



CITY OF DEARBORN MULTIMODAL PLAN

خطة مدينة ديربورن متعددة الوسائل

2020



Acknowledgements

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Tom Paison, Dearborn Economic and Community Development

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Tom Wall, Dearborn Public School

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Gorette Yung, MDOT Taylor TSC

Consulting Partners

The Greenway Collaborative

Bergmann Associates

livingLAB

Resolution

By Sareini supported by Herrick.

10-425-20. WHEREAS: The City of Dearborn passed a Complete Streets Resolution in 2012 which identified the need for a City-wide Multi-Modal Transportation Plan (MMTP), and

WHEREAS: A MMTP will help the City respond to the growing demand for alternative forms of travel and promote safe and comfortable transportation options throughout Dearborn, and

WHEREAS: C.R. 11-556-17 authorized the City to award a contract to The Greenway Collaborative, Inc. for the development of a MMTP, and

WHEREAS: A multi-faceted, public engagement process took place, including the creation of a Steering Committee, to help define current and future community needs and desires for people who walk, bike, ride and drive within Dearborn, and

WHEREAS: The vision, recommendations, and implementation strategies set forth in the MMTP are based on input gathered from the public engagement process and technical expertise provided by the consultant team, and

WHEREAS: The City's Planning Commission unanimously approved the MMTP at its January 13, 2020 public hearing, and

WHEREAS: A Study Session was held on September 23, 2020 for City Council to review the document in more detail; therefore be it

RESOLVED: That the Dearborn City Council unanimously declares its support of the Multi-Modal Transportation Plan; be it further

RESOLVED: That the City of Dearborn will incorporate the MMTP into the City's Master Plan, and other planning documents, to ensure consistency among future transportation goals and objectives; be it further

RESOLVED: That the City of Dearborn will use the vision, recommendations, and implementation strategies set forth in the MMTP to guide policy and decision making as it relates to Dearborn's transportation networks.

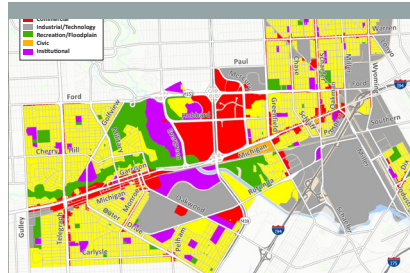
The resolution was unanimously adopted.

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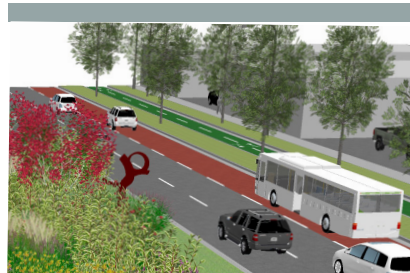
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1

OVERVIEW AND PROCESS

The City of Dearborn has been working to improve connectivity and transportation options for a number of years - however, this is Dearborn's first holistic, city-wide analysis and discussion on multi-modal transportation. Building on the City's long history of being a city of innovation, this Multi-Modal Transportation Plan seeks to lay out a vision for a connected transportation network that will accommodate the next generation of people and vehicles- a plan that will serve those who want to walk, bike, ride and drive. While the Plan considers every mode of transportation, it focuses on the modes that have traditionally received less attention including biking, walking, transit and the potential impacts of autonomous vehicles on the transportation system.

The Plan is both visionary and pragmatic with both near-term recommendations and a long-term vision that reflect desires and priorities driven by stakeholder input. Flexibility is built into the plan given the rapidly changing nature of transportation.

Why Plan?

The City of Dearborn developed this city-wide Multi-Modal Transportation Plan to help define current and future community needs and desires for people who walk, bike, ride, and drive. The Plan will be used by the City to respond to the growing demand for alternative forms of travel and to promote safe and comfortable transportation options throughout the City as well as a system connected into the region.

The overarching focus of this plan is to:

-  Make travel more accessible to everyone in the community
-  Design streets to be safe, comfortable, and convenient for people who walk, bike, take transit and drive
-  Connect people to where they live, work, learn, and play
-  Create beautiful streets that attract people and business
-  Provide policies, programs, and infrastructure that support walking, bicycling and transit
-  Make Dearborn a healthier and happier place to live and work

What Drove This Project?

Health

The first 22 minutes of moderately vigorous physical activity each day reduces many chronic diseases by up to 50%. The best way to integrate more physical activity into your life is to integrate it into your typical daily activities. The quality of the walking and bicycling experience is key. To obtain the benefits we must remove the barriers and establish a system that attracts people.

Safety

Improving the safety of the most vulnerable users of our network - those that walk and bike. Pedestrians in Dearborn averaged 40 crashes a year over the past 12 years. That represents only 1% of all crashes, but 26% of all fatal crashes. Bicyclists averaged 26 crashes a year over the past 12 years which is 0.8% of all crashes but 7% of incapacitating injury crashes.

Place

Providing a high quality of life is the key to attracting people that make the economy thrive including educated youth, high energy immigrants, educated senior citizens and entrepreneurs. Job creators want vibrant downtowns, green infrastructure, pedestrian and bicycle linkages, transit, diverse housing options, recreation amenities and a creative entrepreneurial environment. Streets constitute a community's single most important public space in terms of size, visibility and use. The public right-of-way comprises 24% of Dearborn's total area.

Community

By walking or biking, people build their social capital via the minutia of daily interpersonal interactions. The City's Master Plan documents that residents aspire to increase walkable and bikeable connections, create appealing walkable neighborhood retail districts, and expand recreational opportunities.

Cost

The cost of doing nothing is in all likelihood greater than the cost of doing something. There is an estimated \$25 million a year in economic and societal impacts from pedestrian and bike crashes. There are costs associated with lower productivity at work and school as well as limited mobility for elderly, young and those with disabilities.

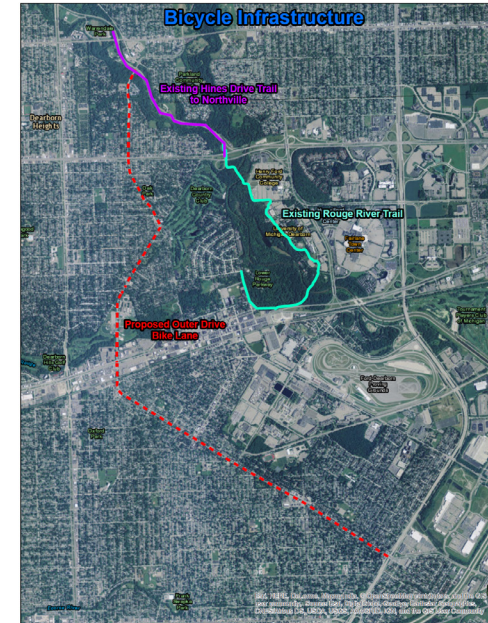
Build Upon Past Plans + On-going Efforts

There are a number of initiatives and plans that have been developed or are on-going that work to make Dearborn a better place for people who walk and bike. These were incorporated into the Multi-Modal Plan and built upon.

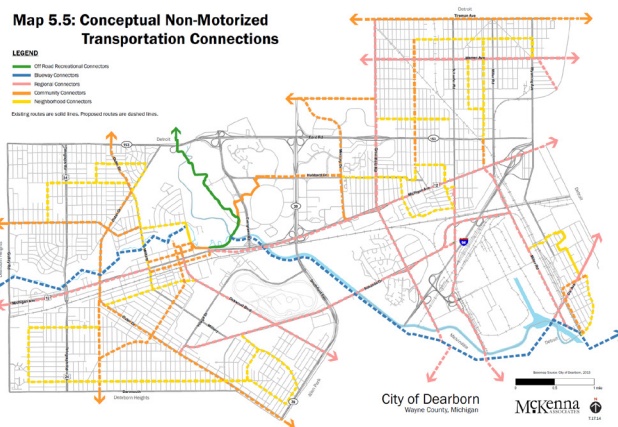
Rouge Gateway Plan



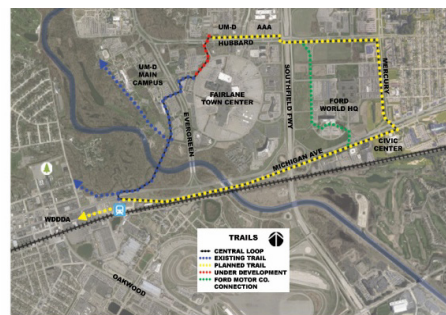
Rouge/Hines/Outer Drive



City Master Plan Connections



Central Loop



West Downtown Discovery Trail

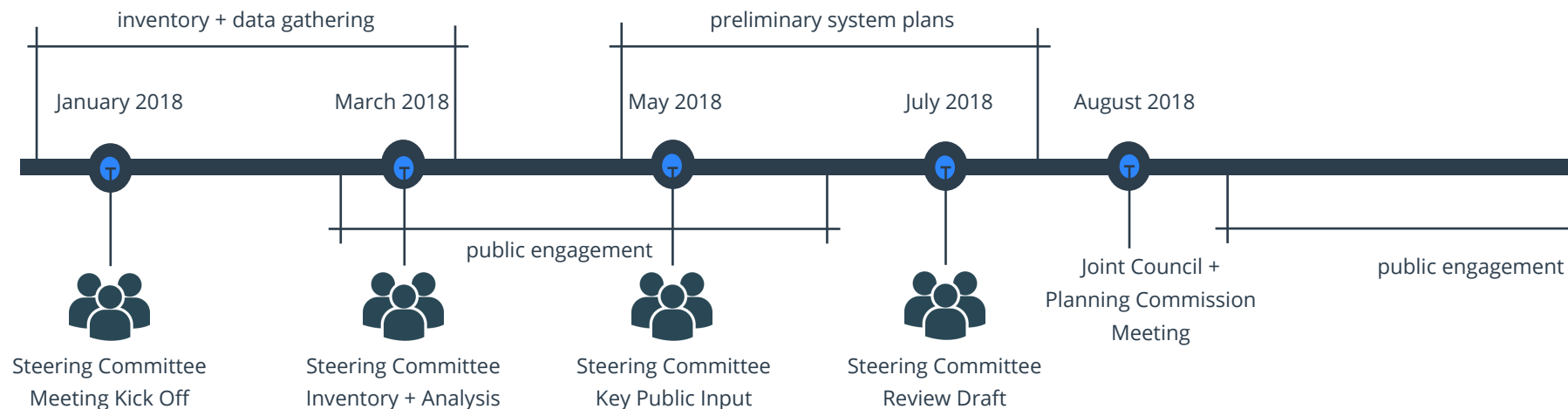


The Process

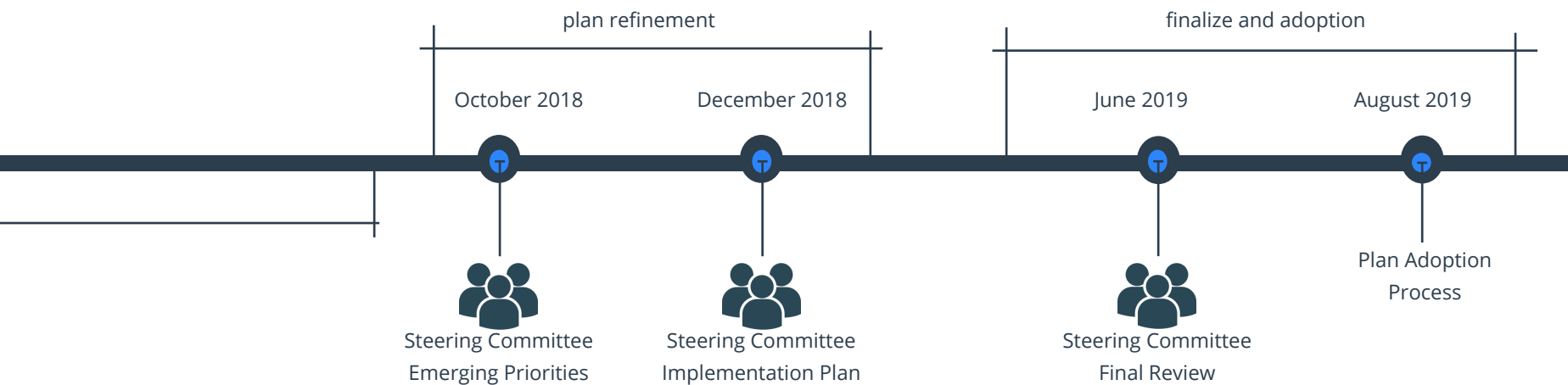
The City of Dearborn developed this city-wide Multi-Modal Transportation Plan over an 18-month period with the bulk of the effort and meetings taking place throughout 2018. A Steering Committee was established that met regularly to guide the process. Engaging the public throughout the process and via various methods was a critical part of the effort. The team also presented the effort and initial findings at a Joint City Council and Planning Commission meeting to ensure awareness and gather input. The Steering Committee completed a final review of the Plan prior to the Plan being recommended for adoption by the Planning Commission and adopted by City Council in summer 2019.

Steering Committee

Alan Leveille, Dearborn Police
Andrew Thorner, SMART
Brian Calder, Fairlane Mall
Brian Pawlik, SEMCOG
Christina Ignasiak, SEMCOG
Chris Small, Ford Land
Cristina Sheppard-Decius, Dearborn East and West DDA
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 Elizabeth Iszler, Wayne County Parks
 Mike Latvis, U of M Dearborn
 Sam Greco, Henry Ford College
 George Moroz, The Henry Ford
 Nikkie Johnson, MDOT
 Mikki Taylor-Hendrix, DDOT
 Gorette Yung, MDOT Taylor TSC



Engagement + Input

The Steering Committee and City staff developed a robust public engagement plan in order to gather as much input as possible while considering the timeline and budget for the project. There were 4 primary methods used to gather input from the public.



A **project website** was developed where schedule and drafts could be reviewed and input collected at www.walkbike.info/dearborn.



Collaborated with **15** existing groups and **participated at their meetings** and/or events in an attempt to meet folks where they were.



849 **surveys** (online and paper copies) were completed and available in English and Arabic. Awareness of the survey was done via social media, email and through the Steering Committee contacts.



Held **2** city-wide **public workshops/open houses** where people could come to learn more about the project and give feedback on preliminary ideas and priorities.

Groups Our Team Met With During Process

School Board City Relations Committee

LAHC's Youth Leadership & Diversity Education Program

Disability Commission

Healthy Dearborn Coalition

Dearborn Federation of Neighborhood Associations

Rotary Club of Dearborn

West and West Dearborn DDAs

Warren Business District Improvement Association

Dix-Vernor Business District Improvement Association

Pop Up near American Moslem Society

Dearborn Business Leaders

Ford Land

ACCESS

Healthy Dearborn Walk n' Roll Event

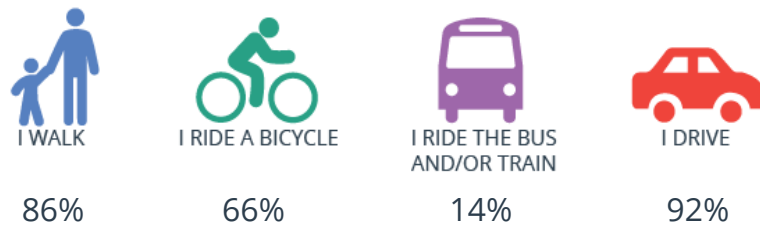
Salina School



Things We Heard During Planning Process

The online survey was completed by 849 people and was available in both English and Arabic. Nearly 400 people attended the various meetings, workshops and pop up input stations that were held. In addition to this brief summary of input gathered, comments collected at public meetings were combined into a Google Map and can be viewed at WalkBike.Info/Dearborn.

How People Get Around Town



How Satisfied People Currently Are



Issues Preventing Trips By Mode



- Lack of sidewalks and poor sidewalk conditions were mentioned by half of the respondents
- Traffic and safety came up in 17% of responses
- Michigan Ave. specifically called out as problematic for a variety of reasons



- 33% want more bike trails
- 28% would like to see more bike lanes
- 13% mentioned poor road conditions
- 12% mentioned lack of bike parking
- About 1/3 of all comments related to traffic, safety and drivers



- Inconvenient bus stop locations and routes
- Lack of shelters
- Not understanding the system
- Not time efficient way to travel - but like new FAST bus
- Like the train, but not in its current form



- Poor pavement condition and pot holes - 40%
- 25% mentioned traffic congestion with school traffic and Michigan Avenue noted specifically

A word cloud shaped like the map of Dearborn, Michigan. The words are arranged to fit the geographical outline of the city. The most prominent words, shown in larger fonts, include 'Diversity', 'History', 'Parks', 'Community', 'Location', 'City Services', 'The Henry Ford', 'People', 'Culture', 'Family', 'Schools', 'Neighborhoods', 'Downtowns', 'Inclusive', 'Safety', 'Arts', 'Walkable', 'Small Business', 'Libraries', 'Train Station', 'Animal Friendly', 'Freindly', 'Home', 'Beautiful', 'Multi-Generational', 'Restaurants', 'Churches', 'Homecoming', 'Retail', 'Small Town', 'Ford Motor Company', and 'Architecture'. The words are in various colors, including shades of green, orange, blue, and grey, and are oriented in different directions to fit the map's shape.

- Fairlane Town Center
- Evergreen Road
- Hubbard Drive
- Michigan Avenue
- Downtowns
- Outer Drive
- Ford Road
- Greenfield Road
- Trails
- Transit

- Better maintenance of trails and rest rooms for year round use
- Desired trail linkages
- Dangerous street racing
- Trash and debris along sidewalks
- Concerns about the quality of drivers' training
- Not enforcing existing laws
- Lots of interest in separated bike lanes (as opposed to just painted lines)
- Better lighting and warning lights at crosswalks
- Rapid Transit to Airport
- Add bus shelters
- Bring Greyhound into Transit Center
- How to pay for all of this?



There is a lot of interest in the future of autonomous vehicles with about half of the population optimistic and the half pessimistic.

Older Mass Transportation Idea Unsure Trust Commute Drivers Control
Vehicles Public Transit Travel Age Self-driving Love
Driving Not Interested Think Ride Sharing Safer Driverless
Road Street Dangerous Mass Transit Scary Able to Afford Uber Parking





2

INVENTORY + ANALYSIS

The vision, recommendations, and implementation strategy set forth in this Multi-Modal Plan are based on input gathered from the Steering Committee and public, technical expertise provided by the team, and consideration of findings made during an extensive analysis of existing conditions.

Planning for a robust multi-modal network is complex and touches on a broad range of issues. Analysis of existing conditions was conducted in order to respond to multiple project objectives and provide a solid foundation for recommendations. Results of this analysis have been grouped into one of three categories:

- ➔ Land Use, Demographics + Travel
- ➔ People Who Walk + Bike + Take Transit
- ➔ Streets, Intersections + Parking

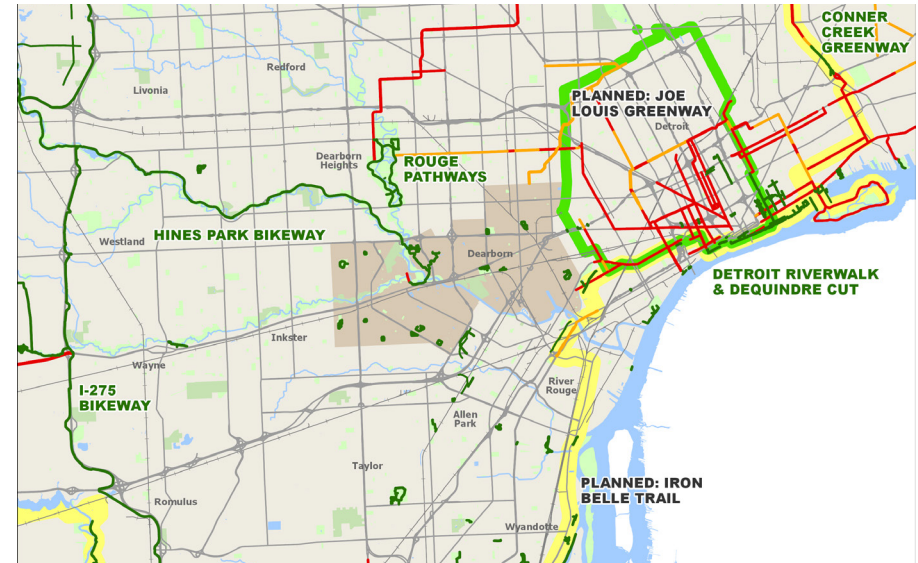
Land Use, Demographics + Travel

Understanding the existing and future land use of the community, the characteristics of the population, and how people travel are an important foundation for future recommendations related to improving people's ability to have transportation choices.

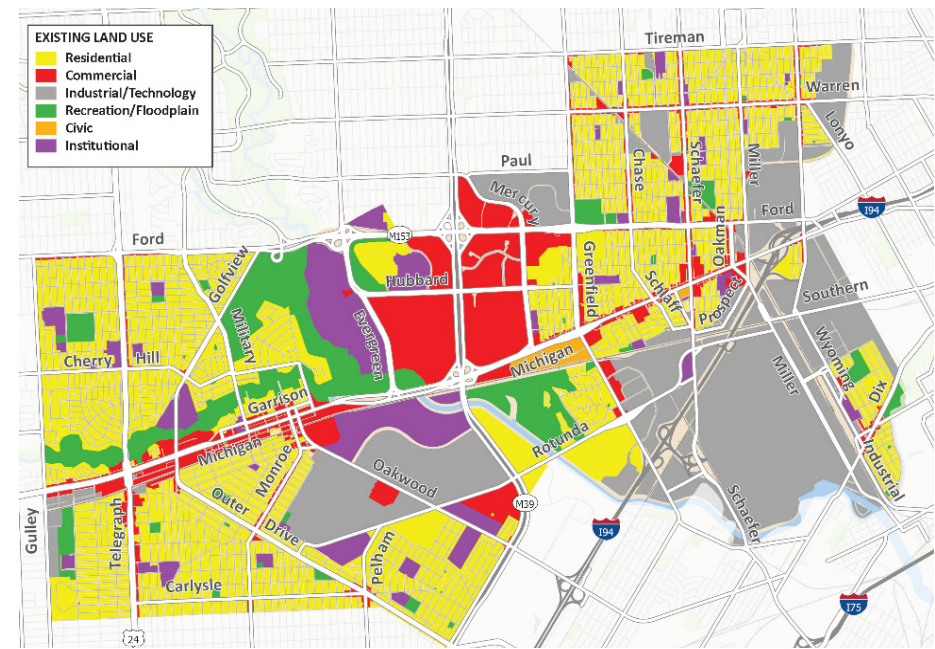
Regional Trails + Bikeways Context

A number of regional trail corridors exist or are emerging around and near the City of Dearborn including the I-275 Bikeway, Hines Park Bikeway, Iron Belle Trail, a network of on-street bike lanes in Detroit, and the planned Joe Louis Greenway. The Rouge River Gateway Trail in the northwest portion of Dearborn is the only part of Dearborn that is directly connected into this emerging regional network. *There is currently no through town trail in the City and Dearborn is not a destination for people who walk or bike.*

Regional Trails



Existing Land Use

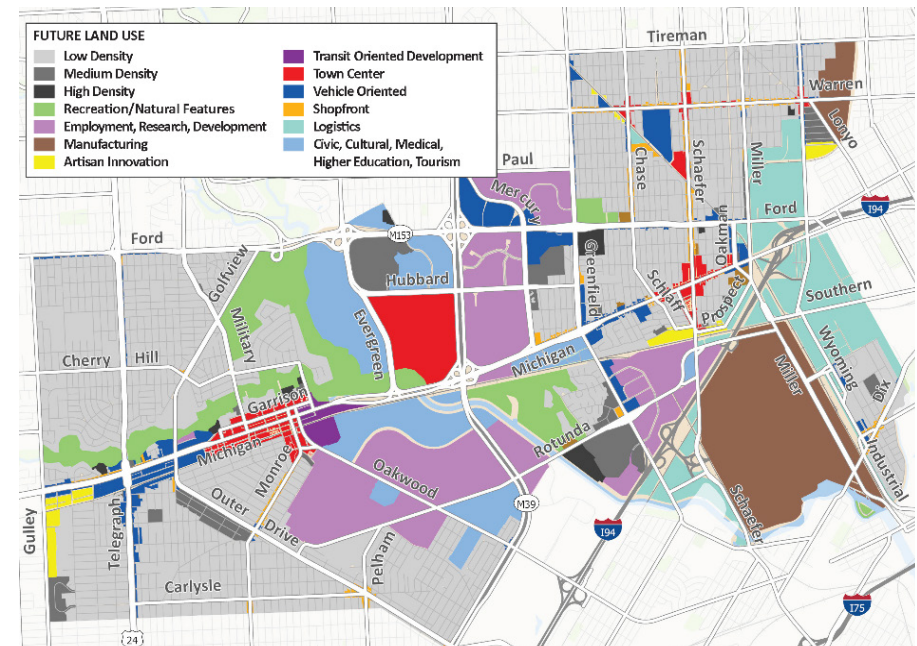


Existing + Future Land Use

A look at the existing and future land use maps for Dearborn reveal a story of two towns and 20th century development patterns with:

- No single city center
- Historic communities of Dearborn and Springwells
- Suburban campus development in the center
- “The” mega industrial complex prototype
- Strip development along major roadways
- Future land use calls for more focused development centers

Future Land Use



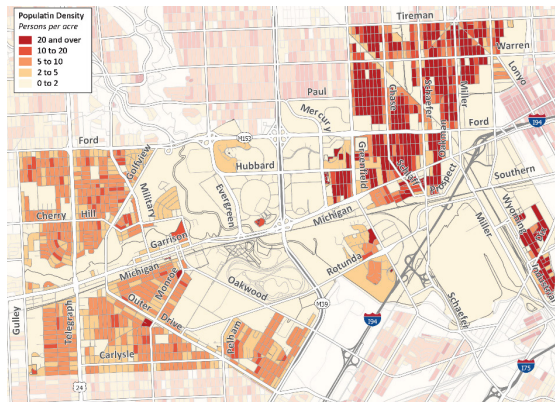
Population Density + Directness of Travel + Potential for Ped/Bike Activity

With more than 98,000 residents, Dearborn is one of the 8 largest cities in Michigan. The northeast section of the City is generally the more dense (more people per acre) part of the City. The higher population density clusters tend to be islands that are cut off from each other and are often better linked to surrounding cities than to other parts of Dearborn. The east and west downtowns are mostly cut-off from the surrounding residential areas and half of the city is comprised of large unpopulated blocks of land that can act as barriers to travel.

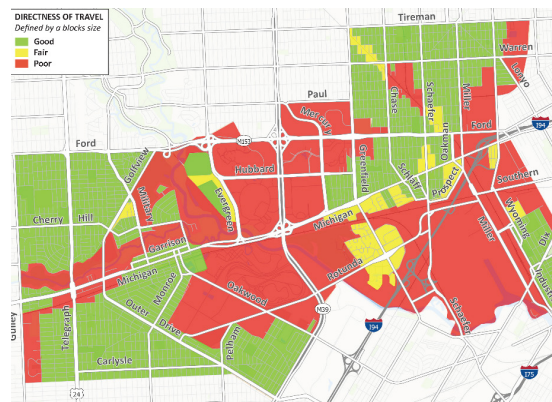
Getting between population centers often requires going significantly out of the way. Rivers, railroads, freeways, golf courses, and large private land holdings create many impenetrable land masses that must be circumnavigated. Linkages between the populations centers is often focused on a few very busy roadways. For pedestrians and bicyclists, the combination of the increased distance and inhospitable connecting corridors discourages most cross-city trips.

Block size, population density and land use mix are the best predictors of pedestrian and bike travel. The Relative Demand Map below and to the right indicates that East Dearborn, Warren Avenue, West Dearborn and a couple nodes along Ford Road are the areas in the City that promise the greatest return on investment.

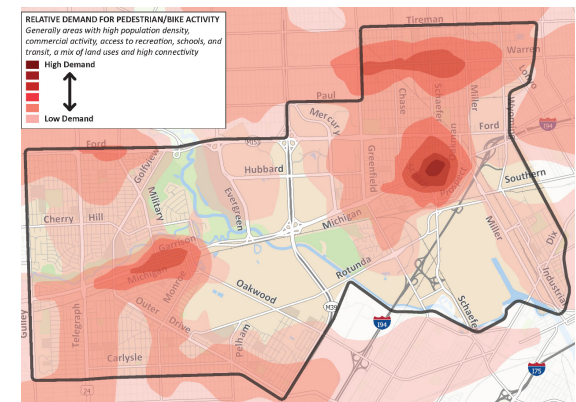
Population Density



Directness of Travel



Demand for Ped/Bike Activity



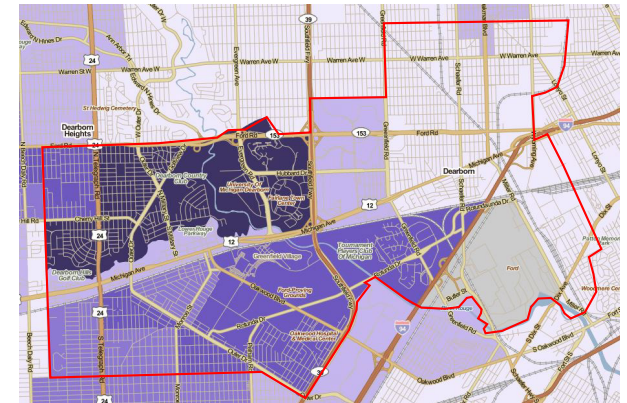
Income, Access to Vehicles + Community Health

Census data from 2012-2016 was analyzed to better understand income levels, access to vehicles, where people walk or bike to work, as well as data that illustrates which parts of the city are experiencing greater percentages of inactivity and chronic disease. A few of the resulting maps are illustrated here. The darker the purple, the greater the number or percent.

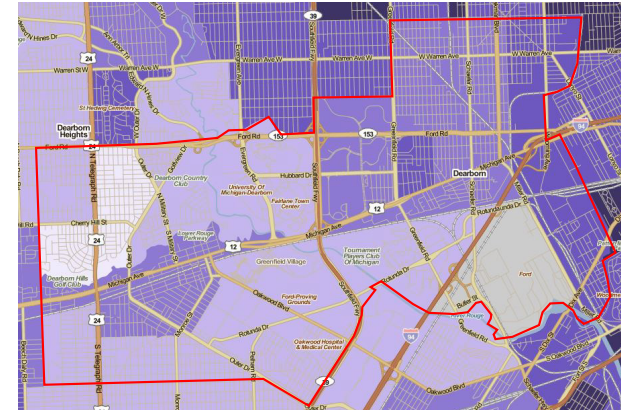
The percentage of people that walk to work is similar across the city with more people biking to work on the west side. The east side of the city has lower household incomes, higher percentages of homes without a vehicle, and a higher percentage of people who take transit.

The percentage of adults with diabetes and high blood pressure is fairly uniform across the city while the percentage of adults diagnosed with coronary heart disease is higher on the east side. Health outcomes and income levels are often linked for numerous reasons. The percentage of adults reporting to be physically inactive is generally higher on the east side with around 1/3 of the adults reporting no physical activity in the past 30 days.

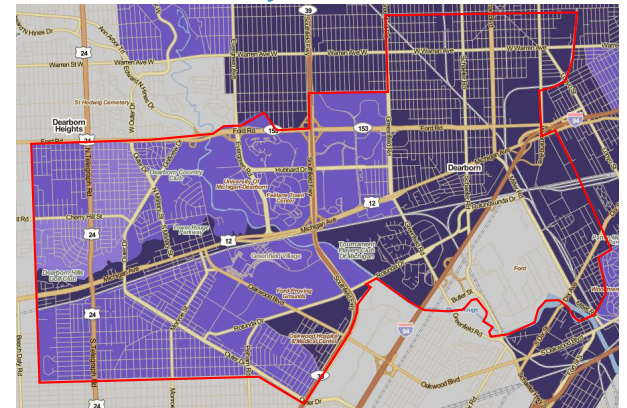
Household Income



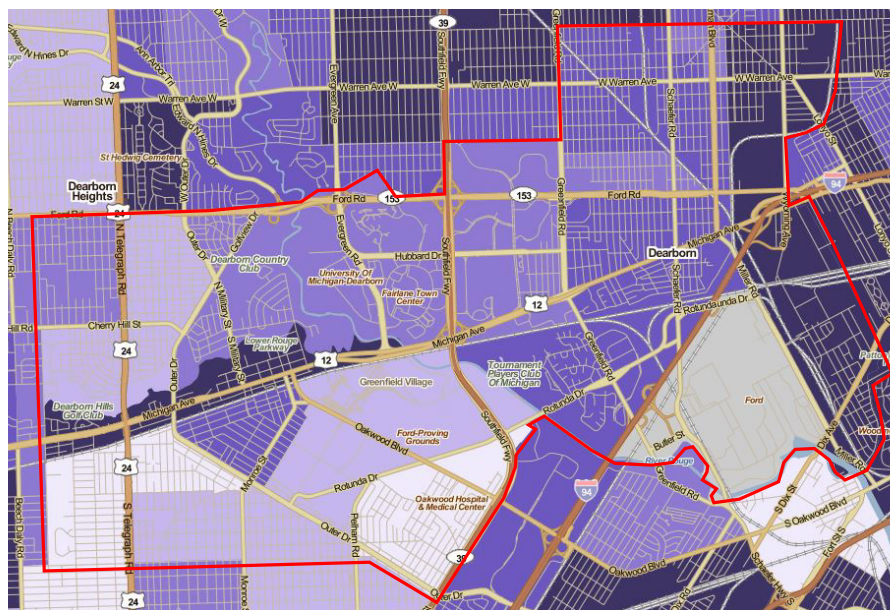
% Adults Physically Inactive (Last 30 Days)



% Adults w/ Coronary Heart Disease



% Housing Units with No Vehicles



People Who Walk, Bike or Take Transit

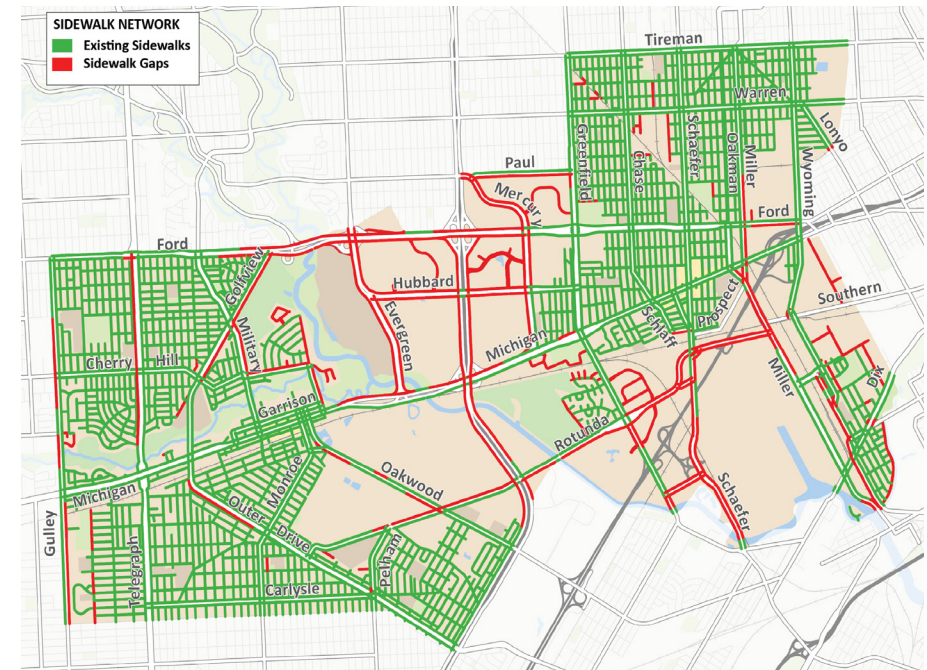
A significant amount of data collection and analysis was completed in order to understand the existing sidewalk and bike networks with a focus on level of service, user stress, crosswalks, crashes, and opportunities to narrow or remove lanes to provide facilities.

Pedestrian Network + Level of Service

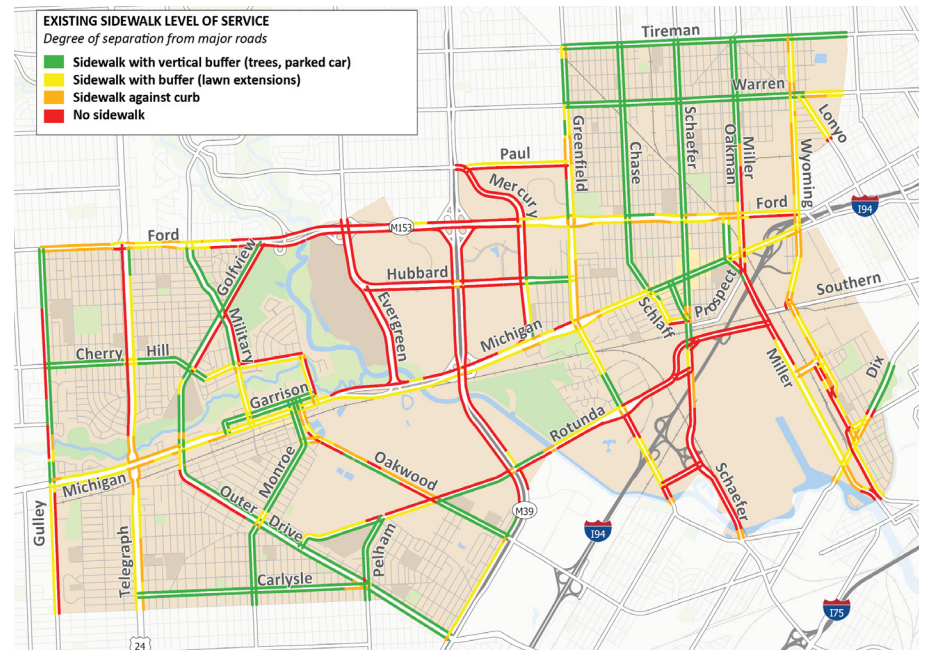
There are currently very few gaps in the residential sidewalk network, however, there are significant gaps along several of the major roadways, particularly in the center of town and in the southeast section. This is especially problematic as in these areas frequently there are not any alternatives or easy ways to cross the road to get to a sidewalk on the other side. Some of the gaps are along private roadways within large corporate parks.

The Level of Service for pedestrians is determined by the presence of sidewalks and the degree of separation from the roadway. The graphic illustrates where there are buffers between the sidewalk and traveling vehicles such as trees and/or parked cars. This type of environment is much more comfortable for pedestrians than a sidewalk adjacent to a curb with no buffer.

Sidewalk Network



Existing Sidewalk Level of Service

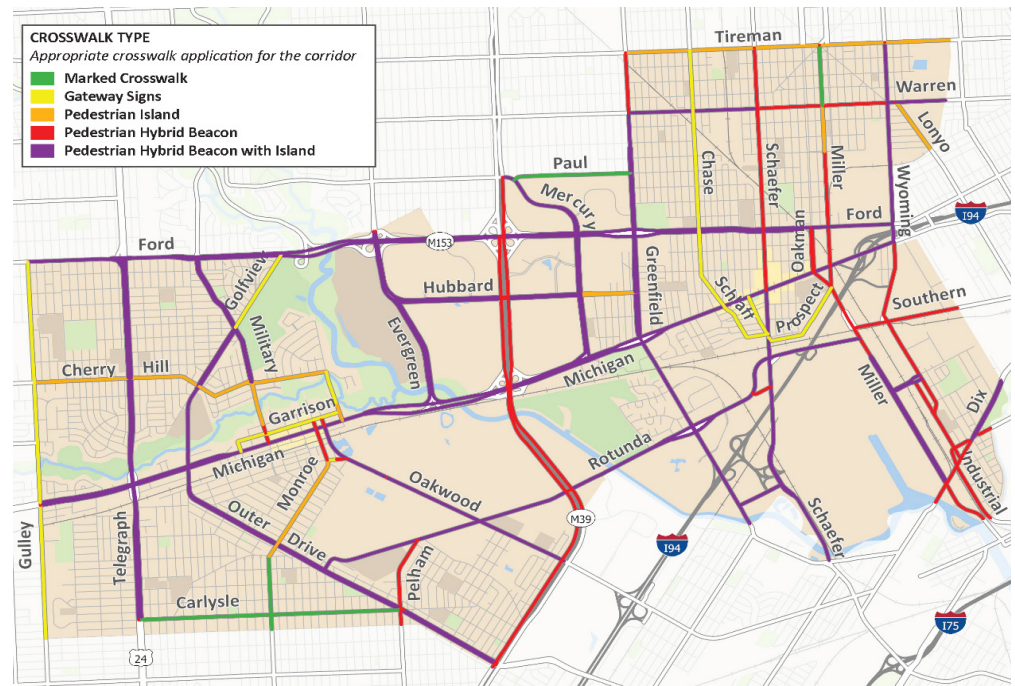


Crosswalks

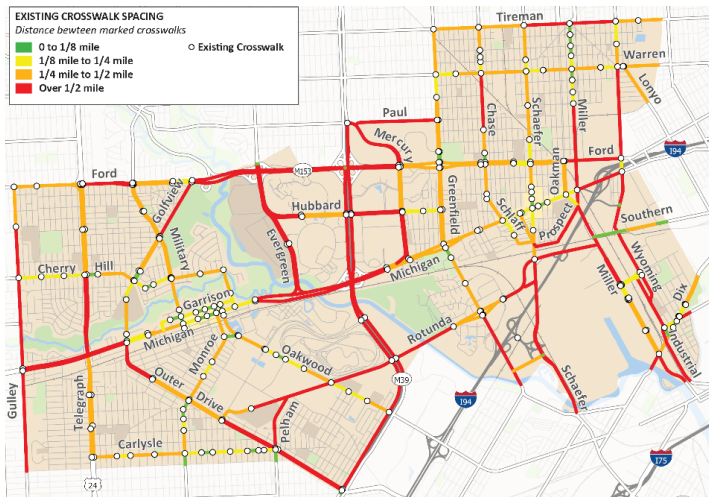
Crosswalks are an important infrastructure element when it comes to determining how walkable a community is. In general, pedestrians will not detour more than 10% of their total trip distance. When looking at existing crosswalk spacing in Dearborn, many are spaced over 1/2 mile apart throughout the City.

Dearborn has many high-speed multi-lane roadways that present significant challenges for pedestrians to cross safely. There are a number of proven safety countermeasures that may be employed to make pedestrian crossings safer. The large map to the right identifies in general the type of mid-block crossing that would be recommended for the current conditions. The lower right map identifies the existing crosswalks that are deficient based on the recommended crossing configurations.

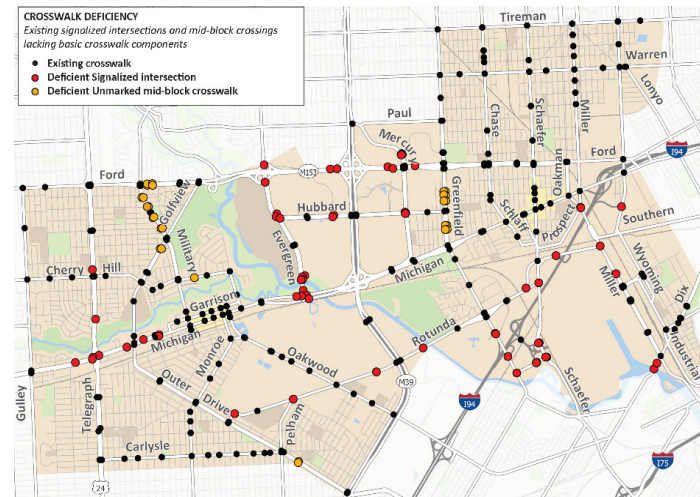
Recommended Crosswalk Type for Existing Roadway Configuration



Existing Crosswalk Spacing



Crosswalk Deficiency



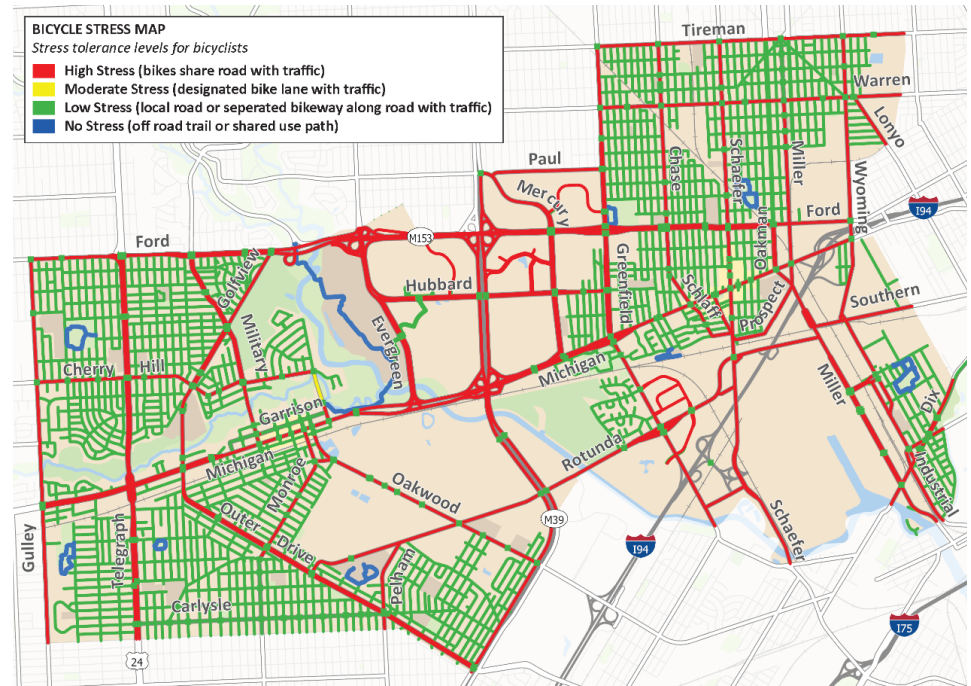
Bicycling in Dearborn

Current conditions in the City were inventoried and analyzed as a foundation for a long-term vision and recommendations. The Rouge River Gateway Trail is the only designated bicycle facility in the City. The Bicycle Stress Map illustrates that the local roads provide a fairly extensive system (although the crash history indicates these may not be as low stress as illustrated). The weak points in the system are the major road crossings.

There is only one location where bicycle and pedestrian counts have been taken (part of a SEMCOG initiative) - at the Rouge Gateway Trail and Michigan Avenue (near train station). The one day count resulted in 817 total with 53% pedestrians and 47% bicyclists. This was one of the highest counts in the region.

In 2017, the Dearborn Bike Share kicked off with 50 bikes at 10 stations located in the east and west downtowns.

Bicycle Stress Map



Dearborn Bike Share



Existing Bikeways

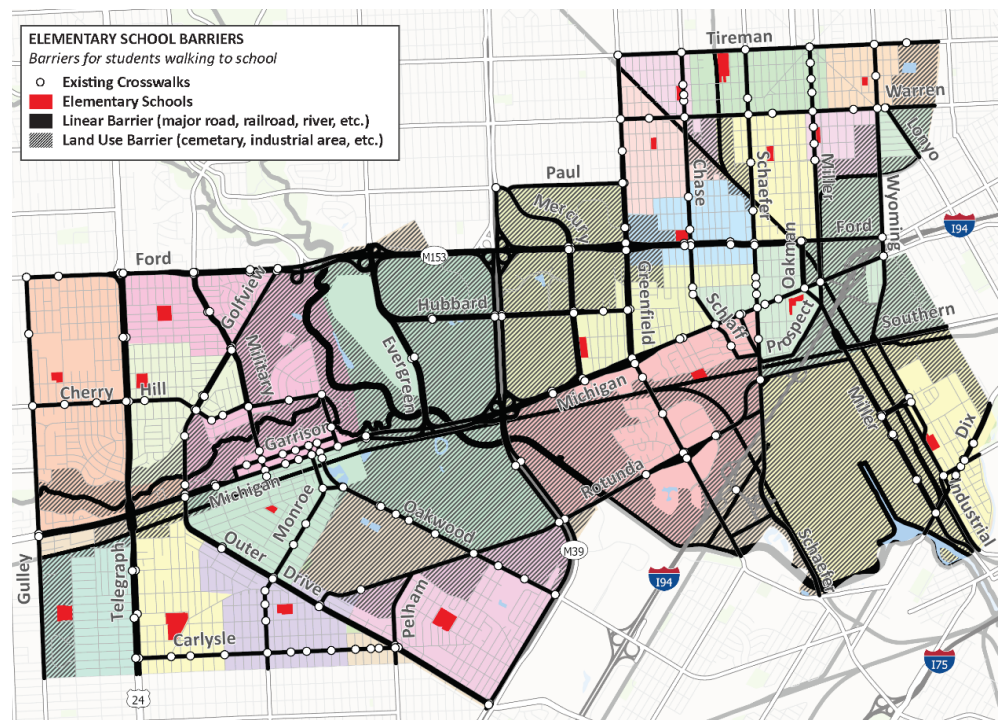


School Barriers

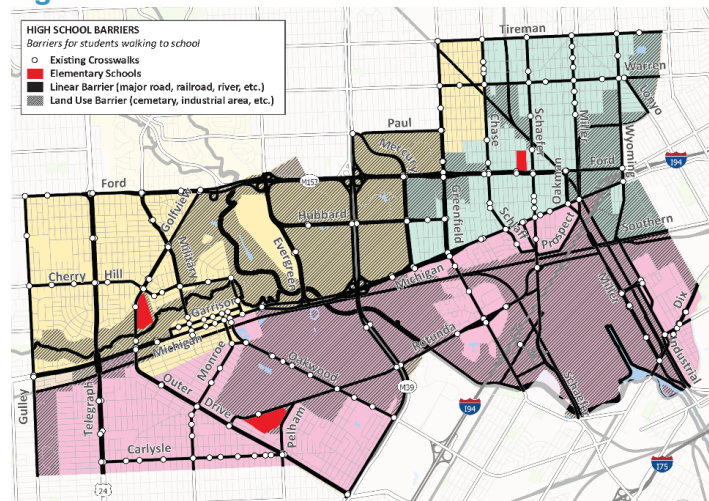
Schools (particularly elementary schools) often serve as social centers for neighborhoods. Analysis was done to understand physical barriers to walking or biking to school. A typical walk radius is 1 to 1.5 miles. There are some roads, such as Cherry Hill, Monroe, Greenfield, and Chase that bisect school draw areas. Crosswalks for these roads should get additional attention. There are also a few areas of the city that are physically cut off from the school. Stout Middle School and Edsel Ford High School have the most physical barriers and remote draw areas. The southeast corner of town has the most neighborhoods cut off from the middle and high schools.

In addition to physical barriers, input was gathered during development of the plan that indicate social and cultural barriers also exist that may be contributing to lower numbers of kids walking/biking to school.

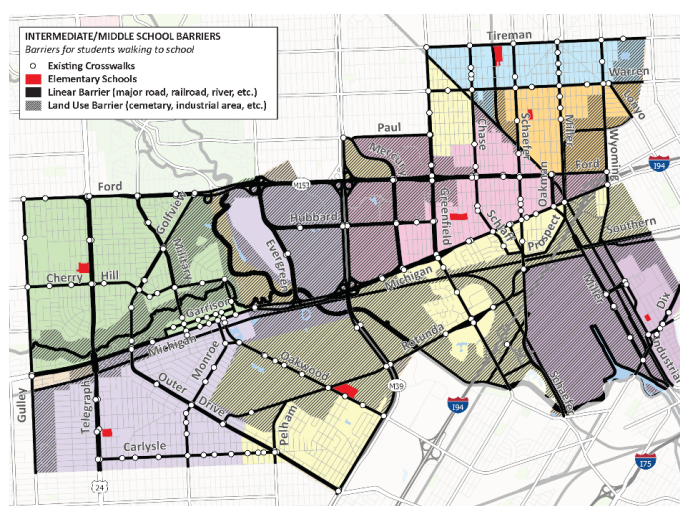
Elementary School Barriers



High School Barriers



Middle School Barriers

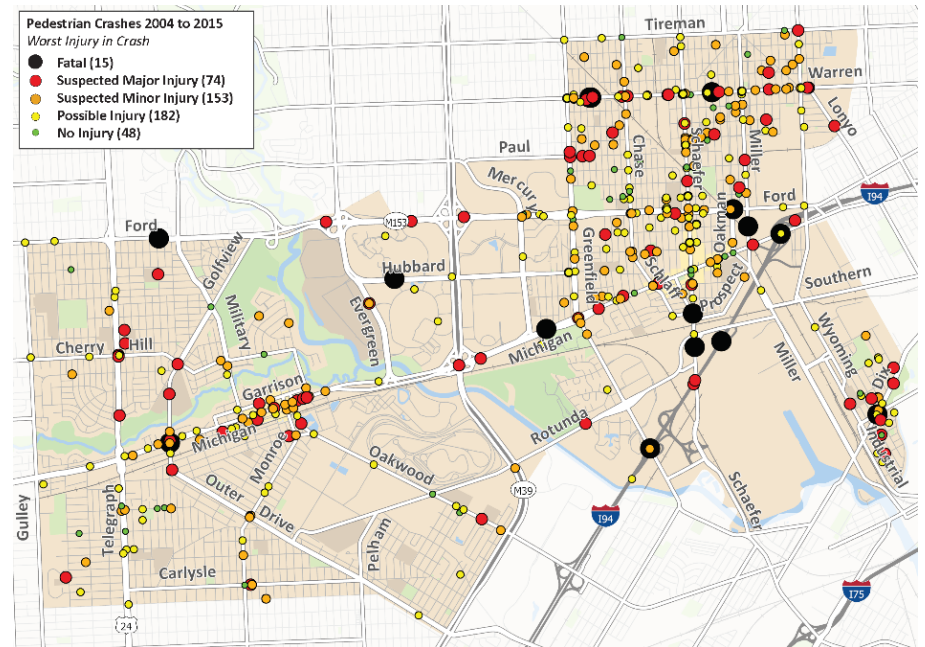


Ped/Bike Crash Patterns (2004-2015)

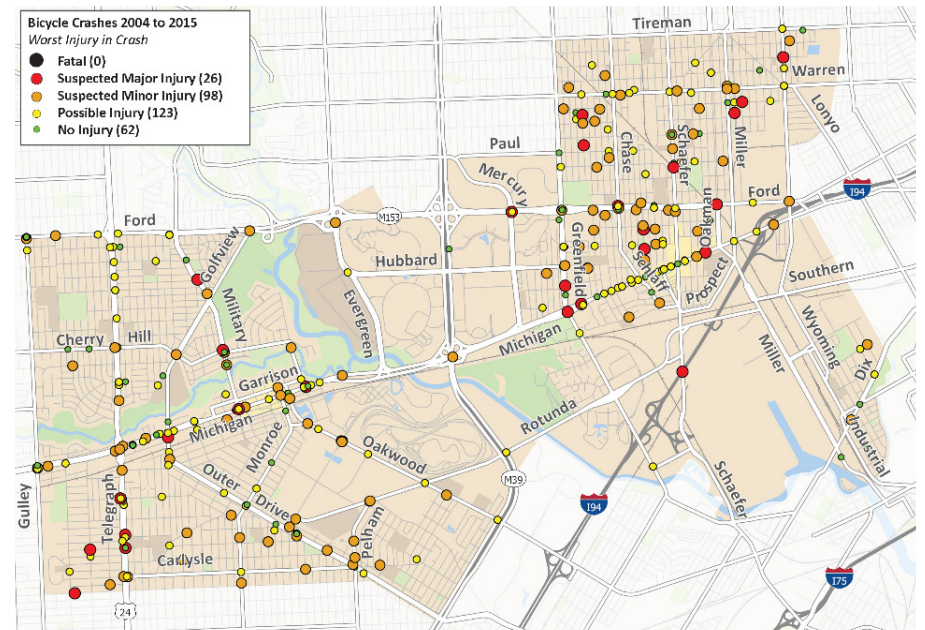
Crash data was collected for those crashes that involved a pedestrian or a bicyclist over an 11 year period. For pedestrians, there have been approximately 40 crashes per year with 4 to 5 pedestrian deaths on the streets of Dearborn each year. Analysis showed that the following are NOT significant factors: drugs or alcohol, day, time, lighting, road condition or weather. The Driver's age does matter with 19% of the crashes being young drivers and 14% being old drivers. Location also matters with 64% occurring at mid-block locations. Unexpectedly, there were also a fair number of serious injury crashes that occurred on local roads especially in the northeast area of the City.

For bicyclists, there have been approximately 26 crashes each year with 2 to 3 resulting in an incapacitating injury. There were no bicyclist fatalities in the 11 year period. In 80% of the crashes, the bicyclist was going straight ahead when they were hit by a motor vehicle. Analysis showed the drugs, alcohol, day, time, lighting, road condition or weather were NOT significant factors. The Driver's age does matter with 22% of the crashes being young drivers and 13% being old drivers. Location also matters with 82% of the crashes being on road and 61% at intersections. Again, unexpectedly, there were also a fair number of serious injury crashes that occurred on local roads.

Pedestrian Crashes



Bicycle Crashes



Public Transit Services

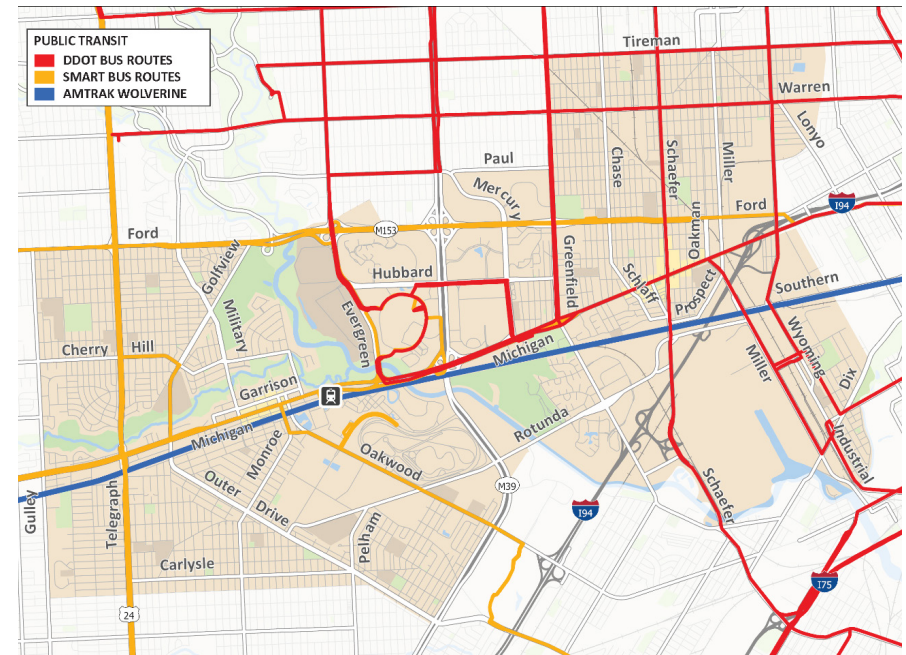
The City of Dearborn is serviced by three entities and two modes: DDOT Buses, SMART Buses and the AMTRAK Train. The Amtrak has 3 westbound departures and 3 eastbound departures per day. Amtrak does not function as a commuter rail. The frequency of trains, schedule, and issues with on-time performance make it an unlikely choice for daily home to work trips.

The bus route service has a fairly dense network with 1 hour headways on the majority of routes (E Level of Service). There is limited weekend service for the majority of the City. The east half of Michigan Avenue and Warren have 24 hour service (A Level of Service) and 30 minute headways (D Level of Service). The west half of the City is the most underserved transit area.

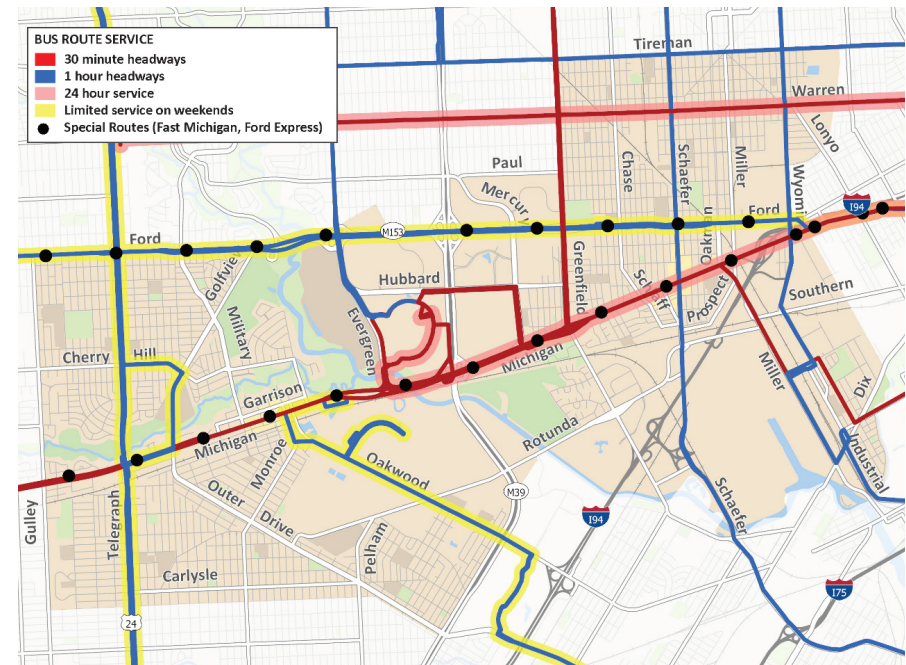
Dearborn transit situation is unusual given the way the City of Detroit wraps around much of the City of Dearborn. Given this geographic situation, many DDOT bus lines go through Dearborn and they have many stops in Dearborn. This presents a number of logistical challenges given the City of Detroit's transit system (DDOT) is providing about 2/3's of Dearborn's transit trips. Currently, DDOT has some institutional barriers that make things such as signing bus stops impossible outside of the City of Detroit. The City of Dearborn, the City of Detroit and DDOT have been working to address these structural issues.

Dearborn is also one of the region's key transfer points between the DDOT and SMART bus systems. There is one official transfer point on the east side of Fairlane Mall that has between 300 and 400 stops each day. On the other side of the Fairlane mall across Evergreen are the campuses of UM Dearborn and Henry Ford College. There are no connecting walkways from the transfer point to the campuses and waiting for a connecting bus is time consuming. SMART provides fixed route bus connections between the John D. Dingle Transit Center, the Fairlane Mall transfer location, Henry Ford College campus and University of Michigan Dearborn campus.

Public Transit



Bus Route Service



Streets, Intersections + Parking

There are 135 linear miles of roadways in the City. The right-of-way for these roads equates to 6 square miles or 24% of the entire City's footprint. The roads and ROW constitute the City's most significant and visible public space. For visitors to Dearborn and people who commute into Dearborn to work or shop, the appearance of the main roads and ROW's define their perception of the City.

The street network is not intuitive for out-of-town visitors to navigate. This is especially true in the center of the City. Many of the major traffic generators such as Fairlane Mall, University of Michigan Dearborn, and Henry Ford College do not have any presence from Michigan Ave, Ford Road, or the Southfield Freeway. Evergreen Road, the primary way to access many of the destinations in the center of the City, connects to Ford Road and Michigan Ave via rural style free flowing interchanges off of high-speed boulevards.

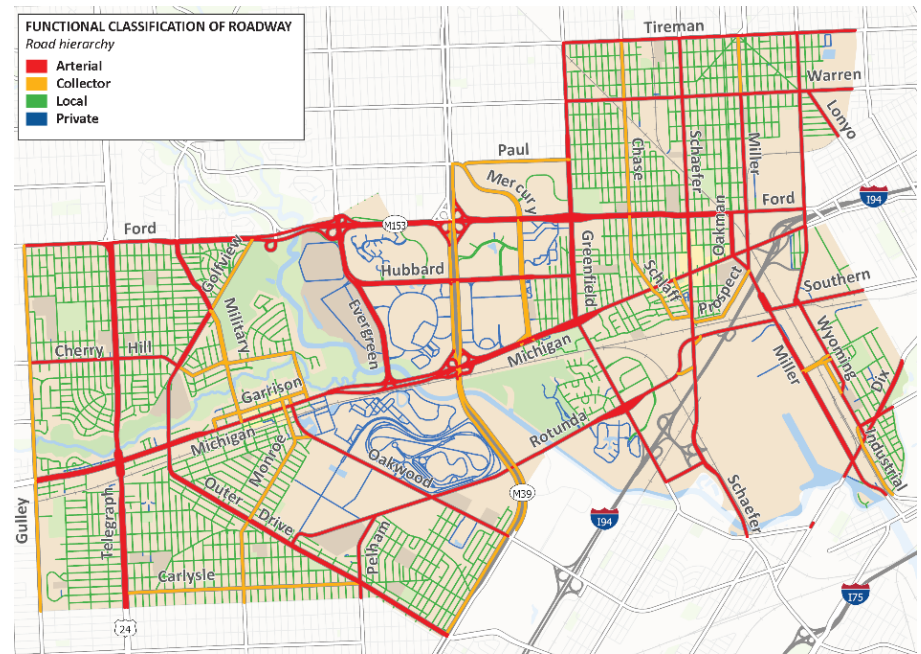
Data was collected and analyzed to better understand the existing street network, understand how key intersections currently function and understand the parking layout in the east and west downtowns, particularly in relation to potential future needs.

Classification + Jurisdiction

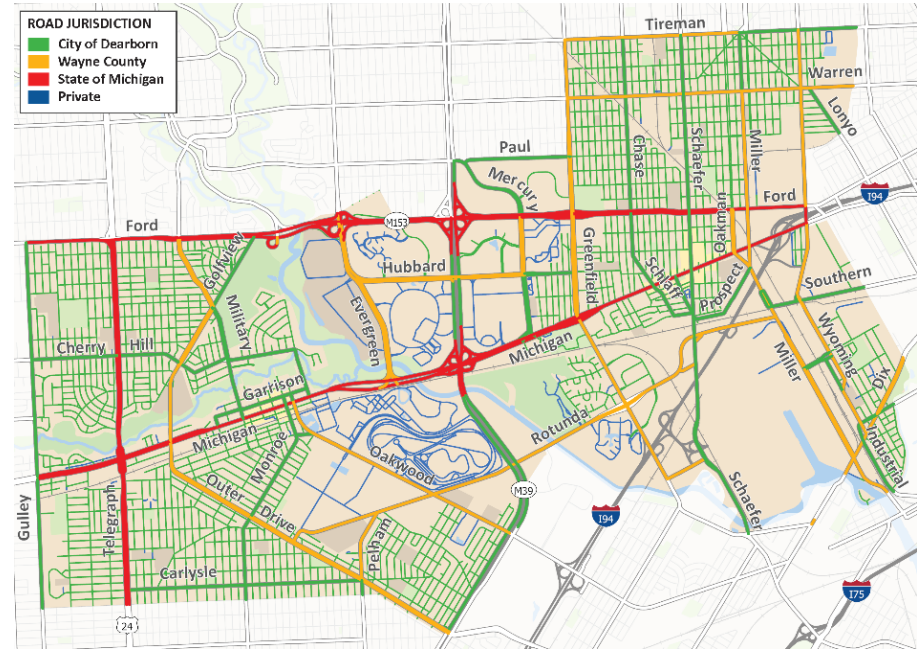
There are functional and jurisdictional hierarchies of the roadway system. Traditionally, the arterial roads were designated to focus on moving traffic through the community as quickly as possible. But this role is in conflict with the context of Dearborn's arterials. Michigan Avenue goes through the center of East and West Dearborn's commercial districts and Telegraph Road and parts of Ford Road provide access to strip commercial development.

The road network falls under three public agencies including the City of Dearborn, Wayne County, and the State of Michigan as well as a number of private entities.

Functional Classification of Roads



Road Jurisdiction



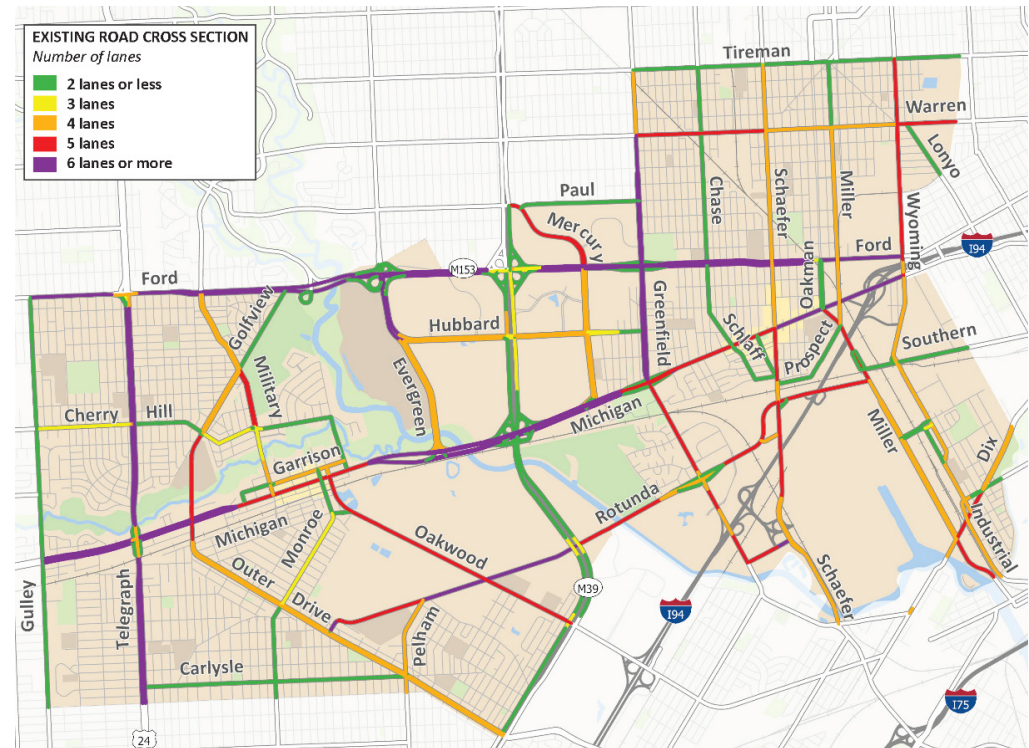
Speed Limits, Volumes + Capacity

The speed of traffic is the most significant factor in the safety of all modes of travel. The arterials were designed to move a lot of vehicles at a high rate of speed. Higher speeds do not necessarily equate to higher volumes. Signalized intersections are the bottle necks and for the most part determine capacity. When signals are coordinated, they have the ability to regulate speed to a degree by creating a “green wave.”

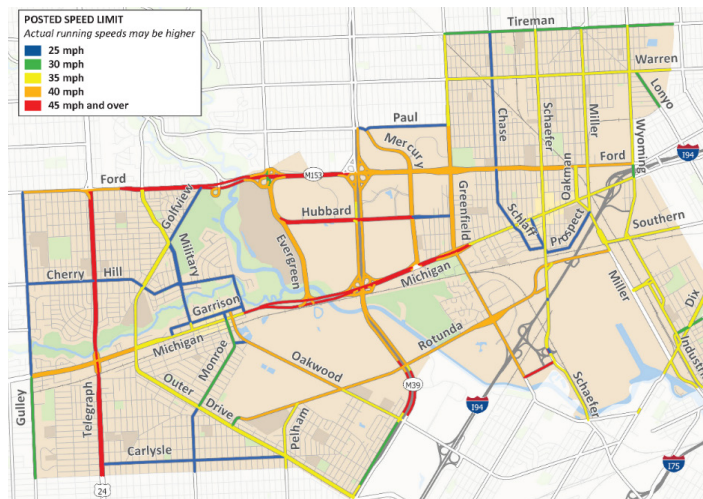
Inconsistent speed is an issue on Michigan Avenue where higher speeds on the boulevard between the downtowns heightens the sense of congestion in the business districts.

There are a significant number of six or more lane boulevards in Dearborn such as Ford, Telegraph, Michigan and Greenfield. These present unique opportunities and challenges. Wide streets do not necessarily need to mean fast streets or totally motor vehicle centric streets as most are now.

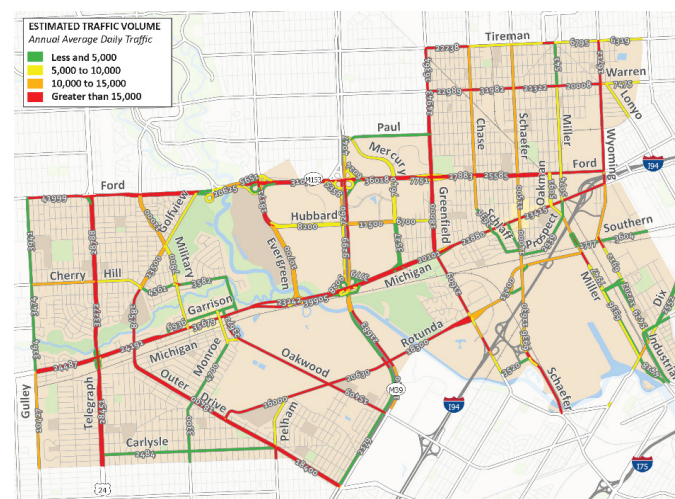
Existing Cross Sections



Posted Speed Limits



Estimated Traffic Volume



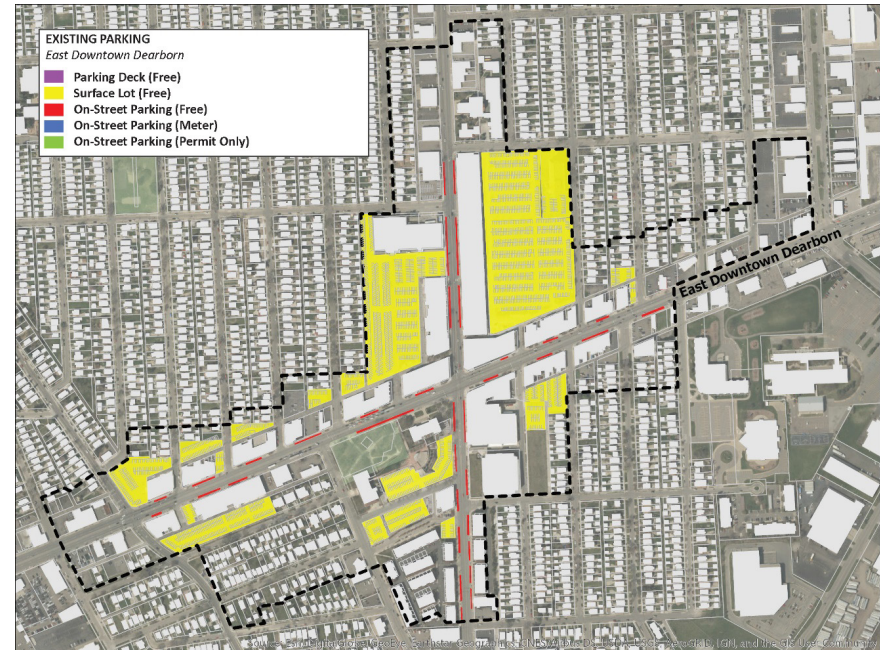
East + West Downtown Dearborn Parking

Parking in the east and west downtowns was mapped in order to understand proximity and also as a foundation for discussions related to how it may change in the future with autonomous shuttles, deliveries and vehicles. The majority of parking is free in both downtowns. In East Downtown, there are two large surface lots north of Michigan Avenue with excess capacity. This may lead to potential for additional retail space and/or consolidating to deck parking for even more developable land. There is minimal regulation and management of parking. Areas allocated for on-street parking will likely turn into pick-up and drop-off spaces as autonomous vehicles evolve. Autonomous shuttles and cars will want to be near demand centers for quick response times.

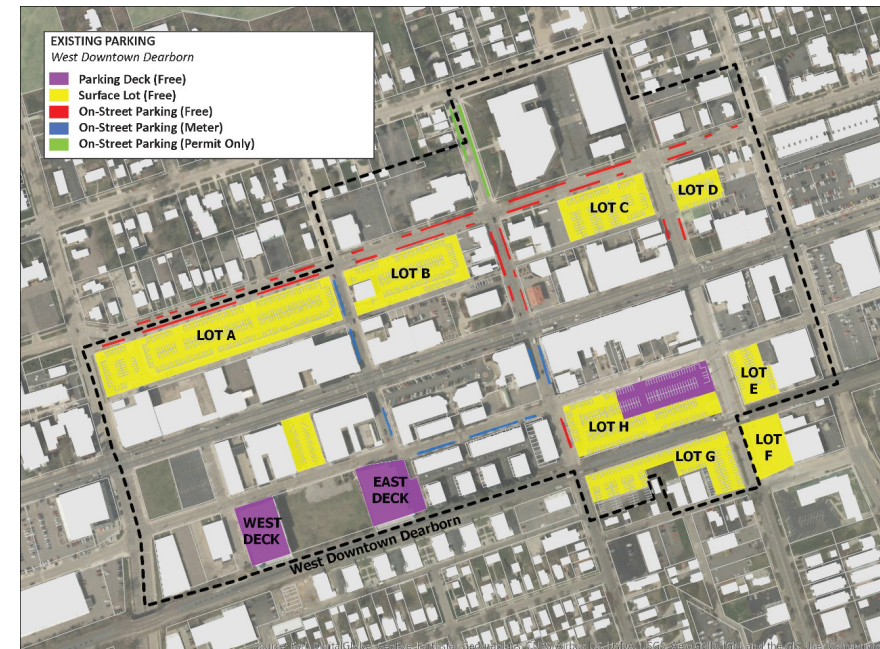
In West Downtown, the majority of parking is in free public decks and surface lots with one private deck. There is minimal on-street parking and very little in front of stores. There are a few metered parking spots in the district. Most parking is accessed from Garrison Street, West Village Drive and side streets. Parking is well-dispersed throughout.

It is likely that the City may need to transition in-the-future to a fee to park and loading zone fee model to control use of its assets as well as create a revenue stream that can be used to maintain parking decks.

East Downtown Dearborn Parking



West Downtown Dearborn Parking



Autonomous Urbanism (NACTO's Blueprint)

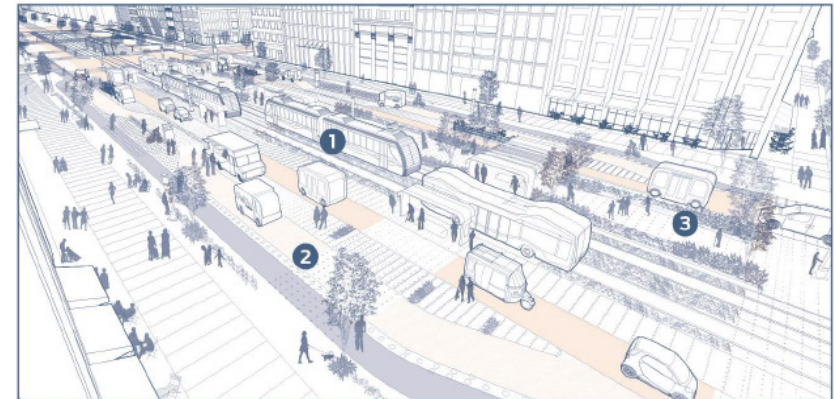
No one knows what the future holds for transportation but slow, steady and integrated are likely the operative words when considering how autonomous vehicles may change our transportation system. It's anticipated our cities will need to accommodate an incredible mix of vehicle types as well as degrees of automation. For the next twenty years this will be a particularly challenging transition. For pedestrians, bicyclists, and drivers of non-autonomous vehicles, it will be near impossible to tell if an approaching vehicle is automated or not. The countless judgements that are currently made by users of the roadway as to whether another user sees them and how they adjust their actions accordingly will change and likely decrease over time.

As illustrated in the adjacent National Association of City Transportation Officials (NACTO) graphics, multiway boulevards are anticipated to have the center median accommodating a wide variety of linked vehicles from passenger to freight. But in reality, existing major infrastructure elements such as bridges and underpasses in combination with countless other factors will dictate where various types of lanes will be placed.

Roadways will need to be designed to be more flexible to adapt to changing vehicles. Ideally, they will be adjusted seasonally as well. On-street parking will likely disappear in most places and replaced by loading zones for autonomous vehicles. People walking will always be the wild card and no level of automation can guarantee their safety, thus slow speeds will be critical.

How economics will impact fleet and shared vehicle deployment will likely require additional regulation to preserve quality of life for residents. In particular, how autonomous vehicles are deployed (moving or parked) when not in use will have a major impact on road capacity, residential streets, and downtown parking.

Future Multiway Boulevards (NACTO)



Center Transitway



A transitway in the center lanes would afford a priority space for transit unimpeded by other vehicles.

Access Lanes



Access lanes would provide space for pick-ups, drop-offs, and deliveries. As pedestrian-priority space, the lanes would be fully traversable and could have restricted access at certain times of day.

Green Infrastructure



Green infrastructure helps absorb stormwater and keep the city cool, in addition to providing green space for people to enjoy.

Future Downtown Streets (NACTO)



Safe & Short Crossings



Crossing the street should no longer be a difficult or time consuming task. Traffic streams of few cars with frequent breaks and smaller lanes would allow safer crossing environments.

Parking to Public Spaces



The rebalanced right-of-way could allow for lively public spaces, leaving enough room for sidewalk cafes and expansive sidewalk areas. No vehicles would need to be stored on downtown streets.

Protected Bike Lanes



With motor vehicles still present, people bicycling will need protection from traffic in the form of fully separate infrastructure buffered from flex zones.

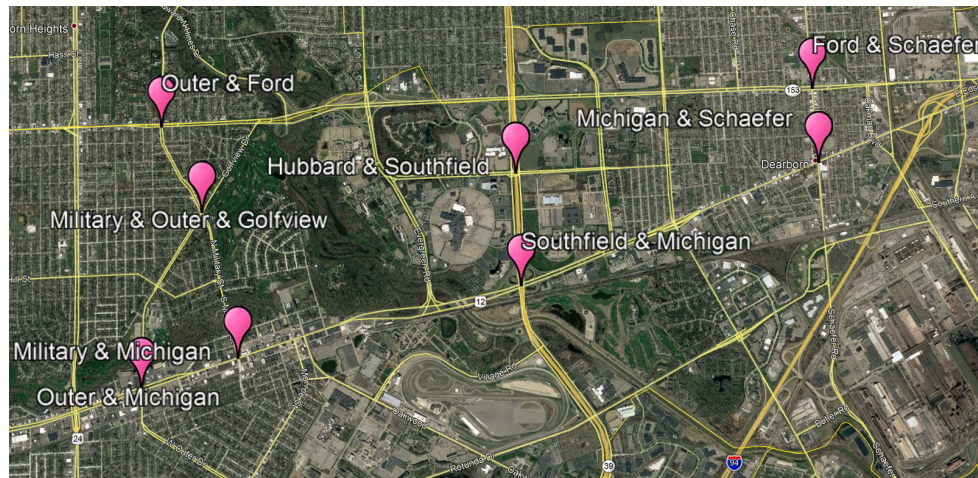
Intersection Operations Analysis

Existing conditions analysis included a snapshot look at vehicular level of service at 7 key intersections in the City including:

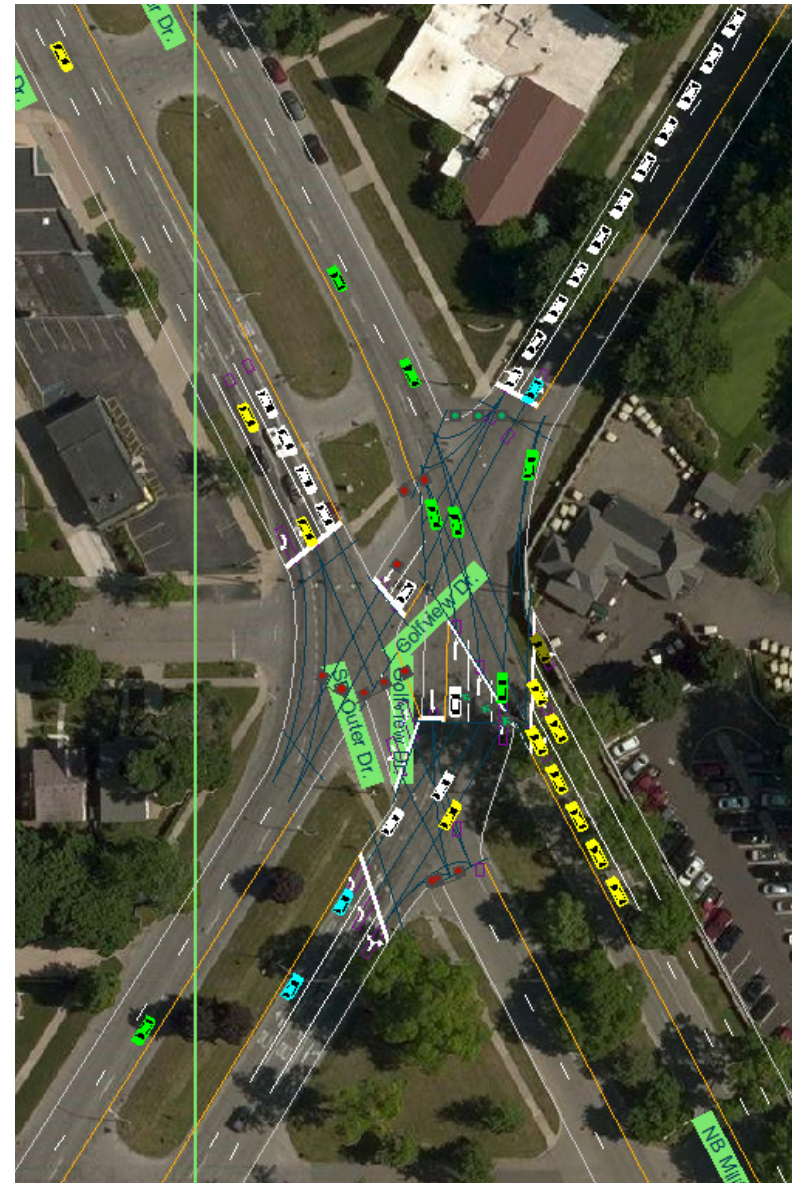
- Outer Drive | Ford
- Military | Outer | Golfview
- Military | Michigan
- Outer Drive | Michigan
- Hubbard | Southfield
- Southfield | Michigan
- Michigan | Schaefer
- Ford | Schaefer

Data available via MDOT, Wayne County and SEMCOG was supplemented with new counts captured in March 2018. The data was modeled using Synchro and simulated using SimTraffic. Results are summarized to flag existing constraints and as a check for compatibility with desired multi-modal routes.

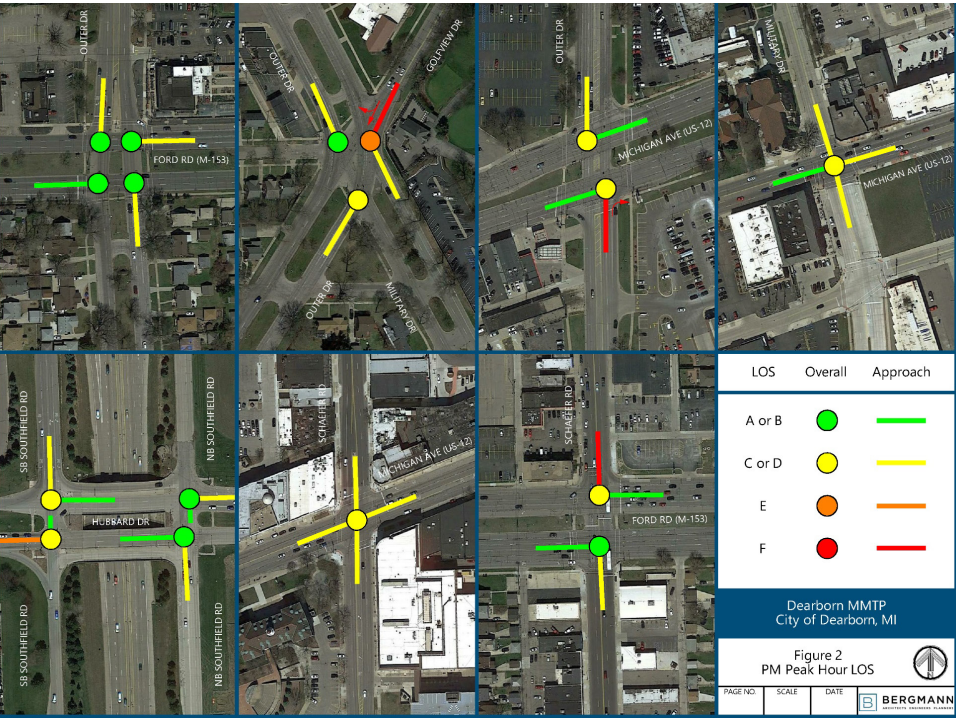
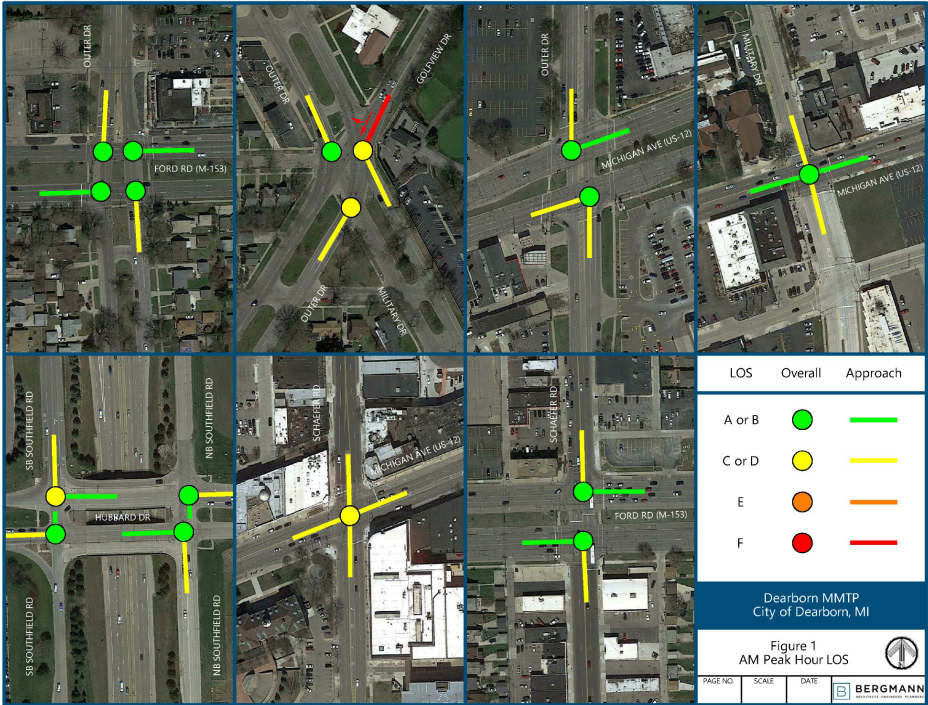
7 Intersections Analyzed



Golfview | Outer Drive Intersection Model



Morning Peak vehicular level of service analysis for the 7 intersections is illustrated to the right. The majority of intersections have an overall A LOS, with the exception of the Outer Drive | Golfview intersection and the Michigan Avenue | Schaeffer intersection.



Evening Peak vehicular level of service analysis for the 7 intersections is illustrated to the left. The LOS drops in the evening rush hour at many of the intersections. The Outer Drive | Golfview intersection rates the lowest at LOS E.





3

INFRASTRUCTURE RECOMMENDATIONS

The City of Dearborn has been working to improve connectivity and transportation options for a number of years - however, this is Dearborn's first holistic, city-wide analysis and discussion on multi-modal transportation. Building on the City's long history of being a city of innovation, this Multi-Modal Transportation Plan seeks to lay out a vision for a connected transportation network that will accommodate the next generation of people and vehicles- a plan that will serve those who want to walk, bike, ride, and drive. While the Plan considers every mode of transportation, it focuses on the modes that have traditionally received less attention including biking, walking, transit and the potential impacts of autonomous vehicles on the transportation system.

The Plan is both visionary and pragmatic with near-term recommendations and a long-term vision that reflect desires and priorities driven by stakeholder input. Flexibility is built into the plan given the rapidly changing nature of transportation.

Facility Types, Transitions + Corridors

There are a number of terms and types of multi-modal transportation facilities discussed in this Plan. A few are highlighted here. A goal of this Plan is to remain flexible as the system and technology changes. Several of these facilities can transition over time from relatively inexpensive and easy changes made with paint in the near-term to more expensive and complex changes that could be accomplished when done in concert with a more significant infrastructure project such as when a road is being completely rebuilt. When these improvements are done in coordination with one another, a variety of corridor types can be created that offer multi-modal options and improved safety for all users.

Facility Types + Transitions

Sidewalks



Dedicated space intended for use by pedestrians. They are separated from a roadway by a curb or unpaved buffer space and typically constructed of concrete.

Cost: \$200,000 to \$300,000 per mile.

Key cost variables include sidewalk width, density of street and driveway crossings, and grading.

Shared Use Path



Pathways physically separated from the roadway that are shared by people who walk and bike going both directions. These are wider than standard sidewalks and typically constructed of asphalt for smoother bicycling.

Cost: \$300,000 to \$450,000 per mile.

Key cost variables include pathway width, earthwork, and grading.

Signed | Marked Bike Route

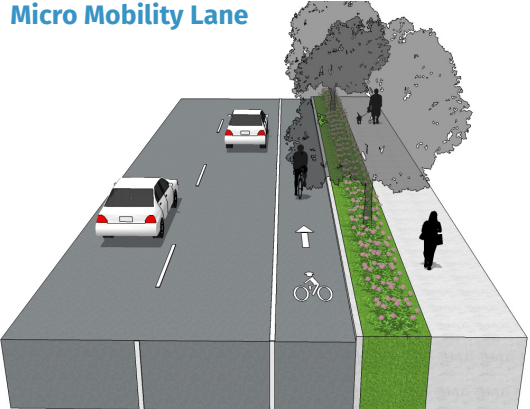
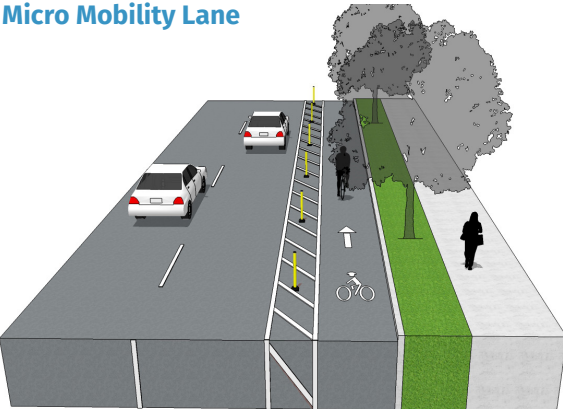
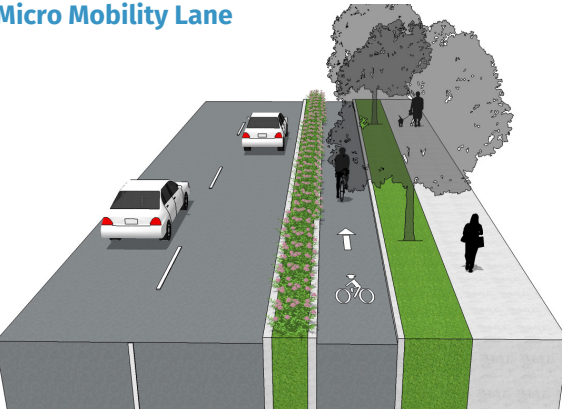


Local roads that provide low-stress connections to neighborhood destinations for people who walk and bike. These types of routes typically include wayfinding signs, traffic calming measures, and sometimes stormwater management features (like rain gardens). Crosswalk improvements may be needed where these routes cross major roadways.

Cos: \$25,000 to \$125,000 per mile.

Key cost variable includes the number of traffic calming measures.

Bike Lanes or Micro Mobility Lanes are portions of the road that have been designated through striping, signage, and pavement markings for the use of bicyclists, e-bikes, scooters, etc. The lanes can be added to existing roads through lane narrowing or reducing number of vehicular travel lanes without effecting the existing curb. They typically run in the same direction as vehicular traffic.

Minimum	Better	Preferred
<p>Used on lower speed and volume roads where space is limited.</p>	<p>Often implemented with a road re-striping or resurfacing project</p>	<p>Typically implemented as part of a road reconstruction project.</p>
<p>Basic Bike Lane Or Micro Mobility Lane</p> 	<p>Buffered Bike Lane Or Micro Mobility Lane</p> 	<p>Separated Bike Lane Or Micro Mobility Lane</p> 
<p>An exclusive space for bicyclists located adjacent to vehicular travel lanes. They assist in facilitating predictable behavior and movements between bicyclists and motorists.</p> <p>Cost: \$50,000 to \$100,000 per mile. Key cost variables include the number of intersections and changes to existing lane configuration.</p>	<p>Basic bike lane paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Provides greater shy distance between motor vehicles and bicyclists and appeals to a wider cross-section of bicycle users.</p> <p>Cost: \$100,000 to \$200,000 per mile. Key cost variable includes the spacing of the delineator posts.</p>	<p>Bikeways that are at street level and use a variety of methods for physical protection from passing traffic. May be combined with a parking lane or other barrier between the micro mobility lane and the motor vehicle travel lane. Dedicates and protects space for micro mobility users in order to improve perceived comfort and safety.</p> <p>Cost: \$500,000 to \$750,000 per mile. Key cost variable includes curb construction and drainage.</p>

Crossings

While safely moving various modes through and along corridors is important, getting vulnerable modes including pedestrians and bicyclists safely **across corridors** is essential. The examples here illustrate various ways to get people across corridors. Specific design treatments vary based on distance, speeds, volumes, etc.

Raised Crosswalk



The crosswalk is at the same level as the sidewalk improving pedestrian accessibility. The road has a gentle ramp up to the crosswalk level that helps moderate traffic speed and improves crosswalk visibility.

Cost: \$10,000 to \$15,000 each.

Key cost variable is the width of the crosswalk.

Rectangular Rapid Flash Beacon

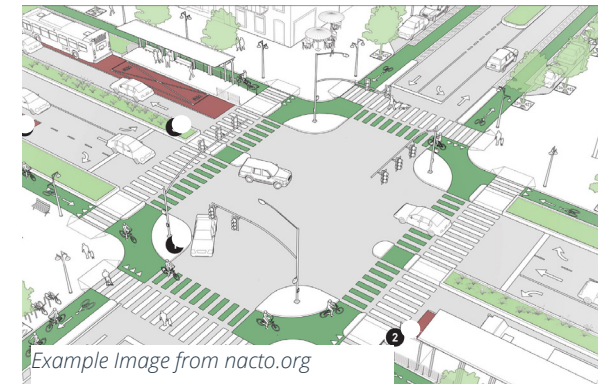


A high-visibility strobe light placed below a crosswalk light is activated by pedestrians to alert drivers that a pedestrian is crossing the roadway. This is used at mid-block locations and is most effective on roads with speeds less 35 mph or less. It is often used in conjunction with crossing islands on roads with more than two lanes.

Cost: \$30,000 to \$40,000 each.

Key cost variable is the electronic control device.

Protected Intersection



Use of corner islands, restricted motor vehicle turns, bike lanes, and bicycle specific signals permit bicyclists to navigate a busy intersection without conflicts from turning vehicles or having to merge with motor vehicles. It also significantly improves pedestrian safety.

Cost: \$50,000 to \$250,000 each.

Widely variable based on the degree of modifications to curbs, drainage, and signalization.

These treatments can be combined with each other and/or with corridor upgrades. For example, a raised crosswalk can be combined with a pedestrian crossing island and/or a rectangular rapid flash beacon. The associated cost would generally be the sum of the parts. However, some savings would be realized in the overlap in design, construction, and other “soft” costs.

Pedestrian Hybrid Beacon



Device that brings motor vehicles to a complete stop to help pedestrians safely cross busy and higher speed roadways mid-block. Motorized traffic is permitted to proceed through the intersection after stopping if a pedestrian or bicycle has cleared the crosswalk.

Cost: \$75,000 to \$150,000 each.

Key cost variable is the foundation and pole / mast arm design.

Crosswalk at Bus Stop

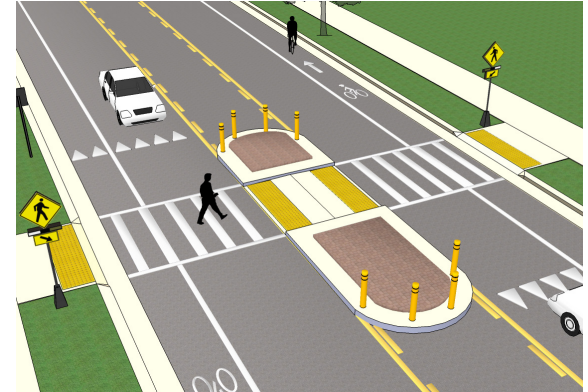


Bus stops located mid-block should be located in conjunction with appropriate crosswalk facilities. The safest place for the crosswalk is behind the bus stops to allow for greater visibility of pedestrians in the crosswalk.

Cost: \$20,000 to \$25,000 each.

Key cost variable is the median length.

Pedestrian Crossing Island



Pedestrians only need to cross one direction of traffic at a time which is much safer and allows for more opportunities as they only are looking for a gap in traffic from one direction. The island provides a strong visual indicator to motorists of the crosswalk. Often used in conjunction with rectangular rapid flash beacons.

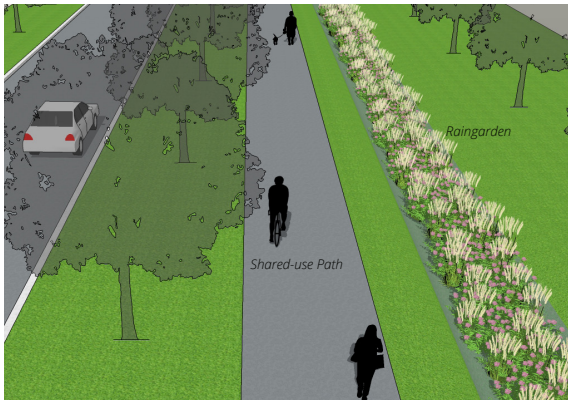
Cost: \$15,000 to \$20,000 each.

Key cost variable is the size of the island.

Corridor Types

As illustrated on the previous pages, a number of types of facilities and types of improvements can be implemented to greatly enhance modal options and overall connectivity and safety. When these improvements are done in coordination with one another, a **variety of corridor types** can be created. The various corridor types are referenced here and illustrated in the Long-Term Vision for the City of Dearborn.

Greenways



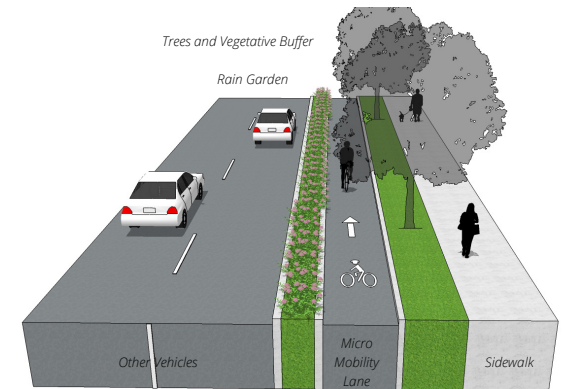
Pathways shared by pedestrians and bicyclists located away from the roadway that are typically along and within natural areas.

Neighborhood Connectors



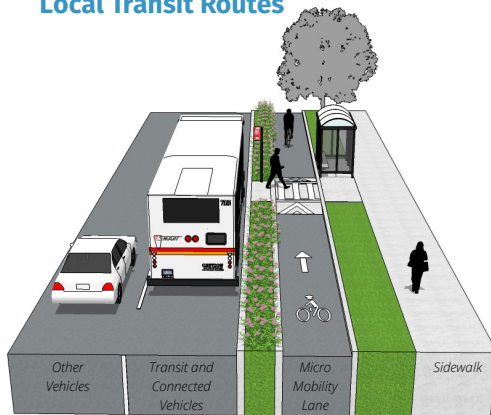
Local roads and trails that provide low-stress bicycle and pedestrian connections to neighborhood destinations. These types of routes typically include wayfinding signs, traffic calming and stormwater management features.

Crosstown Corridors



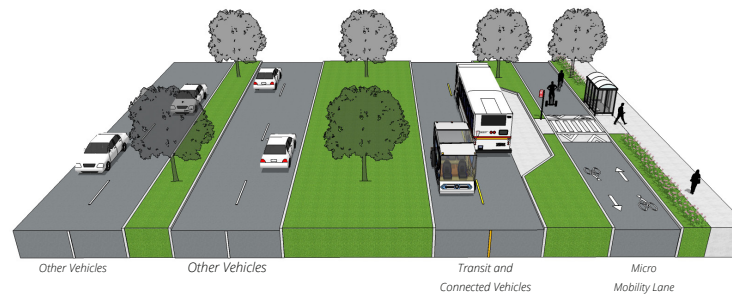
Essential to the flow of people between neighborhoods, these corridors encourage safe speeds to enhance the experience of non-motorized users and improve the overall safety of the roadway. Dedicated facilities for people who walk and bike are provided, such as separated bike lanes, pedestrian crossings, sidewalks and street trees.

Local Transit Routes



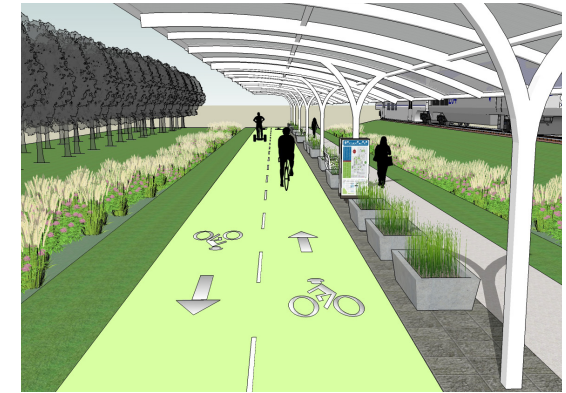
Corridors with local bus service that foster a pedestrian scale environment where walking and biking actively complement public transit. Dedicated facilities for people who walk and bike are provided, such as separated bike lanes, pedestrian crossings, sidewalks and street trees. Transit stops are upgraded and paired with safe road crossings.

Multimodal Boulevards



Large thoroughfares that separate each transportation mode into parallel routes. Physical buffers are provided between transportation modes with significant speed differentials. These corridors accommodate automobiles, transit, autonomous shuttles, micro mobility vehicles, bicycles and pedestrians.

Green Express Routes

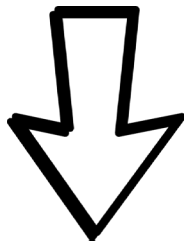


An all-season community concourse for people who walk, bike or use micro mobility vehicles. A direct, first class link between key destinations with minimal interruptions. Coordinated with bike and scooter share systems at key destinations. Could include solar canopy, lighting, security, stormwater management, wayfinding, interpretive signage and community art.

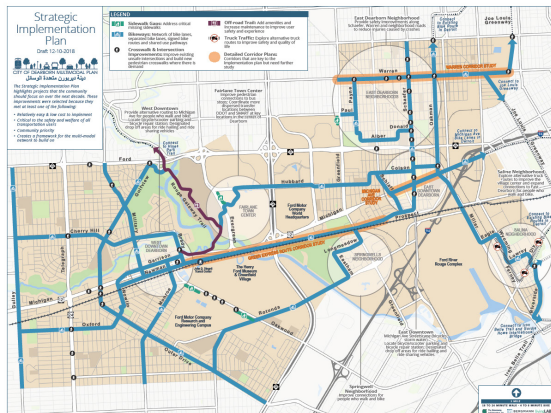
One Goal - 3 Plans

The Multi-Modal Plan recommendations are organized into 3 pieces in order to illustrate which items should be focused on in the first few years, which elements could be implemented as opportunities present themselves, and which elements should be considered when major infrastructure construction projects are being planned. The 3 pieces of the Plan are illustrated below as a Strategic Implementation Plan, Near-Term Enhancements, and the Long-Term Vision. These were developed based on a number of factors, data and input that was collected during the 12 months prior to plan adoption. The number of miles existing in the City as well as proposed within these three pieces are available as GIS data and also summarized in table form.

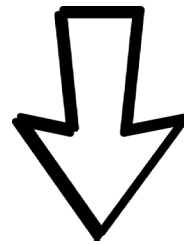
Immediate Focus



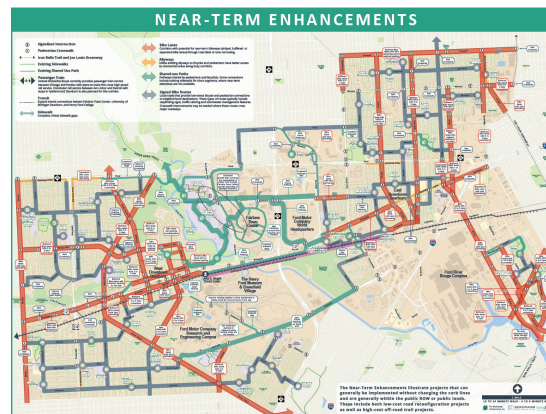
1 Strategic Implementation Plan



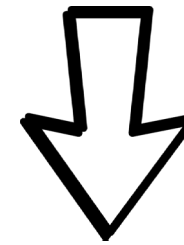
Implement As Opportunities Present Themselves



2 Near-Term Enhancements



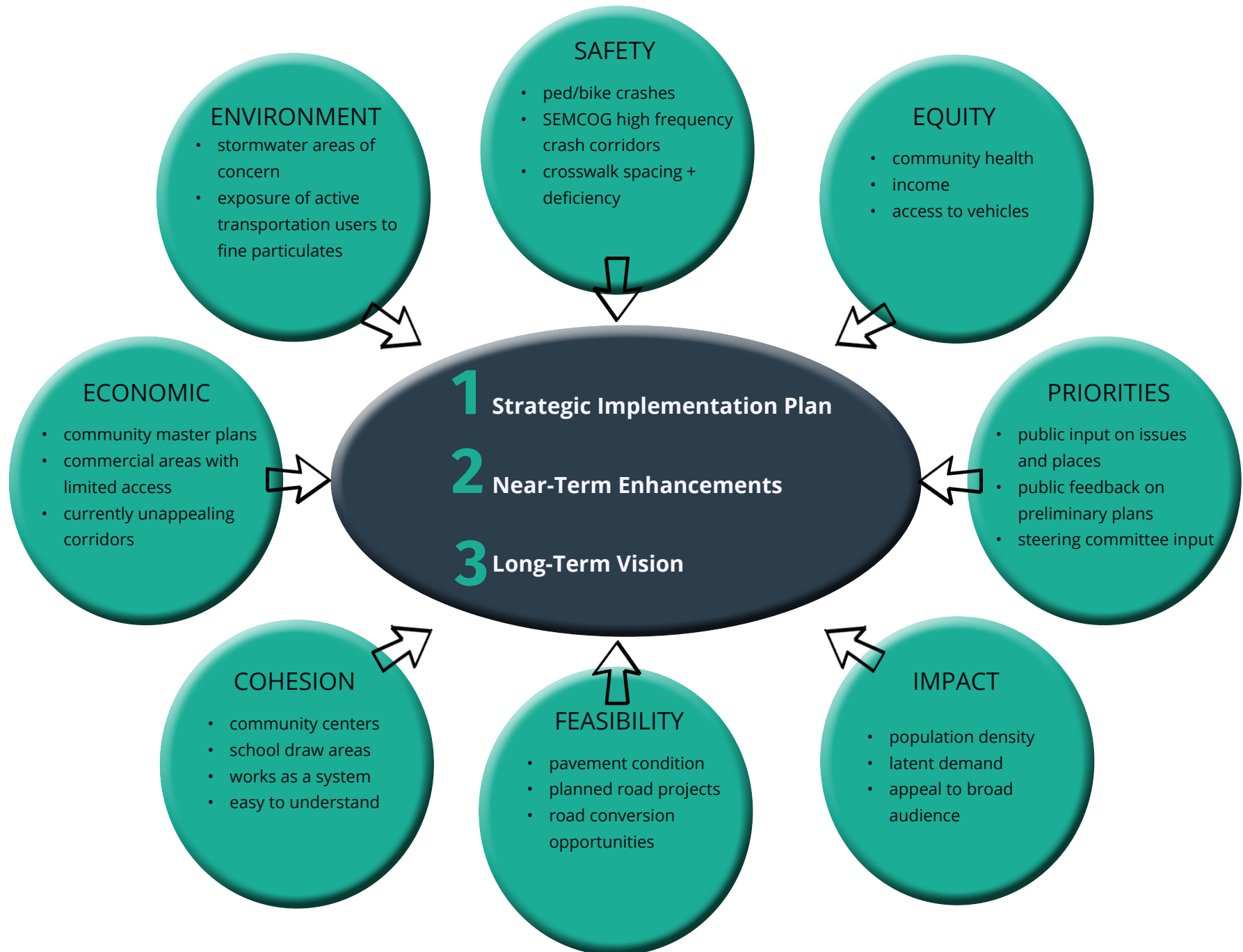
Incorporate Into Major Construction Projects



3 Long-Term Vision



Factors Considered When Developing 3 Categories of Recommendations



Strategic Implementation Plan

The Strategic Implementation Plan highlights projects that the community should focus on implementing/completing over the next decade. Completion of the elements highlighted in the Strategic Implementation Plan would provide a core network. These improvements were selected because they met at least one of the following:

- Relatively easy and low cost to implement
- Critical to the safety and welfare of all transportation users
- Community Priority
- Creates a framework for the multimodal network to build upon
- Primarily low to moderate stress facilities
- Evenly distributed routes
- Links to key destinations

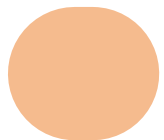
Costs and Budgets

Planning level cost estimates were prepared for the Strategic Implementation Plan. The Appendix includes detailed route breakdowns, summary of cost by routes, unit prices, etc. Below is a summary of the hard costs (construction) and soft costs (design and engineering) and total budget for the Strategic Implementation Plan in round numbers.

Hard Costs **\$5.3 million**

Soft Costs **\$1.3 million**

Total Budget **\$6.6 million**



Immediate Focus

Strategic Implementation Plan Elements

Sidewalk Gaps

There are a few critical sidewalk gaps to focus on improving including segments along Evergreen, Oakwood, and Greenfield.

Bikeways

Network of bike lanes, separated bike lanes, signed routes and shared use pathways

Existing Off-Road Trail Improvements

The Rouge Greenway Trail is a heavily used shared use trail in the City. A focus should be on adding amenities and increasing maintenance to improve user safety and experience.

Expand Off-Road Trail/Greenway Network

Additional off-road trails are desired to expand the network and access to parks, neighborhoods, natural resources, regional destinations and adjacent communities. Further study and coordination is needed to further the concept of the Lower Rouge Trail, a connection north into Detroit and the Rouge Greenway Trail, and continuing efforts for the long-planned Rouge Gateway Trail extension to the Iron Belle Trail.

Crosswalk + Intersection Improvements

Improve existing unsafe intersections and build new pedestrian crosswalks where there is demand. See details on following pages.

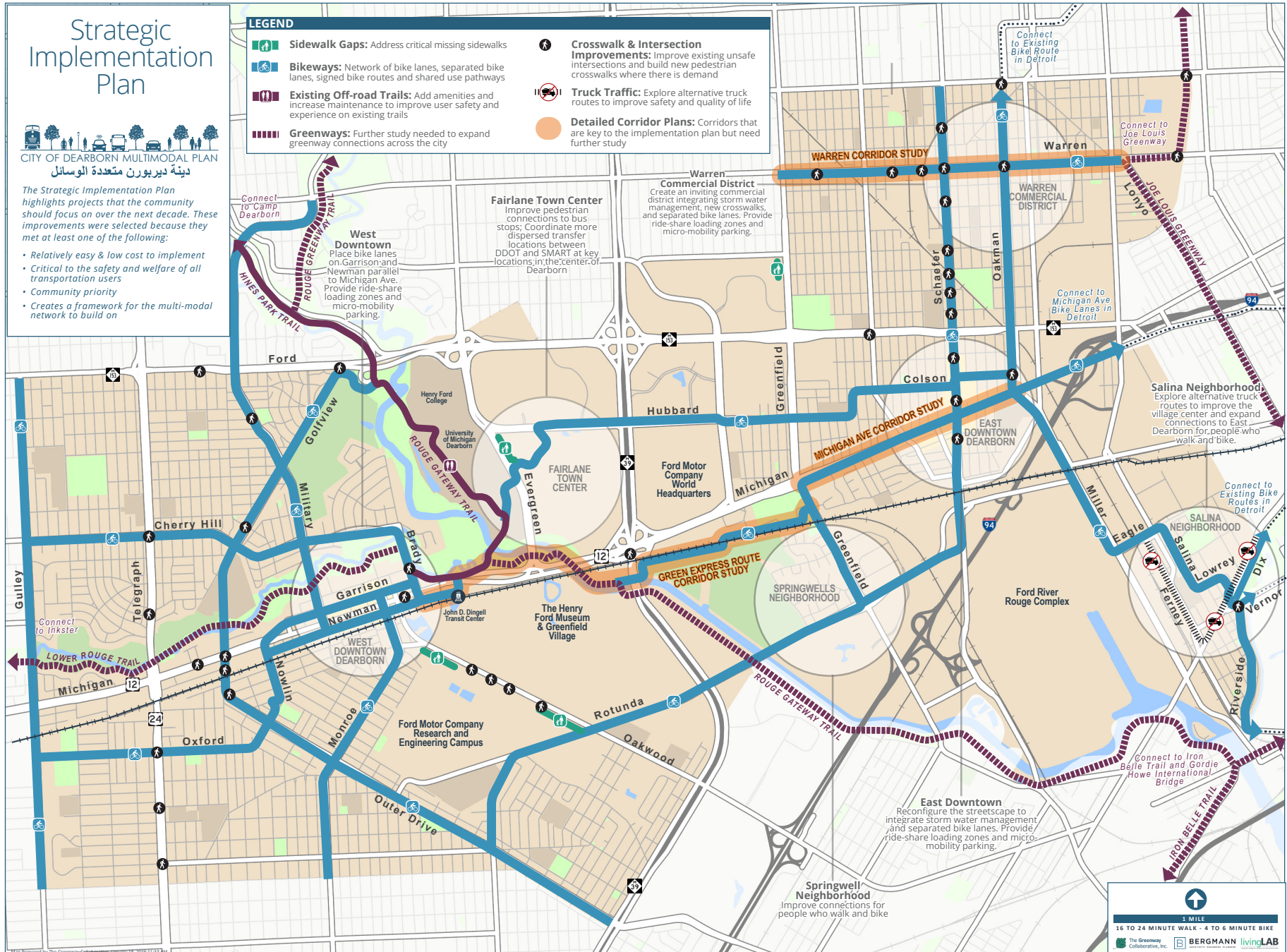
Explore Alternative Truck Routes

Explore alternative truck routes to improve safety and quality of life in the Salina Neighborhood. Coordinate with truck route study being done in Southwest Detroit.

Detailed Corridor Studies

These corridors are key to the implementation plan but need further study.

- Green Express Route Corridor Study between East and West Downtown
- Michigan Avenue Corridor Study between Oakman and Greenfield
- Warren Avenue Corridor Study

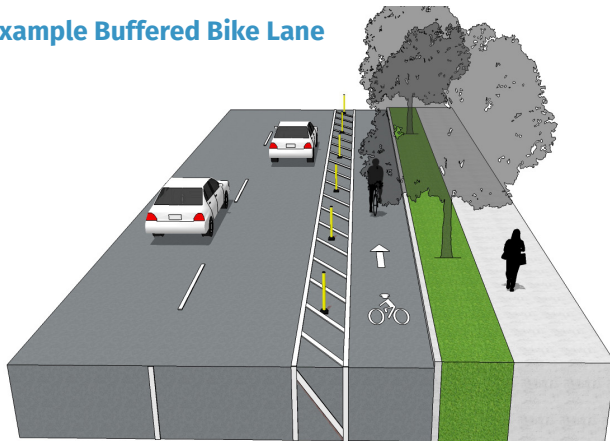


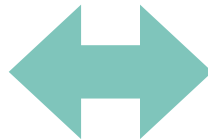
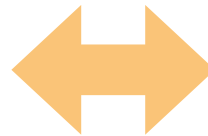
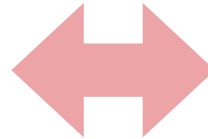
Near-Term Plan Enhancements

The Near-Term Plan enhancements illustrate projects that can generally be implemented without changing the curb lines and are, for the most part, within the public right-of-way or public lands. These include both low-cost road reconfiguration projects as well as high-cost off-road trail projects. These Near-Term recommendations should be reviewed and consulted whenever there is road work (repaving, restriping or reconstruction) work being planned within the City. Many of these recommendations could be implemented with only striping/paint modifications to the existing road cross-section.

Implementing this Near-Term network would establish a fairly robust system on the east and west sides of the City. Recommendations would establish four east-west pedestrian and bicycle connections on Ford Road, Michigan Avenue, Rotunda and the Rouge Trail.

Example Buffered Bike Lane





As Opportunities Arise Near-Term Plan Elements

Transit

Work with partners to expand transit connections between Fairlane Town Center, University of Michigan Dearborn, Henry Ford College and the John D. Dingell Transit Center.

Sidewalks

As work is done within road rights-of-way, seek opportunities to complete gaps in the sidewalk network.

Bike Lanes

Corridors with potential for near-term bikeways (striped, buffered or separated bike lanes) through road diets (removing a vehicular lane) or via lane narrowing.

Alleyways

Utilize existing alleyways so bicycles and pedestrians have better access to commercial areas along busy corridors.

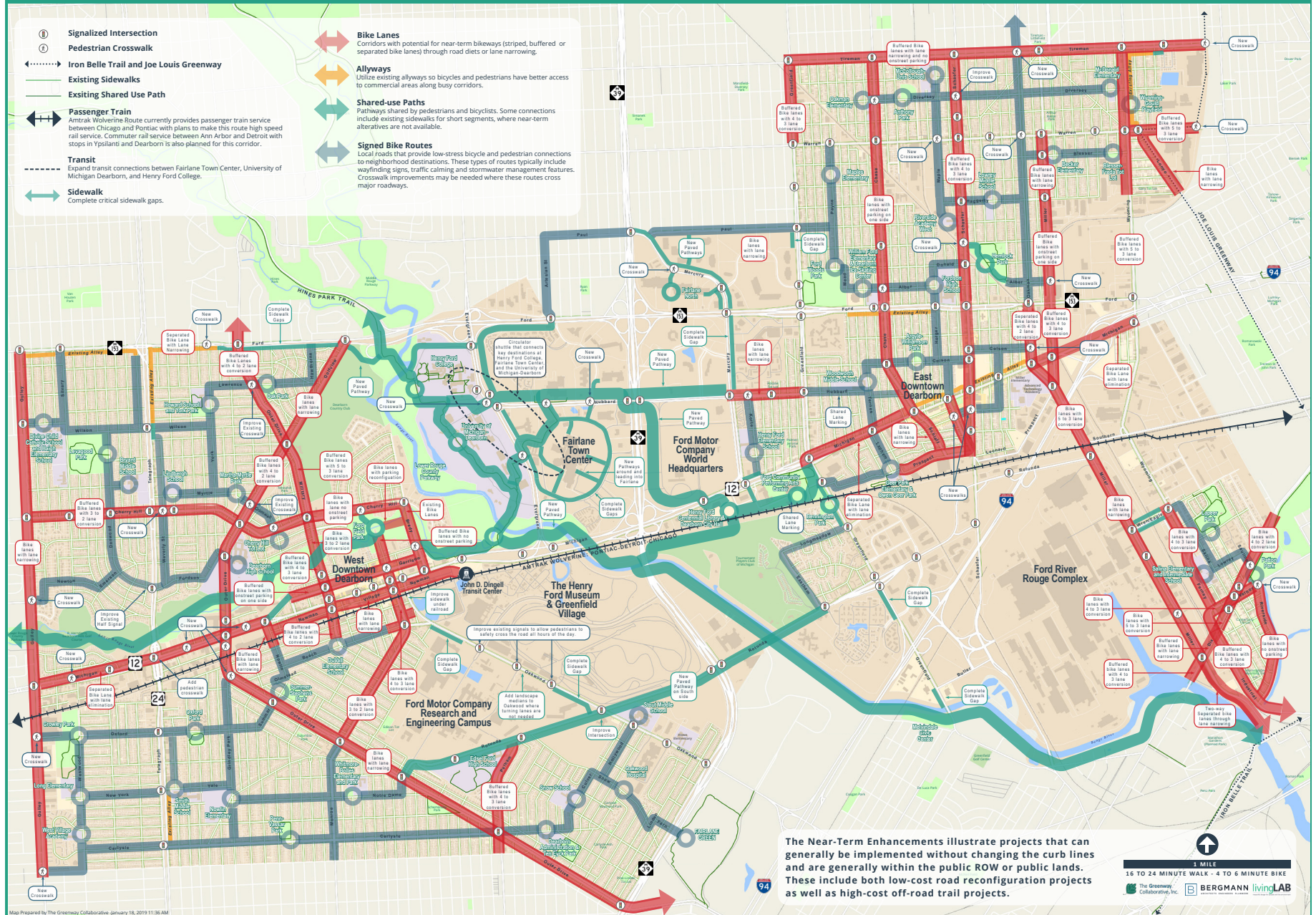
Shared Use Paths

Pathways shared by pedestrians and bicyclists. Some connections include existing sidewalks for short segments, where near-term alternatives are not available.

Signed Bike Routes

Local roads that provide low-stress bicycle and pedestrian connections to neighborhood destinations. These types of routes typically include wayfinding signs, traffic calming and stormwater management features. Crosswalk improvements may be needed where these routes cross major roadways.

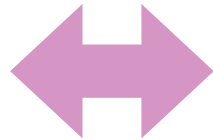
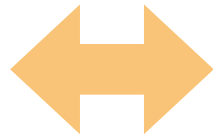
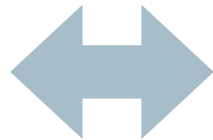
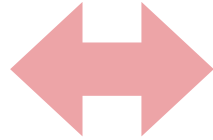
NEAR-TERM ENHANCEMENTS



Long-Term Vision

The Long-Term Vision captures what the City aspires to achieve over the next 20+ years. The recommendations are constrained by available right-of-way and the need to accommodate projected traffic. Many of the recommendations will likely be implemented when roads are reconstructed. The graphic below illustrates how the long-term vision for additional greenways/trails within Dearborn would connect the City into the larger Regional network including the Joe Louis Greenway, Iron Belle Trail, Rouge Greenway and 275 Metro Trail.

Existing and Proposed Regional Trail Network



20+ Years From Now Long-Term Vision Elements

Multi-Modal Boulevards

Large thoroughfares that separate each transportation mode into a parallel route. Physical buffers are provided between transportation modes with significant speed differentials. These corridors accommodate automobiles, transit, autonomous shuttles, personal mobility vehicles, bicycles and pedestrians.

Crosstown Corridors

Essential to the flow of people between neighborhoods, these corridors encourage safe speeds to enhance the experience of non-motorized users and improve the overall safety of the roadway. Dedicated facilities for people who walk and bike are provided, such as separated bike lanes, pedestrian crossings and sidewalks.

Local Transit Routes

Corridors with local bus service that foster a pedestrian scale environment where walking and biking actively complement public transit. Dedicated facilities for people who walk and bike are provided, such as separated bike lanes, pedestrian crossings and sidewalks.

Neighborhood Connectors

Local roads and trails that provide low-stress bicycle and pedestrian connections to neighborhood destinations. These types of routes typically include wayfinding signs, traffic calming and stormwater management features.

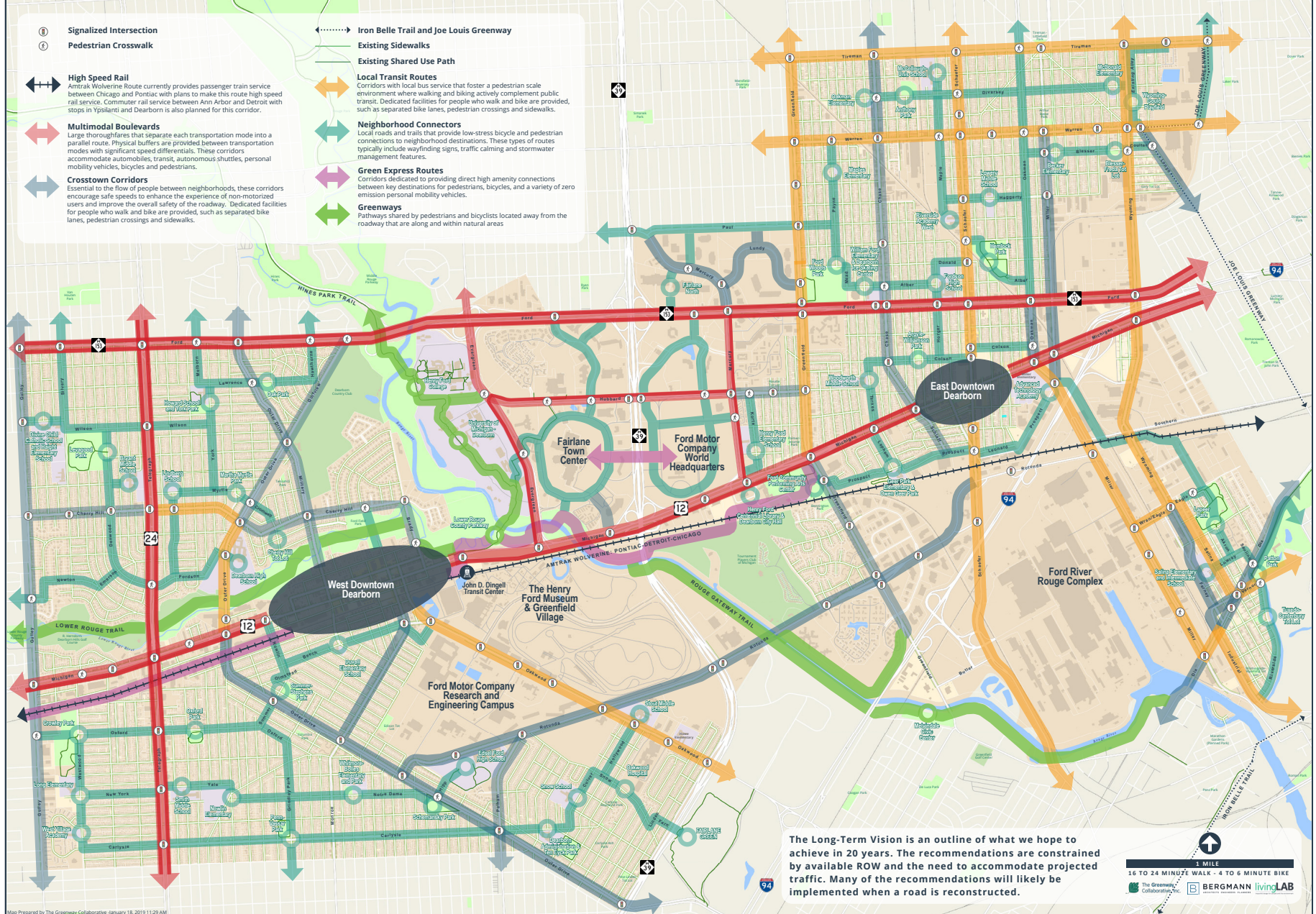
Green Express Routes

Corridors dedicated to providing direct, high amenity connections between key destinations for pedestrians, bicycles, and a variety of zero emission personal mobility vehicles.

Greenways

Pathways shared by pedestrians and bicyclists located away from the roadway that are along and within natural areas.

LONG-TERM VISION



The Long-Term Vision is an outline of what we hope to achieve in 20 years. The recommendations are constrained by available ROW and the need to accommodate projected traffic. Many of the recommendations will likely be implemented when a road is reconstructed.

The existing and proposed facilities detailed in this section of the Plan are summarized in terms of miles in the table below. This will assist with benchmarking and tracking progress over the coming years.

Miles of Multi-Modal Facilities in Dearborn (2018)

		Existing	Strategic Plan	Near Term Plan	Long Term Plan
Greenway		2.36	0.50	8.65	8.65
Shared Use Path		7.98	5.73	13.03	28.54
Green Express Route		0.00	Corridor Study	2.75	3.93
2-way Separated Bike Lanes		0.00	0.36	0.81	11.84
Bike Lanes		0.24	18.88	23.46	11.28
Buffered Bike Lanes		0.00	10.00	19.08	1.73
Separated Bike Lanes		0.00	0.00	6.68	38.34
Sidewalk		600.24	1.00	1.10	1.10
	Along Major Roads	153.83	1.00	1.10	1.10
	Along Local Roads	446.41			
Signed Bike Route		0.00	7.12	37.18	31.30
Corridor Study		0.00	5.56	0.00	0.00
Green Way		0.00	8.16	0.00	0.00

Intersection Improvements

All existing intersections should be assessed and brought up to ADA Standards.

The majority of the bicycle and pedestrian crashes in the City over the last 10 years occurred at intersections. In many instances the vehicle was making a left or right turn when they struck a bicyclist or pedestrian. Providing a Leading Pedestrian Interval (giving the pedestrians the opportunity to enter an intersection before vehicles are given a green indication) and restricting right turns on red are two ways to help mitigate the occurrence.

Priority Intersections For Improvement

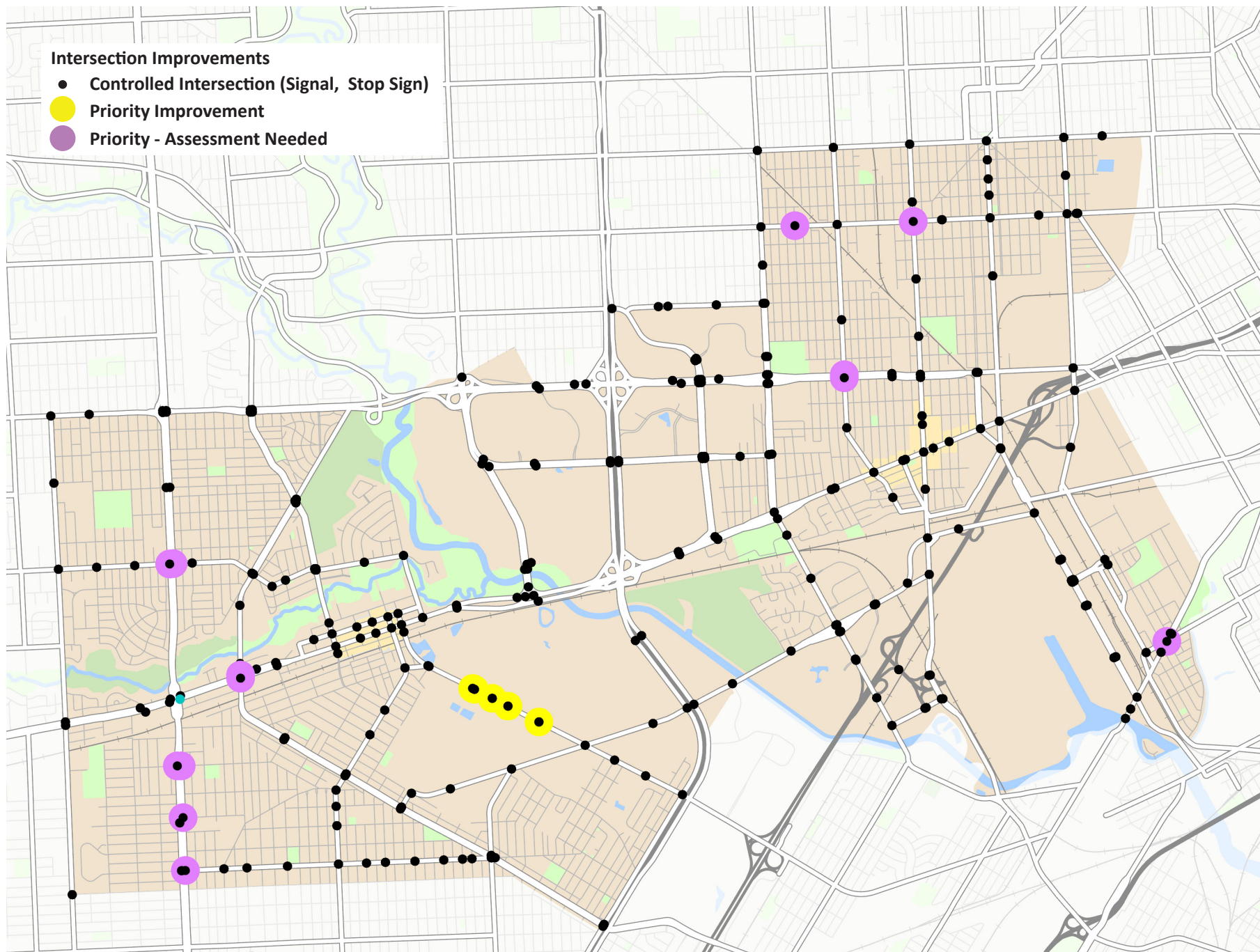


Four intersections along Oakwood Blvd that service Ford Campus, from W Village Road to Pelham - upgrade signal to allow pedestrians to activate signal 24-hours a day.



The following priority intersections are determined to be unsafe based on crash data and public input. Further assessment of these intersections is needed to determine what improvements should be made to address the safety issues.

- Cherry Hill and Telegraph (near middle school)
- Yale and Telegraph (near middle school)
- Oxford and Telegraph
- Schaefer and Warren
- Outer Drive and Michigan (fatal crash)
- Dix and Vernor (fatal crash)
- Chase at Ford (near elementary school)
- Payne at Warren (near elementary school, fatal crash)



Mid-Block Crossing Improvements

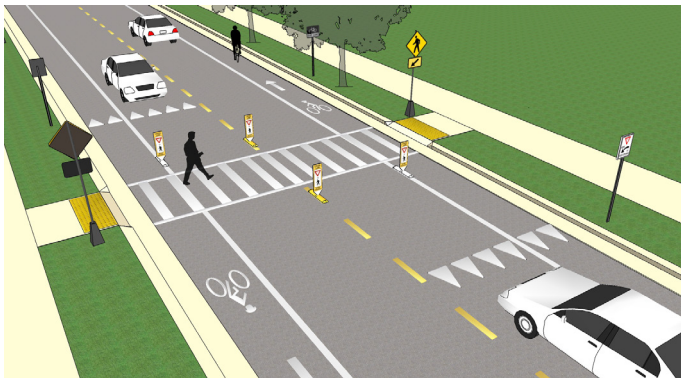
All existing midblock crosswalks should be assessed and brought up to ADA Standards.

Improvements to 12 existing midblock crosswalk and 57 new midblock crosswalks have been proposed. Recommended improvements are based on the proposed cross sections of the priority corridors.

Example Pedestrian Island (3 lane)



Example Gateway Signs (2 lane)



Priority Mid-Block Crossings For Improvement



Proposed Pedestrian Islands

Warren and Oakman

Warren and Maple

Warren and Williamson

Vernor and Riverside Drive - with 4 to 3 lane conversion

Schaefer and Diversey- with 4 to 3 lane conversion

Schaefer between Blesser and Hensen- with 4 to 3 lane conversion

Schaefer and Paul - with 4 to 3 lane conversion

Schaefer and Hemlock - with 4 to 3 lane conversion

Schaefer and Alber - with 4 to 3 lane conversion

Schaefer and Ruby - with 4 to 3 lane conversion

Schaefer between Michigan and Colson - w 4 to 3 lane conversion

Schaefer and Osborn- with 4 to 3 lane conversion



Proposed Gateway Signs

Brady and Morley - existing crosswalk



Proposed Pedestrian Hybrid Beacon with Island

Ford and N York

Ford and Golfview - existing half signal w crosswalk markings + median

Outer Drive and Lawrence - existing crosswalk markings and median

Telegraph and Fordson/Denwood - existing half signal with median

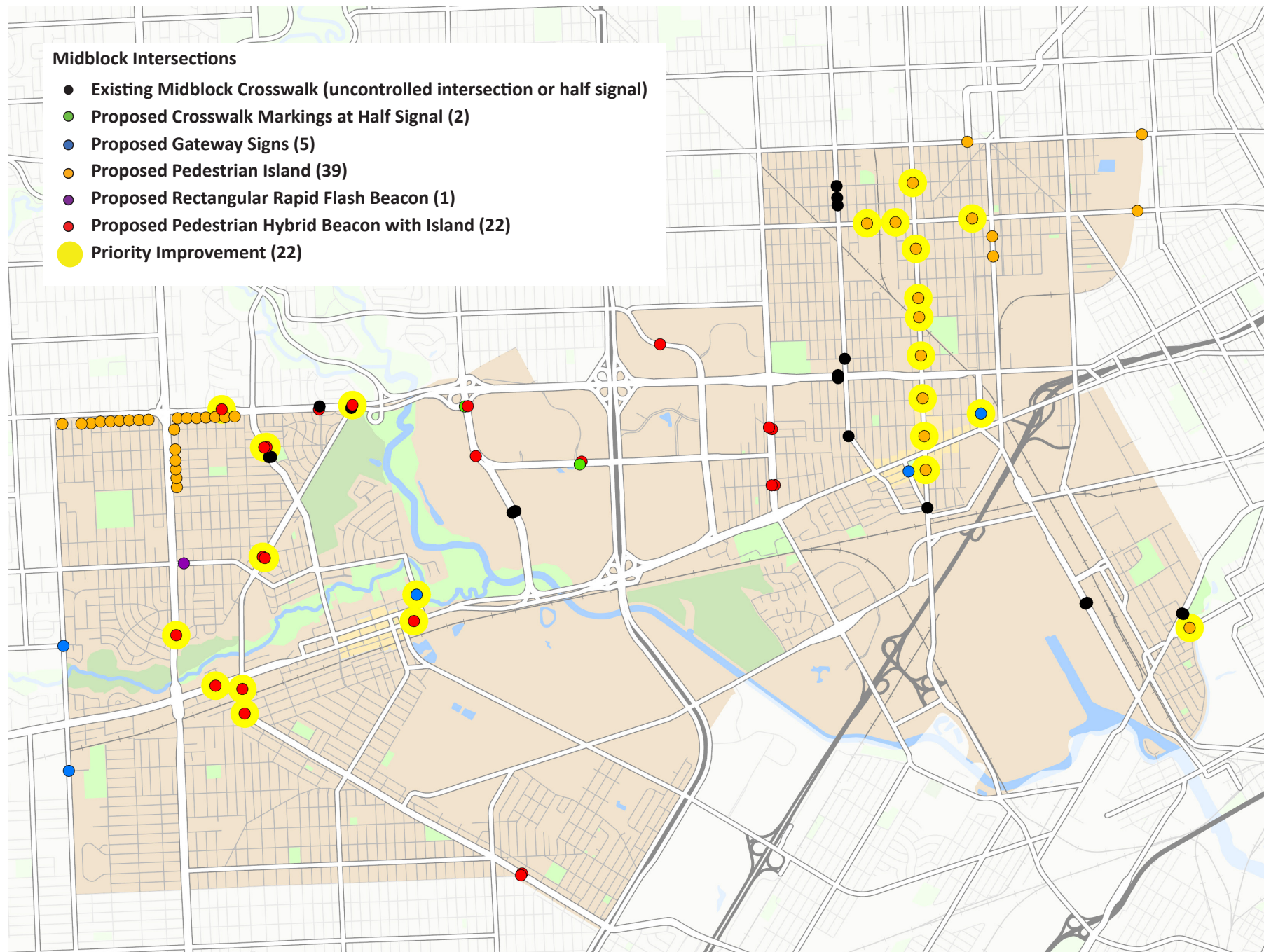
Outer Drive and Cromwell - existing crosswalk markings with median

Michigan Ave and Birch St

Michigan Ave between Madison and Brady

Outer Drive and Kean

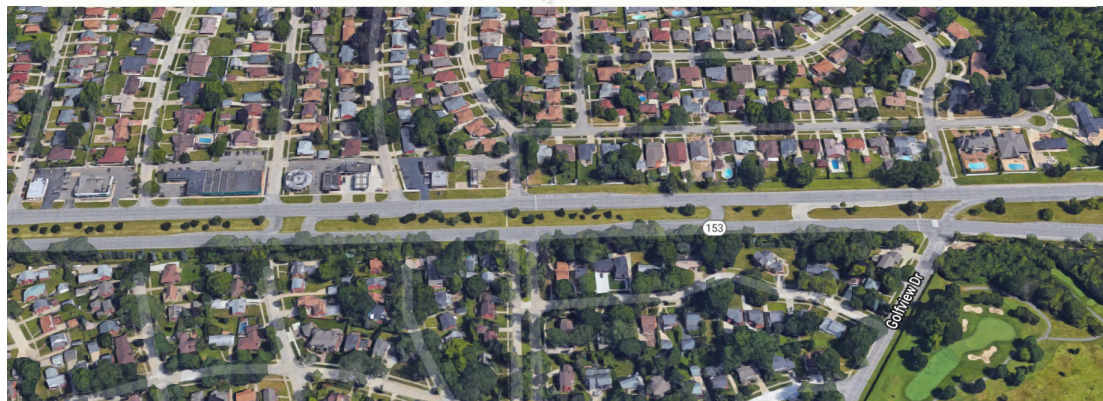
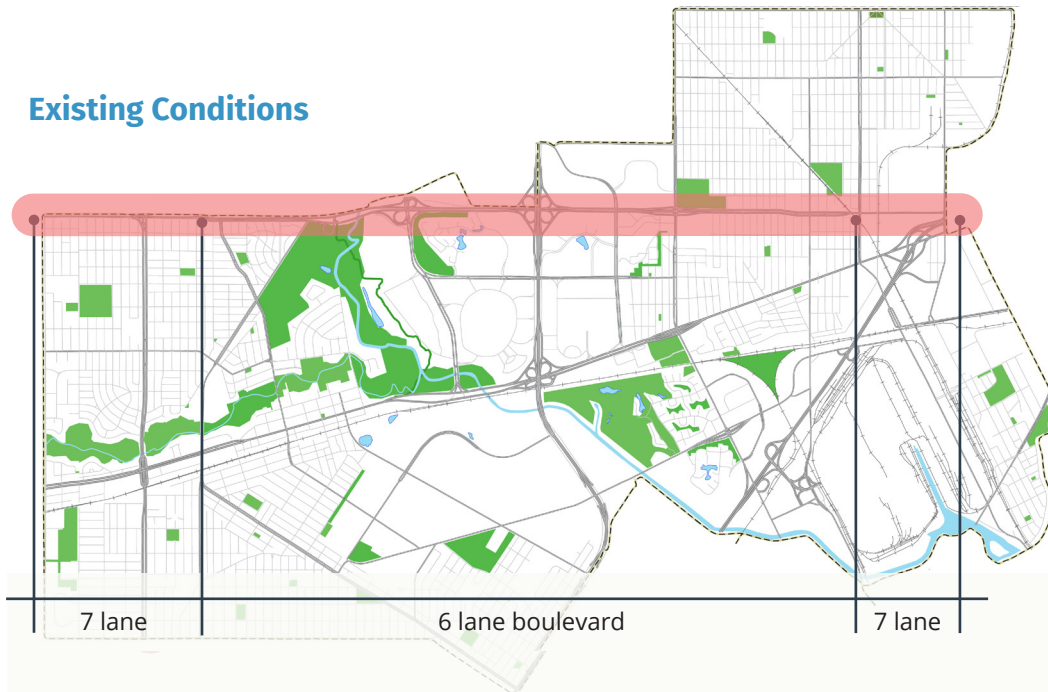
Outer Drive and Nona - existing median



Major Corridor Recommendations

There are 4 corridors in the City: Michigan Avenue, Ford Road, Warren Avenue and Telegraph Road that additional effort and analysis were given due to their importance and/or complexity. The existing conditions and proposed recommendations for these corridors are summarized on the following pages. These 4 roads are regional by nature and coordination with adjacent communities will be essential as these concepts move forward.

Existing Conditions



Typical view of the 6 lane boulevard section

Ford Road Corridor

Ford Road is a MDOT trunkline, traverses the entire width of the City of Dearborn and is a main thoroughfare through the City. Ford Road has two primary cross-sections - 7 lanes (with center turn lane) on the east and west edges of the City and a 6 lane boulevard through the center of Dearborn. Proposed long-term improvements for Ford Road are illustrated. The dedicated transit lane could be phased in as technologies and patterns continue to evolve.

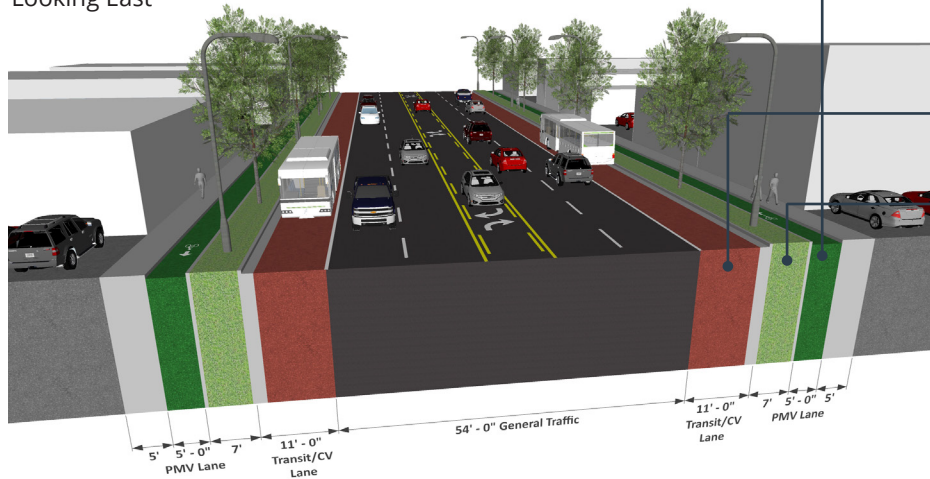
Input Received

Ford Road was commented on in the surveys and was also discussed at various meetings and workshops. Some of the comments received about Ford Road include:

- ➔ Unsafe and challenging for walking and bicycling
- ➔ Needs more trees and landscaping
- ➔ Need connection to Rouge River Gateway Trail
- ➔ Traffic congestion at Telegraph
- ➔ Poor pedestrian and bicycle connection between east and west neighborhoods

Ford Road Long-Term Vision North Gulley to Melborn Street

Looking East



Separated Micro Mobility Lanes



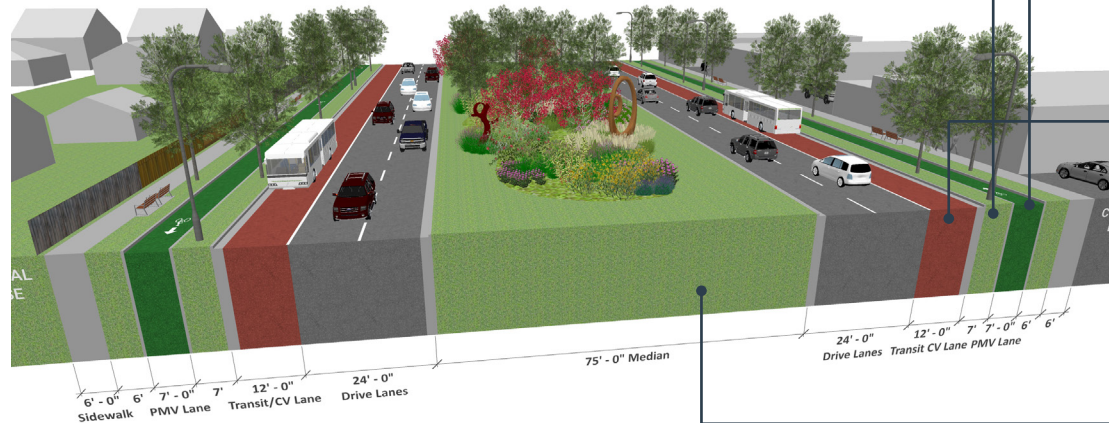
Side running designated transit/
connected vehicle lanes



Use landscaping, furnishings, and
pedestrian scale lighting to create
a more welcoming environment
for people on foot

Ford Road Long-Term Vision Melborn Street to Wyoming Ave

Looking East



Separated Micro Mobility
Lanes (MML)



Landscaped buffer between
street and Micro Mobility Lanes



Side running designated transit/
connected vehicle lanes



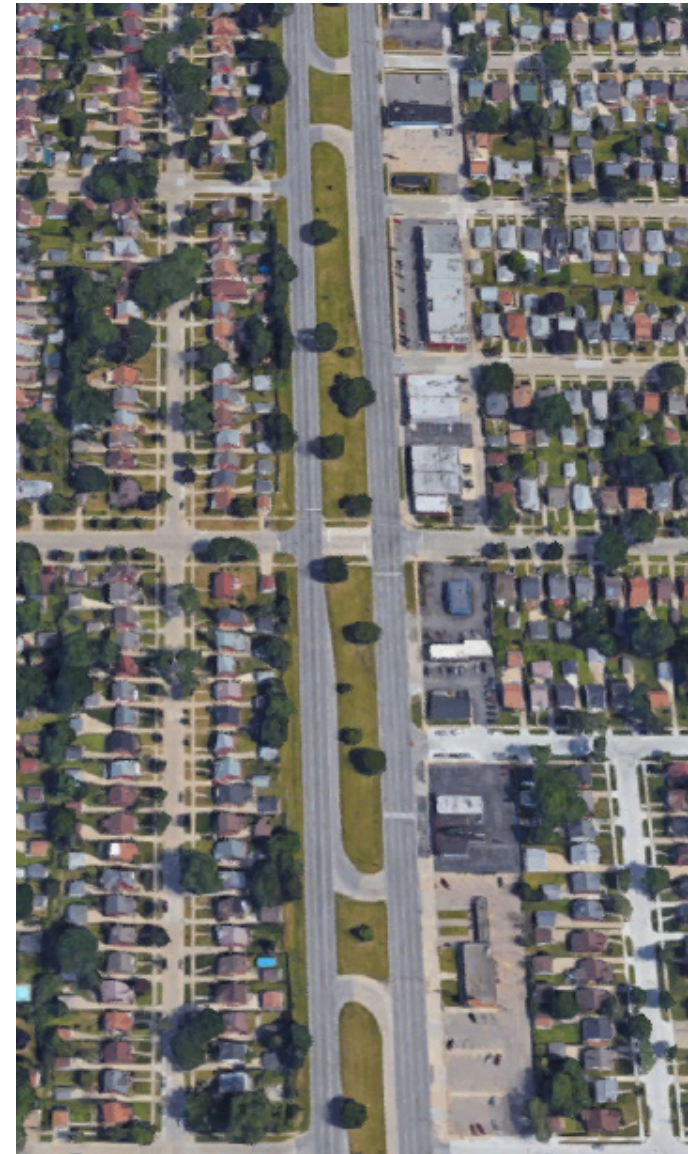
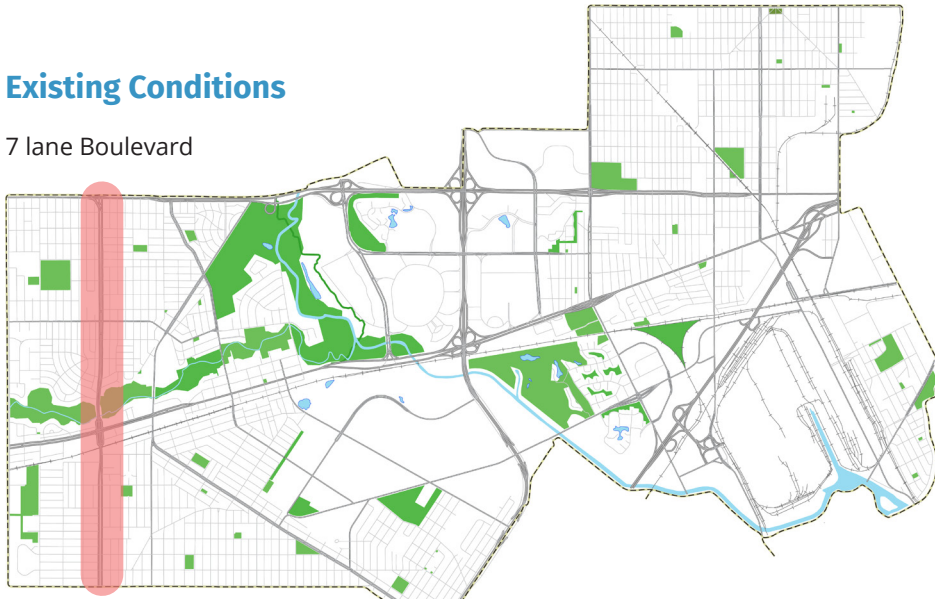
Landscaped medians that incorporate
stormwater management (surface and
potentially underground) and public art.

Telegraph Road Corridor

The regional Telegraph Road Corridor traverses north-south on the western side of Dearborn. This MDOT trunkline is primarily a 7 lane boulevard (4 lanes northbound and 3 lanes southbound) with pinch points at the railroad and Michigan Avenue underpasses. Almost all commercial activity is on the east side. Proposed long-term improvements are illustrated including conversion of one northbound lane to two-way separated bike lanes, a shared use path on west side and designated transit/autonomous vehicle lanes as need arises.

Existing Conditions

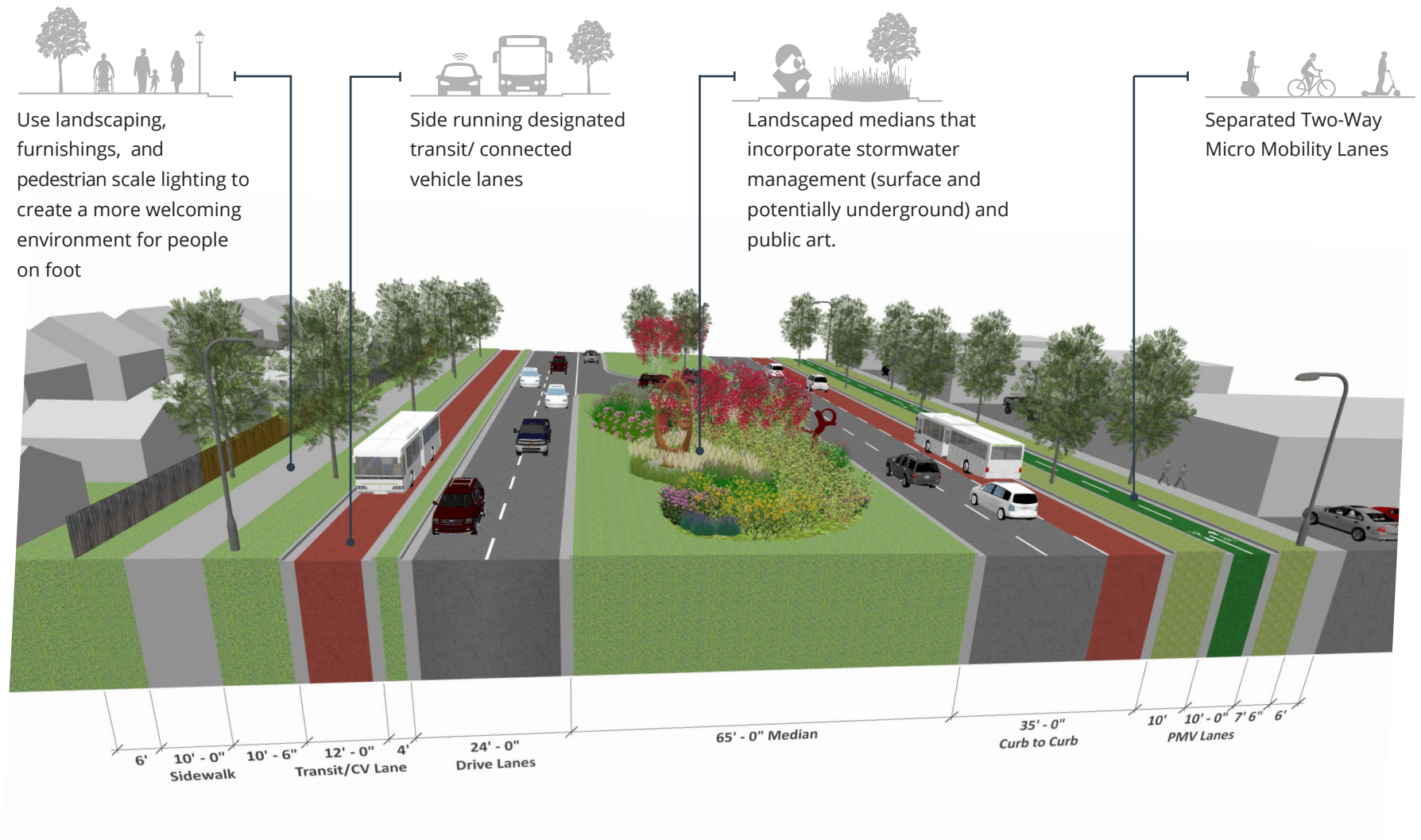
7 lane Boulevard



Typical view of the 7 lane boulevard with strip commercial development on the east side of the corridor and residential land use on the west side.

Telegraph Road Long-Term Vision Ford to Dartmouth Street

Looking North

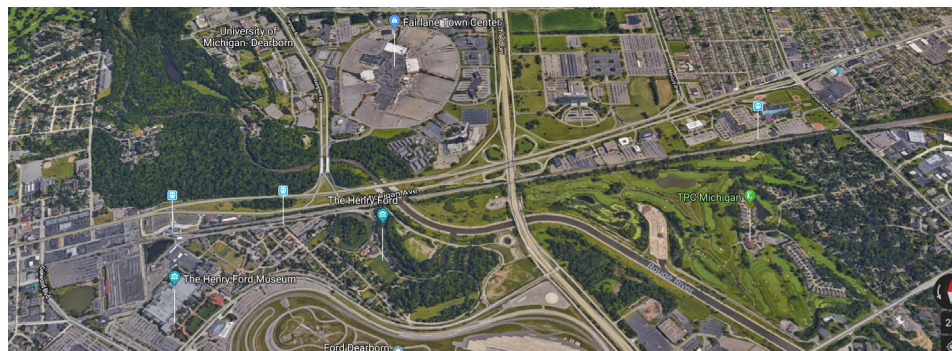
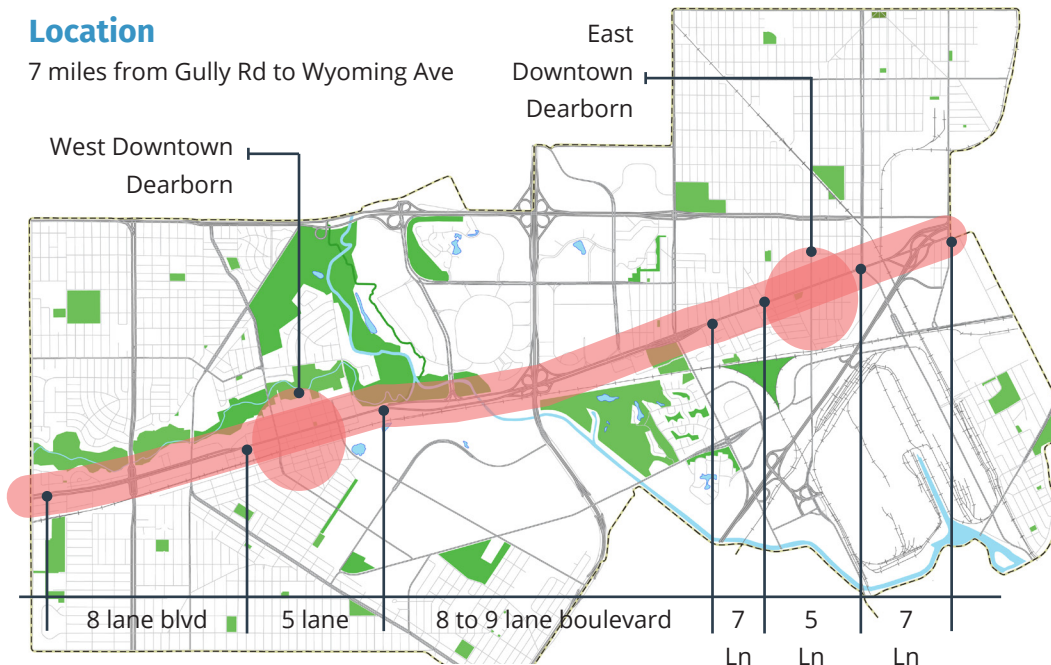


Michigan Avenue

Michigan Avenue traverses the entire width of the City and is a MDOT trunkline. It is a complex roadway that ranges from a fast-moving 9 lane boulevard with ramp access in the middle of the City to a slow-moving 5 lane road with frequent signals in both the east and west downtowns. In the center it links with the Southfield Freeway and distributes a significant amount of traffic to major destinations. The frequently changing character combined with radically different contexts and purposes present a unique challenge. The following pages outline both near and long-term recommendations.

Location

7 miles from Gully Rd to Wyoming Ave



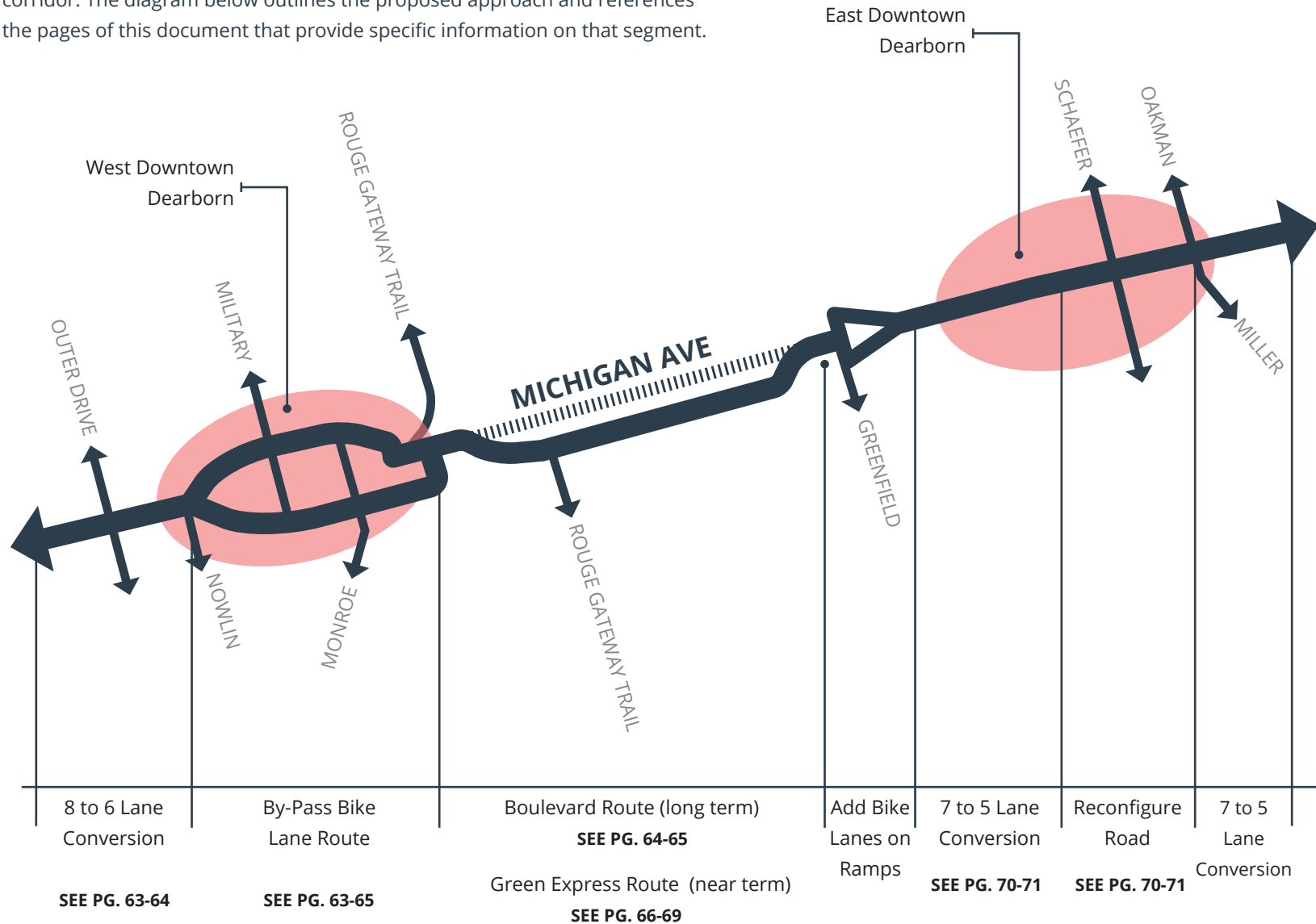
Input Received

Michigan Avenue was the single most mentioned road corridor during public engagement sessions and surveys. Some of the comments received about Michigan Avenue include:

- ➡ Complete the sidewalks and add vegetation
- ➡ Add bicycle connections
- ➡ Improve signal timing and reduce speeds
- ➡ Traffic congestion issues in the downtowns
- ➡ Motorists run red lights
- ➡ Improve intersections including Military, Monroe, Miller, Evergreen, Telegraph, Mason, Nolin, Brady, Outer Dr and Oakwood
- ➡ Close off streets to promote walk/bike culture
- ➡ Slow down traffic speeds
- ➡ Concerned about reducing lanes
- ➡ More street trees to combat pollution
- ➡ Need better wayfinding signs for visitors
- ➡ More outdoor cafes

Proposed Bicycle and Pedestrian Circulation Diagram

A number of strategies must be employed to provide continuous bicycle access and improved pedestrian accommodations along the Michigan Avenue corridor. The diagram below outlines the proposed approach and references the pages of this document that provide specific information on that segment.

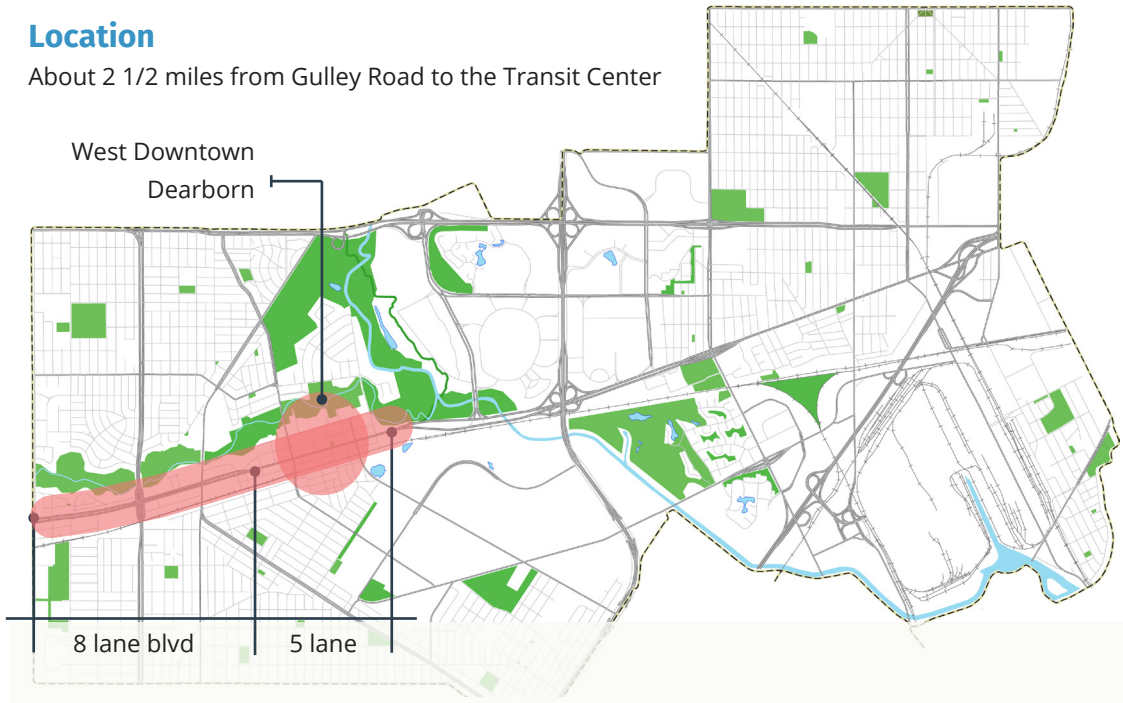


Michigan Ave - West

On the far west side of the City, Michigan Avenue is an 8 lane boulevard with Michigan lefts and strip commercial development. At Nowlin Street, the boulevard necks down to a 5 lane roadway and goes through West Downtown Dearborn. This change from 2 through lanes in each direction to 4 lanes in each direction does not have a corresponding increase in traffic volumes.

Location

About 2 1/2 miles from Gully Road to the Transit Center

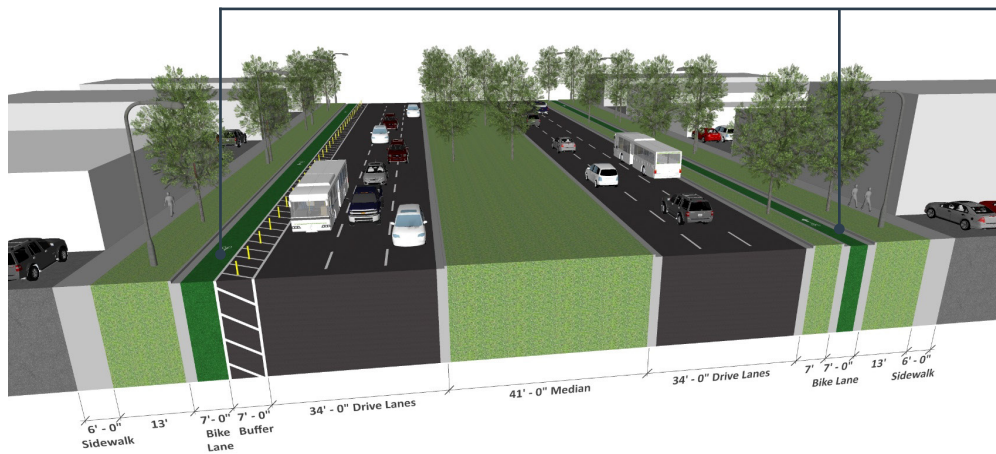


Physical Constraints in West Downtown

Through the West Downtown Dearborn business district, the constricted right-of-way, existing building setbacks, and traffic volumes dictate that the existing 5 lane road cross section will remain largely the same. A recent streetscape plan for the area includes proposals for a narrow median, but fundamentally, the road configuration will remain the same. This requires shifting bicycle traffic to parallel roadways through the downtown.

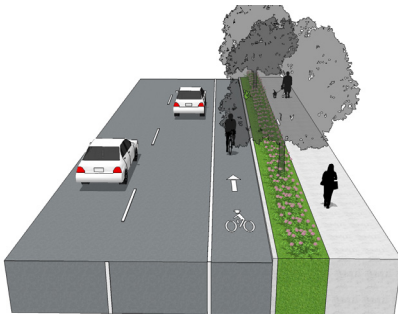


Michigan Avenue (8 to 6 Lane Conversion) Near-Term Improvements



Eliminate one through lane in each direction and convert to separated bike lanes/micro mobility lanes. The lanes could be buffered with delineator posts in the near-term and converted to full separation in the long-term. Look for access consolidation opportunities and make separation as substantial as possible.

Michigan Avenue (Bicycle By-Pass through West Downtown) Near-Term Improvements



Provide bike lanes on Garrison and Newman Street one block north and south of Michigan Ave through West Downtown.

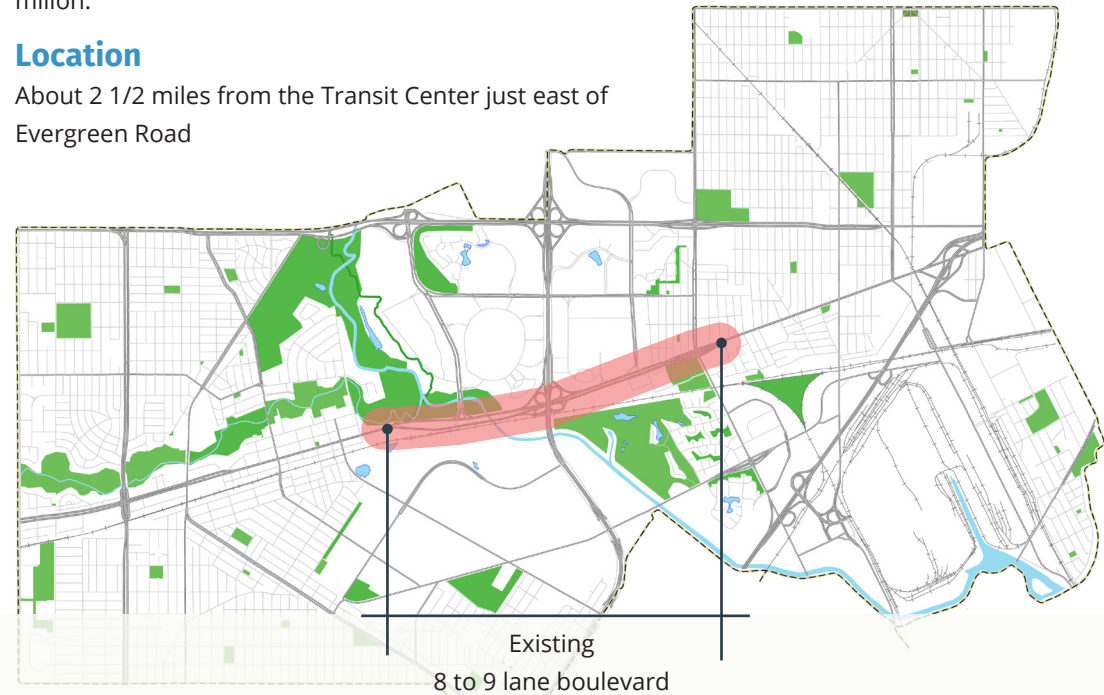


Michigan Ave - Boulevard Section

In the center of Dearborn, Michigan Avenue becomes a limited-access 8 to 9 lane boulevard with extended turn lanes and free flowing ramps. The context is very suburban with buildings placed well back from the roadway. The interchange with the Southfield Freeway is compressed due the adjacent railroad and as a result has poor sight lines and short merge zones. The cost to bring the interchange up to current standards has been estimated to be between \$65 million and \$190 million.

Location

About 2 1/2 miles from the Transit Center just east of Evergreen Road



Wide Open Roadway



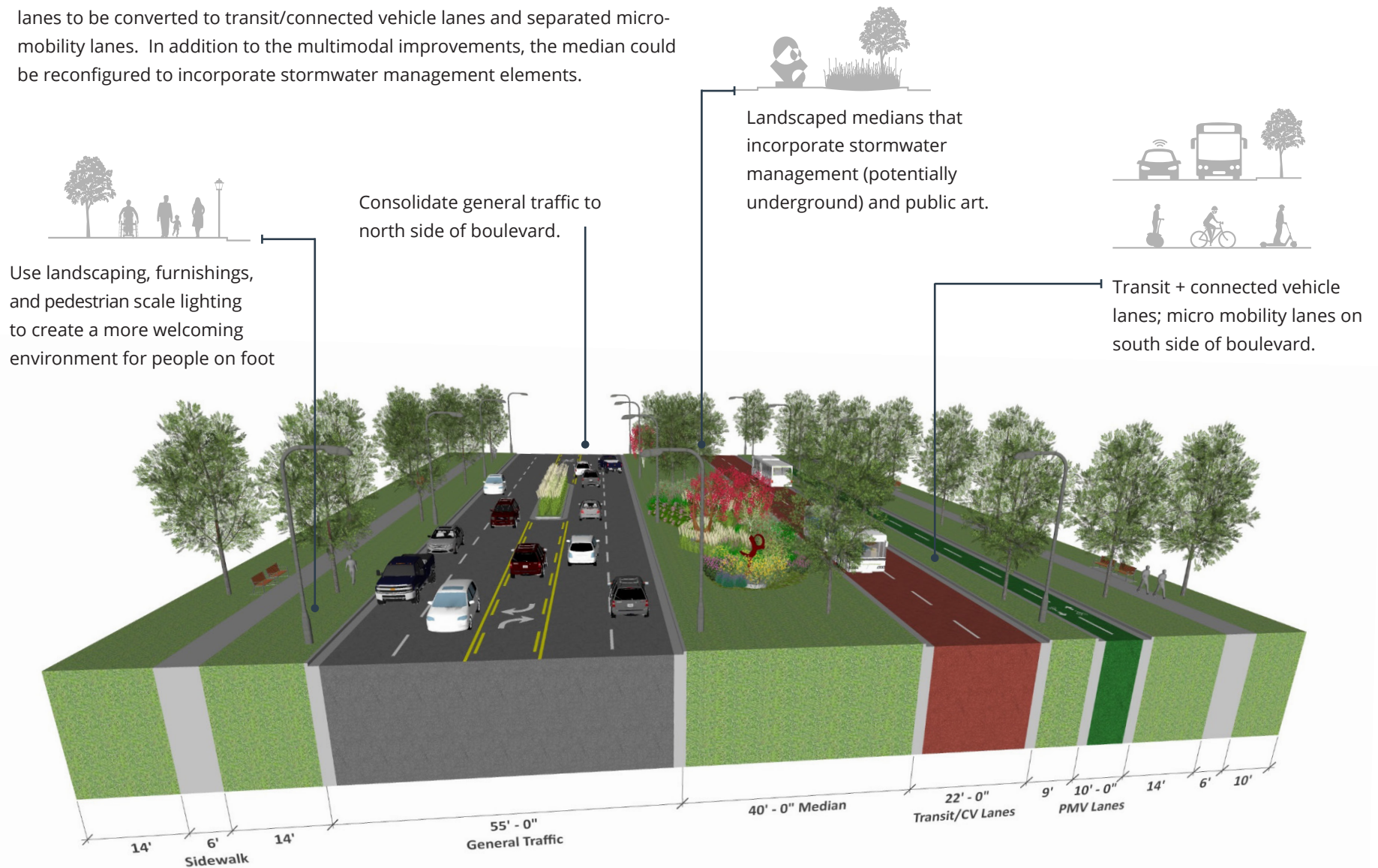
The Boulevard section requires that most left turns be made via a “Michigan Left.” The resulting merging action across multiple lanes is often immediately followed by the need to merge across all of the lanes in the opposite direction to make a right turn.

While there are sidewalks on both sides of the road, the walkways have little physical separation from the roadway and no vegetative buffer. This makes for a very loud and unpleasant experience for a person on foot or on a bike. It also exposes pedestrians and bicyclists to considerable air pollution.



Michigan Avenue Boulevard Section Long-Term Vision

The west-bound lanes of the boulevard (on the north side) have the capacity to handle all of the traffic on Michigan Avenue if configured as a standard 5 lane roadway. This is true even on the bridges over the Southfield Freeway and the Rouge River. This would free up what are the current east-bound lanes to be converted to transit/connected vehicle lanes and separated micro-mobility lanes. In addition to the multimodal improvements, the median could be reconfigured to incorporate stormwater management elements.

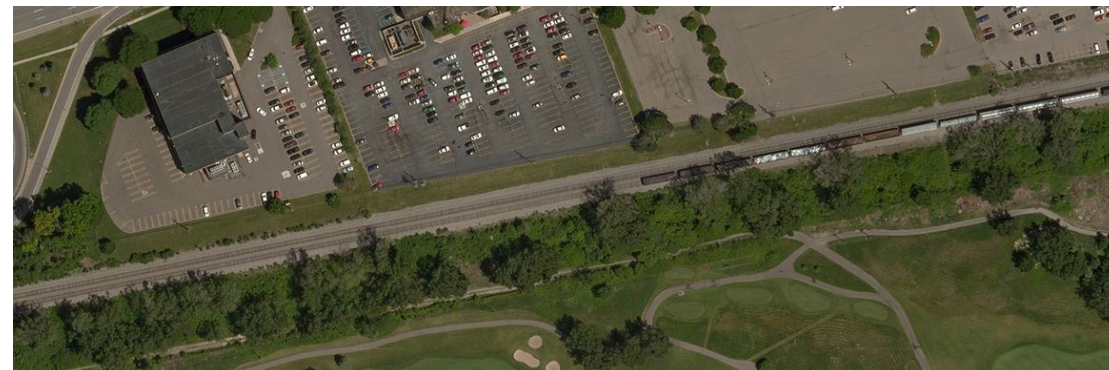
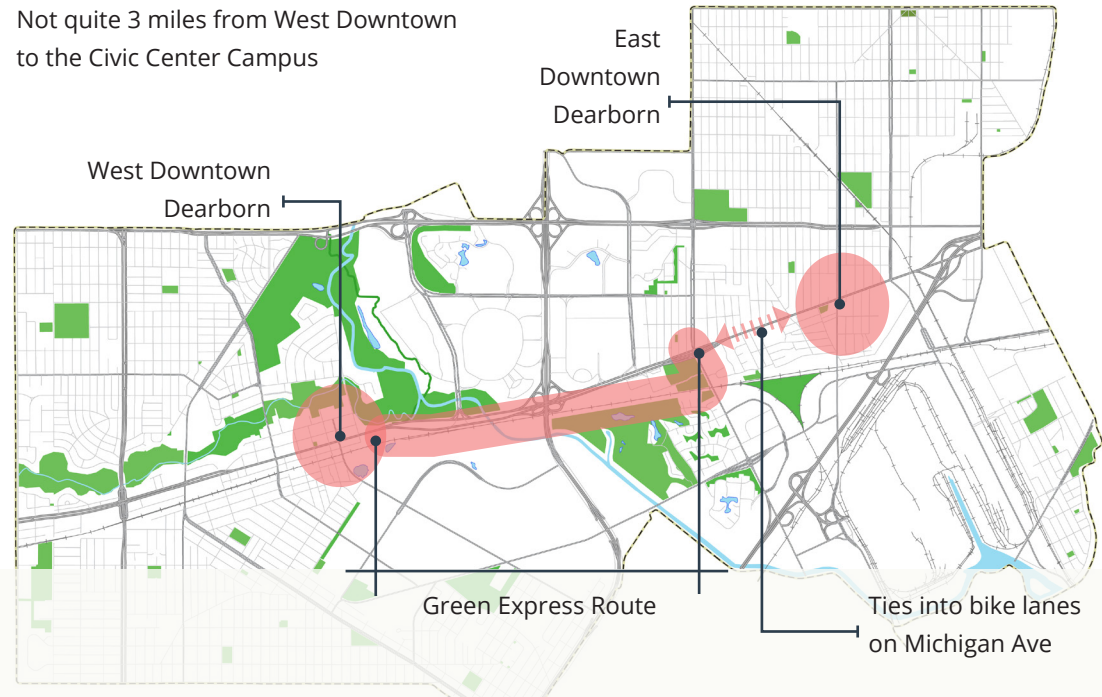


Green Express Route Corridor

The Green Express Routes are envisioned as an alternative to busy Michigan Avenue. The route would link the east and west downtowns and community resources located between. This corridor addresses one of the most challenging links in the city for micro-mobility users and pedestrians. It bypasses Michigan Avenue's free flowing access ramps, noise, and air pollution to offer an attractive alternative.

Location

Not quite 3 miles from West Downtown to the Civic Center Campus



Key Elements

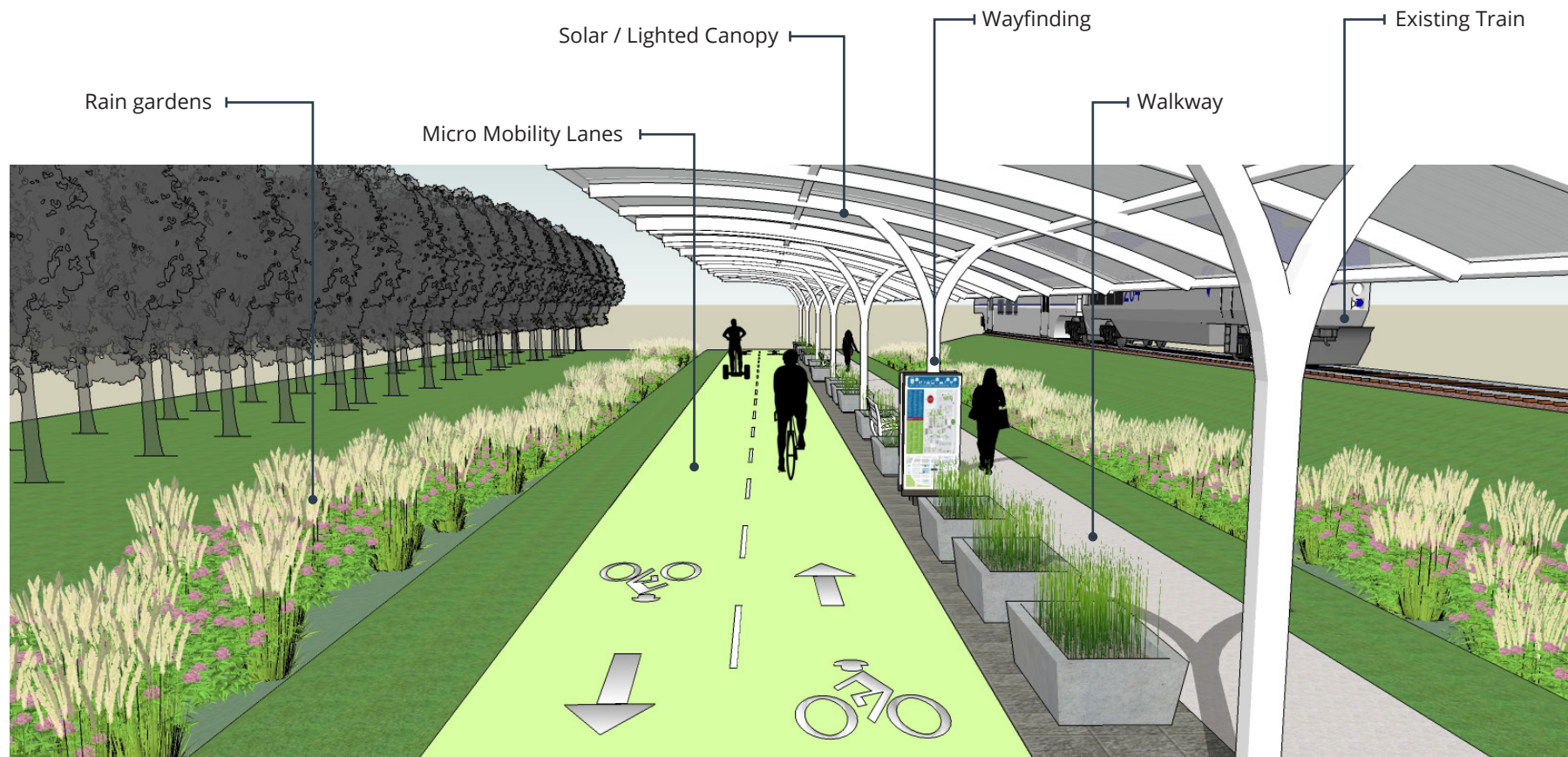
While this is still at the design concept stage, the following elements are the key elements that distinguish the Green Express Route from a typical greenway trail.

- ➔ An all-season community concourse for people who walk, bike or use micromobility devices
- ➔ Separation of pedestrians and micromobility users
- ➔ Grade separation of crossings or signalized crossings of busy roads and avoidance of free flowing access ramps
- ➔ Incorporation of solar panels, lighting, security cameras, stormwater management, wayfinding, interpretive signage, and community art
- ➔ Coordinated with bike and scooter share systems at key destinations

Proposed Detailed Corridor Study

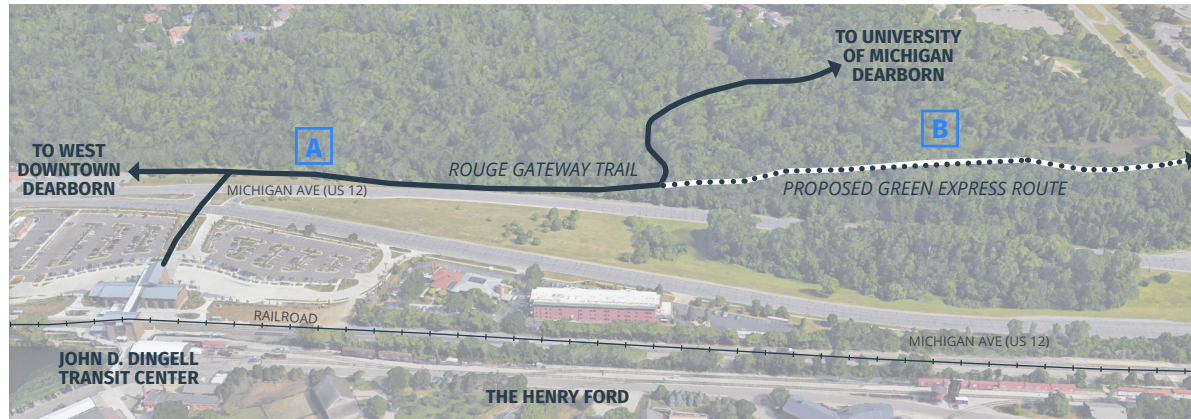
This is a concept only. The area should proceed with a detailed planning and design to move toward becoming a "shovel ready project."

A New Type of Transit Express Route



The Green Express Route may be thought of as designated transit express route, but with ebikes, scooters, bicyclists, and pedestrians replacing scheduled transit service with a shared vehicle. On either end of the corridor and at key points in between, ebike, bike and scooter share stations can provide on demand and inexpensive transportation options for people to make point-to-point trips 24 hours a day, 7 days a week. A separate walkway is provided so pedestrians do not feel threatened by the faster moving bicycle and micromobility devices.

The objective is to create a new type of transportation corridor that is attractive, safe, comfortable, and convenient. The expense is in the construction of the corridor, the vehicles that use it are inexpensive. Located for much of its distance along the river, through natural areas, and along the civic center, the experience will be considerably more pleasant than located along a busy road. It will be attractive to both commuters and recreational users.



Green Express Route Preliminary Routing Overview

A. Enhance the Existing Rouge Gateway Trail

B. Continue Green Express Route on south side of Rouge River

C. Under Evergreen Rd on south side of River

D. Bridge over Rouge River to the north side of the River

E. Under Michigan Avenue on the northeast side of the river

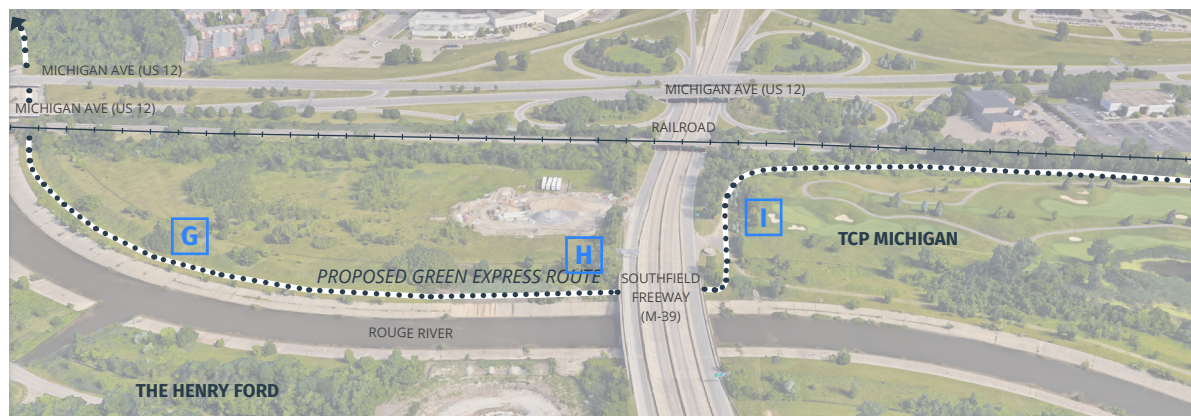
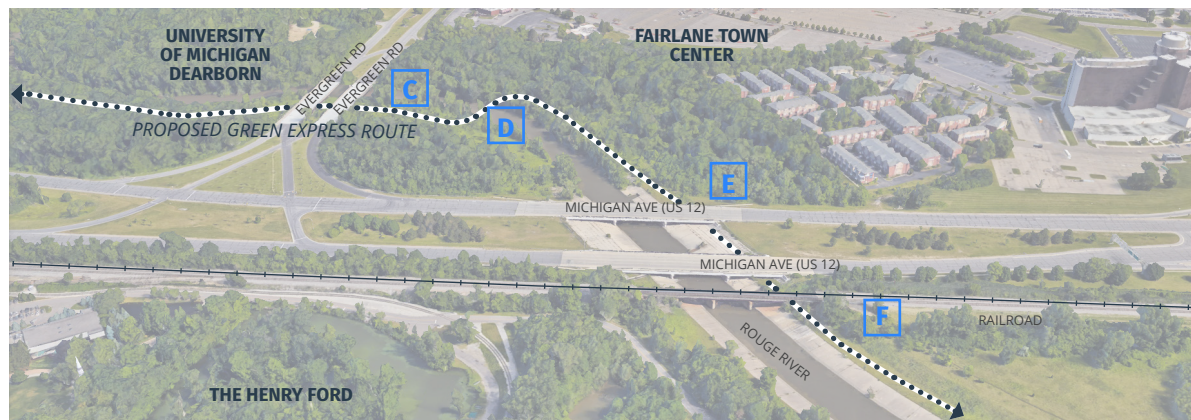
F. Under the railroad on the northeast side of the river

G. Follow the north riverbank on the bench just above the concrete

H. Under the Southfield Freeway (M-39)

I. Follow the existing maintenance road on the east side of the Southfield Freeway (M-39)

J. Follow the existing maintenance road between the railroad and the golf course



K. Follow the existing maintenance road between the golf course and the railroad

L. Construct a railroad over or underpass between the City Administration Building and the Library

M. Follow the north side of the railroad within the City property

N. Work the pathway through the center property up to Michigan Avenue

O. At Evergreen Road, transition the Green Express route to separated bike lanes on the Michigan Avenue ramps to Evergreen

P. Separated bike lanes along Michigan Avenue

Note

The preliminary route was chosen after the evaluation of many alternative and field investigations. It represents the most feasible and desirable option studied to date but the route requires further detailed study beyond what has been evaluated during this process.

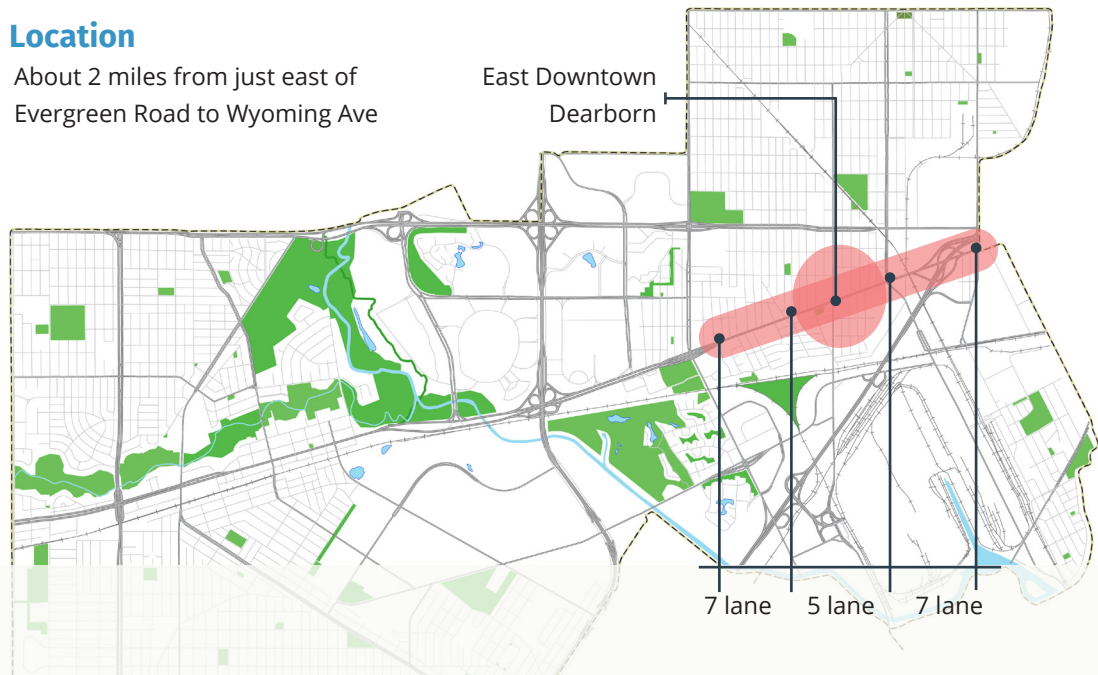


Michigan Ave - East

On the east side of the City, Michigan Avenue transitions from 7 lanes, to 5 lanes, and back to 7 lanes in the span of 2 miles. Just east of Dearborn, Michigan Avenue transitions again back to 5 lanes. The flip-flopping of cross sections serves no purpose and the frequent transitions cause their own issues. Peak hour congestion in the East Downtown is the result of back-up at traffic signals not the through lane capacity.

Location

About 2 miles from just east of Evergreen Road to Wyoming Ave

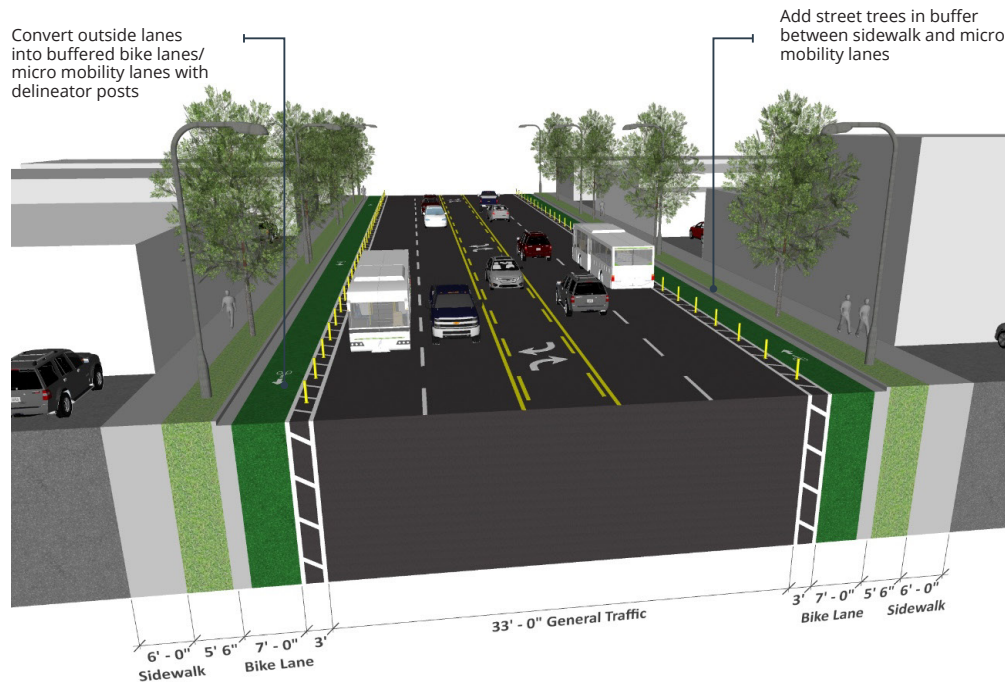


Issue and Opportunity



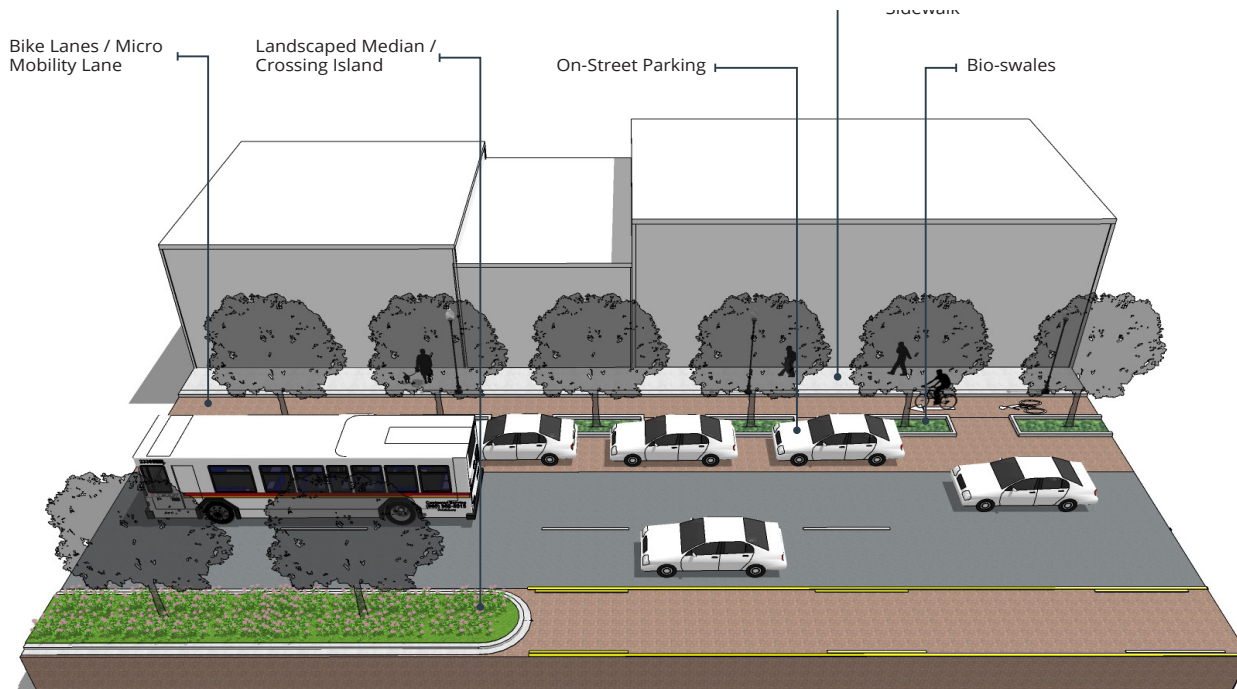
The 5 lane section of Michigan Avenue between Schlafly and Oakman Blvd has the same right-of-way and building setbacks as the 7 lane sections on either side. The DDA has expressed a desire to update the streetscape in this section in the near-term. This 5 lane section is also a major block in the ability to construct a continuous east-west bicycle facility along the Michigan Avenue corridor as there are not any parallel route options. By reworking this section there is an opportunity to create a consistent cross section through East Downtown Dearborn.





Michigan Avenue East (7 to 5 Lane Conversion) Proposed Near-Term Improvements

There are two portions of Michigan Avenue in East Downtown Dearborn that have seven lanes. Segment A is between Firestone Street and Schlaff Street. Segment B) is between Oakman Boulevard and the I-94 Interchange. Concurrent with the addition of Micromobility Lanes on the ramps to Evergreen Road, Segment A should be converted to five lanes with buffered Micromobility Lanes. Segment B should be completed with either the extension of the separated Bike Lanes in the City of Detroit to Dearborn or the proposed Streetscape and Multimodal Long-term Improvements noted below.



Potential Streetscape & Multimodal Long-Term Improvements

This area currently has on-street parking and nearly constant commercial frontage constructed up to the ROW line. The current sidewalks are wider than necessary and have large planters. The street could be reconfigured to accommodate separated micro mobility lanes while maintaining on-street parking/drop-off areas and five lanes of traffic. The concept sketch also proposes the introduction of landscaped medians and bio-swales with street trees.

Proposed Detailed Corridor Study

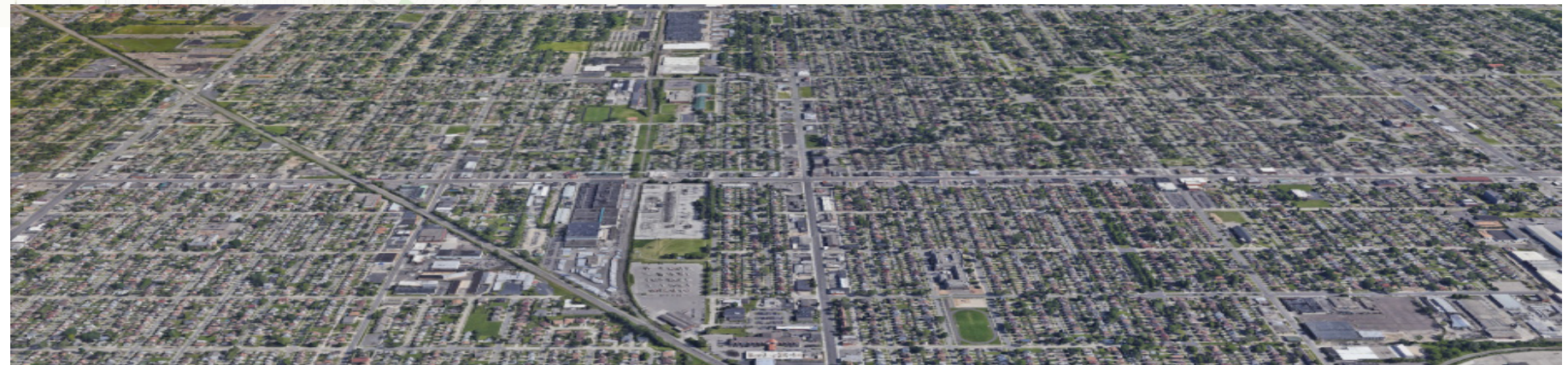
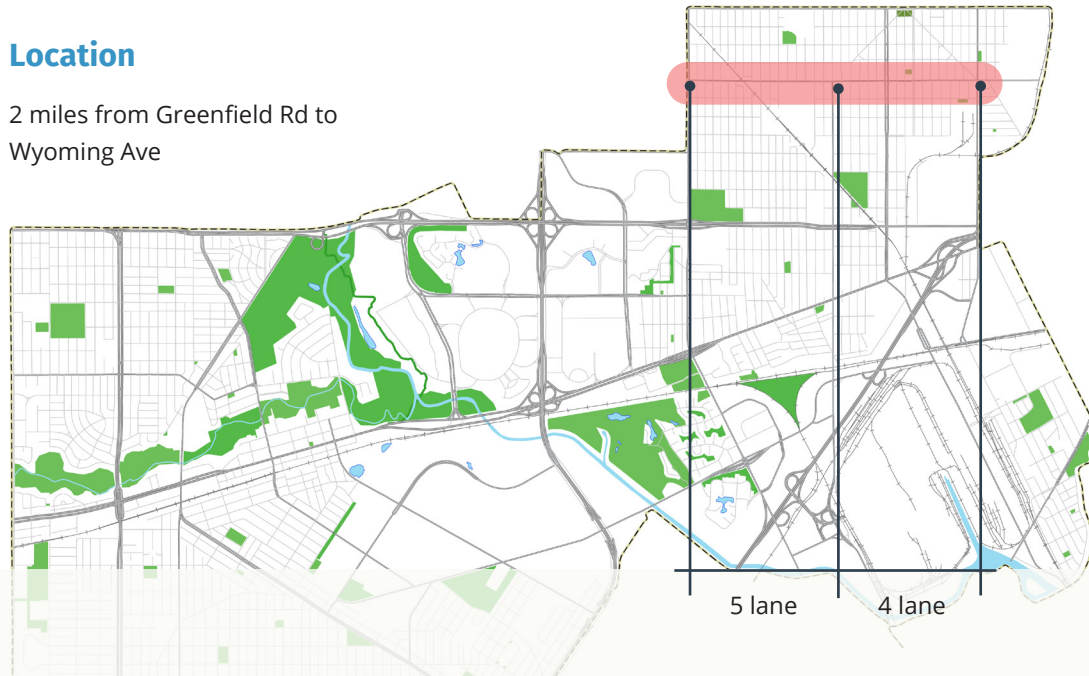
This is a concept only. The area should proceed with a detailed streetscape and phasing plan to move toward becoming a "shovel ready project."

Warren Avenue Corridor

Warren Avenue is a 4 to 5 lane commercial strip corridor on the north side of Dearborn. The buildings are primarily comprised of older two-story buildings and newer one-story structures interspersed with surface parking lots. Much of the corridor is serviced by alleys. While it has significant commercial activity, the corridor currently does not have a place identity on par with East or West Dearborn.

Location

2 miles from Greenfield Rd to
Wyoming Ave



Ready for an Update



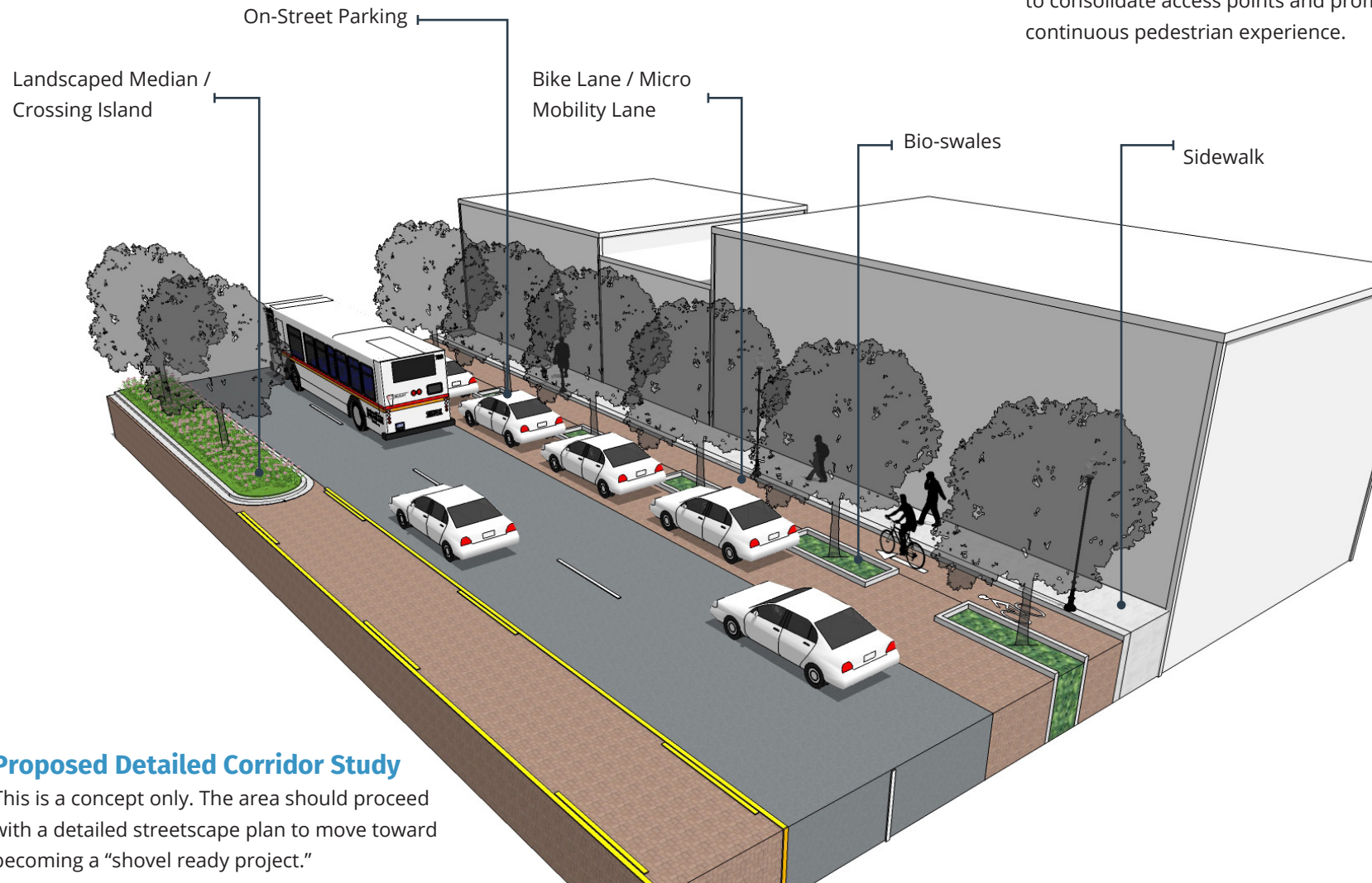
The road changes from primarily 4 lanes west of Schaefer Rd to 5 lanes to the east. The additional lane corresponds with an uptick in traffic volume east of Schaefer Rd. The existing traffic volumes and street widths preclude any near-term conversions to add micro-mobility lanes and there are not any good parallel route alternatives. The existing streetscape on Warren is fairly basic with colored concrete curb extensions and limited street tree plantings and are due for a makeover.

Potential Streetscape & Multimodal Long-Term Improvements

Beyond making the street more multimodal, reconfiguring the Warren Corridor offers the opportunity to enhance the business district and address storm water management. The proposed design concepts include separated micro mobility lanes, bioswales, and pervious pavement in parking, center turn lanes, and micromobility lanes.

Building a Stronger Identity

One of challenges of the Warren Corridor is that the building frontage is frequently interrupted by intersecting streets and surface parking lots. A more detailed plan should look at the potential to consolidate access points and promote a more continuous pedestrian experience.



Proposed Detailed Corridor Study

This is a concept only. The area should proceed with a detailed streetscape plan to move toward becoming a "shovel ready project."





4

POLICIES, PROGRAMS, METRICS + STUDIES

Implementing a robust multi-modal system in the City can not be accomplished with infrastructure improvements alone. During the development of this plan, a number of policies, programs, metrics and studies were discussed. The elements on the following pages are of equal importance to the various infrastructure recommendations discussed in Chapter 3.

Polices set the stage, programs promote safety and use, metrics help guide future improvements and studies will keep key projects moving forward.

Policies

Multimodal transportation does not fall under the domain of one person, one department or even one agency. The recommended policies will set the stage for implementation of the proposed physical improvements, programs, and metrics.

The following is not an exhaustive list, but rather focuses on the policies that should be addressed over the next five to ten years. *The most critical policy is the Complete Streets + Vision Zero Ordinance, a first draft of which is included in the Appendix.* This ordinance will direct the staff to undertake action on the other policies mentioned in this section.



Complete Streets + Vision Zero Ordinance

Adopt policy that places human life paramount and establishes that safe, comfortable, convenient, and accessible transportation for all users is a priority for the City. Then establish the necessary inter-departmental coordination, roles and responsibilities, and performance measures to implement the policy.



Multimodal Transportation Board

Establish a new citizen board or commission to review transportation project designs and transportation funding decisions to provide public oversight in the implementation of the Complete Streets and Vision Zero Ordinance, the New Mechanism for Transportation Funding and tracking of metrics.



Sidewalk + Pathways Maintenance

The City should assume responsibility for the construction and maintenance of sidewalks and pathways within the public ROW as well as responsibility for snow removal on sidewalks and pathways along the primary roads. Property owners will be responsible for timely snow clearance from sidewalks adjacent to their properties.



New Mechanism For Street Funding

Pavement condition is a major concern of residents and the construction of new facilities can not come at the expense of road resurfacing. Set up a combination of a special millage, bonding, and general fund allocation with well-defined objectives and oversight to implement the multi-modal plan.



Best Practice Training

Multimodal transportation planning is a rapidly advancing field with new guidelines and research constantly being introduced. City staff and Multimodal Transportation Board members should be encouraged to attend conferences, join organizations, and attend training sessions to keep up-to-date with best practices.



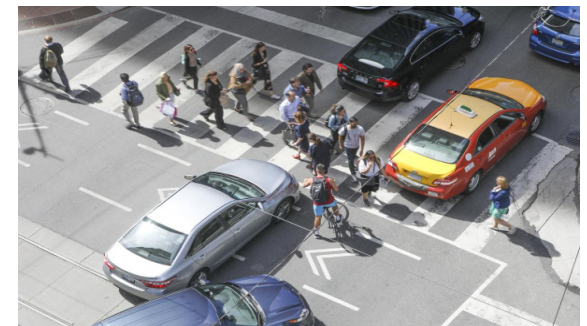
Americans with Disabilities Act Transition Plan

Assess the existing pedestrian network for ADA compliance. Develop a system to respond to complaints of inaccessible routes. Implement proactive measures to eliminate barriers to key public destinations within the city.



Bike Parking

Establish a program to install additional permanent and seasonal bike parking in commercial districts. Create a bulk rack purchase, technical assistance and cost-sharing program to assist other businesses install bike parking. Require bike parking to be included as part of all new developments.



Downtown Intersection Safety Improvements

Restrict right-on-red turns in the East and West downtowns to reduce motor vehicle crashes with pedestrians in crosswalks. Establish fines, sign, and enforce motor vehicles that block crosswalks and intersection.



Managing Shared Vehicle Space

The rapidly expanding shared and autonomous vehicle economy depends on available public curb space and sidewalk space to function. Define where these vehicles can be parked when not in use, where and how long they may idle at a downtown curb, and how the City collects revenue from the services for providing the necessary infrastructure.



Speed Management

Implement speed management measures on streets where the 85-percentile speed exceeds the posted speed limit on residential streets, school zones or where the majority of residents and business owners make a request to the City. For road reconstruction projects determine the desired speed and then design the road such that traffic naturally flows at the desired speed.



Sidewalk and Crosswalk Lighting

Evaluate the existing lighting levels on sidewalks along major roadways and existing crosswalk locations and develop a prioritization system to upgrade lighting for deficient locations. Special emphasis should be placed on providing lighting at unsignalized crosswalks to make sure that pedestrians crossing the street are visible to motorists.

Programs

Changing firmly established transportation patterns does not happen overnight. Programs introduce people to new facilities and new ways to travel.

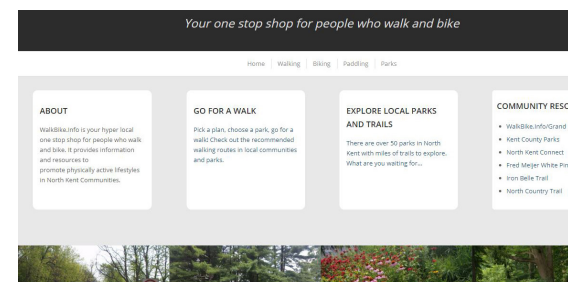
With all of the programs, one overarching theme should prevail - seeing all users of the roadway as fellow human beings deserving respect and consideration.

No single program has the ability to change the culture. But all of the programs working in concert can create a drumbeat of change.



Use SEMCOG's WalkBikeDrive Safe Program

Southeast Michigan Council of Governments has created a program with tip cards, posters, videos, story templates, and media kits in multiple languages including Arabic. These ready to use materials can be integrated into the City's education efforts.



Multimodal Information Website

Create a hyper local website that provides information on the City's walking and bicycling routes, vehicle sharing services and transit options where residents and visitors alike can easily plan trips.



Grand Opening Events + Outreach

The completion of a project is an opportunity to introduce the public to new facilities in the controlled environment of a special event and raise awareness on how to safely use something they may not be familiar with.



Education Paired with Enforcement

As new and unfamiliar facilities come online there will be confusion on issues such as who yields to whom. Initial action should be education based with no penalty that educate with flyers on why they were stopped. After an introductory period, focused enforcement should be employed as needed.



Continue Community Walk N' Roll

Continue Healthy Dearborn's and Bike Dearborn's outstanding Walk n' Roll programs and use the weekly event to introduce riders to new facilities and routes.



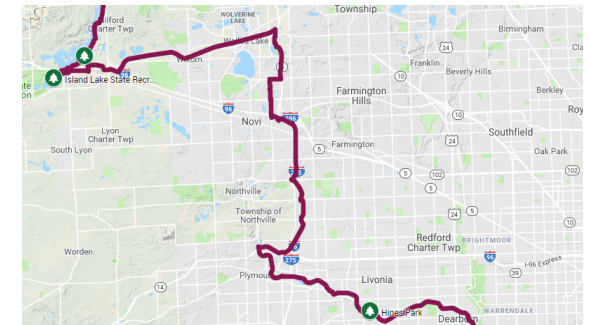
Traffic Laboratory

In the spirit of innovation long tied to Dearborn, set up an ongoing program to test new ideas and evaluate how successful these are. Brand the effort so that the community understands when an experiment is happening and provide a forum for community discussion.



Multimodal Information Hubs

At key junctures around town, coordinated with transit and ride share concentration points, establish information hubs that map out routes, provide links to online information, and provide information on events (e.g. John D. Dingell Transit Center).



Ride to Camp Dearborn

By Fall 2019, there will be a 52 mile off-road trail bike route connecting the City of Dearborn to Camp Dearborn. This offers the opportunity to create two signature events: a half-century ride (1-way) and century ride (2-way).



Commuter Challenge Program

Promote and track a friendly competition between local businesses that focus on encouraging active transportation trips to work.



Safe Routes to School Program

Establish school programs with a focus on walking school buses and bike trains that promote safe active transportation to schools. Use the school-based programs to also reach out to parents to teach key safety issues.

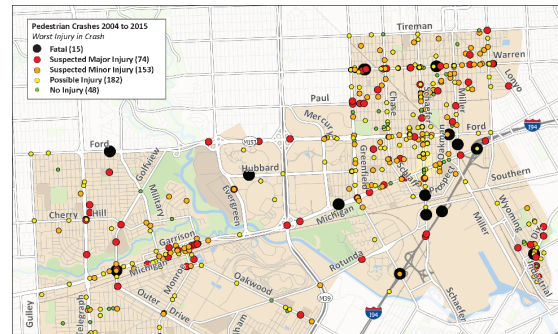


Integrated Real-time Transit Information

Work with public and private transit providers and third-party software developers to establish an integrated tool that makes trip planning easier and provides information to both smart phones and public displays.

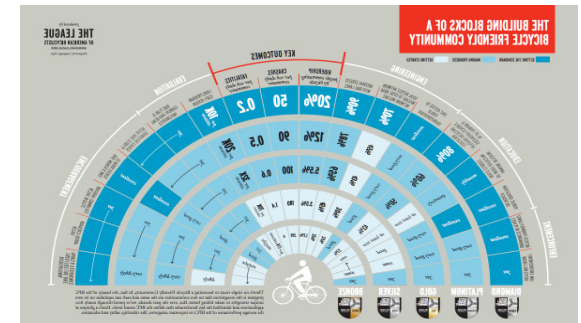
Metrics

Multimodal transportation planning is an iterative process that requires revisiting the policies, physical improvements, and programs on a regular basis and adjusting plans accordingly. Effective ways to measure the progress are necessary as the community decides how to invest in its community. The recommended metrics are a combination of hard numbers, community sentiment and benchmarking against peer cities.



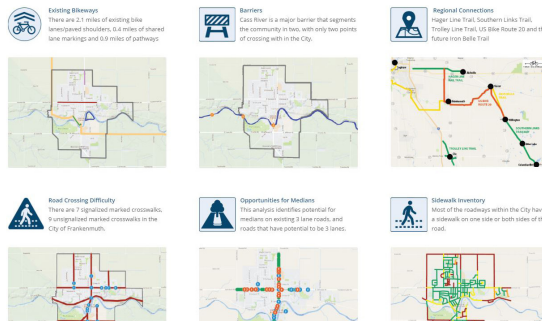
Crash Rates

A yearly evaluation of pedestrian and bicycle crashes will help identify how well new facilities are working and what changes should be made. It will be impossible to tell if a facility is more or less safe without a traffic count program that allows an evaluation of rates.



Community Recognition Programs

The League of American Bicyclists has a Bicycle Friendly Community program that looks at a community's Enforcement, Education, Engineering, Outcomes, Evaluations, and Encouragement programs and then assigns levels of community recognition awards. Each year the community can apply for a higher rating as conditions improve.



Community Dashboard

Create and update a website and printed reports that track progress on implementing the multimodal plan. This would include statistics such as mileage of new infrastructure, the number of new and improved pedestrian crossings, crash rates, and number of people participating in programs.



Community Surveys

Set up a yearly resident survey that measures community use of and satisfaction with the multimodal transportation system. This survey may be used to make mid-course corrections and refine community priorities.



Traffic Count Program

Establish permanent automatic counters for pedestrians, bicyclists, and micro mobility vehicles along major new facilities. Set up a program where temporary traffic counters are rotated around the city to key destinations on a set schedule. Coordinate these efforts with state and regional count efforts. Establish baseline counts prior to the creation of new facilities.

Studies

The Strategic Implementation Plan identified study areas that should proceed with the next level of planning. These studies are critical to establishing a continuous multi-modal network in the city. Two of them, Warren Avenue and East Michigan Avenue share many commonalities and would benefit from a joint study and improvement.

The studies should engage the community in the final design and then proceed toward creating construction documents. The goal being having four “Shovel Ready Projects” that would be attractive to federal and state funding sources. While these projects should also seek traditional funding opportunities, they would be ideally suited to new infrastructure grant programs or redirected funding that require ready to go projects to be completed within a very short time frame.



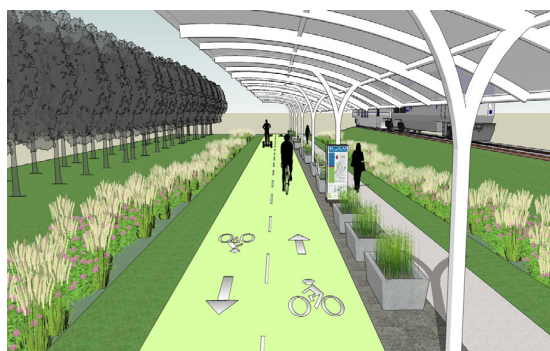
DDOT / SMART Dispersed Transfer Locations

Currently all DDOT / SMART Transfers occur on the east side of Fairlane Town Center. Evaluate a dispersed transfer approach that would use locations on Ford Road, Henry Ford College, UM Dearborn, South side of Fairlane Mall, and the John D. Dingell Transit Center. This could be modeled after a similar project done in Southfield.



Warren Avenue

Greenfield Road to Warren Avenue.



Green Express Route

From the John D. Dingell Transit Center to Evergreen Road.



East Michigan Avenue

From Schlaff Road to Oakman Boulevard.



APPENDIX

The projects website:

<https://walkbike.info/dearborn>

includes a detailed digital appendix with a wealth of information on how the plan was developed and supporting materials including the following:

Advisory Committee Meeting Materials

- Agendas
- Notes
- Presentations

Spring 2018 Public Engagement

- Meeting Materials
- Results

Fall 2018 Public Engagement

- Meeting Materials
- Results

Cost Estimates

- Cost Estimate Technical Memorandum
- Route Cost Breakdowns
- Unit Prices

Detailed Supporting Materials

- Inventory + Analysis Maps
- Geographic Information System
- Traffic Analysis Technical Memorandum
- Draft Complete Streets and Vision Zero Ordinance

Large Format Plan

- Strategic Implementation Plan
- Near-term Enhancements
- Long-term Vision