CORRIDOR MASTER PLAN DESIGN OPTIONS AND EVALUATION REPORT

ST. HELENS - US 30 & COLUMBIA BLVD./ST. HELENS ST. CORRIDOR MASTER PLAN
August 8, 2014 ***DRAFT***

Oregon Department of Transportation

APG

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GREENWORKS

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The contents of this document do not necessarily reflect views or policies of the State of Oregon.


WELCOME TO ST. HELENS

INTRODUCTION

The City of St. Helens is working with a project team of staff from the Oregon Department of Transportation (ODOT) and urban design, land use planning, and transportation engineering and planning consultants to develop a Corridor Master Plan for the US 30, Columbia Boulevard/St. Helens Street within the Houlton/Old Towne area - West of 13th Street, and Columbia Boulevard/St. Helens Street within the Houlton/Old Towne area - East of 13th Street corridor segments. The plan will reflect the community's vision of how these areas should appear and function in the future, and will include measures for how to implement the plan. The plan will focus primarily on how the major streets and intersections in these areas are designed and improved over time to ensure that vehicles, bicyclists and pedestrians have ready access to local businesses and can travel safely and comfortably within and between these different parts of town.

As initial steps in the corridor planning process, the City's project team prepared a series of technical memoranda describing existing and projected future conditions in the study area, including land use, urban design, access, and relevant plans and policies, as well as different strategies or approaches that may be used to meet the goals for the corridor.

The previous design options report summarized and illustrated a set of alternative design concepts and improvements for the three corridor segments, including:

- proposed plan view drawings of the corridor segments (with elements such as pedestrian crossings, gateway features, and special opportunity areas);
- three-dimensional cross-sections showing streetscape design options for each corridor segment; and
- potential enhancements to key intersections in the project area.

The information in the design options report built on previous work conducted for this project, in particular, the project Vision and Guiding Principles, existing conditions report, and Streetscape Design Toolkit. The project team, advisory committees, local business and property owners, St. Helens Planning Commission and City Council, and other community members reviewed and evaluated the design options, and the project team has prepared this Design Options Evaluation report incorporating ideas and feedback received to date.

The Table of Contents for this report is as follows. Sections that address recommendations and design options are broken down into the three corridor segments.

- Summary of Draft Recommendations
- Evaluation of Draft Corridor Design Options
  - Summary of Evaluation Criteria and Process
  - Summary of Options Evaluated
  - Rationale for Recommended Design Options
- Recommended Corridor Design Options
  - Overall Approach
  - Streetscape Design Concepts
  - Special Opportunity Areas
  - Conceptual Intersection Enhancements
  - Phasing recommendations and cost considerations
- Policy and Regulatory Changes
  - Land Use Issues and Potential Changes
  - Development Code Changes or Strategies
  - Access Management Goals and Approach
- Next Steps

  The Next Steps section addresses what will be done with this report and the project process that follows.

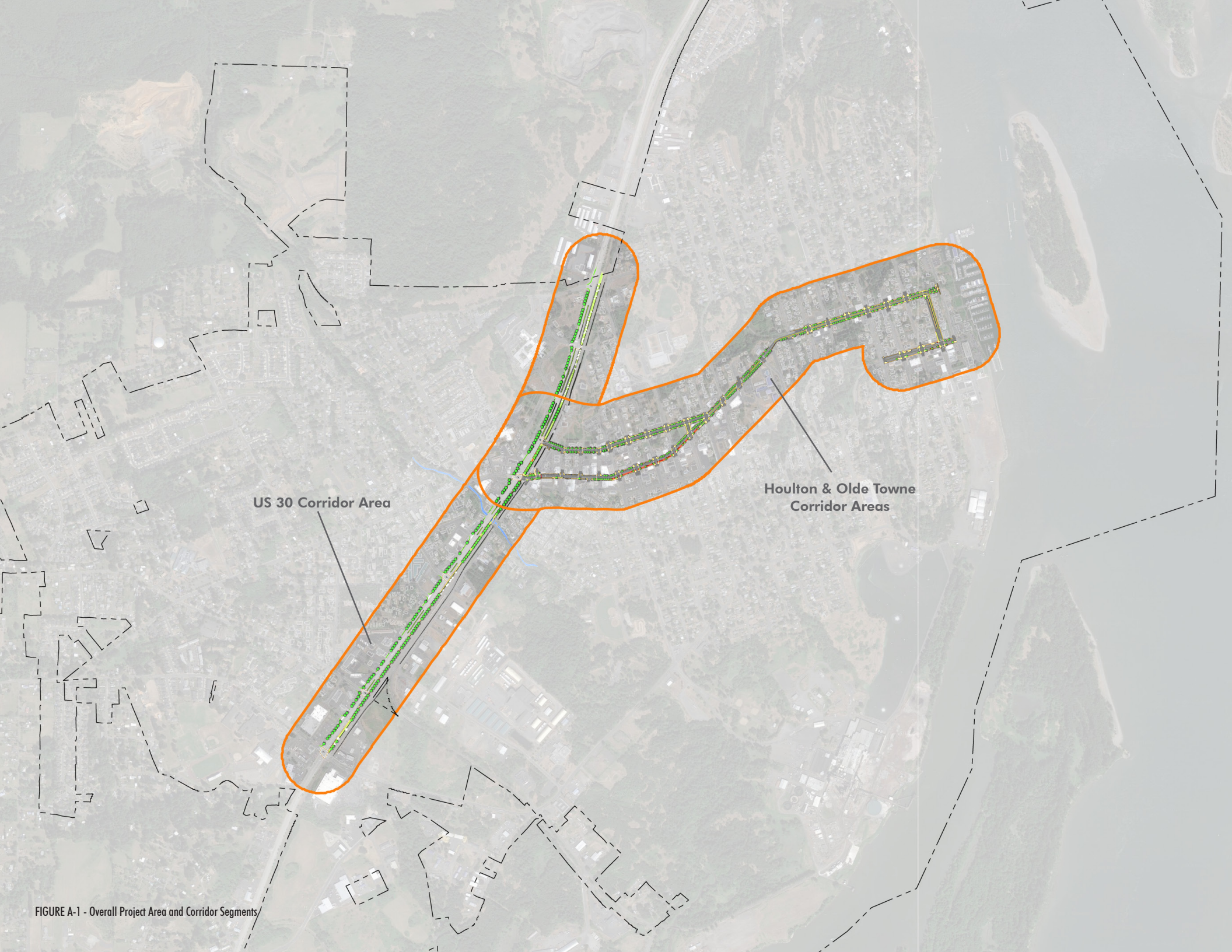


FIGURE A-1 - Overall Project Area and Corridor Segments

A. SUMMARY OF DRAFT RECOMMENDATIONS

US 30 Corridor Segment

DESIGN RECOMMENDATION FOR US 30 CORRIDOR SEGMENT
• Option 1 (Green Edge), short-term • Sidewalk and fencing on the rail side as shown in Option 2 (Green Corridor), long-term

The streetscape design option recommended for the US 30 Corridor Segment is Option 1 (Green Edge) with lower-cost plantings in the median, a combination of banner poles, and more consistent landscaping on the east side (rail side) of the highway in the short-term

Developing sidewalk and fencing on the rail side, as is shown in Option 2 (Green Corridor), is recommended in the long-term, if feasible within the available area and rail constraints.

The recommendation includes planted center medians at designated locations throughout the corridor segment and fencing on both sides of the rail corridor. An initial review of the corridor segment shows that there is enough room on the rail side of the highway for a six-foot sidewalk and at least three feet of landscaped area along the entire length of the US 30 corridor segment. Portions of potential future improvements along the rail side may encroach on the railroad easement currently owned by the Portland and Western Railroad (PNWR). If railroad right-of-way is required to accommodate the proposed improvements, it is likely that the right-of-way would need to be purchased from the Portland and Western Railroad. Even though the state of Oregon technically owns the underlying right-of-way, due to an existing rail service easement benefitting PNWR, the state cannot sell, lease or give permission for improvements thereon, without consulting with PNWR.

Two **Special Opportunity Areas** are recommended for the US 30 corridor segment.

- US 30/Downtown Gateway
- Pedestrian Bridge at Milton Creek

Conceptual Intersection Enhancements are recommended at the following intersections in this corridor segment.

- US 30 / Wyeth Street
- US 30 / St. Helens Street

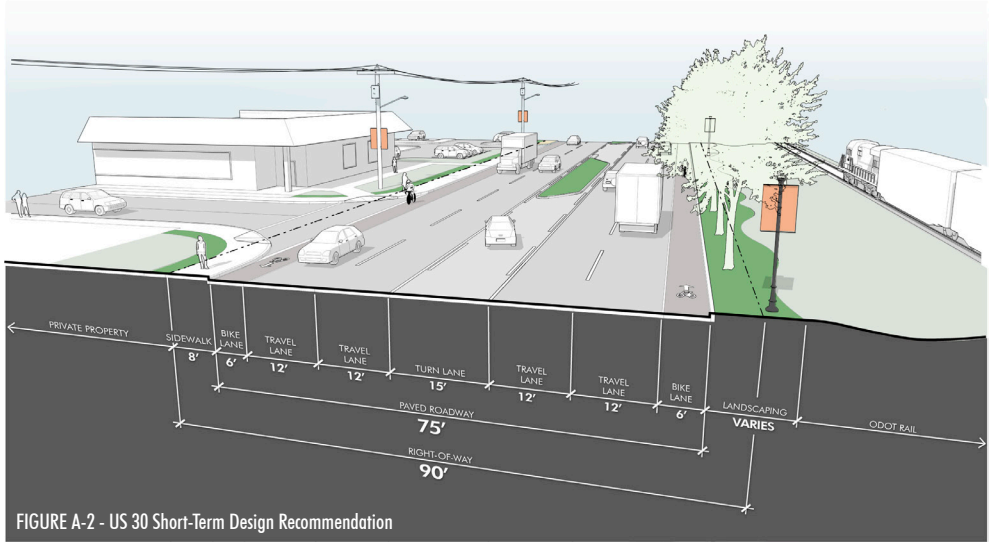


FIGURE A-2 - US 30 Short-Term Design Recommendation

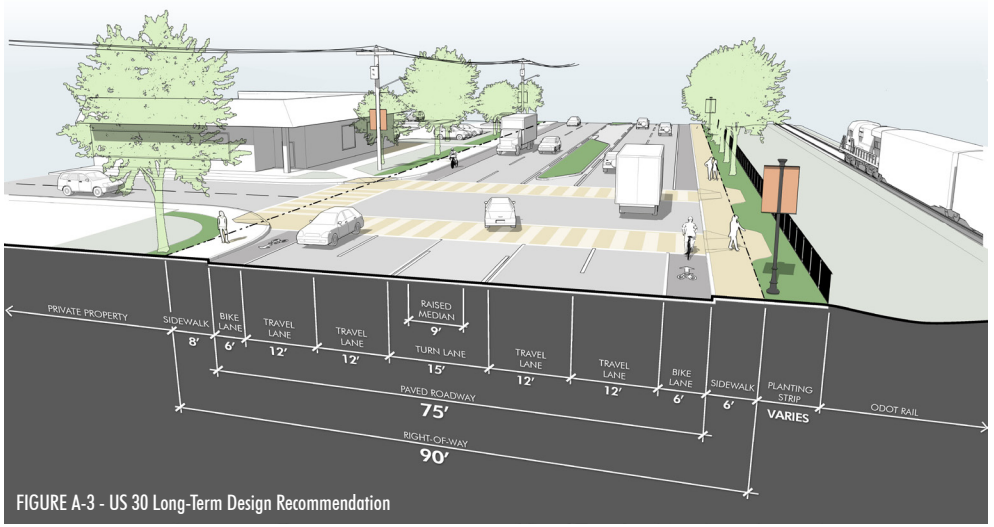


FIGURE A-3 - US 30 Long-Term Design Recommendation

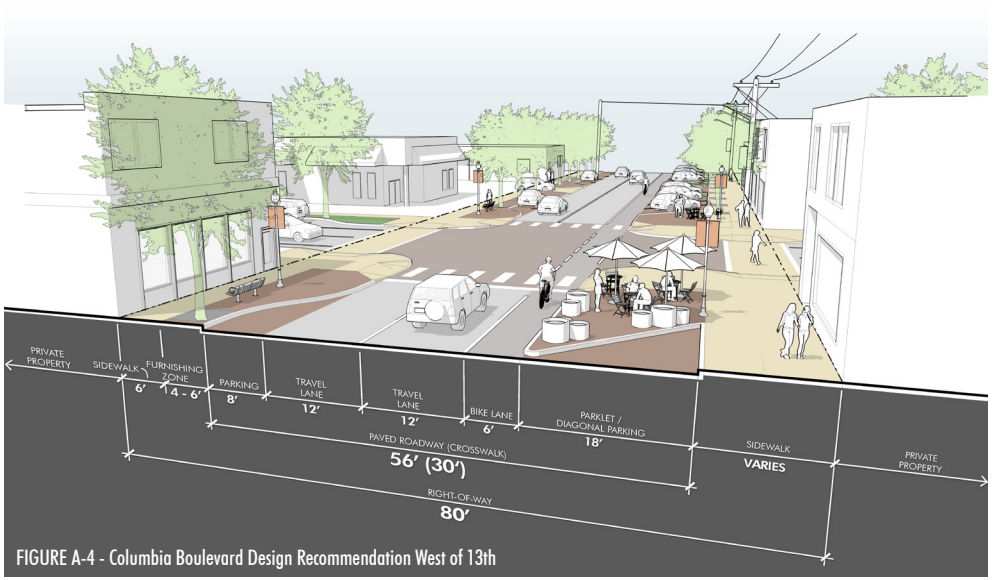


FIGURE A-4 - Columbia Boulevard Design Recommendation West of 13th

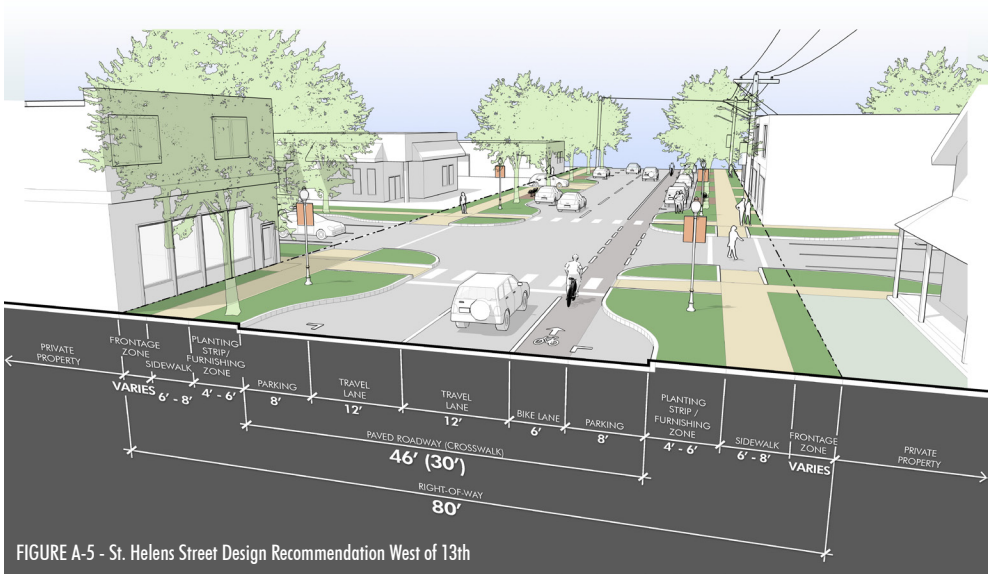


FIGURE A-5 - St. Helens Street Design Recommendation West of 13th

Houlton/Olde Towne – West of 13th Street

DESIGN RECOMMENDATION FOR HOULTON/OLDE TOWNE – WEST OF 13TH STREET
• Columbia Boulevard: Option 3 (Parklets)
• St. Helens Street: Option 1 (Pedestrian Promenade), with bicycle lanes

The Parklet option proposed on the majority of Columbia Boulevard includes wider sidewalks, a bicycle lane and on-street parking on both sides of the street, with angled parking provided along the south side of Columbia Boulevard. This efficient parking layout allows room for large, open sidewalk areas called "parklets" at each intersection corner and/or in selected mid-block locations. Given the available right-of-way, angled parking would not be feasible between US 30 and 18th Street. In that area, parallel parking would be provided but parklets could still be included based on requests or agreements between property owners and the City in place of some on-street parking.

The Pedestrian Promenade on St. Helens Street includes widened sidewalks with generous planting strips and/or furnishing zones with street trees on both sides of the street. Curb extensions are proposed at all intersections in both the Parklet and Pedestrian Promenade options.

In ODOT terminology, buffered bike lanes refer to bike lanes with an extra wide striped area between the vehicle travel lane and the bike lane, creating a "buffer". Although not represented in the graphic, the City could create buffered bicycle lanes as an interim striping improvement on Columbia Boulevard and St. Helens Street. The striping would offer lost cost alternative in the short term if the City resurfaces St. Helens Street in the next few years but doesn't have the full funding to implement the other plan elements.

Three **Special Opportunity Areas** are recommended for this corridor segment:

- Gateway Plaza - Columbia Boulevard / Milton Way (Chamber of Commerce)
- Stormwater / Interpretive Gathering Space - Columbia Boulevard /14th Street
- Civic Gathering Space - Columbia Boulevard /13th Street

Conceptual Intersection Enhancements are recommended for the following sets of intersections in this corridor segment.

- Columbia Boulevard / Milton Way
- Columbia Boulevard / 18th Street
- Columbia Boulevard / St. Helens Street / 13th Street

Houlton/Olde Towne – East of 13th Street

DESIGN RECOMMENDATION FOR HOULTON/OLDE TOWNE – EAST OF 13TH STREET
• Primarily Option 1 (Pedestrian Promenade), with buffered bike lanes • Allow for Option 3 (Parklets) in some locations where appropriate

As noted above, the Pedestrian Promenade option includes widened sidewalks with generous planting strips and/or furnishing zones with street trees on both sides of the street, along with curb extensions at all intersections. Identifying opportunities for parklets are recommended for this corridor segment in situations such as temporary parklets within parallel on-street parking areas. Curb extensions, a bicycle facility, and improved crossings at the intersections are also recommended.

Although not represented in the graphic, the City could create buffered bicycle lanes as an interim striping improvement on Columbia Boulevard and St. Helens Street. The striping would offer lost cost alternative in the short term if the City resurfaces a street segment in the next few years but doesn't have the full funding to implement the other plan elements.

Four **Special Opportunity Areas** are recommended for this corridor segment.

- Civic Gathering Space – Columbia Boulevard / 9th Street
- Civic Gathering Space – Columbia Boulevard / 2nd Street
- Columbia River Overlook – Columbia Boulevard just east of 1st Street
- Olde Towne Overlook – 1st Street between Columbia Boulevard & St. Helens Street

Conceptual Intersection Enhancements are recommended for the following sets of intersections in this corridor segment.

- Columbia Boulevard / 11th Street
- Columbia Boulevard / 9th Street
- Columbia Boulevard / 7th Street
- Columbia Boulevard / 1st Street
- St. Helens Street / 1st Street

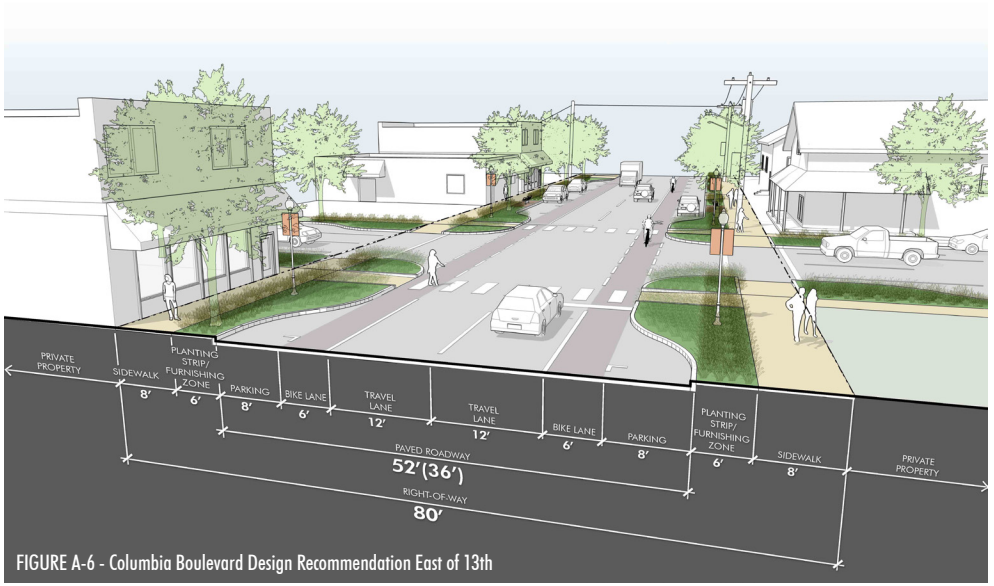


FIGURE A-6 - Columbia Boulevard Design Recommendation East of 13th

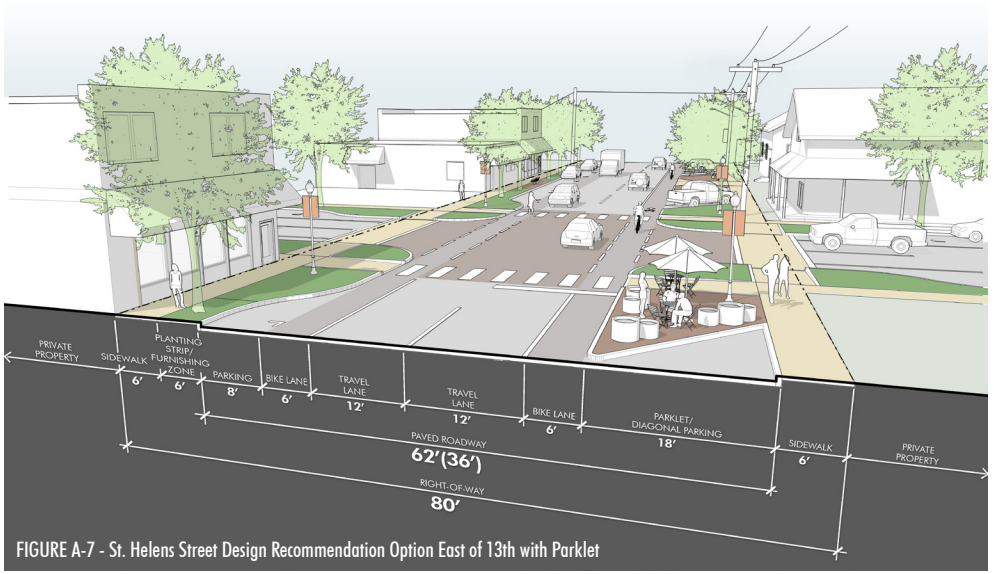


FIGURE A-7 - St. Helens Street Design Recommendation Option East of 13th with Parklet

B. EVALUATION OF DRAFT CORRIDOR DESIGN OPTIONS

Summary of Evaluation Criteria and Process

In evaluating the relative merits of different street design options, the project team considered the goals and guiding principles developed in earlier phases of the project, along with the feedback and recommendations received from community members including:

- Business and property owners
- Technical and citizen advisory committees
- St. Helens Planning Commission
- St. Helens City Council

Following is a summary of the project goals and objectives and feedback received from those groups.

EVALUATION CRITERIA

GOALS AND GUIDING PRINCIPLES

One of the first steps in the Corridor Planning process was to identify a Vision for the area and a set of related goals and guiding principles for the project and the different corridor segments being addressed by it. This document includes the vision, goals and guiding principles which were reviewed and refined based on discussion with project advisory committee members, local business and property owners, the St. Helens City Council and other community members.

CORRIDOR VISION

US 30 Corridor Segment

US 30 will provide safe, convenient access to local businesses along the highway, while balancing that with state goals for traffic mobility. The appearance of the highway will be improved over time to enhance landscaping and other elements that will make it a more attractive place for people to travel by car, bicycle, walking or transit. Key intersections such as at Gable Road, Columbia Boulevard and St. Helens Street will be improved to enhance safety for all types of travel and to create attractive, clearly recognizable gateways to other parts of St. Helens, helping meet the community's goals for economic revitalization in those areas.

Columbia Boulevard/St. Helens Street Segment

Columbia Boulevard and St. Helens Street will provide safe, convenient travel to access the Houlton business area, Olde Towne and adjacent neighborhoods by drivers, bicyclists and pedestrians. These streets will provide convenient access to local businesses and be attractively designed to help draw people to the area and enhance their shopping and travel experiences. Street designs will incorporate opportunities for landscaping, public art and signage that directs people to the Houlton area and Olde Towne. Designs will recognize physical conditions and constraints, be cost-effective and build on natural and cultural features and other opportunities in the area.

OVERALL PROJECT GOALS

- Create "streetscape" plans for the US 30 and Columbia Boulevard/St. Helens Street corridors that reflect the community's vision for appearance and function.
- Improve the aesthetics and function of the corridors to attract business and investment, provide better access, direction and signage to the Houlton and Olde Towne areas, and improve desirability.

PROJECT AND CORRIDOR GUIDING PRINCIPLES

Planning Process and Community Involvement

- Establish a community vision, goals and guiding principles for the project area.
- Engage business and property owners, residents, stakeholders, and elected and appointed officials.
- Ensure consistency with local and state plans and policies.

Economy and Business Support

- Develop planning design and implementation standards to revitalize businesses and business districts in the planning area.
- Ensure that customers, employees and others have good access to local businesses, including through on-street parking.
- Ensure that proposed solutions and projects are cost-effective and make efficient use of limited resources.

Transportation Safety and Mobility

- Improve street connectivity, design, and ability to access and locate business areas.
- Improve pedestrian and bicycle safety and accessibility, thereby encouraging walking and bicycling.
- Balance the need for local access and traffic calming with the need to provide for through-traffic movement and mobility (particularly in the US 30 corridor) as well as emergency vehicle accommodations.
- Develop and implement solutions that are consistent with local and regional transportation needs.

Connectivity and Streetscape Aesthetics

- Improve the appearance of the US 30 and Columbia Boulevard/St. Helens Street corridors.
- Improve pedestrian and bicycle connectivity between the corridor areas and adjacent open spaces and parks, trail/bicycle/transit networks, and neighborhoods.
- Develop and apply street designs that serve the unique needs of each corridor segment (US 30, Houlton and Olde Towne).
- Consider opportunities for integrating sustainable design strategies into the streetscape design and implement them where appropriate.

PROCESS

The Streetscape Design Concepts have been reviewed and discussed with members of the project Technical Advisory Committee (TAC), Citizens Advisory Committee (CAC), business and property owners, the St. Helens Planning Commission and other community members at a series of meetings in March and April. The Streetscape Design Concepts also have been evaluated for consistency with the project Goals and Guiding Principles, including improving safety, economic vitality, appearance and function of these areas, as well as relative cost and financial feasibility of implementing the improvements. Based on the review and evaluation of the concepts, the project team identified a preferred design concept and set of improvements for each corridor area that was reviewed further by advisory committee and other community members.

Summary of Options Evaluated

US 30 CORRIDOR SEGMENT

Three alternative streetscape design options were developed for consideration for the US 30 corridor segment, and are shown in Figure B-1. In general, these options would apply to the entire corridor segment but some of the individual improvements are targeted to specific locations within the corridor. Each concept attempts to "humanize" the current vehicle-dominated environment and create a civic identity befitting St. Helens through the use of landscape plantings, street trees, landscaped roadway medians, and improved pedestrian sidewalks and crossings. Each of the three concepts is described in further detail below. The descriptions are followed by a summary of responses from advisory committees, business and property owners, the Planning Commission, and City Council to these options. (See Table B-1: Feedback Regarding Design Options In The US 30 Corridor Segment)

OPTION 1: "GREEN EDGE" – This option proposed to create a distinctive landscaped edge along the east side of the highway while discouraging informal pedestrian crossings of US 30 and of the railroad tracks. Crosswalks would be provided at signalized intersections along US 30 to offer connectivity with destinations (potentially including future bus stops) and/or other sidewalks, and a new distinctive planting area was proposed along the east side of the highway.

OPTION 2: "GREEN CORRIDOR" – This option proposed a new sidewalk with a planting strip and continuous fence along the east side of the highway, with enhanced pedestrian crossings at key intersections. Raised planted medians with trees and shrubs were also proposed along the middle of the highway at strategic locations, as well as new planting areas behind the sidewalk along the west side of the highway.

OPTION 3: "COMPLETE STREET" – Option 3 proposed to modify US 30 to meet the recommended roadway cross section established for Major Arterials in the 2011 Transportation System Plan (TSP). This includes widening the west sidewalk to accommodate a new planting strip with street trees, several planted medians at strategic locations, reconstructing the east curb to accommodate a new sidewalk and planting strip with street trees, and re-striping the highway. New pedestrian-scale lighting and furnishings would be proposed at strategic locations.

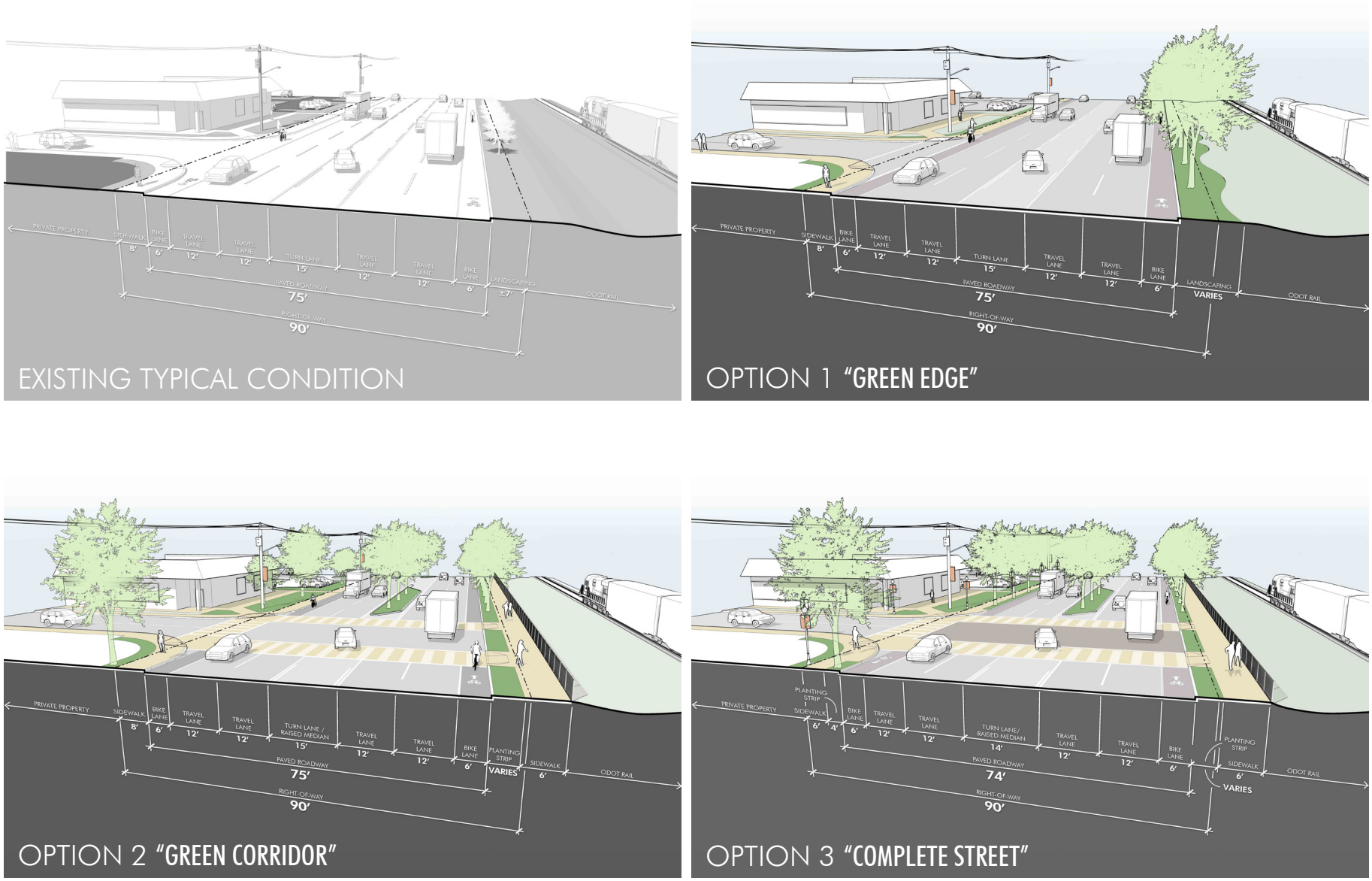


FIGURE B-1 - Existing conditions and three preliminary streetscape options developed for the US 30 corridor.

TABLE B-1: FEEDBACK REGARDING DESIGN OPTIONS IN THE US 30 CORRIDOR SEGMENT	
TAC	RECOMMENDATION: None ISSUES OF CONCERN • Maintenance • Highway Capacity • Fencing/appearance • Transit accommodation
CAC	RECOMMENDATION: None, but generally supported concepts ISSUES OF CONCERN • Maintenance • Visibility related to trees in median or planting areas • Access to east side landscaped area
PROPERTY AND BUSINESS OWNERS	RECOMMENDATION: None ISSUES OF CONCERN • Potential visibility impacts of median landscaping and street trees • Landscaping maintenance • Location of medians • Visual impacts of overhead utilities • Demand for eastside sidewalk
PLANNING COMMISSION	RECOMMENDATION: None but like median; like pathway on RR side in long term ISSUES OF CONCERN • Median landscaping visibility impacts • Safety/use of pathway on RR side • Maintenance • Banner poles, lighting on RR side • Type of landscaping on RR side
CITY COUNCIL	RECOMMENDATION: None ISSUES OF CONCERN • Mixed opinions on RR sidewalk • No consensus on median

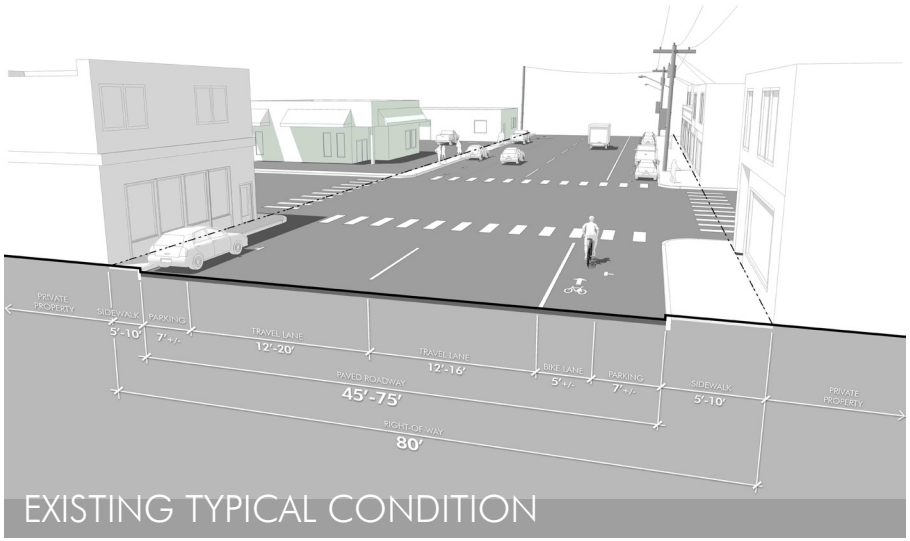
HOULTON / OLDE TOWNE – WEST OF 13TH STREET

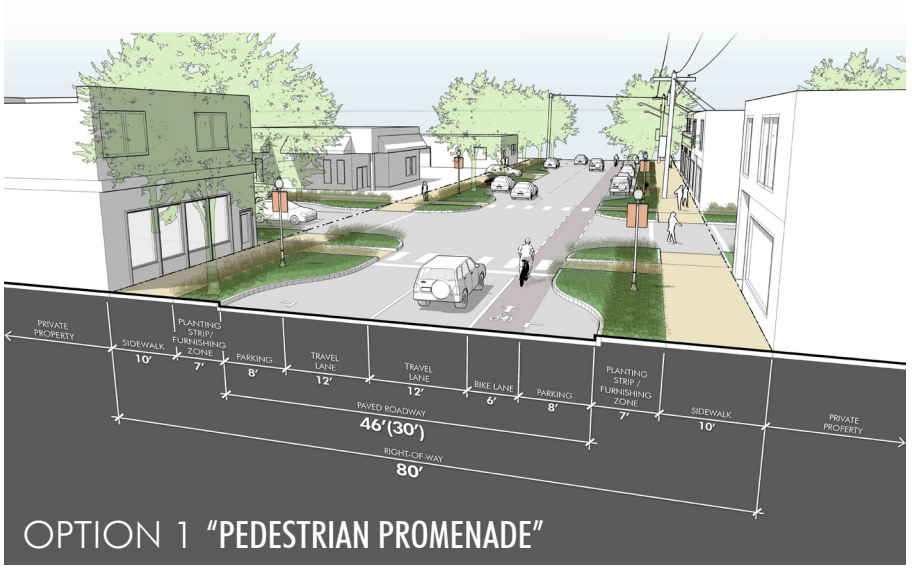
Three alternative streetscape design options were developed for consideration for the one-way streets west of 13th Street along Columbia Boulevard and St. Helens Street, and are shown in Figure B-2. Each option focused on narrowing the vehicular roadway to the widths recommended in the 2011 TSP in order to improve the safety of pedestrians while creating a sense of place and identity for St. Helens. Each option proposed widened sidewalks, street trees and plantings, site furnishings, and improved pedestrian sidewalks and crossings. Each design option is described in further detail below. The descriptions are followed by a summary of responses from advisory committees, business and property owners, the Planning Commission, and City Council to these options. (See Table B-2: Feedback Regarding Design Options In The Houlton/Olde Towne – West Of 13Th Street Corridor Segment)

OPTION 1: "PEDESTRIAN PROMENADE" – This option proposed widened sidewalks with generous planting strips and/or furnishing zones with street trees on both sides of the street. Bulbouts were proposed at each intersection to significantly shorten the pedestrian crossing distances.

OPTION 2: "GREEN SPINE" – This option proposed an elevated "cycle track" between the parking lane and the sidewalk buffered by planting strips and furnishing zones on either side. New widened sidewalks with planting strips and furnishing zones were proposed on each side of the street, with bulbouts at intersections shortening the pedestrian crossing distance.

OPTION 3: "PARKLETS" – This option proposed back-in angled parking along the south side of Columbia Boulevard and the north side of St. Helens Street. This efficient parking layout allows room for large, open sidewalk areas called "parklets" at each intersection corner and/or in selected mid-block locations, which can be designed to reflect the character and function of the adjacent land use (e.g., outdoor seating and tables adjacent to commercial uses, and landscaped areas with a bench or two adjacent to residential uses). On-street parking areas are shown to have special paving that visually extends the parklet, offering adjacent business owners the opportunity for temporary uses in the on-street parking areas such as outdoor seating or shopping areas. Widened sidewalks with street trees, pedestrian lighting, and furnishing zones were proposed along the other side of the street.





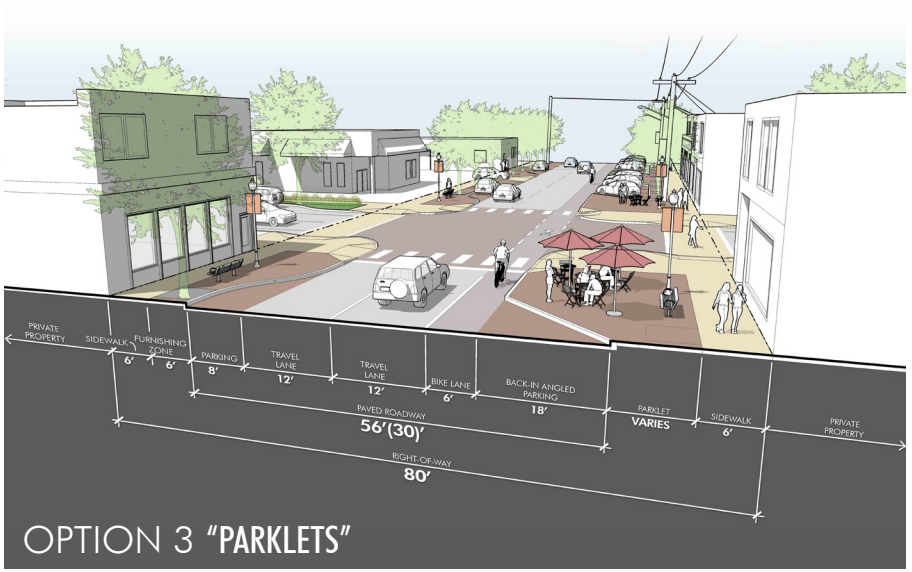


FIGURE B-2 - Existing conditions and three preliminary streetscape options developed for the Houlton/Olde Towne - West of 13th Street

TABLE B-2: FEEDBACK REGARDING DESIGN OPTIONS IN THE HOULTON/OLDE TOWNE – WEST OF 13TH STREET CORRIDOR SEGMENT	
TAC	RECOMMENDATION: None ISSUES OF CONCERN • Cost/benefit of bicycle facilities • Viability of street trees • Parking impacts • Wayfinding, freight movement
CAC	RECOMMENDATION: Parklets or Green Spine on Columbia; Promenade or Green Spine on St. Helens ISSUES OF CONCERN • Bicycle and pedestrian safety • Difficulty with reverse angled parking • Flexibility, location of parklets
PROPERTY AND BUSINESS OWNERS	RECOMMENDATION: None ISSUES OF CONCERN • Greater benefit to businesses immediately adjacent to parklets • Accommodating truck traffic with narrow lanes and bulbouts • Difficulty of using reverse angle parking • Enough room for gateway
PLANNING COMMISSION	RECOMMENDATION: Parklets on Columbia; Promenade or Green Spine on St. Helens ISSUES OF CONCERN • Bicycle and pedestrian safety; bike/vehicle conflicts • Flexibility, location of parklets • Location of diagonal parking
CITY COUNCIL	RECOMMENDATION: Parklets ISSUES OF CONCERN • Differing opinions on reverse angle vs. traditional diagonal parking

HOULTON / OLDE TOWNE – EAST OF 13TH STREET

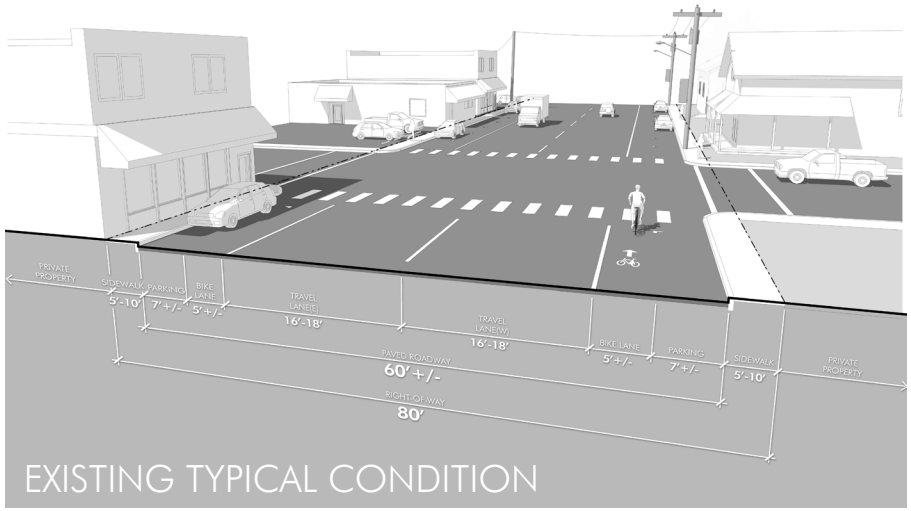
Three alternative streetscape design options were developed for consideration for the two-way portion of Columbia Boulevard east of 13th Street, and are shown in Figure B-3. Like the corridor segment west of 13th Street, each concept focused on narrowing the vehicular roadway to the widths recommended in the 2011 TSP in order to improve pedestrian safety while creating a sense of place and identity. Each option proposed widened sidewalks, street trees and plantings, site furnishings, and improved pedestrian sidewalks and crossings. Each concept is explained in further detail below. The descriptions are followed by a summary of responses from advisory committees, business and property owners, the Planning Commission, and City Council to these options. (See Table B-3: Feedback Regarding Design Options In The Houlton/Olde Towne – East Of 13Th Street Corridor Segment)

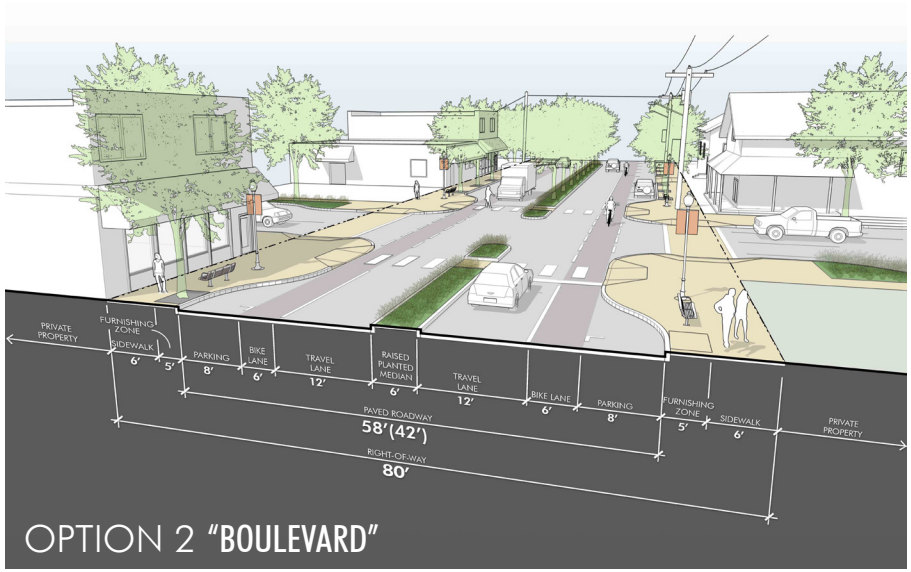
(Note: These concepts do not apply to 1st Street between Columbia Boulevard and St. Helens Street, which has a unique configuration requiring special attention. However, they could be applied with some modifications to the section of St. Helens Street between 1st Street and 4th Street.)

OPTION 1: "PEDESTRIAN PROMENADE" – This option proposed widened sidewalks with generous planting strips and/or furnishing zones with street trees on both sides of the street. Bulbouts were proposed at each intersection to significantly shorten the pedestrian crossing distances.

OPTION 2: "BOULEVARD" – This option proposed raised landscaped medians that separate the east- and west-bound lanes. Other improvements include widened sidewalks with planting strips, site furnishings, street trees, as well as bulbouts and pedestrian refuge islands.

OPTION 3: "PARKLETS" –This option proposed parklets similar to that of Streetscape Option 3 for the corridor segment west of 13th Street, above. However, due to the added bike lane in this two-way roadway configuration, the right-of-way would not accommodate a planting strip between back-in or traditional angled parking lane and the sidewalk along the south side of Columbia Boulevard.





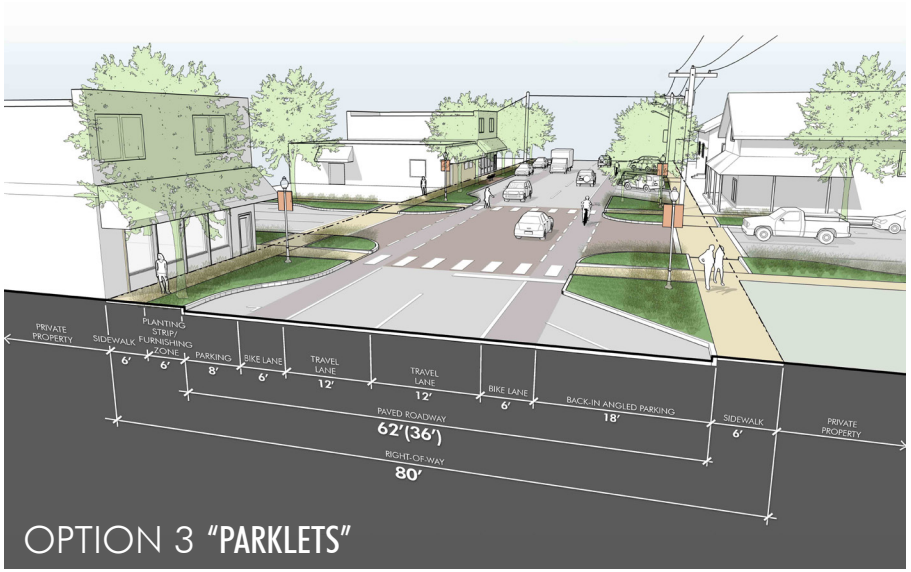


FIGURE B-3 - Existing conditions and three preliminary streetscape options developed for the Houlton/Olde Towne - East of 13th Street

TABLE B-3: FEEDBACK REGARDING DESIGN OPTIONS IN THE HOULTON/OLDE TOWNE – EAST OF 13TH STREET CORRIDOR SEGMENT	
TAC	RECOMMENDATION: None ISSUES OF CONCERN • Difficulty with reverse angled parking • Mini-roundabout operations
CAC	RECOMMENDATION: Green Spine or Parklets ISSUES OF CONCERN • Median is overkill • Loss of on-street parking • Location, design of gateway on 1st Street
PROPERTY AND BUSINESS OWNERS	RECOMMENDATION: None ISSUES OF CONCERN • Location of gateway • Grade-separated rail crossings • Improving appearance of streets in order to improve area's vitality
PLANNING COMMISSION	RECOMMENDATION: Pedestrian Promenade ISSUES OF CONCERN • Median is overkill • Don't need diagonal parking in this area • Bicycle safety (consider buffered bike lanes)
CITY COUNCIL	RECOMMENDATION: Parklets ISSUES OF CONCERN • Special opportunity area at end of Columbia/1st – concern about open space there; want trail connection

Rationale for Recommended Design Options

Following is a summary of the rationale for selecting each corridor segment design option.

US 30 SEGMENT

- Selective application of raised median treatment promotes City and ODOT safety and access management objectives while recognizing and respecting property access needs (no existing driveway closures are proposed by the plan)
- Final Design of median location and content can address site-specific considerations such as individual property access, business visibility and maintenance issues
- Consistent with state design standards and guidelines
- Improves the visual appearance of the corridor to a greater degree than the non-median option
- Balances goals for improvements to appearance with cost and financial viability
- Short-term implementation represents lower cost solution; long-term phases will not be undertaken if not financially feasible
- Improves bicycle and pedestrian connectivity and safety in the short- and long-term
- Equally consistent or superior in satisfying project goals and objectives in a financially feasible manner as compared to other options
- Generally consistent with community and stakeholder feedback to date; anticipated property-specific issues can be addressed and resolved through the detailed design of specific proposed improvements
- Improvements shown along the east side of US 30 advance long-sought safety and aesthetic changes that screen and protect the adjacent railroad corridor
- Improvement recommendations can be implemented in phases as resources and timing allow and/or as property redevelopment occurs

HOULTON/OLDE TOWNE – WEST OF 13TH STREET

- Designs for each street best meet land use conditions and goals
- Improves the visual appearance of the corridor segment to an equal or greater degree than other options; creates a long-sought gateway
- Deemed best option to enhance economic viability compared to other options (particularly on Columbia Boulevard)
- Represents mid-range or lower cost alternative compared to other options
- Key elements (e.g., parklets) can be implemented in a temporary manner at relatively low cost and in a shorter timeframe, allowing the community to "try on" these options
- Improves bicycle and pedestrian connectivity and safety with a balanced approach to meeting mobility needs for all users
- Equally consistent with all other project goals and objectives in comparison to other options

- Most consistent with community and stakeholder feedback to date, compared to other options
- Improvement recommendations can be implemented in phases as resources and timing allow and/or as property redevelopment occurs

HOULTON/OLDE TOWNE – EAST OF 13TH STREET

- Designs for each street best meet land use conditions and goals
- Improves the visual appearance of the corridor segment to an equal or greater degree than other options
- Represents lower cost alternative compared to other options
- Maximizes space for pedestrians throughout the corridor compared to other options
- Improves bicycle and pedestrian connectivity and safety with a balanced approach to meeting these needs and those of drivers
- Equally consistent with all other project goals and objectives in comparison to other options
- Most consistent with community and stakeholder feedback to date, compared to other options
- Improvement recommendations can be implemented in phases as resources and timing allow and/or as property redevelopment occurs

C. RECOMMENDED CORRIDOR DESIGN OPTIONS

US 30 Corridor Segment

OVERALL APPROACH

The proposed improvements along the US 30 highway corridor between Gable Road and Pittsburgh Road strive to improve safety while enhancing the character of the roadway, better creating a sense of place, and bolstering economic viability. Through the use of landscape plantings, street trees, landscaped roadway medians, and improved pedestrian sidewalks and crossings, the recommended design creates a Green Corridor and attempts to "humanize" this vehicle-dominated environment and create a civic identity befitting St. Helens. The following goals and strategies for the recommended design of the US 30 corridor segment are summarized below.

1. IMPROVE PEDESTRIAN SAFETY. The recommended design proposes to retrofit the US 30 corridor with a number of traffic calming features and elements intended to facilitate pedestrian movement without impacting vehicular function. These improvements include new crosswalk striping, ADA-accessible curb ramps, pedestrian refuge median islands, and enhanced crosswalk signals. Additionally, new fencing along each side of railroad corridor will help discourage informal crossings of the railroad tracks.
2. IMPROVE CONNECTIVITY. Several design features improve pedestrian and bicycle connectivity along the US 30 corridor, and between the corridor and nearby neighborhoods and destinations. New sidewalks along the east side of highway provide additional accessible routes for pedestrians to reach and move along the corridor, tying into existing sidewalks at most intersections. Additionally, a new pedestrian bridge at Milton Creek provides an important link for pedestrians moving along the east side of the US 30 corridor.
3. IMPROVE AESTHETICS AND SENSE OF PLACE. New street trees, planted highway medians, and planting areas on each side of the highway work together to reinforce US 30 as a Green Corridor, breaking down the scale of this wide, intimidating highway arterial to one that is attractive, inviting and accessible to pedestrians. Highly visible gateway elements at the intersections of Gable Road and Columbia Boulevard mark key transitions and reinforce civic identity. Additionally, banner poles distributed at equal intervals along each side of the corridor add festiveness and help to unify the corridor.

FIGURE C-1 - US 30 Corridor Segment - Proposed Improvements and Plan Keymap


COLUMBIA BLVD
M I L T O N C R E E K
KELLY ST
HOWARD ST
WYETH ST
PITTSBURGH RD
21ST ST
20TH ST
19TH ST
COLUMBIA BLVD
ST. HELENS ST
Figure C-6, pgs. 32-33
Figure C-7, pgs. 34-35
Figure C-8, pgs. 36-37
NORTH
0
200'
400'
Feet

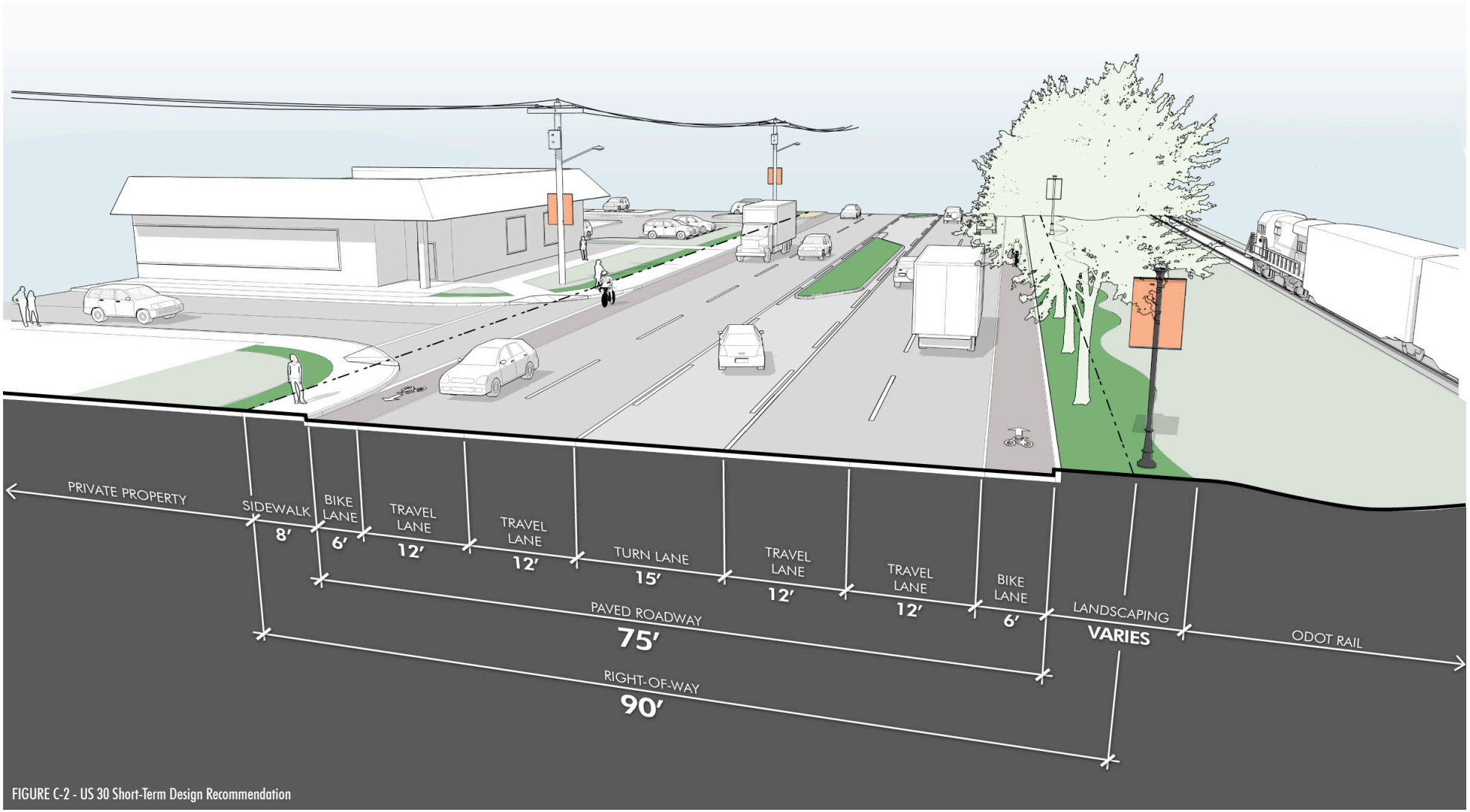


FIGURE C-2 - US 30 Short-Term Design Recommendation

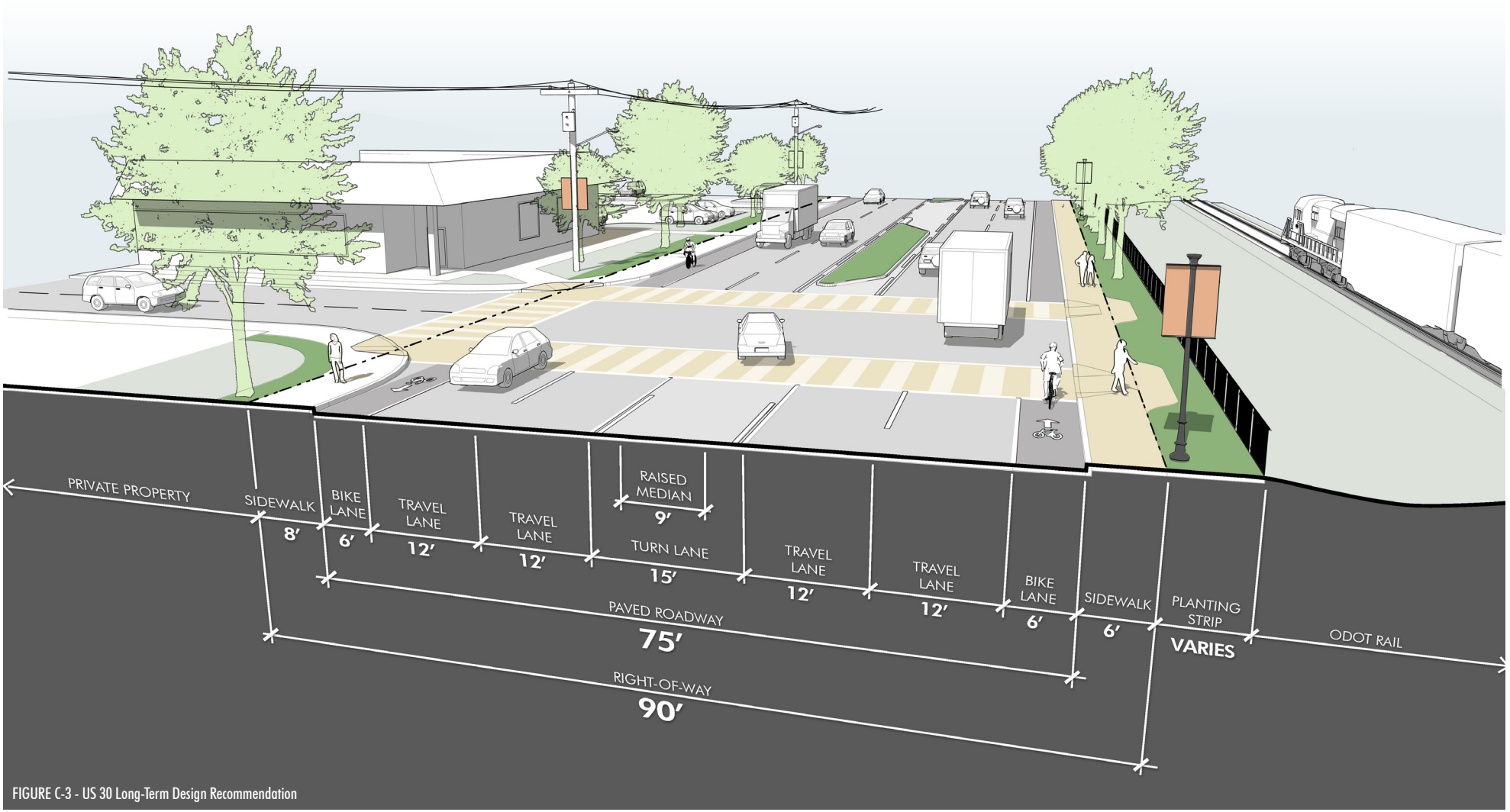


FIGURE C-3 - US 30 Long-Term Design Recommendation

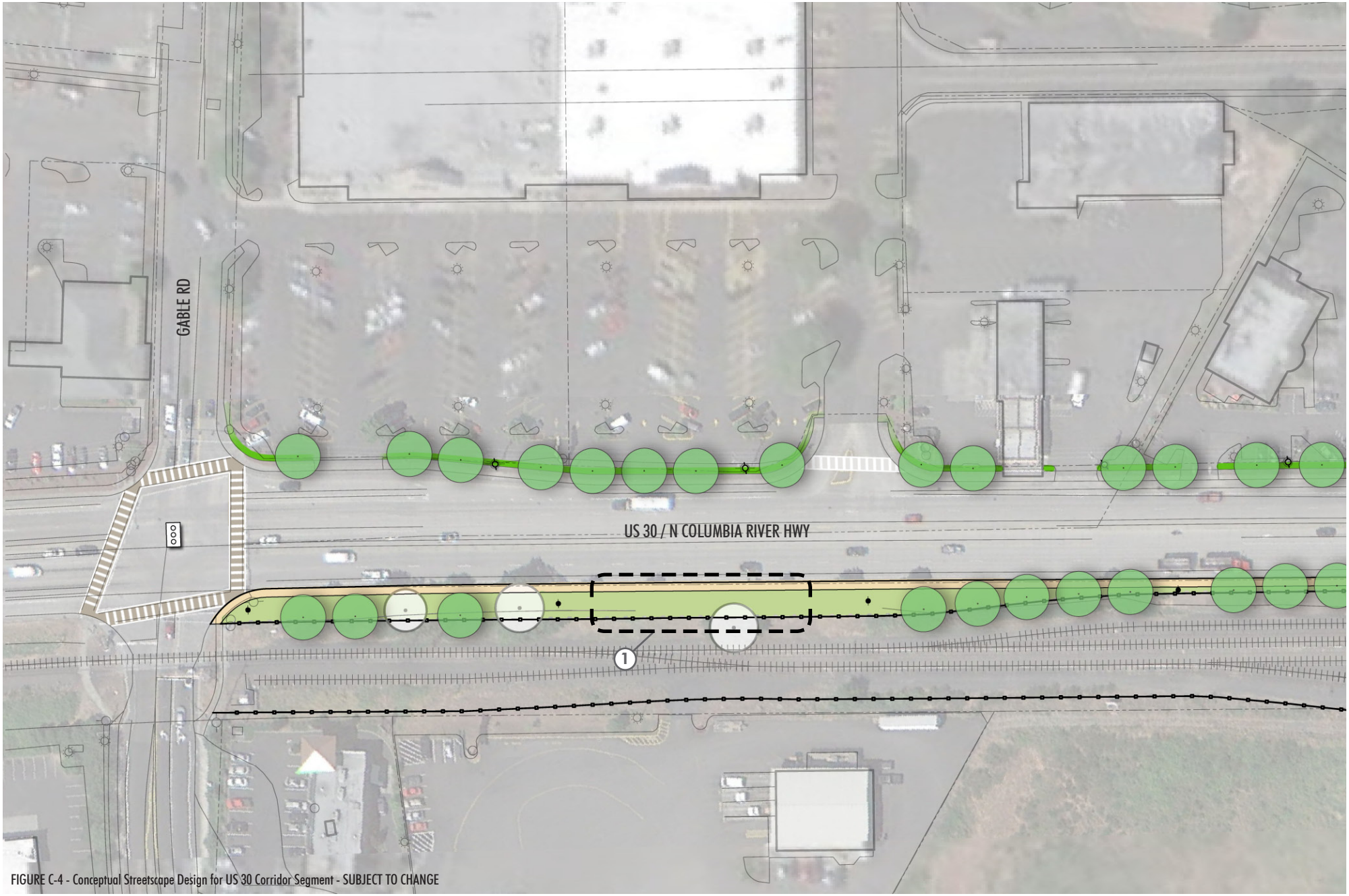
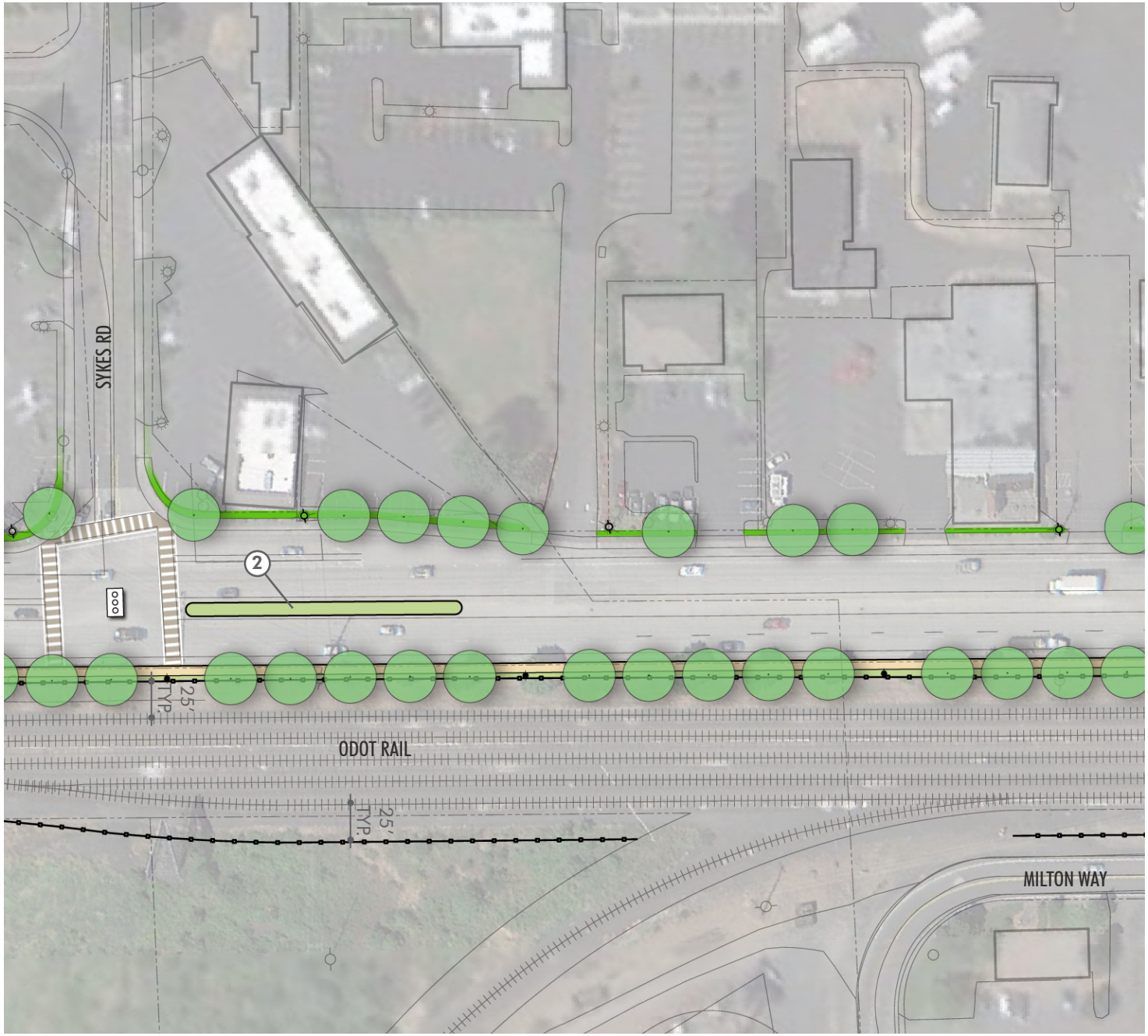


FIGURE C-4 - Conceptual Streetscape Design for US 30 Corridor Segment - SUBJECT TO CHANGE



LEGEND: US 30 CORRIDOR

- NEW 6' SIDEWALK *
- NEW LANDSCAPE AREA
- PRIVATE PROPERTY LANDSCAPE IMPROVEMENTS
- INTERSECTION CROSSWALK PAVING ENHANCEMENTS *
- NEW CROSSWALK STRIPING
- NEW 5' HT. FENCE *
- NEW BANNER POLE
- NEW BANNER ON EXISTING UTILITY / POLE
- NEW TREE *
- EXISTING TREE TO REMAIN
- EXISTING SIGNALIZED INTERSECTION
- FUTURE SIGNALIZED INTERSECTION
- SPECIAL OPPORTUNITY AREA
- CONCEPTUAL INTERSECTION ENHANCEMENT

* DENOTES LONG-TERM IMPROVEMENTS

KEY NOTES

1. FUTURE BUS STOP
2. PLANTED MEDIAN - SEE PG. 40

PLANS ARE CONCEPTUAL AND SUBJECT TO CHANGE

NORTH

0 50' 100' Feet

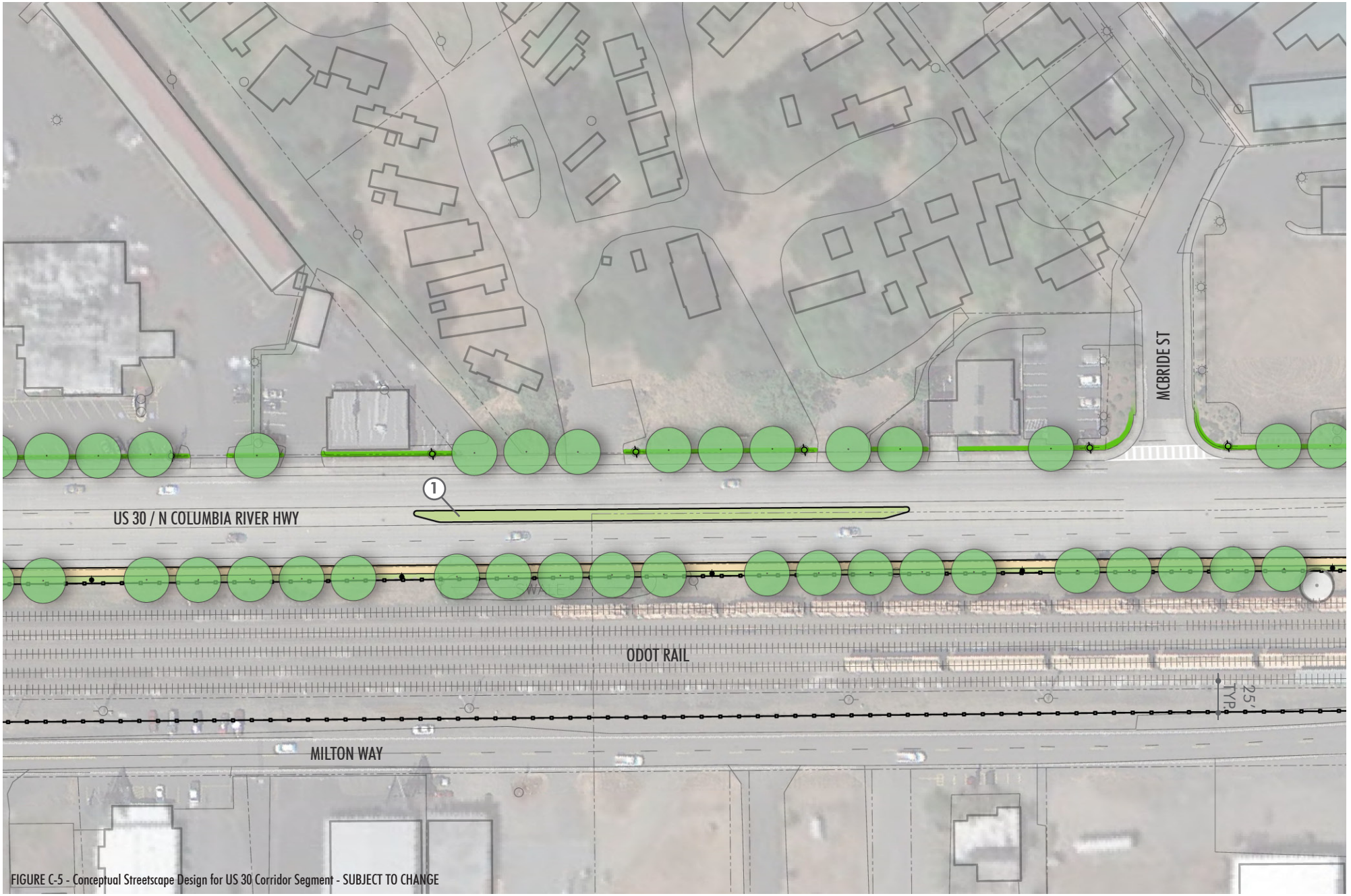
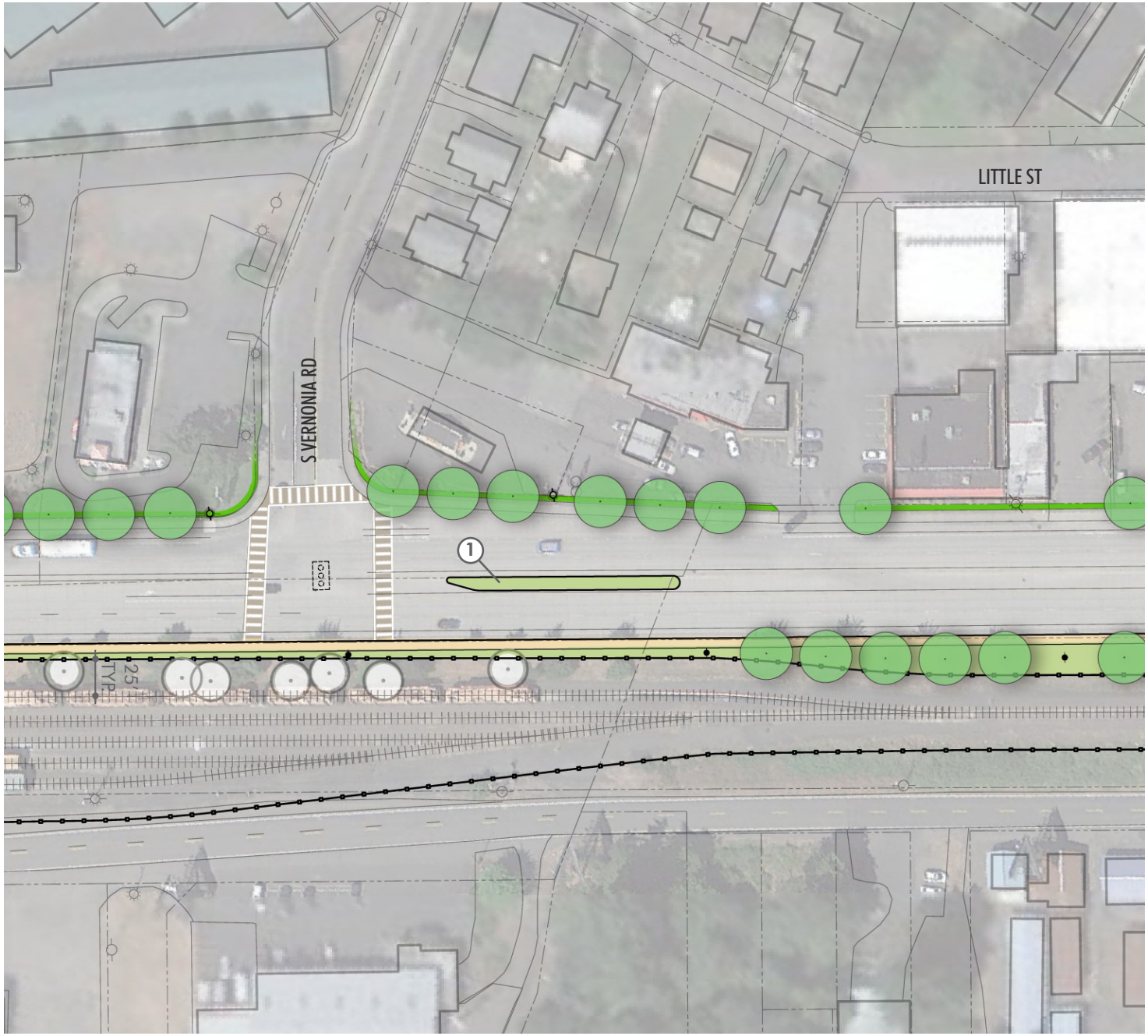


FIGURE C-5 - Conceptual Streetscape Design for US 30 Corridor Segment - SUBJECT TO CHANGE



LEGEND: US 30 CORRIDOR

- NEW 6' SIDEWALK ✱
- NEW LANDSCAPE AREA
- PRIVATE PROPERTY LANDSCAPE IMPROVEMENTS
- INTERSECTION CROSSWALK PAVING ENHANCEMENTS ✱
- NEW CROSSWALK STRIPING
- NEW 5' HT. FENCE ✱
- NEW BANNER POLE
- NEW BANNER ON EXISTING UTILITY / POLE
- NEW TREE ✱
- EXISTING TREE TO REMAIN
- EXISTING SIGNALIZED INTERSECTION
- FUTURE SIGNALIZED INTERSECTION
- SPECIAL OPPORTUNITY AREA
- CONCEPTUAL INTERSECTION ENHANCEMENT

✱ DENOTES LONG-TERM IMPROVEMENTS

KEY NOTES

1. PLANTED MEDIAN - SEE PG. 40

PLANS ARE CONCEPTUAL AND SUBJECT TO CHANGE

NORTH

0 50' 100' Feet

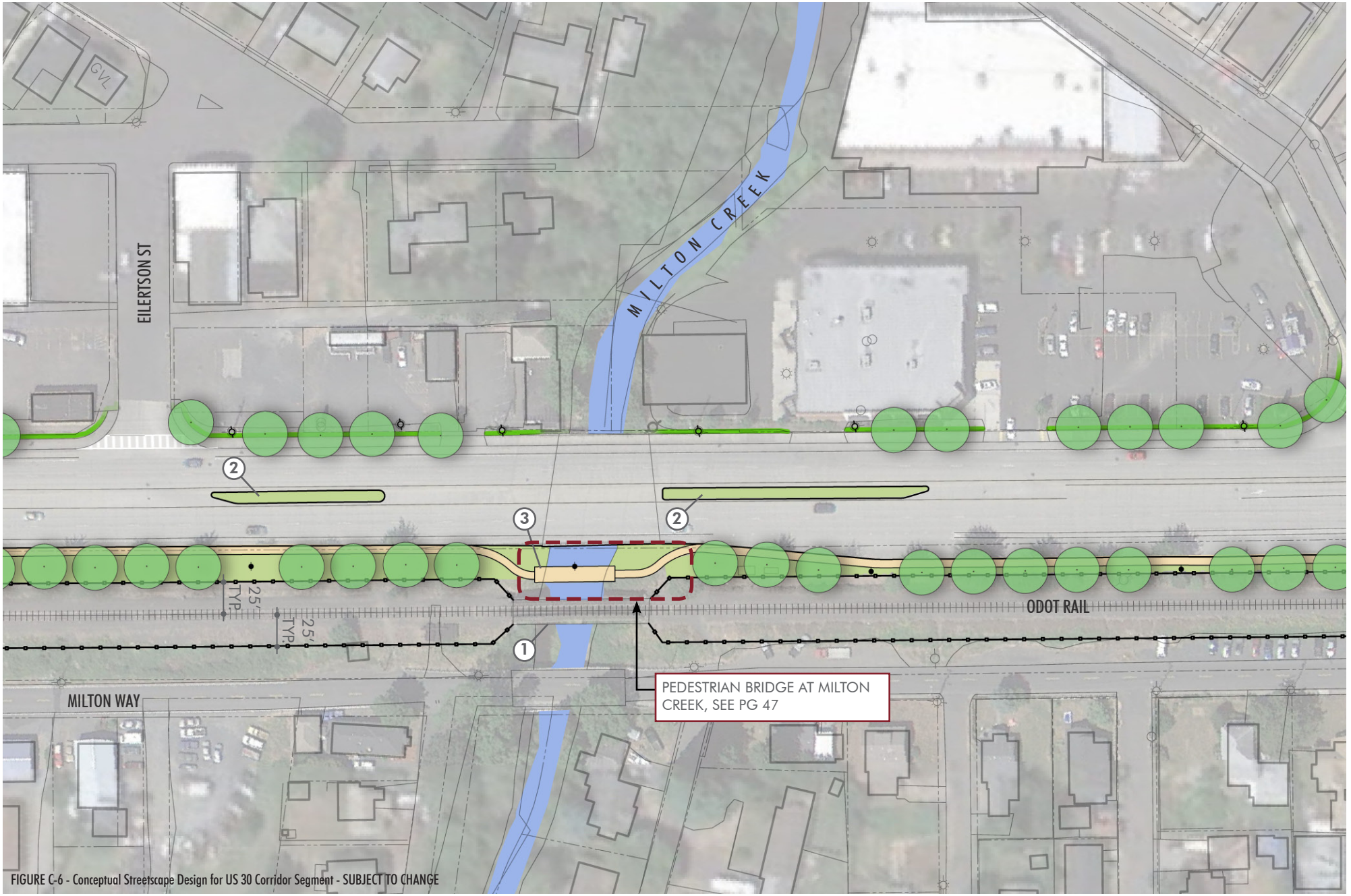
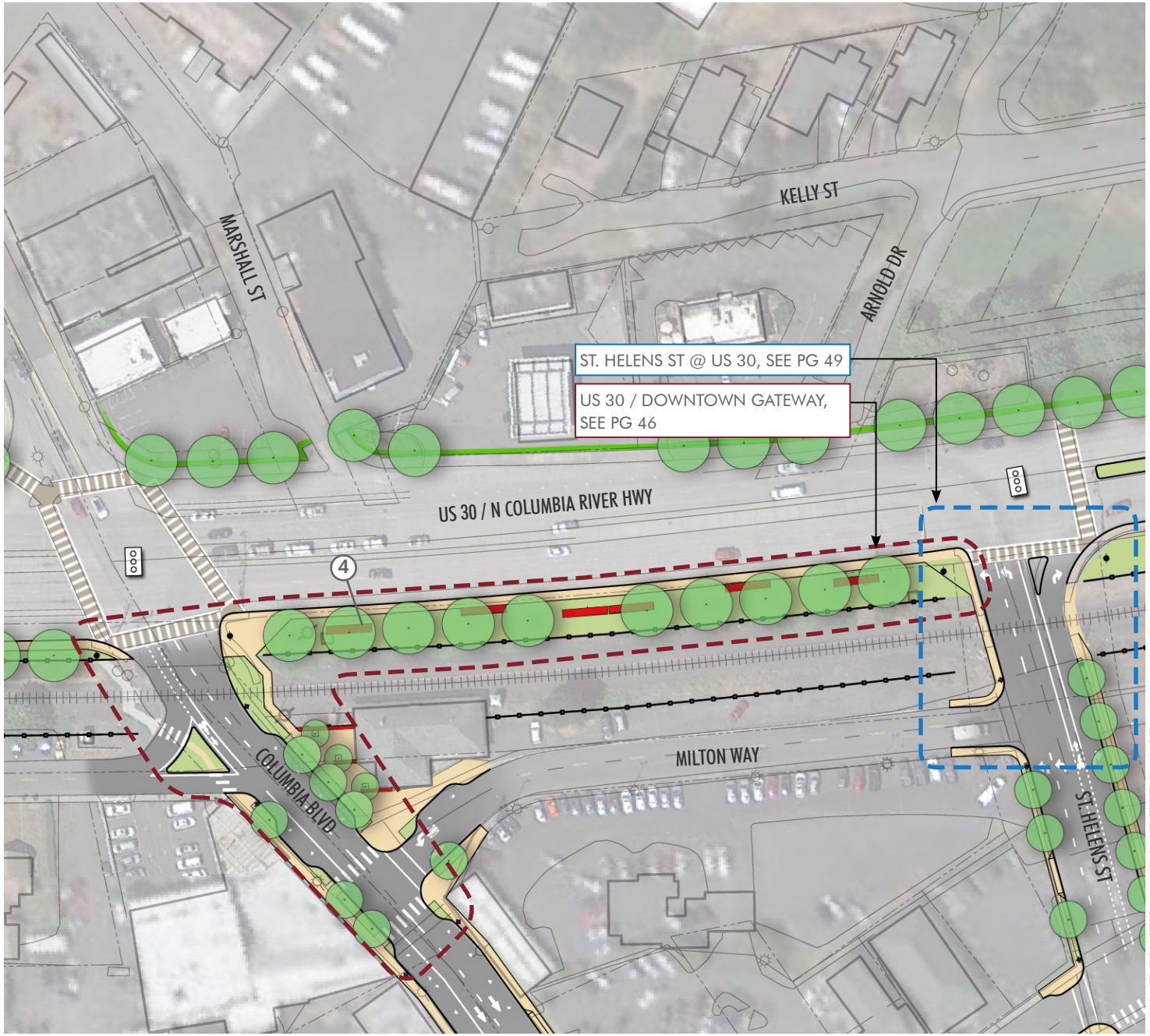


FIGURE C-6 - Conceptual Streetscape Design for US 30 Corridor Segment - SUBJECT TO CHANGE



LEGEND: US 30 CORRIDOR

- NEW 6' SIDEWALK ✱
- NEW LANDSCAPE AREA
- PRIVATE PROPERTY LANDSCAPE IMPROVEMENTS
- INTERSECTION CROSSWALK PAVING ENHANCEMENTS ✱
- NEW CROSSWALK STRIPING
- NEW 5' HT. FENCE ✱
- NEW BANNER POLE
- NEW BANNER ON EXISTING UTILITY / POLE
- NEW TREE ✱
- EXISTING TREE TO REMAIN
- EXISTING SIGNALIZED INTERSECTION
- FUTURE SIGNALIZED INTERSECTION
- SPECIAL OPPORTUNITY AREA
- CONCEPTUAL INTERSECTION ENHANCEMENT

✱ DENOTES LONG-TERM IMPROVEMENTS

KEY NOTES

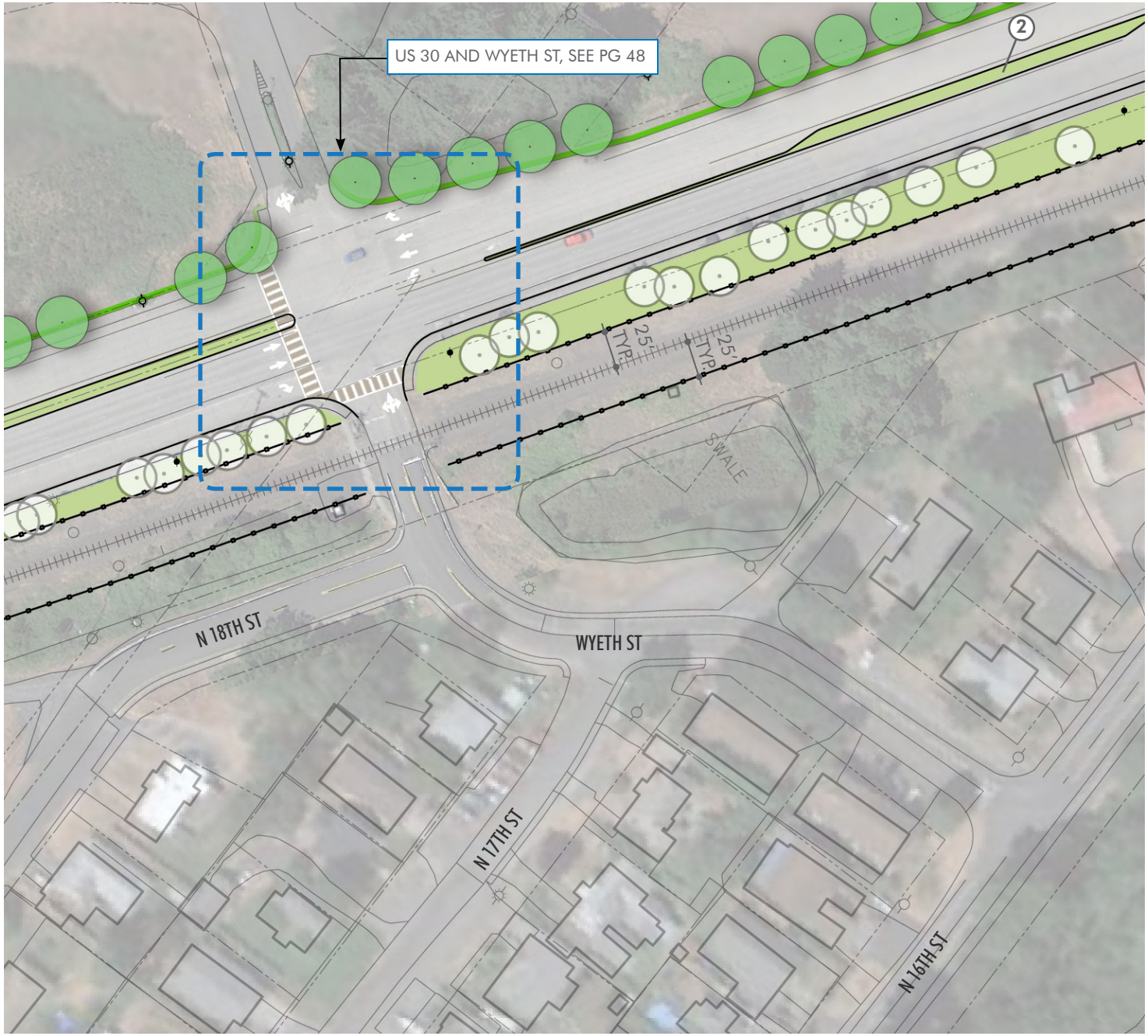
1. EXISTING TRAIN TRESTLE
2. PLANTED MEDIAN, SEE PG 40
3. NEW PEDESTRIAN BRIDGE AT MILTON CREEK
4. US 30 GATEWAY SCULPTURAL ELEMENTS

PLANS ARE CONCEPTUAL AND SUBJECT TO CHANGE

NORTH

0 50' 100' Feet

FIGURE C-7 - Conceptual Streetscape Design for US 30 Corridor Segment - SUBJECT TO CHANGE



PLANS ARE CONCEPTUAL AND SUBJECT TO CHANGE

LEGEND: US 30 CORRIDOR

- NEW 6' SIDEWALK ✱
- NEW LANDSCAPE AREA
- PRIVATE PROPERTY LANDSCAPE IMPROVEMENTS
- INTERSECTION CROSSWALK PAVING ENHANCEMENTS ✱
- NEW CROSSWALK STRIPING
- NEW 5' HT. FENCE ✱
- NEW BANNER POLE
- NEW BANNER ON EXISTING UTILITY / POLE
- NEW TREE ✱
- EXISTING TREE TO REMAIN
- EXISTING SIGNALIZED INTERSECTION
- FUTURE SIGNALIZED INTERSECTION
- SPECIAL OPPORTUNITY AREA
- CONCEPTUAL INTERSECTION ENHANCEMENT

✱ DENOTES LONG-TERM IMPROVEMENTS

KEY NOTES

1. FUTURE BUS STOP
2. PLANTED MEDIAN, SEE PG 40

NORTH

0 50' 100' Feet

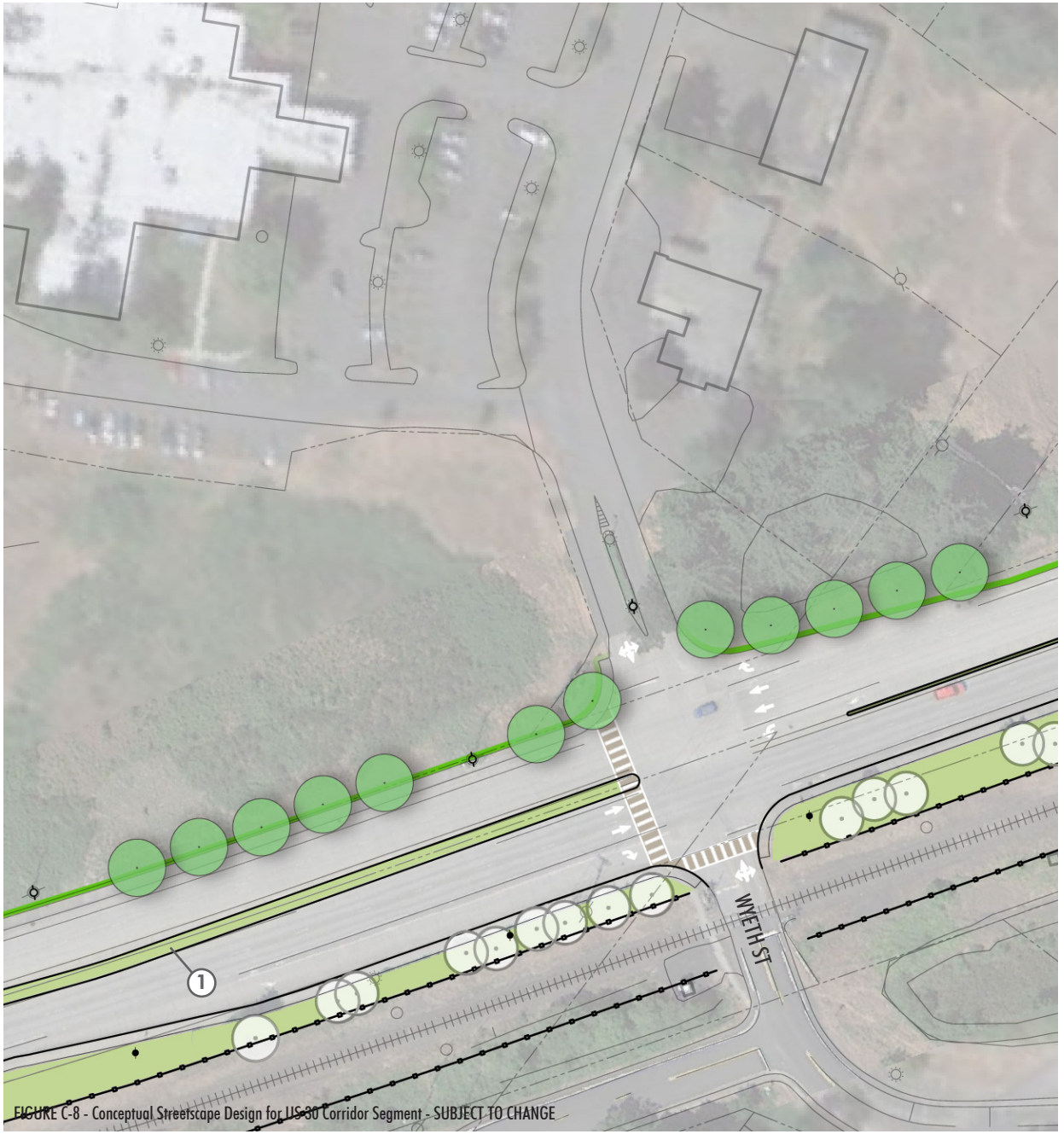
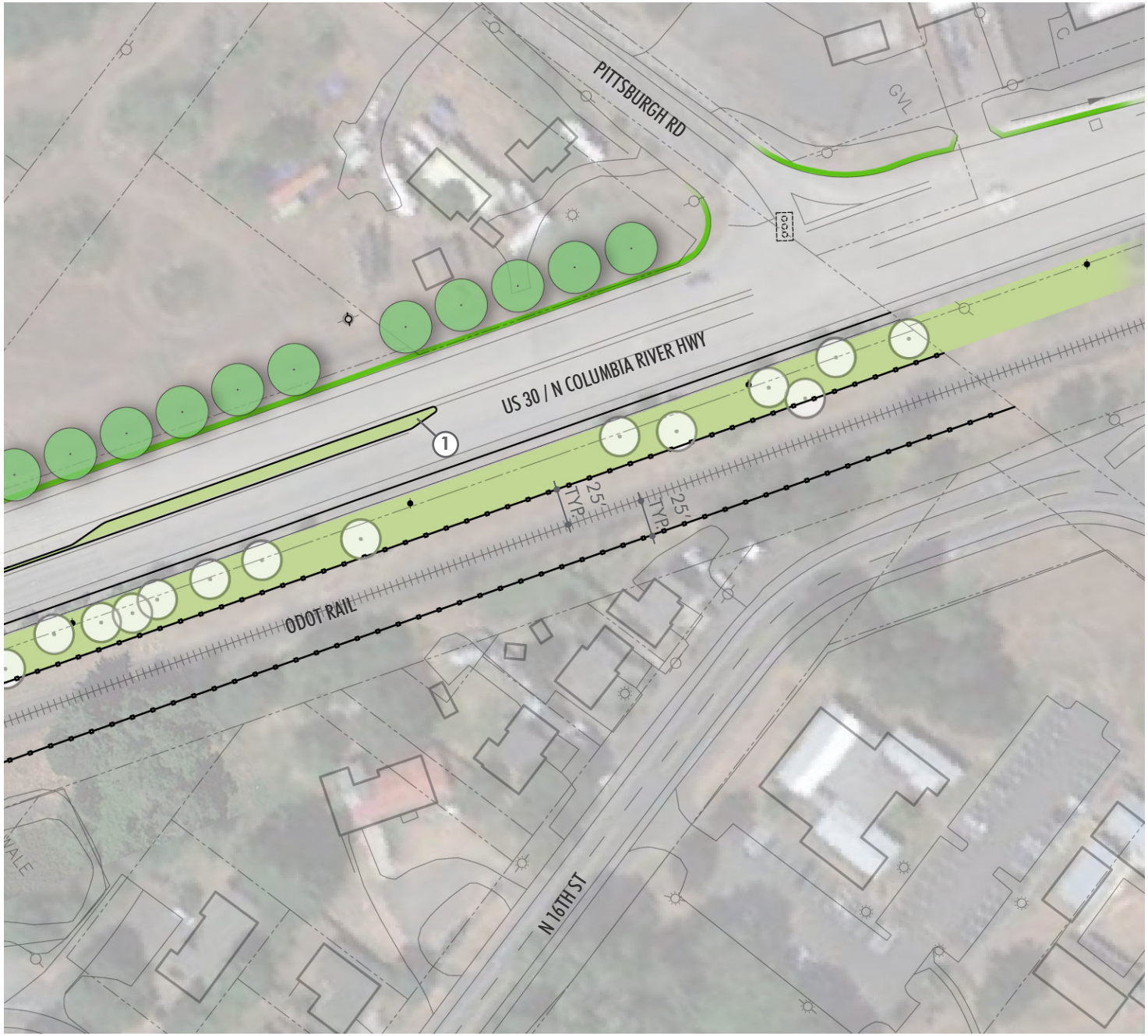


FIGURE C-8 - Conceptual Streetscape Design for US-30 Corridor Segment - SUBJECT TO CHANGE



LEGEND: US 30 CORRIDOR

- NEW 6' SIDEWALK *
- NEW LANDSCAPE AREA
- PRIVATE PROPERTY LANDSCAPE IMPROVEMENTS
- INTERSECTION CROSSWALK PAVING ENHANCEMENTS *
- NEW CROSSWALK STRIPING
- NEW 5' HT. FENCE *
- NEW BANNER POLE
- NEW BANNER ON EXISTING UTILITY / POLE
- NEW TREE *
- EXISTING TREE TO REMAIN
- EXISTING SIGNALIZED INTERSECTION
- FUTURE SIGNALIZED INTERSECTION
- SPECIAL OPPORTUNITY AREA
- CONCEPTUAL INTERSECTION ENHANCEMENT

* DENOTES LONG-TERM IMPROVEMENTS

KEY NOTES

1. PLANTED MEDIAN, SEE PG 40

PLANS ARE CONCEPTUAL AND SUBJECT TO CHANGE

NORTH

0 50' 100' Feet

STREETSCAPE DESIGN CONCEPTS

Specific site responses to the goals listed above, and to the physical and environmental influences on the corridor are explained in further detail below.

1. TRAFFIC CALMING FEATURES. An inviting pedestrian environment on US 30 relies on creating routes for pedestrians that are safe, accessible, and can help calm traffic. Traffic calming measures such as enhanced crosswalks and planted medians slow traffic and encourage awareness of drivers to their surroundings. The following features are proposed along US 30:
    - Several enhanced east-west pedestrian crosswalks are proposed at key intersections along US 30, visually breaking the monotony of asphalt streets and creating a more inviting pedestrian route. These crosswalks could feature special paving materials, articulated scoring patterns, or integral concrete colors, and can significantly enhance the pedestrian experience along the US 30 corridor. They also must include some kind of highly visible striping, consistent with state design standards for the highway. If textured paving is used, stamping or texturing of crosswalks should be relatively minimal to avoid adverse impacts on people in wheelchairs with spinal issues. Crosswalk enhancements are proposed at the intersections of Gable Road, Columbia Boulevard, St. Helens Street (north side only), Wyeth Street (south side only) and Pittsburgh Road (south side only). New E-W crosswalks are proposed at Vernonia Road and Sykes Road

FIGURE C-9 - Example of a concrete crosswalk on an asphalt roadway with striping.

FIGURE C-10 - Example of a Pedestrian Refuge Island with Crosswalk Striping

FIGURE C-11 - Example of a raised planted median on an arterial roadway with plantings, trees, light poles with banners, and a perimeter maintenance walkway - Ottawa, Canada

with the anticipated future new pedestrian sidewalk and intersection signalization. It should be noted that ODOT State Traffic Engineer approval is required for all crosswalk locations across US 30 .

- Several improved north-south pedestrian crosswalks are proposed at roadway intersections and major driveway entrances along the west side of US 30 where few, if any, crosswalk amenities exist. New striping and ADA-accessible curb ramps are proposed at the US 30 entrance to Safeway, and the intersections at McBride Street, Eilertson Street, Marshall Street, and Howard Street.
- New planted roadway medians are proposed at strategic locations, subject to ODOT approval considering the freight classification of US 30. The areas where potential medians are conceptually shown assume that existing driveway access and left-turn lanes at public intersections will remain unchanged. The median areas will need to accommodate both long-term intersection left-turn queues and the taper transition design requirements established by ODOT through the Oregon Highway Design Manual (HDM). It should also be noted that one or more breaks in the conceptual median area shown between Milton Creek and 22nd Street may be sought as properties west of US 30 redevelop in the future.

  Generally speaking, ODOT will require the following for raised planted medians:

  - The roadway cross section shall include a 2′ shy distance between the median curb and adjacent travel lane.

- Raised medians with planted trees will require a minimum 8′ median island width and minimum 100′ length per ODOT HDM standards.
- If trees are planted in medians, and their mature canopy size is wider than the median area itself, the bottom of the canopy must maintain minimum 16′ vertical clearance, free of branching to avoid vehicular conflicts. If the mature canopy size is less than or equal to the width of the median, the bottom of the canopy must maintain 10′ vertical clearance.
- Any groundcover plantings must maintain a maximum 24″ height from the adjacent roadway grade.

Three possible planted median options are presented here, offering different low-maintenance planting and hardscape strategies to consider during design.

Option 1 proposes the use of columnar deciduous or coniferous trees planted in tree wells and spaced approximately 30-feet on center, creating a vertical punctuation at key intersections. The ground plane consists of low maintenance unit paving material such as clay bricks, or concrete unit pavers, mortared in place. An ODOT-approved mountable curb is utilized to provide ease of access for maintenance vehicles.

FIGURE C-12 - US 30 Planted Median Option 1

FIGURE C-13 - US 30 Planted Median Option 2

FIGURE C-14 - US 30 Planted Median Option 3

Option 2 proposes the use of free-standing poles with colorful banners to further reinforce the civic and cultural identify of St. Helens, and are coordinated with new banner located along the east side of the highway, as well as banners mounted to existing utility and light poles along the west side of the highway. A mass of low-maintenance, drought-tolerant ornamental grasses are proposed to soften the roadway and further reinforce US 30 as a Green Corridor.

Option 3 proposes to utilize ODOT-approved modified jersey barrier-style walls to create a robust, elevated planting expression along US 30. Large, broad-leaved deciduous trees are proposed in this option, offering a number of benefits to this asphalt-dominated roadway corridor including needed shade, reduced heat-island effect, stormwater benefits. Low-maintenance, evergreen shrubs provide a year-long stripe of green along this Green Corridor.

From a traffic operations perspective, all three options are viable. Key considerations stakeholders should evaluate when selecting a preferred alternative include on-going ease/cost of maintenance, visibility implications for businesses along the corridor, and the ease of making future modifications if needed to accommodate changes in adjacent land use/access/or turn bay lengths. While the concept plan shows anticipated needs, some redevelopment/further development along the corridor is anticipated. Certain options will have advantages over others in these respects. For example, Option 1 likely would have the lowest maintenance costs, while providing less greenery to soften the character of the roadway. Option 3 would have the most significant impact on the look and feel of the road but also could have the most significant impact on visibility of businesses or properties on the west side of the highway for drivers heading north. Note that some businesses along Milton Way on the east side of the highway may also have visibility concerns.

2. PEDESTRIAN AMENITIES. Streetscape enhancements to the US 30 corridor like new sidewalks, fencing, and plantings are important features for pedestrians to feel welcome and that the street is a comfortable place to be. A vibrant pedestrian realm can increase public safety, increase the value of adjacent real estate, and sustain the health of local businesses. The following summarizes the proposed amenities along US 30:

   - A new 6' wide, curb-tight sidewalk is proposed along the east side of the US 30 corridor between Gable Road and St. Helens Street, with connections to existing sidewalks at Gable Road, Columbia Boulevard, and St. Helens Street. This new sidewalk will provide an extension to the existing sidewalk network on the east side of US 30 north of St. Helens Street, and is proposed as a long term improvement for the US 30 corridor. As an alternative to a curb-tight sidewalk, this walkway could be buffered by a landscaping strip next to the roadway. This would improve pedestrian comfort and safety to some degree. However, provision of a landscape strip would have several disadvantages. Because of the variation in right-of-way and the need to maintain a distance of at least 25 feet from the railway tracks, the path would be forced to meander. This would increase costs of construction and maintenance and would be at odds with current pathway standards recommended by ODOT (which don't favor meandering pathways). In addition, the potential need to purchase railroad right-of-way, varying topography and drainage issues along the length of the corridor also would increase costs and make construction and drainage more challenging. For these reasons, the curb-tight walkway is recommended. However, other options could be considered during a detailed design process.
   - To discourage informal crossings of the railroad tracks, a 5' tall fence is proposed on each side of the railroad corridor located 25' from the centerline of the nearest track as required by ODOT Rail to accommodate operations and maintenance vehicles and activity. Access gates shall be provided at each private property entrance, and every 1,000' along each side of the corridor.

- The fence should be attractive, visually transparent, durable yet cost effective, and should not have barbed wire or other such human-proofing elements.
- Two fence types - welded-wire mesh fence panels and chain link fencing - are recommended here, each with benefits and disadvantages.

  Welded-wire mesh partition fences are a better security barrier than chain link, are easier to modify an existing layout, easier to replace damaged partitions, and have better structural integrity. The vertically-oriented 2"x4" mesh grid is difficult to get a foot-hold, discouraging people from climbing. Additionally, most are fabricated with a durable epoxy and polyester coating that provides better corrosion resistance over time than galvanized chain-link fences. This type of fence is an attractive, alternative to standard chain-link fence, which tends to look and feel utilitarian. This type of fence is more expensive than chain-link fences.

  Chain link fences are the best-selling fencing system in the world, are less expensive, and easier to install. However, they are easier to climb and not as structurally stable, requiring more long-term maintenance. If this type of fence is pursued, a black vinyl coating is recommended to create a more attractive streetscape edge.

  Although the pathway and fencing proposed adjacent to the roadway have been located at least 25' from the center of the railroad tracks, consistent with ODOT and railway guidance and the right-of-way in this area is owned by ODOT, approval of improvements within the rail right-of-way will have to be approved by the railroad because it has an easement to use this area.

FIGURE C-15 - Example of a oncrete sidewalk with plantings and fencing

FIGURE C-16 - Welded-Wire mesh fencing

FIGURE C-17 - Black vinyl-coated chain link fence

FIGURE C-18 - Existing "heritage" grove observed along east edge of US 30

FIGURE C-19 - Existing street trees on US 30

FIGURE C-20 - Long term planting concept for the east edge of US 30 including tree groups, shrubs, grasses, and groundcover

- To create a distinctive and uniform "green edge" along the east side of US 30, a continuous, linear swath of street trees is proposed to supplement existing groups of tree plantings. In proposing a long-term vision for establishing a distinctive green edge of the highway, several factors were considered.

  First, there are several existing stands of trees and shrubs along the east side of US 30 that are comprised of a mix of species in various states of health and maturity. Several stands, however, are in good health and vigor and should be preserved, and are specifically located just north of Gable Road, just east of Vernonia Road, and from north of St. Helens Street to Pittsburgh Road (and beyond). The design proposes to retain these existing "heritage" groves, and intersperse new plantings in a way the complements and highlights them.

  Secondly, approximately 60 street trees located approximately 6' from the back of curb, extend north from Gable Road to just north of Sykes Road, and from McBride Street to Columbia Boulevard. These street trees, which are also in varying states of health and maturity, are comprised of a mix of oak, ash, and cherry, will likely all require replacement in roughly 20-30 years. Additionally, due to its proximity to these existing trees, the new east sidewalk may require many, if not all of these street trees to be removed. However, considering the east sidewalk is a long-term improvement, the design proposes removing and replacing these trees in kind with species of equal or greater value at the time the sidewalk is installed, which would help in establishing the long-term vision of creating a distinc-

tive, uniform green edge along the east side of US 30.

- New shrub and ornamental grass plantings are proposed along the east edge of the highway between the back of sidewalk and fence to reinforce the concept of a green highway edge, and should be comprised of species that are low-maintenance, site appropriate, distinctive, and should maintain sight lines at intersections and rail crossings.
- The design proposes to enhance the west side of US 30 by encouraging private property owners to plant new tree and shrub plantings behind the sidewalk and create a needed visual and physical buffer between public sidewalks and private parking lots. These plantings would be installed on private property through redevelopment activity and/or partnerships between the City and private property owners. These shrubs and trees should complement the species and groupings on the east side of the highway to maintain continuity and reinforce US 30 as a green corridor.

3. CIVIC IDENTITY. Gateway elements, public art, and banner poles can strengthen the identity of the US 30 corridor, enhancing the visitor's relationship to St. Helens and resulting in frequent visitation, loyalty, and an ongoing interest in the vitality of its downtown. The following summarizes the proposed elements that contribute to civic identity along US 30:
   - New banners are proposed on both sides of US 30 to add festiveness and variety to this commercial arterial. Along the west edge, the design proposes to hang banners on existing utility and light poles, which are spaced on average at 250' apart between Gable Road and Columbia Boulevard. North of Columbia Boulevard on the west side where there are fewer existing utility poles, and along the eastern edge of US 30 from Gable Road to Pittsburgh Road, new banners poles are proposed at 250' spacing to reinforce a consistent and unified roadway corridor.
   - As part of the US 30 / Columbia Boulevard Gateway (described further below), a series of sculptural elements are proposed

FIGURE C-21 - Example of street banners from Lake Oswego, OR

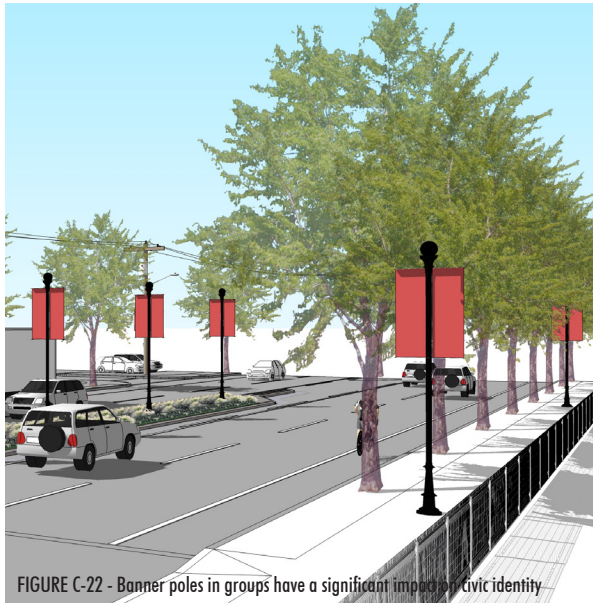


FIGURE C-22 - Banner poles in groups have a significant impact on civic identity

along the east side of the highway at strategic locations to help announce key intersections, help draw visitors downtown, and create a unified and distinctive streetscape that honors the spirit of St. Helens. Specific locations include north of Gable Road, between Columbia Boulevard and St. Helens Street, and north of St. Helens Street. These sculptures are intended to serve as a "trail of breadcrumbs" for visitors to St. Helens, and are described in greater detail below.

4. PUBLIC TRANSIT AND POLICE VEHICLES The Columbia County Transit District (CC Rider) has long term plans for providing transit service in the US 30 corridor using bus stops on the roadway. Currently buses pull off the road into parking or other areas to allow riders to get on or off the buses, causing significant increases in transit time. At this time, only two to three stops are envisioned, at approximately Gable Road, Columbia Boulevard and possibly a location approximately mid-way between them. Incorporating bus pullouts in these or other locations will require some combination of the following to accommodate them:

   - Acquisition of additional right-of-way or easements, particularly on the west side of US 30
   - Location-specific design refinements to the proposed pathway and landscaping concepts on the east side of US 30
   - Incorporation of bus shelters, lighting, landing pads and/or other needed amenities associated with the bus pullouts and stops

   These features are not illustrated in the proposed design concept for US 30. They could be be incorporated during a future, more detailed design phase as construction design plans are developed. The St. Helens Police Chief requested provision of pull-outs for law enforcement use along US 30. Pullout for use by law enforcement vehicles could be stand-alone or potentially integrated with future Transit pullouts.

FIGURE C-23 - Metal sculptural elements recall railroad history, creating a unique identity for the front door of St. Helens. A welcome sign is integrated into one of the elements, and is located at a "mini plaza".

SPECIAL OPPORTUNITY AREAS

A number of areas are identified throughout this report as "Special Opportunity Areas." These locations provide prospects for signature improvements that will enhance the overall corridor and meet specific community goals or needs, and may include the creation of gathering places, gateway features, viewpoints, or stormwater management features. Special Opportunity Areas that are located on private property are identified below, which will require the City to purchase the land and develop these recommended improvements. These preliminary ideas would need the support of impacted property owners to move forward.

1. US 30 / DOWNTOWN GATEWAY – A gateway feature that marks the entrance to downtown St. Helens is proposed along US 30 between St. Helens Street and Columbia Boulevard to help draw people into Houlton and towards Olde Towne. The feature should be highly visible, and representative of the spirit and culture of St. Helens. A number of site constraints should be considered, including proximity to the railroad tracks, required sight lines, and limited landscape area. Subject to ODOT approval, this feature could be one or any combination of typical gateway features, including an arched gateway monument, a sculptural or iconic element, or a vibrant and expansive landscaped area. While the primary gateway features are envisioned at the intersection of US 30 and Columbia Boulevard, the gateway may include features that extend as far as the US 30/ St. Helens Street intersection, which would serve as a secondary gateway.

FIGURE C-24 - Conceptual view of the US 30 / Downtown Gateway, showing sculptural elements, "mini-plaza", street trees, intersection enhancements, and gateway arch - SUBJECT TO CHANGE

FIGURE C-25 - Conceptual view of a gateway arch spanning over Columbia Boulevard located just east of Milton Way, integrating metal materials also utilized in sculptural elements along US 30 - SUBJECT TO CHANGE

FIGURE C-26 - The existing US 30 crossing and train trestle at Milton Creek

FIGURE C-27 - Example of a pedestrian bridge of similar scale and character

2. MILTON CREEK PEDESTRIAN BRIDGE – A critical link to the successful establishment of a new pedestrian sidewalk along the east side of US 30 is a new pedestrian bridge crossing at Milton Creek. This bridge will most likely need to be constructed independently of the existing roadway bridge currently spanning the creek given the planned future placement of a gateway art installation in this area and due to uncertainties about the ability of the existing structure to accommodate an attached/ cantilevered pedestrian bridge. This offset location should make the construction and permitting process easier. As a result, this report shows the bridge offset from the roadway which will make the pathway meander in this locaiton. However, it may be possible to cantilever the sidewalk if financially feasible. There also may be opportunities to integrate current art/ sculptural concepts being explored for the roadway bridge into the pedestrian bridge.

CONCEPTUAL INTERSECTION ENHANCEMENTS

A number of potential improvements have been identified to address traffic safety and operational issues and concerns at specific locations in this corridor segment. These conceptual intersection enhancements are intended to improve safety for all users (e.g., drivers, bicyclists, and pedestrians), while also enhancing the appearance and function of the transportation system.

1. US 30 / WYETH STREET - This concept illustrates a potential enhanced pedestrian crossing at the south leg of the US30 / Wyeth Street intersection. Conceptually the crossing would include signing, striping, and a raised median island to help facilitate pedestrian movements across US30. Subject to ODOT and ODOT Rail review and approval, the crossing may also include Rectangular Rapid Flash Beacons (RRFB) on the shoulders and in the center median or a High-Intensity Activated crossWalk (HAWK) signal. Either treatment would restrict northbound left-turn movements from US30 to the Columbia Commons Business Campus. ODOT state traffic engineer approval would be required for any intersection improvements; coordination with ODOT Rail is also needed. This likely will be a challenging project for which to obtain ODOT approval and secure funding. It also should be considered in the context of potential future development in this area and alternative connectivity, such as the anticipated future US30 / Pittsburg Road traffic signal.

FIGURE C-28 - Conceptual Intersection Enhancement: US 30 @ Wyeth Street

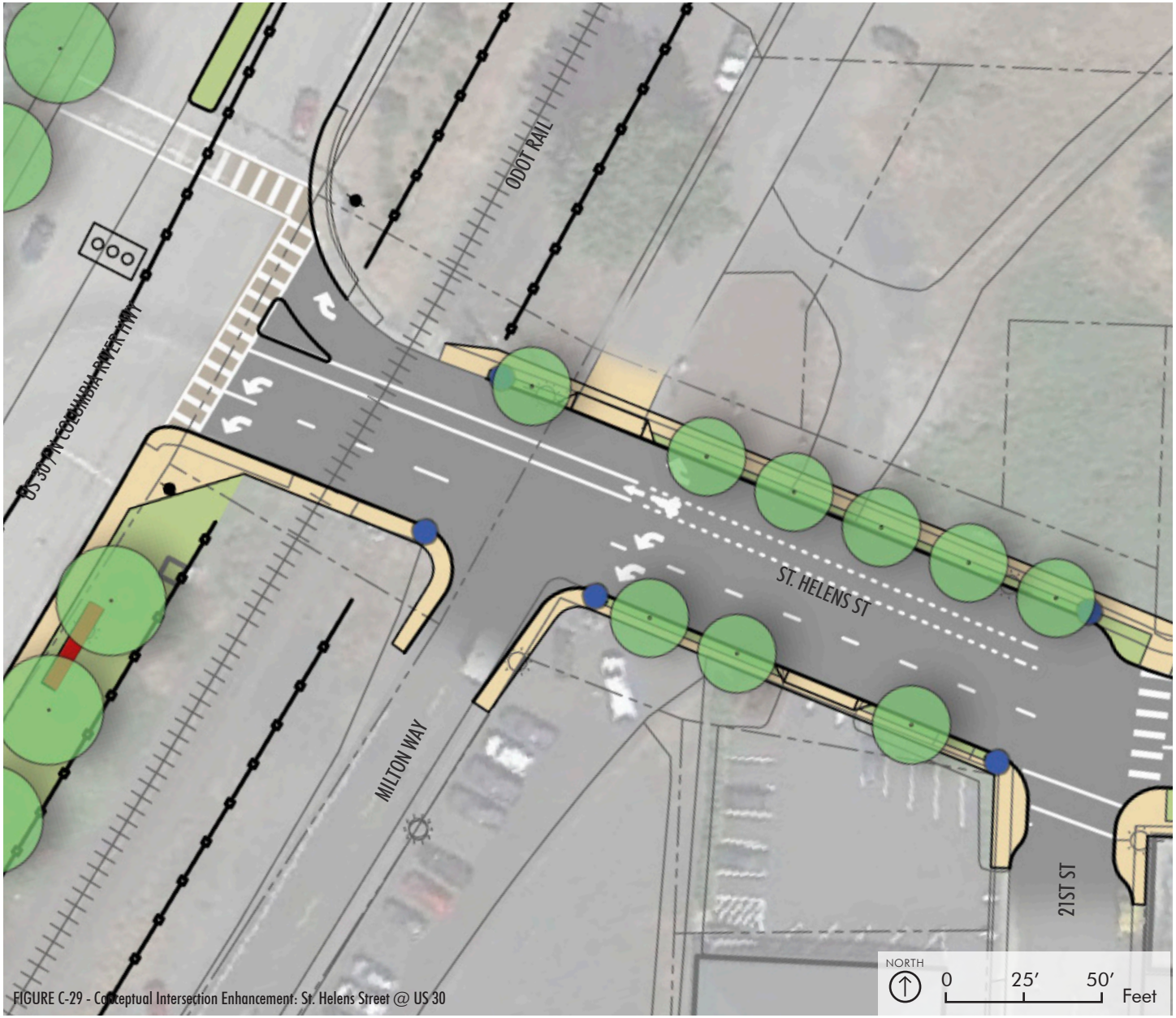


FIGURE C-29 - Conceptual Intersection Enhancement: St. Helens Street @ US 30

2. ST. HELENS STREET / US 30 -
This concept illustrates potential enhancements to the westbound approach to the US30/St Helens Street intersection as well as the segments of St Helens Street within the Houlton area. This concept includes a continuous on-street bicycle lane along the north side of St Helens Street, which continues straight through to US30 between the two left-turn lanes and the right-turn lane (which is developed after 21st Street). This concept also includes a small splitter island at the westbound approach to the intersection to improve crossing conditions for pedestrians as well as to provide further separation between cyclists and right-turning motorists. This concept would not impact the capacity of the intersection for motor vehicles; however, there would be a significant increase in the capacity for cyclists. Further, this concept provides bicycle lane delineation in accordance with ODOT and transportation industry best practices. This concept would also contribute to an improvement in the Bicycle Level of Traffic Stress scoring for the roadway.

PHASING RECOMMENDATIONS AND COST CONSIDERATIONS

Improvements for the US 30 Corridor segment can be separated into short-term and long-term improvements:

- **Short-term Improvements** – Implement Option 1, with lower cost plantings in the medians, a combination of banner poles, and more consistent landscaping on the rail (east) side of the highway.
- **Long-term Improvements** – Develop sidewalk on the rail side of the highway, if feasible within available area and rail constraints.

A potential range of construction costs is provided for the US 30 Corridor Segment improvements in Table C-1, below. These potential costs are broken down into Short-Term Improvements and Long-Term Improvements. These order-of-magnitude costs were derived from the recommended improvements described in the pages above, and are presented as a range to allow for flexibility in implementation, described further below.

TABLE C-1: ORDER OF MAGNITUDE COSTS FOR US 30 CORRIDOR SEGMENT IMPROVEMENTS

ITEM	INCLUSIONS	POTENTIAL RANGE OF CONSTRUCTION COSTS	
		LOW	HIGH
SHORT-TERM IMPROVEMENTS	• Medians (curbs, plantings, trees/banner poles) • Plantings (east side of US 30) • New Banner Poles (east side of US 30) • New Banners on Existing Utility Poles • New Curb Ramps • New Crosswalk Striping • Mobilization/Demo • 30% Design / Construction Contingencies	$750,000 Assumes low-intensity landscape plantings throughout medians and new planting areas, standard median curbs, and base options for banners and banner poles.	$1,650,000 Assumes medians with banner poles or sculptural elements, jersey barrier-style walls and articulated paving, higher-intensity trees and plantings in all new landscape areas, and high quality banners and banner poles.
LONG-TERM IMPROVEMENTS	• Fencing (each side of ODOT Rail property) • New Sidewalk (east side of US 30) • Intersection Crosswalk Paving • Curb Ramps • Trees and Plantings (east side of US 30) • Private Property Landscape Improvements • Mobilization/Demo • 30% Design / Construction Contingencies	$1,500,000 Assumes chain-link fencing, standard concrete sidewalks, standard concrete crosswalk paving materials, and low-intensity landscape plantings.	$2,350,000 Assumes welded-wire mesh panel fencing, articulated concrete sidewalk paving, colored and/or textured concrete crosswalk paving materails, and high-intensity landscape plantings.