TPP Bicycle-Pedestrian Chapter Additions (01-19-2018)

Bicycle Sharing System

Nice Ride Minnesota is a non-profit organization that has been operating a public bike-sharing system ~~that has been in operation~~ in the Twin Cities since 2010. The system was designed to complement the transit system and to provide convenient and affordable transportation by enabling short bicycle connections between activity centers. Beginning operations with about 700 bikes and 65 fixed parking module stations, the system grew to more than 1,800 bikes at 200 stations by 2017. In 2016 the system served more than 430,000 shared bicycle trips during the traditional April through November biking season.

Transition to a Dockless Bicycle System

As has been recently implemented in cities such as Seattle, San Francisco and Aurora, Colorado, Nice Ride Minnesota has proposed transitioning to a "dockless" bicycle sharing model. The proposal would gradually phase out the fixed-bicycle share stations, and replace them with new dockless bicycles that can be locked and parked anywhere and accessed via smart phone apps. These new bikes and sharing system are proposed to be managed by a private partner to increase the convenience, cost and accessibility to many more potential bicyclists. The expectation is that the number of shared bicycles in circulation could increase by more than five times, to 10,000 bikes or more in a just a few years. With the increased convenience and affordability the new system would offer, there may also be a downside in the added conflicts that could ensue from the vast number of bikes and currently limited designated bike parking areas in the core and surrounding cities. In order to manage these possible unintended impacts, local land use regulations will need to address this new bicycle sharing technology.

Protected Bikeways

Protected bikeways are on-street or off-road bicycle facilities that are physically separated from lanes of moving traffic. Formerly known as "cycle tracks" for on or adjacent-street applications, protected bikeways are typically designed to be separated from general traffic lanes with vertical elements such as plastic or concrete bollards, or an elevated curb. These urban street treatments are intended to make bicycling as safe as possible for the widest range of cyclist age and ability.

The planning, programming and construction of protected bikeways is an emerging trend in the core cities of Minneapolis and Saint Paul, and other cities and counties are beginning to follow suit. Minneapolis adopted a Protected Bikeways Plan in 2015 that called for the construction of more than 30 miles of new, protected bikeways by 2020. As of late 2017 about 10 (?) miles of protected bikeways had been constructed and opened for daily use within Minneapolis. The City of Saint Paul completed the first leg of its downtown Capital City Bikeway in 2017; the City's bike plan calls for this network to be expanded to four miles to ultimately create a full downtown protected loop with connections to incoming state and regional trails. Other local agencies like the City of Edina, and Hennepin and Ramsey Counties, along with several others,

have adopted bicycle plans that include some form of an enhanced bicycle network (including protected bikeways) and/or policies for "complete streets" road design and active transportation principles.

Growth in Purchase and ~~Operation~~ Use of E-Bicycles

E-Bicycles, or electric bikes, are an emerging trend in the Twin Cities bicycle market and are beginning to be seen on local streets and trails with some regularity. While not as universally popular as in China (where 9 out of 10 e-bikes in use around the world reside), nor as big of an expansion "boom" market as the Netherlands has experienced (up to 20% of all bike sales in recent years), there is an expectation in the U.S. that it is only a matter of time before e-bikes catch on as a highly-regarded option for commuting, off-road adventure cycling or bicycle touring. Already popular among retiring baby boomers who just want an occasional power assist in the pedaling stroke to climb hills or navigate more efficiently alongside vehicles, the newest trends in e-bike design features are targeted for the daily commutes of younger generations. While up-front cost remains relatively high ($1,600 to $4,000 and up) the operational costs compared to those of typical auto ownership are low enough that e-bikes tend to pay for themselves within their useful lives. As average prices decline over time, the clean energy benefits of e-bikes will attract the carbon-footprint consciences of millennials and younger generations. In addition, as advancing smart vehicle technologies are incorporated into e-bike designs and options, bicycling via e-bike can be made safer (thru advance obstacle or oncoming vehicle warnings) and more convenient (from options like a "no sweat mode" that can apply power assist in response to a cyclist's heart rate). All of these factors point to growing numbers of cyclists who may opt for e-bikes over conventional bicycles.

What e-bikes will ultimately mean for regional and local bicycle planning remains to be seen, but there are a few potential changes, to who and how one bikes in the future, that can be surmised:

- Upper age limits for healthful biking will be extended
- Average commute or bicycle trip distance will increase due to higher average speeds with less energy expended
- More demand for on-street bicycle facilities may result due to higher levels of confidence and safety from more people having the means to maintain bike speeds closer to average vehicle speeds
- Daily bicycle routes become more direct, especially in hilly areas, now that most anyone can ride with ease over long, steep hills
- Greater need to manage/enforce speed limits of off-road trails and/or need to legislate greater separation of bikes and pedestrians

Winter Cycling is a "Thing"

As one of the coldest metro areas in North America, the Twin Cities has been referred to as the "nerve center" of winter biking in the United States. While detailed statistics have not yet been compiled for the region, there are other notable indications that winter cycling is alive and thriving in the Twin Cities. Spurred by the local innovation of the fat tire bike circa 2005, and subsequent locally-developed winter-specific bicycle gear, parts and cold-weather apparel, a vital urban cycling culture has emerged. This was most evident from Minneapolis and Saint Paul's selection to host the 4th Annual International Winter Cycling Congress held in February 2016. This event drew more than 300 city planners, engineers, and bicycle advocates and enthusiasts from around the world including nations such as Finland, Sweden, and the Netherlands. In addition, local events have been springing up in recent years that celebrate the thrill of winter cycling, such as the Winter Bike Expo, Fatbike Frozen 40, and Fat Tire Loppet, which draw several hundred winter biking enthusiasts from casual riders to everyday commuters and hard-core competitors. With increasing numbers of winter cyclists who will continue to rely on well-maintained bicycle facilities for transportation throughout the year, it will be imperative for all road authorities to provide timely snow and ice removal along the most depended on winter bikeways.

Regional Bicycle Transportation Network Implementation Status

As this is the second Transportation Policy Plan to include the RBTN as the established regional network, it is appropriate to begin to monitor progress on its implementation. This performance measure may be adjusted over time, but for this TPP edition, Table X shows the centerline miles of existing and planned RBTN alignments and corridors.

Table X. RBTN Implementation Status (to be updated)

RBTN Category	On-Street	Off-Street	Unknown	Total
RBTN Alignments (miles)	-	-	-	1040
Existing bikeways	248	625	37	910
Planned bikeways	?	?	?	?
RBTN Corridors (planned)	—	—	413	413
Total RBTN centerline miles	?	?	413	1453

Pedestrian Safety

Pedestrians are the most vulnerable travelers on our transportation network and they include many different types of people: children walking to school, people with different disabilities that may require them to roll in a wheelchair or use another mobility device or use a cane or a guide dog, older people, among many others. Planning for safe accommodations throughout the year should be routine. Tools like Pedsafe can help select appropriate infrastructure treatments for people on foot or using mobility devices. The Federal Highway Administration has also identified four pedestrian-related proven safety countermeasures: medians and pedestrian crossing islands in urban and suburban locations, road diets, leading pedestrian intervals, and pedestrian hybrid beacons. Conducting a road safety audit with a pedestrian focus can help agencies identify issues and potential solutions.

FHWA Proven Safety Countermeasures:
https://safety.fhwa.dot.gov/ped_bike/

Tools including Pedsafe:
https://safety.fhwa.dot.gov/ped_bike/tools_solve/