

Transportation Safety Ad Hoc Committee



Final Recommendations

Purpose & Objectives

The Transportation Safety Ad Hoc Committee was created by the Mayor and Council in October of 2023 to analyze a variety of pedestrian, bicycle and vehicle safety issues identified and presented by staff and review and make recommendations to Council on preferred mitigation actions for staff to pursue and implement. Issues included pedestrian crossing and general safety on N Willamette and Pearl Streets, pedestrian lighting, vehicle speed limits throughout the community, the N Willamette and Van Duyn curve/intersection and traffic calming opportunities.

The Ad-Hoc Committee was tasked to complete their work within a six-month window from January to June of 2024 and successfully did so with five committee meetings culminating in the following recommendations.

Recommendations

As part of the review, deliberations and formation of recommendations, the committee was informed of a variety of potential regulatory obstacles to various individual recommendations but was encouraged to take that into account but not temper the desired recommendations due to possible regulatory limitations or processes as that would be addressed by staff as the final Council approved recommendations began to be implemented.

Similarly, while most recommendations are relatively inexpensive to implement, staff encouraged the committee to not make estimated costs a deterrent to the selection of recommendations. As with the regulatory issues, cost and budget availability would be addressed by staff at the Council level.

The resulting recommendations were carefully considered by the committee and many individual recommendations become more impactful when coupled with other recommendations resulting in a strong sentiment for as many of the recommendations as possible to be implemented as concurrently as possible to maximize the benefits and impact of the recommendations as a whole.

Pedestrian Crossings

1. [Pearl at Coleman Street](#) – Lighted, push-button flashing beacons and crossing markings
Purpose: Provide a safe means of crossing Pearl Street for north/south connectivity improving access to residents on the south to City Parks and alternate school routes

Implementation Issues and Timeline: Pearl Street is a Lane County facility and may require data acquisition to gain approval. Costs are expected to be similar to the system installed at N Willamette & McKenzie (\$20,000)

2. [N Willamette at E Mill Street](#) - Pedestrian crossing markings at south side crossing
 3. [N Willamette at E Delany Street](#) - Pedestrian crossing markings at north side crossing
 4. [N Willamette at E Dixon Street](#) - Pedestrian crossing markings at north side crossing
 5. [E Mill Street](#) - Pedestrian crossing markings parallel to N Willamette St on east sides of intersection
 6. [E McKenzie Street](#) – Pedestrian crossing markings parallel to N Willamette St on west and east sides of intersection
 7. [E Delany Street](#) - Pedestrian crossing markings parallel to N Willamette St on east sides of intersection
 8. [E Dixon Street](#) - Pedestrian crossing markings parallel to N Willamette St on east sides of intersection
- Purpose:** Improve pedestrian safety along Coburg’s primary downtown commercial corridor, both for crossing this corridor and for side streets that feed N Willamette St

Implementation Issues and Timeline: N Willamette Street is a Lane County facility and may require data acquisition to gain approval. Costs are dependent on how the work is completed (City staff, County Staff, contracted) as well as how many of the crossings are approved. It is possible that some may receive approval quickly while others may require more time for review/approval and could be grouped into phases for budgeting purposes.

N Willamette/Van Duyn Intersection

1. [Replacement and relocation of “curve ahead warning signs”](#) at both ends of the intersection
Purpose: Decrease average speeds approaching the intersection with increased visibility of warning signs with newer “neon” yellow-colored signs and relocation of signs to improve sightlines of signs and improve driver awareness of curve and need for reduced speed

Implementation Issues and Timeline: N Willamette Street is a Lane County facility and may require data acquisition to gain approval. Costs are dependent on how the work is completed (City staff, County Staff, contracted) and current sign replacement costs from Lane County. Sign location alteration may be limited by regulatory standards.

2. [Re-painting of all intersection pavement markings](#)
Purpose: Restore visible awareness to vehicles of traffic lane boundaries and ensure bicycle lane boundaries are visible. Desired result is reduced speeds through intersection and increased bicycle mode safety.

Implementation Issues and Timeline: N Willamette Street is a Lane County facility. Costs are dependent on how the work is completed (City staff, County Staff, contracted)

3. [Enhanced painting](#) to highlight bike lanes and driver lane awareness*
* (see speed limit section for speed related recommendations for this intersection)
Purpose: Improve visible awareness to vehicles of traffic lane boundaries and ensure bicycle lane boundaries are visible. Desired result is reduced speeds through intersection and increased bicycle mode safety.

Implementation Issues and Timeline: N Willamette Street is a Lane County facility. Costs are dependent on how the work is completed (City staff, County Staff, contracted). Final markings will

be subject to regulatory standards (color, stripe vs. solid, text on surface, etc) Staff will work with Lane County to maximize final design.

Speed Limits/Signage

1. N Willamette Street - Speed reduction at south entrance extend further south (extend 40 MPH south, begin 25 MPH south of Vintage St)
Purpose: Ensure 25MPH zone extends to City limits line (or beyond if possible). Desired result is reduced speeds entering/exiting Coburg and moving the vehicle "speed ramp-up" outside of City limits.

Implementation Issues and Timeline: N Willamette Street is a Lane County facility. Costs are dependent on how the work is completed (City staff, County Staff, contracted). If approved, limited to sign/post relocation only.

2. Van Duyn Street - Reduce 35MPH limit to 25MPH from N Willamette St intersection through N Coburg Rd intersection
Purpose: Create speed limit consistency between the two intersections to be more compatible with residential zoning and uses. Also reduces speed changes from school zone limit to standard limit. Desired result is reduced and consistent speeds throughout this residential, inside City limits corridor.

Implementation Issues and Timeline: N Willamette/VanDuyn Streets are Lane County facilities. Costs are dependent on how the work is completed (City staff, County Staff, contracted) and are limited to sign/post relocations.

3. Consistent school zone speed reduction limits/rules and improved signage on Van Duyn St, N Coburg Rd and Bottom Loop Rd.
Purpose: Current school zone signage on N Coburg is different than on Van Duyn.
 - Request standardization and use of 7:00 AM – 5:00 PM for enforcement rather than "when children are present.
 - Request improved signage for flashing units during the 7:00-5:00 times.
 - Request relocation of school zone signage to maximum legal distances from school to increase school zone speed limit area.

Implementation Issues and Timeline: N Willamette and Van Duyn Streets are Lane County facilities. Costs are dependent on how the work is completed (City staff, County Staff, contracted). Expect costs to include signage/post relocation, new/replacement signage and custom signage (flashing – solar)

4. Designate N Willamette Street as Business District to allow speed reduction to 20MPH within maximum area of Lane County/ODOT district definition
Purpose: Desired result is reduced speeds through as much of the downtown/commercial corridor as allowed by Business District designation/definition, which enhances pedestrian safety and overall human experience of downtown, enhancing economic development and community satisfaction.

Implementation Issues and Timeline: N Willamette Street is a Lane County facility. Costs are dependent on how the work is completed (City staff, County Staff, contracted) and may involve data acquisition as well as signage replacement.

5. No reduction in local street speed limits (remain 25 mph) *

Purpose: Speed reduction to 20 MPH creates a requirement for significant installation of signage on all City streets that negatively impact the utilization of the rights of way for parking, access, etc and are not likely to have a material effect on average speed limits.

*Recommend City staff continued and increased utilization of speed trailer in strategic locations to obtain data to trend and support future transportation safety decision making.

Implementation Issues and Timeline: Coburg Police Department is fully supportive of increasing the utilization of the speed trailer and the City Administrator and Police Chief will develop a data collection and reporting communication process to ensure the data collected is available to Council and the community.

Other Recommendations

1. Development and implementation of formalized safe routes to school maps, signage and promotion utilizing the neighborhood street system to minimize crossings on major streets/intersections and funneling pedestrian and bicycle traffic to controlled intersections to maximize the safety of the route
2. Further research the regulations and potential strategies to reduce the current 35 MPH speed limit on Pearl Street between N Willamette and Coleman Street at a minimum and further east if possible.
3. Develop and implement tree trimming maintenance schedule for tree branches and vegetation overhanging travel lanes, bike lanes, sidewalks, traffic sign visibility and vision clearance areas.
4. Research the viability and potential for the installation of a pedestrian crossing on Pearl Street at the intersection of Pearl and Finney Street.
5. Evaluate appropriate traffic marking tools to improve the safety of W KcKenzie (grade chage + S-curve)

Process Plan (next steps)

This document, once formally approved by the Ad-Hoc Committee, will be presented to Council by staff at the July 9, 2024 Council meeting. Committee members are invited to attend and participate in the presentation if desired.

Discussion points with Council will include cost estimates, timelines and prioritization of recommendations. Upon approval of final recommendations with any adjustments from Council, staff will begin working on the priority recommendations and will develop a regular reporting format for Council and community tracking of progress.

Acknowledgements

The success of this process was made possible by the creation of the Ad-Hoc committee by Mayor Bell, the enthusiastic support of the committee from the City Council and most importantly by the informed and engaged time and effort of the committee members who took

a minimum of ten hours of their personal time to dedicate to the review, deliberation and formation of the recommendations described within this document.

Community involvement and engagement in topics and issues that shape the community and its safety and livability are critical elements of good governance and provide Council and staff with invaluable perspective and ideas to more fully shape future plans and actions. Thank you to committee members listed below:

Transportation Safety Ad-Hoc Committee Members

Brian Hamburger
Brandon Rhodes
Jeanne Schapper
McKenzie Bryant
John Marshall
Michael McDonald
Vilma McDonald
Councilor John Lehmann
Mayor Nancy Bell

Staff

Adam Hanks, City Administrator
Brian Harmon, Public Works Director
Megan Winner, Planning Director
Larry Larson, Police Chief

Attachments/References

1. Resolution 2023-15 – Creation of Transportation Safety Ad-Hoc Committee
2. Transportation Safety Ad-Hoc Committee - Meeting Agendas
3. Meeting #1 – Presentation Slides
4. Willamette St/W Van Duyn Streets Intersection Safety Improvements Options - Branch Engineering
5. Draft Recommendations Memo (Meeting #4)

RESOLUTION 2023-15

A RESOLUTION CREATING A TRANSPORTATION SAFETY AD-HOC COMMITTEE

WHEREAS, the City Council wishes to seek citizen participation and input regarding transportation system safety issues to assist Council and staff in solutions to improve pedestrian, bicycle and vehicle safety, and

WHEREAS, City Council FY2024 Goals include the formation of a Transportation Committee to address transportation challenges in Coburg and planning for update to the Transportation System Plan, and

WHEREAS, City Council recognizes an update to its Transportation System Plan will require a dedication of time and resources beyond the scope of the Transportation Safety Ad-Hoc Committee and wishes to focus initial efforts on immediate safety issues within the existing transportation system.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Coburg

Section 1. The City Council hereby approves the creation of the City of Coburg Transportation Safety Ad Hoc Committee

Section 2. The Committee shall be staffed by the Administration and Public Works Departments.

Section 3. The Committee shall be comprised of a minimum of five and a maximum of seven voting members made up of the Mayor, one (1) City Councilor, one (1) planning commissioner, and up to four (4) citizens. Committee members shall receive no compensation for participation in Committee activities.

Section 4. Applications will be submitted to the City Recorder and provided to the Mayor for appointment with confirmation from Council.

Section 5. The Ad-Hoc Committee is charged with analyzing a variety of pedestrian, bicycle and vehicle safety issues identified and presented by staff, reviewing potential mitigation actions and making recommendations to Council on preferred mitigation actions for staff to pursue. Committee analysis and recommendation shall also include utilization of citizen input provided to the Committee.

Section 6. Expected transportation safety issues to be brought forward to the Ad-Hoc Committee include, but are not limited to:

- Pedestrian crossing/safety on both Willamette and Pearl Street
- Pedestrian/bicycle safety lighting
- Vehicle speed limit reviews for Pearl St and citywide residential
- N Willamette & Van Duyn intersection improvements
- Traffic calming options on N Coleman St

Section 7. The Advisory Committee will cease to function upon the successful completion, recommendation, and presentation of a draft report on recommendations for the specific areas of concern presented by Staff to the Committee. The report will be prepared for presentation to Council by June 30, 2024. If it is deemed necessary that there is additional work of the Committee needed in order to pursue additional changes, or activities or community meetings to receive additional citizen input, the Council by majority vote can extend the completion/termination date of this Ad-Hoc committee up to an additional six months.

Section 8. This resolution is effective immediately upon passage.

Public Meeting Law and Public Record Retention Law must be followed consistent with Oregon Revised Statutes (ORS) and Oregon Administrative Rules (OAR)

Adopted by the City Council of the City of Coburg, Oregon, by a vote of 5 for and 0 against, this 10th day of October, 2023.



Nancy Bell, Mayor

ATTEST:



Sammy L. Egbert, City Recorder



AGENDA

TRANSPORTATION SAFETY AD- HOC COMMITTEE

91136 N Willamette Street

541-682-7852 | coburgoregon.org

Thursday, February 01, 2024 at 4:00 PM

The public may attend this meeting at City Hall, or by Zoom. To participate by Zoom you will need to pre-register with the City by 3 PM the day of the meeting. Meetings are recorded. For questions contact City Recorder, Sammy Egbert, sammy.egbert@ci.coburg.or.us, or 541-682-7852.

CALL MEETING TO ORDER

ROLL CALL

WELCOME

1. Introductions
2. Committee Scope - Resolution 2023-15
3. Deliverable to Council
4. Election of Chair and Vice Chair

PRESENTATION BY STAFF

5. Safety Enhancements
6. Speed Reduction and Control
7. Project Ideas
8. Process for Approval

COMMITTEE DISCUSSION

FUTURE MEETINGS

9. Re-occurring Date and Time for Future Meetings

ADJOURNMENT

The City of Coburg will make reasonable accommodations for people with disabilities. Please notify City Recorder 72 hours in advance at 541-682-7852 or sammy.egbert@ci.coburg.or.us

All Council meetings are recorded and retained as required by ORS 166-200-0235.



AGENDA

TRANSPORTATION SAFETY AD-HOC COMMITTEE

91136 N Willamette Street

541-682-7852 | coburgoregon.org

Thursday, February 22, 2024 at 4:00 PM

CALL MEETING TO ORDER

ROLL CALL

PUBLIC COMMENT

MINUTES FOR APPROVAL

1. February 1, 2024 Transportation Safety Ad-Hoc Minutes

COMMITTEE DISCUSSION

2. Recap of Meeting #1
3. N. Willamette & Van Duyn Intersection

FUTURE AGENDA ITEMS

FUTURE MEETINGS

- 3/28/2024 Transportation Safety Ad-Hoc #3
- 4/25/2024 Transportation Safety Ad-Hoc #4
- 5/23/2024 Transportation Safety Ad-Hoc #5
- 6/20/2024 Transportation Safety Ad-Hoc #6 (Final Meeting)

ADJOURNMENT

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AGENDA

TRANSPORTATION SAFETY AD-HOC COMMITTEE

91136 N Willamette Street

541-682-7852 | coburgoregon.org

Thursday, March 28, 2024 at 4:00 PM

CALL THE CITY COUNCIL MEETING TO ORDER

ROLL CALL

MINUTES FOR APPROVAL

COMMITTEE DISCUSSION

1. Recap Meeting #2
2. Speed Limits
 - a. Business District
 - b. Local Residential Streets
 - c. Van Duyn (N Willamette to N Coburg)
3. Topics for Meeting #4

FUTURE MEETINGS

April 25, 2024 Transportation Safety Ad-Hoc #4
May 23, 2024 Transportation Safety Ad-Hoc #5
June 20, 2024 Transportation Safety Ad-Hoc #6

ADJOURNMENT

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AGENDA

TRANSPORTATION SAFETY AD-HOC COMMITTEE

91136 N Willamette Street

541-682-7852 | coburgoregon.org

Thursday, April 25, 2024 at 4:00 PM

CALL TO ORDER

ROLL CALL

AGENDA REVIEW

MINUTES APPROVAL

1. February 1, 2024 Transportation Safety Ad-Hoc Minutes
2. February 22, 2024 Transportation Safety Ad-Hoc Minutes
3. March 28, 2024 Transportation Safety Ad-Hoc Minutes

COMMITTEE BUSINESS

4. Committee Recommendations DRAFT Review
5. Potential Traffic Calming Areas of Concern

CITY UPDATES

6. Welcome to Coburg Entrance Signs Project

FUTURE MEETINGS

May 23, 2024 4:00 PM Transportation Safety Ad-Hoc #5

ADJOURNMENT

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TRANSPORTATION SAFE AD HOC COMMITTEE

Adam Hanks, City Administrator
Brian Harmon, Public Works Director
Megan Winner, Planning Director
Larry Larson, Police Chief

Meets
February

REGULATORY AUTHORITY

- Lane County
N Willamette/Van Duyn, Pearl and portion of N Indu
- ODOT
Exit 199 Interchange
- City of Coburg
Local Streets (subject to approved Local Street Standards, ORS and MUTCD)

FOCUS AREA OVERVIEW

- Pedestrian Safety Enhancements
- Speed Reduction Opportunities
- Intersection Improvements

PEDESTRIAN SAFETY

- ▶ Lighted Beacons for crosswalks
- ▶ Additional marked crosswalks
- ▶ Signage/Lighting improvement

SPEED REDUCTION

- Speed Limits & Signage
 - N Willamette Speed Reduction (20 MPH Business District)
 - Citywide (local streets only) Speed Reduction (20 MPH)
 - Alternative Street Standard Speed Reduction (15 MPH)
- Traffic Calming Devices
 - Speed Hump
 - Speed Cushion
 - Raised Crosswalk
- Crosswalks
- Trees, Landscaping, Design elements

INTERSECTION IMPROVEMENTS

- N Willamette/Van Duyn
 - High Trip Count
 - Confusing Turning Options
 - Low Accident Rate
 - Pedestrian/Bicycle Challenges

INTERSECTION IMPROVEMENTS

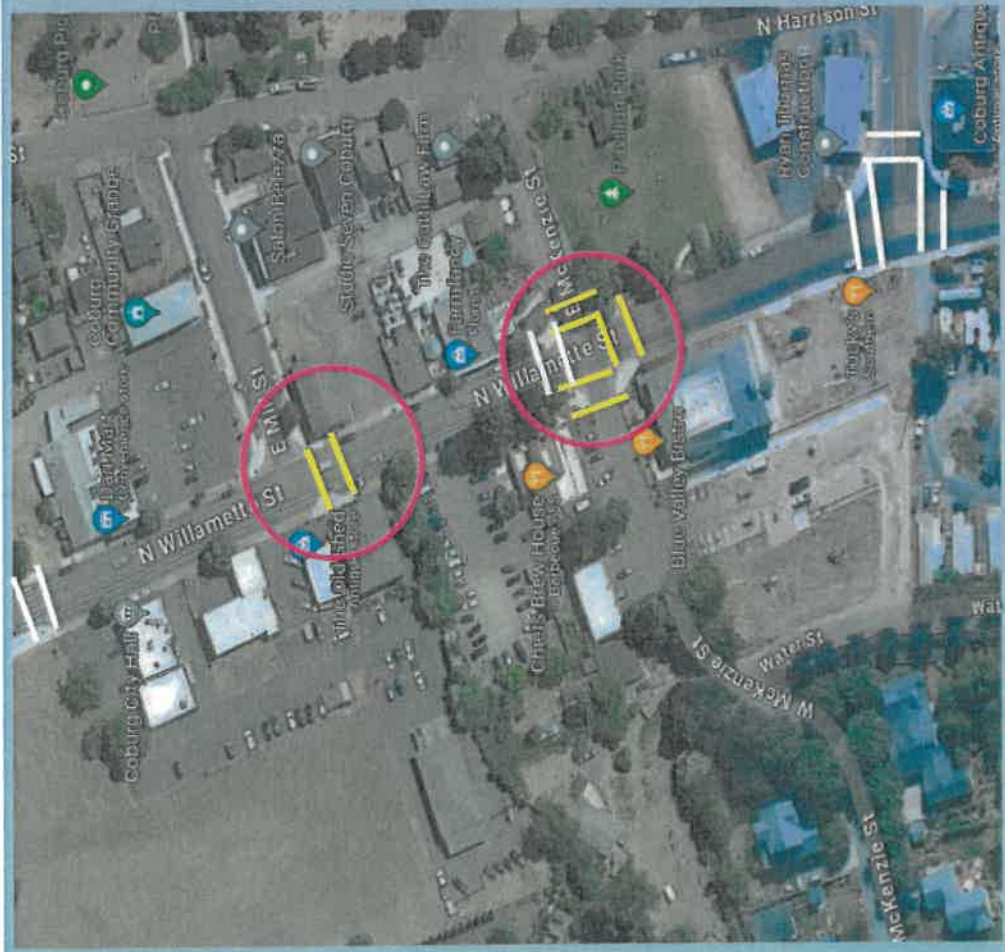
(CONT)

➤ N Willamette/Van Duyn

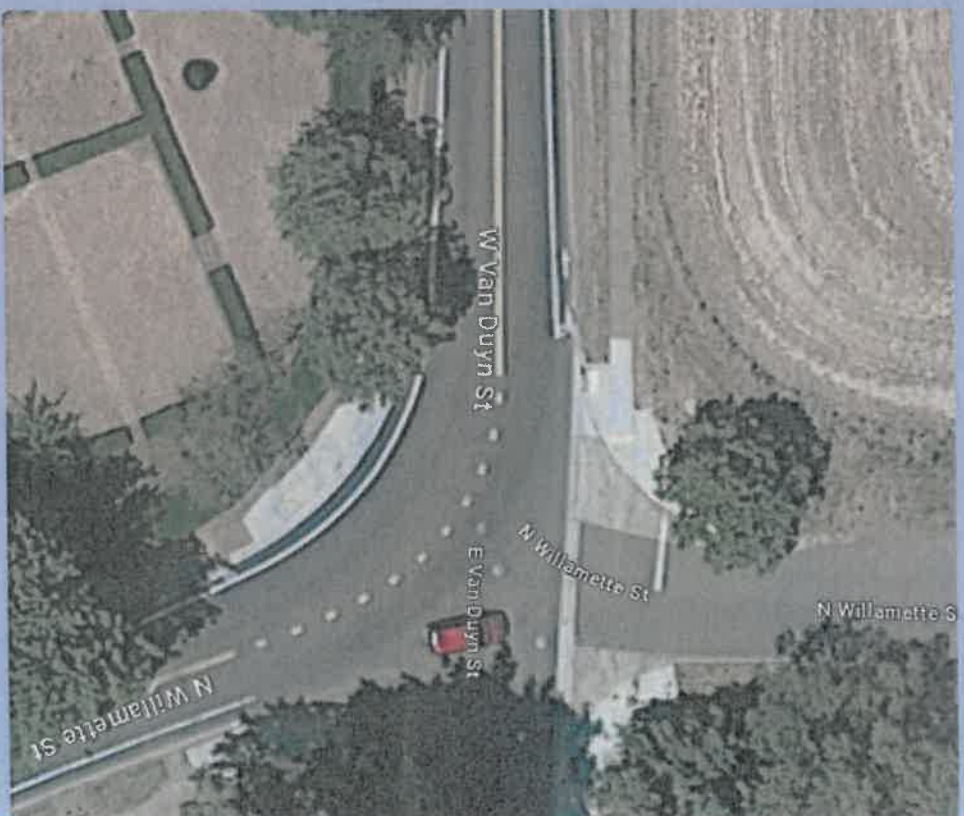
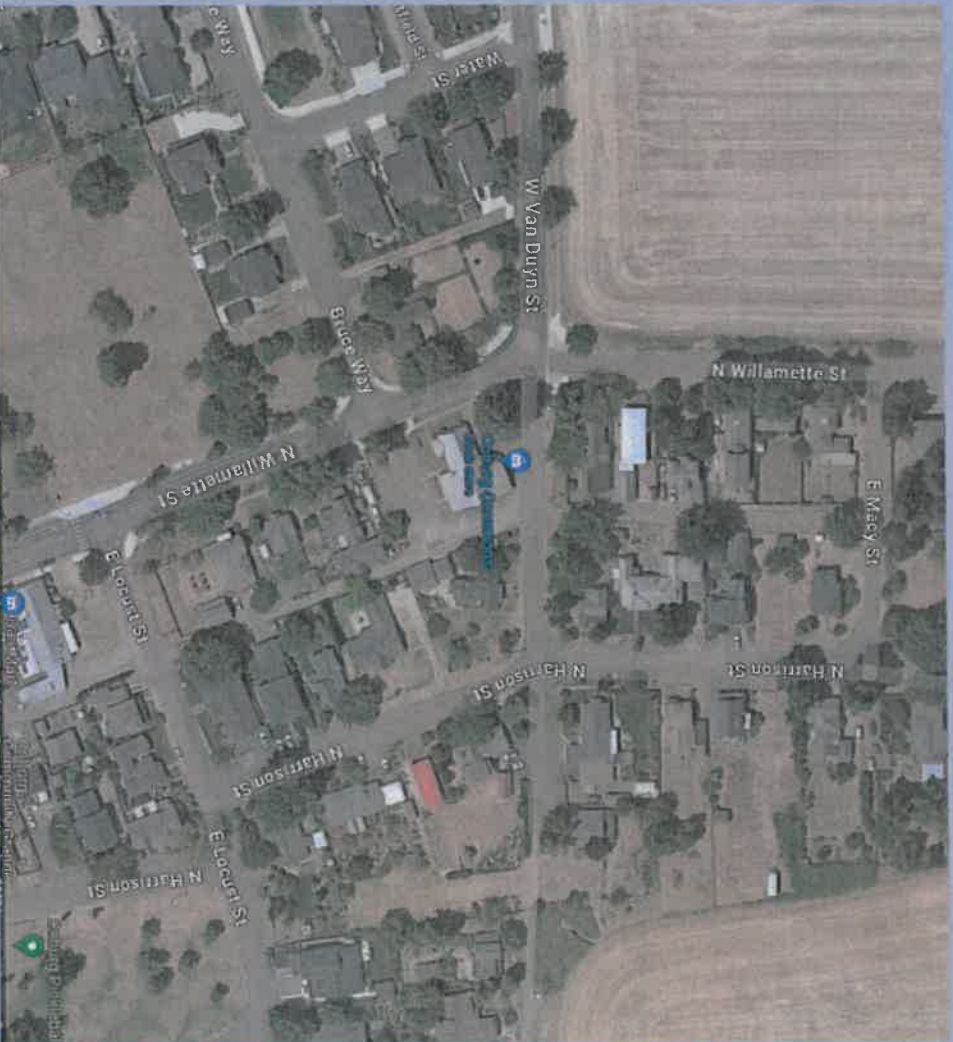
Recommendation Considerations

- Short Term vs Long Term
- Improvement/Reconfiguration Costs
- Allowed/Permitted by Lane County

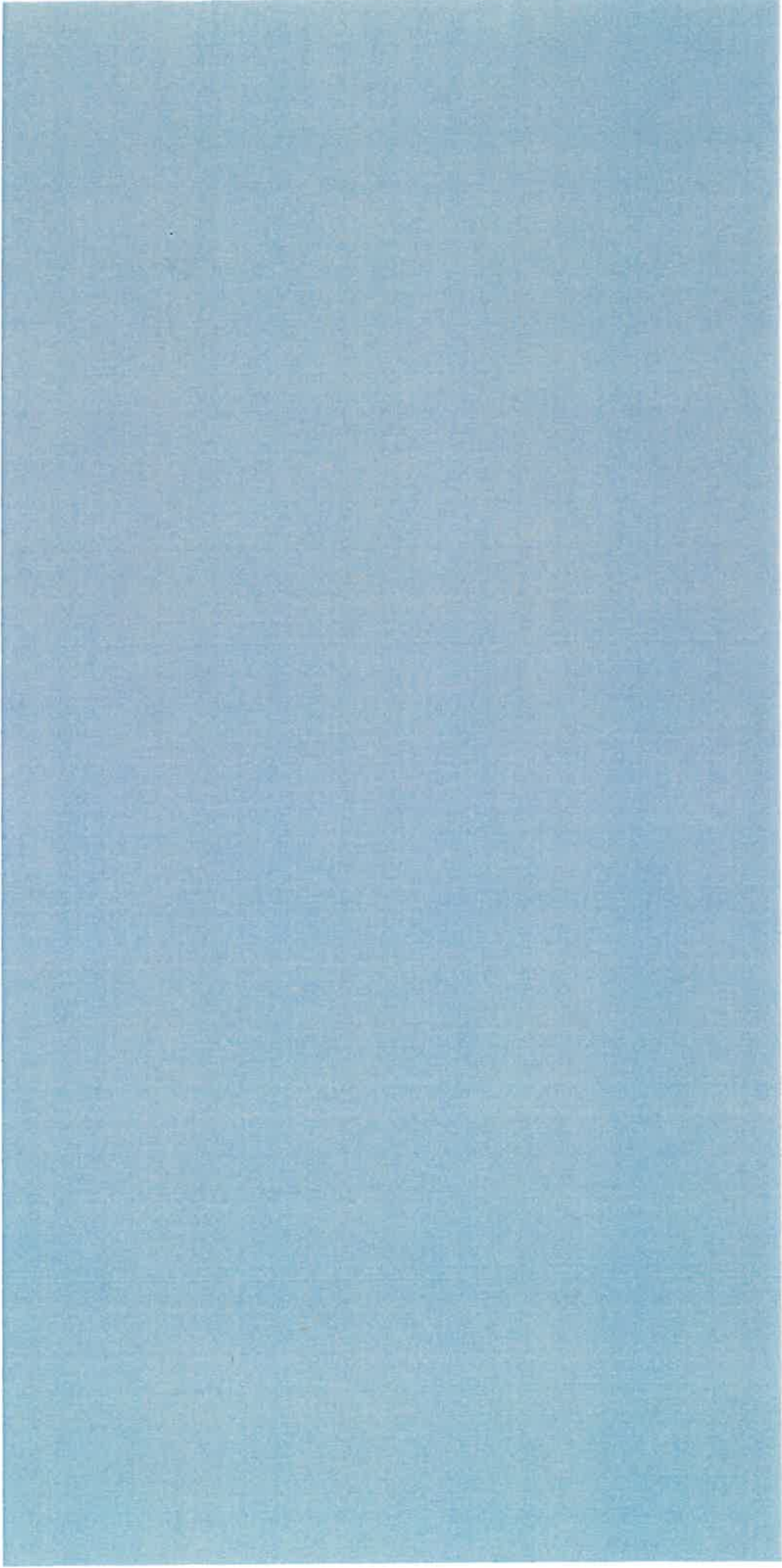
IMPROVEMENTS / PROJECTS N WILLAMETTE ST CROSSWALKS



IMPROVEMENTS / PROJECTS N WILLAMETTE / VAN DUYN ST



IMPROVEMENTS / PROJECTS COMMITTEE SUGGESTIONS?



TECHNICAL MEMORANDUM



DATE: November 30, 2023

PROJECT: Willamette Street/W. Van Duyn Street
Intersection Safety

TO: Adam Hanks
City of Coburg Administrator

FROM: Damien Gilbert, P.E.
Dan Haga, P.E.

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signed by
Damien
Gilbert
Date:
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EXPIRES: 6/30/2025

RE: Intersection Safety and Improvement Options

As requested, we have reviewed and analyzed the existing geometric conditions and researched crash history for the intersection of Willamette and Van Duyn streets in Coburg to explore different options and opportunities to improve the intersection to provide a higher level of safety. The Willamette Street and W. Van Duyn Street thoroughfare provides an important intercounty connection between Lane County and Linn County, by providing both a secondary/alternate route to Interstate 5 and by serving significant local interests associated with local area residents as well as local commercial and industrial truck traffic between the Coburg community and southwestern Linn County and the Interstate 5 corridor.

In looking at potential intersection improvements, references were made to the current edition of the *Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition* (and updates), published by the United States Department of Transportation's Federal Highway Administration (FHWA). References were made to the MUTCD to determine if the potential exists currently or is anticipated to exist in the future, for changing the intersection control from the existing configuration to either an all-way stop, or a fully controlled traffic signal. In addition to exploring the potential for changing the intersection control, certain additional geometric improvement scenarios were also reviewed and will be presented in this document.

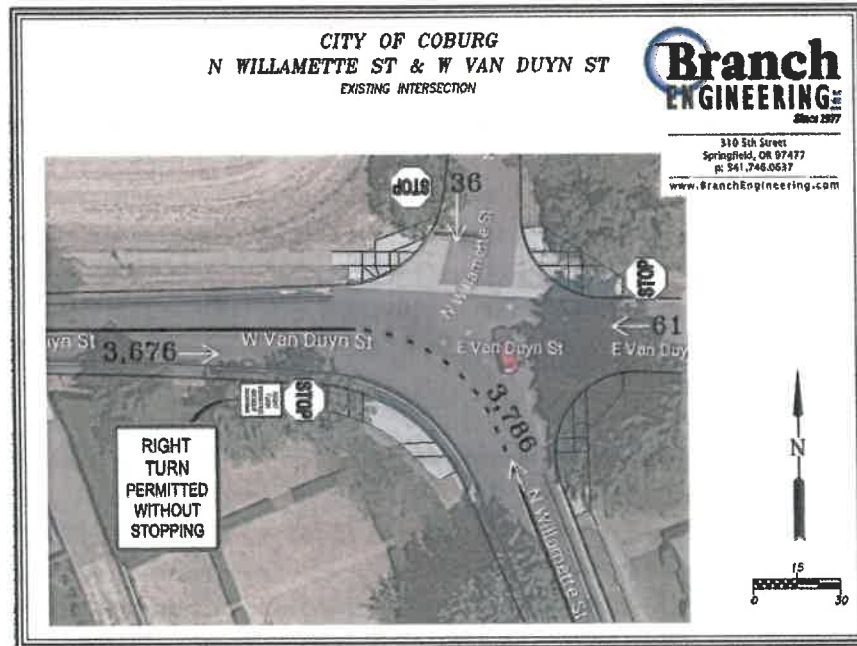
CRASH HISTORY

To determine approximately how many crashes have occurred at the intersection and have been reported to the Oregon Department of Motor Vehicles (DMV)/ODOT, a reference was made to the Oregon Department of Transportation's (ODOT's) Crash Analysis and Reporting TDS Crash Viewer web tool. The available crash data that was downloaded and reviewed indicated that two crashes occurred at the intersection of W. Van Duyn and Willamette Street over the ten (10) year period from January 1, 2013 to December 31, 2022, with one crash occurring in 2015 and one crash occurring in 2017. The year 2017 crash was an angular crash involving four vehicles, with two vehicles traveling

in each direction, that resulted from an improper left-turn made from W. Van Duyn where the driver did not have the right-of-way. The crash rate based on the crash history, approaching traffic volumes and type of intersection control is not considered to be elevated or abnormal, when compared to other intersections in the state with stop sign controls and four approach legs.

TRAFFIC VOLUMES

To determine approximate levels of traffic served by the intersection at Van Duyn Street and Willamette Street, hose/tube counters were deployed at approaches to the intersection during the week of September 18th to 22nd, 2023. Two tube counters were placed on two of the existing approaches at a time, with one placed on the south leg of Willamette Street and one across the west leg of Van Duyn Street deployed on Monday, September 18th, then relocated to the other approaches (E. Van Duyn and N. Willamette Street) on Wednesday, September 20th. The counters were retrieved on Friday, September 22nd, 2023. The tube counters revealed the approximate average daily traffic volumes (ADT) for each approach, which are displayed below.



As shown on the diagram of the intersection, the 24-hour (ADT) approaching traffic volumes on the 'side street' approaches included 36 vehicles/day from North Willamette Street southbound and 61 vehicles/day on E. Van Duyn Street westbound. The 'major street' approaches consisted of 3,786 northbound and 3,676 eastbound average vehicles per 24-hour period, that were primarily through movements on the throughfare (eastbound to southbound and northbound to westbound).

MUTCD TRAFFIC SIGNAL WARRANTS

In evaluating traffic control signal warrants, references were made to Part 4 – Highway Traffic Signals of the MUTCD to determine if the existing and/or anticipated future traffic and geometric conditions meet the criteria for installing a fully controlled traffic signal (referred to as ‘traffic signal warrants’). The MUTCD sets the national standards for traffic control devices, including installation applicability.

To collect relevant data for application of MUTCD traffic signal warrants, Branch Engineering staff conducted vehicle traffic counts with hose/tube counters placed at the approaches to the intersection after the school year began in September 2023, as described previously.

The MUTCD considers several factors in determining if traffic signals are warranted for installation. There are nine traffic signal warrants that include:

- ❖ Warrant 1, Eight-Hour Vehicular Volume;
 - ❖ Condition A - Minimum Vehicular Volume, and;
 - ❖ Condition B - Interruption of Continuous Traffic;
- ❖ Warrant 2, Four-Hour Vehicular Volume;
- ❖ Warrant 3, Peak Hour;
- ❖ Warrant 4, Pedestrian Volume;
- ❖ Warrant 5, School Crossing;
- ❖ Warrant 6, Coordinated Signal System;
- ❖ Warrant 7, Crash Experience;
- ❖ Warrant 8, Roadway Network, and;
- ❖ Warrant 9, Intersection Near Grade Crossing [Railroad].

Meeting signal warrants does not necessarily indicate that a signal should or must be installed. If warrants are met and it is determined that installation of a signal is appropriate to mitigate operational or traffic safety conditions on a local jurisdiction’s facility, the jurisdiction with authority of the road can make the final decision whether to install a traffic signal or not. Lane County has jurisdiction of the Van Duyn and Willamette Street intersection.

MUTCD Traffic Signal Warrants 1 through Warrant 5 are primarily based on thresholds for minimum ‘major street’ approaching vehicular traffic volumes and dependent upon minimum ‘side street’ approaching vehicular traffic or a minimum number of pedestrians crossing the major street. A summary of the thresholds for meeting the MUTCD Signal Warrants are provided in the following table.

| Summary of Traffic Signal Warrant Minimum Volume Thresholds Van Duyn and Willamette Streets | | | | | | | | | |
|---|---------------------------|---------------------|----------------------------------|--------------------------------------|---------------------|------------|---|---|---|
| Minimum Threshold: (Two Rows Apply) | Warrant 1: 8-Hour Veh. | | Warrant 2: 4-Hour Veh. | Warrant 3: Peak Hour Veh. | Warrant 4: Peds | | Warrant 5: School Crossing | Warrant 7: Crash Experience | |
| | 1A | 1B | | | 4-Hour | Peak Hour | | Cond A | Cond B |
| Major Street Approaches: Willamette & Van Duyn Throughfare (NB to WB, EB to SB). Volumes are total of both approaches | 350 VPH for 8 Hours | 525 vph for 8 hours | 750 vph for 4 hours ¹ | 1,050 vph for peak hour ¹ | 750 vph for 4 hours | 1,040 vph | Based on frequency and adequacy of gaps in traffic stream on Major Street | 280 vph for 8 Hours | 420 vph for 8 Hours |
| | <u>and</u> | <u>and</u> | <u>and</u> | <u>and</u> | | | | <u>and</u> | <u>and</u> |
| Side Street Approach (SB Willamette & WB Van Duyn). Volumes are total of higher approach | 105 vph for 8 hours | 53 vph for 8 hours | 60 vph for 4 hours ¹ | 75 vph for peak hour ¹ | <u>and</u> | <u>and</u> | <u>and</u> | 84 vph for 8 hours <u>and</u> min. 5 crashes in 12 months | 42 vph for 8 hours <u>and</u> min. 5 crashes in 12 months |
| Pedestrian Crossings | N/A | N/A | N/A | N/A | 75 PPH for 4 hours | 93 PPH | 20 PPH | N/A | N/A |
| Warrant Met? | No | No | No | No | No | No | No | No | No |
| ¹ Warrants 2 and 3 are dependent upon graphical data that includes a curve (non-linear). The graphical information from the MUTCD is provided as an attachment. For warrant 2, the minimum number of average hourly side street vehicular approaches is 60 vph for the higher volume approach, which corresponds to approximately 750 vph for the total approaches on the major street during the highest 4 hours of the day. For warrant 3, the minimum number of peak hour side street vehicular approaches is 75 vph for the higher volume approach, which corresponds to approximately 1,075 vph for the total approaches on the major street (both approaches). | | | | | | | | | |
| VPH = vehicles per hour PPH = pedestrian crossings per hour NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound | | | | | | | | | |

As shown in the table, the approaching traffic and/or the pedestrian crossing volumes required to meet the traffic signal warrants are not at the levels that are needed to meet the MUTCD standard criteria to warrant installation of a traffic signal. Unless there is a significant change in the local land use patterns in the area that results in significantly more traffic that will need to utilize N. Willamette Street or E. Van Duyn Street, the future conditions are not likely to warrant a traffic signal within the next five years to reach the side street approaching traffic levels that are necessary to meet the minimum traffic volume thresholds that would warrant installation of a traffic signal. For reference, the peak hour traffic volumes are generally about 10 percent of the average daily traffic volumes, which were displayed previously.

Warrants 6, 8 and 9 are not shown in the table because they are not applicable. Warrant 6 is applicable when an intersection is located within a coordinated traffic signal corridor system where progressive movement on the signal system will benefit platooning of vehicles on/through the system by adding a traffic signal. Warrant 8 is applicable for intersections where two or more major transportation routes intersect and the peak hour approaching traffic volume exceeds 1,000 vehicles per hour. Warrant 9 is applicable near railroad crossings.

MUTCD MULTI-WAY (ALL-WAY) STOP CRITERIA

In addition to the traffic signal warrants discussed above and previously, the approaching traffic volumes and reported crashes were evaluated and compared to the MUTCD's Multi-Way Stop criteria for installing a stop sign at all approaches to the intersection at Willamette Street and Van Duyn Street. The MUTCD criteria for installation of a multi-way stop includes five (5) or more reported crashes in a 12-month period that are susceptible to correction by installation of a multi-way stop, or: 'major street' approaching traffic that averages 300 vehicles per hour (vph) for 8 hours of the day and the average approaching vehicular traffic on the side street approaches serves 200 units per hour (vehicle, pedestrian and bicycles) or more during the same 8-hour period with a delay of at least 30 seconds per vehicle during the highest hour.

As described previously, the crash history available from ODOT for the most recent 10 years of available data includes two crashes reported at Willamette Street and Van Duyn Street over the period between January 1, 2013 and December 31, 2022, which does not meet the crash threshold criteria for installation of multi-way stop applications. As reported previously, the 'side street' approaching traffic volumes on E. Van Duyn (westbound) and on N. Willamette Street (southbound) over an average day is less than the average hourly approaching traffic necessary (200 vph for 8 hours) to consider installation of a multi-way stop condition. The MUTCD does not support installation of a multi-way stop condition where all approaching traffic is required to stop.

SPEED

Approaching the intersection of Willamette Street on W. Van Duyn Street eastbound, the posted speed limit is reduced from 35 miles per hour to 25 miles per hour, approximately 120 feet west of the intersection. The 25 MPH speed zone is present throughout downtown Coburg to south of E. Dixon Street. The Oregon Department of Transportation (ODOT) has regulatory authority for speed zoning on all streets and roadways in the State of Oregon that are not local streets. ODOT speed zone citing is based primarily on the field measurements of the speed of approaching traffic, although there are some additional criteria in which ODOT will consider a speed reduction. Situations where ODOT may consider a speed zone reduction that is not based on the measured speed of existing traffic, are typically based on local land use patterns and the built-up environment that meets the specific definition criteria for a statutory speed zone where it did not previously meet the criteria by definition. A few examples include: Parks, Residence Districts and Business Districts, which are all specifically defined by Oregon Statute. A request for a speed zone order can be made to ODOT to review the speed zone by the City by going to the ODOT Speed Zone website: <https://ecmnet.odot.state.or.us/SpeedZone/Home/RequestForm> and filling out and submitting the form to request a new speed zone order. If request is made by someone with the City, ODOT will perform a speed zone investigation and determine if Willamette Street meets the criteria for lower speed zone than is currently posted. ODOT's current lead time for performing speed zone analyses is six to 9 months after request is submitted. A portion of downtown Coburg may qualify for the definition of a Business District (ORS 801.170), which has a statutory speed of 20MPH per the Oregon Revised Statutes, but ODOT would need to determine if it qualifies in their speed zone analysis investigation.

The built-up environment around W. Van Duyn Street approaching Willamette Street does not meet the criteria to be considered a Residence District (25 MPH statutory speed), by definition included in the Oregon Revised Statute (ORS) 801.430.

INTERSECTION AND GEOMETRIC IMPROVEMENTS

The existing intersection consists of a stop condition for through movements and left-turns when approaching from the west on W. Van Duyn, where right-turns are permitted without stopping. The northbound approach on Willamette Street, is uncontrolled, and not required to stop. Other approaches to the intersection at the southbound and westbound approach legs are stop controlled for all conditions. The centerline intersection at the northbound approach on Willamette Street is slightly skewed obtuse from a 90-degree perpendicular intersection at Van Duyn Street. The obtusity of the centerline alignment angle between the northbound and eastbound approaches improves the turning movement radii on the throughfare for larger vehicles. Occasionally, when large commercial vehicles turn left from northbound Willamette Street to westbound on W. Van Duyn without steering wide enough at the outside of the turn, the off-tracking of the trailer can overlap the centerline stripe which can overlap with the oncoming travel lane. Conversely, when approaching the intersection eastbound, larger commercial vehicles sometimes oversteer across the centerline and into the oncoming travel lane to avoid running over the curb at the inside of the curve at the southwest corner. This condition can create conflicts between bicycles users and large trucks. Both conditions are not ideal. To provide some alternate options, several improvement options are included as an attachment. The improvement options include:

Short Term, lower cost

- ❖ Line of Sight Improvements:
 - A tree located at the southeast corner should be periodically limbed, so there are no obstructions to the line of sight for a vehicle driver stopped at E. Van Duyn Street looking to the left waiting to turn. The horizontal plane should be kept clear from the ground up to 9 feet above the road surface.
- ❖ Restriping:
 - Delineate the outside of the turn/curve to give an outside steering aim line for trucks turning northbound left from Willamette Street to westbound on Van Duyn, the outside of the curve/turn currently does not have a fog/bike lane stripe, so drivers most likely use the centerline for negotiating the turn, which could result in cutting off the inside of the turn more than is necessary, and;
 - Mark a narrow traversable median to separate directional traffic and provide a buffer for eastbound Van Duyn right turns onto southbound Willamette Street with more space to negotiate the turn.
- ❖ Experiment with movement restrictions at the north (southbound) and/or east (westbound) approach legs to determine if there is an improvement to be had by removing some accessibility..
- ❖ Crosswalk closure across northbound (south leg) and/or eastbound (west leg)
 - Core drill a hole in the access ramps and install crosswalk closure barricades to discourage crossings at undesirable location(s)

Long term, higher cost

- ❖ Approach widening/re-alignment

-
- Widen the approaches on the throughfare by moving existing curb line to provide more room for wider turns to better accommodate larger tractor trailer commercial vehicles:
 - Potential for an increase in vehicular speeds around the curve
 - Pedestrian crossings should be discouraged from crossing south and west legs with or without widening
 - Restrict access to E. Van Duyn to exit only by constructing curb extension
 - Could be deployed as a temporary measure without permanent curb by placing barricades. The effectiveness could be re-evaluated after it's been in place to determine if it's a viable long-term solution
 - Consider changing the intersection type to a roundabout
 - Closure of the pedestrian crossings on the west and south legs (eastbound approach on W. Van Duyn St., northbound approach on Willamette Street) or installing Rectangular Rapid Flashing Beacons to enhance driver awareness of pedestrians in the roadway would be recommended
 - Restricting access to E. Van Duyn could be needed due to the geometry and location of the existing approach with respect to northbound Willamette Street.
 - Would require significant right-of-way acquisition from adjacent properties.

The improvement options provided above are listed in order of relative cost, where the tree trimming, restriping and crosswalk closures are considered the lowest cost improvements, and installing a roundabout would be the highest cost improvement. Any improvement or work in the right-of way of Willamette Street at the intersection and south and/or on W. Van Duyn Street would require coordination and approval from Lane County, since the intersection is located within the right-of way jurisdiction of Lane County.

CONCLUSIONS & RECOMMENDATIONS

In summary, the collected data and the results of this study revealed that there is not currently justification for installing a traffic signal or an all-way stop control at the subject intersection. There are safety improvements that can be implemented varying from striping and movement adjustments to considering a roundabout.

Changing the traffic control at the intersection of Willamette Street and Van Duyn Street was evaluated against the MUTCD criteria for considerations of installing a traffic signal and for changing the intersection controls to include multi-way (all-way) stop controls, and it was determined that the reported crash history and average traffic volumes do not support changing the control type from the existing conditions. It is recommended that the intersection continue to be monitored for any local changes in land use that may result in an increase to traffic at the intersection, especially at side street/minor street approaches on E. Van Duyn and N. Willamette Streets, and to determine if there are any increases to crash frequency that may necessitate another look at changing the intersection control type. As alternates to installing multi-way stop controls or installing a traffic control signal, improvement options were provided in order of relative cost, with some low cost alternatives that include periodically checking the line of sight on the approaches to the intersection to ensure there is adequate line of sight available to approaching traffic for departing side street

approaches and restriping to accommodate smoother turning maneuvers to better accommodate large commercial tractor trailer vehicles. A higher cost alternative provided could include a change of the intersection type to a roundabout, which would require right-of-way acquisition and the design could limit the access potential for the E. Van Duyn Street approach.

It is recommended that pedestrian crossings be discouraged or that the crosswalks be considered for closure between the southwest corner and the east side of Willamette Street and between the southwest corner and the north side of W. Van Duyn. Both northbound and eastbound approaches are uncontrolled approaches to the intersection.

The right-of way of the Willamette Street and W. Van Duyn Street throughfare (Coburg Road) is within the jurisdiction of Lane County, and any changes to the intersection, including restriping and/or closing crosswalks would need to be coordinated with Lane County for their approval.

Please do not hesitate to contact me with any questions, or if I can provide any additional information.

ODOT CRASH DATA

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

VAN DUYN ST at WILLAMETTE ST, City of Coburg, Lane County, 01/01/2013 to 12/31/2022

| COLLISION TYPE | FATAL CRASHES | NON-PROPERTY | | | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER-SECTION RELATED | OFF-ROAD |
|-----------------|---------------|---------------|----------------------|---------------|---------------|---------------|----------------|--------|----------|----------|-----|------|-----------------------|----------|
| | | FATAL CRASHES | PROPERTY DAMAGE ONLY | TOTAL CRASHES | | | | | | | | | | |
| YEAR: 2017 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |
| REAR-END | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |
| YEAR 2017 TOTAL | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |
| YEAR: 2015 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| ANGLE | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| YEAR 2015 TOTAL | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| FINAL TOTAL | 0 | 2 | 0 | 2 | 0 | 3 | 0 | 1 | 1 | 2 | 2 | 0 | 2 | 0 |

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

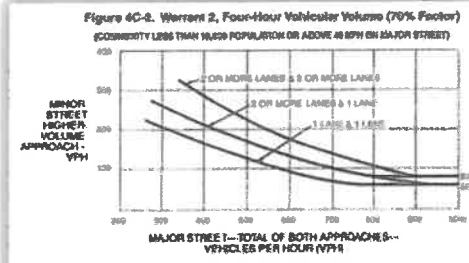
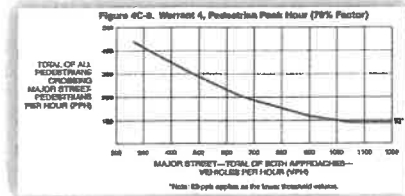
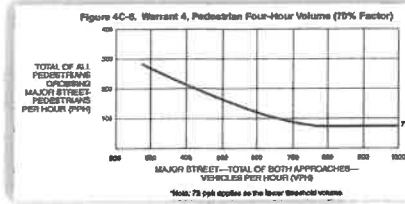
MUTCD Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume
Condition A—Minimum Vehicular Volume

| Number of Lanes for moving traffic on each | | Vehicles per hour on major street (total of both approaches) | | | | Vehicles per hour on higher volume minor-street approach (one direction only) | | | |
|--|--------------|--|------------------|------------------|------------------|---|------------------|------------------|------------------|
| Major Street | Minor Street | 100% ^a | 80% ^b | 70% ^c | 56% ^d | 100% ^a | 80% ^b | 70% ^c | 56% ^d |
| 1 | 1 | 500 | 460 | 390 | 280 | 150 | 130 | 105 | 84 |
| 2 or more | 1 | 600 | 480 | 420 | 336 | 150 | 120 | 105 | 84 |
| 2 or more | 2 or more | 600 | 480 | 420 | 336 | 200 | 160 | 140 | 112 |
| 1 | 2 or more | 500 | 400 | 350 | 280 | 200 | 160 | 140 | 112 |

Condition B—Interruption of Continuous Traffic

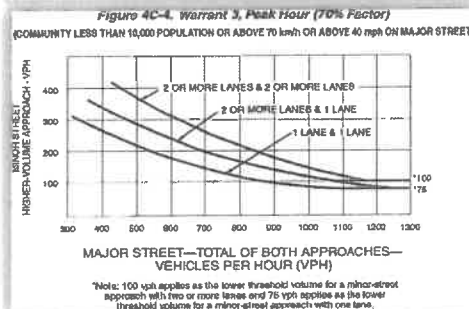
| Number of Lanes for moving traffic on each | | Vehicles per hour on major street (total of both approaches) | | | | Vehicles per hour on higher volume minor-street approach (one direction only) | | | |
|--|--------------|--|------------------|------------------|------------------|---|------------------|------------------|------------------|
| Major Street | Minor Street | 100% ^a | 80% ^b | 70% ^c | 56% ^d | 100% ^a | 80% ^b | 70% ^c | 56% ^d |
| 1 | 1 | 750 | 600 | 525 | 420 | 75 | 60 | 53 | 42 |
| 2 or more | 1 | 900 | 720 | 630 | 504 | 75 | 60 | 53 | 42 |
| 2 or more | 2 or more | 900 | 720 | 630 | 504 | 100 | 80 | 70 | 56 |
| 1 | 2 or more | 750 | 600 | 525 | 420 | 100 | 80 | 70 | 56 |

- ^a Basic minimum hourly volume
- ^b Used for combination of Conditions A and B after adequate trial of other remedies
- ^c May be used when the major street speed reaches 40 mph or in an isolated community with a population of less than 10,000
- ^d May be used for combination of Conditions A and B after adequate trial of remedial measures when the major street speed reaches 40 mph or in an isolated community with a population of less than 10,000



Section 4C.06 Warrant 3, School Crossing

- Support:**
- ^a The School Crossing signal warrant is intended for application where the fact that schoolchildren cross the major street is the principal reason to consider installing a traffic control signal. For the purposes of this warrant, the word "schoolchildren" includes elementary through high school students.
- Standard:**
- ^a The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period (see Section 2A.83) and there are a minimum of 20 schoolchildren during the highest crossing hour.
- See: 4C.05 to 4C.04* December 2009



Section 4C.07 Warrant 6, Coordinated Signal System

- Support:**
- ^a Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles.
- Standard:**
- ^a The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:
 - A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.
 - B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

Section 4C.08 Warrant 7, Crash Experience

- Support:**
- ^a The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.
- Standard:**
- ^a The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:
 - A. Adequate trial of alternatives with satisfactory observation and enforcement has failed to reduce the crash frequency; and
 - B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
 - C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.05), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 (see Section 4C.06) exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.
- Option:**
- ^a If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Section 2B.07 Multi-Way Stop Applications**Support:**

01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

Guidance:

03 *The decision to install multi-way stop control should be based on an engineering study.*

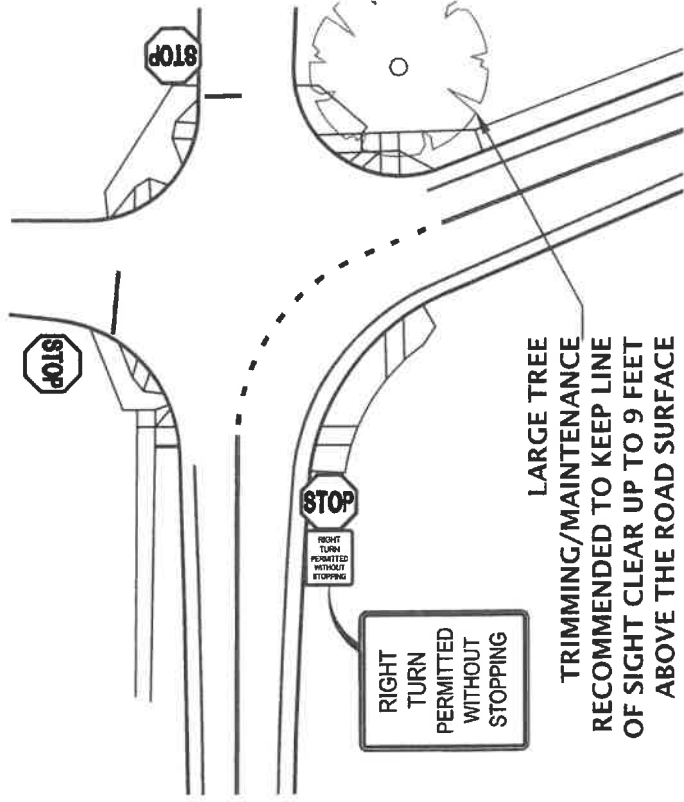
04 *The following criteria should be considered in the engineering study for a multi-way STOP sign installation:*

- A. *Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
- B. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
- C. *Minimum volumes:*
 1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
 2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
 3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
- D. *Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

Option:

- 05 Other criteria that may be considered in an engineering study include:
- A. The need to control left-turn conflicts;
 - B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
 - C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
 - D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

EXISTING CONDITIONS



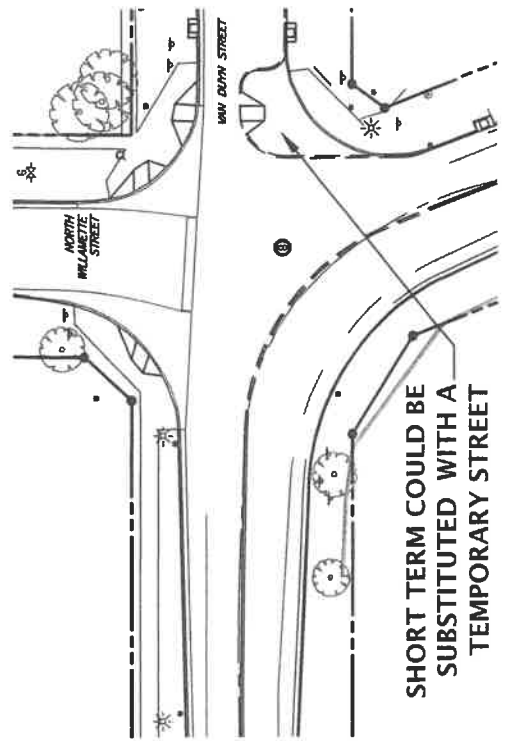
EXISTING &

CROSSWALL CLOSED

STOP
RIGHT TURN PERMITTED WITHOUT STOPPING

RIGHT TURN PERMITTED WITHOUT STOPPING

RESTRICTING ACCESS ON E. VAN DUYN TO EXIT ONLY



APPRO.

WIDENING ACCOMMODATION LARGE VE

TO: TRANSPORTATION SAFETY AD-HOC COMMITTEE

FROM: ADAM HANKS, CITY ADMINISTRATOR

SUBJECT: INITIAL RECOMMENDATIONS LIST - DRAFT V1.0

CC: BRIAN HARMON, PUBLIC WORKS DIRECTOR
LARRY LARSON, POLICE CHIEF
MEGAN WINNER, PLANNING DIRECTOR

Pedestrian crossings

- 1) Pearl at Coleman Street – Lighted, push-button flashing beacons and crossing markings
- 2) N Willamette at E Mill Street - Pedestrian crossing markings at south side crossing
- 3) N Willamette at E Delany Street - Pedestrian crossing markings at north side crossing
- 4) N Willamette at E Dixon Street - Pedestrian crossing markings at north side crossing
- 5) E Mill Street - Pedestrian crossing markings parallel to N Willamette St on east sides of intersection
- 6) E McKenzie Street – Pedestrian crossing markings parallel to N Willamette St on west and east sides of intersection
- 7) E Delaney Street - Pedestrian crossing markings parallel to N Willamette St on east sides of intersection
- 8) E Dixon Street - Pedestrian crossing markings parallel to N Willamette St on east sides of intersection

N Willamette and Van Duyn Intersection

- 1) Replacement and relocation of “curve ahead warning signs” at both ends of the intersection
- 2) Re-painting of all intersection pavement markings
- 3) Request for enhanced painting to highlight bike lanes and driver lane awareness (see speed limit section for speed related recommendations for this intersection)

Speed Limits

- 1) N Willamette Street - Speed reduction at south entrance extend further south (extend 40 MPH south, begin 25 MPH south of Vintage St)
- 2) Van Duyn Street - Reduce 35MPH limit to 25MPH from N Willamette St intersection through N Coburg Rd intersection
- 3) Consistent school zone speed reduction limits/rules on both Van Duyn St and N Coburg Rd
- 4) Designate N Willamette Street as Business District to allow speed reduction to 20MPH within maximum area of Lane County/ODOT district definition
- 5) No reduction in local street speed limits (remain 25 mph)



