

Transportation Master Plan Update

Chapter Review: Freight & Goods Delivery

Report Structure	Freight & Goods Delivery Strategies
<ol style="list-style-type: none"> 1. Executive Summary 2. Introduction 3. Street System 4. Pedestrian 5. Bicycle 6. Transit 7. <i>Curbspace</i> <ul style="list-style-type: none"> • <i>Mayor reviewed Jan. 2025, Council reviewed Jan. 2025</i> 8. Freight & Goods Delivery 9. Transportation Demand Management (TDM) 10. E-Mobility 11. Technology Forward 12. Maintenance 13. Monitoring Progress (Performance Metrics) 14. Appendices 	<ul style="list-style-type: none"> • Maintain designated freight routes, including a three-tiered route system based on the size of truck and cargo tonnage. • Investigate options for improving freight data collection • Consider adoption of innovative strategies to provide for safe and enhanced freight movement, reduced emissions, and application of clean technology (such as dedicated last-mile delivery loading zones, or accommodating autonomous delivery technologies)
Key Themes	<ul style="list-style-type: none"> • Identify Redmond’s designated freight route network • Last-mile delivery • Adapt to new and emerging last-mile delivery technologies
Review Timeline	<ul style="list-style-type: none"> • Director Review: 1/29/2025 • Mayor Review: 2/7/2025 • Planning Commission Presentation: likely June 2025 • Council Staff Report: 3/18/2025 • Council Study Session: 3/25/2025

FREIGHT AND GOODS DELIVERY PLAN (DRAFT)

1. Introduction

The movement of goods and services is a critical component of Redmond’s transportation system. Between long-haul arrivals and last-mile deliveries, Redmond’s entire street system is used in the movement of goods and services. The Southeast Redmond Industrial Center is an important freight hub for the Eastside, where long-haul trucks arrive with goods that are then sent to destinations across the Eastside in smaller vehicles. E-commerce is expected to have sustained growth resulting in more package deliveries to residents. Between 2017 and 2050, the Puget Sound Regional Council forecasts that freight transported within Washington state will increase by more than 40%, and that imports and exports will grow by more than 50%. These trends point to a need to maintain Redmond’s designated truck routes to ensure timely and reliable movement of goods and to be forward thinking in terms of new approaches and technologies last-mile delivery solutions.

Supporting the Redmond 2050 Comprehensive Plan

This chapter contains strategies for ensuring safe and efficient movement of goods and services to, from and within Redmond. Strategies consider the needs of freight operators, businesses, residents, and consumers (TR-28).

Supporting Redmond 2050 Guiding Principles of Sustainability, Equity & Inclusion, and Resiliency

Equity and Inclusion: Making sure freight delivery access is available to all Redmond residents and businesses.

Sustainability: Reducing overall GHG emissions by implementing electric or low emissions delivery and pick up systems.

Resiliency: Promoting freight delivery strategies that minimize energy use and impacts to the surface transportation network and livable Urban Centers.

2. Existing Conditions

Overview of Current Infrastructure:

Redmond’s freight route network consists of truck routes that connect to regional truck routes and provide local access to industrial areas such as the Southeast Redmond Industrial Center. Lacking direct rail and port access, Redmond’s freight network is completely road-based.

The Redmond truck route system is based on the Washington State Department of Transportation’s Freight and Goods Transportation System (FGTS). The FGTS features a ranking system of truck routes based on volume data and estimated tonnage. T-1 and T-2 class routes, or primary truck routes, are recognized as the highest volume and tonnage truck routes in the State, carrying at least four million tons of gross truck tonnage per year. Secondary truck routes are made up of T-3 and T-4 truck routes. T-3 class truck routes carry between 300,000 to 4 million tons per year. T-4 class truck routes carry at least 100,000 to 300,000 tons per year.

Redmond maintains a 39.7-mile four-tiered freight route system that includes local arterials. The 7.3-mile section of SR 520 freeway within the city limits is maintained by WSDOT and included as part of the

City's freight route network. These routes currently have higher volumes of trucks and are predicted to have higher volumes of trucks in the future. Truck routes also connect the major industrial and commercial area in the Southeast Redmond neighborhood and support the movement of goods between manufacturing companies and regional truck routes, which are important to the economic vitality of manufacturing and freight distribution companies in Redmond. All truck routes are built to a standard that accommodates heavy truck loads and may be designed to also provide safe access for people walking, biking and taking transit as is discussed in [Chapter X- Street System Plan](#).

It should be noted that two FGTS-designated T-3 truck routes are not included in the City's truck route network. These are West Lake Sammamish Parkway, from the Bellevue City Limits to Bel-Red Road and NE 116th Street, from Avondale Road NE to SR 202. The reason for excluding these two routes is that they operate in heavily residential neighborhoods and there are alternative truck routes. These are corridors where the city will take future action to discourage through truck traffic.

Figure 1-1 below shows a map of the Redmond truck route system. Table 1-1 below summarizes Redmond's truck route system miles by truck route classification.

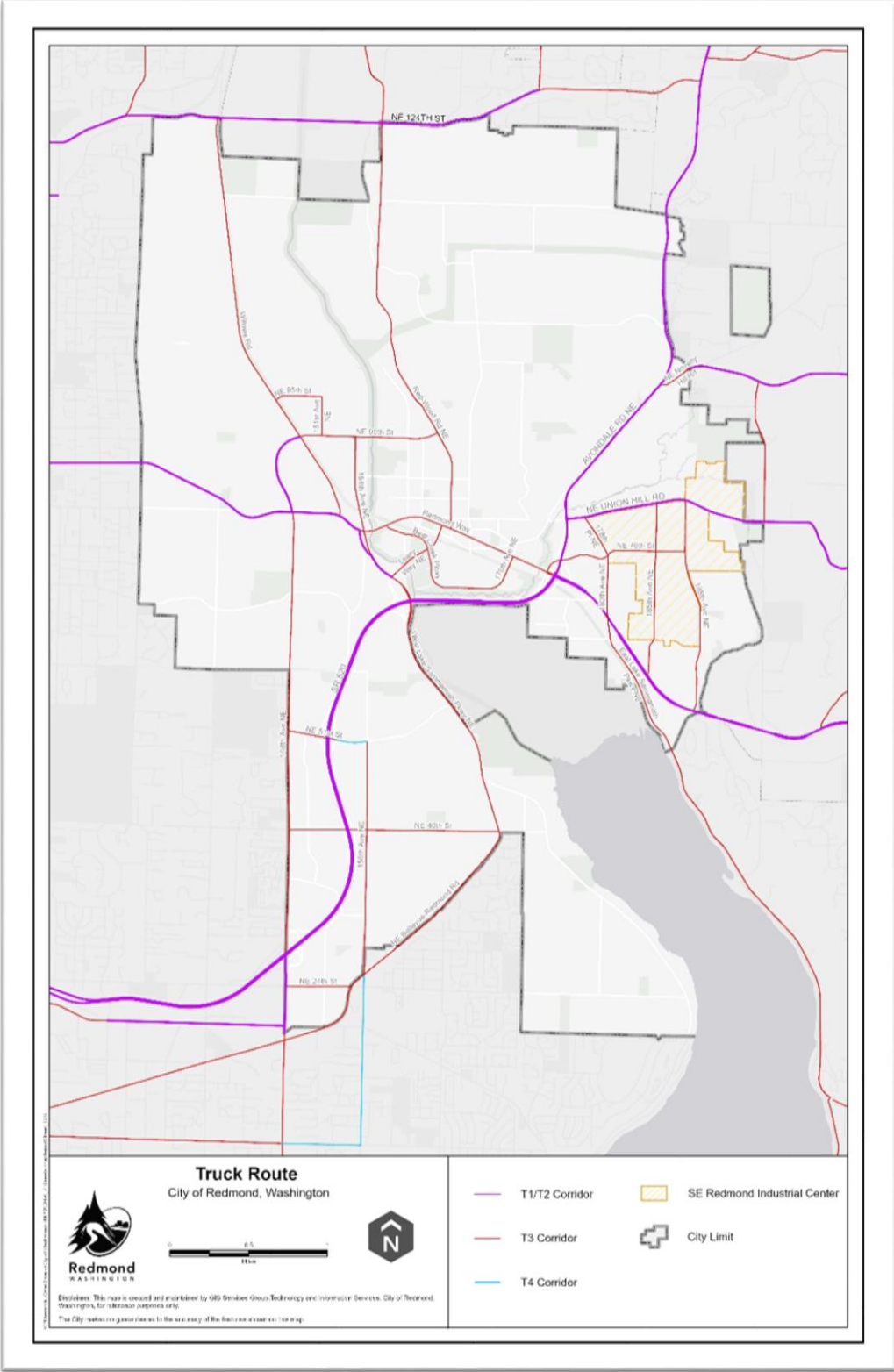


FIGURE 1-1: REDMOND TRUCK ROUTES

TABLE 1-1: REDMOND TRUCK ROUTE SYSTEM

Truck Route Classification	Centerline Miles
(Primary) T1/T2 Truck Route	17.9 (including 7.3 miles of SR 520)
(Secondary) T3 Truck Route	28.9
(Secondary) T4 Truck Route	0.2
	Total Miles: 47.0

Primary Truck Routes (T-1 and T-2) include:

- 148th Ave NE, from south city limits to SR 520
- 148th Avenue NE, from Redmond Way to Willows Road
- West Lake Sammamish Parkway NE, from Leary Way NE to Redmond Way
- Avondale Road, from NE Union Hill Road to north city limits
- NE Union Hill Road, from Avondale Road NE to east city limits
- Redmond Way, from 132nd Avenue NE to West Lake Sammamish Parkway NE

Secondary Truck Routes (T3 and T-4) include:

- 148th Avenue NE, from SR 520 to Redmond Way
- NE 90th Street, from Willows Road to SR 202 (Redmond-Woodinville Rd NE)
- 151st Avenue NE, from NE 90th Street to NE 95th Street
- NE 95th Street from 151st Ave NE to Willows Road
- West Lake Sammamish Parkway NE, Bel-Red Road to Leary Way NE
- 154th Avenue NE, from West Lake Sammamish Parkway NE to NE 90th Street
- 156th Avenue NE, from NE 28th Street to NE 40th Street
- 156th Avenue NE, from NE 40th Street to NE 51st Street
- Bear Creek Parkway, from Redmond Way to 168th Ave NE PVT
- 170th Avenue NE, from 168th Ave NE to SR 202 (Redmond Way)
- East Lake Sammamish Parkway NE, from South City Limits to SR 202 (Redmond Way)
- 180th Avenue NE from SR 202 (Redmond Way) to NE 76th Street
- 178th Place NE, from NE 76th Street to NE Union Hill Road
- 185th Avenue Northeast from SR 202 (Redmond Way) to NE Union Hill Road
- 188th Place NE, from SR 202 (Redmond Way) to NE Union Hill Road
- Bel-Red Road from NE 20th Street (City Limits) to NE 24th St (City Limits)
- Bel-Red Road, from 3200 Block (City Limits) to NE 40th Street
- Bel-Red Road, from NE 40th St, West Lake Sammamish Parkway NE
- Leary Way NE, from West Lake Sammamish Parkway, Redmond Way
- NE 124th Street, from SR 202 (W C/L), East City Limits
- NE 24th Street, from 148th Avenue NE (C/L), Bellevue-Redmond Rd (C/L)
- NE 40th Street, from 148th Avenue NE, SR 520

- NE 40th Street, from SR 520, Bel-Red Road
- NE 51st Street, from 148th Avenue NE, SR 520
- NE 76th Street, from SR 202 (Redmond Way) to 180th Ave NE
- NE 76th Street, from 180th Ave NE to 188th Ave NE
- NE Novelty Hill Road, from Avondale Road NE to East City Limits
- Redmond Way from West Lake Sammamish Parkway NE to SR 202 (164th Avenue NE)
- Willows Road from Redmond Way to NE 124th Street (Kirkland City Limits)
- NE 51st Street, from SR 520 to 156th Avenue NE

3. Strategies and Actions

3.1 Maintain Designated Primary and Secondary Truck Routes:

Redmond’s freight network includes a two-tier street system comprising:

- Primary T-1 and T-2 Truck Routes: Key routes for high truck volumes, directly connecting Redmond with regional highways such as SR 520 and SR 202. These roads are designed for durability with features like strong pavement to support heavy vehicles. A minimum travel lane width of 11 feet is prioritized along these routes to provide more operating space for larger freight vehicles.
- Secondary T-3 and T-4 Truck Routes: These streets will generally operate with lower truck volumes and weight and provide more local access to businesses.

Action 3.1A: Consider efficient and safe truck movement in all street planning and design.

3.2 Restrict or Discourage Truck Traffic Where Incompatible

Whereas all Redmond streets are open to some degree of truck traffic – whether through truck traffic on major roads or last mile delivery on local streets – there may be streets where certain types of truck traffic is incompatible with surrounding land uses or other expected transportation modes.

Action 3.2A: Establish internal policies and procedures for restricting or discouraging truck traffic in corridors where such traffic is deemed incompatible with surrounding land users and/or transportation modes.

3.3. Investigate Options for Improving Freight Data Collection

Redmond uses traditional multi-modal traffic count methods for collecting freight data, which are time consuming, expensive and don’t capture the performance of new and emerging freight movement strategies. New technologies, such as using commercial vehicle truck fleet data and other technology sources such as onboard GPS-enabled navigation systems, and cellphone-derived data supplied by third-party vendors for tracking vehicles may provide more efficient ways to collect freight data that can be used to better manage freight vehicle performance, thereby improving mobility on local city streets.

Action 3.3A: Explore and adopt new technologies or data sources to better track freight movement within the City.

3.4 Adopt innovative strategies to provide for safe and enhanced freight movement, reduced emissions, and application of clean technology.

3.4.1 Last-Mile Delivery Solutions

The increasing demand for last-mile delivery in urban areas requires innovative solutions. Strategies to reduce congestion and improve delivery efficiency for local businesses and residents, include:

Action 3.4.1A: Dedicated Loading Zones and Parking Regulations: Reduce congestion in high-demand areas like Downtown through strategically placed loading and unloading zones combined with improved parking regulations ensures smooth freight delivery operations and fair usage of high-demand urban areas.

Action 3.4.1B: Curb Space Delivery Reservations: As Redmond’s Urban Centers attract more residents and businesses, demand for curb space will continue to intensify. Efficient, safe, and timely delivery of goods to businesses is critical to supporting thriving businesses and livable Urban Centers. As part of its overall curb space management efforts, the city will explore the use of an app-based curb space delivery reservation system where curb space demands are highest within Urban Centers. Preference within specific zones in Urban Centers could be given to zero-emission delivery vehicles.

Action 3.4.1C: Urban Micro-Consolidation Centers (UMCCs): UMCC’s are locations where deliveries within a certain radius are dropped and reconsolidated to be delivered by more sustainable last-leg modes. They may be located within the public right-of-way or off-street sites. The City will work with shipping and logistic providers and support siting of UMCCs within or proximate to its Urban Centers where there are higher concentrations of package deliveries.

Action 3.4.1D: Parcel Lockers and Pickup Points: Explore regulatory or incentive-based approaches to implementation of parcel lockers and/or pickup points in Urban Centers to reduce the number of individual deliveries and resultant congestion and curbspace demand generated by delivery vehicles. Parcel lockers are convenient, centralized locations where consumers retrieve packages, cutting down on individual deliveries. Amazon Locker is an example of a parcel locker service. Pickup points are locations where online orders or parcels can be sent to or dropped off. This service is also known as out-of-home delivery and provides more flexibility than home delivery. Customers can choose the pickup location based on their convenience and schedules. UPS Stores are an example of a pickup point.

3.4.2 Autonomous and Drone Delivery Accommodation

Action 3.4.2A: Explore options and applicable federal and state regulations for future drone and autonomous vehicle zones to support safe, efficient last-mile operations.

Action 3.4.2B: Drone-Compatible Infrastructure: Investigate regulatory framework and infrastructural needs for establishing small landing and pickup areas for future drone delivery services.

- Autonomous Vehicle Types:

- Modular freight vehicles (gas or electric-powered) are one in which substantial components of the vehicle are interchangeable. This modularity is intended to make repairs and maintenance easier, or to allow the vehicle to be reconfigured to suit different functions.
- Shared autonomous vehicles, driverless vehicles that can sense and navigate their environment without human operations.
- Automated guided vehicles are driverless robots used to transport materials in warehouses, distribution centers (DCs), and manufacturing facilities using designated pickup and delivery routines.

3.4.3 Emissions Reduction and Clean Technology

Action 3.4.3A: Support expansion of EV charging infrastructure and explore establishing zero-emission delivery zones inside Urban Centers to promote zero emission last-mile freight and goods delivery.

Action 3.4.3B: Promote the use of small, low- or zero-emission delivery vehicles including electric cargo bikes and tricycles, and electric carts through sensible regulation and bikeway, pathway, and sidewalk design that accommodates such vehicles.

3.5. Consider Application of Freight-and-Bus Only Lanes

In the Puget Sound region, jurisdictions and transit agencies have adopted a strategy to reconfigure travel lanes on congested arterials to allow for special use conditions. One of these strategies are Business and Transit-only Lanes, or BAT lanes, which are curbside lanes used only by right-turning vehicles and buses. They help buses move more efficiently through traffic and provide better access to local businesses.

Action 3.5A: Willows Road, a designated Secondary truck route, may present an opportunity for a variation of BAT lanes that would also permit freight vehicles. A northbound freight and bus only lane (FAB lane) would be added by repurposing existing bike lanes (no longer needed with the Redmond Central Connector) north of the 9900 Block to 124th Street and replacing one general purpose lane south of 9900 Block. This type of reconfiguration would remove slower operating transit and freight vehicles from general purpose lanes thereby, improving operations for all vehicles.

4. Related plans or policies

- WSDOT Freight System Plan–Freight Policies
- Puget Sound Regional Council, Regional Transportation Plan, Freight Policies
- King Countywide Planning Policies-Freight