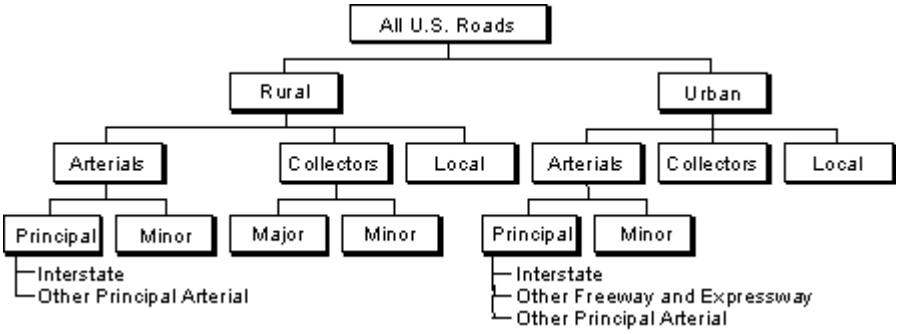
Functional Classification System

The Highway Functional Classification System distinguishes among public roads by the service they provide. Exhibit 1 describes the hierarchy of the Highway Functional Classification System (HFCS).

Arterials provide the highest level of mobility, at the highest speed, for long, uninterrupted travel. The Interstate Highway System is an arterial network. Arterials generally have higher design standards than other roads, often with multiple lanes and some degree of access control.

Exhibit 1



The rural arterial network provides interstate and intercounty service so that all developed areas are within a reasonable distance of an arterial highway. This network is broken down into principal and minor routes. The rural principal arterial network is more significant. It serves virtually all urban areas with populations greater than 50,000 people. Additionally, most urban areas larger than 25,000 people are served by rural principal arterial highways. Rural principal arterial highways provide an integrated network without stub connections except where needed because of unusual geographic or traffic conditions (for example, connections to international borders, coastal cities, waterports and airports). The rural principal arterial network is divided into two subsystems, Interstate highways and other principal arterials.

In 1997, the rural principal arterial system accounted for about 3.3 percent of total miles in the United States. This small portion of highways carried 46.8 percent of rural traffic and 18.3 percent of total travel in the United States. The other element of the rural arterial system, minor arterials, represented 3.5 percent of total U.S. miles, carrying 16.5 percent of rural traffic and 6.4 percent of total travel in the United States.

Similarly, in urban areas, the arterial system is divided into principal and minor arterials. The urban principal arterial system is the most important group; it includes Interstate highways, other freeways and expressways, and other principal arterials. The urban principal arterial system serves major metropolitan centers, corridors with the highest traffic volume, and those with the longest trip lengths. It carries most trips entering and leaving urban areas, and it provides continuity for all rural arterials that intercept urban boundaries. In 1997, the urban principal arterial system accounted for 1.9 percent of total miles in the United States. However, this network carried 57.8 percent of urban traffic and 35.5 percent of total travel in the United States.

Urban minor arterial roads provide service for trips of moderate length and at a lower level of mobility. They connect with urban principal arterial roads and rural collector routes. In 1997, the urban minor arterial network represented 2.3 percent of total U.S. mileage. This system carried 19.5 percent of urban traffic and 12.0 percent of total travel in the United States.

Collectors provide a lower degree of mobility than arterials. They are designed for travel at lower speeds and for shorter distances. Collectors are typically two-lane roads that collect and distribute traffic from the arterial system.

The rural collector system is stratified into two subsystems: major and minor collectors. Major collectors provide service to any county seat not on an arterial route. They also serve larger towns not accessed by higher order roads, and important industrial or agricultural centers that generate significant traffic (but are avoided by arterials). Rural major collectors accounted for 10.9 percent of total U.S. miles in 1997. They carried 20.2 percent of rural traffic and 7.9 percent of total travel in the United States.

Rural minor collectors are spaced at intervals, consistent with population density, to collect traffic from local roads and to insure that all urbanized areas are within a reasonable distance of a collector road. The rural minor collector system accounted for 6.9 percent of total U.S. mileage in 1997. These roads carried 5.3 percent of rural traffic and 2.1 percent of total travel in the United States.

In urban areas, the collector system provides traffic circulation within residential neighborhoods and commercial and industrial areas. Unlike arterials, collector roads may penetrate residential communities, distributing traffic from the arterials to the ultimate destination for many motorists. Urban collectors also channel traffic from local streets onto the arterial system. In 1997, the urban collector network accounted for 2.2 percent of U.S. road mileage. It carried 8.04 percent of urban traffic and 4.9 percent of total U.S. travel.

Local roads represent the largest element in the American public road network in terms of mileage. For rural and urban areas, all public road mileage below the collector system is considered local. Local roads provide basic access between residential and commercial properties, connecting with higher order highways. In 1997, rural local roads represented 54.1 percent of total U.S. road mileage. Local roads carried only 11.5 percent of rural traffic and 4.5 percent of total travel in the United States. Urban local roads, meanwhile, accounted for 14.9 percent of total U.S. road mileage, 14.3 percent of urban traffic, and 8.7 percent of total U.S. travel.