Transportation Element

City of Ferndale

Prepared by:

transpogroup
WHAT TRANSPORTATION CAN BE.

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SECTION 1. INTRODUCTION

A city is both defined and constrained by the network of highways, roads, trails, railroads and transit services that facilitate the movement of its residents and goods throughout the community. A comprehensive and sustainable transportation system is essential to Ferndale's long-term growth. The ability to move people and goods, and respond to emergencies, is fundamental to maintaining a thriving and healthy community.

Over time, key transportation facilities in the area are forecast to degrade with increased land use growth. Proactive transportation planning in Ferndale is increasingly important to maintain an efficient transportation network.

The Transportation Element provides the framework to guide the growth and development of the City's transportation infrastructure. It also integrates land use and the transportation system by ensuring that all existing and future developments are adequately served by appropriate transportation facilities. While automobile-related transportation facilities will continue to provide the core of the system, the Transportation Element also addresses the development of a balanced, Multimodal Transportation Network for the City and adjacent Urban Growth Area (UGA). The Transportation Element also recognizes the regional nature of the transportation system and the need for continuing interagency coordination.

TRANSPORTATION ELEMENT: SUMMARY OF CONCLUSIONS

1. **Passenger vehicles** will continue to be the primary mode of transportation in Ferndale over through 2045.
2. **Sufficient capacity** is available on the majority of City streets for motorists at all hours of the day.
3. **Peak hour traffic** (evening rush hour) leads to congestion at Main Street, Portal Way, Grandview Road and Slater Road.
4. **Irregular events** such as traffic accidents, train delays, inclement weather will generate longer and more substantial congestion in the future, even if overall delays are relatively minor.
5. **Thornton Street Extension** addressed some but not all congestion issues.
6. **Alternative transportation** (bike, pedestrian, transit) have significant existing demand, but cannot be accommodated until coordinated alternative transportation facilities are established.

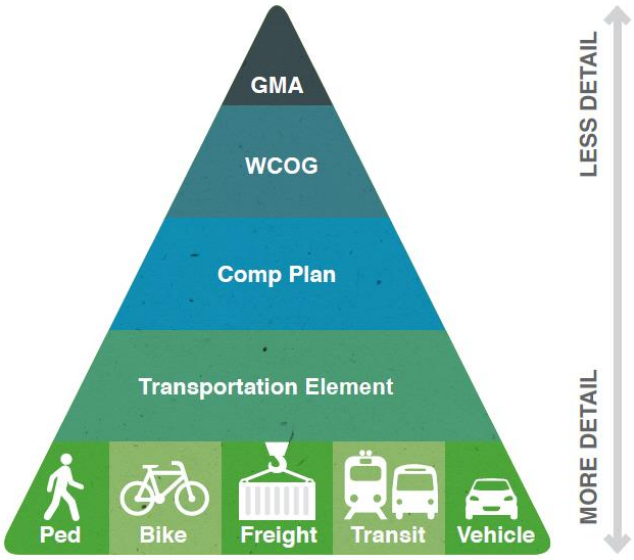
The Transportation Element establishes the City's goals and policies for developing the transportation system within the City and UGA. The Element is based on a 2024 study of Ferndale's existing transportation network, combined with projections of future growth and transportation needs. This Element includes five sections:

- **Inventory of Existing Transportation Facilities and Conditions** (Section 2)
- **Forecasts, Alternatives, and Emerging Transportation Trends** (Section 3)
- **Transportation Systems Plans** (Section 4)
- **Financing Program** (Section 5)
- **Goals and Policies** (Section 6)

REGULATORY SETTING

In 2024 the City Council commissioned an update of the Transportation Element to replace the 2016 Transportation Element (City of Ferndale, 2016). This update addresses transportation needs, improvement projects, and funding sources to support the projected population and employment growth through the year 2045, in accordance with the City's Comprehensive Plan.

The following summarizes the regulatory setting and regional planning efforts that guided the development of the Transportation Element.



Varying levels of detail in transportation planning efforts

Growth Management Act

The Transportation Element satisfies the Growth Management Act (GMA) requirements for long-range planning and to supplement information and implement goals and policies within the Transportation Element of the Comprehensive Plan. Under the GMA (RCW 36.70A.070), the Transportation Element is required to assess the needs of a community and determine how to provide appropriate transportation facilities for current and future residents, workers, and the traveling public. The Transportation Element must contain:

- Existing travel conditions and land use assumptions used in estimating future travel conditions
- Estimated travel impacts on state-owned transportation facilities
- Inventory of existing facilities
- Assessment of future facility needs to meet current and future demands
- Multi-year plan for financing proposed transportation improvements, and reassessment strategy to respond to potential funding shortfalls
- Forecasts of traffic for at least 10 years based on adopted land use plan
- Level of Service (LOS) standards for arterials, non-motorized facilities, and public transportation, including actions to bring deficient facilities into compliance
- Transportation Demand Management (TDM) strategies
- Identification of intergovernmental coordination efforts
- A pedestrian and bicycle component that includes collaborative efforts to identify and designate planned improvements for pedestrian and bicycle facilities and corridors that address and encourage enhanced community access and promote active transportation

Since 2011, Washington has passed several legislative amendments and policy mandates that require a focus on multimodal transportation, as listed below.

- 2011 RCW 47.04.320-.340 established a Complete Streets grant program (funded later), which requires local jurisdictions to adopt Complete Streets ordinances to be eligible to apply for state grant funding.
- 2016 Washington legislature approved funding for the Transportation Investment Board (TIB) Complete Streets grant program.
- 2021 WSDOT adopted an Active Transportation Plan for state highways, which requires WSDOT to work with local jurisdictions to provide safe and well-connected pedestrian and bicycle network improvements along and across state highways.
- 2022 RCW 47.04.035 requires WSDOT to apply Complete Streets principles to all state highway projects with a total project cost of $500,000 or more.
- 2023 ESSHB 1181 Requires Multimodal LOS in Comprehensive Plans and encourages multimodal transportation systems that reduce greenhouse gas emissions (GHG) and vehicle miles traveled (VMT). The bill also requires an agency to prepare an ADA Transition Plan to identify physical obstacles that limit accessibility to individuals with disabilities and identify methods to make the facilities fully accessible.
- 2023 SB 5452 Allows Transportation Impact Fee revenue to be used for pedestrian and bicycle projects as part of citywide transportation system improvements needed to accommodate growth and development.

Whatcom Council of Governments

The Whatcom Council of Government's (WCOG) plan, Way to Go Whatcom, was adopted in 2022 as Whatcom County's long-range strategy for growth management, environmental preservation, economic development, and transportation. Way to Go Whatcom includes Regional Growth Strategies to address congestion, ensure mobility, limit or mitigate environmental impacts, and direct funding. While Way to Go Whatcom builds on previous regional plans for Whatcom County, it also introduces new provisions to guide and coordinate regional and local planning. Successful implementation of Way to Go Whatcom relies on successful implementation of local comprehensive plans.

Countywide Planning Policies

The GMA also requires that counties adopt Countywide Planning Policies (CWPPs) to guide and coordinate issues of regional significance. Whatcom County County-Wide Planning Policies were adopted in May of 1997. Since then, amendments have been made on an annual basis. Transportation issues are discussed throughout the document; however, Section 6 specifically addresses transportation facilities and strategies.

Healthy Communities

Recognizing the growing need for physical activity among citizens, the Washington State Legislature amended the GMA in 2005 with the Healthy Communities Amendment, ESSB 5186. Comprehensive plans are directed to address the promotion of Healthy Communities through urban planning and transportation approaches. The two amendments to the GMA require that communities:

- Consider urban planning approaches that promote physical activity in the Land Use Plan
- Include a bicycle and pedestrian component in the Transportation Element.

Clean Air Act

The Transportation Element is also intended to foster compliance with the Washington State Clean Air Act and specific "conformity" requirements that implement the directives of the Federal Clean Air Act. Because air quality is a region wide issue, the City of Ferndale's Comprehensive Plan must support the efforts of state, regional, and local agencies as guided by WAC 173-420-080.1

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act, (ADA) was enacted on July 26, 1990, and provides comprehensive civil rights protections to persons with disabilities. The requirements of the ADA apply to employment, state and local government programs and services, and access to transportation and telecommunications. Of the five titles or parts to the ADA, Title II is the most pertinent to travel within the public right-of-way. Part 35, Subpart D – Program Accessibility § 35. 150 (d)(3) of Title II requires local agencies to conduct a Self-Evaluation and Transition Plan that, at a minimum shall:

- Identify physical obstacles in the public entity's facilities that limit the accessibility of its programs or activities to individuals with disabilities
- Describe in detail the methods that will be used to make the facilities accessible
- Specify the schedule for taking the steps necessary to achieve compliance with this section and, if the period of the transition plan is longer than one year, identify steps that will be taken during each year of the transition period
- Indicate the official responsible for implementation of the plan

Other City Policies and Plans

The projects and programs outlined in the Transportation Plan are guided by other City plans and requirements. Transportation infrastructure planning considers economic vitality, social interaction, and Ferndale's unique character. Land Use goals, policies, and assumptions from the Comprehensive Plan, Ferndale Municipal Code, and Ferndale ADA Transition Plan (Ferndale, 2023), also play a key role in the planning process.

Other Regional Policies and Plans

Recognizing transportation issues beyond City limits is a key aspect of Ferndale's transportation planning, helping to mitigate congestion and traffic flow between Ferndale and neighboring communities as regional populations grow. The City of Ferndale actively participates in regional transportation efforts and supports projects and programs that improve transportation across Whatcom County.

MAJOR PLAN UPDATES SINCE LAST PLAN

Since the previous Transportation Element Update in 2016, several major planning efforts have occurred including:

- Establishment of Greenhouse Gas Reduction Policy (2019)
- Adoption of an Americans with Disabilities Act Self-Evaluation & Transition Plan (ADA SETP 2023)
- Whatcom Transportation Authority's Bus Rapid Transit, and Ferndale to WWU planning efforts.
- Adoption of Target Zero as a City Goal (2023).
- Review and potential modifications to the City UGA in conjunction with the 2025 update of the Ferndale Comprehensive Plan.

Greenhouse Gas Reduction Policy

The Greenhouse Gas Reduction Policy, adopted in August 2019, documents the City's intent to observe environmentally sustainable practices and procedures that, in compliance with RCW 70.235, reduce the production of greenhouse gasses through various means including the promotion of transportation choices and emphasis on multi-modal options. In addition to promoting multi-modal transportation choices, the policy supports the consideration of technologies and infrastructure that facilitate smooth and efficient traffic movement such as roundabouts (where applicable), and integration of Intelligent Transportation Systems (ITS).

Americans with Disabilities Act Self-Evaluation & Transition Plan (ADA SETP)

The ADA SETP was completed in December 2023 and details the path to achieving ADA compliance. The Plan includes an inventory of pedestrian facilities throughout Ferndale that are not ADA-compliant, the process for making such items ADA-compliant, as well as a schedule for implementing changes. The Plan recommends changes to existing standards, policies, and practices, and describes the public outreach process used to inform the scoring of facilities and their prioritization for improvement. The Plan also outlines the metrics for ADA-compliance for various assets in the public right of way, allowing Ferndale to perform continual review of these assets.

Adoption of Target Zero as a City Goal (2023)

In 2023, the City of Ferndale adopted Target Zero as a goal to eliminate pedestrian and cyclist deaths and serious injuries resulting from motor vehicle collisions by 2036 and wishes to incorporate related standards, appropriate goals, policies, and metrics by which to obtain this goal into the 2025 Comprehensive Plan update. The City's intent is to reduce or eliminate transportation-related deaths and serious injuries by utilizing education, enforcement, and engineering principles and practices. The City seeks to integrate transportation and mobility planning and studies that identify clear and measurable projects that will support these efforts, and to leverage local, regional, state, and federal funding in order to implement the projects identified by these plans.

SECTION 2. INVENTORY OF EXISTING TRANSPORTATION FACILITIES AND CONDITIONS

Travel needs within the City of Ferndale are met by a range of transportation facilities and services. These facilities and services provide for travel within the City and also connect Ferndale with the rest of the region. The City's existing transportation system is comprised of interstate freeways, state highways, arterials, collectors, local roads, pedestrian and bicycle facilities, and transit facilities. A major rail line also traverses the City and affects other travel modes. The following summarizes key elements of the existing transportation system serving the City. The inventory provides input for identifying and prioritizing the City's transportation improvement projects and programs presented later in the Transportation Element.

To provide background for identifying the transportation improvement projects and programs, a summary of existing conditions of the study area roadway system is presented. This includes the number of lanes and existing traffic controls, existing traffic volumes and operations, transportation safety conditions, and the freight system. Non-motorized facilities and transit services, which use the roadway system, are also described.

STREET AND HIGHWAY NETWORK

The backbone of the City's transportation system is the street and highway system. The street and highway system provides mobility and access for a range of travel modes and users. Roadways are classified by their intended function and desired service. The City's roadway functional classification is defined in the Transportation System Plans section of the Transportation Element.

Figure 1 shows the existing state highway and arterial system serving Ferndale. The City is served by state routes, and several major north-south and east-west routes that are described in the following sections. In general, routes in the City are two lanes (one lane each direction) with posted speeds of 25 to 35 mph. In rural areas the speed may be 45 mph or 50 mph.

State Routes

The primary state route within the region is Interstate Five, which has two travel lanes in each direction in the Ferndale area. Interstate Five connects Ferndale south to Bellingham and Skagit County, and north to Blaine and Canada. Four interchanges serve the Ferndale community. The interchanges are located at Grandview Road (SR 548), Portal Way, Main Street, and Slater Road. Posted speeds are 60 to 70 mph.

Within the northern portion of the City limits, Grandview Road is a state route (SR 548) west of Interstate Five. East of Interstate Five, Grandview Road is a county road. Grandview Road connects the Birch Bay community and major employment centers to Interstate Five. Within the Ferndale City limits, Grandview Road is two lanes with posted speeds of 35 mph. Speed limits increase to 45 mph outside of the Ferndale UGA.

North-South Routes

In the southeastern areas of the City, LaBounty Drive and Barrett Road provide key frontage roads parallel to Interstate Five. These roadways allow for non-freeway traffic circulation between Main Street, Smith Road, and Slater Road, as well as access to adjacent commercial land uses. Sections of LaBounty Drive have a center median lane.

In the southwestern part of the City and adjacent area, Imhoff Road and Ferndale Road provide key links between Main Street and Slater Road. Imhoff Road (via Douglas Road) provides a more direct connection with higher allowed speeds than Ferndale Road (via 1st Avenue).

In the northwestern areas of the City, Vista Drive, Malloy Avenue, and Church Road provide the primary north-south routes. Vista Drive is the longest of the three routes, connecting downtown Ferndale to Grandview Road (SR 548). Vista Drive provides a center two-way left-turn lane along some segments within the existing City limits. Malloy Avenue and Church Street are more narrow streets with lower speed limits.

In the northeastern areas of the City, Portal Way and Enterprise Road provide the only continuous route in an area bordered by Interstate Five and the Nooksack River. Portal Way runs parallel to Interstate Five and connects Ferndale to areas north of the City, including the communities of Blaine and Birch Bay. As Portal Way crosses to the west side of Interstate Five, Enterprise Road provides for continuity of the north-south route on the east side of Interstate Five. Within the Downtown area, Second Avenue and 3rd Avenue provide key connections between Main Street, Vista Drive, and Portal Way (via Washington Street.)

East-West Routes

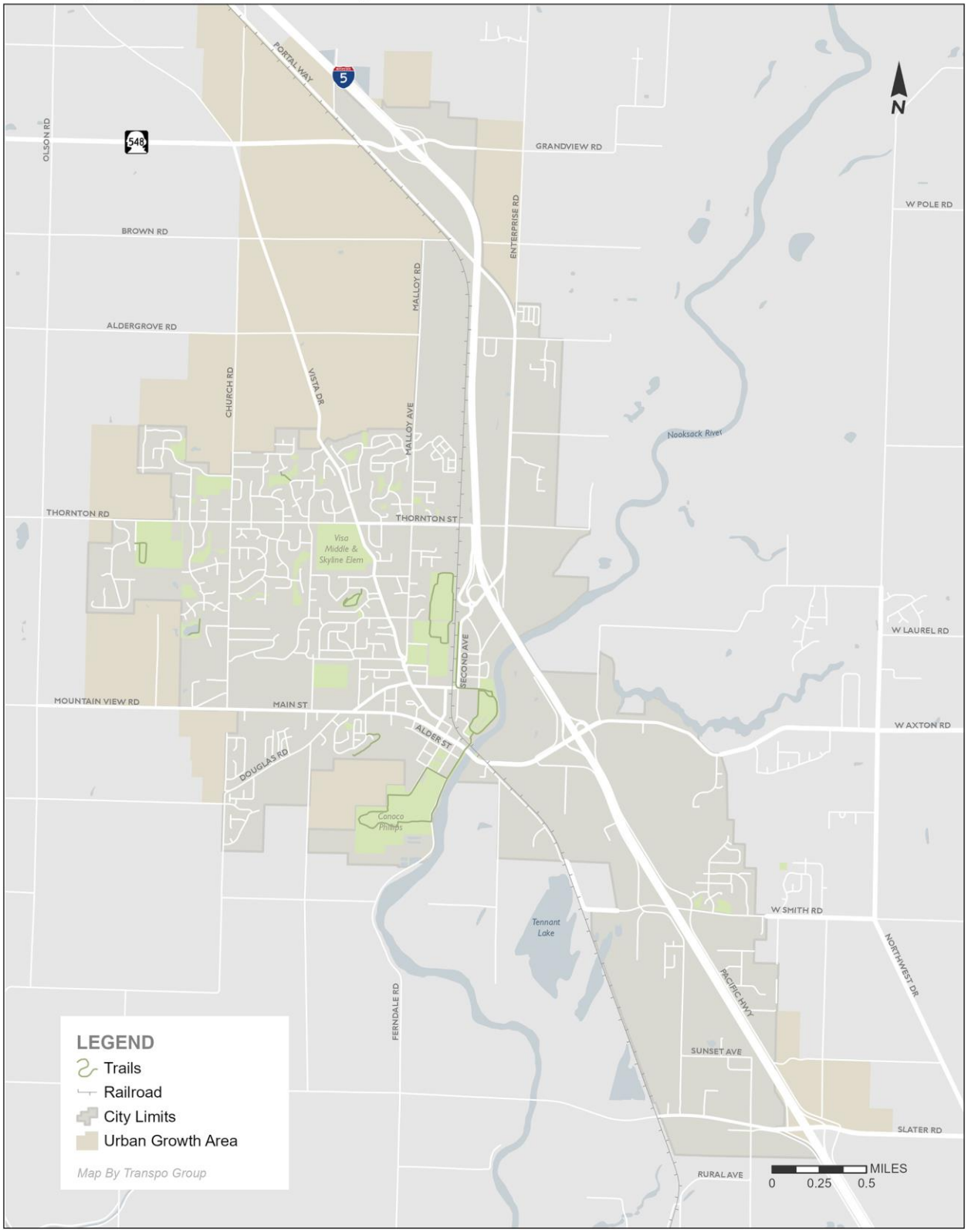
Main Street provides direct access to the downtown area from Interstate Five, across the Nooksack River. Between the river and Interstate Five, the roadway is 3 to 5 lanes wide serving a variety of commercial properties. West of the river, Main Street is 2 to 3 lanes wide serving downtown Ferndale and points to the west, including access to/from the Cherry Point refineries and employment areas located west of the City. East of Interstate

Five, Main Street becomes Axton Road with connections to Northwest Drive and Guide Meridian Road (SR 539).

Slater Road provides another link across the Nooksack River and another interchange with Interstate Five. This road is two lanes and has posted speeds ranging from 35 to 50 mph. In the southeast section of the City, Slater Road is the primary route for traffic within the Lummi Nation, Lummi Island, Sandy Point, and the Conoco Phillips refinery. Smith Road provides an important City link across Interstate Five to Northwest Drive and Guide Meridian Road (SR 539).

Thornton Street and Washington Street also provide important east-west routes within the City. Washington Street provides key connections between Portal Way, Vista Drive, and Main Street. Thornton Road provides continuous connections between Church Road, Vista Drive, and Malloy Avenue. Both routes are generally two lanes with 25 mph posted speeds.

Figure 1
Existing Highway and Street System



ROADWAY TRAFFIC VOLUMES

Traffic volumes in urban areas in the Puget Sound Region are usually highest during the weekday PM peak hour and are therefore used for evaluating transportation system needs. This reflects the combination of commuter work trips, shopping trips, and other day-to-day activities. The City of Ferndale typical weekday peak hour is between 4 and 6 p.m. but can often start and end a bit earlier.

Existing traffic volumes were provided by the City of Ferndale and Washington State Department of Transportation (WSDOT). In some locations new traffic counts were collected. Existing (2024) weekday PM peak hour volumes are shown in Figure 12 for selected locations in the City and surrounding study area.

One of the major changes in the City network was the completion of the Thornton Street overcrossing north of the Portal Way I-5 interchange. Table 1 shows how volumes have changed both on Thornton Street and Main Street with the new project. Not surprisingly, the volumes along Thornton Street have increased significantly since the last major plan update. Main Street did have reductions in traffic, but not do the same degree has found at the northeast part of the City. The minor reductions on Main Street reflect that overall growth has continued within the City over the past 10 years and backfilled some of the trips that shifted north to the new Thornton overcrossing.

Table 1. Thornton Connection Impact: Weekday PM Peak Hour Volumes

Corridor	Location	2015 Volume[1]	2024 Volume[2]	Volume Change	Percent Change
Thornton St	w/o Vista Dr	355	580	+225	63%
	e/o Vista Dr	75	560	+485	>200%
	e/o Malloy Ave	65	730	+665	>200%
Main St	w/o LaBounty Dr	1,635	1,510	-125	-8%
	w/o Hovander Rd	1,775	1,710	-65	-4%
Vista Dr	w/o 3rd Ave	550	545	-5	-1%

Source: Transpo Group, 2025
1. Volume is sum of both directions during the weekday PM peak hour, based on nearby 2015 intersection counts
2. Volume is sum of both directions during the weekday PM peak hour, based on nearby 2024 intersection counts.

ROADWAY TRAFFIC OPERATIONS

Traffic operations analyses provide a quantitative method for evaluating how the transportation system is functioning. It is applied to existing and forecast conditions to assist in identifying issues and potential improvement options. The traffic operations are reported for weekday PM peak hour conditions.

Vehicle Level of Service

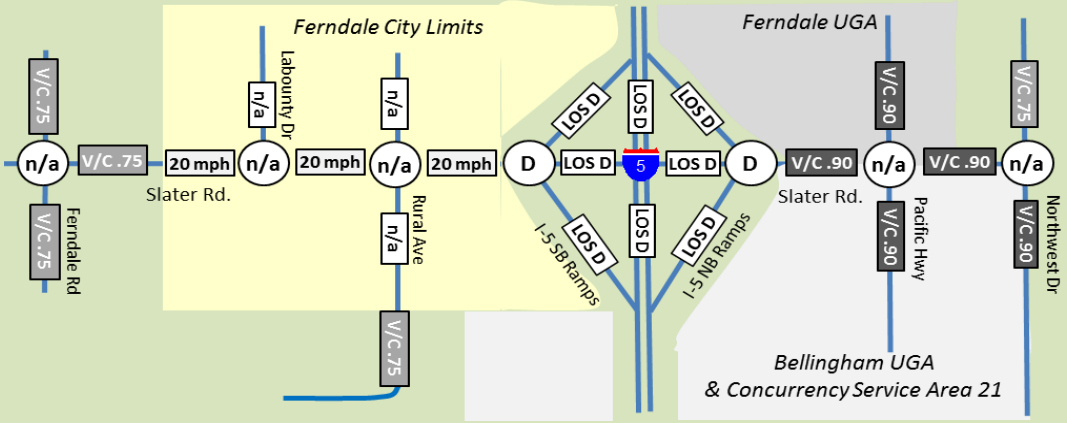
Levels of service (LOS) are typically evaluated based on methodologies documented in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2022. The HCM is a nationally recognized and locally accepted method of measuring traffic operations. Criteria range from LOS A, indicating free-flow conditions with minimal vehicular delays,

to LOS F, indicating extreme congestion and significant delays. LOS at intersections is measured in terms of the average vehicular delay.

As part of its Comprehensive Plan, the City of Ferndale has adopted level of service (LOS) standards to evaluate how corridors and intersections operate under its jurisdiction. Other agencies also have established LOS standards which may affect the transportation system needs in the Ferndale area. The following summarizes the existing level of service standards for these agencies.

Many Ways to Measure Traffic

A transportation network typically involves many agencies. In and around Ferndale, transportation-related Level of Services is measured by four different agencies: Ferndale, Washington State Department of Transportation, Whatcom County, and City of Bellingham. The figure below illustrates the various LOS measurements along Slater Road.



Prepared by Washington State Department of Transportation

City of Ferndale LOS Standards. Current LOS standards for the City of Ferndale are discussed in detail in Section 4.

For the purpose of evaluating corridor traffic conditions, the City's LOS standard for corridors was used. The City has identified the weekday PM peak hour travel speeds along three City roadway corridors being critical to maintaining the adequacy of the system. The LOS standard is a minimum of 15 mph travel speed for Main Street (west of I-5) and Vista Drive, and 20 mph travel speed for Main Street eat of I-5.

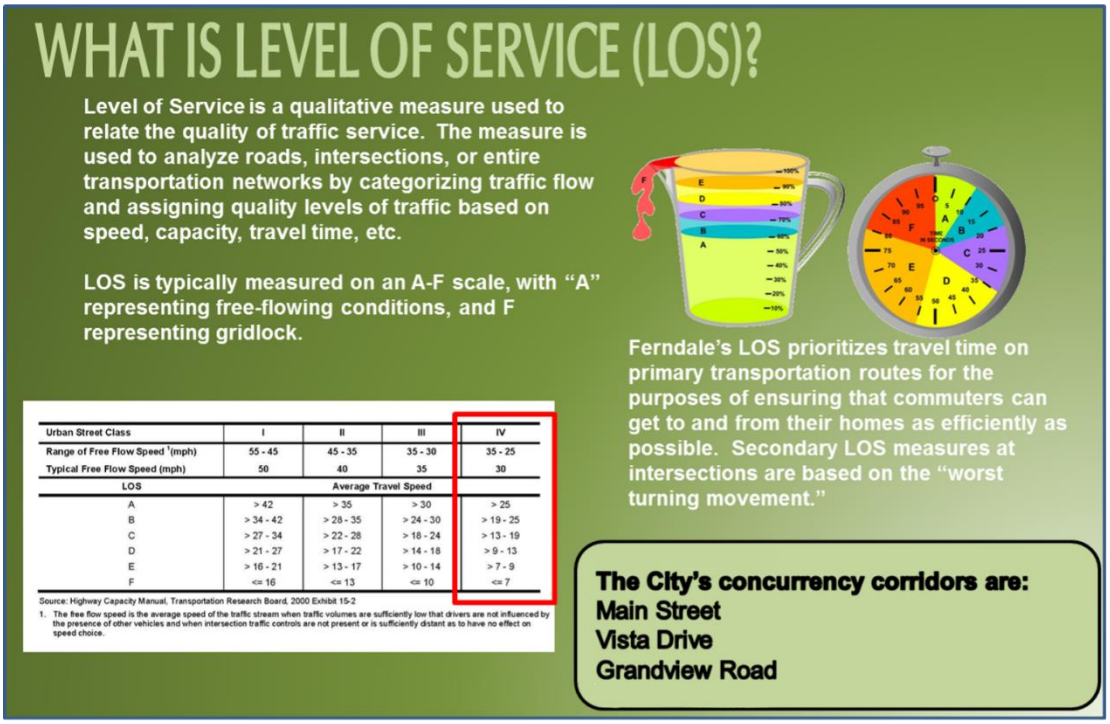
For the purpose of evaluating intersection traffic conditions, the City's LOS standard for intersections was used:

> **LOS D** – For traffic signals, roundabouts, and all-way stop controlled (AWSC) intersections based on overall average delay per vehicle.

LOS E – For unsignalized two-way stop controlled (TWSC) intersections for worst traffic movement. On a case-by-case basis, the City may allow the level of service for traffic movements from the minor streets at two-way stop-controlled intersections to operate below the adopted standard, if the City determines that no significant safety or operational issues will result.

State Highway LOS Standards. Two state highways serve the City of Ferndale. Interstate Five is a designated Highway of Statewide Significance (HSS) and SR 548 (Grandview Road) is designated as a Regionally Significant State Highway (non-HSS). Washington State Department of Transportation (WSDOT) has adopted LOS D for HSS facilities within urban areas and LOS C for highways in rural areas. These level of service standards also apply to non-HSS highways in Whatcom County including Grandview Road (SR 548). WSDOT applies these standards to highway segments, intersections, and freeway interchange ramp intersections.

When a proposed development affects a segment or intersection where the level of service is already below the state's adopted standard, then the pre-development level of service is used as the standard. When a development has degraded the level of service on a state highway, WSDOT would work with the local jurisdiction through the SEPA process to identify reasonable and proportional mitigation to offset the impacts. Mitigation could include access constraints, constructing improvements, right-of-way dedication, or contribution of funding to needed improvements.



Urban Street Class	I	II	III	IV
Range of Free Flow Speed [1](mph)	55 - 45	45 - 35	35 - 30	35 - 25
Typical Free Flow Speed (mph)	50	40	35	30
LOS	Average Travel Speed			
A	> 42	> 35	> 30	> 25
B	> 34 - 42	> 28 - 35	> 24 - 30	> 19 - 25
C	> 27 - 34	> 22 - 28	> 18 - 24	> 13 - 19
D	> 21 - 27	> 17 - 22	> 14 - 18	> 9 - 13
E	> 16 - 21	> 13 - 17	> 10 - 14	> 7 - 9
F	<= 16	<= 13	<= 10	<= 7

Source: Highway Capacity Manual, Transportation Research Board, 2000 Exhibit 15-2

1. The free flow speed is the average speed of the traffic stream when traffic volumes are sufficiently low that drivers are not influenced by the presence of other vehicles and when intersection traffic controls are not present or is sufficiently distant as to have no effect on speed choice.

Whatcom County LOS Standards. Whatcom County has adopted level of service standards based on the volume-to-capacity (v/c) ratio of roadway segments during the PM peak hour. The County has adopted the following LOS standards:

- County arterials and collectors outside of urban growth areas – v/c less than or equal to 0.75, except corridors designated by Whatcom Council of Governments (WCOG) as a part of the regionally significant road system which have a LOS standard requiring a v/c less than or equal to 0.90.
- County arterials and collectors within urban growth areas – v/c less than or equal to 0.90.

Whatcom County LOS standard is adjusted within urban areas to increase the allowable v/c threshold by 0.05 where transit service or adequate non-motorized facilities are available or will be provided by a development.

As areas of the unincorporated UGA are annexed, City standards will be applied. The City intends to work with Whatcom County to potentially apply the City's LOS standards for developments within the UGA. This is consistent to Policy 6A-5 of the Whatcom County Comprehensive Plan's Transportation Element, which reads:

> *"Encourage extension of city concurrency review authority and LOS Standards into their respective UGA's to provide for greater consistency in concurrency review for urban areas."*

Whatcom Council of Governments LOS Standards. Whatcom Council of Governments does not set LOS standards for local agencies, but coordinates with agencies within the region to establish LOS standards.

Corridor Traffic Operations

Corridor LOS is based on average travel speed through a corridor and the type of urban street. Three concurrency corridors are currently within City limits: Main Street west of I 5, Main Street east of I 5, and Vista Drive. Existing corridor travel speeds are summarized in Table 2, along with the corridor's adopted standard. Based on the City's LOS standards, these three corridor segments meet the LOS standard.

Table 2. Corridor Vehicle Level of Service Standards

Corridor Segment	Urban Street Class	Minimum Average Travel Speed (mph)[1]	2024 Travel Speeds – mph (NB/SB) or (EB/WB)
1. Main Street (West of Fourth Avenue to west of I-5/Northbound Ramps)	IV.	11 mph (10 mph for sub-segments)	17.5 / 15.3
2. Main Street (West of I-5 Northbound Ramps to east city limits)	III.	16 mph	23.4 / 26.9
3. Vista Drive (South of Third Avenue to north of Parkland Way)	IV.	11 mph	24.3 / 22.3

1. Urban Street Class based on parameters from Highway Capacity Manual (page 15-3) which takes into account the typical free flow speed on the facility (for example travel speeds during the middle of the night). Urban Street classifications range from I-IV, with Class I streets having the highest average travel speeds and Class IV streets having the lowest. The majority of Ferndale streets are Class III (35 mph) or Class IV (20-25 mph).
2. Minimal travel speed for corridor based on field measurements and adjusted for planned and funded improvements.
3. Corridor not subject to City concurrency review without annexation or agreement with Whatcom County

Intersection Traffic Operations

Figure 3 shows the 2024 PM peak hour intersection LOS and intersection control for each of the selected study intersections. The study intersections are consistent with past Transportation Elements. Table 3 summarizes the intersections that have LOS D or worse during the 2015 or 2024 time periods.

Table 3. Existing PM Peak Hour Intersection Levels of Service

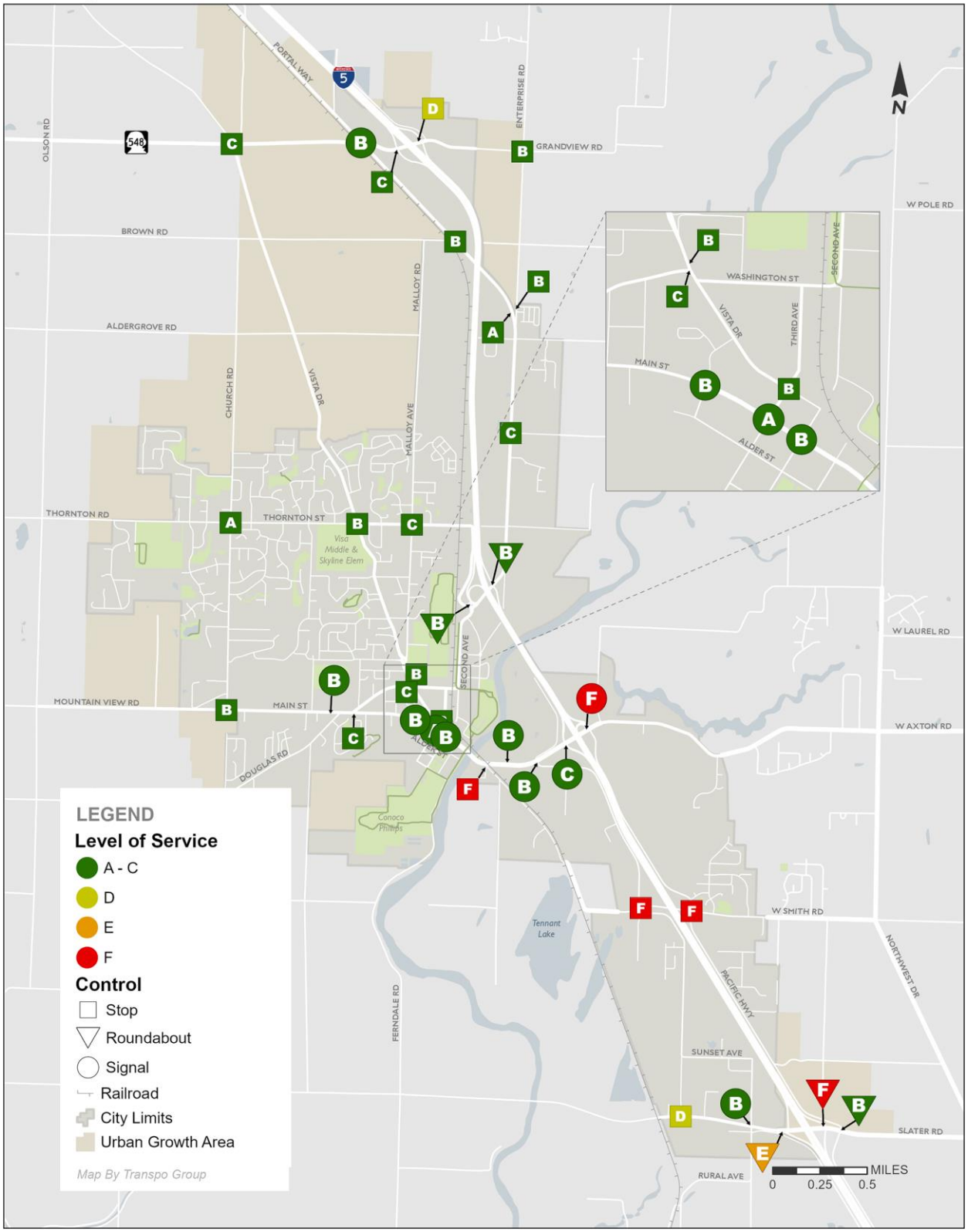
Intersection	Jurisdiction	Control Type[1]	LOS Standard	2024 PM Peak Hour LOS[2]	2015 PM Peak Hour LOS[3]
I-5 SB Ramps/Grandview Rd	WSDOT	Unsignalized	D	C	D
I-5 NB Ramps/Grandview Rd	WSDOT	Unsignalized	D	D	C
I-5 NB Ramps/Portal Way/2nd Ave	WSDOT	Roundabout	D	B	F
Vista Dr/Washington St S	City of Ferndale	Unsignalized	E	C	D
Hovander Rd/Main Street	City of Ferndale	Unsignalized	E	F	F
I-5 NB Ramps/Main Street	WSDOT	Signal	D	F	F
LaBounty Dr/Smith Rd	WSDOT	Unsignalized	D	F	-
Barret Rd-Pacific Hwy/Smith Rd	WSDOT	Unsignalized	D	F	-
LaBounty Dr/Slater Road	City of Ferndale	Unsignalized	E	D	C
I-5 SB Ramps/Slater Road	WSDOT	Roundabout	D	E	A
I-5 NB Ramps/Slater Road	WSDOT	Roundabout	D	F	B

1. "Signal" = Typical traffic signal; "AWSC" = All-way stop control; "Unsignalized" = all other types of stop control, such as two-way stop or partial stop control.
2. Level of Service (A to F) as defined by the Highway Capacity Manual (TRB, 2022)
3. 2015 level of service from 2016 Transportation Element.
4. Roundabouts were installed in 2015. Previously TWSC intersections.
5. Whatcom County does not have an intersection LOS standard.

Six unsignalized intersections have levels of service that exceed jurisdictional standards. The Hovander Road/Main Street intersection, northbound ramps at I-5/Main Street, northbound ramps at I-5 and Slater Road, LaBounty Drive/Smith Road, and Barret Road/Smith Road at LOS F. Additionally, the I-5/Slater Road southbound ramps are operating at LOS E. All other intersections operate within acceptable standards at LOS D or better.

The major differences in LOS between 2015 and 2024 can be attributed to several factors. Upgrading the intersection to a roundabout at Portal Way/2nd Avenue improved levels of service. Higher volumes contributed to the I-5/Slater Road north and southbound ramps LOS changes.

Figure 2
Existing Vehicle Intersection LOS - PM Peak



ROADWAY TRAFFIC SAFETY

The traffic safety analysis was conducted for the City of Ferndale, and at study intersections within the City. Historical collision data along all major City roadways were provided by WSDOT for the five-year period from 2019 to 2023. During this period, a total of 992 collisions occurred along roadways within the City. Analysis and statistics were summarized by collisions related to intersections, fatalities, and pedestrians or bicycles.

Figure 3 summarizes the collision data within the City by collision type. As shown, the most prevalent types of collision include rear-end (30%), fixed object (23%), and angle (17%) collisions. Incidents involving pedestrians and bicyclists constitute 2% of the total crash occurrences, whereas head-on collisions represent approximately 1% of the overall number of collisions. Typically, a main cause for a rear-end collision is traffic congestion (vehicles following too closely). Approach turn and angle collisions relate to conflicts within the intersection itself. These can be influenced by a variety of factors including aggressive driving (congestion related), failure to yield, poor sight distances, or intersection geometry.

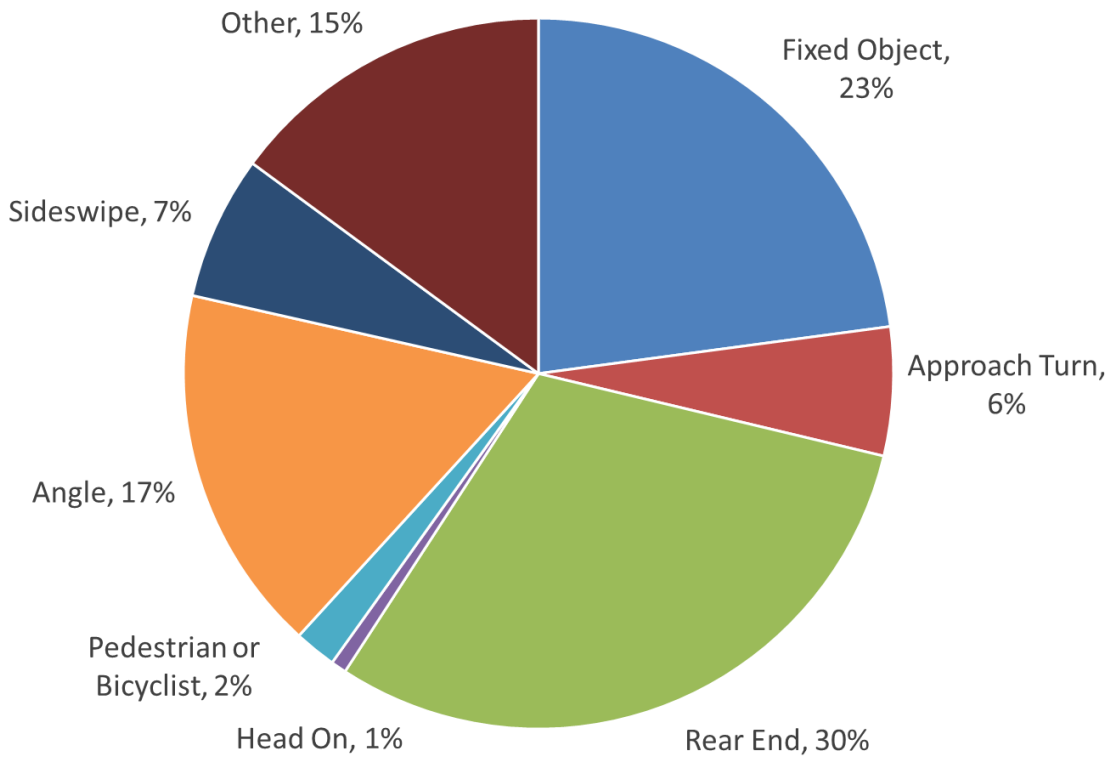


Figure 3 Collisions by Type

Figure 4 summarizes the Citywide collision data by severity. As shown, 75% of all crashes result in property damage only (PDO), while 25% are categorized as injury-related incidents. Additionally, the percentage of crashes resulting in fatalities is approximately 0.4%.

During the five-year study period (2019-2023), four collisions led to fatalities within the City. Of these collisions, three occurred along I-5, while the other occurred near the Senior Center at Cherry St and Ferndale Road (Front Street). Among these fatal collisions, none involved a pedestrian and/or bicyclists.

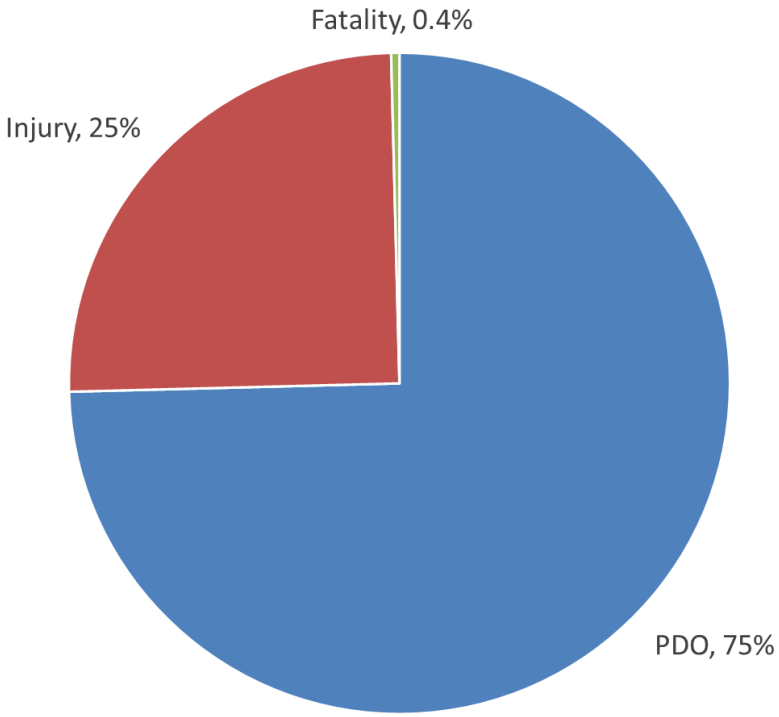


Figure 4 Collisions by Severity

Figure 5 presents the locations of the collisions that occurred within the City between 2019 and 2023. As shown, high-collision corridors tended to be on higher volume corridors. Figure 6 shows only those collisions with fatal and serious injury collisions.

Figure 5
Collision History

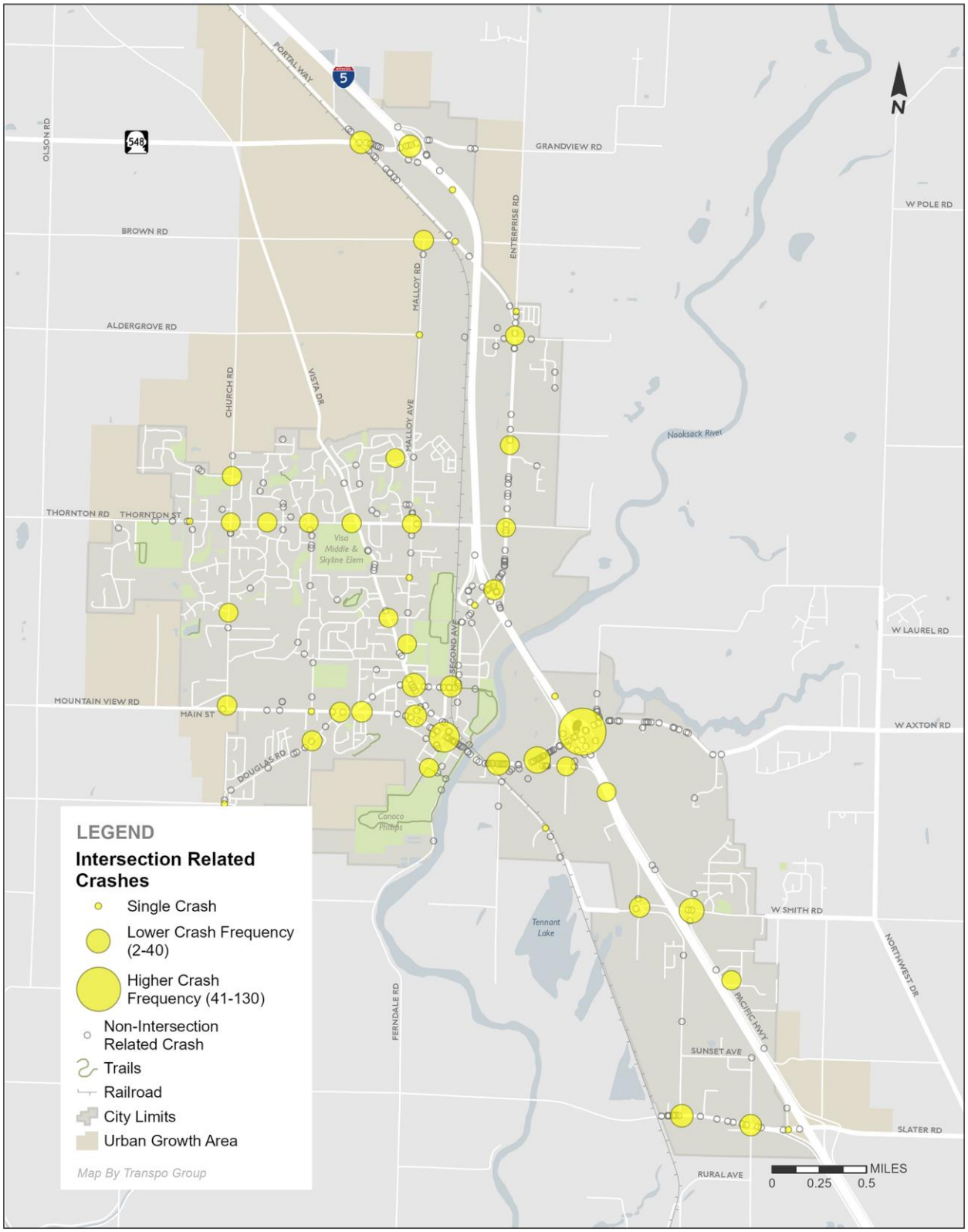
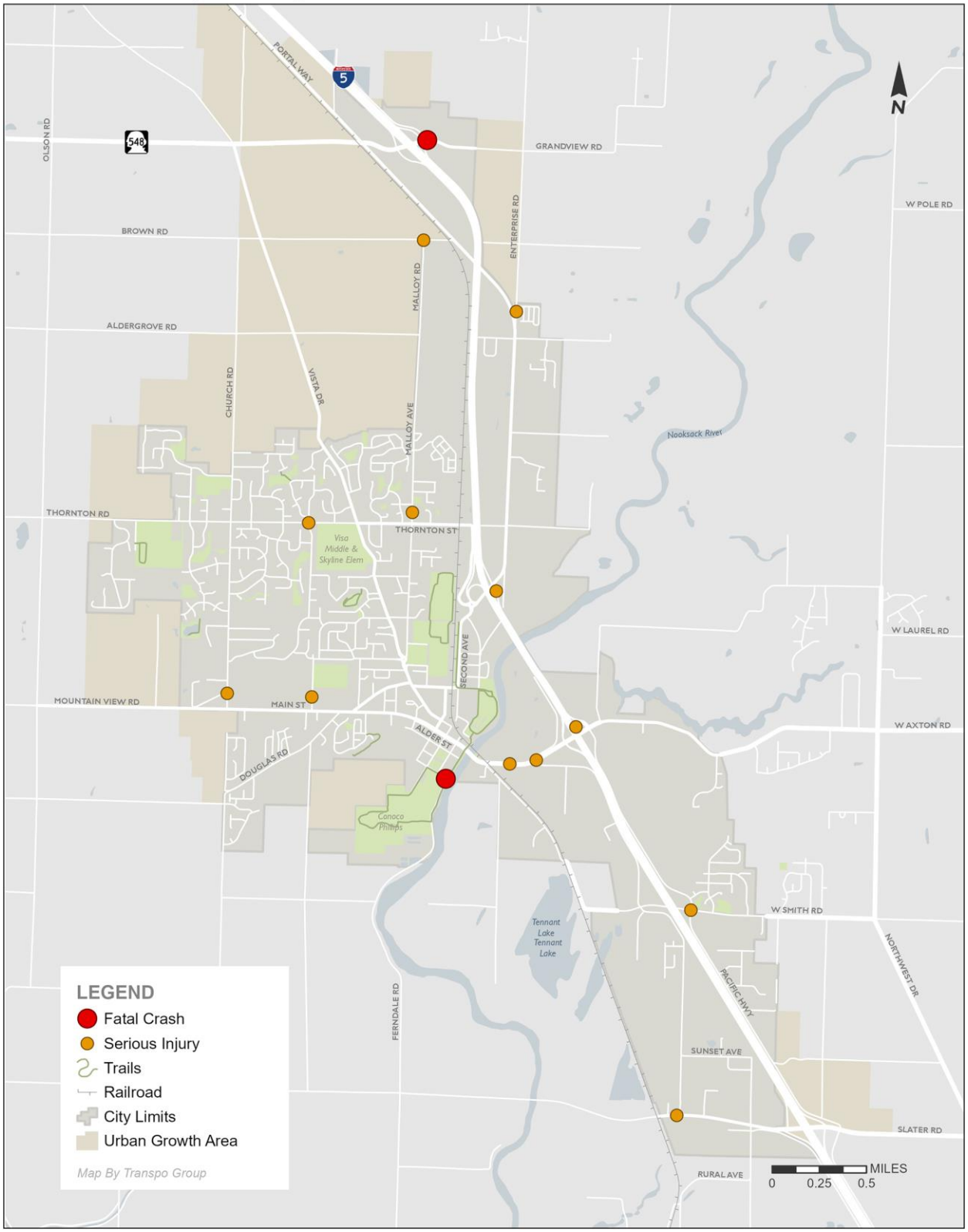


Figure 6
Collision History Severity



Intersection Safety Analysis

Table 4 summarizes the collision history at intersections within the City of Ferndale that had a high collision rate. Typically, any intersection with a collision rate greater than one collision per million entering vehicles (MEV) should be monitored to determine if improvements could be made to improve safety. Two intersections, Main Street/NB I-5 On Ramps and the northern intersection of Vista Drive/Washington Street, showed collision rates greater than one per MEV. This table also summarizes the number of pedestrian- and/or bicycle-involved collisions between 2019 and 2023 at the intersections with high collision rates.

Table 4. Collision Summary at Select Intersections

Intersection	Average Collisions Per Year	Daily Total Entering Vehicles	Collisions Per MEV	Most Frequent Collision Type	Pedestrian/ Bicycle Collisions
Main St/I-5 NB Ramps	6.8	4,300	4.33	Fixed Object	0
Main St/Hovander Rd	1.0	14,600	0.19	Angle	0
Main St/2nd Ave	1.4	6,650	0.58	Rear-End	2
Slater Rd/I-5 SB Ramps	0.2	7,150	0.08	Fixed Object	0
Main St/1st Ave	1.8	8,690	0.57	Angle	1
Vista Dr/Washington St (N)	3.2	6,300	1.39	Rear-End	0
Grandview/I-5 NB Ramps	0.8	9,690	0.23	Fixed Object	0
Portal Way/I-5 NB Ramps	0.0	14,500	0.00	n/a	0
Vista Dr/3rd Ave	0.2	10,140	0.05	Angle	0
Main St/4th Ave	2.8	17,150	2.80	Angle	1

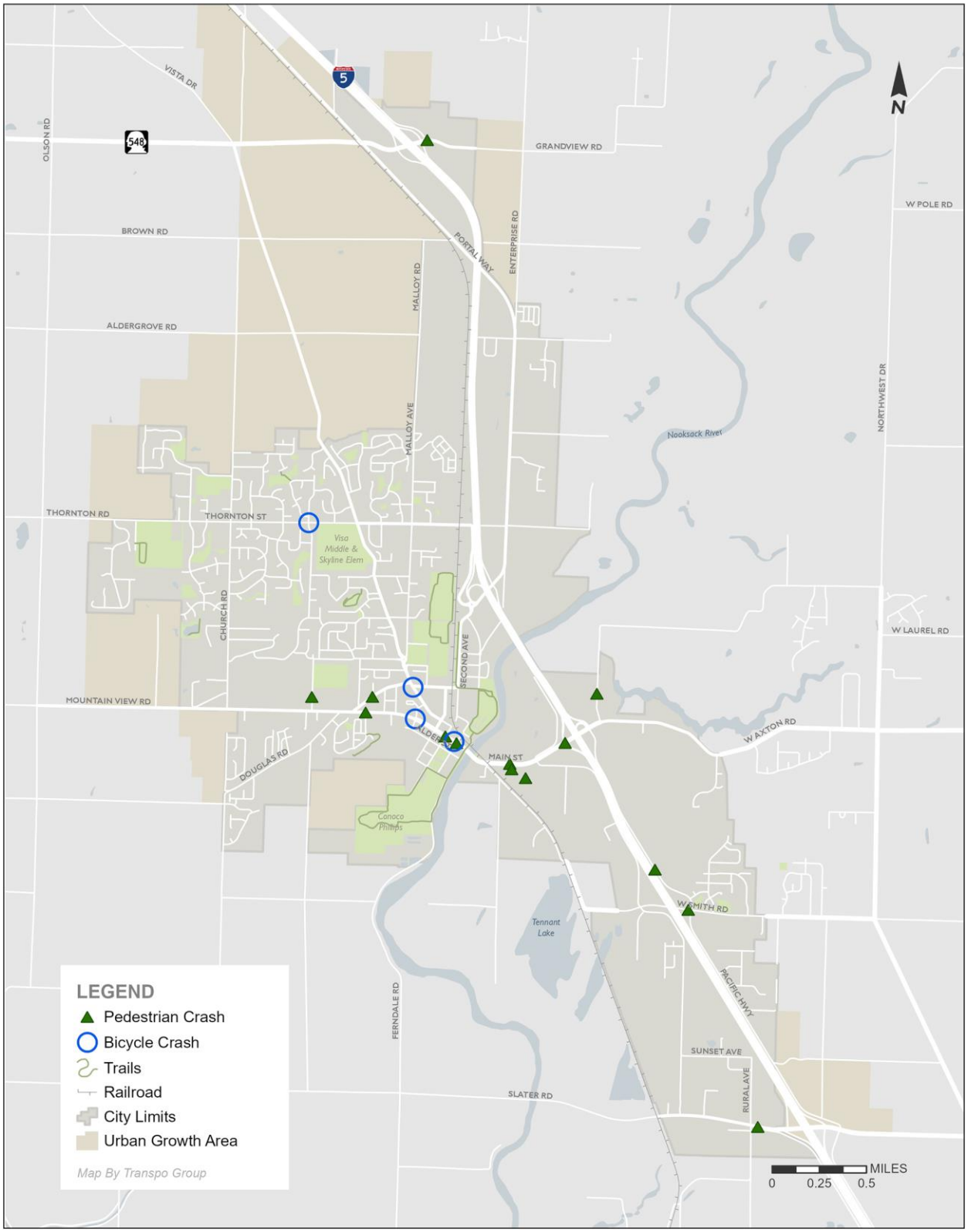
Under 23 U.S. Code § 148 and 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

Pedestrian/Bicycle Safety

Improving roadway safety for pedestrians and bicyclists is essential to reducing traffic-related injuries and fatalities. Based on 2023 WSDOT collision data, over 20 percent of fatal and serious injury collisions within the state of Washington involved pedestrians and/or bicyclists. As these roadway users have fewer protections from impacts during collisions, pedestrians and bicycles are often the party injured or killed when involved in collisions. Therefore, identifying and evaluating the pedestrian and bicycle collisions is key to ensuring the transportation network is safe for all users.

Figure 7 presents the locations of pedestrian and bicycle collisions over the five-year analysis period. Between 2019 and 2023 there were 14 collisions involving pedestrians and 5 collisions involving bicyclists in Ferndale. The largest concentrations of pedestrian and bicyclist collisions occurred along the Main Street, 2nd Avenue, and Barret Road corridors. A total of 10 (53%) of the pedestrian and bicyclist crashes reported during the 5-year analysis period occurred on these corridors, two of which resulted in a serious injury.

Figure 7
Pedestrian and Bicycle Collisions



FREIGHT SYSTEM

Freight movement in Ferndale involves both truck and rail transportation. The City works to provide adequate routes and facilities for movement of goods by truck. Rail tracks also traverse the City, impacting other transportation modes.

Truck Routes

The movement of freight is a major priority for the City of Ferndale. The Washington State Freight and Goods Transportation System (FGTS) is used to classify state highways, county roads, and city streets according to average annual gross truck tonnage they carry as directed by RCW 47.05.021. The FGTS is primarily used to establish funding eligibility for the Freight Mobility Strategic Investment Board (FMSIB) grants. In addition, it also supports designations of HSS corridors, pavement upgrades, traffic congestion management, and other state investment decisions.

The FGTS classifies roadways using five freight tonnage classifications, T-1 through T-5. Routes classified as T-1 or T-2 are considered strategic freight corridors and are given priority for receiving FMSIB funding. The classifications are as follows:

- T-1: Over 10 million annual gross tonnage (about 800 trucks per day or more).
- T-2: 4 to 10 million annual gross tonnage (about 320 to 800 trucks per day).
- T-3: 300,000 to 4 million annual gross tonnage (about 24 to 320 trucks per day).
- T-4: 100,000 to 300,000 annual gross tonnage (about 8 to 24 trucks per day).
- T-5: Over 20,000 gross tonnage in a 60-day period.

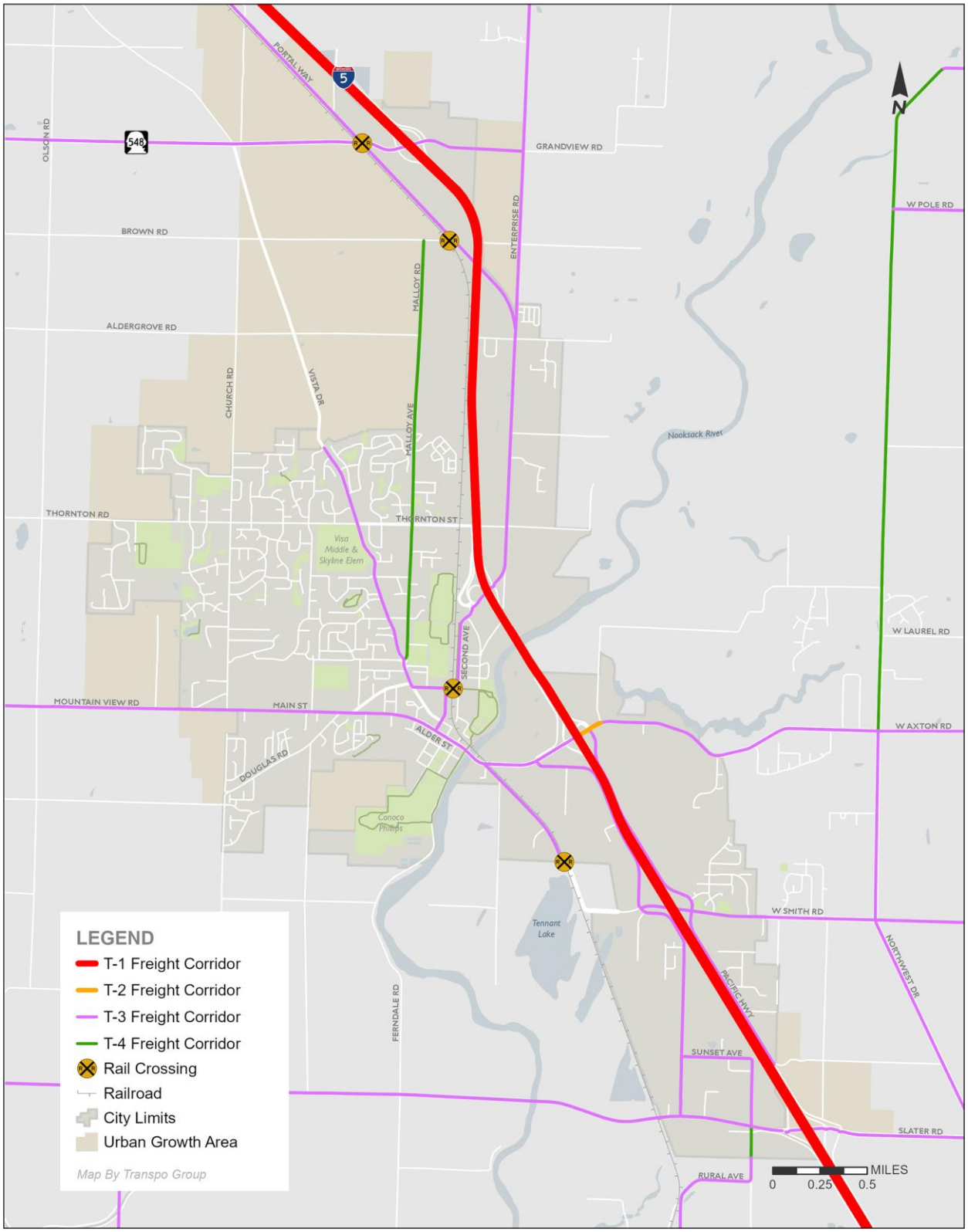
Within the City of Ferndale and its UGA, I-5 is classified as a T-1 route, and Main Street (I-5 to 3rd Avenue) is classified as a T-2 route (see Figure 8).

The following roadways are classified as T-3 freight routes:

- Enterprise Road (north City Limits to Portal Way)
- Main Street (I-5 to east City Limits)
- Main Street (3rd Ave to west City Limits)
- Smith Road (Barrett Road to east City Limits)
- 3rd Avenue (Main Street to Washington Street)
- Barrett Road (Main Street to W Smith Road)
- Labounty Drive (Main Street to W Smith Road)
- Malloy Avenue (Vista Drive roundabout to north City Limits)
- Portal Way (2nd Avenue roundabout to north City Limits)
- 2nd Avenue (Washington Street to Portal Way)
- Vista Drive (Washington Street to north City Limits)
- Washington Street (2nd Avenue to Vista Drive)
- Slater Road
- SR 548 (Grandview)

Truck and rail freight movement often come to conflict points in Ferndale. Since both systems are of vital importance to economic development within Ferndale as well as international commerce, the City places a high priority on improvements that support both rail and truck movement. Grade-separation projects provide multiple benefits by improving safety for rail, truck, and vehicle traffic and allowing train speeds to increase.

Figure 8
Freight and Goods System and Rail Crossings



Rail Crossings

The Burlington Northern railway seeks to reduce the number of at-grade crossings throughout its system, for the purpose of reducing potential collisions as well as improving the efficiency and speed of its trains.

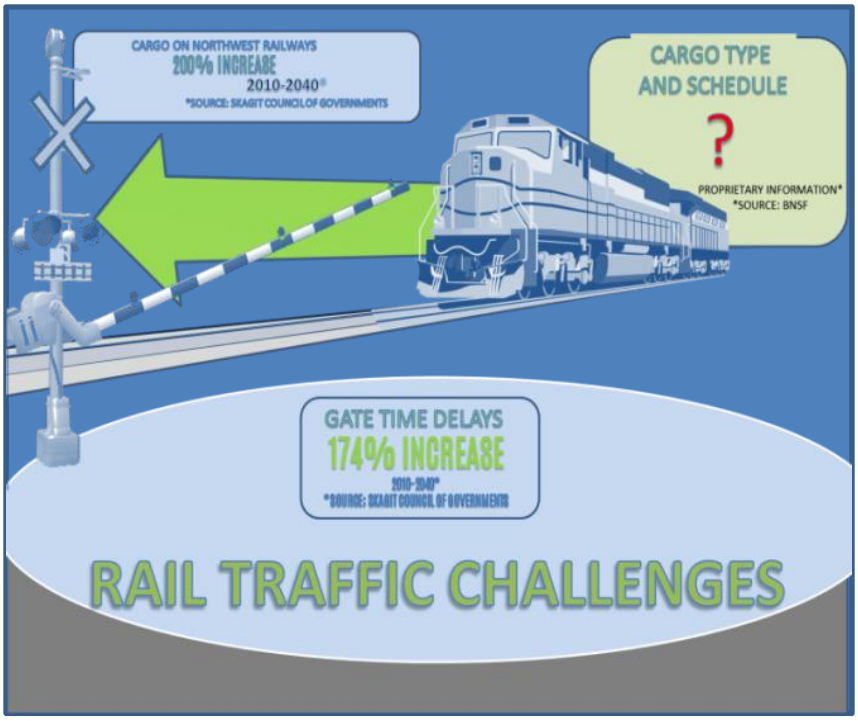


Figure 8 identifies the City's five at-grade railroad crossings: Slater Road, Hovander Road, Washington Street, Brown Road, and Grandview Road (SR 548). The railroad crossing at Slater Road is near the southern boundary of the City limits and has a moderate impact on east/west traffic. Washington Street also crosses the railroad tracks at-grade. Brown Road is the most lightly travelled roadway of the five at-grade crossings.

Rail traffic in the Pacific Northwest is expected to increase during the planning period, reflected in both an increase in the number and the length of trains. Precise estimates of future rail traffic are proprietary and are not publicly available.

Ferndale's transportation network will likely be impacted by increased rail traffic, particularly at at-grade rail crossings, but also extending to nearby intersections and in extreme cases to the I-5 mainline. In addition, drivers seeking alternative routes may contribute to temporary congestion on Main Street and other surface streets.

While the majority of these impacts may be temporary in nature, they will be exacerbated during emergency conditions and for emergency vehicles due to the limited nature of alternative routes in Ferndale. Grade-separated rail crossings outside of the floodplain with convenient access to the interstate system may be necessary to properly mitigate these rail impacts.

PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian and bicycle facilities play a vital role in the City's transportation environment. The non-motorized transportation system is comprised of facilities that promote mobility without the aid of motorized vehicles. A well-established system encourages healthy recreational activities, reduces travel demand on City roadways, and enhances safety

within a livable community. Pedestrian and bicycle facilities also provide access to/from transit stops. Good transit access can increase the use of non-auto travel modes.

A well-used non-motorized transportation system will connect traffic generators, such as major employers, Downtown business, schools, residential areas, parks, and transit stops through a system of pedestrian and bicycle facilities. Existing pedestrian facilities are shown in Figure 9, and bicycle facilities are shown in Figure 10.

Pedestrian Facilities

Ferndale residents depend on sidewalks and trails for recreation, as safe routes to and from school, and for local, non-motorized transportation. There are over 73 miles of sidewalk or marked pedestrian shoulders located within the City of Ferndale, particularly in the downtown and northwestern portions of the City. Sidewalks or pathways also are located along some arterials and local streets throughout other areas of the City; however, gaps in the system reduce the connectivity between various subareas of the City. Figure 9 shows locations of existing sidewalks. The City's street standards identify the standards for pedestrian facilities to be constructed as part of transportation projects or as part of new developments.

Within certain parts of the City and its UGA, pedestrians must walk on roadway shoulders, where available. This can pose safety issues and reduces the likelihood for pedestrian travel in the City or its UGA. Pedestrian routes within close proximity to school zones are vitally important to the pedestrian network for a variety of reasons: school children are often unsupervised and are unfamiliar with driving regulations and stopping speeds, peak hours of school traffic (especially the am peak) often coincide with typical peak hour drive times for non-school related activities, neighborhoods surrounding school zones were often established prior to school construction and are not designed to accommodate pedestrians, and many schools lack a coordinated plan to separate walking trips from driving trips.

In some parts of the City, pedestrian trails serve a similar purpose as adjacent sidewalks. The City's Parks, Recreation and Trails Master Plan anticipates that sidewalks may be incorporated into the trail network and vice versa, in order to avoid unnecessary redundancies and increased maintenance costs – provided that life-safety and ADA accessibility requirements are also met.

The City also has a multi-use trail in the downtown area. The Centennial Riverwalk is located along the west side of the Nooksack River south of Main Street leading down to Pioneer Park. Other trails or pathways are planned for areas in the City limits and in the Ferndale UGA, including extensions to the Riverwalk on both the east and west sides of the river. Regional trails connecting the City to other jurisdictions and unincorporated Whatcom County are also planned.

Bicycle Facilities

The existing bicycle facilities within the City of Ferndale consist of bicycle lanes in the downtown area as shown in Figure 10. These lanes exist along Main Street in both directions of travel. As part of its street standards, the City has identified standards for bicycle facilities to be constructed as part of transportation projects or as part of new developments.

Whereas pedestrian facilities are intended primarily for shorter trips and their use may be significantly impacted by weather, season, and time of day, a robust bicycle network may provide a reasonable alternative to driving for intra-city transportation. As such, the City seeks to reduce barriers that would preclude the use of bicycles while at the same time avoiding instances where bicycle use impedes motorized transportation on primary roadways.

As with sidewalks and trails, bicycle facilities are not independent of other transportation facilities. Where practical, bicycle lanes can be incorporated into the design of certain streets, allowed on pedestrian trails, and in some situations may utilize sidewalks when no bike lanes are present on the adjacent roadway.

Figure 9
Existing Pedestrian Facilities

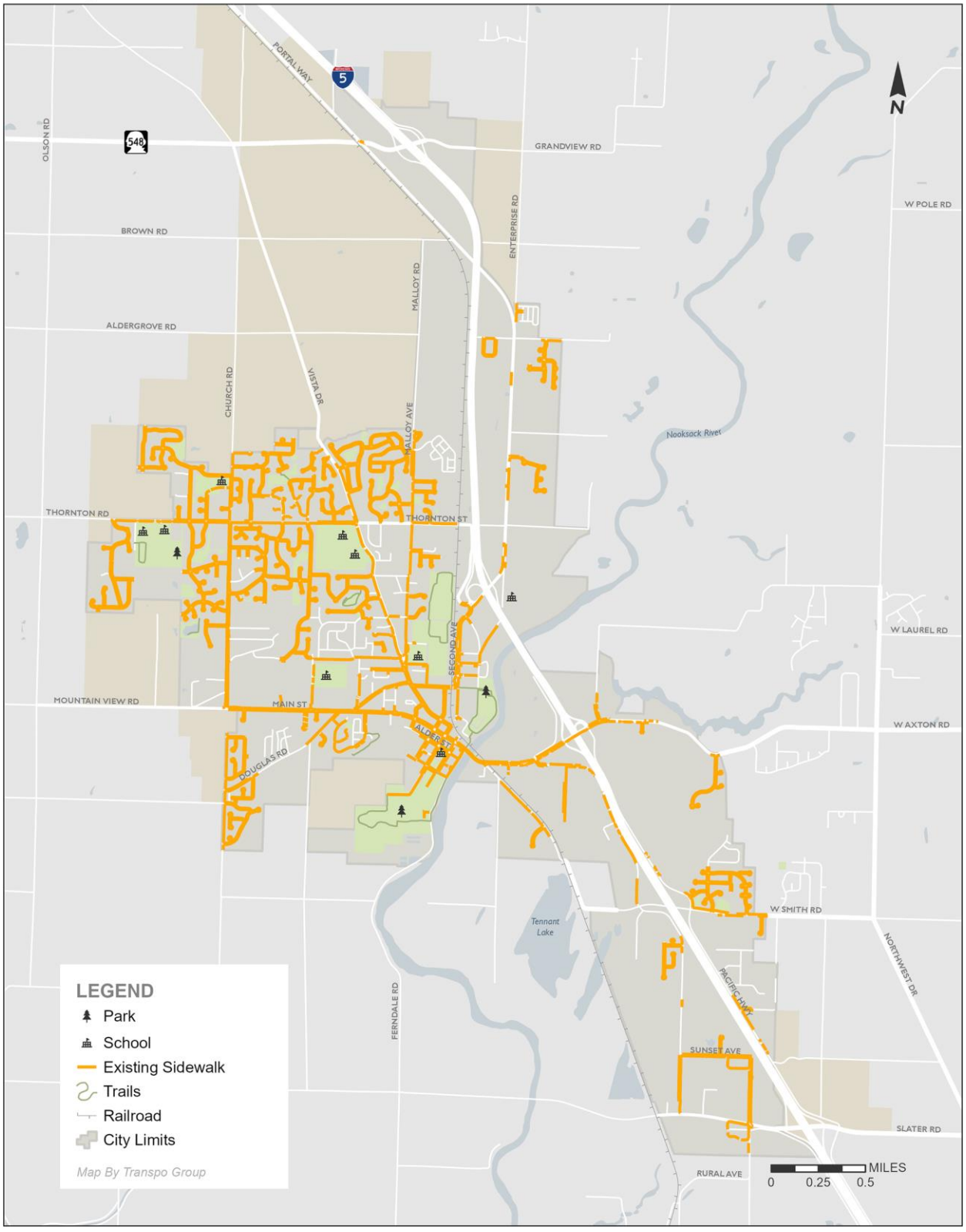
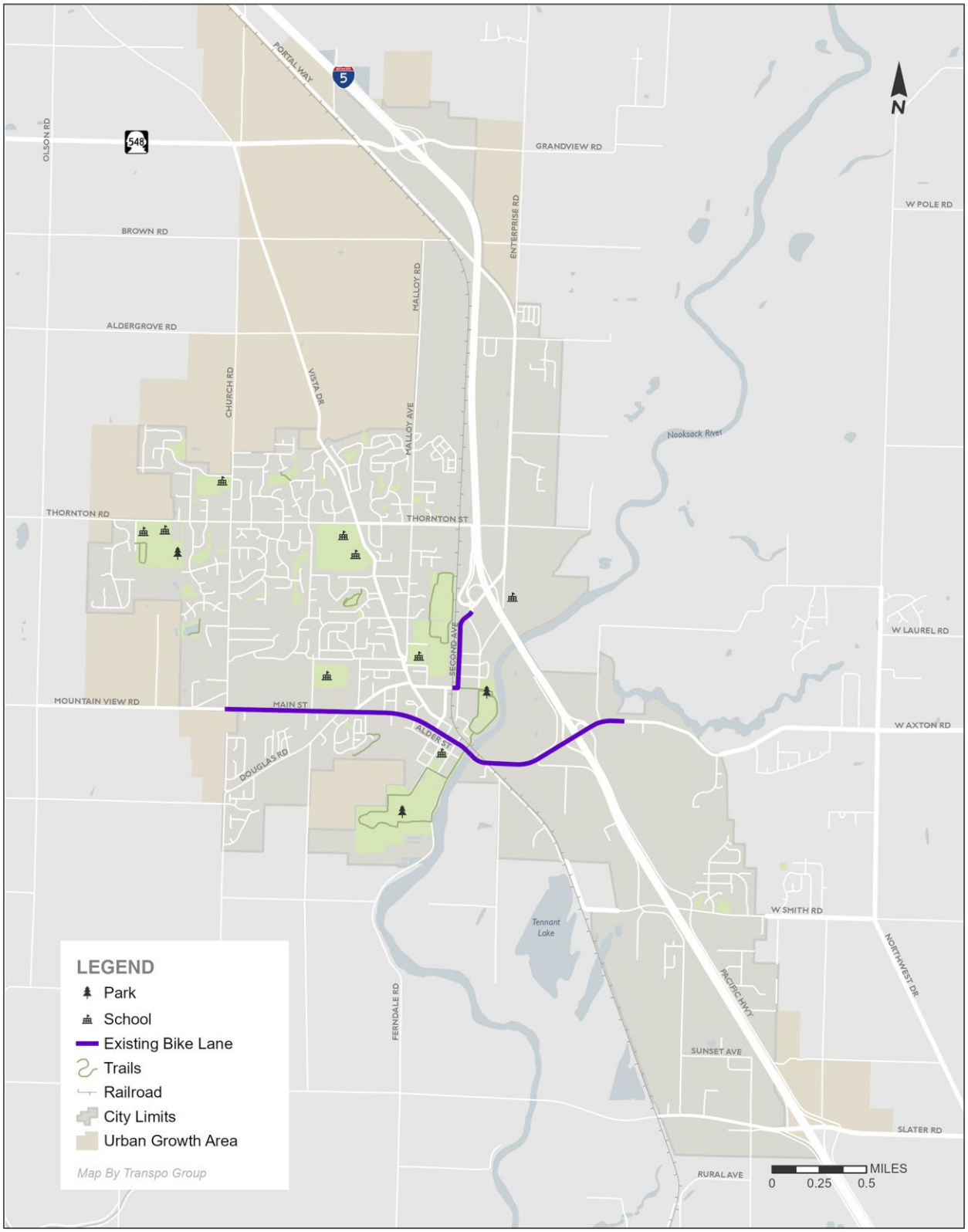


Figure 10
Existing Bicycle Facilities



TRANSIT AND TRANSPORTATION DEMAND MANAGEMENT

Transit and transportation demand management services and programs are another important component of the City's transportation system. Transit services and programs are discussed below.

Transit Service

Transit service is a vital component of a balanced transportation system. Whatcom Transportation Authority (WTA) operates two routes in and through the City of Ferndale. WTA also provides paratransit services. The routes serve origins and destinations within Whatcom County. Figure 11 shows the bus routes throughout the City along with the existing park and ride facilities.

Route 27 connects Ferndale to Cordata Station in north Bellingham and serves the residential neighborhoods west of Malloy Drive. Service is provided hourly. Route 70X/55 provides service in half-hour to two-hour intervals along I-5 between Bellingham and Blaine, with stops at Ferndale Station.

The transit service is focused on Ferndale Station, the main park and ride lot within the City. In addition, WTA coordinates ridesharing services. Park and Ride lots facilitate the use of public transit and also serve as a meeting place for vanpool and carpool commuters. In areas where much of the development is low density, Park and Ride lots allow transit to operate more efficiently by serving as consolidation points.

WTA also operates transit services, such as vanpool, rideshare and specialized transit services. Specialized transit services serve citizens who are unable to use the fixed route transit system because of a disability. The success of the public transportation system is dependent on integrating key elements that comprise the overall plan. Integration of the transit system with street improvements, bicycle facilities, and pedestrian facilities is critical to transit's success.

FLEX Program. The FLEX program serves the general transit-riding public by allowing buses on specified routes to travel off-route for pre-arranged pick-ups. Riders must be located in a FLEX area and need to call at least two hours ahead of time to schedule a pickup. The only flex route which operates in the City of Ferndale is Route 55; service is available Monday through Saturday on that route.

Safety Net Program. Safety Net service provides transit connections to the main transit centers in Bellingham for individuals who are in less populated areas of Whatcom County. On specified days, riders can call the service number and request a pick up; this can be done up to a week in advance, but no later than two hours before the pickup time.

Lummi Transit. The Lummi Nation has provided bus service within the City of Ferndale via Lummi Transit since July 2011. Lummi Transit provides this service "fare free" for all community members tribal and non-tribal. All of the buses in the Lummi Transit fleet are equipped with ADA lifts. The Lummi Transit route through Ferndale is designed to provide

the community with easy access to a variety of health, financial, shopping and public services.

Park and Ride

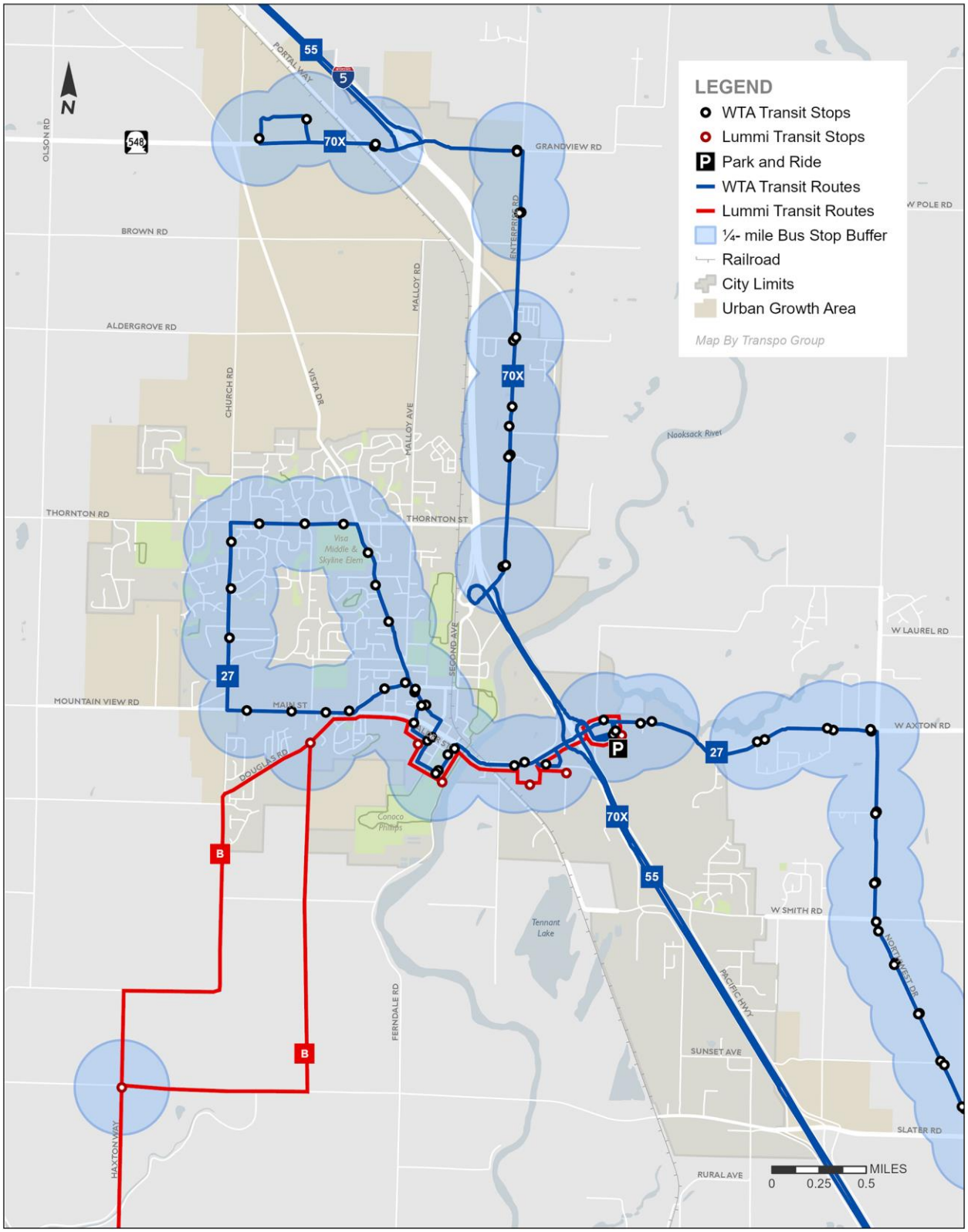
The City currently is served by one park-and-ride lot located off Axton Road east of I-5, known as Ferndale Station. This lot serves all three transit routes operating in the City and has approximately 100 parking stalls. The lot was designed and built with the expectation that building pads within the development would be developed, creating an anchor for bus riders and the general public.

The lot is under-utilized and is a significant distance from residential properties. Congestion at the interchange, the lack of shopping options and the infrequency of bus service has diminished the convenience that a successful Park & Ride facility might otherwise offer. The City expects to work with WTA to identify ways in which the original development concept might yet be realized to increase ridership. Additional park and ride options might be explored to increase ride share opportunities.

Vanpool Program

WTA operates a vanpool program serving commuter groups with an origin or destination in Whatcom County. The program offers support to forming and operating vanpool groups. The support includes providing vehicles, driver orientation, vehicle maintenance, and assistance in forming vanpool groups for daily commuters.

Figure 11
Existing Transit Facilities



SECTION 3. FORECASTS, ALTERNATIVES, AND EMERGING TRANSPORTATION TRENDS

In addition to addressing existing transportation system issues, the City is planning a transportation system to accommodate forecast growth. The GMA requires that the transportation planning horizon be at least ten years in the future. For the 2025 update, the City chose a longer-range horizon year of 2045 as the forecast year for the Transportation Element and is consistent with the horizon year used by WCOG for its long-term planning. The longer-range horizon year allows the City to better plan for and size transportation facilities that will be needed as the City grows.

The WCOG travel forecasting model was used to support the City's transportation planning efforts. The travel demand model provides a tool for forecasting long-range traffic volumes based on the projected growth in housing and employment. The model is also useful in evaluating transportation system alternatives; however, it must be noted that the ratios and specific land use forecasts included in the model are intended for planning purposes only and are not intended to restrict or require specific land use actions. The land use assumptions are based on a county-wide, parcel-by-parcel evaluation (the Land Capacity Analysis, or LCA) of current zoning, existing and permitted development, and remaining assumed capacity for development over the course of the planning period.

LAND USE FORECASTS

Travel forecasts are largely derived based on changes in households and employment within the study area. The expected countywide population and employment growth anticipated to occur in Ferndale was allocated to Traffic Analysis Zones (TAZs) in WCOG's regional transportation demand model based on where capacity was identified in the LCA. The City has evaluated future growth based on the allocations provided by Whatcom County and is consistent with the Land Use Element of this plan. This approach provides the City with the ability to better-evaluate and anticipate future transportation needs through ongoing monitoring via the City's concurrency program, future amendments to this element, the City's 6-Year Transportation Improvement Program (TIP), and more.

Table 5 shows the projected household growth in Ferndale used to forecast traffic volumes for 2045 conditions. The City of Ferndale estimates that the City and its Urban Growth Area (UGA) could grow by over 4,600 households. This is about 78 percent higher than existing households. Residential growth reflects the City's plans for a mix of land uses and redevelopment along Main Street and Portal Way as well as ADUs.

Table 5. Existing and Future Land Use Summary

	2023 Total	2045 Total	Growth	Percent Change
Housing Units	5,966	10,625	+4,659	+78%
Employment	9,934	13,271	+3,337	+34%

Source: City of Ferndale, 2025

Table 5 also summarizes the forecast growth in employment used in developing the 2045 travel forecasts. The City of Ferndale estimates that the City and its Urban Growth Area (UGA) could grow by over 3,300 employees. This is about 34 percent higher than existing employment.

2045 BASELINE AND ALTERNATIVES EVALUATION

The travel forecasting model was used to convert the existing (2024) and forecast (2045) land use data into travel demands. The 2045 WCOG model was used to forecast traffic volumes and travel patterns. A comparison of 2024 and 2045 traffic volumes is shown in Figure 12.

The 2036 forecast model was initially set up with the assumption that only currently committed transportation improvement projects would be constructed by 2045. This scenario provides a baseline for identifying future deficiencies. The resulting 2045 baseline PM peak hour intersection levels of service are shown in Figure 13. Potential alternative transportation improvement system concepts were developed and evaluated to determine how the City could best resolve those deficiencies. The results of the alternatives evaluation were used to establish a framework for the Transportation Systems Plan.

2045 Baseline Evaluation

The results of the 2045 baseline model and related intersection operations analysis showed that increased traffic volumes put substantial demand on Interstate Five interchanges and associated corridors of Main Street, Portal Way, Thornton Street, Grandview, and Slater Road.

The following list highlights areas within the City and UGA for discussion.

Main Street corridor, from Interstate Five to downtown - The Main Street interchange includes signalized ramp intersections and a two-lane bridge. The 2045 baseline PM peak hour traffic volumes will be approaching the capacity of the two-lane overcrossing which may result in additional congestion and potential safety issues; however, revised forecasts in the corridor as well as minor improvements to corridor intersections in recent years have created conditions where additional major improvements are not needed in the planning horizon.

Portal Way Interstate Five interchange - This interchange serves both residential areas east of Interstate Five and commercial/residential areas north along Portal Way. The

completion of the Thornton Street overcrossing has put additional traffic demands on this interchange and along Thornton Street to the west.

Grandview Road Interstate Five interchange - Grandview Road's role as a state highway and northern access to Ferndale will result in significant traffic demands. The interchange is limited by stop-controlled ramp intersections and a two-lane bridge. The Grandview Road interchange has been identified as an area of significant commercial (retail) growth on all four quadrants surrounding the interchange. Regional traffic growth is also expected east of Vista Road.

Slater Road Interstate Five interchange - This interchange provides access to Interstate Five for areas south of Ferndale and north of Bellingham. WSDOT is in the process of constructing roundabouts and other improvements to improve the Slater Road corridor.

Need Evaluation and Project Identification

Based on the results of the evaluation conducted of the 2045 baseline forecasts, projects were identified for all intersections and areas not meeting the City's LOS standards. When constructed, the planned improvement project list in Section 4 will bring all this locations within LOS standards.

Figure 12
Existing and Future Baseline Volumes - PM Peak

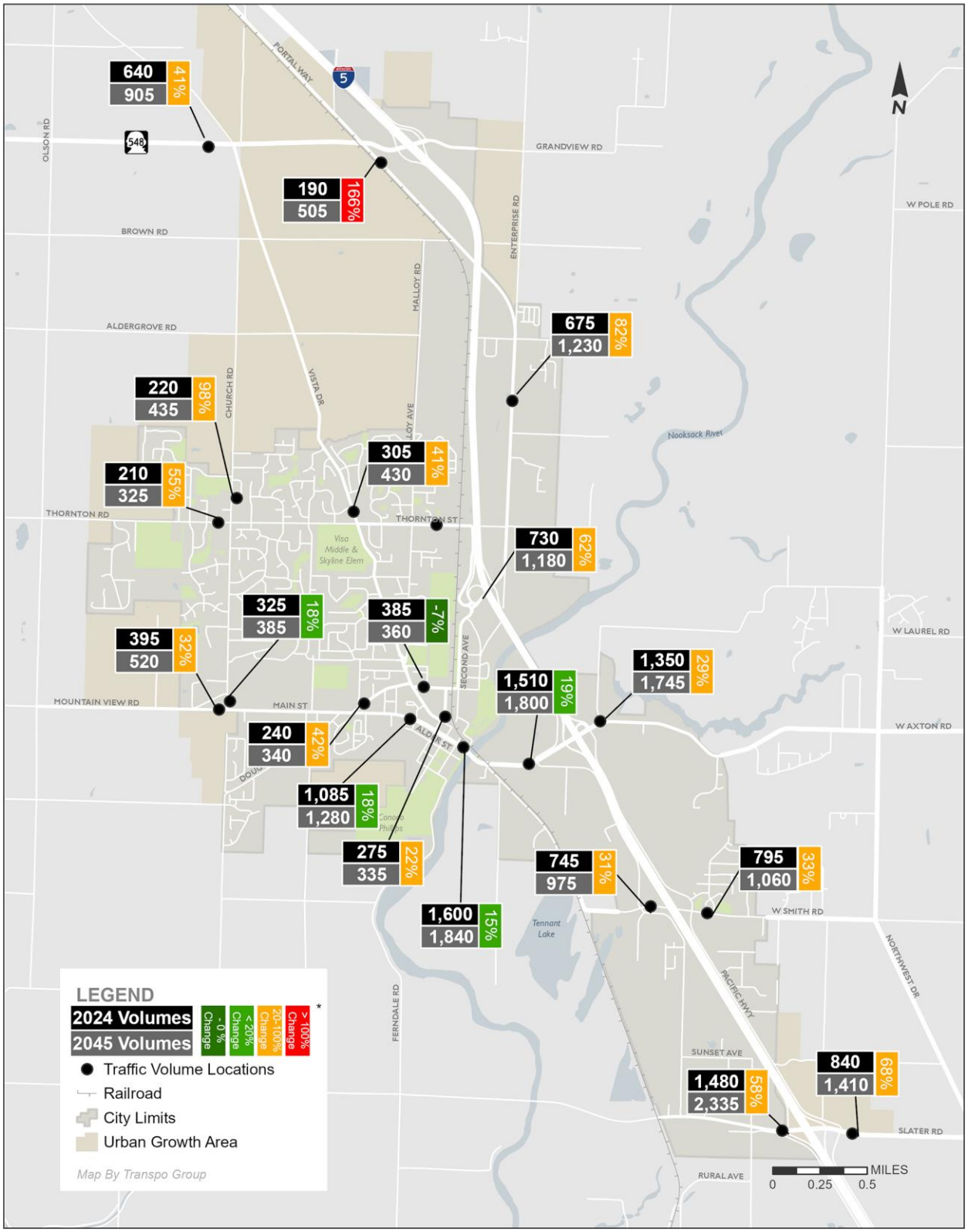
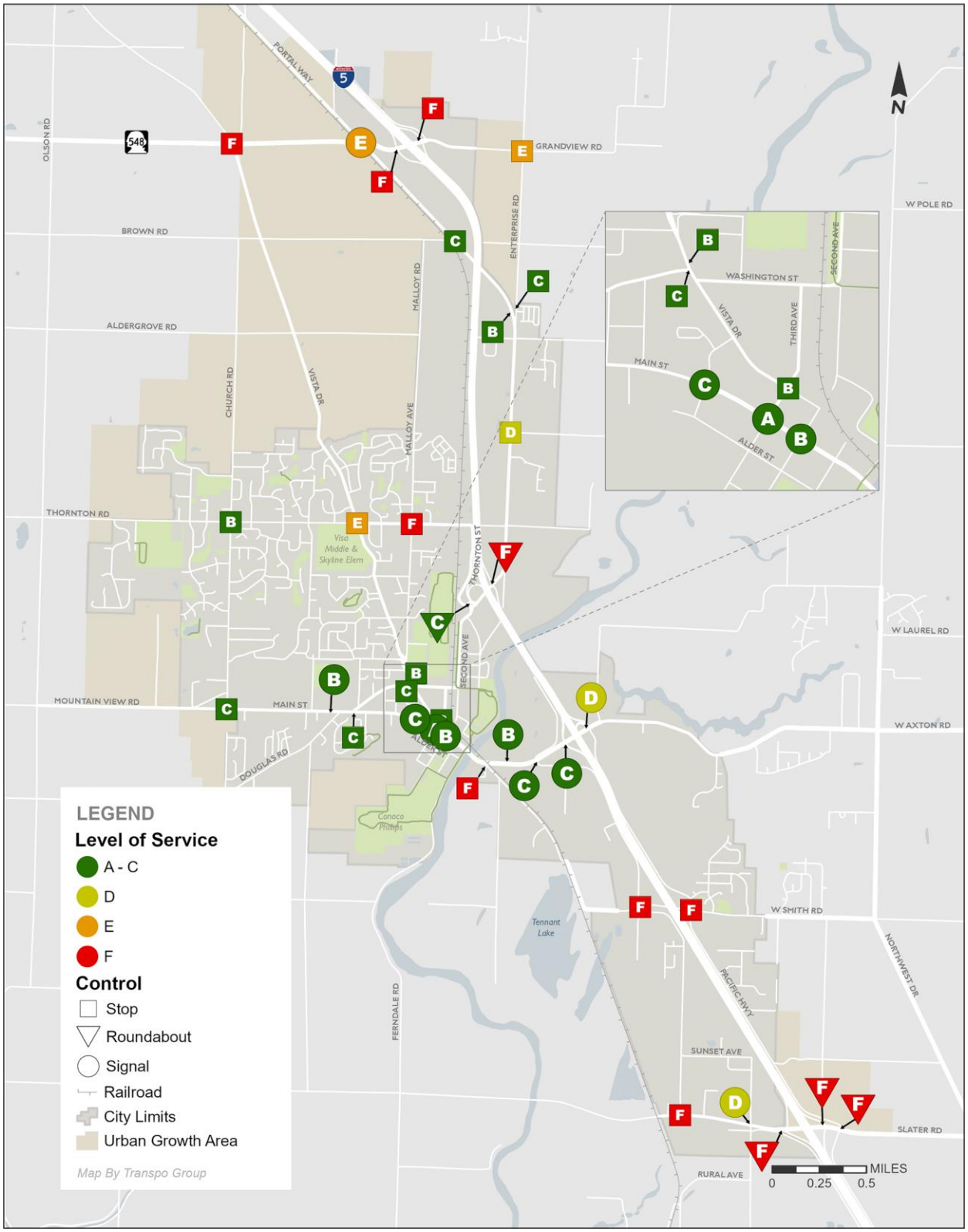


Figure 13
Future Baseline Intersection LOS - PM Peak



ACTIVE TRANSPORTATION NETWORK EVALUATION

Bicycle, pedestrian, and trail facilities play a vital role in the City's transportation environment. The Ferndale active transportation system is comprised of facilities that promote mobility without the aid of motorized vehicles. A well-established system encourages healthy recreational activities, reduces vehicle demand on roadways, and enhances safety within the community.

As described further in the Plan (Section 4) the pedestrian and bicycle LOS standards are based on the presence of facilities along designated routes (primary or secondary classifications). Active transportation corridors identified as primary or secondary routes are not indicative of an implementation strategy, but rather they are used to make a distinction between routes that are more citywide or that extend completely through the community (primary), and those that serve to make the second leg of the journey to connect to destinations, extend into neighborhoods, or complete a loop (secondary). The primary and secondary networks are designated in the transportation system plans in Section 4.

Based on the system plan networks and LOS criteria, pedestrian and bicycle networks were evaluated and summarized on Figure 14 and Figure 15, respectively. Segments shown in green indicate LOS P2 for pedestrian networks and LOS B2 for bicycle networks, and represent that anticipated facilities are fully present. Segments shown in orange indicate LOS P1 and B1 and represent that adequate facilities are present. Segments shown in red indicate LOS NF and represent that few or no facilities are present.

Pedestrian System Evaluation

As shown in Figure 14, the pedestrian system meets LOS standards in large sections of the City. In the north and southeast, underdeveloped areas are shown as not currently meeting LOS standards but that is partly due to roadways being unbuilt at this time. As development occurs, these roadways will also be built and improve pedestrian LOS. The long-term project list identifies projects to improve the pedestrian network LOS and ensure the City's standard LOS is met.

Bicycle System Evaluation

As shown in Figure 15, the formal bicycle system is still very limited, and only focused on Main Street and along the river. The long-term project list would implement the City's standard LOS for the bicycle network.

Figure 14
Future Pedestrian LOS

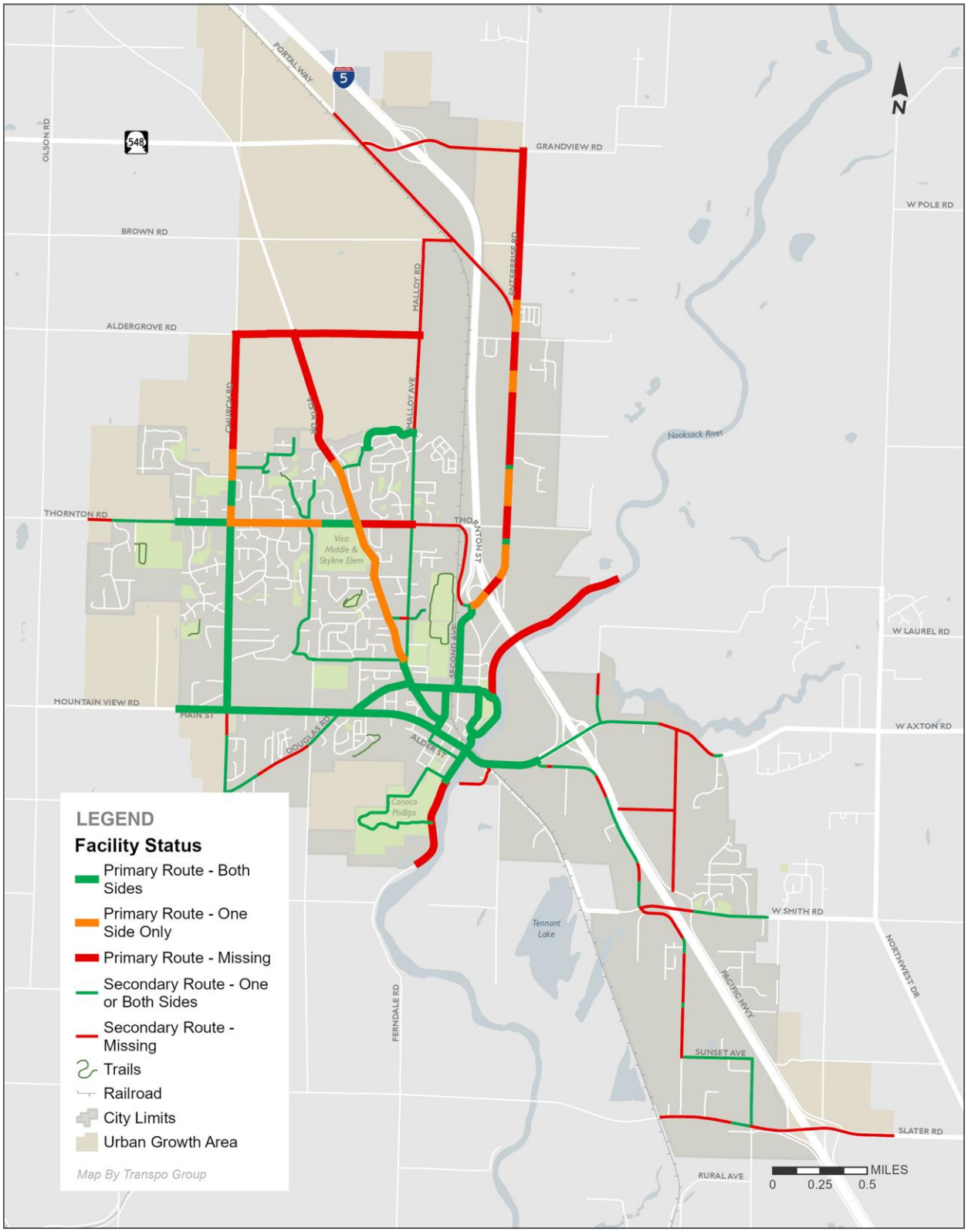
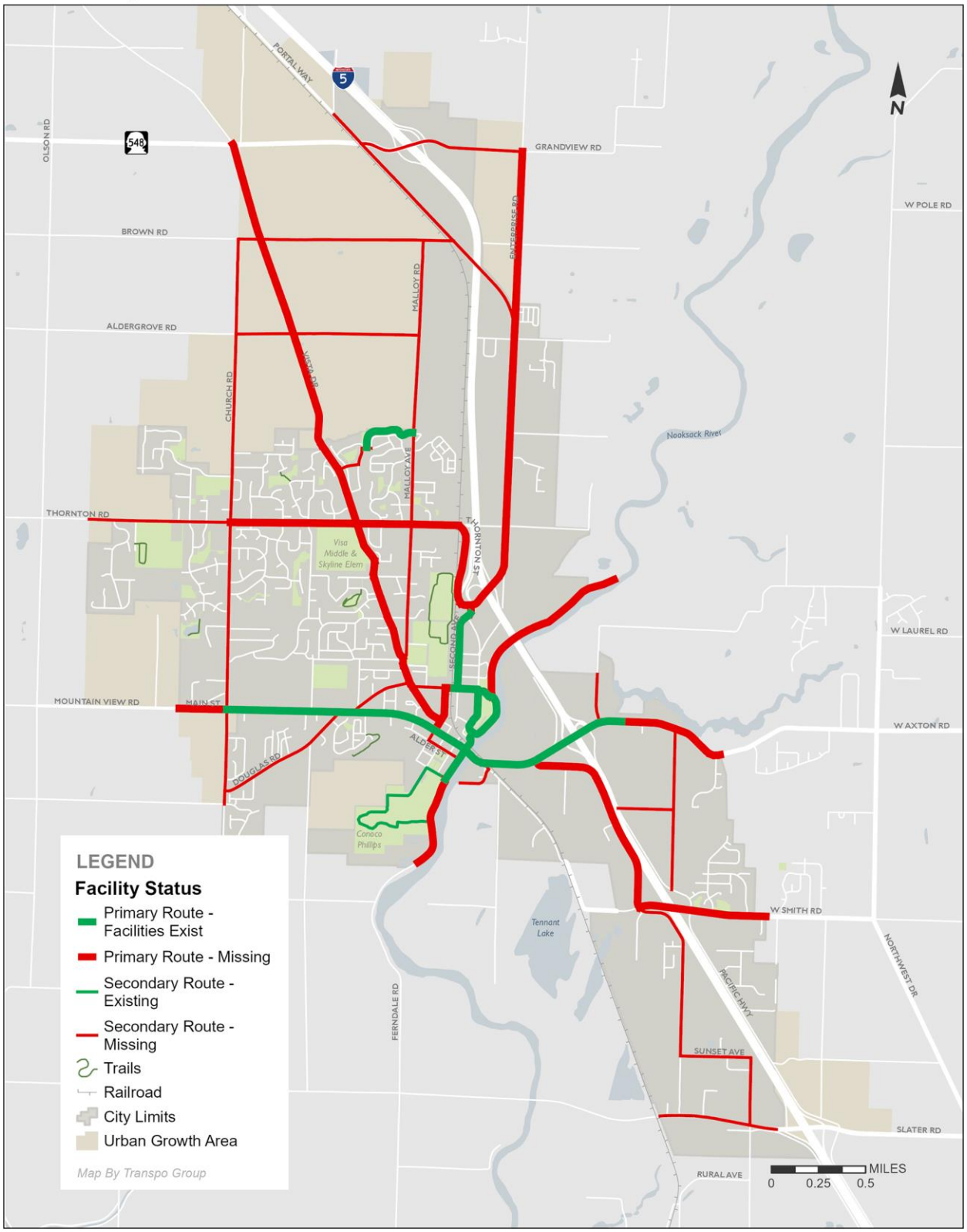


Figure 15
Future Bicycle LOS



EMERGING TRANSPORTATION TRENDS

In addition to formal transportation analysis and forecasting, long-range planning also includes anticipating emerging transportation trends that may change basic assumptions concerning transportation systems. Within the last two decades, technology has come closer to past futuristic visions, and it is likely that by the end of the planning period, some or all of these technologies will be deployed to realize some of these long-imagined ideas. This section describes some of these possible technologies and the impacts they may have on Ferndale's transportation network.

Autonomous Vehicles (AVs)

A great deal of uncertainty faces us in planning for autonomous vehicles. Potential outcomes carry a wide range of possibilities. The next five years may see the first fully driverless vehicles in operation. The next 15 years stand a chance to witness a significant portion of fleet of vehicles on our streets and highways operating without drivers. It is possible that 30 to 40 years from now all or nearly all vehicles will be driverless or will have driverless capabilities in certain situations. The implementation of some of these technologies may be within current long-range planning horizons, and thus the City should consider the ramifications of these technologies on its transportation network. A few key issues rise to the top of what local governments should contemplate while preparing long-range plans.

Street and Roadway Planning. Since AVs will be able to space themselves closer together, the capacity of streets and highways will likely increase significantly, as much as double. This implies that roadway capacity improvements to accommodate more vehicles may not be necessary in the long term as these technologies are implemented. This is especially true if AVs travel in narrower lanes with smaller vehicles.

Transit Planning. Over half of the cost of operating buses is related to the driver. In the future, replacing the driver with AV technology may enable transit operators to offer more service for the same cost. Technology that clears lanes when buses approach may allow them to avoid the same congestion they now face. This will also increase service as buses will be able to run their routes faster. Such technology may reduce the need for

expenditures in rail transit infrastructure as buses may operate with close to the same freedom that trains do on dedicated rights-of-way.

Shared Ride Regulations. The demand for shared ride services such as Lyft and Uber may likely increase as the economics improve without drivers. Public agencies will need to develop policies to regulate the environment for these types of services, especially those that offer pooling options for two, three or more people to ride together.

Human Services Transportation. AV will reduce the cost for serving the needs of the disabled, of military families, and caregivers. With dramatic safety improvements walking and bicycling will likely become much more attractive. The need for wider sidewalks and more bike lanes may increase.

Parking Demand Shifts

It is likely that the economics of transportation will dramatically change with widespread use of AVs and other technologies. Car ownership in urban areas may further decrease if on-demand travel with or without driverless vehicles becomes a legitimate alternative. At present, most vehicles are parked 95 percent of the time, while AVs may operate much of the day picking up one passenger after another, potentially reducing the need for parking. With widespread adoption this could have a transformative effect on the need for parking stalls.

Land Use Planning. Reducing the need for parking could greatly change land use planning. Often today one-quarter to one-half of the cost of constructing new buildings is for parking. Architectural considerations will change and open new possibilities for more economical and more interesting and efficient buildings. Perhaps most important, the cost

of building housing could drop dramatically. Further, land that is now taken up by parking facilities could be repurposed for more pressing needs, such as affordable housing.

Connected Vehicles

Although it is not yet clear what the demand for vehicle-to-infrastructure may ultimately look like, cities might look ahead to providing reference points for lidar and radar to function more efficiently. Perhaps lampposts will become smart poles. Further, it will be possible as more vehicles are fully self-driving to optimize traffic flow with computer systems that talk to and moderate flow. Cities might want to watch to see what systems will be needed and prepare to offer such systems.

Teleworking

Advances in technology and communication infrastructure will facilitate the exponential growth of teleworking in the next decade and beyond. According to current Census data, “not traveling at all” accounts for more than two percent of the overall national mode split and is increasing at a greater rate than all other modes. Factors that are fueling this change include; improving communications and collaboration technologies, increased high-speed broadband availability, and the proliferation of web-based applications. The land use and transportation implications of this trend are wide ranging including; reduced VMT and roadway congestion, reduced greenhouse gas emissions, and greater number of employees choosing to live further from job sites.

Emerging Trends Takeaways

It is difficult to summarize the potential for future technologies, as by definition many of the technologies (and their adoption) remain theoretical. But some trends are emerging: the costs of commuting (both financial and in time lost) in some cases are overwhelming the benefits of being physically present in an office – and technology now exists that allows nearly identical productivity from a remote location.

Similarly, technology now exists to remove many of the responsibilities for driving from the driver themselves. Perhaps the most significant obstacle to increased automation will be the individual driver's desire to drive.

It remains unclear whether or not these new technologies (or others) will gradually be implemented by municipalities and vehicle manufacturers, if there will be a sudden shift towards these technologies, or some combination of the two. Regardless, the City of Ferndale should keep abreast of capital improvement alternatives that could be implemented to serve these existing technologies.

SECTION 4: TRANSPORTATION SYSTEMS PLANS

The transportation systems plans provide the blueprint for improvement projects and programs to meet the multimodal transportation needs of the community. The transportation systems plans are based on the evaluation of existing system deficiencies and forecasts of future travel demands. The improvement projects and programs must be balanced with the availability of funding, as discussed in Section 5. The systems plan builds on the prior Comprehensive Plan, the subarea master plans, input from stakeholders, and the updated evaluation of existing and forecast conditions in Ferndale.

The transportation systems plans are organized and presented by travel mode to provide an overview of key components of each element; however, the plans are integrated to create a multimodal transportation system. For example, improvements along arterial streets and highways also incorporate appropriate non-motorized improvements. The non-motorized systems were defined to support access to transit, and to provide alternatives to automobile travel within the City. As improvement projects move toward implementation, the City will conduct detailed design studies, supported with project-level environmental review, and input from the public and other stakeholders.

The plans illustrate how the City of Ferndale's transportation system supports, and relies on, transportation facilities and programs provided by other agencies. These include new or improved interchanges with I-5, consistency of the arterial and collector road system, connectivity of trails and non-motorized transportation systems, additional transit service and facilities, and rideshare programs. The City will continue to coordinate with other agencies and groups to develop a comprehensive multimodal transportation system for the greater Ferndale area.

STREETS AND HIGHWAYS

Streets and state highways are the core of the transportation system serving the City of Ferndale and surrounding communities. These facilities provide for the overall movement of people and goods, for a wide range of travel modes. Streets and highways serve automobile trips, trucks, transit, vanpools, carpools, bicycle and pedestrian travel. Therefore, the streets and highways establish the framework for the overall transportation system for the City.

The core of the street and highway system includes arterials and collectors. The City also has designated specific corridors as truck routes, which can affect the design features of specific improvement projects. The arterial system is supported by future connector roads to provide circulation and connectivity of the overall system.

Arterial and Collector Classifications

Roadways within a network are typically classified based on their desired purpose, design, and function. Table 6 describes typical roadway functional classifications. Figure 17 shows the functional classification for streets within the City of Ferndale and designated Urban Growth Area (UGA).

The general hierarchy of functional classification is based on the relationship between the function of the roadway and the surrounding land uses and the relationship between mobility and access (see Figure 16). For example, commercial developments will generally desire to locate along arterials or collectors due to a high amount of mobility and visibility. Likewise, it is desirable to have parks, schools, and residential homes located along collector or local streets due to lower traffic volumes and a high degree of access.

Table 6. Functional Classifications

Classification	Definition
Freeways	Multi-lane, high-speed, high-capacity roadway generally intended exclusively for motorized traffic. Freeways have controlled access and are intended to serve longer, regional intra-state or interstate travel.
Principal Arterials	Principal arterials connect focal points of traffic generation throughout the City and adjacent areas. They are used to provide access to the regional highway system, connect major community centers, and connect to adjacent cities. These streets are intended to primarily serve “through” traffic with limited access to abutting land use. Principal arterials typically carry the highest traffic volumes.
Minor Arterials	Minor arterials are inter-community roadways that connect community centers with each other or to principal arterials or freeways. Minor arterials serve lesser points of traffic generation and provide greater land access than principal arterials. Generally, minor arterials have moderate to high traffic volumes and may include some restrictions of traffic movements and limitations on spacing of driveways and local streets.
Collectors	Collectors distribute traffic between the local street system and the arterial street system. They provide land access as well as connection between neighborhoods and smaller community centers. Collectors typically have low to moderate traffic volumes and limited regulation of access control. On-street parking is usually limited.
Local Streets	Local streets primarily provide direct lane access and generally discourage through traffic. These streets typically have low to moderate traffic volumes and few access controls. On-street parking is generally allowed

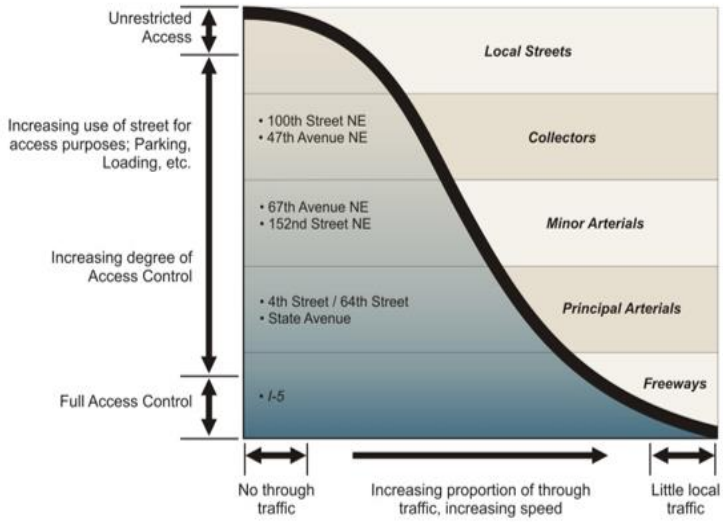
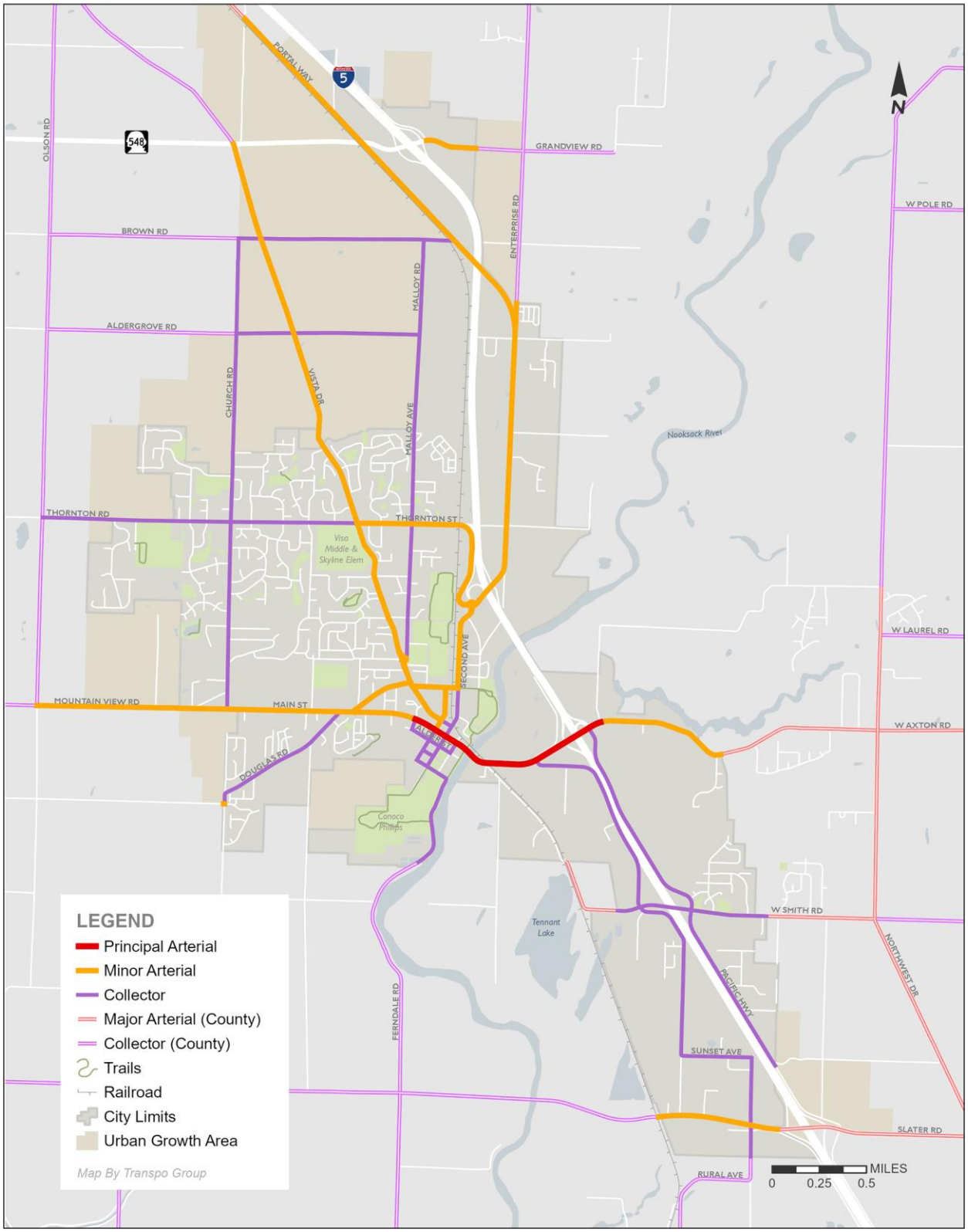


Figure 16. Classification Relationship between Mobility and Access

Figure 17 shows the functional classification for streets within the City of Ferndale and designated Urban Growth Area. It also shows how the City's arterial classifications connect with and support the surrounding regional transportation system. The functional classification also reflects the analysis of the longer-range needs to serve growth through 2045.

Figure 17
Roadway Functional Classification



National Highway System. The National Highway System (NHS) includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility as defined by the Federal Highway Administration (FHWA).

Highways of Statewide Significance. WSDOT designates interstate highways and other principal arterials that are needed to connect major communities in the state as Highways of Statewide Significance (HSS). This designation assists with the allocation of some state and federal funding. These roadways typically serve corridor movements having travel characteristics indicative of substantial statewide and interstate travel. I-5 are classified as Highways of Statewide Significance.

Federal Functional Classification. The Federal Functional Classification system provides a hierarchy of roadways as defined by the FHWA. This classification system defines the role of travel through a network of roadways, rather than focusing on individual roadways. As a result, the Federal Functional Classification differs in several ways from the City's Functional Classification. Changes to the Federal Functional Classification may be submitted through the Washington State Department of Transportation (WSDOT).

Vehicle LOS Standard

Vehicle level of service is both a qualitative and quantitative measure of roadway and intersection operations. Vehicle level of service uses an "A" to "F" scale to define the operation of roadways and intersections depicted on Figure 18 and described as follows:

- LOS A: Primarily free flow traffic operations at average travel speeds. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delays at intersections are minimal.
- LOS B: Reasonably unimpeded traffic flow operations at average travel speeds.
- LOS C: Stable traffic flow operations; however, ability to maneuver and change lanes may be more restricted.
- LOS D: Small increases in traffic flow may cause substantial increases in approach delays and decreases in speed.
- LOS E: Significant delays in traffic flow operations and lower operating speeds.
- LOS F: Traffic flows at extremely low speeds. Intersection congestion is likely, with high delays and extensive vehicle queuing.

As part of the 2010 Transportation Element update, the City revised its LOS standards. The City determined that two components were important to define the adequacy of its transportation system. The first was the ability to maintain a reasonable travel speed for access to/from Interstate Five and along major corridors serving traffic within the City. The second component is intended to ensure that intersections on arterials and collectors operate without extensive delays during the peak travel periods. To accommodate these two objectives, the City has defined an LOS Standard for corridors and a second standard for intersections.

The City will apply the standards to roadways only within the City of Ferndale. As areas of the unincorporated UGA are annexed, City standards will be applied. The City intends to work with Whatcom County to potentially apply the City's LOS standards for developments within the UGA.

Corridor Level of Service. The City of Ferndale has identified the weekday PM peak hour travel speeds along the following three roadway corridors as being critical to maintaining the adequacy of its transportation system.

- Main Street/Axton Road
- Grandview Road (SR 548)
- Vista Drive

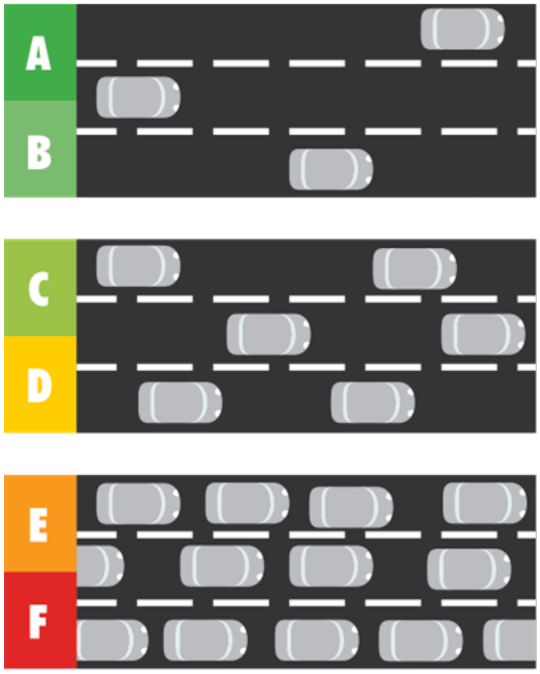


Figure 18 Illustration of Vehicle LOS

The Main Street/Axton Road corridor is divided into a segment west of Interstate Five (including the interchange ramps) and east of Interstate Five. Vista Drive would also be divided into two segments – between Third Avenue and the existing city limits and between the existing city limits and Grandview Road. The five corridor travel speed segments are shown on Figure 19. The City will only apply the corridor LOS standards for segments that are primarily within the City limits unless agreements are reached with Whatcom County for applying City level of service standards to developments within the UGA.

For each of the corridor segments, the City has established minimum travel speeds that equate to (LOS) D or better based on methodologies presented in the (Highway Capacity Manual) TRB, 2022. Table 7 summarizes the City's corridor level of service standards which will be applied to concurrency review. The standards are applied during the weekday PM peak hour time period. The weekday PM peak hour time period typically has the highest traffic volumes and therefore will typically represent the slowest travel speeds throughout the City. The travel speeds account for the total travel time, including delays at the intersections for the limits of each segment.

Table 7. Corridor Level of Service Standards

Corridor Segment	Urban Street Class	Minimum Average Travel Speed (mph)[1]	Additional Requirements
1. Main Street (West of Fourth Avenue to west of I-5/Northbound Ramps)	IV.	11 mph	Minimum sub-segment travel speed of 10 mph
2. Main Street (West of I-5 Northbound Ramps to east city limits)	III.	16 mph	
3. Vista Drive (South of Third Avenue to north of Parkland Way)	IV.	11 mph	
4. Vista Drive[2] (North of Parkland Way to south of Grandview Road)	III.	16 mph	
5. Grandview Road (SR 548)[3] (West of Vista Drive to east of Enterprise Road)	III.	16 ph	

1. Urban Street Class based on parameters from Highway Capacity Manual (page 15-3) which takes into account the typical free flow speed on the facility (for example travel speeds during the middle of the night). Urban Street classifications range from I-IV, with Class I streets having the highest average travel speeds and Class IV streets having the lowest. The majority of Ferndale streets are Class III (35 mph) or Class IV (20-25 mph).
2. Minimal travel speed for corridor based on field measurements and adjusted for planned and funded improvements.
3. Corridor not subject to City concurrency review without annexation or agreement with Whatcom County.

Main Street and Vista Drive within the existing City limits have speed limits of 25 mph, which equates to a Class IV facility for the Highway Capacity Manual methodologies. The other four segments have higher typical travel speeds and equate to Class III facilities.

The minimum average travel speeds established for the LOS standard are two miles per hour faster than the low range of LOS D for that class of urban street. For example, LOS D for Class IV facilities ranges from 9 to 13 mph. The City has established a 11 mph minimum acceptable speed based on field measurements to account for potential decreases in travel speeds associated with traffic that will be generated by already approved but not yet built developments.

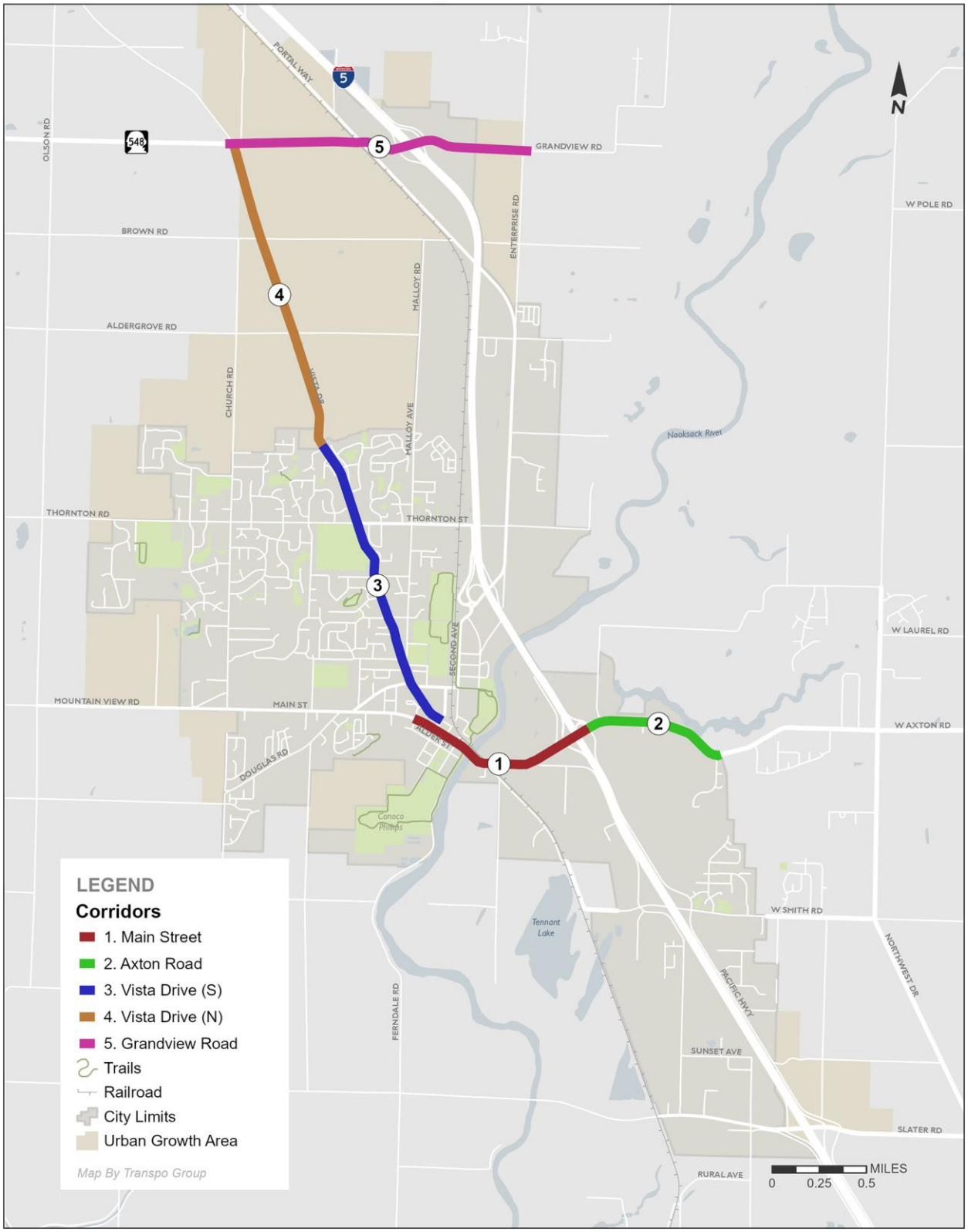
The City will need to coordinate use of a LOS D standard for Grandview Road with WSDOT and WCOG because it is also a state highway. While portions of Grandview Road were annexed into the City in 2010, the majority of the roadway is within the unincorporated UGA, and the City will not be applying its corridor LOS standard to Grandview Road until the area is annexed or an interlocal agreement is established with Whatcom County.

In addition to the minimum travel speed for the overall corridor, a second standard must be met along Main Street. The Main Street concurrency corridor has been further divided into three sub-segments in each direction. These sub-segments are generally defined as:

- Fourth Avenue to First Avenue
- First Avenue to LaBounty Drive
- LaBounty Drive to west of Interstate Five northbound ramps

Travel speeds along each sub-segment of Main Street must operate a measured travel speed of 10 mph or higher. This second requirement was established to support a more consistent travel speed along Main Street between Downtown and Interstate Five.

Figure 19
Vehicle Corridor Level of Service Segments



Intersection LOS. The City has established the following LOS standards for intersections. The levels of service shall be measured using methodologies identified in the latest edition of the Highway Capacity Manual (HCM).

- **LOS D** for traffic signals, roundabouts, and all-way stop controlled intersections based on overall average delay per vehicle.
- **LOS E** for unsignalized two-way stop-controlled intersections for worst traffic movement. On a case-by-case basis, the City may allow the level of service for traffic movements from the minor streets at two-way stop controlled intersections to operate below the adopted standard, if the City determines that no significant safety or operational issues will result.

The lower LOS standard for unsignalized, two-way stop-controlled intersections reflects the desire to minimize delays on the major street and through street traffic, while supporting safe and efficient operations from the minor streets.

The City typically will apply the intersection LOS standard to the weekday PM peak hour. The City may, however, define additional evaluation periods for intersection review in order to identify if potential impacts would occur. These could include weekday AM peak hour, weekends, or other time periods depending on the type and location of a proposed development.

BEHIND THE NUMBERS: DIFFERENT DAY, DIFFERENT TRAFFIC?

Ferndale's Level of Service is based on average traffic volumes and congestion. This means that actual daily traffic volumes may fluctuate – sometimes dramatically – from day to day.

These fluctuations may be caused by inclement weather, traffic accidents, delays caused by rail traffic, construction, higher volumes of traffic – or simply random chance. In some cases, the cause of traffic congestion may not be visible or may exist on an adjacent road or exit.

While Ferndale's traffic volumes will continue to grow and congestion will increase without the projects described in this element, this element generally reflects the traffic on most days of the year.

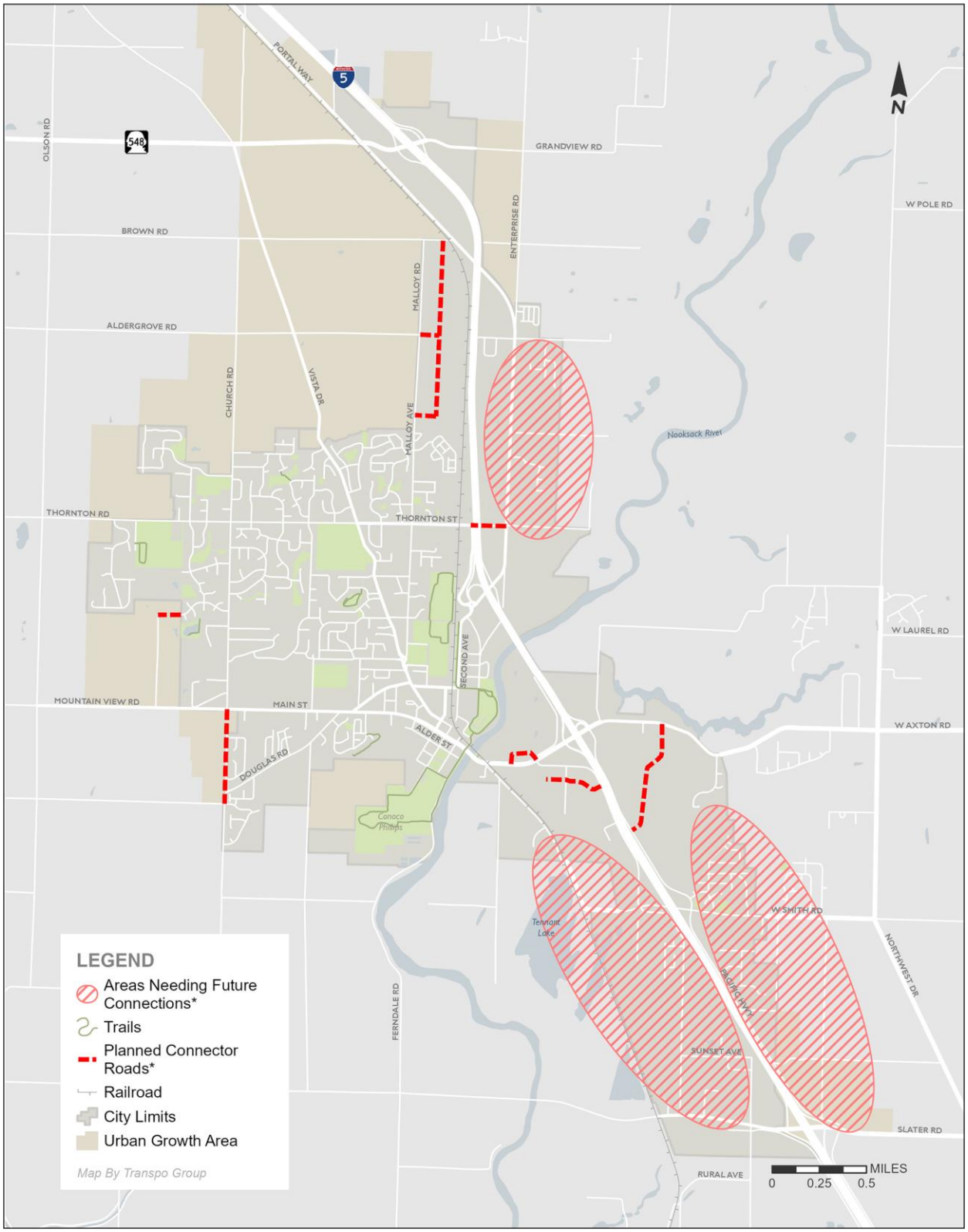
New Road Connections

Building on the roadway functional classification system, the City recognizes the need for additional connector roadways. The connector roads are needed to facilitate property access, circulation, and connectivity of the roadway system. Connector roads are needed to fill gaps in the existing system as well as serve the growth projected for the City. A complete system of connection roads will help disperse traffic which will minimize impacts within individual neighborhoods. This will reduce the number of access roads and driveways intersecting with arterials, which will help maintain capacity and safety of the system.

Figure 20 shows the general locations of planned connector roads, including future arterial routes. Specific alignments have not been identified for the planned connector roads. In general, the connector roadways would be constructed to urban standards including sidewalks and illumination. The alignments will be defined as part of future subarea studies or required as a condition of development for projects on adjacent

properties. Some of the planned connector roads also may be classified as arterials in the future, depending on specific design and access requirements at the time of development.

Figure 20
Planned New Road Connections



Truck Routes

The City's truck routes are show in in Figure 21. Generally, trucks of heavy tonnage must use these routes or be subject to Haul Route Agreements as provided for in the Ferndale Municipal Code.

Transit Street Classifications.

The City has determined that the Main Street and Portal Way corridors represent areas that represent existing and emerging destination points for transit service in Ferndale. The use of these areas as a hub for transit service will facilitate the continued transit-oriented growth of these areas and may limit increases to congestion.

Rail Crossings

As a priority project in 2023, the City constructed a grade separated crossing at Thornton Road. This crossing allows residents to access the interchange located at Portal Way to address some of the congestion issues seen in the Main Street corridor.

Recent improvements to the Washington Street at-grade crossing should be sufficient for the planning period but will continue to be impacted by increased rail traffic. There are no current projects anticipated for the at-grade crossings at Brown Road, Slater Road, and Grandview Road.

Figure 21
Truck Routes

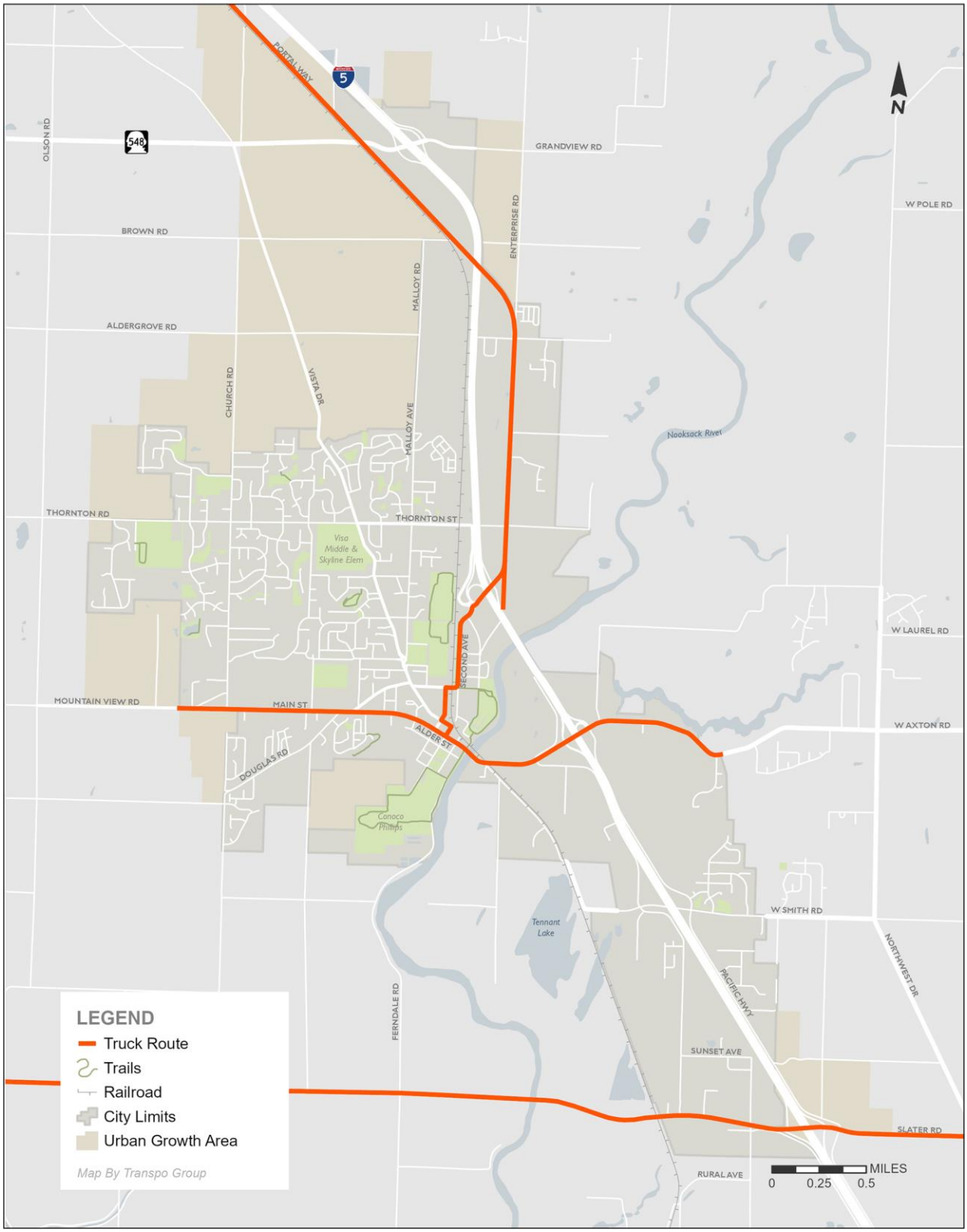
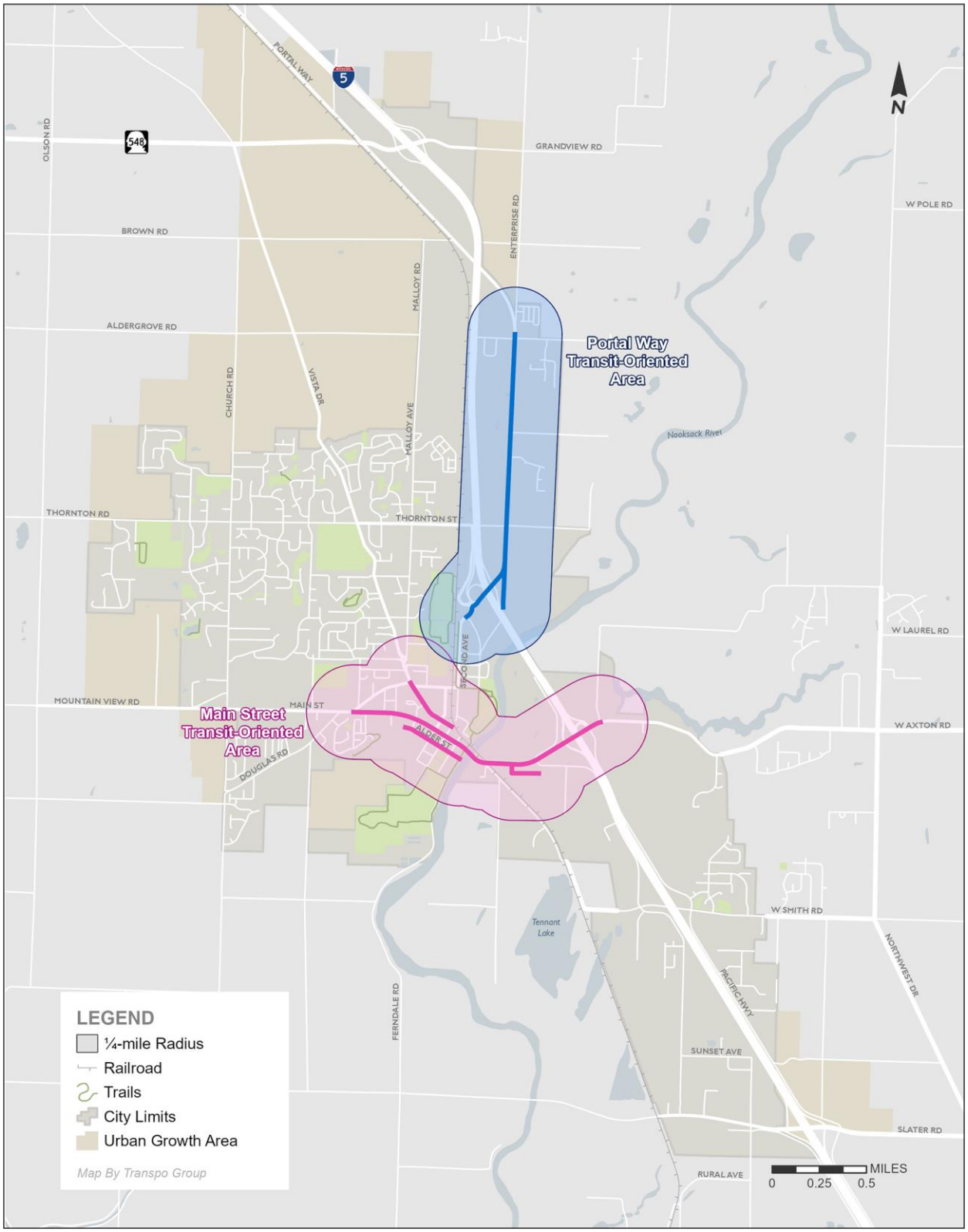


Figure 22
Transit Oriented Corridors



PEDESTRIAN SYSTEM PLAN

Sidewalks, walkways, and multiuse trails are integral to the City's overall transportation system. A well-established system encourages healthy recreational activities, reduces vehicle demand on roadways, and enhances safety within the community. The City generally desires to have sidewalks or other pedestrian facilities on both sides of streets, unless special circumstances make it physically or cost prohibitive.

The City requires that new developments construct sidewalks on their internal streets and adjacent frontages. This process has helped the City convert the rural roadways developed under Whatcom County road standards into the urban facilities needed to support the additional growth and higher traffic volumes within the City. Developer improvements will continue to provide for a large portion of the ultimate pedestrian system; however, even with those improvements, some significant gaps would remain in sidewalks along arterial and collector corridors.

Pedestrian System Classifications

The pedestrian system plan contains a series of primary or secondary sidewalk routes. Corridors identified as primary or secondary routes are used to make a distinction between routes that are more citywide or that extend completely through the community (primary), and those that serve to make the second leg of the journey to connect to destinations, extend into neighborhoods, or complete a loop (secondary). These networks are defined in further detail in Table 8.

Table 8. Pedestrian System Network Definitions

Hierarchy	System Function
Primary Network	Backbone of the system. Offers direct connections to majority of important community destinations, usually on arterials or collectors. Primary Network routes are often the most attractive route in terms of convenience in urban areas.
Secondary Network	Supportive to the Primary Network, often providing system continuity by connecting segments of the primary network with on-street or off-street facilities. Secondary Network routes sometimes offer more comfortable routes on quieter streets, although the route may not be as direct as the Primary network.
Other Streets	This encompasses the majority of streets within the City (including residential neighborhood streets). While not specifically identified within the pedestrian system plan, many of these roadways provide pedestrian facilities in line with roadway design standards. Other Streets provide access to the Primary and Secondary Networks.

The future pedestrian system plan, shown in Figure 23, provides a comprehensive network of pedestrian facilities for Ferndale. The plan identifies an interconnected system of on-road and off-road (trail) facilities, which include sidewalks, pathways, and shared-use trails. The system is designed to facilitate pedestrian travel to key destinations in the City where higher pedestrian demand is expected, such as routes connecting residential areas to recreational facilities and schools, and places of employment. Trails are included in the pedestrian network to help complete the network.

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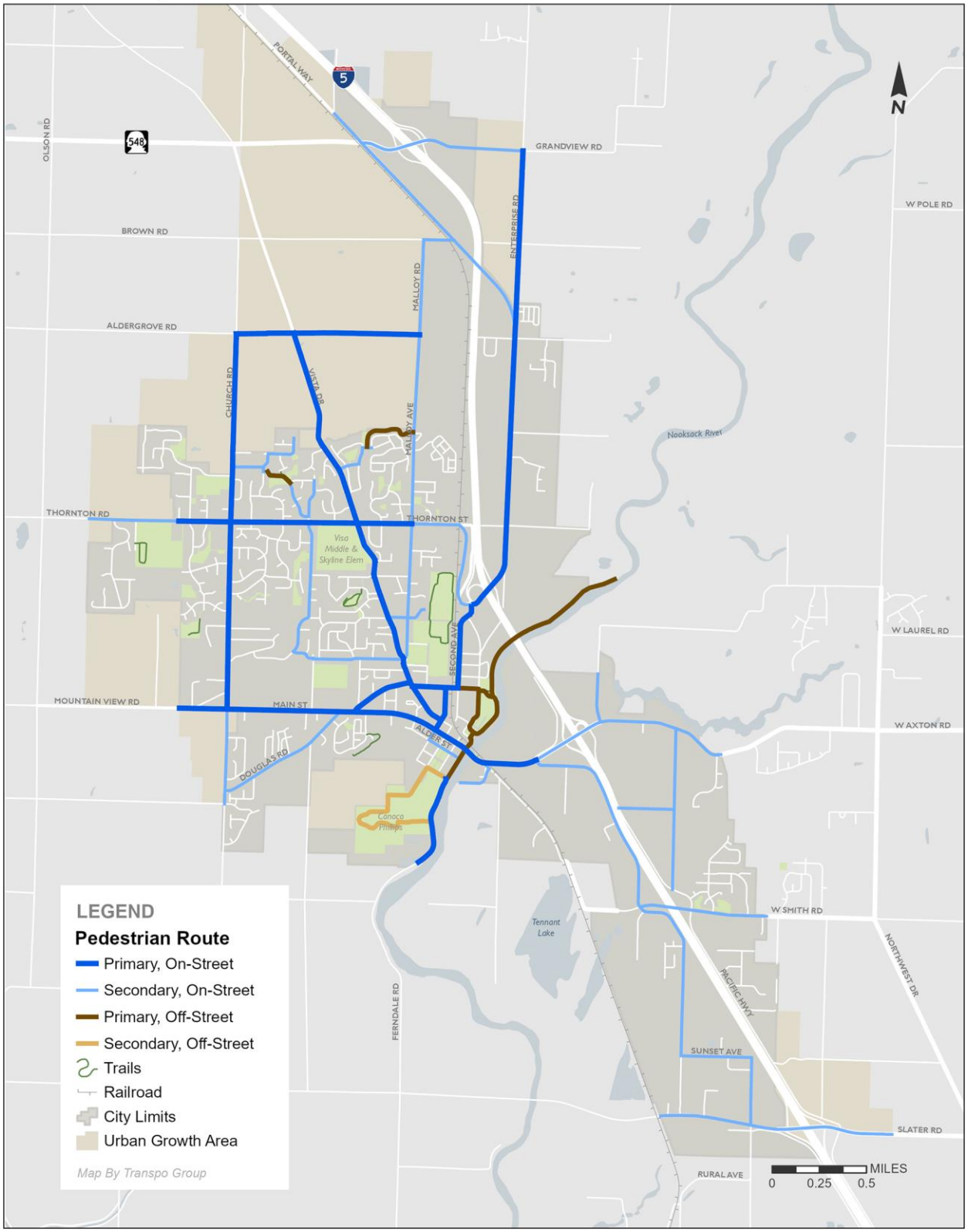
Figure 23
Pedestrian System Plan



Most of the additional pedestrian facilities identified within the City will be constructed as part of associated roadway projects. These may be constructed as part of developer frontage requirements or as part of a capital project by the City of Ferndale or another agency. In some corridors, pedestrian facilities will be provided through development of multi-use trails separated from the travel lanes.

Pedestrian LOS Standard

Pedestrian LOS standards were developed based on the future primary and secondary pedestrian networks. The LOS standards are shown in Figure 24 and emphasize the systems completion of sidewalks, pathways, or multi-use trails on arterial and collector roadways. The LOS designations are shown in green, orange, and red.

The Pedestrian LOS P2 indicates a facility meets adopted roadway standards and has facilities on both sides of the street for primary routes, while a secondary facility may only have facilities on one side of the street. The Pedestrian LOS P1 indicates a primary route has facilities on only one side of the roadway, when both sides would be preferred. A Pedestrian LOS NF indicates no designated facilities are provided for pedestrians and is considered unacceptable.

The City utilizes these standards to prioritize investments in the pedestrian transportation network and identify where significant gaps in the system need to be addressed to serve the City's land use plan. The long-term project list identified in the Transportation Element would implement a Pedestrian LOS P1 or better for primary routes and Pedestrian LOS P2 for secondary routes. These standards were applied to the primary and secondary system to identify gaps in the existing facilities. Figure 14 (see Section 3) shows a summary of LOS conditions for the Pedestrian System.

LOS	Primary Route	Secondary Route
P2	Meets City standards, facilities on both sides	Meets City standards, facilities on one or both sides
P1	Facilities exist, but only on one side	N/A
NF	No facilities exist, does not meet standards	No facilities exist, does not meet standards

Figure 24 Pedestrian LOS Overview

BICYCLE SYSTEM PLAN

Like pedestrian amenities, bicycle facilities play a vital role in the City's transportation environment. The City's bicycle system plan is comprised of facilities that promote mobility without the aid of motorized vehicles. These facilities are essential to ensure that the transportation system provides safe and healthy transportation options for all users of the system.

Bicycle System Classifications

The bicycle system plan contains a series of primary or secondary bicycle facilities. Corridors identified as primary or secondary routes are used to make a distinction between routes that are more regional or that serve to make the second leg of the journey, respectively. These networks are defined in further detail in Table 9.

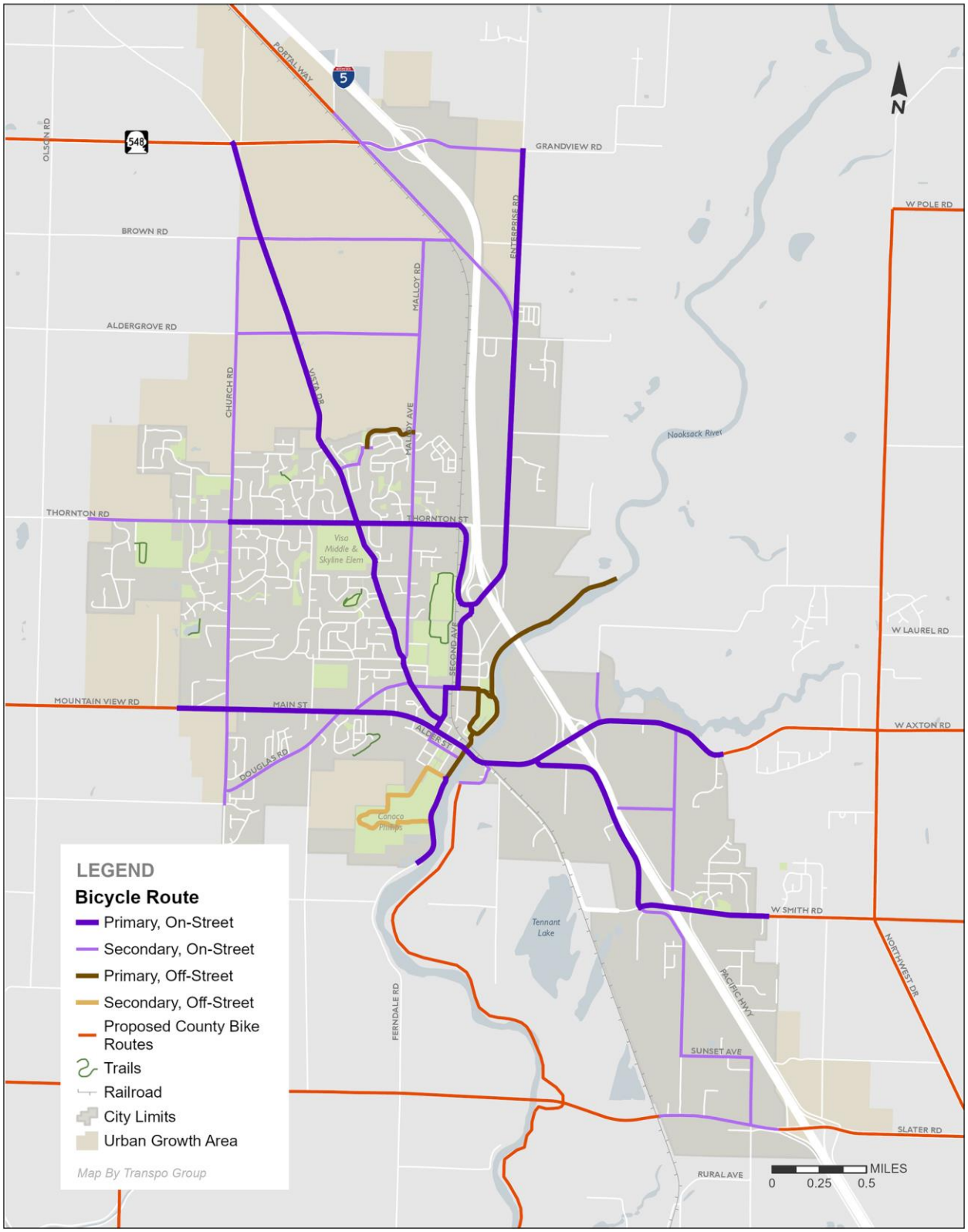
Table 9. Bicycle System Network Definitions

Hierarchy	System Function
Primary Network	Located along roadways providing direct connectivity throughout the City. These roadways are intended to provide a safe and comfortable biking environment for all users. Thus, these roadways will often provide dedicated bicycle facilities with additional safety enhancements, as appropriate, based on the context of the roadway.
Secondary Network	Provide connectivity through neighborhoods and connect to the Primary Network. Vehicles and bicycles may share the roadway on some low-volume, low-speed roadways within this network.

Bicycle facilities for each roadway (either within the Primary or Secondary Networks) were determined based on the context of roadway. The bicycle network will be composed of a variety of bicycle facility types (e.g., bike lanes, bike routes, multi-use paths, and recreational trails). Project-level planning and engineering studies are still required to determine feasibility of selected bicycle treatments on a project-by-project basis.

Figure 25 shows the planned bicycle system classification plan for Ferndale and the surrounding areas. The bicycle system plan, when completed will provide a comprehensive network of attractive bicycle facilities between the City's residential neighborhoods, the transit system, employment areas, schools, and parks. Trails are included in the bicycle network since these connections help complete the bicycle network.

Figure 25
Bicycle System Plan



Bicycle LOS Standard

Bicycle LOS standards were developed based on the presence of bike facilities on key corridors within the City's future primary and secondary pedestrian networks. This bicycle system was first identified in coordination with the City. The LOS standards are shown in Figure 26 and provides flexibility for the types of facilities along each roadway. The LOS designations are shown in green, orange, and red.

A Bicycle LOS B2 indicates the provided bicycle facilities along a primary roadway provide an acceptable bicycle stress level, while a secondary roadway's bicycle facilities may provide a higher stress level. A Bicycle LOS B1 indicates a primary route has facilities, but may operate at a higher stress level. A Bicycle LOS NF indicates no designated facilities are provided for bicycles and is considered unacceptable.

The City utilizes these standards to prioritize investments in the bicycle transportation network and identify where significant gaps in the system need to be addressed to serve the City's land use plan. The long-term project list identified in the Transportation Element would implement the Bicycle LOS B1 or better for primary routes and Bicycle LOS B2 for secondary routes. These standards were applied to the primary and secondary system to identify gaps in the existing facilities. The evaluation of future bicycle LOS of the City's facilities is shown in Figure 15 (see Section 3).

LOS	Primary Route	Secondary Route
B2	Facilities exist including at major crossings, at acceptable stress level	Facilities exist, but higher stress level allowed
B1	Facilities exist, but higher stress level	N/A
NF	No facilities exist	No facilities exist

Figure 26 Bicycle LOS Overview

TRANSIT AND TRANSPORTATION DEMAND MANAGEMENT

In order to provide a comprehensive transportation system, the City of Ferndale recognizes the importance of transit and transportation demand management (TDM) programs. To date, the City of Ferndale has been a relatively inactive participant in applying transportation demand management programs; however, as the City's population grows, especially in employer based land uses, the City will continue to explore alternate methods of increasing efficiencies without costly infrastructure projects to add additional capacity.

To help reduce the need for costly new road facilities, the City of Ferndale will support and encourage efforts by Whatcom Transportation Authority and the Whatcom Council of Governments to reduce peak hour travel by automobiles and encourage the use of public transportation, carpooling, vanpooling, and walking and bicycle modes of travel. The Whatcom Smart Trips program is one example of these efforts. The City will encourage employers and major residential areas within the city to consider ways to reduce automobile travel by their employees and/or residents. The City will also act as a lead agency in encouraging private businesses and citizens to utilize alternate modes of transportation.

The City's Transportation Impact Fee policies are built in a manner to encourage businesses to adjust hours of operation, practice ride-sharing, or utilize alternative transportation options in order to reduce or avoid impact fees and the need for road expansion to meet peak hour demands. These efforts have been successful from the establishment of the fee structure in 2011 through the adoption of this plan; however, professional offices and manufacturing facilities are generally more flexible in their hours of operation than retail or service businesses – which depend on drop-in customer traffic and generate a disproportionately higher share of overall traffic.

Transit

The City should continue to work with WTA to improve transit services and develop a convenient, integrated, and efficient transit system that supports future growth, reduces peak hour congestion and promotes modal options. Design and construction of roundabouts at intersections in the City needs to also take into account the location of bus stops, access, and pedestrian safety to facilitate access and use.

Additional improvements to transit services should focus on the following elements:

- Provide service within the City of Ferndale through the re-establishment of a circulator route
- General increase in frequency to existing routes serving City of Ferndale
- Provide service to Interstate Five/Slater Road area
- Provide service to LaBounty Drive corridor
- Provide service to Portal Way corridor
- Provide direct or near-direct service between residential areas, Downtown, and the Main Street Commercial area

Transportation Demand Management (TDM) Program

TDM consists of strategies that seek to maximize the efficiency of the transportation system by reducing the number, length and need of private automobile trips. Typically, TDM measures include provision of park and ride lots, improvements to pedestrian and bicycle facilities, and promotion of ridesharing activities.

The Washington State Legislature passed the Commute Trip Reduction (CTR) Law in 1991, with goals to improve air quality, reduce traffic congestion, and reduce fuel consumption. In 2006, the Legislature adopted changes to the CTR law to make the program more effective, efficient, and targeted. The modified program focuses on UGAs and congested highway corridors. The City's UGA is classified as an "affected" UGA by WSDOT but currently does not have any employers with 100 or more employees working a shift beginning between 6 am and 9 am, and therefore is not required to implement CTR. When such an employer does exist, the City should develop a CTR ordinance consistent with the State CTR Act. The ordinance should include TDM actions for employers, such as carpool matching, transit pass subsidies, and bicycle parking to discourage employees from commuting alone.

TDM strategies are typically most effective in denser and larger urban areas; however, strategies coordinated with Whatcom County, WSDOT, and WCOG can provide alternatives for residents and employees in Ferndale. Potential TDM strategies the City could promote through policy or investment include but are not limited to the following.

- **Transit Incentives** – Employers can provide free or reduced-rate transit passes to all employees.
- **Ridesharing** - Employers can develop and maintain a database of home addresses to facilitate carpool and vanpool matching between employees working on the same site. Employers can also provide financial incentives or reserved parking spaces for carpool and vanpool vehicles.
- **Flexible Work Schedules** – Flexible work hour schedules allow employees to adjust start/end times to accommodate carpools, vanpools, or transit options. Alternative work schedules can also be used to reduce the number of days an employee commutes during peak travel periods. These programs help reduce the need for adding capacity to highways and arterials, and reduce the levels of peak hour congestion.
- **Telecommuting** – The use of telecommunications technology can allow some employees to work from home, reducing the need for travel to and from a work site for some work days.
- **Secured Bicycle Parking and Showers** – Secured bicycle parking could be provided in the vicinity of major employment centers, preferably in a covered, weather-protected area. Shower facilities at work sites are also desirable to encourage commuting by bicycle. Several City of Ferndale programs, including the

EAGLE program, provide the opportunity for points for the establishment of these facilities.

Intelligent Transportation Systems

The Intelligent Transportation Systems (ITS) is a broad array of applications to improve the efficiency of the transportation system through enhanced information and use of technology. The focus of the ITS program for the City of Ferndale relates to the operations of traffic signals along key arterial corridors. Implementation of an advanced traffic management system (ATMS) would allow the City to improve the coordination and specific issues such as back-ups and traffic diversions relating to an event or a collision, while providing capabilities to make timely adjustments to signal timing remotely.

An ITS program also could include Closed Circuit Television (CCTV) cameras to enhance situational awareness of the traffic conditions and variable message signs to direct traffic to alternate routes. ITS also has the capability to provide the City with additional data about its transportation system which will assist it in design of capital projects or refinement of other operational processes. Especially with the mainstream use of mobile communication technology and software applications, the available traffic data sources and data analytics provided by ITS offers a wide variety of benefits towards understanding traffic characteristics that will help the City of Ferndale plan for future needs.

A first step in implementing ITS would be the preparation of the ITS architecture plan and systems engineering document. In addition to ensuring conformance with the National ITS Architecture for ITS implementation, the architecture plan and systems engineering document will establish the objectives, priorities and implementation phases for the system. It will include an evaluation of options to connect with the WSDOT, City of Bellingham, and other agency ITS systems.

TRANSPORTATION IMPROVEMENT PROJECTS AND PROGRAMS

Based on an evaluation of existing and forecast traffic volumes, traffic operations, safety, and circulation needs, a recommended list of transportation improvement projects and programs were defined. The project list is organized into the following categories:

- **Intersection / Operations** – upgrading intersections through the addition of roundabouts, added turn lanes, or modifications to traffic controls. Where applicable, improvements may also include upgrading of traffic signals and implementation of Intelligent Transportation Systems (ITS).
- **Widening / Reconstruction** – widening existing corridors to add travel lanes and turn lanes to add capacity. Includes reconstruction and upgrading roadways to serve higher traffic volumes and non-motorized travel.
- **Active Transportation** – constructing new bicycle or pedestrian facilities consistent with the planned active transportation networks. This category focuses

on projects were active transportation in the main purpose of the improvement, but active transportation improvements may also be present in the other project categories.

- **Downtown Area** – improvements within the downtown core sub area that aren't reflected in other categories
- **Other Agency Improvements** – improvements along state highways and /or outside the City's UGA.
- **Citywide Programs** – includes annual citywide programs.

Figure 27 and Table 10 identify each of the projects and their locations. Table 10 also provides a brief description of each project including the project limits. The table identifies projects that are currently part of the City's Transportation Improvement Program (TIP). This highlights the projects that are currently identified for planning, design, or construction. A project identification number is provided for each project that is referenced in Figure 27.

Planning level cost estimates are also included for each project. The cost estimates were prepared based on typical per unit costs, functional classification, and level of improvement. The cost estimates include allowances for right-of-way acquisition based on generalized needs to meet the City's adopted roadway standards. Estimated costs for several improvements on state routes were developed jointly with Washington State Department of Transportation (WSDOT).

A relative priority (high, medium, and low) was established for each project. The priority reflects the relative need for the projects to enhance the City of Ferndale and its UGA transportation system and provides guidance in implementing the respective improvements. The priority list will be amended throughout the planning period, based on achieved growth, funding, and project cost.

Figure 27
Transportation Improvement Projects

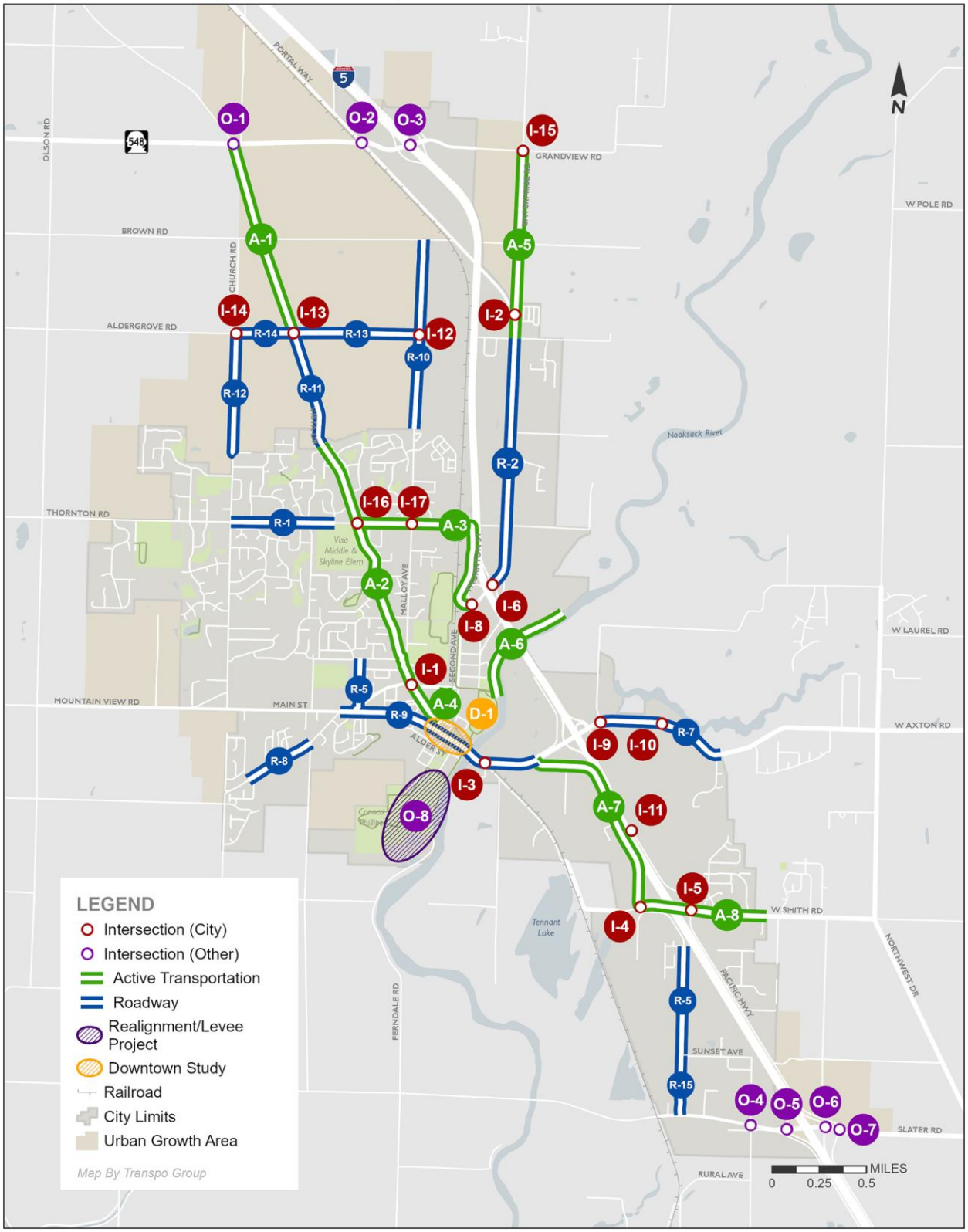


Table 10. List of Transportation Improvement Projects and Programs					
Project Group	2025 Project ID	Project Name	Project Limits	Project Description	2025 Cost Estimate
INTERSECTION/OPERATIONS	I-1	Washington St / Vista Dr	Intersection	Construct one large roundabout, two compact roundabouts, or signal at offset intersection	$ 4,950,000
	I-2	Portal Way / Enterprise St / Destiny St	Intersection	Realign Portal Way to connect directly with Enterprise Rd/Destiny St intersection. Remove Portal Way south of Destiny St	$ 1,960,000
	I-3A	Main St / Hovander Dr	Intersection	Restrict northbound left-turns	$ 30,000
	I-3B	Main St / Hovander Dr	Intersection	Install partial signal to provide phase for westbound left-turns	$ 950,000
	I-4	Smith Rd / LaBounty Dr	Intersection	Construct signal or roundabout. Consider all-way stop as interim solution.	$ 3,350,000
	I-5	Smith Rd / Barrett Rd	Intersection	Construct signal or roundabout	$ 3,910,000
	I-6	Portal Way / I-5 NB Ramps	Intersection	Construct full size roundabout and multimodal connection along Portal Way	$ 4,800,000
	I-8	Portal Way / I-5 SB Ramps	Intersection	Construct second circulating lane on north side of roundabout to increase east-to-west capacity.	$ 300,000
	I-9	Main St / Barrett Rd (North)	Intersection	Construct signal and coordinate with I-5 ramp signals	$ 1,340,000
	I-10	Main St / SE Connector Road	Intersection	Construct signal or roundabout	$ 2,800,000
	I-11	Barrett Rd / SE Connector Road	Intersection	Construct signal or roundabout	$ 2,800,000
	I-12	Aldergrove Rd / Malloy Rd	Intersection	Construct roundabout	$ 2,800,000
	I-13	Aldergrove Rd / Vista Dr	Intersection	Construct roundabout	$ 2,800,000
	I-14	Aldergrove Rd / Church Rd	Intersection	Construct roundabout	$ 2,800,000
	I-15	Enterprise Rd/ Grandview Rd	Intersection	Construct signal or roundabout	$ 2,800,000
	I-16	Vista Dr/ Thornton St	Intersection	Construct WB right-turn lane	$ 620,000
	I-17	Malloy Ave/ Thornton St	Intersection	Install all-way stop control or signal	$ 1,700,000
WIDENING / RECONSTRUCTION	R-1	Thornton Rd	Church Rd to Maureen Dr	North side of road, 8-ft wide road widening and curb, gutter, sidewalk and storm. Existing road and south side curb, gutter and sidewalk remains. Install ADA ramps at Church Rd/Thronton Rd intersection.	$ 1,150,000
	R-2	Portal Way	I-5 NB Ramps to Trigg Rd	Reconstruct and widen to meet City standards, including utilities	$ 20,500,000
	R-4	Legoe Ave Improvement	Washington St to Ferndale Terrace	Reconstruct and widen to meet City standards, including utilities.	$ 1,580,000
	R-5	LaBounty Dr	Seahawk Dr to Sunset Ave	Reconstruct and widen to meet City standards, including utilities	$ 10,020,000
	R-7	Main St	Barrett Road to east City limits	Reconstruct and widen to meet City standards, including utilities	$ 3,410,000
	R-8	Douglas Road	750-ft east of S Church Rd to Imhoff Rd	Reconstruct and widen to meet City standards, including utilities and box culvert	$ 2,440,000

Table 10. Continued

Project Group	2025 Project ID	Project Name	Project Limits	Project Description	2025 Cost Estimate
WIDENING / RECONSTRUCTION	R-9A	Main Street Signal Improvements - Short Term	LaBounty Dr to Douglas Rd	Separate left-turn loop detectors, implement traffic signal cabinet and controller upgrades, and expand/upgrade interconnect system	$ 600,000
	R-9B	Main Street Signal Improvements - Long Term	LaBounty Dr to Douglas Rd	Implement an Adaptive Signal Control system	$ 1,000,000
	R-10	Malloy Ave	Whiskey Creek Crossing to Brown Rd	Reconstruct and widen to meet City standards, including utilities	$ 12,270,000
	R-11	Vista Dr	North City Limits to Aldergrove Rd	Reconstruct and widen to meet City standards, including utilities	$ 7,510,000
	R-12	Church Rd	Pacific Highlands Ave to Aldergrove Rd	Reconstruct and widen to meet City standards, including utilities	$ 9,170,000
	R-13	Aldergrove Rd	Malloy Ave to Vista Dr	Reconstruct and widen to meet City standards, including utilities	$ 8,090,000
	R-14	Aldergrove Rd	Church Rd to Vista Dr	Reconstruct and widen to meet City standards, including utilities	$ 3,800,000
	R-15	LaBounty Dr One-Way Conversion	LaBounty Dr near Slater Rd	Convert LaBounty Dr to one-way operations to address poor operations.	$ 100,000
ACTIVE TRANSPORTATION	A-1	Vista Rd Bicycle Facilities (North)	Grandview Rd to Aldergrove Rd	Provide bicycle facilities along corridor	$ 80,000
	A-2	Vista Rd Bicycle Facilities (South)	Downtown to North City Limits	Provide bicycle facilities along corridor	$ 1,030,000
	A-3	Thornton Rd Bicycle Facilities	Vista Rd to Portal Way	Provide bicycle facilities along corridor	$ 650,000
	A-4	3rd Ave Bicycle Facilities	Vista Rd to 2nd Ave Trail	Provide bicycle facilities along corridor	$ 120,000
	A-5	Enterprise Rd Bicycle Facilities	Grandview Rd to Trigg Rd	Provide bicycle facilities along corridor	$ 600,000
	A-6	Nooksack Trail (North)	VanderYacht Park to East City Limits	Provide multi-use trail along north side river	$ 2,930,000
	A-7	LaBounty Dr Bike Facilities	Main St to Smith Rd	Provide bicycle facilities along corridor	$ 670,000
	A-8	Smith Rd Bike Facilities	LaBounty Rd to East City Limits	Provide bicycle facilities along corridor	$ 390,000
DOWNTOWN	D-1A	Downtown Traffic Reconfiguration	Main St Bridge to 4th Ave	Corridor study to convert selected downtown roadways to one-way operations to improve Main Street traffic flows.	$ 40,000
	D-1B	Downtown Traffic Reconfiguration	Main St Bridge to 4th Ave	Project construction (TBD)	$ 1,500,000

Table 10. Continued					
Project Group	2025 Project ID	Project Name	Project Limits	Project Description	2025 Cost Estimate
OTHER AGENCY IMPROVEMENTS	O-1	Grandview Rd (SR 548) / Vista Dr Intersection	Intersection	Construct signal or roundabout	$ 3,300,000
	O-2	Grandview Rd (SR 548) / Portal Way Intersection	Intersection	Widen all intersection approaches to provide dedicated left-turn lanes. Revise traffic signal operations to operate left-turn movements with protected/permitted phasing	$ 4,470,000
	O-3	Grandview Rd (SR 548) / I-5 NB & SB Ramp Intersections	Interchange	Construct signals or roundabouts	$ 2,800,000
	O-4	Slater Rd / Rural Ave	Intersection	Construct intersection improvement in coordination with WSDOT	NA
	O-5	Slater Rd / I-5 SB Ramps	Intersection	Construct intersection improvement in coordination with WSDOT	NA
	O-6	Slater Rd / I-5 NB Ramps	Intersection	Construct intersection improvement in coordination with WSDOT	NA
	O-7	Slater Rd / Pacific Hwy	Intersection	Construct intersection improvement in coordination with WSDOT	NA
	O-8	Levee Reconstruction/Riverwalk Extension/Street Realignment	Cherry St to south of Star Park	As part of the Nooksack River Levee project, connection to Ferndale Road south of the city will be moved to the west. The Riverwalk trail will be extended south along the new levee.	NA
CITYWIDE PROGRAMS	C-1	Sidewalk Program	City-wide	Repair, replace, and construct new sidewalks.	$ 100,000
	C-2	Pavement Rehabilitation Program	City-wide	City-wide program	$ 360,000

Interstate Five Access Improvements

Interstate Five provides the primary connection between Ferndale and the Western Washington region. To the north Interstate Five connects the Ferndale area to the United States/Canadian border. To the south, Interstate Five connects to Bellingham and the central Puget Sound region. The Ferndale area is served by four existing interchanges:

- Grandview Road (SR 548)
- Portal Way
- Main Street
- Slater Road

The Transportation Element includes specific projects to improve operations at or near all four of interchanges. Improvements are needed to fix operational issues in the near term and to serve forecast growth in the long term. Improvements will improve traffic operations at the ramps by adding turn lanes and installing a traffic signal when future traffic volumes warrant.

Roundabouts also are identified as the preferred improvement strategy for the Slater Road / Interstate Five interchange ramps (projects O-5 and O-6). Installation of

roundabouts at the Slater Road interchange ramps needs to be coordinated with improvements at the intersections of Slater Road with Pacific Highway and Rural Avenue (projects O-4 and O-7).

Intersection / Operations Improvements

Improvements to intersections along City arterials and collectors are needed to resolve future deficiencies, primarily routes that provide access to Interstate Five. The City may consider roundabouts, modifications of existing traffic signals, or installation of new traffic signals based on the availability of funding, timing of the need for improvements, and costs of right-of-way acquisition.

Intersection and operations improvements at City intersections account for a large number of improvement projects in the Plan; however, costs of the intersection/operational improvements account for approximately one-quarter of the estimated capital costs for City projects.

The January 2011 Transportation Element included improvements to upgrade the traffic signals and install Intelligent Transportation Systems (ITS) infrastructure along Main Street. This project was intended to provide improved traffic operations, capacity, and efficiency in the Main Street corridor.

Widening / Reconstruction Improvements

This category of projects includes upgrading and widening of roadways to City standards to provide turn lanes at major access locations as well as improvements to non-motorized facilities. These projects are generally intended to add capacity to existing road segments rather than establishing new roadways to serve the same purpose.

The City will also consider opportunities to explore right-sizing the width of streets. Street width may be reduced in order to reduce maintenance costs, reduce speeds, combine multimodal opportunities, and reduce stormwater run-off. The width of streets has a significant influence on safety, and when wide streets are combined with sparse traffic the average speed will increase – sometimes to levels that are dangerous to pedestrians, bicyclists – and ultimately the driver themselves.

Other Agency Improvements

Improvements to the Slater Road and Grandview Road (SR 548) interchanges serving Ferndale are identified in the Transportation Element under the other agency category. These facilities are critical in providing access to Interstate Five from the City and its UGA and are discussed above. Improvements under the jurisdiction of Whatcom County are also identified in the Transportation Element. West of Interstate Five, improvements to Slater Road (projects O-4) include modifying the intersection. Improvements along Grandview Road (SR 548) include upgrading intersections to improve safety and operations at the intersections of Vista Drive and Portal Way (projects O-1, O-2, and O-3). These could include the addition of turn lanes, constructing roundabouts, or installing traffic signals when future traffic volumes warrant.

As part of the levee improvement project Whatcom County is realigning Ferndale City roads south of downtown. The specific alignments have not been defined at this time.

Citywide Programs

A systematic program for maintaining the existing and future transportation infrastructure is critical to a safe and efficient transportation system. Failure to maintain existing roadways by providing dedicated funding to maintenance and operations programs could result in more substantial capital projects and road rehabilitation projects in the future.

The Pavement Rehabilitation Program (project C-1) includes a systematic evaluation of pavement conditions on arterial and local roadways. In addition, a Citywide Sidewalk Program (project C-2) is needed to repair, replace, and construct new sidewalks citywide.

SECTION 5. FINANCING PROGRAM

The list of transportation improvement projects must be funded and implemented to meet existing and future travel demands in and around the City of Ferndale. Estimated project costs and future revenues are presented and options to fund the projects are described. Implementation strategies are discussed and include items such as coordination with WSDOT, Whatcom County, and Whatcom Council of Governments to prioritize and fund regional improvements. Other strategies include refining the transportation concurrency and impact fee programs to ensure development helps fund transportation improvements necessary to support new growth. The implementation plan sets up the framework for the City to prioritize and fund the improvements identified in the transportation systems plan.

The Growth Management Act (GMA) requires the Transportation Element of the Comprehensive Plan to include a multi-year financing plan based on the identified improvement needs in the transportation systems plan. The financing plan is to be the basis in developing the required 6-year Transportation Improvement Program (TIP). If probable funding is less than the identified needs, then the transportation financing program must also include a discussion of how additional funding will be raised or how land use assumptions will be reassessed to assure that level of service standards will be met. Alternatively, the City can adjust its level of service standards.

A summary of the cost of capital improvement projects and citywide maintenance and operation programs are presented. The capital project and maintenance and operations program costs are compared to estimate revenues from existing sources used by the City to fund transportation improvements. Other potential funding sources to help reduce the projected shortfall are described. A summary of a reassessment strategy for the City to use for reviewing transportation funding in the context of the overall Comprehensive Plan is also included.

PROJECT AND PROGRAM COSTS

Table 11 summarizes the costs of the recommended transportation improvement projects and programs. These cover City of Ferndale capital improvements, maintenance and operations. The costs are summarized for the life of the Plan. Improvements under the responsibility of WSDOT or Whatcom County are not included in the summary table; however, the City may choose to include a share of the costs of WSDOT improvements in its transportation impact fee or other funding options when they serve the growth needs of this plan.

Table 10. Transportation Project and Program Costs (2026-2045)

Improvement Type	(2026-2045) Total Costs[1]	Percent of Total Costs
Transportation Capital Projects[2]		
Intersection	$40,710,000	31%
Roadway Widening / Reconstruction	$83,760,000	63%
Active Transportation	$6,470,000	5%
Downtown Improvements	$1,540,000	1%
City Programs	$460,000	<1%
Subtotal Capital Projects	**$132,940,000**	**100%**
Transportation M & O Programs		
Maintenance & Operations	$33,660000	100%
Subtotal M & O Programs	**$33,660,000**	**100%**
Total Costs	**$166,600,000**	

1. All costs in 2025 dollars
2. Does not include other agency improvements

Planning level cost estimates were developed for the capital improvements presented in the Transportation Systems Plan section of the Transportation Element. The planning estimates were prepared based upon average unit costs for recent transportation projects within the City. Planning level costs were developed with the assumption that such costs would include associated storm water development requirements, property acquisition, wetland mitigation, and utility extensions and/or upgrades, based upon historic costs for those items. The cost projections are not specific to individual projects or locations. More detailed cost estimates will need to be prepared as the projects are closer to design and construction. Future design studies will identify specific property impacts and options to reduce costs and impacts on properties.

The estimated capital cost of the City portion of the Transportation Plan is $178.9 million (in 2025 dollars). Approximately 66 percent of the capital costs are associated with widening and reconstruction of existing streets in the City. These costs cover upgrading roadways to City standards to accommodate higher volumes of traffic and construction of

urban features such as underground drainage, sidewalks, and street lights. Approximately 28 percent of the capital project costs focus on intersection improvements. The remaining 10 percent include active transportation improvements (multi-use path or bicycle improvements) and various City programs.

Maintenance and operations costs were projected based on 4 years of history City costs from 2022 to 2025. Maintenance and operations costs cover general administration, roadway and storm drainage maintenance, street lighting, traffic signal and street signs, street sweeping, and other miscellaneous safety improvement programs. Approximately 19 percent, or $33.7 million, of the total $178.9 million Transportation Element cost is associated with maintenance and operations.

The Transportation Element also includes other agency projects in the vicinity of the City. Many of these project costs are still under development, as they will primarily be funded by other agencies. These projects include improvements to the intersection of Vista Drive, Portal Way and the I-5 NB and SB ramps on Grandview Road (SR 548) (projects O-1, O-2, and O-3). Improvements to Slater Road include construction of new intersection improvements at Rural Ave, the I-5 SB and NB ramps, and Pacific Highway (O-4, O-5, O-6, and O-7). The final other agency project includes the Levee Reconstruction/Riverwalk Extension / Street Realignment project (O-8). These projects are not currently funded by the other agencies.

FUNDING ANALYSIS WITH EXISTING REVENUE SOURCES

The City has historically used tax revenues, developer fees, and grants to construct and maintain their transportation facilities. The description of available funding sources and projected revenue is listed in Table 12.

Table 11. Transportation Funding Revenue Projections (2025 – 2045)

Revenue Source[1]	Total Revenues	Percent of Total Revenues
Transportation Capital Revenues		
Grant Funds	$46,840,000	43%
Entitlements, Impact Payments & Taxes (Gas Tax)	$6,340,000	6%
Impact Fees	$9,400,000	9%
Transportation Benefit District	$16,960,000	16%
Transfers In (REET, Sewer Utility Tax)	$28,640,000	26%
Other	$400,000	<1%
Total Revenues	**$108,580,000**	**100%**

1. All revenues in 2025 Dollars

The revenue projections were estimated based upon the City's historical revenues from 2022 through 2025 budget and input from the City's finance department. Based on recent

historical data, it is estimated that revenues would be approximately $108.6 million during the 20-year period.

Of the $108.6 million in total revenues, approximately 43 percent, $46.8 million, are expected to come from Grant Funds. General Fund Transfers from Real Estate Excise Taxes (REET) and Sewer Utility Taxes are expected to account for $28.6 million, or 26 percent. Transportation Benefit District taxes and fees will generate approximately $17 million, or 16 percent of all revenues during the life of the plan. Approximately $9.4 million (9%) is anticipated to come from developer contributions through impact fees, frontage improvements, and SEPA or concurrency mitigation.

Tax Revenues

The existing tax revenues used by the City will need to be maintained as one source of revenue to fund transportation projects and programs. These revenue sources include motor vehicle fuel tax, property taxes, and other tax revenues that support the City's general fund. These sources of revenue are projected to contribute approximately $28.4 million during the 20-year period. The majority of the existing tax revenue sources will be used for maintenance, and to provide the matching funds for grants or to complete a portion of the improvement projects not covered by other agencies.

The City may elect to utilize greater amounts of sales tax revenue for capital improvements if development within the Master Plan area occurs as projected. The use of these additional resources shall be carefully evaluated in order to ensure that other City funding priorities are met.

Developer Transportation Funding

The City uses several programs to help offset the increased traffic impacts of new development or redevelopment. These include construction of frontage improvements such as curb, gutter, and sidewalks and internal roadways needed to serve the development. The City is also required to review the potential transportation impacts of development and define appropriate mitigation under the State Environmental Policy Act (SEPA) and GMA concurrency requirements. In addition, the City previously adopted a Transportation Impact Fee (TIF) program as allowed by the GMA to help fund growth-related transportation system improvements. As shown in Table 12, the funding program identifies $9.4 million (2025 dollars) in development generated funding for City growth related improvement projects. Furthermore, the City can generate additional impact fee revenues to help fund WSDOT improvements at the Main Street and Grandview Road (SR 548) Interstate 5 interchanges.

Transportation Impact Fees

The GMA allows agencies to develop and implement a Transportation Impact Fee (TIF) program to help fund part of the costs of transportation facilities needed to accommodate growth. State law (RCW 82.02) requires that TIF programs are:

- Related to improvements to serve new growth and not existing deficiencies;

- Assessed proportional to the impact of new developments;
- Allocated for improvements that reasonably benefit new development, and;
- Spent on facilities identified in the adopted Capital Facilities Plan.

TIFs can only be used to help fund improvements that are needed to serve new growth. The projects can include recently completed projects to the extent that they serve future growth and did not solely resolve existing deficiencies. The cost of projects needed to resolve existing deficiencies cannot be included.

The TIF program must allow developers to receive credits if they are required to construct all or a portion of system improvements to the extent that the required improvements were included in the TIF calculation. Cost associated with dedication of right-of-way for improvements included in the TIF also would be eligible for credits. The City is in the process of updating its existing program based on the updated Transportation Element. The revenue projections based on 4 years of impact fees collected estimated a total of $9.4 million in impact fee revenue during the 20-year life of the plan (in 2025 dollars). The analysis did not assume improvement projects under the jurisdiction of WSDOT or Whatcom County would be included since the City does not have interlocal agreements or MOU's with these agencies. The travel forecasting model was applied to determine the proportionate share of the costs of these improvements due to growth in the City, its UGA, and other areas.

Other Developer Mitigation and Requirements

The City has adopted specific development related requirements which will help fund the identified improvements. These include frontage improvements and mitigation under the State Environmental Policy Act (SEPA) and concurrency requirements. The City requires developments to fund and construct certain roadway improvements as part of their projects. These typically include reconstructing abutting streets to meet the City's current design standards. These improvements can include widening of pavement, drainage improvements, and construction of curb, gutter, and sidewalks.

Several of the projects identified in the Transportation Element could be partially funded and constructed as part of new developments. As noted above, to the extent that costs of a transportation improvement are included in the TIF then credits would be required. If improvements to an abutting local street are not included in the TIF, then credits against the TIF would not be required or allowed.

The City also evaluates impacts of development projects under SEPA. The SEPA review may identify adverse transportation impacts that require mitigation beyond payment of the TIF. These could include impacts related to safety, traffic operations, active transportation, or other transportation issues. The needed improvements may or may not be identified as specific projects in the Plan. As with frontage improvements, if the required improvements are included in the TIF program, then the City must provide credits to the extent that the costs are included in the impact fee.

The City also requires an evaluation of transportation concurrency for development projects. The concurrency evaluation may identify impacts to facilities that operate below the City's level of service standard. To resolve that deficiency, the applicant can propose to fund and/or construct improvements to provide an adequate level of service. Alternatively, the applicant can wait for the City, or another agency or developer to fund improvements to resolve the deficiency.

Grants

Over the past several years the City has secured grants for transportation improvements. Based on recent grant awards, this source would provide over $46.8 million in revenues during the 20-year period, which anticipates continued high level of grant success. Grant funding is typically tied to specific improvement projects and distributed on a competitive basis. Due to reduced federal and state revenues the pool of grant funding may decrease in the future. In addition, more local agencies are pursuing grants resulting in a more competitive environment. This plan includes a policy statement that the City will seek grant funding that will average a minimum of thirty percent of total aggregate capital project costs.

FORECASTED REVENUE SHORTFALL

Table 13 summarizes the City's proposed transportation financing strategy for the $178.9 million City portion of the capital, maintenance, operations, and program expenditures. All values are presented in 2025 dollars. The plan results in a shortfall of nearly $70.4 million dollars. This assumes that the level of grants and developer commitments will be generated as estimated in the Transportation Element. The deficit could be greater if the level of development or the level of grant funding is less than forecast. This would be offset by a reduced need for transportation improvements necessitated by growth. If the City is more successful in obtaining grants or other outside funding for projects then potential deficit could be reduced, as discussed in the next section.

The shortfall identified in the Transportation Element is not unusual, particularly as many of the improvements identified in the plan will require partnership with other agencies; however, in an era of diminished public resources and increased competition for grant funding the City must take a realistic view of potential revenue sources. Additionally, several projects identified within the plan are owned by the Washington State Department of Transportation, and may be eligible for full or partial funding from Washington State or the Federal Highways Administration.

In order to be consistently successful in receiving grant funding, the City cannot become a part-time participant in grant requests. Preparation of grant applications must begin early, and must be supported by the Comprehensive Plan and the 6-Year Transportation Improvement Project list.

The City shall also consider funding options which more equitably distribute the costs of the transportation system among the users of the system. While the "growth pays for growth" principle has been applied throughout the Transportation Element, the costs of

maintaining the existing transportation system over time are the shared responsibility of all of the Ferndale community. This could include adoption of other citywide transportation funding programs such as a Transportation Benefit District (TBD) or increased use of general revenues from sales taxes or other sources.

Table 13 summarizes the total anticipated transportation revenues, the required maintenance and operation (M&O) costs and the anticipated capital budget for the 20-year period. This analysis assumes that the City will prioritize maintenance and operations of existing facilities, and additional available funds will be used to construct capital improvements.

Table 12. Forecasted Revenues and Costs

Revenue Source[1]	Total (2026–2045)
Transportation Revenues – City Funds	$61,740,000
Transportation Revenues – Grants	$46,840,000
Transportation M&O Cost	($33,660,000)
Estimated Capital Budget	**$74,920,000**
Estimated Capital Costs	$132,940,000
Total Estimated Shortfall	**($58,020,000)**

1. All revenues in 2025 dollars
2. Does not include other agency improvements

Capital Revenue Shortfall

The City anticipates a capital project shortfall of approximately $70.4 million over the life of the plan. The City is committed to funding the existing maintenance and operations programs needed to preserve the integrity, safety, and efficiency of its existing transportation system. The maintenance and operations cost will expand with the future annexation of its UGA.

Several reconstruction/widening projects and new roadways result in a large share of the capital expenses. The Portal Way, LaBounty Drive, Malloy Avenue reconstruction projects (projects R-2, R-5, and R-10) account for $42.8 million alone. Securing grant funding will be crucial for successful construction of these larger projects.

POTENTIAL OPTIONS TO BALANCE THE PLAN

As noted above, projected existing revenue sources would allow the City to fund only 52 percent of the identified transportation capital improvement projects and program costs. The City could address this shortfall through delaying lower priority projects or increasing revenues.

Options for Reducing the Funding Shortfall for Capital Improvement Projects

The City can increase funding for capital street projects using a range of revenue options. These include partnering with other agencies or additional grants and use of tax increment financing. Alternatively, the City could delay implementation of projects, especially lower priority improvements. Possible applications of these funding strategies are discussed below.

Combining Improvement Projects

The City may be able to reduce the overall costs of capital improvements (Transportation and utilities) by consolidating planned projects. The City's Capital Facilities Element Consolidated Project Map depicts all of the forecast improvements necessary within the planning period. In many cases, there are a number of separate projects located in one general area, and there is the potential to combine those various projects (and their funding sources) into one or two larger improvements.

Consolidation allows the City to save costs by avoiding redundant designs, by avoiding multiple site mobilizations, utilizing committed funding as "match" funds for grants, and more. While the cost savings will vary substantially from project to project (and may not be feasible in all cases), the City has adopted policies in several of the elements of the Comprehensive Plan to consider these approaches.

Delaying Improvement Projects

The City will not likely be able to, or may choose not to, fund lower priority projects within the 20-year horizon without additional funding sources. Some of these projects may be funded through impact fees and/or frontage improvement requirements as development (or re-development occurs). As developments occur in these areas the city may require project-specific facility improvements including SEPA mitigation measures, as appropriate. The city also may identify other programs or opportunities to partially or fully fund some of these improvements.

Additional Grants and Other Agency Funding

As discussed above, the transportation financing analysis estimates that the city may receive approximately $46.8 million in grant funding over the life of the Plan. If the City can pursue and receive grants at a higher rate, shortfalls may be less than projected.

Tax Increment Financing

Washington State allows cities to create "increment areas" that allows for the financing of public improvements, including transportation projects within the area by using increased future revenues from local property taxes generated within the area. The specific rules and requirements are noted in the Community Revitalization Financing (CRF) Act. The Local Infrastructure Financing Tool (LIFT) program is a potential tool for the City to pursue. Under this concept the annual increases in local sales/use taxes and property taxes can be used to fund various public improvements. The city may choose to further consider these types of funding programs in the future as part of its annual budget and six-year Transportation Improvement Program (TIP) processes.

Voter Approved Bond/Tax Package
Bonds do not result in additional revenue unless coupled with a revenue generating mechanism, such as a voter approved tax. The debt service on the bonds results in increased costs which can be paid with the additional tax revenues. Although the city does not anticipate issuing bonds in the near future, it remains an option for generating additional transportation revenues to fund some of the higher cost improvement projects.

Local Improvement Districts
A local improvement district (LID) is a special assessment area established by a jurisdiction to help fund specific improvements that would benefit properties within the district. LIDs could be formed to construct sidewalks, upgrade streets, improve drainage or other similar types of projects. A LID may be in residential, commercial, or industrial areas or combinations depending on the needs and benefits. LIDs can be proposed either by the city or by property owners. LIDs must be formed by a specific process which establishes the improvements, their costs, and assessments. The assessments are added to the property tax which helps to spread the costs over time

REASSESSMENT STRATEGY

Although the financing summary identifies the potential for a total revenue shortfall of approximately $70.4 million (in 2025 dollars) over the life of the plan, the City is committed to reassessing their transportation needs and funding sources each year as part of its 6-year Transportation Improvement Program (TIP). This allows the City to match the financing program with the short term improvement projects and funding. In order to implement the Transportation Element, the City will consider the following principals in its transportation funding program:

- Balance improvement costs with available revenues as part of the annual 6-year Transportation Improvement Program (TIP);
- Review project design standards to determine whether costs could be reduced through reasonable changes in scope or deviations from design standards;
- Fund improvements or require developer improvements as they become necessary to maintain LOS standards to meet concurrency;
- Explore ways to obtain more developer contributions to fund improvements;
- The City could consider options to fund transportation improvements based on the use of the existing transportation network, through transportation benefit districts, increased fuel taxes, and vehicle tab surcharges, or other funding mechanisms. Many of these options will require voter approval.
- Coordinate and partner with WSDOT, Whatcom County, and others to implement improvements to the Interstate Five interchanges, Grandview Road (SR 548), and Slater Road;
- Vigorously pursue grant funds from state and federal sources;
- Work with Whatcom County to develop multiagency grant applications for projects that serve growth in the City and its UGA;

- Review and update the TIF program regularly to account for the updated capital improvement project list, revised project cost estimates, and annexations;
- The City could consider changes in its level of service standards and/or limit the rate of growth in the City and its UGA as part of future updates to its Comprehensive Plan;

Some lower priority improvements may be slid or removed from the Transportation Element. The City will use the annual update of the 6-year Transportation Improvement Program (TIP) to re-evaluate priorities and timing of projects and need for alternative funding programs. Throughout the planning period, projects will be completed and priorities revised. This will be accomplished by annually reviewing traffic growth and the location and intensity of land use growth in the City and its UGA. The City will then be able to direct funding to areas that are most impacted by growth or to roadways that may be falling below the City's level of service standards. The development of the TIP will be an ongoing process over the life of the plan and will be reviewed and amended annually.

SECTION 6. GOALS AND POLICIES

The Transportation Element was developed around one central goal.

Overall Goal:

> ***"The City will provide a safe, equitable, properly maintained, and sustainable multimodal transportation system that promotes economic development and environmental vitality, and will explore innovative methods of resolving transportation-related issues."***

Goals and policies for implementation of the Transportation Element of the Comprehensive Plan support the City of Ferndale's vision statement.

Goal 1. The City will provide a safe and efficient multimodal transportation network to serve existing needs and to accommodate new growth and development.

Rationale: *The citywide multimodal transportation system is designed to move people using a variety of modes. Public safety is always the top priority in transportation planning along with providing mobility choices and options for people of all ages and abilities, wherever possible.*

Policies:

A. The City will coordinate planning, construction, maintenance, and operation of transportation facilities to optimize multimodal transportation programs.

B. The City will coordinate the location of major utility and transportation corridors wherever practical.

C. The City will strongly encourage the preservation of rail rights-of-way for future rail uses, and will work with appropriate agencies to ensure the availability of rail services to its industrial lands.

D. The City will identify and prioritize transportation system needs citywide to meet current and future demand.

E. The City will establish a program to upgrade its existing traffic signal system to improve traffic flow, progression, and safety.

F. The City will seek to integrate appropriate street design with compatible land use types to reduce environmental and livability impacts.

G. The City will balance the equitable distribution of transportation projects with needs, based on 1) safety issues, 2) under-served populations, 3) growth-related improvements, and 4) available funding.

H. The City of Ferndale will work and partner with Whatcom County to maintain a coordinated and consistent strategy for land use development review in unincorporated Urban Growth Areas surrounding Ferndale, or which generate substantial traffic volumes to and through Ferndale.

I. The City of Ferndale will work and partner with Lummi Nation to maintain a coordinated and consistent strategy for land use development review for tribal lands south of Slater Road, which are outside of the boundaries of the City's Urban Growth Area, but which generate substantial traffic volumes to and through Ferndale.

Goal 2. The City will maximize the operating efficiency of its multimodal transportation system.

Rationale: *Planning, designing, and constructing a citywide multimodal transportation based on a variety of land use contexts will allow Ferndale residents and visitors to walk, bike, ride transit, and drive to their desired destinations in a safe, comfortable, and efficient manner.*

Policies:

A. The City will develop its local roadway functional classification system in accordance with the regional functional classification system developed by the Whatcom Council of Governments and the City's road standards.

B. The City will actively coordinate the planning, construction, and operation of transportation facilities and programs that may impact the City with local, tribal, regional, and state jurisdictions and their associated comprehensive plans. These agencies and plans include, but are not limited to, Whatcom County, Lummi Nation, the Whatcom County Council of Governments, and the Washington State Department of Transportation.

C. When considering proposals to revise the land use and zoning plans, the City will seek to minimize increases in vehicle-miles traveled or, where possible, to increase the safety, accessibility, and efficiency of the multimodal transportation infrastructure surrounding the proposed area.

D. The City will coordinate and integrate transportation and land use planning to reduce the distance and vehicle-miles traveled between work, home, shopping, and recreation opportunities, and to provide facilities and services to support active transportation connectivity and mobility to destinations.

E. The City will work with WTA to identify and promote land use densities capable of supporting transit-oriented opportunities, particularly along transit-served corridors within the Downtown Core, High Density Residential land use classifications, around the WTA park-n-ride facility near the Main Street/I-5 interchange, and within the primary shopping and employment districts of the City.

F. The City will coordinate with the Washington State Department of Transportation to develop a Memorandum of Understanding that will lead to a comprehensive review of potential transportation improvements along the I-5 corridor, including the Exit 262 Main Street corridor and other interchanges within the City limits. This Memorandum may also include an agreement to jointly monitor the Level of Service in and around Exit 262 at defined points within the planning period of the Master Plan.

Goal 3. The City will encourage public/private partnerships for financing transportation projects that foster economic growth and address the multimodal transportation needs to support planned growth and development.

Rationale: *Citywide multimodal transportation systems are constructed over time as growth occurs through investments from the City, grant funding agencies, private developers, and collaboration with other agencies, such as Whatcom County, WSDOT, and private organizations.*

Policies:

A. The City will work with property owners to secure needed rights-of-way in advance of multimodal transportation improvements identified in City plans including trails. New development will be required to dedicate adequate street right-of-way as a condition for permit approval.

B. The City will only approve land use changes (such as planned unit developments, master planned projects, rezones, and plats) when existing and proposed multimodal transportation system needs meet concurrency requirements.

C. The City will route principal and secondary arterials around, rather than through, neighborhoods and communities to minimize vehicle traffic impacts on residential neighborhoods.

    a. New residential collector street corridors should be designed and constructed with sidewalks, bikeways, and crossings to serve areas developed with housing.

    b. Existing local residential streets should not be converted into collector street routes, unless other alternatives are not feasible. In instances where existing local streets must be converted to collector roads, the street must be improved to the full design standards for collector roads.

    c. In those cases where collector street corridors must be built close to existing residential neighborhoods, the collector street must be designed to minimize negative impacts to adjoining residents through the use of landscape buffers, sound barriers or similar measures.

    d. Where necessary, access restrictions shall be imposed on new arterial and collector streets to maintain transportation safety, efficiency, and effectiveness. Commercial business access directly onto a restricted arterial or collector street, may only be permissible if no reasonable access alternative is available. Residential access may be allowed in specific instances where such access can be demonstrated to have no negative impacts on corridor traffic safety, function, and/or circulation.

    e. The City will work with property owners and developers to establish collector road systems in developing areas to minimize the number of access locations on arterials and collectors and to promote connectivity for

multimodal travel within residential neighborhoods, as well as commercial and industrial areas.

D. The City will consider sharing project costs with other jurisdictions for improvements that solve regional multimodal transportation problems.

E. The City will require new development to site and construct transportation facilities that are compatible with adjacent land uses to minimize potential conflicts.

F. The City will utilize all general taxation and user-fee options available to it under state law.

G. The City will seek to maximize grant funding support from county, state, and federal sources for improvements necessary for safety, efficient operations, and the economic health of the region.

H. The City will only approve developments that adequately mitigate their impacts on the multimodal transportation system as required under the State Environmental Policy Act, the Ferndale Development Standards, Ferndale Concurrency regulations, Commute Trip Reduction, and other applicable development regulations.

I. The City will encourage state lawmakers to recognize the financial pressure upon the City of Ferndale that is imposed by growth and request legislative action to provide greater relief to the City than is afforded by existing revenue sources.

J. The City will explore the feasibility of partnering with individual property owners and neighborhood associations to share the cost of sidewalk installation in established neighborhoods.

Goal 4. The City will work to secure adequate funding sources for multimodal transportation.

Rationale: *New development should fund street frontage improvements, as well as transportation impact fees, and where necessary off-site mitigation for sidewalks, bikeways, streets, and intersection controls deemed necessary to serve the development. Grant funding typically only funds improvements on arterial streets and the City will leverage local public and private matching funds for state and federal grant funding. Transportation improvements not eligible for grant funding will need to be funded by local public or private sources, such as TIF, TBD, LID, or levy.*

Policies:

A. The City will update its Transportation Impact Fee (TIF) and Mitigation Policy ordinance on a regular basis and will incorporate pedestrian and bicycle projects as TIF eligible.

B. The City will encourage public/private partnerships and grants for financing transportation projects.

C. The City will work to establish local improvement districts and transportation improvement districts in designated areas for economic development.

D. The City will work to establish on and off-site storm sewer systems which combine storm detention for road projects and private developments.

E. The City will consider asking voters to enact new taxes or fees to help fund transportation improvements.

F. The City will seek to fund a minimum average of thirty percent of capital project costs through grants.

G. The City will continue to fund transportation system maintenance, repair and operation using local property tax, solid waste tax, and/or sales tax.

H. The City will generally only use property and/or sales tax to fund local match requirements of multimodal transportation capital projects.

I. The City will work with the Washington State Department of Transportation to secure funds for regionally significant infrastructure that supports the City's economic plans and growth.

Goal 5. The City will encourage and promote the use of active transportation modes, WTA transit, ride sharing, and transportation demand management (TDM) strategies that maximize energy conservation, circulation efficiency, and economy while reducing vehicle-miles traveled (VMT) and greenhouse gas (GHG) emissions.

Rationale: *A citywide multimodal transportation system, along with a compact, higher-density, mixed-use development pattern will allow people to make shorter trips by walking, biking, rolling, and riding transit. This will reduce vehicle-miles traveled and greenhouse gas emissions. Various transportation demand management strategies can incentivize walking, biking, rolling, and riding transit, while disincentivizing unnecessary vehicle trips.*

Policies:

A. The City will support increased use of multimodal transportation facilities. This includes, but is not limited to, ADA ramps, crosswalks, sidewalks, bicycle lanes, multiuse trails, park-and-ride facilities, carpools, vanpools, buses and high-occupancy vehicle lanes. Together, the implementation of these policies is intended to result in a reduction of vehicle trips, vehicle-miles traveled, greenhouse gas emissions, increased air quality, the promotion of healthy activities, and increased active transportation connectivity.

B. The City will coordinate planning efforts for active transportation modes of travel with surrounding jurisdictions and develop an integrated area-wide plan for active transportation travel modes that ensures continuity of routes.

C. The City will encourage sidewalks, improved shoulders, and/or off-street trails within new developments concurrent with the project in order to accommodate internal and external circulation.

D. The City will seek to receive formal recognition as a "Bicycle Friendly Community."

E. The City will coordinate site development guidelines to encourage and enable use of active transportation modes.

F. New road construction shall, wherever possible, include sidewalks and bikeways or other pedestrian-bicycle service amenities, based on street standards, as well as existing and potential multimodal connection opportunities, including establishing new connector roads, collector roads, and arterial roads.

G. The City will prioritize improvements for pedestrian, bicycle, transit circulation, and vehicular mobility on existing roads over the construction of new roads.

H. The City will seek to cooperate with Whatcom County, Lummi Nation, the Washington State Department of Transportation, Whatcom Transportation Authority, and any private entity for implementation of regionally significant transportation projects and programs for Ferndale and its environs.

I. The City of Ferndale recognizes and supports the continued operation of the Burlington Northern Railroad and Amtrak Cascades as important parts of the region's transportation system for the movement of freight and passengers, and shall seek to increase the availability of those services within the City, and reduce conflict with the City's road network and emergency services.

J. The City of Ferndale shall seek to conduct a thorough inventory of city sidewalks, bikeways, and multiuse trails to identify deficiencies in the active transportation network and opportunities for expansion. Over the next 20 years, the City will systematically implement the planned improvements to the citywide active transportation network.

K. The City of Ferndale recognizes and supports the continued operation of the Bellingham International Airport as an important part of the region's transportation system as an alternative to major regional airports such as the Vancouver International Airport and Seattle-Tacoma International Airport.

L. The City of Ferndale will provide incentives to developments to incorporate multimodal transportation options into their projects, and will continue to re-evaluate such incentives as multimodal opportunities increase over time.

M. The City shall provide written justification for including capital projects which are designated as "low" priority within this plan prior to placing such projects on the Six-Year Transportation Improvement Plan.

Goal 6. The City will work to ensure efficient and effective freight transportation needed to support local and regional economic expansion and diversification.

Rationale: *Freight truck access, movement, and delivery is a critical need for economic development and the multimodal transportation system. As growth continues, the City will need to work with industry to provide and promote freight truck routes, as well as delivery schedules, that minimize delay due to peak hour urban traffic congestion*.

Policies:

A. The City will collaborate with federal, state, and neighboring local governments and private business to ensure the provision of transportation infrastructure investments and services deemed necessary by the City to meet current and future demand for industrial and commercial freight movement by way of roadway and truck, rail, air, and marine transport.

B. The City will work with the Whatcom Council of Governments, Port of Bellingham, Whatcom County, and other agencies to develop intermodal connectivity facilities deemed by the City to be needed to facilitate seamless freight transfer between all transport modes.

C. The City will work with the Port of Bellingham to identify connectivity opportunities between the City of Ferndale and the Bellingham International Airport.

Goal 7. The City will establish multimodal level of service (MMLOS) standards and implement concurrency management programs to assure the adequacy of its multimodal transportation system.

Rationale: *A citywide multimodal transportation system accommodates and measures performance for all modes of travel. Annual tracking and monitoring of pedestrian, bicycle, transit, and roadway network performance, along with known land use development activity, will allow Ferndale to adopt transportation investments in the annual six-year Transportation Improvement Program that are integrated with land use, safety, and climate needs.*

Policies:

A. For concurrency review, the City has adopted roadway minimum travel speed standards for the weekday PM peak hour as documented in Section 4 of the Transportation Element.

B. The City has established the following vehicle levels of service (LOS) for intersection operations along arterial and collector roads based on methodologies in the latest edition of the Highway Capacity Manual (HCM):

    a. LOS D or better for traffic signal, roundabouts, or all-way stop controlled intersections based on overall average seconds of delay per vehicle.

    b. The LOS standard for stop controlled (except all-way stop) intersections within the City limits shall be LOS E and be applied to each approach or separate traffic movement at an intersection. On a case-by-case basis the City may allow the level of service for traffic movements from the minor street at a two-way, stop controlled intersection to operate below the adopted standard if the Public Works Director (or designee) determines that no significant safety or operational impact will result. As appropriate, mitigation will be identified and required to address potential impacts to safety or operations. Potential installation of traffic signals or other traffic control devices at these locations shall be based on the Manual on Uniform Traffic Control Devices, the Transportation Element, and transportation engineering best practices.

c. The City will generally apply the intersection LOS standards based on the weekday PM peak hour vehicle traffic, but may choose to require evaluation of other time periods in order to identify potential deficiencies and project impacts.

C. The City will apply Washington State Department of Transportation's vehicle LOS standards to intersections of state highways within the Ferndale area:

   a. LOS D or better within urban areas.

   b. LOS C or better within rural areas.

D. Pedestrian LOS Standards are based on the presence of sidewalk or trail facilities on primary and secondary pedestrian routes on the Pedestrian System Plan. Section 4 of the Transportation Element has more detailed definitions.

   a. LOS P1 or better for primary pedestrian routes. This means pedestrian facilities are needed on at least one side of the street, but facilities on two sides of the street is preferred.

   b. LOS P2 or better for secondary pedestrian routes. This means pedestrian facilities are needed on at least one side of the street.

E. Bicycle LOS Standards are based on the presence of bicycle facilities on primary and secondary pedestrian routes on the Bicycle System Plan. Section 4 of the Transportation Element has more detailed definitions.

   a. LOS B1 or better for primary bicycle routes. This means any form of bicycle facilities are needed, but a design that reflects a lower stress on users is preferred.

   b. LOS B2 or better for secondary bicycle routes. This means any form of bicycle facilities are needed.

F. The Transit LOS Standard is based on ADA accessibility of WTA transit bus stops within the public road right-of-way. The prioritization and completion of ADA upgrades at all bus stops provides mutual benefit to the City of Ferndale and WTA transit.

G. The City will work with Whatcom County to coordinate MMLOS standards for roadways, intersections, active transportation, and transit within the City's unincorporated Urban Growth Area.

H. The City has implemented a Transportation Concurrency Management program to ensure adequate transportation facilities are available concurrent with development.

I. The City will not apply local concurrency requirements to the Limited Access Area of I-5, which includes interchange ramps or any state highway that is designated as a Highway of Statewide Significance.

J. The City will reassess its MMLOS standards, Transportation Concurrency Management program, and other development regulations based on growth and funding levels, as needed.

K. The City shall review development applications based in part on the existing vehicle LOS, and will identify responsible mitigation measures necessary to preserve existing vehicle LOS where appropriate.

L. The City will consider incorporating mechanisms into the concurrency regulations that may fully utilize the concurrency six-year time limits allowed by State law.

M. The City will publish an Annual Concurrency Report to help inform investments in the annual Six-Year Transportation Improvement Program (TIP) which will document: 1) current or recent roadway and intersection LOS status; 2) degree of completeness of the active transportation network; and, 3) ADA upgrades and accessibility improvements to WTA bus stops