Albany Area Metropolitan Planning Organization

City of Albany • City of Jefferson • City of Millersburg • City of Tangent • Linn County • Benton County • Oregon Department of Transportation

Policy Board Meeting
Wednesday, July 22, 2026
2:30 pm to 4:30 pm

HYBRID MEETING
In Person at Albany OCWCOG Office
Albany Upstairs Conference Room
1400 Queen Avenue SE, Albany OR 97322
or
Virtually via Teams by Clicking HERE
Meeting ID: 270 714 726 493 9
Passcode: wV7nH2cS
Mobile One Click Number
+1 872 242 8088
Phone Conference ID: 515 662 179#
Contact: Billy McGregor, **bmcgrecor@ocwcog.org**

AGENDA

1)	**2:30**	**Call to Order, Agenda Review, and Roll Call**	**Chair, Commissioner Malone**
2)	**2:35**	**Public Comment**	**Chair**
3)	**2:40**	**Approve minutes of Policy Board Meeting on Wednesday, June 24, 2026. (Attachment A pg. 04)** **Action***: Decision on minutes*	**Chair**
4)	**2:45**	**ODOT Multimodal Inventory Update** Update regarding ODOT's Multimodal Inventory project. **Action:** *Presentation and Discussion*	**ODOT, Theresa Conley**
5)	**3:15**	**COVID Reserves (Attachment C pg. 19)** Review of the proposed use of COVID Relief Funds reserves. **Action:** *Discussion and Approval*	**Staff, Justin Peterson**
6)	**3:30**	**Old Salem/Salem Ave Update (Attachment D pg. 20)** Update regarding FY26 Task 510 project, with Final Report attached. **Action:** *Presentation and Information*	**Staff, Points of Contact**

7) 3:45 Loop Saturday Shopper Survey (Attachment E pg. 154) — **Staff, Madeline Powell**

Update on the Loop Saturday Shopper outreach.

Action: *Information and Discussion*

8) 3:55 Title VI Survey Reminder — **Staff, Billy McGregor**

Reminder of Title VI demographic survey of AAMPO members and staff, to be sent out in August by email.

9) 4:00 Jurisdictional Updates/Other Business — **Chair, All**

- Staff
- Benton County
- Linn County
- Tangent
- Albany
- Jefferson
- Millersburg
- ODOT

10) 4:30 Adjournment — **Chair**

Next Meeting: Wednesday, August 26, 2026.

Joint RTP Schedule

Combined MPO	**AAMPO + CAMPO Combined RTP 3 Month Schedule**													
AAMPO	**July**				**August**					**September**				
CAMPO	6	13	20	27	3	10	17	24	31	**3**	**10**	**17**	**24**	**31**
Future Trends & Scenarios (3-4 total) w/ TAC				**30**				**20**						
Future Trends & Scenarios (3-4 total) w/ Policy Board						**12**			**26**					
Share future scenario results with the public and gather input on the preferred future scenario	Web Survey, Posting at Library, News Ad													
Review previous RTP projects w/ **TAC**				**30**				**20**						
Work with **TAC** to identify TSP projects for RTP				**30**				**20**						
Staff Setup of Interactive Web Map and deployment														

ATTENDENCE
(FOR QUORUM PURPOSES)

Board Members	**Jurisdiction**	**Attendance**
Mayor David Watkins	City of Jefferson	
Mayor Scott Cowan	City of Millersburg	
Councilor Carolyn McLeod	City of Albany	
Councilor Greg Jones	City of Tangent	
Commissioner Roger Nyquist	Linn County	
Commissioner Pat Malone	Benton County	
Darrin Lane	Citizen Representative	
Christine Hildebrant	Oregon Department of Transportation	
Alternates	**Jurisdiction**	**Attendance**
Kyle Ward	City of Jefferson	
Andrew Potts	City of Millersburg	
Councilor Michael Thomson	City of Albany	
Joe Samaniego	City of Tangent	
Amy Ramsdell	Linn County	
Gary Stockhoff	Benton County	
James Feldmann	Oregon Department of Transportation	

Quorum Requirement: *MPO business may be conducted provided a quorum of the Policy Board is in attendance. A quorum consists of at least four members of the Policy Board or their alternates. The Policy Board members may participate telephonically or by other means of electronic communication as provided in Section 6.D (Special or Emergency Meetings).*
– AAMPO Policy Board Bylaws, Section 6: Meeting, Subsection E: Quorum

ALBANY METROPOLITAN PLANNING ORGANIZATION
POLICY BOARD HYBRID MEETING
Wednesday, June 24, 2026
2:30 – 4:30 pm

Virtual Via Microsoft Teams Technologies

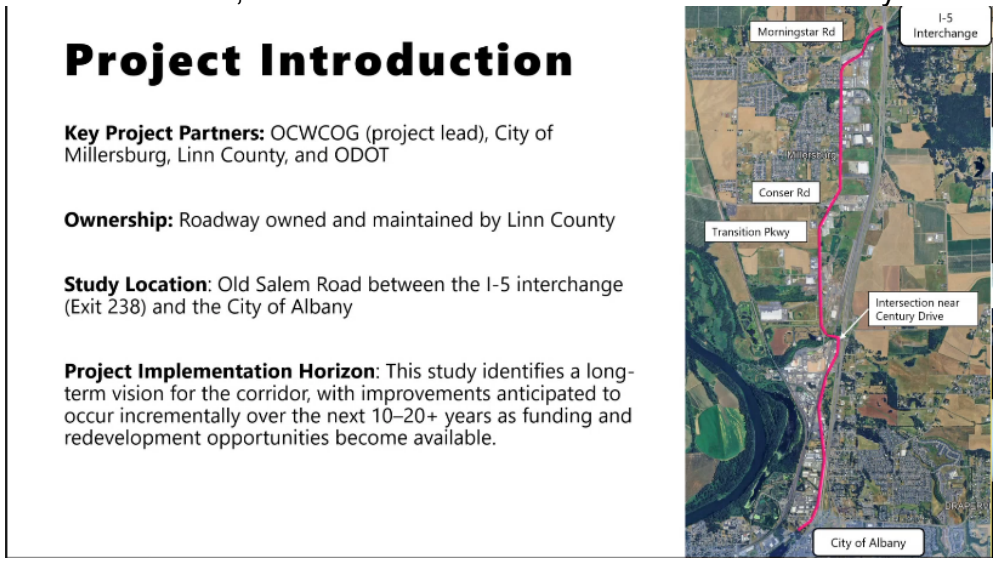
Board Members	Jurisdiction	Attendance
Mayor David Watkins	City of Jefferson	No
Mayor Scott Cowan	City of Millersburg	Yes
Councilor Carolyn McLeod	City of Albany	Yes
Councilor Greg Jones	City of Tangent	Yes
Commissioner Roger Nyquist	Linn County	No
Commissioner Pat Malone	Benton County	Yes
Darrin Lane	Citizen Representative	Yes
Christine Hildebrant	Oregon Department of Transportation	No
Alternates	**Jurisdiction**	**Attendance**
Kyle Ward	City of Jefferson	No
Andrew Potts	City of Millersburg	Yes
Councilor Michael Thomson	City of Albany	No
Joe Samaniego	City of Tangent	Yes
Amy Ramsdell	Linn County	No
Gary Stockhoff	Benton County	No
James Feldmann	Oregon Department of Transportation	Yes

Guests: Steve Harvey, Joe Samaniego, Patrick Wingard, Polina Polikakhina
Staff Present: AAMPO Planner Billy McGregor, CAMPO Planner Corum Ketchum, Planning Supervisor Justin Peterson, and Administrative Assistant Travis Overvig

TOPIC	DISCUSSION	DECISION / CONCLUSION
1. Call to Order, Agenda Review, and Roll Call	The June AAMPO Policy Board meeting was called to order at 2:33pm by the Chairs Alternate, Gary Stockhoff. Samaniego requested to add covid funding updates for the policy board. Administrative Assistant Travis Overvig conducted roll call for the meeting.	**The meeting was called to order at 2:33pm by**
2. Public Comments	There were no public comments provided to the AAMPO Policy Board members and guests present.	**There were no public comments.**
3. Approve minutes of the AAMPO Policy Board Meeting on Wednesday, May 27, 2026 (Attachment A) ***Action:*** Decision on Minutes	The AAMPO Policy Board members approved of the minutes of May 27, 2026, Policy Board Meeting, by consensus with no corrections. Commissioner Malone voted in favor. Mayor Cowan of Millersburg voted in favor Greg Jones of Tangent voted in favor. Carolyn McLeod of Albany voted in favor. Andrew Potts of Millersburg voted in favor. James Feldmann with ODOT voted in favor. Joe Samaniego of Tangent voted in favor. There were no votes against.	**The AAMPO Policy Board members approved of the Policy Boards Meeting Minutes on Wednesday, May 27, 2026, by consensus with no corrections.**
4. Old Salem/Salem Ave Update (Attachment B) ***Action:*** *Presentation and Information*	Guests Dartnell and Polikakhina presented updates on the Old Salem Rd/Salem Ave project. • The Old Salem Rd/Salem Ave project is led by OCWCOG, alongside the City of Millersburg, Linn County, and ODOT. The roadway is owned and maintained by Linn County and the project implementation horizon is that this planning study identifies a long-term vision for the 1-5 corridor, with improvements anticipated to occur incrementally over the	**Old Salem Rd/Salem Ave Project Presented by Kittleson Staff to the AAMPO Policy Board**

	decade 10-20+ years, as funding and redevelopment opportunities become available. • Near-Term Recommendation: Restripe the roadway to narrow vehicle lanes and provide buffered bike lanes. Given the roadway width this is only feasible north of Century Dr intersection vicinity. • Long-Term Recommendation: Construct 12-ft wide shared-use path on west side and sidewalk/path on east side. Provide wider buffers and construct medians where driveways are not present. For more constrained areas recommendation is to construct the same shared-use path and sidewalks as in the less-constrained areas though the buffer space will be smaller. • Mid-Term Recommendation: South of Transition Parkway is to construct 12-ft wide shared-use path on west side, construct sidewalk on east side, and do not narrow roadway between curbs. North of Transition Parkway, construct 8-ft wide shared-use path on east side, keep both bike lanes, and do not narrow roadway between curbs. • Key Intersections of Consideration: Morning Star Road which has crash history and anticipated future development. Conser Road, which is a focus area for future changes to traffic operations. Transition Parkway, where new alignment and development are planned and future changes to traffic operations. And Century Drive which has crash history. • Traffic Control Considerations: Increased volume on Old Salem Rd in the future is expected to create significant delays for left-turning vehicles on side streets. Higher speeds; desire to slow speeds. Land-use context. Safety considerations of roundabout vs traffic signal and interest in “gateway features” • Intersection Recommendations: Draft concepts provided for recommended changes to NE Morningstar Road to accommodate large truck movements. For NE Transition Parkway, the draft concept showed designs to construct a single-lane roundabout to slow speeds, serve as a gateway treatment, and improve future traffic operations. Goal is to monitor traffic growth and add additional lanes to the	

	roundabout if needed. For NE Conser Rd the recommendation is to realign east-leg to shift further north by roughly 10-ft to reduce conflicts between turning vehicles and simplify intersection geometry. Restrict left turns out of east leg – striping and signage only. Monitor traffic growth and construct a roundabout, if needed. Dartnell explained there has been mixed feedback from the public on the plans to conduct roundabouts in Millersburg. • Feedback from the AAMPO TAC and City Council will be incorporated into the finalized plan for this project. <u>Questions from the Board</u>: • The Board highlighted the City Council meeting where parts of the public had fears regarding the proposed roundabouts. Commissioner Malone touched on how the public will learn how to operate a roundabout, which is safer for traffic and improves traffic flows. Mayor Cowan said they will accept the recommendations from the Kittleson engineers. • Commissioner Malone shared that the Transload Facility in Millersburg that is located north of the map (Intermodal Center), which is aligned of where the straight line is on the west side of the I-5 from the label for Transition Pkwy to the bottom where the label Intersection near Century Dr is located. The plan is to reduce truck traffic through Portland by transporting via train. McGregor shared that this is a large facility on the former site of the paper mill. • Kittleson Staff shared that the analysis of future traffic operations at the intersection is based on projected volumes on a 20-year horizon, considering the expected growth in the area and that a roundabout will operate acceptably in the future. • Lane shared that the facility is owned by Mid-Valley Intermodal Center, which is a nonprofit and they have executed a lease with the company that's operating the facility and is primarily their book of business, importing renewable fuels and they are obligated as part of the lease to operate the container portion if	

	that business comes to the facility. Further, the county still owns the Cogen site across the street and the property immediately north of the Intermodal Facility. Lane explained that there is a lot of potential at these sites and with the natural gas pipeline, as well as Timber Labs and others as well. • Lane also touched on the discussions had about the interchange that would tie-in to Transition Parkway that would be critical in the future, as there have been truck accidents in that area. • Mayor Cowan explained that Millersburg has between 60-80 acres of undeveloped land just west of Ball Industry Construction, so there is some potential for additional traffic coming down Transition Parkway. Additionally, there is another large piece of property behind City Hall that has currently been slated for a future school. • Feldmann shared that Millersburg and Albany are updating their TSP, so this information and discussions are timely. 	
5. MTIP Draft (Attachment C)	AAMPO Staff McGregor shared that it is that time again in the three-year cycle to update the MPO's MTIP. Action-wise, we are looking for approval of the current draft with the notation that we will have to	**McGregor shared the MTIP Draft and updates for STBG Projects for**

Action: *Discussion and Referral to Policy Board*	amend it in the next six months after we undero the MPO's Surface Transportation Block Grant, STBG project selection. • McGregor explained that as in previous cycles, we have gotten the project lists for the MPO from ODOT. For larger MPO's (Portland, Eugene, Salem-Keizer area) they manage their projects more intensively. As for AAMPO and CAMPO, the majority of our projects are 5307 and 5310 transit funding sources. • The document also includes the updated safety performance management targets from ODOT. Further, for the 2027-2030 STBG the annual funding from ODOT is going to be $831,035. Previously, government funds increased slightly per year, this is no longer the expectation. So the funding is set for the first year numbers received from ODOT ($831,035). • The STBG project selection process has been highlighted because this section will be changed to reflect the existing conditions in the fall when we go through the selection process for our projects. • The Criteria has been approved by AAMPO, and that finalized Criteria is included in Table 4 (image below). • Projects include: Corvallis-Albany Trail, Queen Ave Rail Crossing, Beta Drive Rail Crossing for Albany, Murder Creek Bridge for Linn County, Trucks Bridge for Linn County, Knox Butte at Scrabble Hill Road roundabout, Linn County Intersection signing and striping upgrades, Geary Street-Queen Ave safety improvements, Corvallis-to-Albany Path Refinement, and 2nd Street Multi-use Path for Jefferson. • For MPO funding, our listing of public transportation projects are all going to be Loop operations, Linn County operations and ATS operations with funding sources from 5307 and 5310. <u>Questions from the Board</u>: No questions from the board. Approval for the Adopting Resolution for AAMPO Policy Board – Resolution 2027-02 was met with unanimous consensus.	**2027-2030** **Policy Board unanimously approved the Adopting Resolution for AAMPO Policy Board Resolution 2027-02**

ADOPTING RESOLUTION

Albany Area Metropolitan Planning Organization Policy Board

Resolution Number 2027-02

FOR THE PURPOSE OF ADOPTING THE ALBANY AREA MPO FFY 2027 – 2030 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM (MTIP)

WHEREAS, the U.S. Department of Commerce, Bureau of Census has declared that the City of Albany, City of Millersburg, City of Tangent, City of Jefferson and adjoining areas of Linn, Benton and Marion Counties form an Urbanized Area named the Albany Urbanized Area; and,

WHEREAS, the Albany Area Metropolitan Planning Organization (AAMPO) Area has been designated by the State of Oregon as the official Metropolitan Planning Organization (MPO) of the urbanized area; and,

WHEREAS, among the major requirements of the Metropolitan Transportation Planning Process is the development of a MTIP that enumerates priority transportation projects in the MPO area consistent with an adopted Metropolitan Transportation Plan; and,

WHEREAS, AAMPO has developed a MTIP for FFY 2027 – 2030 in coordination with ODOT and the local transit agency to comply with all applicable federal and state requirements; and,

WHEREAS, the public has been notified and afforded reasonable opportunities to review and comment on projects included in the FFY 2027 – 2030 MTIP and will be afforded additional opportunities for review and comment as the document is amended.

NOW, THEREFORE, BE IT RESOLVED, that the AAMPO Policy Board approves the AAMPO FFY 2027 – 2030 Metropolitan Transportation Improvement Program.

PASSED AND APPROVED THIS 24th DAY OF JUNE 2026, BY THE ALBANY AREA METROPOLITAN PLANNING ORGANIZATION.

APPROVED:
By:

_____
Patrick Malone, Chair
Benton County

ATTESTED:
By:

_____
Matt Lehman
Cascades West Council of Governments and the Albany Area MPO

STBG Project Selection Process

In 2026, AAMPO selected recipients for the 2027 – 2030 STBG funds through a public selection process. A request for projects was sent to a list of member jurisdictions with an application developed by the MPO in spring 2026. The applications were evaluated by the TAC based on a jointly created *Application Instructions* that was created with the Corvallis Area MPO. "The following criteria will be used for STBG project evaluation as part of the FFY2027-2030 Metropolitan Transportation Improvement Program (MTIP) process. Projects will be sorted into Preservation and Modernization, and then combined into one overall funding list. All applicants will be given the opportunity to present projects to the TAC and Policy Board. **Applicants for funding must demonstrate how well their proposed project meets the evaluation criteria identified below."**

Criteria used to evaluate and prioritize projects include pavement condition, bicycle/pedestrian/transit improvements, Safety, project leverage, project readiness, and community impact. Once projects were evaluated by the TAC, a recommendation was made to the Policy Board for final approval.

Table 4: FFY 2027 – 2030 STBG Criteria

	Modernization	
Project Readiness		
0-10	Scoping study/design/plans have been completed	10
Y/N	Project within existing ROW	10
Y/N	Match funding identified	5
Y/N	No extensive permitting required (Env., Utility, etc)	5
Multimodal Improvement		
0-10	Improves/Creates bicycle facilities	10
0-10	Improves/Creates pedestrian facilities	10
0-5	Upgrades to transit facilities	5
Safety		
0-20	Addresses documented safety issue and/or identified high crash location	20
Community Impact		
0-10	Project identifies benefits to vulnerable road users	10
Y/N	Project has support of community(ies)	5
Y/N	Improves freight operations	5
Y/N	Located on an MPO priority corridor	5

	Preservation	
Pavement Condition		
Y/N	Fair PCI 55-69	30
Y/N	Poor PCI 40-54	15
Y/N	Good PCI 70-84	5
Multimodal Improvement		
0-10	Improves/Creates bicycle facilities	10
0-10	Improves/Creates pedestrian facilities	10
Y/N	Project is on transit route	5
Safety Improvement		
0-20	Addresses documented safety issue and/or identified high crash location	20
Project Leverage		
0-10	Funding this project will leverage larger opportunities to increase overall project impact	10
Y/N	Project is identified in a local plan	5
Y/N	Project is located on a freight route	5
Y/N	Located on an MPO priority corridor	5

AAMPO FFY 27 – 30 TIP – Listing of Surface Transportation Projects

Project Key#	Project Name	Project Description	Work Phase by Year	Federal Amount	State Amount	Local Amount	Total Current Estimate
18850	Corvallis to Albany Trail: Scenic Dr. - Springhill	Complete NEPA and right of way purchase, construct off-highway multiuse path.	CN 2027	$2,370,777.47	$15,881.20	$427,679.64	**$2,814,338.31**
21185	Queen Avenue Rail Crossing (Albany)	Upgrade existing railroad warning devices to improve pedestrian safety.	UR 2027 RW 2027 CN 2027 OT 2027	$1,970,999.99	$219,000.01	$0.00	**$2,190,000.00**
22946	Beta Drive SW Rail Crossing (Albany)	Complete design to install light and gates and improve humped crossing to standard to improve safety and reduce incidents at crossings.	PE 2024 RW 2027	$988,332.00	$0.00	$0.00	**$988,332.00**
23134	Murder Creek (Nygren Road) bridge (Linn Co)	Rehab existing bridge to include installing erosion protection, add new pavement, replace bridge rail and other general maintenance needs to maintain bridge integrity.	PE 2025 RW 2026 CN 2027	$877,110.75	$0.00	$100,389.25	**$977,500.00**
23140	Traux Creek (Clover Ridge Road) bridge (Linn Co)	Replace the bridge to meet current standards.	PE 2024 RW 2026 CN 2027	$2,811,779.28	$0.00	$321,820.72	**$3,133,600.00**
24158	Knox Butte Rd E at Scravel Hill Rd NE (Linn County)	Construct a roundabout at the intersection of Knox Butte Rd and Scravel Hill Rd NE to reduce the number and severity of intersection crashes.	PE 2027 RW 2028 CN 2029	$7,178,400.00	$0.00	$797,600.00	**$7,976,000.00**
24214	Linn County intersection signing & striping upgrades (2030)	Install signs, striping and other devices at various intersections throughout Linn County to reduce crashes and increase safety.	PE 2027 CN 2028	$1,121,400.00	$0.00	$124,600.00	**$1,246,000.00**
24236	Geary Street - Queen Avenue Safety Improvements (Albany)	Design for future construction project to develop safety improvements at the Queen Avenue-Geary Street intersection to enhance safety for pedestrians and bicyclists who use the 1.5 mile Periwinkle Path to travel between South Albany and businesses and services located north of Queen Avenue.	PE 2027	$420,026.13	$0.00	$48,073.87	**$468,100.00**
24239	Corvallis to Albany Path Refinement (Albany)	Project refinement for future construction of a shared use path along US20 between N Albany Road and First Avenue in Albany. This facilitates biking and walking between downtown, north Albany and Corvallis via the future Corvallis-Albany path.	PL 2027	$420,026.13	$0.00	$48,073.87	**$468,100.00**
24240	Second Street Multiuse Path (Jefferson)	Project refinement for future construction of a shared use path for the Second Street Student Link to connect the students of Jefferson Middle and High Schools to the center of the city.	PL 2027	$400,464.99	$0.00	$45,835.01	**$446,300.00**

6. TPAU Model Assumptions (Attachment D1 & D2)

Action: Discussion

Staff McGregor shared updates for the RTP work efforts, explaining that we've been working with the Transportation Planning Analysis Unit at ODOT over the last couple of months to really dial in our CALM Model and to get it up-to-speed for the 2050 Regional Transportation Plan.

- The Regional Transportation Plan relies on the area model to model future traffic expectations, both congestion, peak usage, and volume per capita. And then based on the model scenarios that the Policy Board approved earlier this year, TPAU will model each of those scenarios and provide likely outputs on how the scenarios will impact traffic and congestion in the future, specifically in the model year 2050.
- In the memo, some of the background of this process is highlighted and what the different terms are. Some of the work specifically revolved around the CFA and Equitable Community changes. Based on the DLDC changes that Albany and Corvallis adopted and based on growth expectation within the regions, both employment and household based on low, medium, and high percentage.
- A lot of the expected growth will be in the Climate Friendly Areas (CFAs) that were adopted by both cities.

<u>Questions from the Board</u>:

AAMPO Staff McGregor shared details on the TPAU Model maps and the predicted household/employment growth, discussing the expected impacts with the Board.

	• Board had questions regarding the maps and the expected growth for household and employment, asking clarification on the growth analysis if it was for individual jobs to which McGregor explianed that he believes that they are. • McLeod highlighted that based on the numbers they are predicting to add more households than jobs.	

Attachment D1 & D2

MEMORANDUM

Albany Area Metropolitan Planning Organization
City of Albany • City of Jefferson • City of Millersburg • City of Tangent • Linn County • Benton County • Oregon Department of Transportation

Date: June 18th, 2026 & June 24th, 2026
To: AAMPO Technical Advisory Committee (TAC) & Policy Board
From: Billy Murphy McGregor, AAMPO Staff
Re: **Climate Friendly Area Growth Assumptions for the CALM model**

Purpose of Memo
This memorandum provides an update on the Corvallis-Albany-Lebanon Model (CALM) transportation planning model used by planners, developers and in the development of the Regional Transportation Plan (RTP). In this memo, TAC members are asked to review the assumptions made by AAMPO and ODOT's Transportation Planning and Analysis Unit (TPAU) as it relates to locations within the planning area. In accordance with the Climate Friendly and Equitable Communities[1] transportation policy (OAR 660-012), eligible communities are asked to evaluate the intersection of housing, employment and transportation.
The initial results of this analysis provide forecasts for population and employment change in the MPO planning area, with special emphasis on the Climate Friendly Areas that were nominated by local jurisdictions.

Action: *Discussion*.

- Do these areas align with local assumptions on housing, population and employment growth (RE: location)?
- Which of the three growth scenarios for household and employment growth seems the most realistic?
  - Which one should be selected for the model?
  - Should multiple scenarios be evaluated? If so which ones?
- Are there specific areas that planners have overlooked, or seem unrealistic?
- What questions do you have for the modeling team at ODOT?

Background
The Climate-Friendly and Equitable Communities (CFEC) program reduces climate pollution from transportation and promotes equitable planning outcomes. The program applies to communities within metropolitan regions with populations over 50,000 people including Corvallis and Albany. Cities of 10,000 or less have worked with the State to determine which CFEC regulations make sense for their community.

In developing the 2050 RTP, planners at CAMPO, AAMPO, and ODOT's TPAU reviewed observed land use trends to answer the following questions:

- Given current land use and transportation patterns, where is employment growth likely?
  - Where are people (households or HH) likely to live?

Data

The maps that are attached to this memo were produced by taking the assumed growth in households (HH) and employment by 2050 (based on population projects from ODOT) and allocated those households and employers into the Climate Friendly Areas designated by the jurisdictions. In Corvallis, planners assumed 10%, 25%, or 50% of the growth would occur in the designated areas. In Philomath those assumptions were 5%, 10%, or 25% allocations into the CFA. This information is displayed in Table 1. The data that informed employment distributions were not available as of the meeting deadline.

Table 1 – Household (HH) Growth by 2050 in CFA Areas

	Pop_Growth	HH_Growth_Approx						
Albany	13,377	6,500	Low %	Medium %	High %	Low #	Medium #	High #
- CFA (1) Primary		65	1.0%	2.0%	5.0%	56	113	282
- CFA A		65	1.0%	2.0%	5.0%	56	113	282
- CFA B (East)		325	5.0%	10.0%	25.0%	282	563	1,408
- CFA C (North)		65	1.0%	2.0%	5.0%	56	113	282
- CFA D		65	1.0%	2.0%	5.0%	56	113	282
- CFA E		65	1.0%	2.0%	5.0%	56	113	282
- CFA F		65	1.0%	2.0%	5.0%	56	113	282
- Non-CFA (East of I5)		2,860	44.0%	39.0%	22.0%	2,478	2,196	1,239
- Non-CFA (North Albany)		2,925	45.0%	39.0%	23.0%	2,534	2,196	1,295
Linn Co	733	350						
Millersburg	5,087	2,500						
Tangent	268	150						
Jefferson	1,072	500						

Occupied Household Growth by UGB

UGB	26 Years of Growth
Albany	5,630
Millersburg	1,720
Tangent	100
Linn County (outside of UGB)	300
Lebanon	700
Jefferson	350

Employment Growth by UGB

UGB	26 Years of Growth
Albany	3,300
Millersburg	350
Tangent	160
Linn County (outside of UGB)	850
Lebanon	1,000
Jefferson	75

7. Linn County/Tangent Project Changes* (Attachment D) ***Action:*** *Decision on Project Changes*	Samaniego shared that Tangent currently has two projects that do not have enough funding to complete: Old Oak Project and the Tangent Drive project. • Samaniego shared that Tangent has had difficulty securing funding for these projects so Linn County approached Tangent with the idea of merging the two funds to focus on Tangent Drive and then seek a grant that can get the project up and running. The last Tangent City Council meeting on June 8th approved that idea. • The request for the AAMPO Policy Board is approval to convert the Covid funds totaling $175,000 for Old Oak Crossing Improvement to the STBG project Tangent Drive enhancement project, and more specifically for that projects engineering costs. • The request was approved via unanimous consensus with no objections or amendments.	**The Board approved via unanimous consensus the request for the Tangent Covid funds totaling $175,000 to be used for engineering costs for the Tangent Drive enhancement project.**
8. Jurisdictional Updates/Other Business	**AAMPO Staff Updates:** No updates from McGregor. Peterson had no updates. **Jurisdictional Updates:** *Albany* – McLeod shared that Albany is trying to find ways to pay for road repairs, and in getting residents to come to a consensus about what the best, most equitable way to do that is. *Benton County* – Commissioner Malone shared that there are two bridges across the Willamette River that are earthquake resistant, with the new Van Buren bridge being one of them. Also, the Oregon Transportation Committee (OTC) was well represented at the ribbon cutting for the Van Buren bridge and has a fair amount of authority on prioritizing projects, which is especially helpful with ODOT limited on funding. Discussion with OTC included talk about improving smart	**Jurisdictional Updates provided by the Board**

	signals on Philomath Blvd. *Jefferson* – No member from Jefferson present. *Linn County* – Lane touched on updates with the Intermodal Center and the bridge project in the Talking Water Gardens. Further, work being done in front of the courthouse is for improving ADA access under the front steps, and that will be a future security checkpoint. *Millersburg* – Mayor Cowan shared that Millersburg TSP TAC meeting coming up on July 8th and are looking forward to getting that completed. Potts shared updates on the Transition Parkway, with plans to open the road in July, trying to nail a specific date depending on utility contractors getting in and finishing their work. Further, they are in the 90% design milestone for the Woods Road multi-use path that will connect to Transition Parkway. *Tangent* – Samaniego shared that Tangent is almost finished with their TSP plan. Unique to Tangent is that all legislative amendments must go to the voters, so Tangent will have a town hall to explain what the TSP and to have the voters approve the new TSP plan. *ODOT* – No updates from ODOT. **Other Business:**	
9. Adjournment	The next AAMPO Policy Board Meeting is scheduled for Wednesday, July 22, 2026.	**The meeting was adjourned at 4:07pm by the Chair, Commissioner Pat Malone.**

MEMORANDUM

Albany Area Metropolitan Planning Organization

City of Albany • City of Jefferson • City of Millersburg • City of Tangent • Linn County • Benton County • Oregon Department of Transportation

Date: July 22nd , 2026
To: AAMPO Policy Board
From: Billy Murphy McGregor, AAMPO Staff
Re: **COVID Reserves**

Purpose of Memo

The Albany Area MPO received approximately $960,000 in COVID relief funds from the Oregon Department of Transportation in 2021. The funds were/are flexible in use towards transportation projects within the MPO. AAMPO staff, in coordination with the AAMPO TAC, developed the list of projects seen below, with approval of the Policy Board. As part of the funding allocation about **10%** was set aside as reserves.

Item	Budgeted	Status
Disbursement	$ 960,000.00	
Keep in reserves	$ 96,000.00	
Albany Queen Ave	$ 350,000.00	Complete
Benton County Gibson Hill	$ 150,000.00	Complete
Millersburg Woods Road	$ 100,000.00	Complete
Tangent Drive - engineering	$ 175,000.00	Pending
Jefferson Crossing	$ 75,000.00	Pending

Available Balance	$	360,000.00
Reserves	$	96,000.00
Project Allocations Remaining	$	250,000.00

Reserve Projects	
GIS database - multimodal	$30,000
Bus shelter purchases + install	$41,000
Admin Fee Proposal	$25,000
Total Reserve Projects	$96,000
Balance	$ -

KITTELSON & ASSOCIATES

OLD SALEM ROAD SCOPING STUDY

Millersburg, OR

July 8, 2026

Inside front cover

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Old Salem Road Scoping Study

Millersburg, OR

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July 8, 2026

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APPENDICES

Appendix A: Timberlab TPR Assessment

Appendix B: Delorean (Ball) Site Vicinity Map

Appendix C: Traffic Operations Analysis

Appendix D: Cost Estimates

Introduction

This technical memorandum documents the findings and recommendations of the Old Salem Road Scoping Study. The study seeks to refine corridor planning through the corridor, which has a changing urban context due to residential and industrial growth. Key project partners include OCWCOG (project lead), the City of Millersburg, Linn County, and ODOT. The roadway is owned and maintained by Linn County.

The project goal is to identify near-term and long-term concept scoping-level solutions to improve multimodal connectivity and safety, with the intent to support future funding applications and update development requirements.

Study Area

The study corridor is approximately a 4.5-mile segment of Old Salem Road between the I-5 interchange at Exit 238 and the City of Albany. Key study intersections include Morningstar Road, Conser Road NE, NE Transition Parkway, and Century Drive / I-5 undercrossing vicinity. The speed limit along the corridor ranges from 35 to 50 mph.

The study corridor serves a mix of industrial, commercial, and residential land uses. Land uses on the west side of the corridor are a mix of residential, industrial, and commercial uses; the east side is primarily industrial. Several corridor segments are adjacent to the Burlington Northern/Portland & Western Railroad. The study corridor and its segments, which are presented in the Existing Conditions section of this document, are presented in Figure 1.

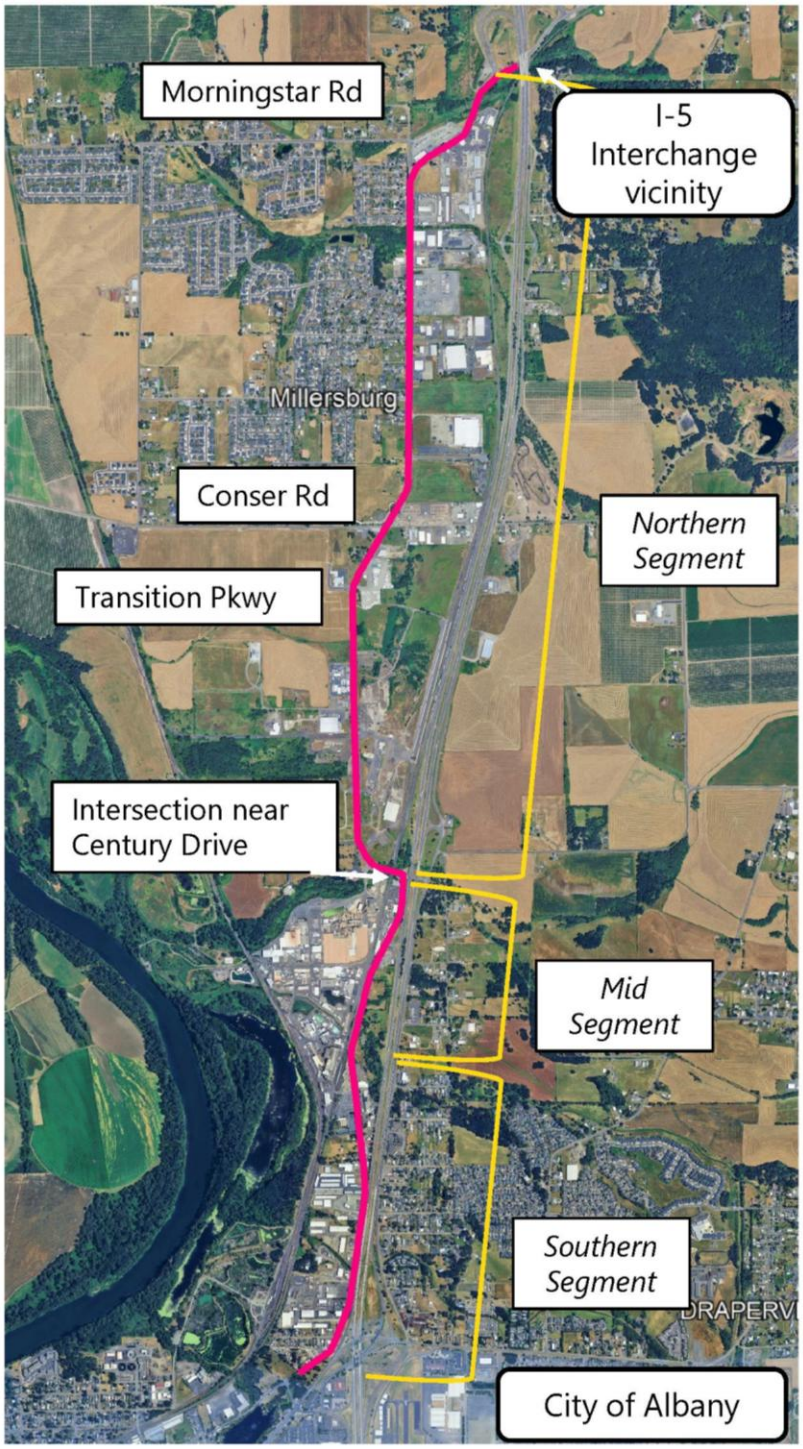


Figure 1. Study Corridor

Planned Projects Review

Drawing from the City of Millersburg 2016 Transportation System Plan (TSP), its 2023 amendment, and the AAMPO Regional Transportation Plan (RTP), there are a total of nine projects within the project area,

as presented in Table 1. They provide guidance on previously identified needs along the Old Salem Rd corridor. While these documents do not determine or enforce a timeline for delivery of projects they do describe priorities and present general cost estimates. Projects considered on the AAMPO 2023 RTP fiscal constraint list include OSR-2 and OSR-5, both of which are described as pedestrian crossing projects.

Table 1. Previously Identified Projects

Source	TSP ID	Project Name	Project Description	Location	Cost
TSP 2023	B1	B1 Old Salem Rd Shared-Use Path	Construct a 10- to 12-foot-wide bicycle and pedestrian path parallel to Old Salem Rd from the north city limit to the south city limit and within existing right-of-way.	Old Salem Rd, N-S Extent	(2016) $3.1 mil
RTP/TSP	B4	OSR-1 Millersburg TSP B4	Near Term: Restripe to provide buffered bike lanes. Long Term: Construct a shared-use path on one side of the road. Consider constructing on the west side of the street to create consistency with adjacent segments.	From I-5 to 2-lane transition near Century Drive NE	(2023) $8,400,000
RTP/TSP	B4	OSR-3 Millersburg TSP B4	Construct a shared-use path on the west side of the road.	2-lane transition near Century Drive NE to Kathryn Avenue	(2023) $3,700,000
TSP 2023	B4	B4 Old Salem Rd Shoulder Lanes (interim project)	Construct continuous bicycle access on Old Salem Rd from north to south city limits by widening shoulder at locations where shoulder is less than 2 feet	Old Salem Rd, N-S Extent	(2016) $50,000
TSP 2023	P6	P6 Old Salem Rd Sidewalks	Construct new sidewalks along west side of Old Salem Rd, north of Nygren Rd	Old Salem Rd, N of Nygren Rd	(2016) $200,000
TSP 2023	S3	S3 Reconstruct Old Salem Rd	Reconstruct Old Salem Rd to arterial cross-section (bike lanes, curb, gutter, sidewalk)	Old Salem Rd, N-S Extent	(2016) $1.8 mil
RTP/TSP	S7	OSR-2 Millersburg TSP S7	Provide pedestrian crossing to support those crossing to/from the truck stop and food cart area.	Near Morningstar Road NE	(2023) $560,000
TSP 2023	S9	S9 Realign Conser Rd at Old Salem Rd	Realign the current offset intersection to a standard 4-leg intersection	Conser Rd & Old Salem Rd	(2016) $260,000

RTP	NA	OSR-5	Provide enhanced pedestrian crossing.	Driveway at ATI Specialty Alloys & Components	(2023) $560,000
TSP 2018	BP-04	NE - I-5 Exit 235 Undercrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as wider paved shoulder or multiuse path) on I-5 undercrossing at Exit 235 serving Old Salem Rd., Murder Creek Dr., Viewcrest, and Millersburg.	NE - I-5 Exit 235	(2018) $600,000

Design Standards Review

Design standards for the study area are derived from three principal sources: Linn County, the Oregon Department of Transportation (ODOT), and the City of Millersburg, as summarized in Table 2. Because Old Salem Road is owned and maintained by Linn County, improvements within the roadway corridor must comply with applicable Linn County design standards, which defer to ODOT's standards. Improvements on intersecting and adjacent local roadways within the city limits are subject to the City of Millersburg's design standards.

Table 2. Cross-Section Design Standards

Agency	Context	Travel Lane	Shy Distance	TWLT	Bike Lane	Bike Lane Buffer	Sidewalk	Sidewalk Buffer	Shared-Use Path
Linn County	Arterial	Defers to ODOT Standards							10′-12′
ODOT [1]	Suburban fringe	11′-12′	1′ - 0′	12′ to 14′	6′	5′-2′	8′-5′	6′-0′	10′-16′
City of Millersburg	Arterial	12′	-	14′	6′	-	5′	5′	-

[1] Ranges are listed in order of priority

Project Goal

The focus of the project is to develop near-term and long-term concept-level solutions to improve safety and multimodal connectivity for the Old Salem Road corridor. Recommendations address previously identified transportation needs, planned improvements, and projected residential and industrial growth within the City of Millersburg and surrounding area.

Existing Conditions

Existing Infrastructure

Figure 2 presents three corridor segments (as noted in Figure 1) with their respective typical cross sections. Most of the corridor consists of a three-lane cross-section, except for a 0.56-mi segment constrained primarily by the adjacent railroad, which does not include a two-way center turn lane. Sidewalks are present intermittently throughout the corridor, resulting in gaps in the pedestrian network and limited connectivity between destinations. Similarly, bicycle facilities are largely absent, with wide shoulders serving as informal bicycle accommodation in some locations but without dedicated or marked bicycle facilities. Pedestrian and bicycle crossing opportunities are limited throughout the corridor.

Stormwater treatment varies between roadside drainage ditches and curb-and-gutter systems, reflecting corridor constraints and the corridor's transition from a more rural to urban context. Overhead power lines and utilities are present along much of the corridor and represent important considerations for future improvements. Key cross-section context notes include:

- At least 60 feet of continuous right-of-way exists along the corridor.
- Through redevelopment, additional right-of-way is being dedicated, resulting in approximately 72 feet of right-of-way (36 feet on each side of the centerline).
- Recent development projects have constructed either five-foot curb-tight sidewalks on varying sides of the roadway or a 12-foot shared-use path on the west side of the corridor.

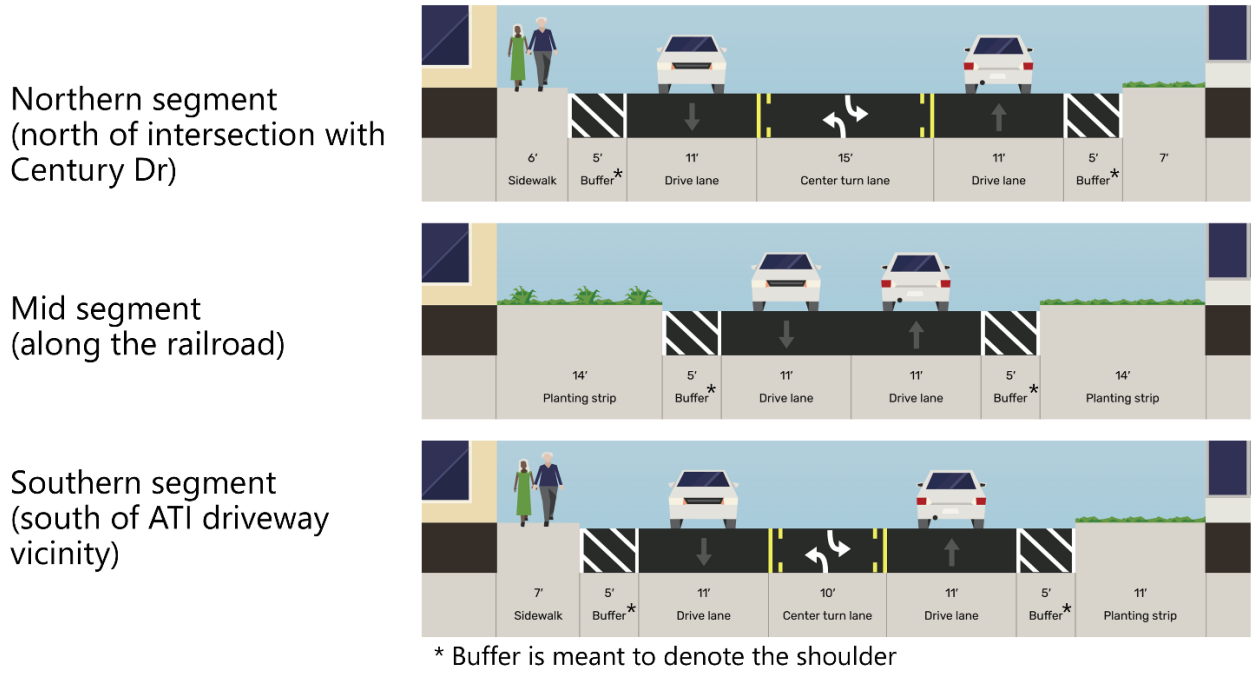


Figure 2. Existing Corridor Cross-Section

Recent Developments and Growth Projections

Recent and planned development in Millersburg is anticipated to influence travel demand and circulation within the Salem Avenue corridor. There are several large developments being built in Millersburg, including the Ball and Timberlab manufacturing facilities. The site map for Timberlab development is included in Appendix A. The Ball site vicinity map is included as Appendix B.

BALL DEVELOPMENT

The Ball Traffic Impact Analysis evaluated two intersections within the study area: Old Salem Rd NE at NE Transition Pkwy and Old Salem Rd NE at Conser Rd NE. The development is located southwest of Old Salem Rd NE and NE Transition Pkwy. The TIA includes operational findings such as level of service, trip generation, and trip distribution patterns. Notably, an estimated 75 percent of project trips are directed south along Old Salem Rd NE, with the remaining 25 percent traveling north. This south-oriented demand may have implications for future capacity and multimodal needs along the corridor.

TIMBERLAB DEVELOPMENT

Timberlab, a subsidiary of Swinerton Construction, is developing a Cross-Laminated Timber (CLT) manufacturing facility on a 33.5-acre site east of the Burlington Northern/Portland & Western Railroad with access via Conser Road. While not directly part of the Salem Avenue project, this facility is expected to generate significant employment (up to 100 jobs with average wages around $80,000) and represents a major industrial investment in Millersburg. The project signals continued economic growth that may

increase freight activity, employee commuting, and overall traffic volumes on Old Salem Road and adjacent network connections.

GROWTH PROJECTIONS

According to U.S. Census, Millersburg's total population in 2020 was 2,919. Millersburg's population has grown to 3,759 in 2026 - an average annual growth rate of nearly 3%. A City-commissioned 2022 Housing Capacity Analysis indicates the city has sufficient buildable land to meet housing demand through 2041. Portland State University forecasted Millersburg's population to reach 5,267 in 2030, 7,717 in 2040, and 8,587 in 2050. Together, this sustained growth and projected development point to increasing corridor multimodal demand and transportation needs.

Needs Assessment

Corridor Infrastructure Gaps and Deficiencies

Most transportation system deficiencies within the study area relate to network connectivity and substandard roadway features. The corridor contains several locations with incomplete or missing urban design elements, including:

- Gaps in the sidewalk network.
- Limited or absent pedestrian crossings.
- Limited or absent bicycle facilities (wide shoulders without marked bike lanes, heavy truck traffic, absent signs).

In addition, projected growth in traffic volumes along the corridor is expected to increase the delay of drivers at side street stop-controlled intersections. In some cases, left turning drivers from key stop-controlled intersections are expected to experience delay that exceeds level of service standards.

Study Intersections

MORNINGSTAR ROAD NE

Currently, Morningstar Road NE intersects Old Salem Road approximately 0.47 miles west of the I-5 overcrossing at Exit 238. To accommodate potential medical facility development in the area (identified by an "X" in Figure 3), Morningstar Road is proposed to be realigned to intersect Old Salem Road approximately 0.27 miles west of the I-5 overcrossing, as shown in Figure 3. The proposed realignment would provide access to the future development, which is currently constrained by its proximity to I-5 and associated access limitations. Under the proposed configuration, the realigned roadway would intersect Old Salem Road directly opposite a major Love's Travel Stop driveway that experiences substantial turning volumes. During public outreach, members of the public noted that southbound trucks waiting to turn left into the Love's driveway can occasionally block through traffic on Old Salem Road.

Review of reported crash data from 2020 through 2024 identified seven total crashes at the existing Morningstar Road/Old Salem Road intersection.

- Crash types include five fixed-object crashes, one turning-movement crashes, and one head-on collision.
- Crash severity: three crashes resulted in property damage only and four resulted in possible or minor injuries.
- Reported contributing factors included failure to yield the right-of-way (**one** crash), driving too fast for conditions or exceeding the posted speed limit (**two** crashes), other improper driving behaviors (two crashes), driver fatigue or drowsiness (one crash), and improper overtaking or passing (one crash).

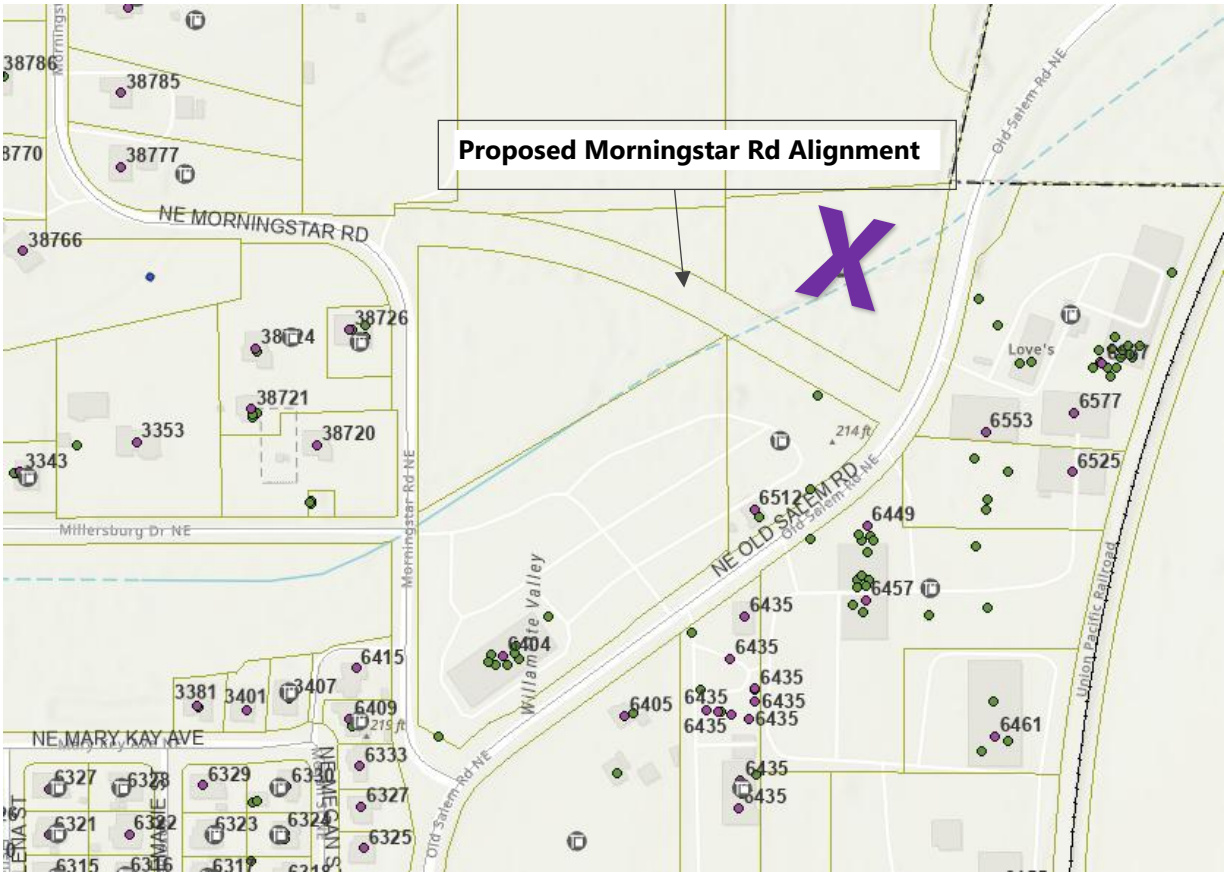


Figure 3. Proposed Future Connection of Morningstar Road

CONSER ROAD NE AND NE TRANSITION PARKWAY

Background

Conser Road NE currently serves as the primary east-west connection for the southern portion of Millersburg's residential area. To support long-planned industrial development south of Conser Road and improve regional connectivity, Transition Parkway is being developed as a new east-west arterial that will ultimately replace Conser Road as the main arterial between Woods Road and Old Salem Road, as shown

in Figure 4. The roadway was designed to provide access to industrial lands, align with the proposed future Murder Creek Interchange on I-5[1], and divert heavy truck traffic away from Conser Road, potentially allowing for reduced operating speeds along the existing corridor. The eastern segment has already been constructed, creating a new intersection with Old Salem Road approximately 1,100 feet south of Conser Road. When completed, Transition Parkway will include a center turn lane, bicycle facilities, sidewalks, and connections to a planned 12-foot-wide multi-use path within a future linear park between Conser Road and Transition Parkway, which will serve as a buffer between residential neighborhoods and future industrial development and connect to the proposed Woods Road shared-use path.

[1] I-5 Reconnaissance Study: https://digitalcollections.library.oregon.gov/nodes/view/221260

Figure 4. NE Transition Parkway and Conser Road NE Proposed Alignment

A review of reported crash data from 2020 through 2024 identified three crashes occurring within 250 feet of NE Conser Road NE intersection:

- The reported crash types are fixed object (one crashes) and turning movement (two crashes).
- Crash severity: two crashes resulted in property damage only and one resulted in possible injuries.
- Crashes are attributed to inattention (one crash), not yielding the right-of-way (one crash), or making improper turn (one crash).

A fatal collision was also reported approximately 400 feet north of the intersection. It was a single vehicle fixed object collision, attributed to other improper driving.

Traffic Operations Assessment

VOLUME DEVELOPMENT

Traffic operations were analyzed at these two study intersections, reflecting 2044 conditions. Future traffic volumes developed by the Timberlab Transportation Planning Rule (TPR) Assessment (Appendix A) were used for this analysis. These forecasts assume an annual traffic growth rate of 1.6 percent, resulting in traffic projections approximately 40 percent higher than those produced by the regional Travel Demand Model. Given the area's recent population growth, development activity, and increasing traffic volumes, the project team determined that the more conservative Timberlab forecasts provide a more appropriate basis for evaluating long-term transportation needs. Additionally, five vehicles were assumed to turn in and out of CRST Transportation Solution driveway (east leg of NE Transition Pkwy) from each movement.

Heavy vehicle percentages were developed using engineering judgment, reflecting current truck activity and anticipated industrial development while recognizing the uncertainty associated with future land use and travel patterns.

INTERSECTION ALTERNATIVES CONSIDERED

Conser Road NE

Given the low projected turning movement volumes at this intersection, a two-way stop control (TWSC) at the Conser Road NE intersection was assumed for the purpose of traffic assessment. To support the recommendations of this study, it was assumed that left turns will be restricted to and from west leg of Conser Road NE. Information about the selection of these solutions are presented in the recommendations section of this report.

NE Transition Parkway

Based on the traffic assessment presented by Timberlab TPR Assessment, a two-way stop control at the NE Transition Parkway intersection will result in delay that exceeds the City of Millersburg and Linn County mobility standards (presented below), given the proposed development and projected traffic growth. The Timberlab TRP Assessment analyzed this intersection being signal controlled in the future and found that it would operate acceptably within those mobility standards. The project team analyzed a roundabout feasibility at this intersection. Results from that evaluation are presented in the Recommendations section of this report.

TRAFFIC DISTRIBUTION

The Timberlab TPR Assessment assumed that all traffic traveling to and from areas west of Old Salem Road would access the roadway network via the NE Transition Parkway intersection. For this study, the project team refined this assumption using engineering judgment and background information provided by the City of Millersburg. The resulting traffic distribution assumes that approximately 80 percent of west-side traffic would use the NE Transition Parkway intersection, while the remaining 20 percent would use the Conser Road NE intersection. Additional adjustments were made to minimize out-of-direction travel and better reflect likely driver behavior. In addition, all left-turn movements to and from the west leg of Conser Road NE were assumed to use the NE Transition Parkway intersection instead.

MOBILITY STANDARDS

The City of Millersburg has adopted a standard of LOS D for all intersections. Linn County has adopted the following mobility standards:

- **Signalized, all-way stop, or roundabout controlled intersections:** a standard of level-of-service (LOS) E and a volume-to-capacity (V/C) ratio not higher than 0.85 for the entire intersection.
- **Two-way stop and yield controlled intersections:** LOS E and a V/C ratio not higher than 0.90 for all intersection approaches serving more than 20 vehicles during the highest one-hour period on an average weekday.

ASSESSMENT RESULTS

The intersection operations analysis was performed by applying *Highway Capacity Manual (HCM), 7th Edition* analysis procedures, using PTV Vistro 2025 and SIDRA 10 software. Given the uncertainty associated with future traffic growth and the conservative traffic volume assumptions used in this analysis, a peak hour factor (PHF) of 1.0 was assumed. This assumption reflects a uniform distribution of traffic demand throughout the peak hour rather than concentrating demand within the peak 15-minute period, which would result in a conservative assessment of future operating conditions.

Table 3 summarizes the traffic operations results for the study intersections, with detailed analysis worksheets provided in Appendix C. As shown, at the **Conser Road NE** intersection, the critical westbound left-turn movement experiences an average delay of 64 seconds, corresponding to Level of Service (LOS) F. As a result, the intersection does not meet the City of Millersburg's mobility standard of LOS D. However, the intersection meets Linn County mobility standards because the critical westbound left-turn

movement has a volume of 20 vehicles per hour and is therefore exempt from the County's mobility criteria. Despite the reported delay, the movement operates well below capacity, with a V/C ratio of 0.21.

As shown in Table 3, a single-lane roundabout at **NE Transition Parkway** intersection is projected to operate at capacity during the 2044 PM peak hour. The critical northbound approach is forecast to have a V/C ratio of 1.0, indicating that demand would approximately equal available capacity during the peak hour. While the intersection-wide operations meet the LOS standards of both the City of Millersburg and Linn County, the projected V/C ratio exceeds Linn County's mobility target. It should be noted that SIDRA roundabout analysis is particularly sensitive to heavy vehicle assumptions. A sensitivity test assuming a 2 percent heavy vehicle share on all approaches reduced the average delay to approximately 15 seconds (LOS C) and lowered the critical V/C ratio to 0.86.

Additional sensitivity analysis was performed to evaluate a roundabout configuration with a dedicated northbound left-turn approach lane in addition to a circulating lane. As documented in Appendix C, this alternative is projected to operate with a critical V/C ratio of 0.74, average delay of 11.5 seconds (LOS B) during the PM peak hour. Under these conditions, the intersection would meet the mobility standards of both the City of Millersburg and Linn County.

Table 3. Year 2044 Intersection Operations

Intersection	Intersection Control	Intersection			Lane Group	PM Peak Hour		
		V/C	LOS	Delay		V/C	LOS	Delay
Conser Road NE / Old Salem Road	TWSC with NB and EB Left-Turn Restrictions	0.21	**F**	64.4	NBTR	—	A	—
					SBL	0.01	B	10.2
					SBTR	—	A	—
					EBR	0.06	B	12.9
					WBL[1]	0.21	F	64.4
					WBR	0.01	C	16.9
NE Transition Parkway / Old Salem Road	Single-Lane Roundabout	**1.00**	D	28.6	NBLTR	**1.00**	E	41.7
					SBLTR	0.60	B	12.1
					EBLTR	0.66	C	18.4
					WBLTR	0.04	B	13.2

Delay is reported in seconds per vehicle.
Bolded values indicate intersection and movements that do not meet the relevant mobility standards.
[1]This approach serves 20 vehicles during the peak hour and thus is not subject to Linn County mobility standards.

CENTURY DRIVE VICINITY

A review of reported crash data from 2020 through 2024 identified 19 crashes occurring in the vicinity of Century Drive intersection:

- Along the curve (red-denoted in Figure 5):

  - Three total crashes, involving fixed object and sideswipe collision types .
  - Crashes attributed to driving not within lane, inattention, and careless driving.
- At the Old Salem Road/Old Salem Road intersection (blue-denoted in Figure 5):
  - Seven total crashes, primarily turning movement and rear-end types.
  - Crashes attributed to failure to yield the right-of-way.
- At the Century Drive intersection (green-denoted in Figure 5):
  - Nine total crashes, with eight being turning-movement and one being a fixed-object.
  - Two crashes are attributed to inattention or reckless driving, and the rest are attributed to not yielding the right-of-way or not stopping at the stop sign.

Identified issues at the Century Drive vicinity include:

- A curve on Old Salem Road, with southbound travel on a downhill grade and limited sight lines for westbound and northbound travelers due to adjacent structures.
- At the Old Salem Road/Old Salem Road intersection: limited sight lines for westbound and northbound approaches, wide turning radii, unclear travel paths, and unpredictable movements due to limited signing and striping.
- At the Century Drive intersection: an eastbound unexpected stop sign with challenging visibility, limited sight lines to the north for right-turning vehicles, and a wide turn radius.

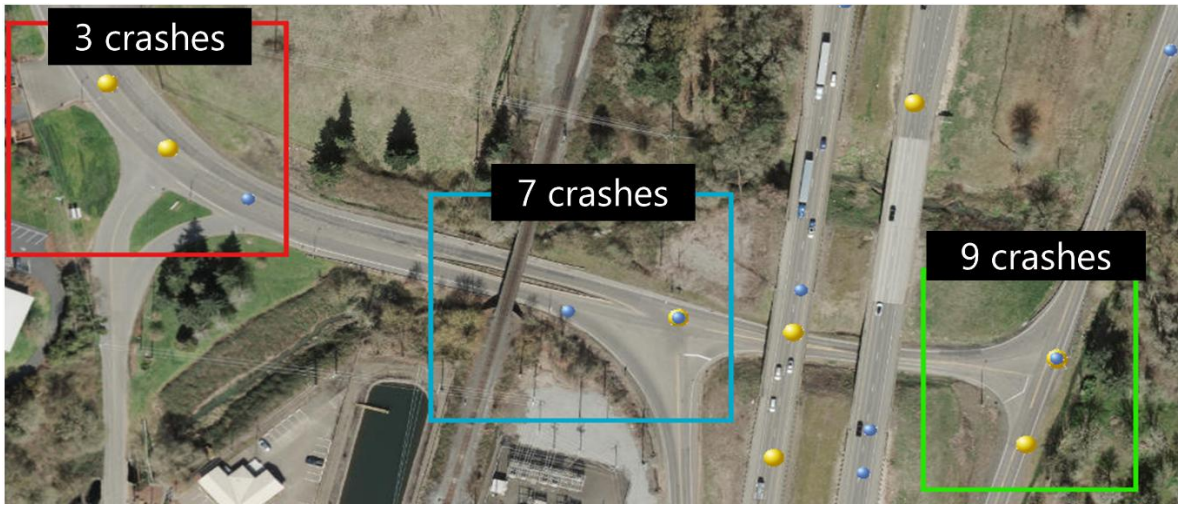


Figure 5. Crashes Reported at Century Drive Intersection Vicinity

Previous planning efforts had identified that the I-5 and railroad overcrossings, as well as the overall topography of the intersection make it infeasible to change control types to a signal or a roundabout at this location and therefore those options were not evaluated through this study.

Recommendations

This section documents concept-level project recommendations. Refinement will be needed during future design to identify and address site specific constraints and support the development of refined cost estimates.

Cross-Section Improvements

The recommendations identify a phased approach to improving Old Salem Road. Near-term improvements focus on lower-cost countermeasures where feasible. Mid-term improvements are intended to be constructed with redevelopment. Long-term improvements establish the ultimate corridor vision and would require roadway reconstruction.

As future corridor planning work advances, it is necessary to evaluate the feasibility of constructing the preferred long-term cross-section at the following **constrained pinch-point locations** (listed North to South):

1. Mid-Willamette Valley Intermodal Center.
2. Railroad undercrossing west of intersection with Century Drive.
3. Bakelite Synthetics site and wetlands across the roadway.
4. Railroad-adjacent segment.
5. Murder Creek bridge.

NEAR-TERM SOLUTION

The near-term recommendation is to restripe the roadway to narrow vehicle lanes and provide buffered bike lanes, as shown in Figure 6. This approach is feasible only north of the Century Drive intersection vicinity, where existing roadway width allows for restriping without reconstruction. This treatment does not require additional right-of-way and can be implemented at relatively low cost compared to reconstruction options.

Key considerations for the near-term solution include:

- Narrowing two-way center turn lane to 12 feet to create space for buffered bicycle facilities within the existing paved width.
  - Bicycle lanes are recommended to be five feet, which is less than the ODOT design standard, due to constraints in the curb-to-curb widths.
  - The buffer zones are recommended to be two feet, which is the minimum buffer width per the ODOT design standard.
- This approach is consistent with the near-term guidance of the AAMPO RTP and Millersburg TSP.
- Buffered bicycle lanes will provide dedicated travel space to support bicycle travel in the area, however they are expected to be only suitable for confident riders, given the high motor vehicles speeds and presence of heavy vehicles.

- Narrowed travel lane widths to provide space for the bike lanes and support reduced motor vehicle speeds.

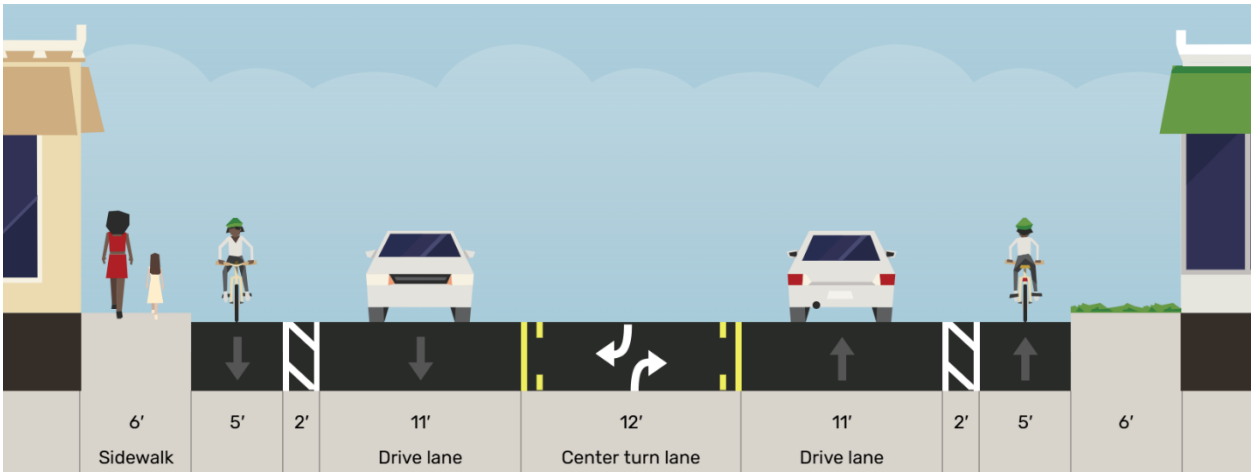


Figure 6. Near-Term Cross-Section Recommendation (north of Century Drive vicinity)

MID-TERM SOLUTION – REDEVELOPMENT

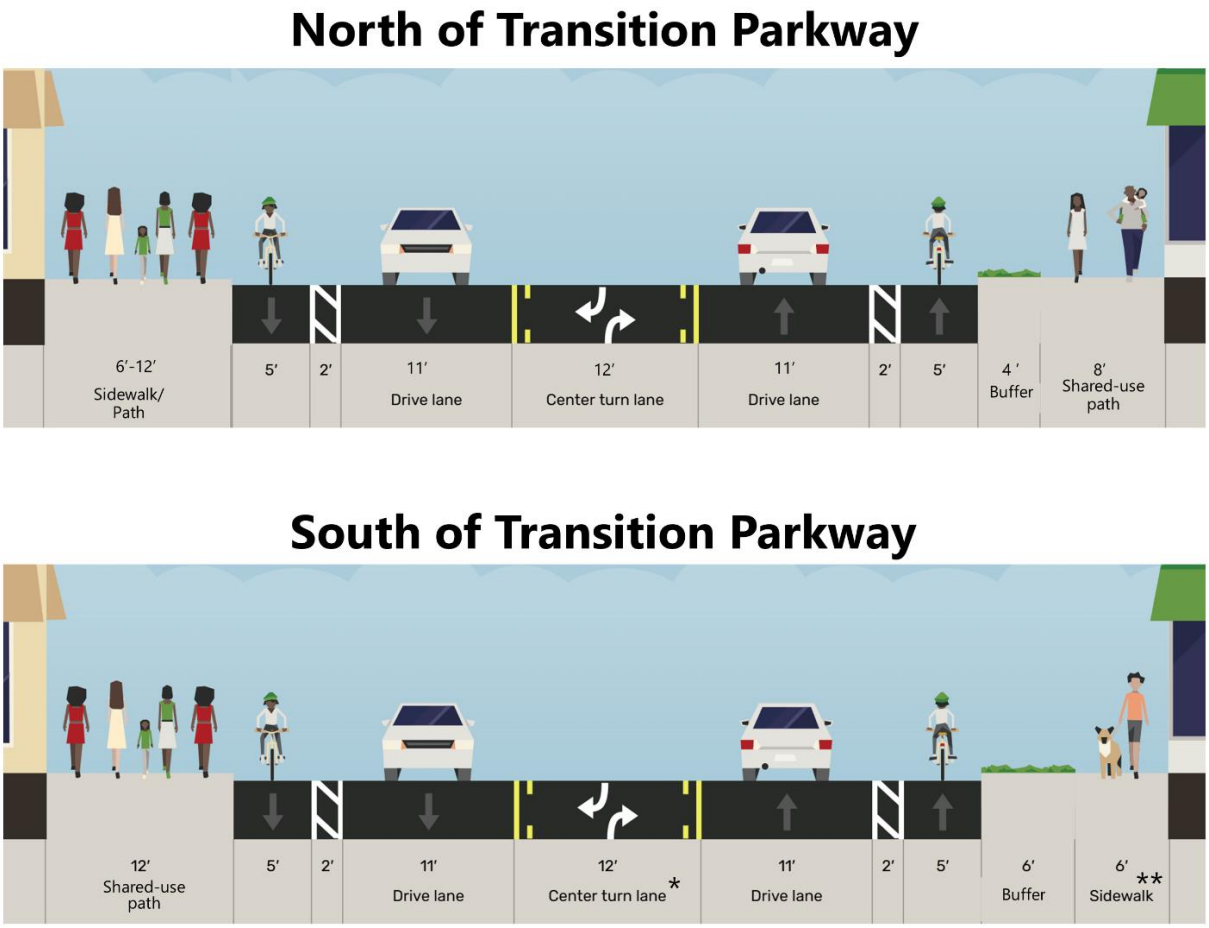
The mid-term recommendation is to construct active transportation facilities incrementally as redevelopment occurs along the corridor, as shown in Figure 7. This approach advances the corridor toward the long-term vision while recognizing that full roadway reconstruction may not be feasible in the near term. By leveraging frontage improvements and redevelopment requirements, the recommendation allows pedestrian and bicycle facilities to be implemented over time while maintaining existing curb-to-curb (edge of pavement to edge of pavement) width.

Key considerations for the mid-term solution include:

- This mid-term solution requires developers to dedicate a 36 feet right-of-way from the centerline, which is consistent with current requirements for development along the corridor.
- This solution only applies to the facilities beyond the curb/edge of pavement line. It does not recommend changing the corridor pavement width.
- Different cross-section treatments are recommended north and south of NE Transition Parkway to reflect varying corridor conditions and long-term facility plans.
  - **North of NE Transition Parkway:**
    - West side (not expected to be redeveloped in near future): Construct a 12-foot-wide asphalt shared-use path. Keep the buffered bicycle lane in place to allow for continuous facilities.
    - East side: Construct an 8-foot-wide shared-use path with a 4-foot landscape buffer. Keep the buffered bicycle lane in place.
  - **South of NE Transition Parkway:**
    - West side: Construct a 12-foot-wide asphalt shared-use path.

  - East side: Construct 6-foot sidewalk with a 6-foot landscape buffer. Keep the buffered bicycle lane in place. Do not construct sidewalk along segments in close proximity to I-5 (less than 130 feet).
  - Do not construct two-way center-turn lane along segments where it is not currently present, as constraints exist.

- Landscape buffer space:
  - Can be used to accommodate power lines and stormwater facilities.
  - In constrained areas, the landscaping buffer can be reduced to 3 feet or be removed completely.
  - Where relocating power line, stormwater or other utility facilities is deemed too expensive, the development may dedicate more space to the landscape buffer and construct the shared-use path and sidewalk facilities further away from the roadway.
- The incremental improvements help address existing gaps in the pedestrian and bicycle network and improve access to adjacent destinations. However, narrow separation from the motor vehicle traffic and piecemealed facilities is not expected to result in comfortable walking and biking facilities for people of all ages and abilities.



* Center turn lane is only recommended for the segments where it is currently present
** Sidewalk on the east side is not recommended along the portions of the roadway adjacent to I-5

Figure 7. Mid-Term Cross-Section Recommendation (implement with redevelopment)

LONG-TERM SOLUTION

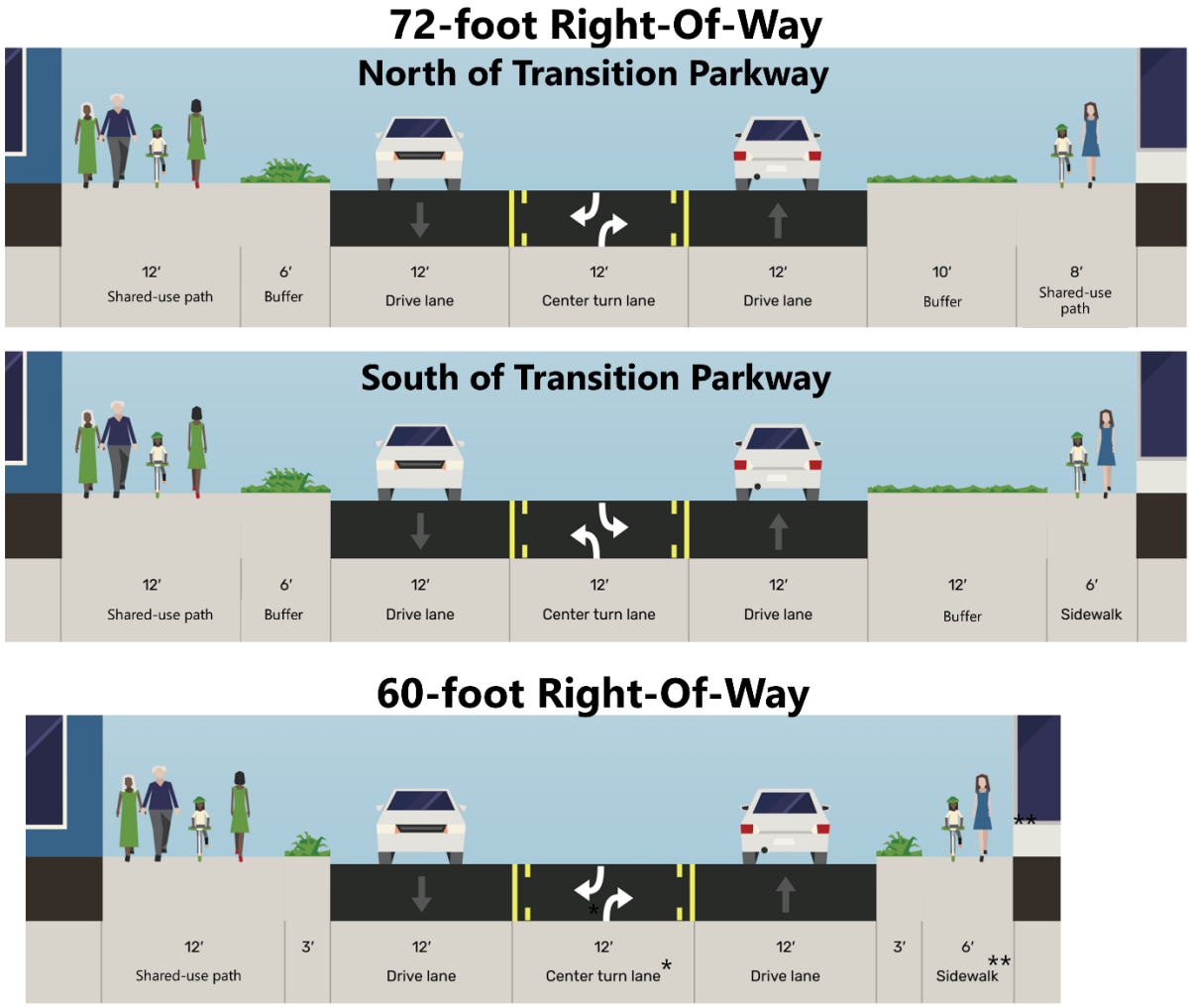
The long-term recommendation is to reconstruct Old Salem Road to achieve a cross-section that supports all travel modes and the corridor's planned land use vision, as shown in Figure 8. This recommendation represents the ultimate build-out condition for the corridor and is intended to provide a comfortable, connected, and durable multimodal facility that supports future population growth and active transportation. Compared to the near-term and mid-term recommendations, the long-term solution provides substantially greater separation from motor vehicle traffic and is expected to create a more comfortable environment for active transportation users of all ages and abilities. Because corridor constraints vary, two cross-section variants are recommended based primarily on the availability of 30 feet or 36 feet of right-of-way from the roadway centerline and the surrounding development context. Thirty-feet is relevant for locations that have not had redevelopment, while 36-feet is expected to be dedicated in locations that have redeveloped.

Key considerations for the long-term solution include:

- This solution requires full roadway reconstruction and narrowing of the pavement width. It is expected to be implemented as funding becomes available or in conjunction with major corridor redevelopment projects.
  - It does not need to occur on the entirety of the corridor at once and can be implemented in sections. However, those sections should be substantial in length (greater than approximately 150 ft) to minimize varying pavement width along the corridor.
- The ultimate long-term cross-section provides a shared-use path on the west side of the corridor and a sidewalk or a path on the east side, creating continuous pedestrian and bicycle facilities throughout the study area.
  - **In less-constrained areas** (where 36 feet from the centerline is available):
    - West side: Construct a 12-foot wide shared-use path with a six-foot landscape buffer.
    - East side:
      - North of Transition Parkway: Construct an eight-foot wide shared-use path with a ten-foot wide buffer to create continuous facilities in alignment with the cross-section constructed by redevelopment.
      - South of Transition Parkway: Construct a six-foot wide sidewalk with a 12-foot wide buffer.
  - **In more constrained areas** (where 30 feet from the centerline is available):
    - West side: Construct a 12-foot-wide shared-use path with a three-foot landscape buffer.
    - East side: Construct a six-wide sidewalk with a three-foot landscape buffer.
    - These recommendations will require shifting the centerline or having an asymmetrical cross-section in constrained areas to be able to provide high comfort walking and biking facilities on the west side of the road.
  - For both options:
    - Preserve the sidewalk and shared-use path facilities constructed with redevelopment.

- In areas where a sidewalk is already present on the west side, consider expanding it to 12-feet to create a shared-use path and to reduce construction cost.
- Construct raised medians in locations where driveway or intersection access is not required. Consider providing planted median if maintenance responsibilities can be established.

- Wider landscape buffer space provides separation between active transportation facilities and motor vehicle traffic, improving user comfort and perceived safety. Buffer areas can also accommodate utilities, power poles, drainage facilities, and stormwater treatment where appropriate.
- The landscape buffer can be used as flex space. It can be completely eliminated at pinch-point locations or it can be widened beyond the recommended width to accommodate utilities.
- Raised medians are intended to improve corridor safety by reducing conflict points, limiting uncontrolled turning movements, and slowing vehicles traveling at excess speeds while maintaining access at designated locations.



* Center turn lane is only recommended for the segments where it is currently present. Where feasible, construct median
** Sidewalk on the east side is not recommended along the portions of the roadway adjacent to I-5

Figure 8. Long-Term Cross-Section Recommendation

Depending on maintenance responsibilities and site-specific conditions, buffers may consist of landscaped areas, pavers, gravel, or other low-maintenance treatments, as shown in Figure 9. Figure 9 also demonstrates an example of a concrete shared-use path, located in Milwaukie, OR, which can be constructed in areas where an existing sidewalk is being widened to create a path.

Figure 9. Shared-Use Paths Examples

Study Intersection Improvements

The following sections present the recommendations at each key study intersection throughout the corridor.

MORNINGSTAR ROAD NE

If significant development occurs in the future alignment of Morningstar Road NE vicinity and the roadway is realigned as presented in the Needs Assessment section of this document, the project team recommends considering the construction of a single-lane roundabout at the intersection. A roundabout at this location would:

- Improve safety by reducing conflict points and vehicle speeds.
- Improve future traffic operations as volumes increase with development.
- Serve as a gateway feature for Millersburg, specifically for those drivers exiting I-5 just to the north of this location.
- Accommodate large truck turning movements at Love's Driveway.

A draft conceptual roundabout layout is presented in Figure 10 and should be refined as part of a detailed planning study, specifically with respect to access management and southbound left turns into Love's truck stop.

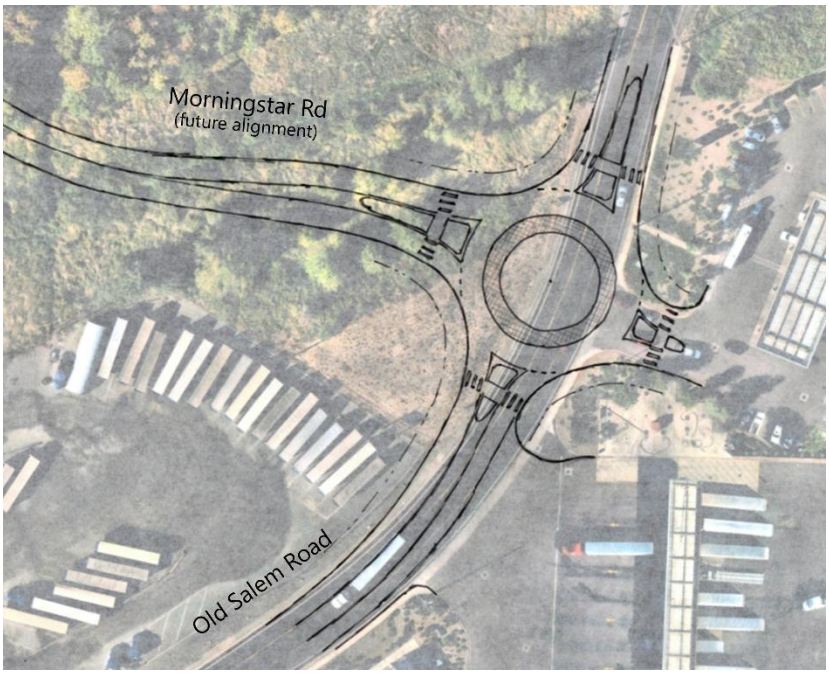


Figure 10. Conceptual Roundabout Alignment (at future Morningstar Rd NE alignment)

CONSER ROAD NE AND NE TRANSITION PARKWAY

Based on the evaluation of traffic operations presented above and safety considerations, the following recommendations are made for the Conser Road NE and NE Transition Parkway intersections.

NE Transition Parkway

Construct a single-lane roundabout to slow speeds, serve as a gateway treatment to the residential portion of Millersburg for northbound vehicles, and improve future traffic operations. Figure 11 presents a draft single lane roundabout concept at NE Transition Parkway intersection.

- Design the roundabout to accommodate larger truck turning movements consistent with adjacent industrial land uses.
- Construct a roundabout in such a manner that it can accommodate a northbound left turn lane addition. This can be achieved by constructing wider splitter islands that could be narrowed in the future (not depicted in Figure 11).

Monitor traffic growth and if volumes in the area increase, add the additional northbound left turn lane to the roundabout.

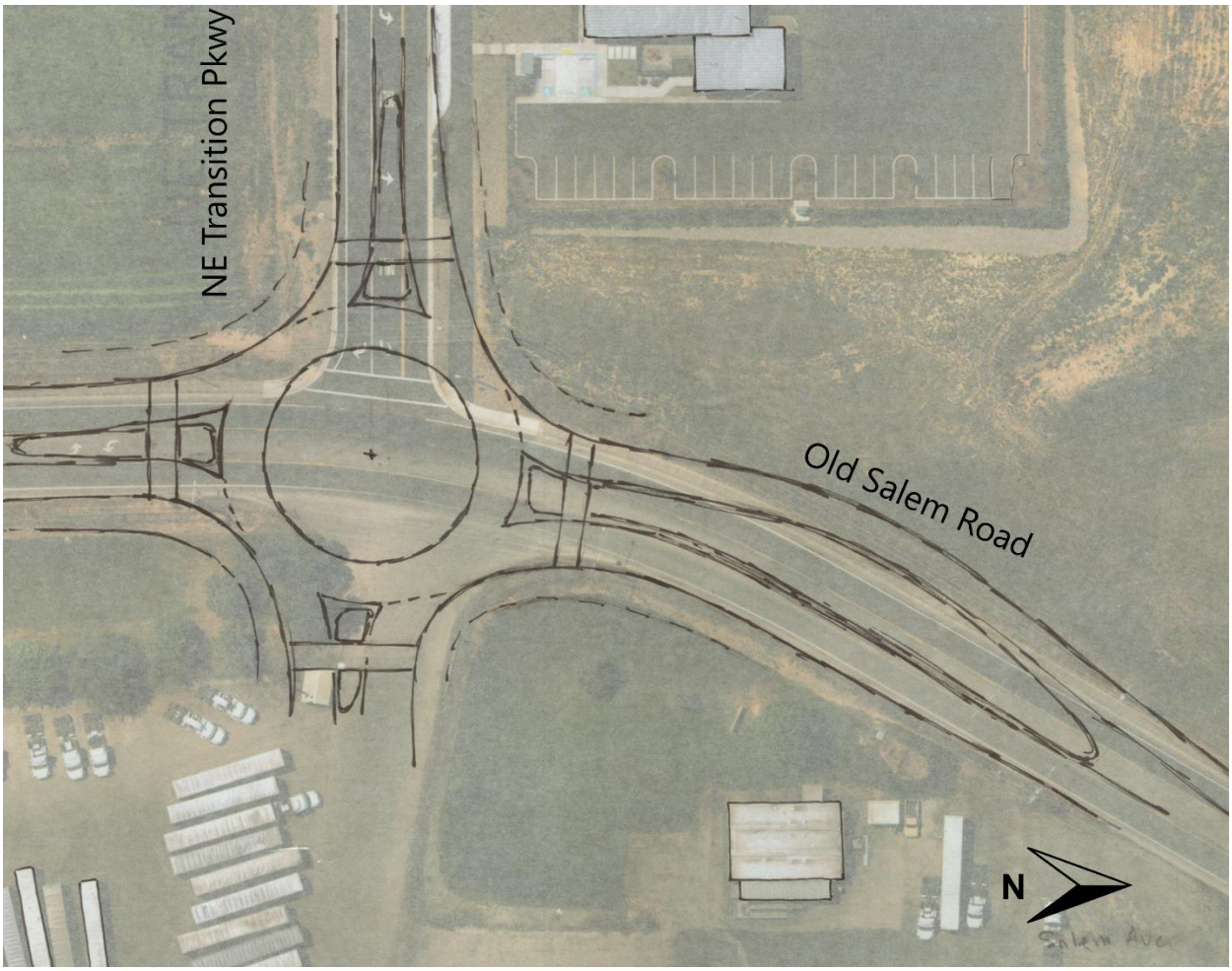


Figure 11. Draft Roundabout Concept at NE Transition Parkway Intersection

NE Conser Road

To occur concurrently with the roundabout construction at Transition Parkway intersection:

- Restrict left turns in and out of the east leg using striping and signage only. Left turning vehicles will then use the roundabout at Transition Parkway to reduce potential turning movement conflicts and improve traffic operations.

To complete independently, if desired (could be completed near-term):

- Realign the east leg of the NE Conser Road intersection approximately 10 feet north to reduce conflicts between turning vehicles and simplify intersection geometry.

A draft sketch of the roadway realignment and left turn restrictions and signage is presented in Figure 12.

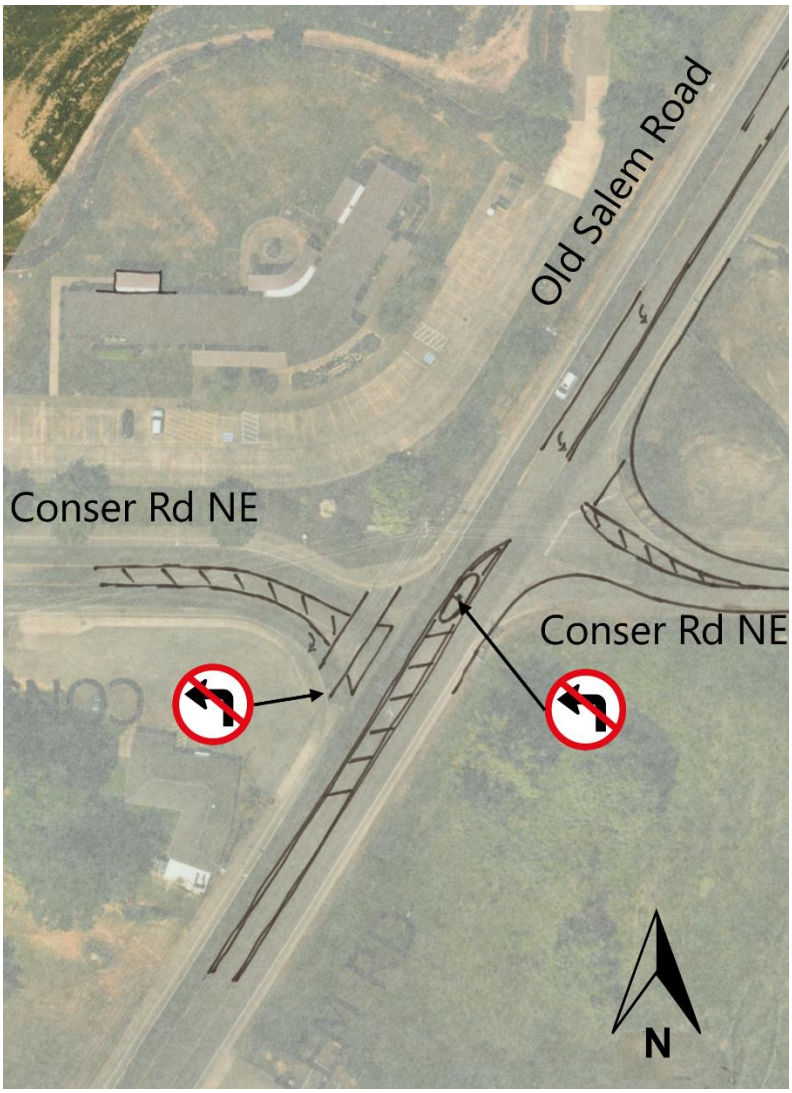


Figure 12. Coser Road NE Realignment and Turn Restrictions Recommendation

Because NE Transition Parkway is planned to be the future arterial, Conser Road NE traffic volumes are not expected to increase significantly, and side street stop control with the proposed left turn restrictions is anticipated to be sufficient for future operations at Conser Road NE.

If traffic volumes increase significantly on Conser Road NE, though, a single-lane roundabout can be constructed at this intersection to enable more efficient traffic flow. The draft roundabout concept shown in Figure 13 impacts the property at the SE corner and the parking lot at the City Hall on the NE corner. Additional traffic operations and a design feasibility study are recommended to be completed in the future if traffic patterns shift substantially, triggering this recommendation.

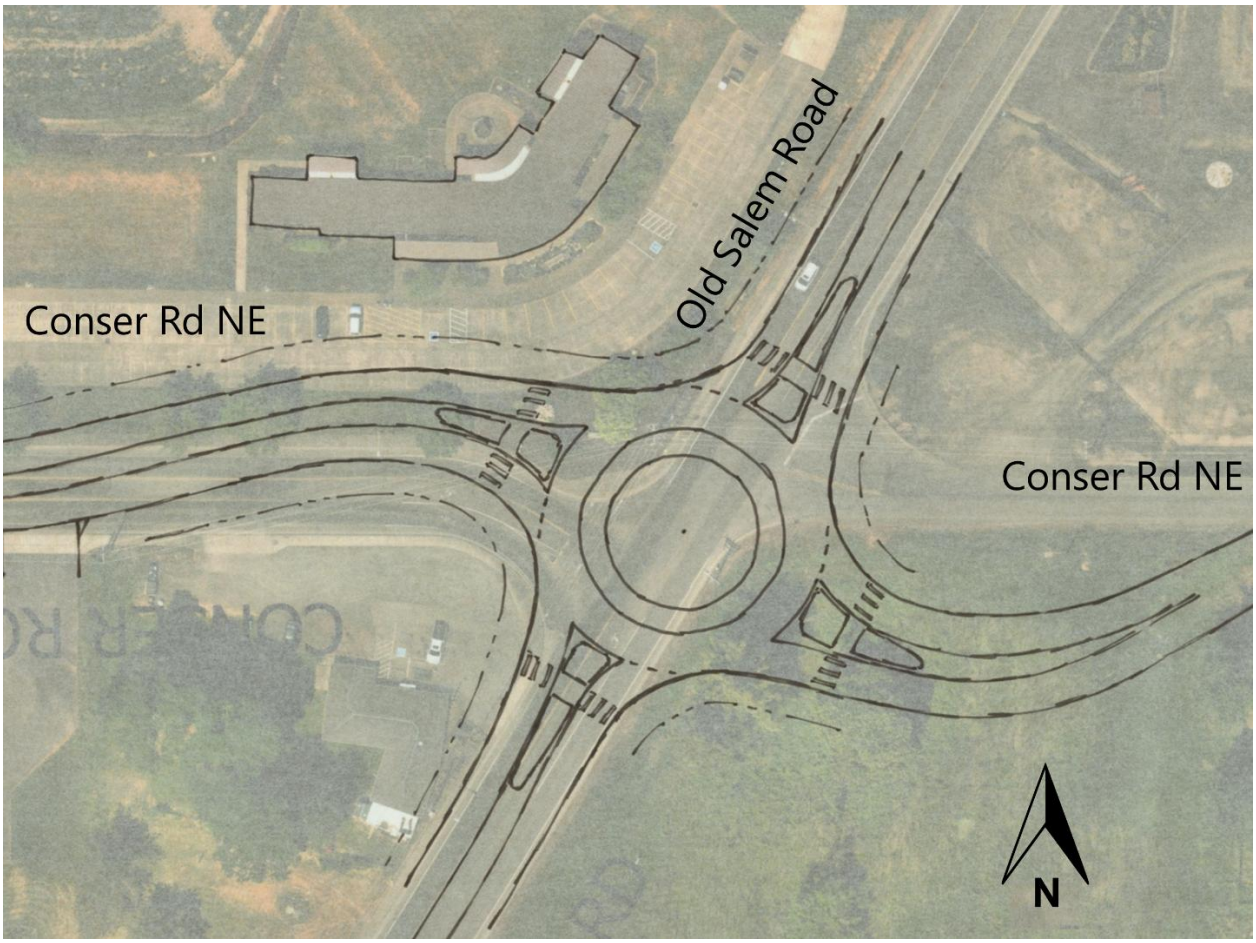


Figure 13. Potential Draft Roundabout Concept at Conser Road NE Intersection

CENTURY DRIVE VICINITY

Recommendations for the Century Drive vicinity address the identified crash patterns and sight-line deficiencies at three sub-locations: the curve, the Old Salem Road/Old Salem Road intersection, and the Century Drive intersection itself.

Curve Improvements

- Complete an engineering evaluation of curve warning signing, including:
  - Replace existing Curve (W1-2) advance warning signs with oversized signs installed in accordance with MUTCD Section 2C.04.
  - Consider use of oversized W1-2 signs to improve conspicuity on the approach.
  - Conduct a ball-bank study to determine the appropriate advisory speed for the curve. If the established comfortable operating speed is at least 10 mph below the posted speed limit, install an Advisory Speed plaque (W13-1P) consistent with ODOT Sign Policy (2026) and MUTCD Section 2C.59.
  - If a speed advisory plaque is provided due to low advisory speeds, install a speed feedback sign in conjunction.

  - Install Chevron Alignment signs (W1-8) along the outside of the curve to improve delineation and guide drivers through the horizontal alignment in accordance with MUTCD Section 2C.08.
- Consider addition of optical speed bars to reinforce speed reduction through the curve (see #1 in Figure 14).
- Consider restricting access from the west leg of NE Nygren Road to Old Salem Road to reduce conflict points and improve safety (see #2 in Figure 14). Outreach to key users of NE Nygren Road is recommended before implementing this recommendation.

Old Salem Road/Old Salem Road Intersection

- Stripe a westbound right-turn lane (see #3 in Figure 14):
  - Option 1: Channelized right-turn lane.
  - Option 2: Short pocket storage lane and reduce the southwest corner turning radius using mountable curb or striping treatments.
- Relocate the northbound stop bar further north to improve intersection visibility and queue storage (see #4 in Figure 14).
- Install Intersection Ahead (W2-4) warning signs on all applicable approaches in accordance with MUTCD guidance.
- Refresh retroreflectivity of existing median delineators to improve nighttime visibility.

Century Drive Intersection

- Reduce the southwest and northwest corner turning radius using mountable curb or striping to better control turning speeds (see #5 and #6 in Figure 14).
- Install an oversized STOP (R1-1) sign on the right-hand side of Old Salem Road to improve conspicuity (see #5 in Figure 14).
- Evaluate truck turning movements and consider installation of a median island with STOP control to clarify right-of-way assignments and vehicle paths (see #7 in Figure 14).
- Add a Two-Direction Large Arrow sign (W1-7) at the west leg of the T-intersection to reinforce expected turning movements and improve driver expectancy (see #8 in Figure 14).

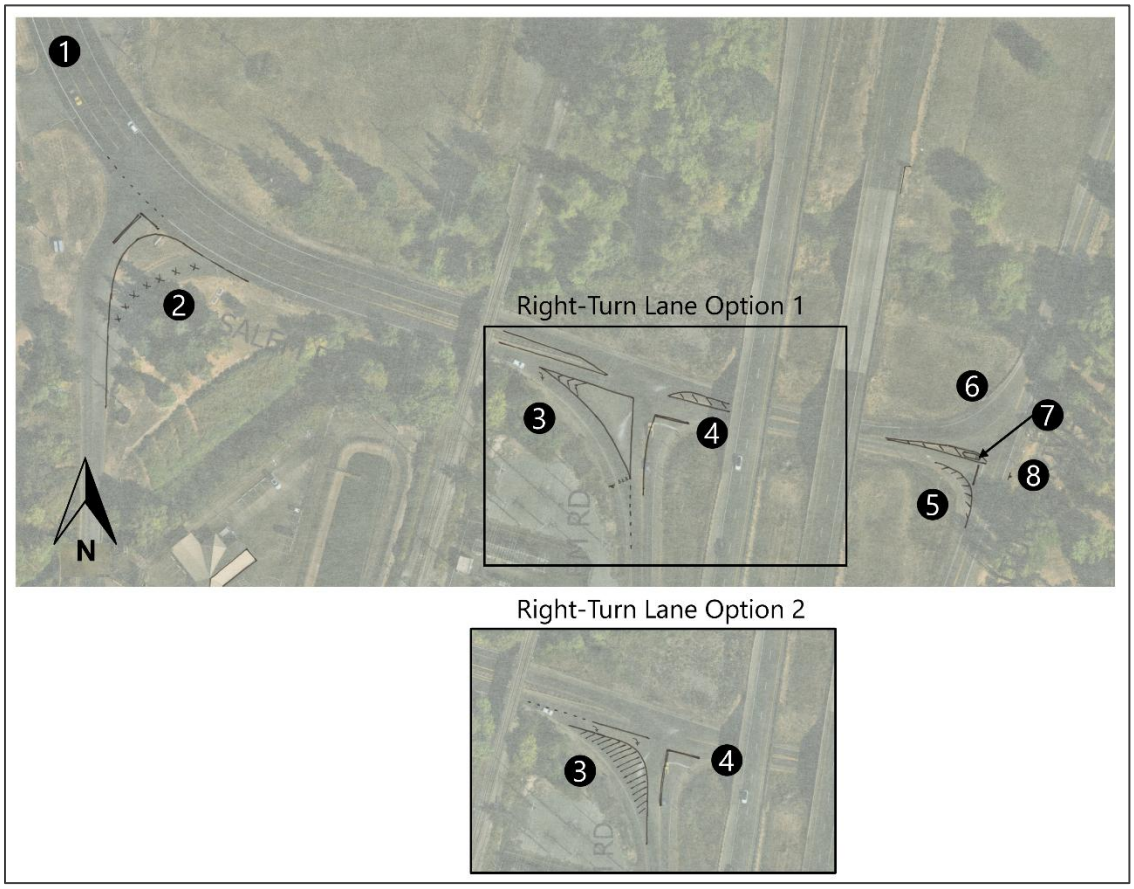


Figure 14. Century Drive Intersection Vicinity Recommendations

Other Recommended Improvements

Additional improvement recommendations for the Old Salem Corridor study corridor include:

- Construct enhanced crosswalks in the near-term that provide high visibility crosswalk markings, enhanced crossing beacons (based on Table 1 of FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations), and concrete medians at the following locations along Old Salem Road corridor:
    1. Approximately 500 feet east of Morningstar Road NE intersection, at the Tradewinds Transportation and Henry's Food Court driveways (consistent with previous planning projects).
    2. In vicinity of 54th Avenue NE and Western Way NE to support a proposed religious institution development on the east side of Old Salem Road.
    3. Near ATI Specialty Alloys & Components driveway (consistent with previous planning projects).
- Provide speed feedback signs at key locations, with consideration for the following locations:
    1. Southbound approaching the curve prior to the intersection with Century Drive NE, if advisory speeds are less than 10mph below the speed limit.
    2. Approaching the 35 mph sections of the corridor.

- Review driveway curb return radii and reconstruct oversized driveways and curb returns with tighter radii where feasible to reduce vehicle turning speeds, shorten pedestrian crossing distances, and improve pedestrian and bicycle safety.

Future Studies Recommendations

Based on the findings of this scoping study, the following additional studies and actions are recommended to advance project planning and implementation along the Old Salem Road corridor:

- **Speed study and speed limit reduction:** Following implementation of speed feedback signs and roadway restriping improvements, a follow-up speed study should be conducted to document operating speeds relative to posted speed limits and to inform potential future speed limit modifications with the intention of lowering the speed limit, especially between NE Transition Pkwy and Morningstar Rd NE to better match the urban context.
- **Concept-level corridor design:** (approximately 15% design): Advancement of the proposed long-term corridor improvement concept should include preliminary engineering design, including a detailed right-of-way and constraints assessment. Multiple locations along the corridor may present constraints that could affect feasibility of the long-term cross-section, requiring refinement during this phase. Concept-level corridor design can also support identification of project construction phasing that could reduce total project construction cost.
- Additional crossing opportunities and coordination with adjacent planned projects along Old Salem Road should be considered at this stage.
- **Concept-level intersection designs:** (approximately 15% design): Preliminary design of proposed roundabouts and intersection improvements should be completed to confirm geometric feasibility, operational performance, and right-of-way requirements.
- **Crossing evaluation:** As development within Millersburg continues, additional pedestrian crossing locations should be evaluated to improve safety and connectivity for people walking and biking.
- **Traffic growth monitoring at NE Transition Parkway and NE Conser Road:** Ongoing monitoring should be conducted to assess traffic growth trends and determine whether additional capacity improvements, including potential roundabout expansion or future roundabout implementation at Conser Road, are warranted.
- **Transportation study for future redevelopment:** When redevelopment of the property north of the Love's site advances and the Morningstar Road NE realignment is implemented, a new transportation study should be completed to determine appropriate traffic control and operational requirements for the reconfigured intersection network.

Cost Estimates

Appendix D presents a high-level cost estimate for the proposed corridor alternatives, including both near-term and long-term scenarios. Both estimates are based on bid-prices by private contractors. Costs may be reduced if improvements are implemented in phases or coordinated with planned roadway replacement or redevelopment activities. However, the estimates do not account for potential cost increases associated with constrained or pinch-point locations identified above, which may require additional design or mitigation measures.

Near-term cost estimate: $1,400,000

- Assumes restriping of the corridor north of Century Drive (no repaving).
- Installation of speed feedback signs.
- Construction of enhanced pedestrian crossing improvements.
- Striping and signage improvements in the Century Drive vicinity.
- Engineering and construction management.
- 40 percent contingency.

Long-term cost estimate: $33,600,000

- Assumes full corridor repaving and restriping (actual pavement rehabilitation needs may vary pending future design). Does not assume roadway reconstruction.
- Construction of an asphalt shared-use path along the full corridor.
- Construction of concrete sidewalk on the east side where gaps currently exist.
- Installation of a vegetated buffer between the roadway and shared-use path.
- Construction of a concrete median along approximately 50 percent of the corridor.
- Construction of a single-lane roundabout at NE Transition Parkway.
- Realignment and restriping of Conser Road.
- No right-of-way acquisition assumed.
- Engineering and construction management.
- 40 percent contingency.

Additional assumptions are provided for each cost item in Appendix D.

Appendix A: Timberlab TPR Assessment

MILLERSBURG GOAL EXCEPTION

TRANSPORTATION PLANNING RULE ASSESSMENT

April 24, 2024

160 Madison St, Suite A
Eugene, OR 97402

SANDOW ENGINEERING

Transportation Planning Rule Assessment

Millersburg Goal Exception

Millersburg, Oregon

April 23, 2024

Kelly Sandow PE

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project # 6109

EXECUTIVE SUMMARY

The City of Millersburg is seeking exceptions to Statewide Planning Goals 3 and 14 (**Goal Exception**) for a driveway to provide access to a set of parcels on the western edge of the City, within the City's Urban Growth Boundary (**UGB**). The driveway is located on Tax Lot 402 of Assessor's Map 10S-03W-20. This tax lot is outside UGB and is zoned Linn County Exclusive Farm Use (**EFU**). The driveway will connect to Conser Road and provide access to and allow use of Tax Lots 106, 203, 206, and 207 of Assessor's Map 10S-03W-29. These lots are subject to the City's zoning jurisdiction and are zoned General Industrial.

This report evaluates the effect of the Goal Exception on the transportation system in accordance with the Statewide Planning Rule Criteria Division 12, Transportation Planning Rule OAR 660-012.

RECOMMENDATIONS

As demonstrated within this report:

- The site access connection and adjacent intersections meet all applicable mobility standards through the 20-year planning horizon with the requested access through Tax Lot 402.
- The queuing at the requested access connection on Conser Road and at the adjacent intersections does not cause any operational concerns on the transportation system.
- There is no history of crashes within the area that need to be mitigated to facilitate safe vehicle movements resulting from the Goal Exception.
- Trucks can safely maneuver through the site access connections and adjacent intersections.
- There is no off-site mitigation recommended for the proposed Goal Exception.
- The City of Millersburg's Transportation System Plan evaluated the transportation system assuming Tax Lots 106, 203, 206, and 207 could be served via an extension of Nygren Road to the west. The access connection will require crossing the BNSF railroad that runs along the western border of the site. The connection across the rail line is not feasible due to the construction and cost constraints that are outlined within the application materials. Therefore, the connection north through Tax Lot 402 to Conser Road is the only feasible access connection for these lots.

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1.0 PROJECT REQUEST AND BACKGROUND

The City of Millersburg is seeking exceptions to Statewide Planning Goals 3 and 14 (**Goal Exception**) for a driveway to provide access to a set of parcels on the western edge of the City, within the City's Urban Growth Boundary (**UGB**). The driveway is located on Tax Lot 402 of Assessor's Map 10S-03W-20. This tax lot is outside UGB and is zoned Linn County Exclusive Farm Use (**EFU**). The driveway will connect to Conser Road and provide access to and allow use of Tax Lots 106, 203, 206, and 207 of Assessor's Map 10S-03W-29. These lots are subject to the City's zoning jurisdiction and are zoned General Industrial.

This report evaluates the effect of the Goal Exception on the transportation system in accordance with the Statewide Planning Rule Criteria Division 12, Transportation Planning Rule OAR 660-012.

Tax Lot 402 (the subject site) is bordered by Conser Road to the north, the Portland & Western Railroad Inc. rail line to the east, farm fields to the west, and City-owned vacant industrial property to the south. The subject site currently has agricultural use. Figure 1 provides an illustration of the site location.

Tax Lots 106, 203, 206, and 207 comprise approximately 74.69 acres and are located directly south of the subject site. These tax lots are zoned General Industrial and are assumed to be built out within the City of Millersburg Comprehensive Plan 20-year planning horizon. It was previously assumed that these industrial-zoned tax lots would be able to access the transportation network via an extension of Nygren Road to the west, providing a connection to Old Salem Road at Nygren Road. There is currently an undersized undercrossing on private land along the Nygren Road alignment that is unable to be used for access to Tax Lots 106, 203, 206, and 207, as detailed in the application materials. Additionally, the City is unable to gain permission for any new at-grade crossing across any section of the railroad tracks, and it is not feasible to construct a new overcrossing or a new below-grade crossing. Therefore, no legal access currently exists for these properties. The only access option to allow for the imminent development of these properties is a connection to the north to Conser Road. To reach Conser Road, the access must cross Tax Lot 402, which is outside of the UGB and is zoned EFU. The City of Millersburg is seeking the Goal Exception to allow for the development of a driveway on Tax Lot 402. Figure 2 provides an illustration of the Goal Exception area and the areas served by the proposed driveway.

2.0 EVALUATION CRITERIA

This report demonstrates compliance with the provisions of the Transportation Planning Rule, OAR Chapter 660, Division 12, and the Linn County Comprehensive Plan, concerning whether an amendment to the Linn County Comprehensive Plan will have a "significant affect" on the transportation system.

OAR 660-012-0060:
The Transportation Planning Rule is set out in OAR Chapter 660, Division 12. Section 0060 of the Transportation Planning Rule (OAR 660-012-0060) requires local governments to consider whether a proposed amendment to an acknowledged comprehensive plan would "significantly affect an existing or planned transportation facility."

The Goal Exception requires an amendment to the Linn County Comprehensive Plan. Accordingly, this report considers whether providing access via Tax Lot 402 would significantly affect an existing or planned transportation facility.

OAR 660-012-0060(1) provides:

> *(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:*
>
> > *(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
> >
> > *(b) Change standards implementing a functional classification system; or*
> >
> > *(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection. If a local government is evaluating a performance standard based on projected levels of motor vehicle traffic, then the results must be based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.*

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Linn County Comprehensive Plan:

Consistent with OAR 660-012-0060, the Linn County Comprehensive Plan requires an evaluation of whether a transportation project will significantly affect the County's transportation system.

Linn County Code 907.230 provides in relevant part:

(E) Comprehensive Plan or Land Development Code amendments.

(1) A Comprehensive Plan or Land Development Code amendment significantly affects transportation if:

(a) it changes the function of a planned transportation facility;

(b) it changes standards for a functional classification system; or

(c) it would increase or decrease the level of a transportation facility's activity beyond an acceptable level.

(2) Findings shall be made to determine the extent of any impact and suggest ways to mitigate any adverse impacts.

TSP Consistency:

OAR 660-012-0060(1) typically applies to amendments to comprehensive plans or land use regulations to allow development that will generate additional traffic. For example, a comprehensive plan map amendment may allow for a greater density of development than allowed under the existing land use designation. In those instances, the relevant question is whether the existing and planned for transportation facilities will be able to accommodate that traffic without resulting in traffic congestion that leads to unacceptable levels of service.

In this case, the proposed amendment to the Linn County Comprehensive Plan (the Goal Exception) does not change the land use designation or zoning that applies to Tax Lot 402. The Goal Exception only allows a private access road on Tax Lot 402.

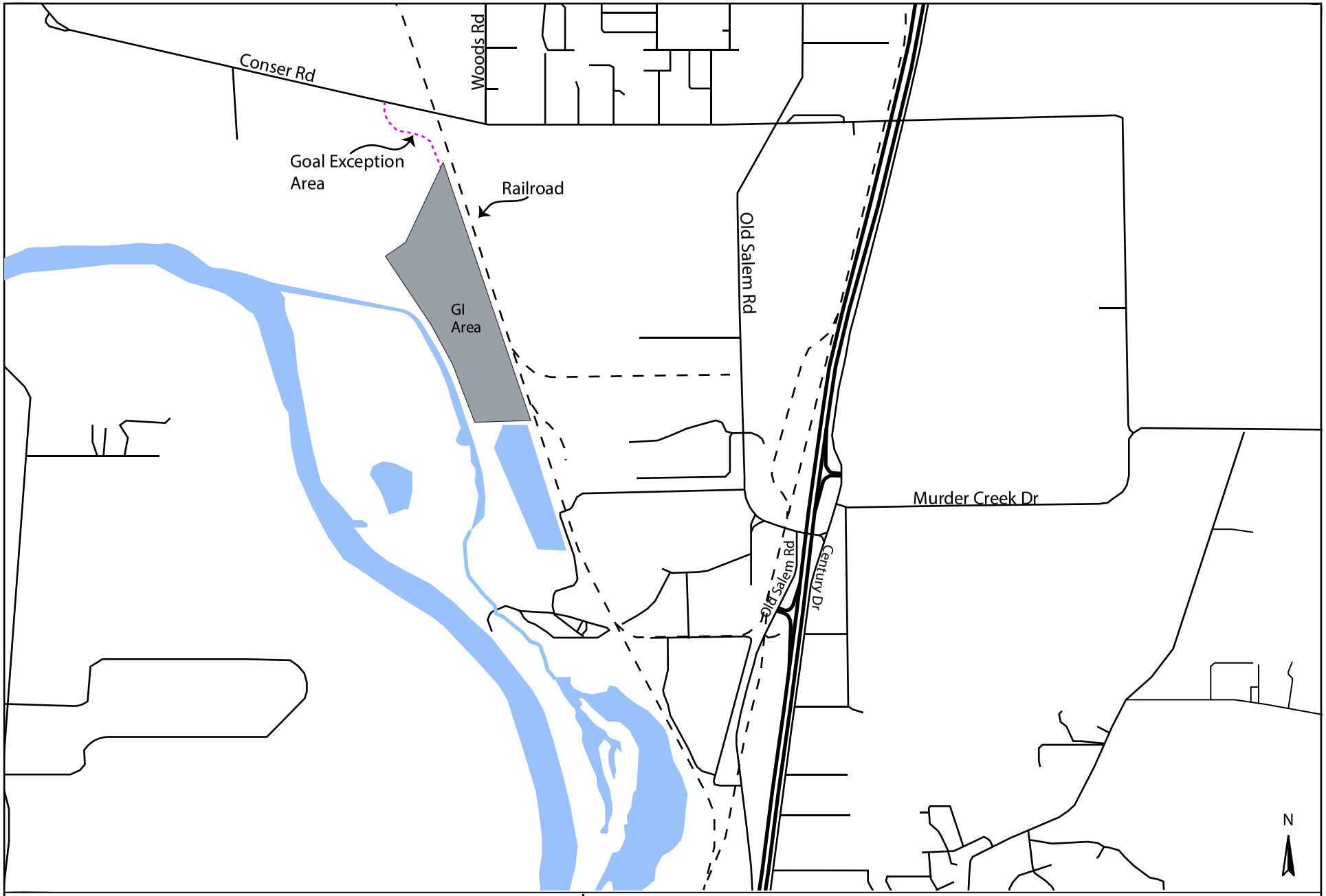
The private access road will serve Tax Lots 106, 203, 206, and 207, which are within the City's UGB and are already zoned General Industrial. The Goal Exception does not change the zoning of those tax lots.

The City of Millersburg TSP and the Linn County TSP already assume that Tax Lots 106, 203, 206, and 207 will be developed for industrial use in accordance with the General Industrial zone that applies to those properties. Accordingly, it is not necessary to analyze the industrial development of Tax Lots 106, 203, 206, and 207 on the transportation system. Such development is already accounted for in the City of Millersburg TSP and Linn County TSP. Instead, this report analyzes the effect of changing the location of access to Tax Lots 106, 203, 206, and 207 to Conser Road.

The City of Millersburg TSP previously assumed that access to Tax Lots 106, 203, 206, and 207 would be provided via a connection to the western terminus of Nygren Road, and then to Old Salem Road. This access route would require a new railroad crossing. However, the City is unable to obtain approval for a new railroad crossing to provide access anywhere along the railway. As such, this report analyzes the effect on the transportation system of relocating access for Tax Lots 106, 203, 206, and 207 from (1) the western terminus of Nygren Road to (2) Conser Road via Tax Lot 402. As discussed in further detail below, providing access to Tax Lots 106, 203, 206, and 207 via Tax Lot 402 and Conser Road will not significantly affect existing or planned transportation facilities.

The adjacent roadways and infrastructure impacted by the new access from Tax lot 402 to Conser Road are Conser Road, Old Salem Road, and the newly constructed Transition Way (further discussed in Section 4.0).

Murder Creek IAMP consistency:
The Goal Exception will reroute vehicle trips from Nygren Road to Conser Road/Transition Road to access Old Salem Road. The impact of rerouting traffic to Old Salem Road via this route will not significantly impact the location or design of the future Murder Creek Interchange.



Millersburg Goal Exception, Millersburg, Oregon

Figure 1: Vicinity Map and Site Location

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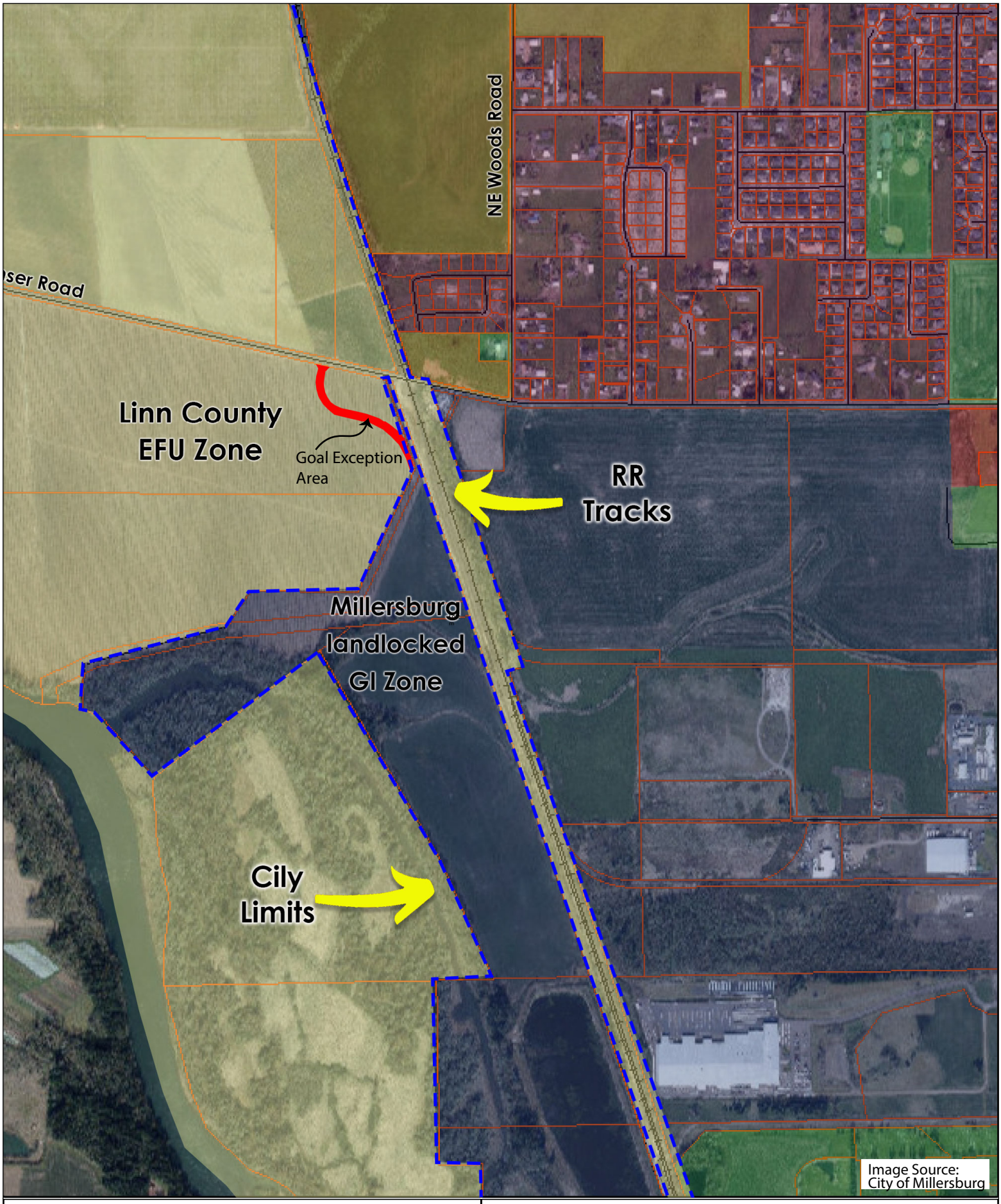

Milersburg Goal Exception, Millersburg, Oregon

Figure 2: Goal Exception Area

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3.0 EXISTING INFRASTRUCTURE

The existing conditions for the adjacent transportation infrastructure are described in this section. The street network and study area intersections are included in Figure 3.

Conser Road

The access connects to Conser Road west of the railroad crossing. Conser Road, west of the railroad crossing, is within the Linn County jurisdiction and is classified as a Major Collector. Conser Road, east of the railroad tracks, is within the City of Millersburg's jurisdiction and is classified as an arterial street within the Millersburg Transportation System Plan (TSP). Figure 4 illustrates the street classification as per the Millersburg TSP. Conser Road consists of one lane in each direction, bike lanes, a sidewalk on the north side between Katelyn Way and Old Salem Road, and shoulders with no bike lanes or sidewalks west of Katelyn Way. The street cross-section is 12’ travel lanes and approximately 2’-6” shoulders.

Old Salem Road

Old Salem Road is classified as an arterial street within the Millersburg TSP. Figure 4 illustrates the street classifications as per the Millersburg TSP. Old Salem Road consists of one lane in each direction, a center turn lane, bike lanes, curb and gutter on both sides, and a sidewalk along the west side north of the Willamette Memorial Park Cemetery. The street cross-section is 6’ bike lanes, 12’ travel lanes, and 14’ center turn lane.

I-5 Murder Creek Interchange

Murder Creek interchange is south of the site at I-5 milepost 235. This interchange is full movement allowing movements on/off for both North and Southbound traffic. All movements at the interchange are stopped controlled before entering Old Salem Road and Century Drive.

I-5 South Jefferson Interchange

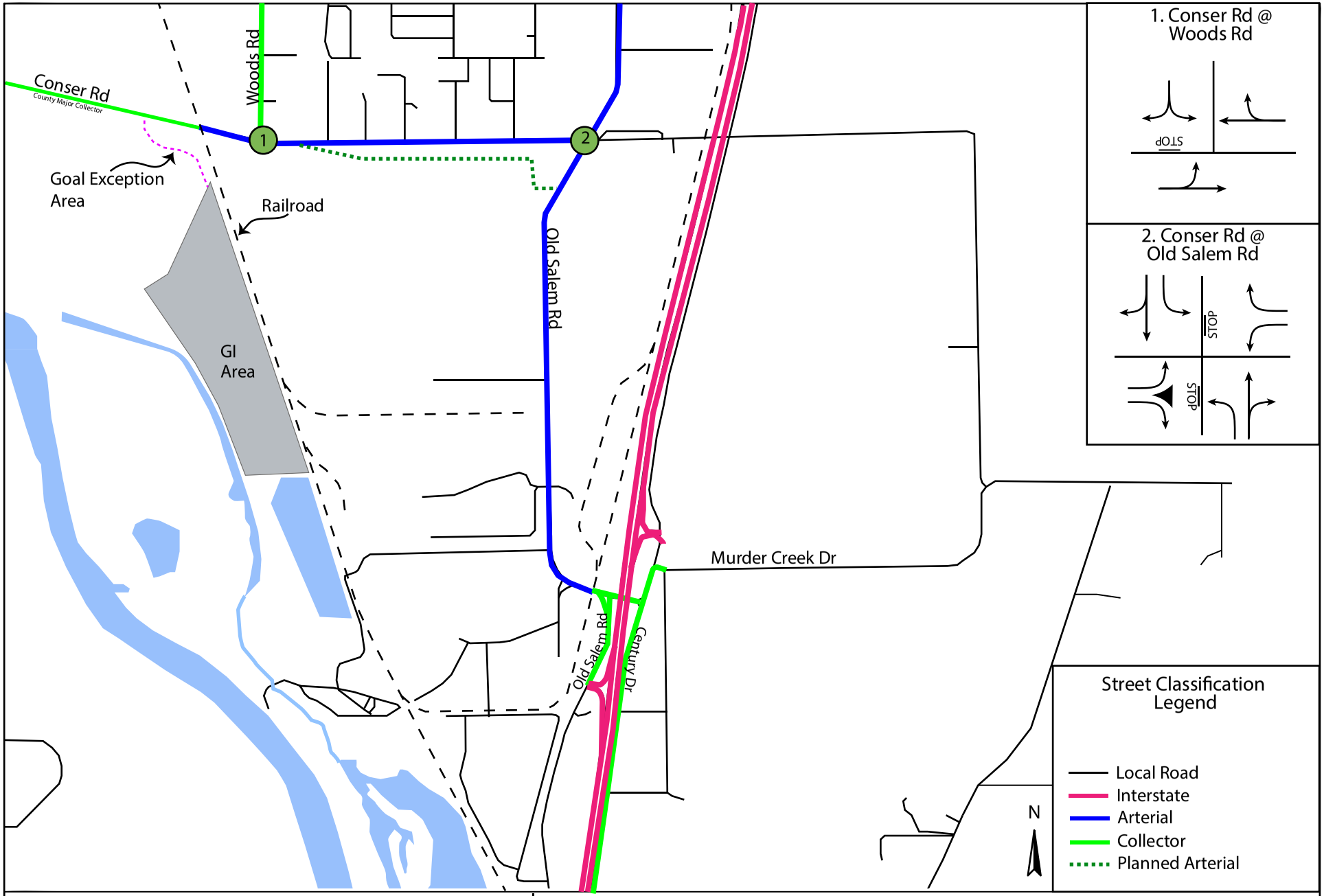
South Jefferson interchange is located north of the site at Interstate-5 mile post 238. The interchange is full access allowing the movements onto/off of Interstate-5 in both northbound and southbound directions. All movements at the interchange are stopped controlled before entering Old Salem Road.

Railroad

There is a rail line along the western border of the site. The rail line is owned by Burlington Northern Santa Fe (BNSF) and operated by Portland & Western Railroad, Inc (PNWR). This is a mainline track with a freight destination. Figure 4 illustrates the location of the rail lines.

Intersections

The study evaluates the operation at the access connection to Conser Road and the existing intersections of Old Salem Road at Conser Road and Old Salem Road at Transition Way. The intersection lane configuration and control are illustrated in Figure 3.



Millersburg Goal Exception, Millersburg, Oregon

Figure 3: Existing Intersection Geometery and Street Classification

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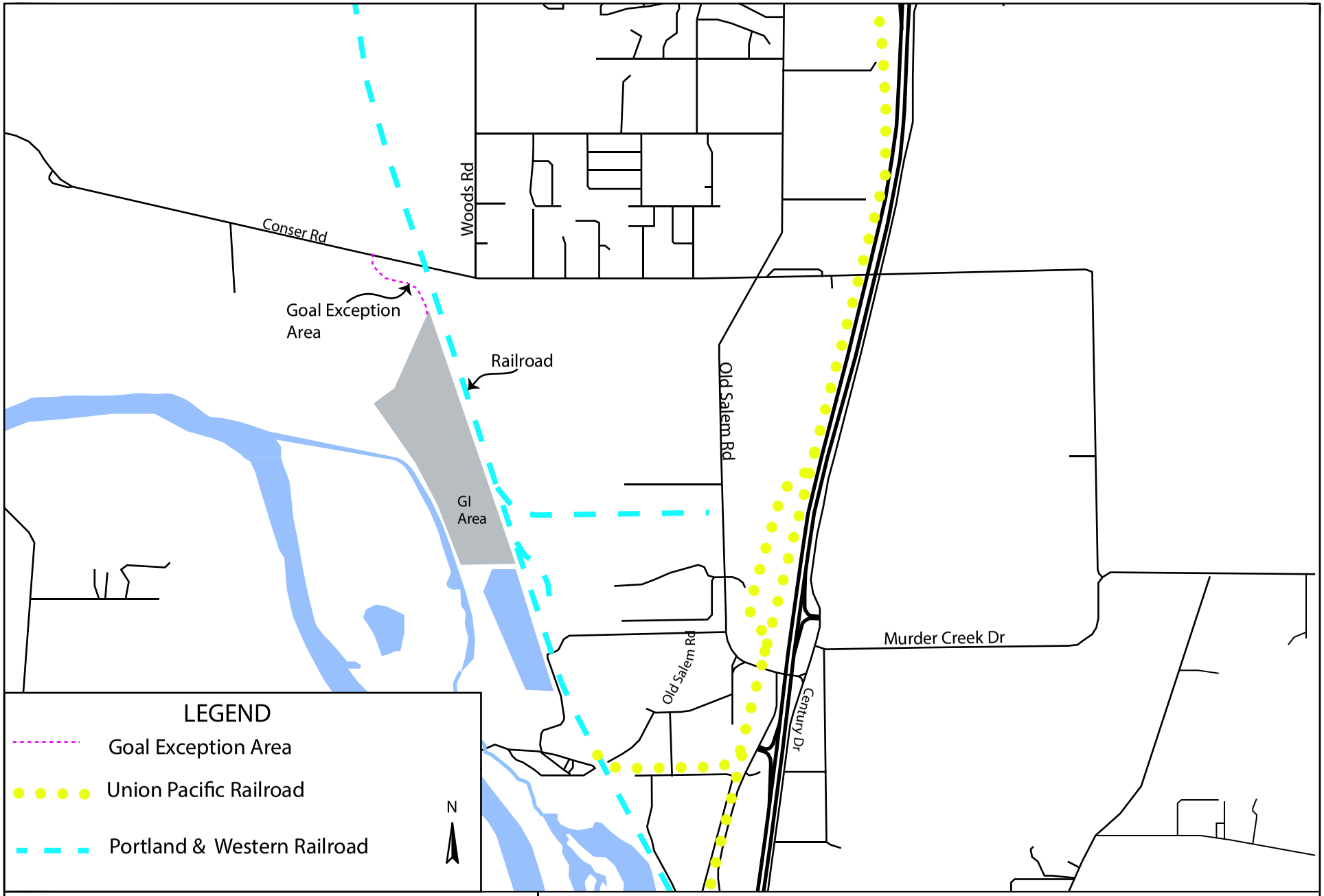

Millersburg Goal Exception, Millersburg, Oregon

Figure 4: Railway Map

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4.0 PLANNED ROADWAY IMPROVEMENTS

The Linn County Transportation System Plan, the City of Millersburg's Transportation System Plan, and the Oregon Department of Transportation have identified several future roadway/transportation improvement projects to address current and future capacity and safety concerns. The following describes the planned improvement projects.

Linn County Projects

Linn County's 2018 Transportation System Plan has identified projects within the City of Millersburg that address existing and future deficiencies within the study area. Table 1 provides a list of the improvements.

TABLE 1: LINN COUNTY PLANNED IMPROVEMENT PROJECTS

ID	Improvement
TSP FINANCIALLY CONSTRAINED AND ASPIRATIONAL PROJECTS-PACKAGE 2	
SS-017	Old Salem Rd. Systemic Roadway Departure Improvements. Provide systemic roadway departure improvements including: Signs and Markings
BR-42	Old Salem Rd. – Truax Creek Bridge Replacement (County Bridge ID 367-3.19, State Bridge ID 22C08). Priority Bridges to be replaced based on load rating, scour, sufficiency rating and seismic issues - Super Structure.
TSP FINANCIALLY CONSTRAINED AND ASPIRATIONAL PROJECTS-PACKAGE 3	
BR-39	N. Waverly Dr. – Cox Creek Bridge Replacement (County Bridge ID 324-0.00, State Bridge ID 12752). Priority Bridges to be replaced based on sufficiency rating, load rating, scour. This bridge is a City of Millersburg Bridge.
CI-10	I-5 - Interchange and Mainline Capacity Improvement Project from South Jefferson to US 20. ODOT Murder Creek IAMP project.
TSP FINANCIALLY CONSTRAINED AND ASPIRATIONAL PROJECTS-PACKAGE 4	
BP-04	Old Salem Rd. NE - I-5 Exit 235 Undercrossing Bicycle and Pedestrian Facility Improvement. Provide improved facilities (such as wider paved shoulder or multiuse path) on I-5 undercrossing at Exit 235 serving Old Salem Rd., Murder Creek Dr., Viewcrest, and Millersburg.

All improvement projects within the City of Millersburg are listed as Package 2, 3, or 4 projects. These projects are not on the financially constrained project list and are identified to be funded only when additional funding sources are available. Package 4 projects are aspirational and are likely not able to be funded within the year 2040.

The realignment of access to the subject parcels from Nygren Road to Conser Road will not affect the ability of any of the projects listed above to be constructed.

City of Millersburg Projects

The City of Millersburg 2016 Transportation System Plan (TSP), with the 2023 updates, evaluated roadways and intersections within the UGB. The TSP has identified several projects to address existing and future deficiencies within the study area. Table 2 provides a list of the improvements, and Figure 6 provides an illustration of the improvements.

TABLE 2: CITY OF MILLERSBURG PLANNED IMPROVEMENT PROJECTS

ID	Improvement
TSP FINANCIALLY CONSTRAINED PROJECTS	
B4	Old Salem Rd Shoulder Lanes (interim project)-widen shoulders for bike access.
B5	Conser Road Multi-Use Path- 12' off-street path along the south side of Conser Road
P5	Conser Rd Sidewalks-extend sidewalks to city limits
P6	Old Salem Rd Sidewalks-Construct new sidewalk along the west side
S8	Woods Road- Reconstruct to arterial standards
S11	Transition Parkway- New arterial street between Woods Road and Old Salem Road
TSP ASPIRATIONAL IMPROVEMENTS	
S3	Reconstruct Old Salem Rd to arterial cross-section
S5	Grade-separated railroad crossing and Conser Road
S9	Realign Conser Rd at Old Salem Rd
S10	Future I-5 Interchange Connection-add roadway from Old Salem Road to the new Millersburg interchange
B1	Old Salem Rd Shared-Use Path-construct a 10–12-foot bicycle and pedestrian path parallel to Old Salem Rd
P3	"Four Lakes" Trail-construct path along the east side of the Willamette River

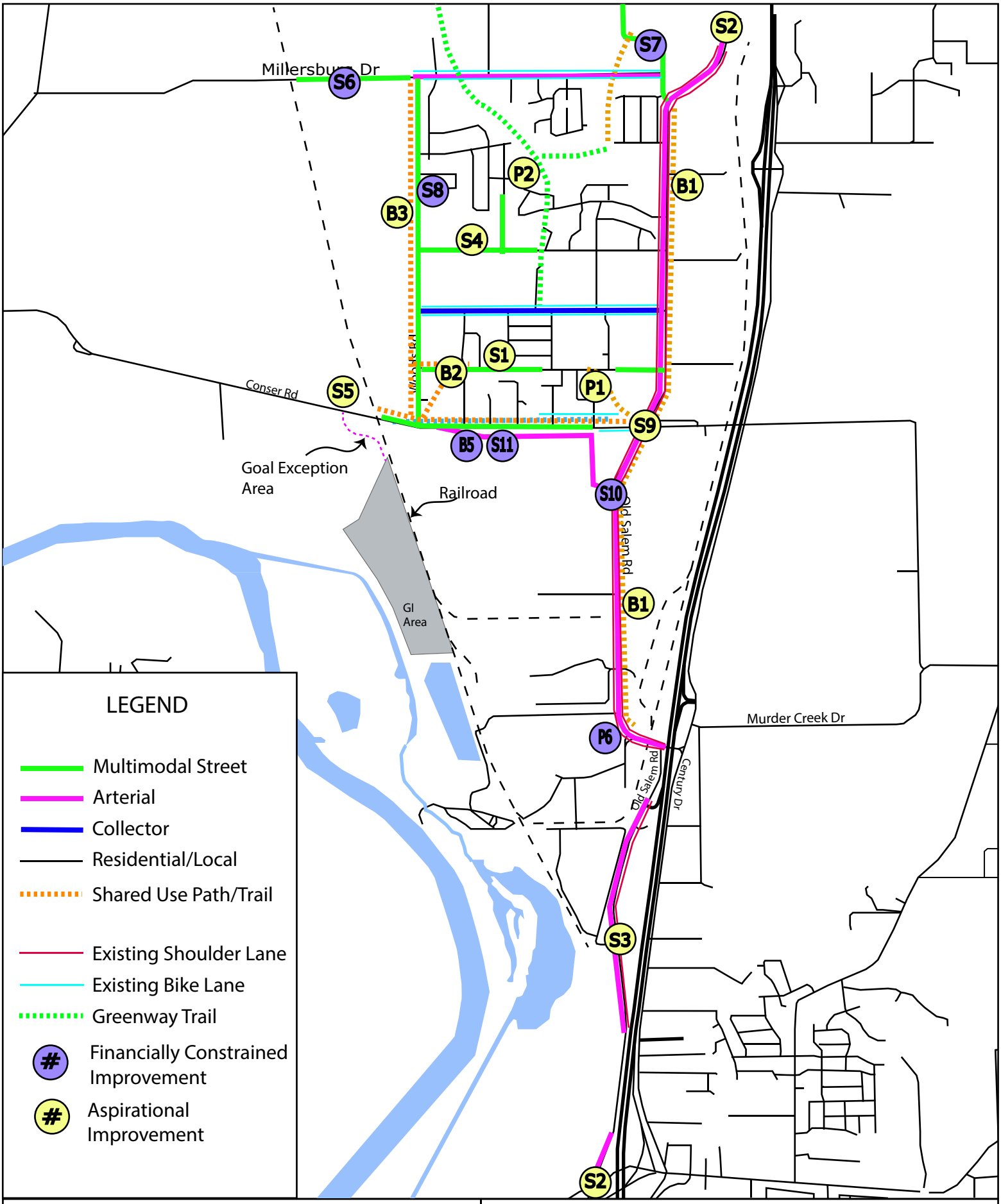
Transition Parkway: Transition Parkway is a new east/west arterial street that will replace Conser Road between Woods Road and Old Salem Road. The eastern portion of Transition Parkway has been recently constructed providing a new intersection to Old Salem Road approximately 1,100 feet south of Conser Road. The connection of Transition Parkway at Old Salem Road aligns with the future connection to the new Murder Creek Interchange. Transition Parkway will be constructed to arterial street standards with a center turn lane, sidewalks, and bike lane. Transition way will begin at Woods Road, curving to the south, run parallel to Conser Road, and then connect to the existing Transition Way at the east end. A new multi-use path (Project B5) will be constructed within a new park located between Conser Road and Transition Way. Figure 5 illustrates the street alignment. Once Transition Parkway is complete Conser Road will be reclassified to a local street.

This project is on the City's financially constrained project list and is anticipated to be constructed within the next few years. The impacts of the proposed Goal Exception are evaluated for the new Transition Roadway alignment.

FIGURE 5: TRANSITION WAY ALIGNMENT

Old Salem Road: Old Salem Road is classified as an Arterial Street within the City of Millersburg TSP. However, Old Salem Road is within the jurisdiction of Linn County. The City has identified the need to reconstruct Old Salem Road to the current street standard as identified in the Millersburg TSP and shown in Figure 8 below. The projects for Old Salem Road include the infilling of missing sidewalks and the widening of the shoulders for bike use.

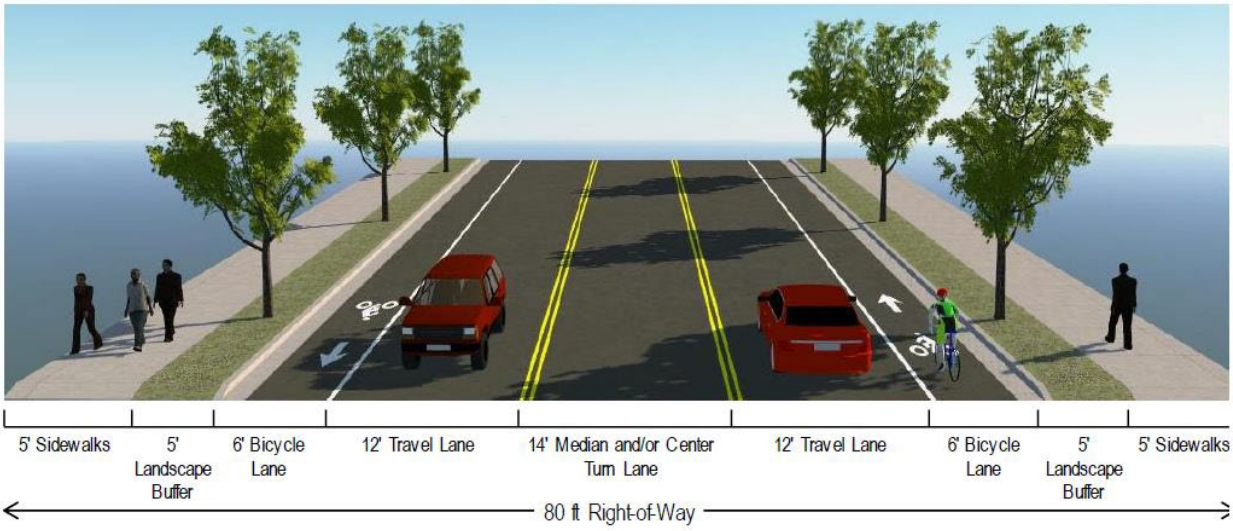
Additionally, the city has identified the need for a 10–12-foot multi-use path parallel to Old Salem Road. While the description of the project (B1) does not identify where in the right of way the multi-use path will be located, the map within the Millersburg TSP depicts the path along the east side of Old Salem Highway.



Millersburg Goal Exception, Millersburg, Oregon

Figure 6: City of Millersburg Future Roadway Improvements

FIGURE 7: CITY OF MILLERSBURG ARTERIAL CROSS-SECTION



ODOT Projects

ODOT interchange along I-5 between the South Jefferson Interchange (MP 238) and the US-20 interchange (MP 233.2). The evaluation identified that there are existing and future geometric deficiencies, safety concerns, and capacity constraints that are triggering the need for interchange improvements.

The following is a list of the recommended improvements as per the evaluation. Figure 8 illustrates the anticipated interchange improvements.

TABLE 3: ODOT INTERCHANGE IMPROVEMENTS

Improvement
- Add 1 additional travel lane on I-5 from MP 238 to MP 233
- Construct a new interchange at MP 236-“Millersburg Interchange”
- Close Viewcrest and Murder Creek interchange
- Improve Old Salem Road to the current design standard
- Improve Century Drive to design standard
- New street connection from the interchange to Old Salem Road

The study did not identify the timeline for improvements to the interchange, and the improvements are not listed in the 2024-2027 ODOT STIP. As the project is not on the STIP and funding has not been secured, this project is not assumed to be completed within the City of Millersburg TSP's 20-year planning horizon.

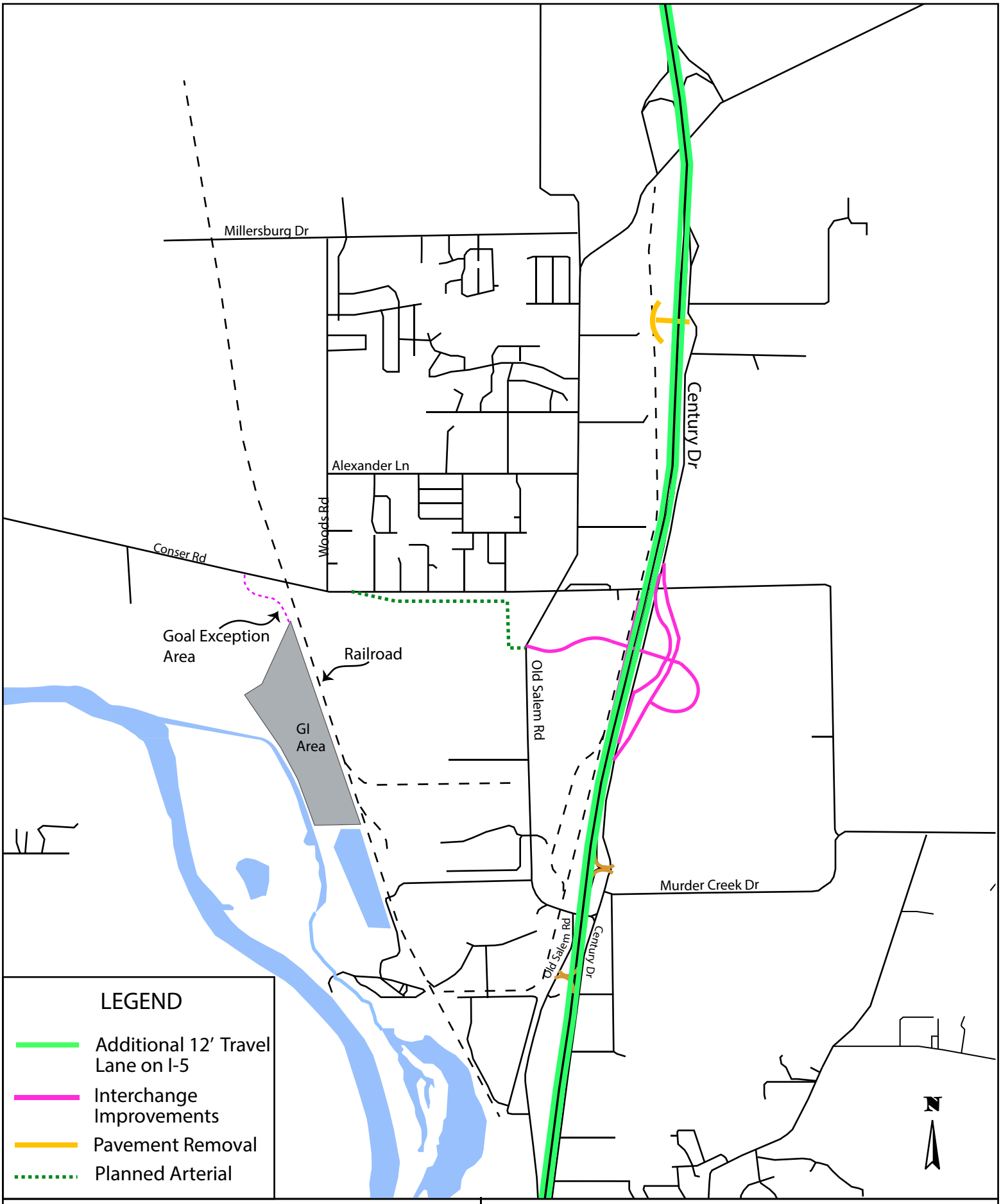


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Figure 8: ODOT Interchange Improvement Project

5.0 VEHICLE USAGE

OAR 660-012-0060 generally requires the transportation evaluation to consider the impacts of a reasonable worst-case development potential of the parcel that is subject to the proposed comprehensive plan amendment. As discussed above, in this case, the Goal Exception does not propose to redesignate or rezone Tax Lot 402. The Goal Exception seeks approval to locate a private access road in Tax Lot 402. The 1.64-acre access road within Tax Lot 402 will not generate any traffic. Instead, the access road will redirect traffic from future industrial development of Tax Lots 106, 207, 206, and 203 from the western terminus of Nygren Road to Conser Road. To evaluate the effect of providing such access, this evaluation considers the reasonable worst-case development potential of Tax Lots 106, 203, 206, and 207 under the existing General Industrial zoning. The reasonable worst-case development potential is estimated as per the following methodology.

As per the Millersburg development code, allowed use within the General Industrial zoning are manufacturing, wholesale trade and distribution facilities, and other general light industrial uses.

Tax Lots 106, 207, 206, and 203 have a total of approximately 74.7 acres. Approximately 47 of those acres are buildable due to wetlands, riparian areas, and other buildable constraints. Typically, industrial buildings within the Millersburg area have a building footprint that is approximately 20-30% of the total site area. The remaining site is parking, drive aisle, loading areas/docks, and drainage areas. Therefore, the building area is assumed to be at 30% of 47 acres or approximately 625,000 square feet (rounded up to be conservative).

The trips to the site are estimated using the ITE Trip Generation manuals (11th ed). The ITE land use codes that most closely match the allowed uses in the General Industrial zoning are 140-Manufacturing and 110- General Light Industrial. Land use code 140- Manufacturing is defined as a facility where the primary activity is the conversion of raw materials into finished products. These facilities typically have manufacturing space, warehouse, office, research facilities, and other associated functions. This land use has a PM peak hour trip rate of 0.75 trips per 1,000 square feet. Land Use Code 110- General Light Industrial is defined as being free-standing facilities devoted to a single use and is occupied with typical light industrial activities such as printing, materials testing, and product assembly. The PM peak hour trip rate is 0.65 trips per 1000 sf. The trip rate for 140-Manufacturing is used for this study as it has a higher trip rate, and therefore represents the reasonable worst-case trip estimates. Table 4 provides the trip generation estimate for the weekday daily and PM peak hours.

As the purpose of this evaluation is to demonstrate consistency with the Transportation System Plans, this evaluation provides a PM peak hour analysis only, since the TSPs do not evaluate AM peak hour conditions.

TABLE 4: TRIP GENERATION

Time of Day	Trip Rate	Total Trips	Entering	Exiting
Daily	3.77(ksf)+201.98	2,558	(50%) 1,279	(50%) 1,279
PM Peak Hour	0.75 trips/ksf	469	(31%) 145	(69%) 324

Trip Distribution

Most trips are anticipated to be from I-5. However, there is anticipated to be some vehicle usage from Highway 99 and Highway 20, and from Millersburg.

The anticipated trip distribution is as follows:

- 5% to/from west on Conser Rd
- 10% to/from Highway 99 South
- 10% to/from Highway 20 (east of I-5)
- 35% to/from I-5 North
- 40% to/from I-5 South

The estimated trip distribution for the PM Peak Hour is shown in Figure 9. The trip distribution assumes travel routes based on the shortest path of travel for both distance and drive time.

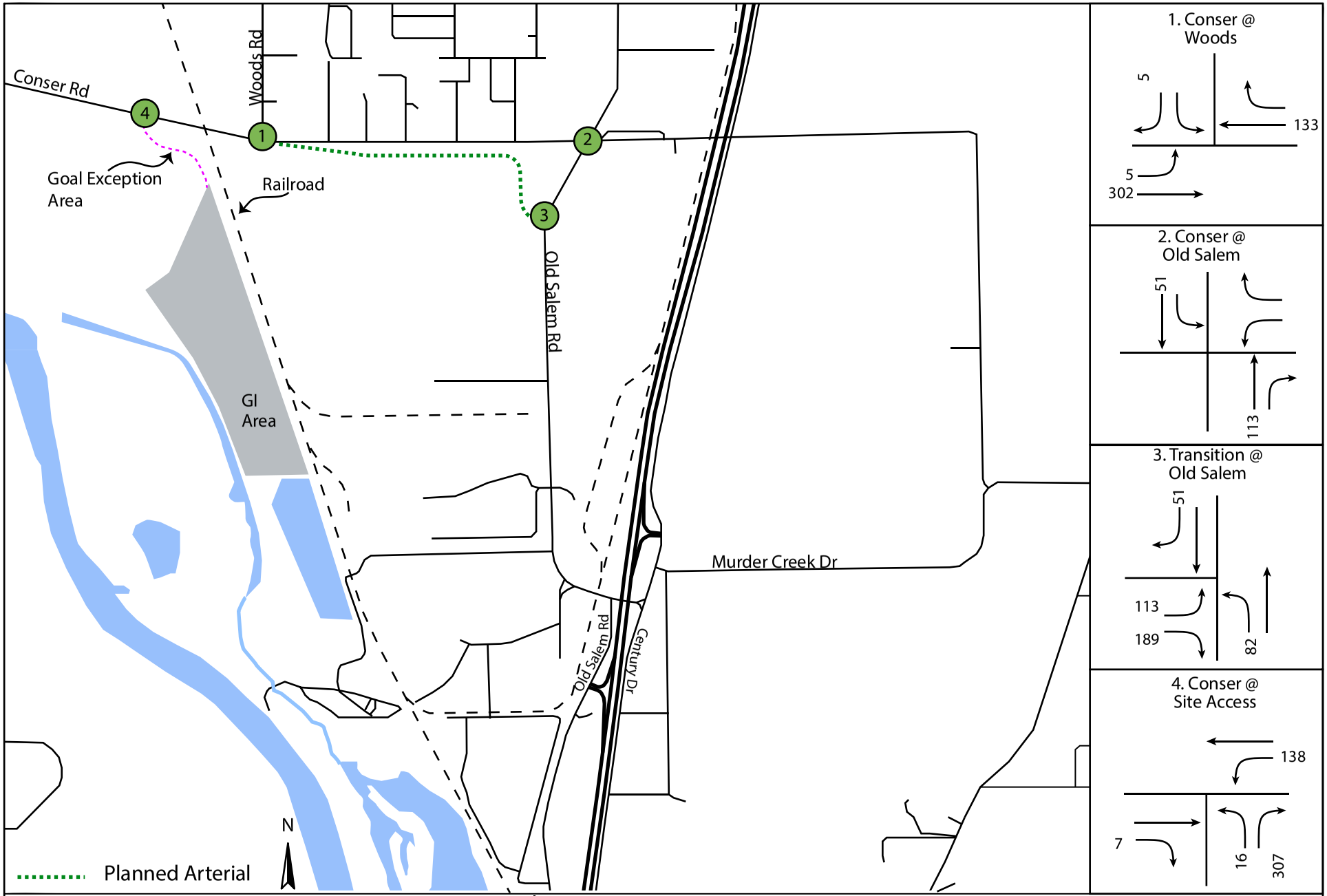

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Figure 9: PM Peak Hour Trip Distribution

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6.0 INTERSECTION EVALUATION

As required by OAR 660-012-0060, this analysis evaluates whether the proposed Goal Exception will have a significant effect on the transportation system. For intersections, a significant effect is defined as causing an intersection to not meet the jurisdiction's performance standards. To determine significant effect, an intersection evaluation is performed that considers the intersection operation in terms of capacity, performance, and queuing. The evaluation is based on industry standards as outlined in the Highway Capacity Manual and considers the standards set by Millersburg and Linn County within the respective Transportation System Plans.

Consistent with the Transportation System Plans, the evaluation considers the driveway and intersection operation and queuing conditions for the PM peak hour for the existing conditions, and the TSP 20-year planning horizon.

The adjacent roadways and infrastructure impacted by relocating the access from Nygren Road to the requested access location on Conser Road are Conser Road, Old Salem Road, and Transition Way, which is anticipated to be constructed in the future and discussed in Section 4.0. The impacts from the development of Tax Lots 106, 207, 206, and 203 outside of these roadways are consistent with the TSPs conditions. Therefore, an evaluation is not required.

6.1 TRAFFIC VOLUMES

Turning movement counts were taken at the following locations for the PM peak hours:

- Old Salem Road at Conser Road
- Conser Road at Woods Road

The traffic counts were taken on September 7, 2022, from 4:00 to 6:00 PM. The peak hour of the system occurs from 5:00-6:00 PM.

The intersection evaluation is prepared for the 30th Highest Traffic Volumes (HV). The 30th HV is the peak hour of the weekday of the peak travel season. Weekday peak hour traffic volumes taken outside of the peak season are adjusted to reflect peak season volumes by applying a Seasonal Adjustment Factor (SAF). The SAF is calculated following the methodology within ODOT's Analysis Procedures Manual (APM). Following the APM, the SAF is determined using ODOT's Seasonal Trend Table using the average of the commuter and summer seasonal trends. The SAF for the is 1.041 for the September counts. This factor is applied to the traffic counts to represent the peak season conditions.

As per standard criteria, an evaluation is to be performed consistent with the County's and City's TSP 20-year planning horizon. The City of Millersburg TSP was recently updated; therefore, the City of Millersburg TSP horizon date is assumed to be the year 2044. Linn County's TSP horizon date is the year 2040. The evaluation considers impacts at the year 2044, meeting demonstrating consistency with both County and City TSPs. A growth rate is applied to the year 2022 30th HV to

estimate the year 2044 traffic volumes. The growth rate is estimated using the data found within Millersburg's TSP. The TSP estimates a growth rate of 1.6% in this study area.

The development trips are added to the background traffic volumes to represent the traffic volumes with full build-out of the parcels served by the Goal Exception. The traffic volumes are illustrated in the following figures. Appendix A contains the traffic volumes.

- Figure 10-Year 2024 PM Peak Hour Background
- Figure 11-Year 2044 PM Peak Hour Background
- Figure 12-Year 2044 PM Peak Hour With Goal Exception

The year 2044 is assumed to have the completion of Transition Parkway. Therefore, trips from the Conser Road at Old Salem Road intersection are rerouted to the Transition Parkway at Old Salem Road to represent conditions with the Transition Parkway complete.

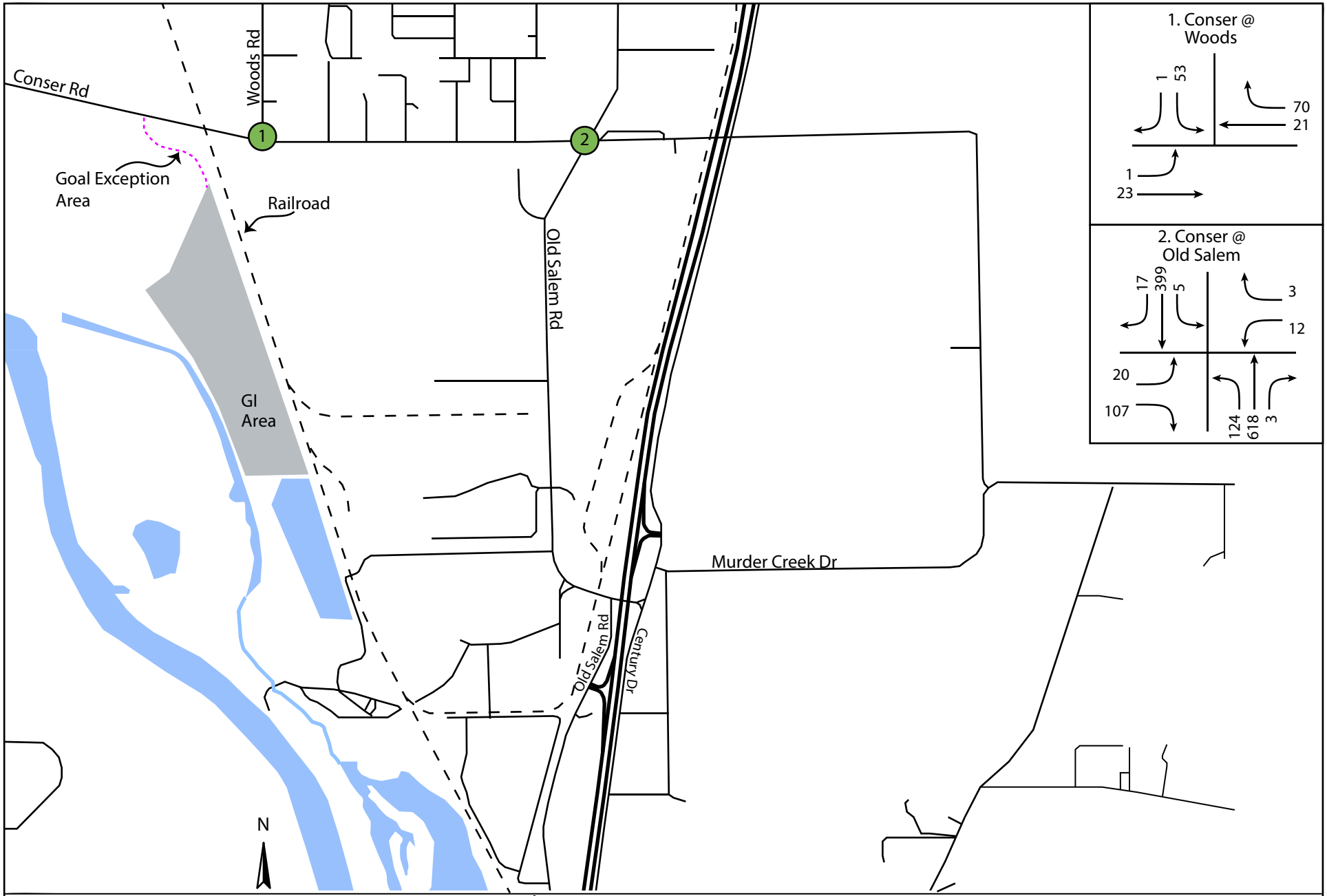

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Figure 10: Year 2024 PM Peak Hour Background Traffic Volumes

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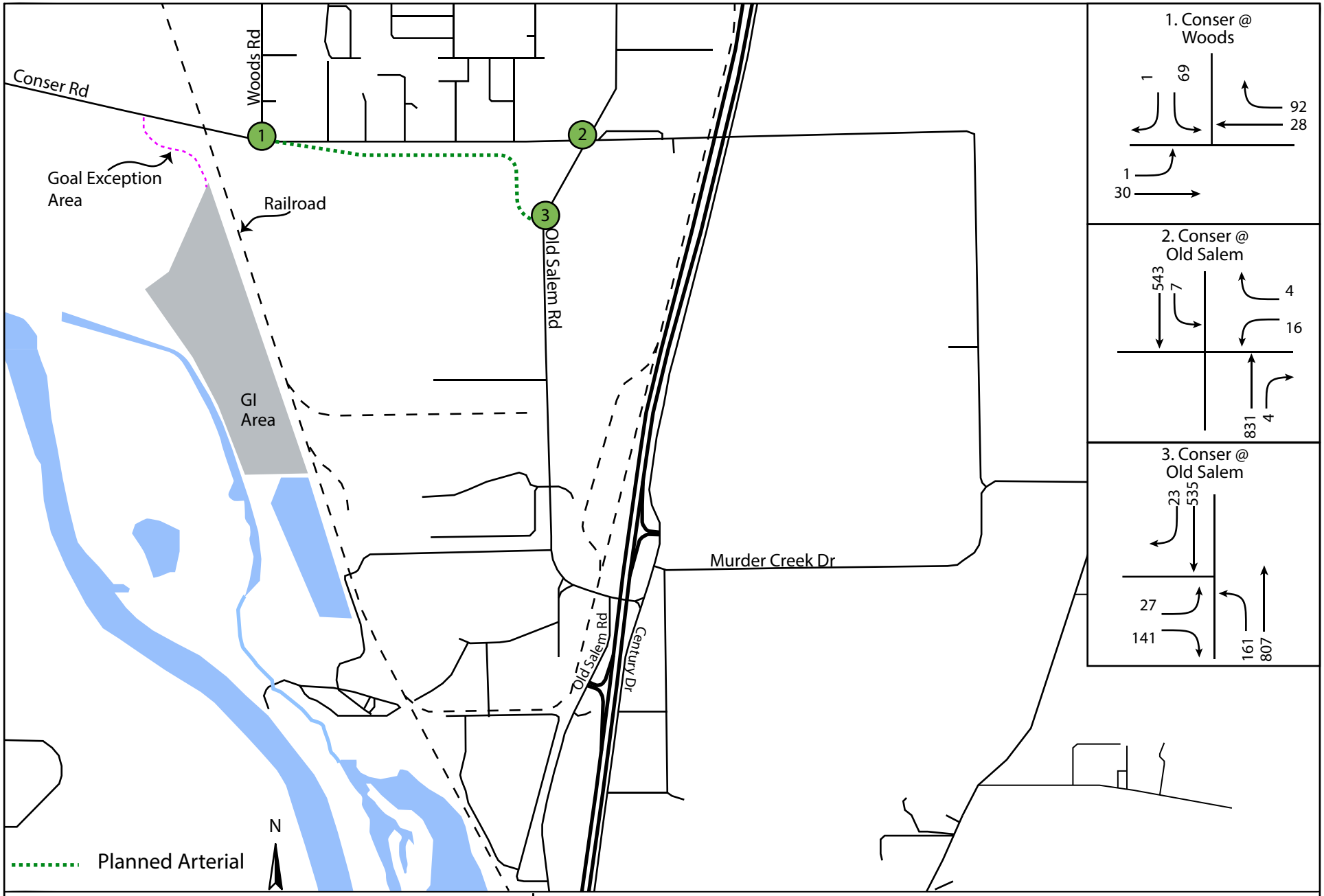

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Figure 11: Year 2044 PM Peak Hour Background Traffic Volumes

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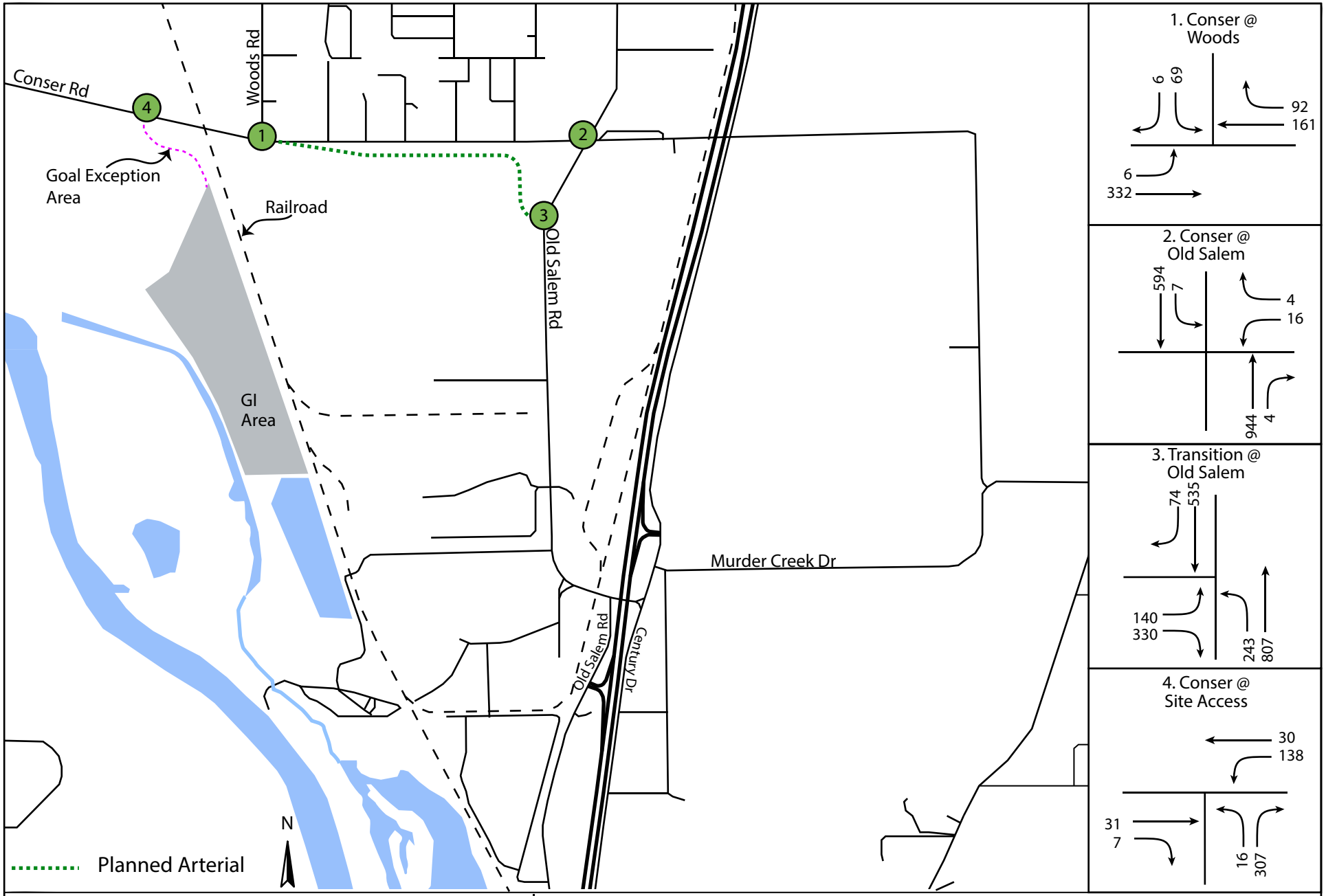

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Figure 12: Year 2044 PM Peak Hour Traffic Volumes with Goal Exception

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6.2 INTERSECTION OPERATION

Linn County and the City of Millersburg have adopted a mobility standard using the Highway Capacity Manual defined Level of Service standards (LOS). LOS is a concept developed to quantify the degree of comfort (including such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles) afforded to drivers as they travel through an intersection or along a roadway segment. It was developed to quantify the quality of service of transportation facilities.

LOS is based on average delay, defined as the average total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. Average delay is measured in seconds per vehicle per hour and is then translated into a grade or "level of service" for each intersection. LOS ranges from A to F, with A indicating the most desirable condition and F indicating the most unsatisfactory condition. The LOS criteria, as defined by the Highway Capacity Manual (HCM 6) intersections, are provided in Table 5.

The City of Millersburg has adopted a standard of LOS D for all intersections. LOS D is a typical industry standard as delays beyond a LOS D are considered problematic as queuing conditions can back up, blocking adjacent transportation infrastructure, and longer delays will encourage drivers to make turns during shorter gaps in traffic increasing the potential for crashes.

Linn County has adopted a standard of LOS E for all intersections. The LOS E standard only applies to approaches that have more than 20 peak hour trips. The LOS standard does not apply to any intersection approach with 20 or fewer peak hour trips.

TABLE 5: HCM LEVEL OF SERVICE FOR INTERSECTIONS

	Stopped Delay Per Vehicle (Seconds per Vehicle)	
	Unsignalized Intersections	**Signalized Intersections**
A	≤ 10.0	≤ 10
B	> 10.0 and ≤ 15.0	> 10 and ≤ 20
C	> 15.0 and ≤ 25.0	> 20 and ≤ 35
D	> 25.0 and ≤ 35.0	> 35 and ≤ 55
E	> 35.0 and ≤ 50.0	> 55 and ≤ 80
F	> 50.0	> 80

Additionally, Linn County has a second adopted standard, volume-to-capacity (v/c). The volume-to-capacity ratio describes the capability of an intersection to meet volume demand based on the maximum number of vehicles that could be served in an hour. Linn County has a v/c standard of

0.90 for any approach that serves more than 20 vehicles during the peak hour. The v/c standard does not apply to any intersection approach with 20 or fewer peak hour trips.

For this study, the intersection analysis was completed according to the Highway Capacity Manual (HCM6) method implemented in SYNCHRO Version 10. The results are illustrated in Table 6 for the PM peak hour. Appendix B includes the Synchro outputs.

TABLE 6: INTERSECTION PERFORMANCE: YEAR WEEKDAY PM PEAK HOUR

Intersection	Mobility Standard LOS	2024 Background	2044 Background	2044 With Goal Exception
Conser Road at Proposed Access	LOS E v/c 0.90	N/A	N/A	B 0.40
Conser Road at Woods Road	LOS D	A	A	B
Old Salem Rd at Conser Road	LOS E v/c 0.90	**F** 0.29	B 0.01	B 0.01
Old Salem Rd at Transition Way	LOS E v/c 0.90	N/A	A 0.69	B 0.83

*Results are reported for highest/critical movement only

The eastbound approach at the intersection of Old Salem Road at Conser Road has an existing LOS of F during the PM peak hour. Transition Way will be completed prior to the year 2044. Transition Way will relocate the eastbound vehicles from Conser Road to Transition Way. The relocation will improve the LOS at the intersection of Old Salem Road and Conser Road to meet the LOS standards.

The addition of vehicle trips from the Goal Exception to Conser Road does not cause any intersection to operate worse than the City or County mobility standards. Therefore, the Goal Exception does not significantly affect these intersections.

6.3 INTERSECTION QUEUING

A queuing analysis was conducted for the studied intersections. The analysis was performed using SimTraffic, a microsimulation software tool that uses the HCM-defined criteria to estimate the queuing of vehicles within the study area. The 95th percentile queuing results are illustrated in Table 7 for the PM Peak hour. All results are rounded to 25 feet to represent the total number of vehicles in the queue, as one vehicle typically occupies 25 feet of space. The SimTraffic outputs are provided in Appendix C.

TABLE 7: INTERSECTION QUEUING: YEAR WEEKDAY PM PEAK HOUR

Intersection			Available Storage (Feet)	2024 Background (Feet)		2044 Background (Feet)		2044 With Goal Exception (Feet)	
				95th	Average	95th	Average	95th	Average
Conser Road at Proposed Access	WB	LT	1000+	N/A	N/A	N/A	N/A	25	25
	NB	LR	530	N/A	N/A	N/A	N/A	100	50
Conser at Woods	EB	L	800	0	0	0	0	25	25
	SB	LR	400	50	25	50	25	75	50
Old Salem at Transition	EB	L	275	N/A	N/A	50	25	125	75
	EB	R	400	N/A	N/A	100	50	175	100
	WB	LTR	150	N/A	N/A	50	25	75	25
	NB	L	200	N/A	N/A	75	50	150	75
	NB	T	1000+	N/A	N/A	150	75	200	100
	SB	TR	500	N/A	N/A	175	100	275	175
Old Salem at Conser	EB	LT	325	75	25	N/A	N/A	N/A	N/A
	EB	R	475	75	50	N/A	N/A	N/A	N/A
	WB	LTR	900	75	25	75	25	125	50
	NB	L	200	75	25	N/A	N/A	N/A	N/A
	SB	L	300	25	25	25	25	25	25

At the requested access connection to Conser Road, the Westbound approach is anticipated to have a queue of 25 feet. This is due to the very low opposing traffic. The queue will not back up to the railroad crossing to the east or cause significant delays for through vehicles on Conser Road. Exiting vehicles are anticipated to have an average queue of 2 vehicles (50 feet) and a 95th percentile queue of 4 vehicles (100 feet). The average delay for vehicles exiting the site is 11 seconds. The delay is a measurement of the time an average vehicle waits during the busiest 15 minutes of the PM peak hour from a complete stop at the back of the queue to departing the stop bar. The 11 second delay is well below the 50-second delay threshold that is the standard for Linn County. Therefore, the delay is considered insignificant and will not result in safety or operational concerns.

At the Intersection of Conser Road at Woods Road, the southbound approach is anticipated to have a 95th percentile queue length of 75 feet. There are no driveway approaches or connecting roadways within the 75-foot queueing distance. The queue will not block any adjacent transportation infrastructure. The average delay for southbound vehicles is 14 seconds. The delay is a measurement of the time an average vehicle waits during the busiest 15 minutes of the PM peak hour from a complete stop at the back of the queue to departing the stop bar. The 14 second delay is not considered significant and will not result in safety or operational concerns.

At the future intersection of Transition Parkway at Conser Road, the addition of site trips from Tax Lots 106, 203, 206, and 207 is anticipated to have a 95th percentile queue at the eastbound

approach of 175 feet. The driveway to the Albany Fire Department, located at the northwest corner of the intersection, is located just over 200 feet from the eastbound stop bar. The queuing is not anticipated to block the fire station driveway. If a traffic signal is installed at this location, the fire station can have fire preemption installed that gives a green movement for the eastbound approach to clear out the queue as a fire truck exits the station.

6.4 INTERSECTION CRASH HISTORY

A crash investigation was performed for the study area intersections. The analysis investigates crashes that have been reported to the state for the most recent 5 years, 1/01/2017-12/31/2021, to determine the crash rate in crashes per million vehicles on the roadway and the types of crashes that occurred. Data has not been compiled for years 2022 or 2023. The crash rate is compared to the critical crash rate. If the calculated crash rate exceeds the critical crash rate, the location is investigated for further mitigation measures. Crash data was provided by ODOT for the study area and included in Appendix D. The results of the crash analysis are provided in Table 8.

TABLE 8: INTERSECTION CRASH RATES

Location	Number of Crashes	Types of Crashes						ADT	Crash Rate*	Critical Crash Rate*
		Head	Rear	Side	Turn	Other	Pedestrian/ Bike			
Old Salem Road at Conser Road	8	0	0	0	3	5	0	12,680	0.35	0.57

***(crashes/million entering vehicles)**

There were no reported crashes on Conser Road near the access connections at the railroad crossing, or at Woods Road within the past 5 years.

There were 8 reported crashes at Old Salem Road and Conser Road. Three of the crashes involved turns to/from Conser Road, colliding with the through movements on Old Salem Road. Four of the crashes involved single vehicles resulting from inattentive driving. One crash involved a vehicle crossing Old Salem Road colliding with a vehicle on Old Salem Road.

7.0 ACCESS CONNECTION TO CONSER ROAD

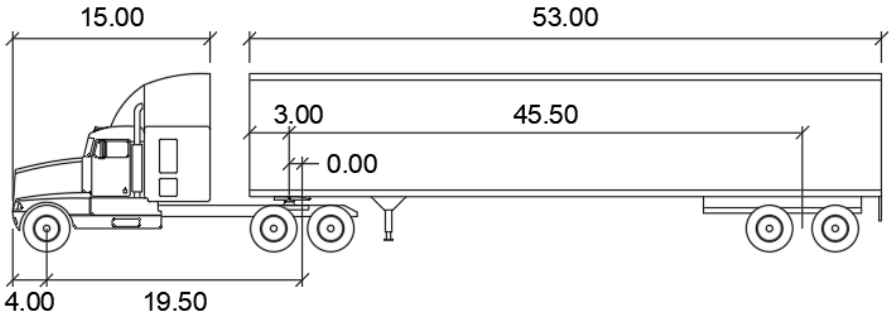
The Goal Exception area/access easement will create a full movement access connection to Conser Road west of the railroad crossing. The access is proposed to be located approximately 591 feet from the center of the railroad crossing and approximately 576 feet from the stop bar at the crossing. The railroad crossing is controlled by signalized gate arms for the east and westbound directions. The following provides a summary of the operational and safety evaluation of this connection.

Access Configuration:
The access easement is 100 feet in width at the connection to Conser Road and then is 60 feet for the remaining easement. While a final design for the access connection and driveway has not been completed, the driveway is proposed as a 22' pavement width with 4-foot gravel shoulders centered in the easement.

Truck Movements:
Tax Lots 106, 203, 206, and 207, which will be served by the access easement, are currently zoned General Industrial and are anticipated to regularly have trucks accessing the site. The connection to Conser Road was evaluated for safe truck movements into and out of the access easement area. The larger WB 67 truck with a 15-foot cab, 53-foot trailer, and 67-foot wheelbase is used as a design vehicle for evaluating the turn paths. The truck details are provided below. The turn paths evaluation is prepared using AutoTURN, a software implementing the AASHTO vehicle dimensions and turning paths.

Truck trips will be from to/from the east as there is no outlet for vehicle traffic to the west and limited facilities for trucks. Therefore, the evaluation is prepared for turns to/from the east. The turning movement analysis (see Figure 13 below) demonstrates that the easement is wide enough to allow for the construction of a driveway that will allow an exiting truck to stay entirely in the travel lane and not swing into the oncoming lane and will allow entering trucks enough room to make a turn entirely within the easement.

FIGURE 13: TRUCK TURNS AT EASEMENT CONNECTION TO CONSER ROAD.



WB-67

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

Operation:

The site access was evaluated for movement operation as described in Section 6.0. At a reasonable worst-case development scenario, the access to Conser Road will operate at an LOS B for the northbound exiting vehicles and a LOS A for the westbound left turn entering vehicles. The average delay for vehicles exiting the site is 11 seconds. The delay is a measurement of the time an average vehicle waits during the busiest 15 minutes of the PM peak hour from a complete stop at the back of the queue to departing the stop bar. The 11 second delay is not considered significant and will not result in safety or operational concerns. LOS B and LOS A indicate that the average delay for a vehicle will not be significant and will not result in operational issues at the access.

Queuing:

At the access connection to Conser Road, the Westbound approach is anticipated to have a queue of 25 feet. This is due to the very low opposing traffic. The queue will not back up to the railroad crossing to the east or cause significant delays for through vehicles on Conser Road. Exiting vehicles

are anticipated to have an average queue of 2 vehicles (50 feet) and a 95th percentile queue of 4 vehicles (100 feet).

Sight Distance

The available line of sight (sight distance) at the site access was evaluated as per the AASHTO methodology. Sight distances are classified by the stopping sight distance (SSD) for vehicles on Conser Road and departure/intersection sight distance (ISD) for vehicles stopped at the site access to enter Conser Road. The SSD is the length of roadway needed for a vehicle traveling at the design speed to safely stop for a stationary object in the roadway. The (ISD) is a measure of the length of visibility of the roadway on Conser Road. The distance provides time to perceive and react to gaps in traffic to allow a driver to safely turn into Conser Road.

The standards for evaluating SSD and ISD follow the methodology in the AASHTO's *A Policy on Geometric Design of Highways and Streets* (2011). As per the AASHTO methodology, intersections and driveways should, at a minimum, meet the SSD requirements. However, it is desirable to achieve the ISD whenever possible.

Stopping Sight Distance

Stopping sight distance is based on the speed of the major roadway. The design speed is 55 mph. As per AASHTO, the SSD at 55 mph is 495 feet. Image 14 provides an illustration of the sight distance. As illustrated in the image, the sight distance is met.

Departure Sight Distance

The recommended intersection sight distance is calculated for a vehicle turning from the access onto Conser Road for both left and right turn maneuvers. Therefore, the intersection site distance calculations are based on Case B1 of the AASHTO manual. Again, the speed used is 55 mph, resulting in an ISD of 610 feet. Image 14 provides an illustration of the sight distance. As illustrated, the sight distance is met.

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Figure 13: Sight Distance at Site Access

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8.0 ALTERNATIVE ACCESS CONNECTION FEASIBILITY

The City of Millersburg's Transportation System Plan evaluated the transportation system assuming Tax Lots 106, 203, 206, and 207 could be served via an extension of Nygren Road to the west. The Nygren Road access connection would require crossing the BNSF railroad that runs along the western border of the site. Although an existing underground crossing exists at that location, it is undersized and not capable of providing access to Tax Lots 106, 203, 206, and 207. Establishing a connection across the rail line is not feasible due to the construction and cost constraints that are outlined within the application materials. Therefore, the connection north through Tax Lot 402 to Conser Road is the only feasible access connection for these lots.

9.0 FINDINGS

Oregon Administrative Ruling Criteria:

The transportation impacts are evaluated as per Oregon Administrative Rules Division 12 OAR 660-12, Transportation Planning. Specifically, the OAR's governing traffic impacts for this proposal are found within:

- **OAR 660-012-0060:** This section provides requirements associated with Plan and Land Use Amendments. As per OAR 660-012-0060:

> ***(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:***
>
> > ***(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);***
> >
> > ***(b) Change standards implementing a functional classification system; or***

The Goal Exception will increase vehicle trips on Conser Road/Transition Road only. As per the City of Millersburg TSP, Conser Road/Transition Road east of the railroad tracks is classified as an Arterial. Linn County has identified Conser Road west of the railroad tracks as a Major Collector. Major Collector and Arterial streets are designated to facilitate a higher volume of traffic and larger vehicles. The proposed access will be a private driveway and, therefore, will not feature a street classification. The Goal Exception will not require a change in the street classifications or a change in standards implementing a functional classification system.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection. If a local government is evaluating a performance standard based on projected levels of motor vehicle traffic, then the results must be based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

The Goal Exception will increase vehicle trips on Conser Road/Transition Parkway only. As per the Millersburg TSP, Conser Road/Transition Parkway is Classified as an Arterial. Linn County has identified Conser Road west of the railroad tracks as a Major Collector. Major Collector and Arterial streets are designated to facilitate the movement of vehicles between major activity generators to higher-order streets. The daily volume and types of trips added to the system are consistent with functional classification.

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

All intersections are projected to operate better than the Linn County adopted LOS and v/c performance standards, as well as the City of Millersburg LOS performance standards. The proposed access to Conser Road does not cause any existing or planned transportation to not meet the standards.

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

The evaluation demonstrates that the intersection of Conser Road at Old Salem Road does not meet the LOS performance standard for Linn County in existing conditions. The City's project of constructing Transition Way will be constructed before the year 2044. Transition Way will reroute the eastbound vehicles from the Coner Road at Old Salem Road intersection to the intersection of Transition Way at Old Salem Road. The relocation will improve the LOS at the intersection of Old Salem Road and Conser Road to meet the LOS standards.

Linn County Comprehensive Plan:

Consistent with OAR 660-012-0060, the Linn County Comprehensive Plan requires an evaluation of whether a transportation project will significantly affect the County's transportation system.

Linn County Code 907.230 provides in relevant part:

> *(E) Comprehensive Plan or Land Development Code amendments.*
>
> *(1) A Comprehensive Plan or Land Development Code amendment significantly affects transportation if:*
>
> *(a) it changes the function of a planned transportation facility;*
>
> *(b) it changes standards for a functional classification system; or*

The Goal Exception will increase vehicle trips on Conser Road/Transition Road only. As per the City of Millersburg Transportation System Plan, Conser Road/Transition Road is Classified as an Arterial. Linn County has identified Conser Road west of the railroad tracks as a Major Collector. Major Collector and Arterial streets are designated to facilitate the movement of vehicles between major activity generators to higher-order streets. The daily volume and types of trips added to the system are consistent with functional classification.

> *(c) it would increase or decrease the level of a transportation facility's activity beyond an acceptable level.*

All intersections are projected to operate better than the Linn County adopted LOS and v/c performance standards, as well as the City of Millersburg LOS performance standards. The proposed access to Conser Road does not cause any existing or planned transportation to not meet the standards.

> *(2) Findings shall be made to determine the extent of any impact and suggest ways to mitigate any adverse impacts.*

The proposed access to Conser Road will not result in any adverse impacts to the transportation system that would require mitigation.

10.0 CONCLUSIONS

As demonstrated within this report:

- The site access connection and adjacent intersections meet all applicable mobility standards through the 20-year planning horizon with the requested access through Tax Lot 402.
- The queuing at the access connection to Conser Road and adjacent intersections does not cause any operational concerns on the transportation system.
- There is no history of crashes within the area that need to be mitigated to facilitate safe vehicle movements resulting from the Goal Exception.
- Trucks can safely maneuver through the site access connections and adjacent intersections.
- There is no off-site mitigation recommended for the proposed Goal Exception.
- The Millersburg's TSP evaluated the transportation system assuming Tax Lots 106, 203, 206, and 207 could be served via an extension of Nygren Road to the west. The access connection will require crossing the BNSF railroad that runs along the western border of the site. The connection across the rail line is not feasible due to the construction and cost constraints that are outlined within the application materials. Therefore, the connection north through Tax Lot 402 to Conser Road is the only feasible access connection for these lots.

Millersburg TPR Analysis

Intersection: 1: Old Salem Rd @ Conser Rd **City:** Millersburg, OR

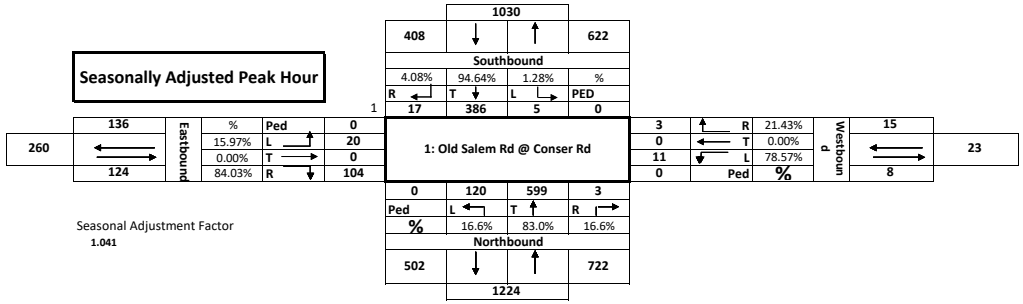
Counter: Quality Counts **Date:** Wednesday, September 7, 2022

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
16:00	16:15	0	100	1	101	1	0	2	3	2	110	30	142	11	0	6	17	263		0	0	0	0
16:15	16:30	12	96	2	110	2	0	4	6	2	98	35	135	20	0	3	23	274		0	0	1	0
16:30	16:45	3	98	2	103	1	0	5	6	3	99	29	131	15	0	3	18	258		1	0	0	0
16:45	17:00	5	94	0	99	2	0	5	7	3	89	29	121	17	0	1	18	245	1040	0	0	1	0
17:00	17:15	9	97	2	108	0	0	6	6	2	90	28	120	30	0	7	37	271	1048	0	0	0	0
17:15	17:30	1	93	0	94	1	0	1	2	0	110	29	139	23	0	3	26	261	1035	0	0	0	0
17:30	17:45	4	89	2	95	2	0	2	4	0	172	29	201	29	0	5	34	334	1111	0	0	0	0
17:45	18:00	2	92	1	95	0	0	2	2	1	203	29	233	18	0	4	22	352	1218	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	947	1	0	2	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	686	0	0	1	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total		**36**	**759**	**10**		**9**	**0**	**27**		**13**	**971**	**238**		**163**	**0**	**32**		**2258**		**2**	**0**	**5**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
Peak Volumes	**16**	**371**	**5**	**392**	**3**	**0**	**11**	**14**	**3**	**575**	**115**	**693**	**100**	**0**	**19**	**119**	**1218**		**0**	**0**	**0**	**0**
PHF	0.44	0.96	0.63	0.91	0.38	0.00	0.46	0.58	0.38	0.71	0.99	0.74	0.83	0.00	0.68	0.80	0.87					
Trucks	2	13	2		0	0	1		0	26	2		2	0	1							
% Trucks	13%	4%	40%		0%	0%	9%		0%	5%	2%		2%	0%	5%							


Seasonally Adjusted Peak Hour
1030
408
622
Southbound
4.08%
94.64%
1.28%
%
R
T
L
PED
1
17
386
5
0
136
Eastbound
%
Ped
0
260
15.97%
L
20
0.00%
T
0
124
84.03%
R
104
1: Old Salem Rd @ Conser Rd
3
R
21.43%
0
T
0.00%
11
L
78.57%
0
Ped
%
Westboun
d
15
23
8
0
120
599
3
Ped
L
T
R
%
16.6%
83.0%
16.6%
Northbound
502
722
1224
Seasonal Adjustment Factor
1.041

1: Old Salem Rd @ Conser Rd

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
4:00 PM		0	96	1			1		2			1	97	29			10		6		243	
4:15 PM		11	89	1			2		4			2	88	32			19		3		251	
4:30 PM		3	92	1			1		4			2	95	29			15		3		245	
4:45 PM		5	87	0			1		4			2	86	29			17		1		232	971
5:00 PM		7	94	1			0		5			2	86	28			29		6		258	986
5:15 PM		1	89	0			1		1			0	107	28			23		3		253	988
5:30 PM		4	87	1			2		2			0	164	28			28		5		321	1064
5:45 PM		2	88	1			0		2			1	192	29			18		4		337	1169
6:00 PM																					0	911
6:15 PM																					0	658
6:30 PM																					0	337
6:45 PM																					0	0
Total	0	33	722	6		0	8	0	24		0	10	915	232		0	159	0	31			
Peak Hour	**0**	**14**	**358**	**3**		**0**	**3**	**0**	**10**		**0**	**3**	**549**	**113**		**0**	**98**	**0**	**18**		**1169**	

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
4:00 PM	0	4	0		0		0		1	13	1		1		0		20	
4:15 PM	1	7	1		0		0		0	10	3		1		0		23	
4:30 PM	0	6	1		0		1		1	4	0		0		0		13	
4:45 PM	0	7	0		1		1		1	3	0		0		0		13	69
5:00 PM	2	3	1		0		1		0	4	0		1		1		13	62
5:15 PM	0	4	0		0		0		0	3	1		0		0		8	47
5:30 PM	0	2	1		0		0		0	8	1		1		0		13	47
5:45 PM	0	4	0		0		0		0	11	0		0		0		15	49
6:00 PM																	0	36
6:15 PM																	0	28
6:30 PM																	0	15
6:45 PM																	0	0
Total	3	37	4		1	0	3		3	56	6		4	0	1			
Peak Hour	**2**	**13**	**2**		**0**	**0**	**1**		**0**	**26**	**2**		**2**	**0**	**1**		**49**	

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound				SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left					
4:00 PM																	0	0	0	0
4:15 PM										1							0	0	1	0
4:30 PM		1															1	0	0	0
4:45 PM																	0	0	0	0
5:00 PM																	0	0	0	0
5:15 PM										1							0	0	1	0
5:30 PM																	0	0	0	0
5:45 PM																	0	0	0	0
6:00 PM																	0	0	0	0
6:15 PM																	0	0	0	0
6:30 PM																	0	0	0	0
6:45 PM																	0	0	0	0
Total	0	1	0		0	0	0		0	2	0		0	0	0		1	0	2	0
Peak Hour	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**1**	**0**	**0**	**0**	**0**	**0**		**0**	**0**	**1**	**0**

Pedestrians

Time Period	NE				NW				SW				SE				SB	WB	NB	EB
	Left	Right	Total		Left	Right	Total		Left	Right	Total		Left	Right	Total					
4:00 PM			0				0				0				0		0	0	0	0
4:15 PM			0				0				0				0		0	0	0	0
4:30 PM			0				0				0				0		0	0	0	0
4:45 PM			0				0				0				0		0	0	0	0
5:00 PM			0				0				0				0		0	0	0	0
5:15 PM			0				0				0				0		0	0	0	0
5:30 PM			0				0				0				0		0	0	0	0
5:45 PM			0				0				0				0		0	0	0	0
6:00 PM			0				0				0				0		0	0	0	0
6:15 PM			0				0				0				0		0	0	0	0
6:30 PM			0				0				0				0		0	0	0	0
6:45 PM			0				0				0				0		0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0		0	0	0	0
Peak Hour	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**	**0**

Intersection: 2: Woods Rd @ Conser Rd **City:** Millersburg, OR

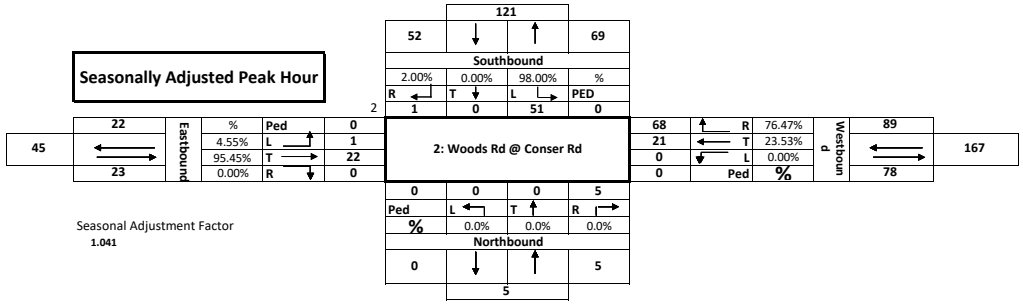
Counter: Quality Counts **Date:** Wednesday, September 7, 2022

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
16:00	16:15	0	0	4	4	18	4	0	22	0	0	0	0	0	1	0	1	27		0	0	0	0
16:15	16:30	0	0	10	10	18	8	1	27	1	1	0	2	0	3	0	3	42		0	0	0	0
16:30	16:45	2	0	11	13	14	7	0	21	2	0	0	2	0	1	1	2	38		0	0	0	0
16:45	17:00	0	1	9	10	16	5	0	21	0	0	0	0	0	0	0	0	31	138	0	0	0	0
17:00	17:15	0	0	17	17	16	7	0	23	1	0	0	1	0	9	0	9	50	161	0	0	0	0
17:15	17:30	0	0	9	9	15	5	0	20	0	0	0	0	0	3	0	3	32	151	0	0	0	0
17:30	17:45	1	0	12	13	14	5	0	19	2	0	0	2	0	5	0	5	39	152	0	0	0	0
17:45	18:00	0	0	11	11	20	3	0	23	2	0	0	2	0	4	1	5	41	162	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total		**3**	**1**	**83**		**131**	**44**	**1**		**8**	**1**	**0**		**0**	**26**	**2**		**300**		**0**	**0**	**0**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
Peak Volumes	**1**	**0**	**49**	**50**	**65**	**20**	**0**	**85**	**5**	**0**	**0**	**5**	**0**	**21**	**1**	**22**	**162**		**0**	**0**	**0**	**0**
PHF	0.25	0.00	0.72	0.74	0.81	0.71	0.00	0.92	0.63	0.00	0.00	0.63	0.00	0.58	0.25	0.61	0.81					
Trucks	0	0	1		2	1	0		0	0	0		0	1	0							
% Trucks	0%	0%	2%		3%	5%	0%		0%	0%	0%		0%	5%	0%							


Seasonally Adjusted Peak Hour
121
52
69
Southbound
2.00%
0.00%
98.00%
%
R
T
L
PED
2
1
0
51
0
22
Eastbound
%
Ped
0
45
4.55%
L
1
95.45%
T
22
23
0.00%
R
0
2: Woods Rd @ Conser Rd
68
R
76.47%
21
T
23.53%
0
L
0.00%
0
Ped
%
Westboun
d
89
167
78
0
0
0
5
Ped
L
T
R
%
0.0%
0.0%
0.0%
Northbound
0
5
5
Seasonal Adjustment Factor
1.041

2: Woods Rd @ Conser Rd

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
4:00 PM		0	0	3			18	3	0			0	0					1	0		25	
4:15 PM		0	0	10			15	7	1			1	1					3	0		38	
4:30 PM		1	0	11			14	7	0			2	0					1	1		37	
4:45 PM		0	1	9			16	5	0			0	0					0	0		31	131
5:00 PM		0	0	16			15	7	0			1	0					8	0		47	153
5:15 PM		0	0	9			15	4	0			0	0					3	0		31	146
5:30 PM		1	0	12			14	5	0			2	0					5	0		39	148
5:45 PM		0	0	11			19	3	0			2	0					4	1		40	157
6:00 PM																					0	110
6:15 PM																					0	79
6:30 PM																					0	40
6:45 PM																					0	0
Total	0	2	1	81		0	126	41	1		0	8	1	0		0	0	25	2			
Peak Hour	**0**	**1**	**0**	**48**		**0**	**63**	**19**	**0**		**0**	**5**	**0**	**0**		**0**	**0**	**20**	**1**		**157**	

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
4:00 PM	0		1		0	1								0			2	
4:15 PM	0		0		3	1								0			4	
4:30 PM	1		0		0	0								0			1	
4:45 PM	0		0		0	0								0			0	7
5:00 PM	0		1		1	0								1			3	8
5:15 PM	0		0		0	1								0			1	5
5:30 PM	0		0		0	0								0			0	4
5:45 PM	0		0		1	0								0			1	5
6:00 PM																	0	2
6:15 PM																	0	1
6:30 PM																	0	1
6:45 PM																	0	0
Total	1	0	2		5	3	0		0	0	0		0	1	0			
Peak Hour	**0**	**0**	**1**		**2**	**1**	**0**		**0**	**0**	**0**		**0**	**1**	**0**		**5**	

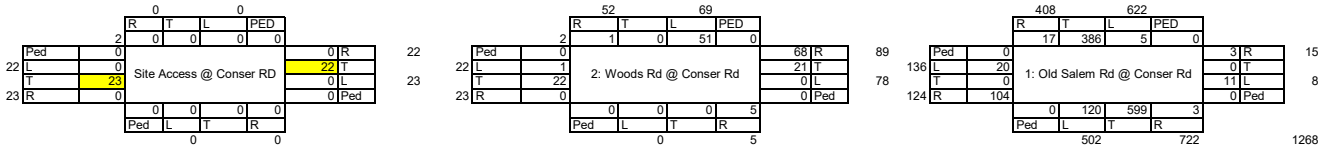
Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound				SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left					
4:00 PM																	0	0	0	0
4:15 PM																	0	0	0	0
4:30 PM																	0	0	0	0
4:45 PM																	0	0	0	0
5:00 PM																	0	0	0	0
5:15 PM																	0	0	0	0
5:30 PM																	0	0	0	0
5:45 PM																	0	0	0	0
6:00 PM																	0	0	0	0
6:15 PM																	0	0	0	0
6:30 PM																	0	0	0	0
6:45 PM																	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

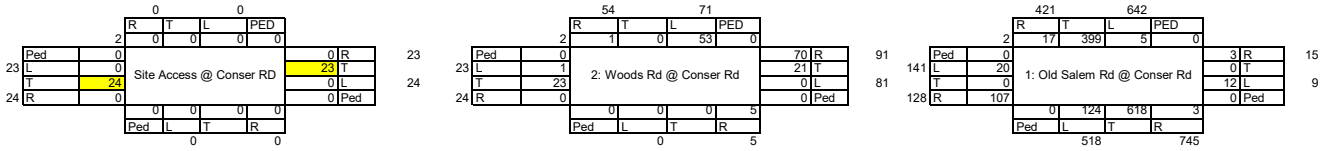
Pedestrians

Time Period	NE				NW				SW				SE			SB	WB	NB	EB
	Left	Right	Total		Left	Right	Total		Left	Right	Total		Left	Right	Total				
4:00 PM			0				0				0				0	0	0	0	0
4:15 PM			0				0				0				0	0	0	0	0
4:30 PM			0				0				0				0	0	0	0	0
4:45 PM			0				0				0				0	0	0	0	0
5:00 PM			0				0				0				0	0	0	0	0
5:15 PM			0				0				0				0	0	0	0	0
5:30 PM			0				0				0				0	0	0	0	0
5:45 PM			0				0				0				0	0	0	0	0
6:00 PM			0				0				0				0	0	0	0	0
6:15 PM			0				0				0				0	0	0	0	0
6:30 PM			0				0				0				0	0	0	0	0
6:45 PM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**

Existing 2022 PM Volumes



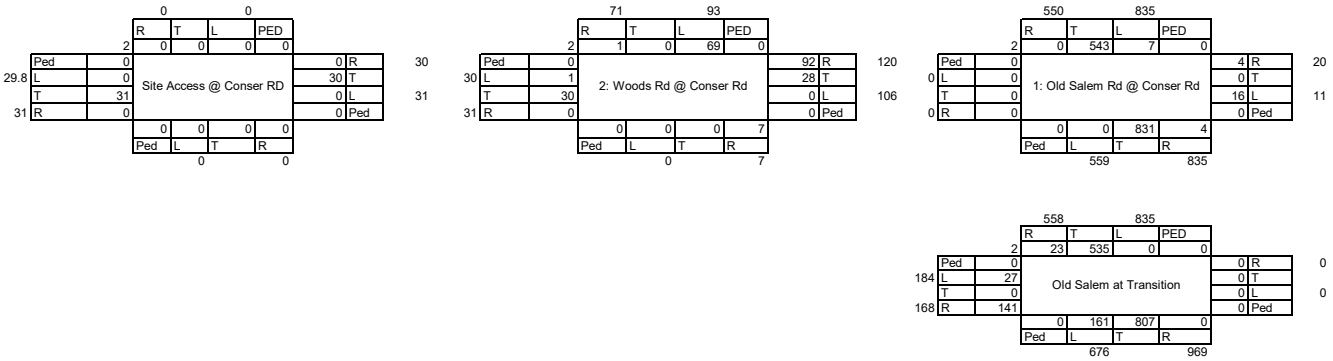
Base 2024 PM Volumes



EDIT Highlighted

Base Year	2022
Target Year	2024
Years of Growth	2
Growth Rate Per Year	0.016
Growth Factor	1.03

2044 PM Volumes
Transition Way Reroute



EDIT Highlighted

Base Year	2022
Target Year	2044
Years of Growth	22
Growth Rate Per Year	0.016
Growth Factor	1.35

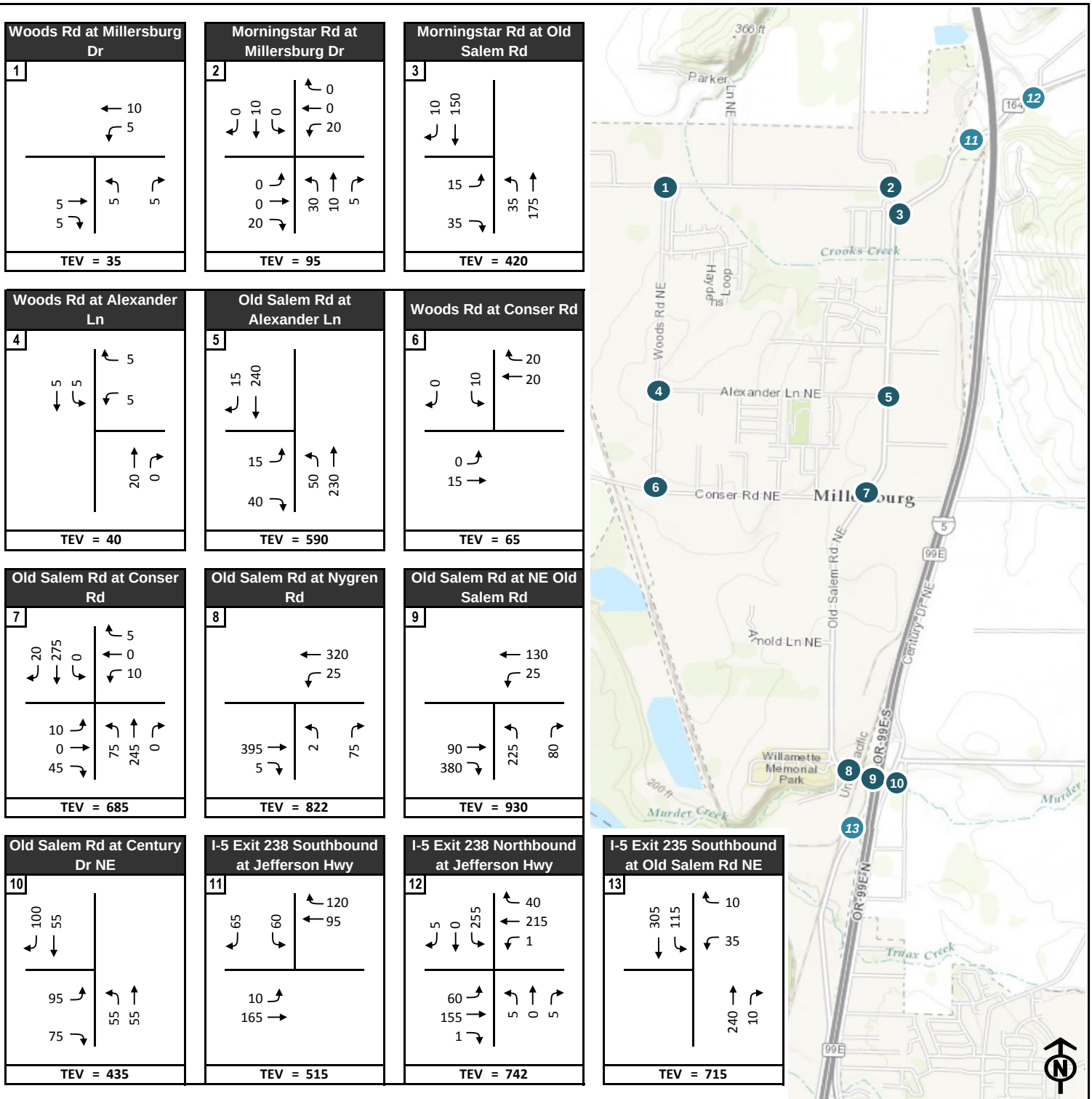
SEASONAL TREND TABLE (Updated: 11/08/2023)																									Seasonal Trend Peak
TREND	1-Jan	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	15-Jun	1-Jul	15-Jul	1-Aug	15-Aug	1-Sep	15-Sep	1-Oct	15-Oct	1-Nov	15-Nov	1-Dec	15-Dec	
INTERSTATE URBANIZED	1.0869	1.1041	1.0688	1.0335	1.0182	1.0028	0.9995	0.9962	0.9901	0.9840	0.9641	0.9443	0.9502	0.9562	0.9510	0.9458	0.9575	0.9692	0.9791	0.9891	1.0107	1.0324	1.0532	1.0739	0.9443
INTERSTATE NONURBANIZED	1.2459	1.2915	1.2286	1.1657	1.0907	1.0158	1.0059	0.9960	0.9728	0.9496	0.9128	0.8760	0.8650	0.8540	0.8612	0.8684	0.8905	0.9126	0.9488	0.9850	1.0336	1.0822	1.1717	1.2612	0.8540
COMMUTER	1.0905	1.0986	1.0636	1.0285	1.0162	1.0038	0.9959	0.9879	0.9814	0.9749	0.9631	0.9512	0.9614	0.9717	0.9608	0.9500	0.9548	0.9595	0.9634	0.9673	1.0090	1.0507	1.0733	1.0958	0.9500
COASTAL DESTINATION	1.2064	1.1715	1.1234	1.0753	1.0545	1.0337	1.0372	1.0407	1.0216	1.0024	0.9586	0.9147	0.8760	0.8372	0.8371	0.8370	0.8678	0.8985	0.9578	1.0170	1.0730	1.1290	1.1823	1.2357	0.8370
COASTAL DESTINATION ROUTE	1.3937	1.2897	1.2245	1.1594	1.1247	1.0901	1.0911	1.0921	1.0516	1.0111	0.9493	0.8875	0.8172	0.7469	0.7455	0.7440	0.7916	0.8391	0.9274	1.0158	1.1126	1.2094	1.3193	1.4291	0.7440
AGRICULTURE	1.4537	1.4624	1.3705	1.2786	1.2139	1.1492	1.1207	1.0923	1.0075	0.9226	0.8742	0.8258	0.8348	0.8439	0.8422	0.8405	0.7976	0.7547	0.8073	0.8598	1.0041	1.1484	1.3339	1.5194	0.7547
RECREATIONAL SUMMER	1.6049	1.5814	1.4924	1.4034	1.3208	1.2382	1.2380	1.2377	1.0939	0.9500	0.8669	0.7839	0.7392	0.6945	0.7065	0.7185	0.7404	0.7624	0.8468	0.9311	1.1270	1.3230	1.5054	1.6879	0.6945
RECREATIONAL SUMMER WINTER	1.0075	0.9570	0.9184	0.8799	0.9701	1.0603	1.0675	1.0747	1.0843	1.0939	1.0045	0.9151	0.8244	0.7336	0.7795	0.8254	0.9368	1.0482	1.1794	1.3105	1.4969	1.6833	1.3470	1.0108	0.7336
RECREATIONAL WINTER**	0.8059	0.6710	0.6475	0.6240	0.7462	0.8685	0.9307	0.9928	1.1496	1.3064	1.2173	1.1282	0.9996	0.8709	0.9526	1.0342	1.1225	1.2108	1.4061	1.6013	1.9826	2.3639	1.6332	0.9026	0.6240
SUMMER	1.2374	1.2352	1.1733	1.1114	1.0786	1.0459	1.0330	1.0202	0.9851	0.9500	0.9160	0.8819	0.8660	0.8501	0.8561	0.8620	0.8891	0.9161	0.9430	0.9698	1.0525	1.1352	1.2002	1.2653	0.8501
SUMMER < 2500	1.2836	1.2576	1.1943	1.1310	1.1011	1.0712	1.0448	1.0184	0.9633	0.9082	0.8861	0.8641	0.8609	0.8578	0.8695	0.8813	0.8874	0.8936	0.9165	0.9394	1.0500	1.1607	1.2535	1.3463	0.8578

* Seasonal Trend Table factors are based on previous year ATR data. The table is updated yearly.
* Grey shading indicates months were seasonal factor is greater than or less than 30%

**Use Recreation Winter Trend with Caution! ATR site was down for most of of 2022 due to loop issues and was estimated while the site was down

	15-Jun	Peak	
Commuter	0.9512	0.9500	1.001
SUMMER	0.8819	0.8501	1.037
			1.019

	1-Sep	Peak	
Commuter	0.9548	0.9500	1.005
SUMMER	0.9161	0.8501	1.078
			1.041

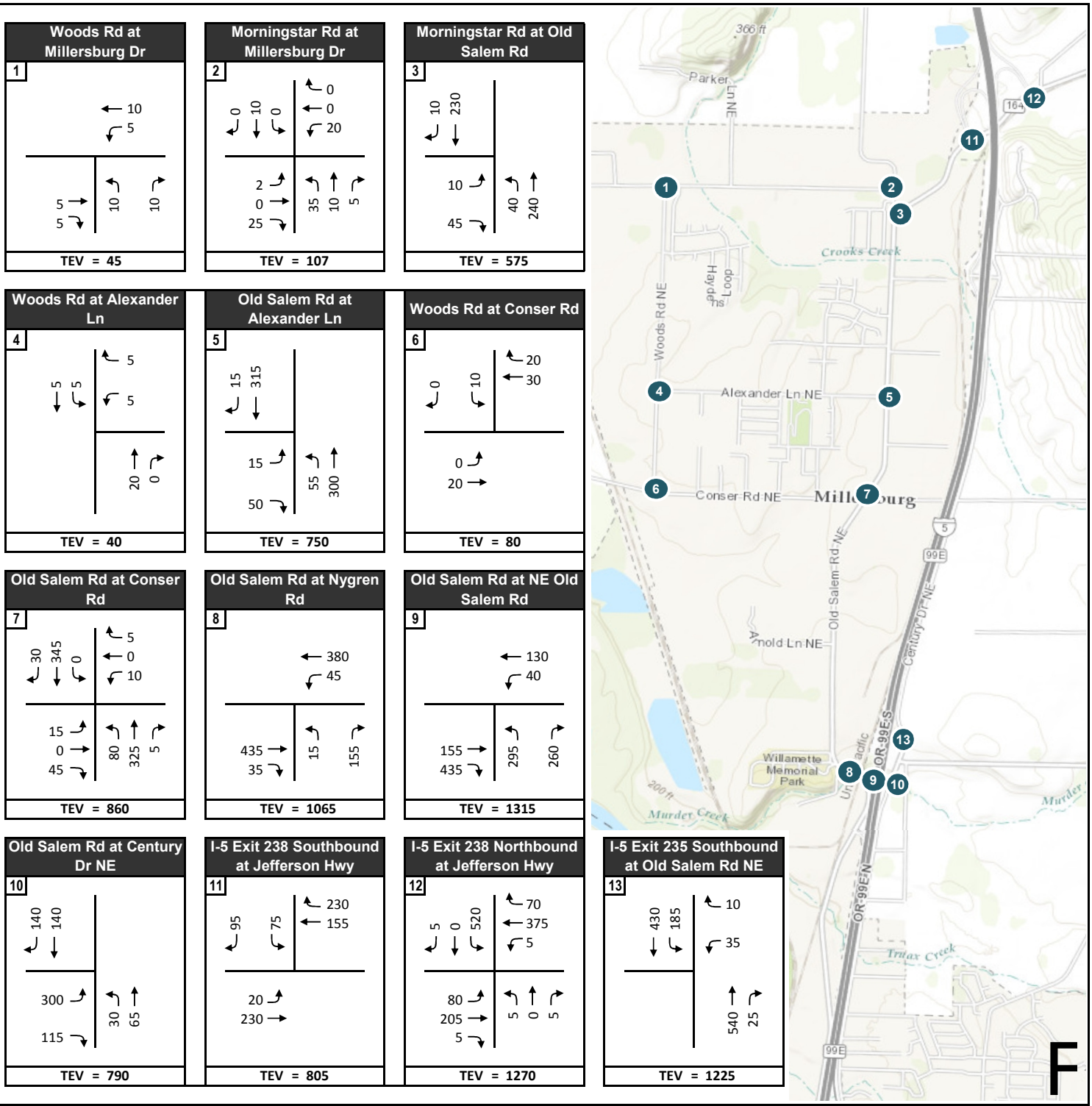


Legend

- Turning Movement
- ### PM Peak Hour Volume
- TEV: Total Entering Volume
- STOP Control
- # Intersection Number
- # Intersection analyzed as part of the Albany Area MPO Transportation Study

Figure 6
Existing (2015) Conditions
PM Peak Hour Traffic Volumes

MillersburgTSP
Transportation System Plan



City of Millersburg: Transportation System Plan

Legend

- Turning Movement
- ### PM Peak Hour Volume
- TEV: Total Entering Volume
- STOP Control
- # Intersection Number
- # Intersection analyzed as part of the Albany Area MPO Transportation Study

Figure 2
Future (2040) Baseline Conditions
PM Peak Hour Traffic Volumes

Millersburg TPR Assessment

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	0	0	23	0	0
Future Vol, veh/h	24	0	0	23	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	7	0	0	4	0	0
Mvmt Flow	30	0	0	28	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	30	0	58	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	28	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1596	-	954	1050
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1596	-	954	1050
Mov Cap-2 Maneuver	-	-	-	-	954	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1000	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1596	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	23	21	70	53	1
Future Vol, veh/h	1	23	21	70	53	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	25	23	76	58	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	88	61
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1494	-	-	-	913	1004
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1494	-	-	-	912	1004
Mov Cap-2 Maneuver	-	-	-	-	912	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1494	-	-	-	914
HCM Lane V/C Ratio	0.001	-	-	-	0.064
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	107	12	0	3	124	618	3	5	399	17
Future Vol, veh/h	20	0	107	12	0	3	124	618	3	5	399	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	0	-	-	-	120	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	25	0	7	43	0	33	19	15	19	14	9	18
Mvmt Flow	23	0	123	14	0	3	143	710	3	6	459	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1480	1480	469	1541	1489	712	479	0	0	713	0	0
Stage 1	481	481	-	998	998	-	-	-	-	-	-	-
Stage 2	999	999	-	543	491	-	-	-	-	-	-	-
Critical Hdwy	7.35	6.5	6.27	7.53	6.5	6.53	4.29	-	-	4.24	-	-
Critical Hdwy Stg 1	6.35	5.5	-	6.53	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.35	5.5	-	6.53	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.725	4	3.363	3.887	4	3.597	2.371	-	-	2.326	-	-
Pot Cap-1 Maneuver	92	127	584	76	125	384	1000	-	-	834	-	-
Stage 1	525	557	-	248	324	-	-	-	-	-	-	-
Stage 2	266	324	-	457	552	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	81	108	584	53	106	384	1000	-	-	834	-	-
Mov Cap-2 Maneuver	81	108	-	53	106	-	-	-	-	-	-	-
Stage 1	450	553	-	213	278	-	-	-	-	-	-	-
Stage 2	226	278	-	358	548	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.2	80.8	1.5	0.1
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1000	-	-	81	584	64	834	-	-
HCM Lane V/C Ratio	0.143	-	-	0.284	0.211	0.269	0.007	-	-
HCM Control Delay (s)	9.2	-	-	66.2	12.8	80.8	9.3	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	1	0.8	1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	31	0	0	30	0	0
Future Vol, veh/h	31	0	0	30	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	7	0	0	4	0	0
Mvmt Flow	38	0	0	37	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	38	0	75	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1585	-	933	1040
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1585	-	933	1040
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1585	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

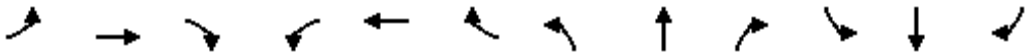
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	30	28	92	69	1
Future Vol, veh/h	1	30	28	92	69	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	33	30	100	75	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	130	0	-	0	115	80
Stage 1	-	-	-	-	80	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1455	-	-	-	881	980
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1455	-	-	-	880	980
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	987	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1455	-	-	-	881
HCM Lane V/C Ratio	0.001	-	-	-	0.086
HCM Control Delay (s)	7.5	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	0	141	20	0	20	161	807	0	0	535	23
Future Volume (vph)	27	0	141	20	0	20	161	807	0	0	535	23
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0		4.0		4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00		1.00		1.00		1.00	1.00			1.00	
Frt	1.00		0.85		0.93		1.00	1.00			0.99	
Flt Protected	0.95		1.00		0.98		0.95	1.00			1.00	
Satd. Flow (prot)	1630		1458		1561		1630	1716			1706	
Flt Permitted	0.83		1.00		0.98		0.27	1.00			1.00	
Satd. Flow (perm)	1430		1458		1561		457	1716			1706	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	0	153	22	0	22	175	877	0	0	582	25
RTOR Reduction (vph)	0	0	139	0	40	0	0	0	0	0	2	0
Lane Group Flow (vph)	29	0	14	0	4	0	175	877	0	0	605	0
Turn Type	Perm		Perm	Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8			2					
Actuated Green, G (s)	4.8		4.8		4.8		36.7	36.7			25.5	
Effective Green, g (s)	4.8		4.8		4.8		38.7	38.7			27.5	
Actuated g/C Ratio	0.09		0.09		0.09		0.75	0.75			0.53	
Clearance Time (s)	4.0		4.0		4.0		6.0	6.0			6.0	
Vehicle Extension (s)	2.5		2.5		2.5		2.5	4.0			4.0	
Lane Grp Cap (vph)	133		135		145		507	1289			910	
v/s Ratio Prot							0.05	c0.51			0.35	
v/s Ratio Perm	c0.02		0.01		0.00		0.21					
v/c Ratio	0.22		0.11		0.03		0.35	0.68			0.66	
Uniform Delay, d1	21.6		21.4		21.2		3.7	3.3			8.7	
Progression Factor	1.00		1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.6		0.3		0.1		0.3	1.6			2.0	
Delay (s)	22.2		21.6		21.3		4.0	4.9			10.7	
Level of Service	C		C		C		A	A			B	
Approach Delay (s)		21.7			21.3			4.7			10.7	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology does not support Non-NEMA phasing.

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	4	831	4	7	543
Future Vol, veh/h	16	4	831	4	7	543
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	43	33	15	19	14	9
Mvmt Flow	18	5	955	5	8	624

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1598	958	0	0	960	0
Stage 1	958	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Critical Hdwy	6.83	6.53	-	-	4.24	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.887	3.597	-	-	2.326	-
Pot Cap-1 Maneuver	94	274	-	-	671	-
Stage 1	315	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	93	274	-	-	671	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	315	-	-	-	-	-
Stage 2	450	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	47.6	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	107	671	-
HCM Lane V/C Ratio	-	-	0.215	0.012	-
HCM Control Delay (s)	-	-	47.6	10.4	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0	-

Intersection	
Int Delay, s/veh	8.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	31	7	138	30	16	307
Future Vol, veh/h	31	7	138	30	16	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	7	0	0	4	0	0
Mvmt Flow	38	9	170	37	20	379

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	47	0	420	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	377	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1573	-	594	1033
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	698	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1573	-	529	1033
Mov Cap-2 Maneuver	-	-	-	-	529	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	621	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.2	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	986	-	-	1573	-
HCM Lane V/C Ratio	0.404	-	-	0.108	-
HCM Control Delay (s)	11.1	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.4	-

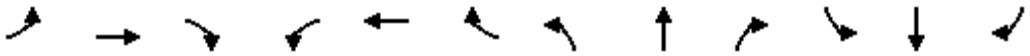
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	332	161	92	69	6
Future Vol, veh/h	6	332	161	92	69	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	361	175	100	75	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	275	0	-	0	600	225
Stage 1	-	-	-	-	225	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1288	-	-	-	464	814
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	695	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1288	-	-	-	461	814
Mov Cap-2 Maneuver	-	-	-	-	461	-
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	695	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1288	-	-	-	478
HCM Lane V/C Ratio	0.005	-	-	-	0.171
HCM Control Delay (s)	7.8	0	-	-	14.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	0	330	20	0	20	243	807	0	0	535	74
Future Volume (vph)	140	0	330	20	0	20	243	807	0	0	535	74
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0		4.0		4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00		1.00		1.00		1.00	1.00			1.00	
Frt	1.00		0.85		0.93		1.00	1.00			0.98	
Flt Protected	0.95		1.00		0.98		0.95	1.00			1.00	
Satd. Flow (prot)	1630		1458		1561		1630	1716			1688	
Flt Permitted	0.73		1.00		0.98		0.16	1.00			1.00	
Satd. Flow (perm)	1250		1458		1561		275	1716			1688	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	152	0	359	22	0	22	264	877	0	0	582	80
RTOR Reduction (vph)	0	0	298	0	37	0	0	0	0	0	8	0
Lane Group Flow (vph)	152	0	61	0	7	0	264	877	0	0	654	0
Turn Type	Perm		Perm	Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8			2					
Actuated Green, G (s)	9.4		9.4		9.4		36.1	36.1			23.0	
Effective Green, g (s)	9.4		9.4		9.4		38.1	38.1			25.0	
Actuated g/C Ratio	0.17		0.17		0.17		0.69	0.69			0.45	
Clearance Time (s)	4.0		4.0		4.0		6.0	6.0			6.0	
Vehicle Extension (s)	2.5		2.5		2.5		2.5	4.0			4.0	
Lane Grp Cap (vph)	211		246		264		410	1178			760	
v/s Ratio Prot							0.11	c0.51			c0.39	
v/s Ratio Perm	c0.12		0.04		0.00		0.34					
v/c Ratio	0.72		0.25		0.03		0.64	0.74			0.86	
Uniform Delay, d1	21.8		20.0		19.2		7.8	5.6			13.7	
Progression Factor	1.00		1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	10.8		0.4		0.0		3.1	2.8			10.1	
Delay (s)	32.6		20.4		19.3		10.8	8.3			23.8	
Level of Service	C		C		B		B	A			C	
Approach Delay (s)		24.0			19.3			8.9			23.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology does not support Non-NEMA phasing.

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	4	944	4	7	594
Future Vol, veh/h	16	4	944	4	7	594
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	43	33	15	19	14	9
Mvmt Flow	18	5	1085	5	8	683

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1787	1088	0	0	1090	0
Stage 1	1088	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Critical Hdwy	6.83	6.53	-	-	4.24	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.887	3.597	-	-	2.326	-
Pot Cap-1 Maneuver	70	228	-	-	597	-
Stage 1	270	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	69	228	-	-	597	-
Mov Cap-2 Maneuver	69	-	-	-	-	-
Stage 1	270	-	-	-	-	-
Stage 2	419	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	67.2	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	80	597	-
HCM Lane V/C Ratio	-	-	0.287	0.013	-
HCM Control Delay (s)	-	-	67.2	11.1	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Millersburg TPR Assessment

Intersection: 3: Site Aceess & Conser Rd , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 3: Site Aceess & Conser Rd , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 3: Site Aceess & Conser Rd , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 6: Conser Rd & Woods , Interval #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	40
Average Queue (ft)	30
95th Queue (ft)	46
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Conser Rd & Woods , Interval #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	25
95th Queue (ft)	48
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Conser Rd & Woods , All Intervals

Movement	SB
Directions Served	LR
Maximum Queue (ft)	60
Average Queue (ft)	26
95th Queue (ft)	48
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: Old Salem Rd & Conser Rd, Interval #1

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	63	71	111	51	9
Average Queue (ft)	20	39	36	30	2
95th Queue (ft)	67	73	113	57	9
Link Distance (ft)		580	604		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	140			120	150
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9: Old Salem Rd & Conser Rd, Interval #2

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	76	80	77	75	21
Average Queue (ft)	15	31	20	22	1
95th Queue (ft)	55	57	57	58	12
Link Distance (ft)		580	604		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	140			120	150
Storage Blk Time (%)	0			0	
Queuing Penalty (veh)	0			0	

Intersection: 9: Old Salem Rd & Conser Rd, All Intervals

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	95	87	118	76	25
Average Queue (ft)	16	33	24	24	1
95th Queue (ft)	58	62	75	58	11
Link Distance (ft)		580	604		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	140			120	150
Storage Blk Time (%)	0			0	
Queuing Penalty (veh)	0			0	

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Intersection: 3: Site Aceess & Conser Rd , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 3: Site Aceess & Conser Rd , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 3: Site Aceess & Conser Rd , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 6: Conser Rd & Woods, Interval #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	38
Average Queue (ft)	28
95th Queue (ft)	46
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Conser Rd & Woods, Interval #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	46
Average Queue (ft)	27
95th Queue (ft)	45
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Conser Rd & Woods, All Intervals

Movement	SB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	27
95th Queue (ft)	45
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Old Salem Rd & Transition, Interval #1

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	R	LTR	L	T	TR
Maximum Queue (ft)	43	81	45	90	160	209
Average Queue (ft)	19	53	25	48	80	98
95th Queue (ft)	47	90	52	87	172	183
Link Distance (ft)		515	211		410	1039
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	275			250		
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 8: Old Salem Rd & Transition, Interval #2

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	R	LTR	L	T	TR
Maximum Queue (ft)	59	86	58	96	214	205
Average Queue (ft)	18	46	24	36	57	81
95th Queue (ft)	44	76	54	74	146	163
Link Distance (ft)		515	211		410	1039
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	275			250		
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 8: Old Salem Rd & Transition, All Intervals

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	R	LTR	L	T	TR
Maximum Queue (ft)	59	93	62	104	244	237
Average Queue (ft)	18	48	24	39	63	86
95th Queue (ft)	45	80	53	78	154	169
Link Distance (ft)		515	211		410	1039
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	275			250		
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 9: Old Salem Rd & Conser Rd , Interval #1

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	100	22
Average Queue (ft)	43	6
95th Queue (ft)	104	25
Link Distance (ft)	606	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Old Salem Rd & Conser Rd , Interval #2

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	97	27
Average Queue (ft)	21	4
95th Queue (ft)	68	19
Link Distance (ft)	606	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Old Salem Rd & Conser Rd , All Intervals

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	105	28
Average Queue (ft)	26	4
95th Queue (ft)	79	21
Link Distance (ft)	606	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Intersection: 3: Site Aceess & Conser Rd , Interval #1

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	22	107
Average Queue (ft)	7	64
95th Queue (ft)	27	107
Link Distance (ft)	1750	371
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Site Aceess & Conser Rd , Interval #2

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	33	90
Average Queue (ft)	5	50
95th Queue (ft)	25	82
Link Distance (ft)	1750	371
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Site Aceess & Conser Rd , All Intervals

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	39	122
Average Queue (ft)	6	53
95th Queue (ft)	25	90
Link Distance (ft)	1750	371
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Conser Rd & Woods , Interval #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	68
Average Queue (ft)	35
95th Queue (ft)	62
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Conser Rd & Woods , Interval #2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	26	57
Average Queue (ft)	2	32
95th Queue (ft)	16	52
Link Distance (ft)	1750	490
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Conser Rd & Woods , All Intervals

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	26	76
Average Queue (ft)	2	33
95th Queue (ft)	14	55
Link Distance (ft)	1750	490
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Old Salem Rd & Transition, Interval #1

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	R	LTR	L	T	TR
Maximum Queue (ft)	117	165	86	168	203	315
Average Queue (ft)	76	104	42	90	121	204
95th Queue (ft)	120	172	88	184	247	331
Link Distance (ft)		515	211		410	1039
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	275			250		
Storage Blk Time (%)					1	
Queuing Penalty (veh)					2	

Intersection: 8: Old Salem Rd & Transition, Interval #2

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	R	LTR	L	T	TR
Maximum Queue (ft)	129	188	66	147	182	263
Average Queue (ft)	64	99	24	67	84	145
95th Queue (ft)	111	167	57	115	157	246
Link Distance (ft)		515	211		410	1039
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	275			250		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 8: Old Salem Rd & Transition, All Intervals

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	R	LTR	L	T	TR
Maximum Queue (ft)	130	188	91	176	210	322
Average Queue (ft)	67	100	28	72	93	160
95th Queue (ft)	114	168	67	137	186	275
Link Distance (ft)		515	211		410	1039
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	275			250		
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 9: Old Salem Rd & Conser Rd , Interval #1

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	158	30
Average Queue (ft)	80	6
95th Queue (ft)	182	31
Link Distance (ft)	606	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Old Salem Rd & Conser Rd , Interval #2

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	124	31
Average Queue (ft)	31	4
95th Queue (ft)	91	20
Link Distance (ft)	606	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Old Salem Rd & Conser Rd , All Intervals

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	160	40
Average Queue (ft)	43	4
95th Queue (ft)	123	23
Link Distance (ft)	606	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty, Interval #1: 2
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Millersburg TPR Assessment

CRASH DATA SUMMARY

Conser Rd @ Old Salem Rd											
YEAR	**PDO**	**INJURY**	**FATAL**	**HEAD**	**REAR**	**SIDE**	**TURN**	**OTHER**	**PED**	**BIKE**	**TOTAL**
2017											0
2018	1						1				1
2019	1	1					1	1			2
2020	1	1	1				1	2			3
2021		2						2			2
2021											0
TOTALS:	3	4	1	0	0	0	3	5	0	0	8

CHECK
OK
OK
OK
OK
OK
OK

P.M. PEAK HOUR	Number of Years, n	ADT	AVG. ANNUAL MILES (MILLIONS)	AVG. YEARLY CRASHES	CRASH RATE/ MILLION MILES
1268	5	12680	4628200.000	1600000.0	0.35

OTHER	W-E / N-S	SW-NE	E-W	NE-SW	S-N
TURN	SW-NE / E-NE	SW-NE / NE-E	NE-SW / SW-W		

			# Crashes	ADT	MEV	Crash Rate	Critical Crash Rate	
1	Conser Rd @ Old Salem Rd	Stop	8	12680	23.14	0.35	0.57	under

Weighted Average				
Stop	8	23	0.34570675	

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

CONSER RD and OLD SALEM RD, City of Millersburg, Linn County, 01/01/2017 to 12/31/2022

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2021														
FIXED / OTHER OBJECT	0	2	0	2	0	2	0	2	0	0	2	0	0	2
YEAR 2021 TOTAL	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**2**
YEAR: 2020														
FIXED / OTHER OBJECT	1	0	1	2	1	0	0	2	0	2	0	0	0	2
TURNING MOVEMENTS	0	1	0	1	0	3	0	1	0	1	0	0	0	0
YEAR 2020 TOTAL	**1**	**1**	**1**	**3**	**1**	**3**	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**2**
YEAR: 2019														
ANGLE	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2019 TOTAL	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**0**
YEAR: 2018														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2018 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**
FINAL TOTAL	**1**	**4**	**3**	**8**	**1**	**6**	**0**	**8**	**0**	**6**	**2**	**3**	**0**	**4**

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.

CITY OF MILLERSBURG, LINN COUNTY

CONSER RD and OLD SALEM RD, City of Millersburg, Linn County, 01/01/2017 to 12/31/2022

1 - 5 of 8 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J U G S V	I N H L	S W C O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00267	N	N	N	N		03/07/2018	16	CONSER RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT											02
NONE						WE	0	OLD SALEM RD	CN		STOP SIGN	N	DRY	TURN		N/A	SW-NE									000		00
N						2P			02	0		N	DAY	PDO		UNKNOWN		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						44 40 52.5	-123 3 38.2																UNK					
															02	NONE 9	TURN-R											
																N/A	E -NE									000		00
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																							UNK					
00831	N	N	N	N		06/11/2019	16	CONSER RD	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										082	03,02
COUNTY						TU	0	OLD SALEM RD	CN		STOP SIGN	N	DRY	ANGL		PRVTE	W -E									015		00
N						10A			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	17	M	OR-Y		021,028	000	082	03,02
N						44 40 51.82	-123 3 38.76																OR<25					
															02	NONE 0	STRGHT											
																PRVTE	N -S									000		00
																PSNGR CAR		01	DRVR	NONE	73	M	OR-Y		000	000		00
																							OR<25					
91358	N	N	N	N		09/19/2019	16	CONSER RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT											02
COUNTY						TH	0	OLD SALEM RD	CN		UNKNOWN	N	DRY	TURN		N/A	SW-NE									000		00
N						5P			04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						44 40 52.5	-123 3 38.2																UNK					
															02	NONE 9	TURN-L											
																N/A	NE-E									000		00
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																							UNK					
00927	N	Y	Y	N		08/07/2020	16	OLD SALEM RD	STRGHT		N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT										040,001	10
COUNTY						FR	400	CONSER RD	NE	(NONE)	UNKNOWN	N	DRY	FIX		PRVTE	SW-NE									000	040	00
Y						2P			00			N	DAY	FAT		MTRCYCLE		01	DRVR	KILL	35	M	N-VAL		081	000	001	10
N						44 40 56.21	-123 3 35.29			(02)													OR<25					
00350	N	N	N	N	N	03/08/2020	16	OLD SALEM RD	STRGHT		N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT											02
COUNTY						SU	73	CONSER RD	SW	(NONE)	L-GRN-SIG	N	DRY	TURN		PRVTE	NE-SW									000		00
N						5P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	18	M	OR-Y		000	000		00
N						44 40 50.92	-123 3 39.58			(03)													OR<25					
															01	NONE 0	STRGHT											
																PRVTE	NE-SW									000		00
																PSNGR CAR		02	PSNG	INJC	19	F			000	000		00
															02	NONE 0	TURN-L											
																PRVTE	SW-W									019		00
																PSNGR CAR		01	DRVR	INJC	19	M	SUSP		028,004	000		02
																							N-RES					

CITY OF MILLERSBURG, LINN COUNTY

CONSER RD and OLD SALEM RD, City of Millersburg, Linn County, 01/01/2017 to 12/31/2022

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J S W U G N H R I V L K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01313	N	N	N N	11/01/2020	17	CONSER RD	STRGHT		N	Y	CLR	FIX OBJ	01	NONE 9	STRGHT										044	27,10
COUNTY				SU	302	OLD SALEM RD	W	(RSDMD)	REG-SIGN	N	DRY	FIX		N/A	E -W									029		00
Y				10A			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				44 40 51.67	-123 3 38.99			(02)													UNK					
00899	N	Y	N N N N	07/17/2021	16	OLD SALEM RD	CURVE		N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT										053	27
COUNTY				SA	600	CONSER RD	NE	(NONE)	NONE	N	DRY	FIX		PRVTE	NE-SW									000	053	00
Y				10P			07			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJB	44	F	OR-Y		016	038		27
N				44 40 58.54	-123 3 33.71			(02)													OR<25					
01558	N	N	N N	11/12/2021	16	OLD SALEM RD	CURVE		N	Y	CLD	FIX OBJ	01	NONE 0	STRGHT										034,053	10
COUNTY				FR	775	CONSER RD	NE	(NONE)	NONE	N	DRY	FIX		PRVTE	S -N									007	053	00
Y				6A			07			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	60	M	OR-Y		081	000		10
N				44 40 59.15	-123 3 33.51			(02)													OR<25					

SANDOW
ENGINEERING
160 Madison Street, Suite A
Eugene, Oregon 97402
541.513.3376
sandowengineering.com

Appendix B: Delorean (Ball) Site Vicinity Map

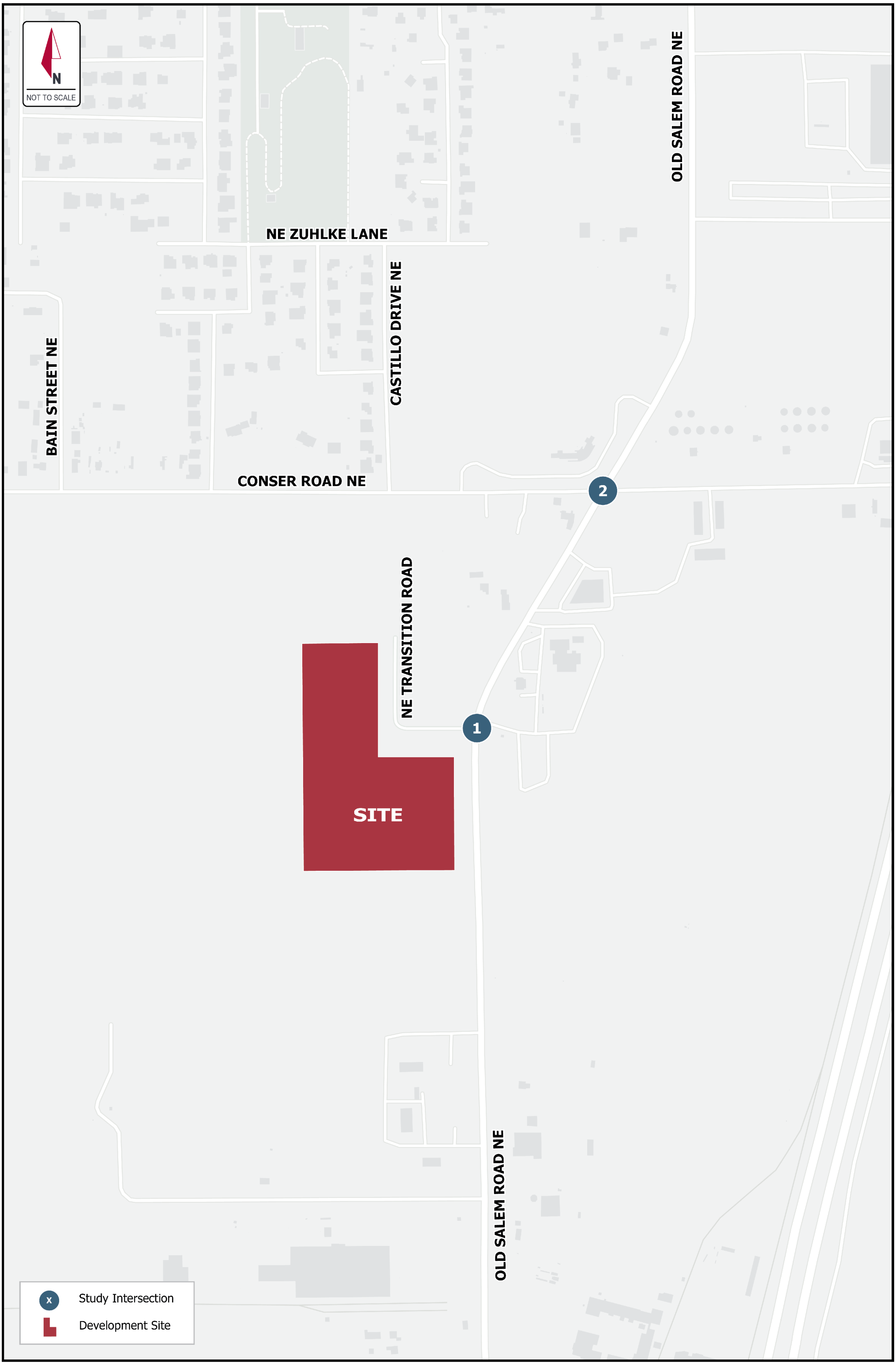


FIGURE 1: SITE VICINITY MAP

Appendix C: Traffic Operations Analysis

Intersection Level Of Service Report
Intersection 1: Conser Rd. NE/Old Salem Rd. NE

Control Type:	Two-way stop	Delay (sec / veh):	64.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.210

Intersection Setup

Name	Old Salem Rd. NE			Old Salem Rd. NE			Conser Rd. NE			Conser Rd. NE		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	10.00	10.00	12.00	10.00	10.00	10.00	12.00	12.00	10.00	10.00	10.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			50.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			No		

Volumes

Name	Old Salem Rd. NE			Old Salem Rd. NE			Conser Rd. NE			Conser Rd. NE		
Base Volume Input [veh/h]	0	944	4	7	594	59	0	0	28	16	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	10.00	10.00	10.00	10.00	2.00	2.00	2.00	2.00	10.00	10.00	10.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	944	4	7	594	59	0	0	28	16	0	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	236	1	2	149	15	0	0	7	4	0	1
Total Analysis Volume [veh/h]	0	944	4	7	594	59	0	0	28	16	0	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

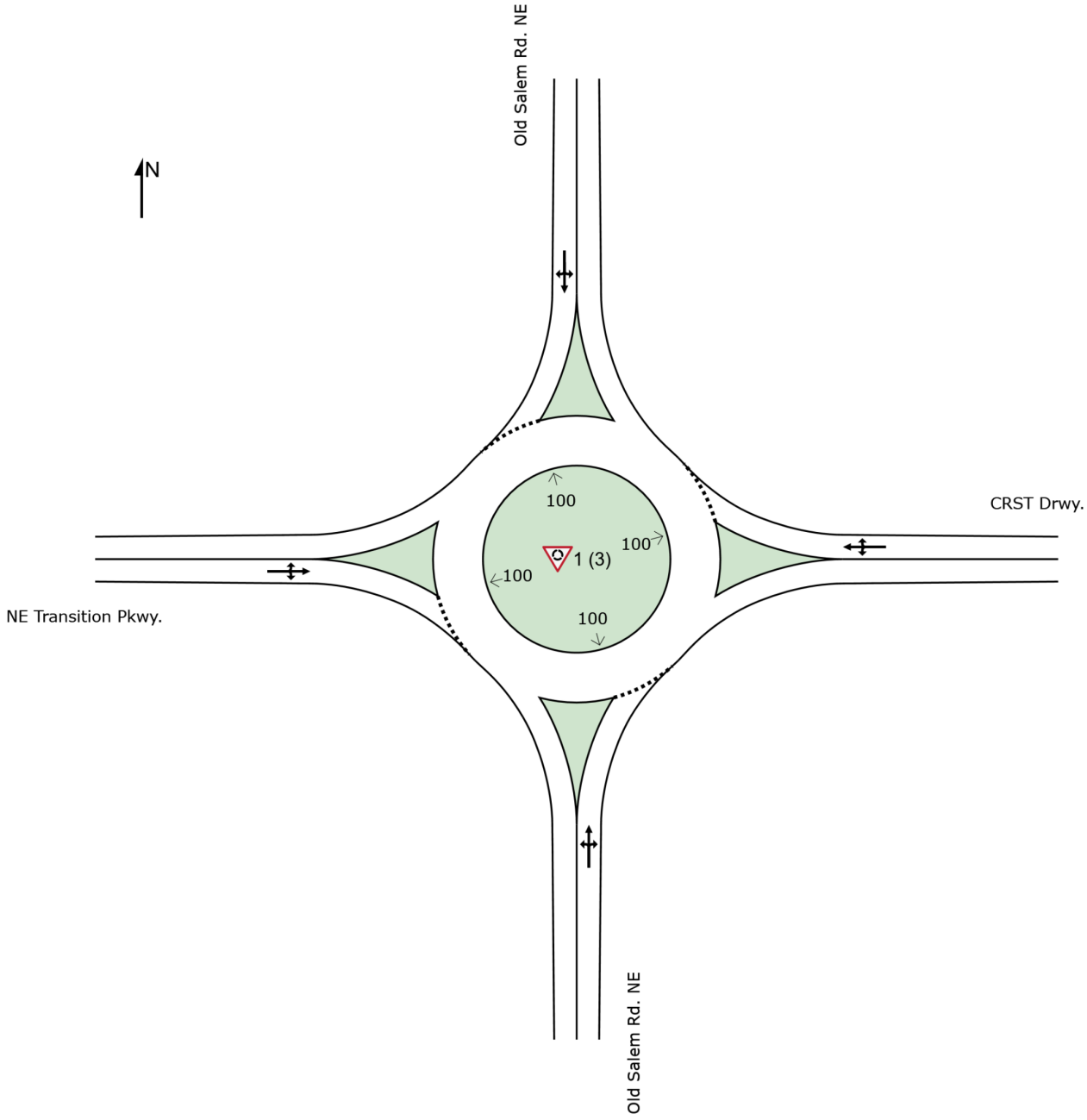
V/C, Movement V/C Ratio	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.06	0.21	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	10.21	0.00	0.00	0.00	39.27	12.86	64.42	41.82	16.90
Movement LOS		A	A	B	A	A		E	B	F	E	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.18	0.18	0.73	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.30	0.30	0.30	0.00	4.57	4.57	18.19	0.99	0.99
d_A, Approach Delay [s/veh]	0.00			0.11			12.86			54.91		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	0.92											
Intersection LOS	F											

SITE LAYOUT

Site: NE Transition Pkwy./Old Salem Rd. NE (Single-Lane Roundabout on All Approaches)

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: NE Transition Pkwy./Old Salem Rd. NE (Single-Lane Roundabout on All Approaches)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: Old Salem Rd. NE															
3	L2	All MCs	243	10.0	243	10.0	0.996	41.7	LOS E	60.8	1641.7	1.00	1.86	2.48	21.4
8	T1	All MCs	807	10.0	807	10.0	0.996	41.7	LOS E	60.8	1641.7	1.00	1.86	2.48	21.7
18	R2	All MCs	5	10.0	5	10.0	0.996	41.7	LOS E	60.8	1641.7	1.00	1.86	2.48	21.6
Approach			1055	10.0	1055	10.0	0.996	41.7	LOS E	60.8	1641.7	1.00	1.86	2.48	21.6
East: CRST Drwy.															
1	L2	All MCs	5	10.0	5	10.0	0.035	13.3	LOS B	0.1	2.6	0.74	0.74	0.74	28.5
6	T1	All MCs	0	0.0	0	0.0	0.035	8.4	LOS A	0.1	2.6	0.74	0.74	0.74	29.2
16	R2	All MCs	5	10.0	5	10.0	0.035	13.3	LOS B	0.1	2.6	0.74	0.74	0.74	28.9
Approach			10	9.9	10	9.9	0.035	13.2	LOS B	0.1	2.6	0.74	0.74	0.74	28.7
North: Old Salem Rd. NE															
7	L2	All MCs	5	10.0	5	10.0	0.595	12.1	LOS B	5.7	154.4	0.68	0.55	0.92	29.9
4	T1	All MCs	535	10.0	535	10.0	0.595	12.1	LOS B	5.7	154.4	0.68	0.55	0.92	30.6
14	R2	All MCs	15	10.0	15	10.0	0.595	12.1	LOS B	5.7	154.4	0.68	0.55	0.92	30.3
Approach			555	10.0	555	10.0	0.595	12.1	LOS B	5.7	154.4	0.68	0.55	0.92	30.6
West: NE Transition Pkwy.															
5	L2	All MCs	140	10.0	140	10.0	0.663	18.4	LOS C	5.4	145.2	0.82	0.92	1.42	27.0
2	T1	All MCs	0	0.0	0	0.0	0.663	16.5	LOS C	5.4	145.2	0.82	0.92	1.42	27.7
12	R2	All MCs	302	10.0	302	10.0	0.663	18.4	LOS C	5.4	145.2	0.82	0.92	1.42	27.3
Approach			442	10.0	442	10.0	0.663	18.4	LOS C	5.4	145.2	0.82	0.92	1.42	27.2
All Vehicles			2062	10.0	2062	10.0	0.996	28.6	LOS D	60.8	1641.7	0.88	1.30	1.82	24.7

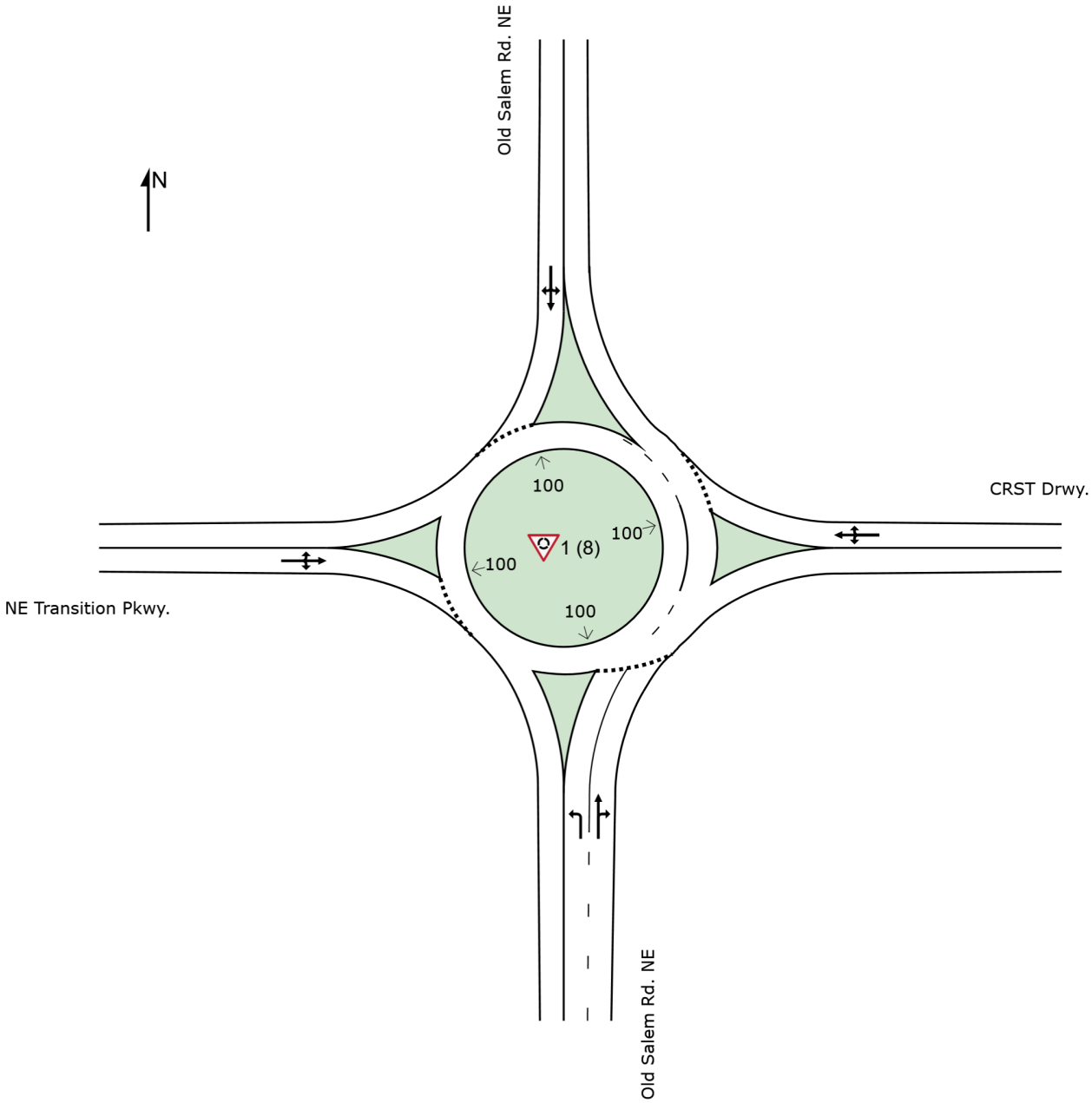
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

SITE LAYOUT

Site: NE Transition Pkwy./Old Salem Rd. NE (NB Approach with Two Lanes)

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: NE Transition Pkwy./Old Salem Rd. NE (NB Approach with Two Lanes)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: Old Salem Rd. NE															
3	L2	All MCs	243	10.0	243	10.0	0.221	5.3	LOS A	0.9	25.0	0.32	0.17	0.32	30.6
8	T1	All MCs	807	10.0	807	10.0	0.739	14.9	LOS B	11.5	310.9	0.71	0.51	0.94	29.5
18	R2	All MCs	5	10.0	5	10.0	0.739	14.9	LOS B	11.5	310.9	0.71	0.51	0.94	29.2
Approach			1055	10.0	1055	10.0	0.739	12.7	LOS B	11.5	310.9	0.62	0.43	0.79	29.8
East: CRST Drwy.															
1	L2	All MCs	5	10.0	5	10.0	0.030	11.1	LOS B	0.1	1.9	0.68	0.68	0.68	29.3
6	T1	All MCs	0	0.0	0	0.0	0.030	6.0	LOS A	0.1	1.9	0.68	0.68	0.68	30.0
16	R2	All MCs	5	10.0	5	10.0	0.030	11.1	LOS B	0.1	1.9	0.68	0.68	0.68	29.7
Approach			10	9.9	10	9.9	0.030	11.1	LOS B	0.1	1.9	0.68	0.68	0.68	29.5
North: Old Salem Rd. NE															
7	L2	All MCs	5	10.0	5	10.0	0.595	12.1	LOS B	5.8	156.6	0.68	0.56	0.93	29.9
4	T1	All MCs	535	10.0	535	10.0	0.595	12.1	LOS B	5.8	156.6	0.68	0.56	0.93	30.6
14	R2	All MCs	15	10.0	15	10.0	0.595	12.1	LOS B	5.8	156.6	0.68	0.56	0.93	30.3
Approach			555	10.0	555	10.0	0.595	12.1	LOS B	5.8	156.6	0.68	0.56	0.93	30.6
West: NE Transition Pkwy.															
5	L2	All MCs	140	10.0	140	10.0	0.664	18.5	LOS C	5.4	145.8	0.83	0.92	1.43	27.0
2	T1	All MCs	0	10.0	0	10.0	0.664	18.5	LOS C	5.4	145.8	0.83	0.92	1.43	27.5
12	R2	All MCs	302	10.0	302	10.0	0.664	18.5	LOS C	5.4	145.8	0.83	0.92	1.43	27.3
Approach			442	10.0	442	10.0	0.664	18.5	LOS C	5.4	145.8	0.83	0.92	1.43	27.2
All Vehicles			2062	10.0	2062	10.0	0.739	13.8	LOS B	11.5	310.9	0.68	0.57	0.96	29.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Appendix D: Cost Estimates

Old Salem Road Corridor Scoping Study

Near-Term Improvements

Prepared for Oregon Cascade West Council of Governments

Engineer's Conceptual Estimate

Prepared By: Andrew Mancini		*Date: June 2026*			
Reviewed By: Eric Germundson, PE and Polina Polikakhina, PE					
This Estimate has a Rating of:		**3C**	*(See rating scale guide below.)*		
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**NOTES AND ASSUMPTIONS**
Mobilization	LS	ALL	$55,000.00	$55,000.00	*10%*
Traffic Control	LS	ALL	$28,000.00	$28,000.00	*5%*
Construction Staging	LS	ALL	$28,000.00	$28,000.00	*5%*
Speed Feedback Sign	EA	2	$7,500.00	$15,000.00	*Assumes one at each end of 35mph corridor segment*
Pavement Markings, Complete	LS	ALL	$172,000.00	$172,000.00	*Includes removing existing pavement markings and striping new TWCTL and buffered bike lanes (north*
Signage, Complete	LS	ALL	$3,000.00	$3,000.00	*1.5% of striping cost*
Enhanced Crossings	EA	3	$120,000.00	$360,000.00	*Assumes median island, RRFB, pavement markings*
Location-Specific Improvements					
Intersection Improvements at Century Drive vicinity	LS	ALL	$100,000.00	$100,000.00	*Assumes a cost based on a recently completed project in Oregon*
TOTAL CONSTRUCTION COST				**$ 761,000**	
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	$241,000.00	$241,000.00	25%
ENGINEERING SUPPORT SUBTOTAL				**$ 241,000**	
TOTAL PROJECT SUBTOTAL				**$ 1,002,000**	
40% Contingency				**$ 400,800**	
TOTAL ESTIMATED PROJECT COST				**$ 1,402,800**	

Old Salem Road Corridor Scoping Study

Long-Term Improvements

Prepared for Oregon Cascade West Council of Governments

KITTELSON & ASSOCIATES

Engineer's Conceptual Estimate

Prepared By: Andrew Mancini		*Date: June 2026*			
Reviewed By: Eric Germundson, PE and Polina Polikakhina, PE					
This Estimate has a Rating of:		**3C**	*(See rating scale guide below.)*		
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**NOTES AND ASSUMPTIONS**
Mobilization	LS	ALL	$1,321,000.00	$1,321,000.00	*10%*
Traffic Control	LS	ALL	$667,000.00	$667,000.00	*5%*
Construction Staging	LS	ALL	$667,000.00	$667,000.00	*5%*
Erosion Control	AC	11.7	$10,000.00	$117,000.00	*Flat fee*
Removal of Structures and Obstructions	LS	ALL	$285,000.00	$285,000.00	*2.25%*
Clearing and Grubbing	LS	ALL	$254,000.00	$254,000.00	*2%*
General Earthworks	CY	13,300	$65.00	$864,500.00	*Total quantity represents constructing a SUP and curbs along the entire corridor*
Asphalt Roadway - Grind & Inlay (2" Depth)	SF	496,260	$3.10	$1,538,406.00	*Assumes 36ft curb-to curb roadway width throughout, except for railroad segment. Assumes 24ft width along that segment*
Concrete Curbs - Standard Curb & Gutter	LF	21,390	$55.00	$1,176,450.00	*Curb (both sides) along 75% of the corridor*
Raised Concrete Island	SF	117,100	$16.20	$1,897,020.00	*Assumes concrete median island for 50% of the corridor (10ft wide)*
Separated Sidewalk - Concrete	SF	119,730	$10.20	$1,221,246.00	*6ft-wide sidewalk, east side, filling in gaps*
Separated Shared-Use Path - Asphalt	SF	281,040	$4.20	$1,180,368.00	*12ft shared-use path, west side, entirety of corridor*
Detectable Warnings	EA	40	$500.00	$20,000.00	*Assumed that 40 pedestrian ramps would need to be constructed*
Extra for Pedestrian Ramps	EA	40	$2,250.00	$90,000.00	*Assumed that 40 pedestrian ramps would need to be constructed*
Residential Driveway Reconstruction	EA	20	$2,000.00	$40,000.00	*Assumed that a number of residential driveways needed to be reconstructed on West side*
Commercial Driveway Reconstruction	EA	80	$4,000.00	$320,000.00	*Assumed that a number of commercial driveways needed to be reconstructed on West side*
Retaining Walls, MSE	SF	10,000	$100.00	$1,000,000.00	*Assumes that retainig walls will be needed along the railroad segment*
Storm Water Conveyance System, Complete	LS	ALL	$1,797,750.00	$1,797,750.00	*Assumes that 25% of corridor already having curb/stormwater system in place*
Regional Water Quality and Hydromodification System, Complete	SF	33,500	$28.00	$938,000.00	*Likely, no water treatment facilities currently*
Permanent Seeding	SF	171,120	$2.00	$342,240.00	*Assumes simple seeding of 12ft buffer along shared-use path*
Pavement Markings, Complete	LS	ALL	$160,000.00	$160,000.00	*2% of the project cost*
Signage, Complete	LS	ALL	$80,000.00	$80,000.00	*1% of the project cost*
Location-Specific Improvements					
Single-Lane Roundabout at Transition Parkway	EA	1	$3,000,000.00	$3,000,000.00	*Cost based on a recently completed project in Oregon. Assumes constructing a wide roundabout that can accommodate an*
Intersection Improvements at Conser Road	LS	ALL	$200,000.00	$200,000.00	*Assumes a cost based on a recently completed project in Oregon*
			TOTAL CONSTRUCTION COST	**$ 19,176,980**	
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	$4,845,000.00	$4,845,000.00	
ENGINEERING SUPPORT SUBTOTAL				**$ 4,845,000**	
			TOTAL PROJECT SUBTOTAL	**$ 24,021,980**	
			40% Contingency	**$ 9,608,800**	
			TOTAL ESTIMATED PROJECT COST	**$ 33,630,780**	

Old Salem Road Corridor Scoping Study

Long-Term Improvements

Prepared for Oregon Cascade West Council of Governments

Engineer's Conceptual Estimate

Prepared By: Andrew Mancini	*Date: June 2026*	
Reviewed By: Eric Germundson, PE and Polina Polikakhina, PE		
This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*

ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST	NOTES AND ASSUMPTIONS

Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 60% based on risk.

SATURDAY SHOPPER BUS ROUTE OPTIONS SURVEY

GUIDE THE ROUTE. SHAPE YOUR WEEKEND.

YOUR INPUT MATTERS!

https://forms.office.com/g/hEzMSdAkne

Help shape the future of Saturday transit service in our community!

We are exploring potential bus route additions for Saturday Service and want to hear from you.

Share your thoughts in our brief survey!

ALBANY TRANSIT SYSTEM

OREGON Cascades West Council of Governments