

Separated Bike Lanes v. Shared Use Paths

[Note that there will be an overall introduction to the facilities paper that lays groundwork for these two sections and the SSRs, ABLs and dual bikeway sections.]

Once the decision to provide physical separation from traffic is made, practitioners must then determine whether to provide a separated bike lane or a shared use path. Separated bike lanes and shared use paths are both critical components of low-stress bicycling networks that are designed to appeal to all ages and bicycling abilities. Both increase the safety, comfort, and attractiveness of the bicycling environment by physically separating bicyclists from motor vehicle traffic, and both facilitate direct and convenient connections to destinations, transit services, and other bicycle facilities. However, each has practical differences in context, design, and application.

Separated bike lanes are an **exclusive space for bicyclists** along or within a roadway that is physically separated from automobiles and pedestrians by vertical and horizontal elements. Separated bike lanes may be constructed as a one-way pair located on both sides of the street in the direction of travel, or they may be constructed as a two-way bikeway. Two-way separated bike lanes can also be constructed in the center of a two-way street; however, this design is generally not preferred because it creates more potential points of conflicts between turning automobiles and bicycles, separates bicyclists from destinations along the roadway, and places bicyclists between opposing directions of traffic. Space constraints will often dictate which facility is feasible in retrofit situations where moving curbs or expansion of the right-of-way is not possible. Design considerations for separated bike lane configurations are addressed in the facility toolkit to be developed by Toole Design Group.

Shared use paths provide a **shared space for all non-motorized users** (e.g., people bicycling, walking, jogging, skating, etc.). They are often referred to as sidepaths when parallel to a roadway within the right-of-way or trails when located along another alignment. Shared use paths provide for two-way travel in all cases and are often marked with a centerline to distinguish directionality.

Recommendations for Montgomery County

The decision to provide a shared or separate space for pedestrians and bicyclists should be supported by a planning process to analyze benefits and tradeoffs, facility configuration, and feasibility given corridor constraints. The following discussion outlines the critical considerations for choosing between a separated bike lane and shared use path facility.

Pedestrian demand along the study corridor should be the **primary consideration for practitioners**. Just as separation from automobiles enhances safety and comfort for people bicycling and driving, separation between people walking and bicycling may be necessary to eliminate potential conflicts and maintain a comfortable and attractive facility. Where observed or anticipated pedestrian demand is low, conflicts between people walking and bicycling may be infrequent. In this situation a shared use path may comfortably and safely satisfy both bicycle and pedestrian demand. Where pedestrian volumes are observed or anticipated to be high, separate facilities should be provided for bicyclists.

The density and land use of the surrounding environment is closely related to pedestrian demand. Providing separated bike lanes and sidewalks is recommended along “main street” town centers and urban streets. Bicycle movements would conflict with both higher pedestrian volumes in these areas as well as the meandering and stop-and-go pedestrian movements associated with urban areas (e.g., socializing, shopping, dining outdoors, accessing transit or on-street parking, etc.). In urban areas, storefronts and other building entryways open directly to the sidewalk, further necessitating separate pedestrian and bicycle spaces. In Montgomery County, this will apply to commercial and higher-density mixed use areas and those around major transit facilities.

This guidance is already being followed in small area network plans for urban areas of the County such as Bethesda, White Flint and Silver Spring. Right-of-way outside the curb will also likely be more constrained in built-out urban areas and may weigh heavily in facility decisions; however, creating a comfortable facility for both bicyclists and pedestrians should remain the primary consideration.

Land uses in suburban and lower-density communities are more spread out, which reduces demand for walking and, subsequently, conflicts with people bicycling. Shared use paths may be appropriate in these contexts. Single-use residential areas, even those that are somewhat more dense, are especially more well-suited for a shared use path application because the lack of nearby destinations will lead to fewer short walking trips. Even in corridors with bus service where pedestrians will board and alight on the path, pedestrian volumes will most likely be low and sporadic enough to avoid frequent conflicts with bicyclists.

Characteristic ¹	Shared Use Path (SUP)	Separated Bike Lane (SBL)
Estimated or Anticipated Pedestrian Volumes	Lower pedestrian volumes	Higher pedestrian volumes
Character	Less dense development, especially suited in rural areas or bounding undeveloped land	More dense development, especially commercial and mixed-use

Example Application in Montgomery County: Falls Road

Falls Road is a two-lane arterial in the southwestern portion of Montgomery County. It connects MacArthur Boulevard at the western end to Maryland Avenue at the eastern end approaching downtown Rockville. The street expands to a median-separated four-lane cross section as it approaches I-270 and narrows again on the approach to Rockville.

¹ An additional criterion often raised is the presence and frequency of driveway crossings. Both separated bike lanes and shared use paths can be designed to standards that minimize and mitigate conflicts between bicyclists and drivers at these crossings. Drivers entering/existing driveways may encounter bicyclists along the road edge in bike lanes or in a shared lane situation as well. Driveway frequency may, however, be one criterion when choosing a side of the street for construction of a two-way separated bike lane or a shared use path. This must be weighed against bicyclists’ access to the destinations for which the facility is constructed in the first place.

The posted speed limit is 35 mph, and shoulder width on both sides of the road varies frequently between approximately one to four feet. These characteristics make Falls Road rate a high stress road today. A substandard width shared use path exists on Falls Road from MacArthur Boulevard to River Road. Another, wider section of shared use path exists from Dunster Road to Wooton Parkway. These two facilities provide a lower stress bicycling environment in those segments, but they are disconnected.

Land use is primarily single-family residential (fronting on side streets) along its approximately seven-mile length, with the exception of the commercial center at Potomac Village and interspersed school, religious and recreational uses (e.g., Falls Road Golf Course, Falls Road Park). Pedestrian volumes are low along the corridor; little commercial use is located nearby that would generate short pedestrian trips except in Potomac Village and the existing shared use paths for recreational use. Pedestrian volume is also likely to be generated along the corridor would RideOn buses 47 and 56 close to Rockville, and WMATA bus T2 from River Road north.

Providing a low-stress connection here would enable bicyclists to access the destinations mentioned above and to access the connecting shared use path network. Given the pedestrian demand, density and land use, and roadway characteristics, a shared use path is the appropriate treatment in this location, not a separated bike lane.