

Guidance for Selecting All Ages and Abilities Bikeways

Transportation Commission

February 27, 2025

Bicycling Comfort Discussion

Citywide, the lowest comfort levels tend to occur on streets with high traffic volumes & near school drop zones.

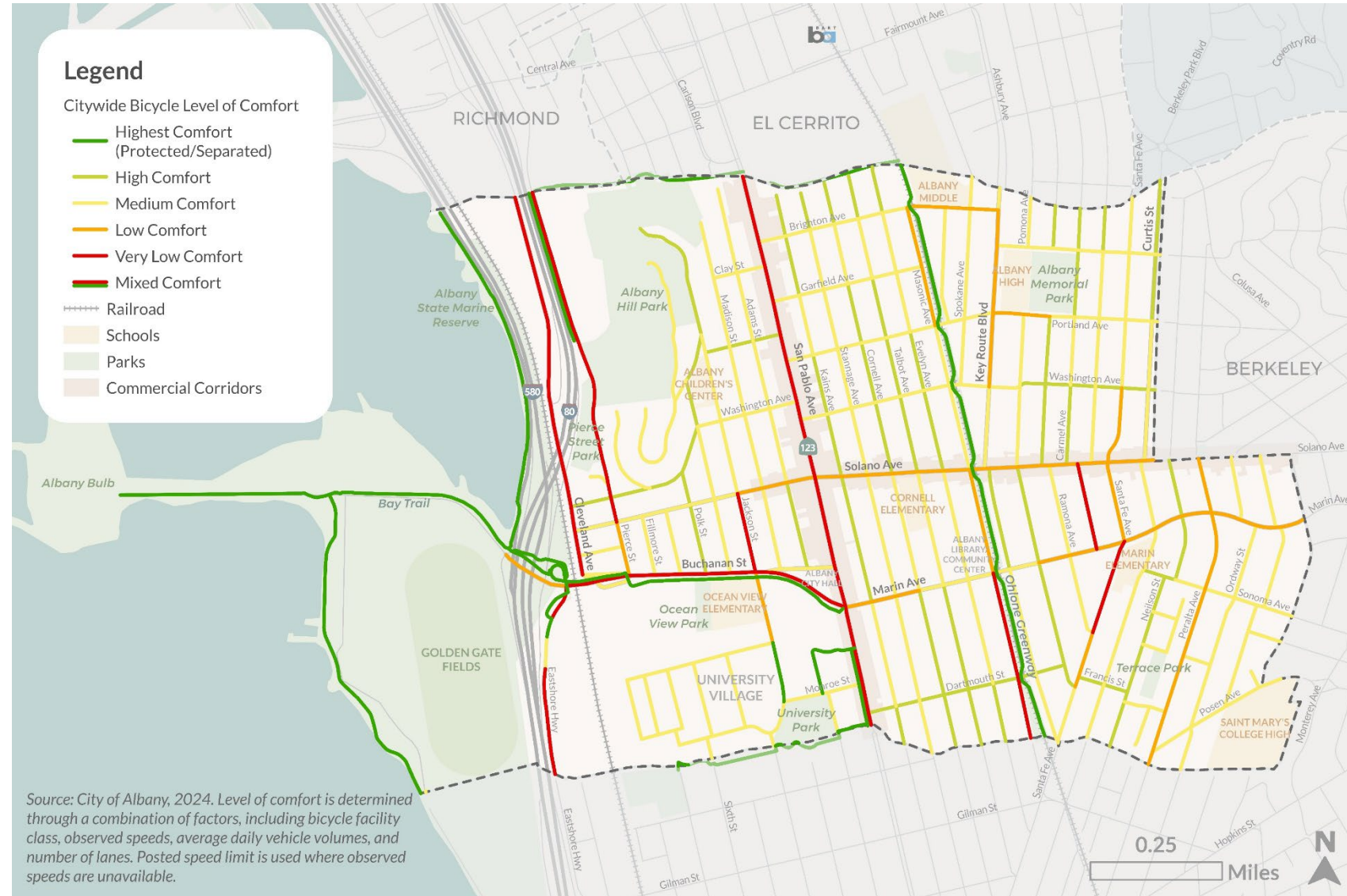
- **High Comfort:** Suitable for all ages & abilities
- **Medium Comfort:** Low traffic interaction, suitable for most adults
- **Low Comfort:** More traffic interaction, suitable for some adults
- **Very Low Comfort:** Only for “strong & fearless” riders



Bicycling Comfort Discussion

Citywide, the lowest comfort levels tend to occur on streets with high traffic volumes & near school drop zones.

- **Highest Comfort:** Separated, suitable for all ages & abilities
- **High Comfort:** Suitable for most ages and abilities
- **Medium Comfort:** Low traffic interaction, suitable for most adults
- **Low Comfort:** More traffic interaction, suitable for some adults
- **Very Low Comfort:** Only for “strong & fearless” riders

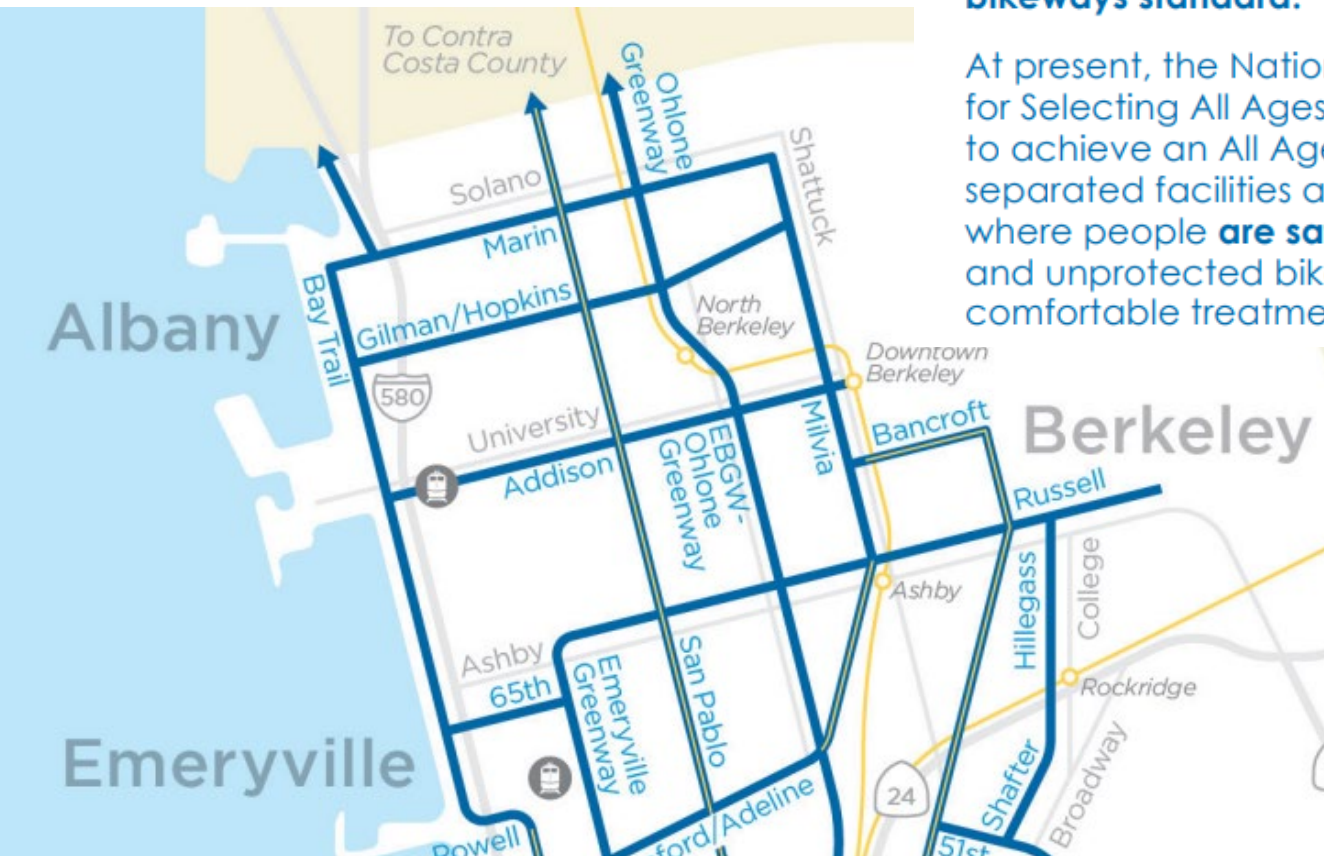


Alameda County Transportation Commission

A NETWORK FOR ALL AGES AND ABILITIES

To achieve a truly safe, comfortable, and high-quality Countywide Bikeways Network, in December 2022 the Commission adopted a resolution setting an All Ages and Abilities bikeways standard.

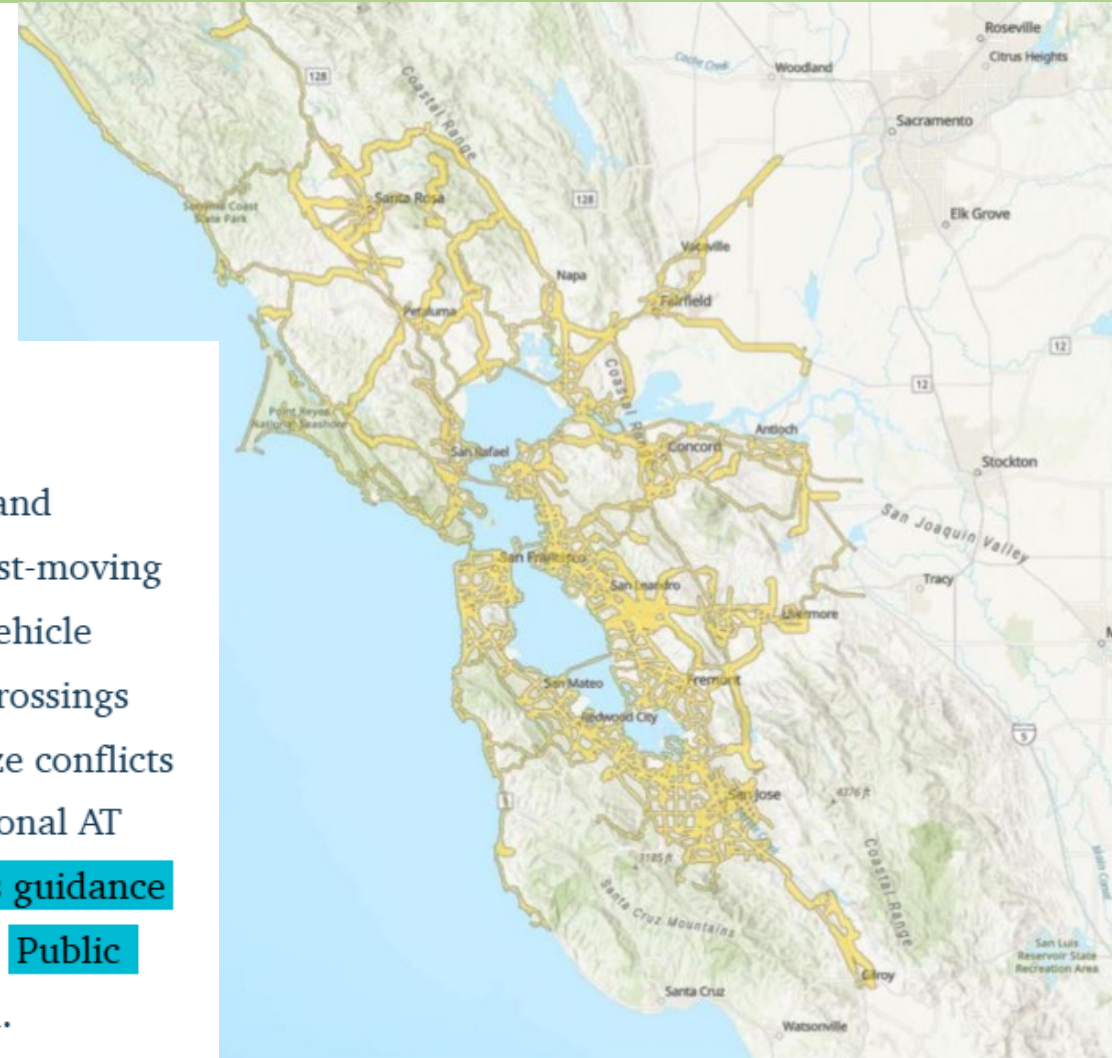
At present, the National Association of City Transportation Officials' Contextual Guidance for Selecting All Ages and Abilities Bikeways provides the best context sensitive guidance to achieve an All Ages and Abilities standard. This guidance requires protected or separated facilities along major arterials and collector streets, providing an environment where people **are safe and feel safe on the Countywide Bikeways Network**. Striped and unprotected bike lanes (bike boulevards or neighborhood bikeways) are safe and comfortable treatments on low volume and speed streets.



Metropolitan Transportation Commission

A Network for All Ages and Abilities

An all ages and abilities (AAA) active transportation network is safe, comfortable, and equitable for all users. In an AAA network, facilities separate people biking from fast-moving vehicles and high volumes of motor vehicle traffic, and reducing excessive motor vehicle speeds. A pedestrian AAA network requires fully accessible sidewalks and street crossings (per the Americans with Disabilities Act) that provide separation from and minimize conflicts with vehicles. If a project seeking funding or endorsement from MTC is on the regional AT Network, it is expected to incorporate design principles based **all ages and abilities guidance** issued by National Association of City Transportation Officials (NACTO), as well as **Public Rights-of-Way Accessibility Guidelines** (PROWAG) issued by the U.S. Access Board.



The Regional Active Transportation Network

NACTO

Contextual Guidance for Selecting All Ages & Abilities Bikeways				
Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts†	Protected Bicycle Lane
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	Shared Street
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	Bicycle Boulevard
≤ 25 mph	≤ 500 – 1,500	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 1,500 – 3,000			Buffered or Protected Bicycle Lane
	≤ 3,000 – 6,000			Protected Bicycle Lane
	Greater than 6,000			
	Any	Multiple lanes per direction		
Greater than 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce Speed
		Multiple lanes per direction		Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	Greater than 6,000	Any	Any	Protected Bicycle Lane, or Bicycle Path
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		Any	High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low pedestrian volume	Shared-Use Path or Protected Bicycle Lane

Source: Designing for All Ages & Abilities: Contextual Guidance for High-Comfort Bicycle Facilities, NACTO, December 2017.

NACTO



Low-Speed Shared Streets allow bicyclists to comfortably operate across the entire roadway. Shared streets target very low operating speeds for all users, typically no greater than 10 mph. The volume of people walking and bicycling should be much greater than vehicle volume to maintain comfort. Issues for bicycling in shared environments arise from conflicts with people walking, who may be expected at any point across the street's width. Materials and street edges must be appropriate for bicycling; materials are often varied to delineate road space, but any seams or low mountable curbs must be designed to avoid creating fall hazards for bicyclists.



Bicycle Boulevards (or neighborhood greenways) provide continuous comfortable bicycle routes through the local street network. Bike Boulevards are characterized by slow motor vehicle speeds and low volumes. Sometimes these are present by the very nature of the street and its function (e.g. narrow streets with no major destinations), but sometimes design work is needed, such as adding traffic calming elements, filtering most motor vehicle traffic off, and/or prioritizing bicycles at major and minor street intersections. In this way, bicycling is made comfortable across the entire roadway. Directional markings and wayfinding signage provide riders with intuitive, coherent routing.

NACTO



Buffered & Conventional Bicycle Lanes provide organized space for bicycling, and are often part of street reconfiguration projects that improve safety and comfort for all users. Bicycle lanes are an important tool to improve comfort and safety on streets where the number of passing events is too high for comfortable mixed-traffic bicycling, but where curbside activity, heavy vehicles, and lane invasion are not significant sources of conflict. Buffered bike lanes are almost always higher comfort than conventional bike lanes. In many cases, cross-sections with room for buffered bicycle lanes also have room for protected bicycle lanes.



Protected Bicycle Lanes (also known as Separated Bike Lanes or Cycle Tracks) use a combination of horizontal separation (buffer distance) and vertical separation (e.g. flex posts, parked cars, or curbs) to protect people bicycling from motor vehicle traffic. The combination of lateral buffer distance and vertical separation elements (such as flexible delineators, curbs or height differences, or vehicle parking) can ameliorate most of the stressors of on-street bicycling. The robustness of bikeway separation often scales relative to adjacent traffic stress.

NACTO



Cultural Trail, INDIANAPOLIS
(photo credit: Green Lanes Project)

Shared-Use & Bicycle Paths have in many cities served as the early spines of an All Ages & Abilities network. Paths can provide a continuous corridor, but usually do not take riders to their destinations. High pedestrian volumes, driveways, obtrusive bollards, sharp geometry, and crossings all degrade bicycling comfort, but often require long project timelines to eliminate. To become useful for transportation, paths work best when connected to an on-street network that meets the same high benchmark of rider comfort, and design provides bicycle-friendly geometry. Ideally, bicycles should be separated from pedestrians where significant volume of either mode is present, but where space limitations exist, multi-use paths are still valuable.

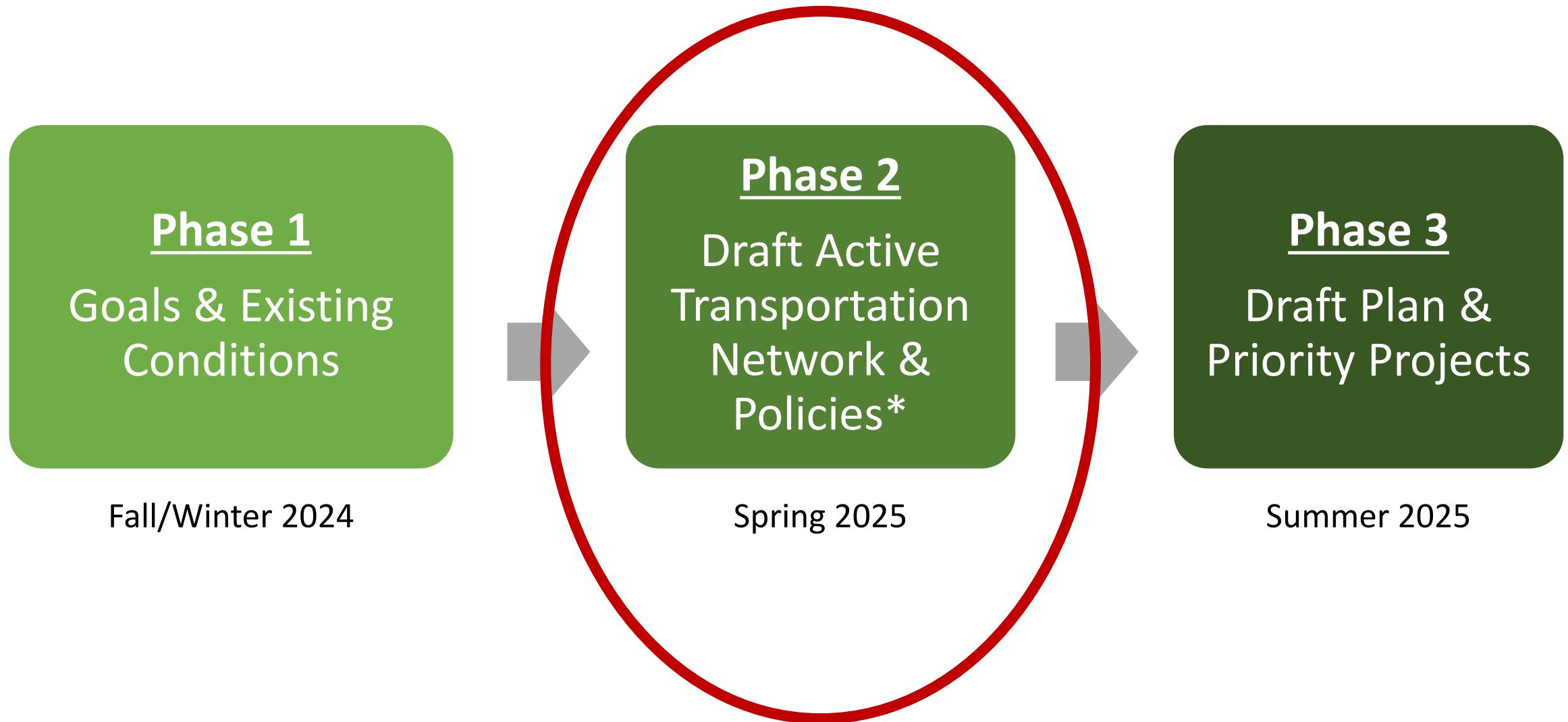
NACTO



GUIDANCE FOR SELECTING ALL AGES & ABILITIES BIKEWAYS

Bikeway	Target Motor Vehicle Speed	Motor Vehicle Volume per day	Motor Vehicle Volume Peak Hour in Peak Direction
Protected Bike Lane	Any	Any	Any
Shared Spaces	≤10 mph ≤15 km/h	≤ 1,000	≤60
Bicycle Boulevard	≤ 20 mph ≤ 30 km/h	≤ 500 - 2,000	<50-150
Advisory Bike Lane	≤ 20 mph ≤ 30 km/h	≤ 500-2,000	<50-150
Constrained Bike Lanes	≤ 20 mph ≤ 30 km/h	≤ 1,500-3,000	≤ 300
Constrained Bike Lane <i>with Buffer</i>	≤ 25 mph ≤ 40 km/h	≤ 6,000	≤ 600

ATP Update Process





Questions?