On-road bikeway facilities are also viable and important means of transportation if developed to acceptable standards. Importantly, promoting the use of trails and on-road bikeways for transportation will only be successful if the system is perceived as safe and convenient relative to a user's skill level. Without such a system, residents will simply use their vehicle.

Trail Classifications

The system plan consists of a variety of trails, bikeways, and sidewalks defined under various classifications. Each classification serves a particular purpose in meeting local trail needs. The distinction between trail types is important due to the variability in their recreational value, which greatly affects the value of the system to residents and the degree to which a trail or system of trails will be used.

The classifications applied to Northfield' trail system are consistent with the MN DNR's *Trail Planning, Design, and Development Guidelines* (2007). The following table provides an overview of the classifications for trails in Northfield. Each of these classifications are further defined later in this section.

Trail Classifications

Classification	Common Guidelines	Application to Northfield
Destination Trails	Destination trails are paved trails for walking, jogging, bicycling, and in-line skating located within a greenway, open space, park, parkway, or designated trail corridor.	Destination trails will be the backbone of the greenway-based trail system that loops the city and connects to adjoining communities and college campuses.
Linking Trails	Linking trails emphasize safe travel for walking, jogging, bicycling, and in-line skating to/from parks and around the community. Linking trails are most often located within road rights-of-way or utility easements.	Linking trails will be primarily used as a means to connect neighborhoods and developed areas to the destination trail system, and provide safe routes to schools.
Sidewalks	Sidewalks emphasize safe travel for walking and jogging within residential areas and business districts and to/from parks and around the community. Although biking and in-line skating are allowed on sidewalks, the narrower width and concrete surface limit their use for this purpose. Sidewalks are most often located within road rights-of-way of a local street.	Sidewalks work in concert with linking trails and are primarily used as a means to connect neighborhoods and developed areas together and to the destination trail system, as well as provide safe routes to schools.
Natural Trails	Nature trails are commonly used in areas where natural tread is desired and harmony with the natural environment is emphasized. Use is limited to hikers and joggers in Northfield.	Natural trails will be primarily used in nature areas and as secondary connections to the destination trail system, especially within a preserved natural area or conservation easement.
On-Road Bikeways	Bike routes and lanes are on-road facilities that primarily serve fitness and transportation bicyclists and in-line skaters, as well as recreationalists with a higher skill and comfort level being around automobiles.	Bikeways augment, but do not take the place of, the trail and sidewalk system.

Character and Value Comparison Between Trail Classifications

Each of the trail classifications defined above:

- Accommodate specific types of trail users
- Provide a certain type of recreational experience and value to pedestrians, bicyclists, in-line skaters, and wheelchair users
- Are located in a specific type of setting appropriate for the activity
- Follow design guidelines that allow for a safe and enjoyable use of the facility

The following table considers the expectations of the most common types of trail users in Northfield, and the values and preferences that are likely to be of most importance.

Values and Preferences of Trail User Groups

User Group	Values and Preferences	Symbols
Family Group – Various Modes	Safety and convenience are top priorities, followed by a pleasant recreational experience. Controlled, traffic-free access to sidewalks and trails is preferred. Length of trail is less important than quality of experience. Will typically only use low-volume residential streets when biking or skating, and rarely busy streets even with bike lanes or routes.	 Family
Recreational Walker, Bicyclists, and In-Line Skater	Same as family user group, with trail continuity and length also being important for repeated use. 20 miles of connected trails are needed for bicyclists, at a minimum. This user group is also more comfortable with street crossings. Bicyclists and in-line skaters will use roads that are not too busy. Loops are preferred over out-and-back routes for variety.	 Recreational
Fitness Walker/ Jogger, Bicyclists, and In-Line Skater	Length of trail and continuity are most important, although an appealing setting is also desired. Bikers are reasonably comfortable on busier roads, but prefer bike lanes/routes to provide separation from vehicles. Bikers will often use a combination of roads and trails to create a desirable loop, which is much preferred over out-and-back routes.	 Fitness
Transportation Walker, Bicyclists, and In-Line Skater	Directness of route is important. Will use a combination of sidewalks, trails, residential streets, and roads that are relatively safe, convenient, and direct. Bike lanes/routes are preferred on busy roads to improve safety. Bicyclists are not overly dependent on trails, but will use them if convenient and not too heavily used by families and recreational users, who tend to slow them down. Walkers need a trail or sidewalk.	 Transportation

Figure 4.2 provides a comparative analysis of each of the trail classifications highlighted in the table on the previous page relative to the values and preferences of the various user groups defined in the above table.

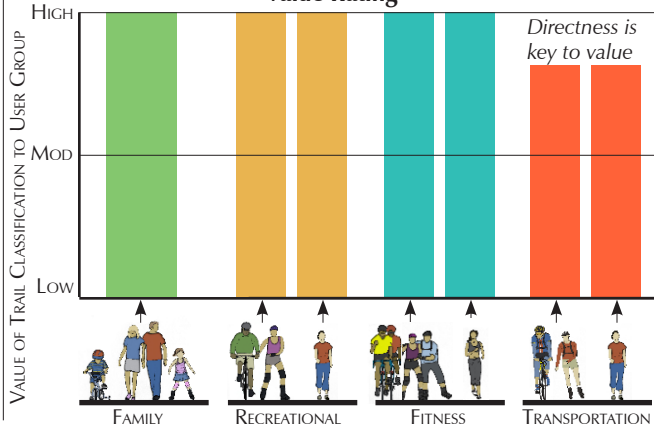
Figure 4.2 – Comparative Analysis of Trail Classifications Relative to User Group Values and Preferences
Source: Brauer & Associates, Ltd. –Trail Values and Preferences Handbook

Destination Trail – Greenway Setting

Value Statement

Desirable and safe environment for family and recreational outings in appealing setting away from traffic and distractions. If continuity is provided and design standards adhered to, also serves fitness users very well. Sometimes lack of directness reduces value to transportation user.

Value Rating

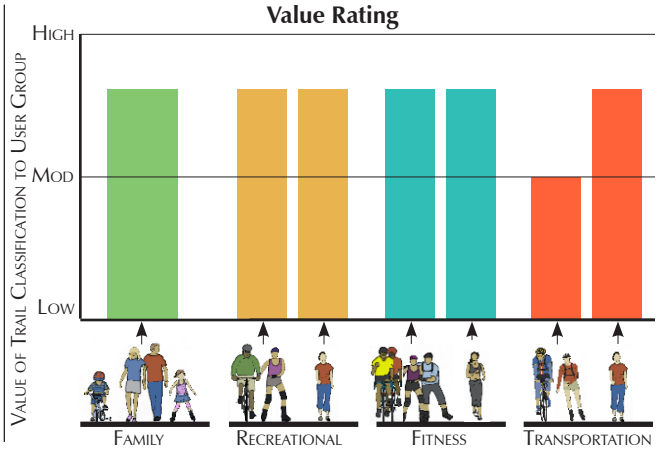


Destination Trail – Parkway Setting

Value Statement

Desirable and safe environment for family and recreational outings in appealing setting. Can be of lower recreational value due to proximity of traffic, increased frequency of road crossings, and distractions like noise. Bicyclist transportation users will often stay on the road, so the trail has less value to them.

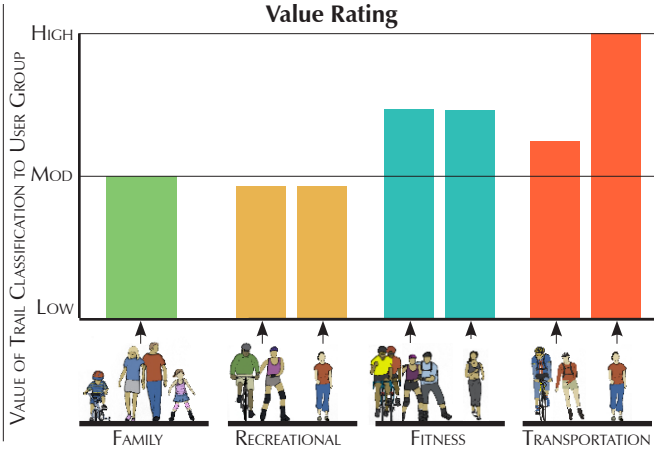
Value Rating



Linking Trail – Road Right-of-Way Setting

Value Statement

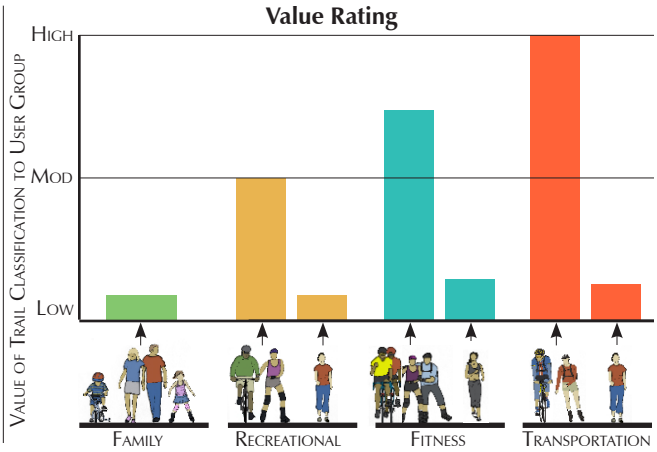
Provides safe and often convenient travel for families, but recreational value diminishes as separation from traffic decreases and traffic volumes increase. If continuity is provided, still has value to fitness and transportation users getting from one place to the next.



On-Road Bikeway – Bike Lane and Bike Routes

Value Statement

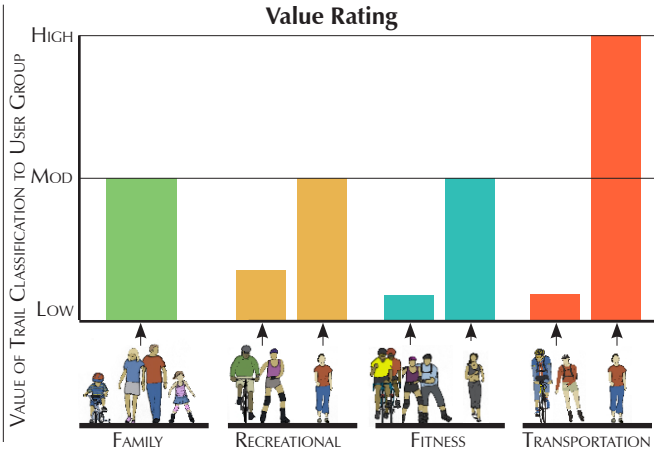
Families will rarely use for perceived safety reasons. Recreational users will occasionally use as a means to connect to another trail or less-busy street. Fitness and transportation users will use if convenient and direct. Meeting desirable design standards is important.



Sidewalk

Value Statement

Families will use to get to a park, trail, or around the neighborhood, as is the case with recreational walkers. Less friendly to family bikers. Recreational bicyclists and in-line skaters will use streets to avoid sidewalks. Fitness and transportation users will use which ever is most convenient.



As the comparisons illustrate, the type of trails (and resultant quality of the experience relative to expectations) provided within the system greatly affects whether or not a given targeted user group will routinely use a particular trail corridor. For example, as illustrated, a destination trail within a greenway setting has decidedly higher value to families and recreational users than that of a linking trail along a roadway or sidewalk. The important point is that quality of experience indeed matters and that any deviation from an optimal classification, alignment, and design detail will directly affect whether or not the trail system is fully successful (i.e., routinely used). The system plan presented in this section is based on this fundamental premise.