INCREASED SPEED ON UPHILL TRAVEL

On most trails it is possible to descend faster than ascend. With an electric assist, however, a cyclist can climb at a greater speed than they would otherwise. This increased climbing speed could be problematic for descending riders who are used to the greater reaction time allowed by climbers’ slower speed.

Trails can be designed to accommodate the increased climbing speed of electric mountain bicyclists with the techniques below, which will increase reaction time in general for all trail users.

- **Have the trail twist and turn; straight segments encourage higher velocities.**
- **Increase sightlines by removing vegetation.**
- **Add trail texture (roots, rocks) to increase fun and decrease speeds.**
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Trail builders have worked diligently over the past several decades to decrease the potential for user conflict on descending multi-use trails. These techniques can be applied to trails open to electric mountain bicyclists who may climb at slightly greater speeds.

One approach is to give users more reaction time by increasing visibility along the trail corridor. Removing dense vegetation at eye-level, particularly through turns, allows trail users to see each other with enough time to anticipate the encounter.

A separate method to slow down cyclists (in both directions) is to make the trail more fun and stimulating. Straight trails allow cyclists to go faster but removing these straight, smooth segments will decrease user speeds while simultaneously creating a more stimulating trail experience.

The increase in climbing speed, however, is likely not significant. In many cases, an electric mountain bicycle will allow a person with average physical fitness to climb at a speed similar to an elite-level rider; as such, a new maximum climbing speed may not be set. It is unlikely that a pedal-assist bicycle could, for example, double the current maximum climbing speed on a trail.