

Appendix D: Street Classification System

Introduction

The functional classification of a street depends on its purpose and role in serving transportation mobility, access, and circulation needs. Streets may:

- Connect Redmond's urban centers to other parts of the region.
- Connect neighborhoods with urban centers.
- Provide internal circulation within neighborhoods.

The functional classification also considers the role of each corridor in supporting Redmond's multimodal transportation system. The street design is based on its functional classification.

Redmond's functional classification system organizes streets into the following categories:

- The SR 520 Freeway
- Principal Arterial
- Minor Arterial
- Collector Arterial
- Local Streets
 - Connectors
 - Local Access
 - Shared Streets

SR 520 Freeway

The SR 520 Freeway is a high-capacity, high-speed highway connecting Redmond with the region. SR 520 is the city's most significant multimodal corridor and serves as the alignment for the East Link light rail line between Redmond and Seattle. Furthermore, the SR 520 Trail along SR 520 is a priority pedestrian/bicycle corridor.

The SR 520 Freeway requires massive infrastructure and wide rights-of-way (up to 300 feet or more) and is intended to carry heavy volumes of traffic at high speeds, including a relatively large percentage of trucks. The freeway is a limited access highway. Adjacent land uses include commercial office and retail uses, residential uses, open space, parks, and industrial uses.

SR 520 terminates at Avondale Road, a principal arterial. All interconnections with other roadway classifications are accomplished through grade-separated interchanges. The SR 520 Freeway is a divided highway with at least two general purpose and one HOV lane in each direction. Lanes are at least 12 feet wide with inside and outside paved shoulders provided. Design geometry is based on relatively high travel speeds. There are no at-grade pedestrian crossings and no bike lanes adjacent to vehicular travel lanes. In certain instances bicycles may be allowed to utilize paved shoulders or may be accommodated in separate trail facilities within the right-of-way.

Traffic calming and speed reduction measures are not applicable to the SR 520 Freeway. Noise and visual mitigation measures may be appropriate in specific settings. Interchanges are to be located far enough apart to safely accommodate merging and weaving maneuvers.

The SR 520 Freeway will continue to accommodate regional and interregional transit routes and the SR 520 Trail will continue to provide safe travel for cyclists and pedestrians.

Principal Arterial

A principal arterial provides capacity and continuity for travel between different areas of the region. Adjacent land uses may include residential and commercial areas, open space, public lands, industrial sites, and institutional sites. The activity center for a neighborhood will often be located along a principal arterial or at the intersection of a principal arterial with another principal arterial or a collector arterial.

Principal arterials connect typically with freeways or other principal arterials. Direct connections with other roadways are provided via at-grade intersections. Principal arterials may have as many as four through lanes, but will generally be designed as divided facilities with a center median. Turn lanes will be provided as turning movements warrant and may include left turn lanes and right turn lanes, or in five-lane or three-lane configurations may include a two-way continuous left turn lane.

Clearly marked crosswalks will be provided at all legs of every signalized intersection unless their absence is warranted. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip. While serving as the separation between vehicles and pedestrians, the buffer strip will use vegetation to treat stormwater runoff using rain gardens or bioswales.

Traffic calming and speed reduction measures are generally not applicable to principal arterials. Principal arterials will be designed with partial control of access through the City's access management system. On-street parking will not generally be allowed.

Principal arterials shall provide for transit circulation and access, including bus stops and bulb-outs. Pedestrian facilities in the corridor including connections to transit, will be designed to provide safety and comfort, and standards may increase in pedestrian zones.

Minor Arterial

A minor arterial provides capacity and continuity for travel between different areas of the region, but will not have the capacity and significance of principal arterials. Adjacent land uses may include residential and commercial areas, open space, public lands, industrial sites, and institutional sites. The activity center for a district will often be served by minor arterials and may include the intersections of minor arterials with principal arterials and collector arterials.

Minor arterials terminate only at freeways, principal arterials, or other minor arterials. Direct connections with other roadways are provided via at-grade intersections. Minor arterials may have as many as four through lanes and may or may not have median dividers. Turn lanes are provided as movements warrant and may include left turn lanes and right turn lanes, or in a three-lane configuration may include a two-way continuous left turn lane.

Clearly marked crosswalks are provided at all legs of every signalized intersection unless their absence is warranted. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip. While serving as the separation between vehicles and pedestrians, the buffer strip will use vegetation, such as rain gardens or bioswales, to treat stormwater runoff.

Traffic calming and speed reduction measures are generally applicable to minor arterials only in areas where sensitive land uses (residential property, schools, public parks, and certain other public institutions) directly abut the roadway or are nearby. Minor arterials will be designed with partial control of access through the City's access management system. On-street parking will be allowed only in commercial areas.

Minor arterials shall include provisions for transit circulation and access, including bus stops and bulb-outs. Pedestrian facilities in the corridor will be designed to provide safety and comfort, and standards may increase in pedestrian zones.

Collector Arterial

A collector arterial receives traffic from connectors and local streets and provides access to principal arterials. Collectors are generally not intended to serve regional trips and generally do not provide route continuity for more than a mile or two.

These roadways are generally contained entirely within the city and connect neighborhoods with each other. Adjacent land uses may include residential areas, commercial areas, open space, public lands, industrial sites, and institutional sites.

Collectors terminate only at principal arterials, minor arterials, or other collector arterials. Direct connections with other roadways are provided via at-grade intersections. Collector arterials have two through/general purpose lanes without a center median. Turn lanes are provided as turning movements warrant, and may include left turn lanes and right turn lanes, or in a three-lane configuration may include a two-way continuous left turn lane.

Clearly marked crosswalks are provided at all legs of signalized intersections and in the vicinity of schools unless their absence is warranted. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks to treat stormwater runoff are included on both sides of the street and are separated from vehicle lanes by a buffer strip. While serving as the separation between vehicles and pedestrians, the buffer strip will use treatment such as rain gardens or bioswales.

Traffic calming and speed reduction measures are applicable to collector arterials, primarily in areas where sensitive land uses (residential property, schools, public parks, and certain other public institutions) directly abut the roadway or are nearby. Collector arterials will be designed with partial control of access through the access management system. On-street parking will be allowed only in commercial areas.

Collector arterials shall include provisions for transit circulation and access, including bus stops and bulb-outs. Pedestrian facilities in the corridor will be designed to provide safety and comfort, and standards may increase in pedestrian zones.

Local Streets

There are three types of local streets listed in hierarchical order: connectors, local access, and shared streets.

Connectors

Connectors are specially designated local streets that provide for direct vehicle, bicycle, and pedestrian connections between adjacent neighborhoods, and between neighborhoods and commercial areas. Connectors do not serve trans-regional trips and provide no route continuity beyond the areas they serve. Adjacent land uses may include residential areas, commercial areas, open space, public lands, industrial sites, and institutional sites.

Connectors terminate at collector arterials, minor arterials, and/or local streets. Direct connections with other roadways are provided via at-grade intersections. Connectors have only two through/general purpose lanes. Turn lanes will not be provided unless unusual circumstances warrant, in which case they may include left turn lanes only.

Bicycle circulation will typically be accommodated in lanes shared with motor vehicle traffic. Sidewalks are included on both sides of the street and are separated from vehicle lanes by a buffer strip. While serving as the separation between vehicles and pedestrians, the buffer strip will use treatments such as rain gardens or bioswales to treat stormwater runoff.

Traffic calming and speed reduction measures may be used on connectors as warranted by adjacent land uses and traffic characteristics. Connectors are designed with partial control of access through the access management system. On-street parking will be allowed where adequate roadway width is available.

The City may map and specify future connector alignments and may require dedication of rights-of-way for these facilities.

Local Access

Local access streets provide direct connections to and within single-family neighborhoods and typically terminate at connector or collector streets. These streets provide for direct vehicle, bicycle, and pedestrian access to commercial and residential land uses. Local streets do not serve regional trips and provide no route continuity beyond the areas they connect. Adjacent land uses may include residential properties, commercial areas, industrial sites, and institutional sites.

Local streets may terminate at principal arterials, minor arterials, collectors, connectors, or other local streets. Direct connections with other roadways are provided via at-grade intersections.

Local streets have only two through/general purpose lanes. Left turn lanes may be provided only in unusual circumstances. Clearly marked crosswalks are provided at signalized intersections or at other locations where warranted because of the proximity of schools or significant pedestrian activity.

On-street bicycle lanes will not be provided; rather, bicycle circulation will be accommodated in lanes shared with motor vehicle traffic. Sidewalks are included on both sides of the street and will be separated from vehicle lanes by an appropriate buffer strip. Traffic calming and speed reduction measures are applicable to local streets as warranted by adjacent land uses and traffic characteristics.

Local streets are designed with partial control of access through the access management system. On-street parking will be allowed where adequate roadway width is available.

Shared Streets

Shared streets are slow-speed streets shared by pedestrians, cyclists, and vehicles. Shared streets allow people to use the public right-of-way for a variety of activities during the course of a typical day and enjoy the outside active life. In a shared street, every user yields to any more vulnerable user. Pedestrians may use the full width of the street within an area defined as a shared street; playing on the roadway is also permitted. Drivers within a shared street may not drive faster than a walking pace. They must make allowance for the possible presence of pedestrians, including children at play, unmarked objects and irregularities in the road surface, and the alignment of the roadway.

In Redmond, some local streets will be transitioned to shared streets, which are appropriate on a residential, limited use, or other low-volume street, where the neighborhood desires to create a public space for social activities and play. Shared streets are also appropriate on streets with commerce where there is a desire to create an active and attractive people-oriented area.

Shared streets have:

- Special paving and surface treatment to identify these streets as unique people places.
- Flush or reduced curb height and nonexistent curb sidewalk to encourage pedestrians to use the entire street rather than street edges.
- Narrow vehicular lanes to create a safe and comfortable environment for pedestrians and cyclists.
- Chicanes to slow drivers by adding curves to the travel lane to indicate that they are entering a pedestrian area.
- High-quality and artistic street furniture to announce that people are welcome and create a friendly pedestrian environment.
- Plants to increase the quality of the urban space and the pedestrian experience.

Where appropriate, curb extensions, gateways, pedestrian lighting, art, and play elements are used to improve safety and entice people to enjoy shared street.

Shared street will not provide entrance to garages or loading/unloading docks.

Streets designated as shared streets are shown in Zoning Code, Exhibit A. Downtown Chapter, Pedestrian System, page 74 of 87. This can be found at http://zoningplus.com/regs/redmond/media/files/PDF/Map10_3_RZC_20130216.pdf.

Figure 1 and Tables 1 through 4 define the functional classification for all streets in the City of Redmond except local streets. Tables 1 through 4 also identify the number of future general purpose through lanes and modal priorities except that of pedestrians (which are covered in Chapter 4: Pedestrian System). Modal priorities correspond to modal corridors designated in Figure 1 of Chapter 4. Abbreviations are used in indicating modal priorities: A - Automobile, B - Bike, and T - Transit.

Table 1. Principal arterial streets.

Principal Arterial Streets	The Number of Future General Purpose Through Lanes	Modal Priorities
Avondale Road NE (Union Hill Road to Avondale Way)	4	A, T
Avondale Road NE (Avondale Way to Avondale north city limits)	4	A, B, T
Redmond Way (east city limits to Bear Creek Parkway east)	4	A
Bear Creek Parkway (Redmond Way west to Redmond Way east)	4	A
Bel- Red Road (NE 20th Street to West Lake Sammamish Parkway)	4	
Redmond Way (west city limits to Bear Creek Parkway west)	4	A
Redmond-Woodinville Road - NE 116th Street - NE 124th Street	2	A
Redmond-Woodinville Road - NE 90th Street - NE 116th Street	2	A
West Lake Sammamish Pkwy NE - Bel-Red Road to NE 51st Street	4	A, B
West Lake Sammamish Parkway NE – NE 51st Street to Redmond Way	4	A, B
NE 90th Street - Willows Road to 154th Avenue NE	2	A, T
NE 90th Street- 154th Avenue NE to 160th Avenue NE	4	A, T
NE 90th Street - 160th Avenue NE to Red-Wood Road	2	A
124th Avenue NE - Willows Road to Avondale Road	2	A
148th Avenue NE - NE 20th Street to Willows Road	4	A, T
154th Avenue NE – West Lake Sammamish Parkway to NE 85th Street	4	A, T
154th Avenue NE - NE 85th Street to NE 90th Street	2	A

Table 2. Minor arterial streets.

Minor Arterial Streets	The Number of Future General Purpose Through Lanes	Modal Priorities
NE 20th Street (148th Avenue NE to Bel-Red Road)	4	A
NE 24th Street (148th Avenue NE to Bel-Red Road)	3	P
152nd Avenue NE (NE 20th Street to NE 24th Street)	2	B
152nd Avenue NE (NE 24th Street to NE 31st Street)	2	B, T
Redmond-Woodinville Road (NE 90th Street to Cleveland Street)	2	
Redmond Way (Bear Creek Parkway to 170th Avenue NE)	2	
Avondale Way NE (Avondale Road NE to NE 79th Street)	3	A, T
Avondale Way (NE 79th Place to Redmond Way)	3	B
164th Avenue NE Extension (NE 76th Street to Cleveland Street)	2	
East Lake Sammamish Parkway NE (Redmond Way to 187th Avenue NE)	2	
Leary Way NE (West Lake Sammamish Parkway to NE 76th Street)	4	
Leary Way NE (NE 76th Street to NE 80th Street)	2	
NE Union Hill Road (188th Avenue NE to Avondale Way)	4	A
NE Union Hill Road (east city limits to 188th Avenue NE)	4	A
Novelty Hill Road (east city limits to Avondale Road NE)	4	
Old Redmond Road (west city limits to West Lake Sammamish Parkway)	2	B
West Lake Sammamish Parkway NE (Bel-Red Road to NE 40th Street)	2	B
West Lake Sammamish Parkway NE (NE 40th Street to NE 24th Street)	2	T
West Lake Sammamish Parkway NE (NE 24th Street to south city limits)	2	T
Willows Road (Redmond Way to NE 90th Street)	4	A

Minor Arterial Streets	The Number of Future General Purpose Through Lanes	Modal Priorities
Willows Road (NE 90th Street to north city limits)	4	A, T
NE 24th Street - city limits to West Lake Sammamish Parkway NE	2	T
NE 31st/NE 36th Streets (152nd Ave NE to 156th Ave NE)	2	T
NE 40th Street (west city limits to SR 520)	4	T
NE 40th Street (SR 520 to West Lake Sammamish Parkway)	4	B, T
NE 51st Street (148th Avenue NE to 156th Avenue NE)	4	T
NE 51st Street (156th Avenue NE to West Lake Sammamish Parkway)	2	
NE 80th Street - Leary Way to 164th Avenue NE	2	B
NE 85th Street (154th Avenue NE to 161th Avenue NE)	2	T
NE 85th Street (161st Avenue NE to 166th Avenue NE)	2	
140th Avenue NE (Redmond Way to south city limits)	2	
156th Avenue NE (NE 51st Street to NE 31st Street)	4	T
156th Ave NE (NE 31st Street to NE 24th Street)	4	
156th Ave NE (NE 31st Street to NE 24th Street)	4	P, T
170th Place NE/Avenue NE (Redmond Way to Avondale Way)	4	A
188th Avenue NE - between Union Hill Road & Redmond-Fall City Road	2	

Table 3. Collector arterial streets.

Collector Arterial Streets	The number of Future General Purpose Through Lanes	Modal Priorities
NE 27th Street/NE 28th Street (150th Avenue NE to 156th Avenue NE)	2	
NE 60th Street (154th Avenue NE to 156th Avenue NE)	2	
NE 76th Street (Redmond Way to 180th Avenue NE)	2	A, T
NE 76th Street (180th Avenue NE to 188th Avenue NE)	2	T
NE 80th Street (132nd Avenue NE to Redmond Way)	2	
NE 83rd Street (158th Avenue NE to 161st Avenue NE)	2	
NE 83rd Street (161st Avenue NE to 166th Avenue NE)	2	T
NE 104th Street/NE 109th Street (Redmond-Woodinville Road to 166th Avenue NE)	2	B
NE 104th Street (166th Avenue NE to Avondale Road)	2	T
NE 111th Street (166th Avenue NE to 172nd Avenue NE)	2	
NE 116th Street (Red-Wood Road to Avondale Road NE)	2	
NE 116th Street (Willows Road to 154th Place NE)		
NE 36th Street (148th Avenue NE to SR 520 Trail)	2	
NE 31st Street/NE 36th Street (SR 520 Trail to 152nd Avenue NE)	2	B
NE 28th Street (Overlake Access Ramp to 152nd Avenue NE)	2	
150th Avenue NE (NE 36th Street to NE 51st Street)	2	
Cleveland Street (160th Avenue NE to 168th Avenue NE)	2	
151st Avenue NE (NE 20th Street to NE 28th Street)		
154th Avenue NE (NE 60th Street to Old Redmond Road)	2	

Collector Arterial Streets	The number of Future General Purpose Through Lanes	Modal Priorities
154th Place NE (Red-Wood Road to NE 116th Street)	2	
156th Avenue NE (NE 51st Street to NE 60th Street)	2	
159th Place NE (Bear Creek Parkway to Leary Way)	2	
160th Avenue NE (Redmond Way to NE 85th Street)	2	
160th Avenue NE (NE 85th Street to NE 90th Street)	2	T
160th Avenue NE (NE 90th Street to Red-Wood Road)	2	
161st Avenue NE - NE 90th Street to NE 85th Street	2	
161st Avenue NE - NE 85th Street to NE 83rd Street	2	T
161st Avenue NE – NE 83rd Street to Redmond Way	2	
161st Avenue NE – Redmond Way to Bear Creek Parkway	2	
166th Avenue NE (NE 76th Street to NE 83rd Street)	2	
166th Avenue NE (NE 83rd Street to NE 85th Street)	2	T
166th Avenue NE (NE 85th Street to NE 104th Street)	2	T
166th Avenue NE (NE 104th Street to NE 111th Street)	2	
169th Avenue NE (NE 79th Street to NE 80th Street)	2	
172nd Avenue NE (West Lake Sammamish Parkway to NE 30th Street)	2	
172nd Avenue NE (NE 111th Street to NE 116th Street)	2	B
180th Avenue NE (Redmond Way to NE 76th Street)	2	
178th Place NE/180th Avenue NE (NE 76th Street to Union Hill Road)	2	T

Collector Arterial Streets	The number of Future General Purpose Through Lanes	Modal Priorities
185th Avenue NE (Union Hill Road to NE 76th Street)	2	A
185th Avenue NE (NE 76th Street to NE 68th Street)	2	
185th Avenue NE (NE 68th Street to SR 202/Redmond-Fall City Road)	2	T

Table 4. Connector Streets.

Connector Streets	General Purpose Through Lanes		Modal Priorities
	Widest Existing	Future	
NE 65th Street (185th Avenue NE to 192nd Avenue NE)	0	2	
NE 73rd Street (185th Avenue NE to 192nd Avenue NE)	0	2	
NE 76th Street (Leary Way to Bear Creek Parkway)	2	2	
NE 80th Street (169th Avenue NE to 172nd Avenue NE)	2	2	B
NE 80th Street (185th Avenue NE to 188th Avenue NE)	0	2	
NE 100th Street (166th Avenue NE to 171st Avenue NE)	2	2	
158th Avenue NE (NE 85th Street to NE 83rd Street)	2	2	
158th Avenue NE (NE 83rd Street to Redmond Way)	0	2	
168th Avenue NE (Redmond Way to NE 79th Street)	2	2	
171st Avenue NE (NE 80th Street to NE 88th Street)	2	2	
171st Avenue NE (NE 88th Street to NE 100th Street)	2	2	B
172nd Avenue NE (NE 116th Street to NE 128th Street)	2	2	

Connector Streets	General Purpose Through Lanes		Modal Priorities
	Widest Existing	Future	
187th Avenue NE (East Lake Sammamish Parkway to SR 202)	2	2	
192nd Avenue NE (Union Hill Road to NE 65th Street)	0	2	
Avondale Way (Redmond Way to NE 76th Street)	0	2	