Ride & Stride 2050

ACTIVE TRANSPORTATION PLAN

Draft Memorandum

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Subject: Active Transportation Plan – Draft Policy Recommendations

Introduction

The MetroPlan Orlando Regional Active Transportation Plan (ATP): Ride & Stride 2050 identifies a variety of potential projects to promote and improve active transportation and safety for vulnerable road users. This document outlines potential new policies that can be incorporated into the final plan to provide additional guidance as identified projects are further planned and refined. Specifically, this memorandum provides policy guidance on the following topics:

- ADA (Americans with Disabilities Act) Compliance
- Active Transportation Count Programs
- Micromobility Regulations
- Bicycle Facility Selection

This document is intended to help inform policies, projects and programs that will be incorporated into the Final Active Transportation Plan.

ADA Policy Recommendations

The Americans with Disabilities Act (ADA) and the Public Right-of-Way Accessibility Guidelines (PROWAG), final rule effective September 7, 2023, regulate construction within the public environment so that buildings and transportation facilities are accessible to people with disabilities. New transportation projects, from planning through construction phases, should

be assessed for compliance with these guidelines and regulations. In addition to meeting applicable ADA and PROWAG requirements, the following guidance is provided:

- **Curb ramps with truncated domes** – Projects affecting curb ramps on brick streets or brick sidewalks should provide yellow truncated domes as opposed to red truncated domes for greater visibility for those with visual impairments.
- **Continuous sidewalk** – If sidewalks are being added to any portion of a block, they should be constructed on the entire block or connect via a context-appropriate marked crossing to another pedestrian facility. If special walking surface treatments, such as bricks or pavers are used, materials that are rated for ADA accessibility should be used, as some surface treatments can create trip hazards or an uneven walking surface.
- **Transit stops** – Transit stops should be connected to the larger pedestrian network via smooth, unobstructed surfaces and should be collocated with context-sensitive marked crossings to the greatest extent feasible. The location of the closest marked and controlled crossing should be considered in the placement of new transit stops and when existing transit stop locations are evaluated. Some existing stops are also located at legal crossings that are not marked or controlled that may be candidates for crossing treatments, such as a pedestrian hybrid beacon or a rectangular rapid flashing beacon coupled with high visibility crosswalks.
- **Accessible Pedestrian Signals (APS)** – PROWAG requires Accessible Pedestrian Signals (APS) at all new or modified signalized intersections where pedestrian signals are provided. There are no requirements to implement APS at existing intersections, but jurisdictions are encouraged to prioritize APS in the following circumstances:
    - Where requested by someone with a visual impairment or other disability along a commonly traveled route
    - Where a Leading Pedestrian Interval (LPI) is in place
    - Signalized intersections near underpasses
    - Signalized crossings of on/off ramps
    - Signalized crossings at T-intersections
    - Mid-block crossings

Specific new requirements in PROWAG as related to active transportation facilities include:

- Accessible pedestrian signals are required at all new or modified signals (R206. 1).
- Crosswalk enhancements at multilane roundabout entrances or exits (R306. 4. 2).
- 48” clear width required for pedestrian access route (R302. 2).
- Dual curb ramps required at all corners (R203. 6. 1. 1).
- Transit stop boarding areas are required (R309. 1. 1).

- Detectable warning surfaces (DWS) are required at driveways with stop or yield control R205. 7).

Title II of ADA requires all jurisdictions to have ADA Transition Plans that identify ADA deficiencies and solutions to those deficiencies; all counties within the region have a published ADA transition plan, but not all jurisdictions within the region have a transition plan separate from their county plan. Guidance on how to prepare an ADA transition plan is provided from the Federal Highway Administration (FHWA). As jurisdictions prepare or update their plans and facilities, they should consider:

- Assessment of ADA infrastructure for damages, hazards, or obstacles that could impede mobility, including, but not limited to:
    - Obstacles – protruding objects or significant ponding in the travel path
    - Hazards – excessive cross slope or running slope on sidewalks or curb ramps; drop-off areas
    - Damages – infrastructure in need of repair to restore mobility, stability, and access for all users (i.e. shattered sidewalks, trip edges, loose bricks, etc.)
- Solutions to upgrade existing facilities to meet current ADA standards and remove identified obstacles, hazards, or damages, if present, as the project proceeds into the construction phase, including:
    - Schedule to implement improvements
    - Public officials responsible for implementing the plan

In addition to the schedule of improvements, jurisdictions should consider identifying potential costs and funding sources, as well as project prioritization criteria.

Active Transportation User Count Program Structure

There are opportunities to install temporary and permanent bicycle and pedestrian counters on existing and new shared use paths and trails in the region. Counters should be placed in a variety of trail and shared-use path environments such that the data collected can be used as a proxy for other locations, including locations where low-income users, older adults, users living in zero-car households, and other underserved communities tend to use active transportation.

Temporary counters are typically a combination of infrared sensors and tube counters (a tube that crosses the path of travel that senses when a bike rides over it); when counters are used along roadways, bicyclists using the roadway as well on the sidewalk or side path should be counted. Common permanent counters are a combination of infrared sensors and inductive loops. Both temporary and permanent counters can distinguish between bicycles and pedestrians and identify the direction of travel. Weather observation units can also be

included in count systems and used by the region for other purposes. Bicycle and pedestrian count programs can be beneficial for the following reasons:

- Measure use of bicycle and pedestrian infrastructure projects via before and after studies
- Capture data on bicycle and pedestrian movements in a jurisdiction
- Track seasonality of bicycle and pedestrian travel
- Plan for and accommodate demand
- Understand how trails are being used (for commuting, or recreationally)
- Support grant applications

If weather units are incorporated, there are also opportunities to provide heat alerts and other information to help people make travel choice decisions. Because many of the trails and shared use paths travel through multiple jurisdictions, it is important for local jurisdictions to report data to MetroPlan Orlando for compilation and reporting at the regional level. Having regional data allows for more comprehensive planning. It can be used to compare data across jurisdictions and help jurisdictions understand how people are traveling throughout the region.

For consistency in reporting, the following data collection guidance is recommended:

- Collect the following information: volumes, mode type, right-of-way position (path, sidewalk, bike lane, or travel lane) direction of travel, time, date, and weather.
- Publicly report data. MetroPlan Orlando can provide a centralized database for jurisdictions that report their data to MetroPlan Orlando.

Micromobility Policy

Micromobility devices are a relatively new phenomenon with their use and definition evolving over the last 10 years. Micromobility refers to a range of individual-use, light-weight vehicles[1] (typically 20" to 36" wide and 50 pounds or less, but up to 121 pounds), typically operating at speeds below 15 miles per hour, but no greater than 28 miles per hour. Mobility devices include, but are not limited to bicycles, e-bikes, e-scooters, e-skateboards, shared bicycle fleets, and electric pedal-assisted bicycles, and exclude devices with internal combustion

[1] Some micromobility vehicles are legally classified as devices rather than vehicles which affects where they can legally operate. For example, e-bikes and e-scooters with seats are defined as vehicles under Florida law and cannot be operated on sidewalks under motorized power. Stand-up e-scooters are not defined as vehicles and can be driven on sidewalks.

engines (working draft updated definition prepared by the FDOT Pedestrian and Bicycle Safety Coalition).

There are similarities between micromobility devices and traditional walk/bike modes including:

- Users of both self-propelled modes and e-bikes/e-scooters are considered vulnerable users, meaning the users of these devices are more vulnerable in a crash as they are not protected by an automobile.
- Both modes are primarily used for short trips.
- Both modes serve as first-mile/last-mile connections.

However, there are differences between traditional walk/bike modes and e-bikes/e-scooters including:

- Many e-bikes/e-scooters are owned by a third-party company and shared by users.
- Travel speeds tend to be higher on electric micromobility devices. Studies vary, but according to one Swedish study, the average self-propelled cyclist travels around 9 mph, while an average e-bike user travels around 14 mph[2]; many e-bikes have a maximum speed of 20 mph or more.
- People on e-bikes and e-scooters can travel, on average, at faster rates of speed than those on self-propelled bicycles and require additional sight distance/reaction time to stop. Additionally, the speed differential between users of micromobility devices and other people walking and using self-propelled bicycles can create the potential for hazards, especially when there is a high volume of users.
- E-bikes are typically heavier than non-electric bicycles. E-bikes can range between 40 and 80 pounds, with some e-bikes even heavier than 80 pounds, while human-powered bikes are typically 20 to 30 pounds. As the speed and weight of e-bikes increases, the greater likelihood of a serious injury or even a fatality if a person riding an e-bike collides with another vulnerable road user.

E-bikes, e-scooters, and other micromobility devices have been controversial in recent years, with concerns related to higher speeds, which can lead to injuries for both the rider and other road users and shared devices cluttering public spaces. Third-party devices are often left in the middle of the sidewalk or in private yards, which can create barriers to other people using the sidewalk, especially those with disabilities, and create visual clutter in neighborhoods. As a result of these concerns, many jurisdictions have either banned shared use mobility companies entirely or restricted their use to specific areas. The USDOT has stated that

[2]Dozza, M., Werneke, J., & Mackenzie, M. (2013). e-BikeSAFE: A naturalistic cycling study to understand how electrical bicycles change cycling behaviour and influence safety. In International Cycling Safety Conference (pp. 1–10). Helmond, The Netherlands. Retrieved from https://trec.pdx.edu/blog/are-e-bikes-faster-conventional-bicycles

"electric and adaptive micromobility devices may also increase mobility for older adults, parents with young children, or individuals with disabilities." Regulations, when applied consistently and enforced, can help manage the use of micromobility devices in our communities, including policies related to:

- Regulating speed on sidewalks and trails, based on their context, volume of users and user profiles
- Not permitting electric micromobility devices on unpaved trails
- Requiring micromobility users to yield to pedestrians
- Implementing equity requirements into shared mobility contracts
- Regulating where/how micromobility devices can be parked

Geofencing technology has proven effective in reducing speeds of shared mobility devices that travel in specified areas, as the companies that own the vehicles can lower the maximum speed of the device when it enters certain areas. Shared devices can also be programmed to not operate in specified locations, such as streets where there could be significant conflicts with pedestrians. However, it can be difficult to regulate speed and location on privately owned micromobility devices.

In addition to regulations related to the end user experience and requirements, regulations related to other factors should be incorporated, including:

- Fleet size, which can ensure that sufficient vehicles are available but not result in a fleet size that is unmanageable for the jurisdiction.
- Fleet removal/relocation to ensure there is a process to remove inoperable devices that can pose a hazard to the public, including process to remove devices from the public-right-of-way when storms with high winds and rains are forecast so devices do not impede emergency response.
- Fleet rebalancing to ensure access to devices when needed, avoid overcrowding on sidewalks and ensure equitable access to devices.
- Equipment maintenance plans to ensure that operators have plans in place to routinely maintain and inspect devices.
- Customer service information should be prominently displayed on all devices and customer service lines should be staffed in real-time during hours to be specified in collaboration with the jurisdiction.
- Pricing structures should promote equity and provide revenue shares to the jurisdiction that can be used to invest in active transportation infrastructure and safety improvements.

- Staffing and workforce development considerations should be incorporated into agreements with micromobility providers to ensure an appropriate level of on-the-ground staff to address issues and concerns.

Bikeway Selection Policy

The selection of the most appropriate bicycle facility is important to creating a network that is comfortable, improves safety, and increases accessibility by non-auto travel modes. As new facilities are being planned and existing facilities upgraded, it is important to select the most appropriate facility for the characteristics of the roadway. Public feedback as well as guidance from FHWA and NACTO discourage the placement of on-street bicycle lanes adjacent to high-speed/high-volume roadways. To aid in the selection of the most appropriate facility, the following should be considered:

- New facilities shall follow guidance from the FHWA's Bikeway Selection Guide as well as the FDOT Design Manual. In some instances, there may be trade-offs between the travel modes that need to be considered. The applicable multimodal policy of the agency/jurisdiction should be consulted to help balance competing demands. Where it is not feasible to provide the facility type recommended by FHWA and FDOT guidance, the provision of alternative and parallel routes should be considered with appropriate wayfinding.

- Unidirectional bicycling facilities are recommended adjacent to roadways as bicyclists traveling against the flow of traffic - regardless of facility type – have a greater crash risk at intersections and driveway than those traveling in the same direction as motorists. Bikeways that encourage or require cyclists to drive facing traffic should be avoided, particularly along corridors with frequent intersections and commercial driveways.

- Facility upgrades should also consider guidance from the FHWA's Bikeway Selection Guide as well as the FDOT Design Manual. During a Resurfacing, Restoration and Rehabilitation (RRR) project, there may be opportunities to enhance existing on-street bicycle lanes. As the RRR process typically includes removing and replacing all lane markings, there can be opportunities to reduce the through lane width and widen the on-street bicycle facility and/or provide a painted buffer. As agencies program RRR projects, opportunities to evaluate the target speed and implement signing, striping, traffic signals, and other low-cost improvements should be considered. These enhancements can help improve access and comfort while more expansive projects that might involve widening sidewalks or providing side-paths are planned, designed, and constructed.

- Where on-street parking exists, a 3-foot buffer should be provided between the bike lane and the on-street parking to prevent dooring collisions. Where buffer space is not available, considerations should be made to removing on-street parking or relocating the bike lane.

- Bicycle facilities should be continued through intersections. This could include dedicated bicycle facilities or connecting bicycle facilities to the adjacent sidewalk and having bicycles cross at the crosswalk. Bicycle facilities may merge with the vehicle

travel lane if the roadway is appropriate. The National Association of City Transportation Officials (NACTO) recommends the following three principles on carrying bicycle facilities through an intersection:

- Reduce turn speed – drivers are more likely to yield to a bicycle or pedestrian if traveling at a low speed, and if a collision does occur, it is less likely to result in a serious injury or fatality.
- Make bicyclists visible – It is important to maintain clear lines of sight between people driving and people on bicycles at an intersection. Setting the stop line farther back from the intersection and providing raised bicycle crossings are two strategies for making bicyclists more visible.
- Give bikes the right of way – Providing bicyclists dedicated space and right-of-way, by letting them use leading pedestrian intervals, providing bike boxes and other dedicated facilities, and restricting vehicles from turning right on red can help increase driver yielding.

Additionally, large intersections that also incorporate on-street bike lanes may need longer clearance time for bicyclists. Bicyclists entering an intersection with a crossing distance greater than 150 feet (these are common at intersections of 6+ lane roadways with a median, dual left-turn lanes and a right-turn lane) take longer to travel through the intersection than a vehicle, and can result in bicyclists still legally completing their crossing when the traffic signal for the opposing through movement has turned green, creating the potential for conflicts. The potential for conflicts can be compounded if there are large vehicles or obstructions blocking drivers' view of the intersection. At these intersections, automatic detection of bicyclists is recommended that would provide additional yellow and all-red time to allow the bicyclist to clear the intersection prior to other movements receiving a green light.