VIRGINIA - DAISY BIKEWAY CONCEPT STUDY

Draft Final Report

Fall 2016

SPRINGFIELD OREGON

Acknowledgments

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MEMBERS OF THE BICYCLE PEDESTRIAN ADVISORY COMMITTEE ON VIRGINIA AVENUE

CHAPTER ONE

Project Overview

Network Context

The current roadway network in mid-Springfield offers few safe and convenient options for bicyclists and pedestrians travelling east-west through the city. Main Street is the primary east-west corridor but functions as a principal arterial with high vehicle volumes and speeds that presents many challenges for people walking and bicycling. The nearby Virginia Ave-Daisy Street corridor is designated as a local road and major collector from 32nd Street to Bob Straub Parkway, and features much lower vehicle speeds and volumes. As such, it represents a more ideal candidate for bicycle and pedestrian travel, but requires significant improvements at key intersections and other locations along the corridor.

The City of Springfield was awarded funding through the statewide Oregon Transportation Enhancement grant program to design, develop and construct the Virginia-Daisy Bikeway Project. Combined with federal funding for a roadway overlay project, the Virginia-Daisy Bikeway Project will allow the City of Springfield to provide comfortable, convenient, and safe transportation options for people of all ages and abilities along the Virginia Ave and Daisy Street corridor. **Figure 1** on the next page provides an overview of the Virginia-Daisy Bikeway Project corridor.

Designing for Safety and Access

This multimodal corridor will provide a much needed connection for residents and the broader community travelling by foot or bicycle to local services and amenities, and complement the commercial Main St. thoroughfare to the north.

Safety

Design elements such as striped bicycle lanes, shared lane markings, traffic calming measures, intersection crossing improvements, wayfinding and additional regulatory signage, and improved lighting are planned to improve traffic safety and comfort. Notably, the project will also feature a significant reconstruction of the intersection of 42nd Street, into a low-stress single-lane roundabout.

Equity

The Virginia-Daisy Bikeway Project responds to the access and connectivity needs identified in the Springfield Bicycle Plan by closing gaps in the corridor that have otherwise presented challenges for people bicycling. This carries important social equity implications for residents with limited or no access to vehicles. Currently, 16 percent of area residents are below poverty level, while 20 to 40 percent of area children are below the poverty level. 24 percent of working residents already use non-drive alone transportation options (carpool, bus, bike, walk, etc.) to commute to and from work.1 Transit service in this area is also limited as Lane Transit District does not currently provide transit service south of Main Street.

Health

Creating a safer, more comfortable walking and biking environment helps to encourage more daily physical activity, which translates to lower stress levels, reduced risk of obesity, diabetes, and heart disease, and overall improved community health.[2]

1 Springfield, Oregon Profile. http://City-Data.com/city/Springfield-Oregon.html

2 Equity and Opportunity Assessment: Safety, Health, and Wellness - Body Mass Index. Livability Lane. 2013.

Amenities

The Bikeway provides a vital connection to nine nearby schools, local shopping and recreation destinations, and the regional Willamalane Center that serves local area children with after school activities and families with a wide range of recreational opportunities and programs. The project further strengthens the walking and bicycling network by complementing current and future off-street path projects, including Willamalane Mill Race Path, Booth Kelly Road, Weyerhauser Haul Road, the growing Middle Fork Path, and other local accessways.

Environment

In addition to promoting active transportation and healthy lifestyles for local residents, the project will contribute to neighborhood livability by enhancing the overall attractiveness of the corridor by incorporating environmentally focused infrastructure, such as street tree plantings and stormwater management facilities.

Tourism

Cycling tourism is growing regionally. In 2012 bicycle-traveler trip expenditures in the Willamette Valley totaled over $70 million. Statewide cycling tourism generated $10.3 billion in direct travel spending.[3] Projects like the Virginia-Daisy Bikeway could expect to become part of larger regional or trans-American bike touring rides. The Virginia-Daisy Bikeway will also provide access to the future Thurston Hills single-track mountain bike trails, a potential key bike tourism destination.

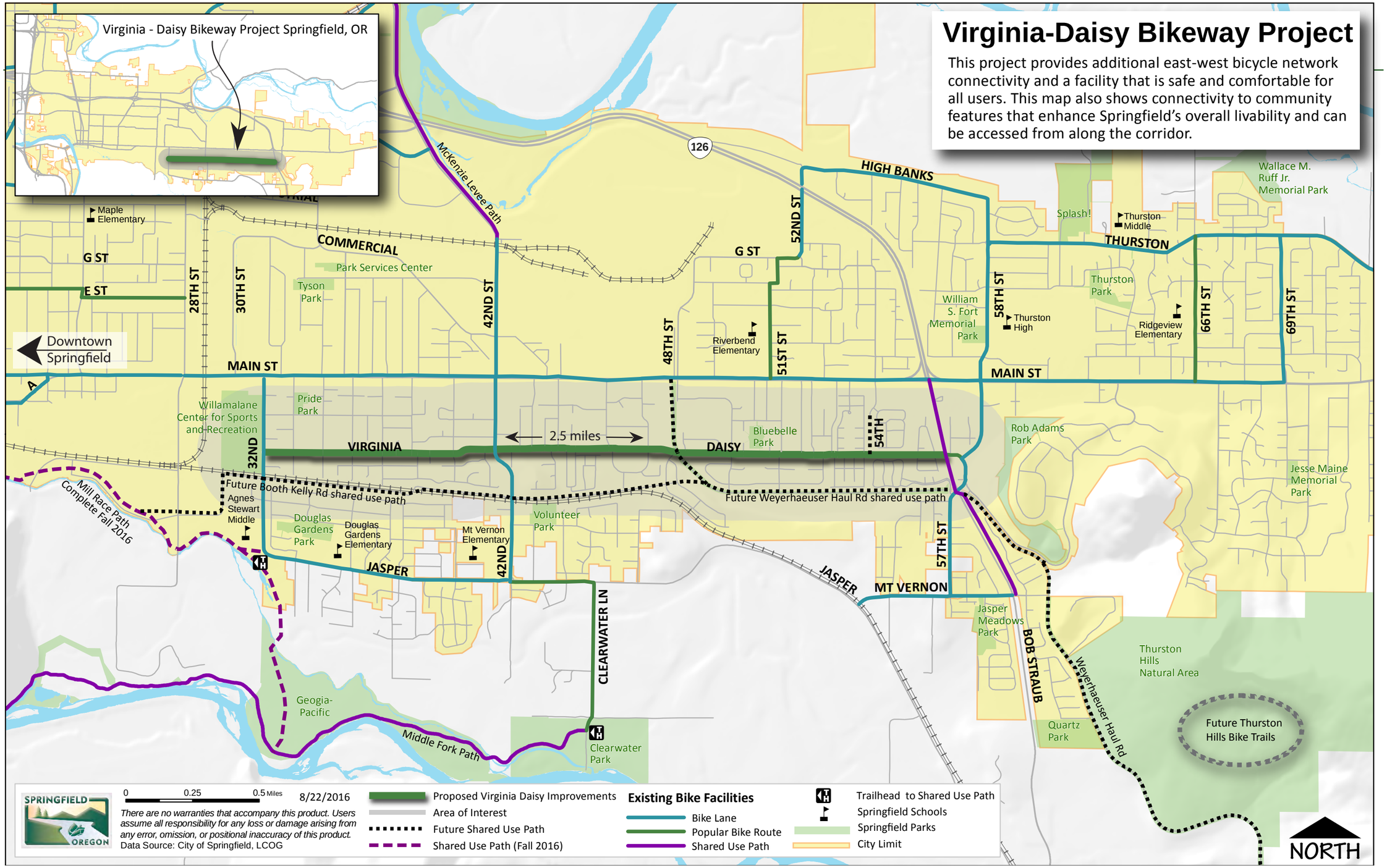
Policy

The Bikeway project is closely aligned with the goals and policies set forth in the Springfield Transportation System Plan, Lane County Transportation System Plan, and the Central Lane Metropolitan Planning Organization Regional Transportation Plan related to regional sustainability, economic vitality, and social equity.

City of Springfield City Council and Project specific goals are presented in the following section.

3 Oregon Travel Impacts: 1991-2014, Dean Runyan Associates

Figure 1: Project Corridor Map



Project Goals

1. **The project aligns with the City of Springfield's commitment to providing safe transportation options. The project is an identified need in the Springfield Transportation System and aligns with regional bike network connectivity goals.**
2. **The Virginia-Daisy Bikeway Project provides a safe and comfortable bicycle corridor that can be used by people of all ages and abilities.**
3. **The design of the Virginia-Daisy Bikeway enhances the overall appearance of the corridor for all users, improves pedestrian safety and usage, and provides traffic calming for automobiles to emphasize active transportation along the street and enhance the neighborhood feel.**

City Council Goals

1. Financially Responsible and Stable Government Services

A. Implementing street overlay, bikeway enhancement, and stormwater treatments through one project increases efficient use of public funds.

2. Community and Economic Development and Revitalization[1]

A. Investments in bicycling infrastructure are cost-effective and generate an array of direct and indirect health, transportation, environmental, and economic benefits for the City and region.

B. Constructing bike facilities creates local jobs, increases local tax revenue, and stimulates local spending.

C. Constructing bike facilities creates local jobs, increases employment tax revenue, and stimulates local spending. People making short local trips by bike tend to make more frequent trips to local stores, and bike tourism and events support the local food, lodging, and recreational industries. This spending on bicycle-related services and amenities generates demand for more bike facilities, creating a positive feedback loop of benefits. Research has also shown that the property values of homes in walkable, bikeable communities are typically higher than similar homes in areas that do not have access to bike and pedestrian facilities.

3. Enhance Public Safety

A. Safety will be greatly increased along the corridor with traffic calming and intersection safety improvements, such as the proposed roundabout at 42nd Street and Daisy Street. Roundabouts reduce overall collisions by 37 percent, injuries by 75 percent, fatalities by 90 percent, collisions with pedestrians by 40 percent, and collisions with people biking by 10 percent.[2]

4. Effectively Create a Positive Environment that Values Diversity and Encourages Inclusion

A. Provide safe and comfortable transportation options for people walking and bicycling, in addition to people driving.

5. Maintain and Improve Infrastructure Facilities

A. Perform an overlay treatment along the corridor to preserve the street infrastructure.

B. Add bicycle facilities and sidewalk infill to improve Virginia Avenue and Daisy Street for all users.

6. Preserve our Hometown Feel, Livability, and Environmental Quality

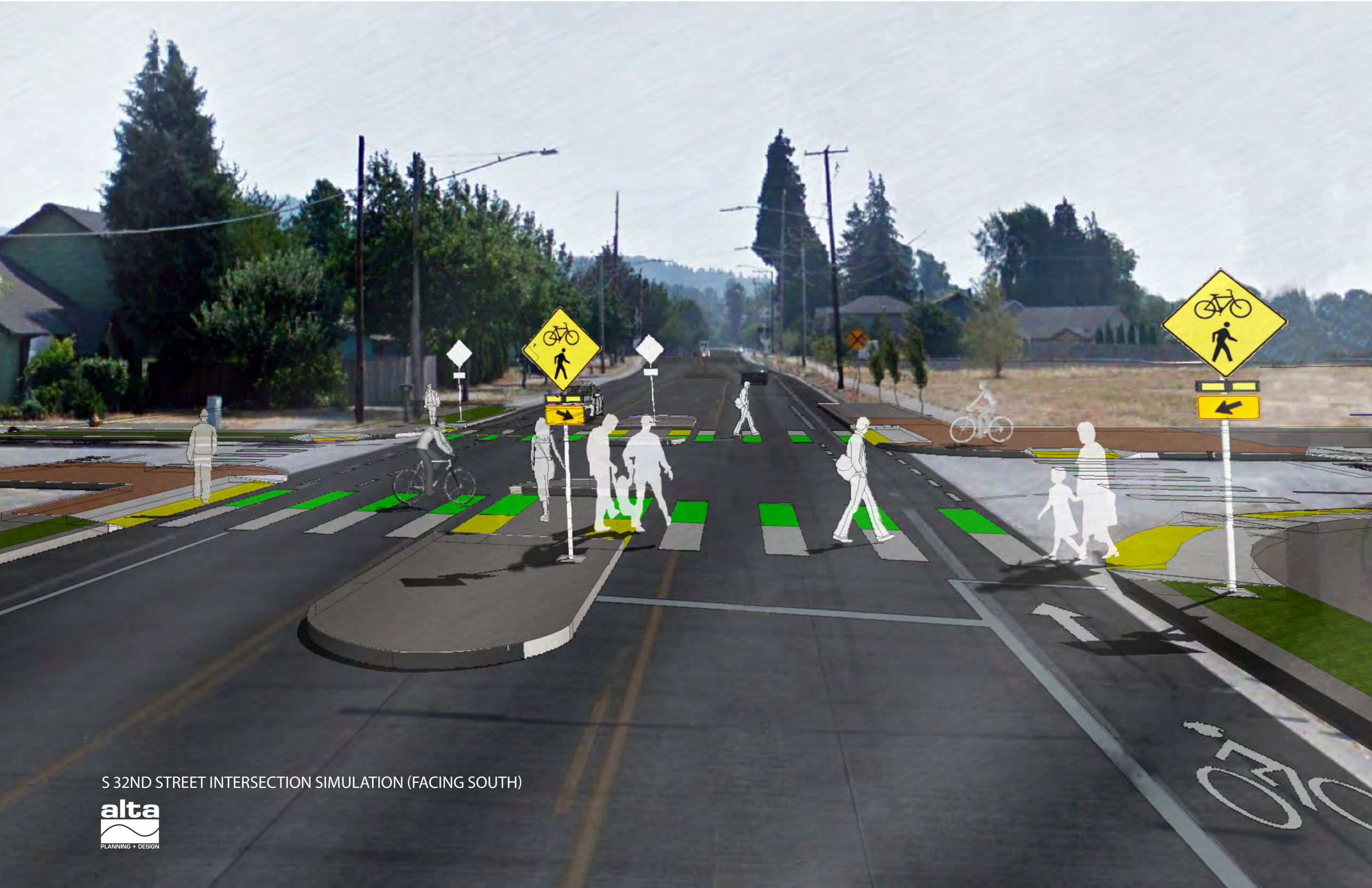
A. Install stormwater treatments along the corridor, including bioswales and additional tree canopy.

B. Construct a design that encourages neighborhood appropriate speeds and enhances the overall appeal of the neighborhood.

Existing S 42nd Street Intersection (Facing North)

1 Flusche, Darren. Bicycling Means Business: The Economic Benefits of Bicycle Infrastructure. Advocacy Advance. 2012.

2 Federal Highway Administration and Insurance Institute for Highway Safety



S 32ND STREET INTERSECTION SIMULATION (FACING SOUTH)

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CHAPTER TWO

Draft Final Design Concept

This is a concept only. Detailed design leading up to construction has yet to be completed. Design elements that will be further developed include wayfinding to and from key locations including:

- Mill Race Path
- Middle Fork Path
- Main Street
- Future Booth Kelly Road Path
- Future Weyerhaeuser Haul Road Path
- McKenzie Levee Path
- Thurston Hills Natural Area
- Clearwater Park
- Willamalane Center for Sports and Recreation

Virginia Avenue:

S 32nd Street to S 41st Place

The preferred bikeway type on Virginia Avenue to S 41st Place is a bicycle boulevard with shared lanes. Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

S 32nd Street Intersection Design

Rapid flashing beacons facing S 32nd Avenue would promote yielding to people crossing the street.

People on bicycles on Virginia Avenue would take the ramp up to a shared-use path at the crossing and cross adjacent to pedestrians in the crosswalk. People on bicycles would also have the option to navigate the intersection as a vehicle in the travel lanes.

Median safety islands would provide added safety and comfort for people walking and biking across the street.

Mixing zones would be created on all four corners of the intersection. These are areas where people biking and walking would be able to navigate around the intersection separated from motor vehicle traffic. These areas are delineated with specialty pavement to indicate that these areas are for slow and safe travel.

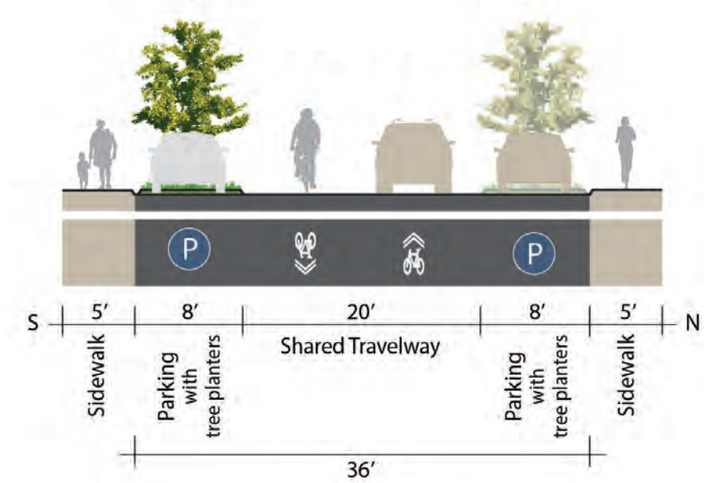
See Appendix 3 for the 32nd St and Virginia Ave Gap Analysis Memo.

Additional Safety Features

Other elements along the corridor designed to create a safer operating environment by slowing speeds, increasing the drivers' field of vision and opportunity to yield, and shortening stopping distances include:

- Curb extensions (shorten the pedestrian crossing distance and visually narrow the roadway to slow traffic)
- On-street planters (capture and treat stormwater runoff and visually narrow the roadway to slow traffic)
- Mini-roundabouts (slow traffic)
- Raised crosswalk (improve driver visibility of pedestrians and slow traffic)
- Pedestrian refuge islands (provide physical protection form motorists and slow traffic)

Recommended Cross Section



Conceptual On-Street Planter

At S 32nd Avenue:

The crossing would be enhanced with high visibility markings and rapid flash beacons to create a low-stress crossing with a high rate of yielding.

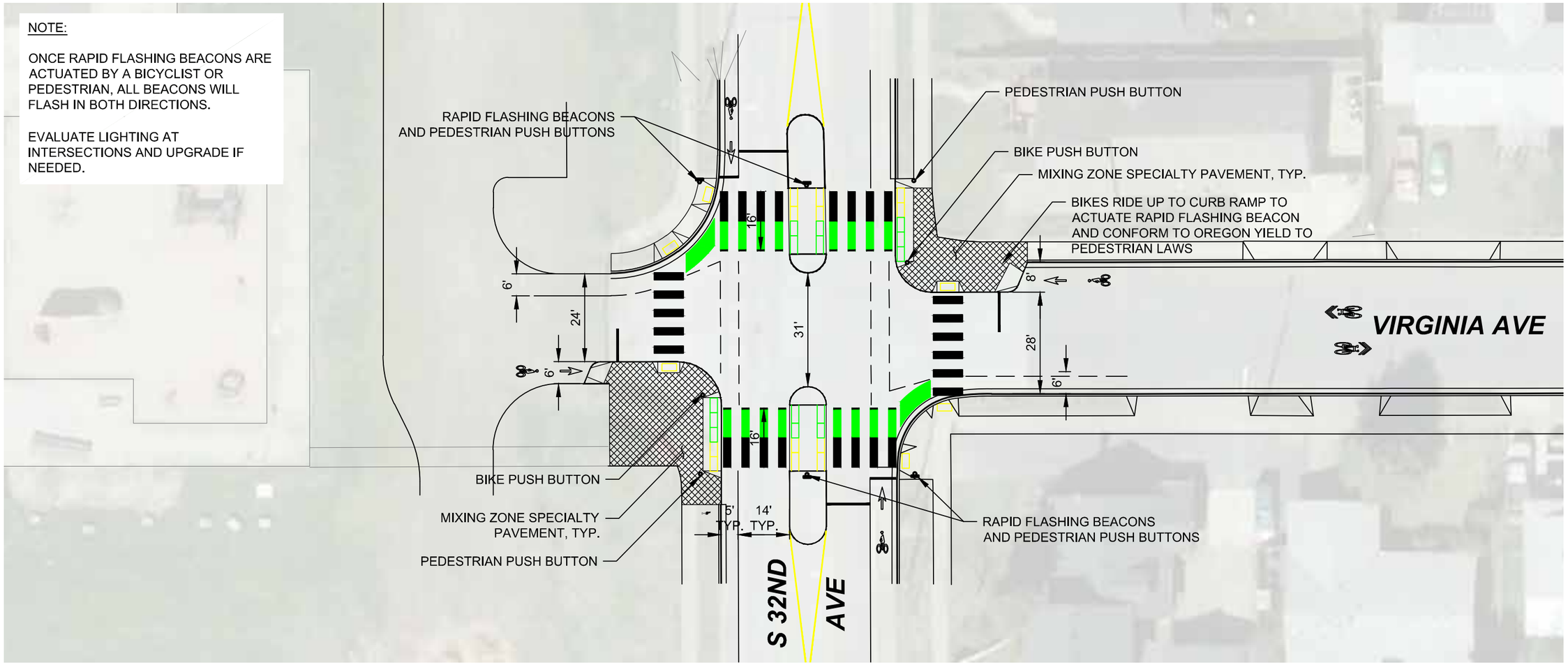
See next sheet for intersection design concept.

Added Tree Canopy:

Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy. Coordination and agreement from fronting property owner will be required prior to implementation. Locations shown are conceptual only.

ADA Accessibility:

All curb ramps along the corridor will be evaluated and upgraded for ADA accessibility.



S 32nd Street Intersection Concept Enlargement

Mini Roundabout

Mini-roundabouts provide traffic calming. Low profile mini-roundabouts would not include center landscaping and they would accommodate emergency vehicles and other typical neighborhood oversized vehicles.

Pedestrian Refuge Island

Pedestrian refuge islands provide a two-stage crossing for people walking and shorten crossing distances. Depending on the location, they may or may not include low profile landscaping.

Added Tree Canopy:

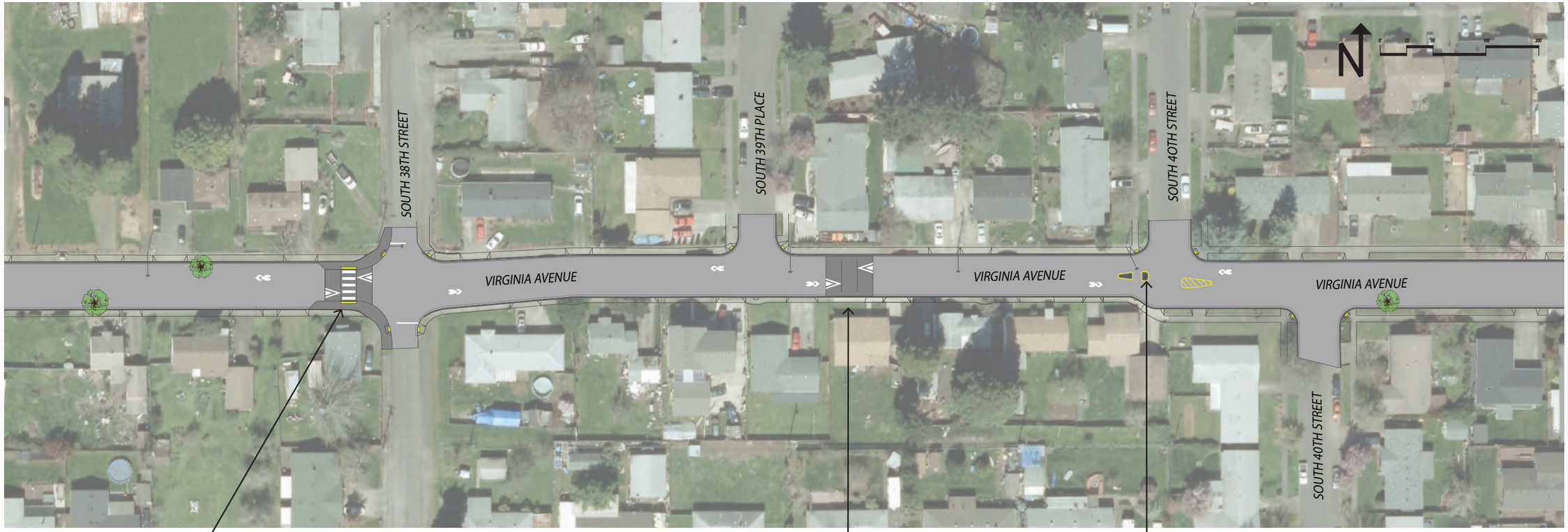
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy. Coordination and agreement from fronting property owner will be required prior to implementation. Locations shown are conceptual only.

At S 35th Street:

A mini roundabout would be added as traffic calming to create bicycle-compatible travel speeds.

At S 37th Street:

The stop sign would be flipped to favor Virginia Ave.



At S 38th Street:

The stop sign would be flipped to favor Virginia Ave.

A narrowed raised crossing with curb extensions would be added to promote yielding to crossing pedestrians and to help deter speeding through the neighborhood.

Curb extensions may also function as stormwater planters to capture and treat water before entering channels on S 38th.

Added Speed Cushion:

Where additional tree plantings are less desired, traffic calming would include asphalt cushions to reduce traffic speeds.

At S 40th Street:

Mini median islands would be added to slow traffic and provide refuge for pedestrians crossing the street.

Added Tree Canopy:

Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy. Coordination and agreement from fronting property owner will be required prior to implementation. Locations shown are conceptual only.

At S 41st Street:

A mini roundabout would be added to create bicycle-compatible travel speeds.

Sidewalk Infill:

New concrete sidewalk added to fill in gaps along corridor.

S 42ND STREET INTERSECTION SIMULATION (FACING NORTH)

Daisy Street:

S 42nd Street to S Weyerhaeuser Haul Road

The preferred bikeway type on Daisy Street to S Weyerhaeuser Haul Road is bicycle lanes. Due to higher traffic volumes, a separated bicycling facility is necessary. Roadway markings throughout this section of the corridor would consist of one consolidated parking lane, bike lane stripes, and bike lane markings to distinguish bike lanes from the general purpose travel lanes. No center line would be provided to encourage motor vehicles to give extra distance while passing people biking. Identification of consolidated parking lane is based on existing parking utilization levels combined with gaps in tree canopy. See the Parking Considerations in Relation to Bikeway Implementation section on pages 30-31 for additional information.

S 42nd Street Intersection Design

A single-lane roundabout would create slow circulation speeds through the intersection for all street approaches and greatly improve the safety of the intersection compared to existing conditions.

People bicycling would be permitted to travel within the roundabout with motor vehicles, or to enter into a shared space with pedestrians and use the crosswalk.

Mixing zones for people walking and biking would be created on all four corners of the roundabout. These are areas where people biking and walking would be able to navigate around the intersection separated from motor vehicle traffic. These areas are delineated with specialty pavement to indicate that these areas are for slow and safe travel.

The roundabout could also incorporate stormwater treatment to aid in controlling flooding, treat stormwater, and recharging ground water.

The roundabout proposed for implementation at S 42nd and Daisy St as a part of the Virginia-Daisy Bikeway Project is designed to be uniquely optimized for pedestrian and bicycle circulation, comfort and safety. This is achieved by designing for slow, 15 mph motor vehicle travel speed throughout the roundabout.[1] This slow speed creates low speed differentials for cyclists choosing to travel in-lane, and a high degree of yielding to people walking and bicycling within the crosswalk and slower approach speeds through the reversing curve to the south.

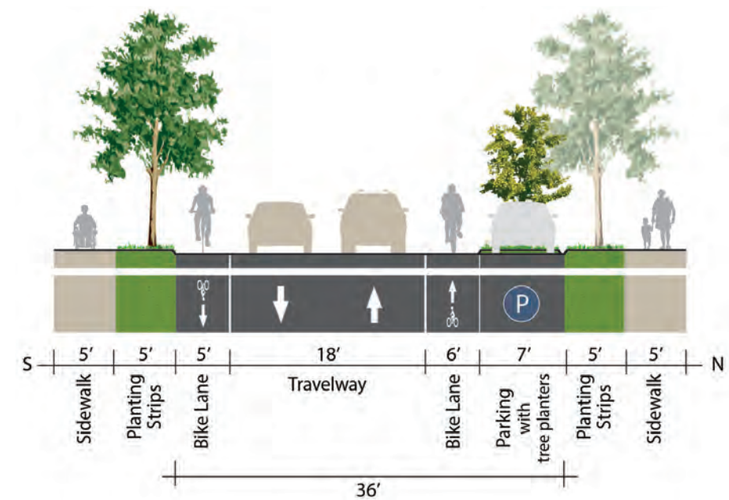
Additional Safety Features

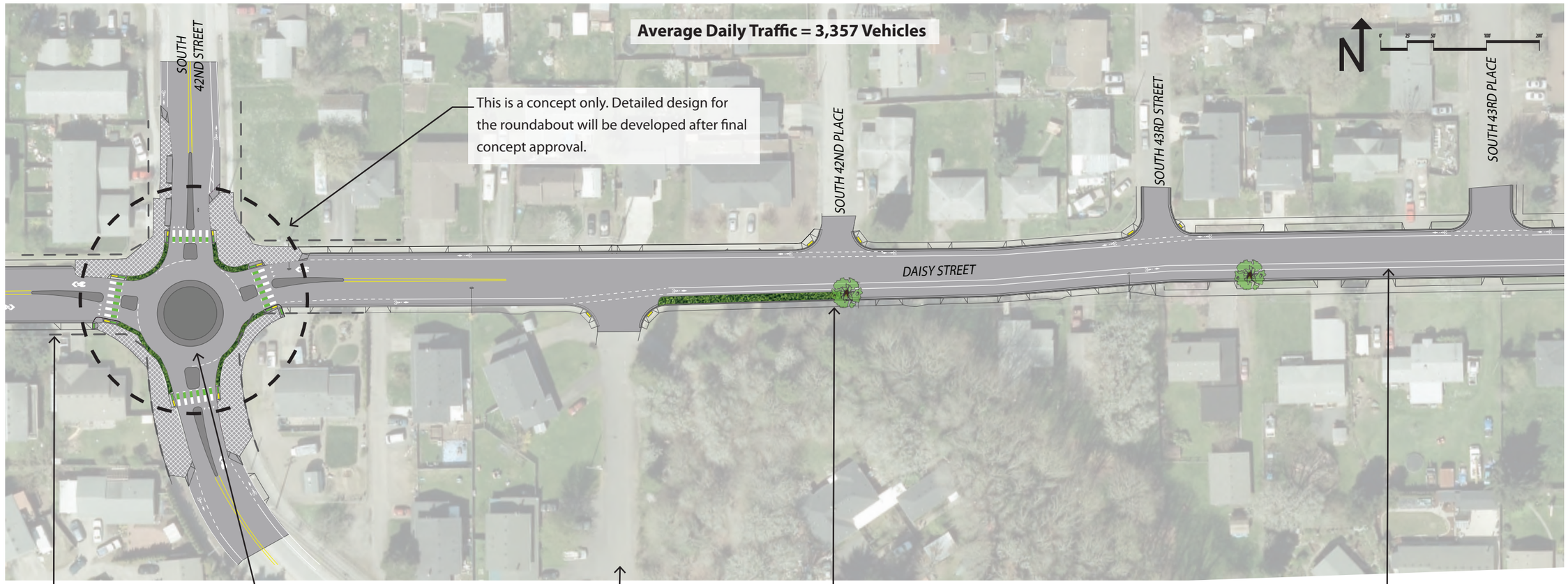
Other elements along the corridor designed to create a safer operating environment by slowing speeds, increasing the drivers' field of vision and opportunity to yield, and shortening stopping distances include:

- Curb extensions (shorten the pedestrian crossing distance and visually narrow the roadway to slow traffic)
- On-street planters (capture and treat stormwater runoff and visually narrow the roadway to slow traffic)
- Raised crosswalk (improve driver visibility of pedestrians and slow traffic)
- Pedestrian refuge islands (provide physical protection form motorists and slow traffic)
- Mini-median islands (slow traffic)

1 FHWA, Roundabouts: An Informational Guide, 2000. This guide has largely been superseded by NCHRP Report 672, but the compact urban roundabout type illustrated in the earlier guide is more appropriate for this use.

Recommended Cross Section





Property Line

At S 42nd Street:

Intersection design options are proposed to improve safety, yielding and crossing comfort for users.

See enlarged design concept of intersection on the following page.

Accessway:

Possible bike accessway improvement for people biking north on S 42nd heading east on Daisy.

Street modification:

Curb extension with stormwater treatment.

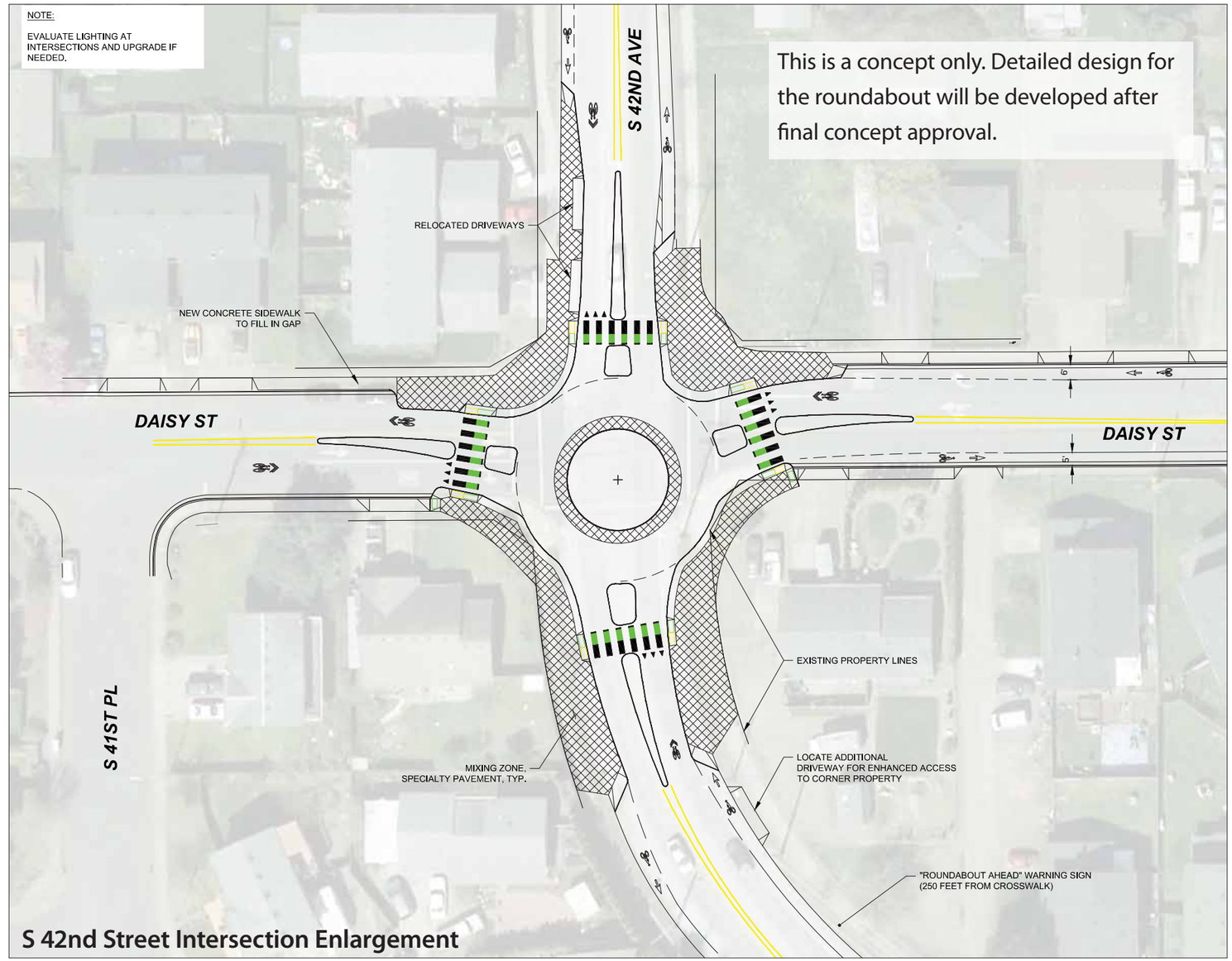
See photo of potential treatment on next page.

Street modification:

Parking would be consolidated to the south side of the street.

Bicycle lanes would be added for the safety and comfort of people bicycling.

Typical Stormwater Treatment



S 42nd Street Intersection Enlargement

Street modification:

A mini-median island would be added to slow traffic and keep cars in the proper lane through the bend in the roadway.

Street modification:

Parking would be consolidated to the higher-demand side of the street.

Bicycle lanes would be added for the safety and comfort of people bicycling.

Added Tree Canopy:

Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy. Coordination and agreement from fronting property owner will be required prior to implementation. Locations shown are conceptual only.

At S 46th Street:

A narrowed raised crossing would be added to promote yielding to crossing pedestrians, as well as reduce speeding along the corridor.

Street modification:

Parking would be consolidated to the higher-demand side of the street.

Bicycle lanes would be added for the safety and comfort of people bicycling.

Street modification:

A landscaped center median would be added to slow traffic. Landscaping would be low maintenance and drought tolerant.

Daisy Street:

S Weyerhaeuser Haul Road to S 54th Street Connector Path

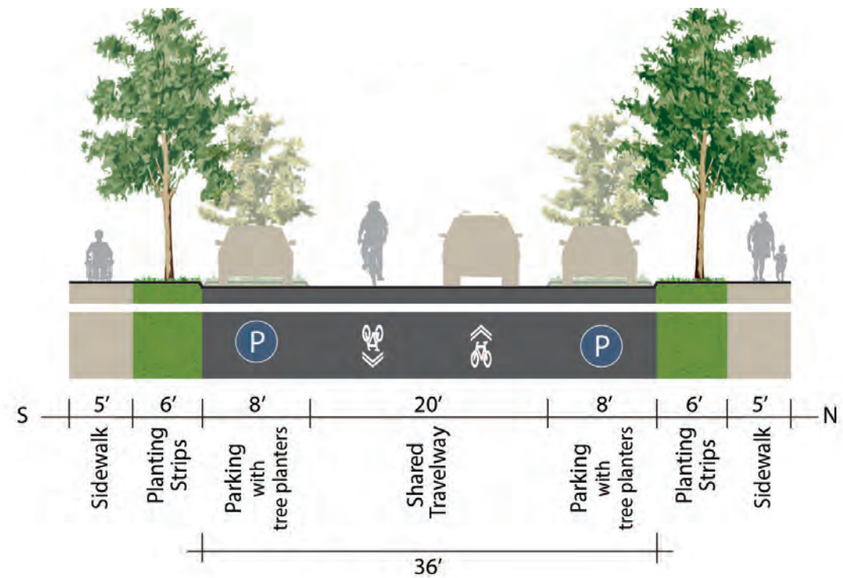
Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

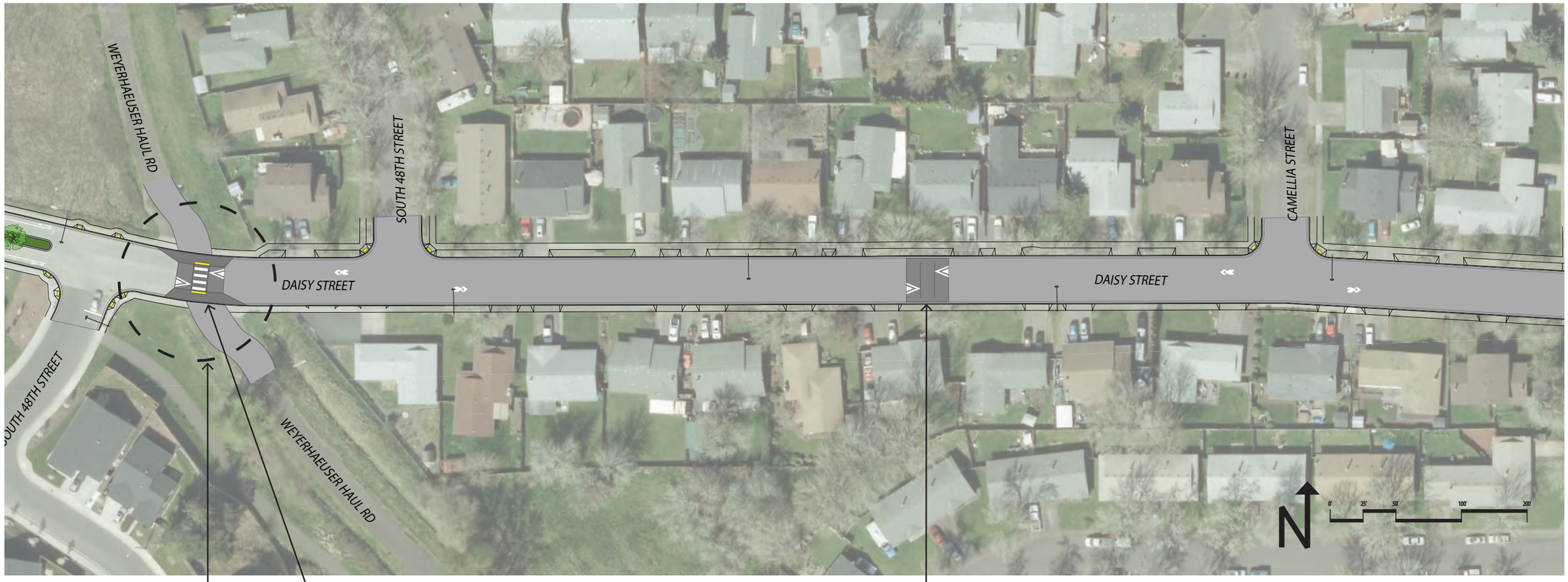
Additional Safety Features

Other elements along the corridor designed to create a safer operating environment by slowing speeds, increasing the drivers' field of vision and opportunity to yield, and shortening stopping distances include:

- Curb extensions (shorten the pedestrian crossing distance and visually narrow the roadway to slow traffic)
- On-street planters (capture and treat stormwater runoff and visually narrow the roadway to slow traffic)
- Mini-roundabouts (slow traffic)
- Raised crosswalk (improve driver visibility of pedestrians and slow traffic)

Recommended Cross Section





At S Weyerhaeuser Haul Rd:

Additional coordination and area development required in relation to future 48th St extension to Main St and Willamalane path development.

At S Weyerhaeuser Haul Rd:

A narrowed raised crossing would be added to promote yielding to people on foot and people biking, as well as reduce speeding along the corridor.

Added Speed Cushion:

Where additional tree plantings are less desired, traffic calming would include asphalt cushions to reduce traffic speeds.

Added Tree Canopy:

Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy. Coordination and agreement from fronting property owner will be required prior to implementation. Locations shown are conceptual only.

At S 49th Place:

A narrowed raised crossing would be added to promote yielding to crossing pedestrians and encourage neighborhood appropriate traffic speeds.

At S 51st Place:

A mini roundabout would be added to encourage drivers to travel at bicycle-compatible speeds.

Curb ramps and concrete sidewalk added to the north east corner.

At S 52nd Street:

Signs would be provided to show existing no parking in narrow area of street.

At S 52nd Street:

Sidewalks would be added to the north side of Daisy St.

At S 53rd Street:

A narrowed raised crossing would be added to promote yielding to crossing pedestrians. This replaces the existing crosswalk to the east.

S 53RD STREET RAISED CROSSING SIMULATION (FACING WEST)

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Daisy Street:

S 54th Street Connector Path to Bob Straub Pkwy

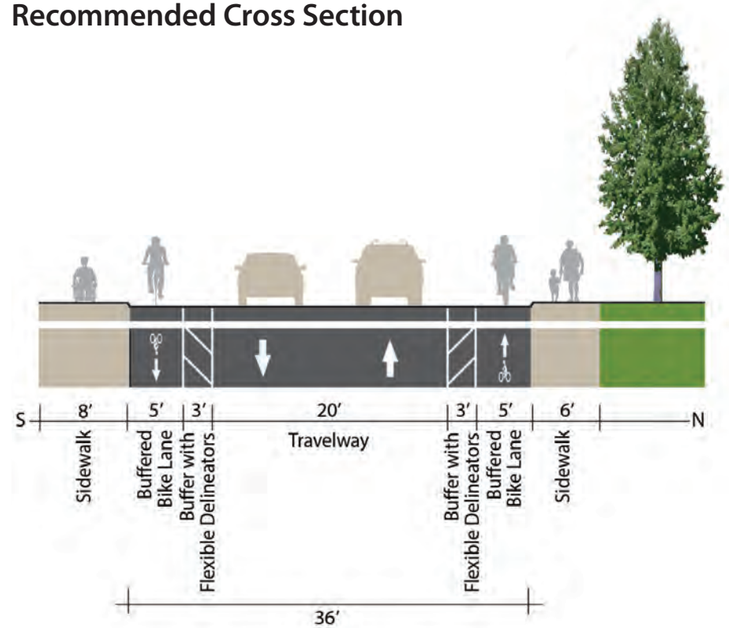
Roadway markings throughout this section of the corridor would consist of buffered bike lane stripes, and bike lane markings to distinguish protected bike lanes from the general purpose travel lanes. No center lane would be provided to encourage people driving to give extra distance while passing people on bikes. Extremely low parking utilization in the block between the S 54th Street Connector Path and 5660 Daisy Street would allow conversion to buffered bike lanes. The block between the 5660 Daisy Street loop would be unbuffered bike lanes to allow on-street parking to remain on the north side of the street.

Additional Safety Features

Other elements along the corridor designed to create a safer operating environment by slowing speeds, increasing the drivers' field of vision and opportunity to yield, and shortening stopping distances include:

- Curb extensions (shorten the pedestrian crossing distance and visually narrow the roadway to slow traffic)
- On-street planters (capture and treat stormwater runoff and visually narrow the roadway to slow traffic)
- Raised crosswalk (improve driver visibility of pedestrians and slow traffic)

Recommended Cross Section



At Future Trail Crossing:

A raised crossing would be added to promote yielding to crossing pedestrians. Additionally, this treatment will enhance safety for all users by reducing speed along this section of the corridor.

Street modification:

Buffered bike lanes would be used to provide a gateway treatment and to slow traffic coming off of Bob Straub Parkway.

At 5660 Daisy Street:

A raised crossing would be added to promote yielding to crossing pedestrians.

Street modification:

Buffered bike lanes would be used to provide a gateway treatment and to slow traffic coming off of Bob Straub Parkway.

Bob Straub Pkwy:

Design will be part of a future project.

Parking Considerations in Relation to Bikeway Implementation

Establishing a new bikeway on the Virginia-Daisy corridor involves changes to the street that include traffic control changes, lane restriping and roadway reconfiguration. One strategy for creating space for dedicated bike lane facilities is to consolidate street parking on only one side of the street.

Underutilized parking lanes can result in higher traffic speeds and unsafe driving behavior due to the appearance of a wide open travel space. Reallocating a portion of underutilized parking lanes as a bike lane can mitigate these issues while providing dedicated space for people biking and maintaining ample on-street parking spaces[1].

Existing Conditions

To support the bikeway design for Virginia-Daisy, the City of Springfield conducted on-street parking counts at ten different times to cover the variety of conditions encountered on the corridor[2]. To supplement this data, the city also performed a count based on visual inspection of previously captured photography.[3]

Count Summary

Observed usage of the on-street parking lane at any one time on the full Virginia-Daisy corridor ranges from a low of 74 vehicles to a high of 116 vehicles. Specific clusters of parking demand varies on the corridor in response to land uses, community destinations and availability of off-street parking.

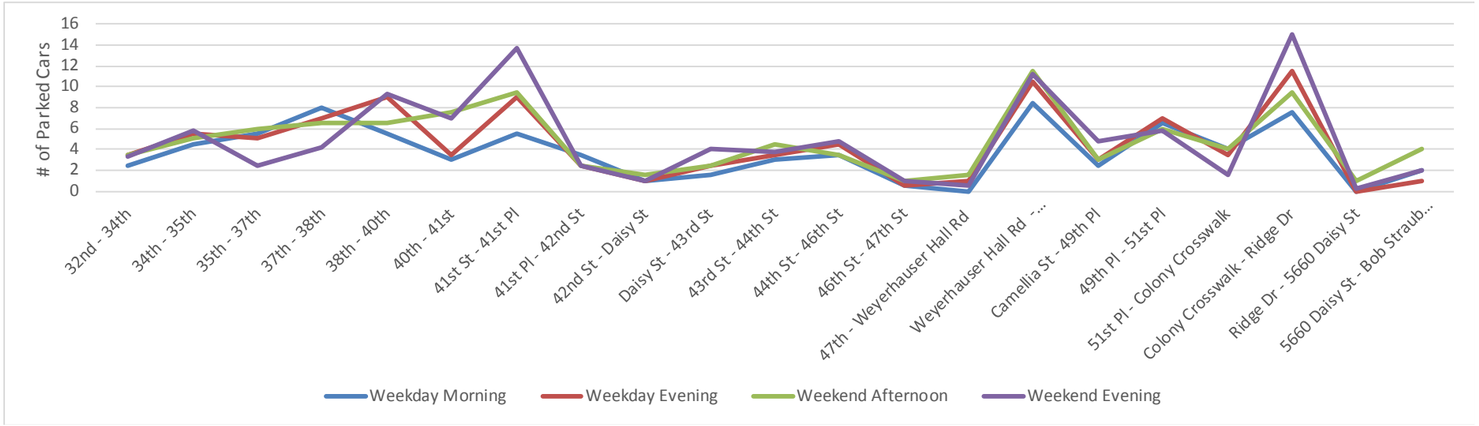
As shown in the table to the right, parking demand is generally consistent from weekday to weekend and morning to evening hours. Special event parking demand (such as a sports event at the Willamalane Center) may exceed the use seen on the average day.

1 FHWA. Incorporating On-Road Bicycle Networks into Resurfacing Projects. 2016

2 Counts were performed Tuesday 1/12/2016 and Tuesday 1/19.2016 at 10am; Tuesday 1/19/2016 and Tuesday 1/26/2016 at 6:30 pm; Saturday 1/16/2016 and Saturday 1/23/2016 at 2:00pm; Saturday 4/02/2016 at 6:00pm; Sunday 4/03/2016 at 5:30pm; Saturday 7/16/2016 at 6:10pm; and Sunday 7/17/2016 at 6:00pm.

3 Google StreetView photography dated September 2011 and August 2008.

Average parking use for each block segment on the corridor based on day and time



Parking Lane Capacity

Parking is allowed on the curbside on both sides of the street along the majority of the Virginia-Daisy corridor. Under some conditions, parking use may be prohibited, restricted or unavailable. These conditions include:

- Parking is prohibited for 30 ft advance of crosswalks . This applies at all crosswalks[4], including all street corners. On the Virginia-Daisy corridor, currently yellow curbs are only painted on either side of the marked crosswalks by Colony Dr and Ridge Dr.
- Spot parking restrictions such as the residential loop at the far East end of the corridor which has no parking permitted on the street (off of Daisy St).
- On-street parking is not allowed in front of driveways. Many residential units on the corridor provide their own off-street parking for one or two vehicles. Curb cuts provide access to these spaces but also prevent on-street parking in that location.
- On narrow segments without space for parking. Between S 51st and S 52nd St the street is so narrow that parking would block one travel lane. Parking is already prohibited on this segment.

4 See. ORS 811.550 – Parking prohibition near crosswalks

Design Considerations

On most streets with parking on both sides, parking demand can be accommodated with parking provided on one side.

Parking may be alternated from one side of the street to the other with proper transitioning. This pattern may cause motorists to reduce their speed.

Proposed Changes

As part of the Virginia-Daisy Bikeway project, some segments of the corridor may feature consolidated parking lanes in order to visually narrow the roadway and provide space to establish a bike lane in higher traffic volume locations. At spot locations across the entire corridor, parking may be restricted in certain locations to allow for trees and crossing enhancements. These spot changes on their own are not expected to have significant impact to parking availability.

There are four distinct segments in the project related to parking lane consolidation:

S 32nd to S 42nd :

In this segment, no parking consolidation is proposed, with no significant effect on parking availability.

S 42nd to Weyerhauser Haul Rd:

This segment proposes parking consolidation on one side of the street. After implementation, this segment will have an estimated 140 parking spaces. This is more than enough to serve the observed weekend peak of 15 parked cars. (10% post implementation utilization).

Weyerhauser Haul Rd to Ridge Dr:

In this segment, no parking consolidation is proposed, with no significant effect on parking availability.

Ridge Dr to Bob Straub Parkway:

This segment proposes the removal of parking on both sides of the street (with the exception of one block on the north side near 5660 Daisy Street/Western Loop). After implementation, this segment will have an estimated 15 parking spaces. This is more than enough to serve the observed weekend peak of 5 parked cars. (33% post implementation utilization). This segment does not have driveways fronting the street since it is located between the backs of two mobile home parks.

Community Benefits

- Reduces conflicts with bicyclists as drivers pull into and out of parking spaces and drivers and passengers open doors of parked vehicles.
- Provides additional roadway space for bicycle facilities.
- Improves sight distance for all roadway users.
- Provides clean water recharge and stormwater management via treatment and flood control.

PLANNING COMMISSION AND BICYCLE & PEDESTRIAN ADVISORY COMMITTEE MEMBERS RIDE CORRIDOR AS PART OF SITE VISIT

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CHAPTER THREE

Outreach and Community Involvement

Involving the community in design concept development is critical to a successful project.

The communications goals for the Virginia-Daisy Bikeway Project are as follows:

- Ensure the Springfield community has opportunities to be informed about the project
- Ensure the Springfield community has opportunities to provide input on the project; specifically residents within the project area
- Project communication is effective and efficient
- Included in this section are the following key highlights. Appendices referenced throughout provide additional detailed information about project communication efforts.
- Communications Summary
- Summary of Open Houses
- Committee Guidance

Communications Summary

A Communications Plan (Appendix 5) was developed to support the Virginia-Daisy Bikeway project by setting objectives, strategies, and tactics to increase awareness and understanding of the overall project and specifically inform Springfield residents that live within the project area about the overall goal of the project and opportunities to give input.

The tactics used to date to communicate about the project and involve the community in project planning are summarized below. Additional communication will continue as the project moves from planning into design and construction. Copies of outreach materials are available in Appendix 9: Outreach Materials.

Material Outreach Tactics

- Project Website: http://www.springfield-or.gov/dpw/Virginia-DaisyBikewayProject.htm
- E-updates: 5/23/2016, 6/23/2016, 7/7/2016
- Newsletter articles: SmartTrips Springfield, SmartTrips Thurston, InMotion
- Postcards: 3 postcards, mailed to 4,400 addresses in the project area
- Interested parties email list: 85 subscribers as of August 19, 2016
- TV interview: 6/13/2016 with local channel
- Flyers: distributed across community prior to each open house
- FAQs: available online and at open houses
- Newspaper: Open Houses promoted in Register Guard outdoor calendar
- Design Mapbooks: staff mailed or hand delivered three design concept packets to residents along corridor at their request
- Facebook posts promoting Open Houses by Safe Routes to School

In-Person Outreach

- 2 Open Houses*
- Tabling at Neighborhood Community Events
  1. PeaceHealth Safety Fair at Willamalane Center on May 21, 2016
  2. Willamalane South Hills String Band at Douglas Gardens Park on July 20, 2016
- Presentations: BPAC, Planning Commission, and City Council
- Hand-delivered letters and on-site conversations with residents on the corners of 42nd St and Daisy St
- Bicycle and Pedestrian Advisory Committee Site Visit Ride
- Analytics - E-update - Average open rate of 66%; 67% on Desktop and 33% on a moblie device; Website - 359 unique pageviews with an average viewing time of 4:29 minutes

Feedback from Community**

- 10 emails
- 17 phone calls
- 1 letter

*See Appendix 7 and 8 for summary of open houses.

**See Appendix 6 for log of written comments.

Summary of Open Houses

To engage residents and property owners along the corridor and to receive their input on the bikeway design elements, staff held two open houses. The first was to show the design concepts and the second to show the refined design concepts that included their feedback from the first open house.

Open House #1

Wednesday, May 25, 2016, 6:00 – 7:30PM

Mt Vernon Elementary School Cafeteria

35 attendees

"Support the shared travelway, beacons at 32nd and Virginia Ave, mini-roundabouts at 35th and 41st, bicycle lanes on Daisy all the way, and 42nd/Daisy traffic light, full signal preferred. Adding trees is not necessary, let people do it in front of their house if they want to. Safely crossing 42nd and Daisy on foot or bicycle is concerning currently, as well as 32nd and Bob Straub."

"No trees that the City has to maintain, staff and funds do not exist. Mini-roundabouts are okay if they don't block the view so that neighbors can't see across or down the street. Don't mess with the parking."

"Like the roundabouts with single lanes for slowing traffic and it makes it safer for bikes. Bike boxes are great. Also buffered bike lanes in some places are great for safety. Not enough speed bumps [raised crosswalks and speed cushions]. Great job!"

Open House #2

Tuesday, July 12, 2016 6:00 – 7:30PM

Papa's Pizza on Main St

45 attendees

"I like basically everything, especially all the roundabouts and flipped stop sign. Also the protected bike lanes. Please, please push for the 54th St. connection to Safeway and remove the gate on the Weyerhaeuser trail. Thank you! Keep up the good work."

"I like these refined design concepts: yes, as far as I understand them. My concerns are what kind of trees will be added? And where?"

"I don't want to change the street."

"I like the roundabouts, especially at 42nd and Daisy, bike lanes, shared lane markings, and anything else you can do to inform others of cyclists on the road. Looks great. Remember to design the project like your kids will be using it. My concerns are that generally motorists far exceed the posted speed limit."

"I have nearly been hit on my bike a handful of times trying to cross at 42nd headed south while I'm on my bike. This is the route to Clearwater bike path that my family uses. My daughter is in middle school and I will not let her ride her bike to school (ASMS) due to this bike crossing problem.

Not only would a round-a-bout be helpful for pedestrian and bicycle crossing, it would make traffic slow down for cars too. The corner south of daisy on 42nd street does not have good vision to predict turning times from daisy to 42nd in any direction. Often traffic is speeding around this corner." – 44th and Daisy Resident, email

"I love the idea of a yellow blinking light and cross-walk across 32nd at the end of Virginia to get to Willamalane Center from our neighborhood." – Neighborhood Resident, email

Committee Guidance

Additional details in the following bullet point content.

BPAC Site Visit (9/14/2015)

BPAC Site Visit:

- Rode the length of the corridor
- Observed the varied characteristics (width, parking utilization, traffic volumes, intersection size, etc.) along the corridor
- Emphasized that crossing improvements at 42nd St and 32nd St were priorities for the project to address and a future crossing improvements at Bob Straub Parkway is needed

Planning Commission (6/7/2016) and City Council (6/13/2016)

Planning Commission:

- Supported 32nd intersection as proposed with refuge island crossings
- Preferred roundabout option at 42nd St and Daisy St
- Supported sharrows and bike lanes as proposed
- Discussed consistency of treatments along the corridor and throughout the community, including wayfinding signs and roundabouts

City Council:

- Supported 32nd intersection as proposed with refuge island crossings
- Preferred roundabout option at 42nd St and Daisy St
- Supported sharrows and bike lanes as proposed
- Directed trees to be optional or at the property owner's request and overall less frequent along the corridor
- Supported stormwater integration elements of project, but wanted predictable and smooth transitions along the corridor with stormwater and traffic calming
- Directed staff to collect additional evening weekend parking utilization counts to ensure treatments complement the current on-street parking patterns

BPAC Meeting (6/14/2016)

BPAC Meeting:

- Overall the committee was very supportive of the Preliminary Design Concepts
- Preferred buffered bike lane option for the corridor to the east of 54th on Daisy St
- Preferred roundabout treatment at 42nd and Daisy intersection

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CHAPTER FOUR

Next Steps

The Path Forward

The City of Springfield has engaged the Virginia-Daisy neighborhood and broader community in developing the design concepts for the Bikeway. The project will continue to communicate with the neighborhood and Springfield community as the project moves from planning into design and construction.

The project website (http://www.springfield-or.gov/dpw/Virginia-DaisyBikewayProject.htm) will continue to be updated, email updates will be shared periodically with the interested parties list (sign-up available on the website), and postcards will be mailed to the project area to keep the community informed.

Project Calendar

September 2016	City Council Work Session
October 2016	City Council Public Hearing
October 2016	City Council Final Concept Approval
October 2016 – Spring 2016	Engineering Design
Summer 2017	Overlay Street and Construct Bikeway

The timeline is subject to change. Please see project website for most updated information or contact Emma Newman, Transportation Planner, at 541-726-4585 or enewman@springfield-or.gov.

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CHAPTER FIVE

Cost Estimate for Refined Design Concept

Project Elements

Cost estimates have been developed for the different elements of the project (see below). For the detailed cost estimate information, please see Appendix 10: Cost Estimate. As the project moves from high level planning concepts into design and construction, some design elements may need to be eliminated if construction costs end up being higher than expected. The intent of the project is to provide as many benefits with the funds available.

Project Element	Cost	Funding Source
Bikeway Treatments	$806,000	Transportation Enhancement Oregon Bicycle and Pedestrian Advisory Committee Grant Springfield Development Charges
Overlay	$500,000	Federal Surface Transportation Planning Urban Funds
ADA Ramps and Driveways	$477,000	To be identified
Stormwater Treatments	$107,000	Springfield Stormwater funds
Total	**$1,890,000**	

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Appendices

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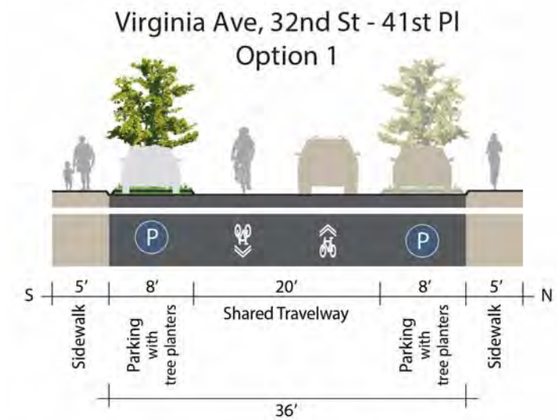
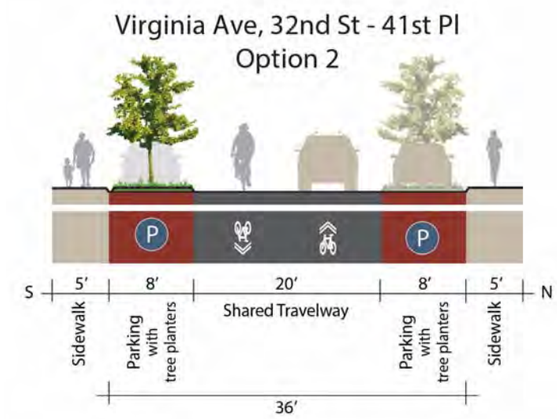
Appendix 1: Preliminary Design Concepts Mapbook

At S 32nd Ave:
The crossing would be enhanced with high visibility markings and rapid flash beacons to create a low-stress crossing with a high rate of yielding.
See next sheet for intersection design.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.

ADA Accessibility:
All curb ramps along the corridor will be evaluated for ADA accessibility and necessary upgrades.





On-Street Tree Planters

KEY FEATURES

The preferred bikeway type on Virginia Avenue to 34th St is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Optional design elements could include colored pavement to differentiate the parking lanes from the travel lanes.

Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.

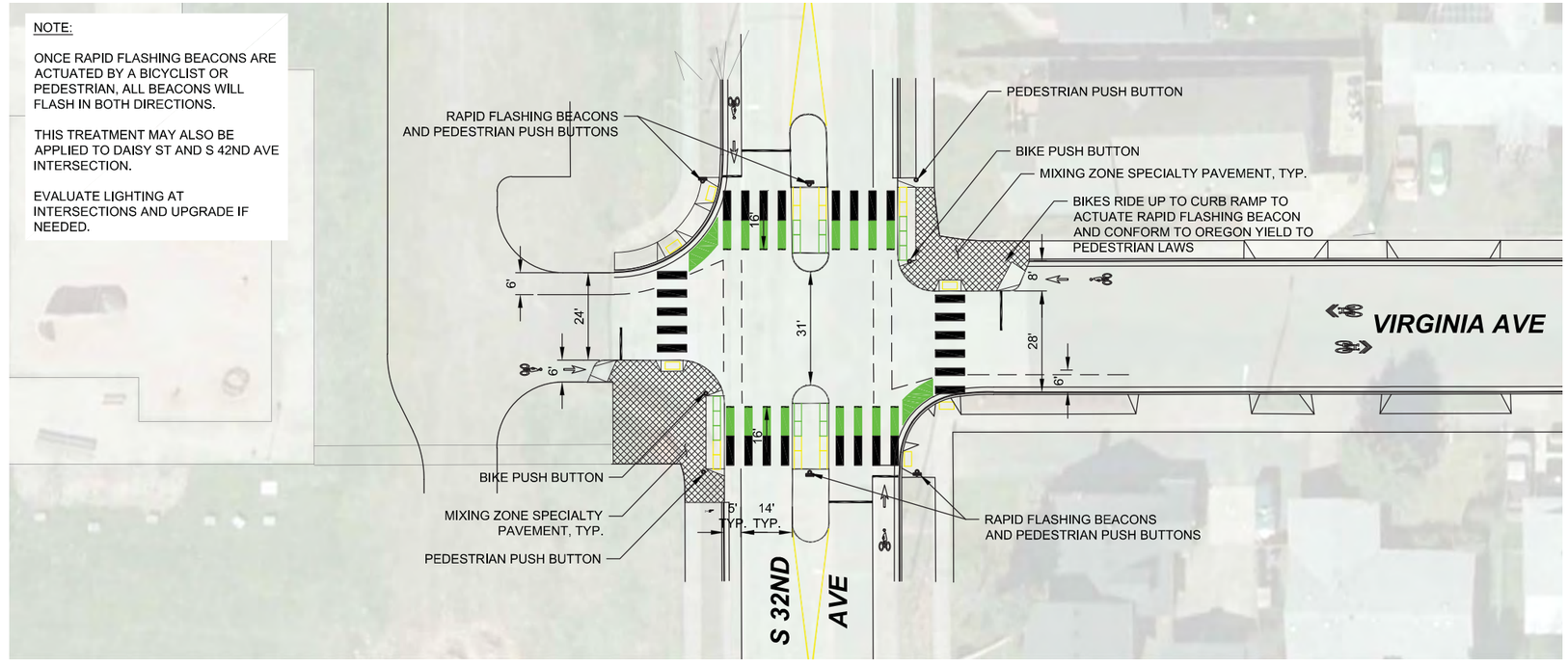
32ND STREET INTERSECTION DESIGN

Rapid flashing beacons facing S 32nd Ave would promote yielding to people crossing the street.

People on bicycles on Virginia Ave would ramp up to a shared-use path at the crossing, and cross adjacent to pedestrians in the crosswalk. People on bicycles would also have the option to navigate the intersection as a vehicle in the travel lanes.

Median safety islands would provide added safety and comfort for people walking and biking across the street.

Mixing zones would be created on all four corners of the intersection. These are areas where people biking and walking would be able to navigate around the intersection separated from motor vehicle traffic. These areas are delineated with specialty pavement to indicate that these areas are for slow and safe travel.

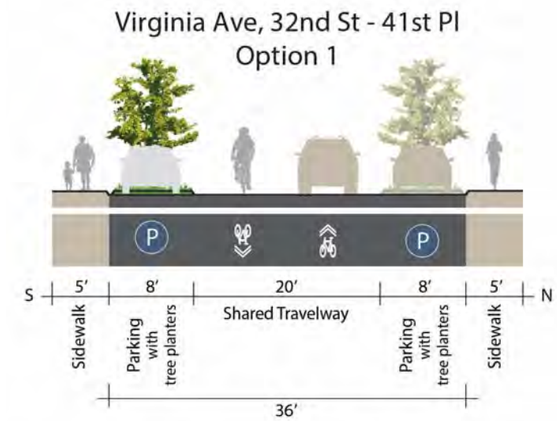


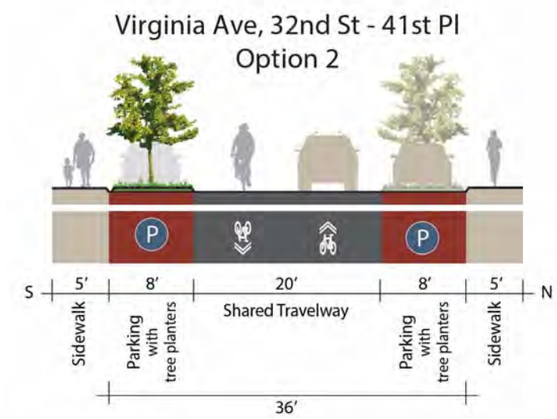
32ND STREET INTERSECTION SIMULATION (FACING SOUTH)

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but on existing parking needs and lack of existing tree canopy.

At S 35th St :
A mini roundabout would be added to create bicycle-compatible travel speeds.

At S 37th St:
The stop sign would be flipped to favor Virginia Ave.





KEY FEATURES

The preferred bikeway type on Virginia Avenue to 37th St is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

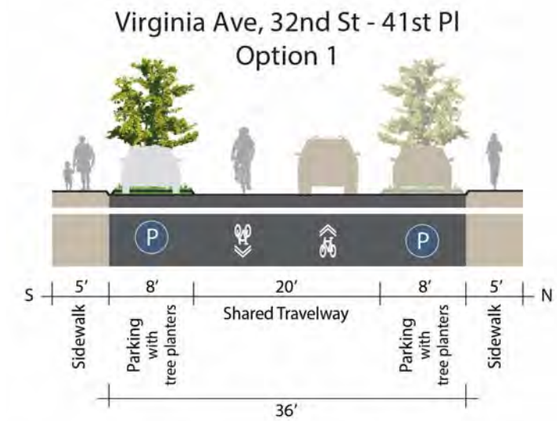
Optional design elements could include colored pavement to differentiate the parking lanes from the travel lanes.

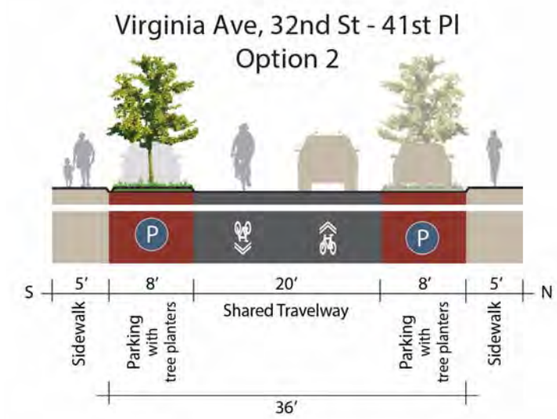
Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.

At S 38th St:
The stop sign would be flipped to favor Virginia Ave. A narrowed raised crossing with curb extensions would be added to promote yielding to crossing pedestrians and to help deter speeding through the neighborhood.
Curb extensions could also function as stormwater planters to capture and treat water before entering channels on 38th.

At S 40th St:
Mini median islands would be added to slow traffic and provide refuge for pedestrians crossing the street.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.





KEY FEATURES

The preferred bikeway type on Virginia Avenue to 40th St is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

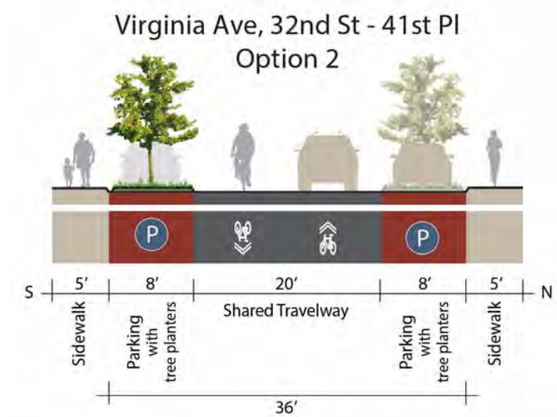
Optional design elements could include colored pavement to differentiate the parking lanes from the travel lanes.

Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.

At S 41St :
A mini roundabout would be added to create bicycle-compatible travel speeds.

Sidewalk Infill:
New concrete sidewalk added to fill in gaps along corridor.



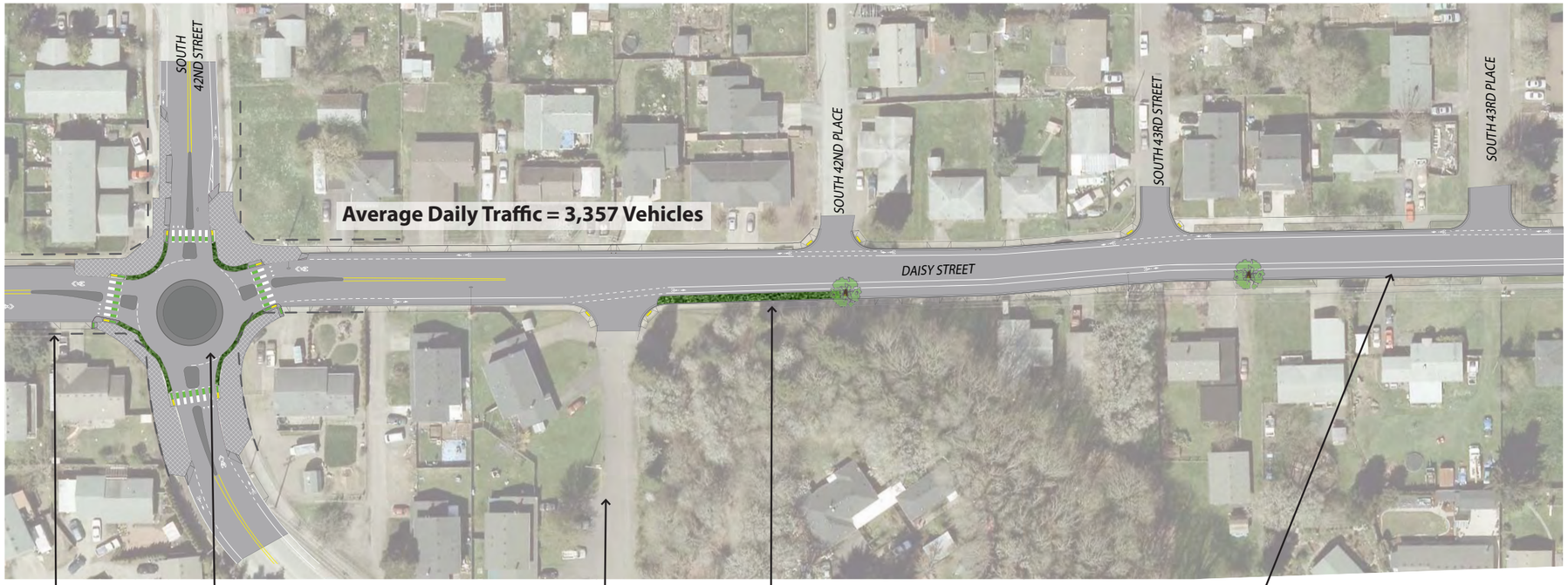
KEY FEATURES

The preferred bikeway type on Virginia Avenue to 41st Pl is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Optional design elements could include colored pavement to differentiate the parking lanes from the travel lanes.

Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.



Property Line

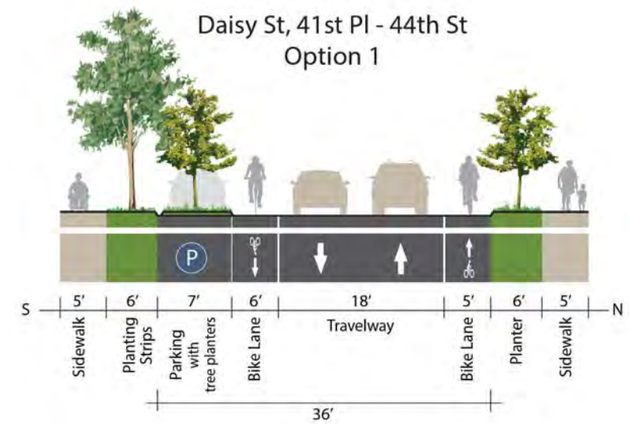
At S 42 St:
Intersection design options are proposed to improve safety, yielding and crossing comfort for users.

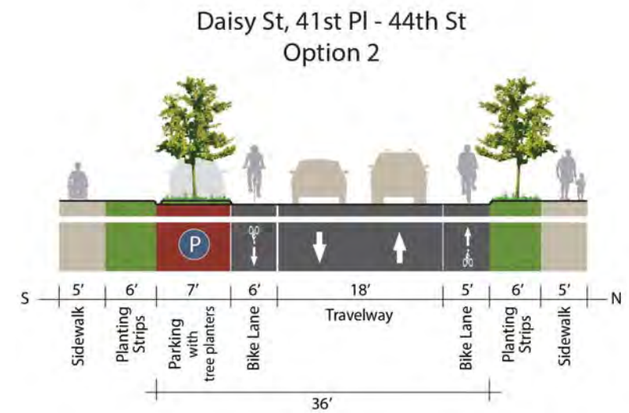
See detailed designs of intersection options on the following pages.

Accessway:
Possible bike accessway improvement for people biking north on 42nd heading east on Daisy.

Street modification:
Curb extension with possible stormwater treatment.
See photo of potential treatment below.

Street modification:
Parking would be consolidated to the higher-demand side of the street. Bicycle lanes would be added for the safety and comfort of people bicycling.





KEY FEATURES

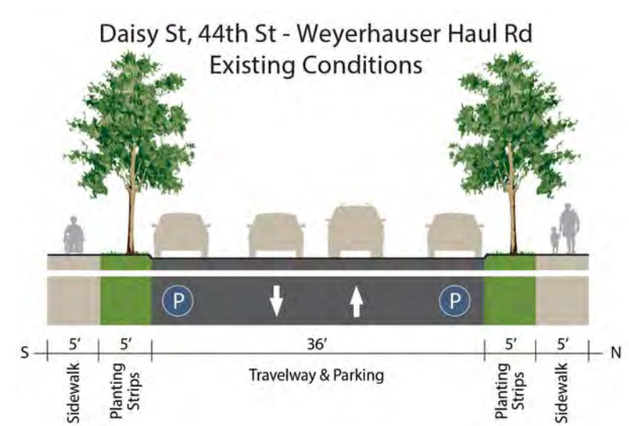
The preferred bikeway type on Daisy Street to 43rd Pl is bicycle lanes.

Due to higher traffic volumes, a separated bicycling facility is necessary. Roadway markings throughout this section of the corridor would consist of one consolidated parking lane, bike lane stripes, and bike lane markings to distinguish bike lanes from the general purpose travel lanes. No center lane would be provided to encourage motor vehicles to give extra distance while passing people biking.

Optional design elements could include colored pavement to differentiate the consolidated parking lane from the bicycle and travel lanes.

Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.

Identification of consolidated parking lane is based on existing parking utilization levels combined with gaps in tree canopy.

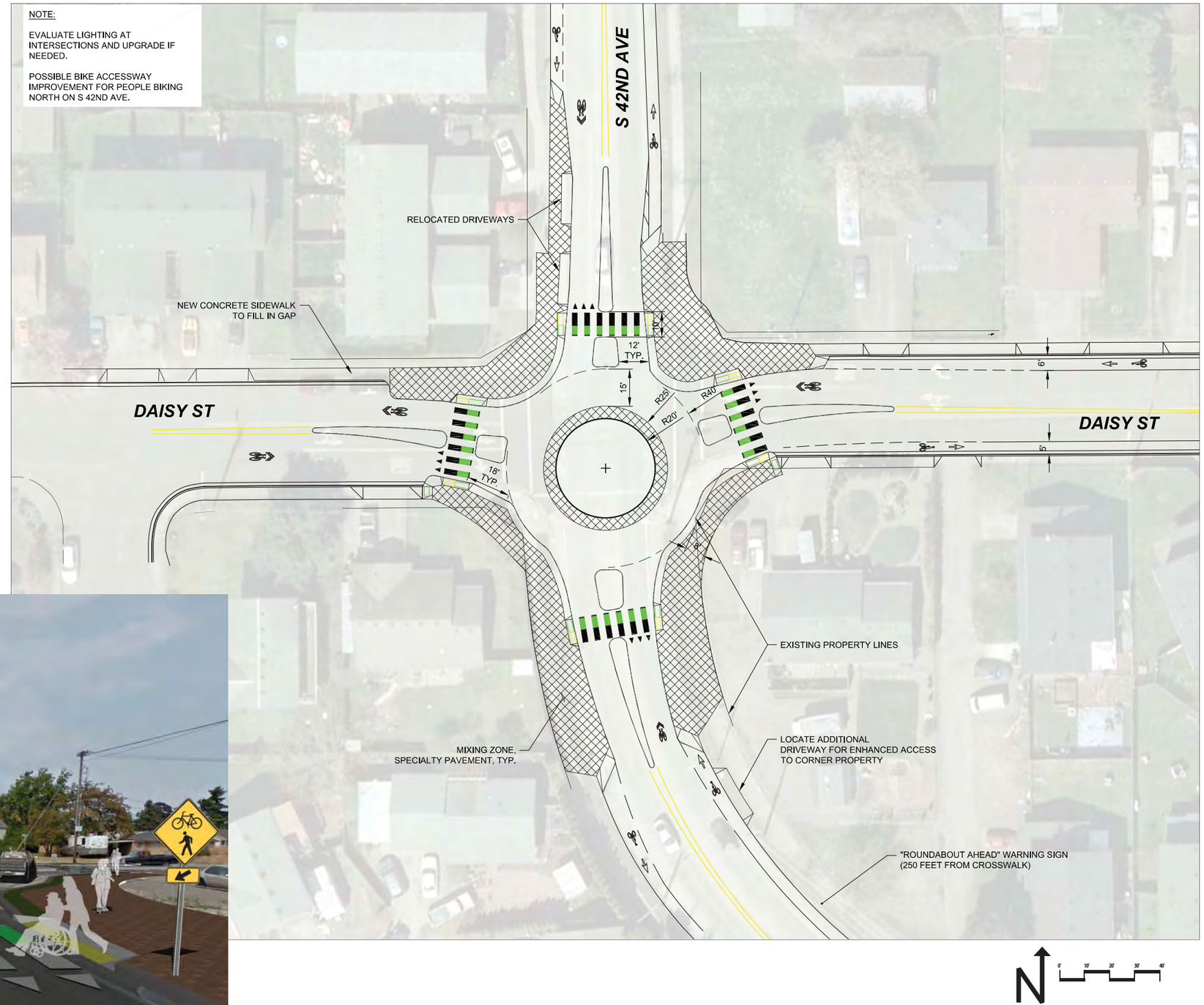


42ND STREET INTERSECTION DESIGN OPTION 1 (ROUNDABOUT)

A compact roundabout would create slow circulation speeds through the intersection for all street approaches and greatly improve the safety of the intersection compared to existing conditions.

People bicycling would be permitted to travel within the roundabout with motor vehicles, or to enter onto a shared use path and cross adjacent to pedestrians.

Mixing zones would be created on all four corners of the roundabout. These are areas where people biking and walking would be able to navigate around the intersection separated from motor vehicle traffic. These areas are delineated with specialty pavement to indicate that these areas are for slow and safe travel.



42ND STREET INTERSECTION SIMULATION

42ND STREET INTERSECTION DESIGN OPTION 2A (FULL SIGNAL & BIKE BOXES)

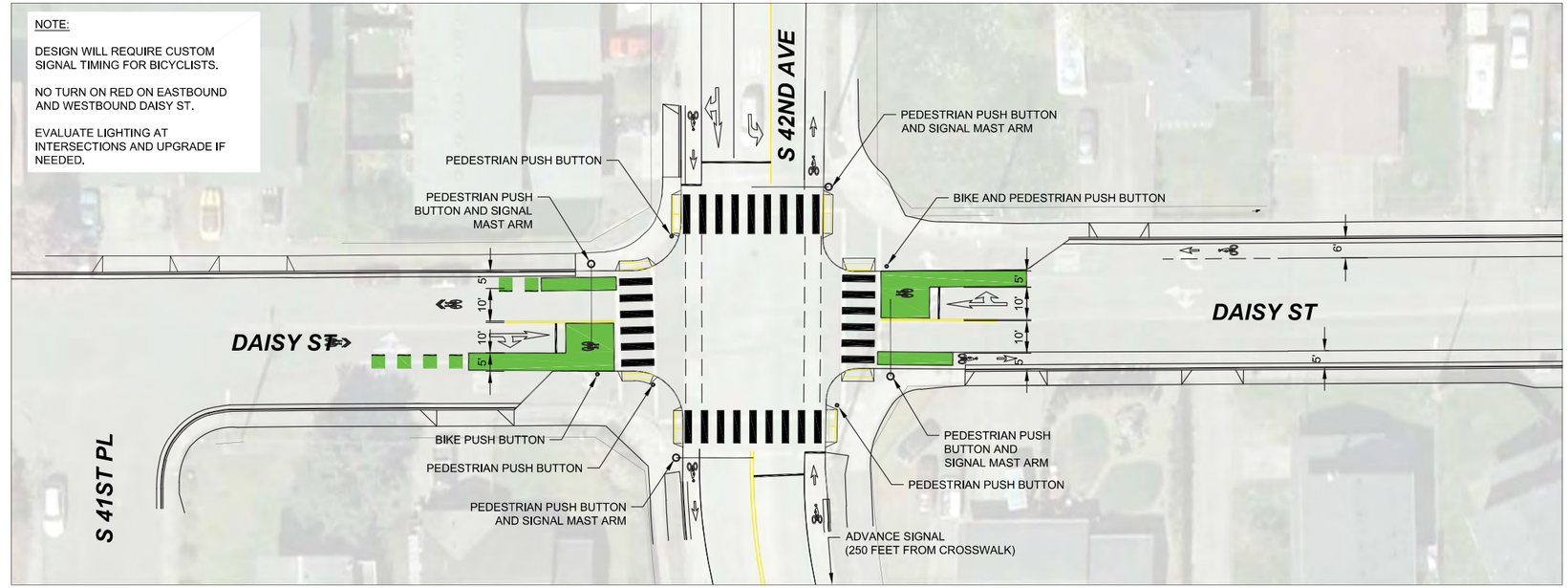
A full traffic signal would control traffic on both streets. A red traffic signal would stop traffic on 42nd Ave, while a green signal would tell people on foot, on bike or in cars that they can safely and comfortably cross the street.

Green bike boxes would provide a dedicated waiting space for people on bikes in advance of the intersection. This would create a prioritized space in front of motor vehicle traffic, and would allow people on bikes to go first on a green signal indication.

Right turns on red from Daisy St would be prohibited in this option.

People on bikes would activate the signal via loop detectors or video detection.

Curb extensions on all four corners reduce crossing distances for pedestrians.

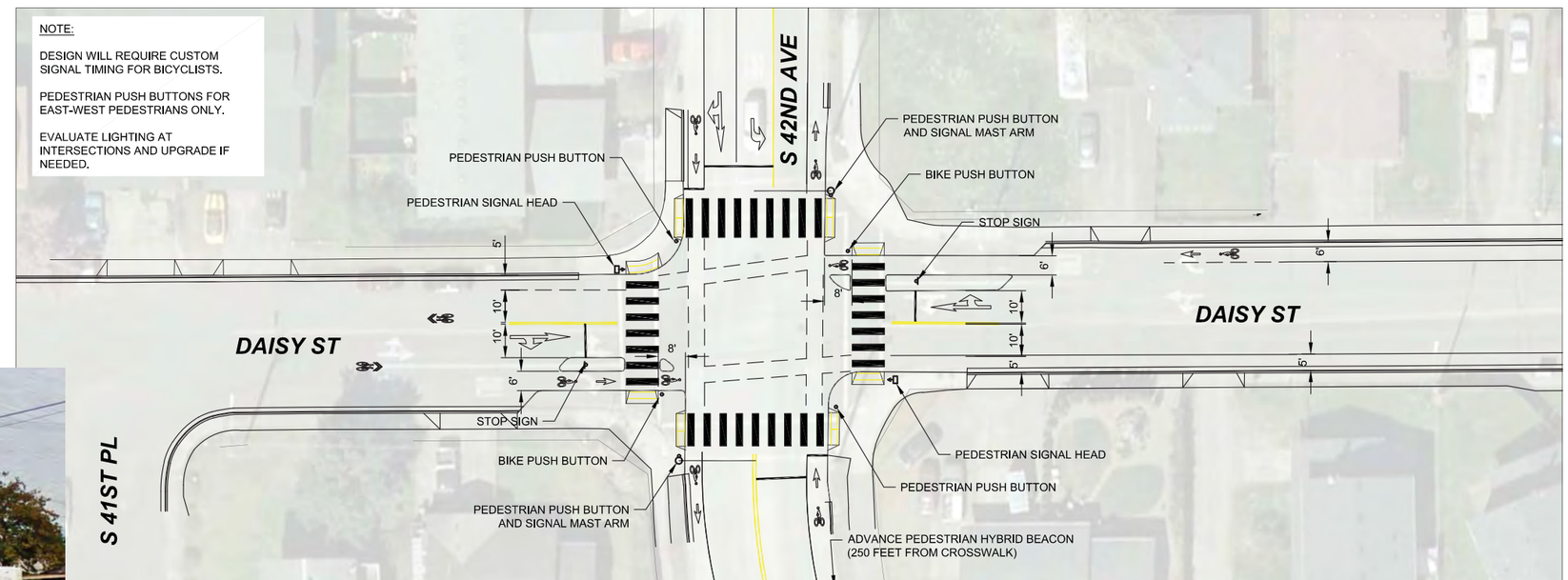


42ND STREET INTERSECTION OPTION 2B (PEDESTRIAN HYBRID BEACON)

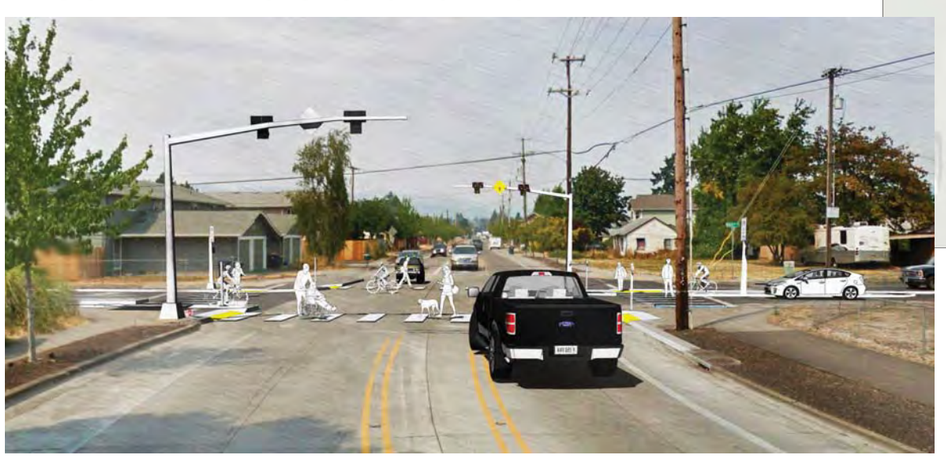
A Pedestrian Hybrid Beacon (PHB) would control motor vehicle traffic on S 42nd Ave and indicate to people biking and walking when it is safe to cross.

A stop sign would control motor vehicle traffic on Daisy St.

Curb extensions on all four corners reduce crossing distances for pedestrians.



42ND STREET INTERSECTION SIMULATION



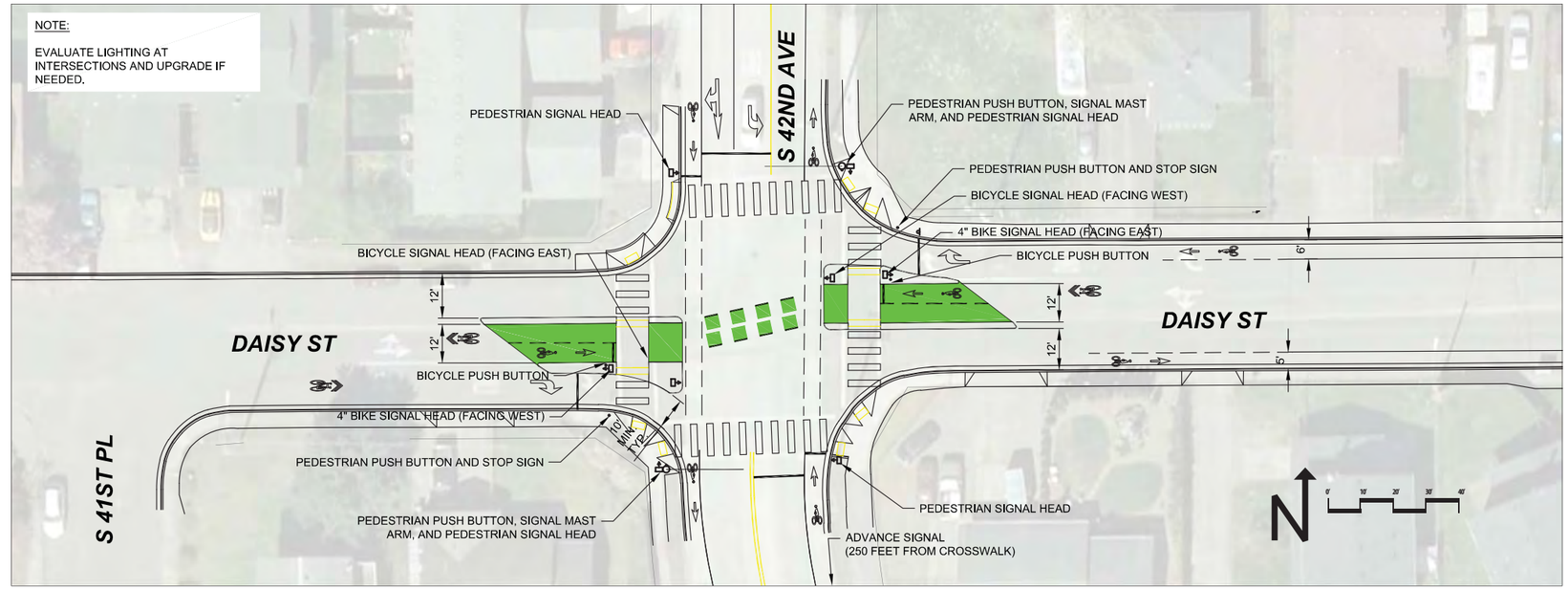
42ND STREET INTERSECTION DESIGN OPTION 3 (PEDESTRIAN AND BICYCLE SIGNAL)

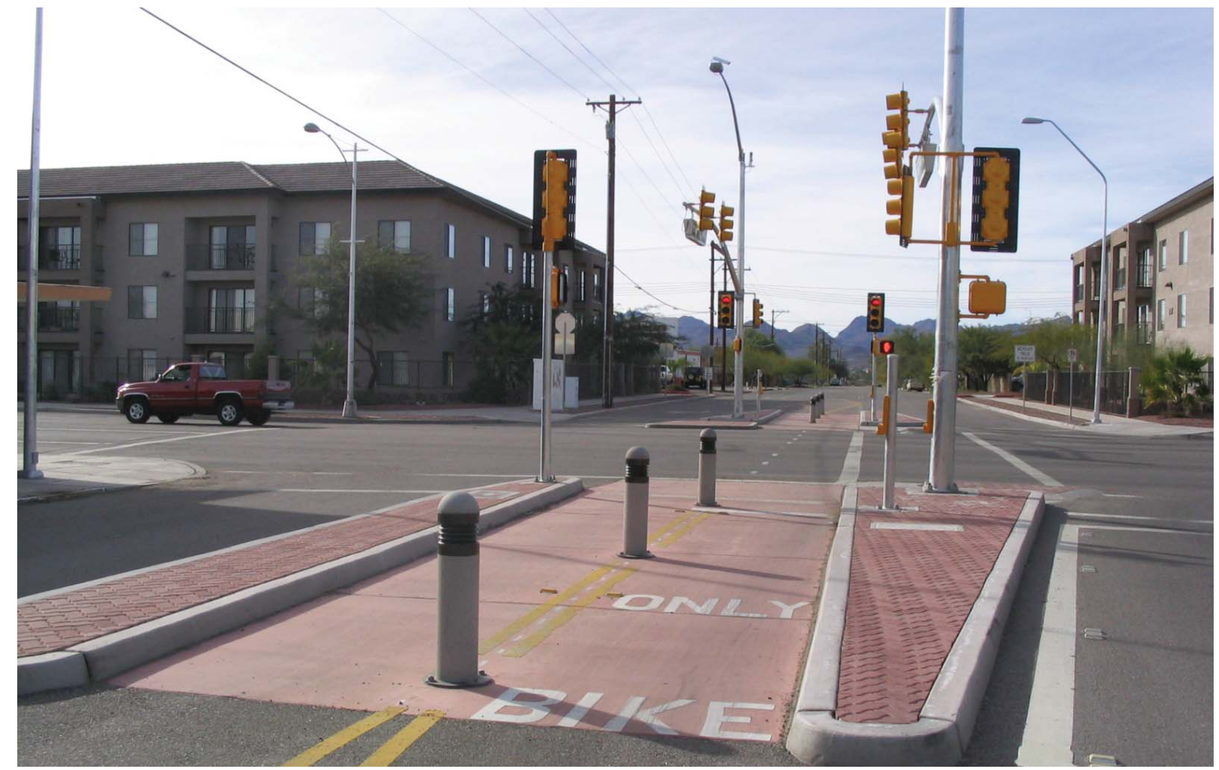
A full traffic signal would control traffic on S 42nd Ave. A red traffic signal would stop traffic on 42nd Ave, while a bicycle and pedestrian signal head would tell people on foot or on bike when to safely cross the street.

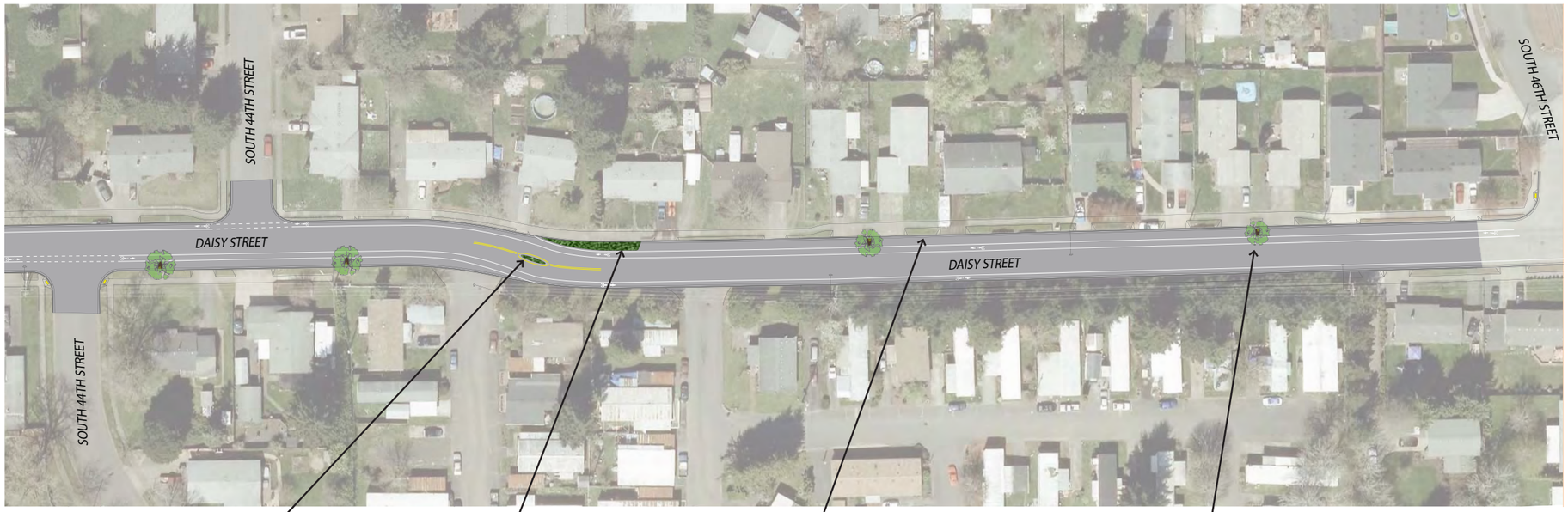
A stop sign would control motor vehicle traffic on Daisy St.

Right-turn islands on Daisy St. would require that people driving turn right when entering S 42nd.

Emergency vehicles would be capable of travelling straight through the intersection if necessary.





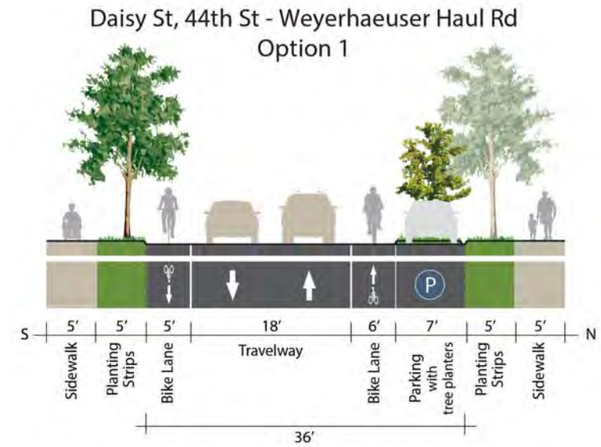


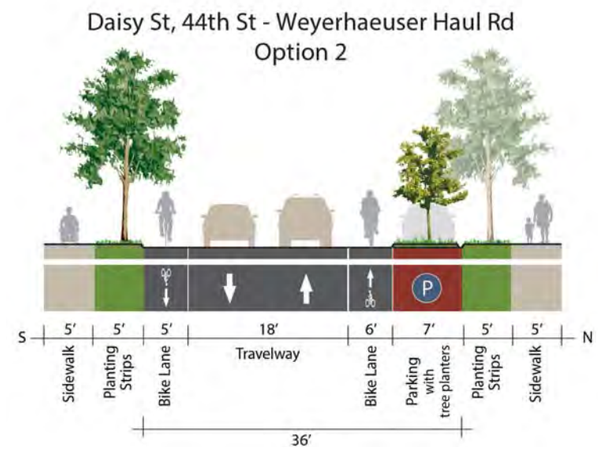
Street modification:
A mini-median island would be added to slow traffic and keep cars in the proper lane through the bend in the roadway.

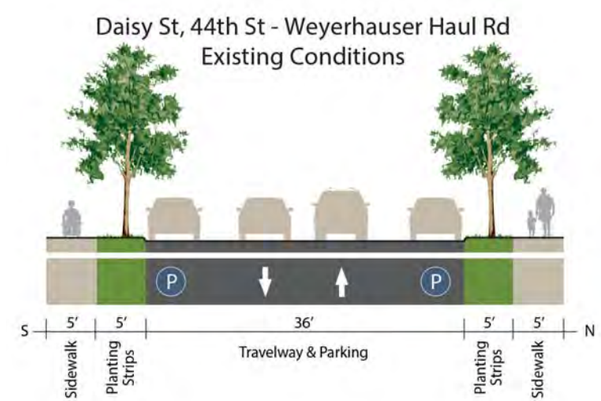
Street modification:
Curb extension with possible stormwater planter treatment.

Street modification:
Parking would be consolidated to the higher-demand side of the street.
Bicycle lanes would be added for the safety and comfort of people bicycling.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.







KEY FEATURES

The preferred bikeway type on Daisy Street to 46th St is bicycle lanes.

Due to higher traffic volumes, a separated bicycling facility is necessary. Roadway markings throughout this section of the corridor would consist of one consolidated parking lane, bike lane stripes, and bike lane markings to distinguish bike lanes from the general purpose travel lanes. No center lane would be provided to encourage motor vehicles to give extra distance while passing people biking.

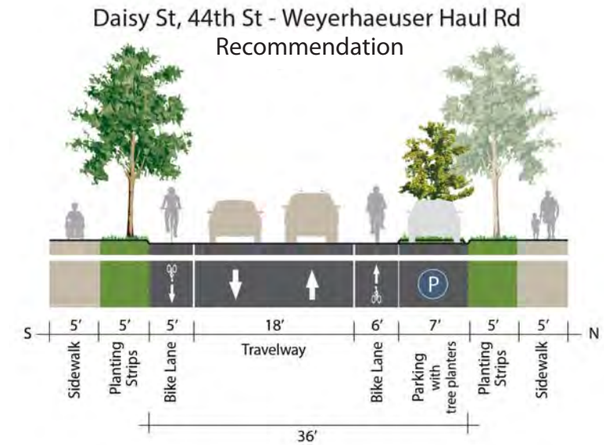
Optional design elements could include colored pavement to differentiate the consolidated parking lane from the bicycle and travel lanes.

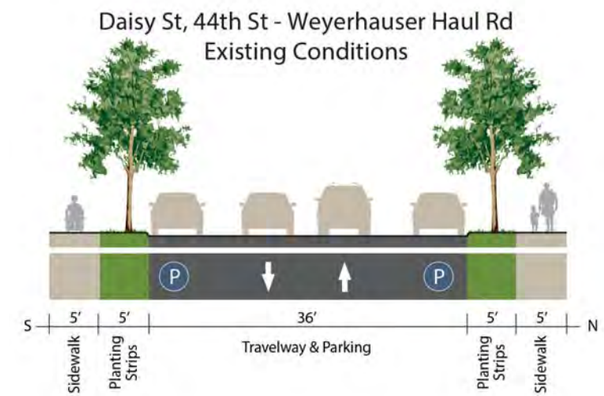
Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.

Identification of consolidated parking lane is based on existing parking utilization levels combined with gaps in tree canopy.

At 46th Street:
A narrowed raised crossing would be added to promote yielding to crossing pedestrians, as well as reduce speeding along the corridor.

Street modification:
Parking would be consolidated to the higher-demand side of the street. Bicycle lanes would be added for the safety and comfort of people bicycling.





KEY FEATURES

The preferred bikeway type on Daisy Street to 47th St is bicycle lanes.

Due to higher traffic volumes, a separated bicycling facility is necessary. Roadway markings throughout this section of the corridor would consist of one consolidated parking lane, bike lane stripes, and bike lane markings to distinguish bike lanes from the general purpose travel lanes. No center lane would be provided to encourage motor vehicles to give extra distance while passing people biking.

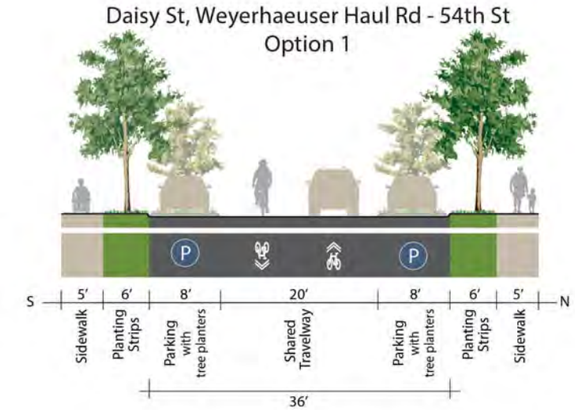
Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.

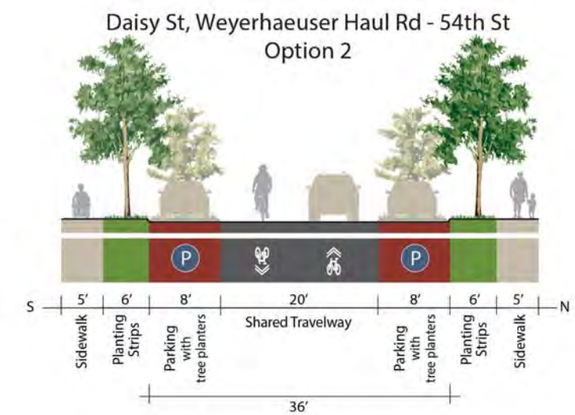
A portion of this segment features light colored concrete paving. On this section, markings will use high-contrast black backing with all white colored markings to enhance visibility.

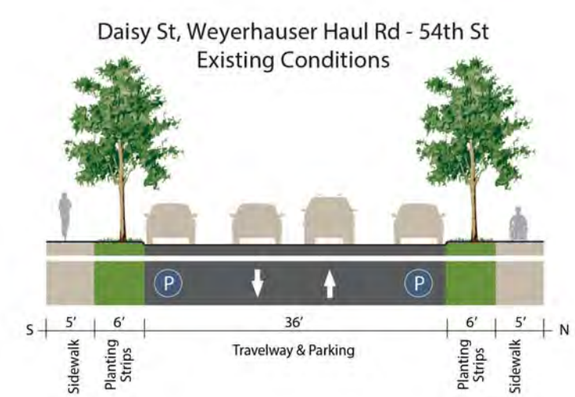
Identification of consolidated parking lane is based on existing parking utilization levels combined with gaps in tree canopy.

At S Weyerhaeuser Rd:
A narrowed raised crossing would be added to promote yielding to people on foot and people biking, as well as reduce speeding along the corridor.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.







KEY FEATURES

The preferred bikeway type on Daisy Street to Camellia St is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

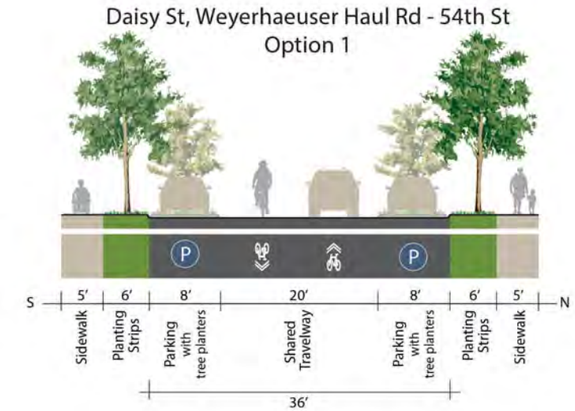
Optional design elements could include colored pavement to differentiate the parking lanes from the travel lanes.

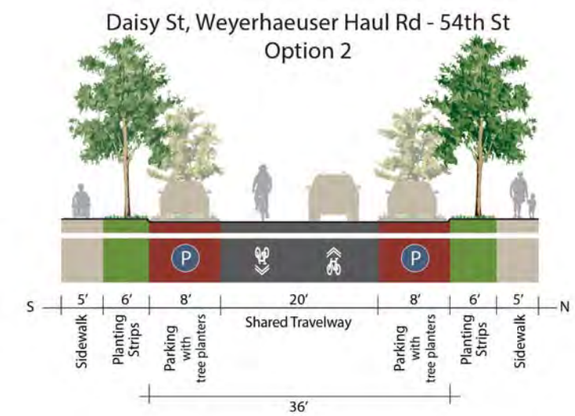
Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.

A portion of this segment features light colored concrete paving. On this section, markings will use high-contrast black backing with all white colored markings to enhance visibility.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.

At S 49th Pl:
Mini roundabout would be added to provide placemaking and to encourage people to drive at bicycle-compatible speeds.





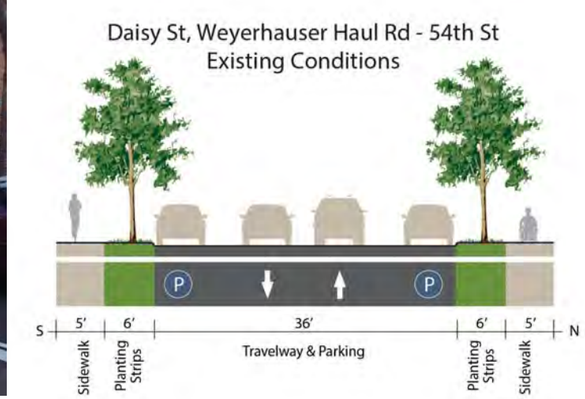
KEY FEATURES

The preferred bikeway type on Daisy Street to Daisy St Cul-de-Sac is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Optional design elements could include colored pavement to differentiate the parking lanes from the travel lanes.

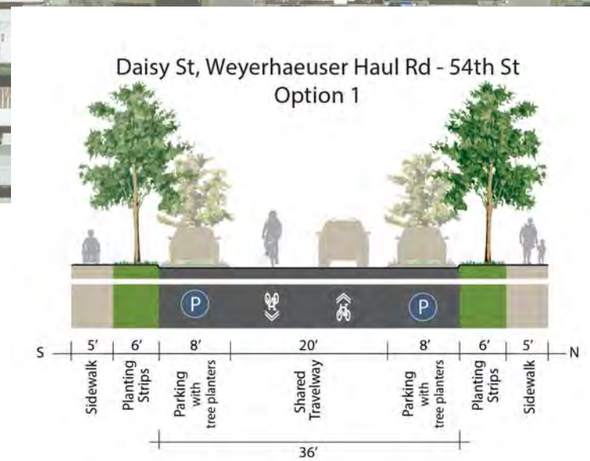
Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.



At S 51st Pl:
A mini roundabout would be added to encourage drivers to travel at bicycle-compatible speeds.
Curb ramps and concrete sidewalk added to the north east corner.

At S 52nd St:
Sidewalks would be added to the north side of Daisy and the planter strip would be removed from the south side.

At S 53rd St:
A narrowed raised crossing would be added to promote yielding to crossing pedestrians.
This replaces the existing crosswalk to the east.



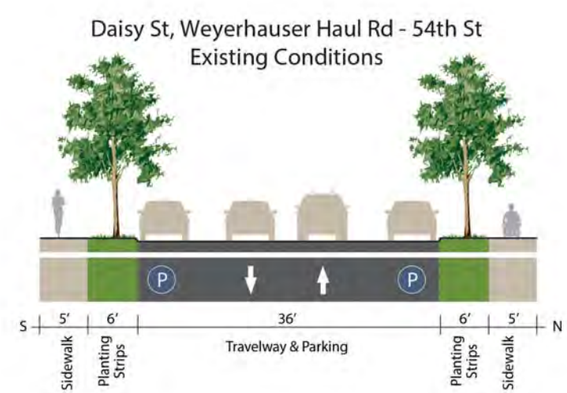
KEY FEATURES

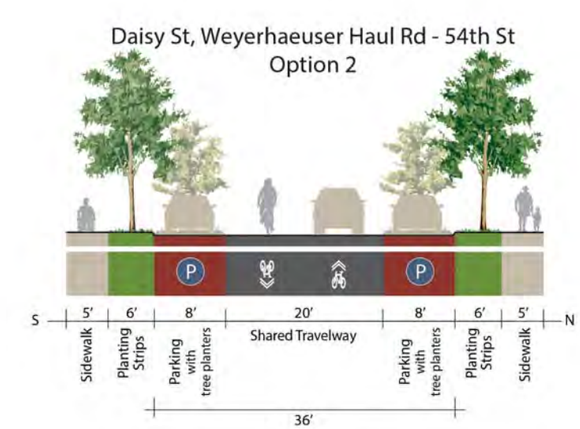
The preferred bikeway type on Daisy Street to 53rd St is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Optional design elements could include colored pavement to differentiate the parking lanes from the travel lanes.

Other elements could include curb extensions, raised crosswalks, and mini-roundabouts as needed to create a dynamic operating environment and increase safety by raising user awareness.



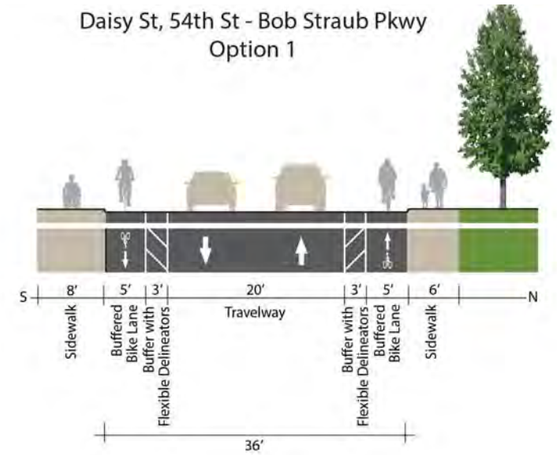


53RD STREET SIMULATION:
RAISED CROSSWALK WITH RED ASPHALT PARKING AREAS

53RD STREET SIMULATION:
RAISED CROSSWALK WITH STANDARD ASPHALT PARKING AREAS

At Future Trail Crossing:
A raised crossing would be added to promote yielding to crossing pedestrians. Additionally, this treatment will enhance safety for all users by reducing speed along this section of the corridor.

Street modification:
Buffered bike lanes would be used to provide a gateway treatment and to slow traffic coming off of Bob Straub Parkway.
See cross-section views of design options to the right.



KEY FEATURES

The preferred bikeway type on Daisy Street to Gateway St is buffered bike lanes.

Roadway markings throughout this section of the corridor would consist of buffered bike lane stripes, and bike lane markings to distinguish protected bike lanes from the general purpose travel lanes. No center lane would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements could include a raised crosswalk to create a dynamic operating environment and increase safety by raising user awareness.

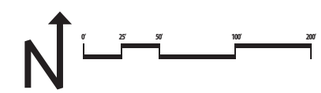
Optional design elements could include a planting strip on the south side of Daisy Street that would allow for additional tree plantings and/or stormwater treatment.

Extremely low parking utilization in this block would allow conversion to buffered bike lanes.

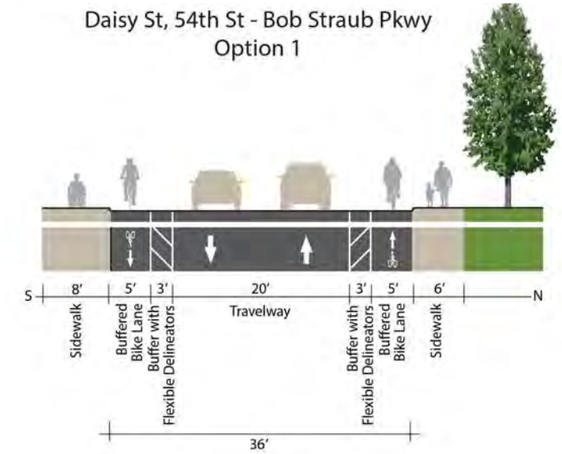
At Gateway Street:
A raised crossing would be added to promote yielding to crossing pedestrians.

Street modification:
Buffered bike lanes would be used to provide a gateway treatment and to slow traffic coming off of Bob Straub Parkway.
See option 1 cross-section view to the right.

Bob Straub Pkwy:
Design will be part of a future project.



Daisy St, 54th St - Bob Straub Pkwy
Option 1



Daisy St, 54th St - Bob Straub Pkwy
Option 2

KEY FEATURES

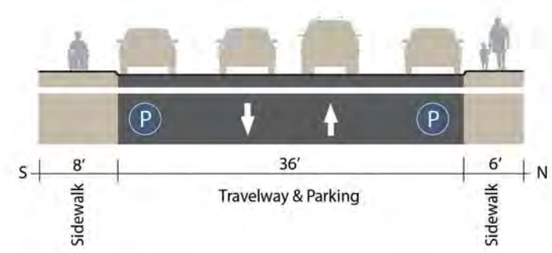
The preferred bikeway type on Daisy Street to Bob Straub Pkwy is buffered bike lanes.

Roadway markings throughout this section of the corridor would consist of buffered bike lane stripes, and bike lane markings to distinguish protected bike lanes from the general purpose travel lanes. No center lane would be provided to encourage people driving to give extra distance while passing people on bikes.

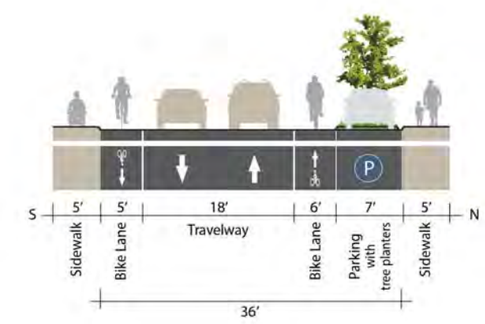
Other elements could include a raised crosswalk to create a dynamic operating environment and increase safety by raising user awareness.

Optional design elements could include a planting strip on the south side of Daisy Street that would allow for additional tree plantings and/or stormwater treatment.

Daisy St, 54th St- Bob Straub Pkwy
Existing Conditions



Daisy St, 5660 Daisy St
Option 3



PARKING CONSOLIDATION TO SUPPORT BIKEWAY IMPLEMENTATION

Establishing a new bikeway on the Virginia-Daisy corridor involves changes to the street that may include traffic control changes, lane restriping and roadway reconfiguration. One strategy for creating space for dedicated bike lane facilities is to consolidate street parking on only one side of the street.

Underutilized parking lanes can result in higher traffic speeds and unsafe driving behavior due to the appearance of a wide open travel lane space. Reallocating a portion of underutilized parking or travel lanes as a bike lane can mitigate these issues while providing dedicated space for bicyclists[1].

EXISTING CONDITIONS

To support the bikeway design for Virginia-Daisy, the City of Springfield supplied on-street parking counts performed at six different times to cover the variety of conditions encountered on the corridor[2]. To supplement this data, the city also performed a count based on visual inspection of previously captured photography[3].

PARKING LANE CAPACITY

Parking is allowed on the curbside on both sides of the street along the majority of the Virginia-Daisy corridor. Under some conditions, parking use may be prohibited, restricted or unavailable. These conditions include:

- Parking is prohibited for 30 ft advance of crosswalks . This applies at all crosswalks[4], including all street corners. On the Virginia-Daisy corridor, yellow curbs are only painted on either side of the marked crosswalks by Colony Dr and Ridge Dr.
- Spot parking restrictions such as the residential loop at the far East end of the corridor which has no parking permitted on the street (off of Daisy St).
- On-street parking is not allowed in front of driveways. Many residential units on the corridor provide their own off-street parking for 1 or 2 vehicles. Curb cuts provide access to these spaces but also prevent on-street parking in that location.
- On narrow segments without space for parking. Between 51st and 52nd St the street is so narrow that parking would block one travel lane. Parking is prohibited on this segment.

COUNT SUMMARY

Usage of the on-street parking lane on the full Virginia-Daisy corridor ranges from a low of 74 vehicles to a high of 101 vehicles. Specific clusters of parking demand varies on the corridor in response to land uses, community destinations and availability of off-street parking.

As shown in the table to the right, parking demand is generally consistent from weekday to weekend and morning to evening hours. Special event parking demand (such as a sports event at the Willamalane Center) may exceed the use seen on the average day.

DESIGN CONSIDERATIONS

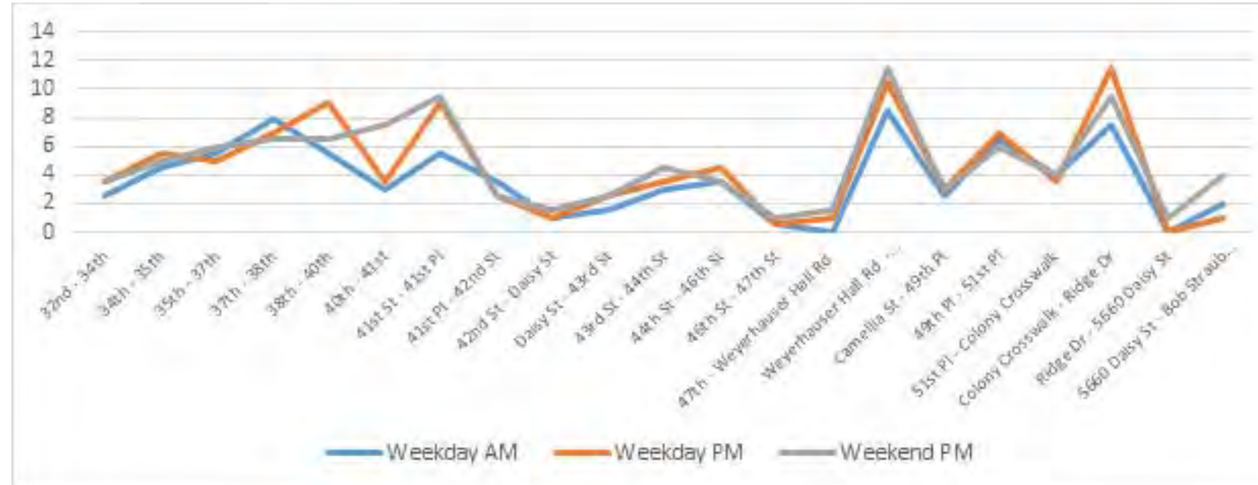
- On most streets with parking on both sides, parking demand can be accommodated with parking provided on one side.
- Parking may be alternated from one side of the street to the other with proper transitioning. This pattern may cause motorists to reduce their speed.

IMPLEMENTATION CONSIDERATIONS

Imperfections in the quality or installation of roadway pavement, gutter joints and drainage grates must be held to a higher standard when they are located within a bicycle lane than when located within a parking lane. Construction plans should call for repair of rough or uneven pavement surface, the use bicycle compatible drainage grates, and corrections to raise or lower existing grates and utility covers so they are flush with the pavement surface.

[1] FHWA. Incorporating On-Road Bicycle Networks into Resurfacing Projects. 2016
[2] Counts were performed Tuesday 1/12/2016 and Tuesday 1/19.2016 at 10am; Tuesday 1/19/2016 and Tuesday 1/26/2016 at 6:30 pm; and Saturday 1/16/2016 and Saturday 1/23/2016 at 2:00pm.
[3] Google StreetView photography dated September 2011.
[4] See. ORS 811.550 – Parking prohibition near crosswalks

AVERAGE PARKING USE FOR EACH BLOCK SEGMENT ON THE CORRIDOR BASED ON DAY AND TIME



PROPOSED CHANGES

As part of the Virginia-Daisy Bikeway project, some segments of the corridor may feature consolidated parking lanes in order to visually narrow the roadway and provide space to establish a bike lane. At spot locations across the entire corridor, parking may be restricted in certain locations to allow for trees and crossing enhancements. These spot changes on their own are not expected to have significant impact to parking availability.

There are four distinct segments in the project related to parking lane consolidation:

32nd to 42nd:
In this segment, no parking consolidation is proposed, with no significant effect on parking availability.

42nd to Weyerhauser Hall Rd:
This segment proposes parking consolidation on one side of the street. The parking lane may be allocated on the north or south side of the street in response to measured parking demand.

The observed weekend parking peak consisted of 15 cars. After implementation, this segment will have an estimated 140 parking spaces, which will more than serve the parking utilization needs.

Weyerhauser Hall Rd to Ridge Dr:
In this segment, no parking consolidation is proposed, with no significant effect on parking availability.

Ridge Dr to Bob Straub Parkway:
Based on low existing parking utilization, this segment proposes the removal of parking on both sides of the street (with the exception of one block on the north side near 5660 Daisy Street (Western Loop).

The observed weekend parking peak consisted of 5 cars. After implementation, this segment will have an estimated 15 parking spaces, which will more than serve the parking utilization needs.

BENEFITS

- Reduces conflicts with bicyclists as drivers pull into and out of parking spaces and drivers and passengers open doors of parked vehicles.
- Provides additional roadway space for bicycle facilities.
- Improves sight distance for all roadway users.

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PLANNING + DESIGN

Appendix 2: Refined Design Concept Mapbook

At S 32nd Ave:
The crossing would be enhanced with high visibility markings and rapid flash beacons to create a low-stress crossing with a high rate of yielding.
See next sheet for intersection design.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.

ADA Accessibility:
All curb ramps along the corridor will be evaluated for ADA accessibility and necessary upgrades.

KEY FEATURES

The preferred bikeway type on Virginia Avenue to S 34th Street is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements include curb extensions and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

On-Street Tree Planters

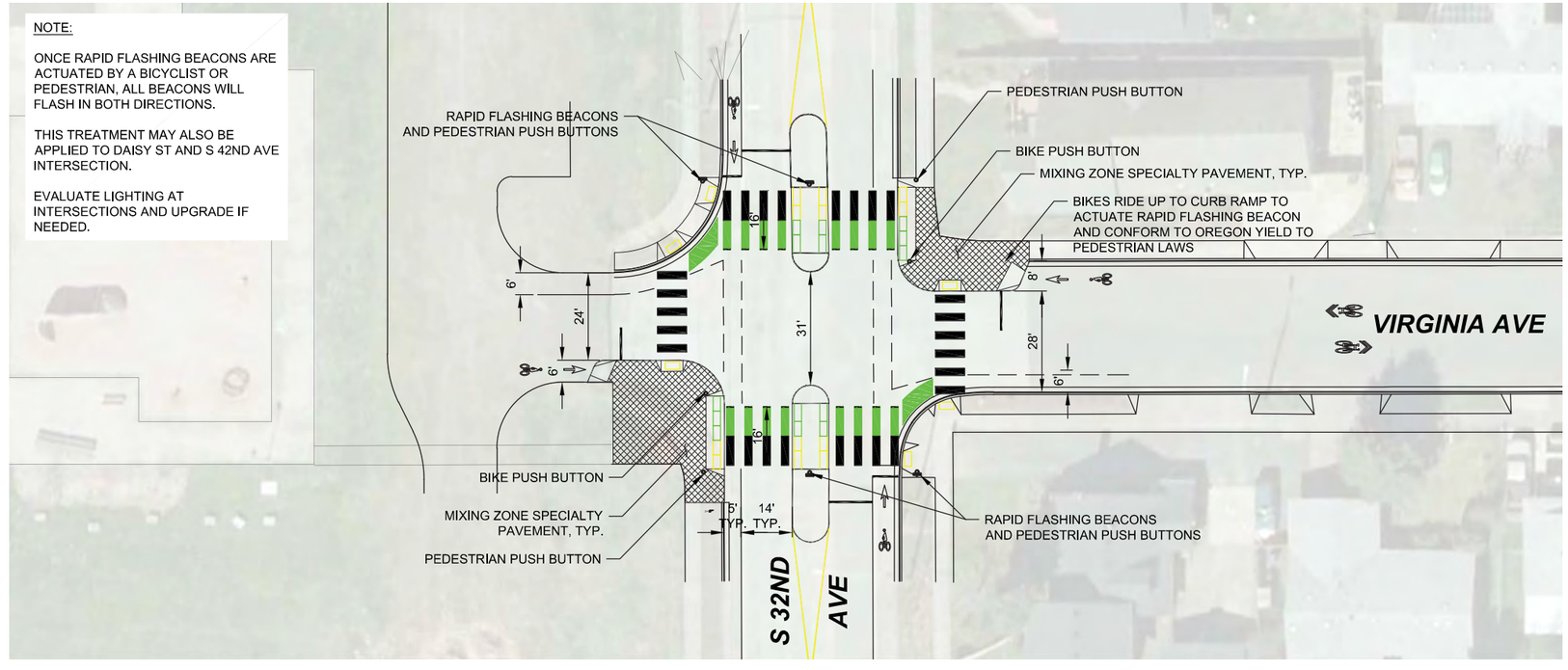
S 32ND STREET INTERSECTION DESIGN

Rapid flashing beacons facing S 32nd Ave would promote yielding to people crossing the street.

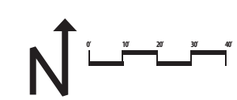
People on bicycles on Virginia Ave would ramp up to a shared-use path at the crossing, and cross adjacent to pedestrians in the crosswalk. People on bicycles would also have the option to navigate the intersection as a vehicle in the travel lanes.

Median safety islands would provide added safety and comfort for people walking and biking across the street.

Mixing zones would be created on all four corners of the intersection. These are areas where people biking and walking would be able to navigate around the intersection separated from motor vehicle traffic. These areas are delineated with specialty pavement to indicate that these areas are for slow and safe travel.



S 32ND STREET INTERSECTION SIMULATION (FACING SOUTH)



Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but on existing parking needs and lack of existing tree canopy.

At S 35th Street:
A mini roundabout would be added to create bicycle-compatible travel speeds.

At S 37th Street:
The stop sign would be flipped to favor Virginia Ave.

KEY FEATURES

The preferred bikeway type on Virginia Avenue to S 37th Street is a bicycle boulevard with shared lanes.

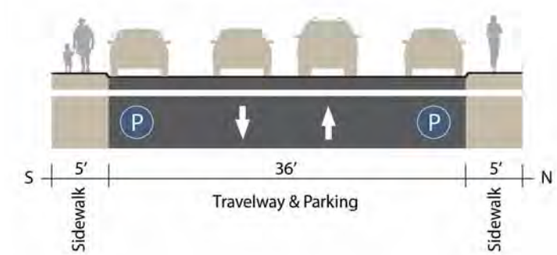
Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements include a mini-roundabout and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

At S 38th Street:
The stop sign would be flipped to favor Virginia Ave. A narrowed raised crossing with curb extensions would be added to promote yielding to crossing pedestrians and to help deter speeding through the neighborhood.
Curb extensions also function as stormwater planters to capture and treat water before entering channels on S 38th.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.

At S 40th Street:
Mini median islands would be added to slow traffic and provide refuge for pedestrians crossing the street.



KEY FEATURES

The preferred bikeway type on Virginia Avenue to S 40th Street is a bicycle boulevard with shared lanes.

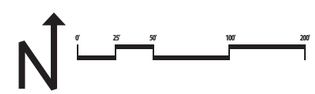
Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements include curb extensions, a raised crosswalk, a pedestrian refuge island, and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

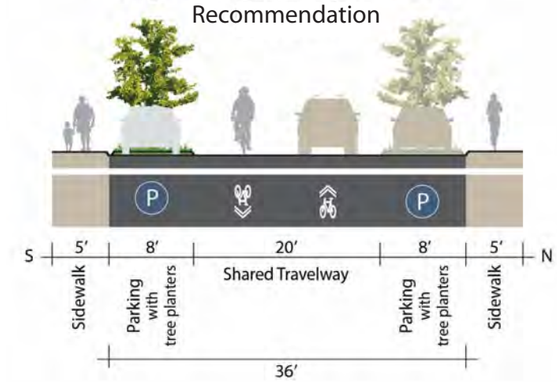
Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.

At S 41Street:
A mini roundabout would be added to create bicycle-compatible travel speeds.

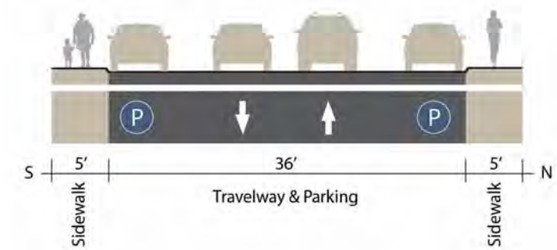
Sidewalk Infill:
New concrete sidewalk added to fill in gaps along corridor.



Virginia Ave, 32nd St - 41st Pl
Recommendation



Virginia Ave, 32nd St - 41st Pl
Existing Conditions



KEY FEATURES

The preferred bikeway type on Virginia Avenue to S 41st Place is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements include a mini-roundabout and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

Property Line

At S 42nd Street:
Intersection design options are proposed to improve safety, yielding and crossing comfort for users.

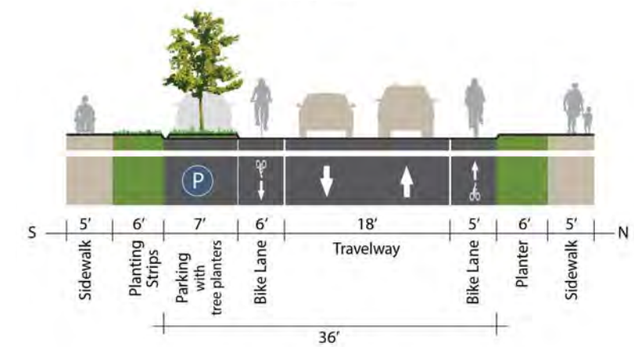
See detailed designs of intersection options on the following pages.

Accessway:
Possible bike accessway improvement for people biking north on S 42nd heading east on Daisy.

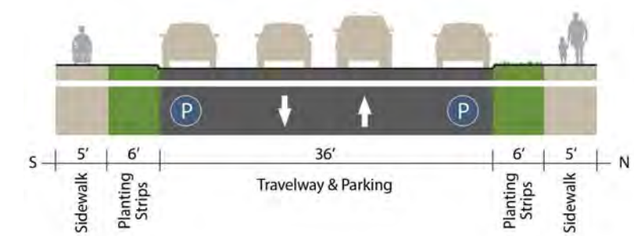
Street modification:
Curb extension with possible stormwater treatment.
See photo of potential treatment below.

Street modification:
Parking would be consolidated to the higher-demand side of the street. Bicycle lanes would be added for the safety and comfort of people bicycling.

Daisy St, 43rd St - 44th St
Recommendation



Daisy St, S 43rd St - S 44th St
Existing Conditions



KEY FEATURES

The preferred bikeway type on Daisy Street to S 43rd Place is bicycle lanes.

Due to higher traffic volumes, a separated bicycling facility is necessary. Roadway markings throughout this section of the corridor would consist of one consolidated parking lane, bike lane stripes, and bike lane markings to distinguish bike lanes from the general purpose travel lanes. No center lane would be provided to encourage motor vehicles to give extra distance while passing people biking.

Other elements include a stormwater treatment and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

Identification of consolidated parking lane is based on existing parking utilization levels combined with gaps in tree canopy.

S 42ND STREET INTERSECTION DESIGN PREFERRED OPTION (ROUNDABOUT)

A compact roundabout would create slow circulation speeds through the intersection for all street approaches and greatly improve the safety of the intersection compared to existing conditions.

People bicycling would be permitted to travel within the roundabout with motor vehicles, or to enter onto a shared use path and cross adjacent to pedestrians.

Mixing zones for people walking and biking would be created on all four corners of the roundabout. These are areas where people biking and walking would be able to navigate around the intersection separated from motor vehicle traffic. These areas are delineated with specialty pavement to indicate that these areas are for slow and safe travel.

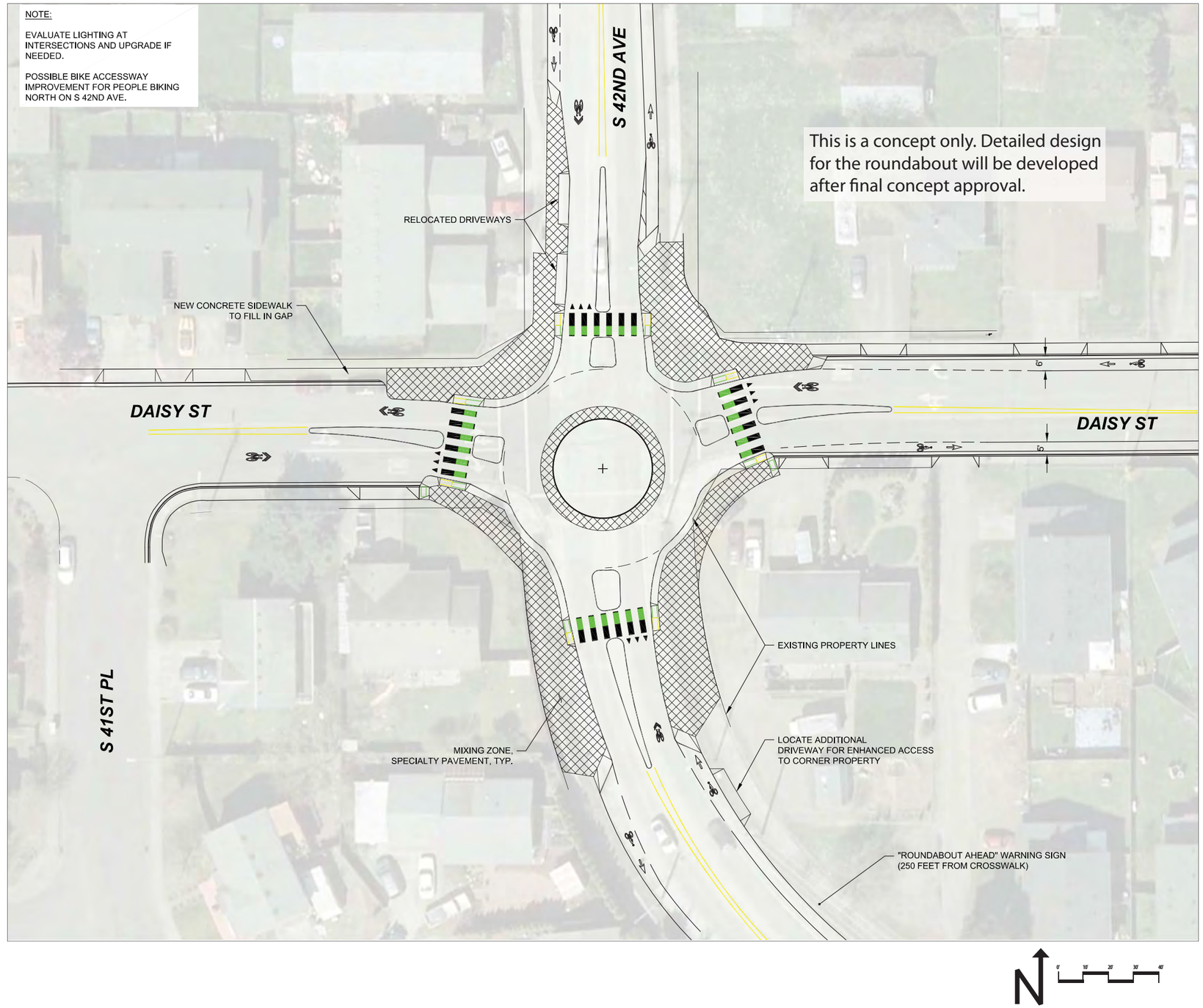
The roundabout could also incorporate stormwater treatment to aid in controlling flooding, treat stormwater, and recharging ground water.

ROUNDABOUT SAFETY BENEFITS*

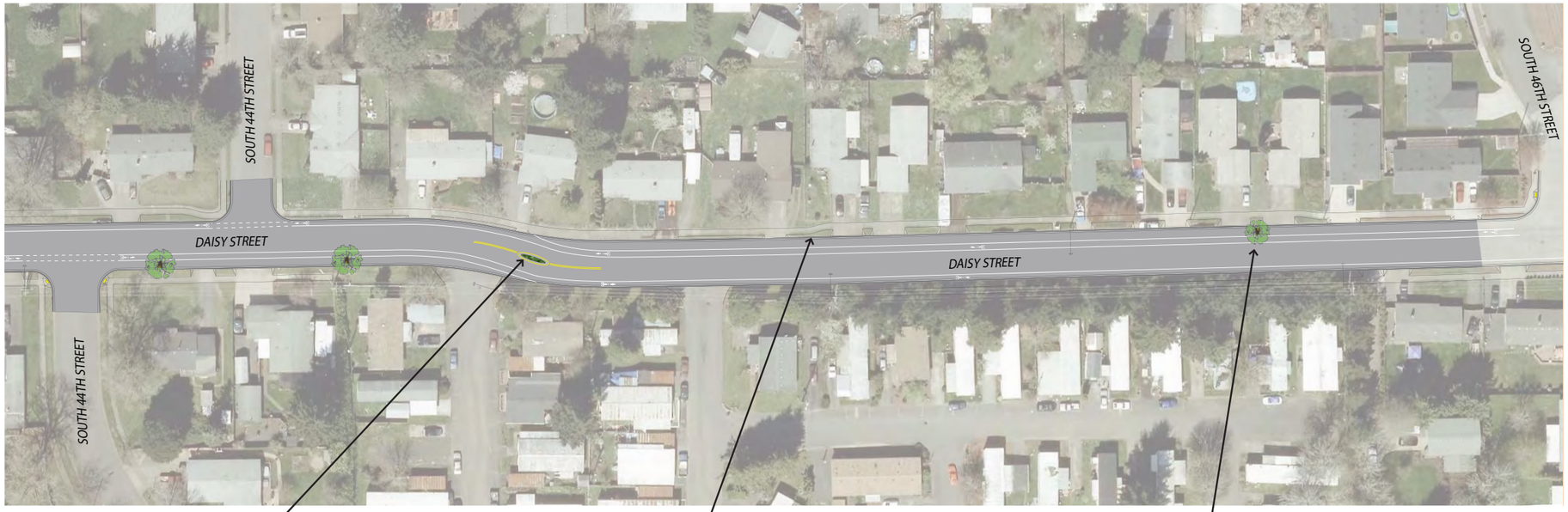
- Crash reduction
  - 37 % reduction in overall collisions
  - 75 % reduction in injury collisions
  - **90 % reduction in fatality collisions**
  - 40 % reduction in pedestrian collisions
- Reduce delay, improve traffic flow
- Less expensive: Installations costs are comparable, however roundabouts eliminate hardware, maintenance and electrical costs associated with traffic signals

The roundabout proposed for implementation at S 42nd & Daisy as a part of the Virginia-Daisy Bikeway Project is designed to be uniquely optimized for pedestrian and bicycle circulation, comfort and safety. This is achieved by designing for slow, 15 mph motor vehicle travel speed throughout the roundabout. This slow speed creates low speed differentials for cyclists choosing to travel in-lane, and a high degree of yielding to pedestrians and cyclists within the crosswalk.

*Federal Highway Administration and Insurance Institute for Highway Safety (FHWA and IHS) and https://www.wsdot.wa.gov/Safety/roundabouts/benefits.htm
* *FHWA, Roundabouts: An Informational Guide, 2000. This guide has largely been superseded by NCHRP Report 672, but the compact urban roundabout type illustrated in the earlier guide is more appropriate for this use.



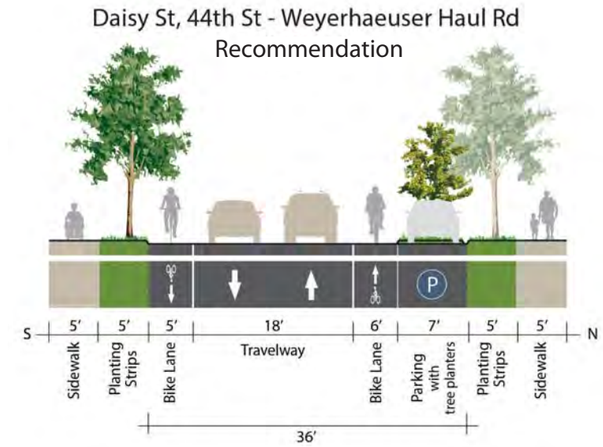
S 42ND STREET INTERSECTION SIMULATION



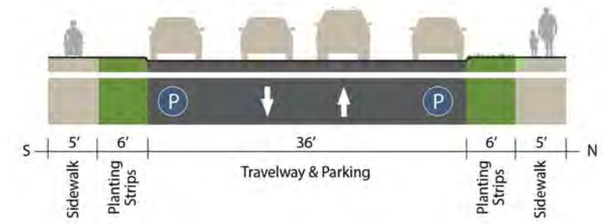
Street modification:
A mini-median island would be added to slow traffic and keep cars in the proper lane through the bend in the roadway.

Street modification:
Parking would be consolidated to the higher-demand side of the street.
Bicycle lanes would be added for the safety and comfort of people bicycling.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.



Daisy St, 44th St - Weyerhauser Haul Rd
Existing Conditions



KEY FEATURES

The preferred bikeway type on Daisy Street to S 46th Street is bicycle lanes.

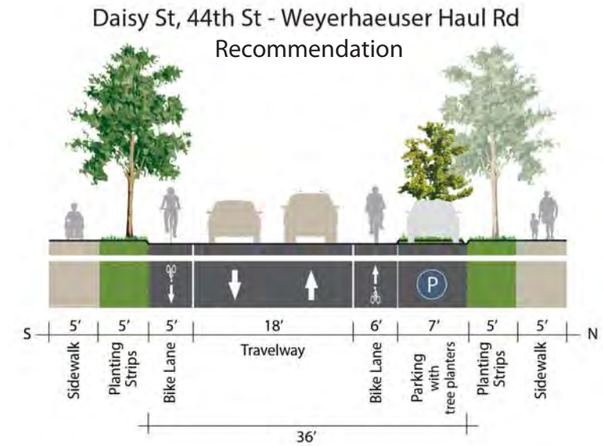
Due to higher traffic volumes, a separated bicycling facility is necessary. Roadway markings throughout this section of the corridor would consist of one consolidated parking lane, bike lane stripes, and bike lane markings to distinguish bike lanes from the general purpose travel lanes. No center lane would be provided to encourage motor vehicles to give extra distance while passing people biking.

Other elements include a center median and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

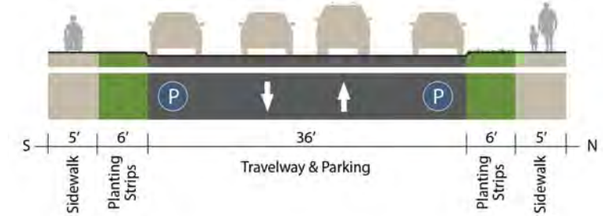
Identification of consolidated parking lane is based on existing parking utilization levels combined with gaps in tree canopy.

At S 46th Street:
A narrowed raised crossing would be added to promote yielding to crossing pedestrians, as well as reduce speeding along the corridor.

Street modification:
Parking would be consolidated to the higher-demand side of the street. Bicycle lanes would be added for the safety and comfort of people bicycling.



Daisy St, 44th St - Weyerhauser Haul Rd
Existing Conditions



KEY FEATURES

The preferred bikeway type on Daisy Street to S 47th Street is bicycle lanes.

Due to higher traffic volumes, a separated bicycling facility is necessary. Roadway markings throughout this section of the corridor would consist of one consolidated parking lane, bike lane stripes, and bike lane markings to distinguish bike lanes from the general purpose travel lanes. No center lane would be provided to encourage motor vehicles to give extra distance while passing people biking.

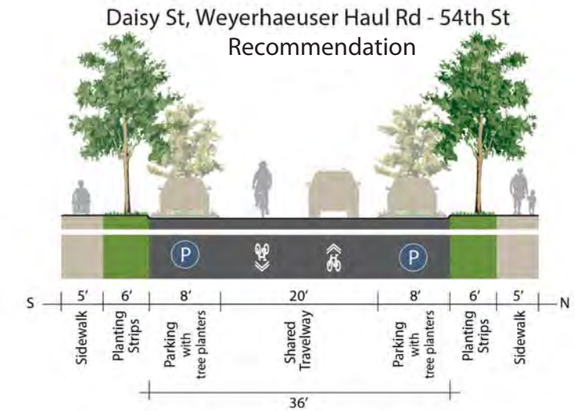
Other elements include curb extensions, a raised crosswalk, a center median, and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

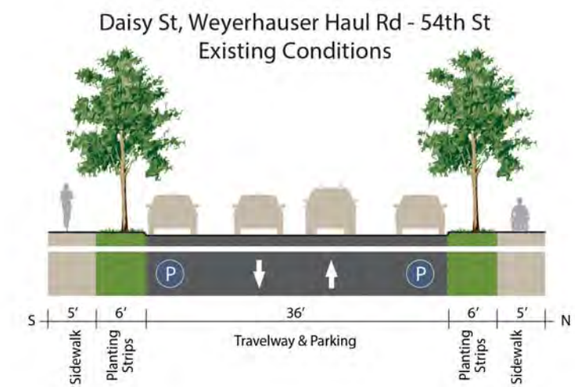
A portion of this segment features light colored concrete paving. On this section, markings will use high-contrast black backing with all white colored markings to enhance visibility.

Identification of consolidated parking lane is based on existing parking utilization levels combined with gaps in tree canopy.

At S Weyerhaeuser Haul Rd:
A narrowed raised crossing would be added to promote yielding to people on foot and people biking, as well as reduce speeding along the corridor.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.





KEY FEATURES

The preferred bikeway type on Daisy Street to Camellia Street is a bicycle boulevard with shared lanes.

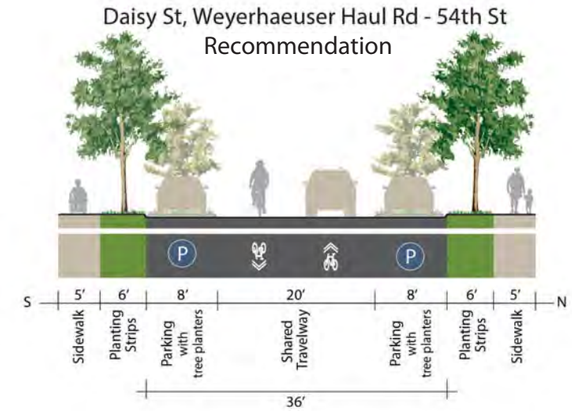
Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

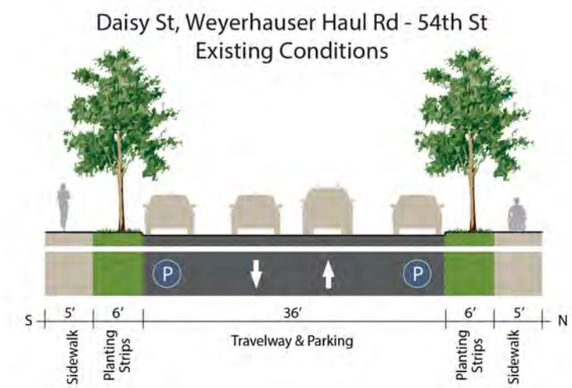
Other elements include curb extensions, a raised crosswalk, and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

A portion of this segment features light colored concrete paving. On this section, markings will use high-contrast black backing with all white colored markings to enhance visibility.

Added Tree Canopy:
Within the parking lane, tree planting areas would be added to increase canopy and define the edges of the street. Locations are schematic only, but based on existing parking needs and lack of existing tree canopy.

At S 49th Place:
A narrowed raised crossing would be added to promote yielding to crossing pedestrians.





KEY FEATURES

The preferred bikeway type on Daisy Street to Daisy St Cul-de-Sac is a bicycle boulevard with shared lanes.

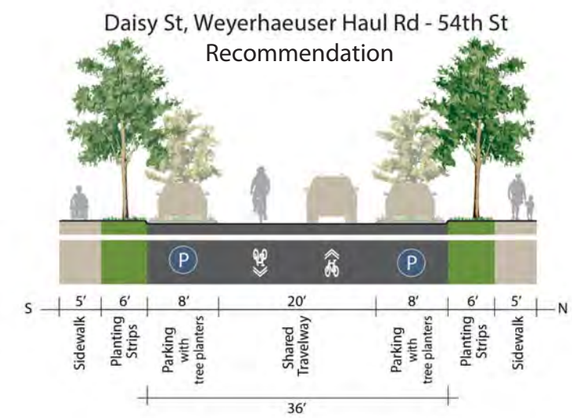
Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements include a raised crossing and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

At S 51st Place:
A mini roundabout would be added to encourage drivers to travel at bicycle-compatible speeds.
Curb ramps and concrete sidewalk added to the north east corner.

At S 52nd Street:
Sidewalks would be added to the north side of Daisy.

At S 53rd Street:
A narrowed raised crossing would be added to promote yielding to crossing pedestrians.
This replaces the existing crosswalk to the east.

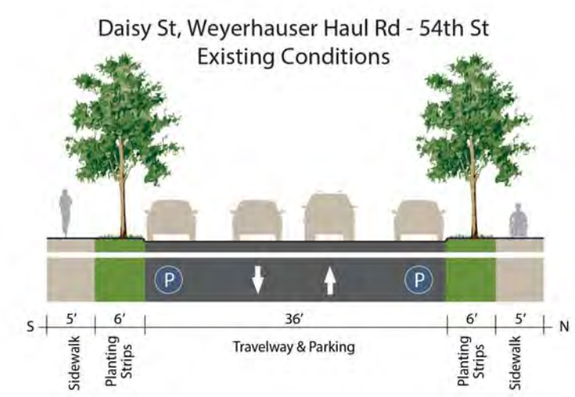


KEY FEATURES

The preferred bikeway type on Daisy Street to S 53rd St is a bicycle boulevard with shared lanes.

Roadway markings throughout this section of the corridor would consist of frequent shared lane markings. These markings indicate to all users to expect people on bikes in the roadway, and help instruct people bicycling to ride in the center of the roadway to increase visibility and avoid car doors. No centerline would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements include curb extensions, a raised crosswalk, a mini-roundabout, and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

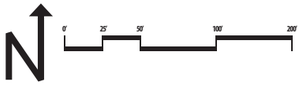


VIRGINIA-DAISY BIKEWAY: REFINED DESIGN CONCEPT

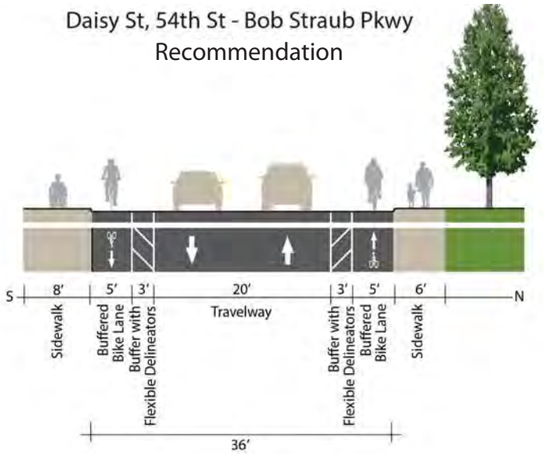
Daisy Street: Raised Crosswalk at S 53rd Street

At Future Trail Crossing:
A raised crossing would be added to promote yielding to crossing pedestrians. Additionally, this treatment will enhance safety for all users by reducing speed along this section of the corridor.

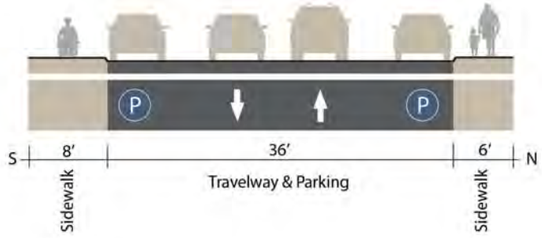
Street modification:
Buffered bike lanes would be used to provide a gateway treatment and to slow traffic coming off of Bob Straub Parkway.
See cross-section views of design options to the right.



Daisy St, 54th St - Bob Straub Pkwy
Recommendation



Daisy St, 54th St- Bob Straub Pkwy
Existing Conditions



KEY FEATURES

The preferred bikeway type on Daisy Street to Gateway Street is buffered bike lanes.

Roadway markings throughout this section of the corridor would consist of buffered bike lane stripes, and bike lane markings to distinguish protected bike lanes from the general purpose travel lanes. No center lane would be provided to encourage people driving to give extra distance while passing people on bikes.

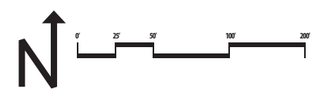
Other elements include a raised crosswalk and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.

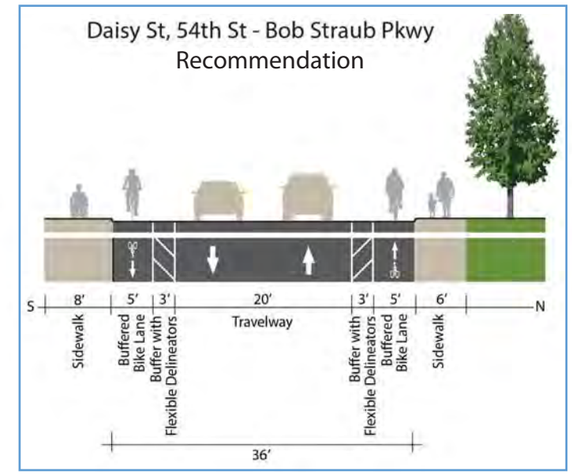
Extremely low parking utilization in this block would allow conversion to buffered bike lanes.

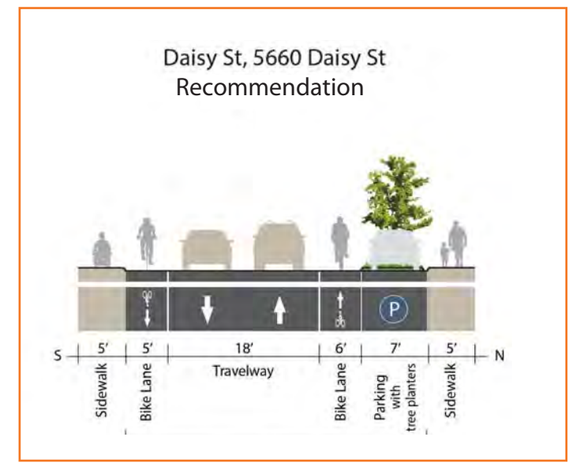
At 5660 Daisy Street:
A raised crossing would be added to promote yielding to crossing pedestrians.

Street modification:
Buffered bike lanes would be used to provide a gateway treatment and to slow traffic coming off of Bob Straub Parkway.
See option 1 cross-section view to the right.

Bob Straub Pkwy:
Design will be part of a future project.





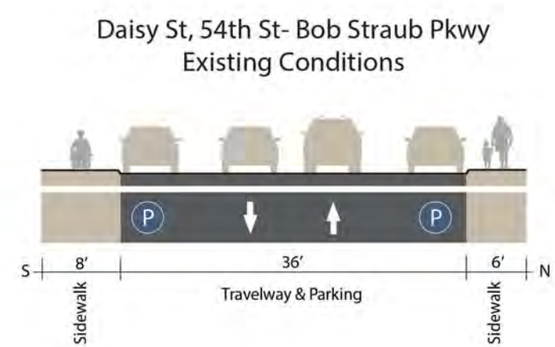


KEY FEATURES

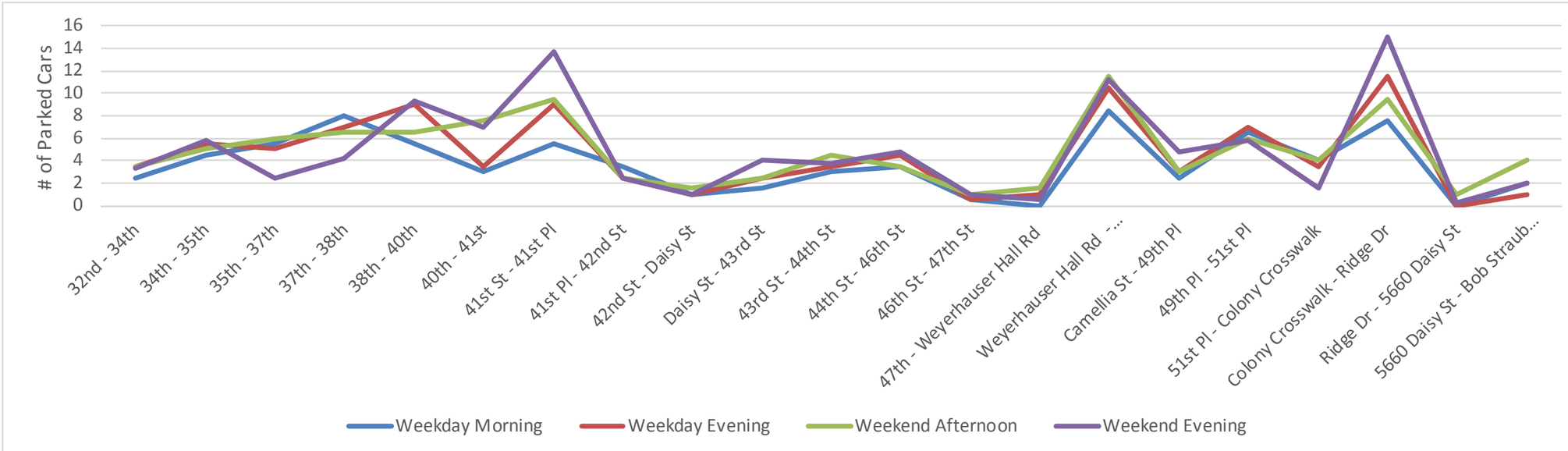
The preferred bikeway type on Daisy Street to Bob Straub Pkwy is buffered bike lanes.

Roadway markings throughout this section of the corridor would consist of buffered bike lane stripes, and bike lane markings to distinguish protected bike lanes from the general purpose travel lanes. No center lane would be provided to encourage people driving to give extra distance while passing people on bikes.

Other elements include a raised crosswalk and on-street planters to create a dynamic operating environment and increase safety by raising user awareness.



AVERAGE PARKING USE FOR EACH BLOCK SEGMENT ON THE CORRIDOR BASED ON DAY AND TIME



PARKING CONSOLIDATION TO SUPPORT BIKEWAY IMPLEMENTATION

Establishing a new bikeway on the Virginia-Daisy corridor involves changes to the street that may include traffic control changes, lane restriping and roadway reconfiguration. One strategy for creating space for dedicated bike lane facilities is to consolidate street parking on only one side of the street.

Underutilized parking lanes can result in higher traffic speeds and unsafe driving behavior due to the appearance of a wide open travel lane space. Reallocating a portion of underutilized parking or travel lanes as a bike lane can mitigate these issues while providing dedicated space for people biking[1].

EXISTING CONDITIONS

To support the bikeway design for Virginia-Daisy, the City of Springfield supplied on-street parking counts performed at ten different times to cover the variety of conditions encountered on the corridor[2]. To supplement this data, the city also performed a count based on visual inspection of previously captured photography[3].

COUNT SUMMARY

Observed usage of the on-street parking lane at any one time on the full Virginia-Daisy corridor ranges from a low of 74 vehicles to a high of 116 vehicles. Specific clusters of parking demand varies on the corridor in response to land uses, community destinations and availability of off-street parking.

As shown in the table to the right, parking demand is generally consistent from weekday to weekend and morning to evening hours. Special event parking demand (such as a sports event at the Willamalane Center) may exceed the use seen on the average day.

PARKING LANE CAPACITY

Parking is allowed on the curbside on both sides of the street along the majority of the Virginia-Daisy corridor. Under some conditions, parking use may be prohibited, restricted or unavailable. These conditions include:

- Parking is prohibited for 30 ft advance of crosswalks . This applies at all crosswalks[4], including all street corners. On the Virginia-Daisy corridor, yellow curbs are only painted on either side of the marked crosswalks by Colony Dr and Ridge Dr.
- Spot parking restrictions such as the residential loop at the far East end of the corridor which has no parking permitted on the street (off of Daisy St).
- On-street parking is not allowed in front of driveways. Many residential units on the corridor provide their own off-street parking for 1 or 2 vehicles. Curb cuts provide access to these spaces but also prevent on-street parking in that location.
- On narrow segments without space for parking. Between S 51st and S 52nd St the street is so narrow that parking would block one travel lane. Parking is prohibited on this segment.

[1] FHWA. Incorporating On-Road Bicycle Networks into Resurfacing Projects. 2016

[2] Counts were performed Tuesday 1/12/2016 and Tuesday 1/19.2016 at 10am; Tuesday 1/19/2016 and Tuesday 1/26/2016 at 6:30 pm; Saturday 1/16/2016 and Saturday 1/23/2016 at 2:00pm; Saturday 4/02/2016 at 6:00pm; Sunday 4/03/2016 at 5:30pm; Saturday 7/16/2016 at 6:10pm; and Sunday 7/17/2016 at 6:00pm.

[3] Google StreetView photography dated September 2011.

[4] See. ORS 811.550 – Parking prohibition near crosswalks

DESIGN CONSIDERATIONS

- On most streets with parking on both sides, parking demand can be accommodated with parking provided on one side.
- Parking may be alternated from one side of the street to the other with proper transitioning. This pattern may cause motorists to reduce their speed.

IMPLEMENTATION CONSIDERATIONS

Imperfections in the quality or installation of roadway pavement, gutter joints and drainage grates must be held to a higher standard when they are located within a bicycle lane than when located within a parking lane. Construction plans should call for repair of rough or uneven pavement surface, the use bicycle compatible drainage grates, and corrections to raise or lower existing grates and utility covers so they are flush with the pavement surface.

PROPOSED CHANGES

As part of the Virginia-Daisy Bikeway project, some segments of the corridor may feature consolidated parking lanes in order to visually narrow the roadway and provide space to establish a bike lane. At spot locations across the entire corridor, parking may be restricted in certain locations to allow for trees and crossing enhancements. These spot changes on their own are not expected to have significant impact to parking availability.

There are four distinct segments in the project related to parking lane consolidation:

S 32nd to S 42nd :
In this segment, no parking consolidation is proposed, with no significant effect on parking availability.

S 42nd to Weyerhauser Hall Rd:
This segment proposes parking consolidation on one side of the street. The parking lane may be allocated on the north or south side of the street in response to measured parking demand.

The observed weekend parking peak consisted of 15 cars. After implementation, this segment will have an estimated 140 parking spaces, which will more than serve the parking utilization needs.

Weyerhauser Hall Rd to Ridge Dr:
In this segment, no parking consolidation is proposed, with no significant effect on parking availability.

Ridge Dr to Bob Straub Parkway:
Based on low existing parking utilization, this segment proposes the removal of parking on both sides of the street (with the exception of one block on the north side near 5660 Daisy Street (Western Loop).

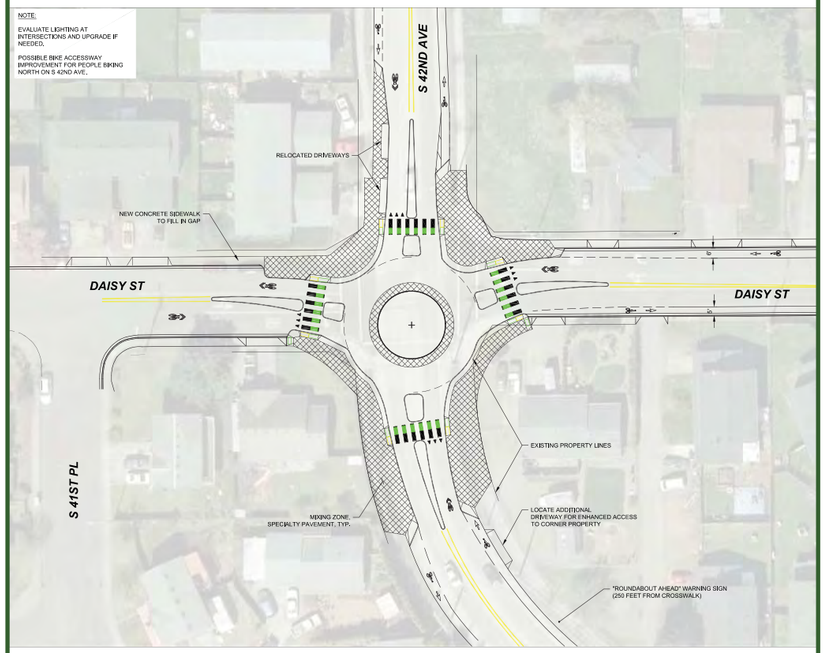
The observed weekend parking peak consisted of 5 cars. After implementation, this segment will have an estimated 15 parking spaces, which will more than serve the parking utilization needs.

BENEFITS

- Reduces conflicts with bicyclists as drivers pull into and out of parking spaces and drivers and passengers open doors of parked vehicles.
- Provides additional roadway space for bicycle facilities.
- Improves sight distance for all roadway users.
- Provides clean water recharge and stormwater management via treatment and flood control.

PREFERRED

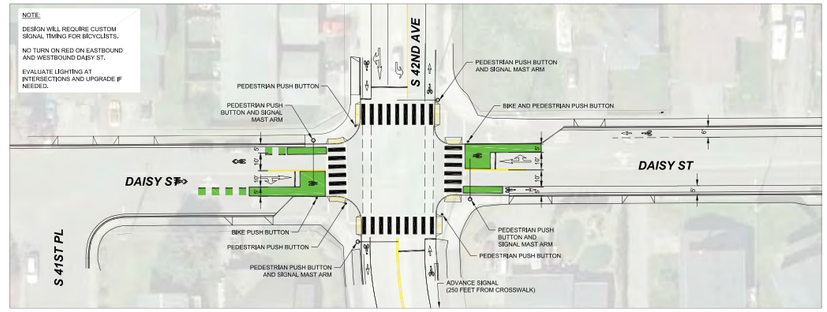
DESIGN OPTION 1 - ROUNDABOUT



Pros:
Reduces speeds
Provides more protected pedestrian crossings movements
Creates safe areas for people walking and biking
Accomplishes the project goals to create a safer intersection for all users
Limits the need for additional signals
Reduces delay, improves traffic flow

Con:
- Will require additional right-of-way

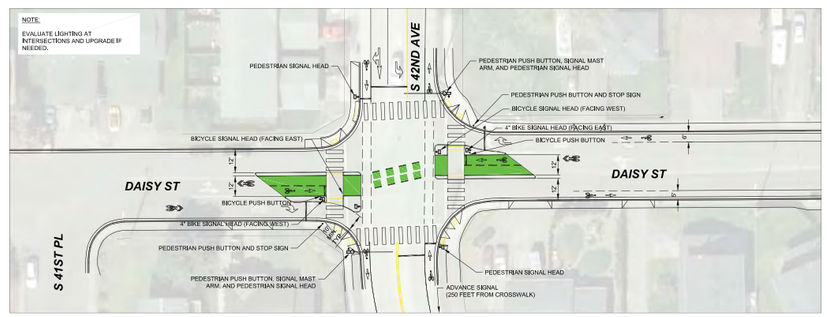
DESIGN OPTION 2A - FULL SIGNAL & BIKE BOXES



Pros:
- Signalized intersection allows controlled crossing for people walking and biking
- Accomplishes the project goals to create a safer intersection for all users and to calm traffic along the corridor
- No additional right-of-way required
- Improves intersection alignment
- Provides buffered area for people biking to line up and cross
- Reduces north-south pedestrian crossing distance

Cons:
- Expense
- Requires advanced warning to the south on S 42nd Street
- Sight lines still provide difficulties for turning movements
- People walking and biking may not always activate signal
- Added maintenance for green paint
- Does not significantly reduce speed or improve stopping sight distance

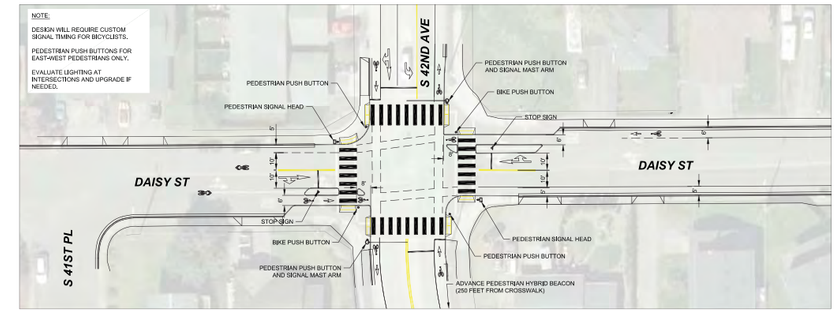
DESIGN OPTION 3 - PEDESTRIAN AND BICYCLE SIGNAL



Pros:
- Provides warning for people walking and biking
- Least expensive
- No additional right-of-way required
- Provides buffered area for people biking to line up and cross

Cons:
- Does not significantly reduce speed or improve stopping sight distance
- Unconventional design may cause confusion for drivers
- No change to offset intersection alignment
- Left turns from Daisy St restricted
- Sight lines still provide difficulties for turning movements
- Requires advanced warning to the south on S 42nd Street
- People walking and biking may not always activate signal
- Added maintenance for green paint

OPTION 2B - PEDESTRIAN HYBRID BEACON



Pros:
- Alerts people driving about people crossing on foot or bicycle
- Lower cost alternative
- No additional right-of-way required
- Intersection alignment is slightly improved
- Provides buffered area for people biking to line up and cross

Cons:
- Does not significantly reduce speed or improve stopping sight distance
- Sight lines still provide difficulties for turning movements
- Requires advanced warning to the south on S 42nd Street
- People walking and biking may not always activate signal

For full safety analysis report, see attachment 4: S 42nd St and Daisy St Safety Technical Analysis Memo

Appendix 3: 32nd St and Virginia Ave Gap Analysis Memo

233 A Street, Suite 703
San Diego, CA 92101
(619) 269-5982 x5

MEMORANDUM

To: Michael Liebler, PE
Transportation Planning Engineer
CC: Mary McGuirk, Mary Stewart, Michael Sampson
From: Bryan Jones, PE, AICP, LCI
Date: July 20, 2016

Re: Gap Analysis for the Intersections of Virginia Avenue and South 32nd Street, City of Springfield, OR

Staff Qualifications

Bryan Jones is a Professional Engineer within the State of California, holding License #TR2229. He has served as the City Traffic Engineer for the cities of Fresno and Carlsbad. During that time, Bryan worked on multiple traffic impact studies, site access plans, roadway designs, and environmental assessments.

Overview

Alta Planning + Design developed a concept design that proposed safety improvements at the intersection of 32nd Avenue and Virginia Avenue, dated April 26, 2016. Alta Planning + Design's suggested improvements include curb extensions, two pedestrian refuge medians, high visibility crosswalks, and rapid flashing beacons. This memorandum is to assess the resulting vehicular gap analysis.

Assumptions

Alta Planning + Design was provided with turning movement counts from the City of Springfield, Oregon, for the intersection of 32nd Street and Virginia Avenue. These counts were conducted on May 10, 2011 between the hours of 4:00 p.m. and 6:00 p.m.

The counts showed 496 southbound-through, 68 southbound-lefts, 256 northbound-through, and 8 westbound lefts.

Using these counts, Alta Planning + Design determined that the primary conflict will be the northbound - through and the southbound left lanes.

Calculations

Based upon an even distribution of the northbound-through lane volumes, there will be an average of 1 vehicle approximately every 13 seconds. If vehicles are platooned, greater length gaps would occur.

$$264\frac{veh}{hr} X \frac{hr}{60min} X \frac{min}{60sec} = .073\frac{veh}{sec} \text{ or } 13.64\ \frac{sec}{veh}$$

Based on an even distribution of the southbound-left turn lane volumes, there will be an average of 1 vehicle approximately every 53 seconds. If vehicles are platooned, greater length gaps could occur.

$$68\frac{veh}{hr} X \frac{hr}{60min} X \frac{min}{60sec} = .019\frac{veh}{sec} \text{ or } 53.19\ \frac{sec}{veh}$$

Analysis

Alta Planning + Design reviewed the volumes of vehicular traffic movement as it relates to the design of the intersection to determine if there was sufficient gap in traffic for motorists making southbound-left turns with minimal delay.

Recommendation

Based on the volume of vehicular traffic, Alta Planning + Design has determined there is sufficient gap availability for motorists turning left to cross the northbound travel lane. With a low vehicular volume travelling in the northbound direction, there will be minimal delay for both motorists continuing straight and those turning left. In addition, upstream traffic control devices will meter traffic and provide sufficient gaps.

The installation of the pedestrian refuge median islands and curb extensions will enhance the safety of people walking across the roadway by creating a two-stage crossing (people will cross one direction of traffic at a time), and reduce their exposure to vehicular traffic. In addition, motorists will experience less delay while the pedestrian crosses the entire roadway cross-section.

alta
PLANNING + DESIGN

Appendix 4: 42nd St and Daisy St Safety Technical Analysis Memo

Technical Memo

To: Joe Gilpin, Mary Stewart, ALTA, City of Springfield

From: Jim Pex, P.E.

Date: 7/13/16

Re: 42nd and Daisy/Virginia Planning Level Intersection Safety Analysis

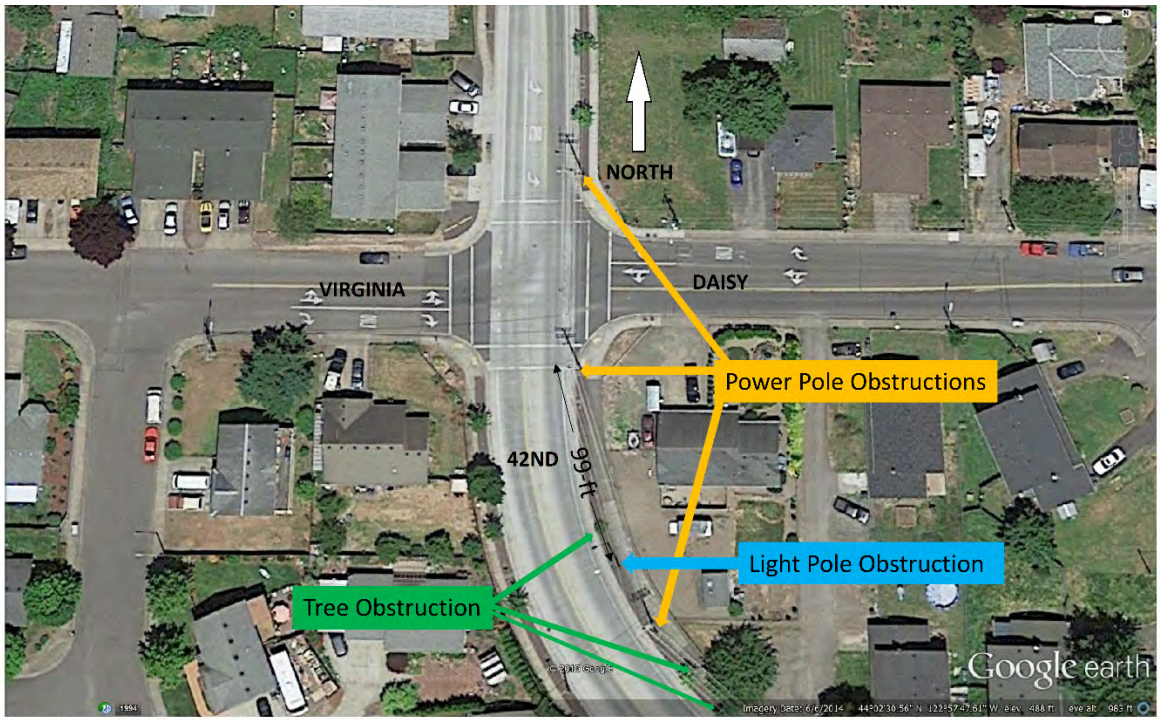
Background: As part of the City of Springfield and ALTA contract agreements, the City requested that Jim Pex, P.E. (Century West Engineering) provide a planning level review of the intersection at Virginia-Daisy and South 42nd Street. The review is based on the following parameters:

Sight Distance Standards – AASHTO Method Crossing Sight Distance

- T = T(pr) + T(A) = **4.5 sec.** T= time to cross, T(pr)=reaction time (2 sec), T(A)= time to accelerate and cross the intersection (2.5 s field timed)
- AASHTO Minimum Stopping Sight Distance for Intersection turns – **250-feet**
- AASHTO Intersection Sight Distance for passenger Cars Left turn from Stop (35 mph) = **390-feet**
- Posted Speed Limit on South 42nd – **35 mph (51.33 ft/sec)**
- Height of Object (sitting in vehicle, average height of drivers eyes) – **3.25-3.75 feet**

Findings

Jim Pex observed and timed vehicles at the intersection the morning of February 19, 2016 at approximately 8 am. Weather was overcast and intermittent drizzle. During the time of observation it was readily apparent that sight distance issues were a particular problem for vehicles traveling North on 42nd coming out of the turns south of the intersection with Virginia-Daisy. From this direction of travel, several objects obstruct a full field of view for the intersection including power poles, planted trees, and placement of vehicles on private property. Additionally, the last light pole is located roughly 100-feet from the intersection. The power pole at the SE corner of the intersection potentially blocks the field of view for pedestrians and partially blocks the view of drivers attempting to turn left from Daisy to go South on 42nd. At the time of observation, Mr. Pex witnessed a vehicle lock-up its brakes and narrowly miss another vehicle making this turn (left from Daisy on to SB 42nd). The details of the intersection are shown below:



Crash Data

Crash data was reviewed for the site. No fatalities were shown at the intersection and very few crashes with physical injuries were noted. However, Oregon is a self-reporting state, so unless obvious injuries occur and officers are called to the scene, nothing is reported. This produces a limited amount of data to work with. However, the lack of crashes reported up to 3/16/2015 was a positive.

Intersection Field Investigation

Vehicles timed coming out of the curve where they would have the first opportunity to see someone (pedestrian or vehicle) located in the middle of the intersection;

Vehicle 1 – 4.5 seconds Vehicle 2 – 5.45 sec Vehicle 3 – 5.15 sec Vehicle 4 – 4.66 sec

Overall average = 4.94 Seconds

From the last visual blockage (light pole at 100-feet south of intersection)

Vehicle 1 – 3.0 sec Vehicle 2 – 3.22 Vehicle 3 – 3.05 Vehicle 4 – 3.22 Vehicle 5 – 3.48 sec

Overall average = 3.19 Seconds

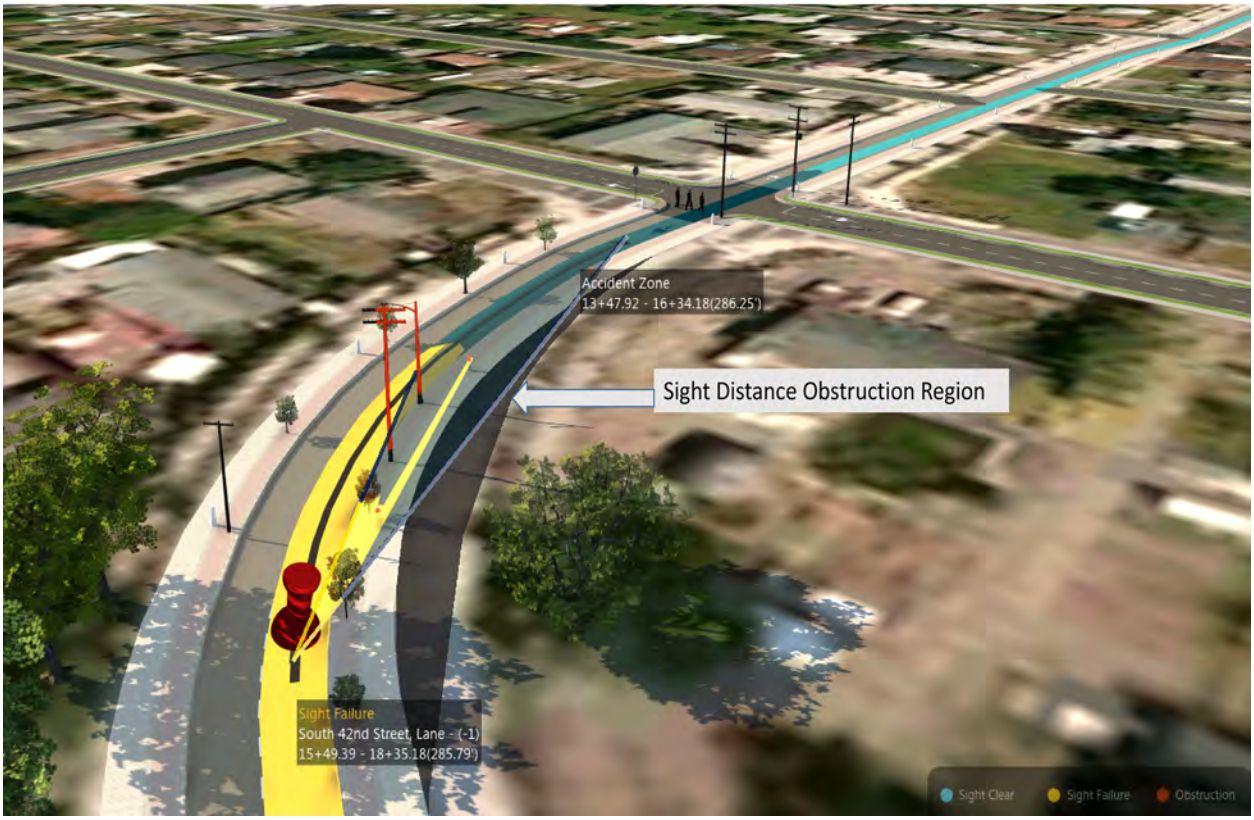
Reaction Time and Allowable Sight Distance Comparisons

Generalized allowable reaction time is 1 second for a middle age driver to recognize an issue. Muscle movement from that reaction is 1.5 seconds in ideal conditions and full awareness of the driver. Realistically an overall assessment is 3 seconds for allowable deviation for age differences of drivers and conditions. Note, this is the time from awareness to the point of muscle movement to react and does not include the time for a vehicle to come to rest, as those times are dependent on the speed and weight of the vehicle.

Using the reaction time of 3 seconds and a speed of 35 mph (51.33 ft/sec) would give a distance of 154-feet traveled before the driver reacts. The pin location shown in the following images is located at approximately 154 feet from the intersection. Items in ORANGE show obstructed view obstacles and gray shaded regions indicate obstructed view zones shown below;

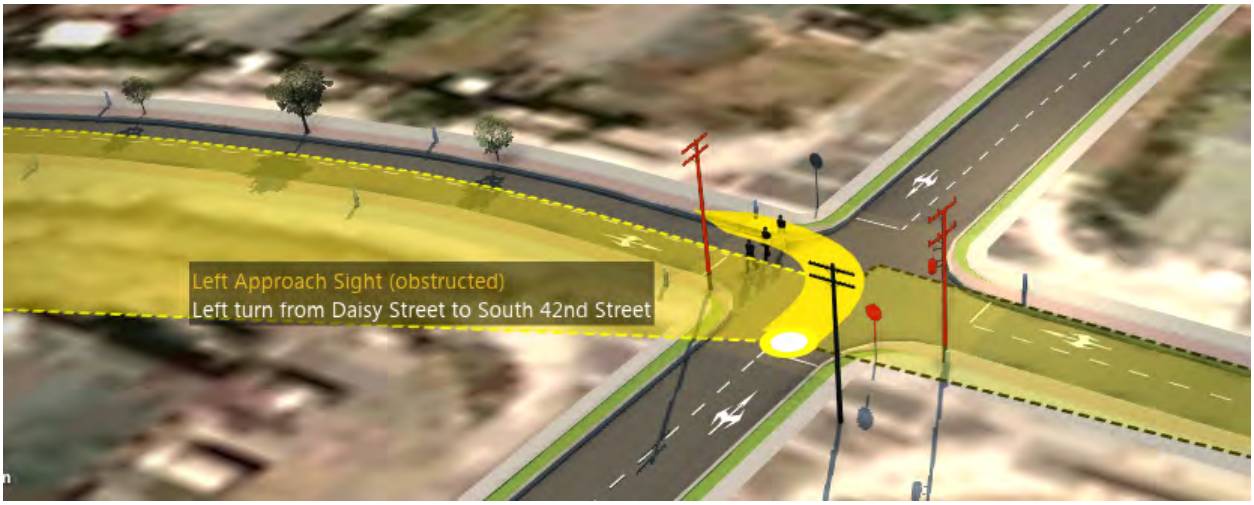
1020 SW Emkay Drive, Suite 100
Bend, OR 97702
541.322.8962

Noting again that the last light pole obstruction is located at approximately 99-feet from the intersection, the current configuration does not meet any minimum standard sight distance calculation traveling North into the intersection. Noted from the timing in the field, the time to react (not counting deceleration) is nearly equal to the time measured from the last light pole obstruction for a vehicle to reach the intersection (average of 3.19 sec). The noted obstructions and limited sight distance is below sight distance minimums that include braking distance requirements traveling North into the intersection of 250-feet (AASHTO) and a comparison of time at 4.87 seconds for a 35 mph roadway.



Approaching the intersection from directions other than 42nd Traveling North

While the approach traveling North on 42nd is the worst scenario for the intersection, other approaches to the intersection have similar problems. The ability to approach from the East on Daisy, then turn South onto 42nd has similar sight distance problems noted previously in the opposite direction. Power and light poles create immediate sight barriers, but the driver also has to take into account movement from 3 other directions prior to proceeding. This complicates vehicle movements and increases reaction time from the stopped vehicle assessing the ability to turn as shown on the next below;



This does not include the additional time needed for drivers to account for pedestrians in the crosswalk. Noted previously, 4.5 seconds is the average time from a stopped vehicle to clear an intersection. Adding 1 second to processing each direction of travel prior to starting, it's reasonable to estimate a vehicle needs 7.5 seconds of clear travel to turn left. This exceeds the visual capabilities for drivers traveling north.

Other visual obstructions at the intersection came from vehicles on private property parked too close to the intersection. The NW corner and SE portions of the intersection had parked vehicles which impaired the ability to see oncoming traffic clearly. The location where the vehicles are parked can change daily and drastically affect the sight corridors of the intersection.

Existing Condition Safety Summary

The intersection in question does not meet sight distance requirements for vehicles traveling South to North on 42nd or from the East to West on Daisy. Traveling from the West on Virginia does not meet requirements when looking south but does meet distances to the North when private vehicles are not parked too close to the intersection. The only direction of travel that meets sight distance standards is traveling North to South on 42nd Street. The existing right-of-way configuration on south 42nd and corresponding curves limit improvement options for the intersection.

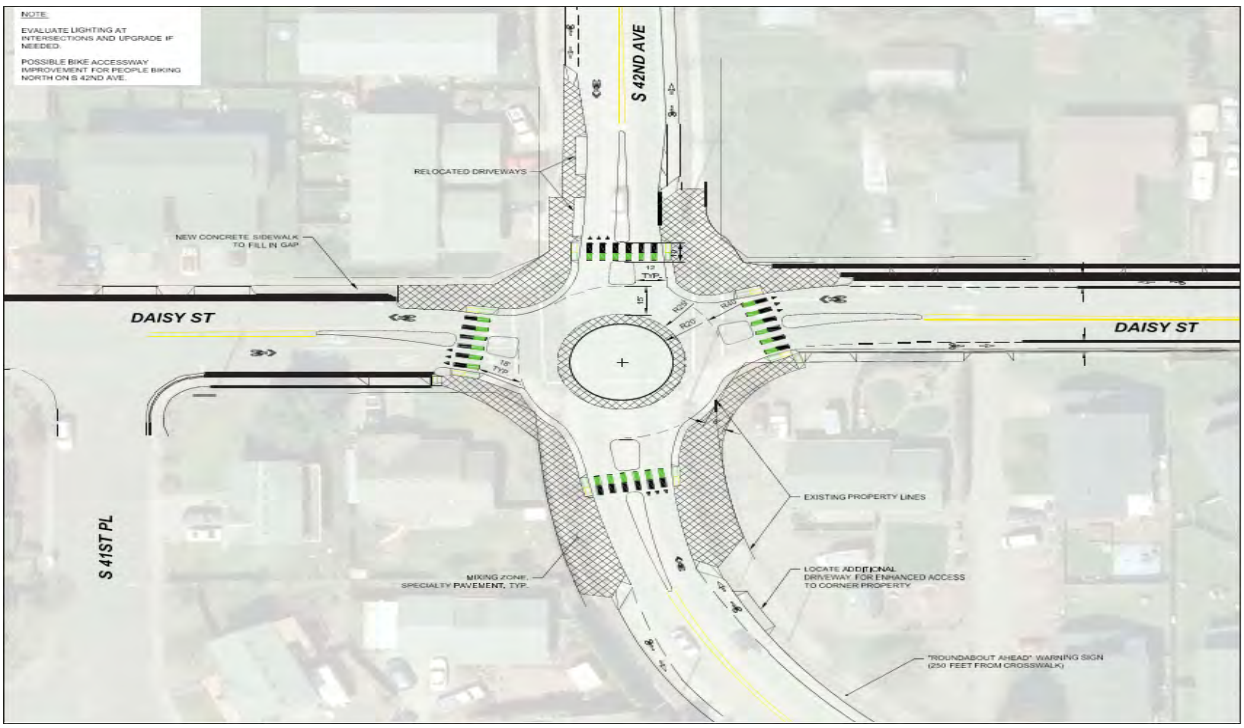
Interim improvements could include, closing the crosswalk located on the South side of the intersection, and eliminating left turns onto 42nd from Daisy. The drivers do not have enough time to react at current speed limits with a clear view of the intersection. Temporary signage should be considered on 42nd Street to notify drivers of the oncoming intersection. Speed reduction signs are located south of the intersection currently, however field observations show that vehicles accelerate back to the 35 mph limits on the last turn prior to the intersection in question based on observation.

Privately parked vehicles are a continuous problem around this intersection. It is recommended that the City discuss alternative parking options with the property owners and the potential danger the visual obstructions from parked cars create for people walking, biking and driving through the intersection.

Improvement Options

ALTA has provided multiple options for improvements to the intersection and will be discussed below;

Option 1 Round-About Configuration (***Preferred Solution***)



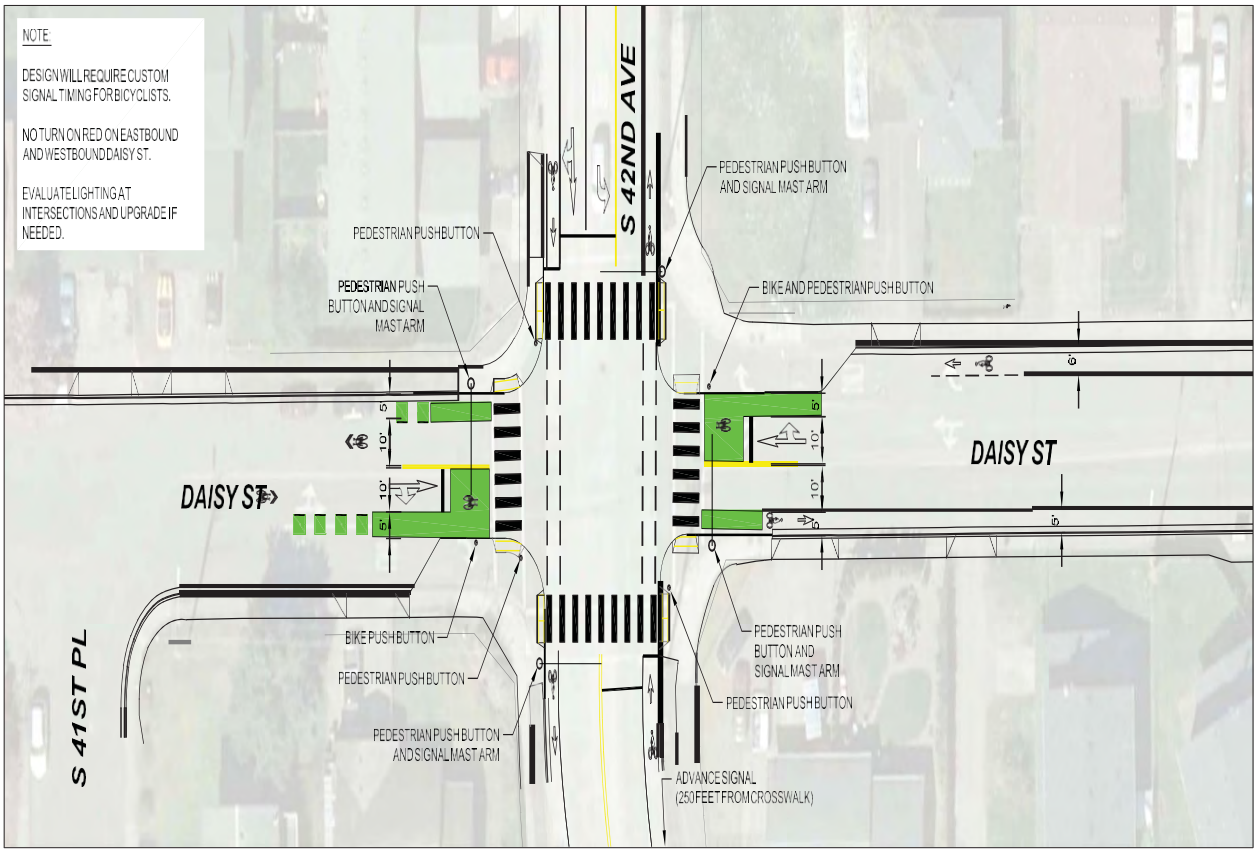
<u>Pro</u>

- Reduces speeds in the intersection
- Allows Pedestrian Movement behind thru traffic area
- Creates safe areas for Pedestrians.
- Accomplishes the goals of the City to create a safer intersection for all users.
- Limits the need for additional signals.

<u>Con</u>

- Radius Turn on East Daisy will need to be evaluated further in final design.
- Southern pedestrian crossing on 42nd should be reviewed and possibly eliminated. Sight distance concerns pertaining to existing obstructions are outlined within this memo. Speeds, removal of visual obstructions, and sight distance calculations will need to be checked with the final layout if the crossing can remain as shown. Final design will provide clarity on this issue.
- Will require right-of-way acquisition.

Option 2A Full Signal and Bike Boxes (***Preferred Alternative Solution***)



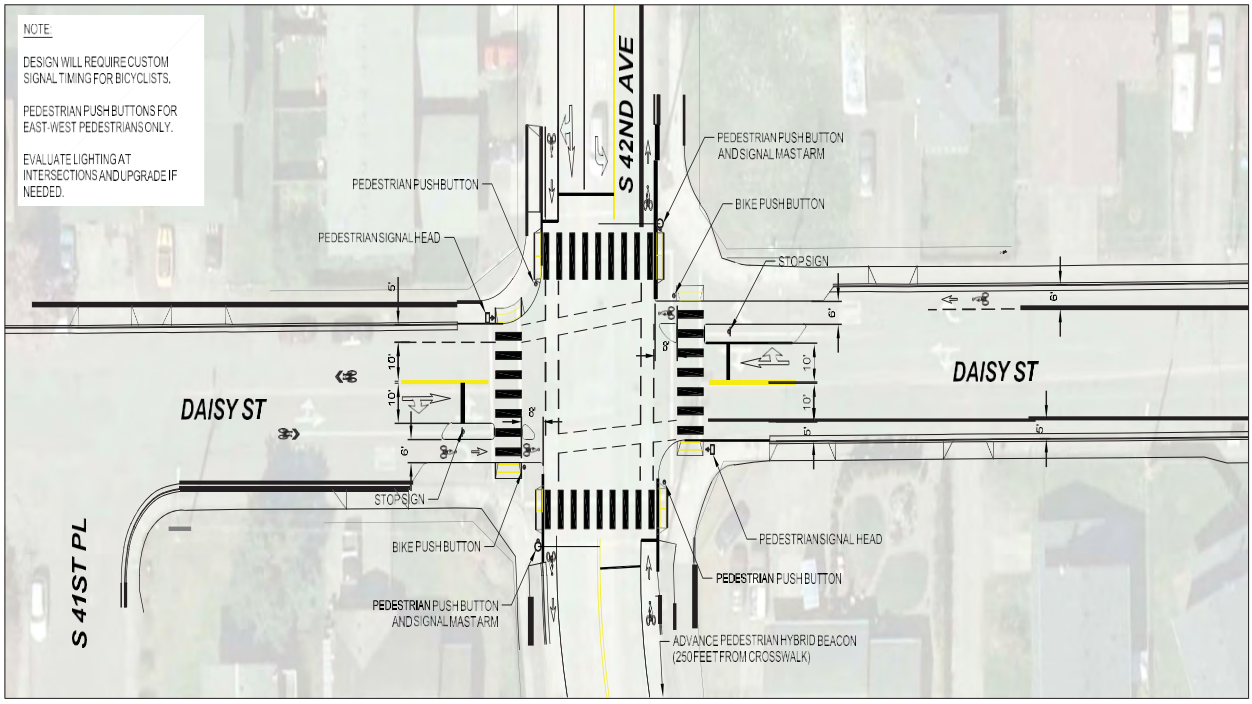
Pro

- Mandatory stopping requirements with a signalized intersection will allow controlled movement for pedestrians and cyclists crossing the intersection.
- Accomplishes the goals of the City to create a safer intersection design.
- May be able to accomplish improvements without Right-of-Way acquisition
- Intersection alignment is slightly improved from the current configuration.

Con

- Signalized intersections tend to be expensive.
- Will require additional advanced warning to the south on 42nd Street due to stopping distance.
- Right hand turns could be troublesome for larger vehicles due to available area in the proposed intersection.
- Left hand turns traveling S-N on 42nd Street would be troublesome due to stopping sight distance. These issues remain the same on the existing intersection configuration as outlined in the report.

Option 2B Pedestrian Hybrid Beacon



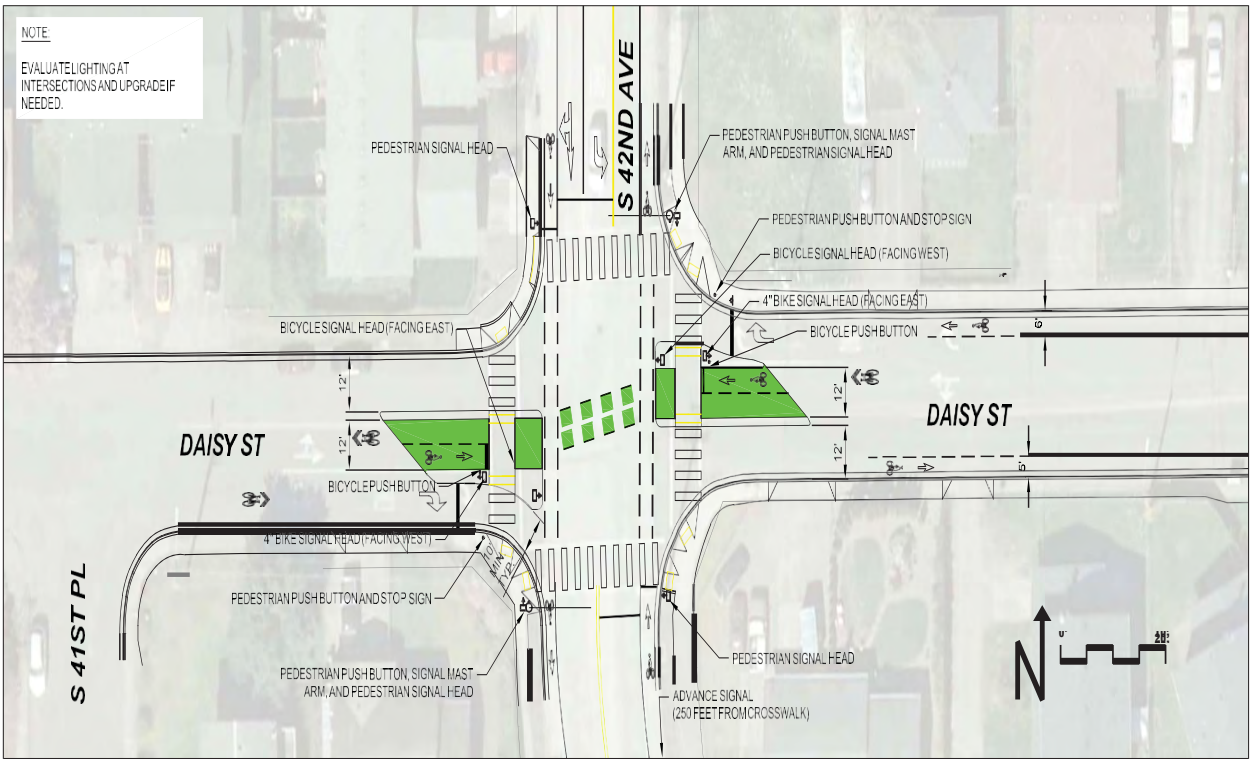
Pro

- Provides warning for pedestrians in the intersection.
- Low cost alternative to the existing footprint of the intersection.
- May be able to build within the existing Right-of-Way footprint for the intersection.
- Intersection alignment is slightly improved from the current configuration.

Con

- Does not account for existing issues with regards to stopping sight distance from the south of the intersection for vehicles and pedestrians.
- The layout does not fix existing problems with speed reductions for the intersection.
- Left hand turns traveling S-N on 42nd Street would be troublesome due to stopping sight distance. These issues remain the same on the existing intersection configuration as outlined in the report.

Option 3 Pedestrian and Bicycle Signal



Pro

- Provides warning for pedestrians in the intersection.
- Low cost alternative to the existing footprint of the intersection.
- May be able to build within the existing Right-of-Way footprint for the intersection.

Con

- Does not account for existing issues with regards to stopping sight distance from the south of the intersection for vehicles and pedestrians.
- The layout does not fix existing problems with speed reductions for the intersection.

- Unconventional design may cause confusion for drivers where they should be turning and areas of avoidance.
- Alignment of the intersection remains offset in the current configuration.
- Left hand turns traveling S-N on 42nd Street would be troublesome due to stopping sight distance. These issues remain the same on the existing intersection configuration as outlined in the report.

Conclusion

Design option number one (Roundabout) will provide the best alternative to the various issues discussed within this report. This design provides allowance for the ability to slow traffic, continuous movement for vehicles in all directions, advance warning for pedestrians, and safe areas for pedestrians to cross, which all fall within the City's goals for an improved intersection. However, due to the size and needs for public right of way for this improvement, it will require acquisition of existing private parcels to meet minimum standards of design. The entry turning radius angles will need to be verified during final design to accommodate all vehicles that utilize this busy intersection. Although costs to create this design are not typically as high as signalized intersections, land acquisition will remain an unknown cost to move forward. If land acquisition becomes too cumbersome to continue, the next best option is to signalize the intersection and provide direct control over the movements for vehicles and pedestrians.

Appendix 5:
Communications Plan

Development & Public Works Department
Virginia-Daisy Bikeway Communications Plan
2016

Introduction

The City of Springfield was selected to receive funding for Virginia-Daisy Bikeway project covering the design development and selection phase through the Oregon Bicycle and Pedestrian Advisory Committee's Transportation Enhancement grant program. The goal of the project is to provide a safe and comfortable bicycle corridor that can be used by people of all ages and abilities. Additionally, the design should enhance the overall appeal of the corridor for all users, improve pedestrian safety and usage, and provide traffic calming for automobile traffic to emphasize the active transportation priority along the bikeway.

This Communications Plan will support the Virginia-Daisy Bikeway project by setting objectives, strategies, and tactics to increase awareness and understanding of the overall project and specifically to inform Springfield residents that live within the project area about the overall goal of the project and opportunities to give input.

Individual tactics identified in this plan will be developed using this plan as a guide and the Virginia-Daisy Bikeway Communications Project Plan will contain more in-depth details. Tactics may be used multiple times to implement more than one communication strategy. This plan will be updated as needed during the duration of the project and was developed using the DPW Communication Team's guiding principles that project information provided is accurate, effective, consistent, cost-efficient, engaging, and fun.

Goals

The goals of this plan will help guide the overall communications for the project.

- Ensure the Springfield community has opportunities to be informed about the project.
- Ensure the Springfield community has opportunities to provide input on the project; specifically businesses and residents within the project area.
- Project communication is effective and efficient.

Objectives

These stated objectives were developed based on known effective outreach for similar types of City projects previously conducted.

- A significant portion of the Springfield community is aware of the project and its objective, especially residents living in the immediate project area.

- A significant number of Springfield residents that are located within the project area provide input on the project.

- Opportunities to continually improve project communication are captured.

Core Message

These core messages help describe the need for a project communications plan and provide consistent messages for implementing and managing the plan.

- The City of Springfield is committed to providing safe transportation options.

- The goal of the Virginia-Daisy Bikeway project is to provide a safe and comfortable bicycle corridor that can be used by people of all ages and abilities.

- The design of the bikeway should enhance the overall appeal of the corridor for all users, improve pedestrian safety and usage, and provide traffic calming for automobiles to emphasize active transportation along the street and enhance the neighborhood feel.

- There will be multiple ways for the Springfield community to receive and seek project information and provide input on the project; specifically the design of the bikeway.

Audience

The target audiences for project information will be the broader Springfield community, and specifically residents that are located within and around the project area; immediately along Virginia Street and Daisy Street. Also, the City will engage partner agencies that will be involved in the design and subsequent construction for the project. Audiences will be provided information that aligns with communications guiding principles.

Strategies & Tactics

The strategies and tactics of this plan will be implemented to reach the stated objectives. Strategies define how to achieve overall objectives by answering the “what” will be done. The strategies outlined in this plan were developed to address all objectives. The tactics answer the “how” by identifying the specific activities that will be implemented to further strategies and overall objectives. Key staff identified for each tactic will provide direction and/or input on implementation.

1. *Provide the Springfield community multiple ways to receive and seek project information.*

2. *Inform Springfield residents that are located within the project area about the project and opportunities to give input.*

3. *Elicit feedback from the community to improve two-way communication.*

4. *Evaluate the effectiveness of strategies and tactics implemented and adjust as needed.*

Deliverables

Tactic	Timeline	Key Staff
Project Web Page	Establish early 2016/ on-going	Loralyn Spiro, Emma Newman
Newsletter Article(s)	Edition(s) TBD	Loralyn Spiro, Emma Newman
Social Media	On-going/ as needed	Loralyn Spiro
LTD Advertising	Specific dates in 2016 TBD	Loralyn Spiro
Flyer/Poster	Create based on project timeline/ update as needed	Loralyn Spiro, Emma Newman
FAQs	Create based on project timeline/ update as needed	Loralyn Spiro, Emma Newman
Talking Points	As needed	Loralyn Spiro, Niel Laudati
Media Advisories	As needed	Loralyn Spiro, Niel Laudati
Open Houses	Date(s) based on project timeline	Emma Newman, Michael Liebler, Loralyn Spiro, other Community Development staff or Consultant as needed
Events	Research/ establish list	Emma Newman, BPAC Members
Presentations	Research/ establish list	Emma Newman, BPAC Members
Postcard Mailings	Create based on project timeline/ update as needed	Loralyn Spiro, Emma Newman
One-on-One Meetings	Research/ establish list	Emma Newman
E-Updates	Establish sign up mechanism early 2016/ as needed	Loralyn Spiro, Emma Newman
Survey	At end of project	Loralyn Spiro, Niel Laudati
Analytics	On-going	Loralyn Spiro, IT Department
Debrief Meetings	After key project milestones	Emma Newman, Michael Liebler, Loralyn Spiro, other Community Development staff or Consultant as needed

Appendix 6: Written Comment Log

Virginia-Daisy Bikeway Log of Written Comments

2/5/2016, Resident at 40th and Virginia Ave:

Is the City planning to eliminate parking along Virginia Ave. to put in bike lanes? Many of my neighbors are upset about this possibility. This would be VERY distressing due to the fact that this is the only parking for any guests at my house. My suggestion for bike safety on this street is not to add bike lanes, but to find some way to slow traffic down.

> City Staff called Resident at 40th and Virginia Ave back: spoke with him about the project and added him to the interested parties list.

5/18/2016, Resident at 48th and Daisy St:

I'm excited to see that there could possibly be a roundabout at the 42nd Street Intersection (that intersection is a huge pain when driving and biking). My house is located on the South side of Daisy St. at the intersection of Daisy St. and S. 48th St. One of the proposed plans show a tree being placed right in front of my house. Is there any way to request a tree not to be placed in front of my house? There used to be a tree near where this proposed tree is, and the roots of that tree snaked its way all throughout the yard and under the house. That tree was cut down several years ago, and when we installed a sprinkler system in our front yard 2 years ago, we had the task of digging up all those roots, and I would hate for a new tree's roots to do the same thing.

My dog and I go on a lot of bike rides, and we always see families out with small children biking as well, but we tend to bike on the Weyerhaeuser Haul Rd. to avoid all the traffic. Am I correct in assuming that you wouldn't be able to turn that into a nice bike path because it's owned by Weyerhaeuser? Weyerhaeuser Haul Rd. could make an awesome bike path because it's away from cars, and it would be safer for folks with kids, and dogs.

Thanks!!

> City Reply
>
> Hi (48th and Daisy St Resident),
>
> Thank you very much for reaching out to me regarding the Virginia-Daisy Bikeway project.
>
> We are in the preliminary design concept phase of the project and there are still plenty of opportunities for amendments to the initial design concepts. The tree wells depicted in the preliminary design are conceptual and the specific locations of that treatment are yet to be determined. I have documented your request and will make sure that it is incorporated into design conversations as we refine the project. Your input is greatly appreciated.
>
> The Weyerhaeuser Haul Rd is also identified in the City's Transportation System Plan as an opportunity for additional pedestrian and bicycle improvements. Willamalane and the City will be partnering on that project, but it is a separate project from the on-street Virginia-Daisy Bikeway project that is currently underway and has funding available. I will be reaching out to Willamalane staff and to learn more about the timeline for improvements along the Weyerhaeuser Haul Rd since other residents in the area have also asked the same question.

We will be hosting an open house for the Virginia-Daisy project at Mt. Vernon Elementary School starting at 6pm on Wednesday, May 25th. I hope that you are able to attend, learn more about the project, and provide additional feedback.

Would you like to be added to the interested parties email list for the project? If so, please click here to sign up.

Thanks again,

Emma Newman
Transportation Planner
City of Springfield
541-726-4585

5/19/2016, Property Owner at 51st and Daisy St:

I am the owner of XXXX Daisy property.
I received a post card with information regarding the project. I would like to be included in receiving additional information and details of upcoming meetings.

I was unable to find when and where the open houses will be held. I would like to add – the post card is the first I have heard of the project but I am thrilled and would like to support the effort.

Thank you!

5/26/2016, Community Member:

I was unable to attend the meeting, but would like to suggest this:

There are few places for these people to walk safely without being endangered by bikes/skateboards. Families with toddlers, and elderly persons would appreciate a "walking only" lane on one side of a bikeway (could just be painted on).

City Reply

Thank you for your comment. Have you had a chance to look through the Preliminary Design Concepts, available on the Virginia-Daisy Bikeway project website? The current preliminary concepts propose including additional sidewalk and ramps to fill the gaps that currently exist along the corridor. Typically we would not stripe a walking lane along a street in the same location where sidewalks are provided.

5/27/2016, Comment Member Reply

...sidewalks/ramps are great....perhaps occasional signs re where skateboards go (hopefully not on sidewalks with pedestrians). (no need to respond to this email)

Virginia-Daisy Bikeway Log of Written Comments

5/31/2016, Resident at Bob Straub Parkway and Daisy St:

Dear Ms. Newman:

I do have a lot of questions. I live on the corner of Daisy and Bob Straub.

1. Where is all the money coming from for this project? When they put in Bob Straub parkway they had nice wide sidewalks. I have tried walking them but the exhaust fumes from all the vehicles make that unpleasant and unhealthy.

2. Are there plans to install traffic signals at the corners of 42nd and one for Bob Straub and Daisy? One can hardly get off or on 42nd and the curve before Daisy is deadly. Drivers on Bob Straub try to beat the traffic signals coming from the south and going north. It is quite hard to get across Bob Straub and walking requires either going down the block to the south or going north to one of the median strips. There have been quite a few accidents at that corner.

3. I walk on Daisy Street and there are houses all along 98% of Daisy Street. How are you going to widen these streets so you can put in extra trees and lanes? Is this another plan to steal land so our properties are devalued or raise taxes? Will this mean I will be able to step from my front door directly on to Daisy?

4. I do not have a problem crossing Daisy. Why would you need a special walk way? The biggest problem are the cars racing through the intersection of Daisy and Bob Straub. If you happen to be crossing at the corner at Daisy you better be ready to run. I suspect there is a problem at the 42nd St crossing also.

You can't fix stupid which is how most people drive and pedestrians think they are special and can stop 3000 lb vehicles. EVERYONE needs to pay attention whether walking or driving.

Thank you,

(Resident)

City Reply

Hi (Resident),

Thank you for writing to us regarding the Virginia-Daisy Bikeway project. Here are some responses to your questions:

1. There is some federal funding for an overlay project that will precede the bikeway treatments. The bikeway project itself is funded through the Oregon Bicycle and Pedestrian Advisory Committee's enhance grant funds. Some additional funds may be allocated to be able to cover the cost of safety improvements at the 42nd and Daisy intersection, depending on the final cost of the project.

2. A full traffic signal is one of the current preliminary design concepts under consideration for the 42nd and Daisy intersection. To see the full preliminary design concepts and specifically view the 42nd and Daisy intersection treatments under consideration, please click here (pages 7-9). For the full project website, please visit http://www.springfield-or.gov/dpw/Virginia-DaisyBikewayProject.htm. The project is working to address the safety concerns at the 42nd and Daisy intersection that you stated. The Daisy and Bob Straub Parkway intersection is not within the scope of this specific project. We recognize that intersection could also benefit from improvements, but no funding is available for that location at this point.

3. The majority of the project will maintain existing curb-to-curb widths with the exception of a little bit of potential corner widening at 42nd St. We also heard from residents along the corridor at the Open House last week that they would like to see the narrow section between 51st and 52nd widened. There would be no widening along the portion of Daisy St near your location.

4. The project design's goal is to enhance the overall appeal of the corridor for all users, improve pedestrian safety and usage, and provide traffic calming for automobiles to emphasize active transportation along the street and enhance the neighborhood feel. We hope that this will address your concern regarding cars racing along the corridor. I am not sure which specific special walk way you are referencing in the design, but would be happy to answer your question if you clarify the location.

Thanks again for your input,

Emma Newman

Resident Reply

Thank you Ms. Newman for your prompt reply. I passed it along to some of the people in the HOA.

6/1/2016, Resident at 49th and Daisy St:

Questions we have as residents of Daisy Street:

Will the hazardous old maple trees come down that were severely damaged in the ice storm two years ago? One of the city-owned trees in front of our house has a split that's about 20 feet in length from the tree top to the trunk area. When the wind blows we can still hear cracking in the upper limbs, and a lot of debris still drops periodically to the ground. The tree is not safe to be left in the condition it's currently in. We repaired our own roof and replaced our own broken window, caused by the storm, after we didn't hear back from the city with 3 attempts to get in touch with them following the storm.

Will parking be restricted making it difficult for home owners that live along Daisy?

Specifically, what will be done to slow traffic as we see numerous cars blow through the only stop sign (at 49th Place) between 42nd and Bob Straub? Our 16-box mailbox was knocked off the support and

tossed across a driveway from a car that sped through the stop sign after it hit another car. It then rested on the wrong side of the street in the yard (2 houses from the stop sign) across from our property. Current traffic completely disregards the speed signs posted. We know of 5 cats including 2 of ours that have been killed in front of our house. There are a lot of young children that now live near our home. It's hard enough to see animals killed, but we cannot help but be concerned about children in our neighborhood.

What will be done to the area that bottlenecks between 51st and 53rd, where there is a fence built on the curb?

Will the traffic still be blocked on 49th Place where road access to Main Street once existed? 49th Place to Main became a WALKING PATH (seriously?) when a series of apartments were built in the field that was once a Drive-in Theater. This makes it very hard for cars to pass to Main Street between the assisted living housing and apartments meandering around to come out at 48th and Main. That street is barely passable by two cars going in opposite directions now; therefore, people blow through our street to get to either 42nd or Bob Straub. It makes one wonder who dreams up such plans? Certainly not someone who lives in this neighborhood.

This was a wonderful tree-lined sleepy lane when we moved in 21 years ago. That peace and quiet was completely destroyed when the city punched through Weyerhaeuser Road making this a speedway. Our street became one of the longest parallels to Main. Since that street change we see many frightening characters day and night that now roam the street, some digging through residents' garbage cans. And, we've witnessed high-speed pursuits by police attempting to do their job when chasing criminals. This is no longer the pleasant area we once experienced. Hopefully some of your plans with these proposed bike lanes will do something to correct some of the difficulties that were created when Daisy Street's neighborhood was turned into a high-speed nightmare.

Thank you for listening to these questions and concerns,
(Resident)

City Reply Part 1

Thanks for writing with regards to the Virginia-Daisy Bikeway project. I am looking into some of your questions regarding the tree concerns with our maintenance staff and will send you a full reply to your email when I am back in the office early next week.

The full Preliminary Design Concepts are available on the project website at http://www.springfield-or.gov/dpw/Transportation/SupportFiles/Virginia-Daisy_Bikeway_Preliminary_Design_Concepts.pdf. A variety of different traffic calming treatments are proposed, which may interest you and address some of your concerns expressed below.

City Reply Part 2

Virginia-Daisy Bikeway Log of Written Comments

Hi (Resident),

Thanks again for writing to us with regards to the Virginia-Daisy Bikeway project. Below I have provided the answers to your various questions.

1) Our operations and maintenance staff are looking into the trees that you described and assessing what can be done to improve the situation. The preliminary feedback was that it appears as if the trees were topped many years ago and are now experiencing the results of topping.

2) The majority of the existing parking is maintained in the Preliminary Design Concepts. The last page of the document explains the parking utilization study that was conducted, which informed the Preliminary Design Concepts. Some locations have parking consolidated to one side of the street in locations where very low utilization was observed. As you can see for your portion of the corridor, almost all of the existing parking would be maintained as currently proposed. The primary treatment proposed is a shared lane marking, also known as a "sharrow," which is marked with paint. Additional trees are proposed at some locations along the corridor to help provide additional traffic calming and neighborhood beautification. As the design progresses from preliminary concept into a refined design, we will work with residents along the corridor to place trees in the most appropriate locations. The result will most likely be fewer trees than are currently shown. The trees would also be selected to be appropriate street tree varieties so they do not create some of the same problems you are currently experiencing with the silver maples. What do you think about the trees?

3) Traffic calming to create an environment that encourages people to drive neighborhood appropriate speeds is a priority for the project. Along the corridor, we are looking at a variety of different physical engineering treatments to achieve this goal. There are various locations that are being considered for raised crosswalks, others with mini-roundabouts (see attached photo), as well as a few locations with planted buffer areas. The trees that are proposed would also help traffic calm as well, which helps to prevent people from speeding. The Preliminary Design Concepts show a raised crossing or mini-roundabout treatment every several blocks, which would help deter people from using the length of the corridor as a speedway. Additionally, we are looking to fill in a few sidewalk gaps that exist to ensure pedestrians have a safe place to walk.

4) The Preliminary Design Concept shows additional sidewalk being added to fill in the existing gap from 51st to 53rd and to provide one travel lane in either direction. This configuration would also be signed with no parking through the narrow section, similar to how it is currently unsafe to park in that location. The preliminary proposal would not require any additional right of way. The gentleman's property you referred to comes up to the edge of the road currently. I'd be interested to hear your thoughts about this couple block area.

5) The location to the north of Daisy at 49th Pl is not within this project's scope, but appreciate your feedback about that location as well.

6) We have heard from you and many of your neighbors about speeding concerns along Daisy St and Virginia Ave. We also have worked with police officers who work in the area as part of the concept development and they are supportive of the proposed traffic calming, which will help deter speeding.

I hope that the Virginia-Daisy Bikeway project can help make your street more pleasant. Please let me know if you would like clarification on any of the topics above.

Thank you,

Emma Newman

Letter from Two Residents at 44th and 45th and Daisy:

Dear Emma Newman:

We are contacting you to give our opinion of the proposed Virginia-Daisy Bikeway Project. We realize that the project has already been decided on and that it is likely too late to cancel the project, but we would still like to state our objections.

1. Before city officials decide to do something, they should live in the neighborhood for a year or two in order to understand the dynamic of the neighborhood. Since that is likely impossible, a questionnaire should be sent to those who live in the neighborhood to assess the feasibility of a project.

2. When it was decided to put Daisy Street completely through, we were assured that our neighborhood wouldn't be impacted by extra traffic. Before the street was put through, we had approximately 300 vehicles a day drive past our houses. Most of those were in the morning, people in the neighborhood going to work, or in the late afternoons when they were returning home. We had very little traffic mid-day and late at night. Now, traffic is constant. I believe that you're count shows approximately 3000 vehicles a day. Those vehicles ignore traffic safety and regulations. We have vehicles going by our house at 40-80 mph mid-day and late at night.

3. Because of the excess traffic, the road surface has deteriorated. The street was repaved several years ago, when the anticipated traffic load was approximately 300 vehicles per day. Now that the traffic load is 3000 vehicles per day, the pavement is in extremely bad condition.

4. We have noticed that where there are bike lanes, bicyclists realize that they're being encouraged to use those routes. But... they don't use the bike lanes. They ride on the sidewalks. One of us was struck by a bicyclist when she was walking down the sidewalk and the cyclist, coming up behind her, wasn't paying attention to where he was going or what was in his path. Like vehicle drivers, bicyclists often are busy talking or texting with their cell phones and not paying attention to what is around them or in their path.

5. With the increased amount of traffic caused by the through opening of Daisy Street, it's very difficult to back out of our driveways when we need to go somewhere. We frequently have to wait for several minutes before there is a large enough gap in traffic to allow us to back out without causing an accident.

6. Because we already have a large number of bicyclists traveling on this street (actually riding on the sidewalk since that's where they prefer to ride) we have almost caused an accident with a bicycle. They don't follow common laws (bicyclists are supposed to follow basic traffic laws about which side of the street to ride when going a particular direction, etc.). They pay no attention to cars trying to legally exit a driveway or side street.

7. One of the issues that is a problem in the section of Daisy Street where we live is designating parking on the north side of the street, the side of the street where our houses are located. We live across the street from the Country Manor Mobile Home Park. At one time, it was a Mobile Home Park. Now, it a trailer court. The Park has rules and regulations about how many vehicles can be parked in and around each space.

If the residents of a particular space have more vehicles than permitted, then they park them along Daisy Street. With designated parking on the north side of the street, the side where we live, then those extra vehicles will be parked in front of our homes. That means our invited guests, family and friends, won't be able to park by our home. They might have to park several blocks away. This last weekend, there were 6 vehicles parked on the south side of Daisy Street. When the Bikeway is established, those vehicles will have to park on the north side of the street. I don't know how you feel about the area in front of your home being taken up with parking by strangers, but it doesn't sit well with us.

Daisy Street was originally a quiet, back street in a residential neighborhood. It was not designed to be a major thoroughfare, an adjunct to Main Street. However, with the changes that have been made, and that are scheduled to be made, it is no longer the quiet family area where we have lived for so long.

Sincerely,
(Resident)
(Resident)

City Reply (Letter Mailed 7/1/2016)

Thank you for sending in your letter expressing your opinions on the project. We are still in the process of collecting input from residents in the area. Final decisions on design have not been made yet and there are more opportunities coming up to express you opinion moving forward. We have heard similar concerns from our police department and others in the neighborhood in relation to the numerous occurrences of speeding along the corridor. One of the goals of the project is to improve safety by installing traffic calming measures to get vehicles to slow down. In relation to your comment about road deterioration, this project is being performed in combination with a re-paving project to address the roadway condition. By combining our efforts for preservation and enhancement we hope to save money, minimize construction impacts to the citizens on the corridor and return the street to more of a residential neighborhood condition and detract its use as a higher speed major thoroughfare.

If you would like to provide additional comments, we have another public open house coming up from 6:00 to 7:30pm on Tuesday July 12, 2016 at Papa's Pizza on Main Street. You are always welcome to contact us directly as well and we are more than willing to set up a time to come to your residence to discuss your concerns in person.

Thank you,

Michael Liebler and Emma Newman

7/10/2016, Resident at 51st and Daisy St:

Hi,

Finally got a chance to look at project ideas.

I have lived here on Daisy for 14 years and can say without a doubt that a round about at the 42nd and Daisy intersection is a bad idea.

I've always wished for a traffic light there.

As having driven my children to Mt. Vernon Elementary has always been a dangerous endeavor.

Please put up traffic lights!!! It would be better for everyone.

City Reply: Emma Newman called resident back and shared project update and answered questions. Emma shared the safety information from the project and explained the benefits associated with roundabouts compared with traffic signals and she said, "what do I know? If a roundabout is safer, that's good." Overall, she was very glad that something will be done to address the safety at 42nd and Daisy St and along the corridor.

7/12/2016, Property Owner at 40th and Virginia Ave:

Emma,
My name is XXXX. I am a teacher and I own a home at XXXX Virginia with my husband and my 1.5 year-old son who was at the open house with me tonight. (I felt awkward because I forgot his shirt. Oops!) We didn't stay long.

I wanted to say that overall I think this project is a great idea for Springfield. I heard many people who seemed caught up in the nitpicking specifics as it pertains to their house. I am fortunate that we live in the cul-de-sac and therefore my home won't be directly impacted, but I will be driving and walking this bikeway everyday. I think it will make it safer and more enjoyable for pedestrians and bikers as well as the kids playing in their yard.

Thanks,
(Property Owner)

City Reply

Thank you so much for taking the time to come to the open house and to follow up with your feedback. If you would like to receive email updates about the project, please click here to sign

up. We will be having a public hearing at the City Council this fall, tentatively scheduled for October 3rd if you'd like to provide additional comment.

7/15/2016, Resident at S 44th St:

I received the post card in the mail re:the open house to discuss this project. I was unable to attend but do have some input. I live off of Daisy on S. 44th.

I have nearly been hit on my bike a handful of times trying to cross at 42nd headed south while I'm on my bike. This is the route to Clearwater bike path that my family uses. My daughter is in middle school and I will not let her ride her bike to school (ASMS) due to this bike crossing problem. Not only would a round-a-bout be helpful for pedestrian and bicycle crossing, it would make traffic slow down for cars too. the corner south of daisy on 42nd street does not have good vision to predict turning times from daisy to 42nd in any direction. Often traffic is speeding around this corner.

In addition, my middle school daughter has a babysitting job that she bikes to on 50th pl., so she heads east on Daisy. It is not at all set up for bicyclists and is concerning for sharing of the road. I, at this time, have advised her to ride her bicycle on the sidewalks (where there are actually sidewalks). This is unreasonable for the amount traffic, cars and bicycles, in this area of town.

I think this proposal is worth being pushed. My family would very much benefit from the improvements.

Please let me know if there is anything I can do to help this to come to fruition.

Sincerely,

(Resident) & Family

City Reply

Thank you very much for taking the time to provide feedback on the Virginia-Daisy Bikeway project and sharing your story.

There will be an opportunity for people to speak at the City Council meeting prior to the approval of the project design concept, which is currently scheduled for the evening of October 3rd, but could change. If you would like to stay informed about the project and the public hearing information, please click here to sign up for project email updates.

7/18/2016, Community Member:

Hi, I missed coming to the open house last Tues. July 12th, and main input I had concerns the intersection at 42nd and Daisy. I gave comment earlier at the Mt. Vernon School display to the effect that I thought we seriously needed a regular traffic light at that intersection, but now realize it's pretty close to the intersection at 42nd and Main Street to be having another traffic light so soon on 42nd south of Main Street. I would be content with a "calming" traffic circle at that intersection, but I wonder how it could be done with homes presently on every corner of that intersection and having enough land-

room to make that modification. Oh yes and I love the idea of a yellow blinking light and cross-walk across 32nd at the end of Virginia to get to Willamalane Center from our neighborhood. Thank you for the planning work that's going into this project.

City Reply

Thank you very much for taking the time to provide feedback on the Virginia-Daisy Bikeway project.

The single-lane roundabout that is the preferred design concept treatment for the 42nd and Daisy intersection would require some additional space on a couple of the corners. However, we have spoken multiple times with the property owners whom we would be buying a small portion of land from and they are supportive of the project and have both expressed support for increased safety at the intersection. As the project moves from design concepts into detailed design in the fall, we will continue to work with the property owners to reduce impacts to their properties.

Have you signed up for our interested parties email list? If you'd like to stay more informed about the project and opportunities to provide further comment, please click here to sign up.

Appendix 7: Open House 1 Comments

Virginia-Daisy Bikeway Open House #1 Comments

Comments submitted by Open House #1 participants:

Comment form question: "Are the proposed refined design concepts presented today moving in the right direction?"

- Yes – 9 participants
- Maybe – 3 participants
- No – 3 participants

General Comments:

- 32nd and Virginia – slow traffic down turning onto Virginia Ave with the proposed intersection treatment. Supports sharrows. Concerned about trees and effecting visibility.
- Not happy with roundabout proposal. Improve intersection at Daisy and Bob Straub Parkway (roundabout would be OK) and 42nd and Daisy (but not roundabout). Loss of parking on one side of the street.
- Interested in bike path. Does not like proposed design concepts proposed today. City of Springfield is running a parallel project with Booth Kelly and Weyerhaeuser Rd. Why spend taxpayer money on Virginia-Daisy on residential street with more conflicts? Would like to see off-street paths developed instead.
- No trees that the City has to maintain, staff and funds do not exist. Mini-roundabouts are okay if they don't block the view so that neighbors can't see across or down the street. Don't mess with the parking.
- Changing 42nd and Daisy intersection is great. Roundabout option is good. Opening Daisy and adding sidewalks and the buffered bike lanes are great. Overall good conversations from folks who live along Daisy and want to slow the traffic. Keep up the good work. Concern about 53rd [51st – 52nd] and Daisy issue – property and fence are at the street, would like to see widened improvements.
- Like the roundabouts with single lanes for slowing traffic and it makes it safer for bikes. Bike boxes are great. Also buffered bike lanes in some places are great for safety. Not enough speed bumps [raised crosswalks]. Great job!
- Roundabout at 42nd would work if all the blind spots were removed. Having a curb extension close to my address is a great idea and would slow traffic. More narrowed, raised crossings. Keep up the great work.
- Roundabout will keep traffic flowing and provide safe crossing for pedestrians and bicycles. Add more speed bumps [raised crosswalks] and raised crosswalks between 42nd and 46th. Slow traffic on Daisy. Keep green space between sidewalk and street.
- Would like to see more raised crossings. Keep up the good work. Would like the right turn on 42nd only.
- Yes, most of the ideas are great. 42nd and Daisy no roundabout. Light would be better. S 52nd St and Daisy is a concern.

Virginia-Daisy Bikeway Open House #1 Comments

- Excited project is moving forward and it has been needed in Springfield. Would like to see more of this in the future, great job! The roundabouts, just the large one [42nd] are a bit concerning regarding pedestrian safety, which is usually caused by unobservant drivers.
- More bikers = more broke people who steal my stuff. When Albert Einstein made the nuclear bomb and the army used it he felt terrible. I feel the engineers off this project will feel the same. Does not support the design. The trees are going to be absolutely terrible for bikes and a bus stop [school bus] is where one of the trees is currently located in the design.
- Slow the traffic down with speed bumps [raised crossings], traffic circles [mini-roundabouts] and stop signs. Traffic circles are fine and the large speed bumps. Use the money to pave existing spur streets and put in speed bumps to slow traffic. Already have enough non-maintained trees on the street. More stop signs and traffic islands. Does not really like the proposed design. Street parking would be gone. More bike traffic means more transient traffic. Cars already being broken into and bikes being taken from property. Maybe come down the street after 7pm and on the weekends to see everyone parked on the street.
- Support the shared travelway, beacons at 32nd and Virginia Ave, mini-roundabouts at 35th and 41st, bicycle lanes on Daisy all the way, and 42nd/Daisy traffic light, full signal preferred. Adding trees is not necessary, let people do it in front of their house if they want to. Safely crossing 42nd and Daisy on foot or bicycle is concerning currently, as well as 32nd and Bob Straub. Can the Weyerhaeuser Haul Rd have a path without the gates on either end?
- The width of the street is inadequate now. Condemn the north side to allow the street to be widened [52nd].

<u>Mapbook Comments</u>

During the open house, the Preliminary Design Concept mapbook pages were displayed and sticky notes were provided for participants to leave comments. The following comments were submitted on sticky notes on the mapbook pages during the event.

Page 1:

- No comments.

Page 2:

- *32nd St. and Virginia Ave.* – Make this a round about.
- *32nd St. and Virginia Ave.* – Willamalane will begin construction at this location mid-July. We will have signage here. Simon is the proj. manager. Thx!

Page 3:

- *General Comment* - If Booth Kelly Road is going to be improved as a pedestrian/bike path in the future… why put money into Daisy-Virginia?
- *S. 35th St. and Virginia Ave.* – Single car drive 3450 Virginia Ave.
- *S. 35th St. and Virginia Ave.* – What about paving 35th St.? It's rock.

- *S. 37th and Virginia Ave.* – Looks great!
- *S. 37th and Virginia Ave.* – More speed bumps, no trees.
- *S. 37th and Virginia Ave.* – Crashes, traffic calm here?
- *S. 37th and Virginia Ave.* – There is already a tree in the yard at 3716 Virginia.
- *S. 37th and Virginia Ave.* – Duplex on corner of 37th and Virginia always has 4-10 cars parked on both sides of the street. State run disability home. Fire hydrant on corner.
- *S. 37th and Virginia Ave.* –Why put in trees along road – who will water? SUB will only have to come along and trim them back. And die with no water.

Page 4:

- *General Comment* – No round about at 35th. We have too many tweekers casing our area. We are a good neighborhood watch. We need to see up and down the street. Use speed bumps.
- *General Comment* – Plant lots of trees!
- *S. 38th and Virginia Ave.* – Speed bumps!!! Just put speed bumps, Jesus!!!
- *S.* 38th *and Virginia Ave.* – Why did 3785 Virginia lose access to the east side of their house off 38th? That fence has been there for at least 30 years.
- *S.* 39th *and Virginia Ave.* – This large house has at least 10 cars and a taco truck with expired tags that park every night. They use their driveway and the street on both sides. No trees here.
- *S.* 39th *and Virginia Ave.* – This house uses street parking only. No trees
- *S.* 39th *and Virginia Ave.* – No tree here. Need parking on the street.
- *S.* 40th *and Virginia Ave.* – I live here. Please no tree in front of 4022 [Virginia Ave.] – need the parking.

Page 5:

- *4037-4053 Virginia Ave. Col-de-sac* – I live at 4042 Virginia. I don't want a tree or planter on front of my house.
- *Roundabout at S. 41st St. and Virginia Ave.* – Roundabouts without landscaping. Want to see through for security.

Page 6:

- *General Comment* – Not enough traffic control
- *S. 42nd St. and Virginia Ave.* – Looks great. Slow the cars down.
- *S. 42nd St. and Virginia Ave.* – This is the best option for this intersection.
- *S. 42nd Pl. and Virginia Ave.* – I like this idea [curb treatment]. Curb treatments would slow the traffic.

Page 7:

- *42nd St. and Daisy St. Option 1* – Great idea, round-about at 42nd and Daisy!
    - Agreed. I like this option.
    - Yes!

- *42nd St. and Daisy St. Option 1* – Much prefer this option.
- *42nd St. and Daisy St. Option 1* – No, not this option.
    - Not an option – too dangerous!
- *42nd St. and Daisy St. Option 1* – No fix. Very scary and dangerous for peds and bikers.
    - Definitely not.

Page 8:

- *42nd St. and Daisy St. Option 2B* – Option #2A 42nd St. Ok light, not a roundabout.
    - Yes!
- *42nd St. and Daisy St. Option 2A* – Best option. Love bike boxes and bike signals.
- *42nd St. and Daisy St. Option 2A* – Yes!! Much safer for peds and bikers.
    - Best option 2A.
    - Yes I agree!

Page 9:

- *42nd St. and Daisy St. Option 3* – No way for Daisy traffic to continue straight. Not good. Round-about.
- *42nd St. and Daisy St. Option 3* – No, not this option.
    - No.
    - Agreed, no to this option.
    - No!
- *42nd St. and Daisy St. Option 3* – No. Not safe. Very inconvenient for traffic flow.
- *42nd St. and Daisy St. Option 3* – Much prefer roundabout.

Page 10:

- *S. 44th and Daisy St.* – Raised crossing.
- *Daisy St. between S. 44th and S. 46th St.* – Add some speed humps.

Page 11:

- No comments.

Page 12:

- *S. Weyerhaeuser Rd. and Daisy St.* – More of the raised crossing areas on Daisy to help slow the speeding traffic would be great.
    - *Yes.*
- *S. Weyerhaeuser Rd. and Daisy St.* – Raised crossings are great!
- *S. Weyerhaeuser Rd. and Daisy St.* – Use the [Weyerhaeuser] Haul Rd. between 48th and Bob Straub as bike path.
    - *Yes.*

- *S. Weyerhaeuser Rd. and Daisy St.* – I live here (4801 Daisy St.) and I do not want a tree in front of my house. If you have any questions please call me at 541-968-4814.
- *Daisy St. between S. 48th St. and Camellia St*. – Tree canopy is great!
- *Daisy St. between S. 48th St. and Camellia St*. – Raised crossing. More.

Page 13:

- *S. 49th Pl. and Daisy St.* – Yes to the roundabout.

Page 14:

- *S. 51st Pl. and Daisy St.* – Yes to this roundabout.
- *Fence at 52nd St. and Daisy St.* – Make this side wider. Add parking.
    - *Agree*
- *Fence at 52nd St. and Daisy St.* – Visit the dedication of ROW or condemnation.

Page 15:

- No comments.

Page 16:

- *Daisy St. after future trail connection* – Take 2nd look at parking here.
- *Daisy St., 54th St. to Bob Straub Pkwy Options* – Option 1 seems safer with buffered lanes.

Page 17:

- *Gateway St. and Daisy St.* – This is a "gateway" street. It's not "Gateway St."
- *Bob Straub Pkwy and Daisy St.* – Improve this intersection.
    - Yes I agree!!

Page 18:

- No comments.

Appendix 8: Open House 2 Comments

Virginia-Daisy Bikeway Open House #2 Comments

Comments submitted by Open House #2 participants:

Comment form question: "Are the proposed refined design concepts presented today moving in the right direction?"

- Yes – 8 participants
- Maybe – 1 participant
- No – 3 participants

General Comments:

- Yes! Thank you for the excellent design and safety! So nice and upgrading to all areas. This design just rocks! Great job Springfield.
- No. Remove in street tree planting. Buffered bike lanes restrict on street parking. Design impediments fail to acknowledge MD-50 standards and restrict movement of mobile homes. My concerns are loss of on street parking, extra maintenance costs for in street trees, parking loss will adversely impact residents along Daisy, the general design will cause movement problems with manufactured homes and large vehicles. Why not utilize Booth Kelly and Weyerhaeuser Haul Road as bicycle path, it would be cheaper.
- I like basically everything, especially all the roundabouts and flipped stop sign. Also the protected bike lanes. Please, please push for the 54th St. connection to Safeway and remove the gate on the Weyerhaeuser trail. Thank you! Keep up the good work.
- I like these refined design concepts: yes, as far as I understand them. My concerns are what kind of trees will be added? And where?
- I like the roundabout at 42nd. I suggest omitting the trees. My concerns are trees in the street – especially by our house 4022 Virginia – tress already in parking strips don't get trimmed.
- I like the treat 36th across from the mail boxes at 3566. Where I live the traffic through here travels very fast – too fast. My concerns are between 32nd and 37th is a speedway. A lot of pre-school aged kids at 33rd and 35th.
- I don't want to change the street.
- Roundabout at 42nd and Daisy is a great idea for safety of drivers and pedestrians.
- I like street modification of curb extension planted area, added trees, and raised crosswalks. My concerns are parking in front of mail boxes prevents delivery of the mail.
- I think that the bike route should utilize the Weyerhaeuser Haul Road once you get to 49th going east. I understand Willamalane owns this path. This would bring a ride out on 57th and the stop light across Bob Straub. I realize that Bob Straub is not part of this project, but the route leads you to a crossing that is very difficult. I think the roundabout at 42nd St. is an excellent idea. I have ridden the Daisy/Virginia route many times and have not had any problems with traffic. This corridor does not seem to be a cut through. Traffic seems to be mostly local residents. I am not sure all of the traffic calming is necessary or justified. Sharrows would be nice and bike route signs. My concern is the Bob Straub crossing. Is there any concern about changing the stop signs at 37th and 38th causing traffic to use this as a cut through or increase car speed? I like the 32nd St. crossing concept as a lot of kids could use this crossing. Is there a future plan for west of

Virginia to get a cyclist across the city without riding on Main St.? Will there be signage to get from Virginia to the new Mill Race trail?

- Roundabouts are a really good idea. I suggest fewer trees in the street.
- I like the roundabouts, especially at 42nd and Daisy, bike lanes, shared lane markings, and anything else you can do to inform others of cyclists on the road. Looks great. Remember to design the project like your kids will be using it. My concerns are that generally motorists far exceed the posted speed limit.

Mapbook Comments

During the open house, hard copies of the Refined Design Concept mapbook were available for review and sticky notes were provided for participants to leave comments. The following comments were submitted on sticky notes on the mapbook pages during the event.

Page 2:

- 32nd St. and Virginia Ave. - Like it at S. 32nd to the park for walking our grand kids. Thank you.

Page 3:

- No tree at 3495 Virginia Ave.
- S. 35th and Virginia Ave. - I favor roundabout here at 35th for safety.
- S. 35th and Virginia Ave. - Round on 37th needed, not on 35th. Oregon and Virginia both have stop signs. No problems there but several accidents are on 37th, 39th, and 40th every year.
- We don't want speed bumps that will cause damage to our camp trailers. Too tall and it will cause damage.
- S. 35th and Virginia Ave. – Remove this tree
- S. 35th and Virginia Ave. – Mine are perfect
- S. 37th and Virginia Ave. – Vehicles hit 35th-37th. Add speed cushions before 35th and 38th.

Page 4:

- S. 38th and Virginia Ave. – No trees
- S. 38th and Virginia Ave. – No tree
- S. 38th and Virginia Ave. – No trees
- S. 38th and Virginia Ave. – Leave stop sign on Virginia Ave.
- S. 40th and Virginia Ave. – More speed cushions, less trees
- S. 40th and Virginia Ave. – Please no trees @ 4022 Virginia
- S. 40th and Virginia Ave. – Median island will interfere with emergency vehicle's ability to make turns at 40th and Virginia.
- S. 40th and Virginia Ave. – Leave street the way it was – no trees 4022 Virginia Ave.
- S. 40th and Virginia Ave. – 4042 Virginia leave street as is. People park their cars in street.

Page 7:

Virginia-Daisy Bikeway Open House #2 Comments

- S. 42nd Ave. and Daisy St. – I favor a roundabout at 42nd and Daisy for safety.
    - Me too.
- Please I beg of you, put a roundabout here.
- S. 42nd Ave. and Daisy St. – Yes! To the roundabout.
    - Yes! Roundabout at 42nd St. much safer than is now

Page 6:

- Daisy St. between S. 42nd Pl. and S. 43rd St. – Concern about parking in front of mail boxes preventing postal delivery.

Page 9:

- Country Manor Mobile Home Park periodically enforces # of vehicles per space. At some times of the year cars will be bumper to bumper on the south side of Daisy.

Page 11:

- Daisy St. between S. 48th St. and Camellia St. – I like the look of trees, but not the silver maple that the contractor put on either side of my driveway. They are huge, with roots cracking and raising the sidewalk and my driveway and yard. 4833 Daisy..
- No trees at 4801 Daisy Please. Thanks.
- More raised crossings along Daisy would be great. Between Weyco Rd. and 47th. Thank you.
- At 4819 Daisy and 4817 we don't want the tree but we would like a speed bump. Speed bumps every few blocks.
- S. 48th St. and Daisy St. – Speed bump doesn't also need to be narrowed. It disrupts traffic more than reduce speeding. Speed bump is enough.
- 4817 Daisy has a 37' motor home that would not fit with the proposed tree. We need to be able to park to load and unload.
- The more speed bumps the more it will slow people down. If we don't get them they will speed up after they over them.

Page 15:

- Daisy St. between future 54th St. trail and Bob Straub Pkwy – Speed bumps for all of Springfield
- <3 Trees (maybe not too many) :)
- Avoid too many speed bumps
- Roundabouts are a great solution

Page 16:

- Daisy St. and Bob Straub Pkwy – No street parking!!! Make people park in their own driveways or the overflow parking.
- Daisy St. and Bob Straub Pkwy – When the time comes a pedestrian activated red light to cross Bob Straub Pkwy would be nice.

Appendix 9:
Outreach Materials

Learn more about the Virginia-Daisy Bikeway Project!

Virginia-Daisy Bikeway Project

The City of Springfield is working on the Virginia-Daisy Bikeway Project and we need your input on the design concepts being considered. The project will develop a preferred design to provide a safe and comfortable bicycle corridor that can be used by people of all ages and abilities from 32nd to Bob Straub Parkway.

Additionally, the design will enhance the overall appeal of the corridor for all users and residents, improve pedestrian safety and usage, and provide traffic calming to support active transportation along the corridor.

Visit Our Website

Open House Event - We Need Your Input!

What type of design and improvements would you like to see? Come to our open house event to learn more and share your ideas!

When: 6 to 7:30 p.m. on Wednesday, May 25, 2016

Where: Mt. Vernon Elementary, 935 Filbert Ln, Springfield in the cafeteria

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Questions?

Contact Emma Newman, Transportation Planner, at 541.726.4585 or enewman@springfield-or.gov with project questions.

You can also check out our Frequently Asked Questions for more information:
Frequently Asked Questions

STAY CONNECTED:

City of Springfield, Development & Public Works Department,
225 Fifth Street, Springfield, OR 97477

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Learn more about the Virginia-Daisy Bikeway Project!

Virginia-Daisy Bikeway Project

The City of Springfield has been working on the Virginia-Daisy Bikeway Project and we need your input on the refined design concepts to move forward to the Springfield City Council for consideration this fall.

Over the past two months, we have received feedback and input from numerous neighbors and the broader community through our first open house, emails, one-on-one meetings, and phone calls. We appreciate the concerns, ideas, and thoughts shared and the time to do so.

We have taken the feedback and input from neighbors, the City Planning Commission, and the City Council, and refined the design concepts to reflect the desire and needs of neighbors along the Virginia-Daisy Corridor. We want to share the refined design concepts with you.

Visit Our Website

Open House Event - Are We on the Right Track with the Refined Design Concepts?

We invite you to our Open House #2 to view the refined design concepts, ask questions, and provide additional feedback.

When: 6 to 7:30 p.m. on Tuesday, July 12, 2016

Where: Papa's Pizza at 4011 Main Street in Springfield

Questions?

Contact Emma Newman, Transportation Planner, at 541.726.4585 or enewman@springfield-or.gov with project questions.

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Learn more about the Virginia-Daisy Bikeway Project!

Virginia-Daisy Bikeway Project Open House #2

A friendly reminder about our second open house for the project. We hope to see you there!

Open House Event -
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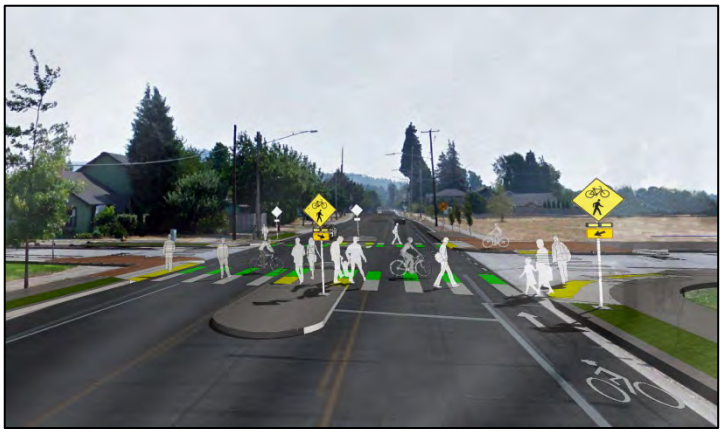
Virginia-Daisy Bikeway Open House

Wednesday, May 25, 2016
6:00 to 7:30 p.m.

Mt Vernon Elementary Cafeteria

What type of improvements would you like to see along Virginia Ave and Daisy St?

Drop-in at your convenience; no RSVP needed.
Light refreshments will be provided.

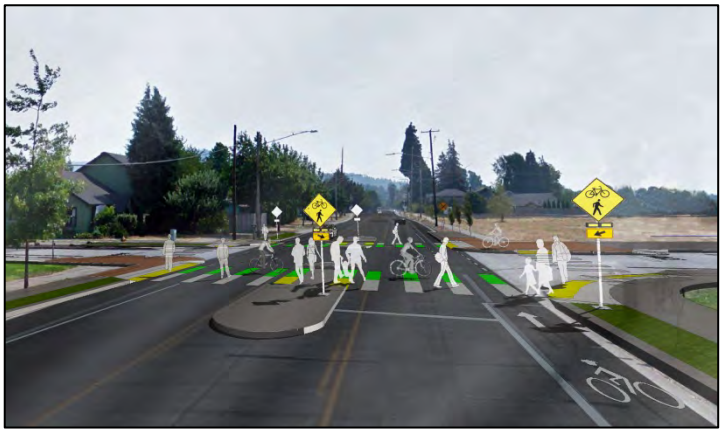


Virginia-Daisy Bikeway Open House

Tuesday, July 12, 2016
6:00 to 7:30 p.m.

Papa's Pizza – 4011 Main St. in Springfield

Drop-in at your convenience; no RSVP needed.
Light refreshments will be provided.



225 Fifth Street
Springfield, OR 97477

Your input is needed on the Virginia-Daisy Bikeway Project

For details please see reverse...

Virginia-Daisy Bikeway Project

The City of Springfield is starting work on the Virginia-Daisy Bikeway Project and wants your input on the design concepts being considered. The project will develop a preferred design to provide a safe and comfortable bicycle corridor that can be used by people of all ages and abilities from 32nd Street to Bob Straub Parkway. Additionally, the design will enhance the overall appeal of the corridor for all users and residents, improve pedestrian safety and usage, and provide traffic calming to support active transportation along the corridor.
There will be multiple ways to provide input. Open Houses will be scheduled so watch for future postcards with details. You can also connect with the project manager to provide comments.

Q: How can I stay informed about the Virginia-Daisy Bikeway Project?

A: For more information or to sign up on our mailing list visit: springfield-or.gov/dpw/Virginia-DaisyBikewayProject.htm

Q: Who can I contact if I have questions about the Project?

A: Please contact Emma Newman, Project Manager, at 541.726-4585 or enewman@springfield-or.gov

SPRINGFIELD OREGON

City of Springfield
225 Fifth Street
Springfield, OR 97477

Join us to learn more about the Virginia -Daisy Bikeway Project!

Open House
6 to 7:30 p.m.
Wednesday, May 25
Mt Vernon Elementary Cafeteria

Dear Neighbor,

The City of Springfield is working on the Virginia-Daisy Bikeway Project and we need your input on the design concepts being considered. The project will develop a preferred design to provide a safe and comfortable bicycle corridor that can be used by people of all ages and abilities from 32nd to Bob Straub Parkway.

Additionally, the design will enhance the overall appeal of the corridor for all users and residents, improve pedestrian safety and usage, and provide traffic calming to support active transportation along the corridor.

What type of design and improvements would you like to see? Come to the neighborhood meeting to find out more and share your ideas!

Neighborhood Meeting
What type of improvements would you like to see?
6 to 7:30 p.m.
Wednesday, May 25, 2016
Mt Vernon Elementary
Room - Cafeteria
Drop-in at your convenience; no RSVP needed.
Light refreshments will be provided.

Questions?
Emma Newman, Transportation Planner
541.726.4585 or enewman@springfield-or.gov

Para esta comunicación en Español, por favor llame a Molly Markiaran 541.726.4611

City of Springfield
225 Fifth Street
Springfield, OR 97477

Join us to learn more about the Virginia-Daisy Bikeway Project!

Open House
6 to 7:30 p.m.
Tuesday, July 12
Papa's Pizza on Main Street

Dear Neighbor,

The City of Springfield is working on the Virginia-Daisy Bikeway Project and we need your input on the refined design concepts to move forward to the Springfield City Council for consideration this fall.

Over the past two months we have received feedback and input from numerous neighbors and the broader community through our first open house, emails, one-on-one meetings, and phone calls. We appreciate the concerns, ideas, and thoughts shared and the time to do so.

We have taken the feedback from neighbors, the City Planning Commission, and the City Council, and refined the design concepts to reflect the desire and needs of neighbors along the Virginia-Daisy Corridor. We want to share the refined design concepts with you. We invite you to our Open House #2 to view them, ask questions, and provide additional feedback.

Open House
Are we on the right track with the refined design concepts?
6 to 7:30 p.m.
Tuesday, July 12, 2016
Papa's Pizza
4011 Main Street in Springfield
Drop-in at your convenience; no RSVP needed.
Light refreshments will be provided.

Questions?

Emma Newman, Transportation Planner
541.726.4585 or enewman@springfield-or.gov

Para esta comunicación en Español, por favor llame a Molly Markiaran 541.726.4611

Project website:
springfield-or.gov/dpw/Virginia-DaisyBikewayProject.htm

Springfield Virginia-Daisy Bikeway Project

Frequently Asked Questions

Q: What is the Springfield Virginia-Daisy Bikeway Project?

A: The Virginia-Daisy Bikeway Project will develop a preferred design to provide a safe and comfortable bicycle corridor that can be used by people of all ages and abilities from 32nd St to Bob Straub Pkwy along Virginia St and Daisy Ave. Additionally, the design will enhance the overall appeal of the corridor for all users and residents, improve pedestrian safety and usage, and provide traffic calming to emphasize the active transportation priority along the street. The project will provide an east-west alternative to Main Street for people wishing to ride bicycles in our community. Once the final design is selected, the project will move forward into construction in summer 2017.

Q: What is the main purpose of the Virginia-Daisy Bikeway?

A: The primary goal of the Virginia-Daisy Bikeway project is to provide a safe and comfortable corridor that can be used by people of all ages and abilities to ride bicycles to move about our community.

Q: Why is the Virginia-Daisy Bikeway Project necessary?

A: The City of Springfield is committed to providing safe transportation options.
The Virginia-Daisy Bikeway will serve as a key east-west connection in the Springfield bicycle network and will provide a more comfortable alternate biking route instead of along Main St. The project is consistent with the Springfield Transportation Plan, TransPlan, the Central Lane MPO Regional Transportation Plan, and the Lane County TSP. It is also identified as a need in the Springfield Bicycle Plan. The Springfield Transportation System Plan identifies the need to, "expand and enhance Springfield's bikeway system" and "provide bike lanes on collector streets and provide parallel routes and bike boulevards on adjacent streets where appropriate."

Q: What changes will be implemented through this project?

A: The changes that will be implemented will be identified through the design development process, which will include comments and feedback from residents along the corridor and the broader community. A range of treatments will be considered, including, but not limited to, striping of bicycle lanes, sharrows, traffic calming infrastructure, intersection treatments, automobile traffic diversion, limited lighting additions, ramp improvements, speed and designation signs, and a crossing improvement at 42nd St. As the design options are developed and refined, updates will be posted to the project website.

Springfield Virginia-Daisy Bikeway Project

Frequently Asked Questions Continued

Q: What public outreach and involvement efforts are proposed for the Virginia-Daisy Bikeway Project?

A: There will be two open houses that residents and community members are encouraged to attend to learn more about the project and provide feedback during the design development process. Additionally, comments can be submitted to Emma Newman at enewman@springfield-or.gov. For the detailed outreach and involvement efforts, please see the Virginia-Daisy Bikeway Communication Plan.

Q: Where can I learn more and follow the process?

A: For more information on the project, please see the Virginia-Daisy Bikeway Project web page.

http://www.springfield-or.gov/dpw/Virginia-DaisyBikewayProject.htm

Q: Who can I contact if I have questions?

A: Emma Newman, Transportation Planner at 541-726-4585 or **enewman@springfield-or.gov**.

Para obtener información en español, comuníquese con Molly Markarian al 541-726-4611.

Appendix 10:
Cost Estimate

Virginia-Daisy Bikeway: Preliminary Cost Estimate

Design Feature Cost Breakdown

Item	Estimated Quantities	Unit	Unit Price	Total Cost	Notes	Design Feature Quantity	Cost By Feature Group
Asphalt Raised Crossing (Speed Cushion) - Includes Sidewalk Curb Extensions & Ramps							
Curb Removal	87	LF	$ 6.00	$ 522			
Standard Curb & Gutter	100	LF	$ 40.00	$ 4,000			
Sidewalk - 4-inch	1,222	SF	$ 15.00	$ 18,330	Curb extensions and sidewalk infill		
Asphalt	975	SF	$ 5.00	$ 4,875	Includes grinding		
Crosswalk	1	EA	$ 1,200.00	$ 1,200			
Cushion Chevron Symbol	2	EA	$ 150.00	$ 300	Includes AC Removal		
Wayfinding Sign	1	EA	$ 400.00	$ 400			
Cost per Asphalt Raised Crossing (Speed Cushion)				**$ 29,627**	Quantities from 38th St & Virginia, other raised crossings vary in total area.		
Cost w/ Contingencies & Other Costs Added				**$ 39,996**	35%	**7**	**$ 279,975**
Notes: 1) If raised crossings are not implemented, this area would be added into asphalt overlay area total.							
Median Island - Between S 47th St & S 48th St							
Asphalt Removal	1,200	SF	$ 1.00	$ 1,200			
Standard Curb & Gutter	412	LF	$ 40.00	$ 16,480			
Tree	4	EA	$ 500.00	$ 2,000	Includes curb extensions		
Landscape	1,200	SF	$ 5.00	$ 6,000	Includes grinding		
Cost per Landscape Median (w/ trees)				**$ 25,680**			
Cost w/ Contingencies & Other Costs Added				**$ 34,668**	35%	**1**	**$ 34,668**
Mini Median Island - At S 40th St & S 44th St							
Asphalt Removal	75	SF	$ 1.00	$ 75			
Standard Curb & Gutter	55	LF	$ 40.00	$ 2,200			
Yellow Solid Line	60	LF	$ 5.00	$ 300	Includes curb extensions		
Landscape	75	SF	$ 5.00	$ 375	Includes grinding		
Cost per Landscape Median (w/ trees)				**$ 2,950**			
Cost w/ Contingencies & Other Costs Added				**$ 3,983**	35%	**2**	**$ 7,965**
Mini Roundabout - 17' Diameter and oval - At S 35th St, S 41st St, & S 51st Pl							
Asphalt Removal	284	LF	$ 1.00	$ 284			
Mountable Curb & Gutter	53	LF	$ 40.00	$ 2,136			
Concrete Median	387	SF	$ 12.00	$ 4,644			
Yellow thermo solid line	453	LF	$ 5.00	$ 2,267			
Median Warning Signs	4	EA	$ 350.00	$ 1,400			
Cost per Mini Roundabout				**$ 10,731**			
Total w/ Contingencies & Other Costs Added				**$ 14,486**	35%	**3**	**$ 43,459**
32nd Ave Intersection							
Asphalt Removal	725	SF	$ 1.00	$ 725			
Curb Removal	150	LF	$ 6.00	$ 900			
Concrete Sidewalk Removal	689	SF	$ 2.00	$ 1,378			
Standard Curb & Gutter	177	LF	$ 40.00	$ 7,080			
Sidewalk - 4-inch	1,796	SF	$ 15.00	$ 26,940			
Raised Island (Median)	456	SF	$ 12.00	$ 5,472			
Crosswalk	4	EA	$ 1,200.00	$ 4,800			
Tactile Warning Panel	4	EA	$ 250.00	$ 1,000			
Yellow thermo solid line	149	LF	$ 5.00	$ 745			
White thermo solid line	420	LF	$ 5.00	$ 2,100			
White thermo skip line	84	LF	$ 5.00	$ 420			
Stop bar (Thermo)	58	LF	$ 24.00	$ 1,392			
Stop Symbol (Thermo)	2	EA	$ 150.00	$ 300			
Wayfinding Sign	2	EA	$ 400.00	$ 800			
Stop sign	2	EA	$ 350.00	$ 700			
"Bikes to use pedestrian signal" sign	2	EA	$ 350.00	$ 700			
Two-sided RRFB	4	EA	$ 10,000.00	$ 40,000			

Virginia-Daisy Bikeway: Preliminary Cost Estimate

Design Feature Cost Breakdown

Item	Estimated Quantities	Unit	Unit Price	Total Cost	Notes	Design Feature Quantity	Cost By Feature Group
Pole-mounted pedestrian push-button	4	EA	$ 250.00	$ 1,000			
Stand-alone pedestrian push-button	2	EA	$ 2,750.00	$ 5,500			
Stand-alone bike push button	2	EA	$ 2,750.00	$ 5,500			
Total 32nd Ave Intersection Improvements				**$ 107,452**			
Total w/ Contingencies & Other Costs Added				**$ 145,060**	35%	**1**	**$ 145,060**

Notes:
1) Asphalt overlay not included. See individual bottoms-up total for overlay.

42nd Ave Roundabout (Option 1)							
Asphalt Removal	2,361	SF	$ 1.00	$ 2,361			
Curb Removal	453	LF	$ 6.00	$ 2,718			
Concrete Sidewalk Removal	2,050	SF	$ 2.00	$ 4,100			
Standard Curb & Gutter	606	LF	$ 40.00	$ 24,240			
Sidewalk - 4-inch	7,410	SF	$ 15.00	$ 111,150			
Stormwater Catch Basin	5	EA	$ 2,500.00	$ 12,500			
12-inch SDR 35 Storm Sewer	75	LF	$ 80.00	$ 6,000			
Raised Island (Median)	1,433	SF	$ 12.00	$ 17,196			
Roundabout - mountable apron	706	SF	$ 15.00	$ 10,590			
Crosswalk	4	EA	$ 1,200.00	$ 4,800			
Tactile Warning Panel	4	EA	$ 250.00	$ 1,000			
Yellow thermo solid line	662	LF	$ 5.00	$ 3,310			
White thermo solid line	658	LF	$ 5.00	$ 3,290			
White thermo skip line	49	LF	$ 5.00	$ 245			
Yield Markings (Thermo)	12	EA	$ 50.00	$ 600			
Wayfinding Sign	2	EA	$ 400.00	$ 800			
"Roundabout Ahead" warning sign	4	EA	$ 350.00	$ 1,400			
Utility Relocation	1	LS	$ 12,000.00	$ 12,000	OH Pole Relocation		
Total 42nd Ave Roundabout (Option 1)				**$ 218,300**			
Total w/ Contingencies & Other Costs Added				**$ 294,705**	35%	**1**	**$ 294,705**

Notes:
1) Asphalt overlay not included. Extents of overlay at 42nd shown in overlay total costs.
2) ROW purchase not included.

42nd Ave Layout (Option 2A)							
Asphalt Removal	1,571	SF	$ 1.00	$ 1,571			
Curb Removal	316	LF	$ 6.00	$ 1,896			
Concrete Sidewalk Removal	2,052	SF	$ 2.00	$ 4,104			
Standard Curb & Gutter	376	LF	$ 40.00	$ 15,040			
Sidewalk - 4-inch	4,039	SF	$ 15.00	$ 60,585			
Raised Island (Median)	-	SF	$ 12.00	$ -			
Roundabout - mountable apron	-	SF	$ 15.00	$ -			
Crosswalk	4	EA	$ 1,200.00	$ 4,800			
Tactile Warning Panel	4	EA	$ 250.00	$ 1,000			
Yellow thermo solid line	278	LF	$ 5.00	$ 1,390			
White thermo solid line	246	LF	$ 5.00	$ 1,230			
White thermo skip line	240	LF	$ 5.00	$ 1,200			
Traffic Turn Symbol (Thermo)	4	EA	$ 200.00	$ 800			
Stop bar (Thermo)	69	LF	$ 24.00	$ 1,656			
Stop Symbol (Thermo)	-	EA	$ 150.00	$ -			
Green Bike Box (Thermo)	935	SF	$ 5.00	$ 4,675			
Bike Box Border (Thermo)	347	LF	$ 4.00	$ 1,388			
Wayfinding Sign	2	EA	$ 400.00	$ 800			
Mast pole with 2 traffic signal heads	4	EA	$ 30,000.00	$ 120,000			
Pole-mounted pedestrian signal heads	8	EA	$ 400.00	$ 3,200			
Pole-mounted pedestrian push-button	8	EA	$ 250.00	$ 2,000			
Stand-alone pedestrian signal head with push button	4	EA	$ 3,150.00	$ 12,600			
Stand-alone bike push button	2	EA	$ 2,750.00	$ 5,500			
Bicycle conductive loop detector	2	EA	$ 2,000.00	$ 4,000			
Stand-alone advance traffic signal head	1	EA	$ 25,000.00	$ 25,000			

Virginia-Daisy Bikeway: Preliminary Cost Estimate

Design Feature Cost Breakdown

Item	Estimated Quantities	Unit	Unit Price	Total Cost	Notes	Design Feature Quantity	Cost By Feature Group
Total 42nd Ave (Option 2A)				**$ 274,435**			
Total w/ Contingencies & Other Costs Added				**$ 370,487**	35%	**1**	**$ 370,487**
Notes: 1) Asphalt overlay not included. Extents of overlay at 42nd shown in overlay total costs. 2) ROW purchase not included.							
Bumpout On-Street Tree Planter (30 SF)							
Asphalt Removal	50	SF	$ 1.00	$ 50			
6" Curb	22	LF	$ 20.00	$ 440			
Tree	1	EA	$ 500.00	$ 500	36" box		
PVC Underdrain	-	LF	$ 30.00	$ -			
Connection to Ex. SW System	-	EA	$ 750.00	$ -			
Drain Rock	0.37	CY	$ 45.00	$ 17	3"		
Aggregate Base Rock	1	CY	$ 45.00	$ 50	1'		
Cleanout/Overflow Inlet	-	EA	$ 1,500.00	$ -			
Water Quality Growth Media	4	CY	$ 40.00	$ 178	Topsoil, 4' depth		
Cost per Bumpout On-Street Tree Planter				**$ 1,234**			
Cost w/ Contingencies & Other Costs Added				**$ 1,666**	35%	**47**	**$ 78,315**
Curb Extension Stormwater Treatment Area - 150' Approx. Length							
Asphalt Removal	750	SF	$ 1.00	$ 750			
Curb & Gutter	160	LF	$ 40.00	$ 6,400			
Tree	1	EA	$ 500.00	$ 500	36" box		
PVC Underdrain	175	LF	$ 30.00	$ 5,250			
Connection to Ex. SW System	1	EA	$ 750.00	$ 750			
Check Dam	2	EA	$ 300.00	$ 600			
Concrete splash pad	2	EA	$ 500.00	$ 1,000			
Drain Rock	28	CY	$ 45.00	$ 1,238	3"		
Aggregate Base Rock	28	CY	$ 45.00	$ 1,250	1'		
Overflow Inlet	1	EA	$ 1,500.00	$ 1,500			
Water Quality Growth Media	42	CY	$ 40.00	$ 1,667	1.5'		
Cost per Curb Extension Stormwater Treatment Area				**$ 20,904**			
Cost w/ Contingencies & Other Costs Added				**$ 28,221**	35%	**1**	**$ 28,221**
Driveways							
Driveways	1	EA	$ 1,850.00	$ 1,850			
Cost w/ Contingencies & Other Costs Added				**$ 2,498**	35%	**115**	**$ 287,213**
ADA Curb Ramp Corridor Upgrades							
Curb Ramps	1	EA	$ 3,700.00	$ 3,700			
Cost w/ Contingencies & Other Costs Added				**$ 4,995**	35%	**38**	**$ 189,810**
Asphalt Overlay - 42nd Ave Option 1 (Roundabout)							
Asphalt Overlay	1	EA	$ 370,000.00	$ 370,000			
Total Asphalt Overlay - Option 1				**$ 370,000**			
Total w/ Contingencies & Other Costs Added				**$ 499,500**	35%	**1**	**$ 499,500**
Notes: 1) The asphalt overlay total area assumes proposed medians, raised crossings, mini roundabouts, and 42nd Ave roundabout are being constructed. It does not account for the area of the tree planters or curb extension planter. 2) Extent of concrete pavement on 42nd Ave to be coordinated with overlay extents. Asphalt overlay area is conservative in that it doesn't include 42nd Ave concrete pavement.							
Asphalt Overlay - 42nd Ave Option 2A							
Asphalt Overlay	1	EA	$ 370,000.00	$ 370,000			
Total Asphalt Overlay - Option 1				**$ 370,000**			
Total w/ Contingencies & Other Costs Added				**$ 499,500**	35%	**1**	**$ 499,500**
Notes: 1) The asphalt overlay total area assumes proposed medians, raised crossings, and mini roundabouts are being constructed. It does not account for the area of the tree planters or curb extension planter.							

Virginia-Daisy Bikeway: Preliminary Cost Estimate

Design Feature Cost Breakdown

Item	Estimated Quantities	Unit	Unit Price	Total Cost	Notes	Design Feature Quantity	Cost By Feature Group
2) Extent of concrete pavement on 42nd Ave to be coordinated with overlay extents. Asphalt overlay area is conservative in that it doesn't include 42nd Ave concrete pavement.							
						Total - 42nd Ave Option 1	**$ 1,888,890**
						Total - 42nd Ave Option 2A	**$ 1,964,673**

Cost Summary (42nd Ave Option 1)		
Safety and Bike Treatments	$	805,832
Asphalt Overlay	$	499,500
ADA & Driveway Upgrades	$	477,023
Stormwater Facility	$	106,536
Total	**$**	**1,888,890**

*Includes contingency

Cost Summary (42nd Ave Option 2A)		
Safety and Bike Treatments	$	881,615
Asphalt Overlay	$	499,500
ADA & Driveway Upgrades	$	477,023
Stormwater Facility	$	106,536
Total	**$**	**1,964,673**

*Includes contingency