

DIVISION
UNITED



MOBILITY & CONNECTIVITY TOOLKIT

DIVISION UNITED



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01

INTRODUCTION

1.0 DOCUMENT ORGANIZATION

This Mobility and Connectivity Toolkit, prepared for Division United, is meant to provide broad guidance on the tools and options currently available to support accessibility and mobility for all modes on South Division Avenue. This Toolkit should be used in conjunction with the Incremental Development Toolkit, the Economic Development Toolkit, and the Placemaking Toolkit, also prepared for this project. It also informs strategies for the Transit Oriented Development (TOD) Framework and the Station Area Plans.

The document that follows has six sections.

- **Section 1** provides background and an overview of the South Division corridor and mobility related challenges.
- **Section 2** explains the format of recommendations and provides a short 'how to read this' visual guide.
- **Section 3** is a list of 11 recommendations that can be leveraged to support safety, walkability, and mobility in the corridor.
- **Section 4** shows proposed improvements and recommendations at the Zone level (Zones cover 2-4 station areas and show the context around the study area).

- **Section 5** shows proposed improvements at the station level.
- **Section 6** visualizes these changes in 3D and section views at three key intersections.

These recommendations, while not exhaustive, provide detail on interventions that might be considered within the cities of Grand Rapids, Wyoming and Kentwood. Certain strategies may work better in some locations than others along the corridor. For example, there may be differences between strategies used in the more urban northern part of the corridor and the more suburban portion of the corridor. Each municipality will also operate differently as a result of differing policy or community preferences.

1.1 AN OVERVIEW OF CORRIDOR CHALLENGES

The South Division corridor is well over 150 years old and has seen significant changes in the modes of mobility occurring in the street.

In the early 20th century, bicycles, pedestrians, trams and early autos shared the unpaved street without signalization. In the 1920s, Division Avenue was Grand Rapids' busiest commercial corridor. It was so busy that the city undertook a street

CORRIDOR CHALLENGES



FREQUENCY AND
RELIABILITY



SUPPORT FOR STUDENT
MOBILITY



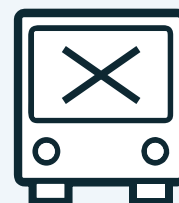
LIMITED CUSTOMER
INFORMATION



NEED FOR MULTIMODAL
CONNECTIONS



LACK OF SAFE CROSSINGS



A STIGMA AGAINST
TRANSIT

widening project in the 1930s between Wealthy Street and Hall Street to alleviate congestion. Around the same time, Grand Rapids paved all downtown streets and replaced its electrified street cars with buses. By the 1950s, signalization and electric lights were extending down South Division as far as Alger Street.

Until recently, the focus of these long term changes has primarily been on increasing vehicular access

and speed in the corridor. Road widening and surfacing and improved lighting have made it easier for cars to travel down South Division, and also made it easier for them to go faster. Investment in the Silver Line BRT service has helped to prioritize transit, but the vehicular orientation of South Division continues to impact adjacent businesses as well as the public realm and quality of the street edge. This toolkit considers the long term impacts of prioritizing vehicles over people, and the need to

reverse this trend through policy and design. Below is a list of six additional issues on South Division that have emerged from discussion, research, and engagement in the corridor:

1. The frequency and reliability of the Silver Line bus service, especially during off-peak times, is affecting ridership. Before the pandemic, on-time performance on the Silver Line dropped from 75% during the day to 53% during the evening rush hour (3-6pm). As we emerge from the pandemic, ensuring high on-time performance will be essential. Once buses begin to run late, it's very difficult for the following trips to recover.

2. Safe crossings for pedestrians and cyclists is needed. In 2018, a total of 1,352 crashes occurred in the study area: 3 were fatal, 20 caused serious injuries, and 59% occurred at an intersection. This included 28 pedestrians (including 2 pedestrian fatalities), and 15 bicyclists. Nearly 70% of pedestrian- or bicyclist-involved crashes occurred at intersections, and there are especially high pedestrian crash concentrations at Burton and 28th. Slower speeds on South Division as well as safe crossing options are needed to improve safety.

3. A lack of multi-modal infrastructure affects pedestrian and multi-modal options, as well as last mile connections to transit at key intersections. This is especially important because there are a significant number of zero-car households located

in the study area (At Hall Street, 30% of households do not have access to a car). This indicates that connections for modes besides the car are needed to enable residents to get where they need to go.

4. Customer information, rider instructions, and way-finding is needed to enhance transit service use. Mobile meeting participants requested bilingual and improved signage and bilingual rider trainings. Some residents do not understand the basics of how to use the Silver Line and there are cultural and language barriers that need to be overcome to support their ridership.

5. Students constitute a large ridership group, and would be one of the main beneficiaries of mobility improvements. Many students ride the bus to the handful of schools located directly along South Division Avenue and the need for improved walking conditions around schools would support these riders.

6. The stigma against using public transit is real and needs to be overcome for the bus to be successful. Mobilizing, empowering, and catering to transit-dependent people through incentives, opportunities, education, and greater transparency can support use and reverse stigma.



POP-UP BUS SHELTER FROM
BETTER BLOCK ACTIVITIES,
OCTOBER 2020

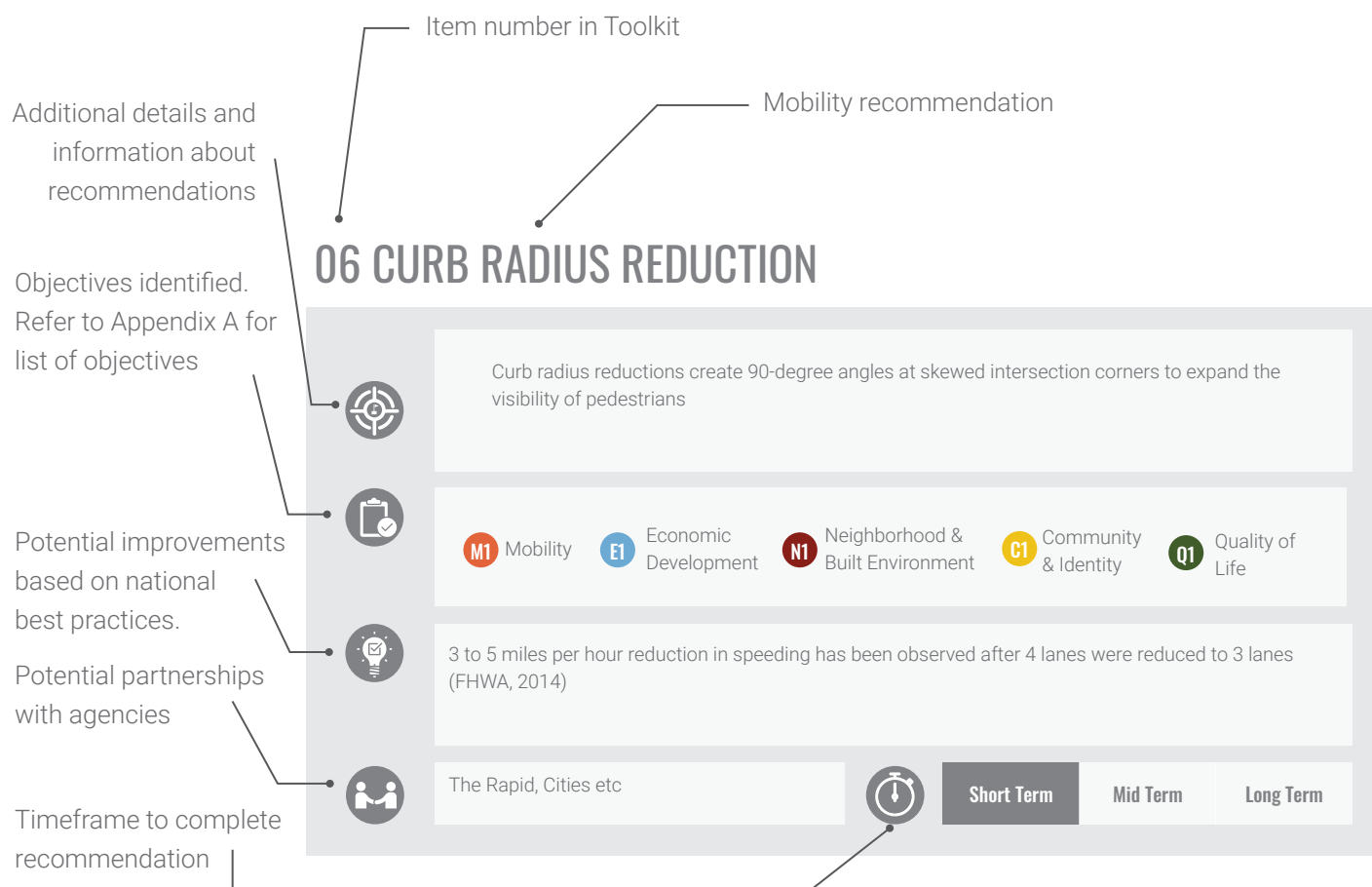
The Mobility and Connectivity Toolkit attempts to address these issues in the pages that follow through a combination of projects, policies, and programs than can be implemented on South Division Avenue.

02

HOW TO READ TOOLKIT ITEMS

Each toolkit entry begins with the proposed recommendation. Beneath this are shown the project objectives fulfilled by this recommendation, as well as the specific improvements and outcomes expected. This section also includes the area partners that can be involved in implementation (including state transportation agencies and municipal public works departments) and the time frame in which the intervention may occur. Short

Term refers to 1-5 years, Mid Term is 5-10, and Long Term is 20+ Finally, each entry also includes a best-practice case study to illustrate how the improvement has been successfully implemented elsewhere or a featured resource for more information. For more details, see the “How to Read this Guide” graphic below for an explanation of specific icons used for each item.



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03

MOBILITY & CONNECTIVITY RECOMMENDATIONS



BUSES ON SOUTH DIVISION IN 1935
GRAND RAPIDS PUBLIC LIBRARY

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01 RE-ALLOCATE ROAD SPACE



Program

Space within the South Division corridor is currently prioritized for personal autos and should be re-balanced to better accommodate transit and active modes. Specific opportunities include:

- Converting the outside travel lanes on South Division Avenue to painted, all-day bus lanes, starting in segments that already have peak-period bus lanes (generally north of 44th Street) and expanding to other areas and intersections based on further engineering studies.
- Reducing lane widths to 10'-11' on cross-streets, and also potentially 11' for internal and turn lanes for South Division (given that this is a National Highway System route, a design exception may need to be pursued). Under the City of Grand Rapids Vital Streets Design Standards, lane widths are only allowed at 11' for heavy trucking and transit, otherwise 10' lanes are required.
- Physically narrowing local or major cross streets by expanding sidewalks or landscaped areas.

The implementation of these strategies will vary by location along the Division Avenue corridor and on cross and parallel streets, and may require engineering and safety studies and implementation through the Bicycle Action Plan.



Objectives

M1 M11 M13



Improvements

Reductions in speeding have been observed in previous projects that narrowed the number or width of lanes (FHWA, 2014).



Partners

The Rapid, local planning and engineering departments, community stakeholders



Timeline

Short Term

Mid Term

Long Term



Davetro Te Zajac for the Record-Journal

Location: Hartford, CT

Best Practice: CTfastrak is a dedicated 9.4-mile busway with connections to the rail network of the Hartford, CT region. CTfastrak has nearly doubled ridership on the corridor (from 8,500 daily riders to 18,000 weekday riders) and reduced travel times between Hartford, CT and New Britain, CT from 52 to 26 minutes. Amenities for pedestrians and bicyclists include a 5-mile multi-use trail, low floors for wheelchair and bicycle access, indoor bicycle racks, and stations with heating, glass windbreaks, wooden seating, lighting and real-time information displays. Zoning reforms attracted three affordable housing projects for the disabled, homeless and veterans, with parking minimums eliminated in some jurisdictions.

02 CURB EXTENSIONS AT INTERSECTIONS



Program

Curb extensions narrow the roadway for safer crossing distances and speeds with an extension of the curb or sidewalk into the street in the form of a bulb that makes pedestrians and drivers more visible to each other. Along South Division, curb extension opportunities are primarily limited to locations where right-turn or parking lanes exist near intersections. Adjacent to Division Avenue, on designated low volume and low speed streets, curb extensions can create a bicycle boulevard which has been optimized for bicycle travel through treatments such as wayfinding signage, pavement markings, and intersection crossing treatment. Curb extensions can create space for stormwater management infrastructure like bioswales or rain gardens, and for pedestrian, bicycle, and transit amenities like street furniture, recycling or compost stations, and bicycle parking and repair stations.

Emergency access is often improved through the use of curb extensions, as intersections are kept clear of parked cars. Fire engines and other emergency vehicles can climb a curb where they would not be able to move a parked car. In addition, at mid-block locations, curb extensions can keep fire hydrants clear of parked cars and make them more accessible. Finally, curb extensions can improve safety for pedestrians by preventing parking too close to corners (self enforcing), which reduces ticketing, slows turns, and lessens sight distance issues from improperly parked cars.



Objectives

- M3
- M6
- M7
- M8
- M11
- M12
- M13



Improvements

23-48% reduction in crashes and 2.6 miles per hour reduction in speed is estimated through these measures, based on reviews of residential areas and in areas where high-speed rural highways transition into rural communities (FHWA, 2018 and ITE, 1999) and **50% to 88% fewer total crashes** on bicycle boulevards compared to parallel, adjacent arterial routes (Fehr and Peers, 2018).



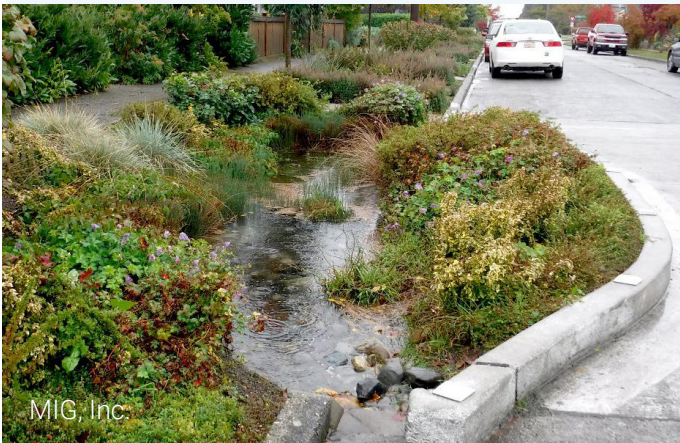
Partners

The Rapid, local planning and engineering departments, community stakeholders



Timeline

Short Term	Mid Term	Long Term
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MIG, Inc.

Location: Seattle, WA (Barton CSO Control Project)
Best Practice: Together, this network of 93 roadside rain gardens embedded within curb extensions feature native and drought-tolerant plants and are estimated to divert 6 million gallons of stormwater annually from entering the county's combined sewer overflow (CSO).

03 RAISED CROSSWALKS AND SPEED TABLES



Program

Elevating pedestrian crossing areas with mountable physical barriers on local roads adjacent to South Division Avenue can reduce vehicle speed and provide a better view of pedestrians and motorists in the intersection and/or crossing area. While raised crosswalks may not be appropriate on South Division, they are applicable throughout local neighborhoods, wherever vehicle speeds are a concern.

Specifically:

- Raised Crosswalks: the pedestrian crossing area is raised above normal pavement surface level.
- Speed tables: wider flat-top speed humps and are gentler on vehicles. They have a lower slope that can handle relatively higher traffic volumes and speeds.

Raised crosswalks and speed tables could be used to manage traffic speeds on side streets around the Kroc Center school zones near 36th Street and 48th Street.

Note: Raised crosswalks at intersections can create stormwater drainage issues, snow-plow issues, and vehicular turning issues. Detailed designs would be required prior to approval.



Objectives

M6 M7 M11 M12 M13



Improvements

45% reduction in crash rates on average (ITE, 2018)



Partners

The Rapid, local planning and engineering departments, community stakeholders



Timeline

Short Term

Mid Term

Long Term



http://guide.safetutessinfo.org/engineering/raised_pedestrian_crosswalks.cfm

Featured Resource:

Learn more about raised intersections and other traffic safety measures from an engineer's perspective through the FHWA's Safe Transportation for Every Pedestrian (STEP) fact sheets: https://safety.fhwa.dot.gov/ped_bike/step/resources/

04 HIGH VISIBILITY CROSSWALKS AND ACCESSIBLE SIDEWALKS



Program

Clear, high-visibility roadway markings and accompanying devices like street lights and pedestrian signals should be placed at intersections and priority pedestrian links, located where motorists should expect pedestrians with sufficient sight distance and reaction time.

High-visibility crosswalks can demarcate legal pedestrian crossings that currently are unmarked or are low-visibility surrounding Silver Line stations and transfers to connecting routes.

Wherever possible (or as part of a larger reconstruction project), crosswalks should be completed in conjunction with other measures such as curb extensions to improve the safety of a pedestrian crossing. Crosswalks should be visible to all roadway users, particularly at night, should not be slippery, and should not create trip hazards.

Crosswalks and sidewalks should have pedestrian amenities including shade trees, access to benches, accessible drinking fountains and collection bins for recycling, compost and trash.

Curb ramps at intersection and mid-block crossings should be upgraded with ADA compliant detectable warnings, known as truncated domes, with a level landing (not exceeding a 2% grade in slope) and a pedestrian travel zone wide enough for people traveling with mobility aids like wheelchairs and service or guide dogs ranging between 5-10 feet (FHWA, 2004) between 6-10 feet (FHWA, 2004).



Objectives

M2 M6 M7 M8 M10 M11 M13 M12



Improvements

37% reduction in crashes at school sites in San Francisco, CA (FHWA, 2014).



Partners

The Rapid, local planning and engineering departments, community stakeholders

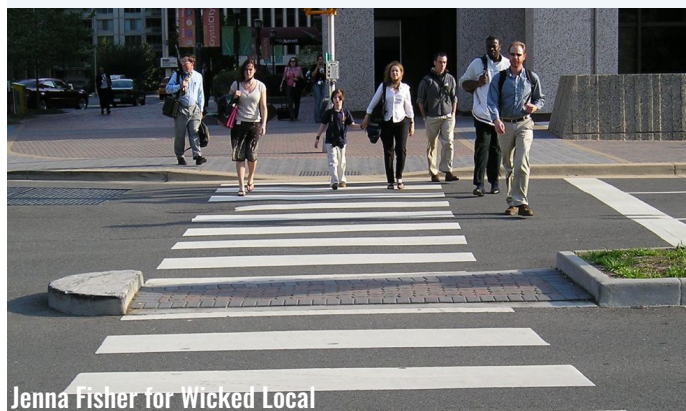


Timeline

Short Term

Mid Term

Long Term



Jenna Fisher for Wicked Local

Location: Brookline, MA (Emerald Necklace Park System)

Best Practice: In 2016, the City of Brookline partnered with the City of Boston, MassDOT, the metropolitan transit authority, and the Department of Conservation and Recreation to add a 12-foot-wide high-visibility crosswalk, new shared use paths, and other traffic calming measures to the six lane Route 9 roadway. Previously, pedestrians would have to travel 650 feet to the nearest crosswalk within this historic park system.

05 PEDESTRIAN REFUGE ISLANDS AND MEDIAN ISLANDS



Program

Raised medians to protect pedestrians include:

- Median Barriers: A raised area constructed between travel lanes through an intersection to block or discourage pedestrian crossings.
- Pedestrian Refuge Islands: A raised area in the middle of a crosswalk for pedestrians to stop while crossing street.

Median barriers can improve pedestrian, bicycle and disabled access by limiting left turns from the major street and through movements along the minor street. These will need to be studied on a case by case basis. Traffic studies for left turn movements would be required to ensure adequate left turn storage remains.

For mid-block crossings, new refuge islands may impact left turns into and out of nearby cross-streets and driveways, requiring coordination with adjacent land owners prior to implementation. Ensure that there is enough room for wider sidewalks, bike lanes, street furniture zones, and bus turning movements before proceeding with construction of raised medians.



Objectives

M2 M6 M7 M8 M10 M11 M12 M13



Improvements

5 miles per hour reduction in speeding was observed as part of a traffic calming project that included raised medians in rural Grand Junction, CO (FHWA, 2014).



Partners

Local planning and engineering departments, community stakeholders.



Timeline

Short Term

Mid Term

Long Term



Lyubov Zuyeva,
pedbikeimages.org

Featured Resource:

Learn more about pedestrian refuge islands, median barriers and 67 other measures from the federal safety perspective through the FHWA Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE): <http://www.pedbikesafe.org/pedsafe/>.

06 CURB RADIUS REDUCTION



Program

Curb radius reductions create 90-degree angles at intersection corners to expand the visibility of pedestrians, to reduce crossing distances, and to slow the speed of turning vehicles to prevent near-misses and collisions at the intersection.

Curb radius reductions can often be installed temporarily prior to being installed on a more permanent basis. A mountable truck apron raised 2 to 3 inches above the street can be added to accommodate emergency access vehicles. When designed, factors like turning radius of larger vehicles and stormwater drainage will be considered.

Intersections can be made safer for motorists and pedestrians alike by extending each curb to form a 90-degree turning radius. This will give pedestrians a shorter crossing distance while enhancing their visibility to motorists making right turns. Note: no art should appear in the ramp and crosswalk area for ADA access.



Objectives

M2 M6 M7 M8 M10 M11 M12 M13



Improvements

One of the common pedestrian crash types involves a pedestrian who is struck by a right-turning vehicle at an intersection. A wide curb radius typically results in high-speed turning movements by motorists. Reconstructing the turning radius to a tighter turn will reduce turning speeds, **shorten the crossing distance for pedestrians**, and also improve sight distance between pedestrians and motorists (NHTSA, 2016).



Partners

Michigan Department of Transportation, local planning and engineering departments, local police and fire departments, community stakeholders



Timeline

Short Term

Mid Term

Long Term



SDOT (Seattle)

Location: Seattle, WA

Best Practice: Since 2017, the City of Seattle's online Right-of-Way Improvements Manual has issued guidelines and specifications for low-cost engineering solutions for skewed intersections like this one, including this curb extension with public art and flexposts to tighten the curb radius.

07 ACCESS MANAGEMENT



Program

Access management includes strategies to improve the safety for all street users by reducing the number of conflicts between motorists and transit, pedestrians and bicyclists at driveways and side streets, including:

- Closing, consolidating, or improving of driveways, median openings, and intersections
- Adding or redesigning medians
- Spacing of intersections, median openings, and driveways

Since each driveway is a potential conflict point between motorists, transit, pedestrians, and bicyclists, driveway consolidation is another access management method used to improve safety. Where possible, combine closely spaced driveways and provide vehicle circulation off the main roadway.

Driveways can be consolidated at the Wealthy Street Station gas station and the Franklin Street parking lot, for example, to prevent potential conflicts between transit riders, pedestrians, and motorists at the sidewalk and allow for easier and more convenient bus stop placement. Any corner lot parcel on Division with multiple driveways can be consolidated.



Objectives

M1 M2 M6 M7 M9 M10 M11 M12 M13



Improvements

25-31% reduction in severe crashes along urban/suburban arterial roads (FHWA, 2020).



Partners

The Rapid, Local planning and engineering departments, police departments, and community stakeholders.

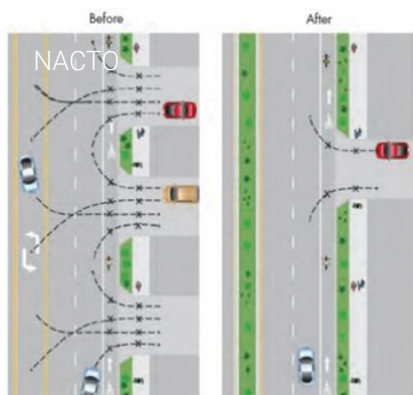


Timeline

Short Term

Mid Term

Long Term



Featured Resource:

The FHWA maintains resources on access management best practices, case studies and technical guidance through the Office of Operations:
https://ops.fhwa.dot.gov/access_mgmt/resources.htm.

08 LEADING PEDESTRIAN INTERVAL (LPI)



Program

Leading Pedestrian Intervals (LPIs) give pedestrians 3 to 7 seconds to start crossing the intersection before vehicles get a green light. This allows pedestrians to be more visible to turning vehicles. LPIs have also been shown to improve safety for bicyclists .

Implementation considerations include:

- Ensure visibility of pedestrian countdown timers and signs.
- Elderly pedestrians and disabled pedestrians may require longer crosswalk cycle lengths.
- Explore allowing bicyclist to cross during with the LPI signal.



Objectives

- M1
- M2
- M6
- M7
- M10
- M11
- M12
- M13



Improvements

In 2019, New York City announced that it will allow bicyclists to legally cross at the 3,494 intersections where the Leading Pedestrian Intervals have been installed (out of about 13,300 traffic lights overall). There was a **56% decrease in pedestrian and bicyclist fatalities and serious injuries** at intersections in New York City with LPIs (New York City DOT, 2016).



Partners

MDOT, local planning and engineering departments, local police departments, community stakeholders

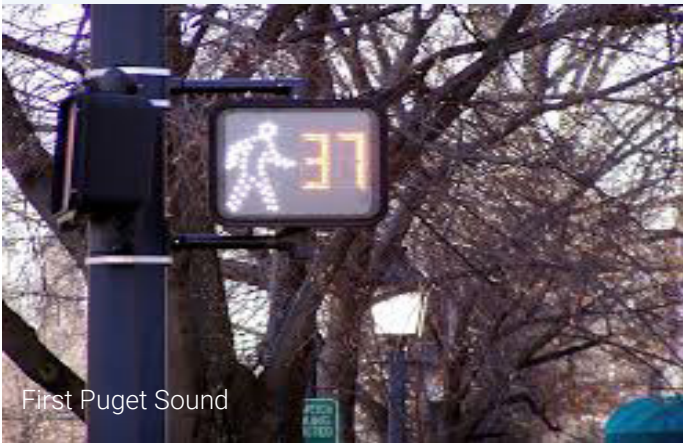


Timeline

Short Term

Mid Term

Long Term



First Puget Sound

Location: Seattle, WA
Best Practice: In 2019, the Seattle Department of Transportation (SDOT) adopted a policy to evaluate and install LPIs as part of every signal maintenance or installation project. The State of Washington has committed to pay for 150 LPIs over the next three years. Seattle established their first LPI in 2004. In 2018, the Federal Highway Administration found a 60% reduction in accidents between vehicles and pedestrians in intersections with LPIs.

09 SHARED USE PATHWAYS



Program

Paved pathways away from the road and out of the path of turning vehicles designed with space adequate for safe use by both pedestrians and bicyclists. Treatment types include:

Shared-Use Path: For the purposes of this project, there are recommendations for consideration of a shared-use path within the right of way. However, along 28th Street where there is more right-of-way, there may be space for a shared use path at the same grade as the sidewalk.

Multi-Use Trail: The recommendations propose upgrading the Interurban and East-West Trails to operate as a commuter trail. Required elements for this upgrade would include:

- human- scale lighting
- bicycle fix-it stations and parking
- water fountains
- wayfinding signs in multiple languages or with iconography
- rain gardens
- concrete or asphalt pavement
- improved crossings. For example, there should be consideration of a pedestrian signal where the Interurban trail crosses major streets such as the existing crossing at 54th or potential future ones at 44th or 36th



Objectives

M1 M2 M6 M7 M10 M11 M12 M13



Improvements

88.2% less likely to have pedestrian crashes on trails with a sidewalk or wide shoulder compared to trails without (FHWA, 2014).



Partners

Local planning and engineering departments, community stakeholders.



Timeline

Short Term

Mid Term

Long Term



Xavier Wang for the Charlotte Observer

Location: Charlotte, NC

Best Practice: The 11-mile Charlotte Rail Trail was created alongside the LYNX light rail in 2007. The trail features student-created and anonymous public art, play areas with musical instruments, community games and an urban greenway lined with shops, restaurants and outdoor seating. The trail connects to 15 different bicycle routes and multiple major destinations and has over 2,000 trail users per day in some locations.

10 BICYCLE BOULEVARDS AND SEPARATED BIKEWAYS



Program

The area of roadway designated for non-motorized bicycle use, separated from vehicles by pavement markings or protected from vehicles with flexible reflective posts, concrete or landscape islands or barriers, and/or on-street parking.

Treatments can include thermoplastic, pavement markings, wayfinding signs with estimated miles, and wayfinding signs with nearby bikeshare or scooter stations.

Bicycle boxes can be added to increase bicycle visibility at intersections. A bicycle box is a marked area in front of the stop bar at a signalized intersection that allows bicyclists to correctly position themselves for turning movements during the red signal phase by pulling ahead of the queue.

Bicycle boxes are allowable through interim MUTCD approval (IA-1819). Mini roundabouts, with mountable curbs for larger vehicles, could create lower stress bikeways on the residential portions of Madison and Jefferson Avenues with lower traffic volumes.



Objectives

M2 M4 M6 M7 M8 M10 M11 M12 M13



Improvements

From 2014 to 2018, bicycle ridership increased more than 400% after Seattle upgraded a key corridor to a two-way separated bikeway with amenities including hand and foot rests and self-watering planters. In 2019, the separated bikeway had an average monthly ridership of 34,939 cyclists.



Partners

Local planning and engineering departments, community stakeholders.



Timeline

Short Term

Mid Term

Long Term



Location: Seattle, WA

Best Practice: From 2014 to 2018, bicycle ridership increased more than 400% after Seattle upgraded a key corridor to a protected bicycle lane with amenities including hand and foot rests and self-watering planters. In 2019, the bicycle lane had a average monthly ridership of 34,939 cyclists. These improvements in ridership and amenities have reduced collisions and helped filter storm water runoff.

11 THE 3 E'S: ENGINEERING, EDUCATION AND ENFORCEMENT

Engineering strategies to enhance connectivity along South Division and the intersecting streets (such as those shown on the previous pages) should be supplemented with educational programming and enforcement measures. Together, these measures comprise the classic “3 E’s” of road safety, first established by the National Safety Council in 1925, in the early days of the automobile.

11.1 EDUCATION

Educational opportunities for transportation projects on South Division and intersecting streets include:

Citizen Advisory Committees (CACs), have been generally aimed at creating informed stakeholders, and providing a sounding board for ideas on transportation planning projects. In addition, all transit agencies receiving financial assistance from the Federal Transit Administration (FTA) are required every three years to submit a description of efforts made to encourage the participation of minorities on CACs as well as the racial break-down of CACs to ensure compliance with Title VI of the 1964 Civil Rights Act (FTA C 4702.1B).

The Rapid has an existing CAC focused on seniors and individuals with mobility impairments. This CAC could be expanded to include transit dependent, minority, and low-income riders. The CAC could also conduct rider outreach along South Division corridor as projects are implemented.

Bus Buddy, Bike Buddy and Bike Train Programs are comprised of experienced commuters who volunteer to pick up inexperienced riders by bus or bicycle. Together, they address concerns, learn routes and schedules, and gain confidence in using multiple modes of transportation.

Similar training programs already exist in the study area and could be enhanced. The Rapid has an existing Travel Trainers program that could be leveraged to assist new riders along the corridor. The City of Grand Rapids’ Driving Change is a bicycle/motorist safety program, which has been converted into a statewide playbook for use by other communities.

11.2 ENFORCEMENT

Enforcement opportunities for transportation projects on South Division and intersecting streets could include:

Automated Enforcement: Automated enforcement uses technology to issue tickets instead of having to rely on police or parking enforcement personnel. These could be used to enforce speeding and bus-only restrictions along South Division, and have proven to be an effective tool in other cities. While current rules in Michigan do not allow for automated enforcement, some communities in the State have considered the possibility of changing this state law.



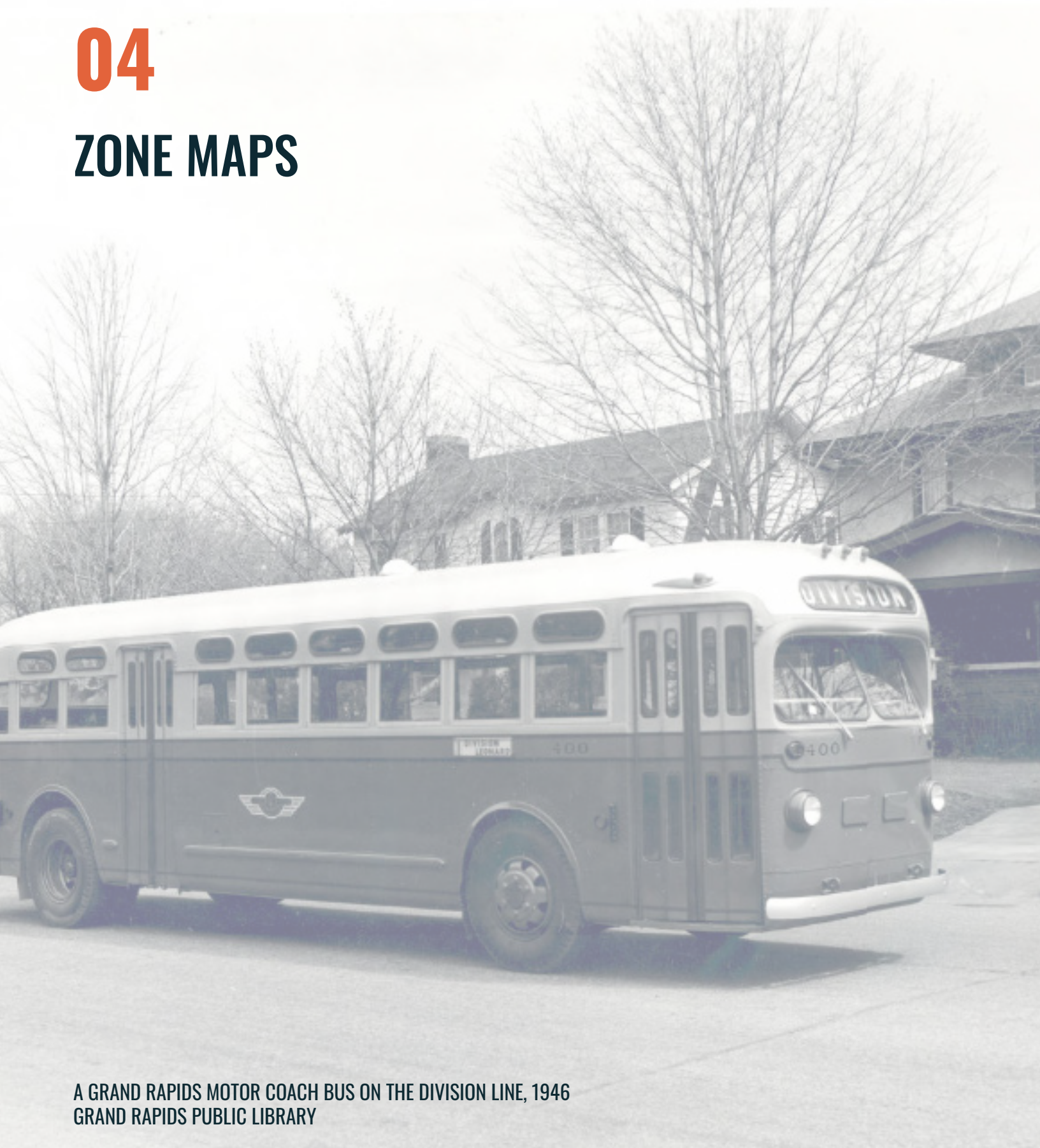
Location: Boulder, CO

Best Practice: Since 2003, the nonprofit, Via Mobility Services, has offered a variety of one-on-one and group travel training programs for low-income individuals, people with disabilities, older adults and Limited English Proficient (LEP) individuals in order to promote independence and self-sufficiency. Travel training from paid staff and volunteers includes group outings, in-home assessments and pre-trip planning.

Targeted Enforcement: Certain intersections, such as those at 28th and Burton, show the highest level of crashes and safety incidents. Increased enforcement of laws such as speeding, failure to yield to pedestrians, signal violations, and distracted driving could help discourage less dangerous driving behavior. The potential benefits of such increased enforcement on community safety would need to be communicated and weighed against a larger inequities in policing that affect minority and lower-income communities.

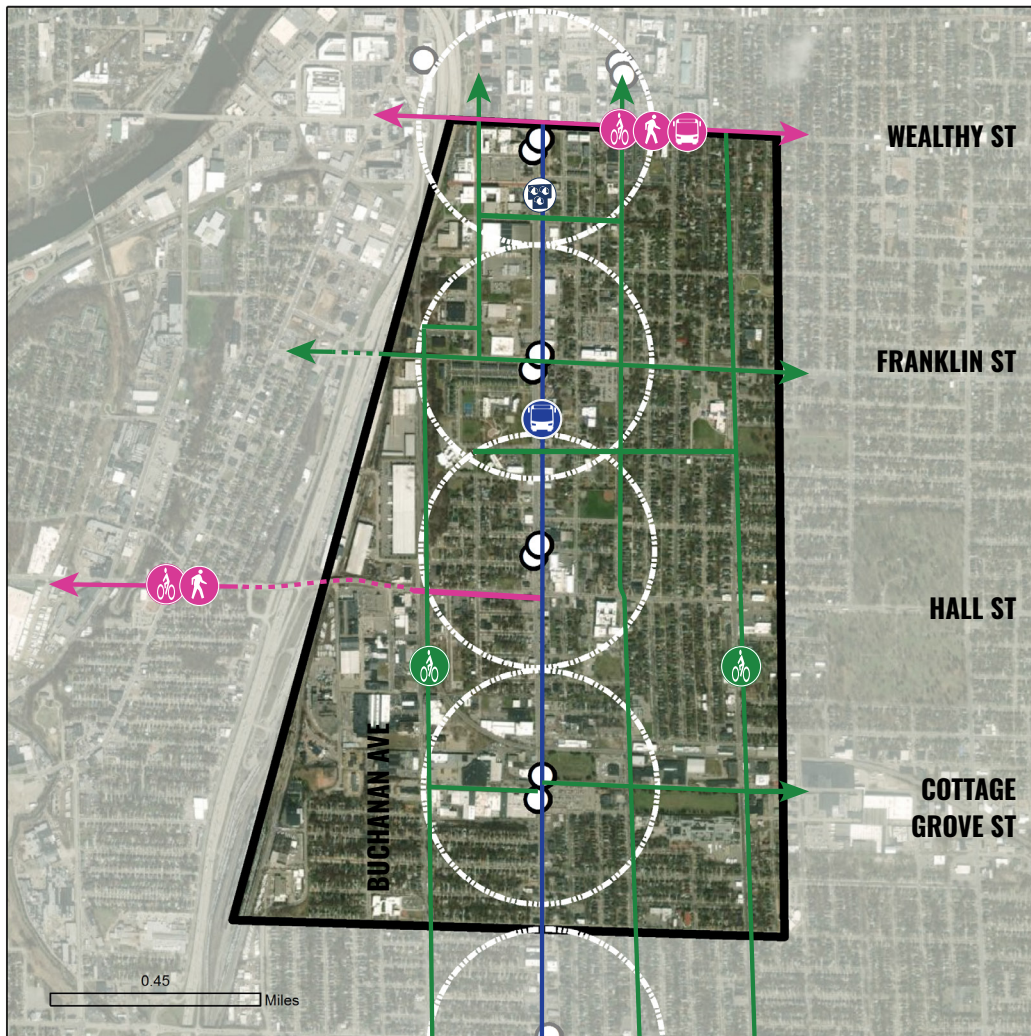
04

ZONE MAPS



A GRAND RAPIDS MOTOR COACH BUS ON THE DIVISION LINE, 1946
GRAND RAPIDS PUBLIC LIBRARY

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ZONE 1 RECOMMENDATIONS

Transit Connections

- Enhanced existing peak-only signed bus lane with long-term potential for dedicated all-day phased in over time.

Bicycle/Scooter Connections

- Enhanced bicycle infrastructure on Buchanan Avenue to Graham Street and on Ionia Avenue to continue north.
- Improved continuous bicycle infrastructure on Jefferson Avenue and Madison Avenue.
- Improve existing infrastructure on Franklin Street by providing wider bike lanes and improved crossings.
- Provide connections to Silver Line stations at Wealthy Street, Franklin Street and Cottage Grove Street.

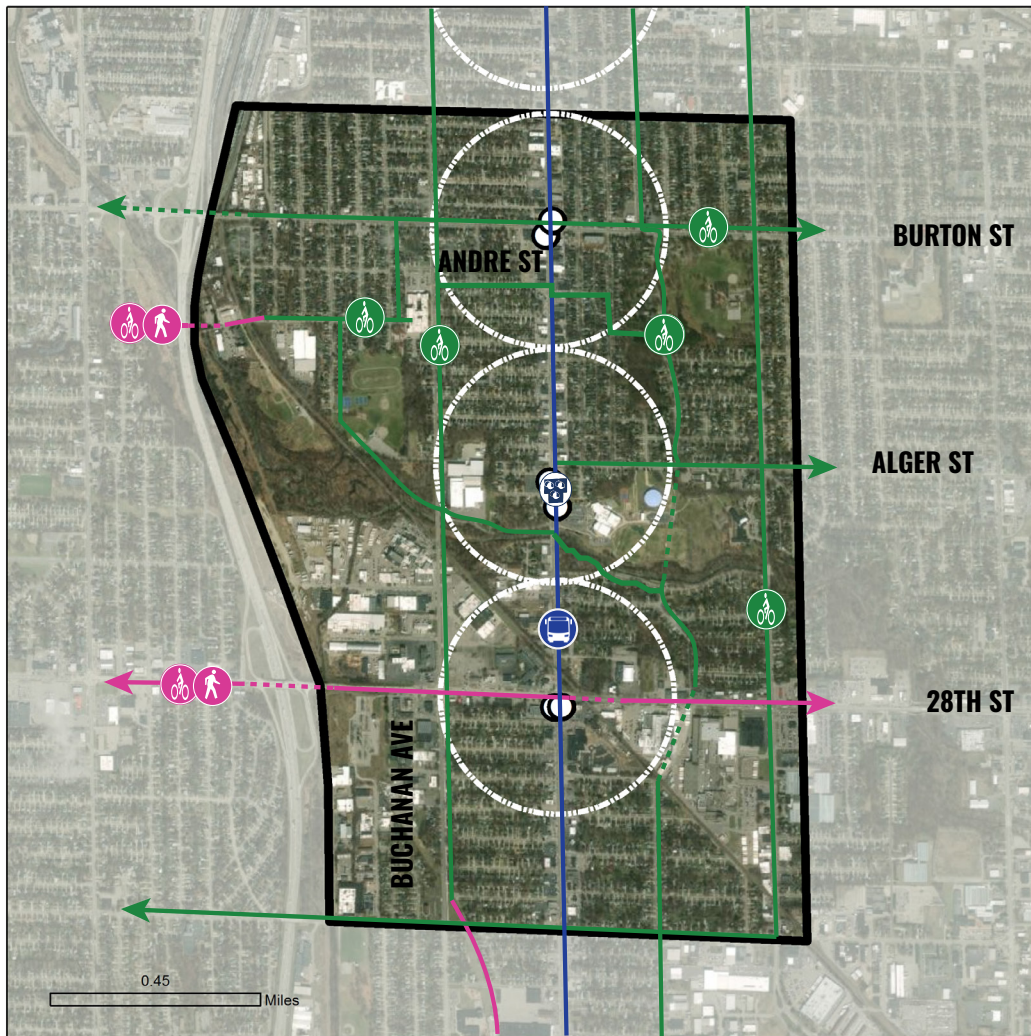
- Added bicycle connections across Buckley between Ionia and Jefferson and on Delaware from Madison to Ionia, as per the Grand Rapids Bicycle Action Plan.

Multimodal Connections

- Wealthy Street could be a street that balances transit, bicycles, and pedestrians, including an enhanced local street connection across US-131 to Rapid Central Station.
- The sidewalk on Hall Street west of Buchanan could be expanded to function as a shared path connecting over US-131.

Mid-Block Crossing

- Install a safe crossings at Logan and/or Buckley Street.



ZONE 2 RECOMMENDATIONS

Transit Connections

- Enhanced existing peak-only signed bus lane with long-term potential for dedicated all-day phased in over time.

Bicycle/Scooter Connections

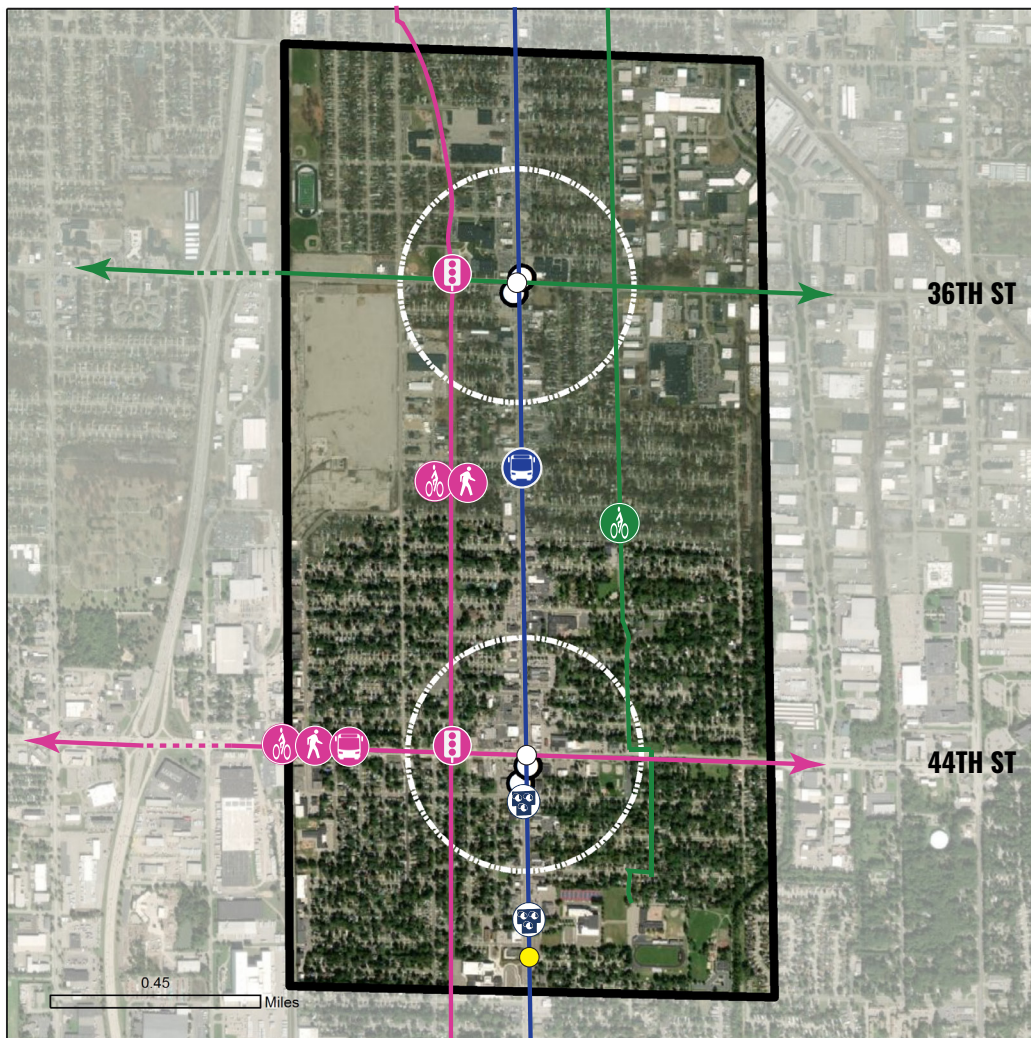
- Connect Buchanan Avenue to the Interurban Trail.
- Improved continuous and appropriate bicycle infrastructure on Jefferson Avenue and Madison Avenue.
- Improve bike infrastructure on Burton Street.
- Improved Plaster Creek Trail to be continuous and functional for walking and biking transportation trips. This is also recommended in the Grand Rapids Parks Master Plan.
- Bicycle infrastructure on Alger St.
- Bicycle infrastructure on 32nd St.

Multimodal Connections

- The underpass on Kirtland Street could be an east-west walking and biking connection that avoids highway interchanges.
- The sidewalk on 28th Street could be expanded to function as a shared path.
- A new trailhead for the Interurban Trail could be located at Buchanan and 32nd.

Mid-Block Crossing

- A crossing is planned at the southern entrance to the Kroc Center in 2022.
- A new pedestrian and bicycle crossing at Andre Street could improve connectivity in this business district.



ZONE 3 RECOMMENDATIONS

Transit Connections

- Long term potential of upgrading current peak-only bus lane to an all-day painted bus lane in the future (north of 44th).

Bicycle/Scooter Connections

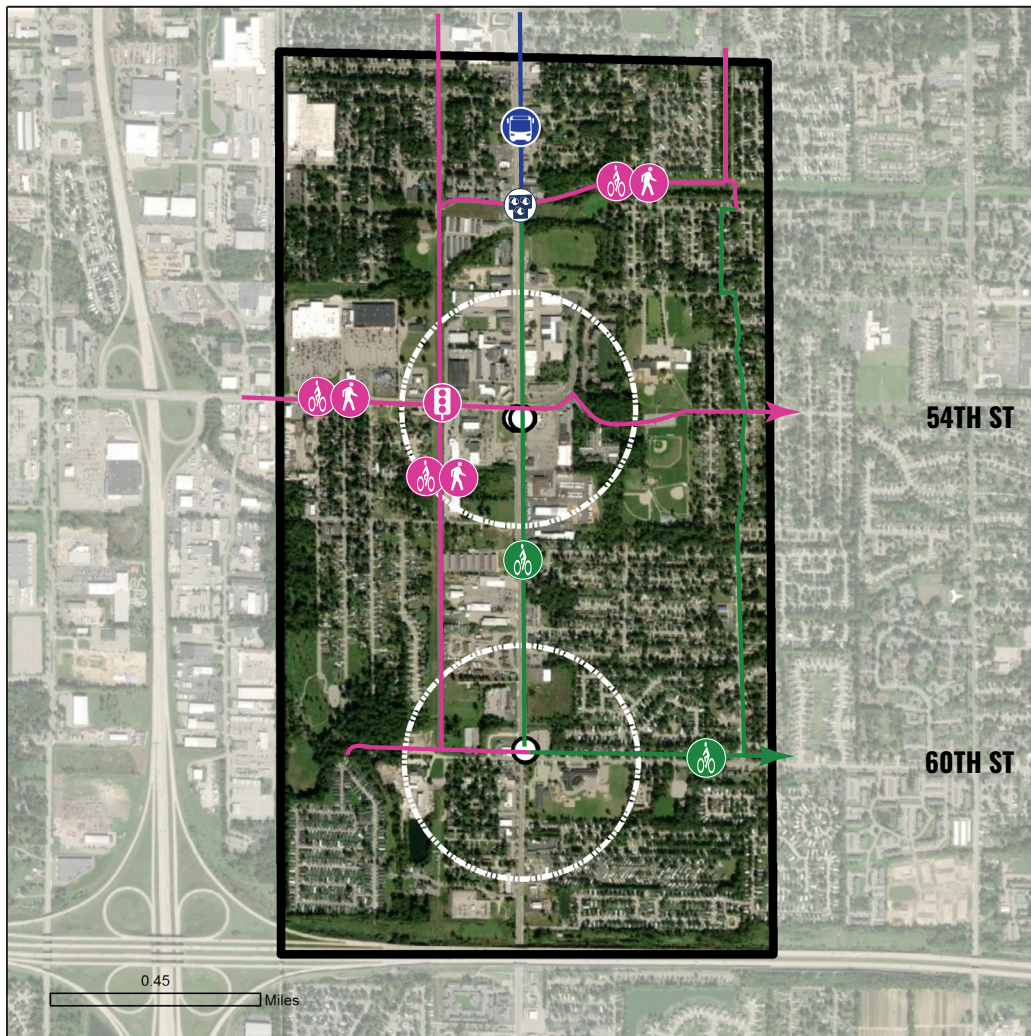
- Improved continuous bicycle infrastructure on Jefferson Avenue to safely connect to schools.
- Improved continuous bicycle infrastructure on 36th Street.

Multimodal Connections

- 44th could accommodate transit, bicyclist, and pedestrians.
- Sidewalk on 44th can be expanded and function as shared path.
- Improve the Interurban Trail to be continuous and functional for walking and biking transportation trips by adding crossing beacons.

Mid-Block Crossing

- Install safe crossings between Leroy and Elwell Streets to support school access, including consideration of a crossing beacon or other traffic signal.
- Install safe crossing at Farnam Street to support safe connection between north and south bound BRT stations.
- Add signalization where the Interurban Trail crosses a major street (i.e. 44th & 36th Streets)
- Remove pedestrian bridges at 34th, Wexford, and Bellevue.
- Add safe crossing with median island at 43rd to support local business district.



ZONE 4 RECOMMENDATIONS

Bicycle/Scooter Connections

- Improved bicycle infrastructure on South Division Avenue south of the East-West Trail.
- Enhanced bicycle infrastructure along 60th Street east of South Division Avenue.

Multimodal Connections

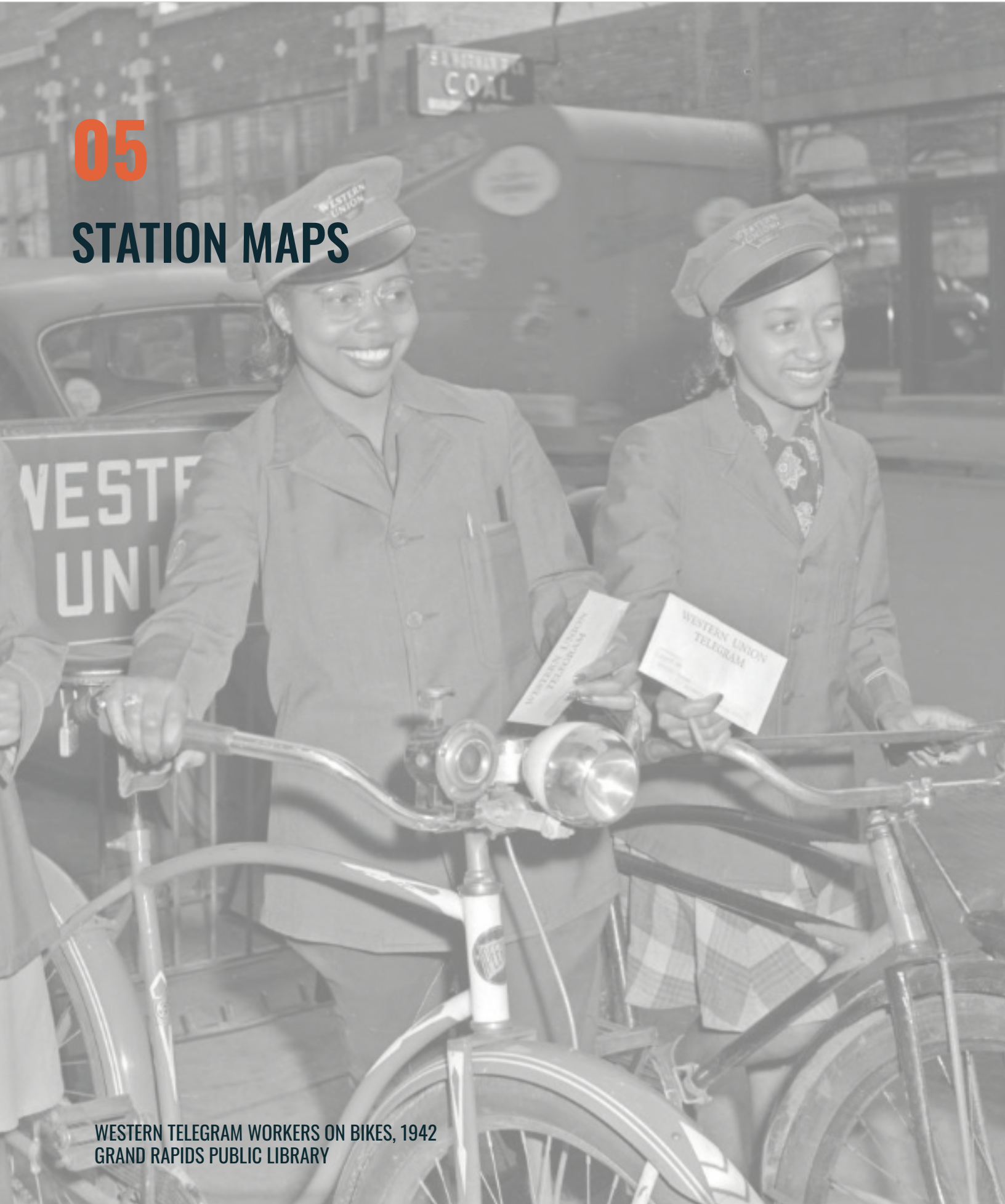
- Improve the East-West Trail to be functional for walking and biking transportation trips.
- Improve the Interurban Trail to be continuous and functional for walking and biking transportation trips.
- Create multi-modal connection to park and Interurban Trail trailhead on 60th Street west of South Division Avenue.

Mid-Block Crossing

- Install improved crossings at the East-West Trail, including consideration of a crossing beacon or other signal.
- Install a median refuge and a pedestrian signal where the Interurban Trail crosses 54th Street.

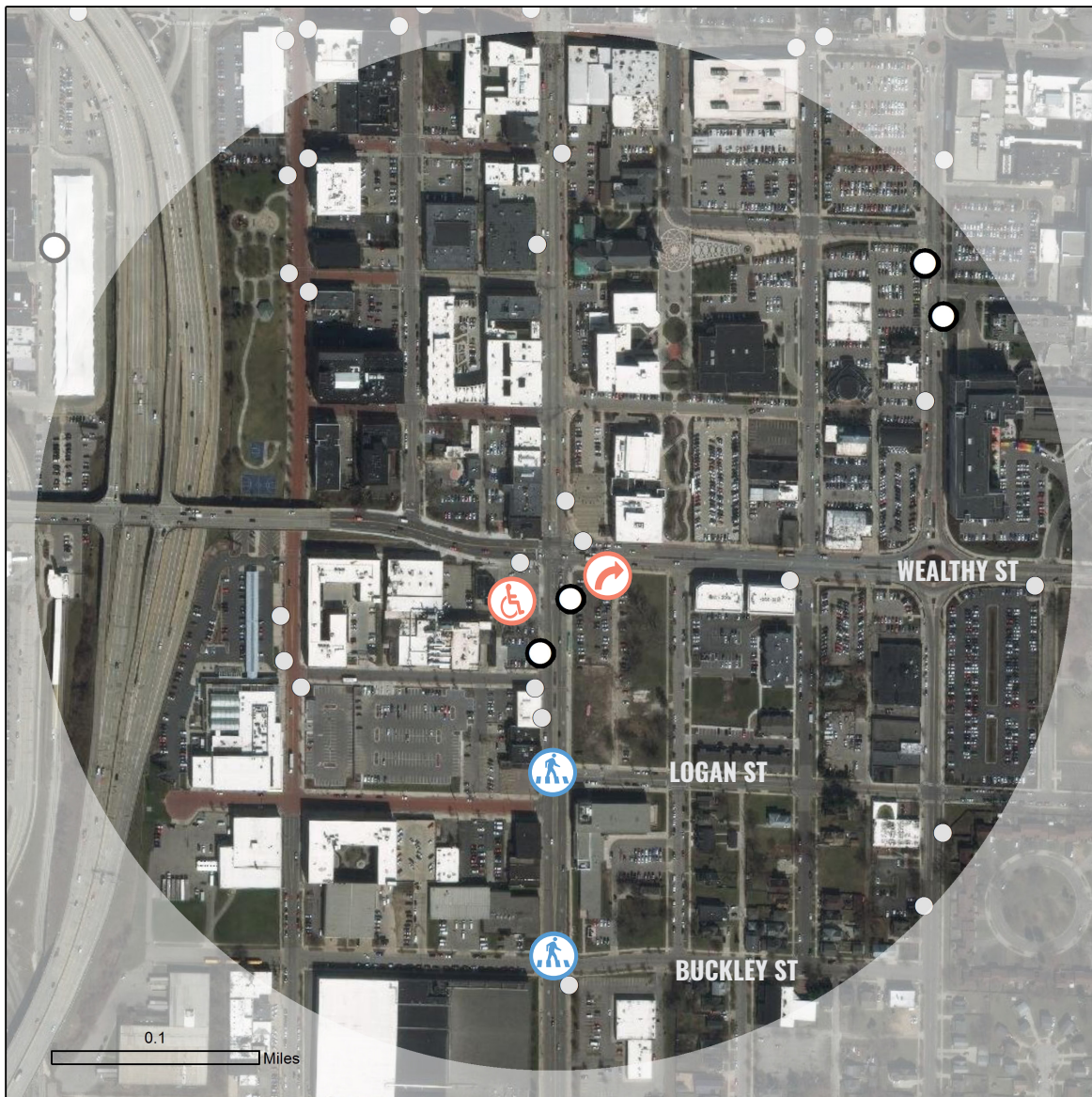
05

STATION MAPS



WESTERN TELEGRAM WORKERS ON BIKES, 1942
GRAND RAPIDS PUBLIC LIBRARY

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WEALTHY ST - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



Tighten southeast corner radius at Wealthy Street and Division Ave, potentially offering a pedestrian refuge on right-turn divider.



Close driveways to make safer for people walking along Division Ave.



Add safe crossings at Logan and/or Buckley.



FRANKLIN ST - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



Reduce parking lot curb cuts by transit station with ADA accessible sidewalk.



Proposed bicycle infrastructure planned for 2022 includes buffered bike lanes, right turn lanes removal continuous bike lanes, and bike boxes.



HALL ST - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



Reduce parking lot curb cuts radii leading to transit stations with ADA accessible sidewalk.



High-visibility mid-block crosswalks at Highland St.



The implementation of continuous bicycle lanes on Hall St, as consistent with Grand Rapids' Bicycle Action Plan.



COTTAGE GROVE - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops





ADA accessible sidewalks with detectable warnings on both sides of Cottage Grove St.



Bike connections with wayfinding signs in accordance with the Grand Rapids Bicycle Action Plan on Cottage Grove.



BURTON ST - LEGEND

-  Rapid Bus Stops
-  Silver Line Stops



Green infrastructure at curb extensions.



Multimodal connections with wayfinding signs and continuous bicycle lanes on Burton Street; bicycle parking planned at station for 2021.



Bike Lanes on Andre Street.



KROC CENTER - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



New crossing is planned at the south entrance to Kroc Center (2022).

1



Plaster Creek Trail/Bike connections to bike infrastructure on Buchanan to the west and Jefferson and Madison to the east. Change the texture of the on-road segment to slow drivers down.

2



Bikeway along Alger, including bike and scooter parking.



28TH ST - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



Reduce parking lot curb cuts' curb radii leading to transit stations with ADA accessible sidewalk.



Tighten northeast curb radii at 28th Street and Division Avenue (MDOT approval required).





Bike and scooter parking on 28th Street.





36TH ST - LEGEND

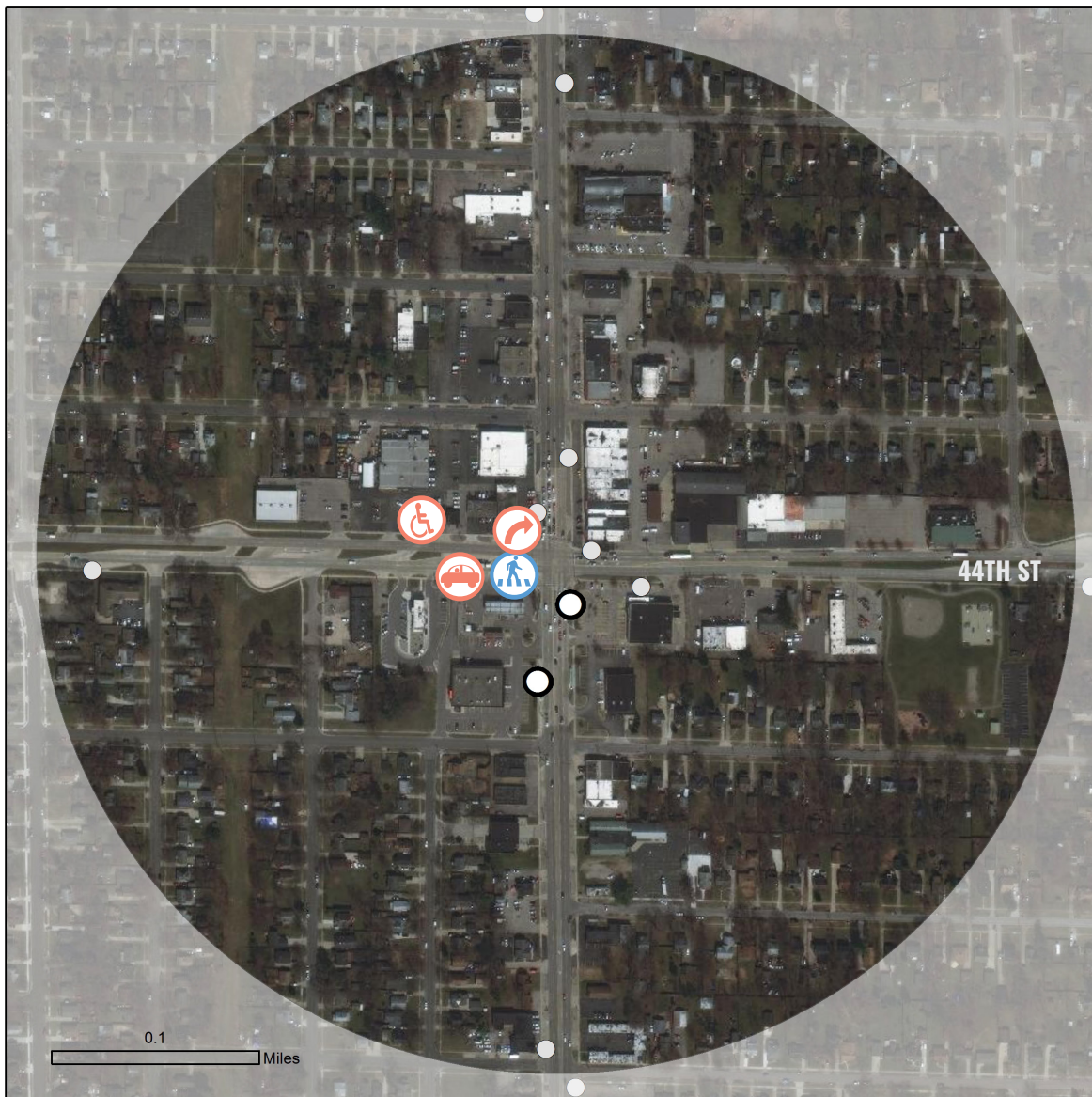
1  Add bicycle infrastructure along 36th Street.

 Rapid Bus Stops

2  Bike connections with wayfinding signs. at station, including bike and scooter parking.

 Silver Line Stops

 Replace pedestrian overpass with a mid-block crossing.



44TH ST - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



Shorten estimated 90' crossing of 44th by extending curb or adding pedestrian refuges.



Eliminate excess curb cuts to improve ADA accessibility in coordination with redevelopment and road reconstruction efforts.



Create 90 degree turning radius at curb to improve sightliness at 44th Street and Division Avenue.



Add high-visibility crosswalks on 44th Street.



54TH ST - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



Potential for narrowed lanes on 54th Street.



Reduce parking lot curb cuts and curb radii leading to transit stations with ADA accessible sidewalk.



Tighten northwest curb radii at 54th Street and Division Avenue.



Extend connections east of Interurban Trail with a shared-use path.



New bus stop/ amenities.



60TH ST - LEGEND

○ Rapid Bus Stops

○ Silver Line Stops



ADA accessible sidewalks with detectable warning pavers.



High-visibility crosswalks.

1



Bike and scooter parking.

2



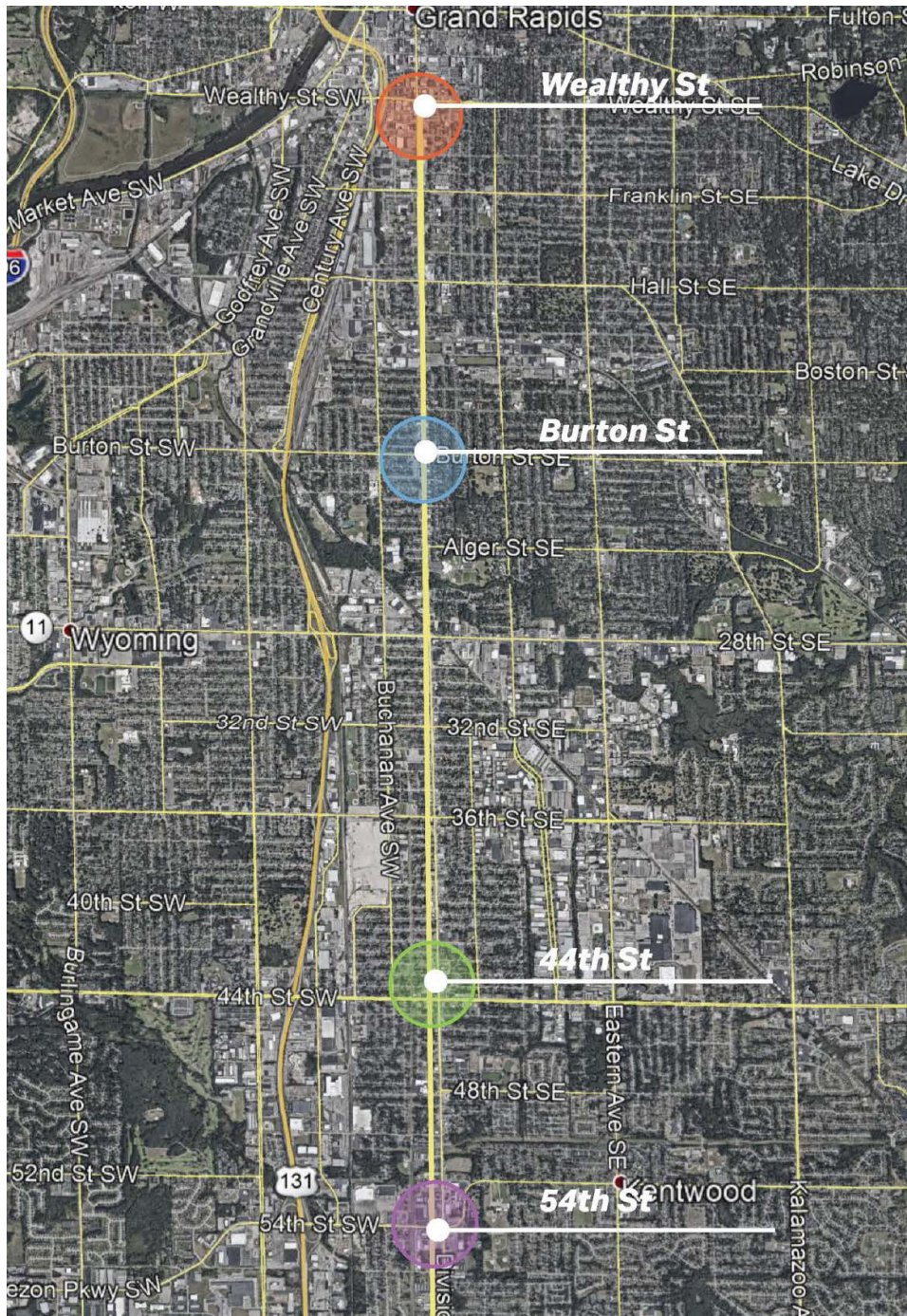
Multi-modal (bicycle and pedestrian) connection to park and Interurban Trail west of Division.

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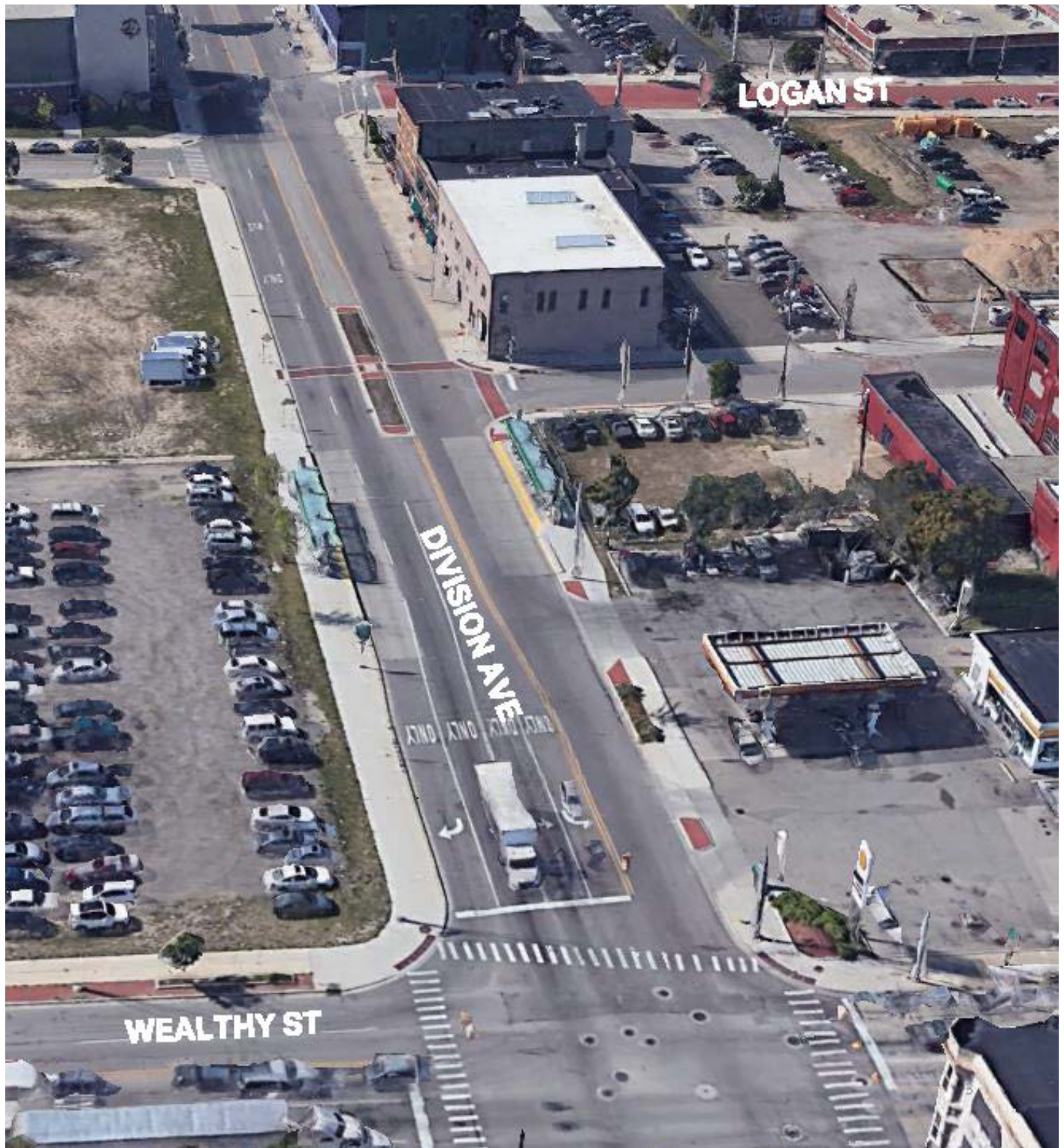
06

STREET SECTIONS AND VISUALIZATIONS



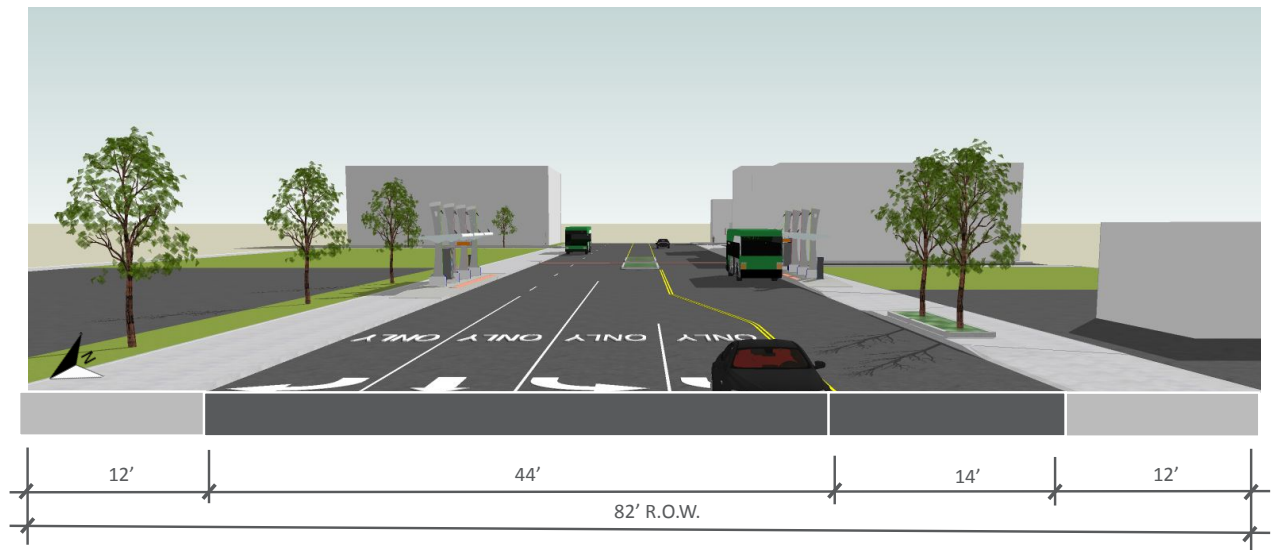


WEALTHY/LOGAN STREET TRANSIT CORRIDOR ENHANCEMENT

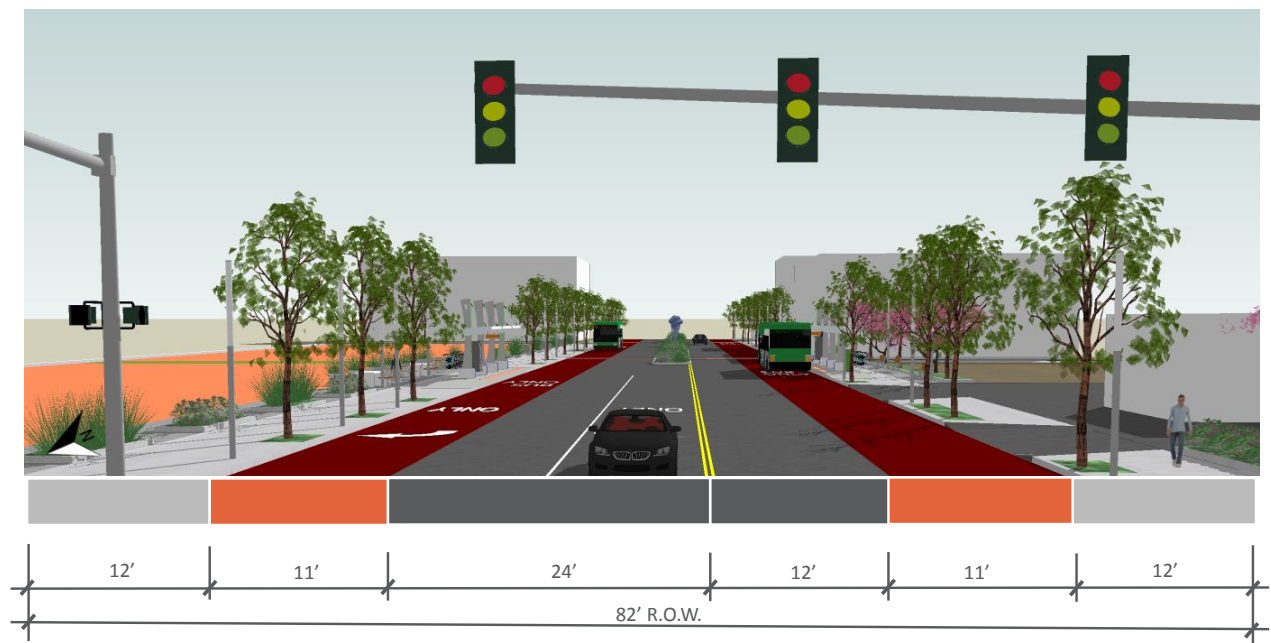


CROSS SECTION- WEALTHY STREET INTERSECTION

Existing



Proposed



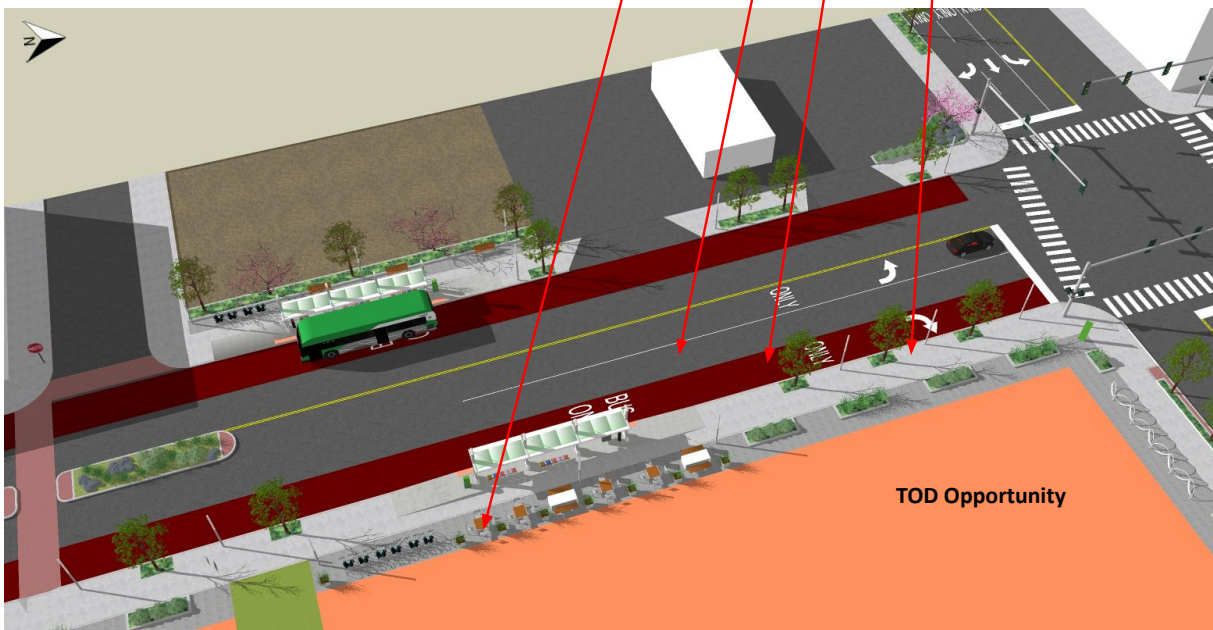
WEALTHY STREET: STREETSCAPE

Existing

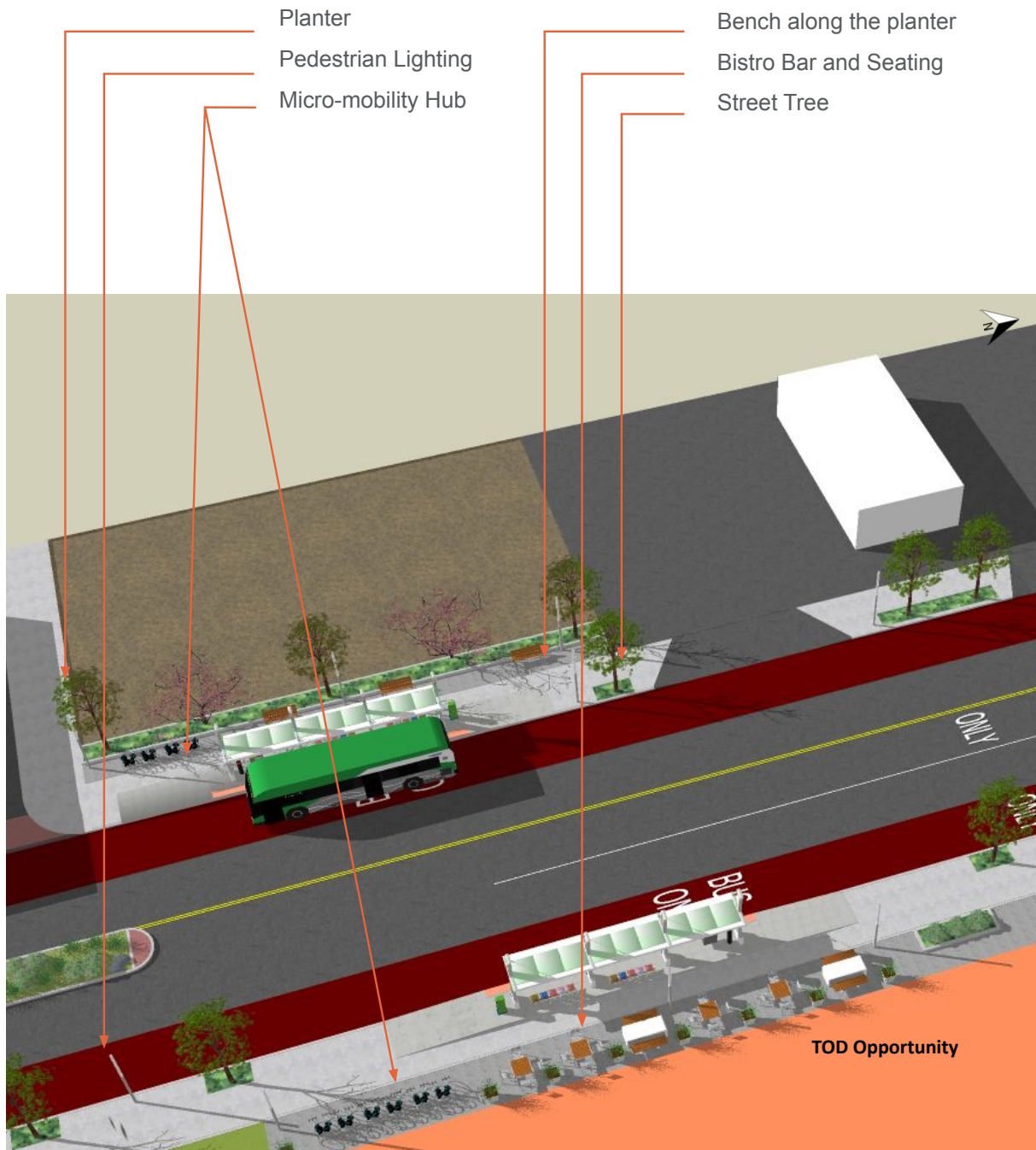


- Added Mobility Hub
- Reduced Lanes from 4 to 3
- Painted Bus-Only Lane
- Widened Sidewalk

Proposed

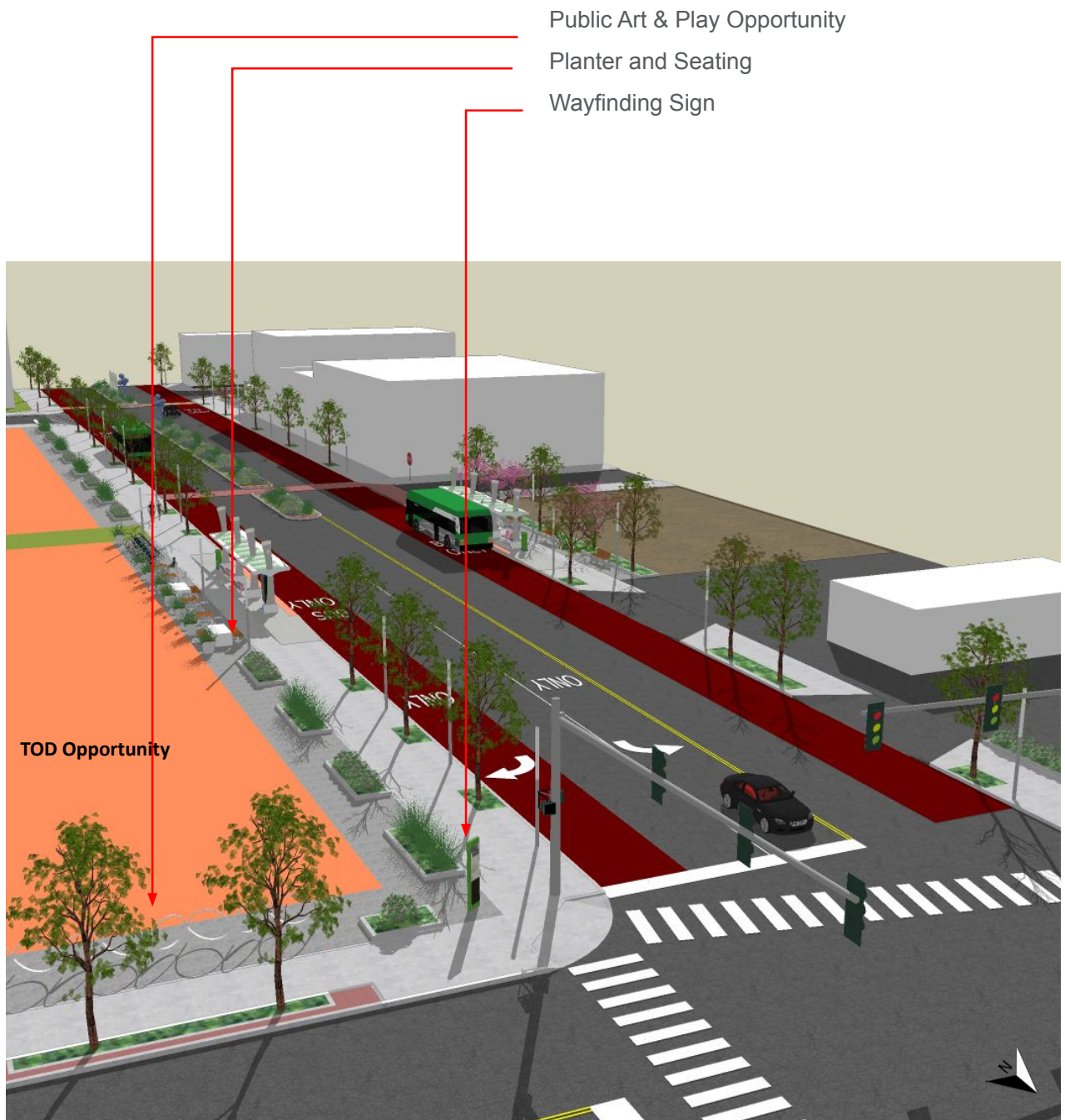


WEALTHY STREET: STATION AREA



Proposed

WEALTHY STREET: PUBLIC SPACE



Proposed

MCCONNELL STREET T-JUNCTION

Existing



Proposed



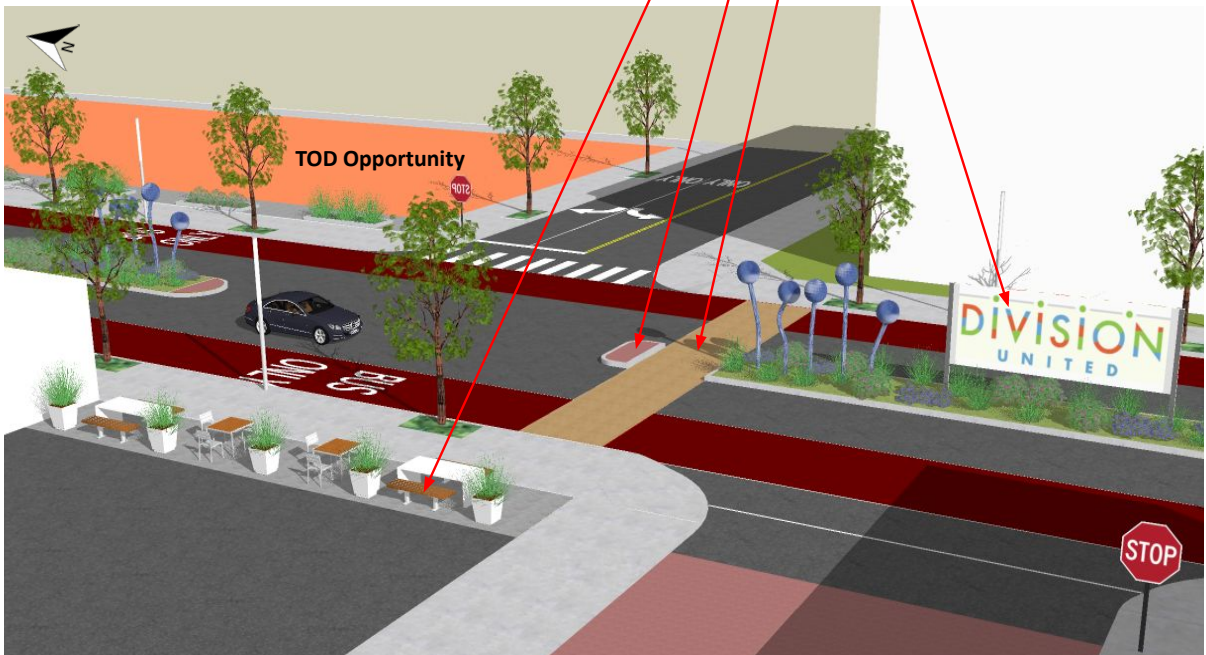
LOGAN STREET - OFFSET INTERSECTION

Existing



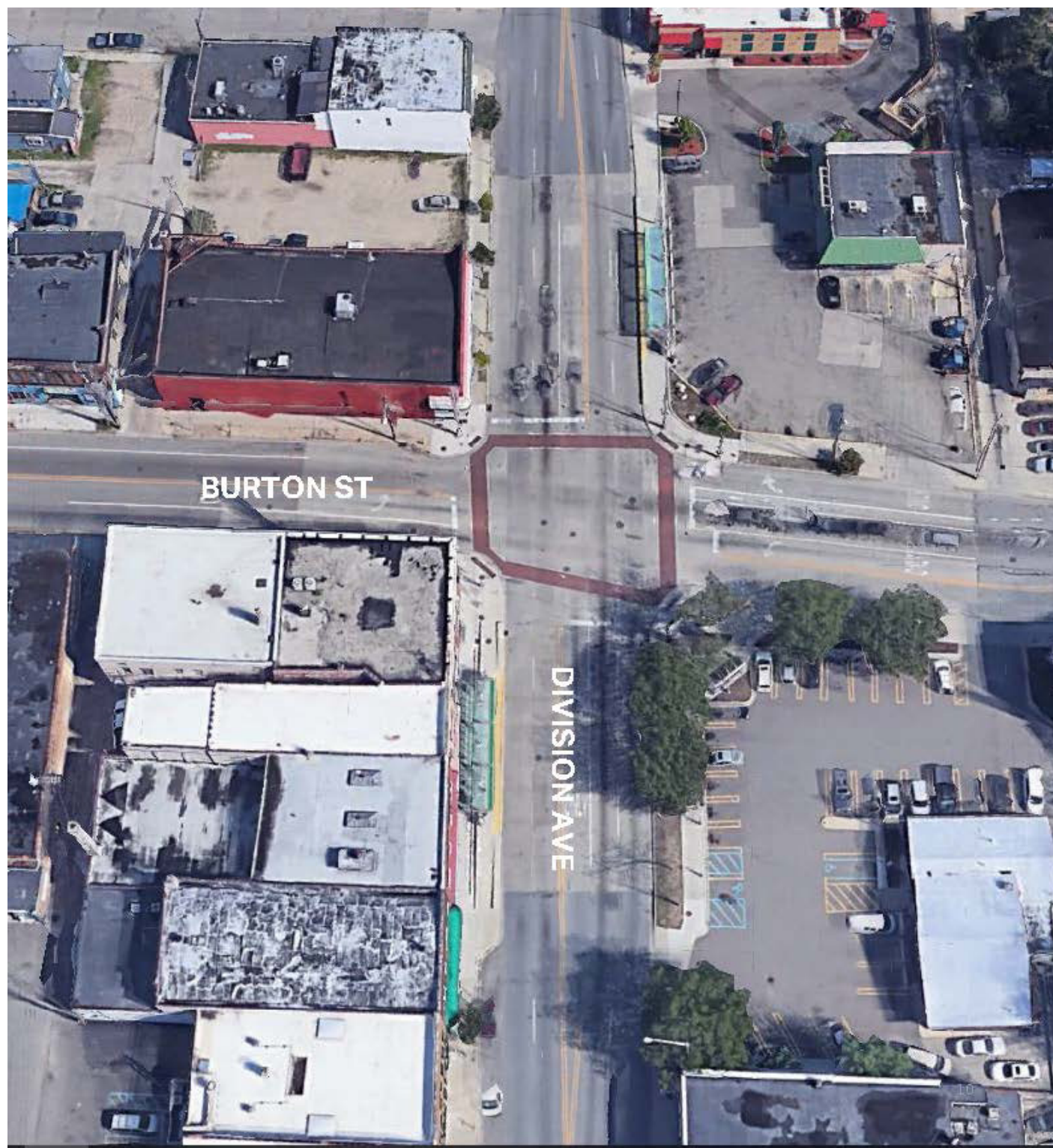
- Outdoor Dining and Seating
- Extended Median
- Crosswalk with Flashing Beacon
- Public Art
- Community Sign & Wayfinding

Proposed



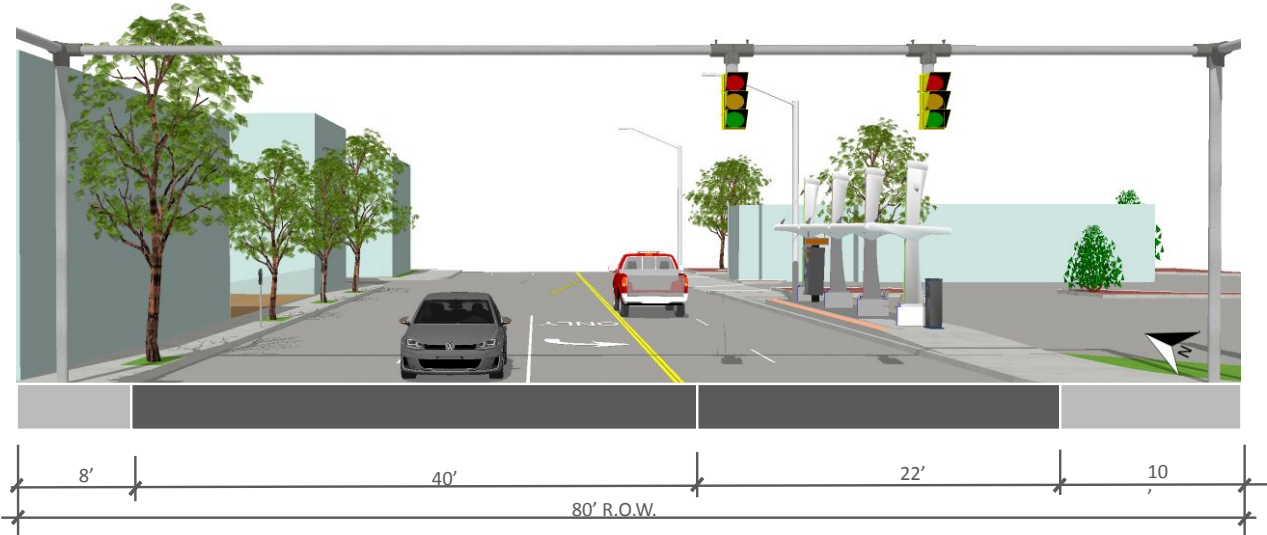
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BURTON STREET TRANSIT CORRIDOR ENHANCEMENT

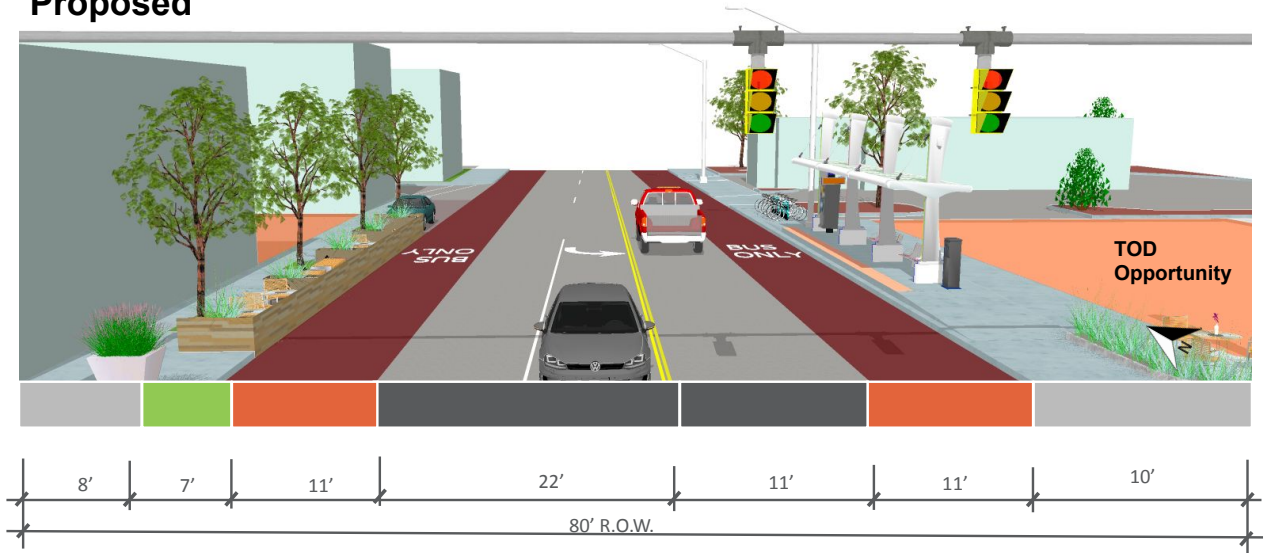


BURTON STREET- CROSS SECTION

Existing



Proposed



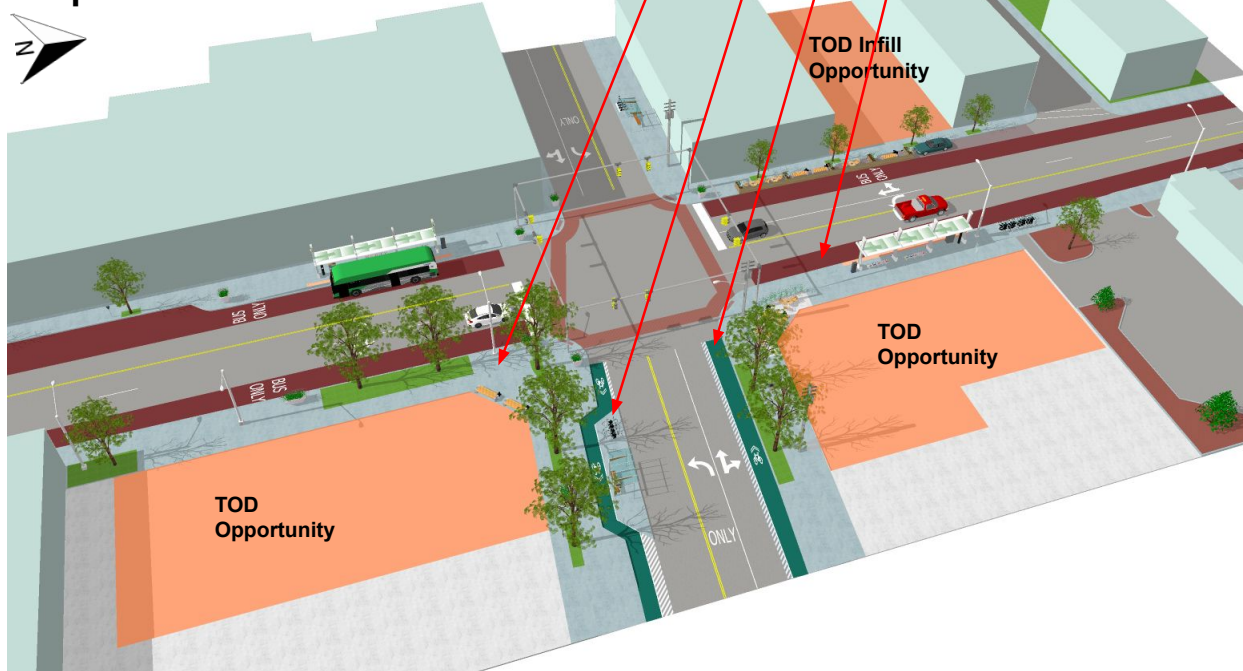
BURTON STREET- STREETScape

Existing



- Widened Sidewalk
- Bus Station Island
- Reconfigured Bike Lane
- Painted Bus-Only Lane

Proposed

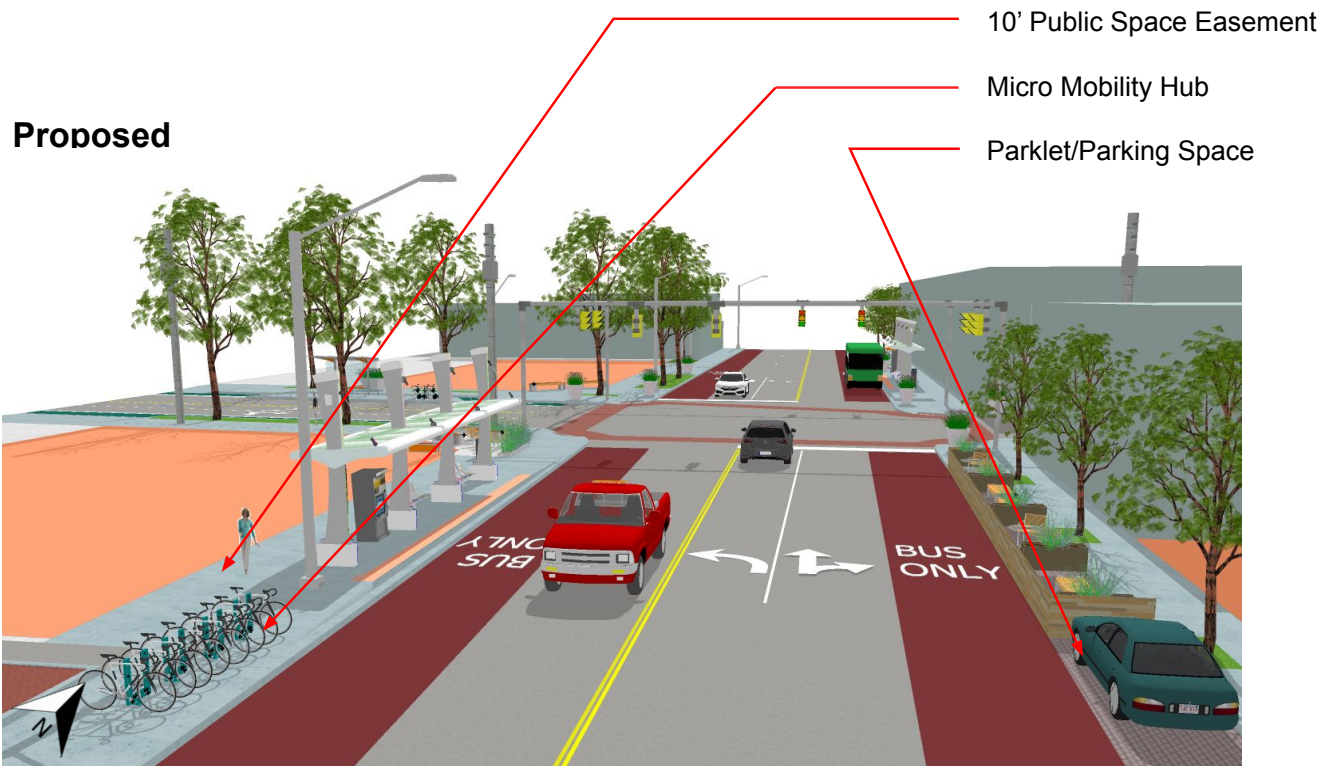


BURTON STREET- STATION AREA

Existing



Proposed

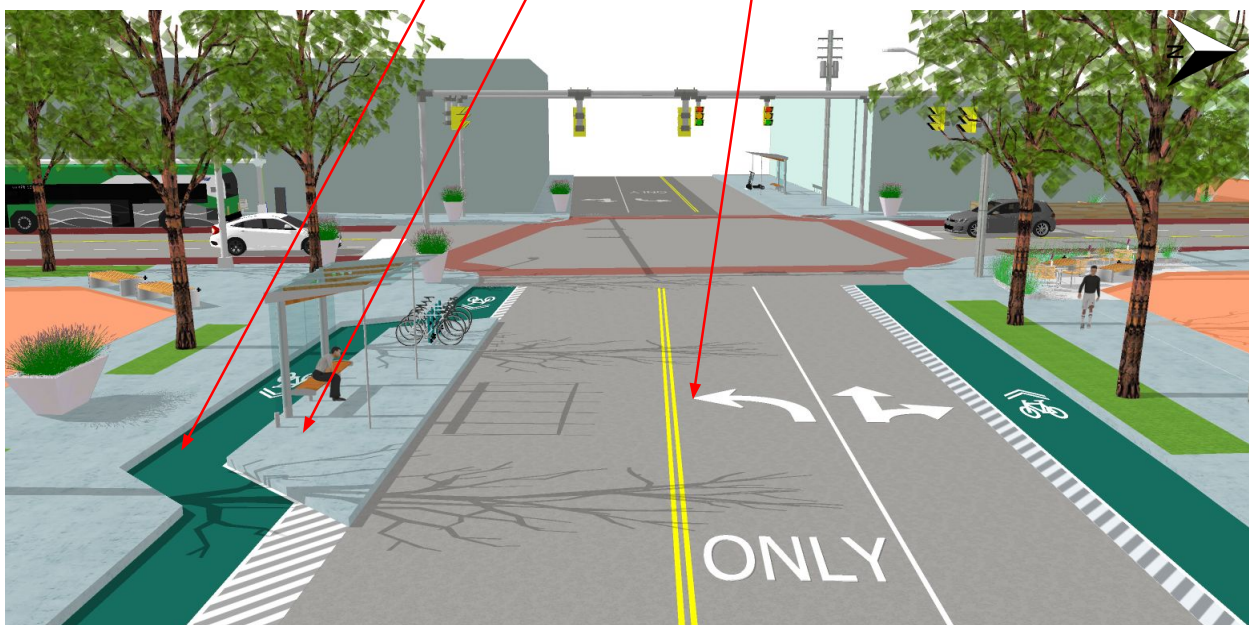


BURTON STREET- INTERSECTION

Existing

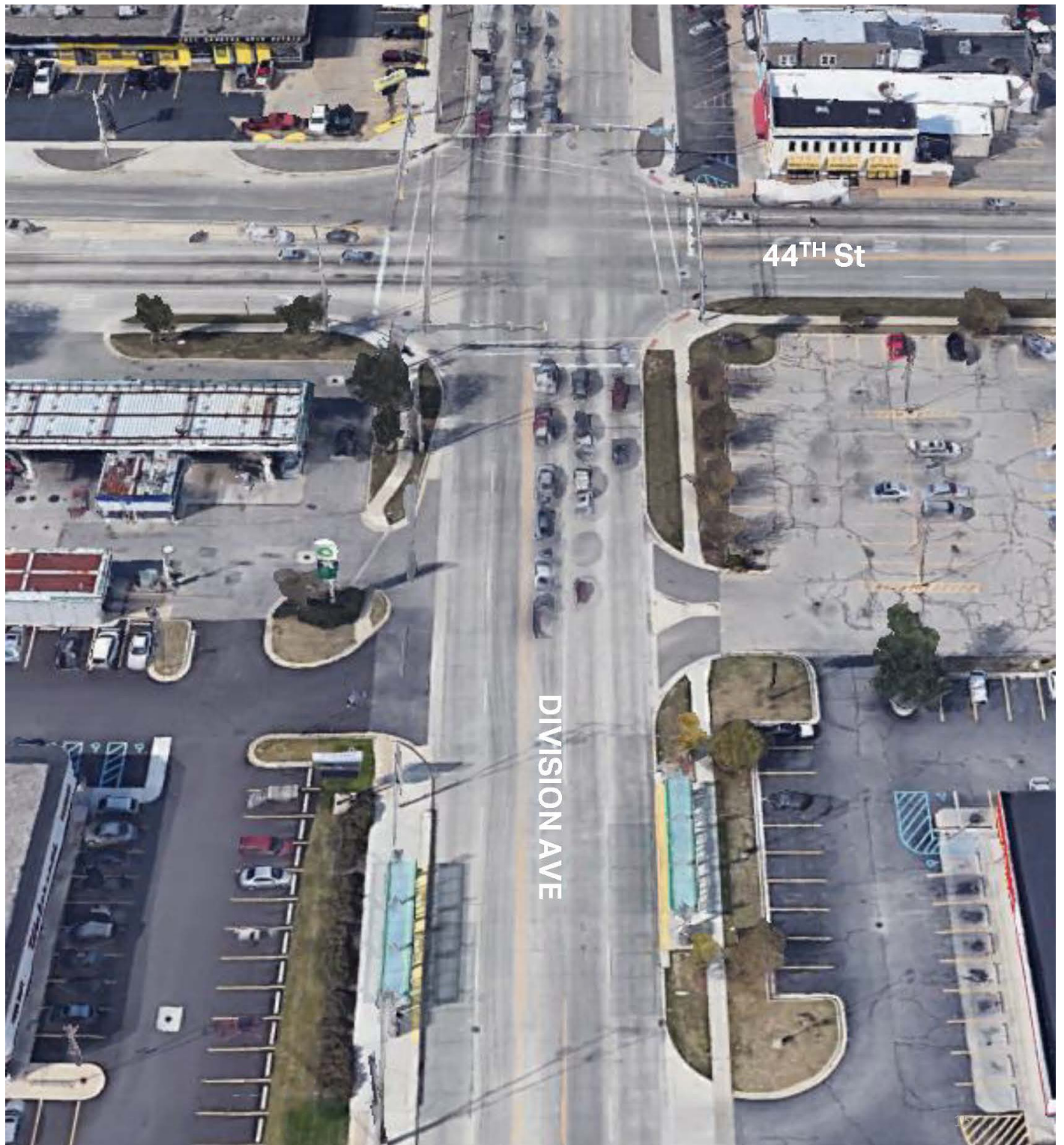


Proposed



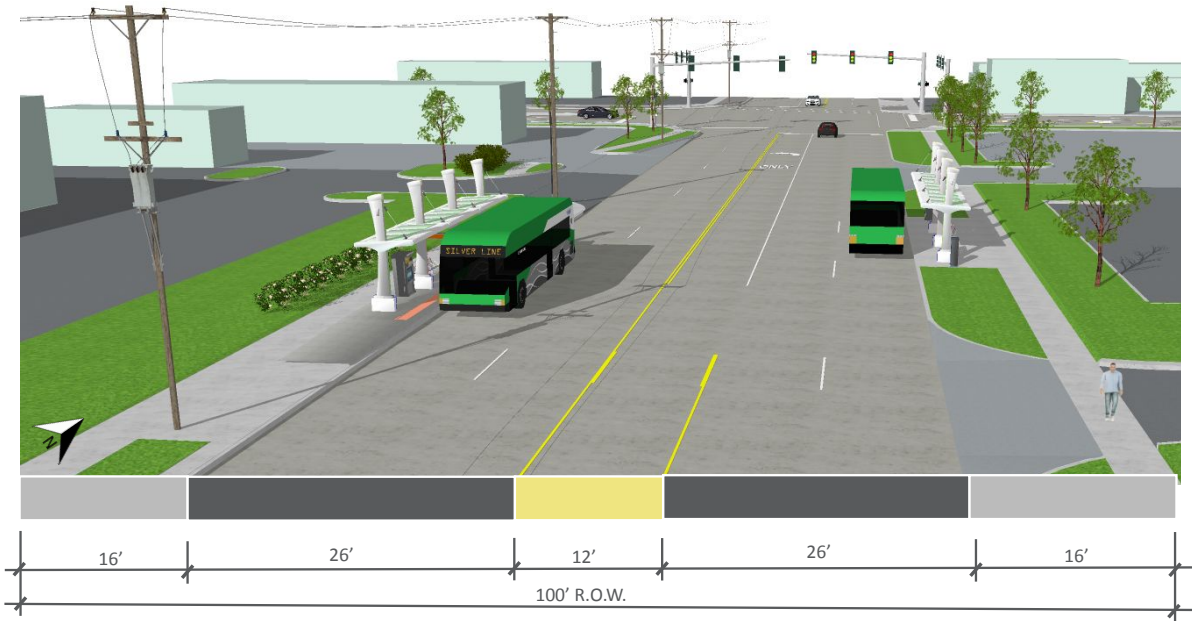
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44TH STREET TRANSIT CORRIDOR ENHANCEMENT

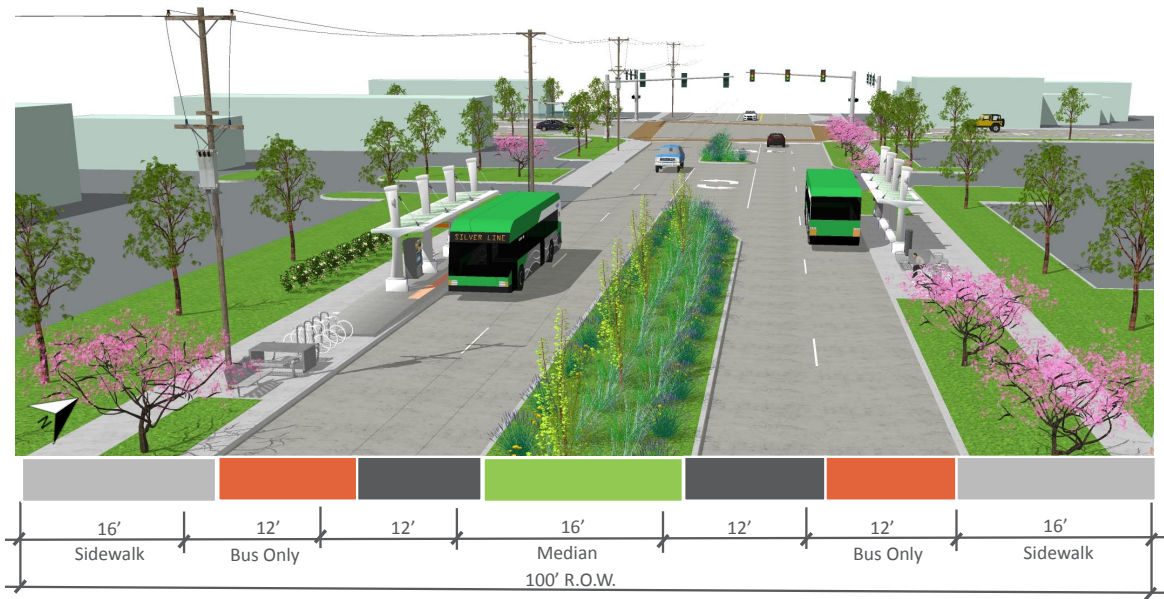


44TH STREET- CROSS SECTION

Existing

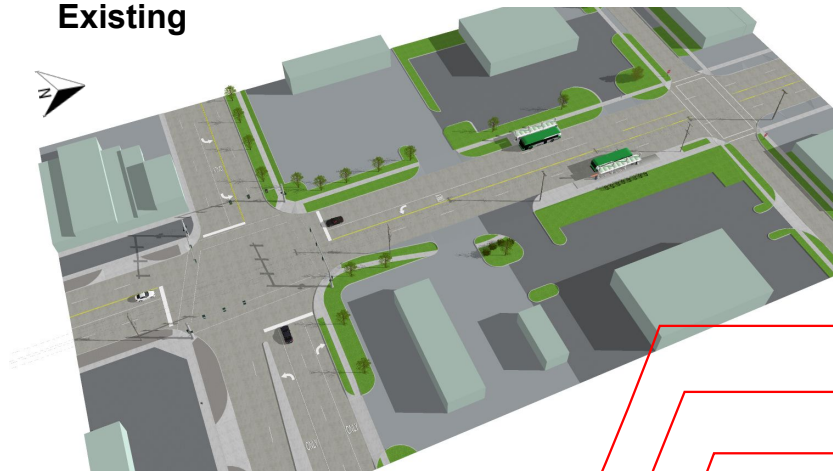


Proposed



44TH STREET- STREETSCAPE

Existing



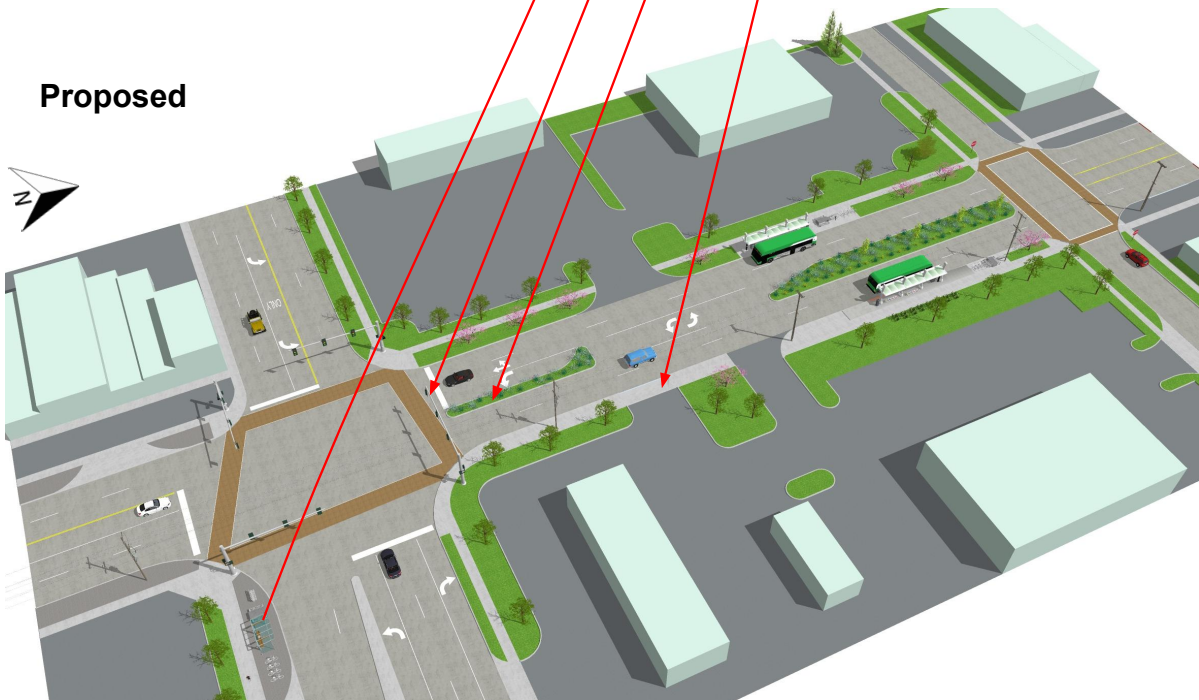
Relocated Bus Stop

Painted Crosswalk

Landscaped Median

Widened Sidewalk

Proposed



44TH STREET- STATION AREA

Existing



Landscaped Median

Micro-Mobility Hub

Additional Tree Planting

Proposed

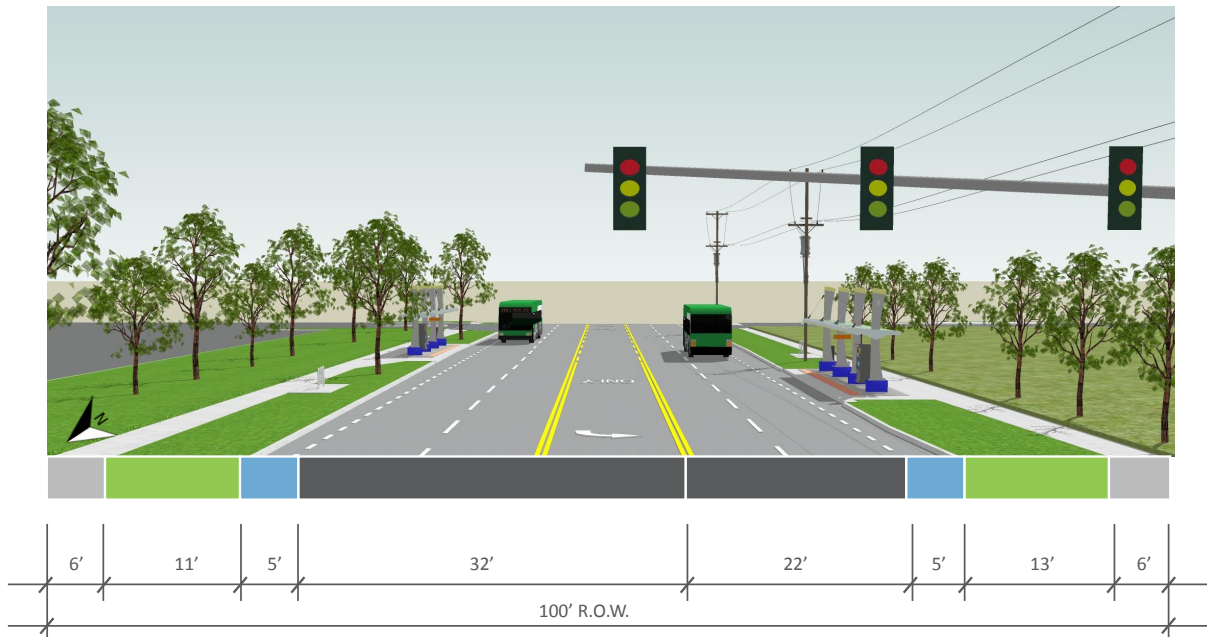


54TH STREET TRANSIT CORRIDOR ENHANCEMENT

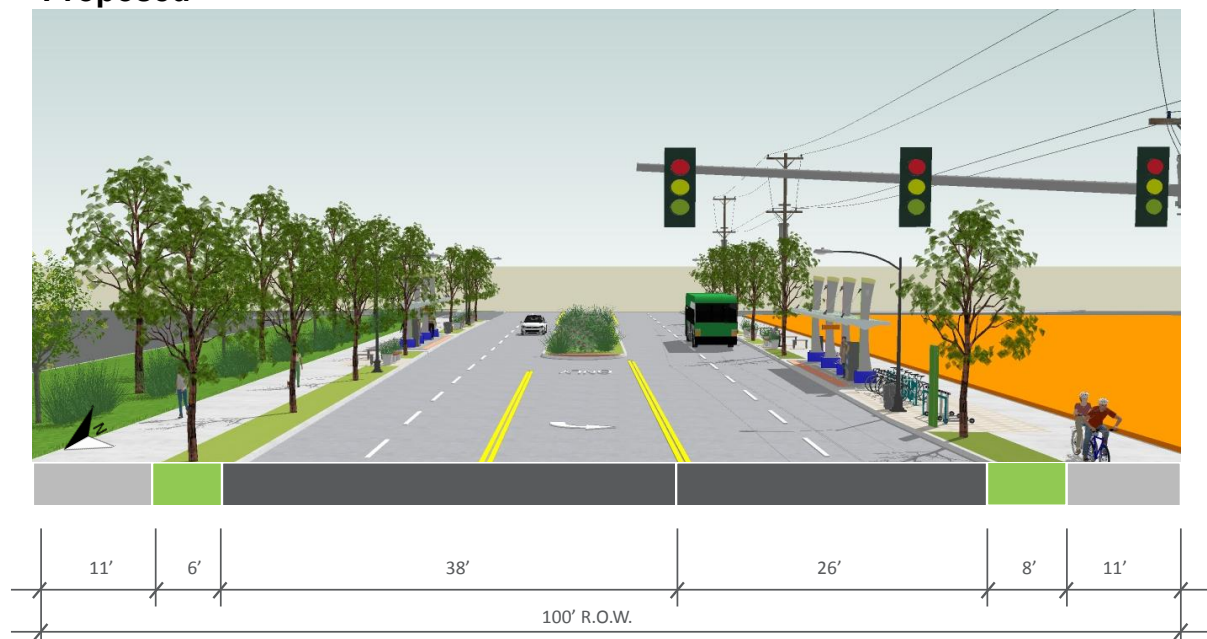


54TH STREET- CROSS SECTION

Existing



Proposed



54TH STREET - STREETSCAPE

Existing



Additional Tree Planting

Widened Sidewalk

Removed Bike Lane

Widened Painted Crosswalk

Right-Turn Only Lane
Removed and Widened
Sidewalk

Proposed



TOD Opportunity

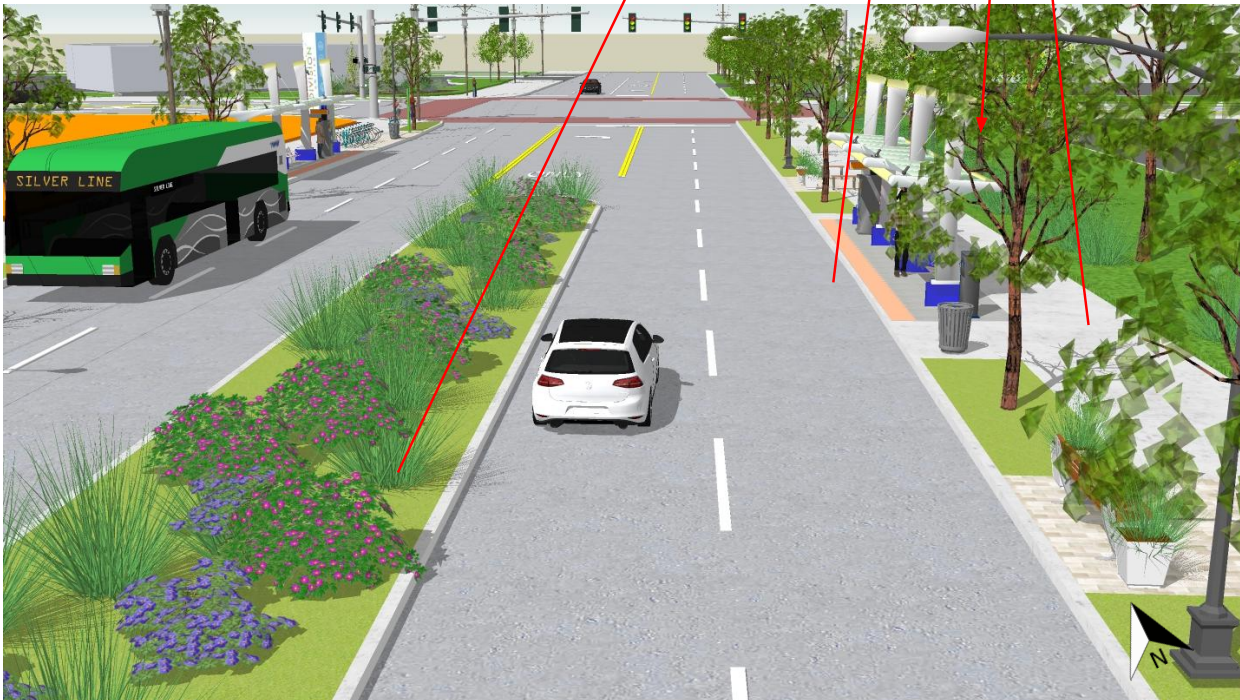
54TH STREET - STREETSCAPE

Existing



- Landscaped Median
- Removed Bike Lane
- Additional Tree Planting
- Widened Sidewalk

Proposed



54TH STREET- INTERSECTION

Existing



Special Landscape at
Corner of Intersection

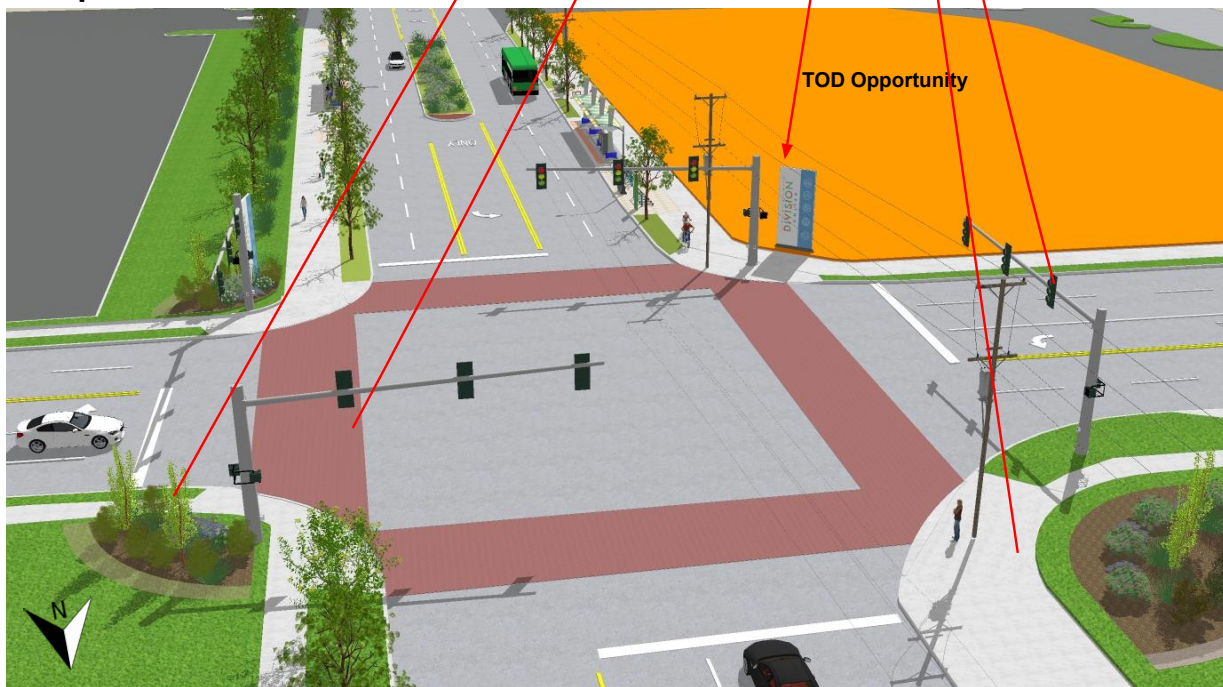
Painted Crosswalk

Gateway Sign

Extended Sidewalk Curb

Reduced Lanes by
Removing Right-Turn Only
Lane

Proposed



TOD Opportunity

54TH STREET- STATION AREA

Existing

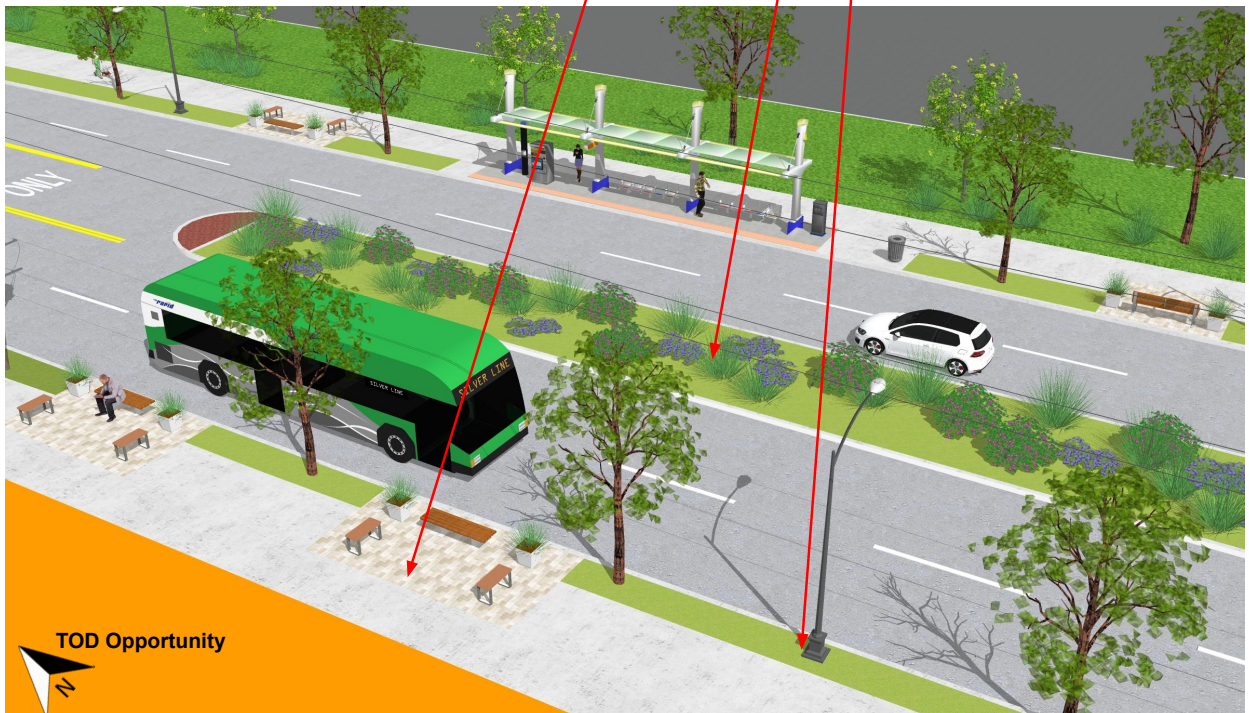


Widened Sidewalk and
Pedestrian Amenities

Landscaped Median

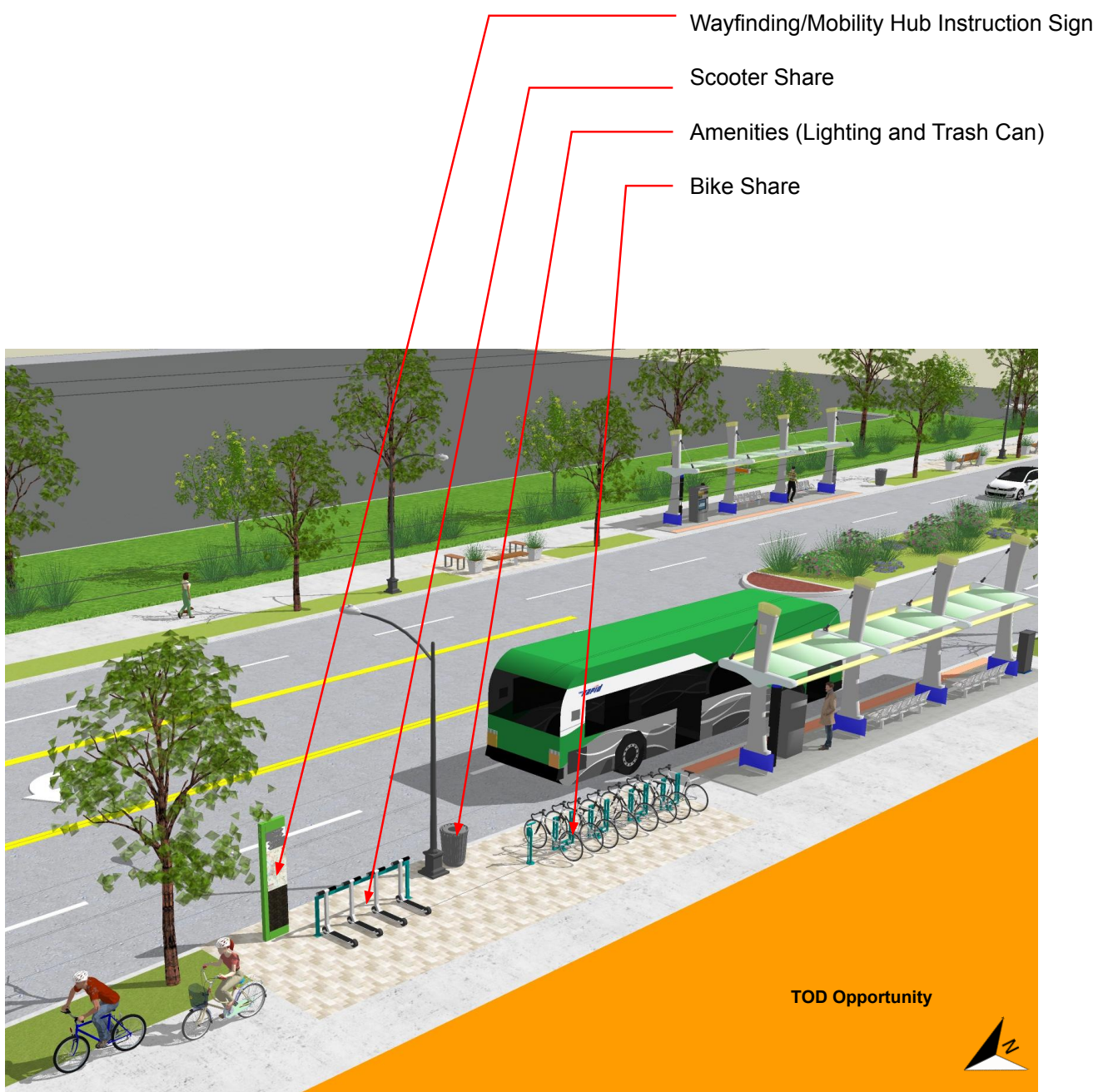
Additional Street Lighting
and Trees

Proposed



TOD Opportunity

54TH STREET- STATION AREA, MICRO-MOBILITY HUB










Proposed


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APPENDIX A: GOALS AND OBJECTIVES

CATEGORY	GOALS	OBJECTIVES	ICON
 TRANSPORTATION	Greater value and priority will be placed on transit service and facilities. GM1	Reduced travel times, improved on-time arrivals, increased hours of service, and more frequent service to each bus stop.	M1
		Better access to connecting transit (e.g., at 28th, 44th).	M2
		Dedicated bus lane (painted, resin, dyed, or asphalt).	M3
		Improved maintenance of Silver Line stations and all bus stops (in addition to Silver Line stops) in the corridor.	M4
		Ensure equitable access to transit, in part by improving multi-lingual information on service.	M5
	People will be safe from physical or vehicular harm while walking along and across South Division. GM2	Reduce vehicle traffic along Division Avenue and in surrounding neighborhoods.	M6
		Improved pedestrian crossings at existing intersections and add mid-block pedestrian crossings at strategic locations.	M7
		Add streetscaping elements, including trees for shade and beautification, where pedestrians stand, sit and wait.	M8
		Reduce number of driveways and curb cuts.	M9
		Updated infrastructure that meets accessibility standards and best practices for pedestrians of all abilities.	M10

CATEGORY	GOALS	OBJECTIVES	ICON
 TRANSPORTATION	<p>Sustainable transportation options will be available for all ages to access surrounding neighborhoods.</p> 	Improved routes to schools that prioritize access for children walking, bicycling, skateboarding, and using scooters.	
		Support the creation or continued activation of a transit riders union or other community body to advocate for transit-reliant users.	
		Transit and micro-transit connectivity to major employers and institutions (esp. outside a 10 minute walking distance).	
		Better connected walking and bicycling networks to, from, and across South Division Ave.	

CATEGORY	GOALS	OBJECTIVES	ICON
 ECONOMIC DEVELOPMENT	<p>Programs will help long-standing residents and business owners generate sustainable wealth.</p> <p>GE1</p>	Develop more direct pathways for small-scale development and local business ownership.	E1
		Funding resources available to repair and allow improvement of existing homes / businesses.	E2
		Public land and assets offered to local residents / businesses.	E3
		Attract significant employers to the opportunity sites (esp. at south end of corridor).	E4
		Recruit minority-owned or local bank / credit union.	E5
	<p>Policies will encourage growth in a diverse set of jobs that are better connected to people living in the corridor.</p> <p>GE2</p>	Generate employment that supports a mix of uses.	E6
		Protect job-generating uses but better buffer them from surrounding community.	E7
		Link school and job training centers to surrounding industrial employers.	E8
	<p>Development processes will ensure that current residents are informed about and understand the impacts and benefits of development.</p> <p>GE3</p>	Seek or provide financial support to small, local and first time developers.	E9
		Create more transparent development process for residents, businesses, developers, and the general public.	E10

CATEGORY	GOALS	OBJECTIVES	ICON
 BUILT ENVIRONMENT	<p>New development will foster variety, enhance cultural diversity and grow the population.</p> <p>GB1</p>	Identify development opportunities for vacant and underutilized parcels in the corridor.	N1
		Support for existing businesses and commercial properties through storefront improvements, especially minority-owned.	N2
		Add additional outreach programs for existing residents and businesses.	N3
		Identify design guidelines that support the introduction of more walkable urban environments.	N4
	<p>The mix of land uses will continue to include residential, commercial, office, retail and industrial.</p> <p>GB2</p>	Support addition of job-generating uses, including industrial and commercial uses.	N5
		Better align building and zoning codes with likely smaller scale and more flexible building types.	N6
		Identify residential density targets needed to support corridor commercial and absorb housing demand at transit nodes.	N7
	<p>The housing mix will allow for people of all income levels and household sizes to have options for renting or owning a home.</p> <p>GB3</p>	Develop affordable housing programs to ensure delivery of a mix of affordable uses.	N8
		Add flexibility in code for additional housing types (missing middle housing).	N9

CATEGORY	GOALS	OBJECTIVES	ICON
 QUALITY OF LIFE	All residents will have access to safe, quality and well-maintained parks and public gathering spaces. GQ1	Programming of underutilized public sites or rights-of-way.	Q1
		Leverage publicly owned land for green space and recreational space.	Q2
		Improve access to parks and public spaces.	Q3
		Add programmed public open space in areas with limited amounts.	Q4
	Investments in community amenities will target improvements in physical and mental health. GQ2	Provide greater opportunities for physical fitness and recreation.	Q5
		Improve access to fresh and healthy food.	Q6
		Partner with corridor health institutions and land owners to recruit health and family services to corridor and connect residents to them.	Q7
	Environmental impacts on residents will be mitigated. GQ3	Identify public and private side strategies to improve pedestrian realm.	Q8
		Continue to monitor the impacts old infrastructure/ lack of improvements have had on residents.	Q9
		Buffer industrial uses from adjacent residential neighborhoods.	Q10

CATEGORY	GOALS	OBJECTIVES	ICON
 COMMUNITY AND IDENTITY	<p>Familiar people, food and services will remain even as new development is constructed.</p> <p>GC1</p>	Support and develop community events celebrating corridor history and culture.	C1
		Preserve iconic and historic buildings that add character to the corridor for adaptive reuse when possible.	C2
		Protect businesses that are consistent with future land use and provide programs for them to expand in place.	C3
	<p>Community amenities and prominent indicators will reflect the history and culture of the corridor.</p> <p>GC2</p>	Development of narratives and media that highlight the unique history of the corridor.	C4
		Invest in public art / place-making / third place.	C5
		Official or unofficial designation of under-appreciated community assets.	C6
	<p>Public engagement will provide residents and property owners the power to influence decision-making processes.</p> <p>GC3</p>	Develop standards for engagement around new development projects.	C7
		Community engagement that reflects the diversity of the corridor.	C8
		Community engagement proposed by and run by residents.	C9

DIVISION
UNITED

