

Chapter 4-1: Street System Plan

Introduction

Streets are the backbone of the transportation system in Redmond, serving all modes of travel including automobiles, trucks, transit, bicycles, and pedestrians. The Street System Plan is an interconnected network of “complete streets” that accommodates all modes of travel for users of all ages and abilities and safely connects people to where they need to go. Since streets are more than just places for automobile travel, the design needs to start with the safety requirements along the outer edges where people gather, pedestrians walk, bicyclists ride, transit provides access, and people park their vehicles.

In addition to their multimodal mobility function, well-designed streets shape the urban character and vitality of places. The “grid” of streets in the two urban centers also means that fewer lanes are needed on each street because there are more choices for access and turns. Finally, efficiently designed streets minimize and better manage the amount of stormwater runoff that directly impacts the natural environment by affecting water quality in surface streams and lakes.



Figure 1. An example of a complete street.

Strategic Approach for Streets

The strategic approach for streets establishes the direction for developing the street system in Redmond that is consistent with the TMP strategies. The strategic approach includes:

- All Redmond streets are part an integrated street system.

- All Redmond streets are “Complete Streets.”
- All streets are walkable.
- Automobile modal corridors ensure good connections for vehicles.

All Redmond Streets Are Part of an Integrated Street System

Individual streets do not serve travel needs independent of each other. Rather, they function (or not) as part of a network. In order for the street network to operate in a logical and efficient manner, Redmond considers each street and its role or function within the context of the overall street network using a functional classification system. This system identifies the role of each street along with its planned future size and profile. In addition to their specific functional classification, selected streets are designated as modal corridors, freight routes, or main streets to indicate their special roles in the street system.

New Street Connections

Providing new street connections has been an emphasis for Redmond to complete the grid street network, both in the two urban centers and neighborhoods. New street connections have been planned for areas where the City expects significant growth. For example, the City is planning for new connections in Southeast Redmond to support existing and planned land uses (Figure 2). The TMP recognizes the need for having a connected street grid and includes a three-year action plan item for developing these plans in more detail. In Downtown and Overlake, examples of new street connections include:

- Improvements to currently confusing street patterns; i.e., the one-way couplet in Downtown and new north-south street connections as part of the efforts to form the ultimate street grid network.
- The Overlake Access Ramp that helps eliminate “bottlenecks” that contribute to congestion.

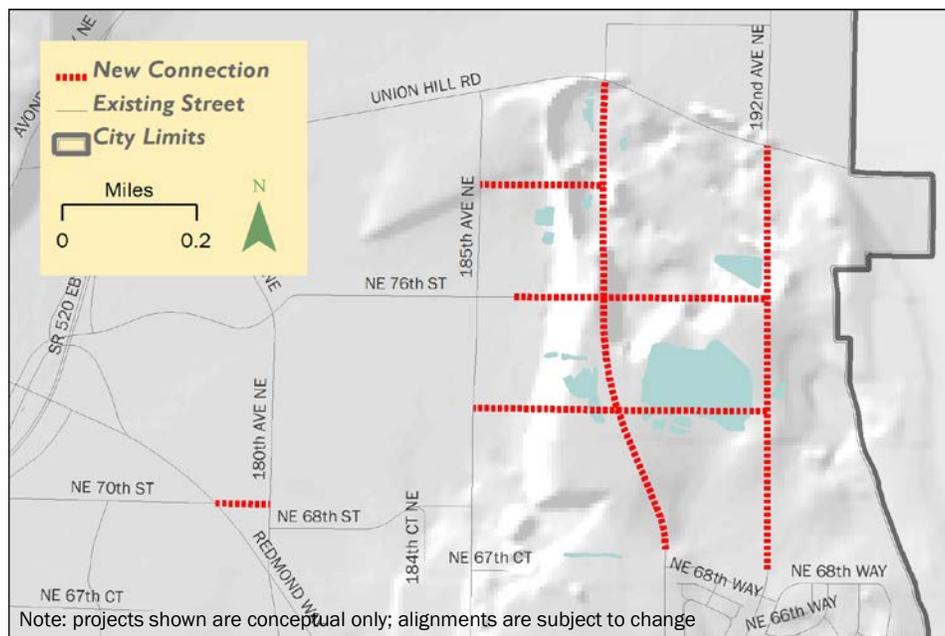


Figure 2. SE new street and trail connections.

All Redmond Streets Are “Complete Streets”

It is the City’s policy that all streets in Redmond eventually become “Complete Streets.” The Complete Streets approach is about building an integrated driving, walking, cycling, and transit network, giving residents, commuters, visitors, and shippers more travel choices. Complete Streets can also include treatments such as natural vegetation and pervious sidewalks that reduce water flow and polluted runoff into streams and lakes.

Streets Are Walkable

Streets can be great places for people to socialize and connect when they are interesting, attractive, safe, and walkable. Cleveland Street in Downtown and 152nd Avenue NE in Overlake Village will be exceptionally walkable “Main Streets” intended to become important public places and activity corridors within Redmond’s two urban centers.

Automobile Modal Corridors Ensure Good Connections for Vehicles

Vehicular traffic will remain a significant part of daily travel in the future. While this plan emphasizes travel choices for all modes of travel, it recognizes the importance of ensuring good connections for vehicles. This plan designates automobile modal corridors (Figure 3) to provide a high standard of functionality and priority for travel by cars and trucks. Automobile modal corridors connect major local and regional destinations for trucks and cars while accommodating all modes of travel. A critical part of ensuring good function of automobile modal corridors is managing congestion, which keeps congestion at a reasonable level (see Chapter 3 for congestion targets). However, it is not Redmond's goal to eliminate congestion or provide free-flow travel conditions.

Street System Development

To guide the development of the street system consistent with the strategic approach described in this chapter, the City employs tools as follows to guide planning and design of its street system:

- Functional classification system
- Street design framework
- Main street characteristics

The Street Functional Classification System

These functional classes establish a common understanding of the intended use and desired character of each street. The system will guide decisions about access to abutting land parcels, and will be used to determine how the costs of street construction shall be shared between the City and affected properties. Each street in the city's network is classified and the ultimate right-of-way width is set.

Redmond's roadway functional classifications include:

- SR 520
- Principal arterial
- Minor arterial
- Collector arterial
- Local streets
 - Connectors
 - Local access
 - Shared streets.

See Appendix D for a complete description of the functional classification system. For more information about SR 520, refer to Chapter 5 - Regional Transportation.

Street Design Framework

The street design framework guides the design, construction, and maintenance of streets in a manner that aligns with the direction established in this chapter. The framework clarifies the underlying intent of design standards, guidance, and regulations contained in the Redmond Zoning Code, Appendix F, and other relevant City documents. In applying design standards, guidance, and relevant regulations, decision making must achieve the intent described in the street design framework. For example, the establishment or update of design standards and guidance is consistent with the intent of the street design framework. Similarly, when deviations from design standards and guidance are sought for either capital improvements or private developments, decision making achieves the intent of the street design framework.

Streets are designed from the outside toward the center

Redmond streets will not be wider or faster than necessary. Greatest attention needs to be given to the design and separation of sidewalks and bike facilities from vehicular traffic. All appurtenances to the street, such as signs, fire hydrants, street lighting, and utility boxes, shall be designed so they do not interfere with, or present barriers to, walking and bicycling. Designs for landscaping, lighting, treatment of stormwater runoff, artwork, places for events, and other unique design features all begin outside of the traveled way or behind the curbs. Design elements and treatments then extend into the traveled way (vehicular portion of the street) as needed. Traffic control devices (signs, markings, and traffic signals) regulating or informing all users must be highly visible and easy to distinguish. They need to be designed to integrate aesthetically with the street and the character of both the surrounding natural and built environments.

With particular emphasis on the two urban centers, improvements to streets and bridges will include integrated public art and interesting design treatments to enhance street aesthetics and create lively streetscapes that contribute to a greater sense of community and enjoyment. Design and public art installations will reflect the unique identity and character of Redmond's urban centers and neighborhoods.

Narrow streets encourage lower travel speeds, reclaiming the street and right-of-way for all users. Redmond will ensure that all modes are adequately accommodated within city street corridors consistent with the City's "Complete Streets" policy. This includes appropriate accommodations for trucks, transit, and emergency vehicles. Because of right-of-way limitations, the City will have to weigh tradeoffs in trying to meet the needs of all users. For example, a street may not be able to accommodate bicycle lanes and parking lanes in both direction.

The posted speed limit on each street (target speed) shall strike a balance between accommodating traffic movement and providing a safe environment for pedestrians and bicyclists. At places where high concentrations of pedestrians and bicyclists are expected, providing a safe environment for pedestrians and bicyclists will be a priority consideration for setting the target speed. A lower speed is a key characteristic of walkable streets in urban areas. For a balanced approach to set the speed limit for individual streets, refer to *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* (Institute of Transportation Engineers, 2010). Also, the Three-Year Action Plan calls for a near-term action to assess speed limits on select streets.

Redmond will integrate transportation and stormwater improvements

To protect water resources including surface water, groundwater, and stormwater, Redmond will reduce hydrologic impacts in its street improvements by:

- Designing narrower streets that help the environment by reducing impervious and pollution generating surfaces that impact the volume and quality of stormwater runoff.

- Using a watershed management approach to investing in stormwater infrastructure instead of project-by-project stormwater impact mitigation.
- Considering impacts to streams as part of planning street improvements.
- Using green infrastructure preferentially to gradually absorb and treat stormwater originating from transportation facilities.
- Adding stormwater controls to project areas to retrofit existing impervious areas.
- Supporting routine maintenance and cleanup measures such as street sweeping, along with other pollution source control efforts, through design and maintenance/operations of the transportation system.

Main Street Characteristics

Main Streets are important public places in Redmond, and are located in the heart of Redmond’s two urban centers. Main Streets are “signature streets” characterized by superior urban streetscape design, unique design features, slow vehicle speeds, wide sidewalks, ample pedestrian amenities, safe and convenient pedestrian crossings, the presence of public art, and the programming of public events—all within a street that is enclosed by active storefronts. Main Streets are the centers for community activity and will be designed first and foremost to support safe, comfortable, and convenient pedestrian access and interaction. These streets will be able to support high-density residential livability and a strong local business environment.

Redmond’s two Main Streets are Cleveland Street in Downtown and 152nd Avenue NE in Overlake Village.

A well-designed Main Street becomes an important destination in its own right. The unique character of place and the active presence of local people will attract others from throughout the region. Each Main Street will have distinctive features that are designed as an integrated whole and that reflect the surrounding urban area. For more information about specific guidelines for Cleveland Street, refer to the 2013 amended “Downtown East West Corridor Study.” For more specific design details for 152nd Avenue NE, refer to the 2010 “Overlake Village Street Design Guidelines.”

Implementation

- Build new street connections in urban centers and Southeast Redmond to enable planned or approved land use growth.
- Transition existing streets into complete streets.
- Develop the two designated main streets: the Cleveland Street and 152nd Avenue NE.
- Improve modal corridors for quality connectivity between key destinations including Redmond neighborhoods, urban centers, and other regional destination.
- Improve SR 520 interchange areas for multimodal traffic operations and connections.