TPPB COMPLETE GREEN STREETS UPDATE

8/15/2022

TOOLE DESIGN

EQT by design

ELEMENTS DISCUSSED TODAY

- **Modal Hierarchy** – reflects community values and illustrates the order in which various street users and uses are accommodated by default
- **Modal Priority Networks** – overlays that prioritize different modes, forming a system of complete networks that are well connected, safe and reliable
- **Street Types** – context-based starting points for street design that span the spectrum of current and future streets in Madison.

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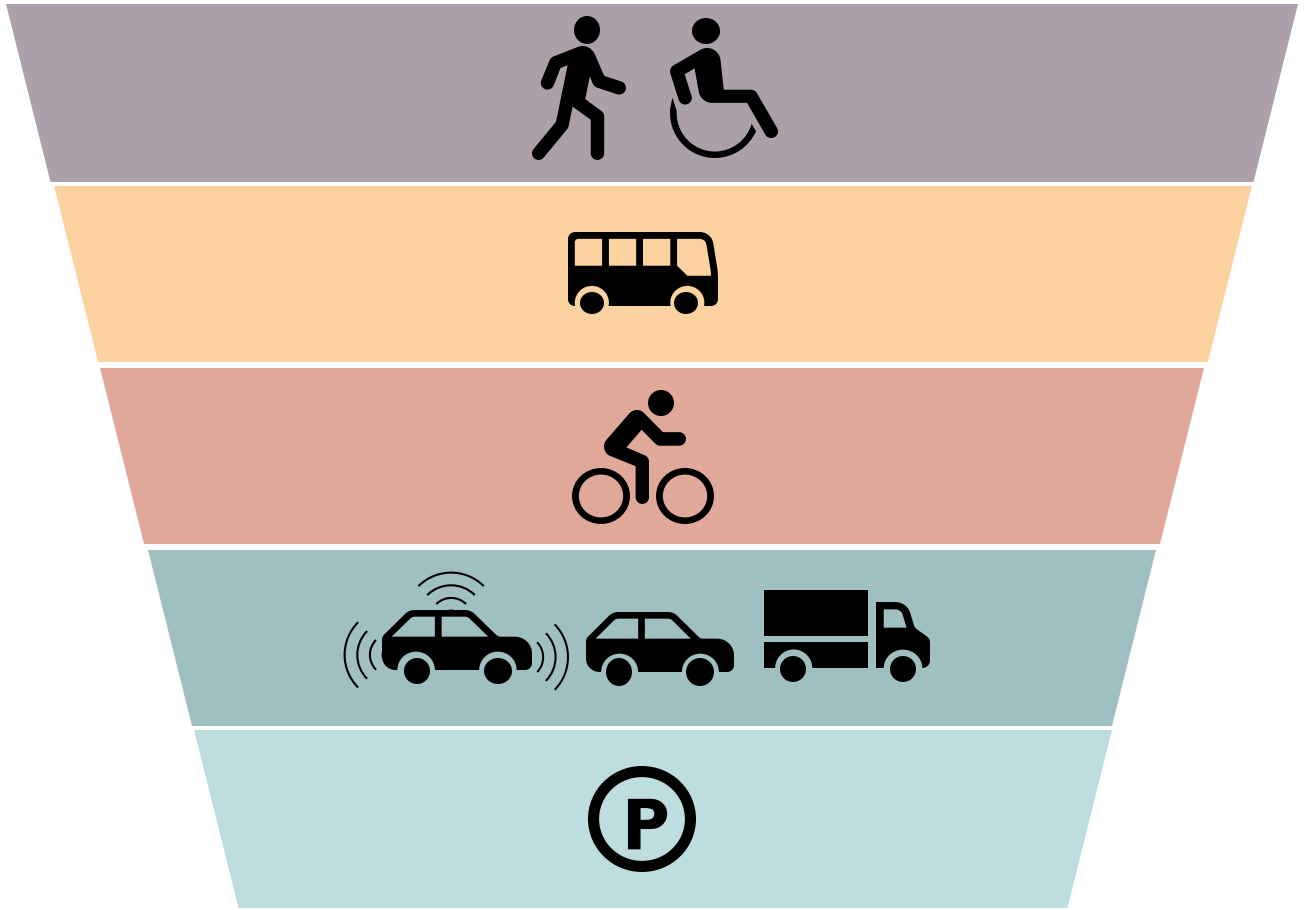
*The words "modal" and "mode" refer to the ways people travel (transit, walking, biking, driving, etc.)

MODAL HIERARCHY

Street Values:

- Putting people first –
  safety over speed
- Supporting community –
  prioritize place and access
- Fostering sustainability –
  multimodal and green
- Centering equity –
  process and outcomes



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DECISION-MAKING PROCESS OVERVIEW

(The modal hierarchy guides decisions throughout the process and is integrated in each step)

1. Look at the street type map and identify what type applies to the street project.
2. Look at the overlay maps and identify which overlays are present.
3. Look at the street type descriptions to understand what typical elements to include and how overlays should influence the design or process.
4. Look at parameters tables to understand min/max/preferred values for various elements (e.g., lane width, design speed, trees/green inf, multi-modal facilities, etc.)
5. If tradeoffs must be made, go back to the street type descriptions and overlay maps and determine the priority between street zones.

MODAL PRIORITY NETWORKS & OVERLAYS

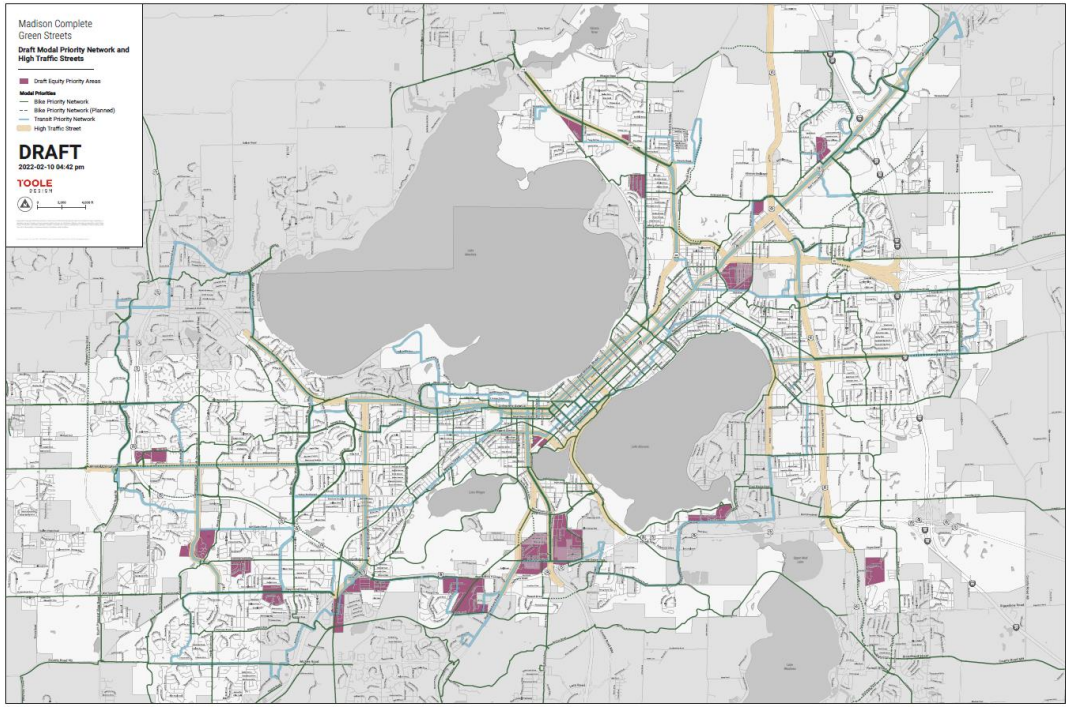
Modal Priority Networks

- Transit Priority Network
- Bike Priority Network
- Pedestrian Priority Network (?)

Overlays

- Equity Priority Areas
- Tree Priority Areas
- Green Infrastructure Priority Areas
- NHS & Truck Routes (higher traffic streets)

The influence of each overlay will be described for each street type. E.g. triggering design or process changes, different type of bike facility, etc.



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OPTIONS FOR STRUCTURING MODAL PRIORITY NETWORKS

Option 1

- Bike Priority Network
  Alternative Names:
  - All Ages & Abilities Priority Bike Network
  - AAA Connected Bicycle Network
  - Key Bicycle Corridors
- Transit Priority Network
  Alternative Names:
  - High-Capacity Transit Network
  - Key Transit Corridors

Option 2

- Bike Priority Network
- Transit Priority Network
- Pedestrian Priority Network
  - Accessible Pedestrian Network
  - Enhanced Pedestrian Network

BIKE PRIORITY NETWORK

Purpose & Goals

- Complete bike network between neighborhoods, key destinations, and to adjacent communities
- Context-based designs emphasizing projected bike lanes, paths, and low-traffic streets
- Map is a long-term planning document and aspirational concept for a complete system – will be updated regularly
- Map helps focus efforts toward most important connections, supports working with WisDOT and others, helps with grant applications

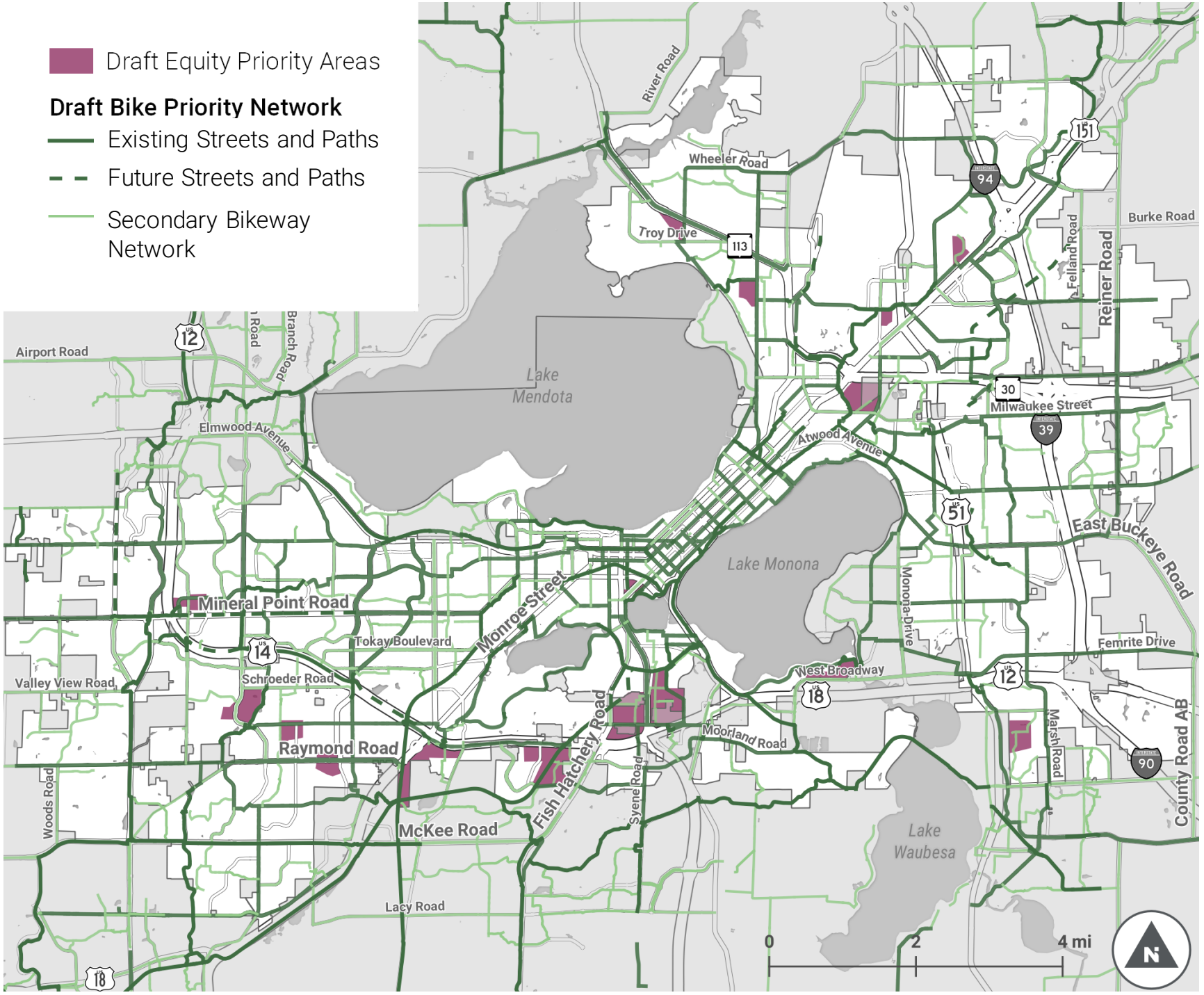
Future bike plan updates will trigger changes to the CGS Bike Priority Network

What does this mean?

- **Streets on the network:**
  - Considered most critical for creating a complete network. "Line in the sand" when it comes to tradeoffs.
  - Designed for all ages and abilities.
  - May include removal of on-street parking, creating Bike Boulevard with traffic diversion, etc.
- **Streets NOT on the network:**
  - Modal Hierarchy still applies (biking above driving)
  - Still try to achieve all ages and abilities conditions, but may have tradeoffs for other modes or street uses.
  - Goal is for most streets to be bike-friendly.

INITIAL BIKE PRIORITY NETWORK MAP

- Dark green lines are priority network
- Light green lines illustrate additional secondary planned bikeways



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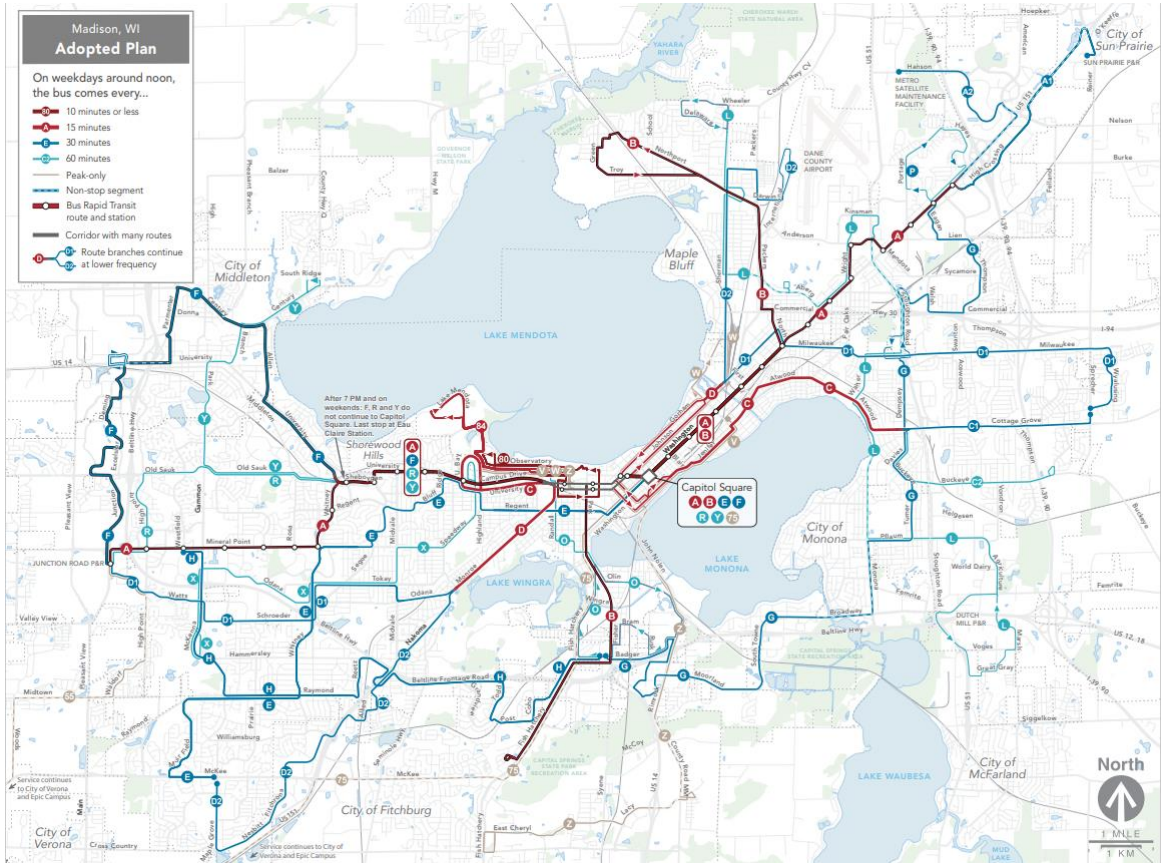
TRANSIT PRIORITY NETWORK

Purpose & Goals

- Metro Transit high-frequency routes (BRT routes and other routes with 15-minute frequency)
- Identify and preserve key corridors to provide high quality transit service

What does this mean?

- Ensure maximum efficiency for transit operations and access to transit stops for people walking. Ensure other priorities do not negatively impact transit operations or safety of accessing stops.
- May include removing parking, dedicated transit lanes, transit signal preemption, pedestrian and crossing enhancements, etc.



Future transit plan updates will trigger changes to the CGS Transit Priority Network

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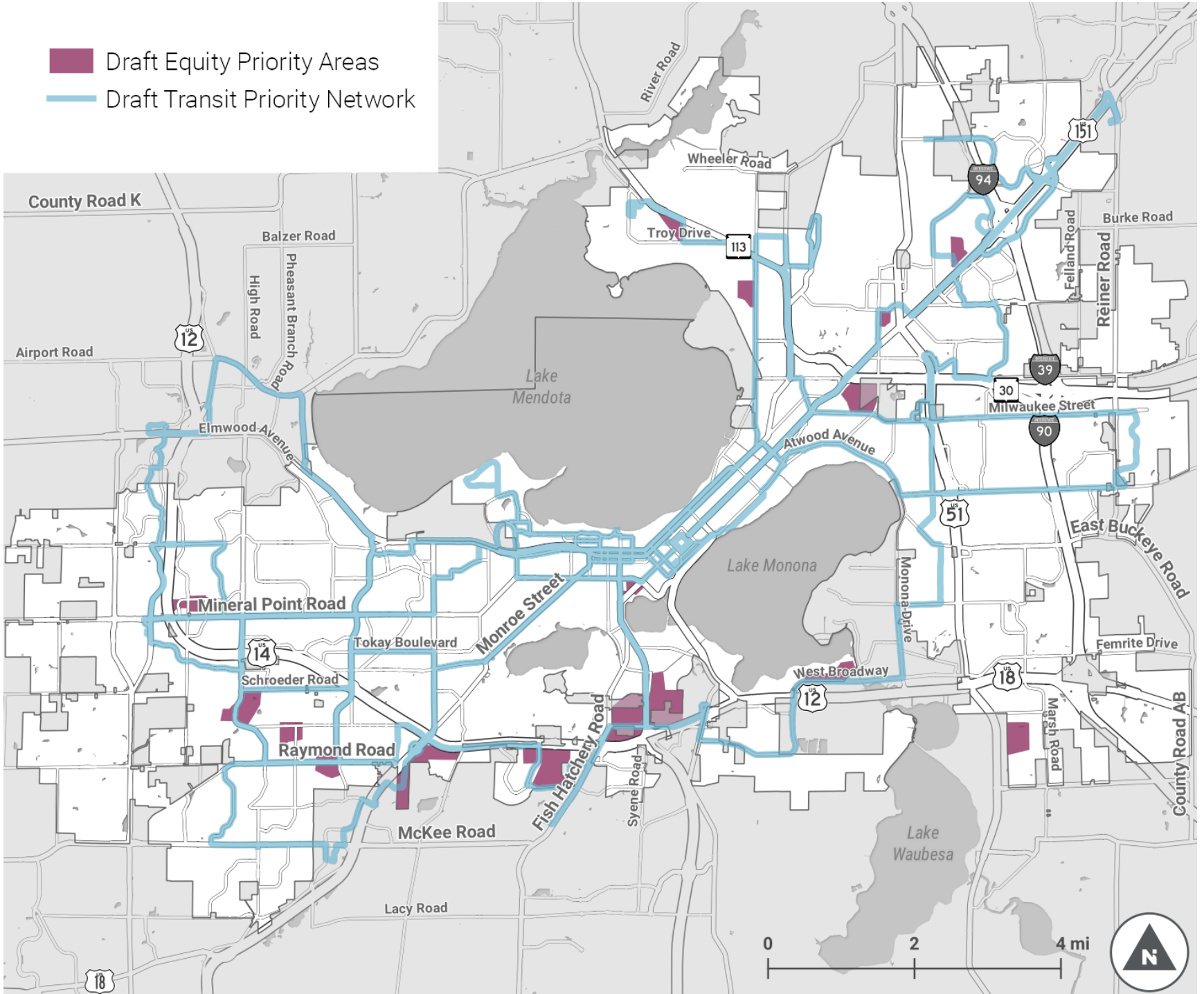
INITIAL TRANSIT PRIORITY NETWORK MAP



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PEDESTRIAN PRIORITY NETWORK

With or without a priority network, people walking are at the top of the modal hierarchy.

Accessible Pedestrian Network

- Created by future Pedestrian Plan (Imagine Madison Tier One Sidewalk Map as starting point)
- Based on key gaps in the pedestrian network
- Prioritizes access to transit, schools, colleges, libraries, parks, employment, shopping, and other important destinations
- Prioritizes areas with low car ownership and large populations of non-drivers

Enhanced Pedestrian Zones

- Created by future Pedestrian Plan
- Areas where pedestrian accommodations need to be above the minimum in the street type
- More space for walking, lighting, streateries, benches, art, placemaking, etc.
- Prioritizes shopping districts, schools, colleges, transit corridors, and High Injury Network streets

OPTIONS FOR STRUCTURING MODAL PRIORITY NETWORKS

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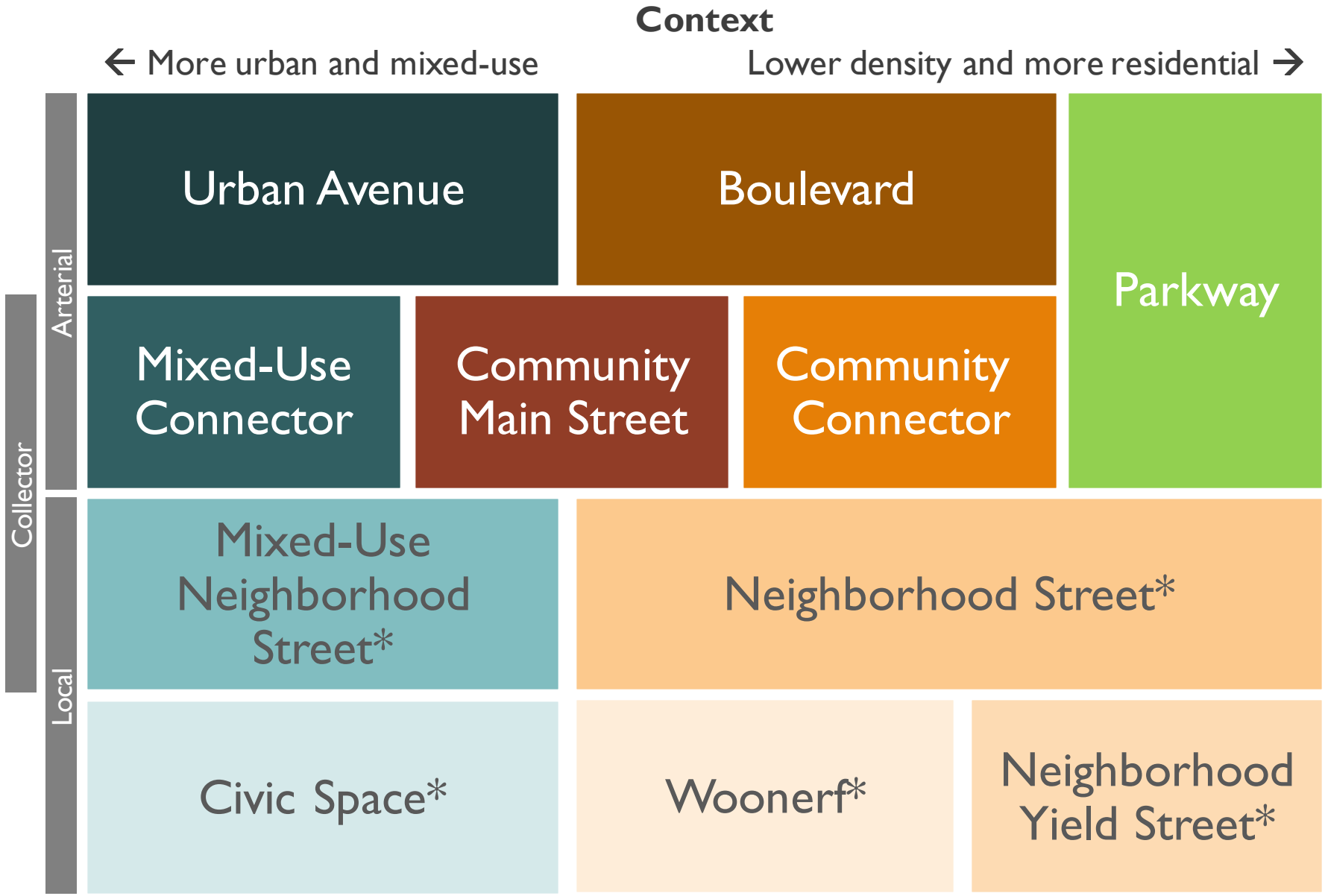
STREET TYPES

CGS is built around a collection of 11 street types (the typology) that describe the spectrum of current and future streets in Madison. They serve as starting points for street design.

The types are based on context and the amount of varied activity occurring. They are intended to be aspirational.

*Most or all of these will not be mapped, unless applied on a collector or bike boulevard



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STREET ZONES

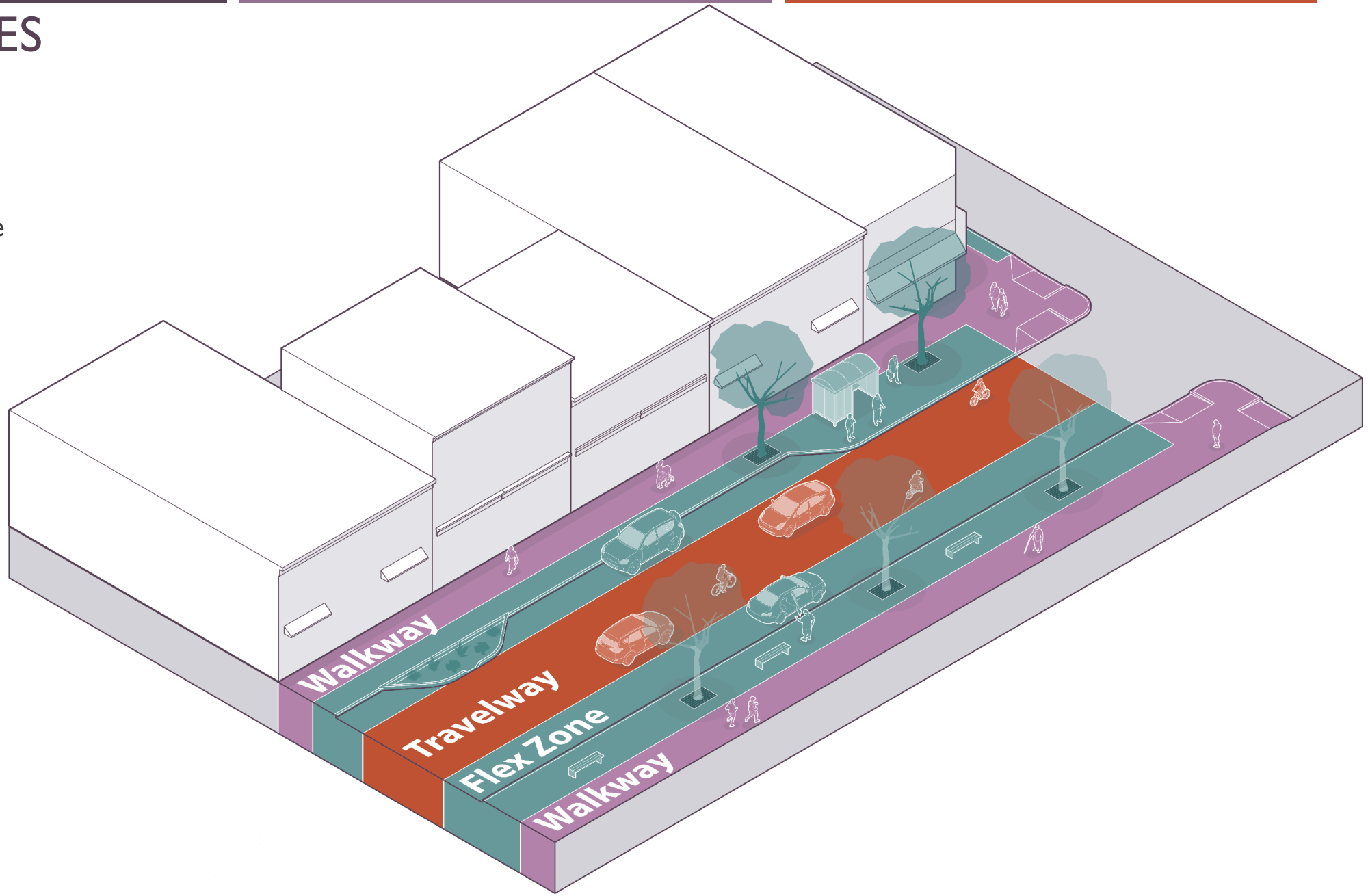
Each street type is divided into zones.

Movement happens in the walkway and travelway.

Bike lanes are considered travelway. Paths go in the walkway.

Stationary uses (parking, cafes, trees) occur in the flex zone.

The flex zone can be terrace or part of the roadway.



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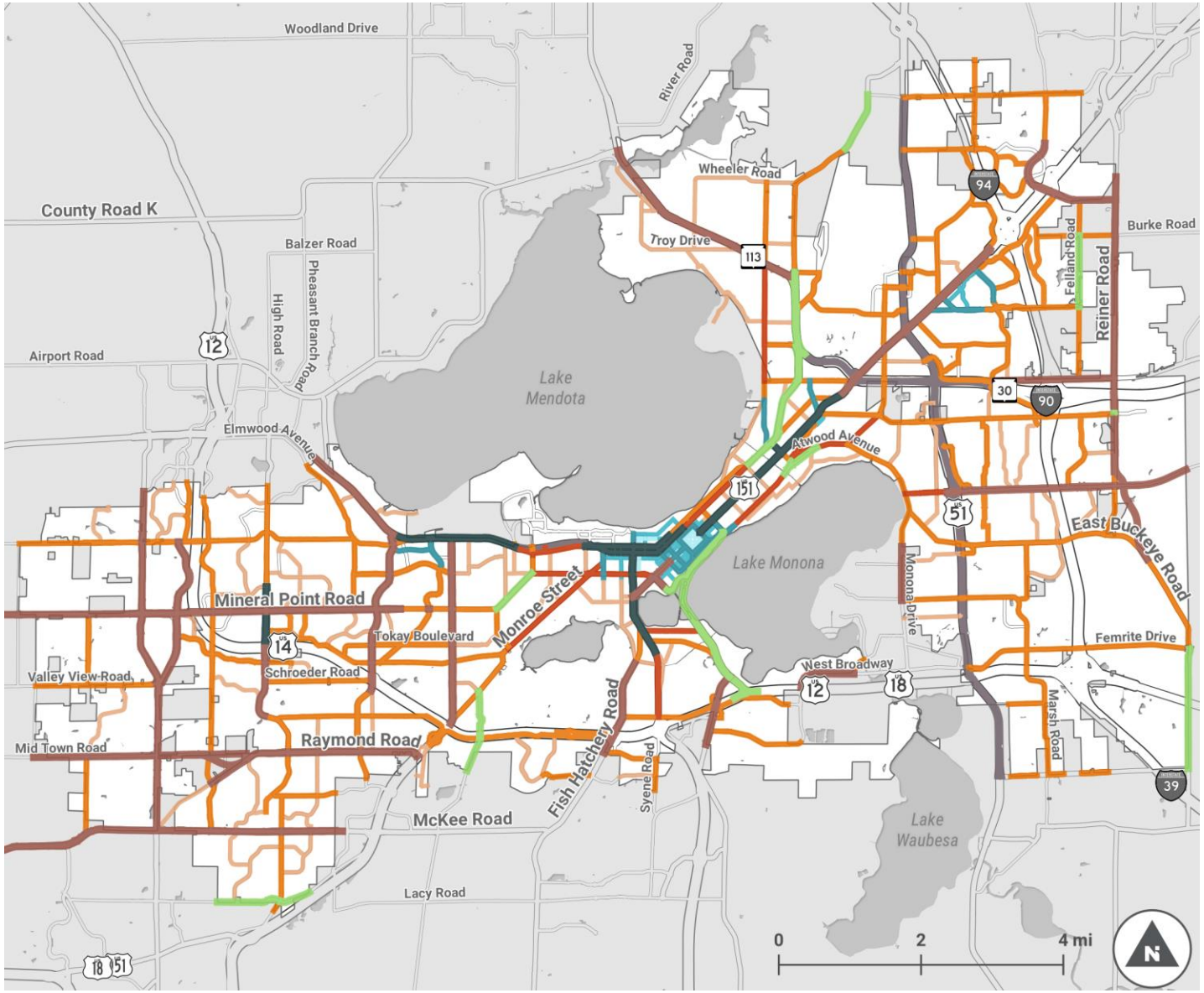
STREET TYPE MAP

Urban Avenue	Boulevard	Parkway
Mixed-Use Connector	Community Main Street	Community Connector
Mixed-Use Neighborhood Street*	Neighborhood Street*	
Civic Space*	Woonerf*	Neighborhood Yield Street*

*Most or all of these are not mapped, unless applied on a collector or bike boulevard. No streets are currently mapped for the Woonerf type.



TOOLE DESIGN

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Urban Avenue

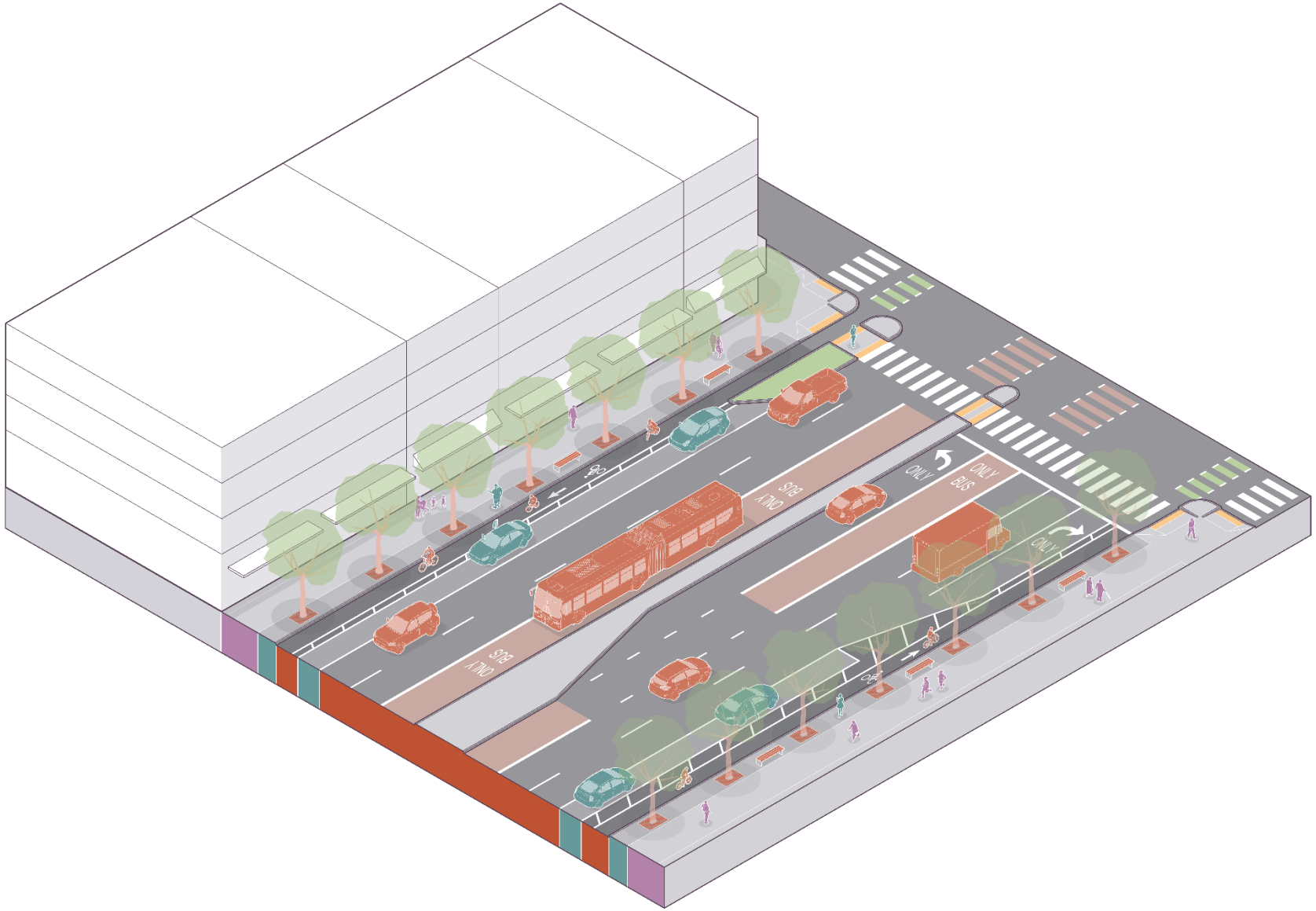
Major streets that serve as backbones of the street network and convey large numbers of people via multiple modes. High number of transit boardings and amount of cross traffic. May be part of the National Highway System and/or serve as a Truck Route.

Example Streets:
East Washington (downtown to Starkweather Creek); University Ave; South Park St; South Gammon (at West Towne)

Context: Downtown and other corridor-oriented large scale mixed use. High density, consolidated parcels.

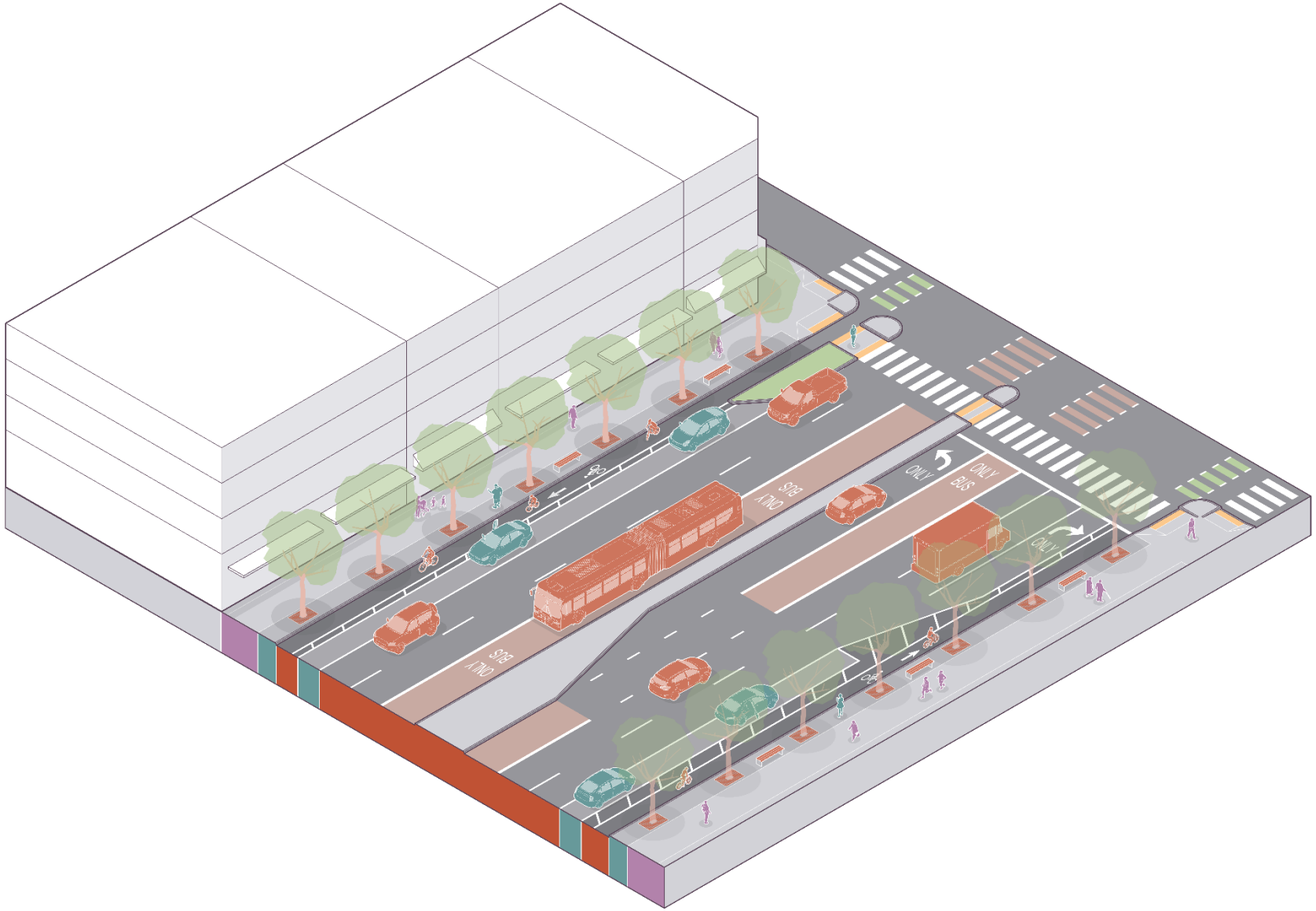
Functional Classifications:
Arterials

Target Speed: 25 mph



Urban Avenue

Walkway High Priority
Wider sidewalks with buildings close to or touching the sidewalk.
Flex Zone Medium Priority
Street trees, bike racks, and enhanced transit stops. Parallel on-street parking. Loading zones, if needed, should be provided around the corner on intersecting minor streets.
Travelway High Priority
Dedicated transit lanes, separated bike lanes, often 2 travel lanes per direction, and medians.
Additional Features and Considerations
Intersections every ~500 feet; controlled crossings every ~1,000 feet



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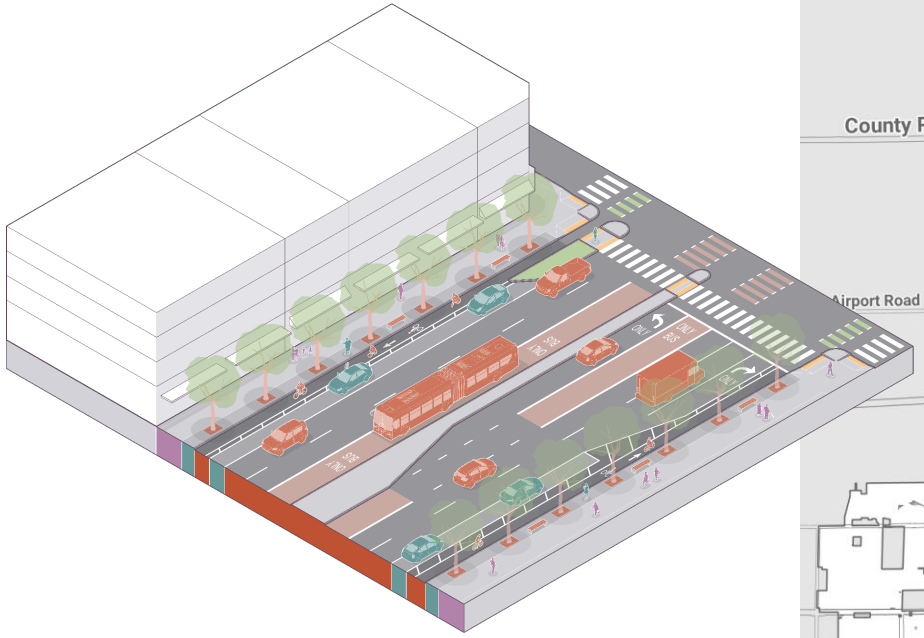
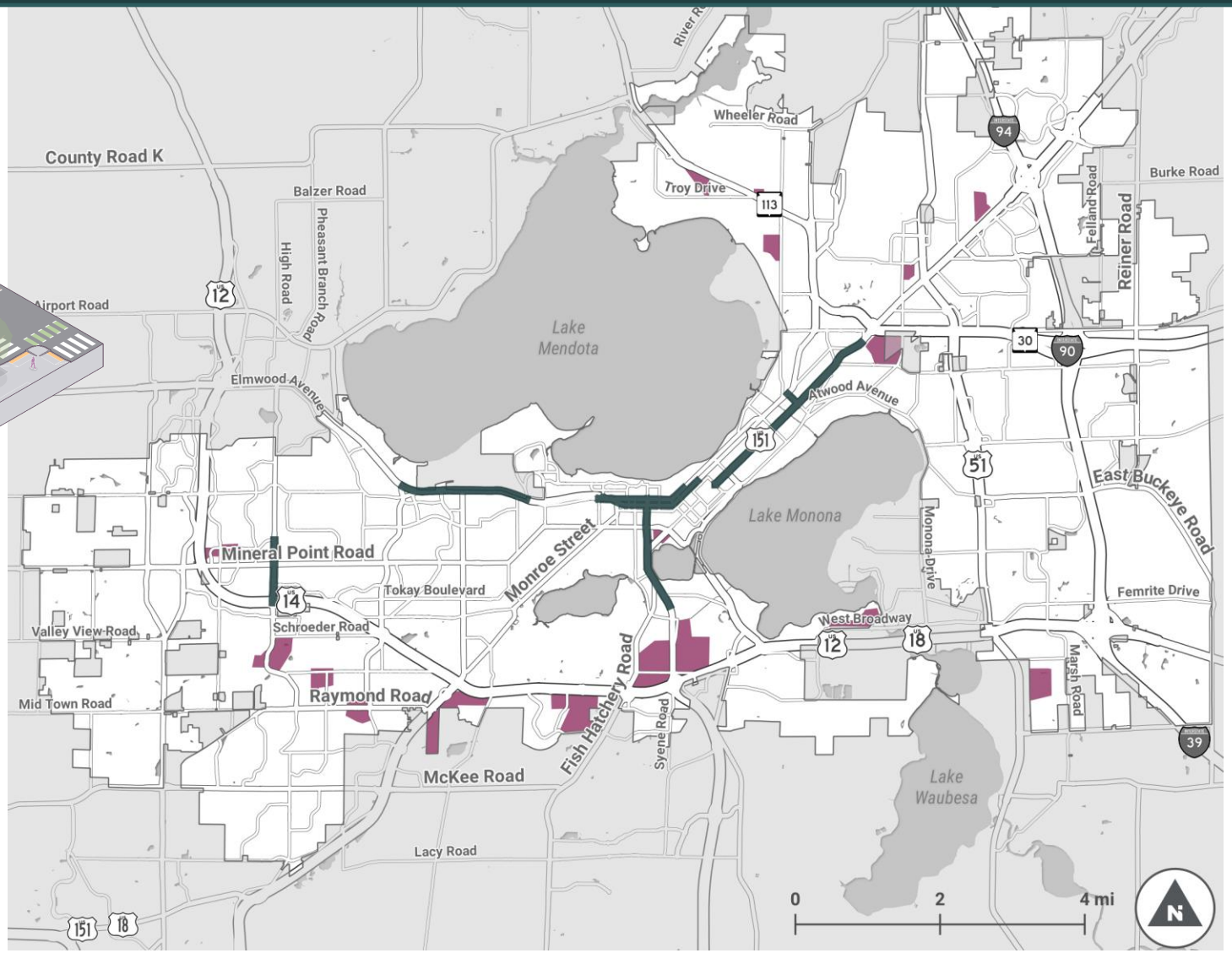
Urban Avenue





TOOLE DESIGN

EQT by design

Boulevard

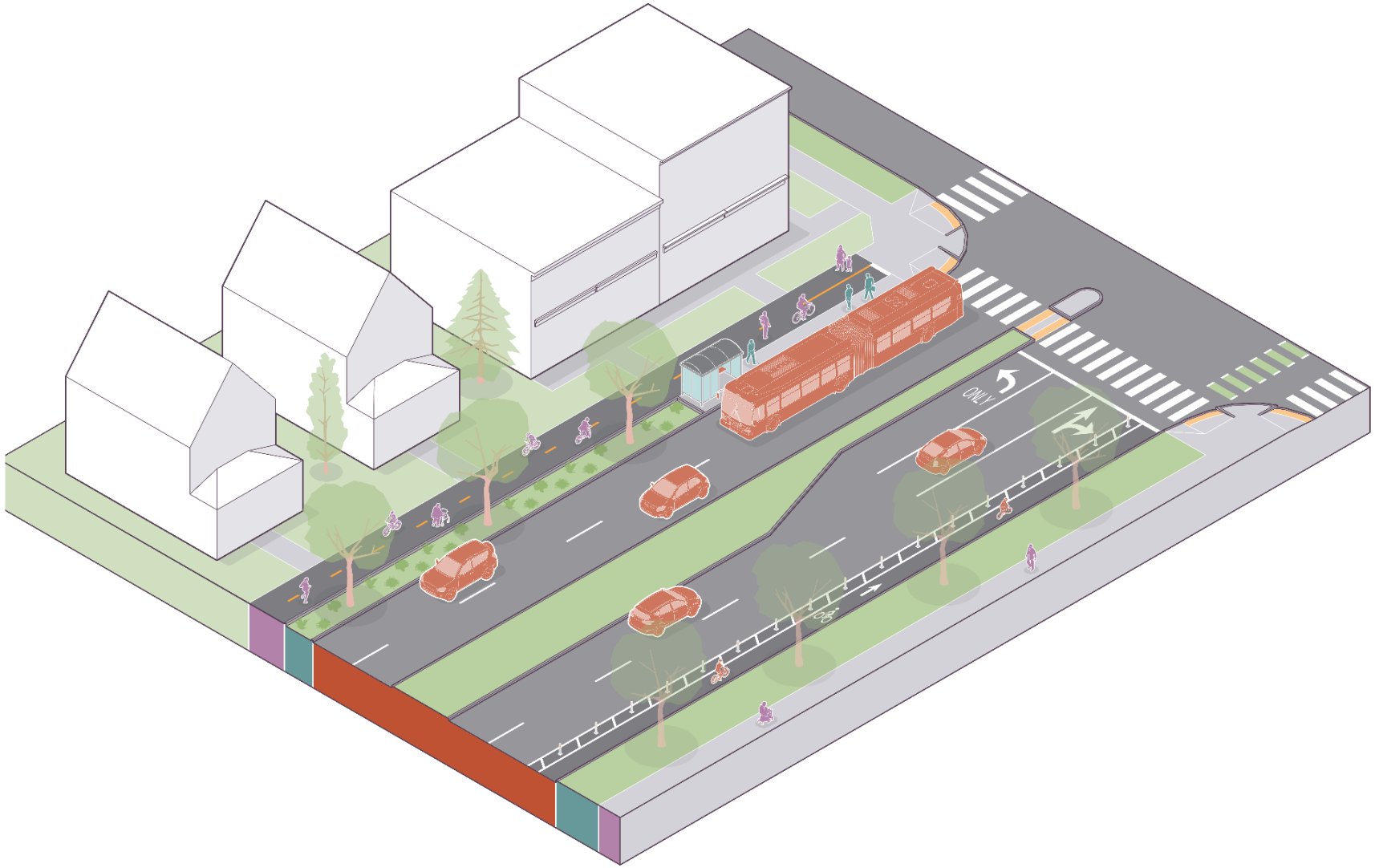
Connecting major streets conveying large numbers of people. Frequently part of the Transit Priority Network. May be part of the National Highway System and/or serve as a Truck Route.

Example Streets:
East Washington (Starkweather Creek to East Towne); Mineral Point; Whitney Way; Midvale Blvd; Cottage Grove (past Stoughton)

Context: Areas with longer blocks and few driveways. Could be edges of neighborhoods, commercial corridors, and new mixed-use.

Functional Classifications:
Arterials

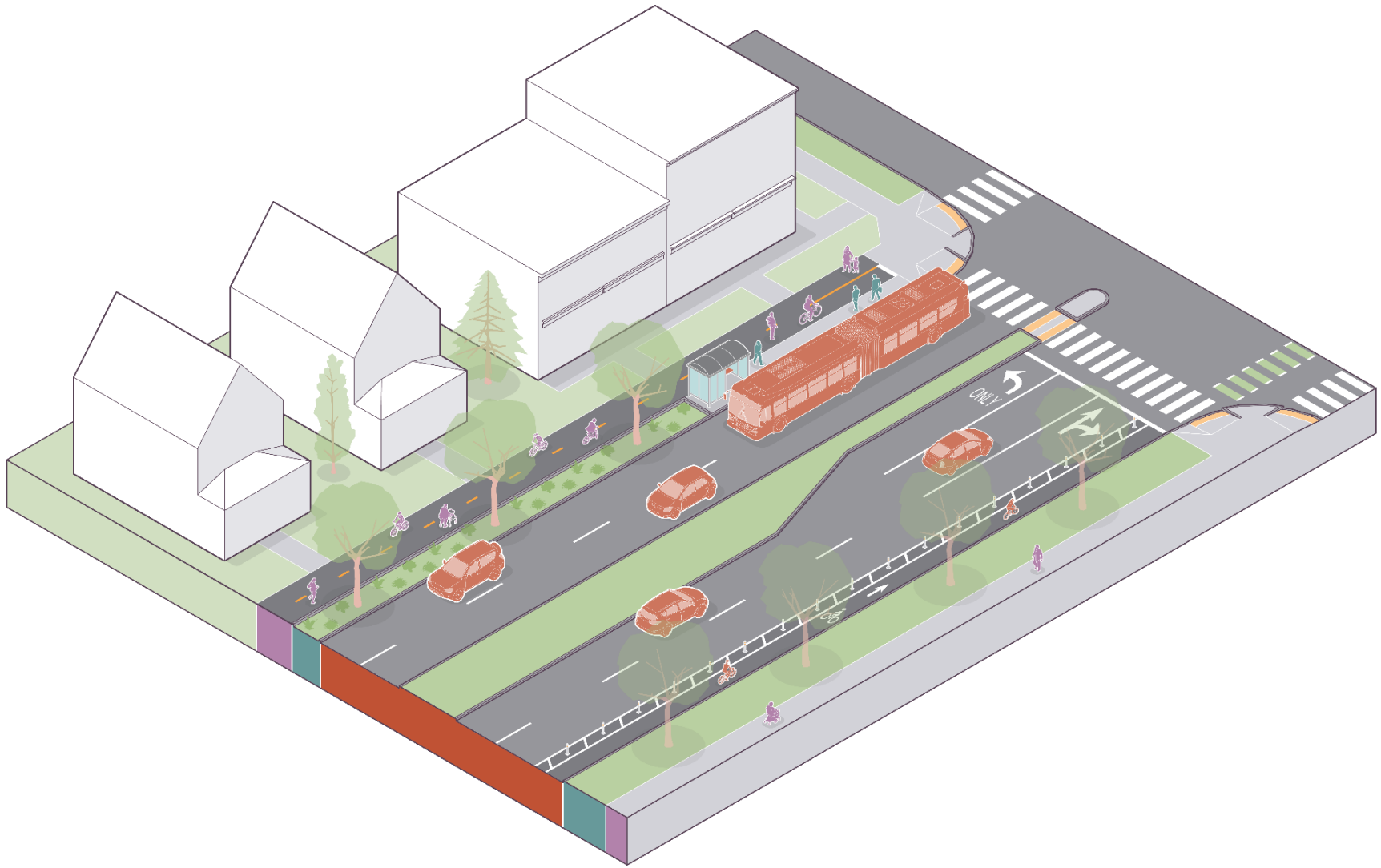
Target Speed: 25-30 mph



TOOLE DESIGN EQT by design

Boulevard

Walkway Medium Priority
Standard sidewalks or wider sidepaths, with buildings offset from the sidewalk by landscaping.
Flex Zone Low Priority
Landscaped terrace with street trees and enhanced transit stops.
Travelway High Priority
Appropriate transit accommodations, separated bike lanes, typically 2 travel lanes per direction, and medians.
Additional Features and Considerations
Intersections every ~600 feet; controlled crossings every ~1,200 feet



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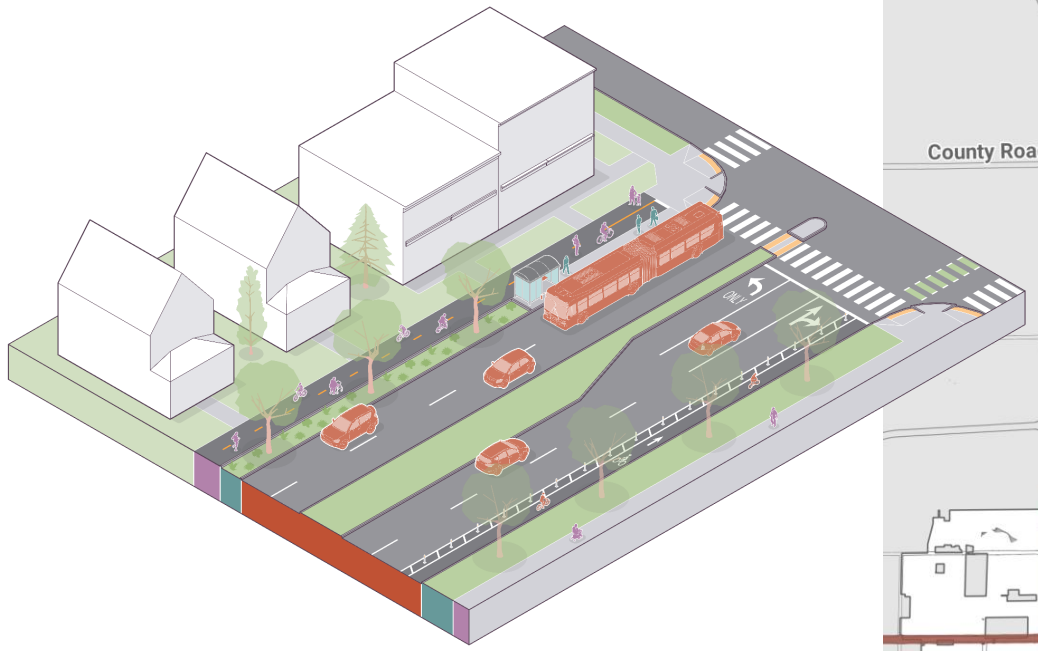
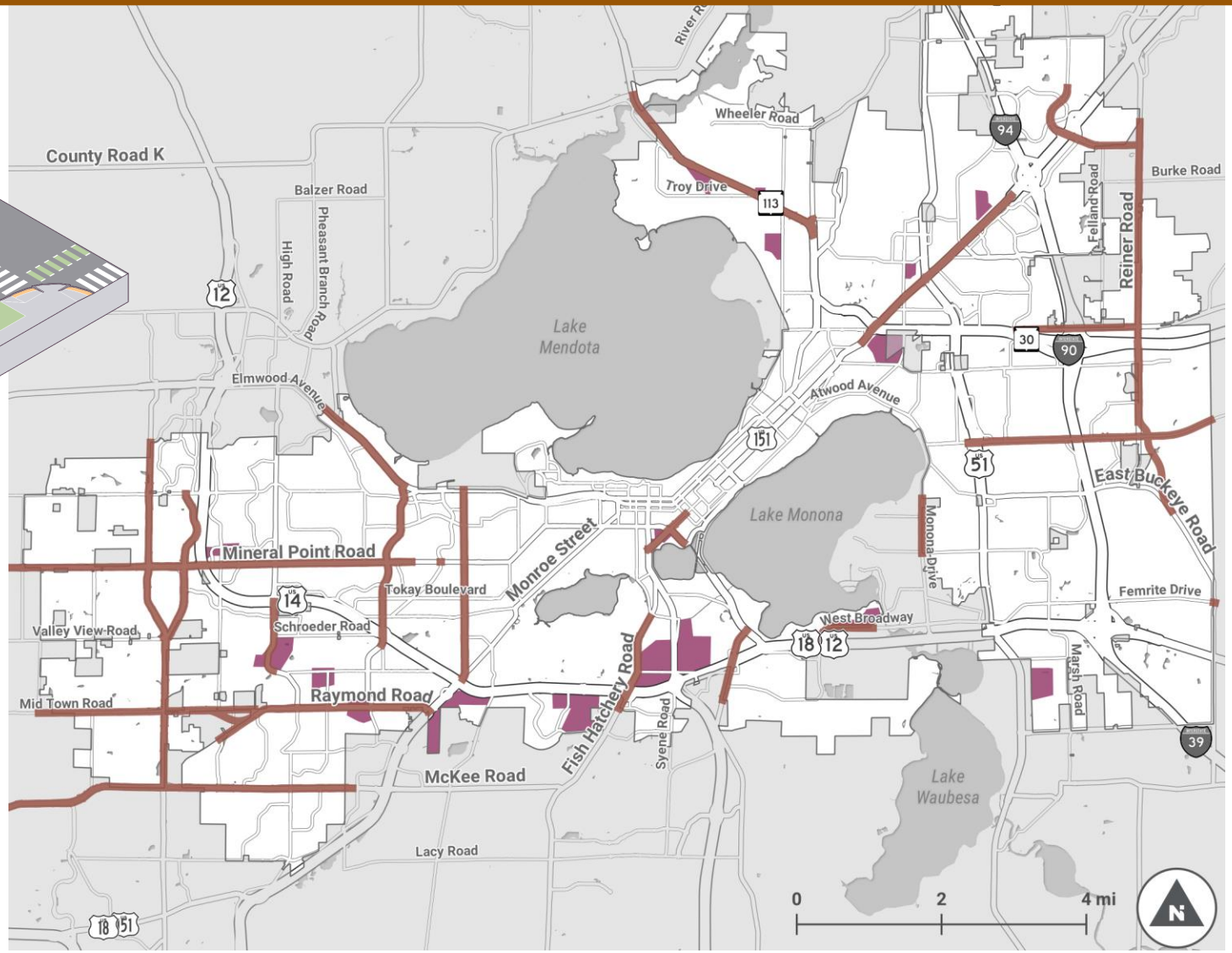
Boulevard





TOOLE DESIGN

EQT by design

Parkway

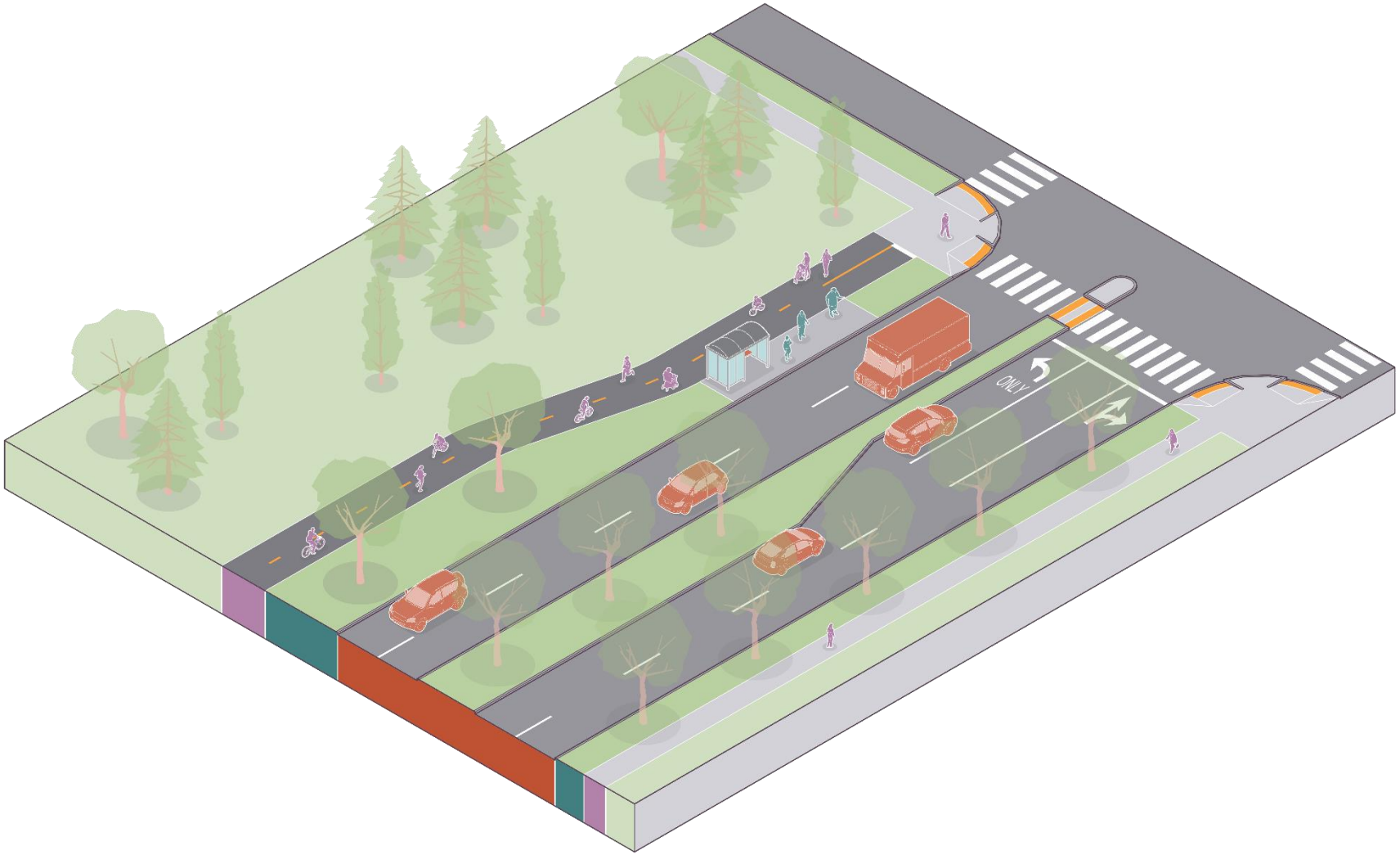
Connecting multi-modal corridors that conveying large numbers of people, near open spaces/water with a focus on minimizing impacts to nearby greenspace/water. May be part of the National Highway System and/or serve as a Truck Route.

Example Streets: John Nolen; Eastwood; Packers Ave; Seminole Hwy

Context: Alongside parks, lakes, etc. Possibly in some areas with significant building setbacks.

Functional Classifications: Arterials; Collectors

Target Speed: 25-35 mph



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Parkway

Walkway
High Priority

Path on at least one side, with buildings offset from the path or sidewalk by parking or landscaping.

Flex Zone
Low Priority

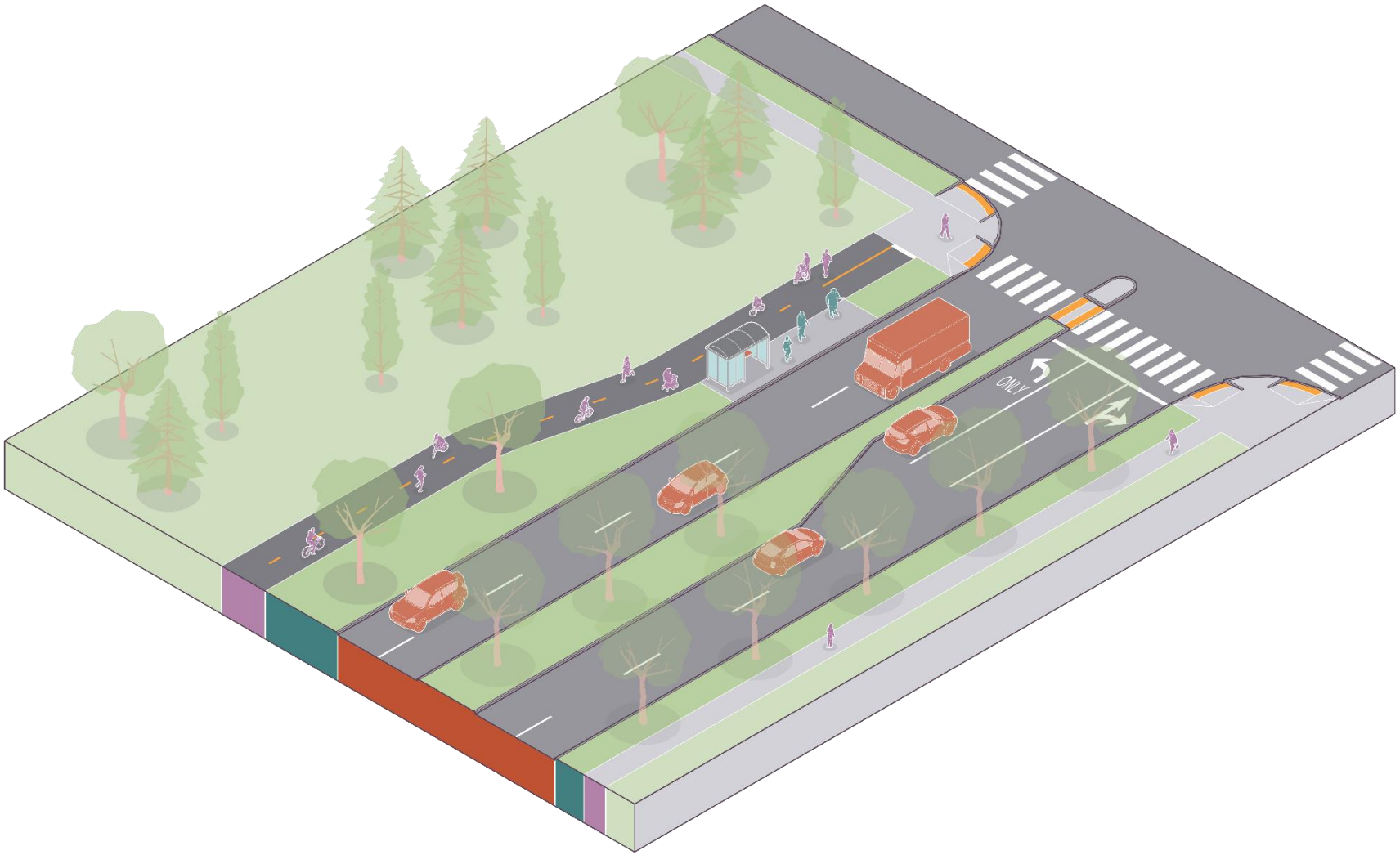
Wide landscaped terrace with street trees. If flex zone is too narrow to support healthy trees, plant trees outside of the right-of-way.

Travelway
Medium Priority

Typically 2 travel lanes per direction with tree-lined medians. (Biking typically accommodated via a path in the Walkway zone.)

Additional Features and Considerations

Intersections with RRFB every ~1,000 feet; fully controlled crossings every ~2,000 feet; few to no driveways



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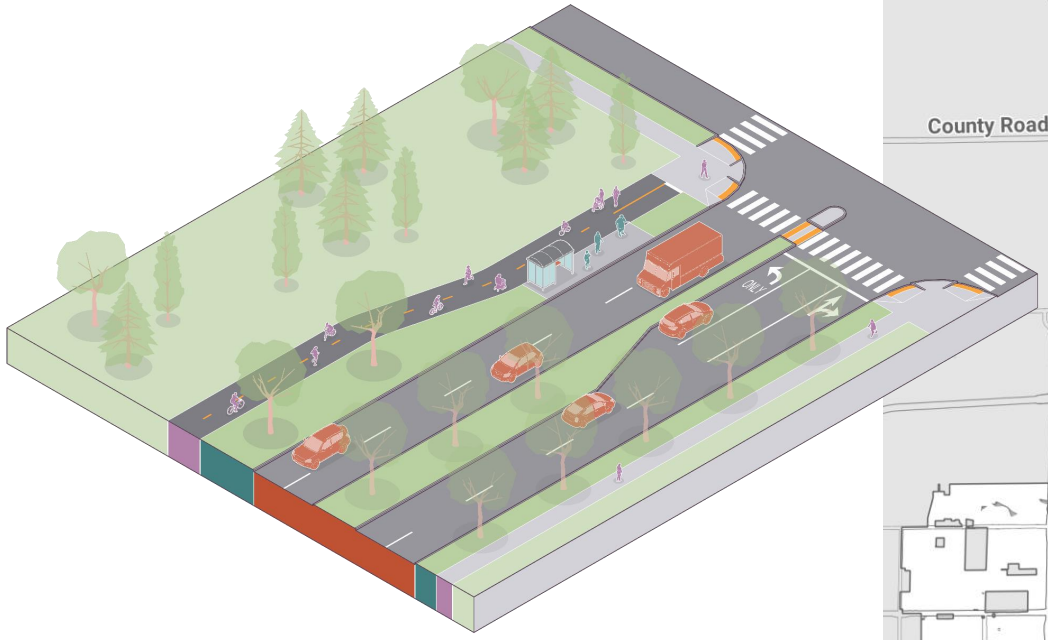
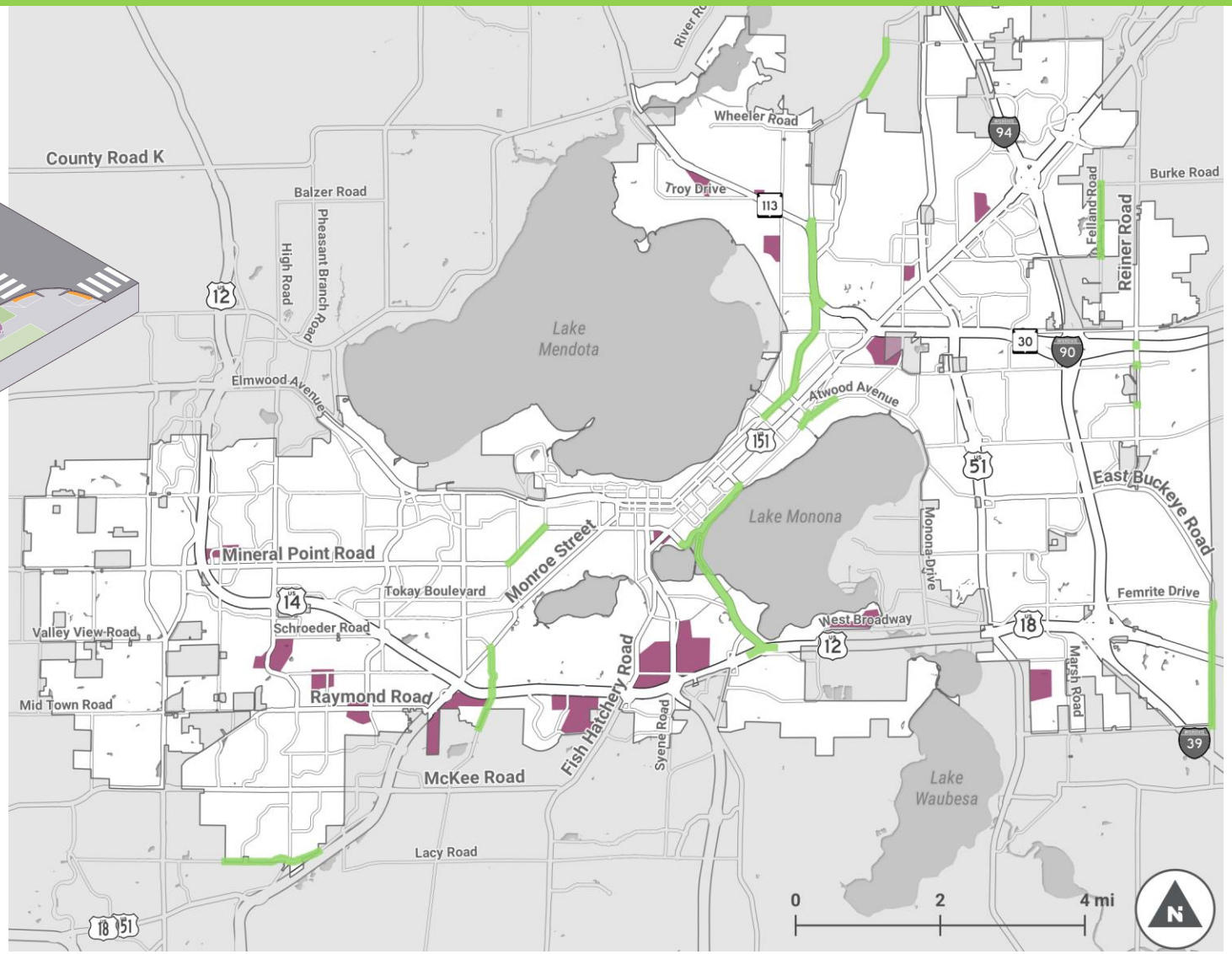
Parkway

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Balzer Road
High Road
Pheasant Branch Road
Elmwood Avenue
Wheeler Road
Troy Drive
Lake Mendota
Atwood Avenue
Reiner Road
Felland Road
Burke Road
East Buckeye Road
Lake Monona
Monona Drive
Monroe Street
Mineral Point Road
Tokay Boulevard
Schroeder Road
Valley View Road
Mid Town Road
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Mixed-Use Connector

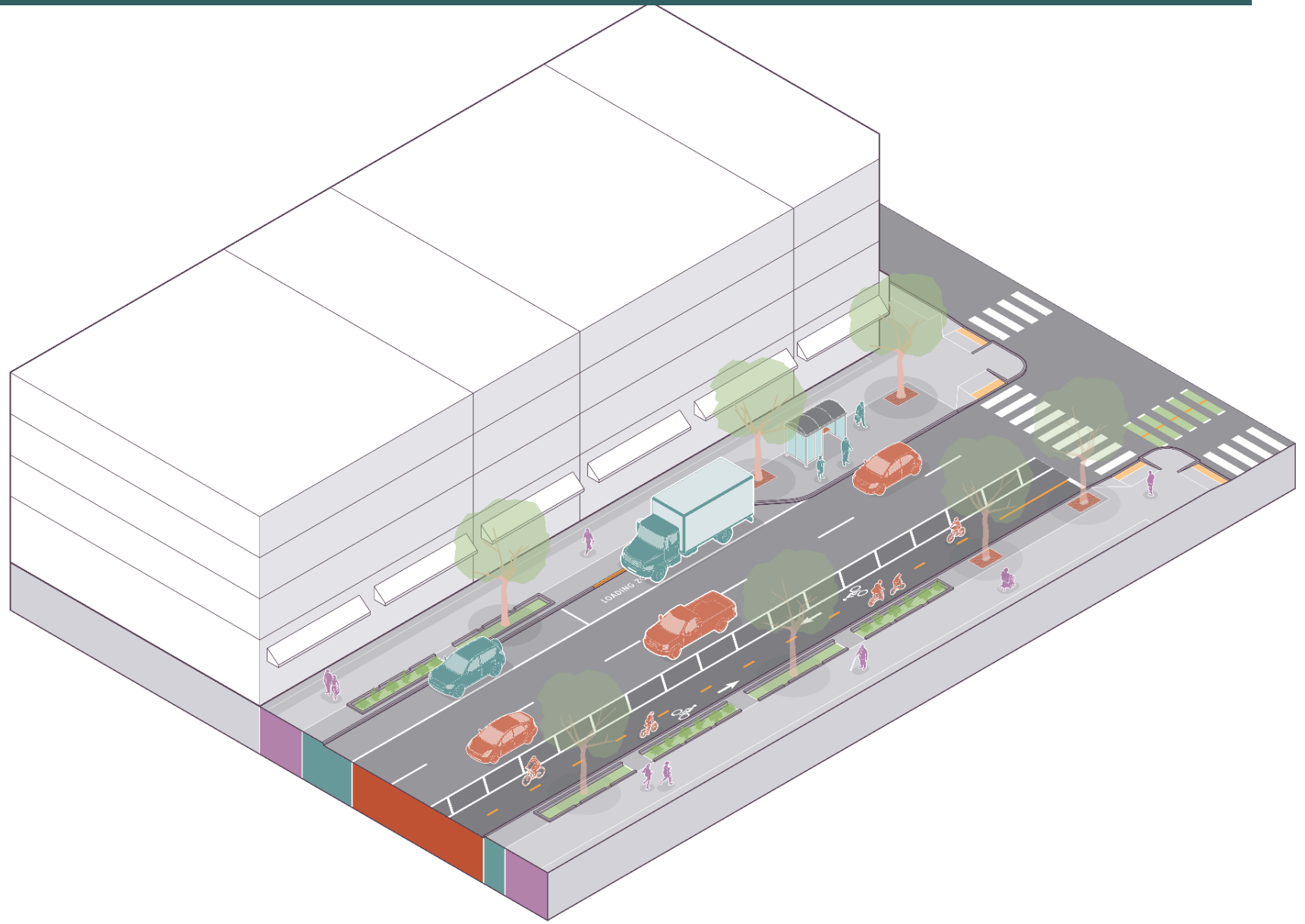
Streets that provide access and convey moderate numbers of people via multiple modes. Often includes transit. High demand for on-street parking with more frequent turnover.

Example Streets: Bassett; Broom; Outer Loop; Wilson

Context: Often surrounded by 3+ story buildings with a mix of residential, office and commercial, alongside 1-2 story buildings/homes.

Functional Classifications: Arterials; Collectors

Target Speed: 25 mph



TOOLE DESIGN EQT by design

Mixed-Use Connector

Walkway
High Priority

Wider sidewalks with buildings close to or touching the sidewalk.

Flex Zone
Medium Priority

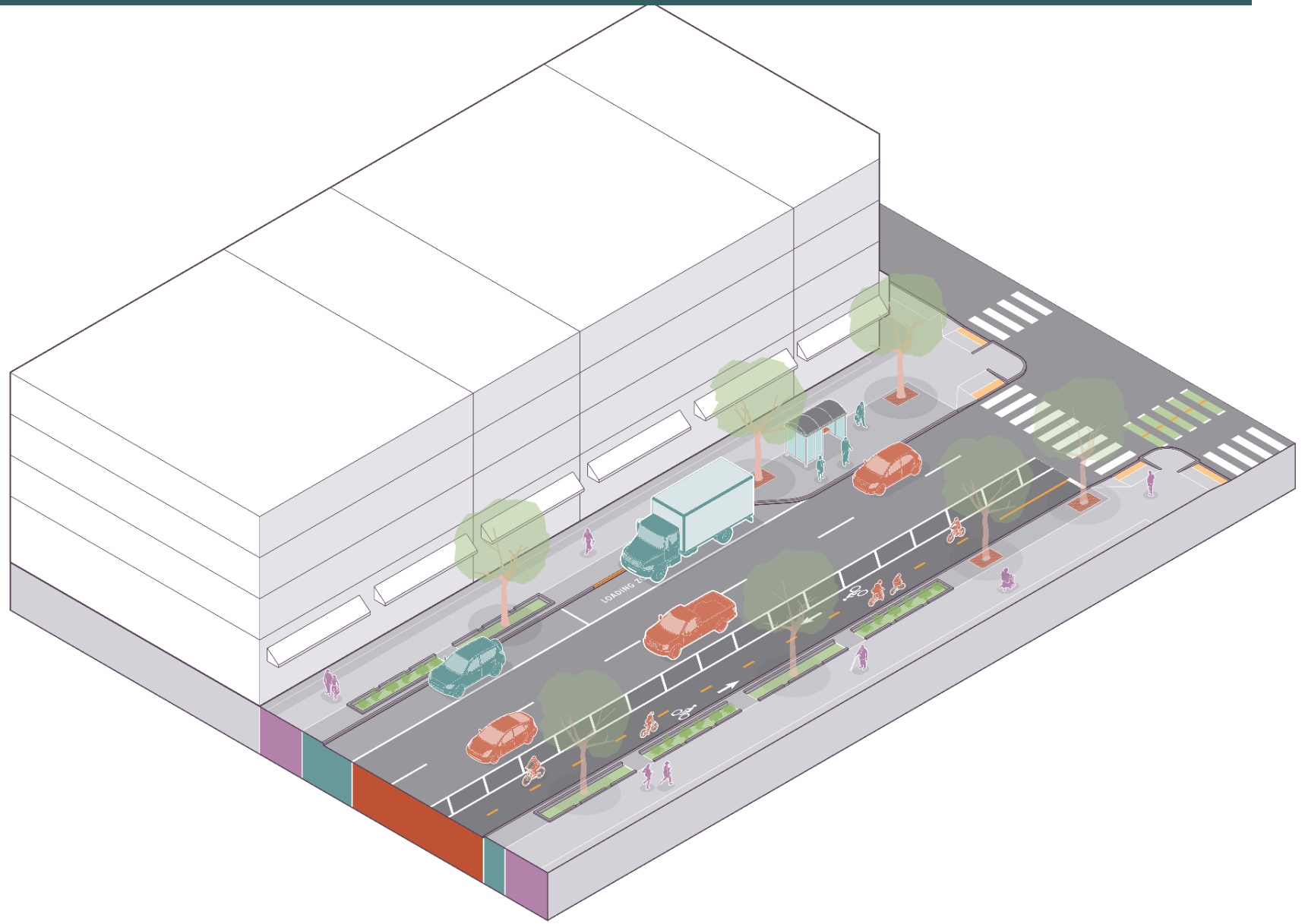
Mix of green and hardscaped terraces with street trees, bike racks, enhanced transit stops, and sidewalk cafés. Parallel on-street parking and loading zones (optional).

Travelway
Medium Priority

Bike lanes, 2 travel lanes (including one-way streets). Most existing examples of this street type are one-way.

Additional Features and Considerations

Intersections every 300-500 feet; controlled crossings every 300-900 feet; fewer driveways



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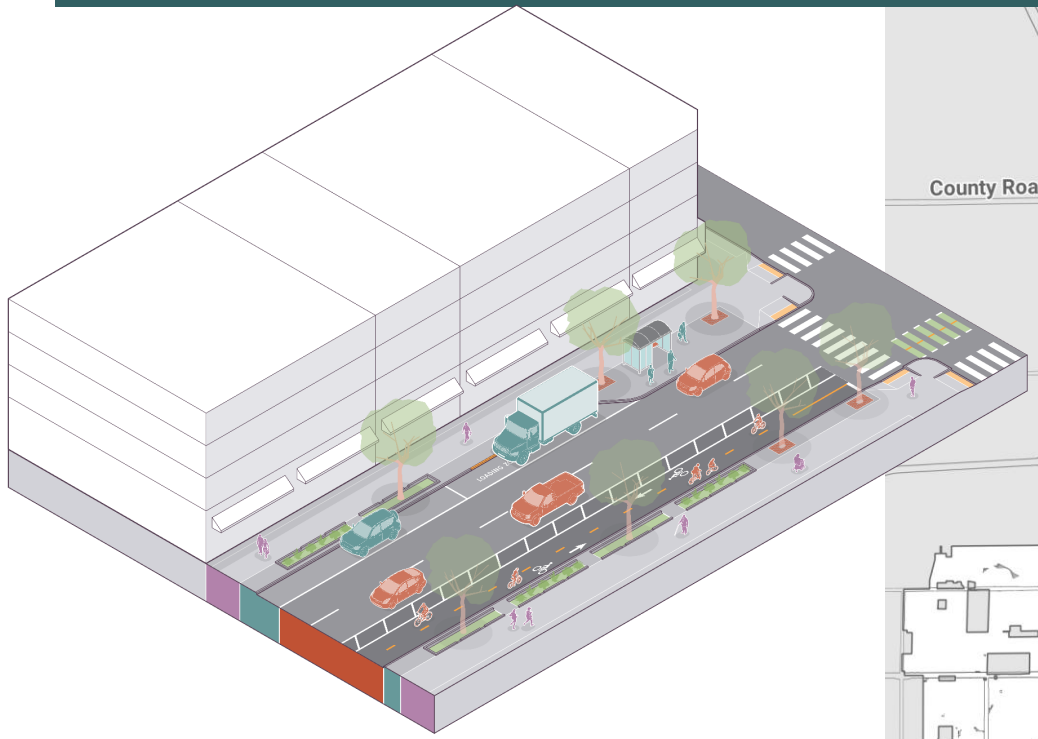
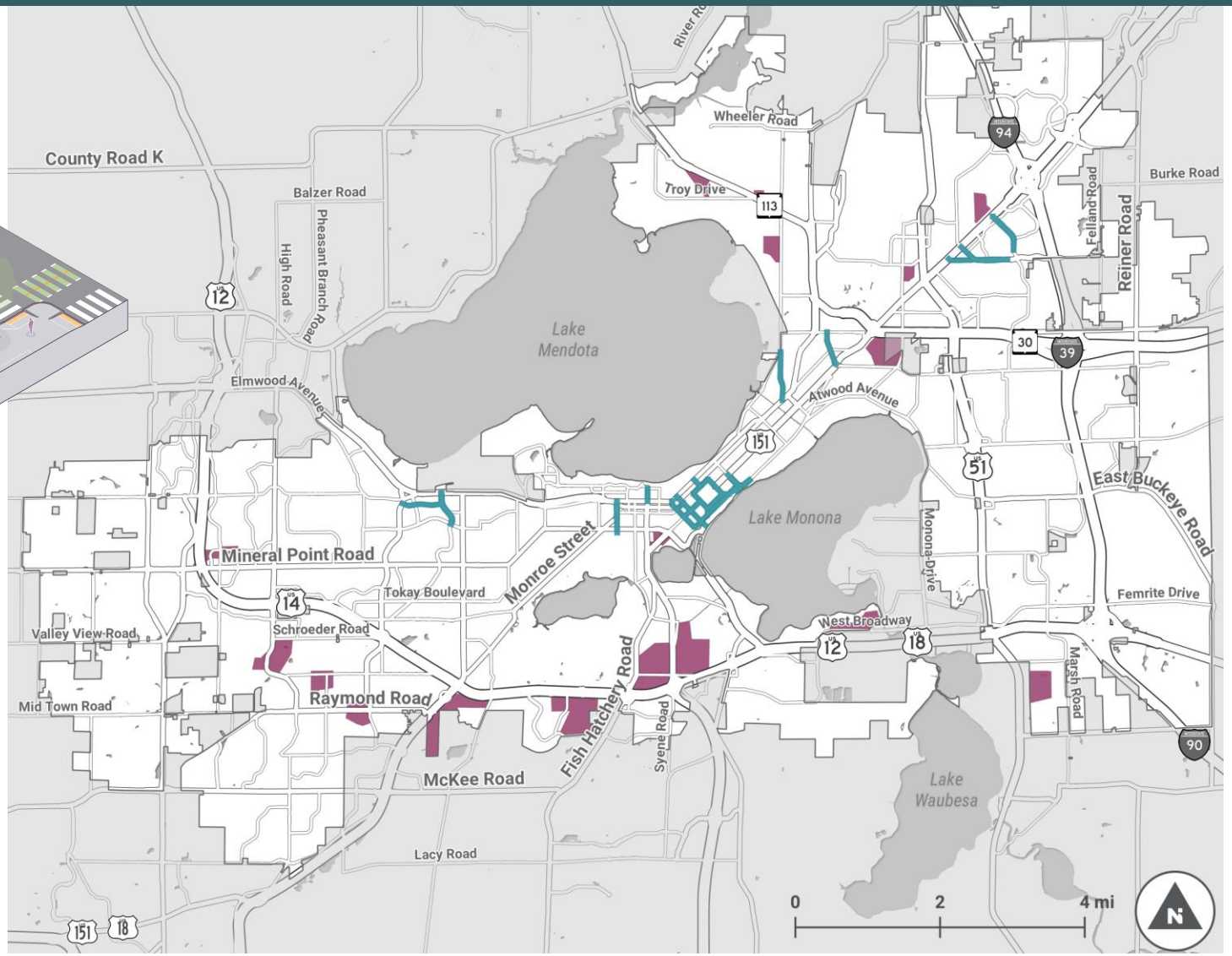




TOOLE DESIGN

EQT by design

Community Main Street

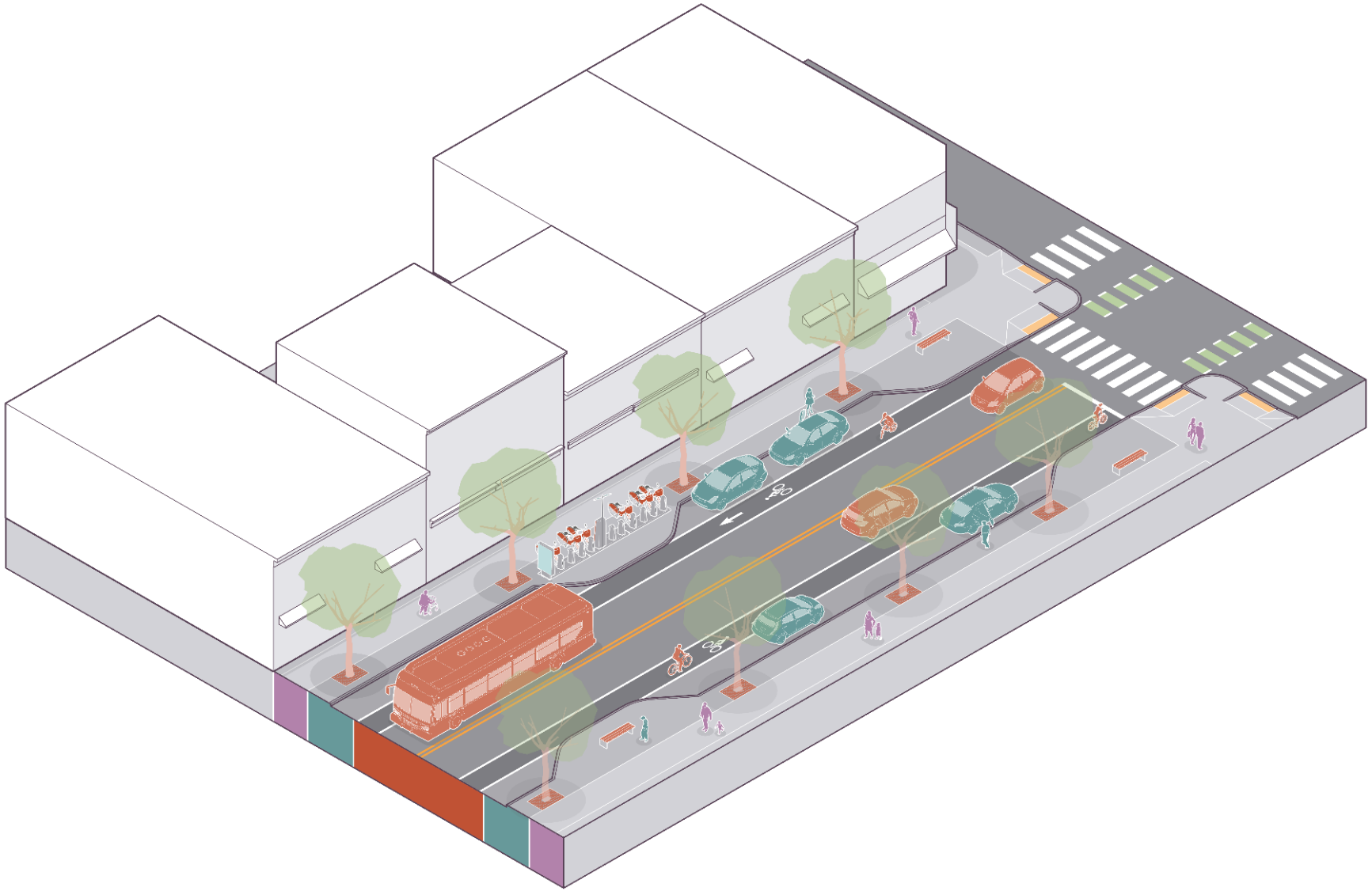
Destination/shopping street with a strong sense of place. May also carry a fairly large number of people by a variety of travel modes. Typically has larger volumes of pedestrians.

Example Streets: Willy; Monroe; Fair Oaks; Atwood; Regent

Context: Small/medium scale mixed use, many facades/entries for retail/dining/etc.

Functional Classifications: Arterials; Collectors

Target Speed: 25 mph or less



TOOLE DESIGN EQT by design

Community Main Street

Walkway
Medium Priority

Wide sidewalks with buildings close to or touching the sidewalk.

Flex Zone
High Priority

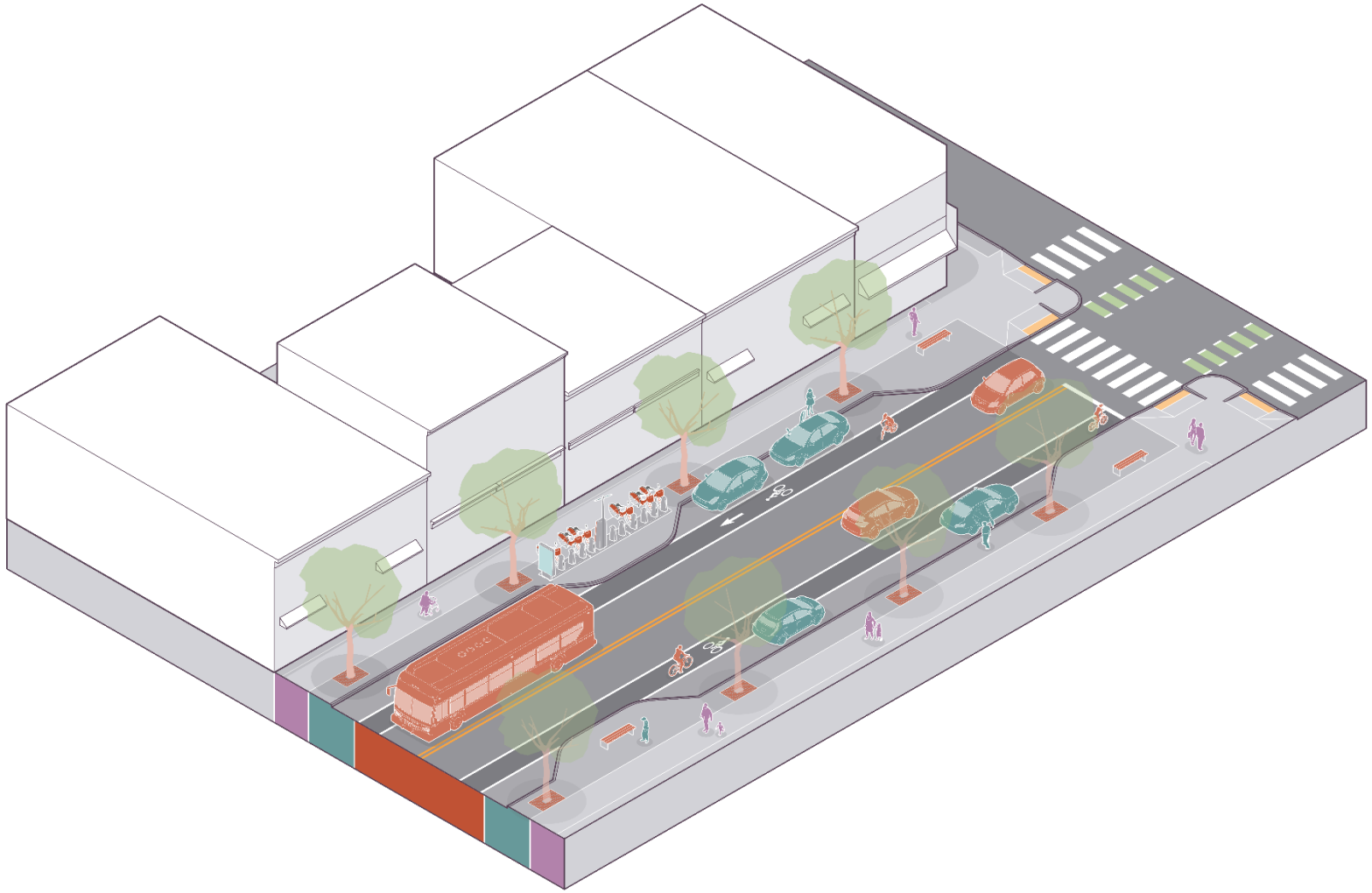
Hardscaped or landscaped terrace with street trees, bike racks, enhanced transit stops, and sidewalk cafés. Higher demand for on-street parking more frequent turnover, pedestrian-scale streetscapes and amenities that encourage people to walk. Short-term parking often prioritized. Loading zones, if needed, should be provided around the corner on intersecting minor streets.

Travelway
Low Priority

1 travel lane per direction. Left turn lanes are common at controlled intersections. Bike facilities included when space is available.

Additional Features and Considerations

Intersections every 300-500 feet; controlled crossings every 600-1,000 feet



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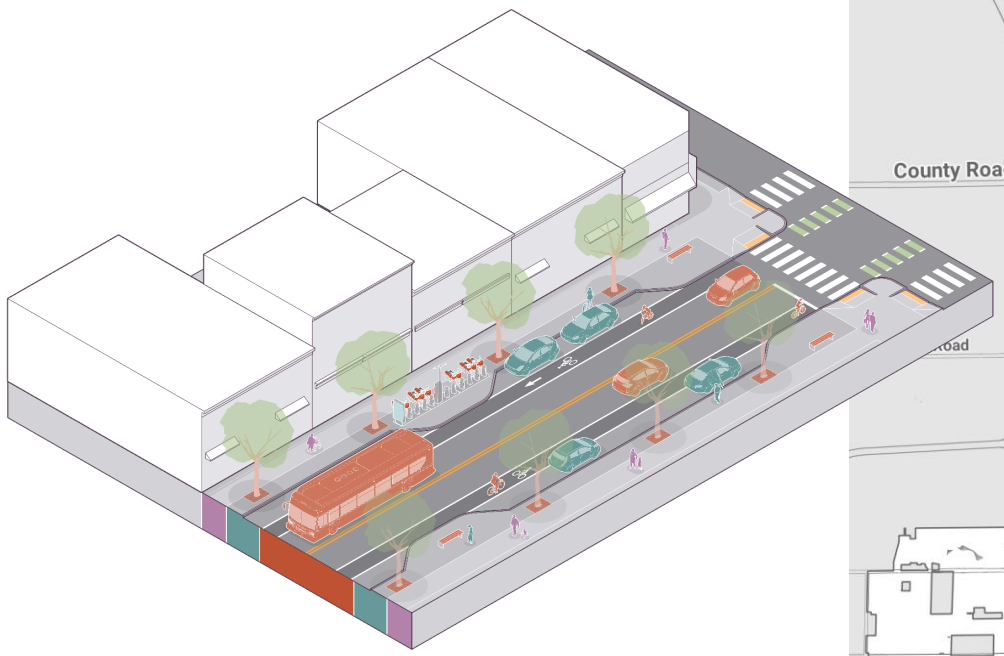
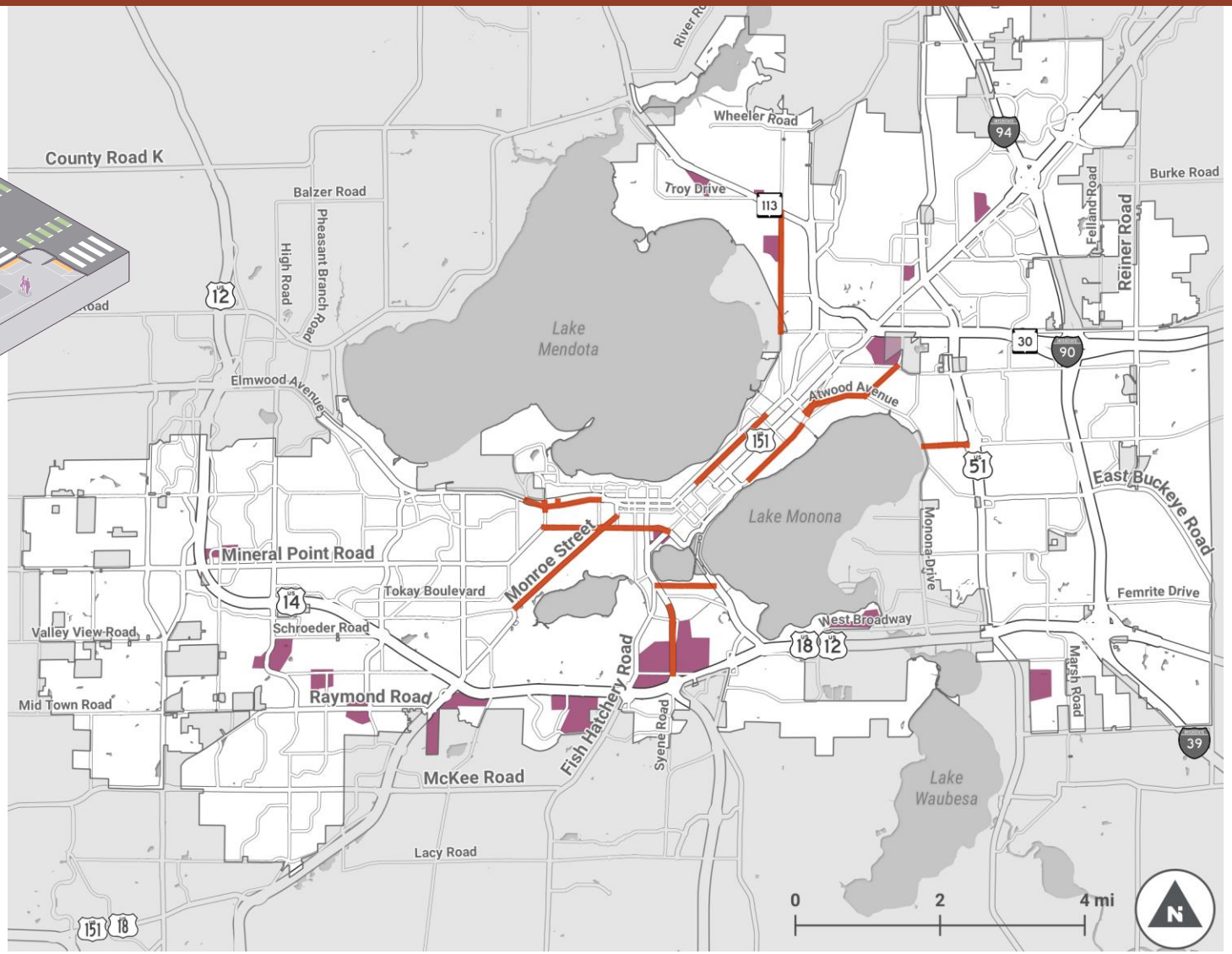
Community Main Street





Community Connector

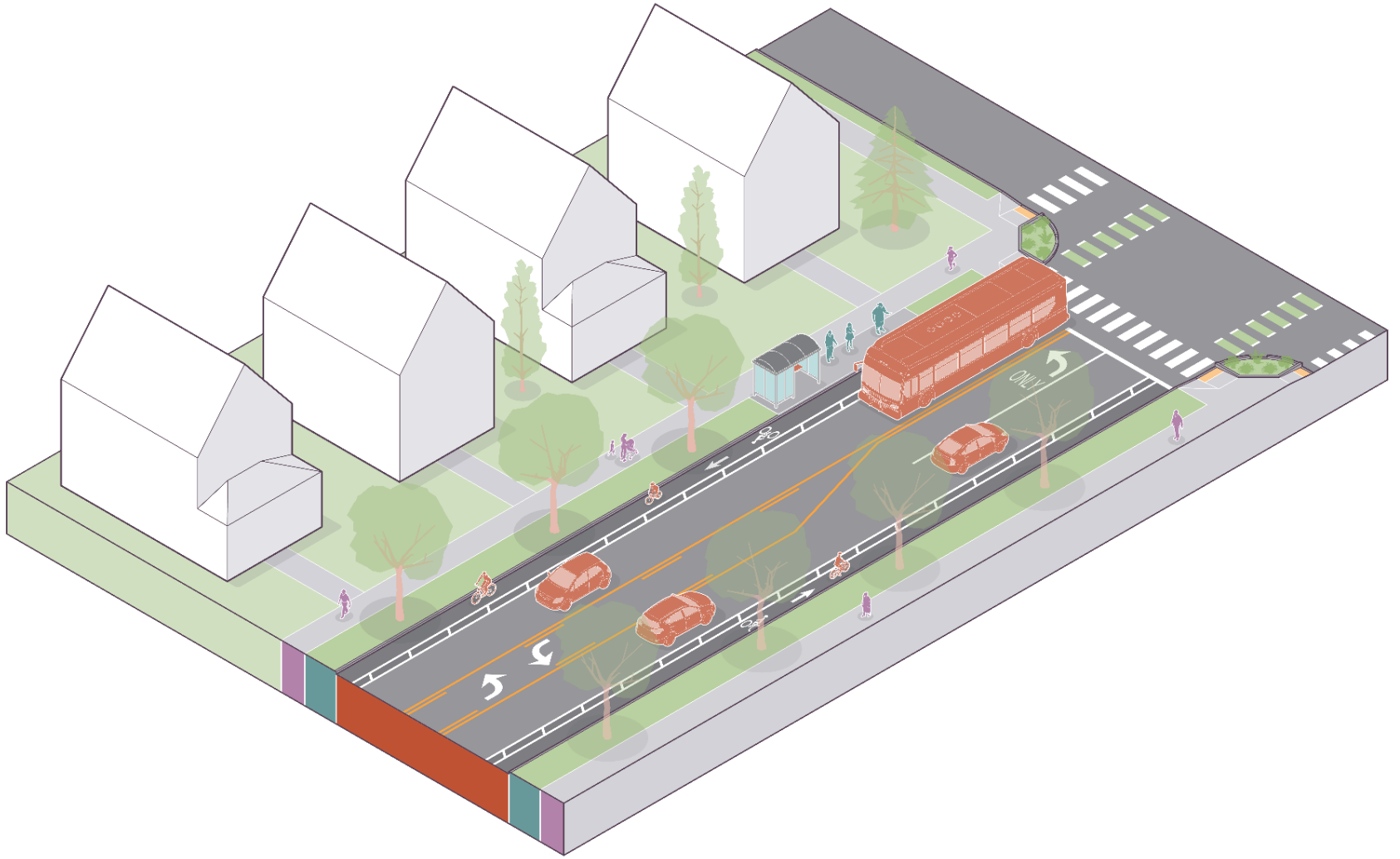
Streets that provide access and convey moderate numbers of people via multiple modes. Often includes transit.

Example Streets: Watts Rd; N Thompson; Buckeye Rd; Milwaukee St; East Gorham; Schroeder

Context: Neighborhoods, ranging from more walkable with short blocks and many driveways to more car-oriented. Includes some commercial and light industrial.

Functional Classifications: Arterials; Collectors

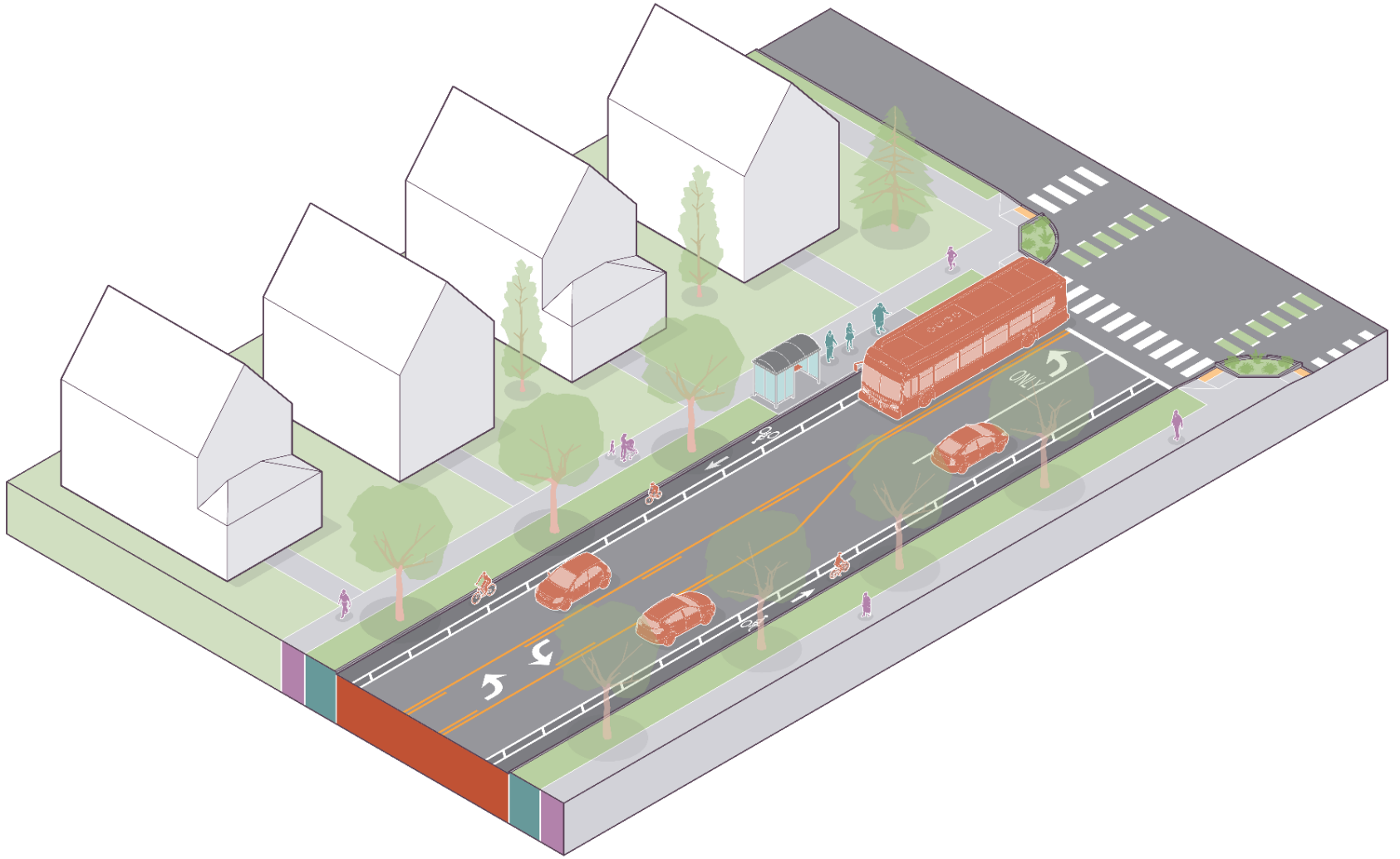
Target Speed: 25 mph or less



TOOLE DESIGN EQT by design

Community Connector

Walkway High Priority
Standard sidewalks, with buildings offset from the sidewalk by landscaping.
Flex Zone Low Priority
Landscaped terrace with street trees. On-street parking may be provided in some locations.
Travelway Medium Priority
1 travel lane per direction with bike facilities, often with medians or center turn lane. Appropriate transit accomodations.
Additional Features and Considerations
Intersections every 300-500 feet; controlled crossings every 800-1,200 feet; frequent driveways



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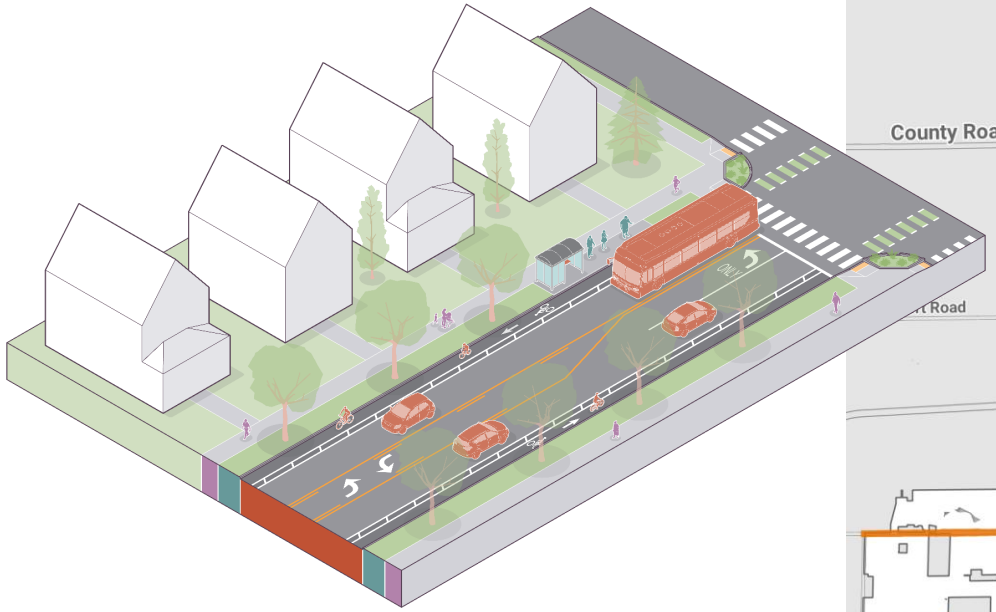
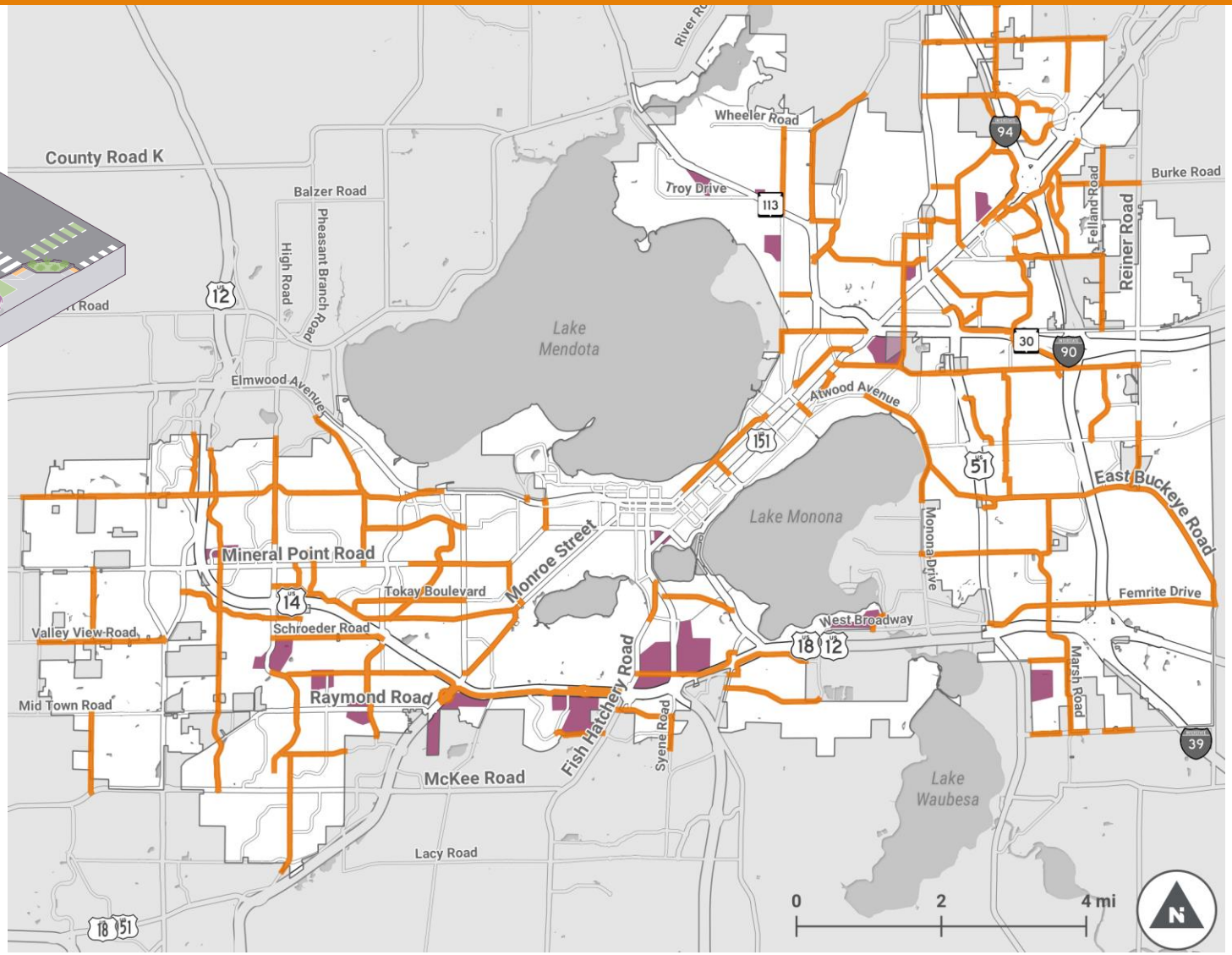
Community Connector





Mixed-Use Neighborhood Street

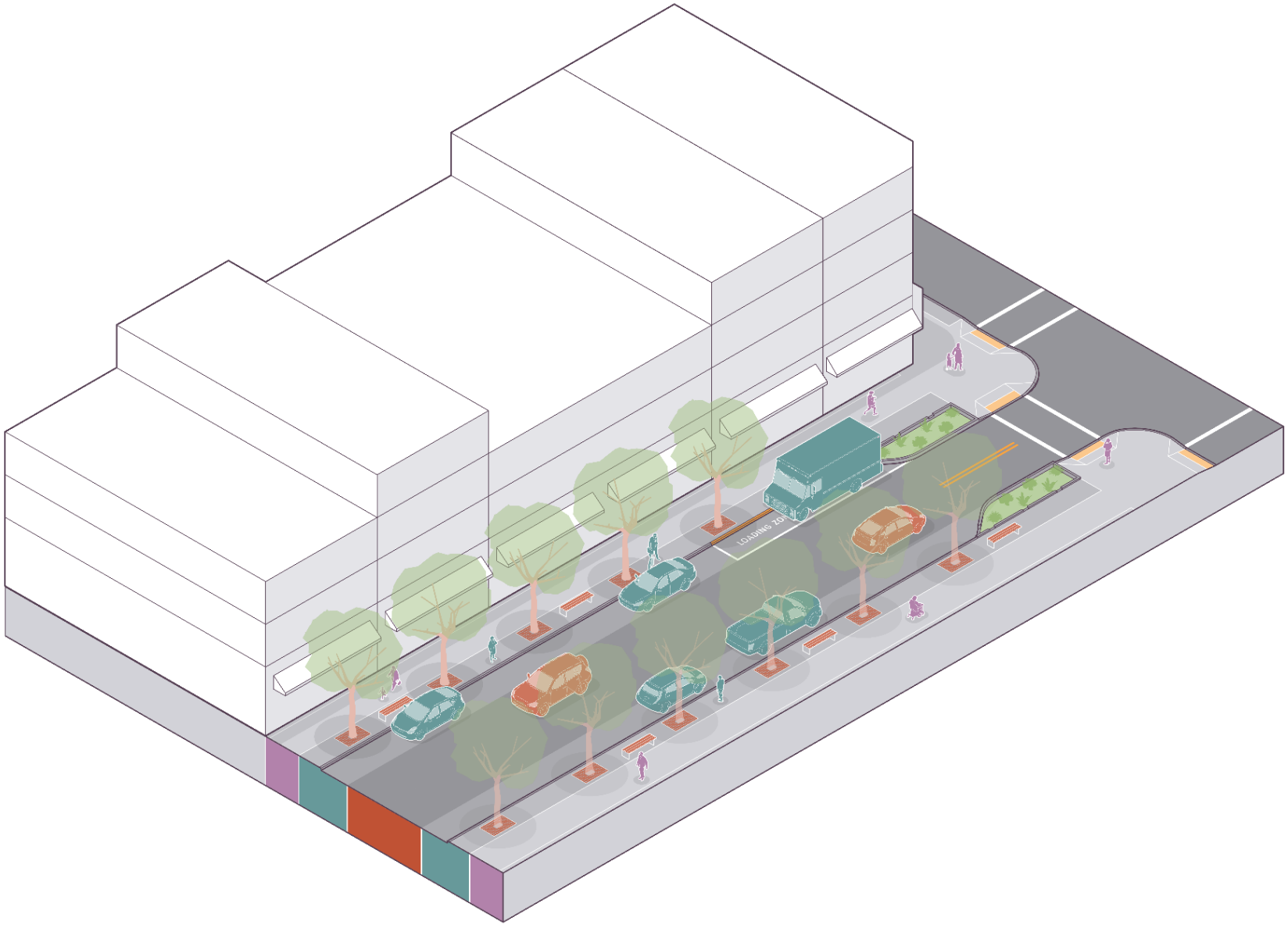
Streets that provide access and convey relatively low numbers of people via multiple modes.

Example Streets: Downtown local streets; internal streets in new mixed-use areas; East Main St

Context: Downtown and mixed-use corridors and districts.

Functional Classifications: Collectors; Locals

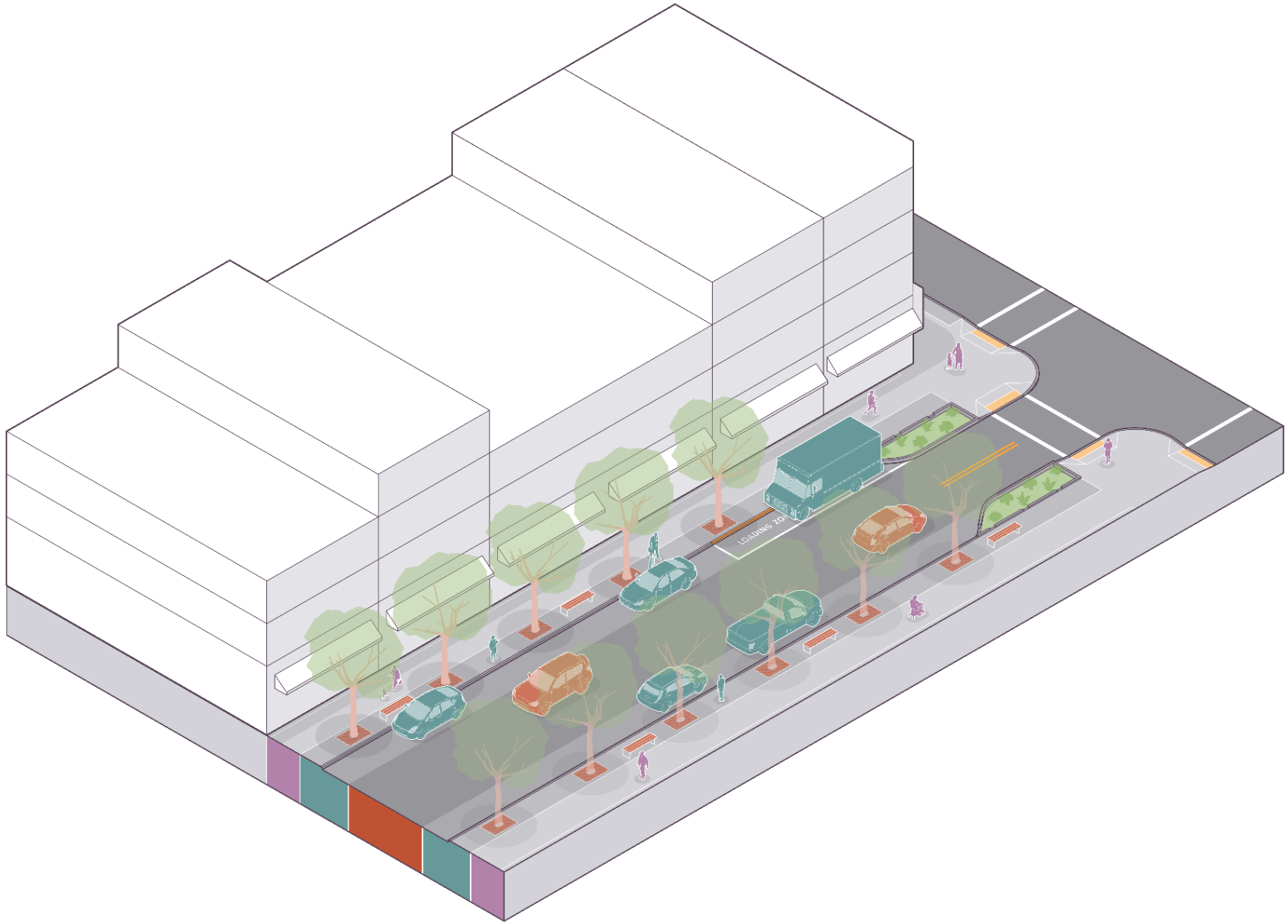
Target Speed: 20 mph or less



TOOLE DESIGN EQT by design

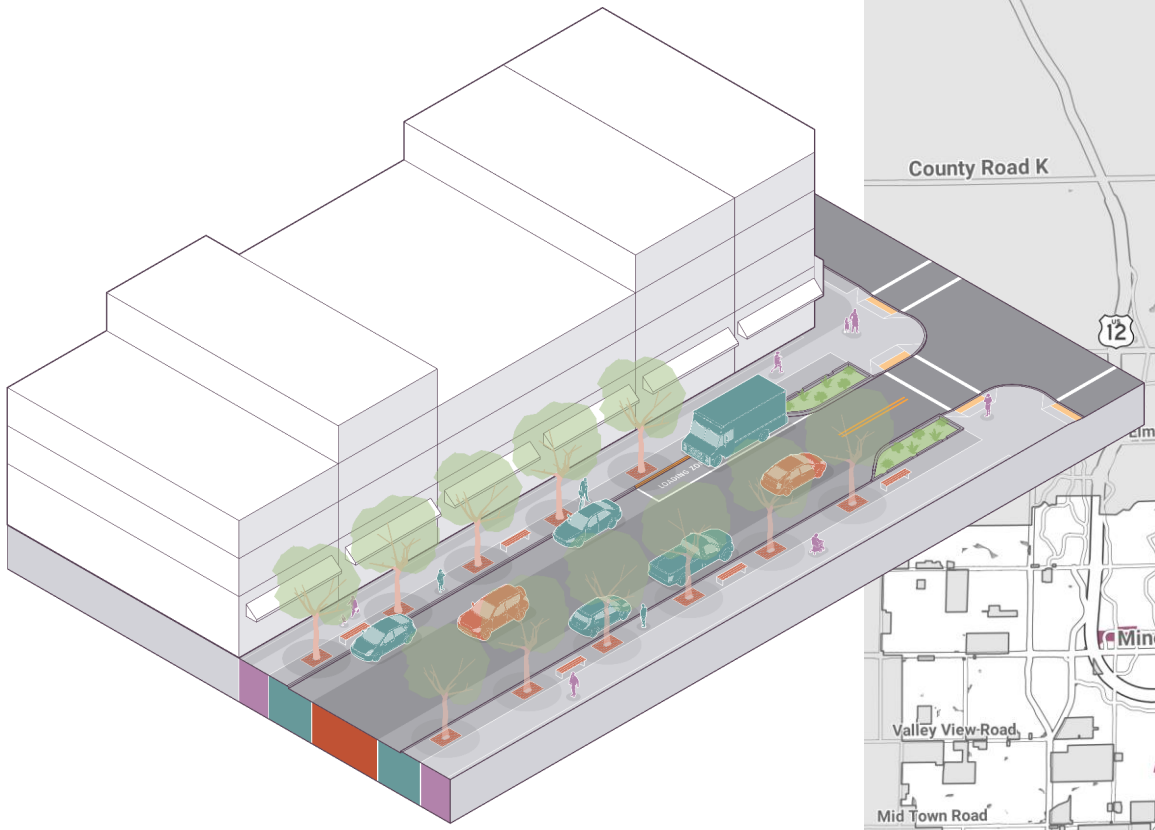
Mixed-Use Neighborhood Street

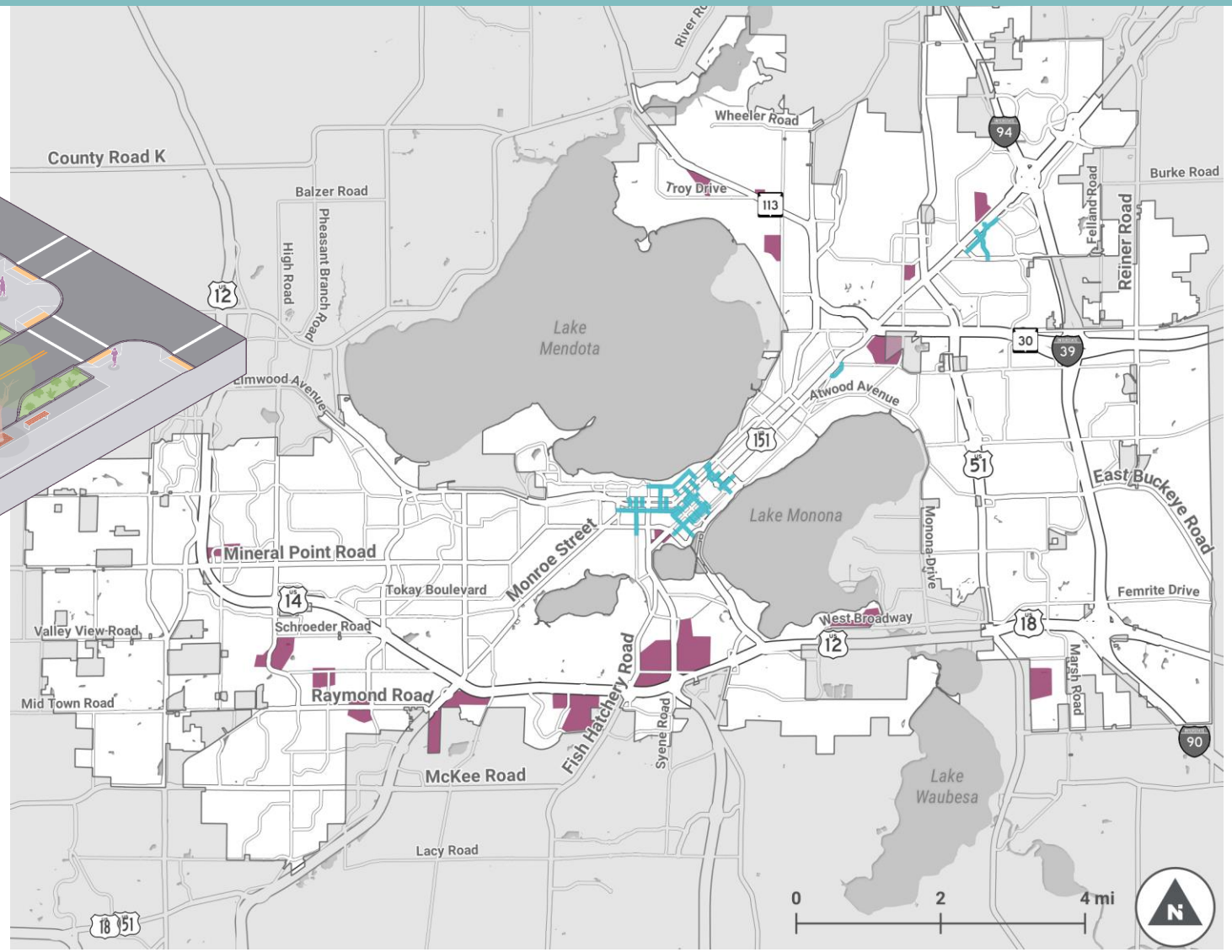
Walkway Medium Priority
Wide sidewalks with buildings close to or touching the sidewalk.
Flex Zone High Priority
Terrace with street trees and bike racks. Parallel or diagonal on-street parking. Loading zones, if needed, should be provided around the corner on intersecting minor streets.
Travelway Low Priority
Two-way travel without lane markings. No dedicated bikeway unless contraflow bike lane or needed based on traffic volumes.
Additional Features and Considerations
Intersections every 300-500 feet



TOOLE DESIGN EQT by design

Mixed-Use Neighborhood Street





TOOLE DESIGN

EQT by design

Civic Space

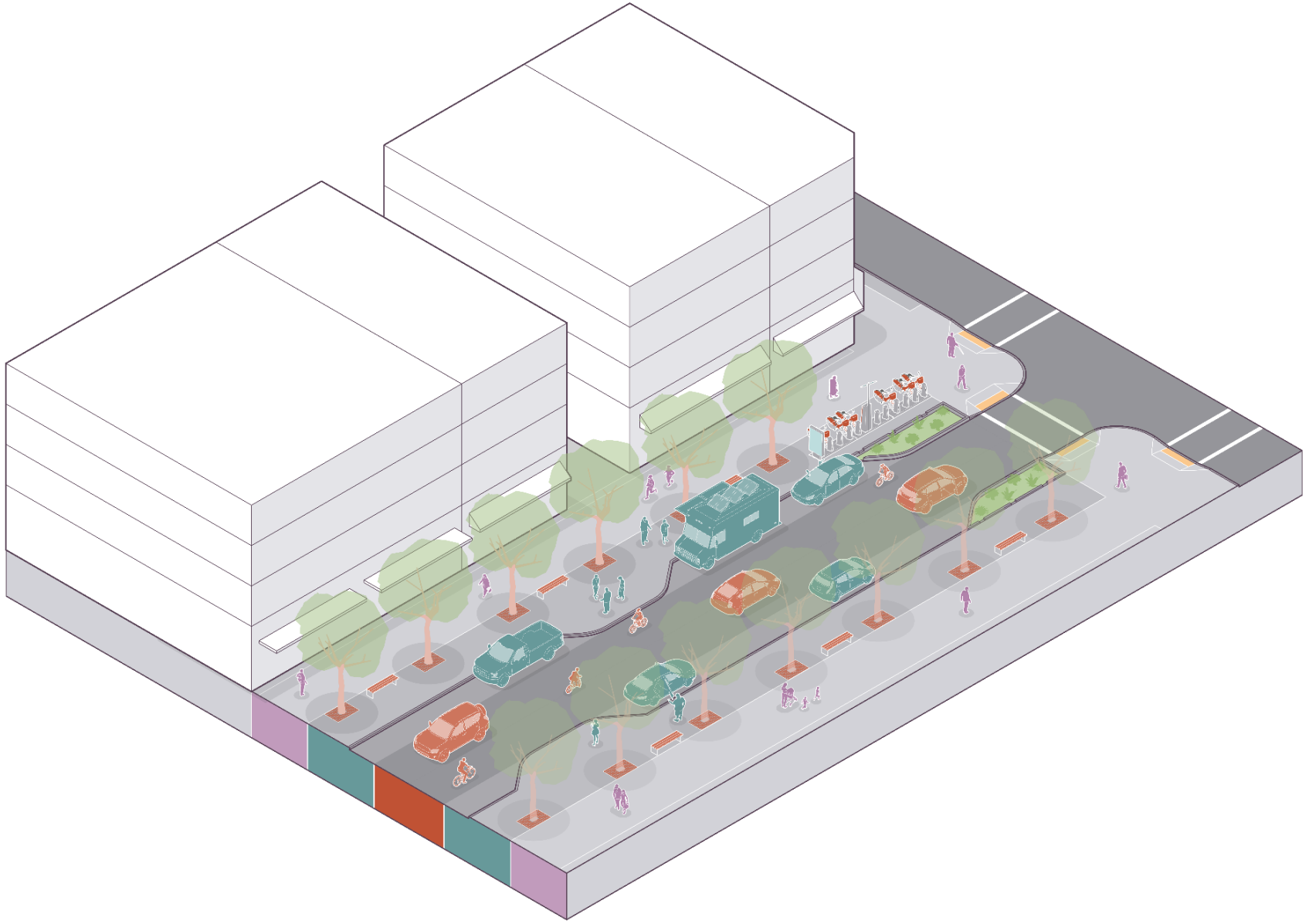
Street with minimal delineation between sidewalk and roadway. Always or often closed to car traffic.

Example Streets: Capitol square; downtown diagonals; MLK Blvd

Context: Downtown and other mixed use

Functional Classifications: Collectors; Locals

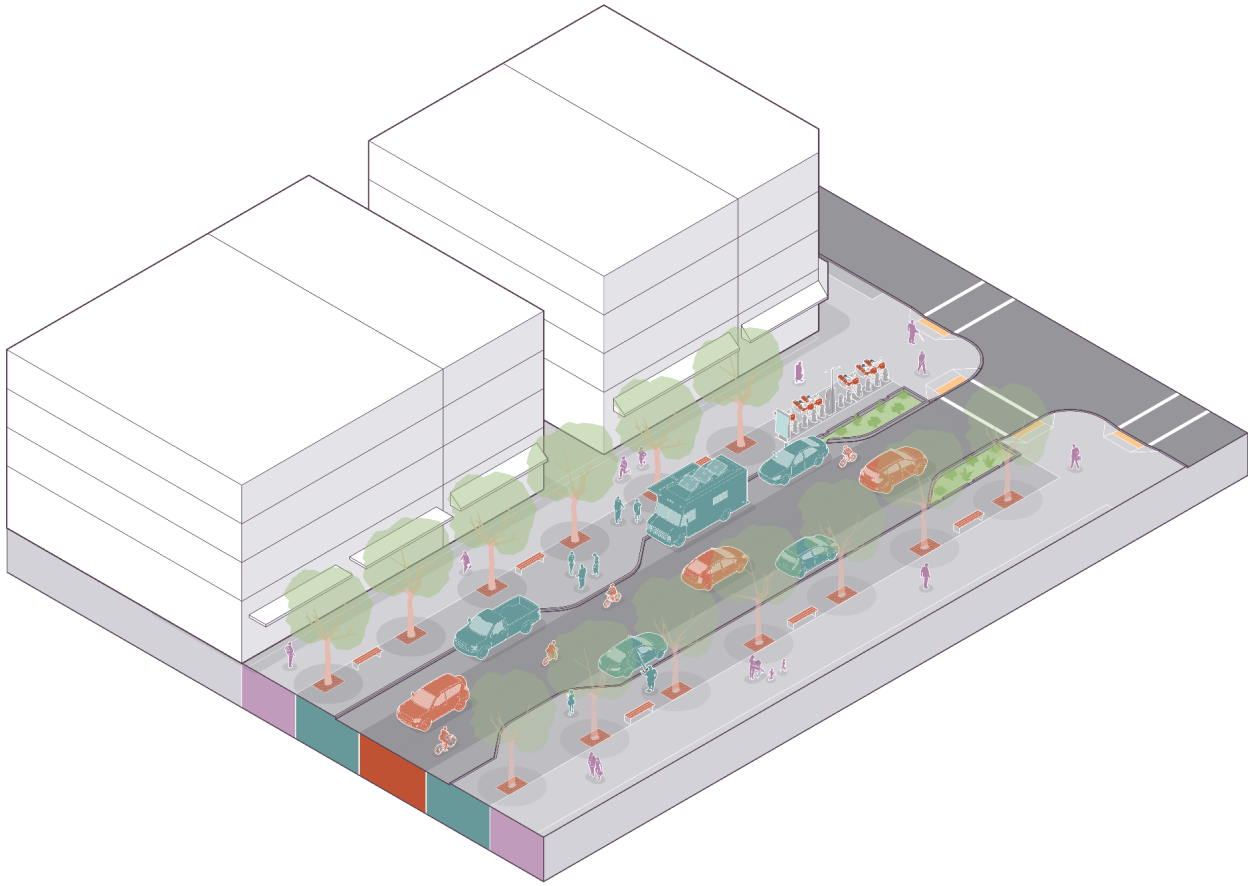
Target Speed: 15 mph or less



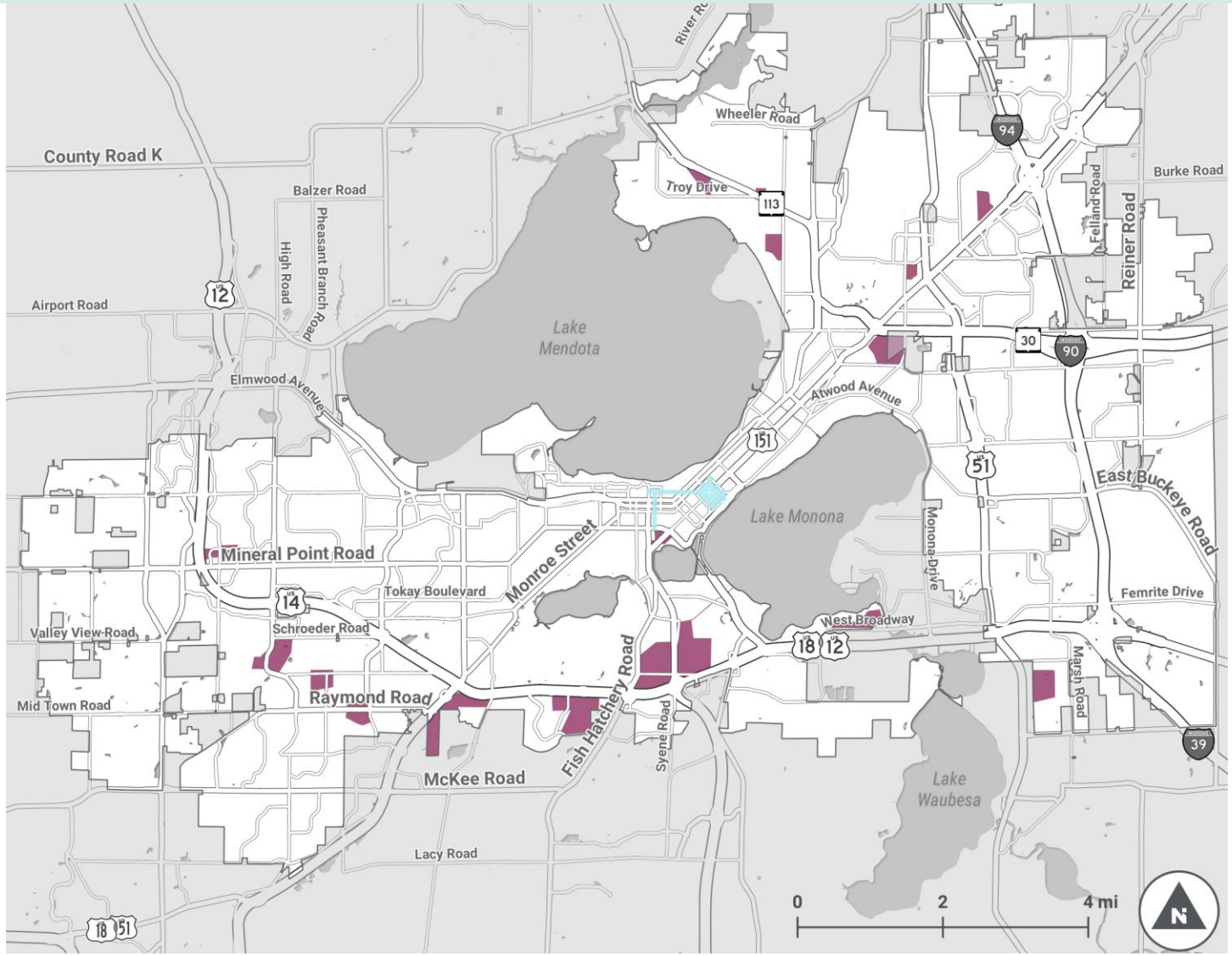
TOOLE DESIGN EQT by design

Civic Space

Walkway High Priority
Designs vary widely. Wide sidewalks with buildings close to or touching the sidewalk. May shift closer to or farther from the street, to avoid impacting existing canopy trees.
Flex Zone High Priority
Designs vary widely. Hardscaped terrace with street trees, bike racks, and sidewalk cafés. Parallel or diagonal (back-in) on-street parking. Loading zones, if needed, should be provided around the corner on intersecting minor streets.
Travelway Low Priority
Designs vary widely. One or two-way travel, sometimes without lane markings. No dedicated bikeway unless contraflow bike lanes are necessary. May be shared space, a flush street, etc. Regularly closed to motor vehicle traffic during events.
Additional Features and Considerations
Intersections every 200-400 feet; controlled crossings every 500-900 feet The overall design should make driving over 15 mph feel uncomfortable and may include elements such as curb extensions or raised instersections or crosings to achieve this outcome. If traffic volumes exceed desired levels, traffic diversion features may be included.



Civic Space



TOOLE DESIGN

EQT by design

Neighborhood Street

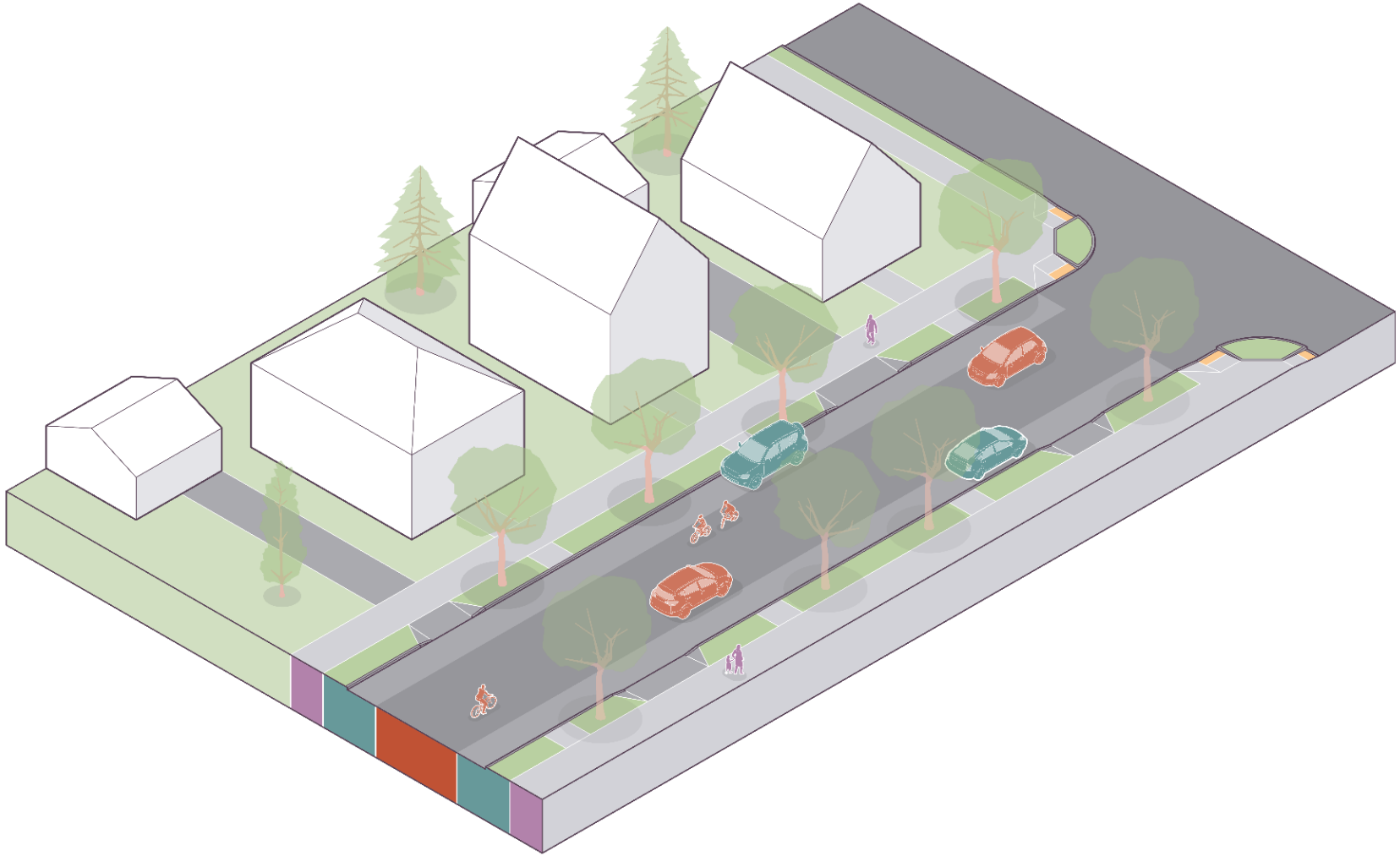
Typical neighborhood streets. Includes some higher-traffic streets that would be designed to prioritize neighborhood quality of life. Allows two drivers to pass each other without stopping.

Example Streets: Park Edge Dr; Tree Ln; Allied Dr; Baldwin St; Mifflin St; Commonwealth Ave (many are not mapped)

Context: Residential neighborhoods, including edges of downtown. May include industrial areas.

Functional Classifications: Collectors; Locals

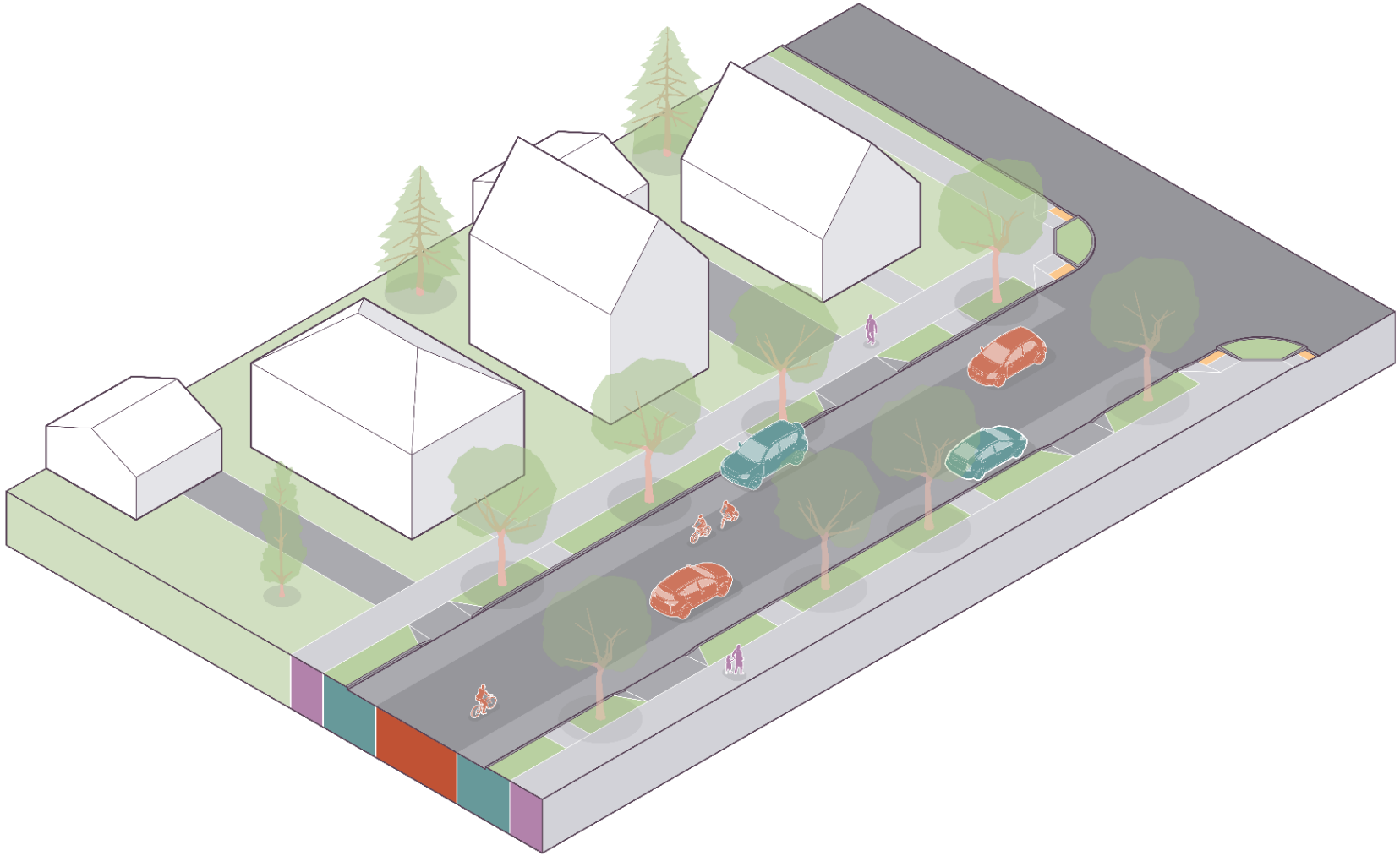
Target Speed: 20 mph or less



TOOLE DESIGN EQT by design

Neighborhood Street

Walkway High Priority
Standard sidewalks, with landscaping between the sidewalk and homes or buildings. May shift closer to or farther from the street, to avoid impacting trees.
Flex Zone Medium Priority
Landscaped terrace with trees; may include items like rain gardens. May straddle the walkway when the walkway is close to the street to avoid impacting existing canopy trees. On-street parking on one or both sides is common.
Travelway Low Priority
Two-way travel, sometimes without lane markings. Bike facility if street has higher traffic volumes.
Additional Features and Considerations
Intersections every 300-500 feet



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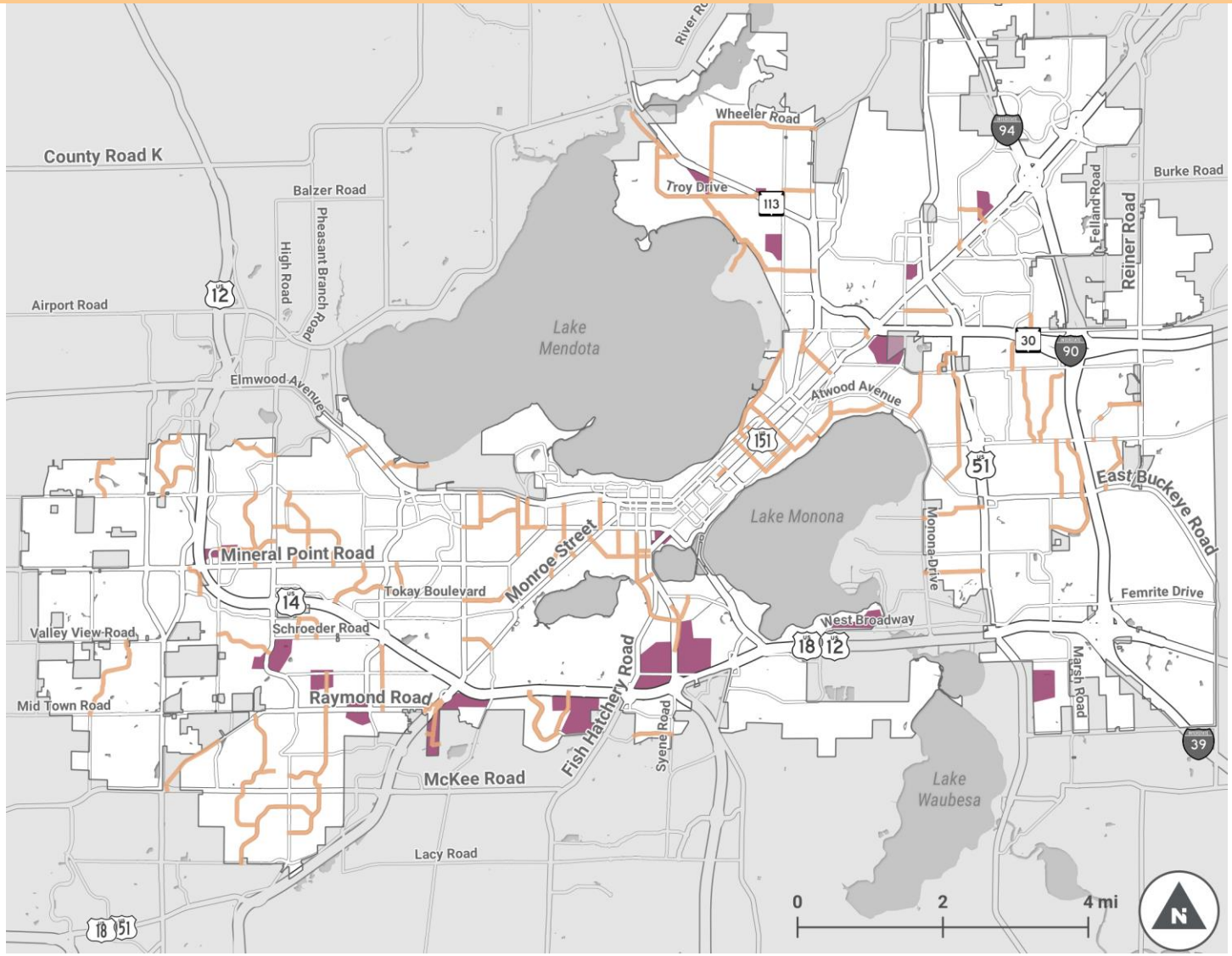
Neighborhood Street & Neighborhood Yield Street



TOOLE DESIGN

EQT by design

Neighborhood Yield Street

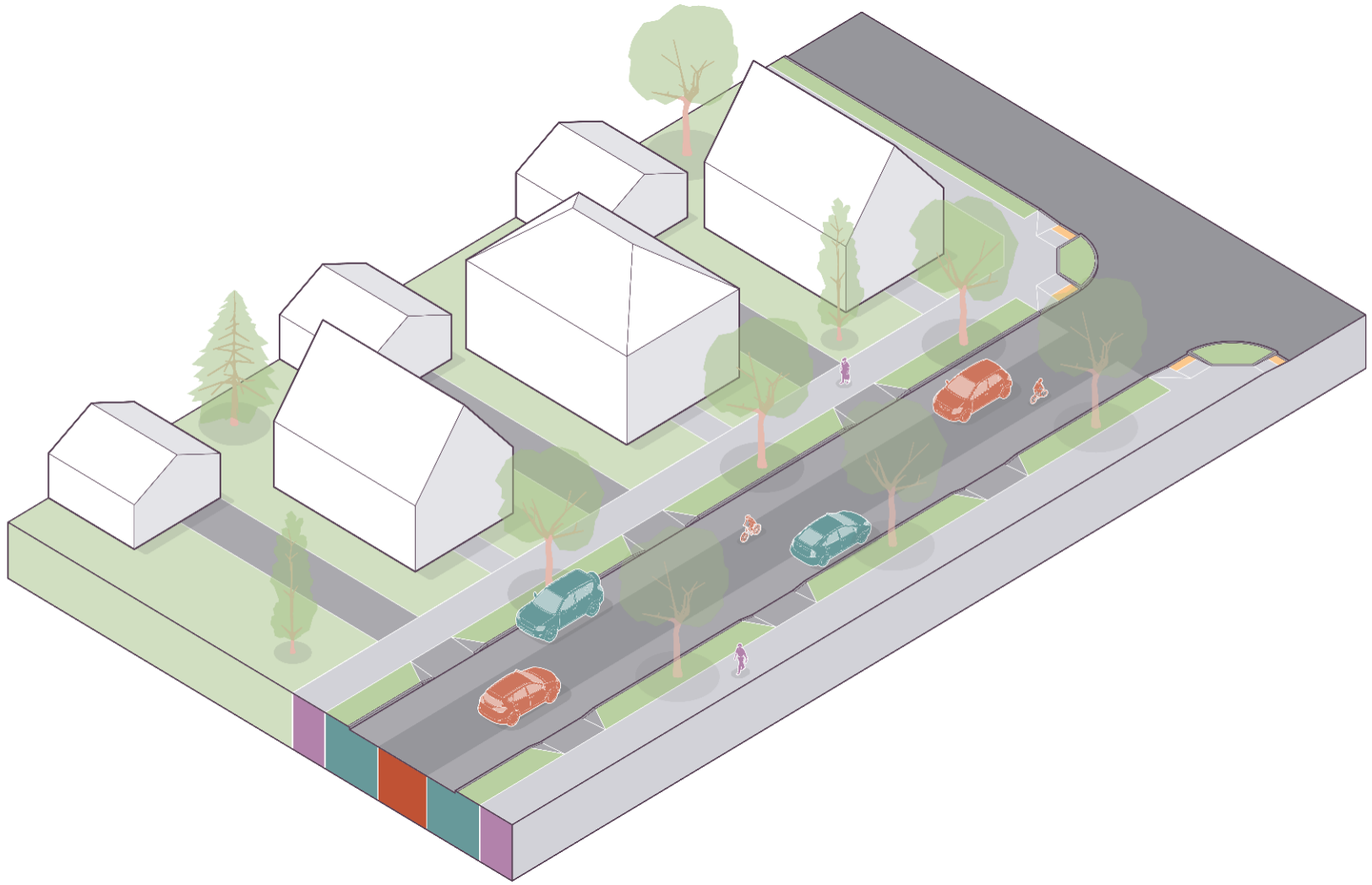
Typical neighborhood streets. May allow parking on only one side. Does NOT allow two drivers to pass each other (one must give way), which provides a traffic-calming effect.

Example Streets: Riverside Drive; numerous residential local streets (most are not mapped)

Context: Residential neighborhoods, including edges of downtown.

Functional Classifications: Locals

Target Speed: 20 mph or less



TOOLE DESIGN EQT by design

Neighborhood Yield Street

Walkway
High Priority

Standard sidewalks, with landscaping between the sidewalk and homes or buildings. May shift closer to or farther from the street, to avoid impacting trees.

Flex Zone
Medium Priority

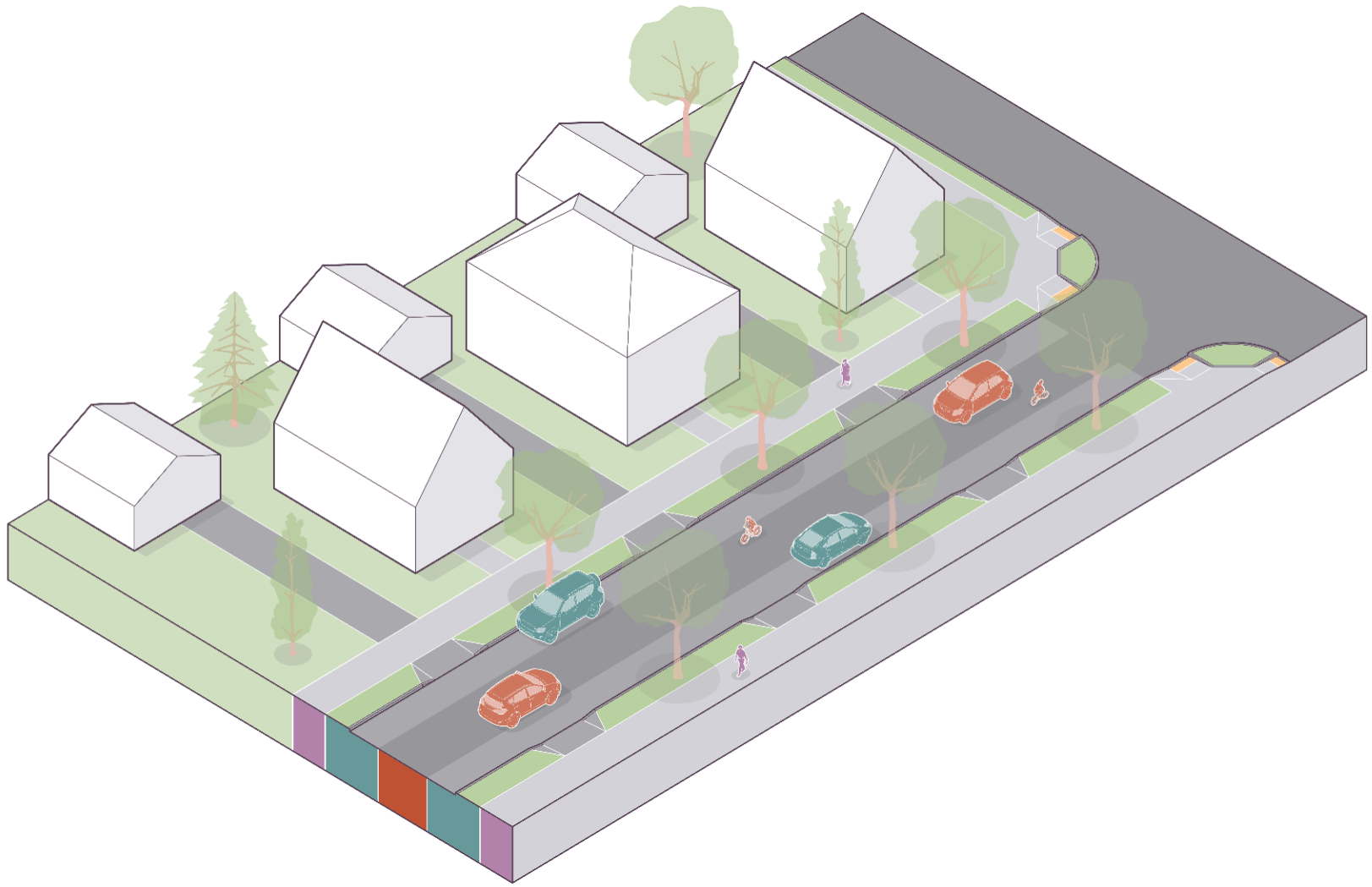
Landscaped terrace with trees; may include items like rain gardens. May straddle the walkway when the walkway is close to the street to avoid impacting existing canopy trees. On-street parking on one or both sides.

Travelway
Low Priority

Two-way travel without lane markings, typically requiring one direction to give way to the other. No dedicated bikeway.

Additional Features and Considerations

Intersections every 300-500 feet



TOOLE DESIGN EQT by design

Woonerf

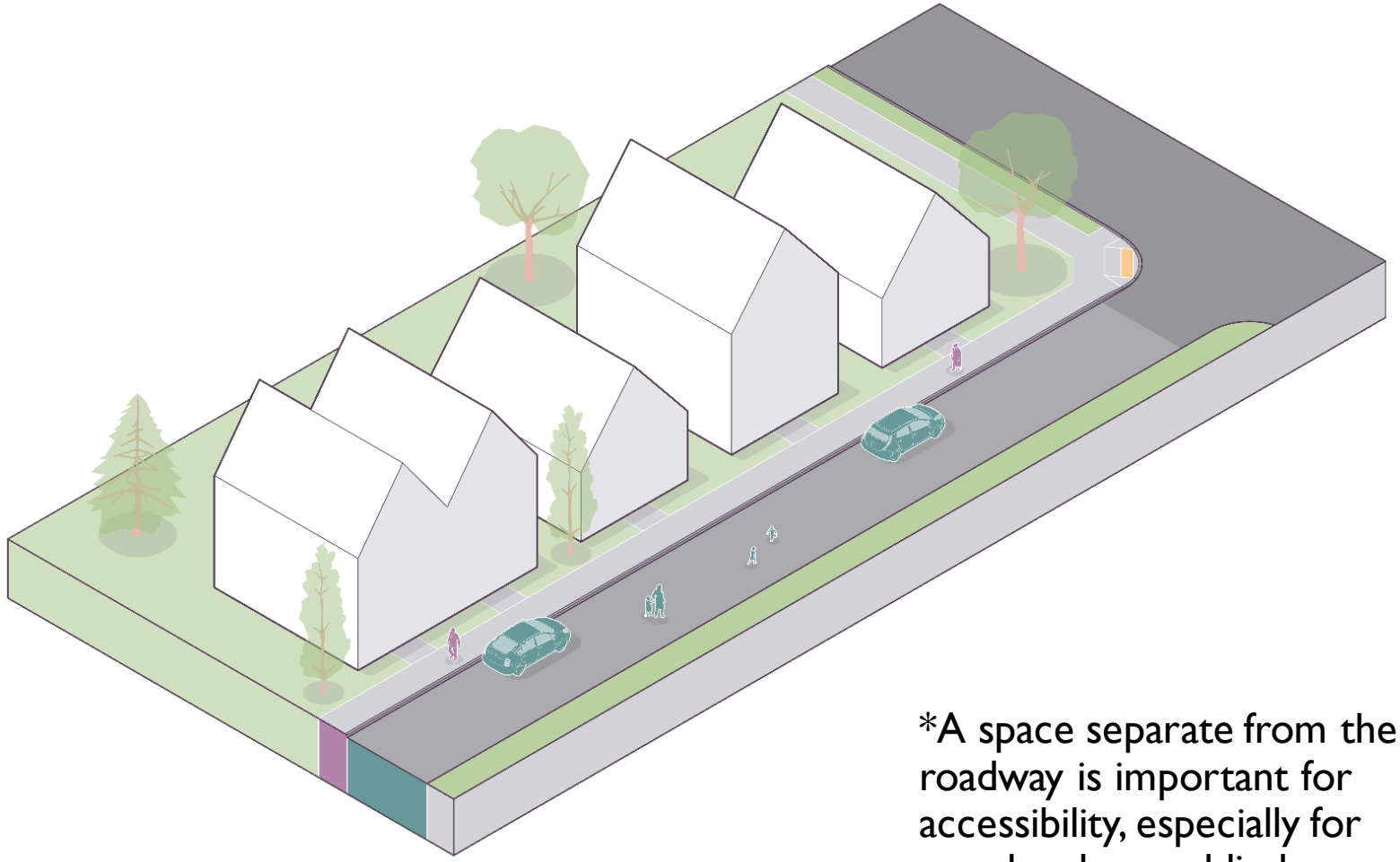
Street where walking, biking, driving, parking, and playing take place in the same space. Includes a "pedestrian comfort zone" for year-round accessibility* and to allow ease of pedestrian-suitable snow clearance during the winter. Requires very low speeds and low amounts of car traffic. In areas with high density.

Example Streets: "Court" streets in older neighborhoods
(not mapped)

Context: Compact residential streets with very low car traffic.

Functional Classifications: Locals

Target Speed: 15 mph or less



*A space separate from the roadway is important for accessibility, especially for people who are blind or visually-impaired.

TOOLE DESIGN EQT by design

Woonerf

Walkway
High Priority

High density housing often close to sidewalk. Sidewalk often back-of-curb. "Pedestrian zone" provided for accessibility and ADA compliance. Sidewalk could be on only one side and may look different than a traditional sidewalk.

Flex Zone
Medium Priority

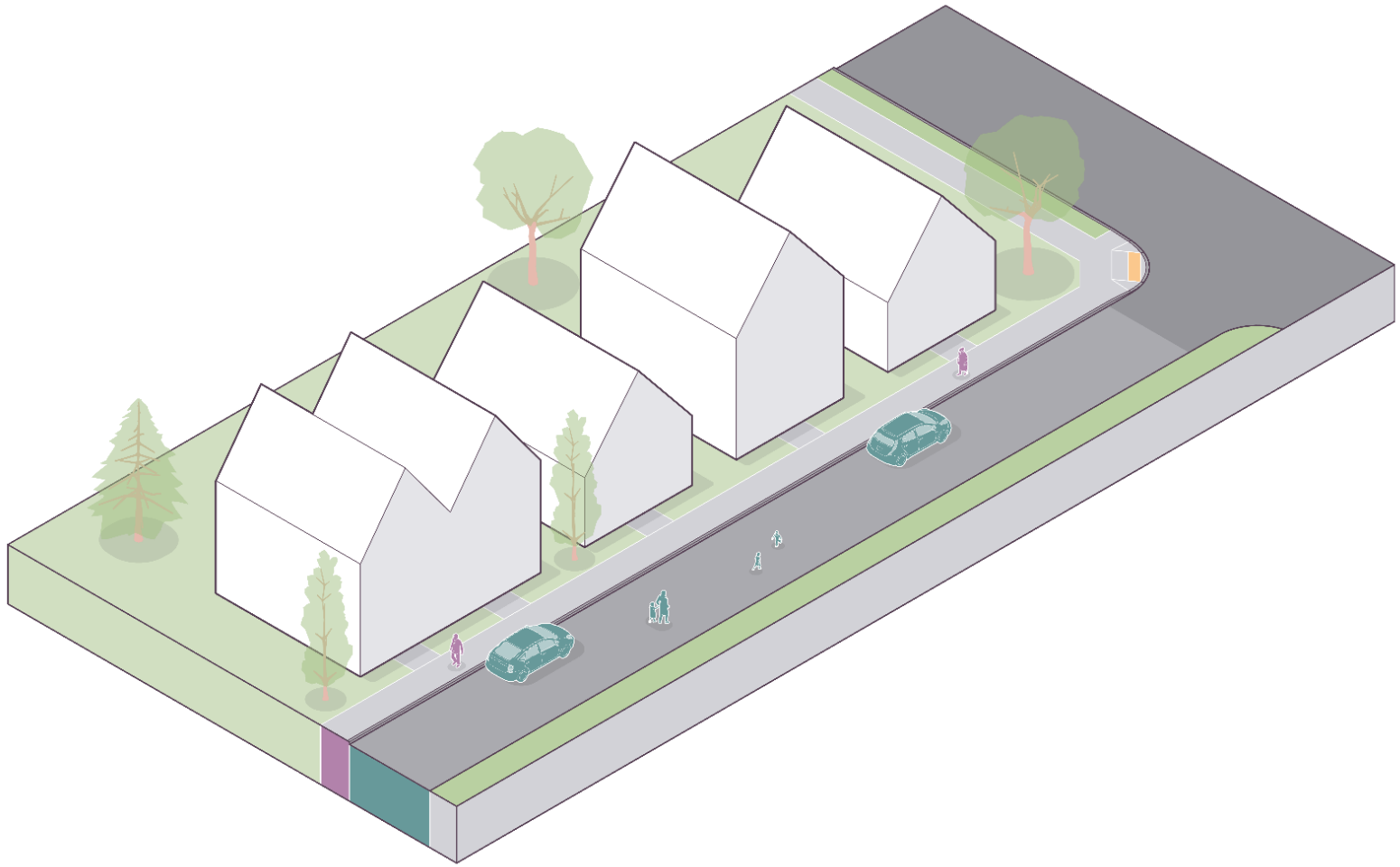
Minimal to no curb. Parallel on-street parking. May include narrow terrace with street trees or container planters. May include "parklets" or other landscaped curb extensions. Entire roadway—including space for moving motor vehicles—is considered Flex Zone.

Travelway
N/A

Not Applicable. Entire roadway—including space for moving motor vehicles—is considered Flex Zone.

Additional Features and Considerations

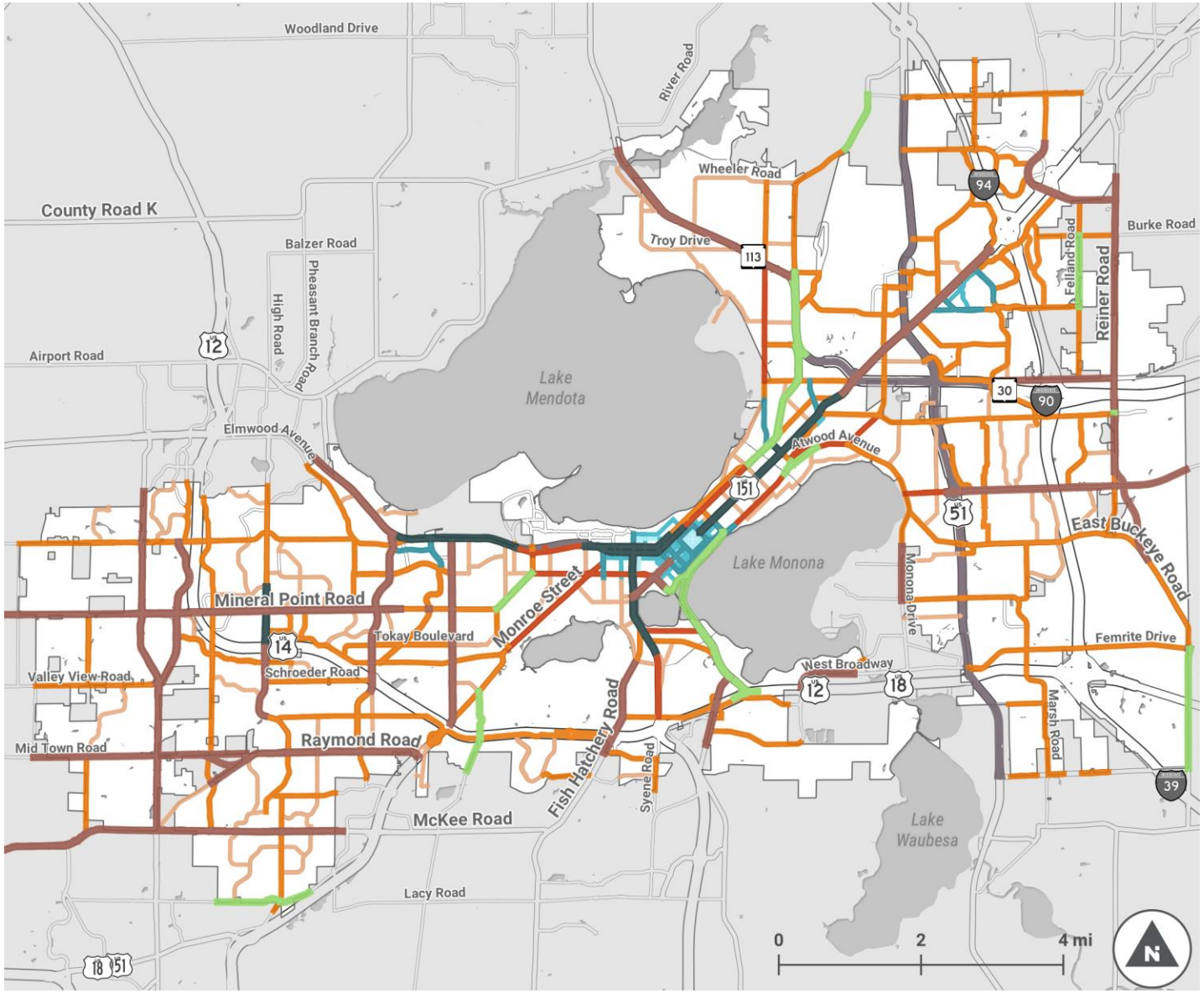
In the US, a typical woonerf is 300-500 ft
Traffic calming elements (such as curb extensions or chicanes to reduce speeds) as needed, defined parking spots, pedestrian scale lighting, gateway treatments.



STREET TYPE MAP

Urban Avenue	Boulevard	Parkway
Mixed-Use Connector	Community Main Street	Community Connector
Mixed-Use Neighborhood Street*	Neighborhood Street*	
Civic Space*	Woonerf*	Neighborhood Yield Street*

*Most or all of these are not mapped, unless applied on a collector or bike boulevard. No streets are currently mapped for the Woonerf type.



TOOLE DESIGN

EQT by design

FEEDBACK

NEXT STEPS

- Engagement
- Additional Discussion on Overlays – Including Green Infrastructure
- Decision-making Framework

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