DLCD FORM 1

NOTICE OF A PROPOSED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

FOR DLCD USE
File No.:
Received:

Local governments are required to send notice of a proposed change to a comprehensive plan or land use regulation **at least 35 days before the first evidentiary hearing**. (*See* OAR 660-018-0020 for a post-acknowledgment plan amendment and OAR 660-025-0080 for a periodic review task). The rules require that the notice include a completed copy of this form.

Jurisdiction: **City of West Linn**

Local file no.: **PLN-15-03**

Please check the type of change that best describes the proposal:

☐ **Urban growth boundary (UGB) amendment** including more than 50 acres, by a city with a population greater than 2,500 within the UGB

☐ **UGB amendment** over 100 acres by a metropolitan service district

☐ **Urban reserve designation,** or amendment including over 50 acres, by a city with a population greater than 2,500 within the UGB

☐ **Periodic review task** – Task no.:

☒ **Any other change** to a comp plan or land use regulation (*e.g.*, a post-acknowledgement plan amendment)

Local contact person (name and title): DARREN WYSS
Phone: 503-722-5512 E-mail: dwyss@westlinnoregon.gov

Street address: 22500 Salamo Road City: West Linn Zip: 97068-

Briefly summarize the proposal in plain language. Please identify all chapters of the plan or code proposed for amendment (maximum 500 characters):

The proposal is to adopt the 2016 West Linn OR 43 Conceptual Design Plan as an attachment to the TSP. This will include amendments to Tables XX in the TSP and amendments to the Comprehensive Plan Goals 2, 11, and 12 and Development Code Chapters 46, 48, 55, 85, and 92. A staff report will be available 10 days before the first public hearing.

Date of first evidentiary hearing: 05/18/2015
Date of final hearing: 07/11/2016

☐ This is a revision to a previously submitted notice. Date of previous submittal:

Check all that apply:

☒ Comprehensive Plan text amendment(s)

☐ Comprehensive Plan map amendment(s) – Change from N/A to
Change from to

☒ New or amended land use regulation

☐ Zoning map amendment(s) – Change from N/A to
Change from to

☐ An exception to a statewide planning goal is proposed – goal(s) subject to exception:

☐ Acres affected by map amendment: 0

Location of property, if applicable (site address and T, R, Sec., TL):

List affected state or federal agencies, local governments and special districts: Metro, Tri-Met, City of Lake Oswego, City of Oregon City, Tualatin Valley Fire & Rescue, Clackamas County, and ODOT For more information refer to https://westlinnoregon.gov/publicworks/future-design-highway-43 and www.highway-43.com

NOTICE OF A PROPOSED CHANGE – SUBMITTAL INSTRUCTIONS

1. Except under certain circumstances,[1] proposed amendments must be submitted to DLCD's Salem office at least 35 days before the first evidentiary hearing on the proposal. The 35 days begins the day of the postmark if mailed, or, if submitted by means other than US Postal Service, on the day DLCD receives the proposal in its Salem office. **DLCD will not confirm receipt of a Notice of a Proposed Change unless requested.**

2. A Notice of a Proposed Change must be submitted by a local government (city, county, or metropolitan service district). DLCD will not accept a Notice of a Proposed Change submitted by an individual or private firm or organization.

3. **Hard-copy submittal:** When submitting a Notice of a Proposed Change on paper, via the US Postal Service or hand-delivery, print a completed copy of this Form 1 on light green paper if available. Submit **one copy** of the proposed change, including this form and other required materials to:

Attention: Plan Amendment Specialist
Dept. of Land Conservation and Development
635 Capitol Street NE, Suite 150
Salem, OR 97301-2540

This form is available here:
http://www.oregon.gov/LCD/forms.shtml

4. **Electronic submittals** of up to 20MB may be sent via e-mail. Address e-mails to plan.amendments@state.or.us with the subject line "Notice of Proposed Amendment."

Submittals may also be uploaded to DLCD's FTP site at
http://www.oregon.gov/LCD/Pages/papa_submittal.aspx.

E-mails with attachments that exceed 20MB will not be received, and therefore FTP must be used for these electronic submittals. **The FTP site must be used for all .zip files** regardless of size. The maximum file size for uploading via FTP is 150MB.

Include this Form 1 as the first pages of a combined file or as a separate file.

5. **File format:** When submitting a Notice of a Proposed Change via e-mail or FTP, or on a digital disc, attach all materials in one of the following formats: Adobe .pdf (preferred); Microsoft Office (for example, Word .doc or docx or Excel .xls or xlsx); or ESRI .mxd, .gdb, or .mpk. For other file formats, please contact the plan amendment specialist at 503-934-0017 or plan.amendments@state.or.us.

6. **Text:** Submittal of a Notice of a Proposed Change for a comprehensive plan or land use regulation text amendment must include the text of the amendment and any other information necessary to advise DLCD of the effect of the proposal. "Text" means the specific language proposed to be amended, added to, or deleted from the currently acknowledged plan or land use regulation. A general description of the proposal is not adequate. The notice may be deemed incomplete without this documentation.

7. **Staff report:** Attach any staff report on the proposed change or information that describes when the staff report will be available and how a copy may be obtained.

8. **Local hearing notice:** Attach the notice or a draft of the notice required under ORS 197.763 regarding a quasi-judicial land use hearing, if applicable.

9. **Maps:** Submittal of a proposed map amendment must include a map of the affected area showing existing and proposed plan and zone designations. A paper map must be legible if printed on 8½" x 11" paper. Include text regarding background, justification for the change, and the application if there was one accepted by the local government. A map by itself is not a complete notice.

10. **Goal exceptions:** Submittal of proposed amendments that involve a goal exception must include the proposed language of the exception.

[1] 660-018-0022 provides:
(1) When a local government determines that no goals, commission rules, or land use statutes apply to a particular proposed change, the notice of a proposed change is not required [a notice of adoption is still required, however]; and
(2) If a local government determines that emergency circumstances beyond the control of the local government require expedited review such that the local government cannot submit the proposed change consistent with the 35-day deadline, the local government may submit the proposed change to the department as soon as practicable. The submittal must include a description of the emergency circumstances.

If you have any questions or would like assistance, please contact your DLCD regional representative or the DLCD Salem office at 503-934-0017 or e-mail plan.amendments@state.or.us.

Notice checklist. Include all that apply:

☒ Completed Form 1

☒ The text of the amendment (e.g., plan or code text changes, exception findings, justification for change)

☒ Any staff report on the proposed change or information that describes when the staff report will be available and how a copy may be obtained

☐ A map of the affected area showing existing and proposed plan and zone designations

☐ A copy of the notice or a draft of the notice regarding a quasi-judicial land use hearing, if applicable

☒ Any other information necessary to advise DLCD of the effect of the proposal

West Linn OR 43

2016 Conceptual Design Plan

City of West Linn, Oregon

May 2016

CITY OF West Linn

Project Purpose and Background

In 2008, the City of West Linn engaged in a planning process involving citizens and agency stakeholders to re-envision Highway 43 and create a plan for improving it. This update to the 2008 plan maintains the original plan's objectives and builds on it with refinements to take into account emerging best practices in design for non-automobile travel modes as well as implementation considerations. The 2016 Highway 43 Conceptual Design Plan (2016 Plan) is needed to provide clarity on the ultimate cross section envisioned for Highway 43 in West Linn, incorporate bicycle facilities that will serve and attract users of all ages and abilities, and ensure consistent access for emergency vehicles and maintenance functions, and secure agreement between the Oregon Department of Transportation (ODOT) and the City of West Linn with regards to the ultimate geometric and traffic control design elements throughout the corridor.

I. PROJECT PURPOSE

Oregon Highway 43 (OR 43) is a high-volume, Oregon Department of Transportation (ODOT) - operated district highway which runs through the eastern edge of the City of West Linn. The highway functions as a regional commuter route, carrying a significant volume of traffic from West Linn and Oregon City into Portland. OR 43 (locally referred to as Willamette Drive) also functions as an important local route within West Linn. The road is classified as a Major Arterial / Principal Route within the City of West Linn's Transportation System's Plan [TSP].

Significant growth within the region has put a strain on the roadway. The road's capacity has not kept up with its demand. The roadway consists of mainly two travel lanes, and lacks left turn bays in many locations. OR 43 is currently designed to address the needs of automobile traffic, often to the detriment of alternative, non-motorized modes of transportation such as bicycles and pedestrians. As it currently exists, the roadway contains only intermittent or substandard sidewalks and bike facilities, inadequate pedestrian crossings, and a general lack of urban quality streetscape features.

Project objectives

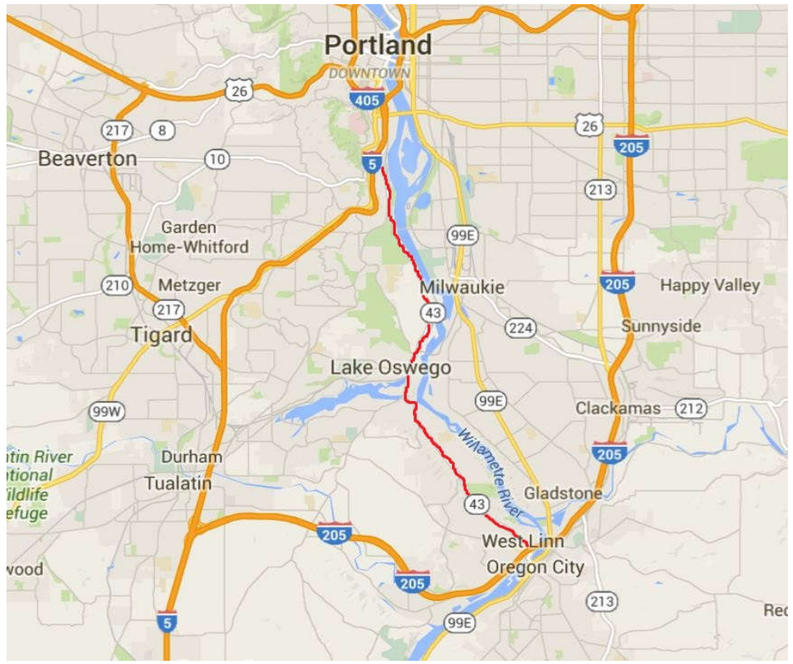
The purpose of this project was to develop a multi-modal Conceptual Design Plan for OR 43 that adequately accommodates bicycles, pedestrians, and vehicles. The final conceptual design strikes a balance between enhancing multimodal opportunities, accommodating regional needs, providing an arterial street function, and supporting adjacent land uses within the City of West Linn. To meet these charges, the project considered roadway features such as pedestrian crossings, street trees, landscaping, transit stops, and lighting to better support the needs of all roadway users (as well as adjacent land uses). The stated objectives of the project were to: *new/additional objectives to add?

- Develop conceptual plans for a design treatment along OR 43 in the project area to better accommodate multi-modal circulation along and across the street and to support adjacent land use.
- Involve the public in designing the OR 43 streetscape.
- Create a corridor that will encourage the use of alternative transportation modes and reduce reliance on the automobile.
- Improve the aesthetic environment, pedestrian crossing opportunities, and pedestrian-transit connections along OR-43.
- Improve vehicular access to properties abutting OR 43 while promoting bicycle and pedestrian safety.
- Ensure consistency with adopted plans, policies and standards, including the *Oregon Highway Plan,* the *Oregon Highway Design Manual,* the *Regional Transportation Plan,* the *West Linn System Transportation Plan,* and the *West Linn Comprehensive Plan.*
- Identify planning-level cost estimates and likely funding sources to construct the Final Conceptual Streetscape Design (including incorporated Stormwater management practices).

The plan responds to project objectives and community input to strike a balance between addressing traffic congestions, providing access to alternative modes of transportation while minimizing the need for acquiring additional right-of-way. All design elements are conceptual. Future survey work, analysis, final detail drawings, and engineering will be necessary to determine the final roadway and right-of-way alignment. Public input and potential effects on private property, particularly with respect to right-of-way, has and will continue to be a critical element of the design process.

Existing conditions along OR 43

OR 43 regional context



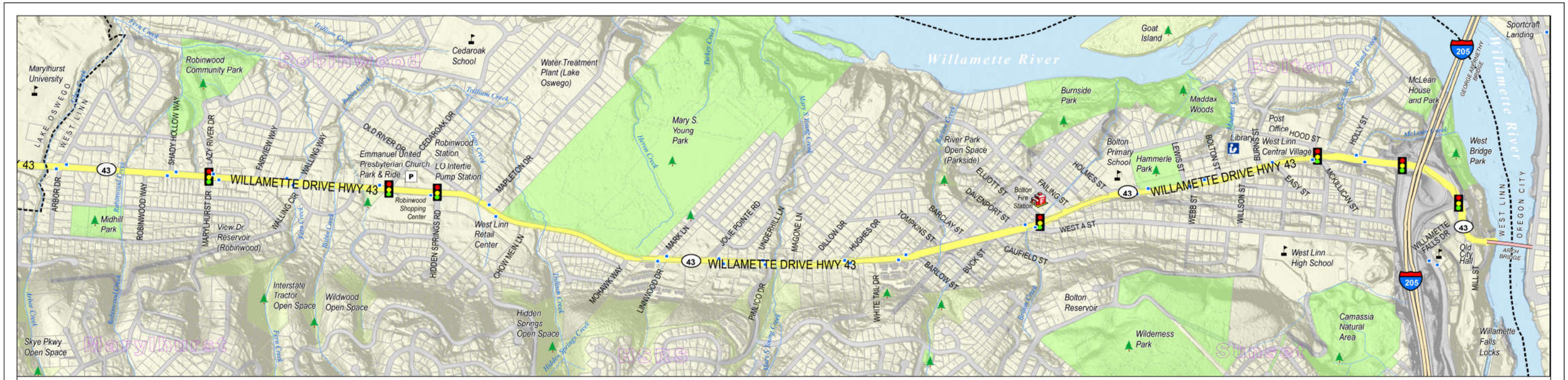
I. Project Purpose and Background

The Study Area

The project study area spans approximately 3.3 miles along the OR 43 corridor within the City of West Linn, from the Lake Oswego / West Linn municipal boundary at the northern end, to the OR 43 / Holly Street intersection to the south. Additional options are presented for the area from Holly Street to Willamette Falls Drive. For much of its route, the highway passes through lower-density, single-family residential areas. However, it also traverses two major commercial nodes: the Robinwood Neighborhood commercial area to the north, and the Bolton Neighborhood commercial node to the south. Additionally, OR 43 borders Mary S. Young State Park, a large regional park which holds recreational and sporting events, and serves as a significant destination point throughout the week. It also passes by Hammerle Park and Bolton Primary School, two significant community facilities.

Hammerle Park along OR 43

Mary S. Young Park along OR 43



I. Project Purpose and Background

The Planning Process * clarify still referencing 2008?

The 2008 project began with the planning team identifying, describing, and documenting existing conditions along the corridor. This included identifying plans and policies that affect the OR 43 corridor, analyzing transportation and adjacent land uses, and photographing and mapping existing physical and design features along the roadway. Basemaps were compiled describing existing land use, zoning, comprehensive plan designations, transit facilities, nearby historic structures, and environmental conditions such as slope, streams, and wetlands. (do we mention that such basemaps are now updated and originals are not included in this version?)

The initial background and research phase of the project also included extensive research on multi-modal street examples across the state and the country. Educational materials illustrating multi-modal street designs and features pertinent to OR 43 were provided to explain how such features affect both transportation and land use. Additionally, the planning team collected examples of “green street" designs, and examined these as a tool for addressing stormwater management concerns along the corridor. The results of this research can be found in the Appendix. (keeping such appendix or do we remove this statement?)

Three technical memoranda were prepared as part of the planning process. The first analyzed existing traffic mobility conditions, gathering base traffic volume data for the project area, and calculating projected 20-year traffic conditions. Specific level-of-service deficiencies were identified in both current and future conditions. Technical Memo #2 identified the various opportunities and constraints within the corridor, based on the existing conditions analysis and base mapping. The final technical memo analyzed current and future traffic conditions along the corridor in terms of the final proposed conceptual design, evaluating its impact on traffic mobility over the next 20 years. Copies of Tech Memo’s 1 & 2 can be found in the Appendix. Tech Memo #3 is contained within section IV of this report *do we keep this statement..will the 2008 memos be included in update?

In order to ensure that the project was adequately coordinated with agency stakeholders and local jurisdictions, a Technical Advisory Committee (TAC) was formed. The TAC reviewed draft materials prior to public presentation, ensuring that products were consistent with applicable policies and standards while also providing suggestions and recommendations. The TAC included representatives from the City of West Linn, ODOT, Metro, and TriMet as well as representatives from the Robinwood and Bolton Neighborhood Associations.

In order to ensure that the planning process was responsive to the opinions and concerns of community members, two public workshops were held. At the first workshop, the planning team presented the existing conditions analysis, multi-modal, and green street examples to the public. Small groups convened around maps of the corridor, identifying and prioritizing desired improvements.

The project team used this feedback to develop a draft proposed conceptual design. After deliberation and comment from the Technical Advisory Committee, the concept design was presented in a second workshop for additional public comment. Community members were encouraged to interact directly with the proposed design, identifying issues directly on plan maps. Community comments were consolidated, and the planning team amended the proposed conceptual design based on this feedback. The final proposed 2008 conceptual design was the result of this process.

The 2016 Plan Development Process

The plan update process occurred over the course of a year from March 2015 to March 2016, and engaged stakeholders from the City of West Linn and from external agencies, as well as members of the public, to reach the preferred update to the conceptual layout for the Highway 43 corridor. The following section outlines the key steps in the development of the plan update.

Pictures of planning process to be provided by Kittelson _ Keep 2008 photos for old planning process info?

I. Project Purpose and Background

Review of Previous Planning Efforts

The project team reviewed planning, outreach, and input received since the development of the 2008 Concept Design Plan. In particular, the team drew on public input received from the *Highway 43/Willamette Falls Drive Vision, Phase I*. In the process of developing this vision, community members emphasized the following needs:

- Provide the ability to shop locally and access daily needs by biking or walking
- Enhance pedestrian and bicycle safety
- Achieve regular, frequent transit service
    - Along the corridor
    - Connecting to City Hall
    - Providing a direct connection to downtown Portland

Ultimately, the vision called for a "complete street" design and noted that a "continuous protected bikeway" was a key component for that vision. This protected bikeway is needed to connect the commercial centers along the corridor and encourage a larger portion of the community to use non-automobile modes to conduct their local trips within the corridor.

Review of Best Practices

The project team also reviewed published guidance on best practices for designing and incorporating protected bikeways into existing roadway facilities:

- *The Centre for Research and Contract Standardization in Civil and Traffic Engineering (CROW) Design Manual for Bicycle Traffic* (Netherlands, 2007)
- *National association of City Transportation Officials (NATCO) Urban Bikeway Design Guide* (2012)
- *NATCO Urban Street Design Guide* (2013)
- *The Federal Highway Administration Separated Bicycle Lanes Planning and Design Guide* (2015)

After a review of the community vision and best practices, the project team determined that the 2016 Plan should include protected bicycle facilities for the length of the corridor.

Stakeholder Meetings

The project team conducted two meetings with key stakeholders, including representatives from the City of West Linn Planning Department, City Council, Public Works, Police Department, and Transportation Advisory Board, along with the Oregon Department of Transportation (ODOT), Metro, TriMet, Clackamas County, the City of Oregon City, and the City of Lake Oswego.

At the initial meeting (April 2014), the project team introduced the project and reviewed potential options for addressing the community desire for the incorporation of protected bicycle facilities, in addition to sidewalks, crossings, transit stop enhancements, traffic control upgrades, and streetscape improvements.

At the second stakeholder meeting (June 2014) the project team proposed design options and requested stakeholder feedback on key components of the update. Because Highway 43 is currently owned and maintained by ODOT, the project team sought to understand what types of designs would be acceptable to ODOT, what elements would require a design exception, and what elements would not be approved.

Appendix XXX includes the presentations and meeting materials from the stakeholder meetings, as well as the feedback received after the meetings.

Corridor Audit

The project team conducted a "corridor audit" in April 2014, between the two stakeholder meetings, in which project team members and stakeholders from the City, ODOT, and Metro walked, bicycled, and drove throughout the corridor to observe conditions and assess the viability of different design options. The group visited the corridor during the afternoon, during the late evening after dark, and during the morning commute period to understand peak and off-peak conditions as well as lighting conditions after dark.

Public Outreach

In preparing the initial draft 2016 Plan, the project team drew on documented public input from the 2008 Highway 743 Conceptual Design Plan, the Highway 43/Willamette Falls Drive Vision, Phase I, and the West Linn Transportation System Plan update that was happening concurrently. The project team also held an online Virtual Open House, in which over 150 people provided input on the proposed designs. Finally, City staff attended meetings in surrounding neighborhoods to discuss the plan and hear input from community members. The input gathered in these forums highlighted the importance of creating safe and comfortable multimodal connections through the entire corridor; providing safe and convenient pedestrian crossings at key locations; improving safety and traffic operations at eky intersections along the corridor; and finding ways to ease congestion along the corridor. Comments from the Virtual Open House are included in Appendix XXX.

Figure Caption:

This would be a figure imported from a standard letter-sized document. Expand to the top and bottom margins. Maintain column width 3-column with for text.

Existing Conditions

As previously discussed, the initial phase of the project involved identifying and analyzing existing conditions along the corridor, assembling photographs, and constructing base maps illustrating those conditions. What follows is a discussion of those existing conditions along OR 43 that informed and shaped the final conceptual design. Conditions have remained largely unchanged since the 2008 Conceptual Plan.

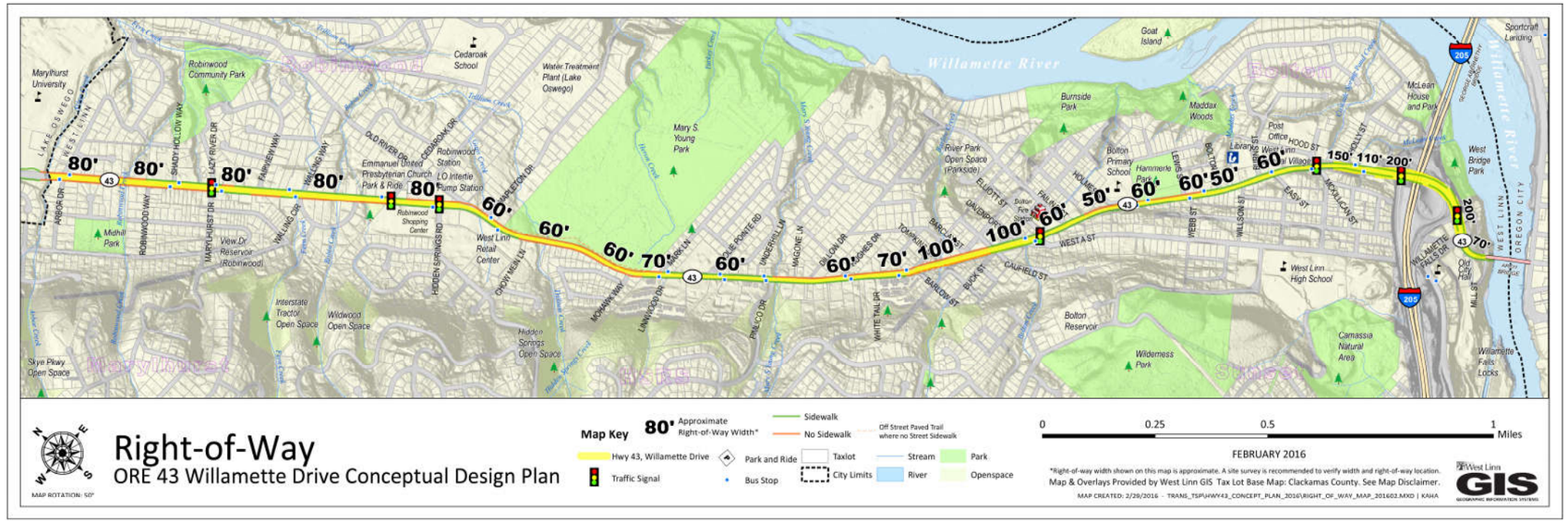
Varying Right-of Way

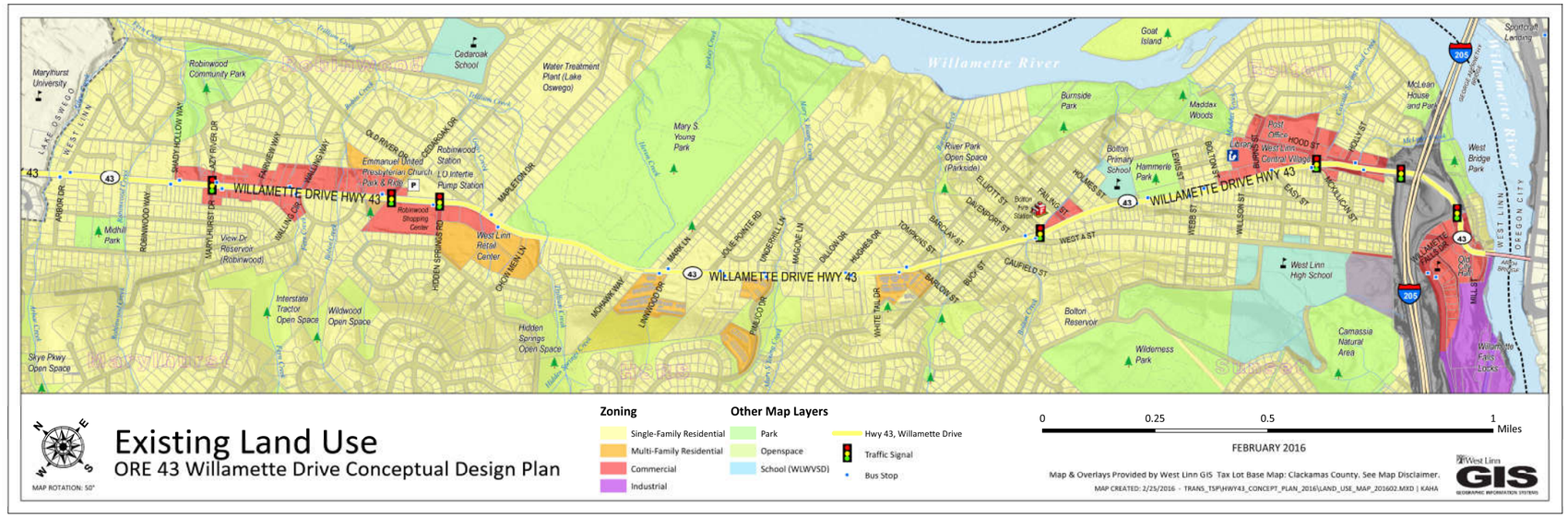
The amount of right-of-way available along the OR 43 corridor varies significantly within the study area. At its widest, the right-of- way measures approximately 200 feet across, but is only 50 feet at its most narrow. This tremendous variation in available right-of-way widths required that several site-specific streetscape design cross sections be devised. The variation in right-of-way also constrained streetscape design options in certain areas, as limited right-of-way within certain segments required close examination of the various trade-offs implicit in allocating right-of-way (ROW). For example, while on-street parking facilities are often provided along commercial nodes, doing so precludes allocating that limited right-of-way to other, perhaps more pressing needs, such as sidewalks.

Varying Land Use

The OR 43 corridor passes through areas with distinctly different land uses. The northernmost section of the corridor is less-intensely developed, primarily with single-family homes. There are two higher-density, commercial nodes along the corridor - one within the Robinwood neighborhood, and the other within the Bolton neighborhood. Between these two commercial areas lies Mary S. Young State Park - a significant community and regional asset - as well as a mix of single-family and multi-family residential uses.

This continuous shift in land uses and character suggests a need to customize the streetscape in differing ways to meet the unique demands of various uses and densities. For example, higher-density commercial nodes suggest a need for wider sidewalks and access management features. There is also an opportunity to better connect these commercial areas to nearby residences, many of which are not served by sidewalks currently. Less foot traffic in predominantly residential areas may allow for narrower sidewalks.



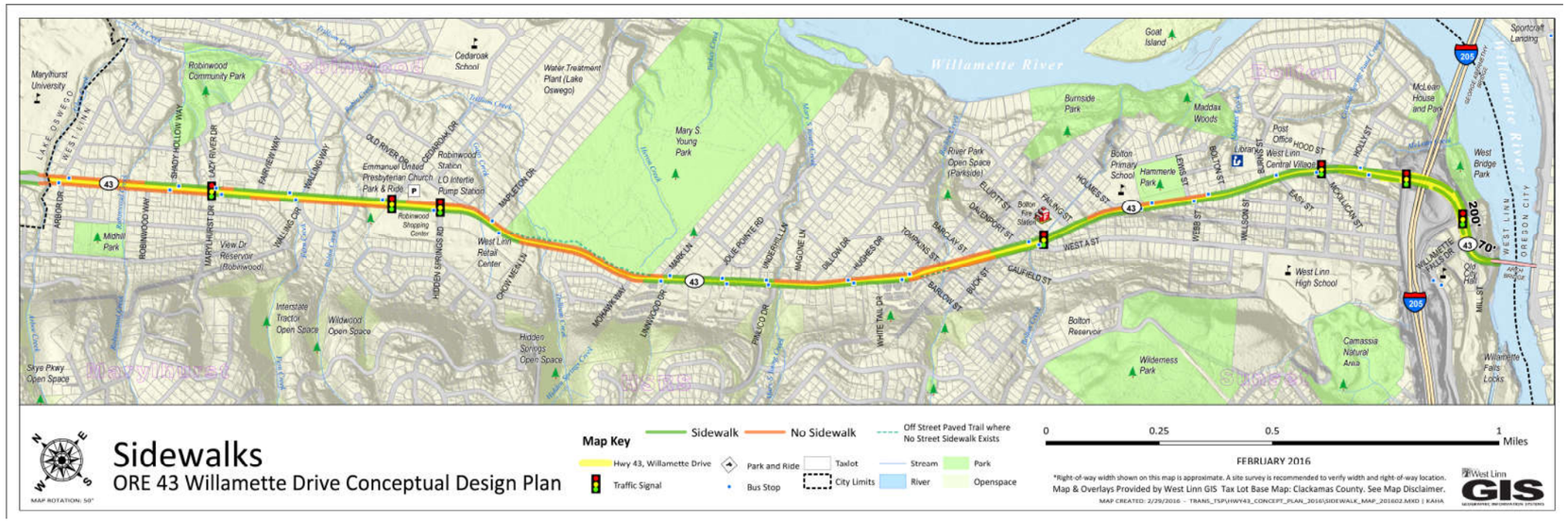


Inadequate Pedestrian Environment

As the map at right illustrates, sidewalks along OR 43 are sporadic in many areas, and are altogether absent in others. Sidewalks may exist on one side of the street but not the other, and in the residential areas to the north, they are lacking on both sides of the street. The Robinwood commercial area provides sidewalks on both sides of the street, but these sidewalks are fragmented, often leaving a pedestrian with no option but to walk on the roadway.

Where sidewalks do exist, they are often narrow (sometimes only 3' to 4' wide), making it difficult for two people to walk side by side. Sidewalks occasionally contain obstacles such as telephone or light poles, rendering them impassable to citizens in wheelchairs, people on crutches, or children on bicycles who may not feel safe riding on the roadway. More common are frequent driveways - which bring pedestrians into direct conflict with motor vehicles. Need pic of driveways?

Sidewalks throughout the study area are "curb-tight," meaning that in most instances there is no buffering between pedestrians and the roadway. Planting strips and/or furnishing zones in commercial areas located between the pedestrian way and the street could help not only to visually enhance the streetscape, but also to shield the pedestrian from fast-moving traffic - thereby improving the perceived safety of the sidewalk.



Many locations have sidewalks that end abruptly or have obstructions within the sidewalk

Traffic Mobility

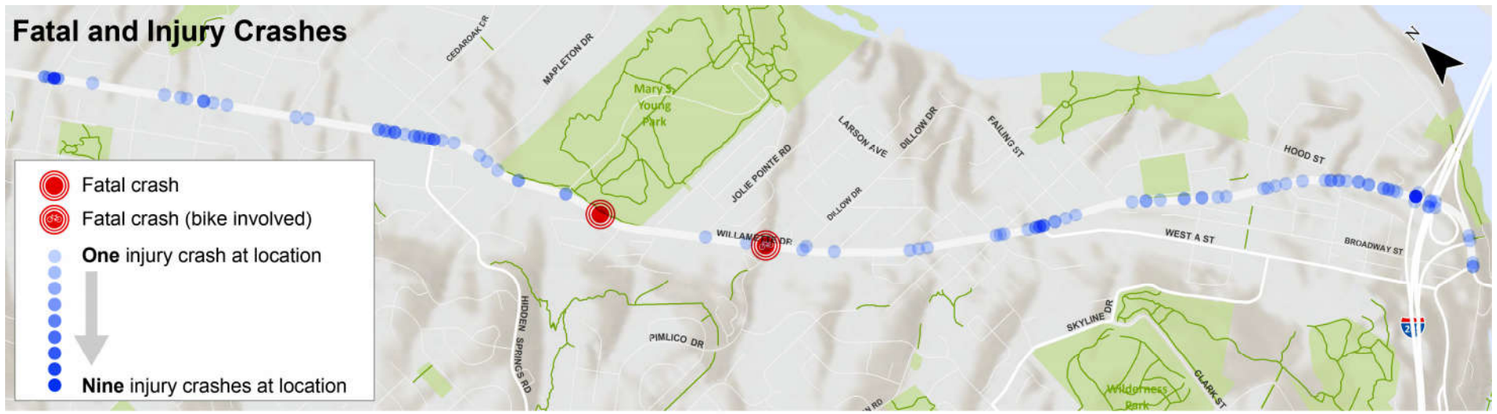
Comments gathered at both public workshops revealed that the community places great priority on improving traffic safety and mobility along the corridor. Traffic analysis conducted by the planning team revealed several traffic circulation issues that needed to be addressed throughout the course of the project. Those issues are as follows:

- Two intersections have moderate congestion during commute hours today: HWY 43 at Cedar Oak, and HWY 43 at Hidden Springs.
- Access to Bolton Primary School is constrained, with backups occurring before and after school sessions
- Many cross-streets have long waits for adequate "gaps" to make turns onto the highway
- Opportunities to cross HWY 43 on foot or by bike are currently very limited, especially south of Hidden Springs to West A.

Crash History

ODOT keeps a record of crashes that are reported on roadways throughout the state and analyzes crash data to identify areas that are priorities for safety improvements. Highway 43 in West Linn had 264 crashes over the period of time from January 1, 2009 to March 31, 2014, including two fatalities, 124 injury crashes, and 138 property damage only crashes. Figure XX shows the crashes in the corridor over this period of time by crash severity. There are two locations on Highway 43 that are currently identified on ODOT's Safety Priority Index System list—the segment of Highway 43 in the vicinity of Cedaroaks Drive and Hidden Springs Road falls into the 85th to 90th percentile list, and the area in the vicinity of the McKillican Street intersection and south to the I-205 interchange also appears on the list.

Existing traffic conditions along OR 43



The Plan Update

II. THE PLAN UPDATE: GENERAL CONCEPTS

This plan update replaces the 2008 Highway 43 Conceptual Design Plan; however, much of work from the original plan is still applicable and the intent of the plan remains the same. This section summarizes the general concepts and approach of the plan update.

General Plan Characteristics

The 2016 Plan replaces the varying cross sections in the 2008 Plan with a more consistent cross section throughout the corridor. The update consists of three preferred overall cross sections: typical, transit stop, and constrained. These cross sections are shown in Figure XX. Each of the three cross sections was developed to provide the following key features:

- Comfortable bicycle facilities grade-separated from motor vehicle traffic.
- Continuous sidewalks on both sides of the street, adjacent to the bicycle facilities.
- A continuous two-way left-turn lane to provide improved access to side streets and driveways along the highway.
- Sufficient roadway width for utility vehicles to perform maintenance on utilities throughout the corridor while still allowing for two-way motor vehicle flow and clear bicycle facilities. Because the preferred cross sections have protected bike lanes, instead of standard bike lanes, vehicles cannot use this space as a shoulder or breakdown lane; instead, the necessary width is provided by the continuous two-way left-turn lane.

Typical Cross Section

The typical preferred cross section includes six-foot sidewalks, protected bike facilities (cycle tracks), a landscape buffer, one motor vehicle travel lane in each direction, and a two-way left-turn lane. In commercial areas, the sidewalk width may be greater than six feet. The typical preferred cross section is applied throughout the corridor in locations not limited by extreme topography or potential building impacts. As development occurs along the corridor, property owners shall either construct or dedicate sufficient right-of-way and pay cash in lieu of construction for the typical cross section.

Transit Stop Cross Section

The transit stop cross section is very similar to the typical cross section, but it replaces the landscape buffer with a slightly wider transit stop platform to allow for accessible boarding and a lighting of the transit vehicles ins a location separated from the bicycle facility. This cross section is to be used in all transit stop locations.

Constrained Cross Section

The constrained cross section is similar to the typical cross section, but it removes the landscape buffers between the bicycle facility and the motor vehicle travel lane. However, the bicycle facility remains grade-separated from the motor-vehicle travel lane. The constrained cross section is applied on one or both side of the roadway only in locations where topography, other natural features, or buildings impacts limit the total roadway width. The constrained cross section can be applied only with the approval of the City Public Works Director.

Pedestrian Improvements

OR 43 is currently designed to address the needs of automobile drivers, often to the detriment of other users. One of the primary charges of the project was to re-design OR 43 into a truly multi-modal corridor. The Highway 43 Corridor through West Linn is significantly lacking in accessible sidewalks and safe bike lanes and suffers from traffic congestion delays, inefficiencies, and safety issues that could be greatly improved by targeting key areas for enhancement. Pedestrian and bike facilities in the project area are defined as substandard or completely lacking in the ODOT Active Transportation Needs Inventory as well as in the 2014 Metro Regional Transportation Plan. Deficiencies along Hwy 43 are identified in the West Linn Transportation System Plan

Improved Pedestrian Crossings

The final concept design includes improved traffic signals and critical roadway crossings for pedestrians in areas currently lacking adequate facilities. In addition to improvement of existing pedestrian crossings, the final concept design will incorporate new opportunities for safe crossings along the corridor. In addition to clear striping, the plan calls for countdown pedestrian timers at intersections. Such timers visually display and count down the amount of time a pedestrian has to safely cross the street before a signal change.

The final concept plan recommends several new pedestrian crossings and are strategically located near activity centers, commercial areas, and high-density residential developments.

ODOT requires a crosswalk study, approved by the state traffic engineer, for all marked crosswalks at unsignalized locations to ensure that new crossings would provide actual safety benefits as opposed to the false perception of security. Criteria for establishing such crosswalks on State highways can be found in Section 6.6 of the ODOT Traffic Manual which is available on ODOT's website.

Continuous, High-Quality Sidewalks

Providing continuous sidewalks throughout the entire corridor remains one of the foremost priorities for the project and the public. The majority of the project area does not have sidewalk on both sides of the Highway and numerous locations have no sidewalk at all. Sidewalk is missing along the only area park and ride transit facility, which is also a key commercial center. In addition to sidewalk infill, many areas of non-compliant or obstruction-laden sidewalk (e.g. non-ADA curb ramps, insufficient clearance around power poles/utility boxes/ pedestals, etc.) will be made ADA compliant.

To improve the overall quality and safety of pedestrian facilities, where right-of-way allows, existing curb-tight sidewalks will be replaced with sidewalks that are set back from the roadway, separated by planting strips between the sidewalk and the road itself. Such planting strips effectively separate the pedestrian from moving traffic and provide a physical buffer. This increases both actual and perceived safety in addition to beautifying the streetscape. *from 08 Plan...keep? Anything new to add?

Bike Improvements

Bicycle facilities as they currently exist along OR 43 often create dangerous conditions for bicyclists. Although bike lanes are provided throughout, they often share space with the emergency shoulder and/or on-street parking, creating a confusing, ambiguous space which often causes conflict between parking and turning cars and bikes. Furthermore, bike lanes along OR 43 are often cluttered with debris, including trash receptacles, which can create dangerous obstacles for bicyclists.

During the public process, many community members voiced their support for separating bicycle facilities from vehicular traffic in order to increase bicycle safety along the corridor. The final concept plan proposes the construction of innovative cycle tracks including the first in Oregon protected intersection for all users. Cycle tracks, or a protected bike lane, is an exclusive bikeway that has elements of a separated path and on-road bike lane. A cycle track is located within or next to the roadway, but is made distinct from both the sidewalk and the vehicular roadway by vertical barriers such as a planter strip. Cycle tracks are designed to encourage bicycling in an effort to relieve automobile congestion and reduce pollution, while increasing safety for bicyclists. Protected bike lanes will in most cases prevent cars from verging into the bike lane in order to pass stopped, or left turning cars. Because the shoulder along OR 43 is currently a marked bicycle lane, cars are currently not legally permitted to pass other cars within the bike lane (though this practice is common). The protected bike facility will increase bicycle safety by preventing these maneuvers.

Transit

The preferred method for loading and unloading bus passengers is to do so while remaining within the travel lane, as this is most efficient. However, there may be a need to provide one or two bus pullouts over the length of the corridor. These pullouts would allow buses to pullout of the roadway as they load and unload passengers, and give the bus a place to idle when dwell time is needed. Pullouts also permit cars to pass stopped, loading buses. Although they can allow for greater automobile mobility, transit operators often disfavor them, as they can find it difficult to pull back into traffic after loading.

It should be noted that OR 43 is not currently a frequent bus route, and vehicular delays caused by in-flow loading are therefore not extreme in nature. Other improvements associated with this conceptual design plan may help to alleviate delays. TriMet does intend to convert this line into a frequent bus route in the next five years, however. It is anticipated that this extra service will tie in with the pedestrian and streetscape improvements proposed within this plan. An area of continuous concern as it relates to transit resides at the only Park and Ride facility within the OR 43 corridor within West Linn, Currently, there are no sidewalks along the road where the park and ride exists. The intended result in improving pedestrian access to the Park and Ride facility, and improving overall bus stop conditions along the corridor is to promote an increase in transit use.

Aesthetic Improvements

Several opportunities to introduce vegetation to the streetscape exist along the OR 43 corridor. Since OR 43 is an ODOT facility, streetscape design elements along the corridor are subject to ODOT design standards. Tree placement within the planting strip are subject to ODOT review. Current ODOT standards stipulate that trees should be a minimum of 6' from the curb at maturity to ensure that visual clearance is maintained at driveways and intersections. The City of West Linn wishes to incorporate decorative poles and arms at signalized intersections much like those present at the Santa Anita and Rosemont Intersection in order to have a consistent and uniform aesthetic appeal.

Operational and Safety Improvements

The 2016 Plan has been developed to offer operational and traffic control improvements for all modes traveling along the corridor. Key features of the plan include the following elements.

- A continuous two-way left-turn lane on Highway 43
- Redesigned, consolidated, and new signalized intersections
- Improvements at unsignalized intersections
- A modification of the Hidden Springs and Cedaroak Drive intersections

Two-way left-turn lane on Highway 43

This feature of the design increases efficiency and safety by providing left-turning vehicles a place to wait for a break in oncoming traffic, where they don't block the flow of through traffic in their lane. The two-way left-turn lane also provides the opportunity for drivers making a left turn on to High2way 43 to make the turn in two stages. For example, a northbound driver making a left turn would first find a gap in the eastbound traffic, turning left into the two-way left-turn lane, and then finding a gap and merging into the westbound stream of traffic.

Signalized Intersections

The 2016 Plan draws on recent innovations in "protected intersection" design, which are just starting to be implemented in cities across the United States. This type of intersection (also known as "Dutch-style intersections") has been in operation in the Netherlands for decades and is being currently deployed in the United States (e.g. Davis, California). Figure XXX shows the protected intersection concept and highlights key elements of the design.

Each signalized intersection on the Highway 43 corridor has a different context, operating characteristics, lane configurations, and physical constraints. As such, it is recommended that each intersection is analyzed in more detail prior to design in order to determine optimal operations strategies, signal phasing, and proposed lane configurations. In some cases, implementation of the protected intersection design as shown may result in impacts or trade-offs that outweigh the benefits of the design. In these cases, it may be necessary to make modifications to the design, potentially incorporating other types of intersection treatments described in the design guidance documents.

The 2016 Plan also includes a new signal at the Pimlico Road/Highway 43 intersection, when it is warranted. While the 2014 volumes did not warrant a signal at Pimlico, it is forecasted to be warranted in the future. Signalized intersections in the corridor are:

- Marylhurst Drive/Lazy River Drive/Highway 43
- Hidden Springs Road/Old River Road/Highway 43 (consolidation of existing signals at Cedaroak Drive/Highway 43 and Hidden Springs Road/Highway 43)
- Pimlico Road/Highway 43 (when warranted)
- West A Street/Elliot Street/Highway 43
- McKillican Street/Hood Street/Highway 43

Unsignalized Intersections

Unsignalized intersections also will be treated differently depending on their context and use. Treatments may include the following:

- Addition of turn lanes on the approach to highway 43 in some locations.
- Inclusion of raised or painted crossings of side streets for pedestrian and bicyclists. In some locations, these crossings may be set back from highway 43 to provide vehicles with the opportunity to first cross the bicyclist and pedestrian crossing, and then find a gap in traffic on Highway 43.
- Inclusion of enhanced pedestrian crossing treatments of Highway 43 at selected high-demand locations with adequate sight distance (locations to be determined in future design phases).
- Change from full access to partial access or closures for some side streets. For example, a minor side street may be changed from right-in right-out only, to right-out only, or to right-in only, to improve safety and operations for all users, particularly in areas where sight distance and topography are limiting factors.
- The redesign of side-street approaches to lessen the skewed angles of some intersections.

Some of these treatments are illustrated in the conceptual plan layout, while others may be added during the design phase as feasible.

Hidden Springs/Cedaroak Realignment

The 2016 Plan includes a reconfiguration of Hidden Springs Road/Highway 43 and Cedaroak Drive/Highway 43—two closely spaced signalized intersections that have been identified repeatedly as a Safety Priority Index System (SPIS) site. The design of the reconfiguration was developed in collaboration with the stakeholder groups to improve the operations and safety of the area. The reconfiguration includes the addition of a fourth leg at the Hidden Springs Road/Highway 43 intersection, connecting with River Road. This intersection provides an intuitive connection and increased connectivity for all modes between the neighborhoods and land uses on both sides of Highway 43. The Cedaroak Drive intersection will be deemphasized, limited to right-in right-out movements, and signal will be removed. Left turning movements will be provided at the Hidden Springs Road/Highway 43/Old River Drive intersection. A planning level operational analysis of the intersection is included in Appendix XXX.

The 2016 Plan

III. THE 2016 PLAN: DETAILED LAYOUTS

The following section discusses in greater detail the design features and recommendations contained within the Final Proposed Conceptual Design Plan for OR 43. It is organized geographically, and will examine the corridor segment by segment, from north to south.

Segment A

City Limits North of Arbor Dr. to South of Hidden Springs Rd.

Segment A is a cross-section surrounded that spans both residential and commercial areas. Intersection improvements include the addition of both northbound and southbound turn pockets from OR 43 onto Arbor. Wider lanes have been provided along Arbor as it approaches the intersection with OR 43. This improvement will allow right-turning cars to edge around stopped cars waiting to make a left turn movement onto OR 43.

The removal of the center turn lane on OR 43 eliminates the possibility of making a "two-phased" left turn from Arbor onto OR 43. However, safety concerns dictate that the project's priorities must lie with improving safety and mobility along the OR 43 corridor itself, rather than increasing convenience along side streets. Providing a continuous center turn lane on OR 43 to allow for left turn movements from Arbor is mutually exclusive with the much needed left turn lane from OR 43 onto Arbor. For this reason, motorists turning left from Arbor onto OR 43 are encouraged to do so at the nearest signalized intersection, in this case Marylhurst/ Lazy River.

Although there was significant community demand for a marked crosswalk at Arbor, the project team determined that because Arbor is not a signalized intersection, it may not be an entirely safe place to encourage pedestrian crossings.

The summary of impacts related to these intersection improvements are as follows:

Arbor Drive:

- In order to accommodate northbound and southbound left turn lanes within the existing 80-foot ROW on Highway 43, the proposed cross section with 22-foot planter/sidewalk on each side would be narrowed by approximately 7 feet on each side.
- New curb returns on Arbor Drive may require some additional ROW at the corners or along Arbor Drive if final design includes new sidewalks or widening for the side street.
- No driveways on OR 43 are adjacent to the proposed turn lanes.
- Moving the northbound bus stop to the north side of Arbor Drive would also help facilitate northbound right turns onto Arbor.

Further south at Marylhurst Dr./Lazy River Way, intersection improvement include the provision of northbound and southbound left turn pockets from OR 43 to Marylhurst Dr./Lazy River Way. In addition to the provision of northbound and southbound turn pockets, recommendations are in place to consolidate driveways along the corridor. Minimizing the overall number of driveways can dramatically improve the pedestrian and bike environment as it minimized conflict with automobiles.

The summary of impacts related to the intersection improvements at Marylhurst Drive/Lazy River Way and Fairview Way are as follows:

- The proposed cross section fits within the existing 80-foot ROW
- Driveways are adjacent to the proposed turn lanes, which is the same as the existing conditions. One or two locations may have the opportunity to combine driveways, but some conflicts will remain as many buildings are close to the street with one row of parking in front.

The plan recommends aligning the Walling Way/Walling Circle intersection in order to improve functionality and Safety. Further south, is where the Robinwood Shopping Center and Tri-Met's Park and Ride facility is located (just north of Hidden Springs Rd.). The cross section responds to the greater amount of pedestrian traffic associated with these land uses, and provides sidewalks on both sides of the street. Furthermore, the plan recommends shifting the existing access drive to the Robinwood Shopping Center from its current midblock location to more closely align with CedarOak. This alignment will create a true, 4-leg intersection, and is expected to dramatically improve functionality and safety. It should be noted that the shopping center's parking lot configuration would have to change in order to accommodate this new access drive at the northern boundary of the property. Final determinations regarding specific designs for the new driveway, and the effect of driveway queuing on the existing parking lot's functionality are to be studied and determined during preliminary engineering.

As previously stated, some issues associated with the Cedaroak realignment will need to be addressed during preliminary engineering, however. These issues include examining the effect of the "skew" angle of Cedaroak on the proposed improvement, as well as examining any right-of-way takes which may be associated with the improvement.

The plan recommends aligning the Walling Way/Walling Circle intersection in order to improve functionality and Safety. Further south, is where the Robinwood Shopping Center and Tri-Met's Park and Ride facility is located (just north of Hidden Springs Rd.). The cross section responds to the greater amount of pedestrian traffic associated with these land uses, and provides sidewalks on both sides of the street. Furthermore, the plan recommends shifting the existing access drive to the Robinwood Shopping Center from its current midblock location to more closely align with CedarOak. This alignment will create a true, 4-leg intersection, and is expected to dramatically improve functionality and safety. It should be noted that the shopping center's parking lot configuration would have to change in order to accommodate this new access drive at the northern boundary of the property. Final determinations regarding specific designs for the new driveway, and the effect of driveway queuing on the existing parking lot's functionality are to be studied and determined during preliminary engineering.

As previously stated, some issues associated with the Cedaroak realignment will need to be addressed during preliminary engineering, however. These issues include examining the effect of the "skew" angle of Cedaroak on the proposed improvement, as well as examining any right-of-way takes which may be associated with the improvement. Signage issues associated with proposed new right turn and right through lanes on OR 43 at Cedar Oak will also requie ODOT examination. If these issues cannot be satisfactorily resolved, status quo conditions will prevail.

The current property owner has expressed a wish to maintain the existing entrance along OR 43 as a “right-in / right-out" access drive. However, the recommended driveway realignment is recommended as a safety improvement. Therefore, any decision to keep the current driveway open will depend upon future studies analyzing the safety of maintaining this driveway. It should be noted that the current driveway location and its width negatively impact the pedestrian environment. Furthermore, TriMet has voiced a preference for closing the driveway, based on rider input, as it creates conflicts between automobiles and pedestrians, and endangers transit riders walking to and from nearby bus stops and the park and ride. These moves may also allow TriMet to adjust the current bus stops to better meet the needs of transit riders.

To further maximize vehicular mobility in this area, the plan recommends interconnecting the traffic signals at Cedar Oak and Hidden Springs.

The summary of impacts related to this intersection improvement at Cedar Oak Drive and Hidden Springs Road are as follows:

- Existing ROW on Highway 43 is approximately 75 to 78 feet. To accommodate turn lanes and minimize ROW takes, the proposed cross section with 15-foot planter/sidewalk on each side would be narrowed by approximately 9 feet on the west side, requiring additional ROW of 5 to 8 feet total width.
- Relocation of the existing commercial driveway between Cedaroak and Hidden Springs will eliminate one driveway conflict. One driveway north of Cedaroak Drive will conflict with the proposed left turn lane on Highway 43, but it is already a shared driveway and other access alternatives do not exist. One driveway south of Hidden Springs Road conflicts with the proposed turn lanes, but may be closed because it is one of three driveways that access a single parking lot. It is currently channelized as right-in, right-out.

Segment B

South of Hidden Springs Road to North of Dillow Drive

This segment of the plan includes areas with both commercial and residential uses. Through portions of this segment, high-density residential areas exist. A curbed median currently exists to prevent left turn maneuvers where the highway curves, and the plan maintains this structure.

It has been noted that an automobile/bike conflict currently exists at Mapleton and Old River as bicyclists attempt to access the Mary S. Young trail. They must temporarily travel on the "wrong" side of the road, flowing against traffic. Right-turning motorists often fail to look for bicyclists approaching from the right. Although this issue is beyond the reach of the current project, it is a safety concern, and warrants further examination.

Intersection improvements include turn pockets at Chow Mein and at Mary. S. Young. Additionally, the approach from Mary S. Young to OR 43 has been widened so as to allow right-turning cars to maneuver around stopped, left-turning vehicles. Sidewalks and crossing improvements may warrant a re-examination of the bus stop facilities in this area.

The summary of impacts related to the intersection improvements at Chow Mein Lane and the Mary S. Young entrance are as follows:

- Existing ROW on Highway 43 is approximately 60 feet. The proposed cross section with a 12-foot planter/sidewalk on the west side and a 7-foot planter/sidewalk on the east side would require additional ROW of up to 9 feet total width. To mitigate for this, planting strips will be eliminated, and sidewalks may narrow a bit at intersections to accommodate for the needed right-of-way. It should be noted that though it is highly preferred, sidewalks along the park side of the street may be removed (only if needed) without great detriment to accommodate for intersections, as a multi-use pathway currently exists just within the park boundaries.
- There are no existing driveway conflicts with the proposed left turn lanes. However there are several undeveloped residential lots on the west side of Highway 43 that will require access when developed.

South of Mark Lane there is only 56' right-of-way. Its limited width dictates that trade-offs be made during the design process. A center turn lane has been provided to ensure safe turning maneuvers from OR 43 onto Jolie Pointe and into the multi-family development.

In order to accommodate for this turn lane, both the sidewalks and the bike lane have been narrowed to 5', and the planting strip has been eliminated.

Further south down the corridor the right-of-way widens and planting strips have been re-introduced, and the sidewalks and bike lanes widened. Intersection improvements include a new signal at OR 43 and Pimlico Drive. This new signal is in response to both community input and to the intersection mobility analysis conducted during the 2008 Plan, which showed the intersection's current level-of-service to be deficient. It should be noted that this new signal is subject to ODOT approval.

The summary of impacts related to the intersection improvements at Pimlico are as follows:

- Existing ROW on Highway 43 is approximately 56 to 58 feet. The proposed cross section with 6-foot planter/sidewalk on each side would require additional ROW of up to 6 feet total width. In order to accommodate intersection right-of-way needs, the planting strip would be narrowed and/or eliminated as it approaches the intersection.
- Three existing driveways south of Pimlico conflict with the proposed left turn lane. A driveway at the intersection conflicts with a proposed crosswalk location.

Segment C

North of Dillow Drive to South of Failing Street

This segment includes right-of-way surrounded by both single-family and high-density residential uses. The plan proposes that north of Dillow Drive 6' sidewalks be installed. South of Hughes Drive features high-density residential areas and 8' sidewalks are proposed.

Intersection improvements include providing a northbound left turn pocket from OR 43 to White Tail Drive. This will facilitate access to the multi-family development.
The left turn pocket allows for a pedestrian refuge island at the northern leg of the White Tail intersection. The crossing will improve pedestrian circulation to and from the multi-family development and to nearby TriMet bus stops, which may warrant adjustment as a result of these improvements.

The summary of impacts related to the intersection improvements at Pimlico are as follows:

- Existing ROW on Highway 43 is approximately 57 (north of White Tail) to 69.5 (south of White Tail) feet. By narrowing the proposed planter/sidewalk zone to 6 feet on each side of the proposed cross section, ROW takes of 5 feet in total width would be required north of White Tail. No ROW acquisition would be required south of White Tail.
- There are no existing driveways conflicting with the left turn lane.

South of Tompkins St. right-of-way varies measuring 56' at a minimum and 65' at a maximum. Notably, this section between Tompkins St. and West A. St. passes the West Linn Montessori School. Due to limited right-of-way planting strips would need to be eliminated in order to ensure that there is adequate room for sidewalks and bike lanes to be provided. No intersection improvements are proposed for the OR 43/West A St. intersection.

Segment D

South of Failing Street to South of Holly Street

Segment D passes the Bolton Primary School, Hammerle Park and the West Linn Central Village shopping area. Providing a safe, continuous, high-quality pedestrian network is crucial in this segment. A pedestrian activated signal currently exists at OR 43 and Holmes St. The plan maintains this signal.

Significant intersection mobility improvements are recommended for Holmes St. and Lewis St. In order to address backup which regularly occur during school drop-off and pick-up hours, the plan recommends a circulation plan. A final circulation plan would require additional research prior to recommending a final design. The summary of impacts related to the intersection improvements at Holmes St. and Lewis St. are as follows:

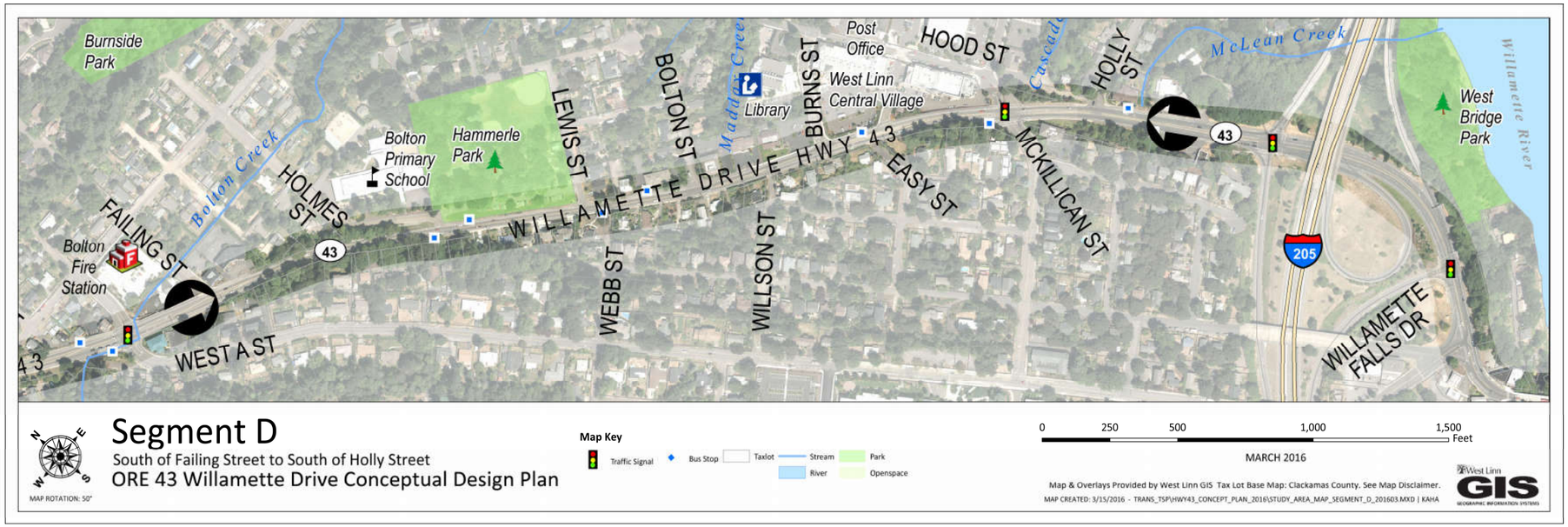
.

- The existing ROW on Highway 43 is about 63 feet from Holmes Street to Lewis Street and 112 feet north of Holmes for the segment that includes the combined ROW of Highway 43 and Holmes Street where it doubles back parallel to Highway 43. The proposed cross section at Lewis Street would require 64 feet of ROW, just slightly more than is available requiring only a small amount of additional ROW.
- The greatest challenge for this section will be grades as the approach grades to OR 43 are already somewhat steep and widening of the roadway will make them steeper.
- School bus access is essential, but may be challenging due to grades and geometry at Homes St. This will require more in-depth investigation at the preliminary engineering level to determine what is feasible.

A median is currently in place in this segment and extends from Hood St./McKillican St. to Easy St. The plan recommends installing landscaping within the existing, concrete median as a means of beautifying the streetscape.

The summary of impacts related to the intersection improvements at Hood St./McKillican St. are as follows:

- The proposed cross section with left turn lanes would require 64 feet of ROW. At the narrowest point, the existing ROW on OR 43 is 60 feet, but is generally in the range of 62 to 66 feet so some small slivers of private property acquisition would be required.
- There are no existing driveways that conflict with the proposed left turn lanes on OR 43.



Analysis of Future Traffic Conditions

IV. ANALYSIS OF FUTURE TRAFFIC CONDITIONS

This section discusses the effect of the Final Proposed Conceptual Design Plan on 2030 peak hour traffic volumes. The proposed Conceptual Design addresses many of the connectivity and operational issues identified by the public and detailed analysis as deficient throughout the course of the project. However, some issues will require further refinements and, potentially require design exceptions to fully implement this design. Analysis in this section remains unchanged from the 2008 plan as traffic volumes have not had a notable increase.

Review of Traffic Analysis

The following are highlights of the traffic analysis work conducted at the beginning stages of the project, information which was used during the conceptual design process. These findings should help in evaluating how well the proposal meets the needs identified in the corridor. Those key findings are as follows:

- Peak hour conditions at unsignalized locations have significant delays for the minor street approaches to the highway. However, only the Pimlico Drive intersection meets warrants for traffic signal controls.
- Peak hour conditions at the study intersections that are controlled by traffic signals operate with moderate congestion, and all comply with the minimum acceptable standards for a state facility.
- The Pimlico Drive intersection with Highway 43 meets preliminary warrants for installing a traffic signal, based on current peak hour volumes However, further study is needed to fully justify a traffic signal at this location.
- The two locations that are approaching the minimum acceptable limit are the two adjoining intersections at Cedaroak Drive and at Hidden Springs Drive. The Cedaroak Drive intersection operates at 90 percent of capacity in the AM peak hour, and the Hidden Springs Road intersection operations at 83 percent of capacity in the PM peak hour.
- The Bolton School access onto Highway 43 provides for a pedestrian activated signal crossing. Vehicle access at this location can create significant queues on the highway, since there is not enough room for a southbound left-turn lane on the highway. It was also noted that the pedestrian push button can be activated by vehicle occupants to create a “gap” in traffic for egress onto the highway.
- Most of the segments of the Highway 43 do not meet ODOT access spacing standards today. The most significant exemptions are those that have a higher frequency of activity, notable those that serve commercial areas.
- Pedestrian volumes recorded during the AM and PM peak hours at the study intersections showed minimal levels at all locations. The exception is at Cedaroak Drive, where the park and ride lot for transit access is located.
- Similarly, the observed bicycles volumes and transit usage during peak hours is relatively low. It was noted that bicycle volumes generally are higher during midday and on weekends than the levels observed during weekday commute hours.

2030 Conditions without Proposed Improvements

The table at right illustrates future (2030) intersection performance assuming no roadway capacity or operation improvements are made to OR 43. The table shows that four of the intersections controlled by traffic signals will exceed the minimum operational standards during one or both of the peak hours by 2030 without improvements either to the traffic signal or to the approaches provided at those locations. Locations without traffic signals will continue to have long delays for traffic turning onto the highway.

2030 Conditions with Proposed Concept Design

The Final Proposed Conceptual Design Plan addresses some, but not all of the identified operational problems, primarily because of issues with terrain and right-of-way constraints along the study corridor. In addition, the City of West Linn and many residents expressed their preference to retain the narrow, three-lane configuration of OR 43 in order to protect the character of their city. This desire is consistent with ODOT's facility plan for the highway, as well as the Regional Transportation Plan.

At the study intersections, additional turn lanes have been added where they improve overall intersection operations. In several cases, additional northbound and/or southbound through lanes would be required for intersection performance to be within ODOT operational standards. Those intersections will require design exceptions from ODOT.

Storage lengths for turn pockets will generally accommodate the forecasted 2030 95th percentile queue or meet minimum ODOT standards, whichever is greater. Exceptions are those locations where storage is limited by geometry (Lewis Street and Hood Street) or where congestion causes longer queues than can be cleared during a single traffic signal cycle. The proposed lane configurations and storage lengths are shown in the Appendix. Keep?

2030 intersection performance according to the improvements suggested as part of the Final Proposed Conceptual Design Plan are illustrated in the table at right.. Table to remain unchanged?

Findings and Recommendations

- According to local residents, many through vehicles pass left-turning vehicles by using the shoulder on the right at the intersection of Highway 43/Arbor Drive, creating conflicts with cyclists who use the shoulder. Left turn lanes should be added on Highway 43 at Arbor Drive to remove left-turning vehicles from the through traffic stream to improve both safety and queuing on Highway 43. However, the added lanes will not improve delay for vehicles turning onto the highway and the intersection will continue to operate at LOS F on Arbor Drive.
- The intersection of Highway 43/Marylhurst Drive cannot be mitigated to meet operational standards without the addition of additional through lanes on Highway 43, which are not included in the proposed conceptual design.
- A private driveway south of the intersection of Highway 43/Cedar Oak Drive should be relocated farther north to become the west leg of the intersection. Traffic counts were not performed at this driveway but an approximation of the trips at this driveway was made based on trip generation for similar land use. This information was used to determine intersection performance and queue lengths for 2030.
- Circulation at the school and park at Holmes Street and Lewis Street should be modified to allow left turns in at Lewis Street only and exit only traffic at Holmes Street. This would re-direct inbound vehicle traffic to the school through the parking lot that adjoins the park area. It is expected that the peak school activity (before and after school session) would not occur at the same times at peak park activity, and so the conflicts between parked vehicles and entering school traffic would be minimal. There is sufficient right- of-way at Lewis Street to provide a southbound left-turn pocket that cannot be accommodated at Holmes Street. Although this modification would not improve operations for the side streets, left turning vehicles would be removed from the through traffic stream. Lewis Street would not meet the PM peak hour traffic signal warrant in 2030 with this modification. Remove?
- The intersection of Highway 43/Hood Street - McKillican Street could be mitigated to a v/c of 0.89 with the addition of an eastbound right turn lane. However the eastbound approach is severely constrained by grade and by a newer building and retaining walls at the southwest corner, so this additional lane would probably not be feasible. With an adjustment to signal cycle length, but without the additional lane, the intersection would barely meet operational standards as shown in Table 2. Property owners east of this intersection have raised concerns about existing queuing on Hood Street during the PM peak hour. A study supporting protected left turn phasing for Hood Street and McKillican Street was presented to the City. Intersection operations would meet operating standards under existing conditions with the modification of left turn phasing from permitted to protected, but would be deficient in 2030 with a v/c greater than 1.0 and an increase in average delay per vehicle for southbound through traffic, the heaviest movement in the PM peak hour. Some of the westbound left-turning vehicles could be diverted to a new traffic signal at Highway 43/ Burns Street to ease queuing at Hood Street. It should be noted that the two signals would be less than 700 feet apart.

New LOS Table for 2030 projections from KAI

Traffic Signal Warrants

PM peak hour traffic signal warrants were evaluated for the unsignalized study intersections. The intersection of Highway 43/Pimlico Drive does meet this warrant for the existing traffic volumes and the 2030 future base conditions; however, the intersection would require additional mitigation with the installation of a traffic signal to meet operational standards. It should also be noted that meeting the PM peak hour traffic signal warrant alone is not sufficient justification for installation of new signal and additional study would be required. The remaining unsignalized intersections would not meet the PM peak hour warrant for 2030 future conditions. Keep?

Outstanding Issues

The recommended Conceptual Design Plan fails to meet the ODOT operating standards during the AM and PM peak hours. The deficient locations include:

- Highway 43 / Marylhurst Dr.-Lazy River Way; AM and PM peak hours
- Highway 43 / Cedar Oak Drive: AM peak hour
- Highway 43 / Hidden Springs Road: PM peak hour

In addition, all locations without traffic signals will have major delays for side street approaching traffic during peak hours. This is consistent with the current findings under existing volumes.

While this Conceptual Plan does not include designs for the expansion of OR 43 beyond three lanes, nothing in this Plan shall prohibit the City from considering, at a later date, other options to increase roadway capacity, including additional vehicular lanes and transit accommodations, however other options must be consistent with state and regional plans, policies and standards.

Park and Ride Opportunities

Although it is not within the scope of this document to make recommendations regarding the future land uses along the study area, it is important to note that the City's Transportation System Plan (TSP) specifically identifies the need for additional park- and-ride lots in areas along transit routes. Due to West Linn's topography, lack of transit, and relatively low population density, most citizens must drive to a park-and-ride in order to utilize public transportation and park-and-ride lots are a key provision of the City's Transportation System Management (TSM) strategy to effectively reduce automobile traffic and to encourage the use of alternative modes of transit. West Linn has but one park and ride lot and this lot at the entrance of Emanuel United Presbyterian Church should be maintained and its usage should continue to be promoted by the City. The City should actively pursue and encourage additional park-and-ride lots within the Highway 43 corridor. In the future, all park-and-ride lots should be equipped with a transit bus shelter as well as bicycle parking and convenient pedestrian access. The location, design, and amenities of all future park-and-ride lots must be coordinated with Tri-Met and ODOT as necessary.

Get Graphics to fill remainder of page

Plan Implementation

V. PLAN IMPLEMENTATION

Design Phase Refinement Needs

As the corridor plan moves towards implementation through development or capital projects, the design of the corridor will need to provide more detail on some aspects of the plan.

- **Right-of-way needs** - A survey and more detailed right-of-way analysis is needed in order to fully understand the right-of-way impacts of the concept design. The impacts shown in this plan are approximate and not based on actual field survey information.
- **Detailed topographic survey and engineering design** - The concept design and cost estimates will need to be refined in the design phases to account for the topography of land adjacent to Highway 43 and the need for retaining walls in some locations.
- **Intersection design and operations** - Particularly at signalized intersections, a more detailed operational analysis is needed in order to determine the appropriate lane configurations and signal phasing for the protected intersections. At Unsignalized approaches, the design of each side street or driveway will need to carefully consider appropriate treatments for the bicycle facility crossing, based on sight distance, topography, and property impacts.
- **Detailed bus stop placement and design** - TriMet has been involved in the development of the 2016 Plan, which provides preliminary recommendations on bus stop placement and design. As the pedestrian and bicycle facilities on the corridor improve, TriMet will consider consolidation of bus stops to improve bus travel time and reliability. TriMet should continue to be involved in the refinement of design and placement of individual bus stops along the corridor.
- **Location and design of enhanced pedestrian crossings** - The 2016 Plan includes continuous sidewalks and bicycle facilities to enhance the ability of people to walk and bike along the corridor, and Oregon State law gives pedestrians the legal right to cross at any intersection, with motor vehicles required to yield. Still, to enable people comfortable access to destinations on both sides of the corridor as well as transit stops, the future design phase will also consider enhanced pedestrian crossing locations in addition to the signalized intersections. The design of these enhanced crossings will consider a variety of potential treatments, including a striped crosswalk, signage, rectangular rapid flash beacons, or pedestrian hybrid beacons. The design phase will determine the locations of enhanced crossings based on pedestrian demand, sight distance, proximity to signalized intersections and other factors. In particular, public input reflected a desire for a crossing to Mary S. Young Park.

Cost Estimates

V. Plan Implementation

Implementation Steps

The 2016 Plan represents a plan for the Highway 43 corridor that represents the goals of the community and is reflective of public input and desires. In the constrained corridor of Highway 43 through West Linn, which is lined with homes and businesses as well as steep slopes in some areas, the 2016 Plan represents a balance of providing high quality facilities to serve a variety of travel modes while managing costs and impacts to adjacent parcels. Implementation of the 2016 Plan is critical to the success of West Linn's goals for its transportation system - Highway 43 provides the only continuous connection stretching between the Arch Bridge and Lake Oswego and access to all the businesses and destinations located in between. As such, it must provide access for people and goods moving on foot, by bike, by transit or in motor vehicles. The implementation of the 2016 Plan can occur in several phases and incrementally through redevelopment along the corridor.

Plan Adoption

The 2016 Plan will be adopted by City Council as an amendment to the 2016 City of West Linn Transportation System Plan. As an adopted part of the Transportation System Plan, the *2016 Highway 43 Conceptual Design Plan* provides direction to the City in pursuing funding to improve Highway 43 as well as setting clear requirements for property owners in terms of right-of-way dedication and frontage improvements.

Intergovernmental agreement / Jurisdictional transfer framework

Highway 43 is currently owned and maintained by the Oregon Department of Transportation (ODOT), and the 2016 Plan has been developed in coordination with ODOT. Because the proposed design includes some elements outside of ODOT's design standards, the 2016 Plan requires a set of design exceptions. However, ultimately, the City of West Linn would prefer to have local control of the Highway, given its function as a key arterial that provides access for local trips to and from destinations and neighborhoods, with regional and state traffic better served by I-5, OR-99E, and I-205. As such the City of West Linn and ODOT have initiated discussions on jurisdictional transfer of the Highway from ODOT to the City. The path to jurisdictional transfer includes the development of an intergovernmental agreement between ODOT and the City to determine funding and maintenance responsibilities before, during, and after the implementation of the 2016 Plan. Appendix XXX provides the jurisdictional transfer framework that has been developed to date between the City and ODOT.

Implementation through development and redevelopment

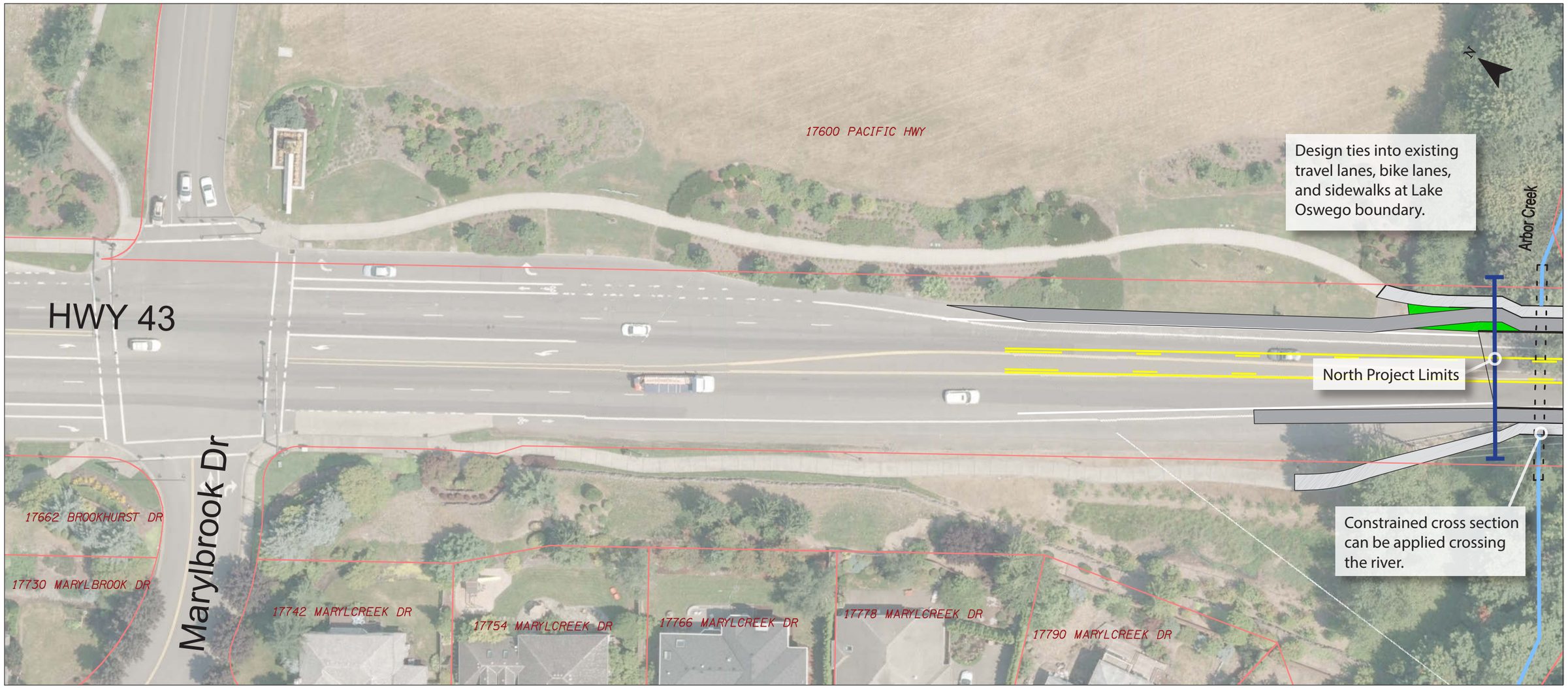
The implementation of the Highway 43 Conceptual Design Plan through private development land use actions and/or land use amendments will follow the development application and approval procedures of the City of West Linn. Highway 43 Conceptual Design Plan through its adoption will serve as the transportation system plan element and provide guidance for identifying the necessary transportation facility provisions (e.g., right-of-way, improvements, traffic control devices, etc.) associated with a specific land use action(s) and amendment(s). However, the Highway 43 Conceptual Design Plan's adoption does require the City to consider the following elements when reviewing and approving specific land use actions:

- **Right-of-Way Dedication Requirements:** Right-of-way dedications should be consistent with the *2016 Highway 43 Conceptual Design Plan* and typical cross section shown in Figures XXX. Any deviations from the 2016 Plan must be approved in writing by the City of West Linn Public Works Director.
- **Direction of Requirement Construction of Improvements, Partial Improvements, or Cash-in-Lieu Payments:** The City will require through conditions of approval and/or development agreements the specific improvements, partial improvements, or cash-in-lieu payments consistent with and necessary to implement the *2016 Highway 43 Conceptual Design Plan* based on the impacts and properties associated with the specific land use actions and/or amendment.
- **Administration of Cash-in-Lieu Payments (Optional):** The City may seek to receive cash-in-lieu of construction payments for land use actions that would result in isolated elements of the corridor being constructed prior to use. These funds would need to be properly administered by the City in order to both preserve and allocate the funds in the most appropriate manner to facilitate the implementation of the overall.

Implementation as a capital improvement project

Implementation through development will occur gradually over time in small increments; however, implementation as a capital improvement project has the potential to improve significant segments or even the entire corridor within a relatively short time period. Funding sources for capital improvement projects such as this include a variety of local, regional, state, and national sources, as follows:

- Statewide Transportation Improvement Program (STIP) Funding - The City of West Linn has submitted an application to ODOT for the 2018-2021 STIP funding cycle under the "Enhance" program. STIP funding decisions are made annually in late spring/ early summer.
- Regional Flexible Funds (RFF) - Metro allocates federal funding dollars through the Regional Flexible Funds program as part of the Metropolitan Transportation Improvement Program (MTIP). Metro will adopt funding priority policy guidance in April 2016, with the funding application period opening May 2016 for $125 million region-wide over three years. The City of West Linn is eligible to apply for this funding.
- *ConnectOregon* - *Connect Oregon* is a statewide lottery-backed funding source that can be used for a variety of transportation projects, including air, rail, marine, transit, and bicycle/pedestrian infrastructure. *ConnectOregon* VI Applications are currently under review; however the City of West Linn can consider applying to future *ConnectOregon* grant cycles.
- Transportation Investments Generating Economic Recover (TIGER) Discretionary Grants - TIGER grants are awarded by the US Department ofTransportation to support innovative projects across the country that promote economic development and improve transportation access for a variety of communities. The City of West Linn could consider applying for a TIGER Grant to fund the construction of the 2016 Plan.
- Local Funding Sources - The City of West Linn has a variety of funding sources that contribute to funding transportation improvements that could be leveraged as local match funds for grants or could be used to fund portions of the 2016 Plan. These sources include the state gas tax and license fees, a roadway maintenance fee, franchise and miscellaneous fees, and system development charges. The sources are described in more detail in the Transportation System Plan.



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

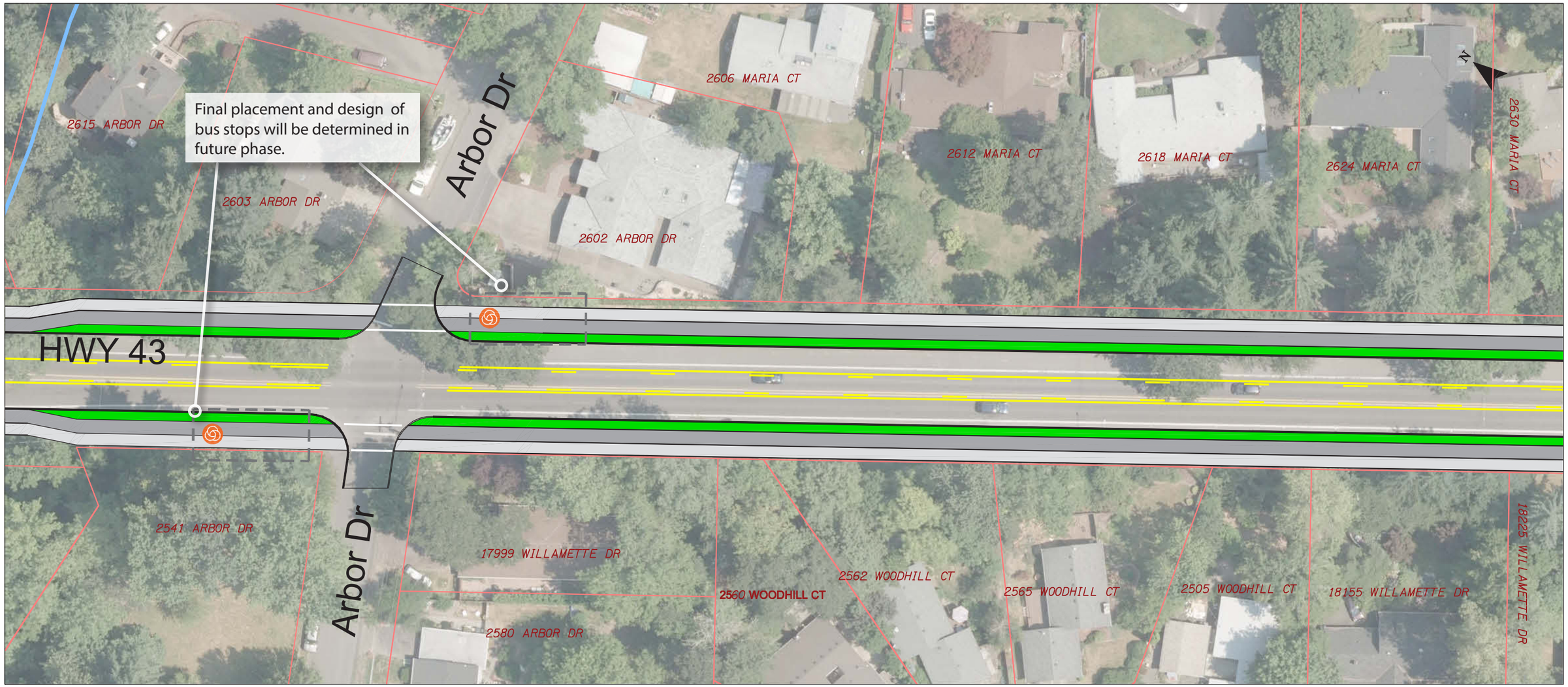
Transit stop locations shown in concepts are approximate and will be revised in the design phase. In conjunction with transit stops, additional signing, striping, beacons and/or signals will be added to pedestrian crossings where warranted.

SCALE

0 50 100

West Linn, Oregon

Figure **1**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

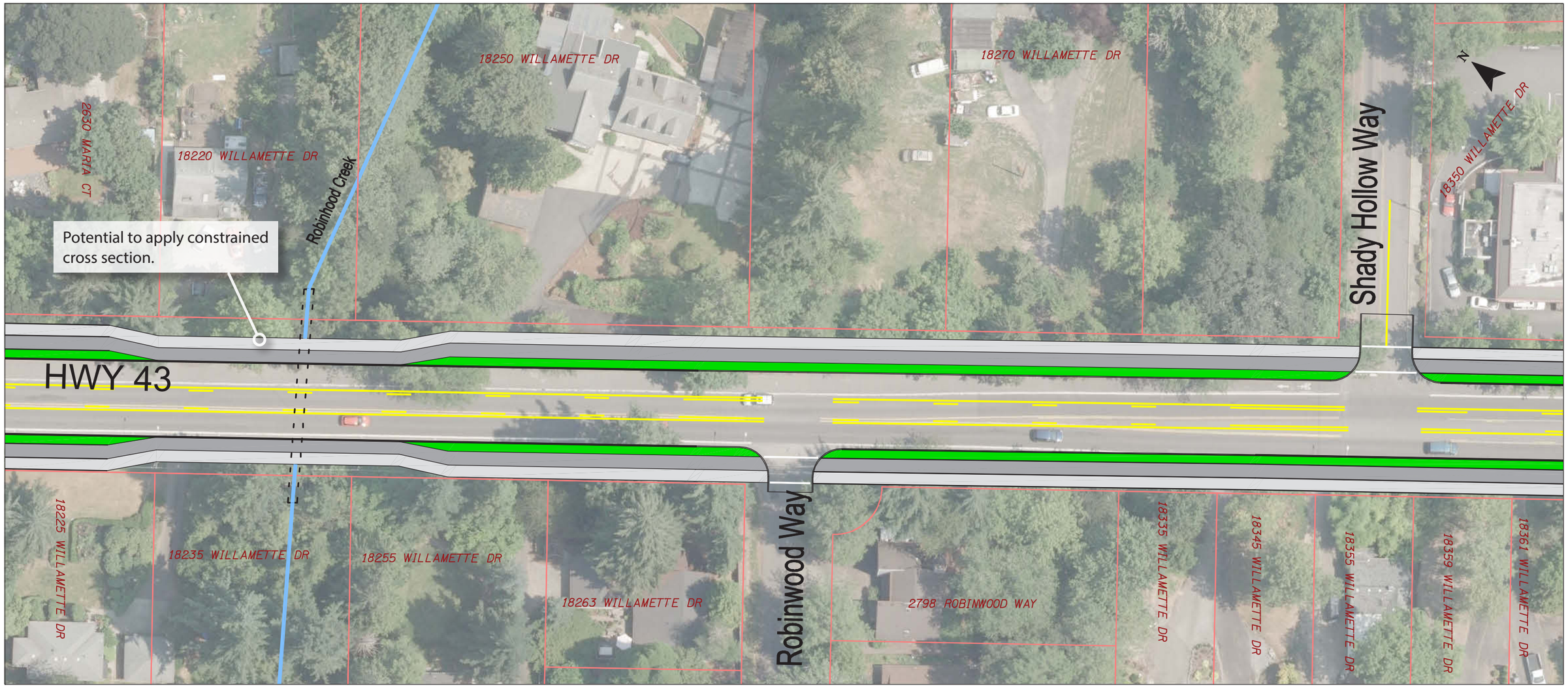
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **2**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

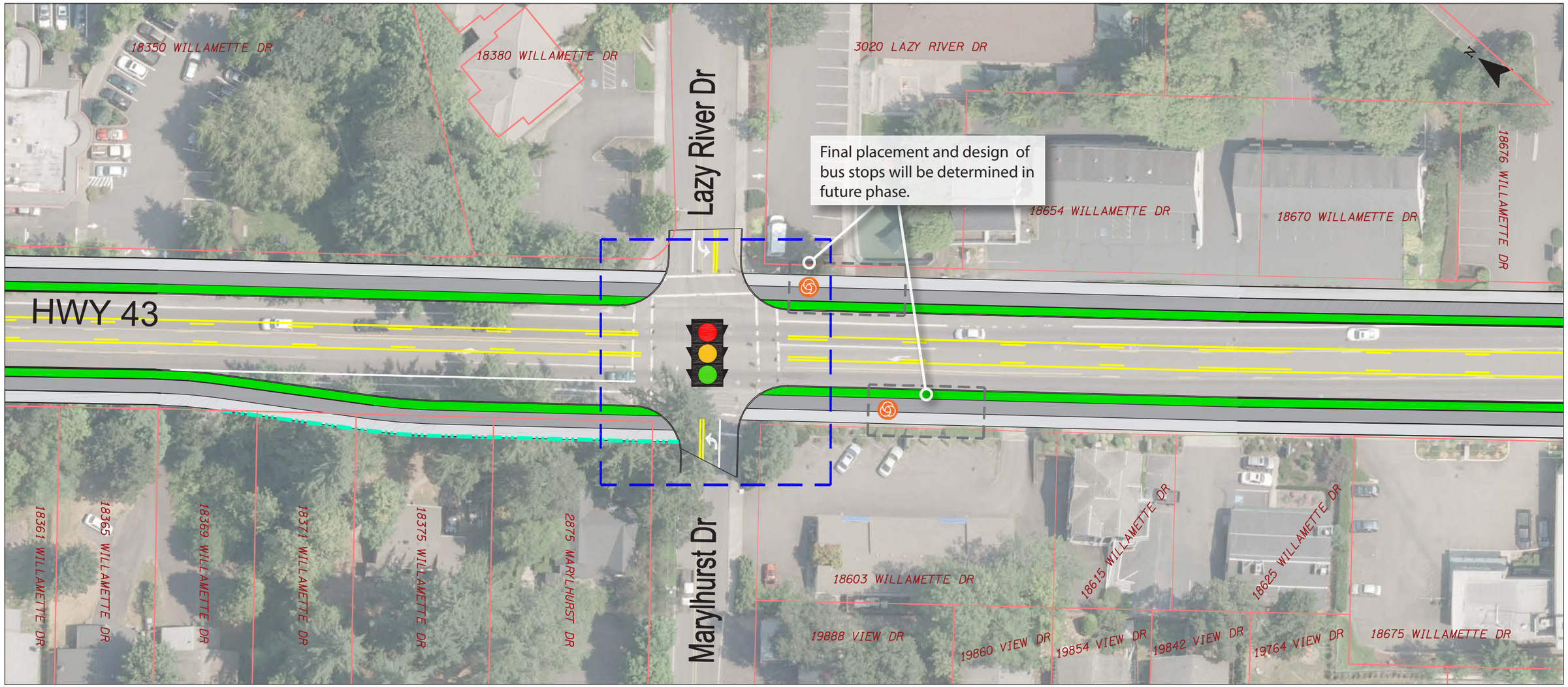
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **3**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

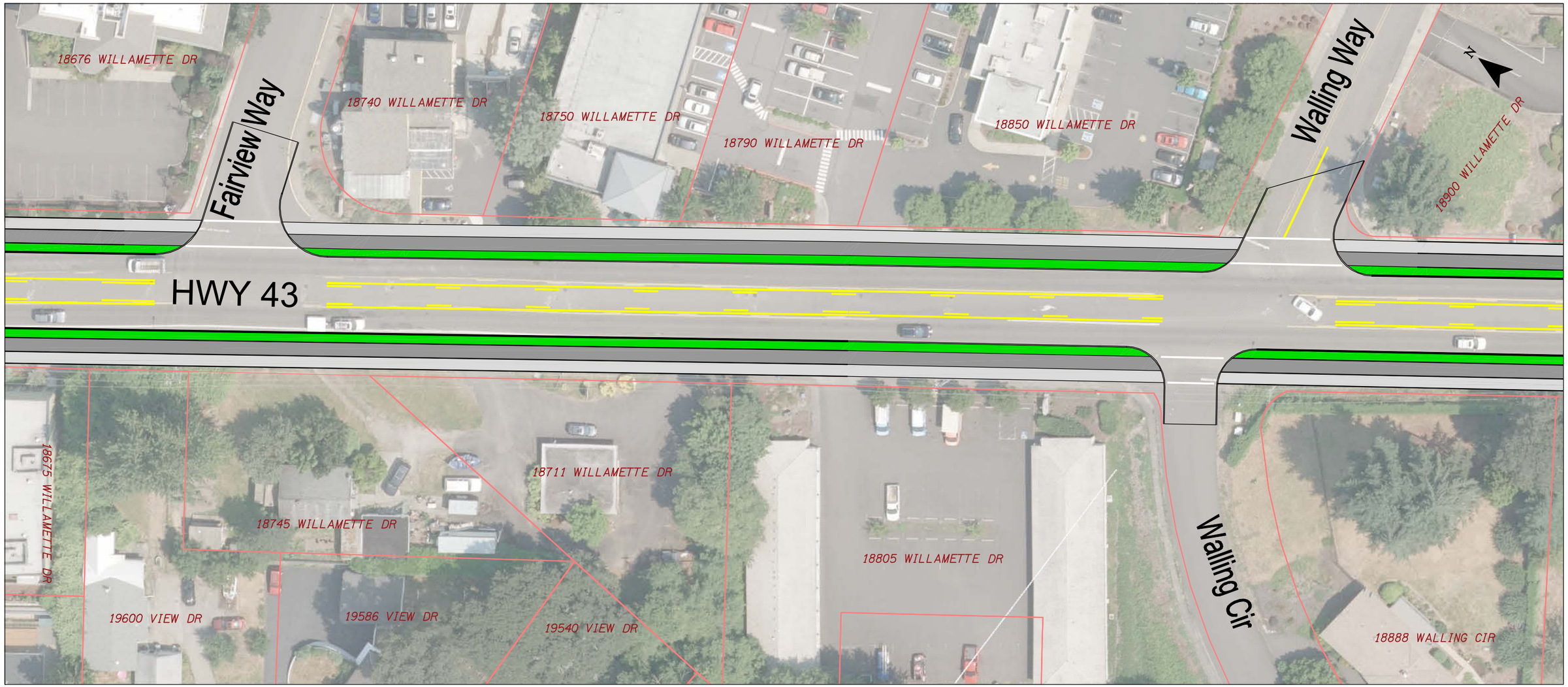
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **4**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

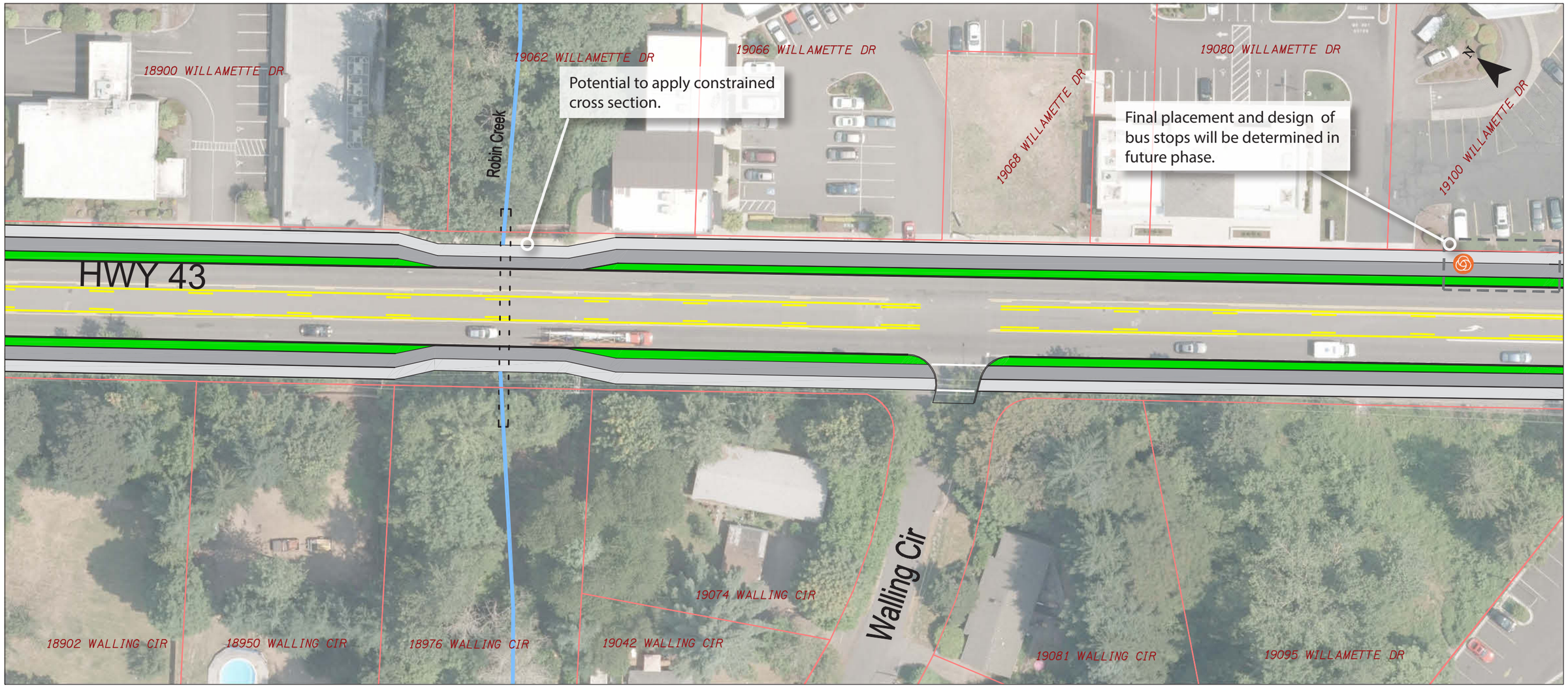
[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **5**

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

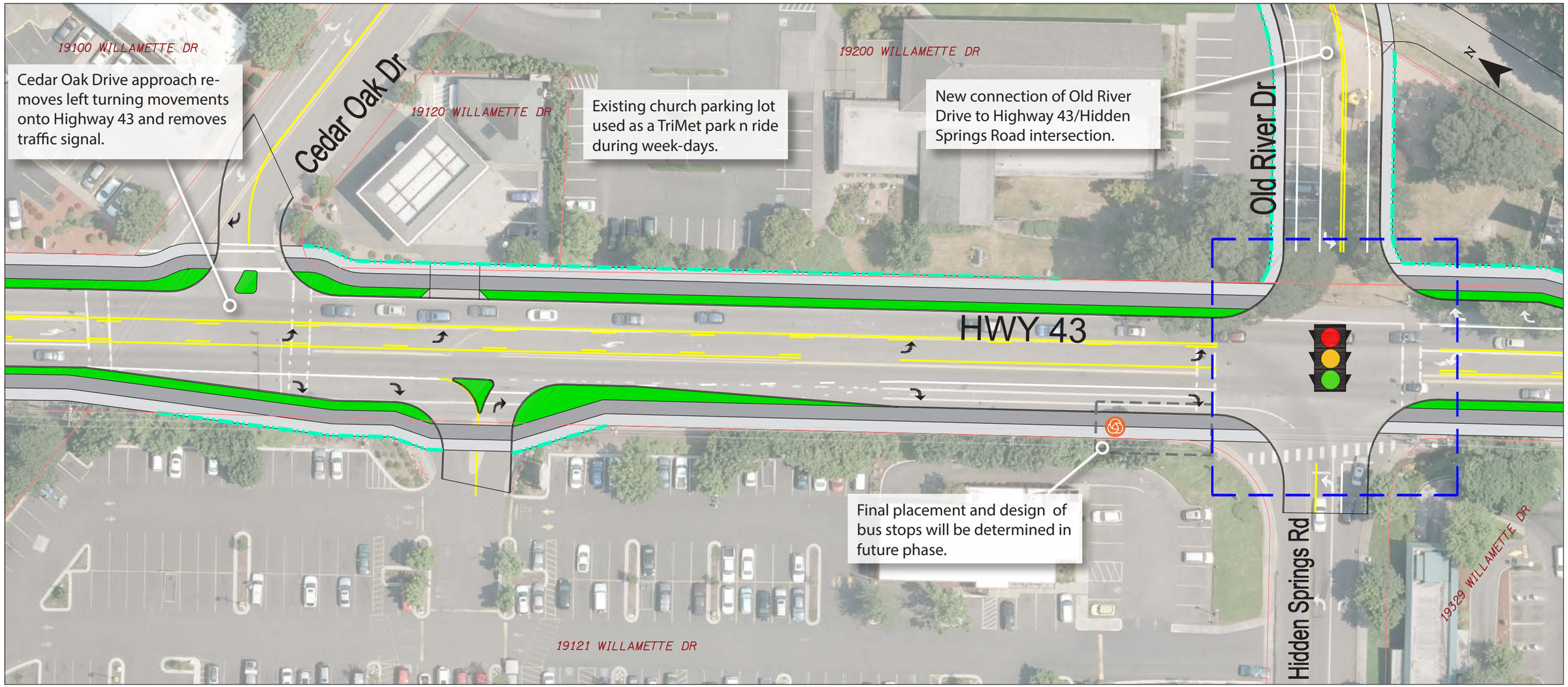
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **6**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

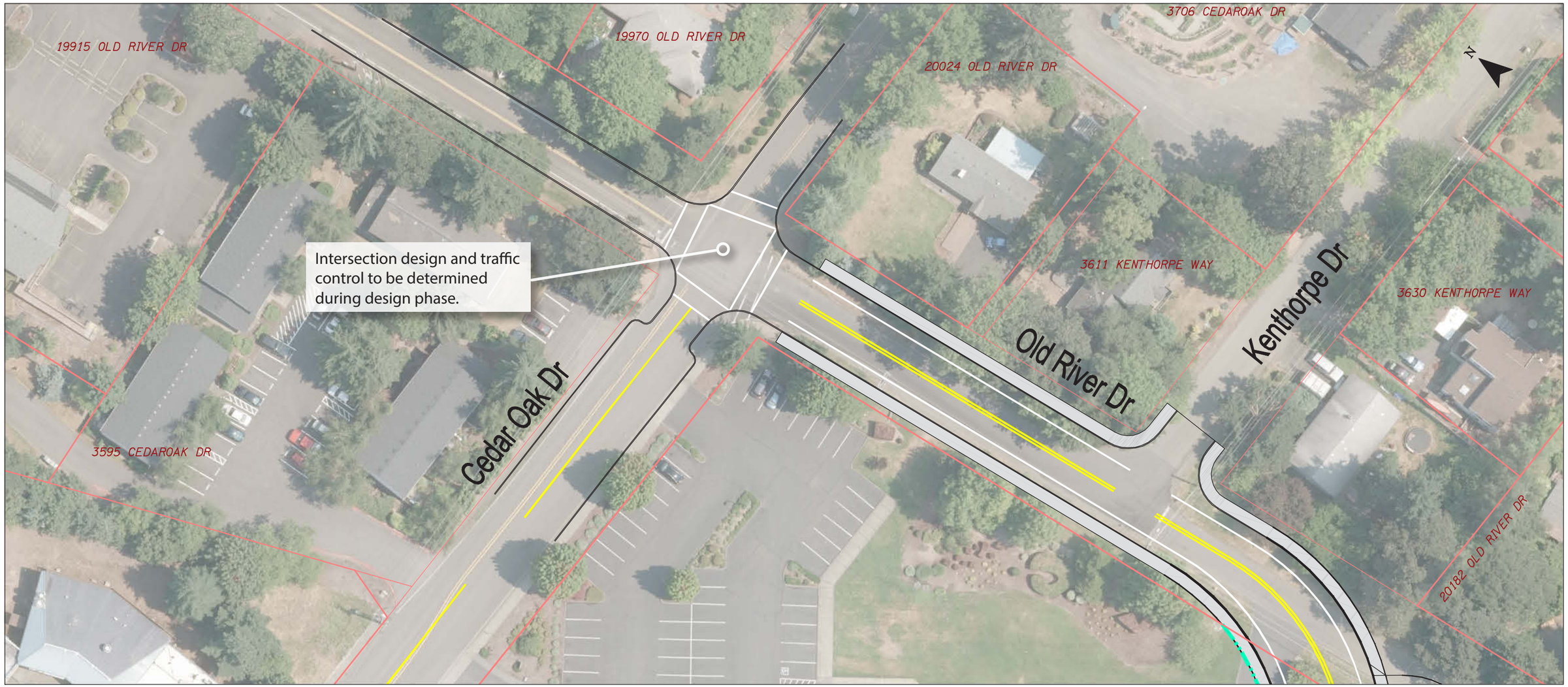
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **7**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

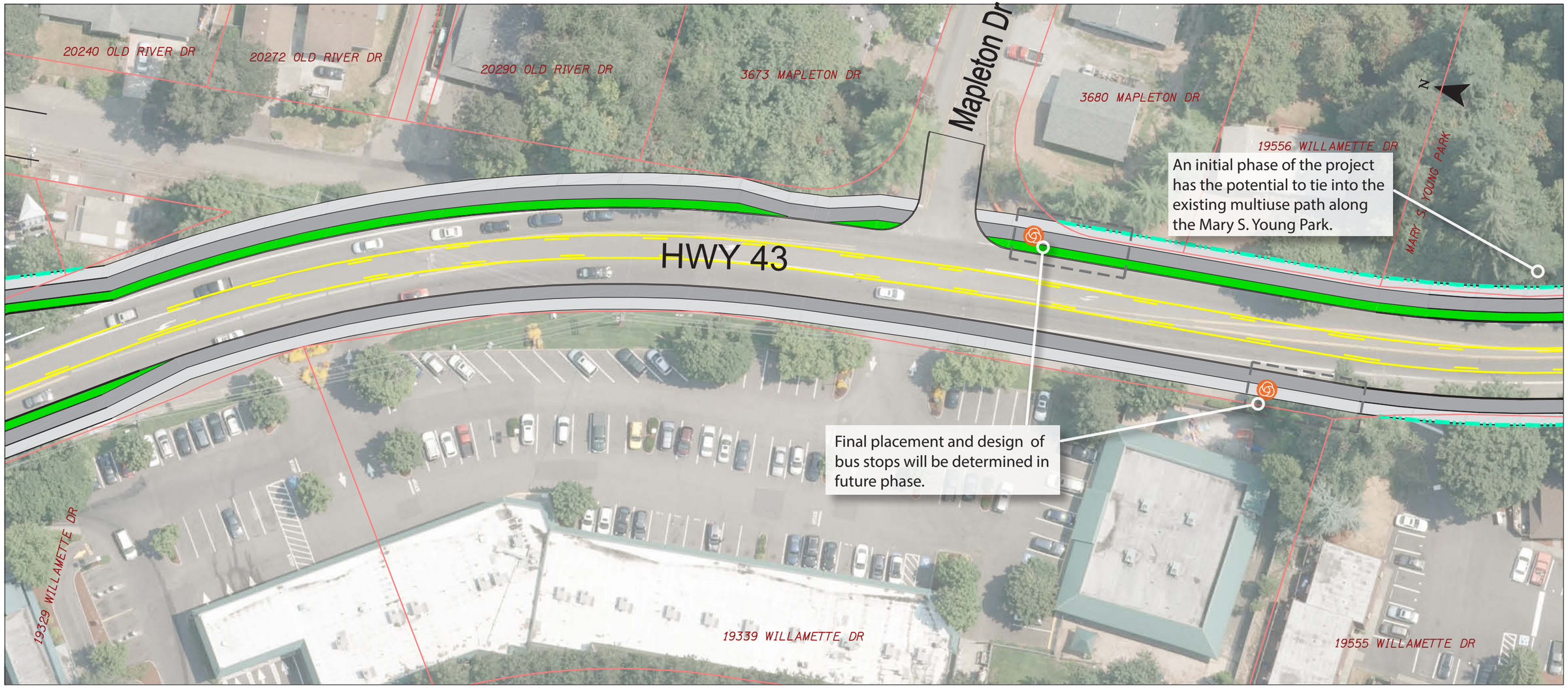
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **7A**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

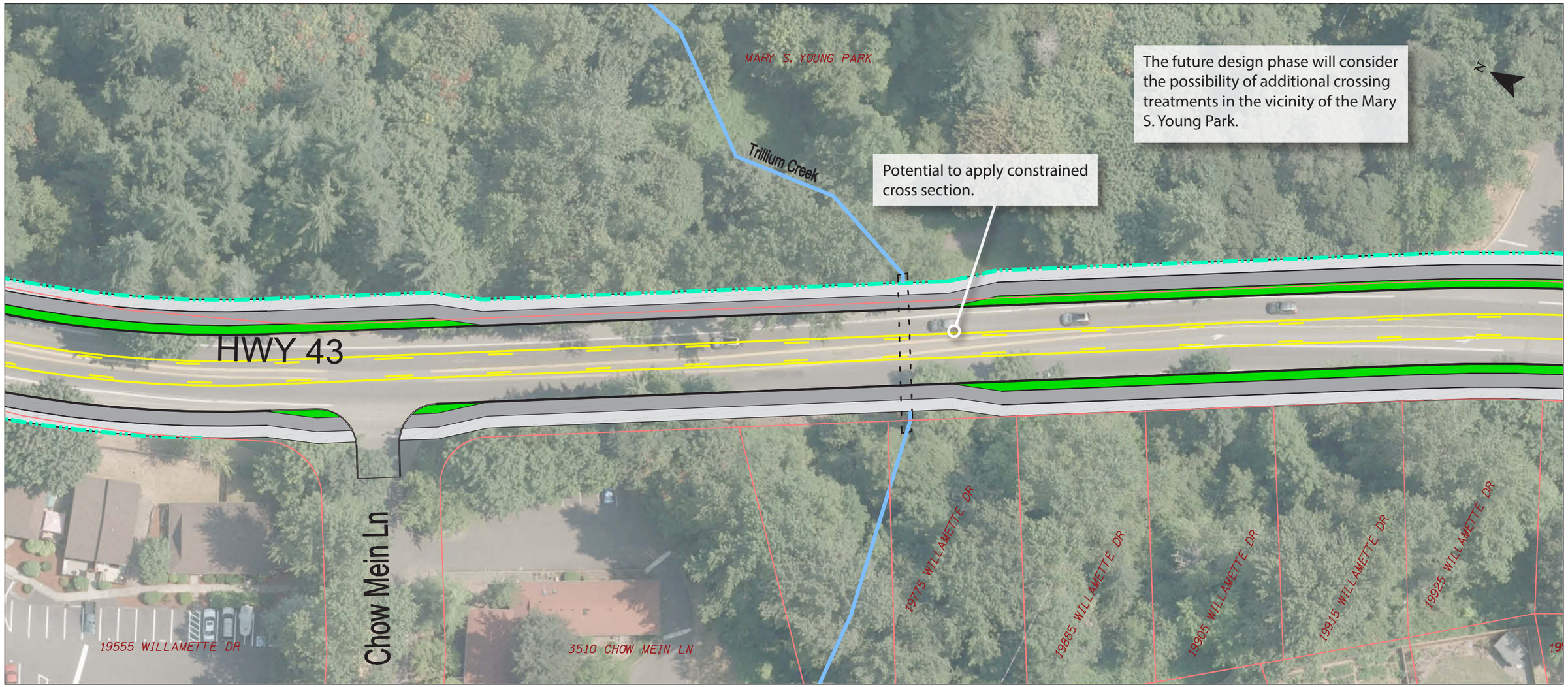
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **8**



Sidewalk

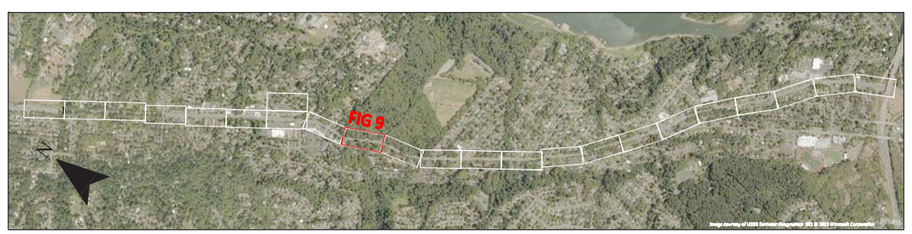
Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]



SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **9**

The future design phase will consider the possibility of additional crossing treatments in the vicinity of the Mary S. Young Park.

MARY S. YOUNG PARK

HWY 43

N

19945 WILLAMETTE DR
19975 WILLAMETTE DR
19995 WILLAMETTE DR
19944 WHITE CLOUD CIR
19978 WHITE CLOUD CIR
19990 WHITE CLOUD CIR
20026 WHITE CLOUD CIR
20044 WHITE CLOUD CIR
20060 WHITE CLOUD CIR
20110 WHITE CLOUD CIR
20128 WHITE CLOUD CIR
Mohawk Way
3855 MOHAWK WAY

Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

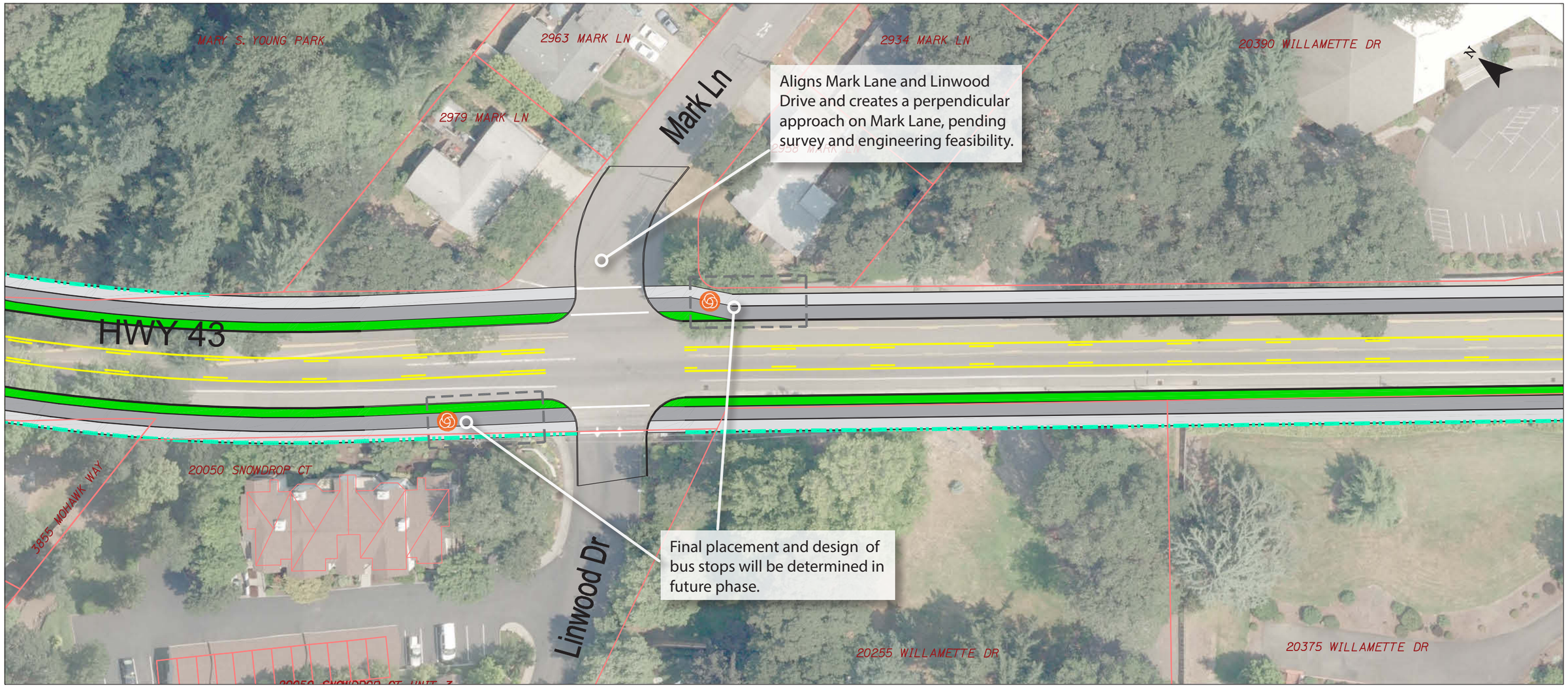
SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.
[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.
[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **10**



Sidewalk

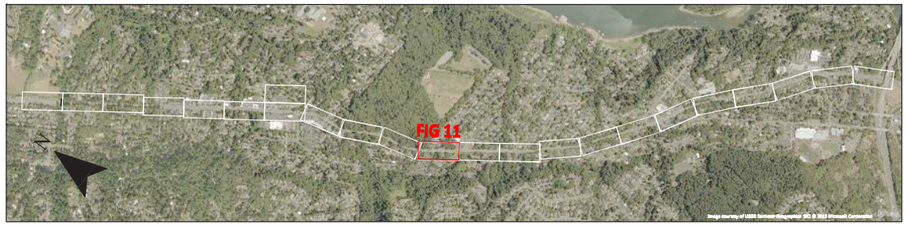
Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]



SCALE

0 50 100

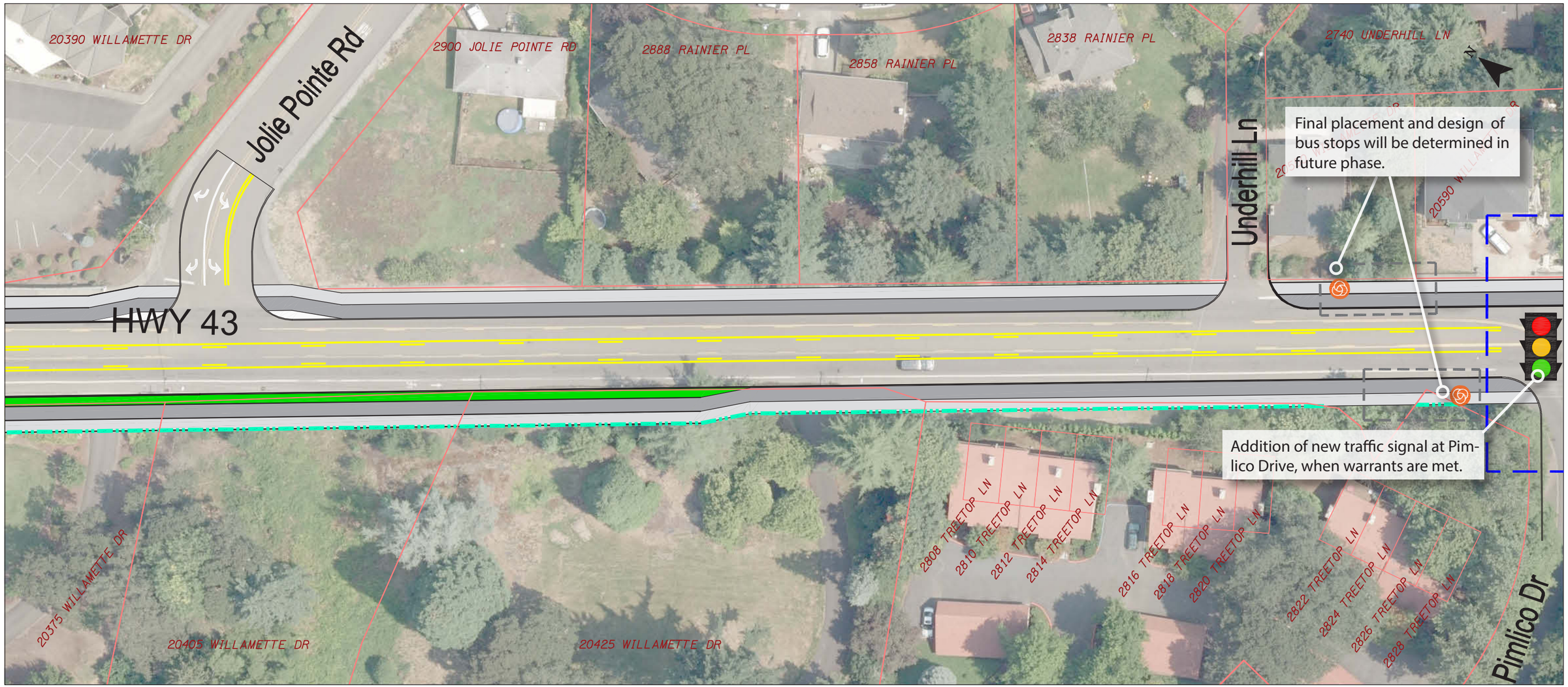
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **11**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

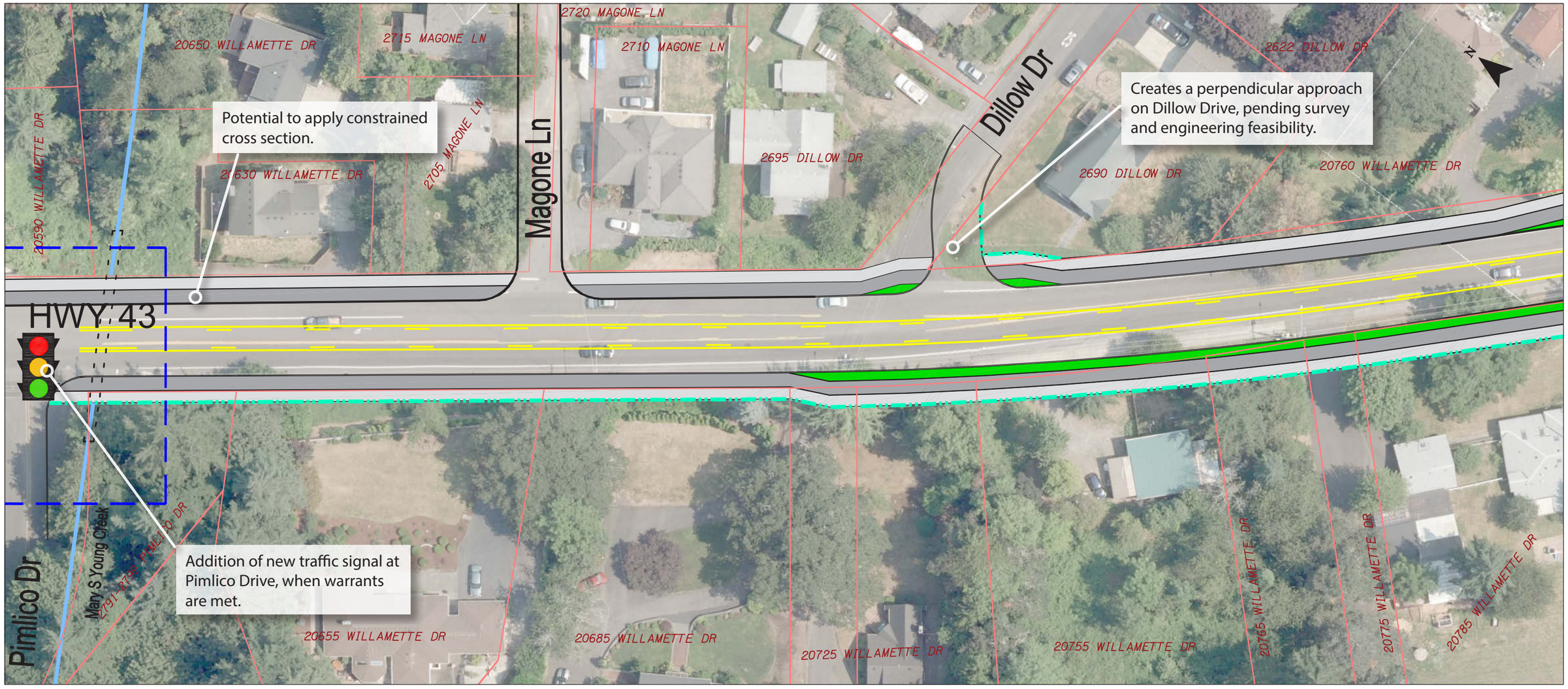
[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **12**

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING



Sidewalk

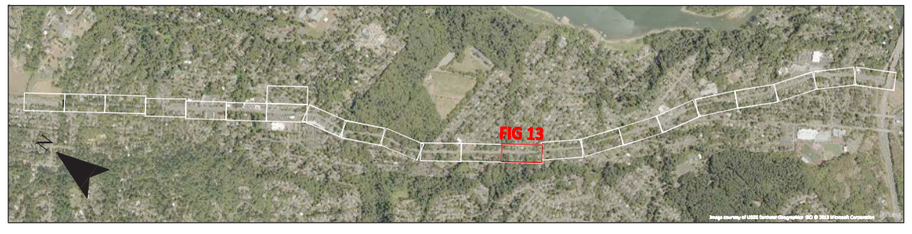
Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]



SCALE

0 50 100

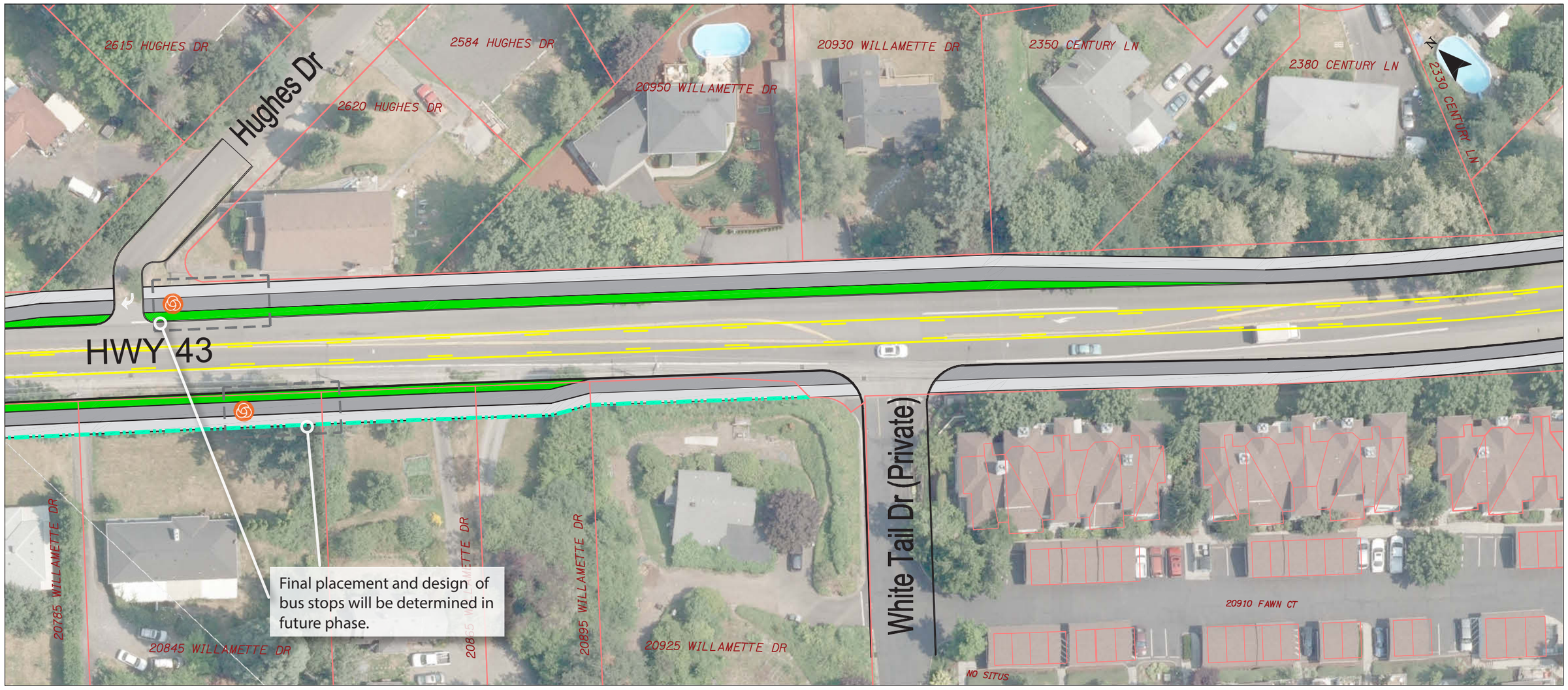
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **13**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

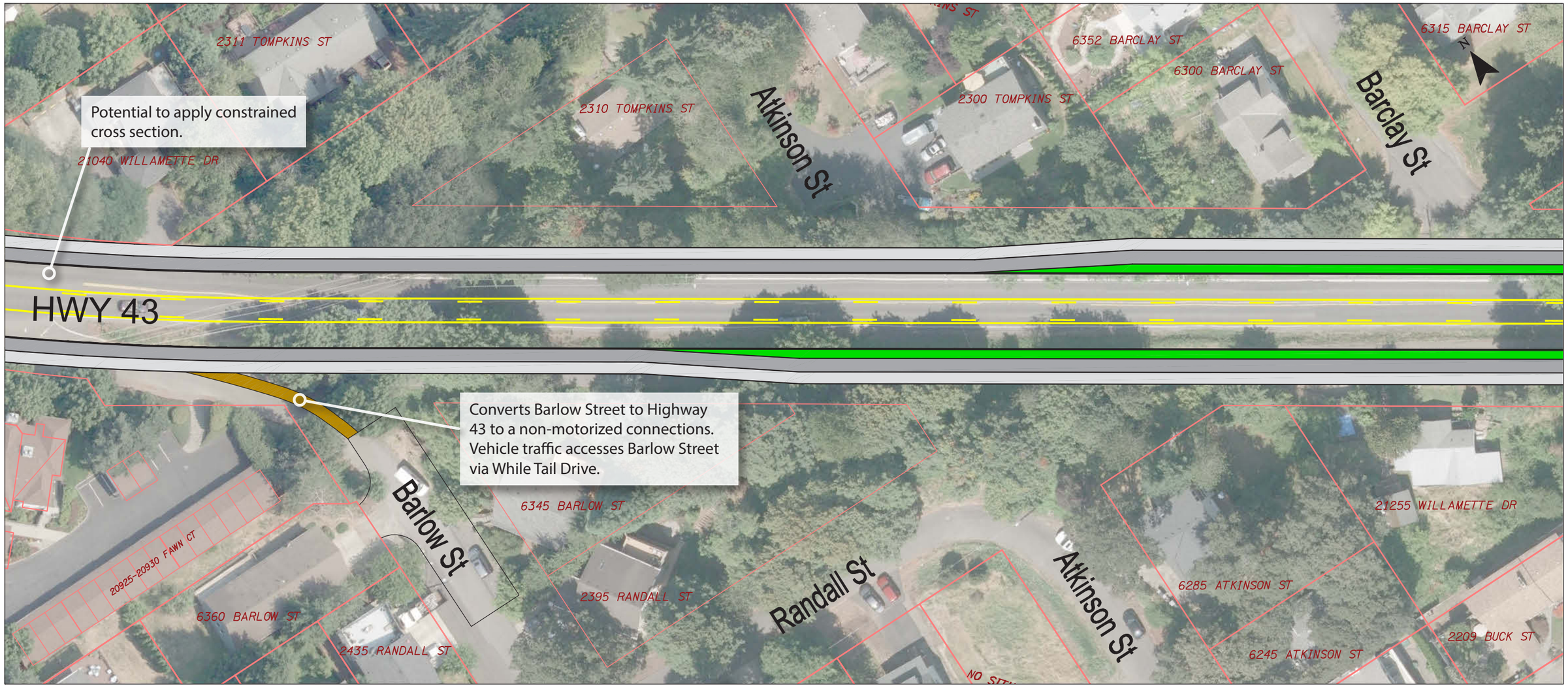
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **14**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

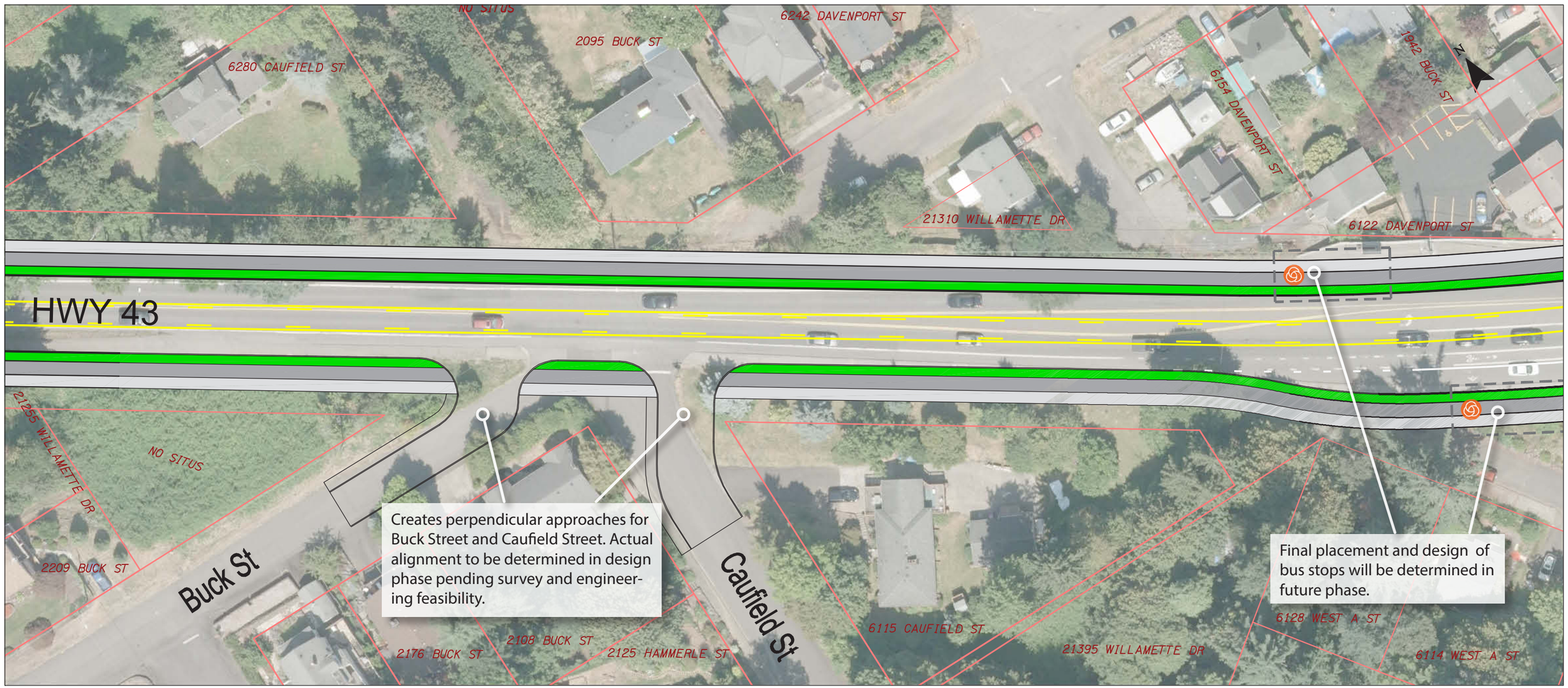
[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **15**

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

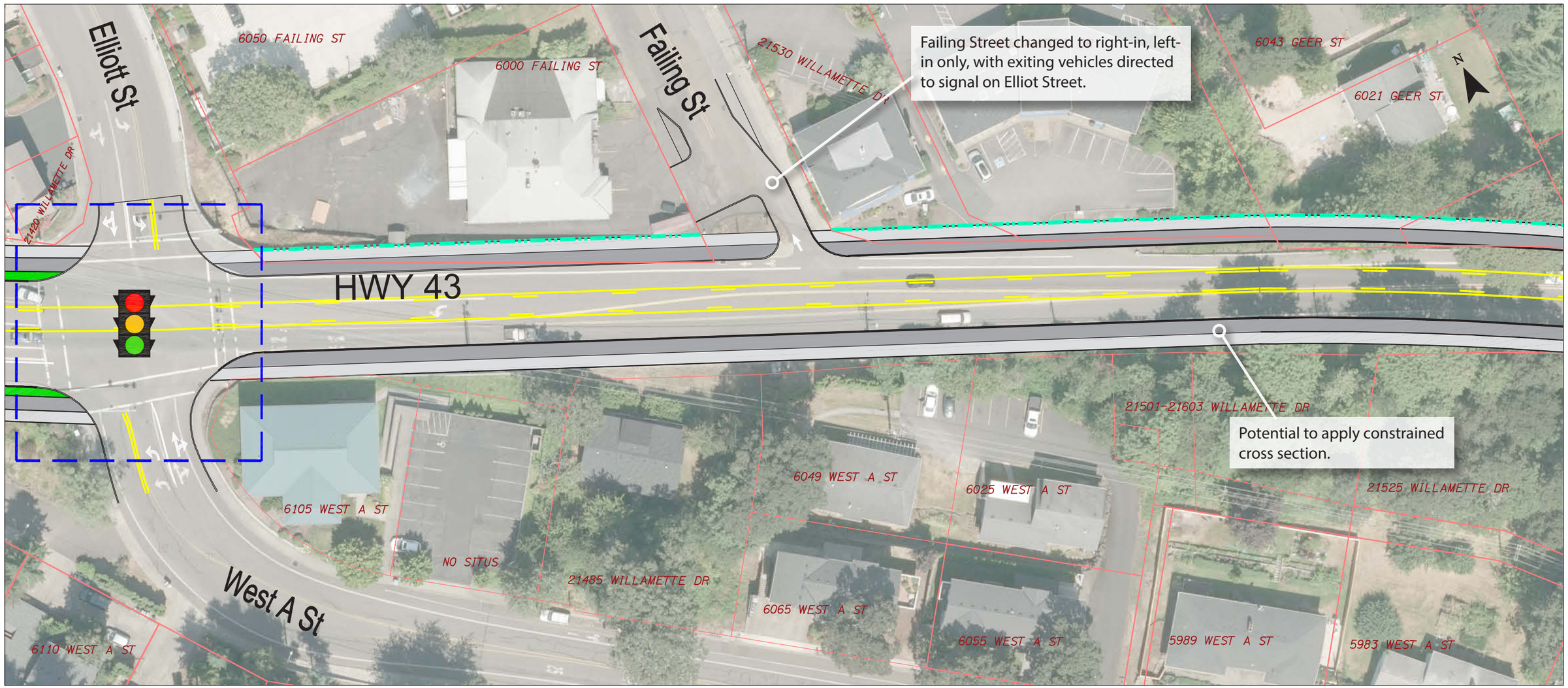
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **16**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

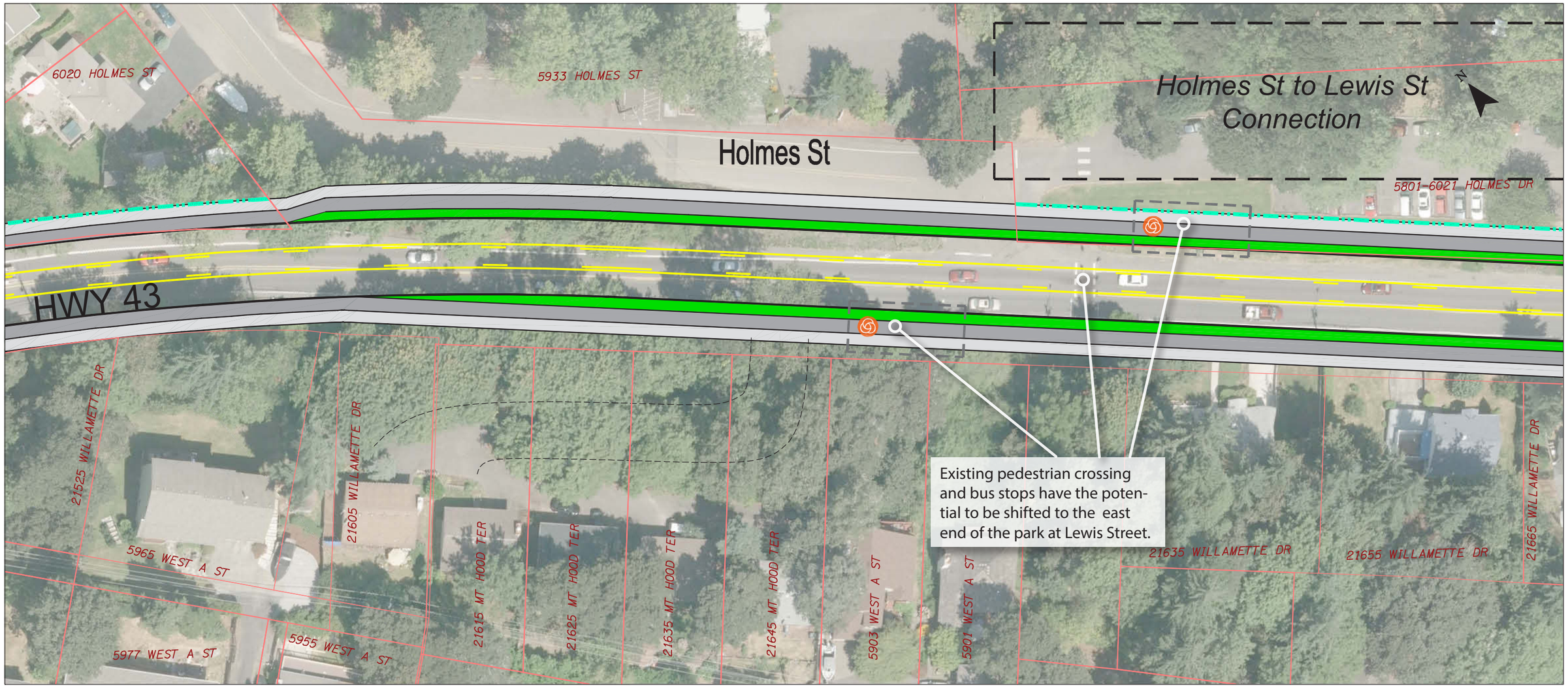
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **17**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

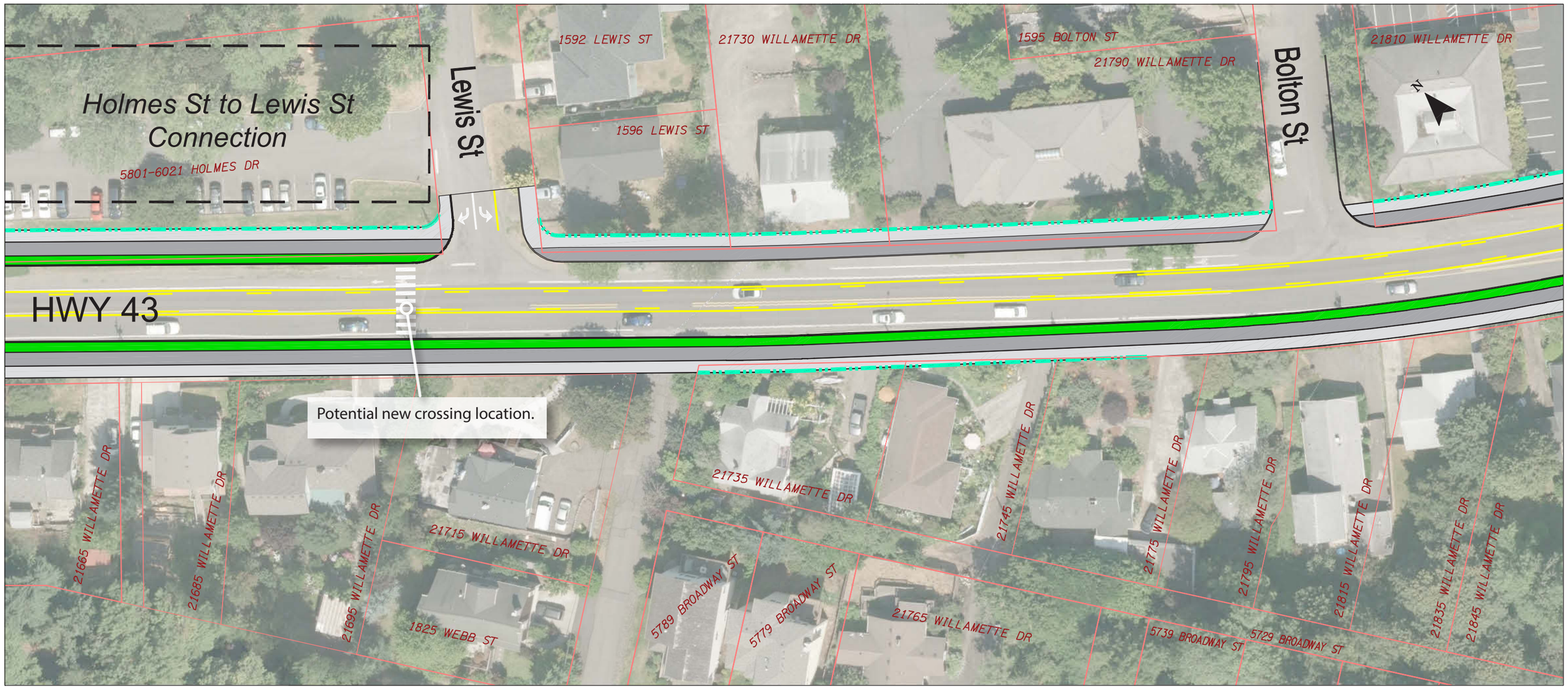
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **18**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

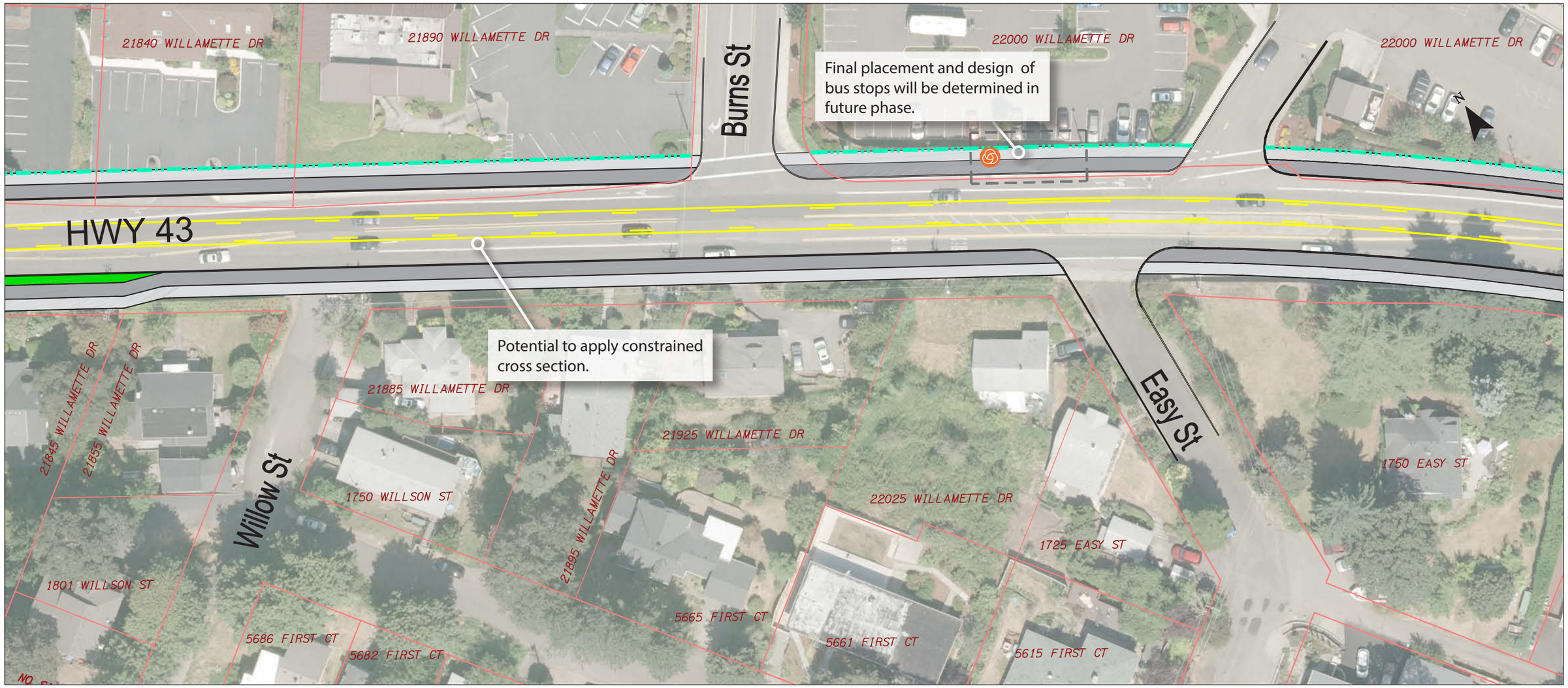
[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **19**



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

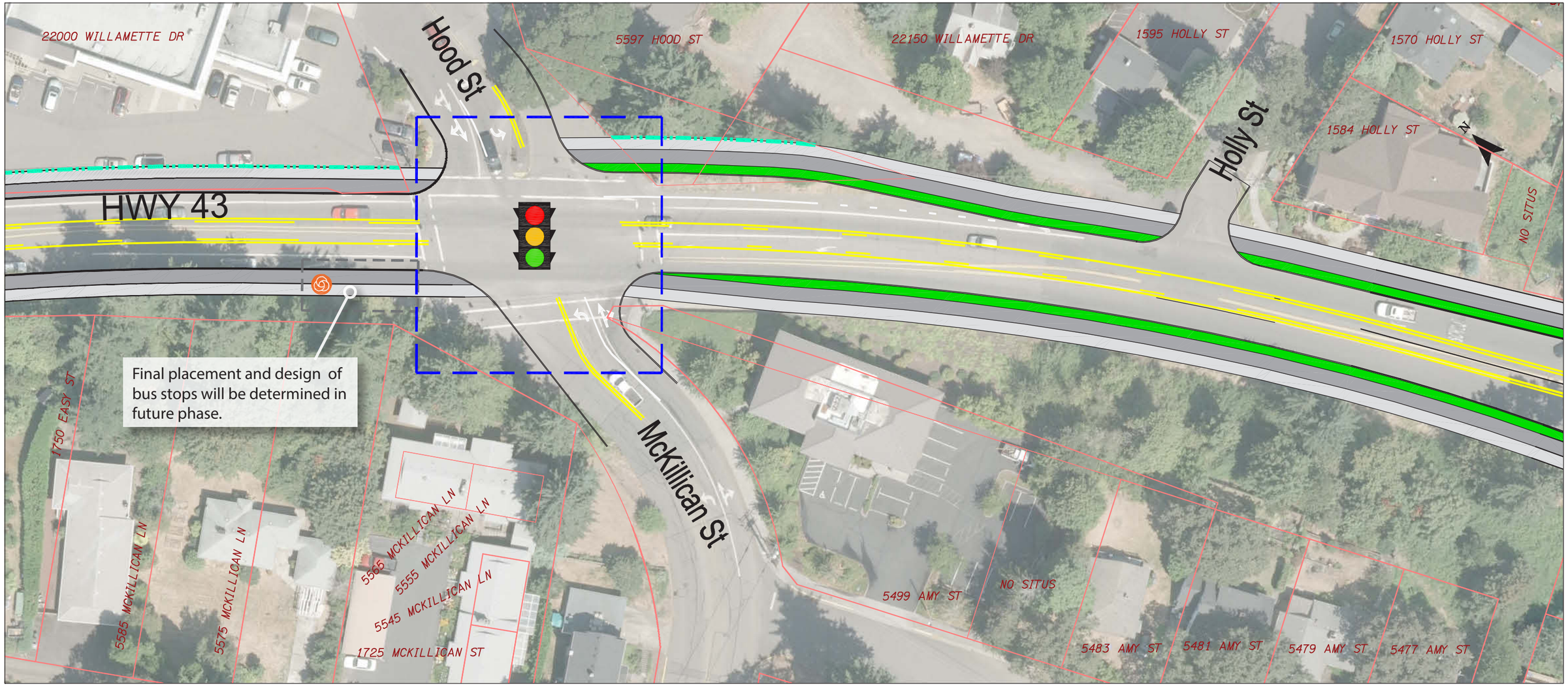
[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **20**

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING



Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **21**

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

The concept transitions to the existing condition south of Holly Street. A future interchange area management plan (IAMP) will develop the design for the Highway 43 / I-205 interchange area. Planning level concepts developed as part of the Highway 43 planning process are included in Section IV.

22250 WILLAMETTE DR

22355 WILLAMETTE DR

HWY 43

205

N

Sidewalk

Protected Bike Facility

Buffer/Landscape

TriMet Bus Stop Location[1]

Signalized Intersection[2]

Potential Right-of-way Impacts[3]

SCALE

0 50 100

[1] Bus stop locations are preliminary based on existing stop locations and potential stop consolidation. Final stop locations will be determined in the design phase of the project.

[2] Signalized Intersection design will be refined in the next design phase of the project. Signalized intersections will be designed to provide a high level of comfort and protection to bicyclists, pedestrians, and transit riders, utilizing design elements shown in the 'Signalized Intersection Concept'.

[3] Potential Right-of-way impacts are estimated and not based on survey. Actual right-of-way impacts will be determined in the next phase after acquiring survey data and refinement of the design to account for vertical grading, stormwater retention and utility relocation.

West Linn, Oregon

Figure **22**

City of West Linn
2016 West Linn OR 43 Conceptual Design Plan
PLN-15-03

Proposed Comp Plan, TSP, and CDC Amendments

The following text amendments are proposed for the City of West Linn Comprehensive Plan and development code. Additions are shown with underlined text while deletions are shown with ~~strikethrough text~~.

West Linn Comprehensive Land Use Plan Text and Policy Amendments

Goal 2 - Land Use Planning:

Section 1 – Residential Development

Goal 2. Allow a mix~~ed~~ of residential and commercial uses ~~existing~~ in Commercial Districts ~~commercial areas only in conjunction with an adopted neighborhood plan designed to~~ and ensure compatibility ~~and maintain~~ of these districts with the residential character of existing neighborhoods.

Section 3 – Mixed Use /Commercial Development

Background and Findings:

West Linn is unique in that it does not have a major commercial district or downtown… The major districts are Willamette, including the area north of I-205 at the 10th Street interchange, Bolton, the Robinwood area adjacent to Highway 43, and Tanner Basin. These areas are intended to develop into walkable mixed use districts that provide access to transit connections deliver essential services and employment opportunities for the surrounding neighborhoods.

Goals:

6. Provide for multi-modal connections to and interconnections between mixed use/commercial centers via automobile, transit, bicycle, and pedestrian ~~pathways~~ facilities, and other means.

7. Require standards for mixed-use commercial districts that promote safe access into and within these areas for walking, biking, and transit use from surrounding neighborhoods ~~areas~~ and that create livable areas ~~that fit in~~ compatible with existing neighborhood character.

Section 5 – Intergovernmental Coordination

Policies:

6. The West Linn Comprehensive Plan may include ancillary elements as part of the Plan such as the Transportation System Plan, Public Facility Plan, and neighborhood plans, as well as implementing ordinances consistent with Statewide Land Use Planning requirements.

(Note:

Update Figure 2-2 Metro 2040 Growth Concept to the 2014 version.)

Goal 11 - Public Facilities:

Section 3: Storm Drainage

Policies:

9. Adopt regulations that allow for the development of Green Streets in locations that are suitable for them.

Section 7: Schools

Policies:

5. Work cooperatively with the school district to develop a safe-routes to school program and to incorporate related transportation improvements into the transportation capital improvement program.

Goal 12 - Transportation:

(Update the Transportation Plan narrative to reflect the revised TSP improvement program for the I-205/10th Street interchange and related local network improvements. Update other narrative elements to reflect programmatic shifts in priorities and system improvements. Add descriptions for shared streets and other altered street classifications. Revise narrative for the fee-in-lieu program to reflect the policy for a dedicated sidewalk sinking fund.

General Policies and Action Measures

Policies:

9. Take action using the following measures to promote the use of Transportation Options:

   - Support community education to increase efficient use of existing transportation infrastructure and minimize congestion and safety concerns by offering choices of mode, route, and time.

- Support efforts by Metro, the Department of Environmental Quality (DEQ), transit providers, and Transportation Management Associations (TMAs) to develop, monitor and fund local TDM programs.
- Provide adequate bicycle and pedestrian facilities connecting mixed-use commercial centers to encourage use of bicycles or walking for the commute to work and to improve access to jobs for workers without cars.
- Take steps to reduce drive-alone vehicle trips with the goal to reach 40% non-drive alone trips in mixed-use areas by 2040.
- Develop regulations for mixed-use areas that require major new development and redevelopment and conditional use applications to address Transportation Options requirements.

10. Consider the Metro Regional Street Design Classifications for new and redesigned city streets prior to construction or reconstruction.

11. Reduce storm water impacts from roadways by allowing "green streets," as a design alternative in appropriate locations.

12. West Linn will take steps to eliminate and/or consolidate non-conforming accesses through the land use and development review process.

13. Consider implementing a Transportation Options program that requires all development above threshold limits to include a Transportation Options program as part of the development approval process.

Streets

Policies

6. Minimize local streets being used for pass-through traffic. Establish guidance in the City's Public Works Standards for the use of traffic calming devices on streets where speeding related to cut-through traffic is identified.

7. Adopt the following definitions and street functional classifications for each of the street types listed below:

…

- Shared Local Street: Shared local streets are a subset of local streets where proximity to water resource areas, steep terrain, or the existing residential development pattern renders the development of a standard street cross section impractical. Shared streets will be designed in such a way as to make the roadway safe for use by all modes of transportation without relying on conventional separation for autos, bicycles, and pedestrians. Special striping, LED lighting, pavement relief for paved shoulders, traffic calming, and other design features may be relied on to create a safe shared use environment.

Bicycles

Policies

2. Promote a comprehensive cohesive network of bicycle paths, lanes, and routes that accomplishes the following objectives:

a. Connect~~s~~ the ~~four~~ mixed-use commercial centers in the Willamette, Bolton, Robinwood, and Tanner Basin neighborhoods.

Pedestrians

Policies

1. Promote a comprehensive cohesive network of pedestrian paths, lanes, and routes that accomplishes the following objectives:

a. Connect~~s~~ the ~~four~~ mixed-use commercial centers in the Willamette, Bolton, Robinwood, and Tanner Basin neighborhoods.

2. Employ a variety of methods to promote safe and convenient pedestrian access in addition to, or instead of, sidewalks in older developed areas of West Linn without sidewalks. Where a fee-in-lieu option is allowed, the revenue shall be dedicated to pedestrian frontage improvements in other parts of the city.

Transit

Policies

5. Promote a cohesive transit network connecting the ~~four~~ mixed-use commercial centers in the Willamette, Bolton, Robinwood, and Tanner Basin neighborhoods.

8. Encourage the development of modes of mass transit for those residents of the City who must commute to jobs outside the City limits. Adopt performance measures targeting the reduction of single-occupancy vehicle use by commuters and for travel within and between mixed-use commercial districts.

10. Improve pedestrian and bicyclist accessibility from city neighborhoods to transit stops that are located along major transit routes ~~and to transit stations~~.

11. Support a public transit system that is accessible to the largest number of people by encouraging transit-oriented development along transit routes and in ~~Town Center areas~~ mixed-use commercial centers.

Transportation Demand Management and Options

Policies

3. Develop ~~and implement~~ a local Transportation Options ~~Demand Management~~ program that compliments, expands and improves access to regional transit pass subsidies, emergency rides home, and carpool/vanpool matching database to major employers.

West Linn Community Development Code (CDC)

CDC 46.090

G. Parking reductions. CDC 55.100(H)(5) explains reductions of up to 10 percent for development sites ~~next to~~ within ¼ mile of a transit ~~stops~~ corridor or within a mixed-use commercial area, and up to 10 percent for commercial development sites adjacent to ~~large~~ multi-family residential sites with the potential to accommodate more than 20 dwelling units.

CDC 48.025 – Access Control

A. Purpose - The following access control standards … as required by the West Linn Transportation System Plan

B. Access Control

6. Access spacing.

a. The access spacing standards found in ~~Chapter 8 of~~ the adopted Transportation System Plan (TSP) shall be applicable to all newly established public street intersections and non-traversable medians. Deviation from the access spacing standards may be granted by the City Engineer if conditions are met as described in the Access Spacing Variances Section in the adopted Transportation System Plan (TSP).

CDC 55.010

… Developers of ~~Multi~~ multi-family, industrial, commercial, office, and public building projects ~~will comply with the Transportation Planning Rule (TPR). The TPR is a State requirement that jurisdictions must~~ are required to take steps to reduce reliance on the automobile by, in part, encouraging other modes of transportation, such as transit, bicycles, and foot traffic, ~~or~~ and through building orientation or location.

CDC 55.100 – Approval Standards Type II Design Review

B. Relationship to the Natural and Physical Environment

7. Transportation ~~Planning Rule (TPR) compliance~~. The automobile shall be shifted from a dominant role, relative to other modes of transportation, by the following means:

…

CDC 60.090 Additional Criteria For Transportation Facilities (TYPE II)

A. Construction … satisfaction of all of the following criteria:

1. The project and its design are consistent with West Linn's adopted TSP, with ~~and consistent with~~ the State Transportation Planning Rule, OAR 660-012 ("the TPR"), and with the adopted Regional Transportation Plan (RTP).

CDC 85.120 Partial Development

Where the tentative subdivision … for the unsubdivided portion. A tentative street plan is required for sites where the un-subdivided portion of the property is greater than 300 percent of the minimum lot size allowed in the underlying zoning district.

CDC 85.170 Supplemental Submittal Requirements For Tentative Subdivision or Partition Plan

B. Transportation

1. Centerline profiles … of street construction. Where street connections are not proposed within or beyond the limits of the proposed subdivision on blocks exceeding 330 feet, or for cul-de-sacs, the tentative plat or partition shall indicate the location of easements that provide connectivity for bicycle, pedestrian use to accessible public rights of way.

CDC Chapter 85.200 Approval Criteria

No tentative subdivision or partition plan shall be approved unless adequate public facilities will be available to provide service to the partition or subdivision area prior to final plat approval and the Planning Commission or Planning Director, as applicable, finds that the following standards have been satisfied, or can be satisfied by condition of approval.

A. Streets

2. Right-of-way widths shall depend upon which classification of street is proposed. The right-of-way widths are established in the adopted TSP.

~~In order to accommodate larger tree-lined boulevards and sidewalks, particularly in residential areas, the standard right-of-way widths for the different street classifications shall be within the range listed below. But instead of filling in the right-of-way with pavement, they shall accommodate the amenities (e.g., boulevards, street trees, sidewalks). The exact width of the right-of-way shall be determined by the City Engineer or the approval authority. The following ranges will apply:~~

~~Street Classification~~	~~Right-of-Way~~
~~Highway 43~~	~~60 – 80~~
~~Major arterial~~	~~60 – 80~~
~~Minor arterial~~	~~60 – 80~~
~~Major collector~~	~~60 – 80~~
~~Collector~~	~~60 – 80~~
~~Local street~~	~~40 – 60~~
~~Cul-de-sac~~	~~40 – 60~~
~~Radii of cul-de-sac~~	~~48 – 52~~
~~Alley~~	~~16~~

~~Additional rights-of-way for slopes may be required. Sidewalks shall not be located outside of the right-of-way unless to accommodate significant natural features or trees.~~

3. Street Widths

Street widths shall depend upon which classification of street is proposed. The classifications and required cross sections are established in ~~Chapter 8 of~~ the adopted TSP. Streets are classified as follows.

Local streets … deliberately discouraged by design.

Shared Street – Provides access to residential or commercial uses in areas in which right-of-way is constrained by topography or historically significant structures. The constrained right-of-way prevents typical bicycle and pedestrian facilities such as sidewalks and bicycle lanes. Therefore, pedestrians, bicycles, and motor vehicles may share the entire width of the street. The design of the street should emphasize a slower speed environment and provide clear physical and visual indications that the space is shared across modes.

The following table identifies appropriate street width (curb to curb) in feet for various street classifications. The desirable width shall be required unless the applicant or his engineer can demonstrate that site conditions, topography, or site design require the reduced minimum width. For local streets, a 12-foot travel lane may only be used as a

shared local street when the available right of way is too narrow to accommodate bike lanes and sidewalks.

City of West Linn Roadway Cross-Section Standards

Street Element	Characteristic	Width/Options
Vehicle Lane Widths (minimum widths)		
…		
	Local	10 to 12 feet

B. Blocks and lots

2. Sizes. The recommended block size is 400 feet in length to encourage greater connectivity within the subdivision. Blocks shall not exceed 800 feet in length between street lines, except for blocks adjacent to arterial streets or unless topographical conditions or the layout of adjacent streets justifies a variation. Designs of proposed intersections shall demonstrate adequate sight distances to the City Engineer's specifications. Block sizes and proposed accesses must be consistent with the adopted TSP. Subdivisions of five or more acres that involve construction of a new street shall have block lengths of no more than 530 feet. If block lengths are greater than 530 feet, accessways on public easements or right-of-way for pedestrians and cyclists shall be provided not more than 330 feet apart.

CDC 92.010

E. Surface drainage and storm sewer system. A registered civil engineer … and meet planning and engineering requirements. Standards for the improvement of public and private drainage systems are in West Linn Public Works Standards. Developers are encouraged to adapt storm water management approaches that make use of natural systems and infiltration to manage storm runoff, including the use of vegetated swales, rain gardens, and other like systems where appropriate.