



Department of Transportation

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Modal Priority Network Background

In 2017 the Common Council adopted “Madison in Motion” as its transportation plan (legistar 45285). The plan was useful in comparing Madison’s transportation network to that of other aspirational cities, and pointing a direction. It also provided a list of over a hundred recommendations and action items. While providing a direction, Madison in Motion did not provide sufficient guidance on when and how to incorporate treatments into streets. It also provided limited guidance on which modes would take priority and where. Consequently when streets were reconstructed, the decision about how to accommodate each mode was deliberated with each project.

To address this, the Complete Green Streets study was incorporated in Transportation’s budget to “*inform and direct implementation of the Complete Streets framework*”. The request for proposals included the following desired outcomes:

- *Establishing a modal hierarchy.*
- *Developing a street typology that addresses modal function of streets, with the goal of providing a complete network for each mode. The typology should identify how modes are prioritized by street within the available right of way.*

The modal hierarchy and typology (or modal priority networks) were key deliverables for the project.

Modal Priority Networks (Typology)

A high quality, safe multimodal transportation system consists of several networks, each of which serve a particular transportation mode. Together these form a system of complete networks that are well connected, safe and reliable for every mode. A network approach helps to balance the needs of all users. Understanding that it is impossible to make every street perfect for every type of traveler, Complete Streets networks create an intertwined collection of streets that emphasize different modes to ensure Madison is a safe, high-quality, accessible transportation facilities for everyone. Modal Priority Networks (or typology) prioritize the safety and convenience of a specific transportation modes in specific corridors and require trade-offs in the street design and operation for other modes.

Complete Streets is often seen as simply adding bike lanes and sidewalks to every street but in ways that do not affect traveling by motor vehicle. However, Complete Streets considers people first and requires a fundamentally different approach to street design that enable safe access for all users with physical alterations to the roadway network. The Modal Priority Network helps achieve connectivity across the transportation network for all users and plays a critical role in implementation of the City’s Complete Streets policy.

Establishing a bike priority network also has ancillary benefits when applying for state and federal grant funding. Often being on a bike plan network is a prerequisite, or a supporting characteristic, for the funding being pursued. Similarly, the City of Madison shares jurisdiction of connecting highways with WisDOT. A bike priority network helps Madison advocate for protected accommodations on streets with shared jurisdiction.

In previous TPPB meetings discussing the Modal Priority Network, two modal priority networks were included: Bike Priority Network and Transit Priority Network.

The Bike Priority Network influences design in these ways:

- These are the streets considered most critical for creating a complete network. They are a “line in the sand” when it comes to tradeoffs.
- Streets on the network designed for all ages and abilities.
- Removal of on-street parking, creating Bike Boulevard with traffic diversion, etc.

For streets NOT on the Bike Priority Network:

- Modal Hierarchy still applies.
- Street designs should still try to achieve all ages and abilities conditions, but tradeoffs may have to be made that favor other modes or street uses.
- Goal is for most streets to be bike-friendly.

Future bike plan updates will trigger changes to the CGS Bike Priority Network.

The Transit Priority Network is based on Metro Transit high-frequency routes. The Transit Priority Network would include the Bus Rapid Transit routes and other routes with 15-minute frequency.

1. Option 1: Bicycle Priority Network & Transit Priority Network (could also be called All Ages Ability (AAA) Bicycle Network and High Capacity Transit Network)

The Bicycle Priority Network identifies streets and paths that provide a complete bike network between neighborhoods, key destinations within the City and to the adjacent municipalities. A continuous network is essential for bicyclists of all ages and abilities to travel throughout the City and is critical in increasing trips made by bike by a diversity of users.

The design of facilities on the Bicycle Priority Network will consider the speed and volume of the different types of traffic along a corridor. As the volume and speeds increase, separation between bicycles and motor vehicles needs to increase to ensure the route is safe and comfortable for all users. This means that the Bicycle Priority Network will primarily be protected bike lanes, paths, and low volume local streets.

Streets not on the Bicycle Priority Network are also important to support safe bicycling throughout the City. Streets not on the Bicycle Priority Network will be built to the lowest stress level possible. This map helps ensure that the key corridors needed to have a connected All Ages and Abilities bike network are identified and prioritized.

The Bicycle Priority Network map serves as a long-term planning level document and is an aspirational concept for a complete system. When the network is completed, it will improve bicycle connectivity for a broad range of users enabling everyone to travel by bike. This map helps focus efforts towards improving the most important roads for safe connectivity and provides guidance for City infrastructure projects and with working with WisDOT to improve bicycle facilities. As mention, it also serves as a tool for upcoming grant applications. The Bicycle Priority Network map will be updated regularly including during Bicycle Plan updates and neighborhood plan updates.

The Transit Priority Network identifies Metro Transit high-frequency routes that serve as the key corridors in providing high quality transit service throughout the City. The Transit Priority Network includes the Bus Rapid Transit routes and other routes with 15-minute frequency. The Transit Priority Network updates will be based on changes to Metro Transit routes and frequency.

2. Option 2: Modal Priority Networks that include Transit, Bicycle and Pedestrian

- Transit Priority Network (or High Capacity Transit Network) – See Option 1
- Bicycle Priority Network (or All Ages Abilities Connected Bicycle Network) – See Option1
- Accessible Pedestrian Network or Enhanced Pedestrian Zones (or Pedestrian Priority Network for consistency) – Options below

Option A: Pedestrians are the highest priority in the modal hierarchy and safe, accessible facilities will be included with all projects. The Accessible Pedestrian Network defines the gaps and shortcomings in the pedestrian network where focused investments are most needed to improve the ease, accessibility and safety of people walking. The highest priority locations improve access to transit, schools, colleges, libraries, parks, employment, shopping areas and other important destinations. Consideration is also given to areas with low car ownership and large populations of non-drivers.

The Accessible Connected Pedestrian Priority Map will be mapped and prioritized during the next Pedestrian Plan update and will be updated regularly when the Pedestrian Plan is updated and as part of neighborhood plan updates. The Imagine Madison Tier One sidewalk gap map is included with the Complete and Green Streets plan as the starting point for that planning.

Option B: Pedestrians are the highest priority in the modal hierarchy and safe, accessible facilities will be included with all projects. The Enhanced Pedestrian Zones defines areas where pedestrian accommodations need to be above the minimum street typology. This includes areas where wider spaces are needed for walking and where amenities such as pedestrian scale lighting, trees, landscaping, streateries space, benches, art and other placemaking is provided to further encourage walking. This would include shopping districts, schools, colleges, transit corridors and High Injury Network streets.

The Enhanced Pedestrian Zones will be mapped during the next Pedestrian Plan update and will be updated regularly when the Pedestrian Plan is updated and as part of neighborhood plan updates.