MoD

Mobility-Oriented Development Study

ANN ARBOR TO DETROIT CORRIDOR READINESS ANALYSIS

September 2020

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ABOUT RTA

The RTA (Regional Transit Authority) of Southeast Michigan was created in 2012 to plan for and coordinate public transportation in the 4-county region of Washtenaw, Wayne, Oakland, and Macomb counties. Its 10-member board is appointed for three-year terms by the county executives of Wayne, Oakland, and Macomb counties, the chair of the Washtenaw County Board of Commissioners, the Mayor of Detroit, and the Governor of Michigan. The Southeast Michigan region is currently served by five transit providers: Ann Arbor Area Transportation Authority (AAATA), Detroit Department of Transportation (DDOT), Detroit Transportation Corporation (DTC, or the Detroit People Mover), M-1 Rail (or the QLine), and Suburban Mobility Authority for Regional Transportation (SMART).

INTRODUCTION

The RTA is conducting a Mobility-Oriented Development (MOD) Study of select stations along key regional corridors in Oakland, Wayne, and Washtenaw Counties to promote coordination around strategic mobility and transit investments and collaborative economic development. The MOD framework builds on transit-oriented development (TOD) methods by examining connections to and from station areas, focusing on station accessibility for defined catchment areas. Two corridors have been analyzed: the first along Woodward Avenue from Detroit to Pontiac, and the other along a potential rail corridor connecting Ann Arbor and Detroit. This report, entitled the Readiness Analysis, seeks to diagnose each station's level of readiness for accommodating MOD.

The Readiness Analysis Report is one document within a suite of deliverables being provided to the RTA for strategic planning with stakeholders throughout the Southeast Michigan region. The Existing Conditions Report informs the Readiness Analysis by providing a base understanding of the zoning, future land use, infrastructure, and services already in place within each station area. The Typology Framework - included in this report - determines the typologies of each station and their envisioned density scale and development types, while the Mode of Emphasis Framework - also included in this report - determines the mode(s) of transportation, in addition to walking and wheelchair, that should be prioritized for accessing each station. Both Frameworks identify a set of regional destinations that impact development within the station area and are important to ensure connectivity to. The Readiness Analysis aims to identify the gaps between the Existing Conditions Report and the aspirational targets supplied by the Typology and Mode of Emphasis Frameworks, identifying opportunities that exist for each station to better accommodate MOD as part of a regional framework.

The Action Plan responds to the results of both this Readiness Analysis and the Mobility Gap Analysis by suggesting specific actions to address each gap, making each station more ready to accommodate MOD. The RTA intends to share study deliverables with a number of regional stakeholders, including local municipalities and transit operators to inform future planning and investment.

TYPOLOGY FRAMEWORK

WHAT IS A TYPOLOGY?

In recent years, several regions have created strategic frameworks as a platform for planning and implementation of development near transit. While such frameworks may include a variety of components, a common feature is a system overview in which stations are categorized for planning purposes. This typically takes the form of two parallel structures: a typology and a readiness scale.

MOD is not a one-size-fits-all concept, and typologies can help maintain important distinctions between places while still allowing MOD to be applied across broad geographies. A typology is a set of categories that sorts station areas by what kind of places they are, or what kind of places the community envisions them becoming as MOD takes root over time. Typologies are thus aspirational as well as descriptive. Unless the vision for a particular station area radically changes for some reason, its typology is meant to stay fixed.

A typology usually reflects a blend of:
- The scale and density of land use;
- Location in the "urban transect", from the core of the main regional downtown to the outer suburbs;
- Function in the transit network—a key commuting destination, a multi-modal collector or a transfer point; and
- Any key destination around which land use and transportation are organized—an airport, campus, stadium, or industrial center.
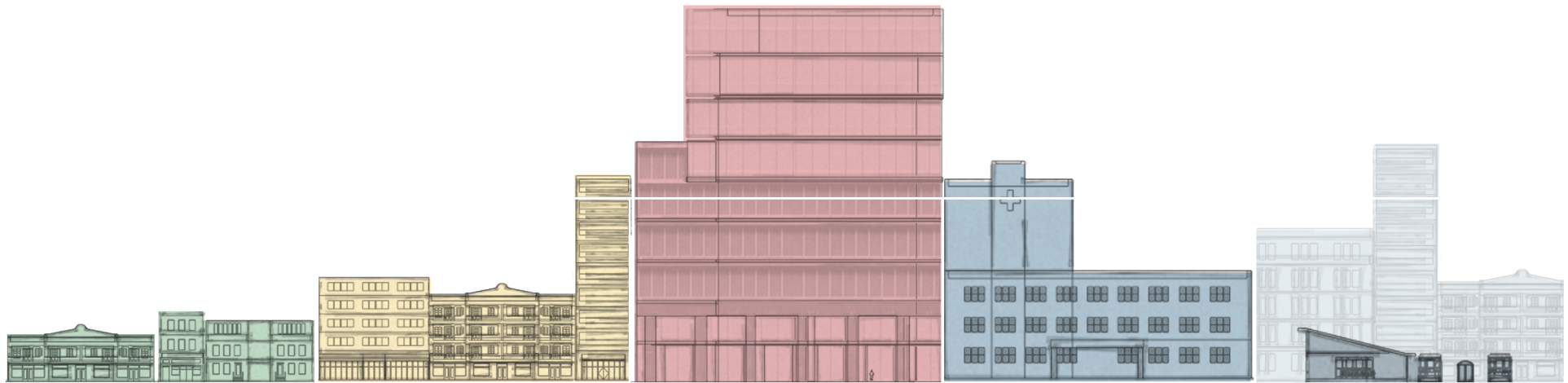
Once established, specific station areas can be categorized into typologies to help define what is envisioned for each one.

The diagram on the following page is the Typology Framework for the MOD Study. Incorporating elements of typical TOD typologies, the Framework also encompasses MOD by considering mobility to and from the station and connections to both station area and satellite destinations.

MOD
(Station Catchment Area)

TOD
(Station Area)

~ ½ Mile   up to 2 Miles

Station

The Typology Framework consists of 3 typologies and 2 destination overlays. Each station can be categorized as either a Neighborhood Center, a Town Center, or a Core City, depending on the density scale and development types that are envisioned there. In addition to a typology, one or both of the destination overlays can be applied to each station area, depending on whether a major destination such as a hospital or university is within the immediate station area or farther away. Every station area – no matter its typology or destination overlay – is envisioned to have mixed-use and affordable development as fundamental elements of MOD.

TYPOLOGY FRAMEWORK

NEIGHBORHOOD CENTER	TOWN CENTER	CORE CITY	STATION AREA	SATELLITE
Typology Categories			**Destination Overlays**	
Lower density	Medium density	High density	Major trip or employment generator within a ½-mile of the station	Major trip or employment generator approximately 1 mile from the station
2-3 stories typical building height of immediate station area	4-6 stories typical building height of immediate station area	7-10 stories typical building height of immediate station area		
More residents than jobs	Number of residents and jobs are about even	More jobs than residents		
A focus on housing development with a mix of retail	A mix of residential, retail, and office development	A focus on office and retail development with a mix of residential		

Mixed-use and affordable development

Hospitals, universities, downtowns, museums/cultural centers, etc.

NEIGHBORHOOD CENTER

CORE AREA

SECONDARY TRANSITION AREA

COMMUTER RAIL CORRIDOR

NEIGHBORHOOD AREA

1/8 MILE

1/4 MILE

1/2 MILE

CORE AREA
- 2-3+ stories
- Mixed Use (retail and commercial, residential)
- Remove Auto-Oriented Uses Over Time (gas stations, drivethroughs, auto repair shops)
- Replace surface parking with development
- No or reduced parking requirements
- Highly walkable

SECONDARY TRANSITION AREA
- 2-3 stories
- Mixed Use
- Some surface parking
- Dense Residential (Multi-Family, Townhomes)
- Walkable

NEIGHBORHOOD AREA
- Residential / Existing Neighborhood

1/8 MILE
1/4 MILE
1/2 MILE

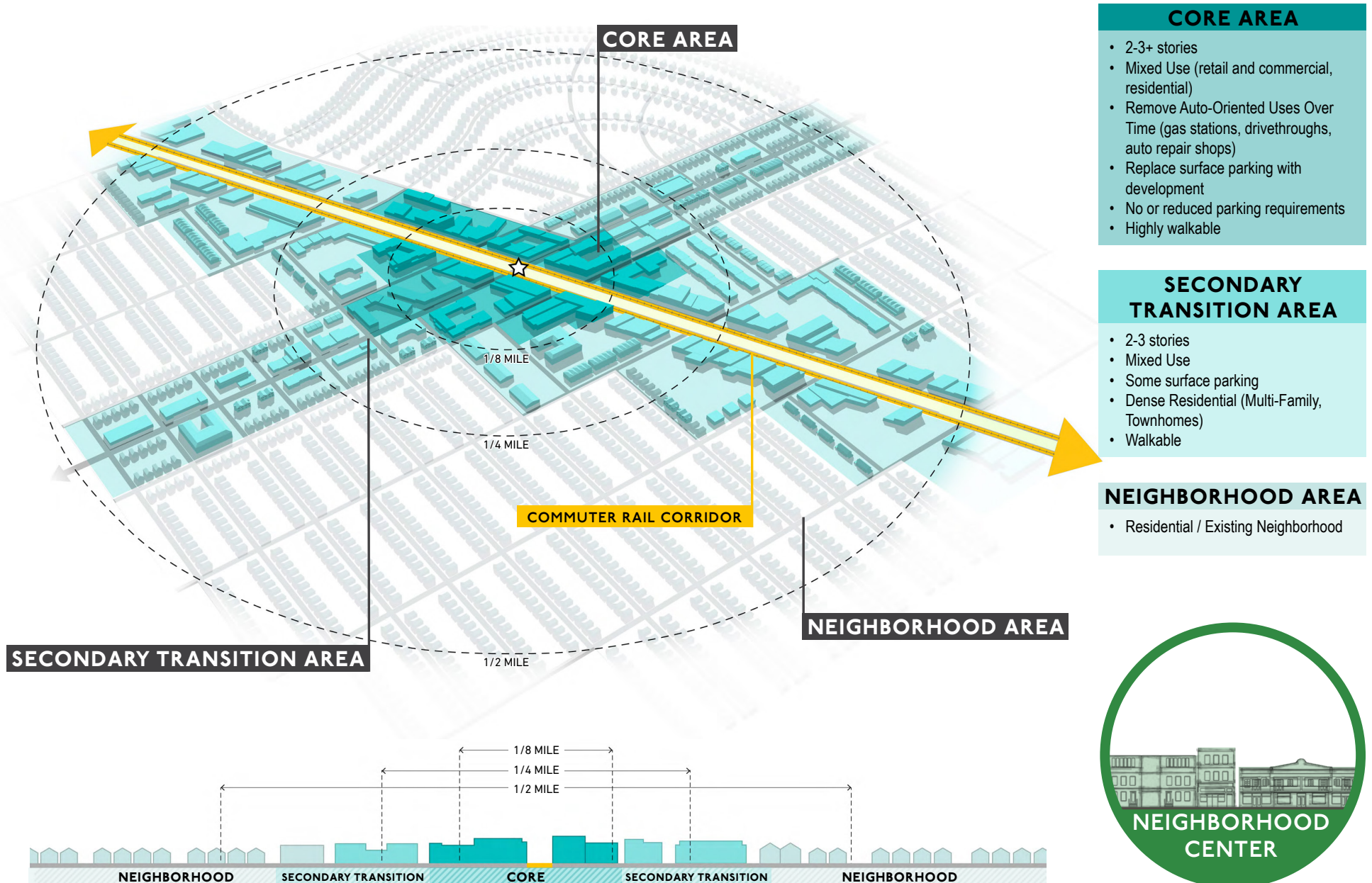NEIGHBORHOOD   SECONDARY TRANSITION   CORE   SECONDARY TRANSITION   NEIGHBORHOOD

NEIGHBORHOOD CENTER

NEIGHBORHOOD CENTER

Lower density

2-3 stories typical building height of immediate station area

More residents than jobs

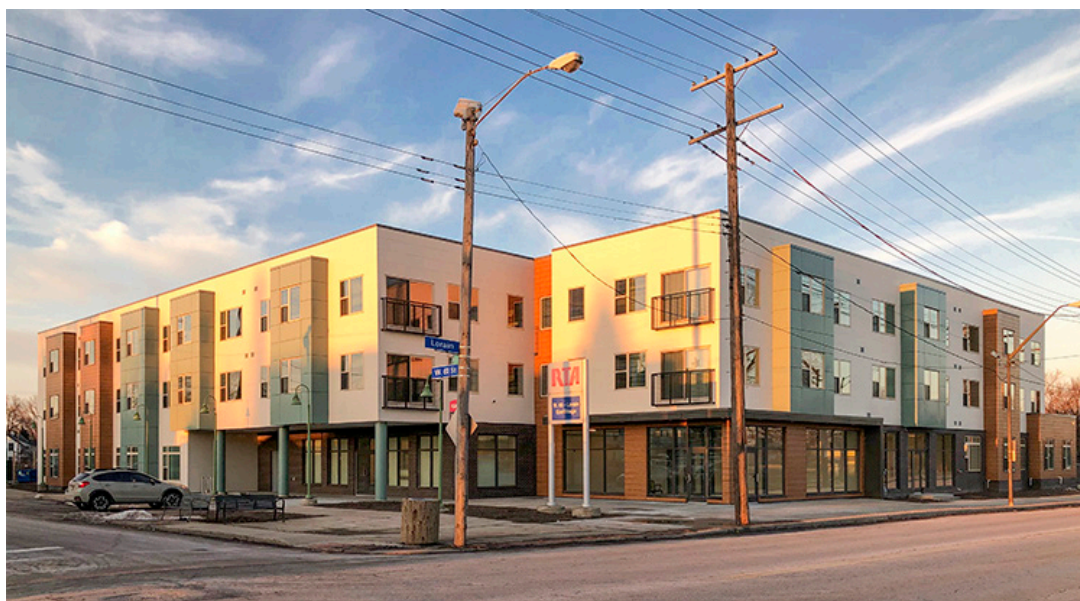A focus on housing development with a mix of retail

San Carlos Transit Village, CA
Source: Silicon Valley Business Journal

Hyde Park Station, Austin, TX
Source: CapMetro

Aspen Place, Lorain, OH
Source: FreshWater

MOD Study
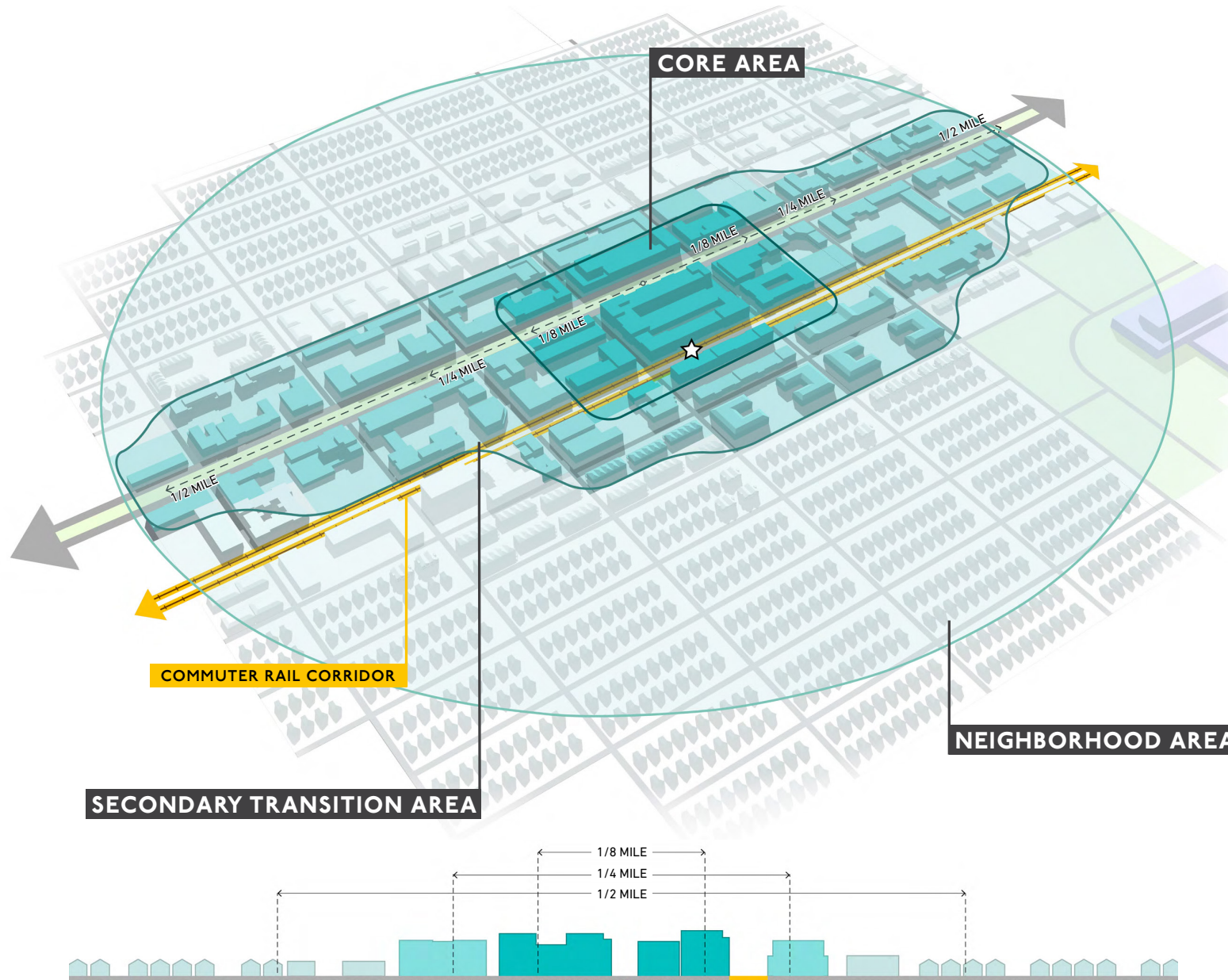
CORE AREA

CORE AREA
- 4-6+ stories
- Mixed Use
- Remove Auto-Oriented Uses Over Time (gas stations, drivethroughs, auto repair shops)
- Replace surface parking with development

SECONDARY TRANSITION AREA
- 2-6 stories
- Mixed Use
- Dense Residential (Multi-Family, Townhomes)
- Walkable

NEIGHBORHOOD AREA
- Residential / Existing Neighborhood

1/2 MILE

1/4 MILE

1/8 MILE

1/8 MILE

1/4 MILE

1/2 MILE

1/4 MILE

1/2 MILE

COMMUTER RAIL CORRIDOR

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

1/8 MILE

1/4 MILE

1/2 MILE

TOWN CENTER

TOWN CENTER

Medium density

4-6 stories typical building height of immediate station area

Number of residents and jobs are about even

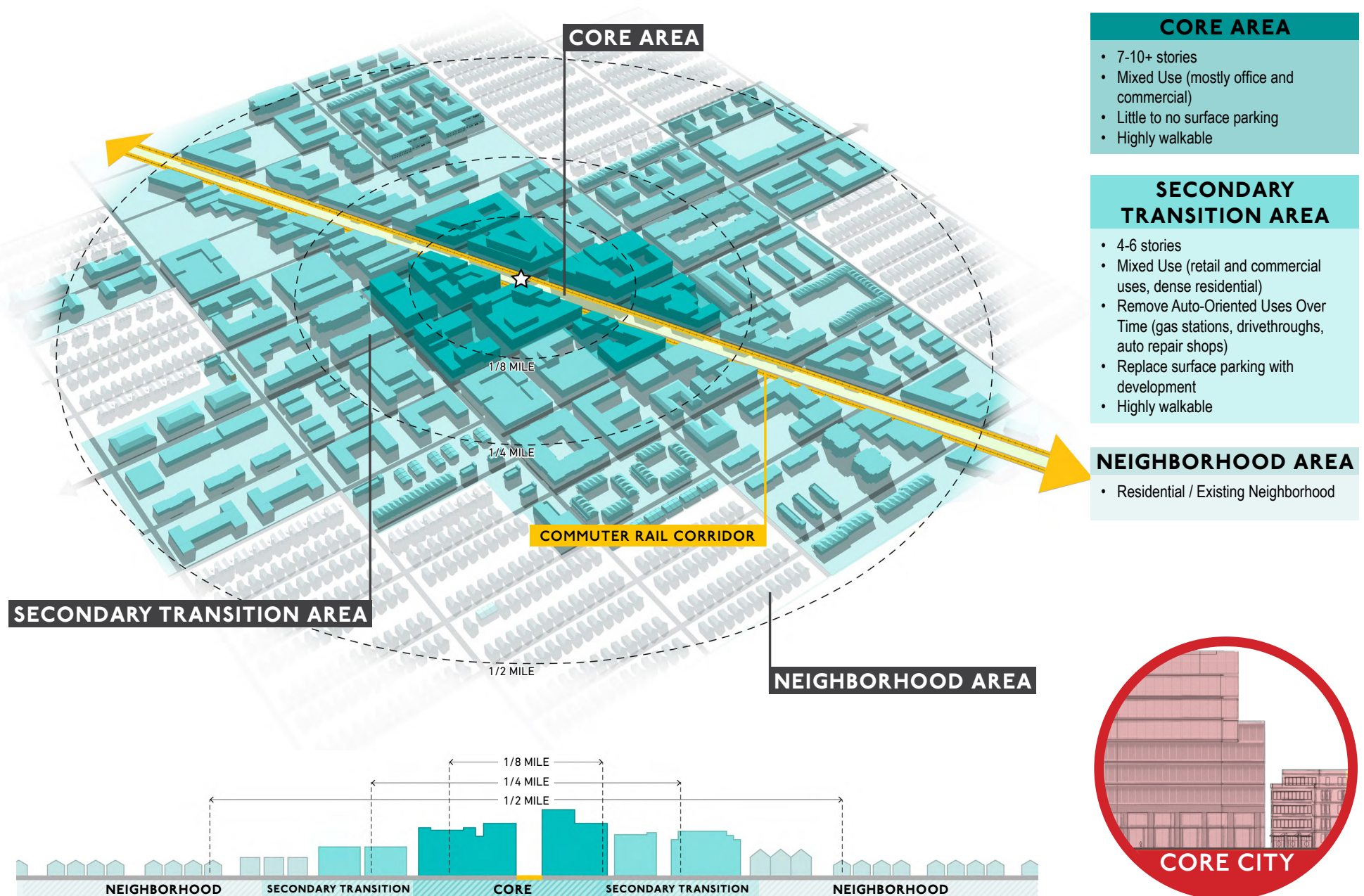A mix of residential, retail, and office development

The Triangle, Austin, TX
Source: ApartmentFinder

The Domain, Austin, TX
Source: Austin City Guide

Proposed Redevelopment of Market Square Plaza, Ohio City, OH
Source: Dimit Architects

CORE AREA

CORE AREA

- 7-10+ stories
- Mixed Use (mostly office and commercial)
- Little to no surface parking
- Highly walkable

SECONDARY TRANSITION AREA

- 4-6 stories
- Mixed Use (retail and commercial uses, dense residential)
- Remove Auto-Oriented Uses Over Time (gas stations, drivethroughs, auto repair shops)
- Replace surface parking with development
- Highly walkable

NEIGHBORHOOD AREA

- Residential / Existing Neighborhood

SECONDARY TRANSITION AREA

COMMUTER RAIL CORRIDOR

NEIGHBORHOOD AREA

1/8 MILE
1/4 MILE
1/2 MILE

1/8 MILE
1/4 MILE
1/2 MILE

NEIGHBORHOOD   SECONDARY TRANSITION   CORE   SECONDARY TRANSITION   NEIGHBORHOOD

CORE CITY

CORE CITY

CORE CITY

High density

7-10 stories typical building height of immediate station area

More jobs than residents

A focus on office and retail development with a mix of residential

Gateway Transit Village, New Brunswick, NJ
Source: Severud Associates

Republic Square, Austin, TX
Source: Pallasart

Euclid Avenue BRT Station, Cleveland, OH
Source: NACTO

Regional Destinations

A set of regional destinations, shown on the following page, were identified for each corridor based on "Regional Attractions" identified by the Short Trip Demand Analysis of the Bicycle and Pedestrian Mobility Plan for Southeast Michigan, published in March 2020 by the Southeast Michigan Council of Government (SEMCOG). This analysis took into account:

- Core services - including jobs, health care facilities, supermarkets, parks, schools, and libraries;
- Retail, entertainment and commercial land use; and
- Walkable Urban Places - existing or emerging areas of walkability anchored by a mix of real-estate products, identified by the 2015 WalkUP Wake-Up Call: Michigan Metros report.

The regional destinations were then categorized based on their proximity to the stations: destinations within ½-mile of a station are Station Area Destinations and destinations farther than ½-mile away are Satellite Destinations.

Destination Overlays

The addition of destination overlays to the Typology Framework rose out of discussions with stakeholders that identified the need to describe how the regional destinations contribute to the land use context of specific stations and to emphasize the importance of connectivity to those that lie beyond the immediate station area.

STATION AREA — Regional destination within a ½-mile of the station

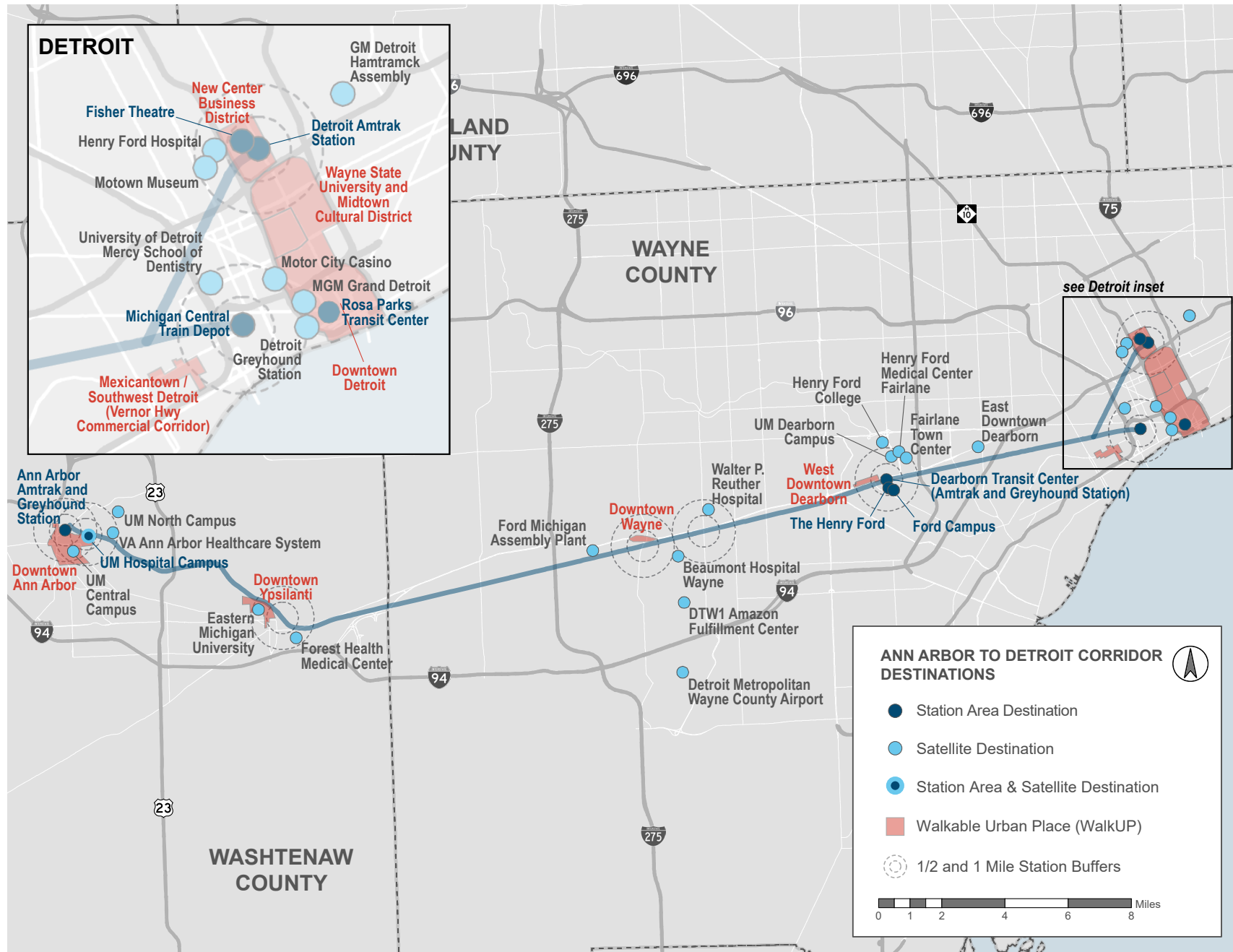**SATELLITE** — Regional destination approximately 1 mile from the station

University of Michigan Hospital in Ann Arbor
Source: Michigan Medicine

The Henry Ford Museum in Dearborn
Source: Gate to Adventures

DETROIT

GM Detroit Hamtramck Assembly

New Center Business District

Fisher Theatre

Henry Ford Hospital

Detroit Amtrak Station

Motown Museum

Wayne State University and Midtown Cultural District

University of Detroit Mercy School of Dentistry

Motor City Casino

MGM Grand Detroit

Rosa Parks Transit Center

Michigan Central Train Depot

Detroit Greyhound Station

Downtown Detroit

Mexicantown / Southwest Detroit (Vernor Hwy Commercial Corridor)

WAYNE COUNTY

see Detroit inset

Henry Ford Medical Center Fairlane

Henry Ford College

Fairlane Town Center

East Downtown Dearborn

UM Dearborn Campus

West Downtown Dearborn

Dearborn Transit Center (Amtrak and Greyhound Station)

The Henry Ford

Ford Campus

Walter P. Reuther Hospital

Ann Arbor Amtrak and Greyhound Station

UM North Campus

Downtown Wayne

VA Ann Arbor Healthcare System

UM Hospital Campus

Ford Michigan Assembly Plant

Downtown Ann Arbor

UM Central Campus

Downtown Ypsilanti

Beaumont Hospital Wayne

DTW1 Amazon Fulfillment Center

Eastern Michigan University

Forest Health Medical Center

Detroit Metropolitan Wayne County Airport

WASHTENAW COUNTY

ANN ARBOR TO DETROIT CORRIDOR DESTINATIONS

- ● Station Area Destination
- ● Satellite Destination
- ● Station Area & Satellite Destination
- ▪ Walkable Urban Place (WalkUP)
- ⬭ 1/2 and 1 Mile Station Buffers

0 1 2 4 6 8 Miles

MODE OF EMPHASIS FRAMEWORK

In addition to this study's Typology Framework, which focuses on TOD within the immediate station area, is the consideration of first-mile/last-mile connections linking stations to their surrounding catchment areas. These connections not only enhance the centrality and accessibility of a station area, but extend the footprint of transit-supportive development out beyond the quarter- or half-mile walkshed of traditional TOD planning.

Identifying gaps in connectivity and planning for the future of the mobility network extending approximately 2 miles out from each station requires consideration of the modes that will be used to access the station. The infrastructure and facilities supporting different modes must be accommodated within limited space and may even conflict with one another; therefore, a framework for prioritizing those modes that will be used to access the station the most – a station's mode(s) of emphasis – is important.

Once established, specific station areas can be categorized into the Mode of Emphasis Framework to define which mode(s) to emphasize for each one. A Mobility Gap Analysis can then be performed to assess how a station area accommodates its mode(s) of emphasis and identify any gaps in the network.

The diagram on the following page is the Mode of Emphasis Framework for the Mobility-Oriented Development Study.

MOD
(Station Catchment Area)

TOD
(Station Area)

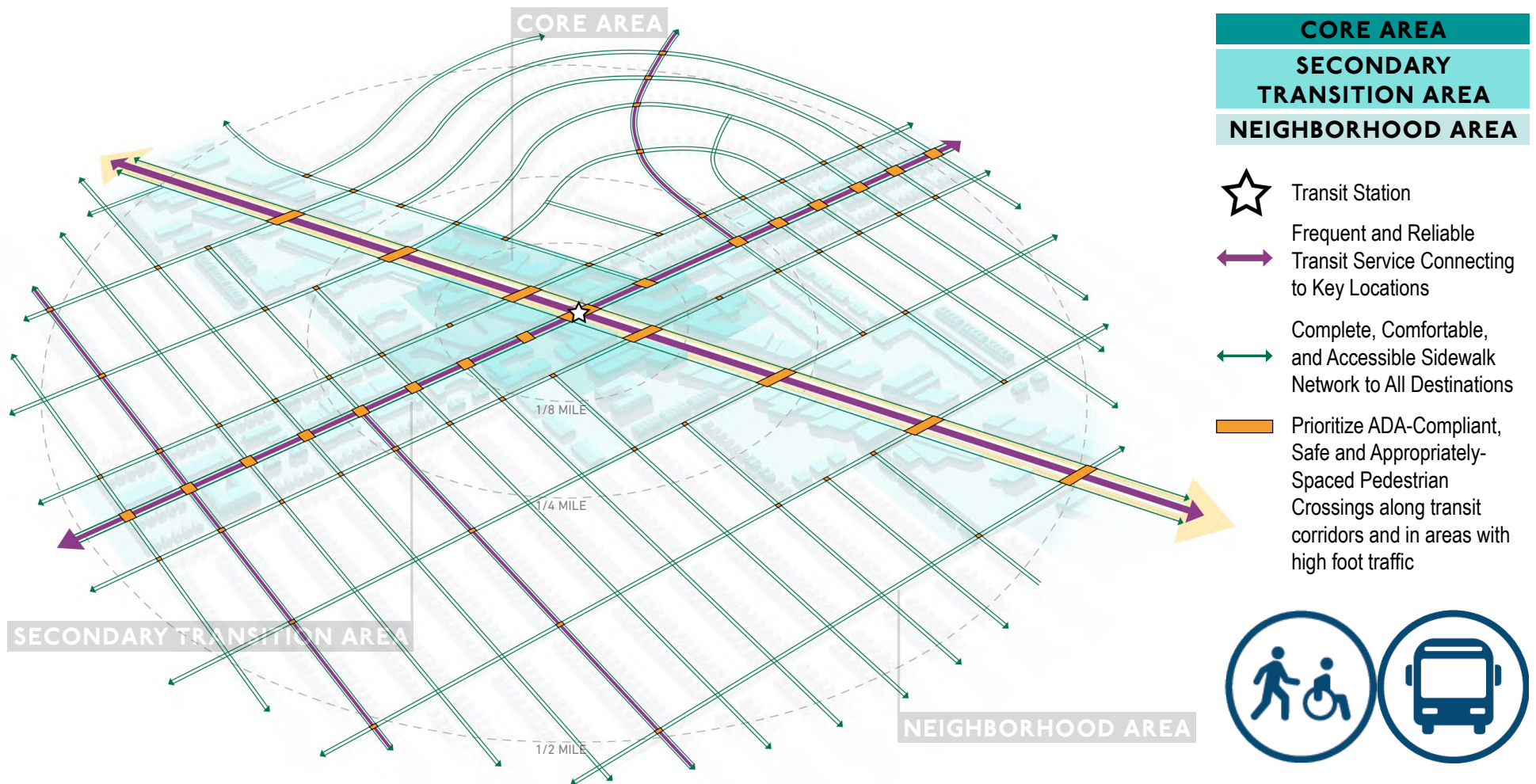~ ½ Mile   up to 2 miles
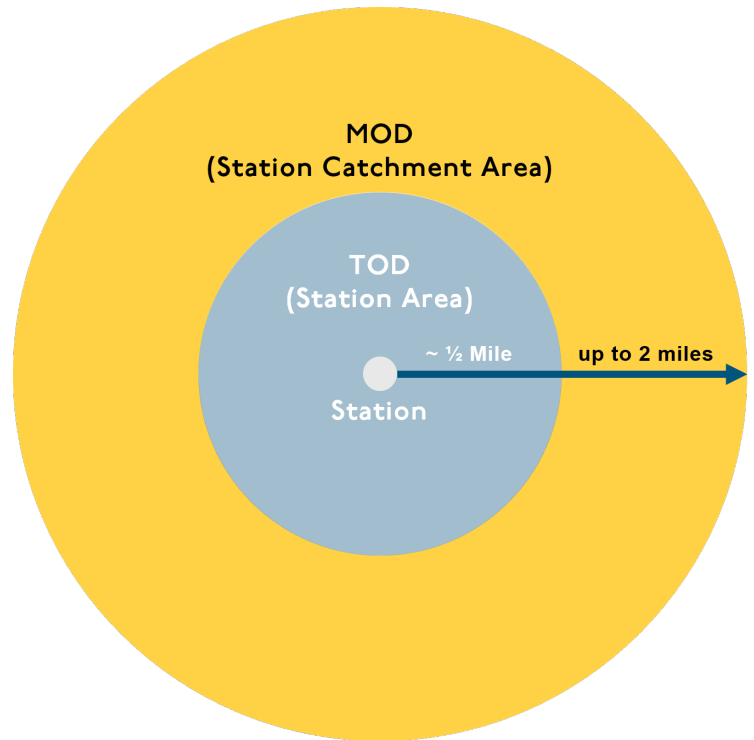
Station

MODE OF EMPHASIS FRAMEWORK

The Mode of Emphasis Framework consists of 3 mode categories: biking and micromobility, transit and microtransit, and ride-hailing and park & ride. Every station area – no matter its mode(s) of emphasis – is envisioned to have transit connectivity, and accessibility and walkability as fundamental elements of TOD.

STATION SCALE	STATION ELEMENTS		
At the Station	• E-scooters • Bike parking	• Safe walking / ADA connections between transit stops • Transit amenities / waiting facilities	• Flexible curb space • Parking facilities • Car-share • Electric vehicle charging
Within the Secondary Transition Area (1/4-Mile)	• Bike-share station(s)	--	• Existing park and ride lot • Potential park and ride lots
Within the Neighborhood Area (1/2-Mile)	--	--	• Convenient freeway access
Within 1 Mile of the Station	• Complete, comfortable, and accessible pedestrian network to all destinations • Frequent and reliable transit service connecting to key locations		
	--	• Convergence of multiple transit routes or connection to a frequent, all-day route/service • Microtransit service	--
Within the 2 Miles of the Station	• Complete low-stress bike network connecting key destinations	--	--

Legend:

CORE AREA

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

☆ Transit Station

↔ Frequent and Reliable Transit Service Connecting to Key Locations

↔ Complete, Comfortable, and Accessible Sidewalk Network to All Destinations

▬ Prioritize ADA-Compliant, Safe and Appropriately-Spaced Pedestrian Crossings along transit corridors and in areas with high foot traffic

Rail Station Access Considerations

This report features consideration of access for proposed rail stations along the corridor from Ann Arbor to Detroit. The presence of the adjacent passenger and freight rail corridor adds unique access (and accessibility) considerations compared to surface-running bus or rail transit. Namely, the ability to cross at-grade will be limited, and thus will often need to be considered as part of the rail station design itself. This is often handled by creating overpasses, as was done at the Dearborn station, but other stations such as the existing location at Ann Arbor are lacking such features. Any new planned or potential station will need to consider convenient access points to platforms on both sides of the tracks, either as part of the station or close by. Broader pedestrian and ADA accessibility will also need to be considered for any at-grade rail crossings that provide access to the station or surrounding district.

Station Scale	Station Elements
At the Station	E-Scooters
Within the 1/4-Mile Station Area	Bike-share station(s)
Within the 2-Mile Station Area	Complete low-stress bike network connecting key destinations

William Street Bike Boulevard in Ann Arbor
Source: AECOM

What is Micromobility?

Micromobility refers to any small, human or electric-powered transportation solution such as bikes, e-bikes, scooters, e-scooters or any other small, lightweight vehicle. Shared micromobility refers to the use of these vehicles as a shared resource between multiple users. Systems usually allow point-to-point trips and the majority of companies provide a similar service model to the customer. Vehicles are distributed across a community and typically customers can use a smartphone to find and unlock a device, and pay for the trip using a mobile app. Currently, trip rates typically incorporate an initial flat fee plus a per-minute charge. Business operational models between companies vary greatly and affect the type of operations and maintenance provided.
Source: Transportation for America Shared Micromobility Playbook

Forms of shared micromobility established in this study's corridor communities include:
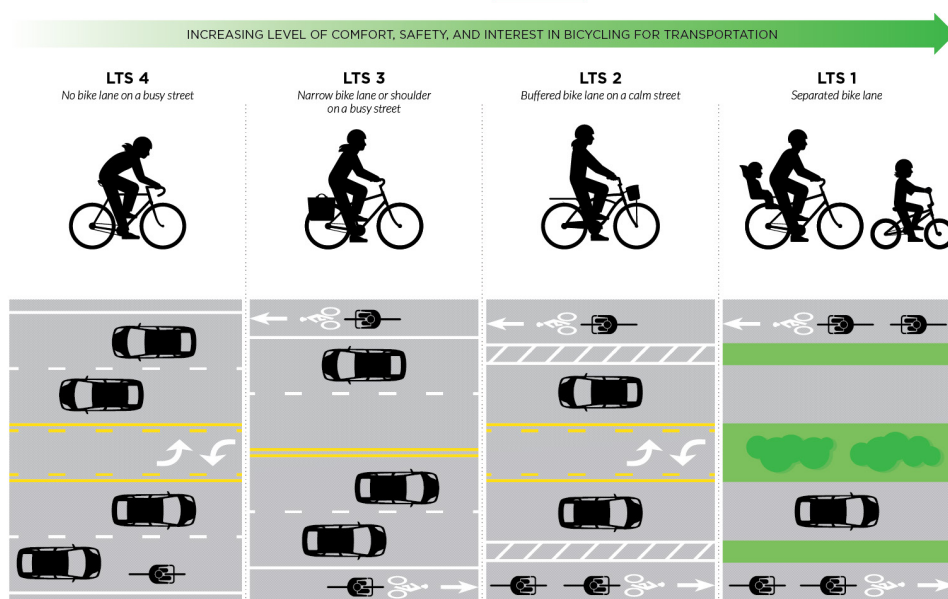- MoGo bike-share (Detroit, to be expanded to Ferndale, Oak Park, Huntington Woods, Berkley, and Royal Oak)
- Zagster bike-share (Dearborn)
- ArborBike (Ann Arbor)
- Spin e-scooters (Ann Arbor and Detroit)
- Bird e-scooters (Detroit)
- Lime e-scooters (Detroit)
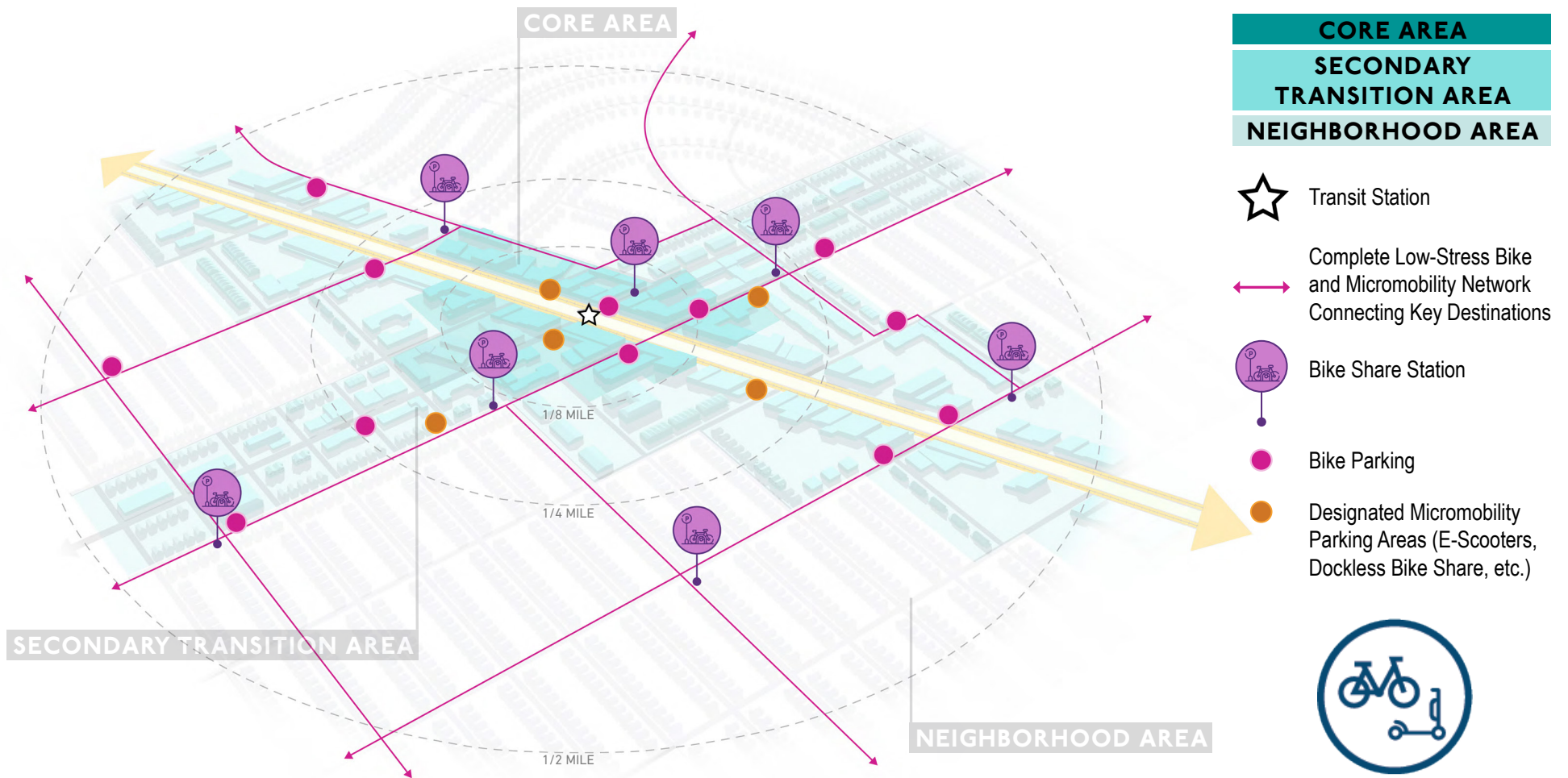
What is a Low-Stress Bike Network?

A low-stress bike network is one that all types of bicyclists feel comfortable using, whether "strong and fearless" or "interested but concerned". Level of Traffic Stress (LTS) measures how comfortable a bikeway is to use by taking into account factors such as the roadway width, the level of separation between bikes and other traffic, and the volume and speed of traffic on the roadway.
Source: Alta Planning + Design

LEVEL OF TRAFFIC STRESS

INCREASING LEVEL OF COMFORT, SAFETY, AND INTEREST IN BICYCLING FOR TRANSPORTATION

LTS 4
No bike lane on a busy street

LTS 3
Narrow bike lane or shoulder on a busy street

LTS 2
Buffered bike lane on a calm street

LTS 1
Separated bike lane

BIKING + MICROMOBILITY

CORE AREA

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

1/8 MILE

1/4 MILE

1/2 MILE

CORE AREA

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

☆ Transit Station

↔ Complete Low-Stress Bike and Micromobility Network Connecting Key Destinations

Bike Share Station

● Bike Parking

● Designated Micromobility Parking Areas (E-Scooters, Dockless Bike Share, etc.)

Mode of Emphasis	TRANSIT + MICROTRANSIT
At the Station	Safe walking connections between transit stops Transit amenities / waiting facilities
Within the 1-Mile Station Area	Convergence of multiple transit routes or connection to a frequent, all-day route/service Microtransit service

**Flex Microtransit Bus,
Montgomery County, MD**
Source: Montgomery County

Dearborn Transit Center
Source: Yelp

Frequent, All-Day Transit Services

Existing frequent, all-day transit services established in this study's corridor communities with at least 15-minute frequency during peak hours include:

- SMART's Frequent, Affordable, Safe Transit (FAST) routes on Woodward, Michigan, and Gratiot Avenues.
- DDOT's ConnectTen network
- AAATA's Route 4: Washtenaw (a planned BRT route), Route 5: Packard, Route 23: Plymouth, and Route 28: Pauline

What is Microtransit?

Microtransit is a transportation service which includes smaller vehicles with flexible, "on-demand" routing; partnerships between transit agencies and technology providers; and mobile apps for ride hailing, navigation, and payment. Microtransit can provide improved access to transit for people and places that fixed bus routes do not serve well, more directly matched supply of service to the demand for rides, shorter wait times, and greater flexibility to hail a ride when you need one via an app or phone call.

The study's corridor communities do not have any microtransit services today; however, microtransit services are under development by the region's various transit agencies.

Ypsilanti Transit Center
Source: Doug Coombe

TRANSIT + MICROTRANSIT

CORE AREA

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

1/8 MILE

1/4 MILE

1/2 MILE

CORE AREA

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

☆ Transit Station

⬌ Rail Corridor

⬌ Transit Routes

⬌ Safe Walking Connections between Transit Stops

┈ Microtransit Service (route created on-demand as customers request rides)

• Microtransit "Virtual" Stops (created on-demand as customers request rides)

◉ Convergence of Multiple Transit Routes or Connection to a Frequent All-day Service

🚆 Rail Station Waiting Facility / Amenities

🚌 Bus Waiting Facility / Amenities

Readiness Analysis // 20

Mode of Emphasis	RIDE-HAILING + PARK & RIDE
At the Station	Flexible curb space Parking facilities Carshare Electric vehicle charging
Within the 1/2-Mile Station Area	Convenient freeway access

PUDO Zone, Washington, DC
Source: David Alpert

Electric Vehicle Charging Stations in Ann Arbor Parking Garage
Source: Republic Parking System

Parking Facilities

Parking that is reduced, shared, and designed so as not to dominate the streetscape is a foundational ingredient of MOD, and requires special attention if the main way that people will access the station is by driving and parking there. A number of designated and informal parking facilities exist today within the study's corridor communities, including SMART and MDOT park & ride lots. SMART is also in the process of identifying future park & ride facilities.

Flexible Curb Space

If the main way that people will get to and from a station is by being picked up or dropped off there, providing sufficient space that is clearly marked and actively managed, especially in places with many competing demands for curb space, is a key consideration.

Carshare

Carsharing is a service that provides members with access to an automobile for short-term use. The shared cars are distributed across a network of locations. Members can access the vehicles at any time with a reservation and are charged by either time or distance. Carsharing provides most of the benefits of a personal automobile without the costs of owning a private vehicle. Zipcar is a form of carshare in this study's corridor communities.
Source: Shared Use Mobility Center

Electric Vehicle Charging

As electric vehicles become more commonplace, the provision of charging stations is worth consideration, especially if many people will access a station via park & ride. Electric vehicle charging stations exist today in many of this study's corridor communities, and several are located along the study corridors.
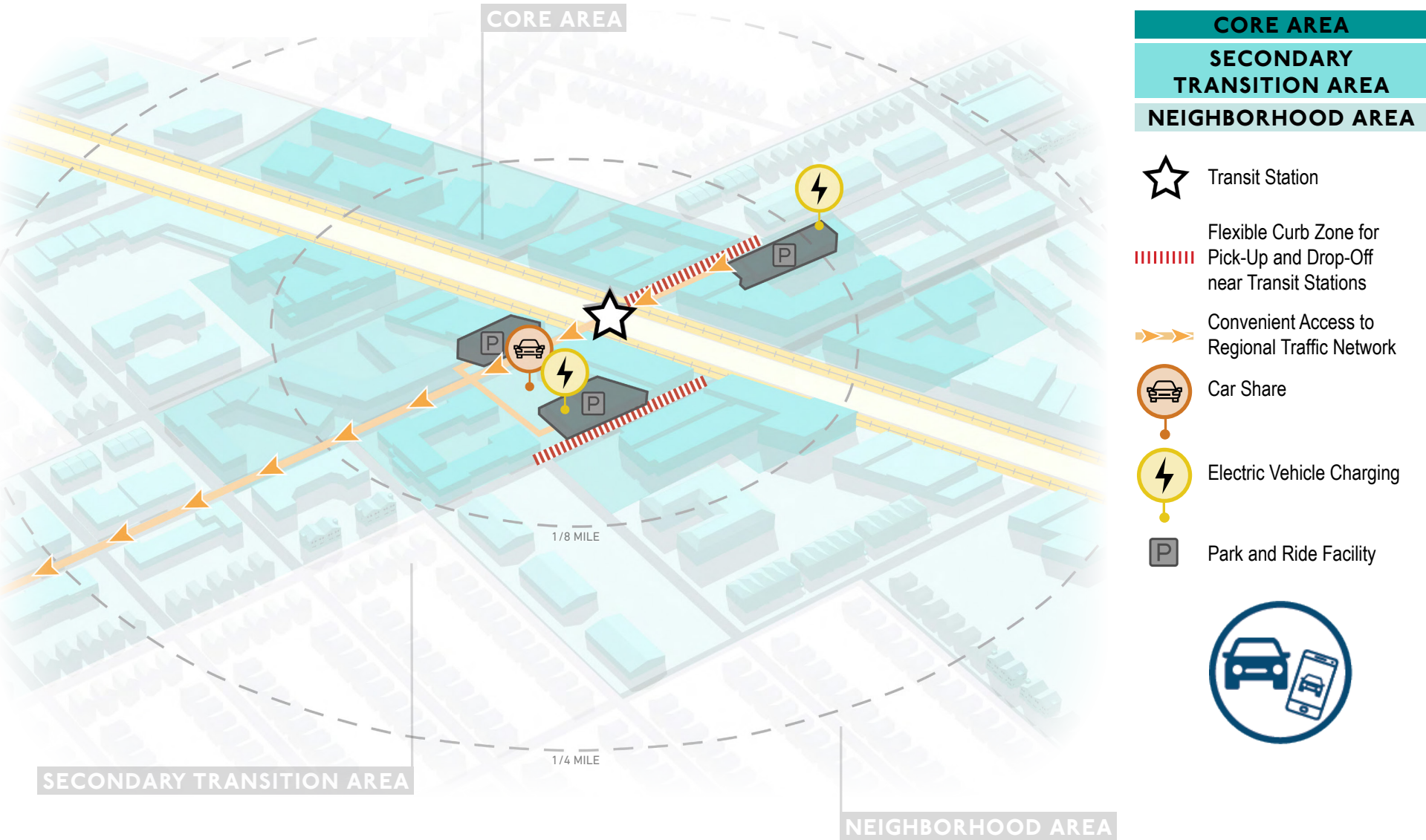
RIDE-HAILING + PARK & RIDE

CORE AREA

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

☆ Transit Station

| | Flexible Curb Zone for Pick-Up and Drop-Off near Transit Stations

⟫ Convenient Access to Regional Traffic Network

🚗 Car Share

⚡ Electric Vehicle Charging

🅿 Park and Ride Facility

CORE AREA

1/8 MILE

1/4 MILE

SECONDARY TRANSITION AREA

NEIGHBORHOOD AREA

STATION CATEGORIZATION

Each station along the Ann Arbor to Detroit corridor was assigned one typology, up to two destination overlays, and up to three modes of emphasis. The project team developed an initial categorization of the stations based on existing conditions and review of local plans and policies. This initial categorization was provided to planning representatives from the state, the regional planning organization, transit agencies, and individual corridor communities at a series of workshops where each planning representative provided an update on recent planning within each station area and weighed in on the typology, destination overlay(s), and mode(s) of emphasis that would be most appropriate for each one. The initial categorization provided by the project team was then modified to incorporate the feedback received at the workshops. The final typology, destination overlay(s), and mode(s) of emphasis for each station are shown on the following page. A full list of planning representatives who participated in the workshops is provided below.

State of Michigan
- Elizabeth King - Michigan Economic Development Corporation (MEDC)
- Jim Schultz - Michigan Department of Transportation (MDOT)
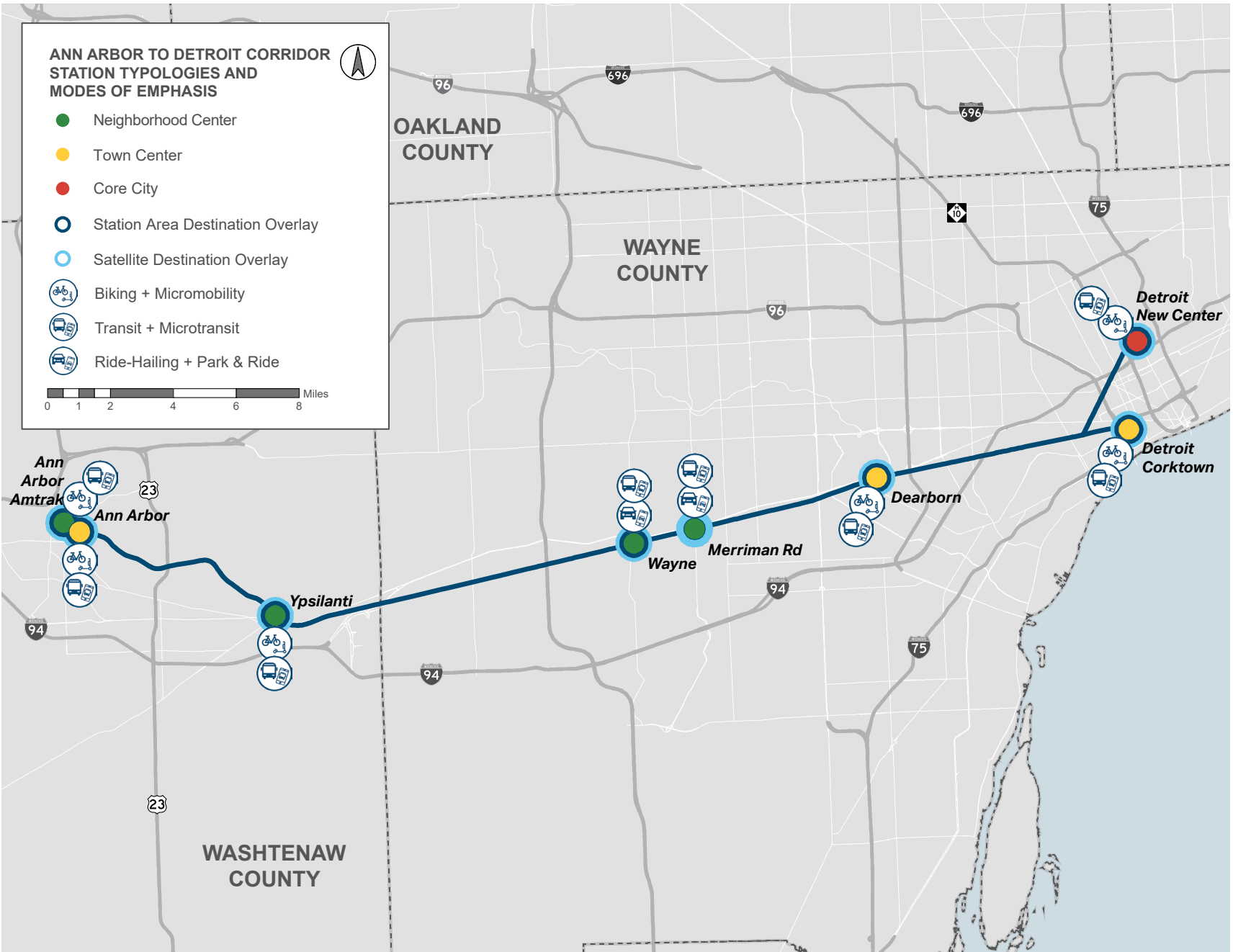- Jennifer Quinlivan - Michigan Land Bank Authority

Southeast Michigan Council of Governments (SEMCOG)
- Christina Ignasiak
- Brian Pawlik

Transit Agencies
- Julia Roberts - Ann Arbor Area Transportation Authority (AAATA)
- Forest Yang (AAATA)
- Deanna Donahoo - Detroit Department of Transportation (DDOT)
- Elias Fischer - DDOT
- Andrew Thorner - Suburban Mobility Authority for Regional Transportation (SMART)

Corridor Communities
- Christina Peltier - City of Detroit
- Kevin Schronce - City of Detroit
- Shannon Selby - Wayne County
- Tom Paison - City of Dearborn
- Jeff Watson - City of Dearborn
- Adrianna Jordan - City of Inkster
- Mohamed Ayoub - City of Westland
- Lori Gouin - City of Wayne
- Nathan Voght - Washtenaw County
- Ryan Buck - Washtenaw Area Transportation Study (WATS)
- Andy Aamodt - City of Ypsilanti
- Raymond Hess - City of Ann Arbor
- Brett Lenart - City of Ann Arbor
- Eli Cooper - City of Ann Arbor

ANN ARBOR TO DETROIT CORRIDOR
STATION TYPOLOGIES AND
MODES OF EMPHASIS

- 🟢 Neighborhood Center
- 🟡 Town Center
- 🔴 Core City
- ⭕ Station Area Destination Overlay
- ⭕ Satellite Destination Overlay
- Biking + Micromobility
- Transit + Microtransit
- Ride-Hailing + Park & Ride

Miles
0 1 2 4 6 8

OAKLAND COUNTY

WAYNE COUNTY

WASHTENAW COUNTY

Ann Arbor Amtrak
Ann Arbor
Ypsilanti
Wayne
Merriman Rd
Dearborn
Detroit Corktown
Detroit New Center

READINESS ANALYSIS

The Readiness Analysis of the Mobility-Oriented Development Study assesses how far along a station area has progressed toward the density scale and development types envisioned in the Typology Framework, as well as the mobility accommodations envisioned in the Mode of Emphasis Framework. While a station area's typology and mode(s) of emphasis are static, its readiness status is expected to improve as recommended actions are taken. The Readiness Analysis measures each station area's readiness to accommodate its mode of emphasis and proximity to its designated typology through a combination of data-based metrics in four areas: Place, Connectivity, Regulatory, and Development.

In addition to diagnosing each station's proximity to its designated typology and its readiness to accommodate its mode(s) of emphasis, the Readiness Analysis also identifies key gaps to address to improve each station area's MOD readiness. This information is distilled into an overall level of readiness for each station that identifies the next step in its progress: Plan, Build, or Strengthen. "Plan" stations have limited near-term potential or significant gaps to be addressed, "Build" stations have potential that could be captured by addressing key opportunities, and "Strengthen" stations have largely achieved MOD readiness but have opportunities for enhancement.

Readiness Category

Readiness Metric

Overall Level of Readiness

Readiness Opportunity

Category Level of Readiness

Metric Level of Readiness
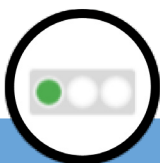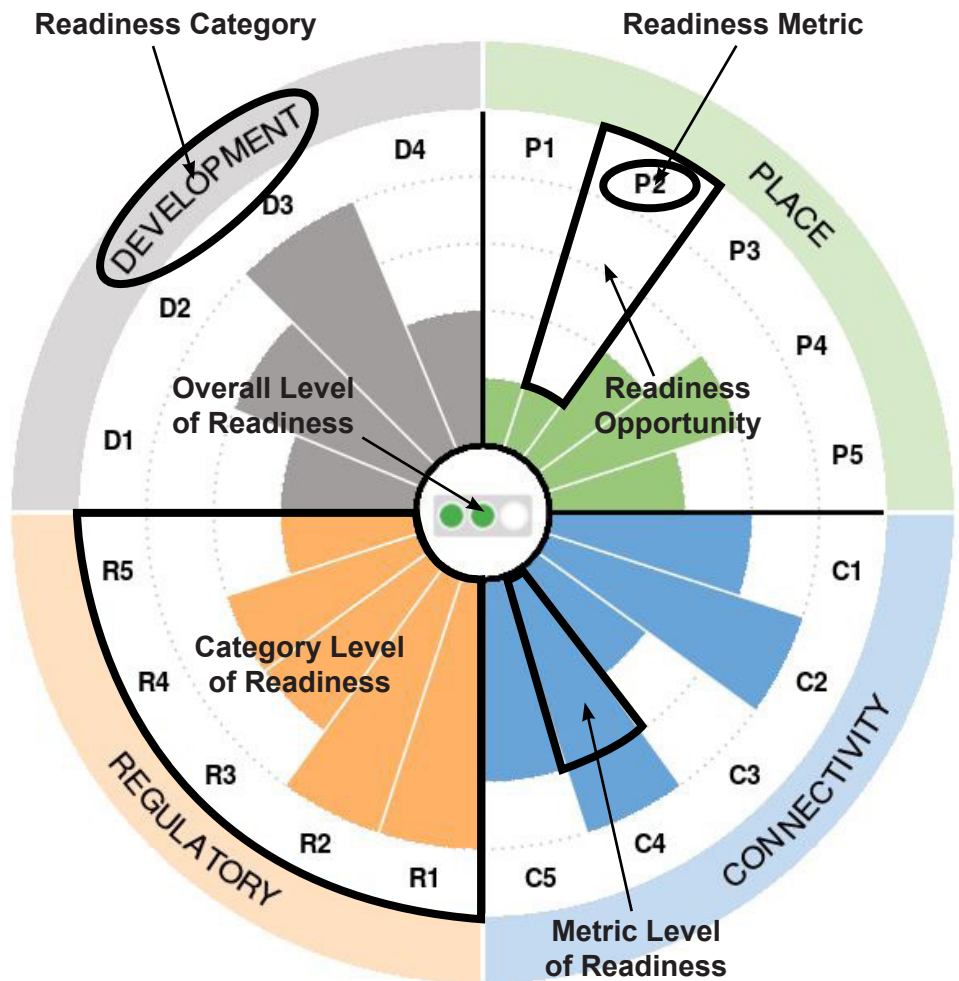
Plan

Limited near-term potential or significant gaps to be addressed

High level of readiness in only 1 or fewer categories
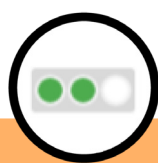
Build

Potential could be captured by addressing key pportunities

High level of readiness in 2 categories or greater than average overall readiness
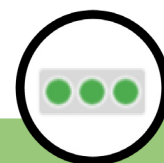
Strengthen

Have largely achieved readiness (enhancement opportunities exist)

High level of readiness overall or in at least 3 categories

Place-Based Metrics

The place-based metrics describe the existing level and types of activity within the ½-mile station area, indicating the extent to which the density scale and development types envisioned in the station area have already been achieved.

P1 Population measures how many people live within ½-mile of the station and how that compares to the expected population for the station's typology.

P2 Employment measures how many jobs are within ½-mile of the station and how that compares to the expected number for the station's typology.

Together, these metrics indicate both the density and mix of activity around the station.

P3 Annual Growth Rate measures how much the number of people and jobs within the ½-mile station area are projected to grow in the next 10 years. Outcomes provide context for the future density of the station area.

P4 Short Trip Demand measures the number and mix of attractions within the ½-mile station area and how well that compares to what is expected for the station's typology. Outcomes provide context for how clustered the people and destinations of the ½-mile station area are and, therefore, how bike and pedestrian friendly the area is.

P5 Affordable Housing Inventory measures the number of federally assisted rental housing units within the ½-mile station area and how well that compares to what is expected for the station's typology. Outcomes provide context for the affordability of living in the station area.

Connectivity-Based Metrics

The connectivity-based metrics describe how easily people can connect to the station, make connections between transit services and transportation modes at the station, and connect to surrounding destinations. These metrics indicate the extent to which the transit connectivity, accessibility, and walkability envisioned in the station area have already been achieved.

C1 Walkshed Ratio measures how much of the area within the 1-mile station area can be reached by a 1-mile (15-20 minute) walk on the existing sidewalk network, indicating how extensive and complete the station area's sidewalk network is.

C2 Intersection Density measures how many intersections are within the 1-mile station area, indicating how connected the street network is.

C3 Pedestrian Transit Connectivity measures the presence of the following items at the intersection adjacent to each station: crosswalks, ADA-compliant curb ramps, pedestrian signals, lighting, and pedestrian refuge islands (at locations with wide roadways). Outcomes provide context for how well the intersection adjacent to the station safely accommodates people walking between transit stops.

C4 Transit Connectivity to Destinations compares the number of regional destinations that can be reached within a 10-minute transit trip from the station to the number of regional destinations within 3 miles of the station, indicating the station's access to regional destinations.

C5 Mode of Emphasis Rating measures how well the station and its surrounding area accommodate the station's mode(s) of emphasis: biking and micromobility, transit and microtransit, and/or ride-hailing and park and ride. This rating was determined by the Mobility Gap Analysis.

Regulatory-Based Metrics

The regulatory-based metrics describe the types of development that are allowed and encouraged within the ¼-mile station area. These metrics provide context for how possible it is to achieve the density scale, development types, and transportation options envisioned in the station area.

R1 Zoning & Future Land Use measures how consistent the existing zoning and planned land use within the ¼-mile station area are with its typology. Outcomes provide context for whether or not the development types envisioned in the station area are allowed and encouraged.

R2 Allowable Densities measures how well the allowed building height and lot coverage within the ¼-mile station area align with its typology. Outcomes provide context for whether or not the density scale envisioned in the station area is allowed and encouraged.

R3 Parking Management measures to the extent to which parking is managed within the ¼-mile station area. Outcomes provide context for whether or not the density scale, development types, and transportation options envisioned in the station area are allowed and encouraged.

R4 Pedestrian-Oriented Design measures the level of pedestrian-friendliness enabled by the guidance and policy in place within the ¼-mile station area. Outcomes provide context for whether or not the walkable environment envisioned in the station area is allowed and encouraged.

R5 Affordable Housing Policies measures to what extent affordable housing is encouraged within the ¼-mile station area. Outcomes provide context for whether or not the mixed-income development envisioned in the station area is allowed and encouraged.

Development-Based Metrics

The development-based metrics describe the future potential of the ½-mile station area to be developed, providing context for how possible it is to achieve the density scale and development types envisioned in the station area.

D1 Market Fundamentals measures how likely it is that a developer would develop real estate within the ½-mile station area during the next 10-20 years. This metric is based on the Market Analysis.

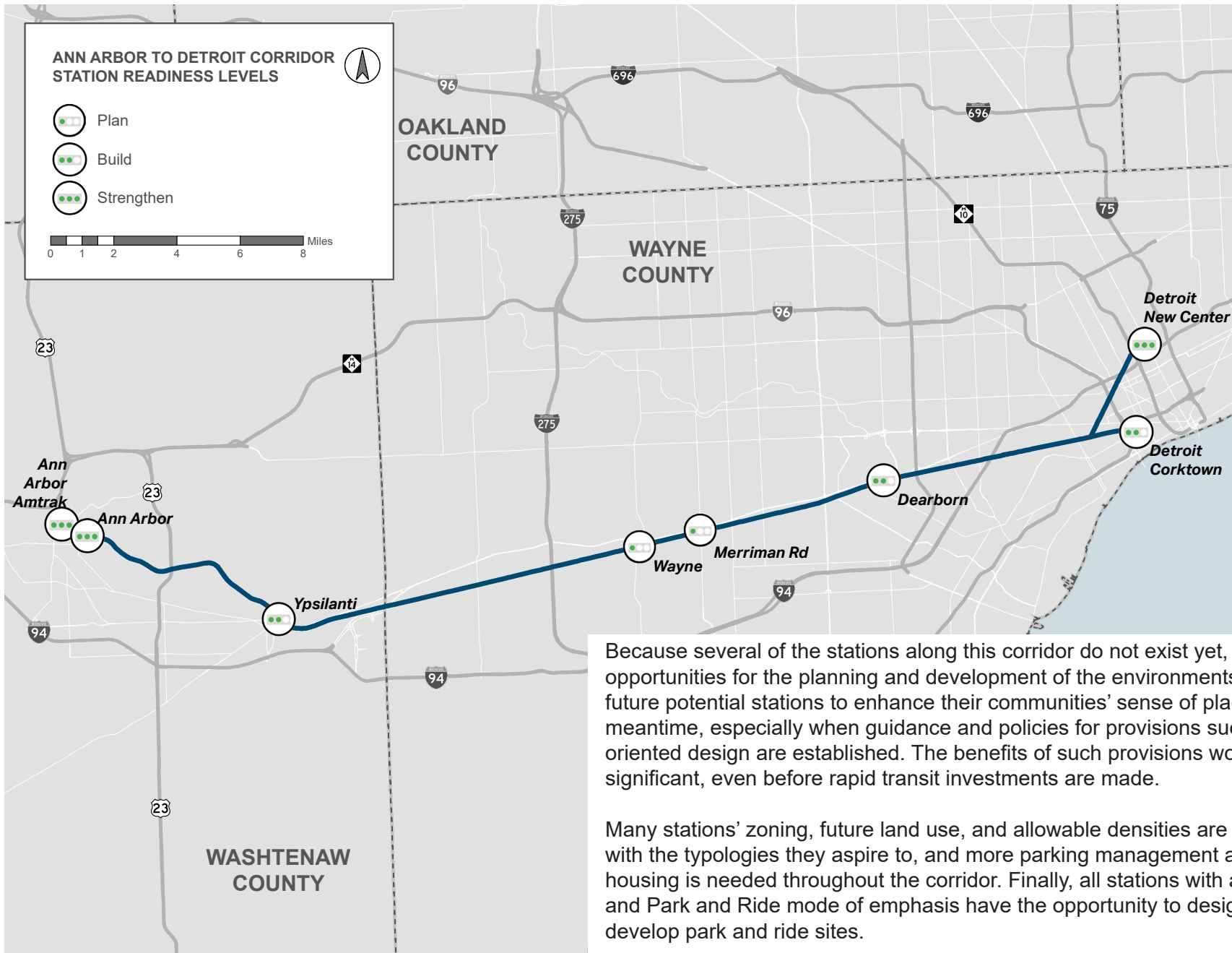**D2 Parcel Size** measures how easily developable land can be assembled for development.

D3 Developable Land measures how much vacant and underutilized property, including surface parking lots, is within the ½-mile station area.

D4 Recent Development Activities measures how much development activity has occurred within the ½-mile station area in the past 5 years. This metric is based on the Market Analysis.

Detailed explanations for all of the readiness metrics, how they were developed, and how they were scored are included in the Appendix.

ANN ARBOR TO DETROIT CORRIDOR STATION READINESS LEVELS

- Plan
- Build
- Strengthen

0 1 2 4 6 8 Miles

Because several of the stations along this corridor do not exist yet, there are opportunities for the planning and development of the environments around the future potential stations to enhance their communities' sense of place in the meantime, especially when guidance and policies for provisions such as pedestrian-oriented design are established. The benefits of such provisions would be significant, even before rapid transit investments are made.

Many stations' zoning, future land use, and allowable densities are inconsistent with the typologies they aspire to, and more parking management and affordable housing is needed throughout the corridor. Finally, all stations with a Ride-Hailing and Park and Ride mode of emphasis have the opportunity to designate and develop park and ride sites.

Station Name	Typology	Level of Readiness	Overall Score (1-5)	Categories with Score >= 3.0	Place Score (1-5)	Connectivity Score (1-5)	Regulatory Score (1-5)	Development Score (1-5)
Existing Ann Arbor	Neighborhood Center	Strengthen	3.64	4	4	3.4	3.6	3.75
Planned Ann Arbor	Town Center	Strengthen	2.85	3	3	2.4	3	3
Ypsilanti	Neighborhood Center	Build	2.79	1	2.4	2.8	3.2	2.75
Wayne	Neighborhood Center	Build	2.50	2	3.2	1.8	2	3
Merriman Rd	Neighborhood Center	Plan	1.98	1	1.8	1.6	1	3.5
Dearborn	Town Center	Build	2.63	2	1.6	2.4	3	3.5
Detroit Corktown	Town Center	Build	2.75	2	1.6	2.2	3.2	4
Detroit New Center	Core City	Strengthen	3.34	4	3.6	3	3	3.75

Level of Readiness Rules

Strengthen: At least 3 categories have a score of at least 3.0, or overall score is at least 3.0

Build: At least 2 categories have a score of at least 3.0, or overall score is at least 2.6

Plan: Remaining stations

ANN ARBOR (DEPOT STREET)

Typology and Destination Overlay(s)

NEIGHBORHOOD CENTER

STATION AREA

SATELLITE

Mode(s) of Emphasis

Readiness Opportunities

The existing Amtrak station in Ann Arbor is a "Strengthen" station with high levels of readiness in all aspects but with room to grow in terms of connectivity. Specific opportunities include expanding the reach and connectedness of the sidewalk network to more than half of the 1-mile station area, creating more of a street grid with a higher intersection density, providing more direct routes with higher frequency to regional destinations, and better accommodating biking, micromobility, transit, and microtransit.

PLACE

P1	Population	6,182
P2	Employment	4,633
P3	Annual Growth Rate	0.77%
P4	Short Trip Demand	74.0
P5	Affordable Housing Inventory	131 units

CONNECTIVITY

C1	Walkshed Ratio	29%
C2	Intersection Density	144 / sq mi
C3	Pedestrian Transit Connectivity	Very High
C4	Transit Connectivity to Destinations	0.83
C5	Mode of Emphasis Rating	Medium

REGULATORY

R1	Zoning and Future Land Use	Medium
R2	Allowable Densities	Medium
R3	Parking Management	High
R4	Pedestrian-Oriented Design	High
R5	Affordable Housing Policies	High

DEVELOPMENT

D1	Market Fundamentals	Very High
D2	Parcel Size	0.97 ac
D3	Developable Land	29.3 ac
D4	Recent Development Activities	Low

ANN ARBOR (FULLER ROAD)

MOD Study

Typology and Destination Overlay(s)

TOWN CENTER

STATION AREA

SATELLITE

Mode(s) of Emphasis
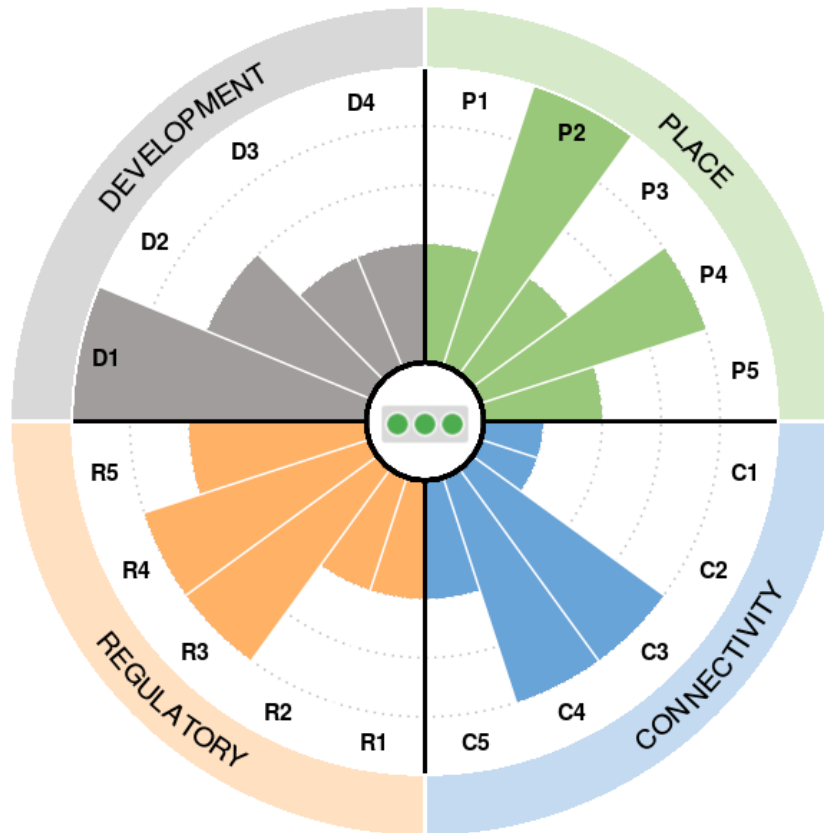
Readiness Opportunities

The planned Ann Arbor station off of Fuller Road is a "Strengthen" station with high levels of readiness in all aspects but with room to grow in terms of connectivity. Specific opportunities include expanding the reach and connectedness of the sidewalk network to more than half of the 1-mile station area, creating more of a street grid with a higher intersection density, and better accommodating biking, micromobility, transit, and microtransit.

PLACE		
P1	Population	2,610
P2	Employment	20,617
P3	Annual Growth Rate	0.44%
P4	Short Trip Demand	79.4
P5	Affordable Housing Inventory	47 units
CONNECTIVITY		
C1	Walkshed Ratio	11%
C2	Intersection Density	36 / sq mi
C3	Pedestrian Transit Connectivity	High
C4	Transit Connectivity to Destinations	0.83
C5	Mode of Emphasis Rating	Low
REGULATORY		
R1	Zoning and Future Land Use	Low
R2	Allowable Densities	Low
R3	Parking Management	High
R4	Pedestrian-Oriented Design	High
R5	Affordable Housing Policies	Medium
DEVELOPMENT		
D1	Market Fundamentals	Very High
D2	Parcel Size	0.19 ac
D3	Developable Land	9.7 ac
D4	Recent Development Activities	Low

MOD Study

Typology and Destination Overlay(s)

NEIGHBORHOOD CENTER

STATION AREA

SATELLITE

Mode(s) of Emphasis
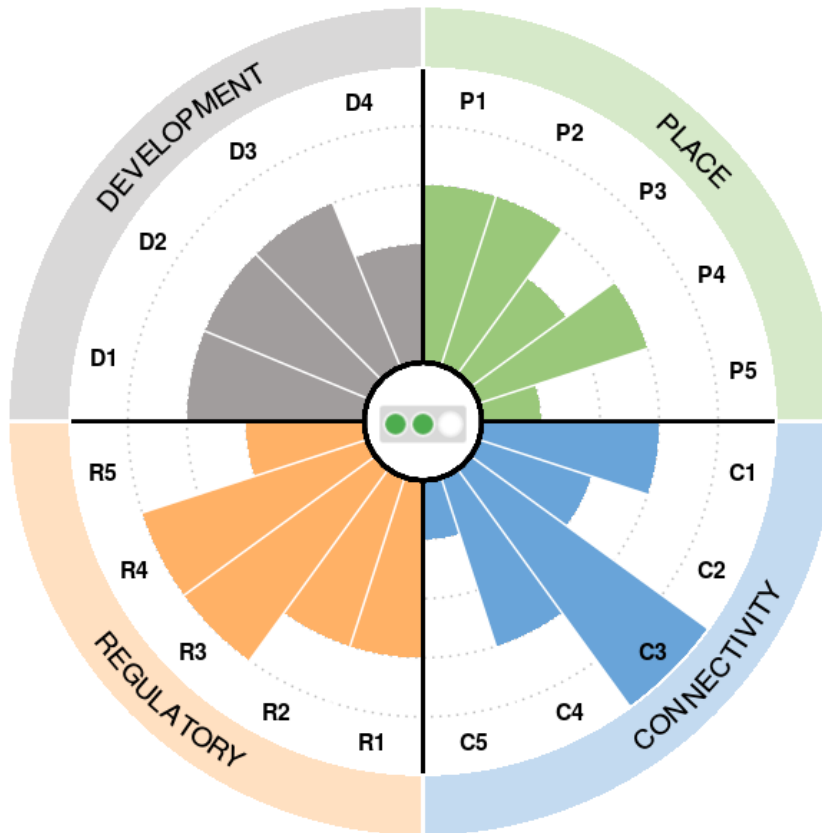
Readiness Opportunities

The Depot Town station in Ypsilanti is a "Plan" station with opportunities to take fundamental steps towards readiness in all aspects, especially regulatory readiness. The most significant opportunities are updating zoning, future land use, and allowable densities to be consistent with the two to three stories of residential and mixed retail envisioned for a Neighborhood Center, as well as managing parking, supporting pedestrian-oriented design, and encouraging affordable housing through regulations.

PLACE		
P1	Population	3,533
P2	Employment	1,766
P3	Annual Growth Rate	0.47%
P4	Short Trip Demand	55.7
P5	Affordable Housing Inventory	0 units
CONNECTIVITY		
C1	Walkshed Ratio	32%
C2	Intersection Density	131 / sq mi
C3	Pedestrian Transit Connectivity	Very High
C4	Transit Connectivity to Destinations	0.67
C5	Mode of Emphasis Rating	Very Low
REGULATORY		
R1	Zoning and Future Land Use	Medium
R2	Allowable Densities	Medium
R3	Parking Management	High
R4	Pedestrian-Oriented Design	High
R5	Affordable Housing Policies	Low
DEVELOPMENT		
D1	Market Fundamentals	Medium
D2	Parcel Size	0.19 ac
D3	Developable Land	21.2 ac
D4	Recent Development Activities	Low

WAYNE

MOD Study

Typology and Destination Overlay(s)

NEIGHBORHOOD CENTER

STATION AREA | SATELLITE

Mode(s) of Emphasis

DEVELOPMENT

PLACE

CONNECTIVITY

REGULATORY

PLACE		
P1	Population	1,707
P2	Employment	2,801
P3	Annual Growth Rate	-0.25%
P4	Short Trip Demand	65.8
P5	Affordable Housing Inventory	472 units
CONNECTIVITY		
C1	Walkshed Ratio	38%
C2	Intersection Density	158 / sq mi
C3	Pedestrian Transit Connectivity	Very Low
C4	Transit Connectivity to Destinations	0.20
C5	Mode of Emphasis Rating	Very Low
REGULATORY		
R1	Zoning and Future Land Use	Medium
R2	Allowable Densities	Low
R3	Parking Management	Very Low
R4	Pedestrian-Oriented Design	Low
R5	Affordable Housing Policies	Low
DEVELOPMENT		
D1	Market Fundamentals	Medium
D2	Parcel Size	0.29 ac
D3	Developable Land	38.8 ac
D4	Recent Development Activities	Low

Readiness Opportunities

The station off of Wayne Road near Downtown Wayne is a "Plan" station with opportunities to take fundamental steps towards readiness in all aspects, especially regulatory readiness. The most significant opportunities are updating zoning, future land use, and allowable densities to be consistent with the two to three stories of residential and mixed retail envisioned for a Neighborhood Center, as well as managing parking, supporting pedestrian-oriented design, and encouraging affordable housing through regulations.

MERRIMAN ROAD

MOD Study

Typology and Destination Overlay(s)

NEIGHBORHOOD CENTER

SATELLITE

Mode(s) of Emphasis

Readiness Opportunities

The station at Merriman Road is a "Plan" station with opportunities to take fundamental steps towards readiness in all aspects, especially regulatory readiness. The most significant opportunities are updating allowable densities to be consistent with the two to three stories envisioned for a Neighborhood Center, as well as managing parking, supporting pedestrian-oriented design, and encouraging affordable housing through regulations.

PLACE		
P1	Population	2,343
P2	Employment	230
P3	Annual Growth Rate	-0.28%
P4	Short Trip Demand	60.3
P5	Affordable Housing Inventory	12 units
CONNECTIVITY		
C1	Walkshed Ratio	14%
C2	Intersection Density	92 / sq mi
C3	Pedestrian Transit Connectivity	Very Low
C4	Transit Connectivity to Destinations	0.50
C5	Mode of Emphasis Rating	Very Low
REGULATORY		
R1	Zoning and Future Land Use	Very Low
R2	Allowable Densities	Very Low
R3	Parking Management	Very Low
R4	Pedestrian-Oriented Design	Very Low
R5	Affordable Housing Policies	Very Low
DEVELOPMENT		
D1	Market Fundamentals	Medium
D2	Parcel Size	2.20 ac
D3	Developable Land	141.2 ac
D4	Recent Development Activities	Very Low

DEARBORN

Typology and Destination Overlay(s)

TOWN CENTER

STATION AREA   SATELLITE
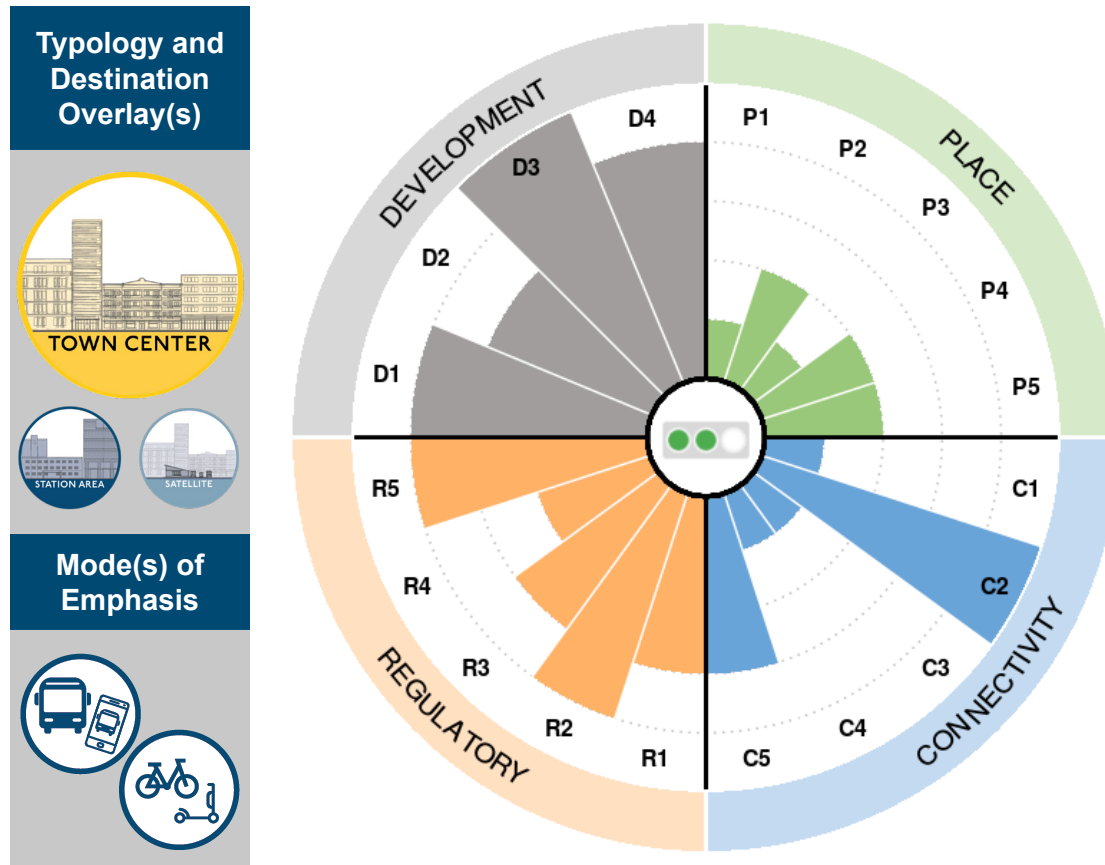
Mode(s) of Emphasis
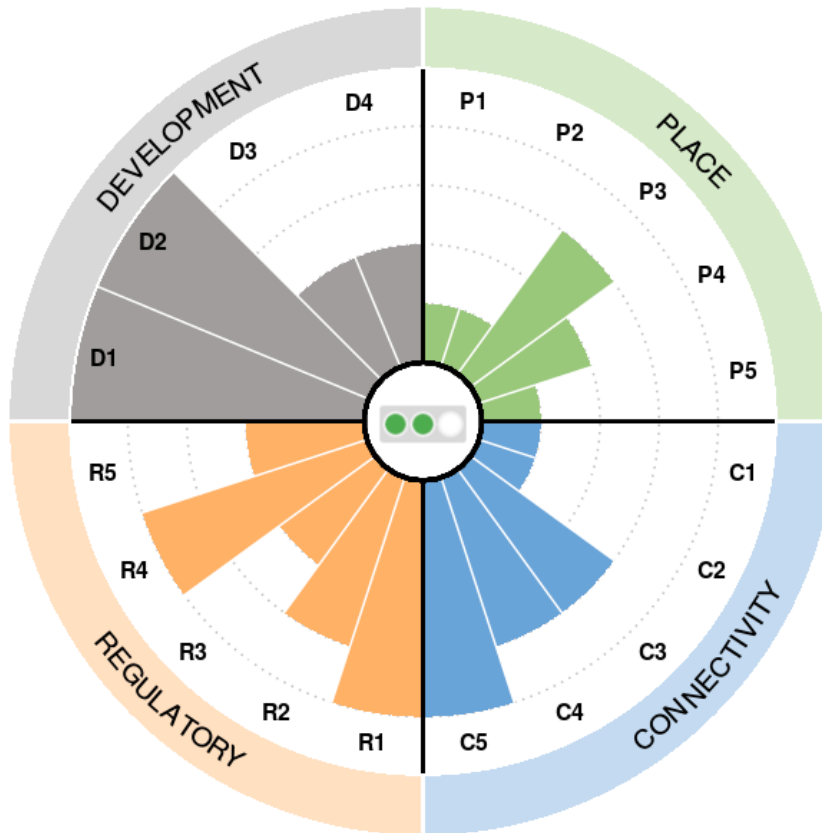
Readiness Opportunities

The existing Amtrak station at the John Dingell Transit Center is a "Build" station with high levels of regulatory and development readiness and significant opportunities in place readiness. The residential population falls short of the 7,900 expected for the Town Center ½-mile area, and the number of jobs falls short of the 10,000 expected. There are opportunities to develop more of a sense of place, attracting more people to the area. Additional opportunities include expanding the reach and connectedness of the sidewalk network to more than half of the 1-mile station area and creating more of a street grid with a higher intersection density.

PLACE

P1	Population	707
P2	Employment	871
P3	Annual Growth Rate	0.73%
P4	Short Trip Demand	53.4
P5	Affordable Housing Inventory	0 units

CONNECTIVITY

C1	Walkshed Ratio	10%
C2	Intersection Density	88 / sq mi
C3	Pedestrian Transit Connectivity	Medium
C4	Transit Connectivity to Destinations	0.63
C5	Mode of Emphasis Rating	High

REGULATORY

R1	Zoning and Future Land Use	High
R2	Allowable Densities	Medium
R3	Parking Management	Low
R4	Pedestrian-Oriented Design	High
R5	Affordable Housing Policies	Low

DEVELOPMENT

D1	Market Fundamentals	Very High
D2	Parcel Size	2.00 ac
D3	Developable Land	8.1 ac
D4	Recent Development Activities	Low

DETROIT CORKTOWN

MOD Study

Typology and Destination Overlay(s)

TOWN CENTER

STATION AREA | SATELLITE

Mode(s) of Emphasis

PLACE		
P1	Population	1,749
P2	Employment	1,517
P3	Annual Growth Rate	-0.33%
P4	Short Trip Demand	58.7
P5	Affordable Housing Inventory	65 units

CONNECTIVITY		
C1	Walkshed Ratio	7%
C2	Intersection Density	278 / sq mi
C3	Pedestrian Transit Connectivity	Very Low
C4	Transit Connectivity to Destinations	0.26
C5	Mode of Emphasis Rating	Medium

REGULATORY		
R1	Zoning and Future Land Use	Medium
R2	Allowable Densities	High
R3	Parking Management	Medium
R4	Pedestrian-Oriented Design	Low
R5	Affordable Housing Policies	High

DEVELOPMENT		
D1	Market Fundamentals	High
D2	Parcel Size	0.15 ac
D3	Developable Land	98.3 ac
D4	Recent Development Activities	High

Readiness Opportunities

Michigan Central Station in Detroit's Corktown neighborhood is a "Build" station with a relatively higher level of overall readiness but with significant opportunities in place readiness. The residential population falls short of the 7,900 expected for the Town Center ½-mile area, and the number of jobs falls short of the 10,000 expected. There are opportunities to develop more of a sense of place, attracting more people to the area. Additional opportunities include expanding the reach and connectedness of the sidewalk network to more than half of the 1-mile station area and improving the safety and comfort of crossings on Michigan Avenue.

DETROIT NEW CENTER

Typology and Destination Overlay(s)

CORE CITY

STATION AREA

SATELLITE

Mode(s) of Emphasis

Readiness Opportunities

The station in Detroit's New Center neighborhood at Baltimore Avenue is a "Strengthen" station with high levels of readiness in all aspects but with room to grow in terms of regulatory readiness. Specific opportunities include updating zoning, future land use, and allowable densities to be consistent with the seven to ten stories of office and retail development with a mix of residential envisioned for a Core City, as well as managing parking and supporting pedestrian-oriented design through regulations.

PLACE		
P1	Population	3,613
P2	Employment	20,326
P3	Annual Growth Rate	1.39%
P4	Short Trip Demand	79.7
P5	Affordable Housing Inventory	636 units
CONNECTIVITY		
C1	Walkshed Ratio	38%
C2	Intersection Density	181 / sq mi
C3	Pedestrian Transit Connectivity	High
C4	Transit Connectivity to Destinations	0.33
C5	Mode of Emphasis Rating	Low
REGULATORY		
R1	Zoning and Future Land Use	Medium
R2	Allowable Densities	Medium
R3	Parking Management	Low
R4	Pedestrian-Oriented Design	Medium
R5	Affordable Housing Policies	High
DEVELOPMENT		
D1	Market Fundamentals	High
D2	Parcel Size	0.23 ac
D3	Developable Land	71.2 ac
D4	Recent Development Activities	High

APPENDIX:
READINESS METRIC DEFINITIONS AND DATA SOURCES

PLACE METRICS

Metric	Purpose	Definition	Score				Data Source
				Core City	Town Center	Neighborhood Center	
Population	Measures a place's density and mix of activity	Number of residents within the ½-mile station area	1	<2,500	<2,500	<1,300	American Community Survey 5-year estimates, 2012-2017
			2	2,500 - 4,700	2,500 - 4,700	1,300 - 2,500	
			3	4,700 - 6,300	4,700 - 6,300	2,500 - 4,700	
			4	6,300 - 7,900	6,300 - 7,900	4,700 - 6,300	
			5	>7,900	>7,900	>6,300	
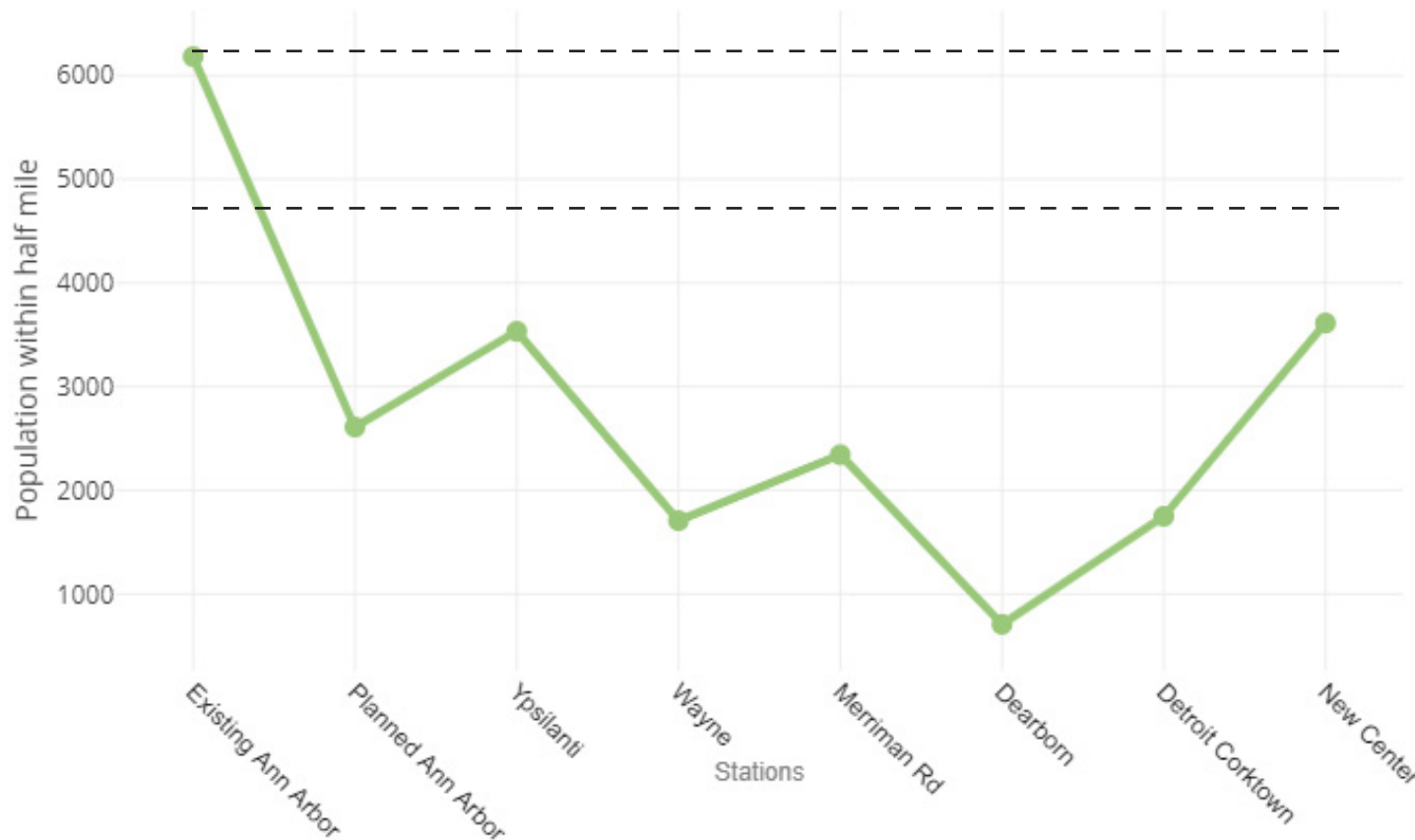
The population thresholds are based on the average and target minimum densities required to support arterial Bus Rapid Transit (BRT), as documented in tables 1 and 2 of Metro Council's Density & Activity Near Transit Local Planning Handbook. The 4-point thresholds for each typology (6,300 residents for Core City and Town Center, and 4,700 for Neighborhood Center) are the targeted range of average density for all stations of that typology to achieve.

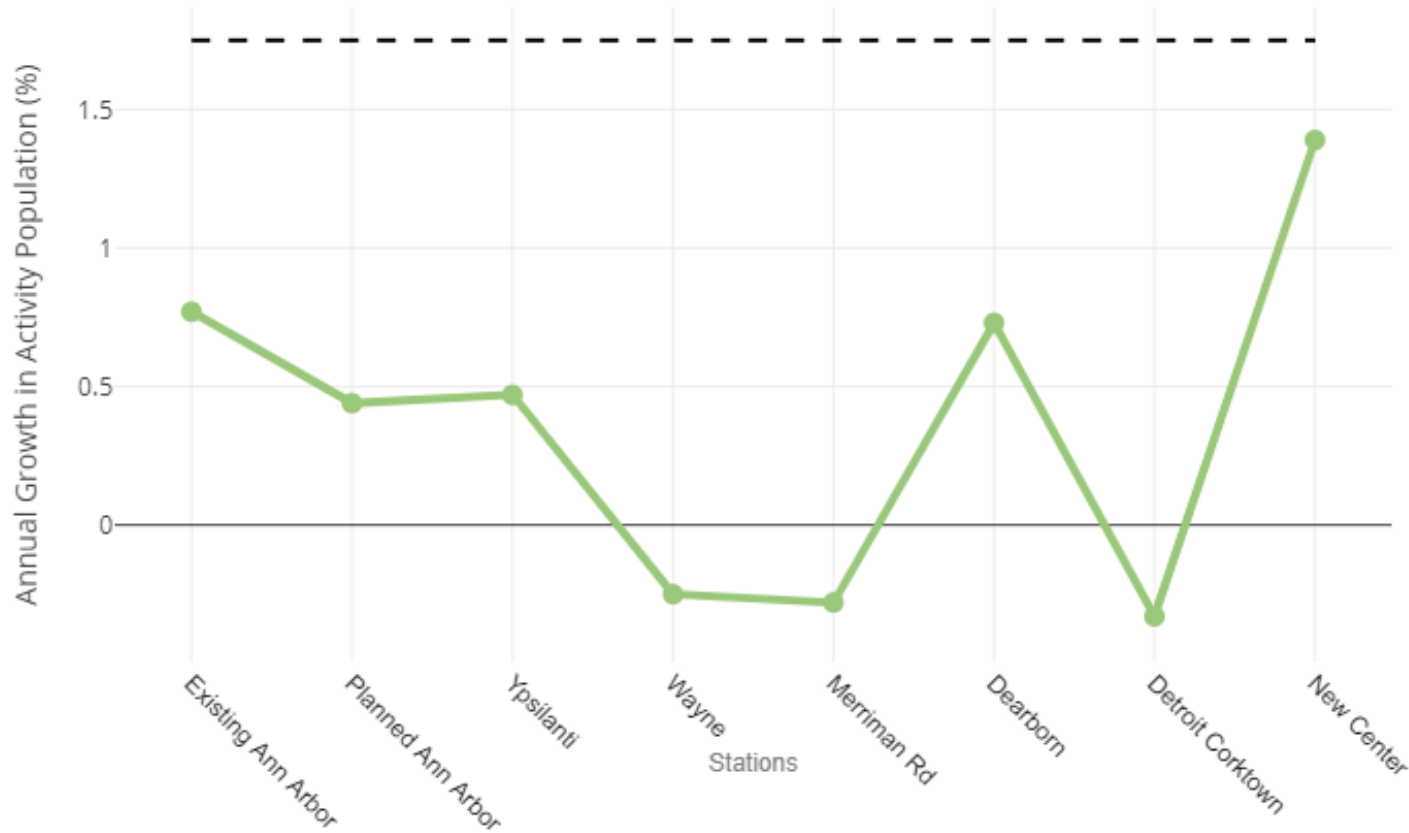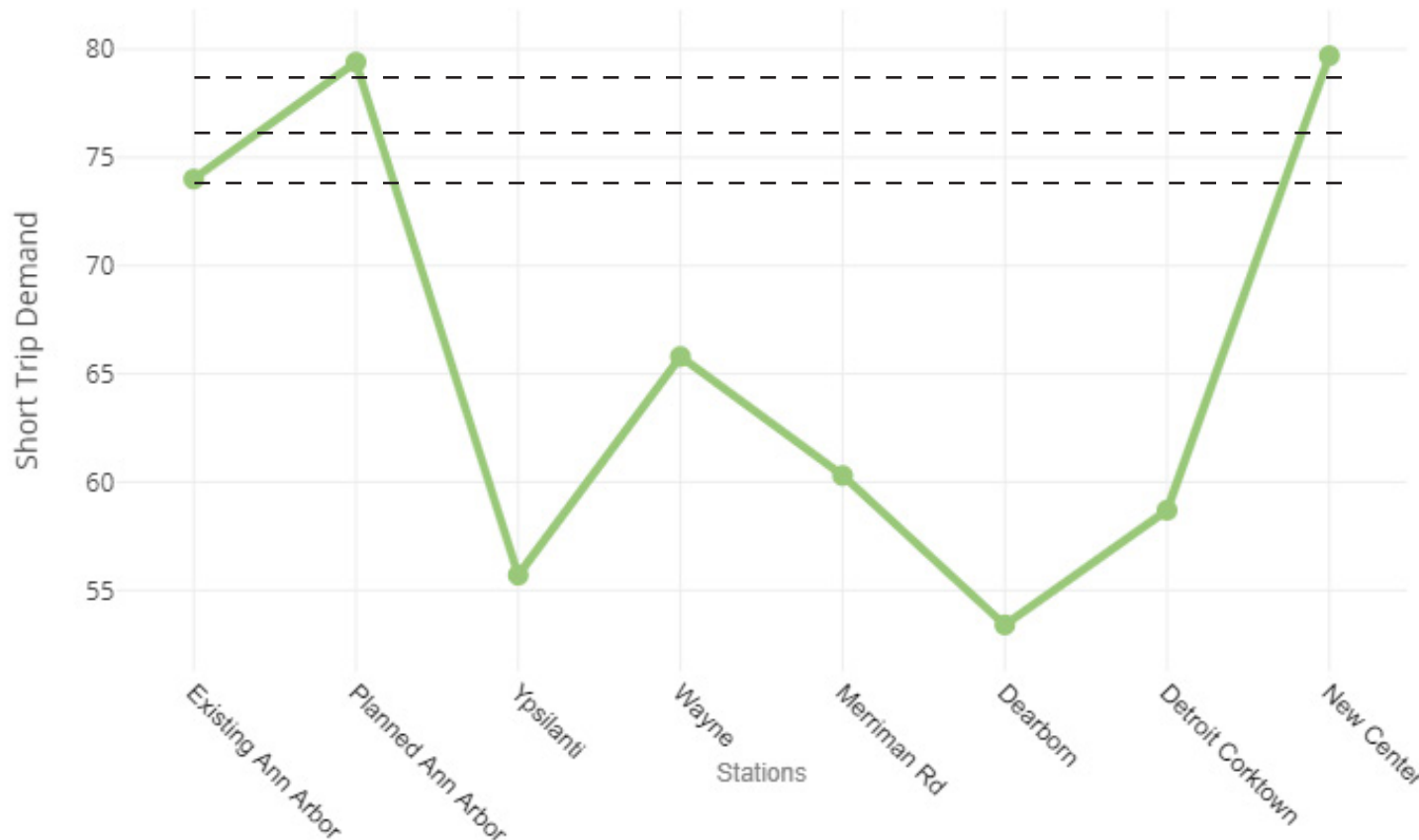| Metric	Purpose	Definition	Score				Data Source
				Core City	Town Center	Neighborhood Center	
Jobs	Measures a place's density and mix of activity	Number of jobs within the ½-mile station area	1	<5,000	<1,500	<500	Longitudinal Employer-Household Dynamics Data 2017
			2	5,000 - 10,000	1,500 - 3,000	500 - 1,000	
			3	10,000 - 20,000	3,000 - 6,000	1,000 - 2,000	
			4	20,000 - 30,000	6,000 - 10,000	2,000 - 3,000	
			5	>30,000	>10,000	>3,000	
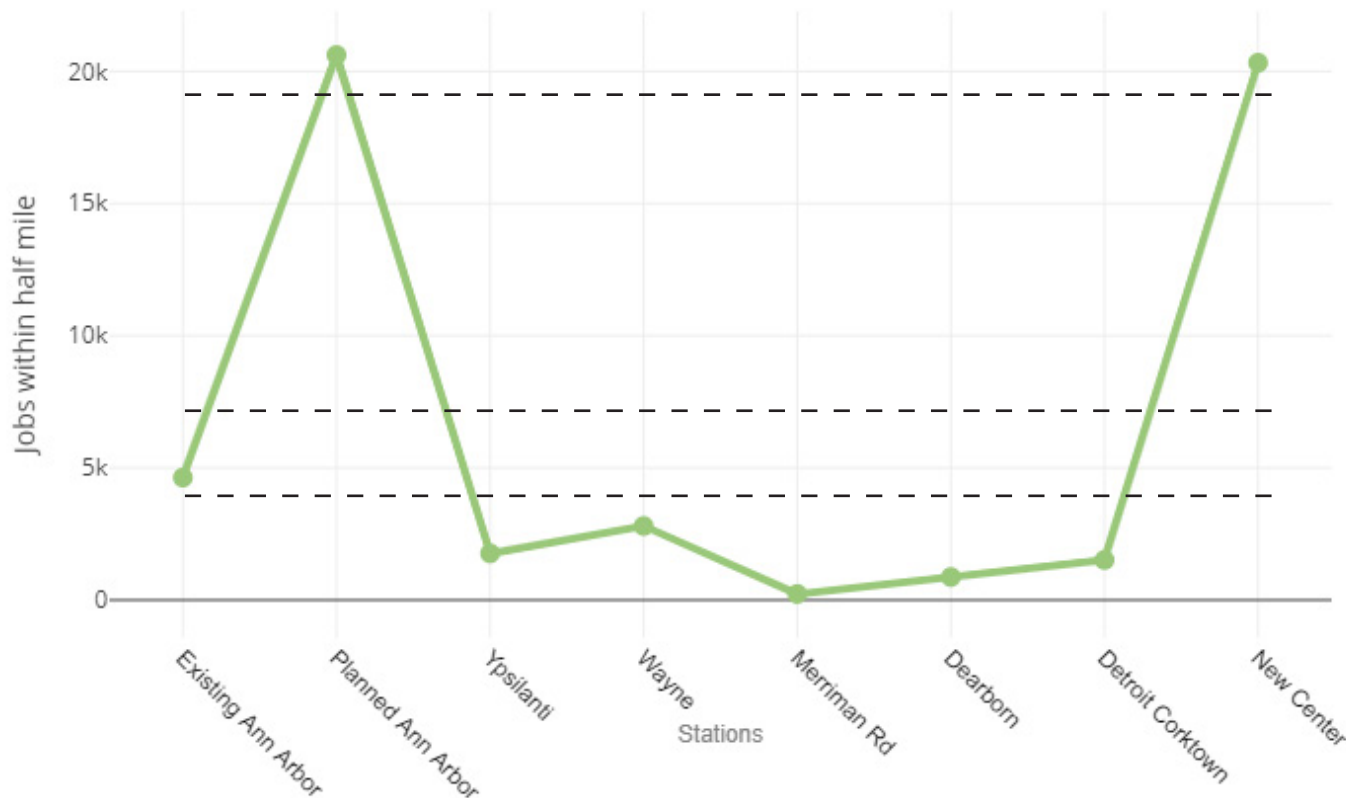
The Core City jobs thresholds are based on Downtown Detroit's employment, the Town Center thresholds are based on Maple Road (Downtown Birmingham), and the Neighborhood Center thresholds are based on 9 Mile Road (Downtown Ferndale). While these locations have different typologies than the thresholds they inform, they currently meet many of the expected conditions for these typologies and were therefore used as a benchmark for jobs. The 4-point thresholds for each typology (20,000 for Core City, 6,000 for Town Center, and 2,000 for Neighborhood Center) are the targeted range of average density for all stations of that typology to achieve.

Metric	Purpose	Definition	Score		Data Source
Annual Growth Rate	Measures the future density of a place	Year-over-year percent change in the number of residents and jobs within the ½-mile station area projected from 2020 to 2030	1	<0%	SEMCOG Projections
			2	0% - 0.5%	
			3	0.5% - 1%	
			4	1% - 1.75%	
			5	>1.75%	

The annual growth rate thresholds are based on the average of the current growth rates among the different stations along the corridor, setting attainable standards for growth across typologies that some stations are already exceeding.

Metric	Purpose	Definition	Score				Data Source
				Core City	Town Center	Neighborhood Center	
Short Trip Demand	Measures how clustered the people and destinations of a place are, how bike and pedestrian friendly a place is	Weighted average Short Trip Demand score for the ½-mile station area	1	<55	<50	<37.5	SEMCOG Short Trip Demand Analysis
			2	55 - 65	50 - 60	37.5 - 50	
			3	65 - 75	60 - 70	50 - 62.5	
			4	75 - 85	70 - 80	62.5 - 75	
			5	>85	>80	>75	

The short trip demand thresholds are based on the current scores among the different stations along the corridor. The highest scores are around 85 (this is the Core City 5-point threshold), the next highest hover around 80 (this is the Town Center 5-point threshold), and the rest are around 70 or less (the Neighborhood Center 5-point threshold is slightly higher at 75 to hold these stations to a standard which is 75% of the maximum possible).
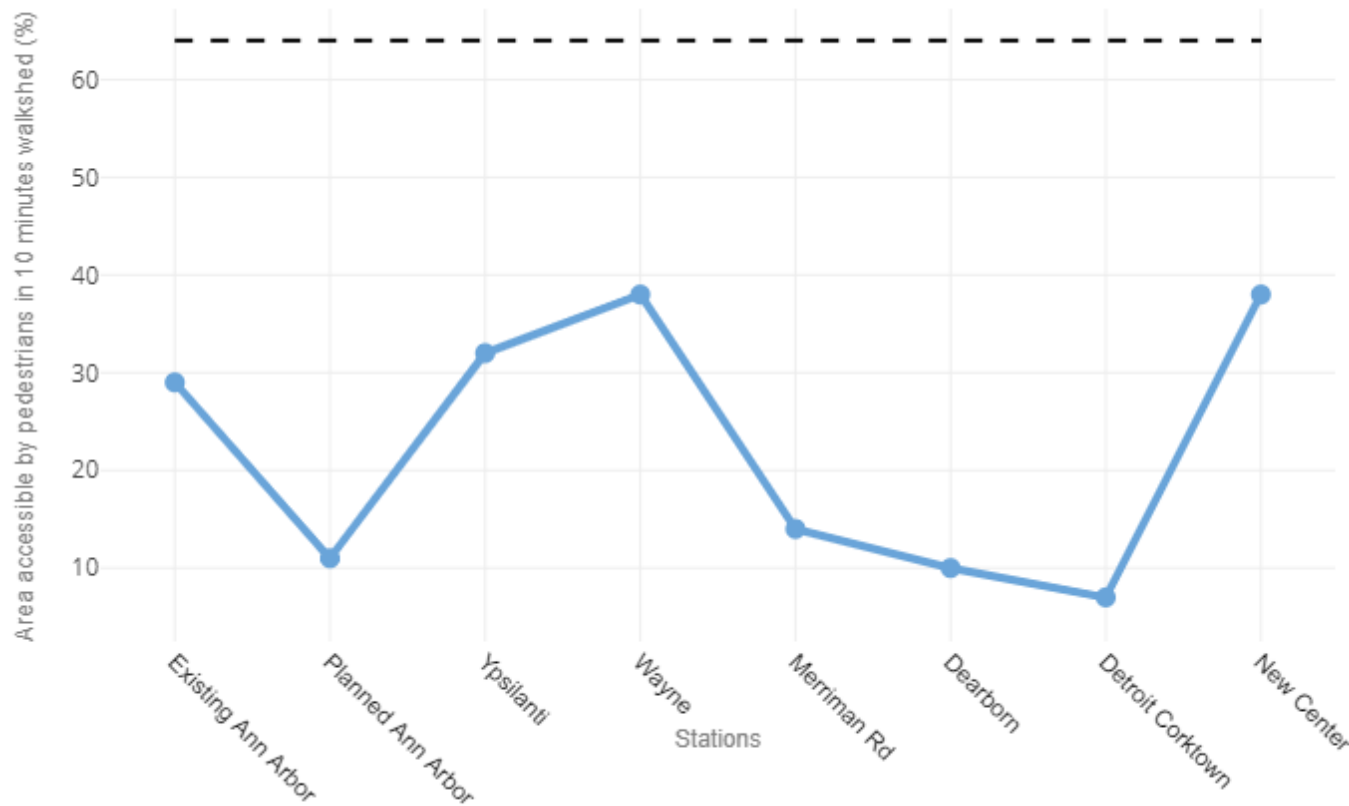
Metric	Purpose	Definition	Score				Data Source
				Core City	Town Center	Neighborhood Center	
Affordable Housing Inventory	Measures the affordability of living in a place	Number of federally assisted rental housing units within the 1/2-mile station area	1	<20	<20	<20	National Housing Preservation Database
			2	20-100	20-100	10-50	
			3	100-300	100-300	50-150	
			4	300-900	300-900	150-450	
			5	>=900	>=900	>=450	
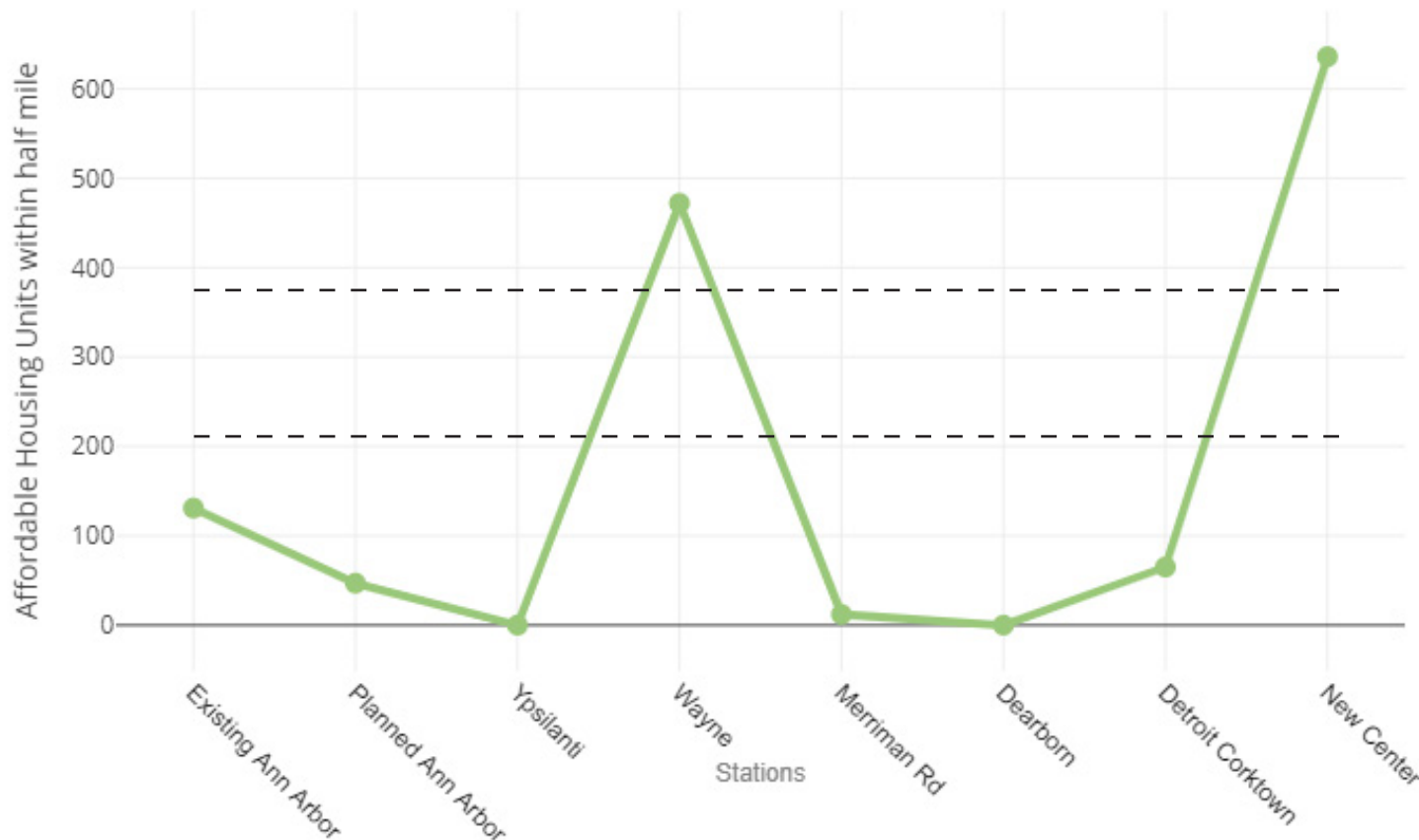
The affordable housing inventory thresholds are based on the distribution of affordable housing units within a half-mile radius across all stations in both the Woodward Avenue and Ann Arbor to Detroit corridors. The number of units at Neighborhood Centers is significantly lower than Town Centers and Core Cities, and therefore thresholds for Neighborhood Center are relatively lower than the other two typologies.

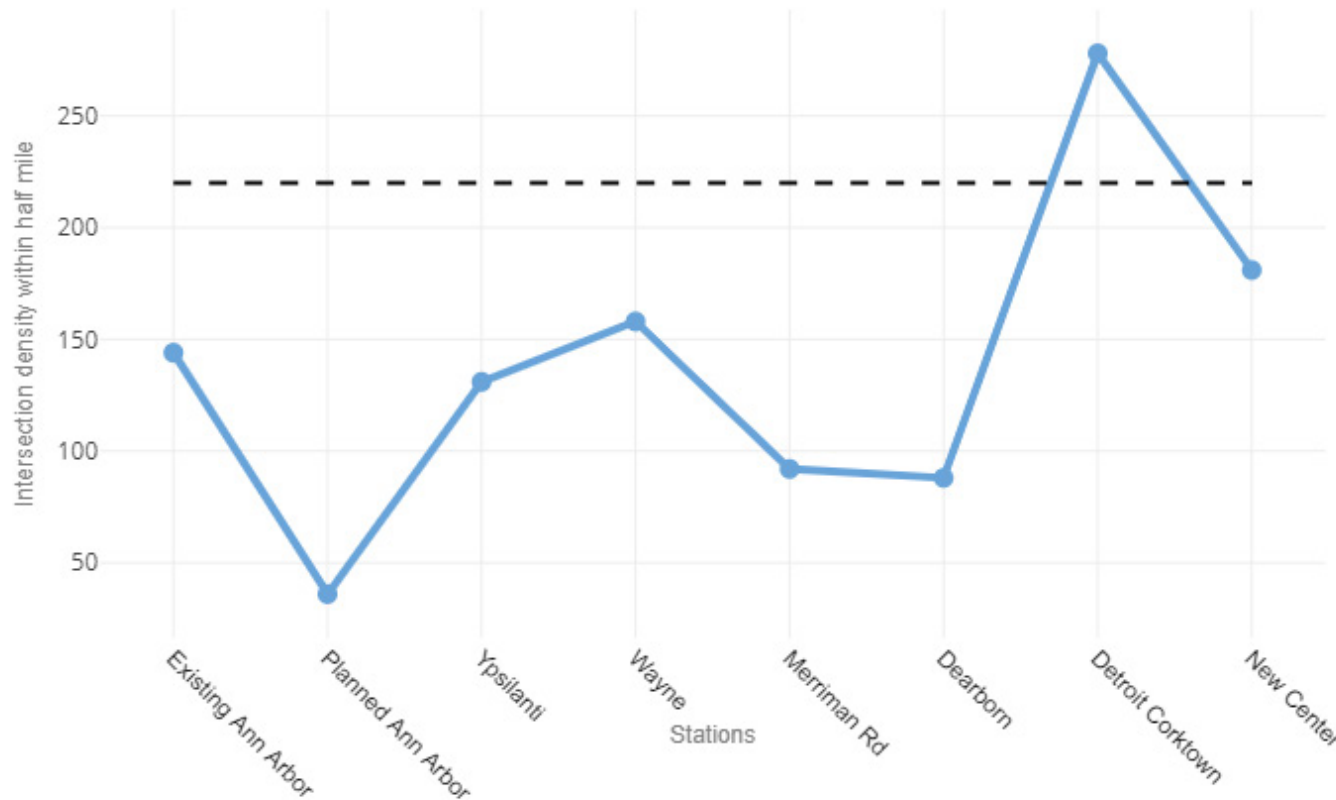| Metric	Purpose	Definition	Score		Data Source
Walkshed Ratio	Measures sidewalk network extent and completeness	Percent of the 1-mile-station area that is accessible within a 1-mile walk along the existing sidewalk and crosswalk network	1	<16%	SEMCOG Open Data Portal Sidewalks and Crosswalks GIS layer
			2	16% - 32%	
			3	32% - 48%	
			4	48% - 64%	
			5	>64%	

The walkshed ratio thresholds are based on both current walkshed areas and best practices for sidewalk network coverage. More than half of the 1-mile area should be reachable within a 1-mile walk along the sidewalk network.

CONNECTIVITY METRICS

Metric	Purpose	Definition	Score		Data Source
Intersection Density	Measures street network connectivity	Number of intersections per square mile within the ½-mile station area	1	0 - 90	SEMCOG Open Data Portal Sidewalks and Crosswalks GIS layer
			2	90 - 140	
			3	140 - 180	
			4	180 - 220	
			5	>=220	

The intersection density thresholds are based on the Maple Road station area's high intersection density, which is indicative of its small blocks that are much easier and more comfortable for pedestrians to navigate. This threshold sets a high standard that is still reasonable for the region.
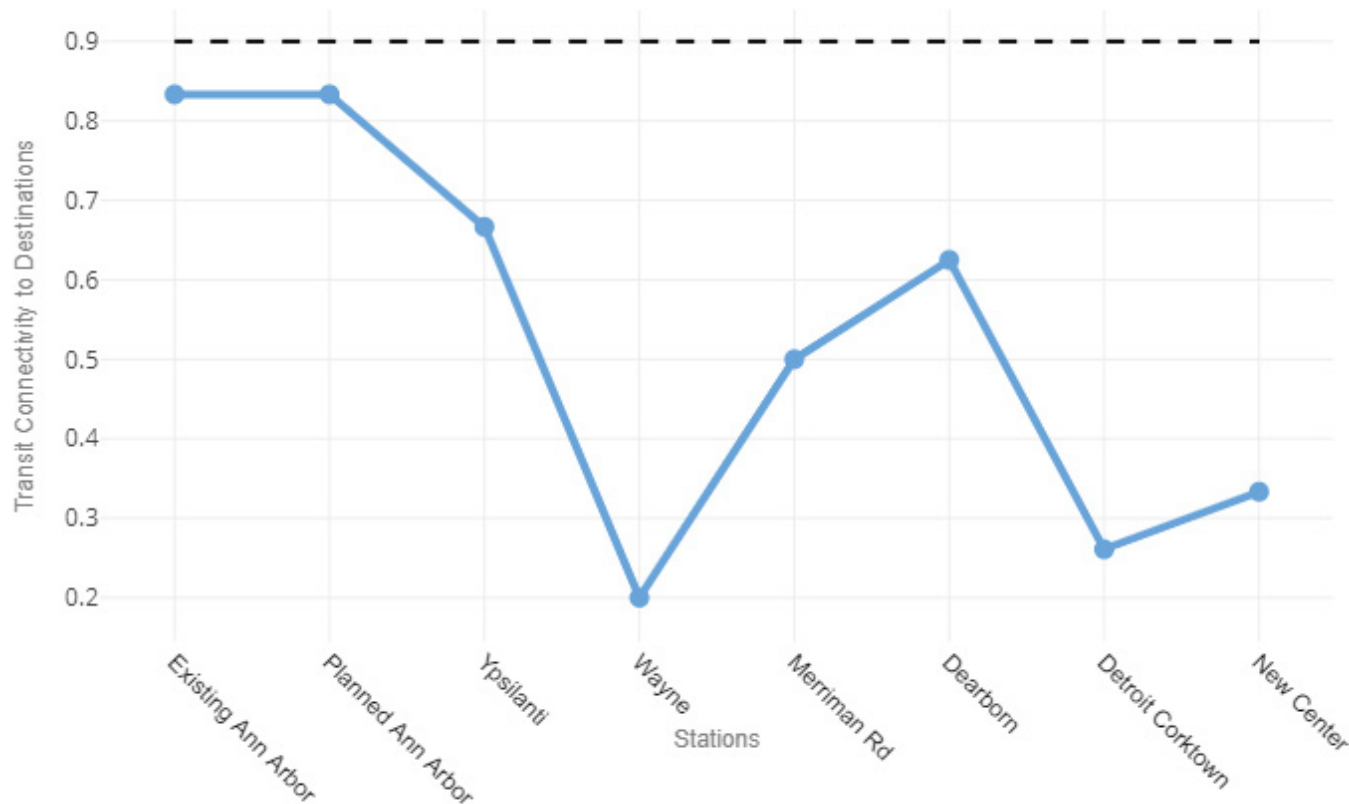
CONNECTIVITY METRICS

Metric	Purpose	Definition	Score		Data Source
Pedestrian Transit Connectivity	Measures the safety of connections for people walking between transit stops	Inventory of existing pedestrian infrastructure at the station	1	Missing crosswalks, tactile pavings, and/or pedestrian signals	Field assessments [Pedestrian refuge island guidance from the Federal Highway Administration (FHWA)](#)
			2	Crosswalks, tactile paving, and pedestrian signals	
			3	Crosswalks, tactile paving, pedestrian signals, and sufficient lighting	
			4	Crosswalks, tactile paving, pedestrian signals, sufficient lighting, and able to cross main road in one light cycle	
			5	Crosswalks, tactile paving, pedestrian signals, sufficient lighting, able to cross main road in one light cycle, and pedestrian refuge islands on roads with four or more travel lanes that have speed limits 35 mph or greater and/or where annual average daily traffic (AADT) is 9,000 or higher	
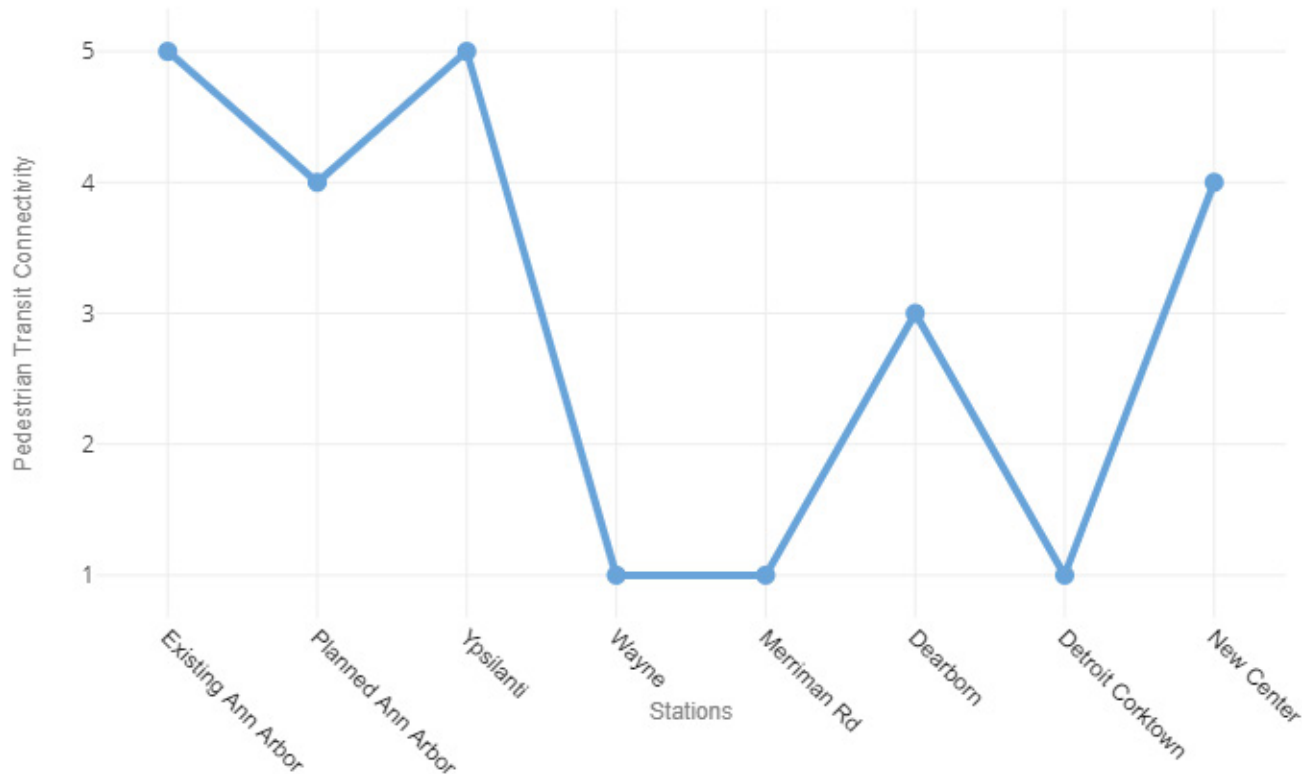
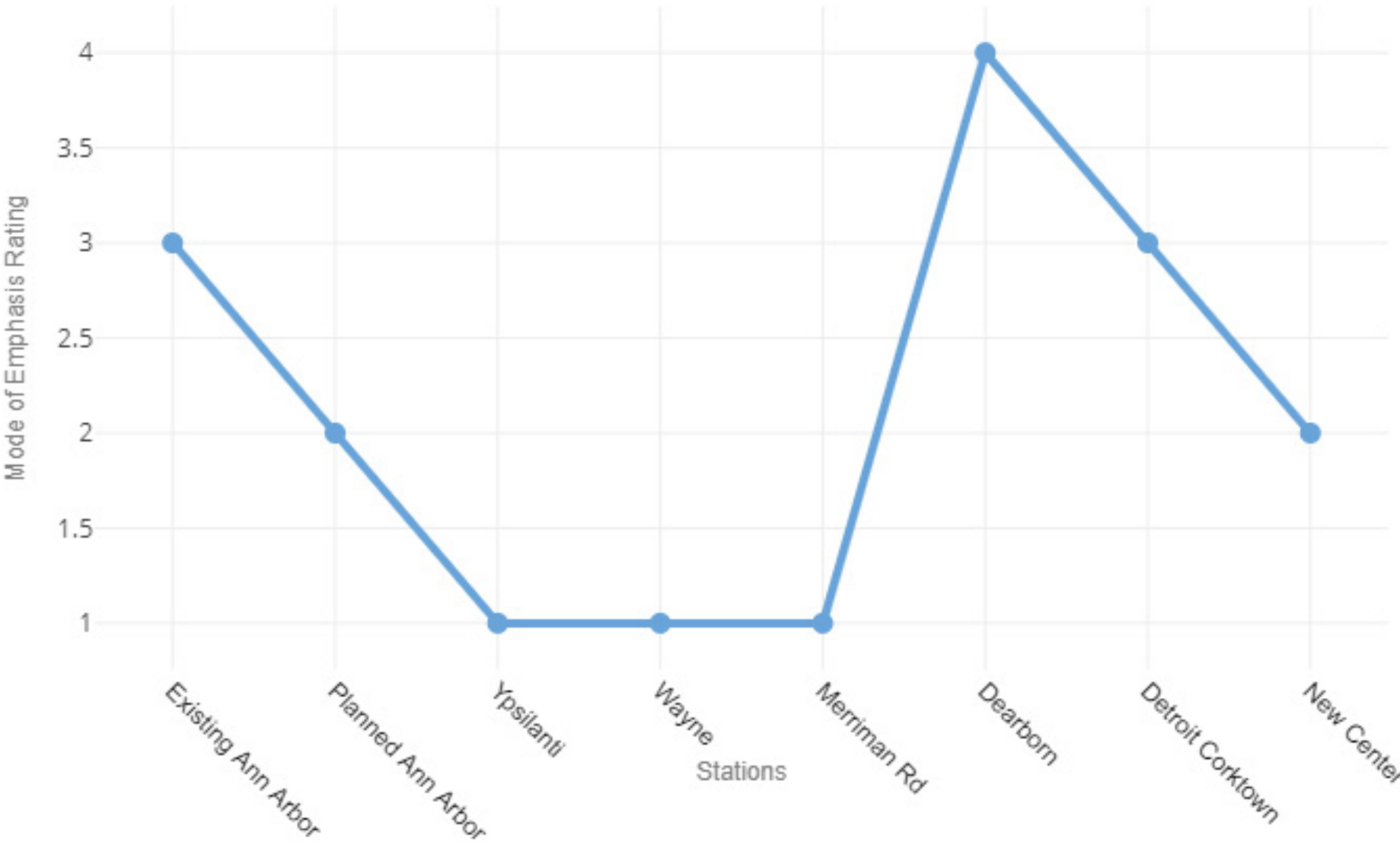| Metric	Purpose	Definition	Score		Data Source
Transit Connectivity to Destinations	Measures access to regional destinations	Ratio of regional destinations that can be reached within a 10-minute transit trip from the station to regional destinations within 3 miles of the station	1	<30%	SEMCOG Short Trip Demand Analysis
			2	30% - 50%	
			3	50% - 70%	
			4	70% - 90%	
			5	>=90%	

The transit connectivity to destinations thresholds are based on the current percentage of destinations reachable from the different station areas along the corridor. The largest percentages are more than 90% (the 5-point threshold), the next highest is about 70%, and so on.

The Mode of Emphasis Rating metric is based on the scoring shown in the table below. For stations with multiple modes of emphasis, the mode scores are averaged.

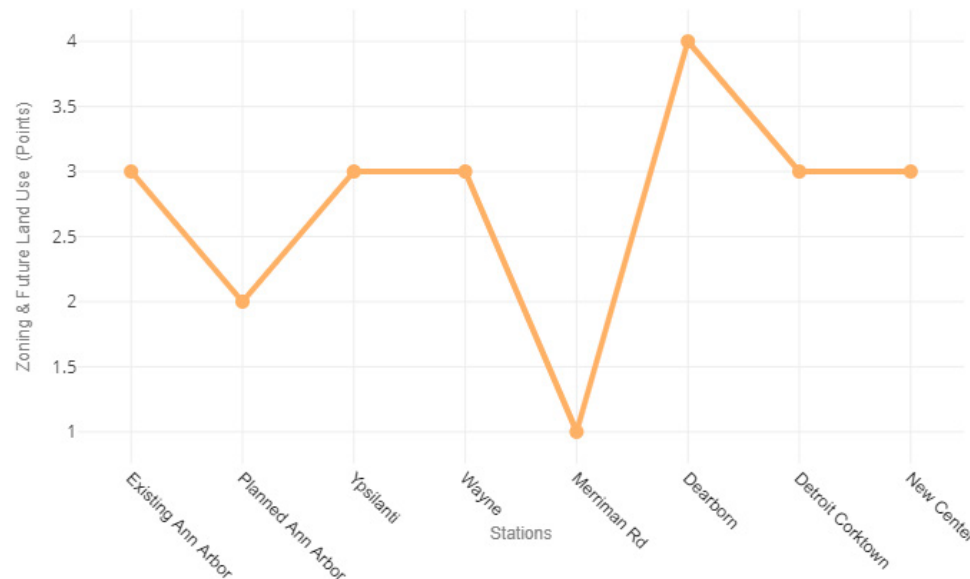| Mode of Emphasis	Max Points Possible	Extent	Measurement	Description	Data Source
Biking and Micromobility	4	Site	Bike parking	YES/NO: Is there bike parking at the station's current transit stops?	Field assessments / Google Earth
	1	Site	E-scooters	YES/NO: Are e-scooters available at the station's current transit stops?	Field assessments / Google Earth
	4	Station Area	Stress	SLIDING SCALE: How large of an area can be reached from the station via a 2-mile ride on the low-stress bike network?	SEMCOG Open Data Bicycle Network GIS layer
	1	Station Area	Bike-share	YES/NO: Is there bike-share within ¼-mile of the station?	MoGo, Zagster, and ArborBike
Transit and Microtransit	4	Site	Transit amenities	YES/NO: Do the station's current transit stops having seating and shelter(s)?	Field assessments / Google Earth
	1	Site	Real time travel information	YES/NO: Do the station's current transit stops have real time travel information?	Field assessments / Google Earth
	4	Station Area	Transit connectivity	SLIDING SCALE: Transit Connectivity Index score	Center for Neighborhood Technology AllTransit tool
	1	Station Area	Microtransit	YES/NO: Is micro-transit connecting to the station planned within the 1-mile station area?	SMART
Ride-Hailing and Park & Ride	5	Site	Curb space	YES/NO: Is there an existing rideshare pick-up and drop-off zone at the station?	Field assessments / Google Earth
	3	Station Area	Existing park & ride facilities	YES/NO: Are there existing park and ride facilities within ¼-mile of the station?	MDOT Open Data Carpool Lots GIS layer
	1	Station Area	Park & ride candidates	YES/NO: Are there park and ride candidates (medium - large, low use lots) within ¼-mile of the station?	Google Earth
	1	Station Area	Highway access	YES/NO: Is there highway access within ½-mile of the station?	MDOT Open Data All Roads GIS layer

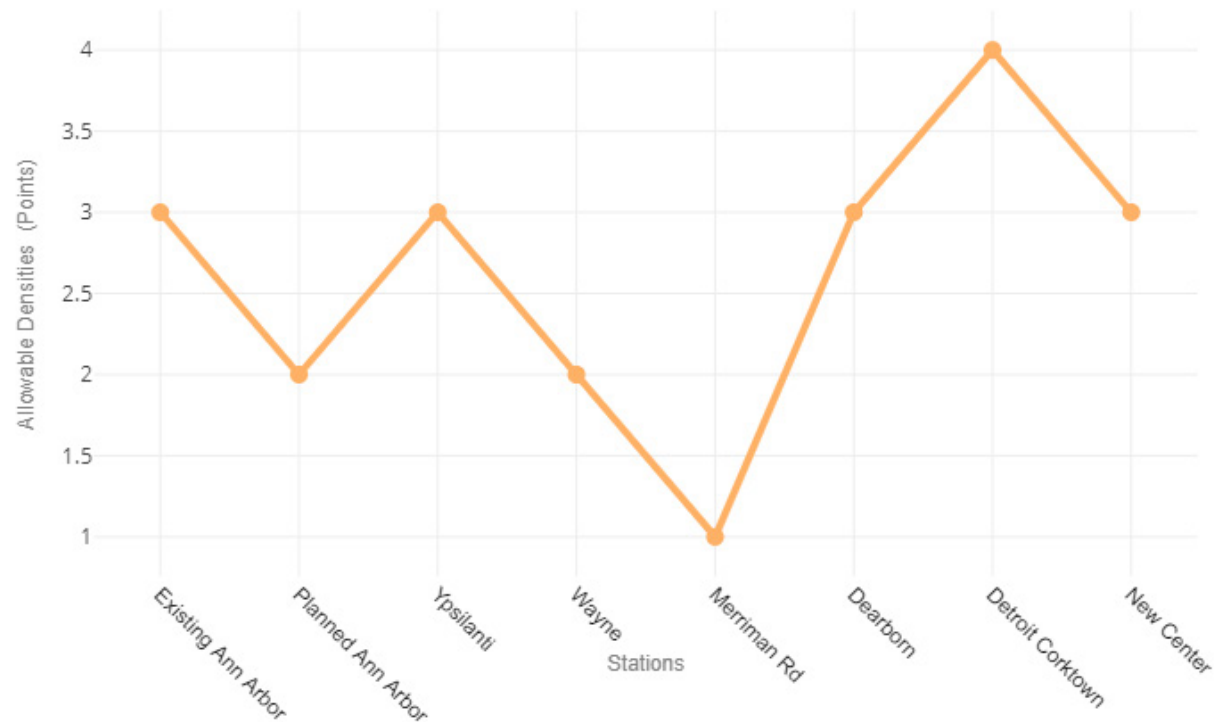| Metric	Purpose	Definition	Score	
Zoning & Future Land Use	Measures alignment with typology development types	Extent to which the existing zoning and planned land use within the ¼-mile station area align with its typology (considers mixture of uses, setbacks, height, form, and allowance of off-street surface parking - parking requirements are factored in the "Parking Management" metric)	1	Zoning is inconsistent with Aspirational Land Use and Form Typology (uses, form, parking, etc.) e.g. allows auto-oriented uses with individual parking areas, allows surface parking as a principal use.
			2	Some of the station area is zoned consistent with the Aspirational Land Use and Form Typology, allows surface parking as a principal use.
			3	Zoning throughout approximately half of the station area is consistent with many of the Aspirational Land Use and Form Typology factors, allows surface parking as a principal use.
			4	Zoning throughout much of the station area and surroundings is consistent with many of the Aspirational Land Use and Form Typology factors, prohibits surface parking (except for Park & Ride lots) as a principal use.
			5	Zoning in the station area and surroundings is consistent with most or all of the Aspirational Land Use Typology factors, and/or there is existing TOD zoning in the station area, prohibits surface parking (except for Park & Ride lots) as a principal use.

Data Source: community plans and policies

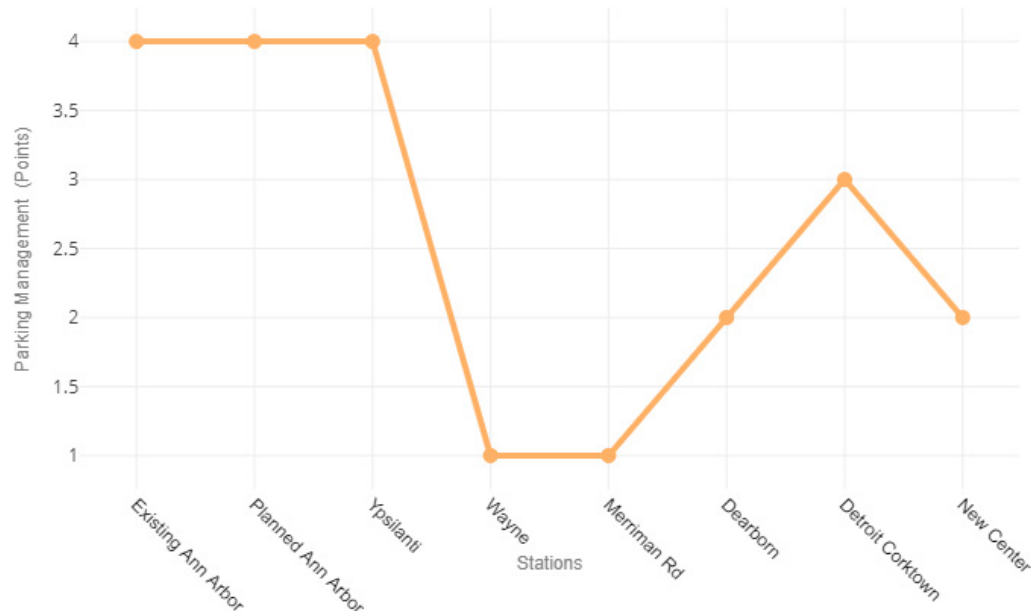| Metric	Purpose	Definition	Score	
Allowable Densities	Measures alignment with typology density scale	Extent to which the allowed building height, density, and lot coverage within the ¼-mile station area align with its typology	1	Does not permit height or density recommended by the Aspirational Land Use and Form Typology
			2	Some of the station area permits the recommended height and density and/or approaches meeting the recommended thresholds.
			3	Most of the station area permits the recommended height and density and/or approaches meeting the recommended thresholds.
			4	Station area meets or exceeds height/lot coverage maximums to meet typology recommendations
			5	Station area includes minimum required height, density, or lot coverage that aligns with typology.

Data Source: community plans and policies

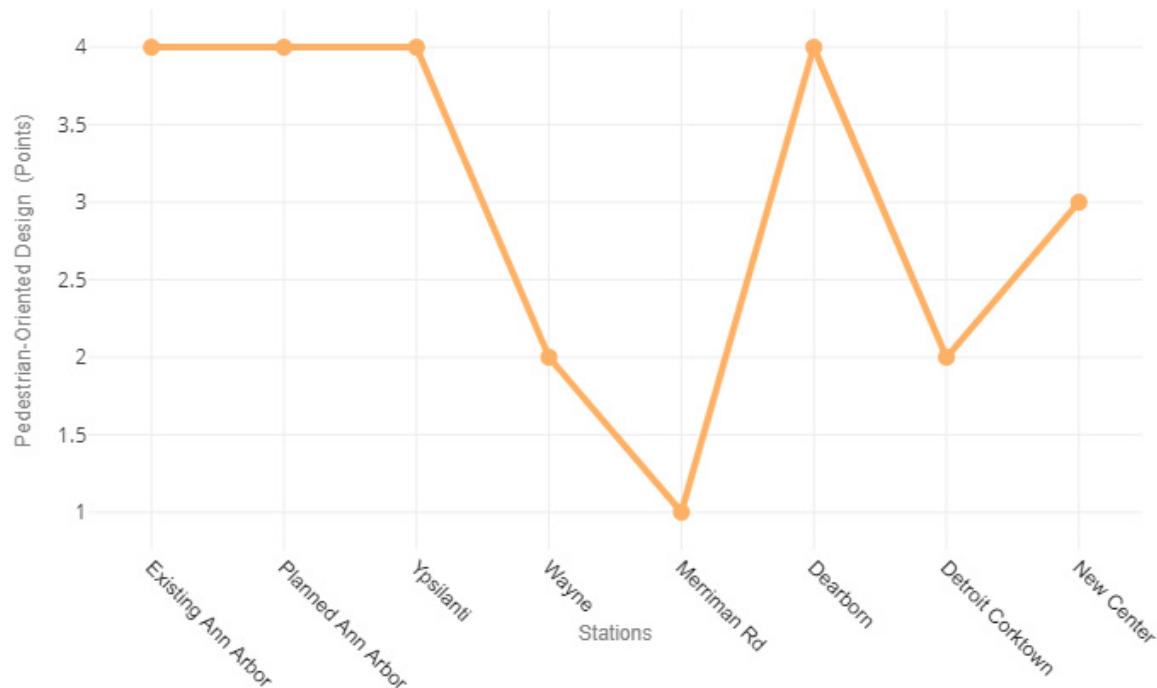| Metric	Purpose	Definition	Score	
Parking Management	Measures alignment with typology density scale, development types, and transportation options	Extent to which parking is being addressed within the ¼-mile station area (considers required parking for individual properties, incentives for shared or public parking, bike parking, and level of parking and transportation demand management)	1	Contains no parking incentives and has significant parking minimum requirements, parking requirement limit development to meet typology recommendations.
			2	Contains no apparent strategies to promote shared parking or parking management programs, some parking minimums are high.
			3	Contains some parking incentives (shared, parking reductions, etc.) and has lesser parking minimums than other parts of the community.
			4	Much of the station area contains parking incentives for shared parking, has either no parking required or parking maximums in targeted areas within the station area (may also have a public/private parking management strategy in place)
			5	Entire station area contains parking incentives for shared parking, has either no parking required or parking maximums in targeted areas within the station area (may also have a public/private parking management strategy in place)

Data Source: community plans and policies

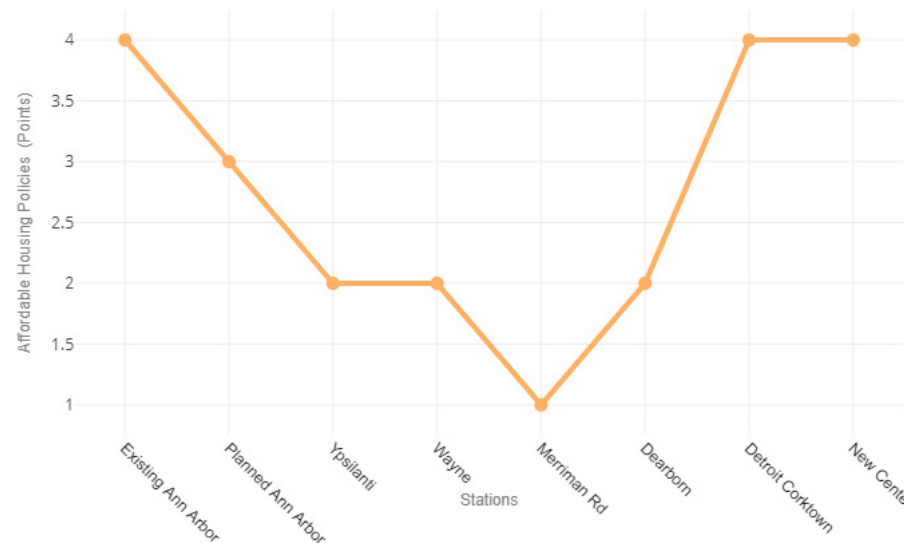| Metric	Purpose	Definition	Score	
Pedestrian-Oriented Design	Identifies whether or not a walkable environment is allowed and encouraged	Extent to which pedestrian-oriented design and placemaking are addressed within the ¼-mile station area through regulations, standards and investments for site access and circulation, building/parking site placement, streetscape design/amenities, sidewalk width, etc.	1	Site development requirements are very auto-centric, such as significant front yard parking.
			2	Contains some elements of pedestrian-oriented design.
			3	Has basic levels of pedestrian-oriented design elements.
			4	Contains requirements and/or incentives for pedestrian-oriented design elements.
			5	Provides exceptional level of pedestrian-oriented design requirements, incentives for placemaking.

Data Source: community plans and policies

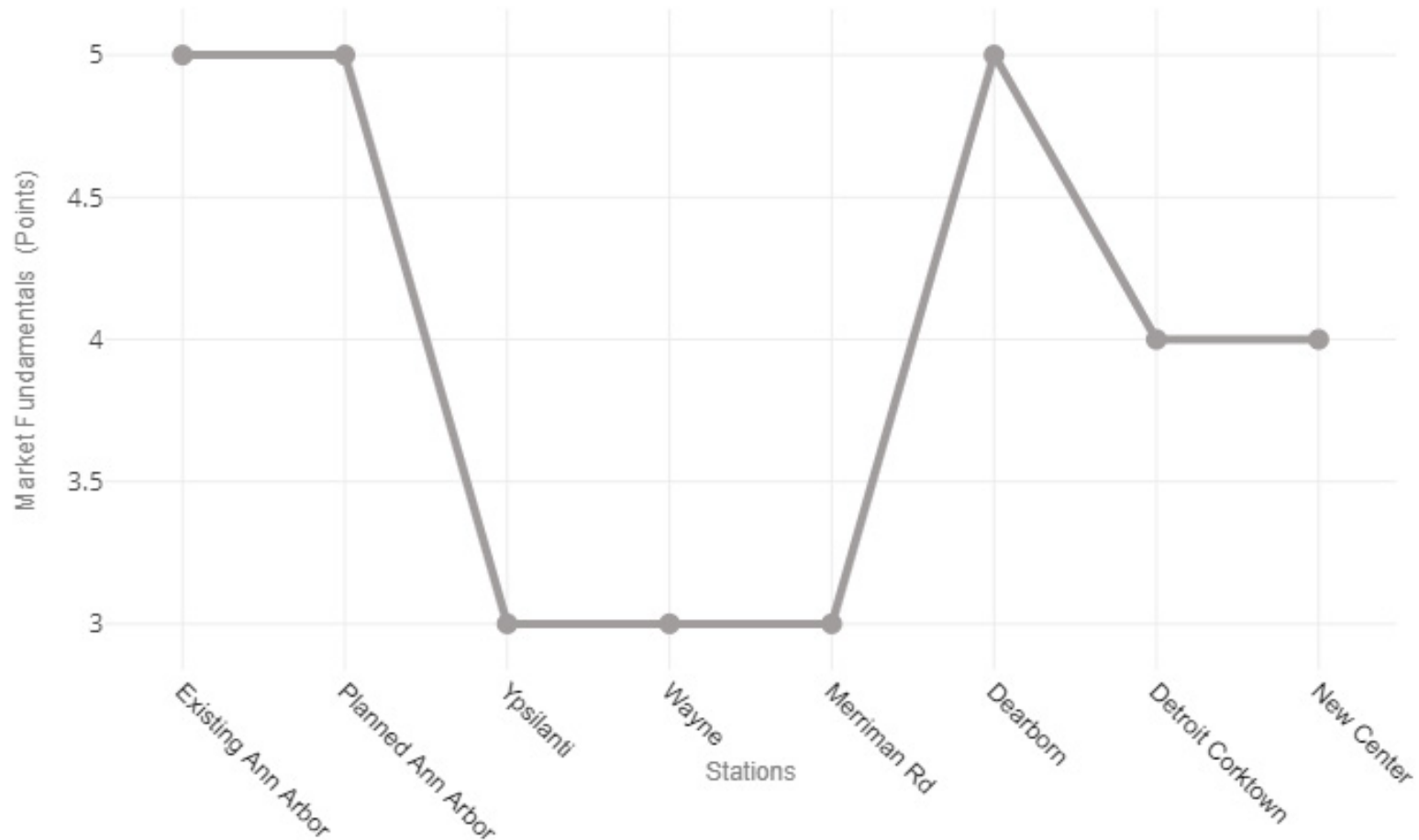| Metric	Purpose	Definition	Score	
Affordable Housing Policies	Identifies whether or not affordable housing is allowed and encouraged	Extent to which affordable housing is being addressed within the ¼-mile station area through policies, programs, requirements, and land availability	1	No policy or program other than county and Land Banks.
			2	Passive affordable housing policy in place. "Affordable" mentioned in planning policies, Master Plan, HUD or MSHDA Consolidated Housing Plan. Little to no easily available public land for affordable housing in station area.
			3	Proactive affordable housing policy in place. Minimal or flexible AMI and unit percentage requirements. Well-positioned for affordable housing in terms of developable public lands available within ¼- to ½-mile of transit stops.
			4	Active affordable housing programs, zoning has voluntary incentives for affordable units (extra height/density), require certain percentage of units using public financing or built on public land to be affordable; developable public lands available for affordable housing; may achieve some benchmarks from 5 above.
			5	Active affordable housing programs, zoning has voluntary incentives for affordable units (extra height/density), require 25% of units using public financing or built on public land to be affordable; very well positioned in terms of developable public lands available for affordable housing.

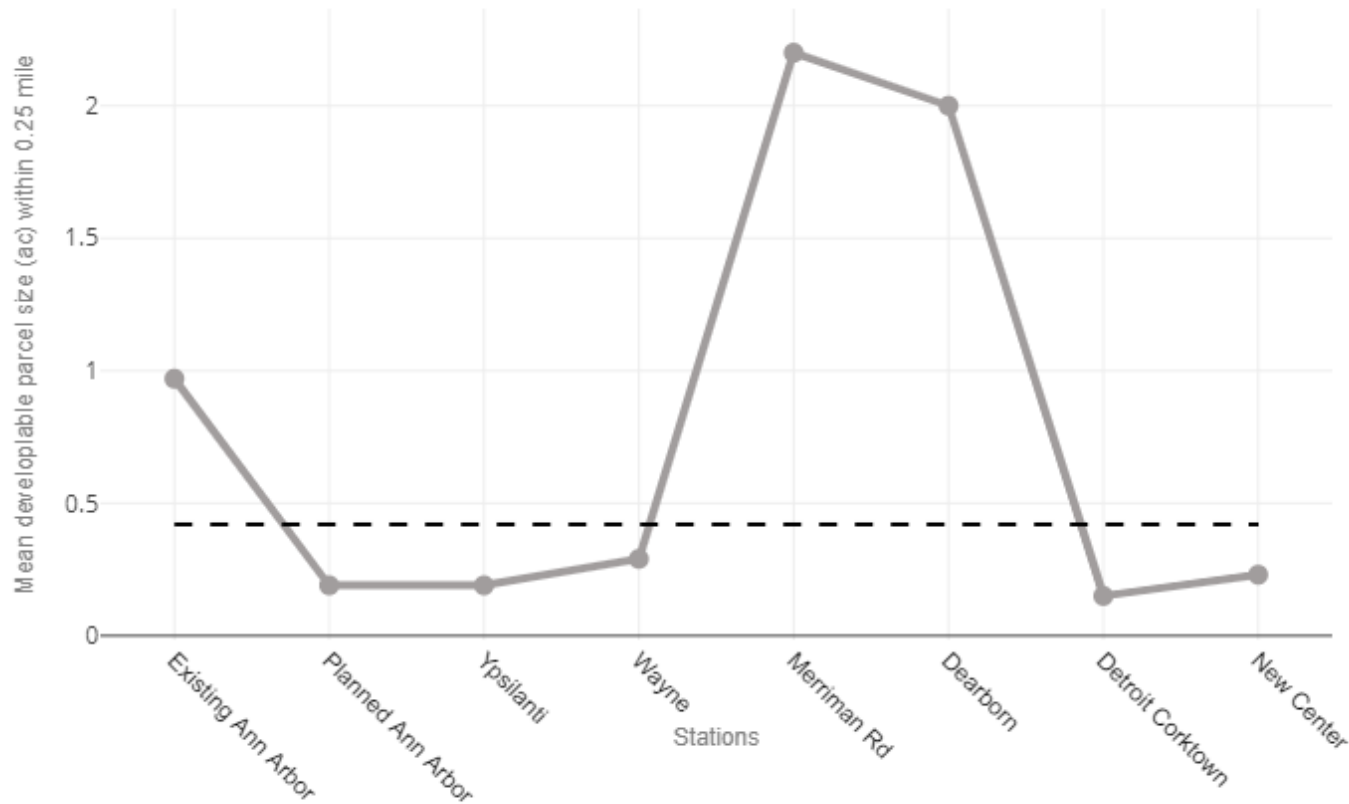Data Source: community plans and policies

DEVELOPMENT METRICS

Metric	Purpose	Definition	Score		Data Source
Market Fundamentals	Measures market demand	Likelihood that a developer would develop real estate within the ½-mile station area during the next development cycle (10-20 years)	1	Rare	Market Analysis (AECOM)
			2	Unlikely	
			3	Occasional	
			4	Likely	
			5	Very likely	

DEVELOPMENT METRICS

Metric	Purpose	Definition	Score		Data Source
Parcel Size	Measures ease of land assembly for development	Mean parcel size (in acres) of developable land within the ½-mile station area	1	<0.11	SEMCOG parcels GIS layer
			2	0.11 - 0.14	
			3	0.14 - 0.24	
			4	0.24 - 0.42	
			5	>0.42	

The parcel size thresholds are based on the average of the current parcel sizes at the different station areas along the corridor, setting a slightly higher standard for ease of development that some stations are already exceeding.

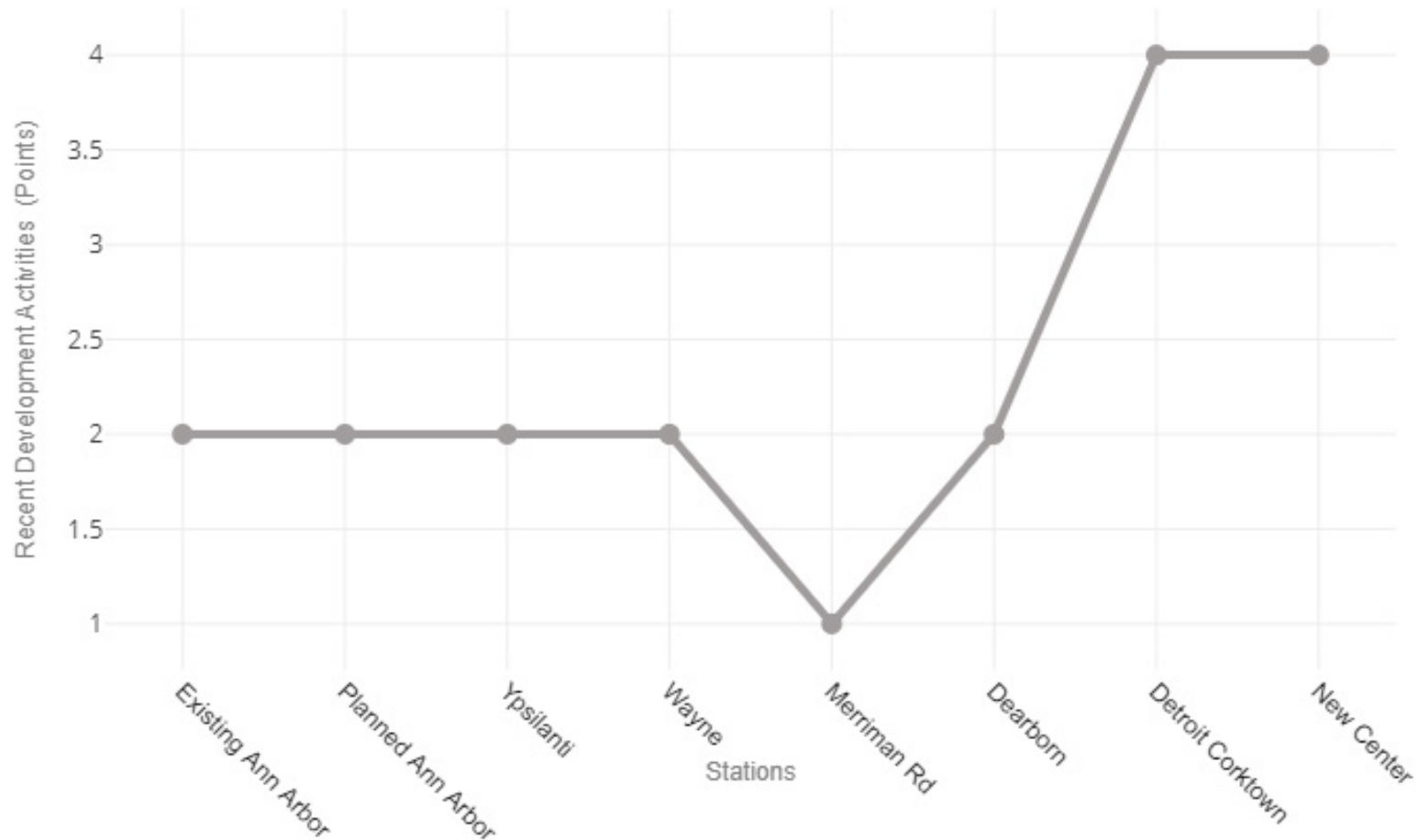| Metric	Purpose	Definition	Score		Data Source
Developable Land	Measures development potential	Acres of vacant and underutilized property, including surface parking lots, within the ½-mile station area	1	<4	SEMCOG parcels GIS layer
			2	4 - 13	
			3	13 - 44	
			4	44 - 88	
			5	>88	

The developable land thresholds are based on the current amount of developable land available at the different station areas along the corridor with the highest amounts around 90 acres (the 5-point threshold is 88).

DEVELOPMENT METRICS

Metric	Purpose	Definition	Score		Data Source
Recent Development Activities	Measures market demand	Level of development activity within the ½-mile station area in the past 5 years (on a relative basis)	1	Negligible	Market Analysis (AECOM)
			2	Low	
			3	Medium	
			4	High	
			5	Very high	

MoD

Mobility-Oriented Development Study

ADDITIONAL STATIONS READINESS ANALYSIS

INTRODUCTION

The RTA conducted a Mobility-Oriented Development (MOD) Study of select stations along key regional corridors in Oakland, Wayne, and Washtenaw Counties to promote coordination around strategic mobility and transit investments and collaborative economic development. The MOD framework builds on transit-oriented development (TOD) methods by examining connections to and from station areas, focusing on station accessibility for defined catchment areas. This report, entitled Additional Stations Readiness Analysis, demonstrates how the same framework can be applied to other locations and along other corridors in Southeast Michigan, and diagnoses the following stations' levels of readiness for accommodating MOD:

- Washtenaw Avenue and Michigan Avenue Corridors: Ypsilanti Transit Center (Pearl Street & Adams Street in Downtown Ypsilanti)
- Michigan Avenue Corridor: Inkster (Michigan Avenue & Inkster Road)
- Grand River Avenue Corridor: Farmington Hills (Grand River Avenue & Tuck Road near the West River Shopping Center)
- Gratiot Avenue Corridor: Macomb Mall (Gratiot Avenue & Masonic in Roseville)

These locations were selected by the RTA and the project team because these corridors are highly served by transit today and have been considered for future rapid transit in regional planning efforts.

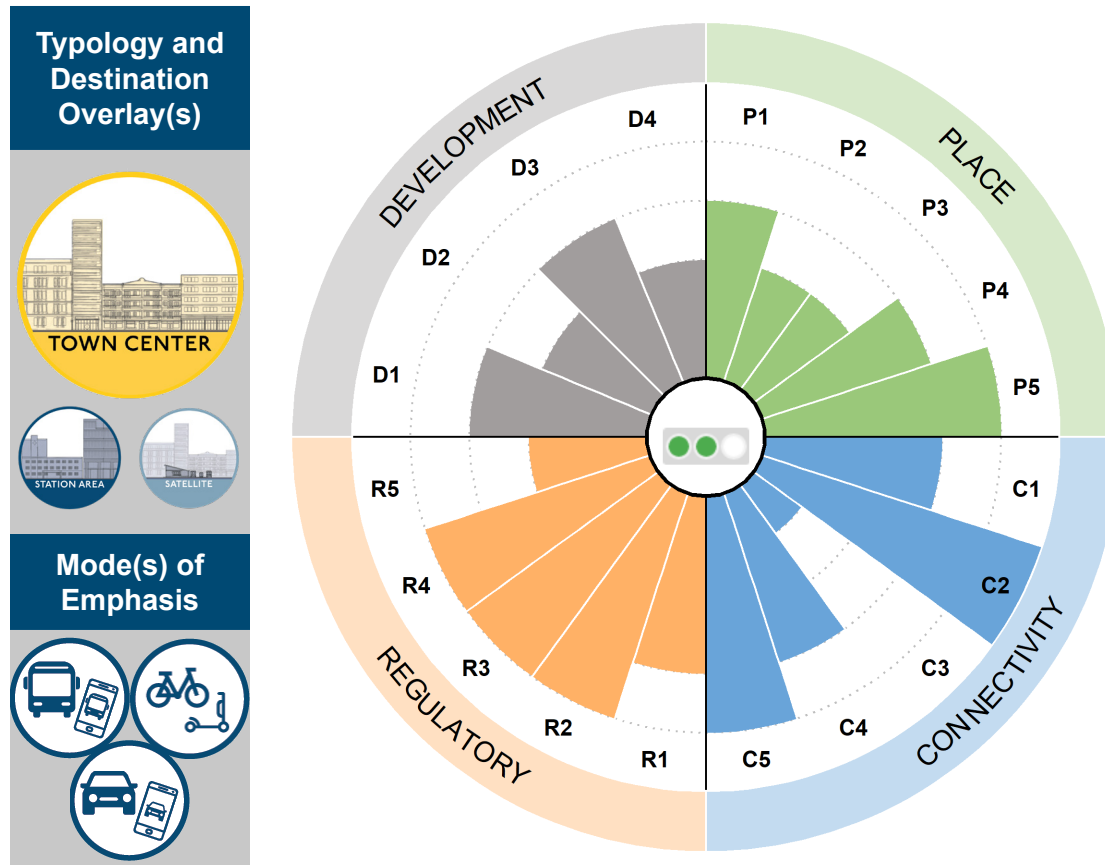| Station Name	Typology	Level of Readiness	Overall Score (1-5)	Categories with Score >= 3.0	Place Score (1-5)	Connectivity Score (1-5)	Regulatory Score (1-5)	Development Score (1-5)
Ypsilanti Transit Center	Town Center	Build	2.98	2	2.8	3.2	3.4	2.5
Inkster	Neighborhood Center	Build	2.76	2	2.6	2.2	3	3.25
Farmington Hills	Neighborhood Center	Plan	2.13	0	2.6	1.4	2	2.5
Macomb Mall	Town Center	Plan	2.35	1	2	2.2	2.2	3

Level of Readiness Rules

Strengthen: At least 3 categories have a score of at least 3.0, or overall score is at least 3.0

Build: At least 2 categories have a score of at least 3.0, or overall score is at least 2.6

Plan: Remaining stations

YPSILANTI TRANSIT CENTER

MOD Study

Typology and Destination Overlay(s)

TOWN CENTER

STATION AREA SATELLITE

Mode(s) of Emphasis

DEVELOPMENT

PLACE

D4
D3
D2
D1
R5
R4
R3
R2
R1
C5
C4
C3
C2
C1
P5
P4
P3
P2
P1

REGULATORY

CONNECTIVITY

The Ypsilanti Transit Center (YTC) is located at Pearl Street & Adams Street in Downtown Ypsilanti and is the terminus for several routes in the The Ride (AAATA)'s transit system, including its highest ridership route: Route 4 Washtenaw. YTC is a "Build" station with opportunities to improve development readiness by attracting developers, freeing up land, and assembling smaller parcels into larger sites to better enable future development. Other opportunities include safely and comfortably accommodating pedestrian connections between transit services and encouraging job growth in Downtown Ypsilanti.

PLACE

P1	Population	5,503
P2	Employment	2,461
P3	Annual Growth Rate	0.45%
P4	Short Trip Demand (out of 100)	63.9
P5	Affordable Housing Inventory (units)	321

CONNECTIVITY
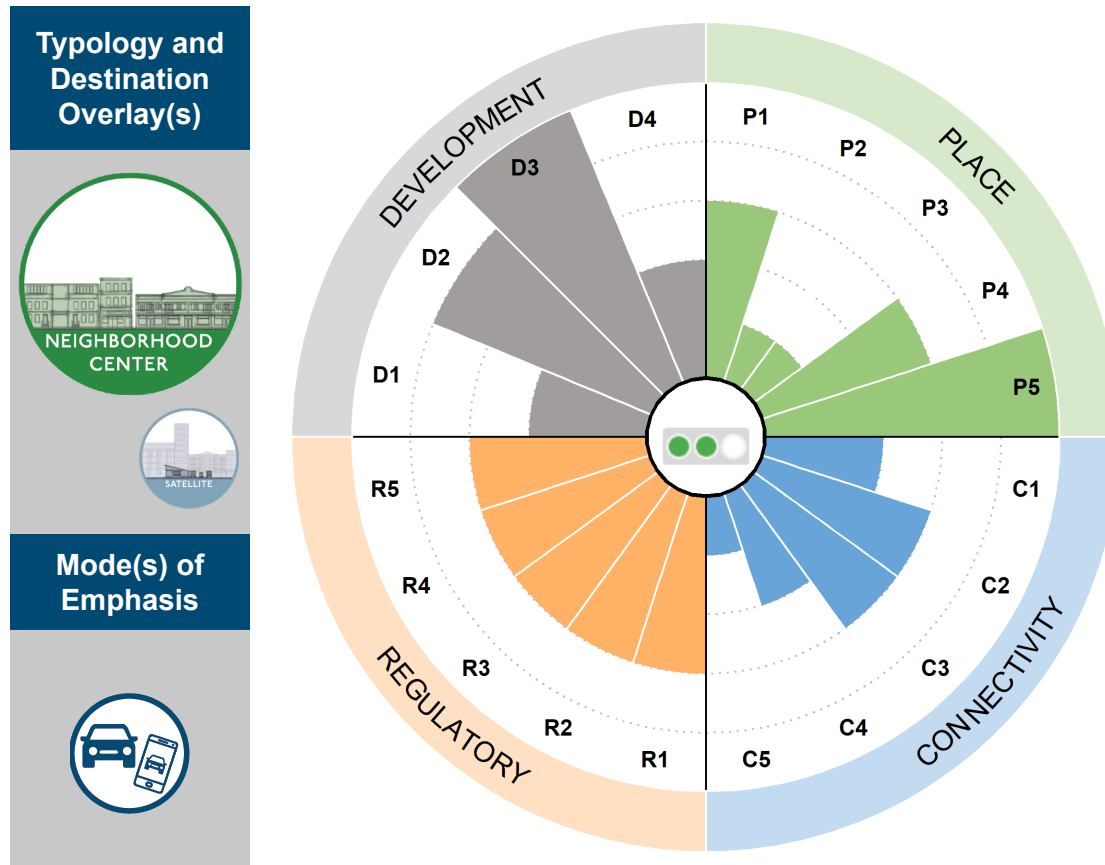
C1	Walkshed Ratio	36%
C2	Intersection Density (per sq mi)	289
C3	Pedestrian Transit Connectivity	Very Low
C4	Transit Connectivity to Destinations	50%
C5	Mode of Emphasis Rating	High

REGULATORY

R1	Zoning and Future Land Use	Medium
R2	Allowable Densities	High
R3	Parking Management	High
R4	Pedestrian-Oriented Design	High
R5	Affordable Housing Policies	Low

DEVELOPMENT

D1	Market Fundamentals	Medium
D2	Parcel Size (acres)	0.14
D3	Developable Land (acres)	15.5
D4	Recent Development Activities	Low

INKSTER

Typology and Destination Overlay(s)

NEIGHBORHOOD CENTER

SATELLITE

Mode(s) of Emphasis

The potential future Inkster station is located at Michigan Avenue & Inkster Road and is served by both the SMART FAST Michigan route and the local Michigan Avenue SMART route. Inkster is a "Build" station with opportunities to improve connectivity readiness by expanding the sidewalk network, improving transit connections to the airport and regional hospitals, and accommodating ride-hailing and park and ride. Encouraging job growth in Inkster is another opportunity that would help improve the station's place readiness.

PLACE

P1	Population	2,506
P2	Employment	256
P3	Annual Growth Rate	-1.02%
P4	Short Trip Demand (out of 100)	61.2
P5	Affordable Housing Inventory (units)	778

CONNECTIVITY

C1	Walkshed Ratio	28%
C2	Intersection Density (per sq mi)	167
C3	Pedestrian Transit Connectivity	Medium
C4	Transit Connectivity to Destinations	33%
C5	Mode of Emphasis Rating	Very Low

REGULATORY

R1	Zoning and Future Land Use	Medium
R2	Allowable Densities	Medium
R3	Parking Management	Medium
R4	Pedestrian-Oriented Design	Medium
R5	Affordable Housing Policies	Medium

DEVELOPMENT

D1	Market Fundamentals	Low
D2	Parcel Size (ac)	0.29
D3	Developable Land (ac)	89.2
D4	Recent Development Activities	Low

FARMINGTON HILLS

MOD Study

Typology and Destination Overlay(s)

NEIGHBORHOOD CENTER

STATION AREA

SATELLITE

Mode(s) of Emphasis
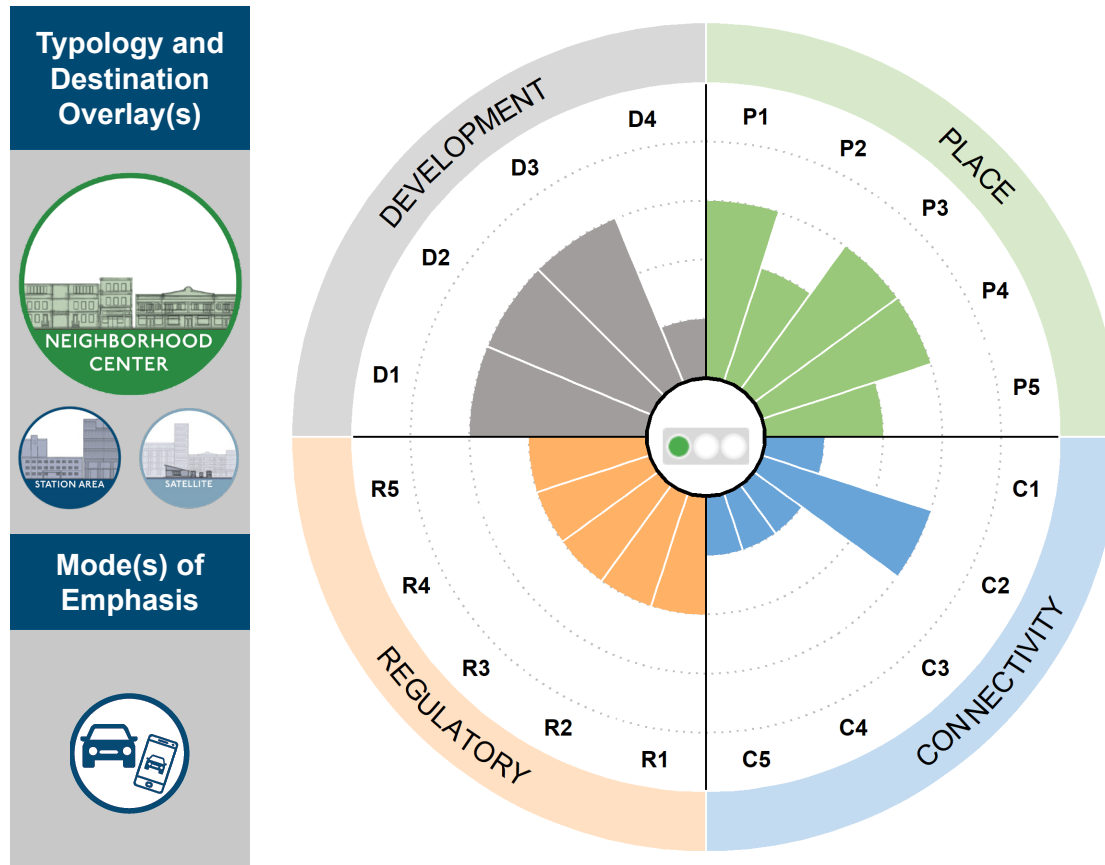
The potential future Farmington Hills station is located at Grand River Avenue & Tuck Road near the West River Shopping Center and is currently by SMART Route 330 Grand River-Beech Daly. The Grand River Avenue corridor is also served by DDOT ConnectTen Route 3 Grand River. Farmington Hills is a "Plan" station with opportunities to improve connectivity readiness by expanding the sidewalk network, safely and comfortably accommodating pedestrian connections between transit services, improving transit connections to regional hospitals and shopping centers, and accommodating ride-hailing and park and ride. There are also opportunities to improve regulatory readiness by updating zoning, future land uses, and allowable densities to be consistent with the two to three stories of residential and mixed retail envisioned for a Neighborhood Center, managing parking, supporting pedestrian-oriented design, and encouraging affordable housing.

PLACE		
P1	Population	2,662
P2	Employment	906
P3	Annual Growth Rate	0.71%
P4	Short Trip Demand (out of 100)	61.3
P5	Affordable Housing Inventory (units)	32

CONNECTIVITY		
C1	Walkshed Ratio	4%
C2	Intersection Density (per sq mi)	180
C3	Pedestrian Transit Connectivity	Very Low
C4	Transit Connectivity to Destinations	0%
C5	Mode of Emphasis Rating	Very Low

REGULATORY		
R1	Zoning and Future Land Use	Low
R2	Allowable Densities	Low
R3	Parking Management	Low
R4	Pedestrian-Oriented Design	Low
R5	Affordable Housing Policies	Low

DEVELOPMENT		
D1	Market Fundamentals	Medium
D2	Parcel Size (ac)	0.21
D3	Developable Land (ac)	33.9
D4	Recent Development Activities	Very Low

MACOMB MALL

Typology and Destination Overlay(s)

TOWN CENTER
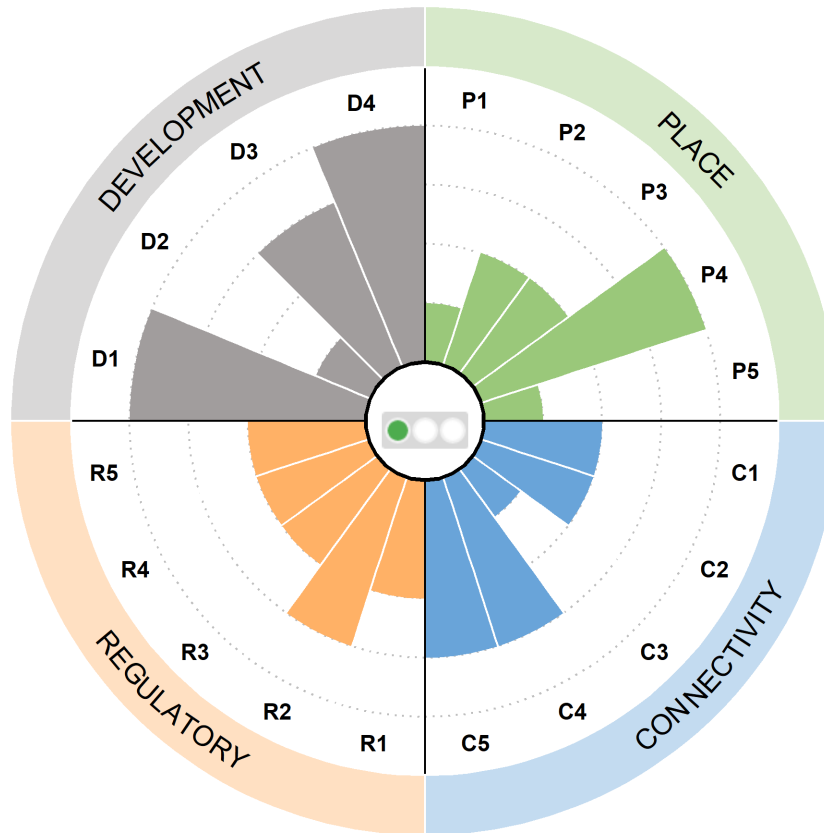
STATION AREA   SATELLITE

Mode(s) of Emphasis

Macomb Mall is located just north of Gratiot Avenue & Masonic in Roseville. The mall is served on Gratiot Avenue by both the SMART FAST Gratiot Route and local Gratiot Avenue SMART service. Multiple other SMART routes terminate at Macomb Mall, which also serves as a park & ride location and paratransit transfer point for many riders. Macomb Mall is a "Plan" station with opportunites to improve connectivity readiness by expanding the sidewalk network, creating more of a street grid with a higher intersection density, and safely and comfortably accommodating pedestrian connections between transit services. There are also opportunities to improve regulatory readiness by updating zoning and future land uses to be consistent with the four to six stories of mixed-use development envisioned for a Town Center, managing parking, supporting pedestrian-oriented design, and encouraging affordable housing.

PLACE

P1	Population	2,187
P2	Employment	2,545
P3	Annual Growth Rate	0.30%
P4	Short Trip Demand (out of 100)	70.3
P5	Affordable Housing Inventory (units)	0

CONNECTIVITY

C1	Walkshed Ratio	23%
C2	Intersection Density (per sq mi)	126
C3	Pedestrian Transit Connectivity	Very Low
C4	Transit Connectivity to Destinations	50%
C5	Mode of Emphasis Rating	Medium

REGULATORY

R1	Zoning and Future Land Use	Low
R2	Allowable Densities	MEdium
R3	Parking Management	Low
R4	Pedestrian-Oriented Design	Low
R5	Affordable Housing Policies	Low

DEVELOPMENT

D1	Market Fundamentals	High
D2	Parcel Size (ac)	0.09
D3	Developable Land (ac)	29.8
D4	Recent Development Activities	High