

NEVs and Bicycles

Creating Policies for Safety and Good Land Use in California

Purpose

The Marin County Bicycle Coalition (MCBC), in conjunction with state and national organizations, has been looking into the use of Neighborhood Electric Vehicles (NEVs) and their use within separated NEV-specific facilities and with shared-use facilities with bicycles. The use of NEVs, while still a fairly new category of transportation, is on the rise across the country. They are particularly popular in suburban and retirement communities.

We understand that NEVs have a significantly lower carbon footprint than traditional automobiles and are sometimes operated by individuals who are not able to bicycle and cannot obtain a driver's license. While these benefits are important, to ensure safety and good land use practices, MCBC feels strongly that the operation and expansion of NEV use on public roads should be restricted to relatively low speed roads, with no additional facilities needed.

Our research is based on the conclusions of the *Final NEV Transportation Plan* (2006), written for the City of Lincoln, and the *Neighborhood Electric Vehicle Transportation Plan Evaluation* (2008), written as a report to the California State Legislature as required by AB 2353 (Chapter 422, Section 1, Chapter 7), as well as research and input from the California Bicycle Coalition and members of the Association of Pedestrian and Bicycle Professionals, a national organization.

Background and Rationale

For the past century, the US transportation system has been largely designed to accommodate quick movement of motor vehicles, and up until the 1970's bicyclists were forced to share the road with all types of traffic in most circumstances. While retaining a right to the roadway is important for bicyclists, transportation engineers have spent the past several decades working on ways to safely retrofit existing roads and provide designs for new roads so that bicyclists have the safest space for sharing the road with motor vehicles. Some of the engineering has resulted in the creation of bike lanes (Class II facilities) – especially along roads where there is a relatively high flow of and/or fast moving traffic.

Bike lanes are treated as *protected* space for non-motorized vehicles. Mopeds, motor scooters, and small motorcycles are not allowed to use bike lanes under the California Vehicle Code, because of safety issues associated with speed and mass. These small, motorized vehicles use the same road space as motor vehicles. Additionally, new electric mopeds and scooters are becoming commercially available; these vehicles are also to use the same portions of the roadway as motor vehicles. Typically, this category of small, motorized vehicles are not allowed on freeways or expressways, as they cannot safely move at the same speed as motor vehicles. In almost all cases, these small vehicles travel at about the same speed as NEVs.

The Lincoln Pilot Community

The *Neighborhood Electric Vehicle Transportation Plan Evaluation* notes that during the pilot program, no crashes or injuries were reported. This is, in fact, good news. However, MCBC feels that the pilot community in Lincoln does not represent all of the challenges that NEVs will face in an urban environment elsewhere within California. In particular, we found that:

- The number of cyclists using the roads in Lincoln was significantly lower than in urban areas, and thus is not a good sample of the true numbers of cyclists that a NEV may encounter during travel. In fact, several years ago, Davis, California experimented with placing NEVs in a shared lane with bikes. After a short time, Davis abandoned the experiment concluding that it was a bad idea.
- A survey of bicyclists from the area indicated that they were not at all comfortable sharing the NEV/bike lanes with NEVs. Several indicated that they encountered “close calls” where the driver of the NEV failed to see the bicyclist ahead of them slowing, and as a result had to swerve out of the shared use lane.
- With a width of nearly five feet, NEVs cannot safely pass a bicyclist in a bike lane, as bike lanes are four feet where there is no parallel parking, and five feet where there is parallel parking. In addition, while four to five foot bike lanes may meet current Caltrans standards, bike lanes in many areas of the state may be substandard in width or may actually wider than the state standard, encouraging drivers to use them on occasion as an auxiliary lane and causing additional safety hazards for cyclists.

Conclusion

MCBC provides some final thoughts about NEVs:

- NEVs are too wide for bike lanes (55 inches on average for NEVs vs 48 inches on average for most bike lanes). In fact, the dimensions of the recently imported SMART cars can be smaller than some NEVs; thus the argument that NEVs are too small to utilize standard roads is not valid.
- MCBC and the California Bicycle Coalition believe that NEVs should share the same road space as other motorized vehicles – which is the same practice used by mopeds and motor scooters. As the maximum speed of a NEV is about 35 mph, we advocate that they should simply be treated as any other “slow moving traffic”, and occupy the right-most lane on any multi-lane road with speed limits of 35 mph or less.
- If NEV drivers act as curb huggers rather than as operators of vehicles, then they will have the same problems faced by bicyclists, with right hooks, left crosses, turning left, driveways, etc. They should simply travel in the center of the roadway.
- In a collision with a bicyclist, an NEV is much faster and heavier, so the increased risk is significant. As such NEVs should not share space in a bike lane or a shared NEV/bike lane.
- If operators of NEVs can drive in bike lanes, they may believe that they can also drive on shared-use paths (this has already been reported in Beaufort County, South Carolina). This creates additional conflicts as these Class I pathways are designated by the CVC only to be used by bicyclists and pedestrians. In fact, in Marin County, electric bicycles are not even permitted on multi-use pathways.
- Studies have shown that wider streets create conditions that encourage speeding. In addition, excess pavement reduces the soil surface area in a community, which is important for drainage and other environment consideration. As such, we are not in favor

of separated NEV lanes – which we believe is a poor choice for land use when NEVs can simply share the regular motorized travel lane.

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