

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, and
- 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. {insert a graphics with SR 520}. 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 to treat stormwater runoff such as rain gardens or bioswales.

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 hierarchal 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 non-existent curb sidewalk to encourage pedestrians 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 in 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, add a website link).

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.

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Table 1. Principal arterial streets

Principal Arterial Streets	The Number of Future General Purpose Through Lanes	Modal Priorities
Avondale Rd NE (Union Hill Rd to Avondale Way)	4	A, T
Avondale Rd 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 Rd (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 St - NE 124th St	2	A
Redmond-Woodinville Road - NE 90th St - NE 116th St	2	A
West Lake Sammamish Pkwy NE - Bel-Red Rd to NE 51st St	4	A, B
West Lake Sammamish Pkwy NE - 51st St to Redmond Way	4	A, B
NE 90th St - Willows Rd to 154th Ave NE	2	A, T
NE 90th St - 154th Ave NE to 160th Ave NE	4	A, T
NE 90th St - 160th Ave NE to Red-Wood Rd	2	A
124th Ave NE - Willows Rd to Avondale Rd	2	A
148th Ave NE - NE 20th St to Willows Rd	4	A, T
154th Ave NE - West Lake Sammamish Pkwy to NE 85th St	4	A, T
154th Ave NE - NE 85th St to NE 90th St	2	A

Table 2. Minor arterial streets

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

NE 24th St - City limits to West Lake Sammamish Parkway NE	2	T
NE 31st/NE 36th St (152nd Ave NE to 156th Ave NE)	2	T
NE 40th St (west City limits to SR 520)	4	T
NE 40th St (SR 520 to West Lake Sammamish Parkway)	4	B, T
NE 51st St (148th Ave NE to 156th Ave NE)	4	T
NE 51st St (156th Ave NE to West Lake Sammamish Parkway)	2	
NE 80th St - Leary Way to 164th Ave NE	2	B
NE 85th St (154th Ave NE to 161th Ave NE)	2	T
NE 85th St (161st Ave NE to 166th Ave NE)	2	
140th Ave NE (Redmond Way to south City limits)	2	
156th Ave NE (NE 51st St to NE 31st St)	4	T
156th Ave NE (NE 31st St to NE 24th St)	4	
156th Ave NE (NE 31st St to NE 24th St)	4	P, T
170th Place NE/Ave NE (Redmond Way to Avondale Way)	4	A
188th Ave NE - between Union Hill Rd & Redmond-Fall City Rd	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 Ave NE to 156th Ave NE)	2	
NE 60th St (154th Ave NE to 156th Ave NE)	2	
NE 76th St (Redmond Way to 180th Ave NE)	2	A, T
NE 76th St (180th Ave NE to 188th Ave NE)	2	T
NE 80th St (132nd Ave NE to Redmond Way)	2	
NE 83rd St (158th Ave NE to 161st Ave NE)	2	
NE 83rd St (161st Ave NE to 166th Ave NE)	2	T
NE 104th St/NE 109th St (Redmond-Woodinville Rd to 166th Ave NE)	2	B
NE 104th St (166th Ave NE to Avondale Rd)	2	T
NE 111th St (166th Ave NE to 172nd Ave NE)	2	
NE 116th St (Red-Wood Rd to Avondale Rd NE)	2	
NE 116 th St (Willows Rd to 154 th Place NE)		
NE 36th St (148th Ave NE to SR 520 Trail)	2	
NE 31 st St/NE 36th St (SR 520 Trail to 152nd Ave NE)	2	B
NE 28th St (Overlake Access Ramp to 152nd Ave NE)	2	
150th Ave NE (NE 36th St to NE 51st St)	2	
Cleveland Street (160th Ave NE to 168th Ave NE)	2	
151st Ave NE (NE 20th Street to NE 28th Street)		
154th Ave NE (NE 60th St to Old Redmond Rd)	2	

154th Pl NE (Red-Wood Rd to NE 116th St)	2	
156th Ave NE (NE 51st St to NE 60th St)	2	
159th Place NE (Bear Creek Parkway to Leary Way)	2	
160th Ave NE (Redmond Way to NE 85th St)	2	
160th Ave NE (NE 85th St to NE 90th St)	2	T
160th Ave NE (NE 90th St to Red-Wood Rd)	2	
161st Ave NE - NE 90th St to NE 85th St	2	
161st Ave NE - NE 85th St to NE 83rd St	2	T
161st Ave NE - NE 83rd St to Redmond Way	2	
161st Ave NE - Redmond Way to Bear Creek Parkway	2	
166th Ave NE (NE 76th St to NE 83rd St)	2	
166th Ave NE (NE 83rd St to NE 85th St)	2	T
166th Ave NE (NE 85th St to NE 104th St)	2	T
166th Ave NE (NE 104th St to NE 111th St)	2	
169th Ave NE (NE 79th St to NE 80th St)	2	
172nd Ave NE (West Lake Sammamish Pkwy to NE 30th St)	2	
172nd Ave NE (NE 111th St to NE 116th St)	2	B
180th Ave NE (Redmond Way to NE 76th St)	2	
178th Place NE/180th Ave NE (NE 76th St to Union Hill Rd)	2	T
185th Ave NE (Union Hill Rd to NE 76th St)	2	A
185th Ave NE (NE 76th St to NE 68th St)	2	
185th Ave NE (NE 68th St to SR202/Redmond-Fall City Rd)	2	T

TABLE 4. Connector street

Connector Streets	General Purpose Through Lanes		Modal Priorities
	Widest Existing	Future	
NE 65th St (185th Ave NE to 192nd Ave NE)	0	2	
NE 73rd St (185th Ave NE to 192nd Ave NE)	0	2	
NE 76th St (Leary Way to Bear Creek Parkway)	2	2	
NE 80th St (169th Ave NE to 172nd Ave NE)	2	2	B
NE 80th St (185th Ave NE to 188th Ave NE)	0	2	
NE 100th St (166th Ave NE to 171st Ave NE)	2	2	
158th Ave NE (NE 85th St to NE 83rd St)	2	2	
158th Ave NE (NE 83rd St to Redmond Way)	0	2	
168th Ave NE (Redmond Way to NE 79th St)	2	2	
171st Ave NE (NE 80th St to NE 88th St)	2	2	
171st Ave NE (NE 88th St to NE 100th St)	2	2	B
172nd Ave NE (NE 116th St to NE 128th St)	2	2	
187th Ave NE (East Lake Sammamish Parkway to SR 202)	2	2	
192nd Ave NE (Union Hill Rd to NE 65th St)	0	2	
Avondale Way (Redmond Way to NE 76th St)	0	2	