Regional PEDESTRIAN PLAN

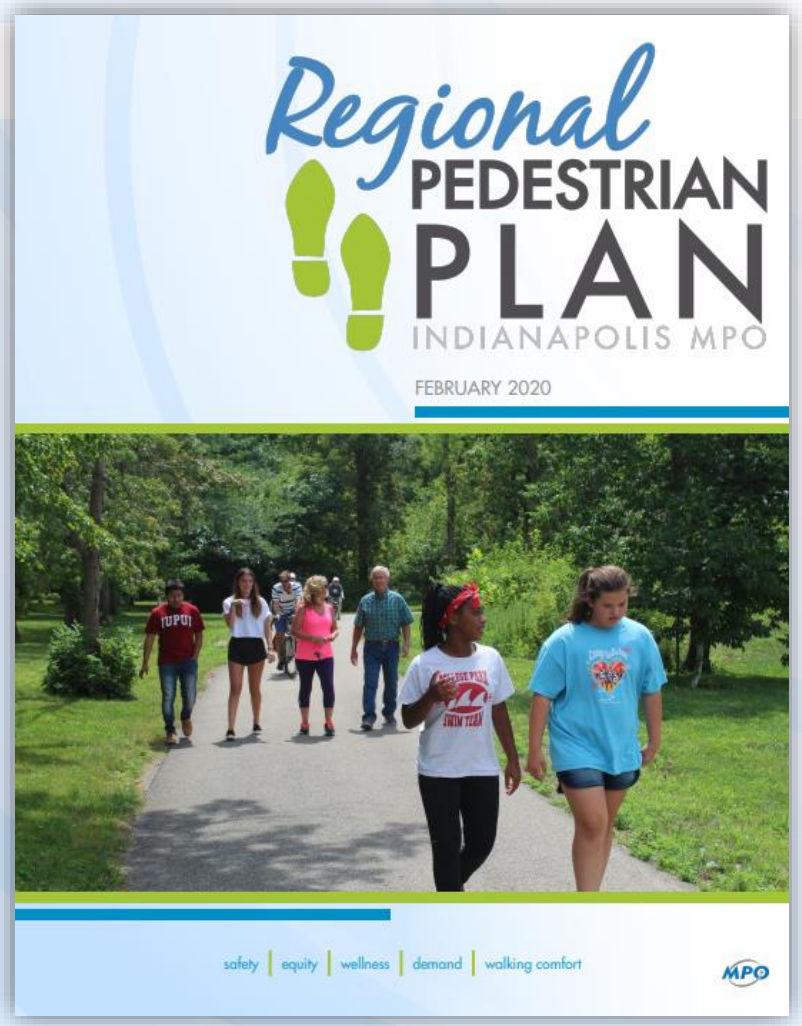
INDIANAPOLIS MPO

Approved: February 2020

ISDH: Injury Prevention Advisory Council (IPAC) +Indiana Violent Death Reporting System (INVDRS)

In the Plan

- Vision & Goals
- Investment Prioritization Methodology
- Implementation Recommendations



Regional PEDESTRIAN PLAN

INDIANAPOLIS MPO

VISION & GOALS

Vision

Provide a safe, efficient, and balanced comprehensive pedestrian network that promotes local and regional connectivity, maximizes community benefit, and establishes pedestrian facilities as an equal component of the regional transportation network. This system should provide for residents' daily transportation, recreation, and everyday walking uses.

Goals

Connectivity: Create a regional network of convenient, connected, and well-designed sidewalks and paths throughout the Central Indiana region.

Safety: Create a safe and inviting sidewalks and paths network throughout the MPA.

Wellness & Quality of Life: Create sidewalks and paths that promote walking, increase opportunities to walk, and connect people to meaningful destinations.

Community Benefit: Recognize and develop projects that provide additional community benefit beyond just the benefits of walking.

Collaboration & Education: Communities should work together, across municipal and county boundaries, to support sidewalks and paths that are enjoyable, useful, and have an impact on the most people's lives.

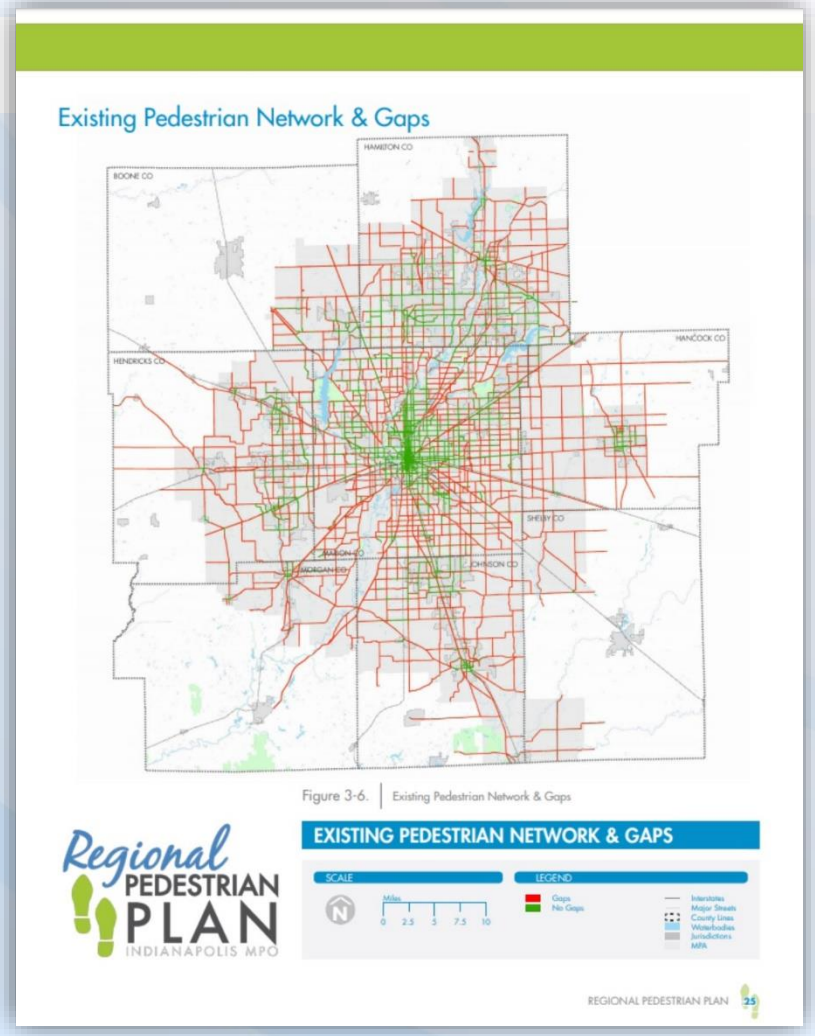
Perspective

- Plan uses regional priorities to recommend investments
- May not match local priorities
- Plan does not propose what communities should do or build
  - data-driven analysis
  - resource for local pedestrian planning and implementation
  - Communities are encouraged to adapt the methodology to their own needs and apply their own priorities to this analytical process

Investment Prioritization Methodology

Identify Gaps

- Rather than proposing projects, identify gaps
- "Gaps" are missing segments of the pedestrian network
- Gaps create barriers between neighborhoods, public facilities, and people
- Gaps identification did not include neighborhood streets or interstates.



MPO Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

Gather Data

- Block/Block Group data for
  - youth, older adults, non-white, poverty households, zero-car households, population
- InfoUSA data for employment
- Points for
  - parks and recreation, healthcare facilities, educational facilities
- Crash Data (ARIES - Automated Reporting Information Exchange System)
- Lane Widths
- Traffic Volumes (AADT)
- Speed Limits

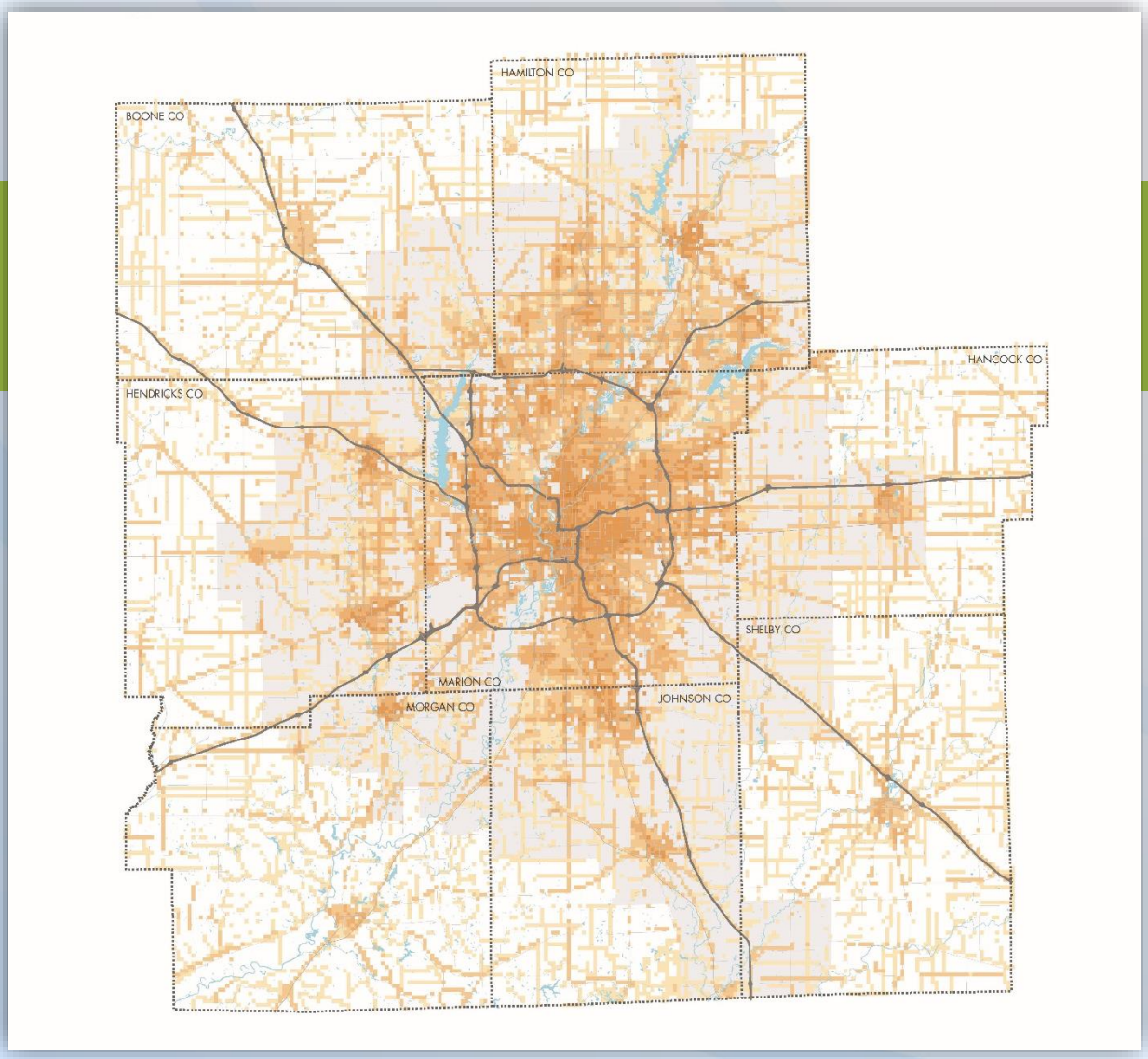
PRIORITY INVESTMENT AREA INDICES

PEDESTRIAN SAFETY

Prioritize investment in high-crash or likely risk areas to improve pedestrian safety.

Measures of Pedestrian Safety:

1. Density of Pedestrian/Vehicular Collisions
2. Existing Pedestrian Infrastructure Network
3. Lane Widths

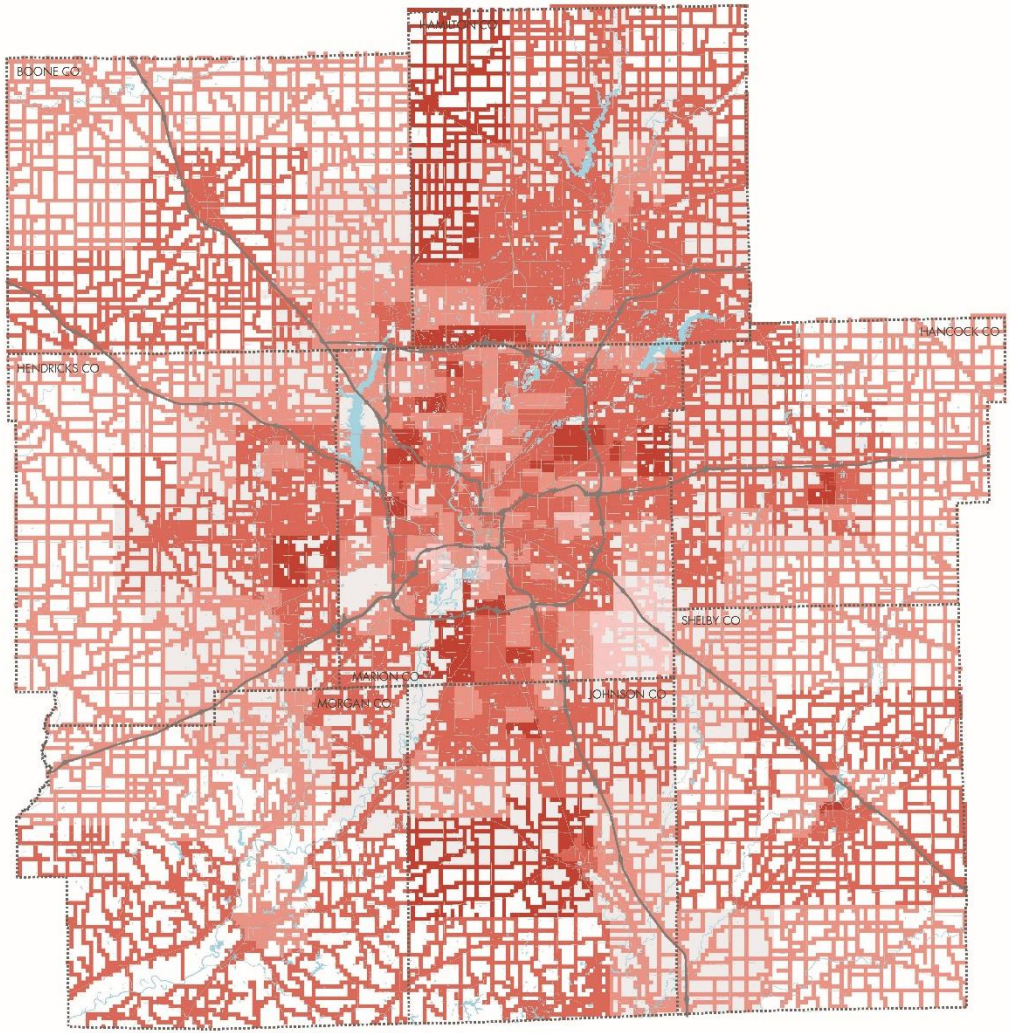

HAMILTON CO
BOONE CO
HANCOCK CO
HENDRICKS CO
SHELBY CO
MARION CO
JOHNSON CO
MORGAN CO

PRIORITY INVESTMENT AREA INDICES

Prioritize investment where people may be more dependent on walking or public transit for the majority of their trips.

Measures of Equity:

1. Densities of Youth
2. Densities of Older Adults
3. Densities of Minority Populations
4. Household Poverty Levels
5. Zero-Car Households


BOONE CO
HENDRICKS CO
HANCOCK CO
SHELBY CO
MARION CO
MORGAN CO
JOHNSON CO

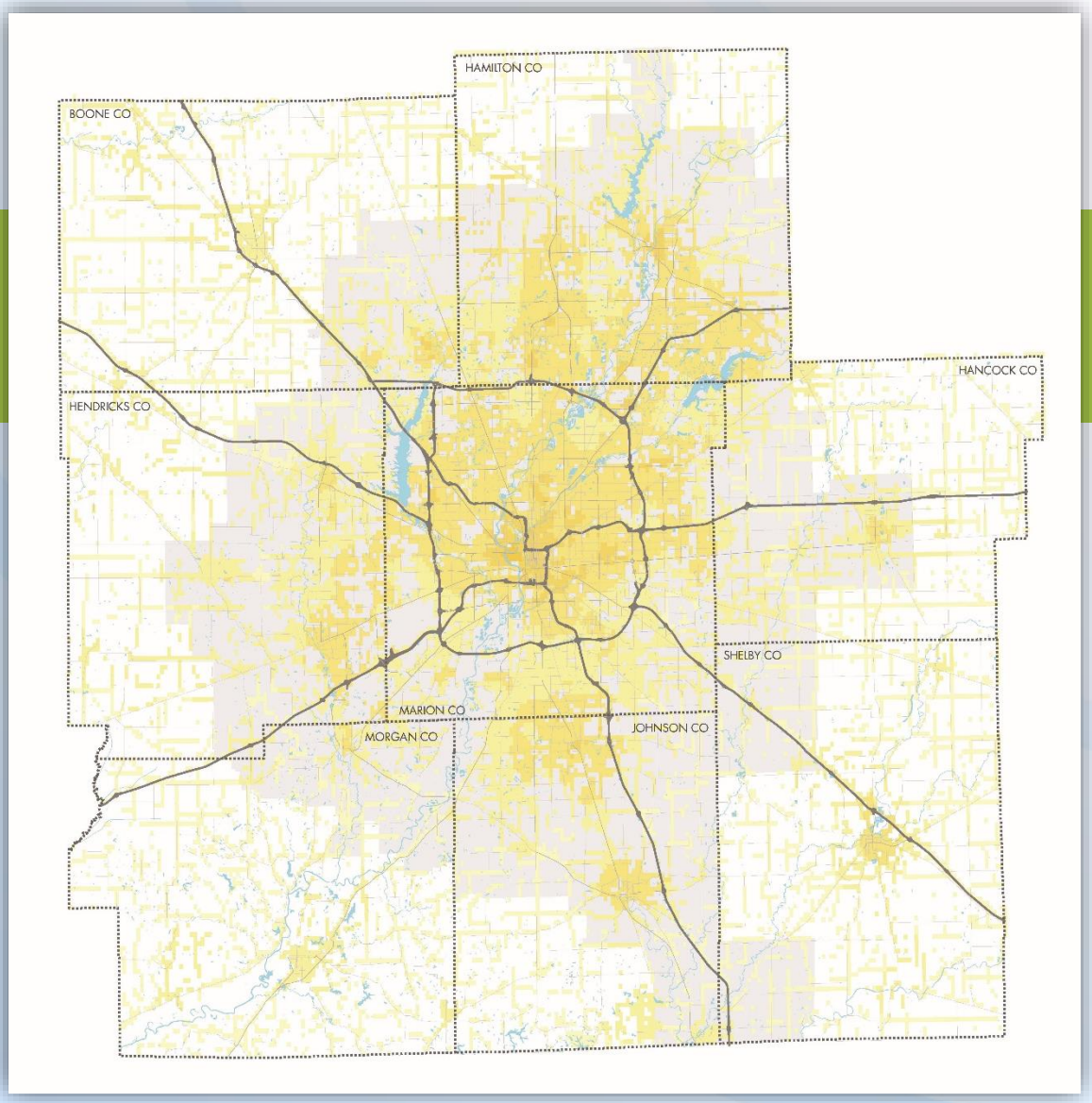
PRIORITY INVESTMENT AREA INDICES

WELLNESS

Prioritize investment where the pedestrian environment can negatively impact the health of residents.

Measures of Health:

1. Lack of access to Parks and Recreational Opportunities
2. Lack of access to Healthcare Facilities
3. Density of Pedestrian/Vehicular Collisions


HAMILTON CO
BOONE CO
HANCOCK CO
HENDRICKS CO
SHELBY CO
MARION CO
MORGAN CO
JOHNSON CO

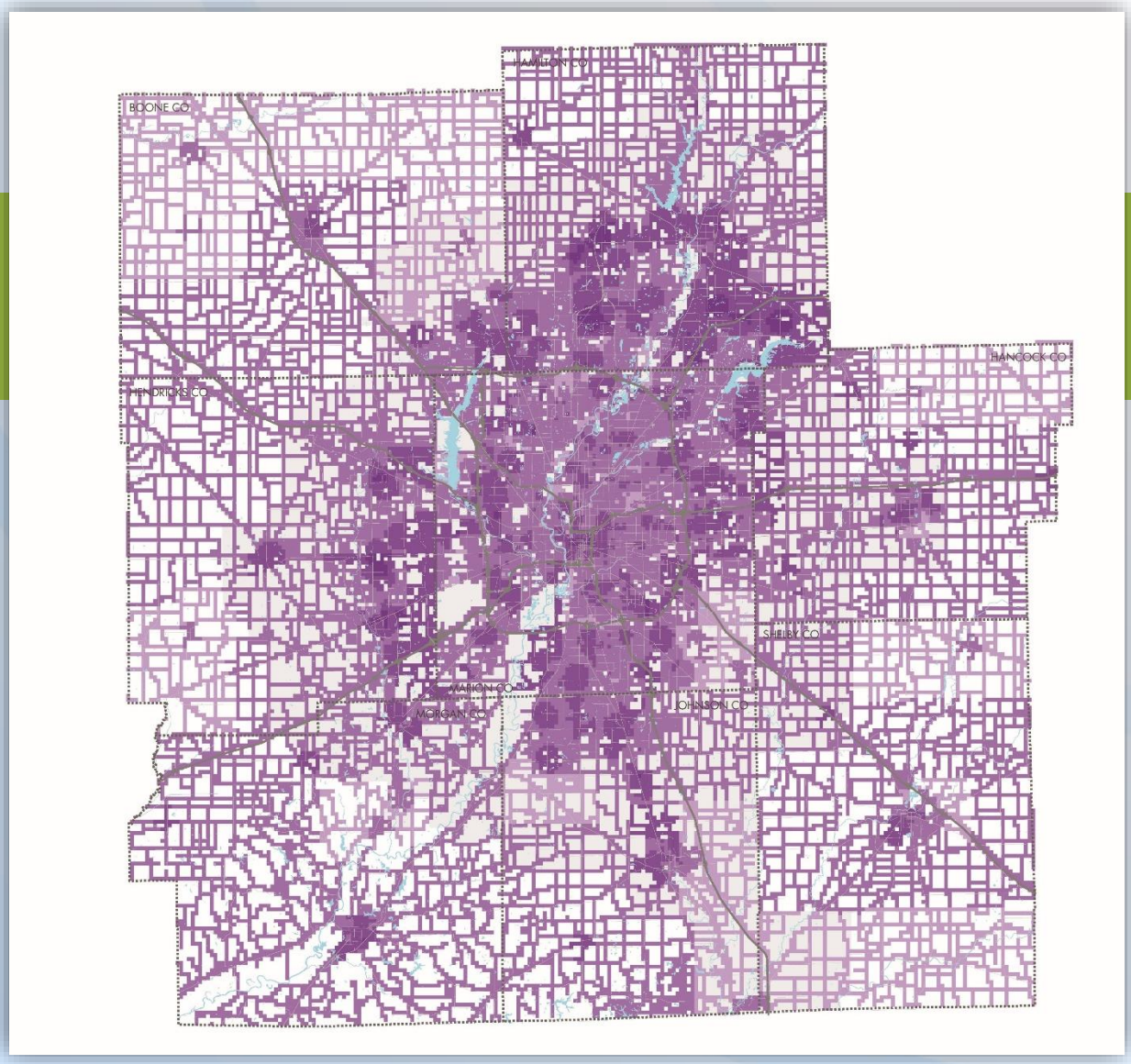
PRIORITY INVESTMENT AREA INDICES

PEDESTRIAN DEMAND

Prioritize investment in areas with higher pedestrian demand (the average volume of pedestrians on the pedestrian network).

Measures of Pedestrian Demand:

1. Population Density
2. Employment Density
3. Locations of Educational Facilities


HAMILTON CO.
BOONE CO.
HANCOCK CO.
HENDRICKS CO.
SHELBY CO.
MARION CO.
JOHNSON CO.
MORGAN CO.

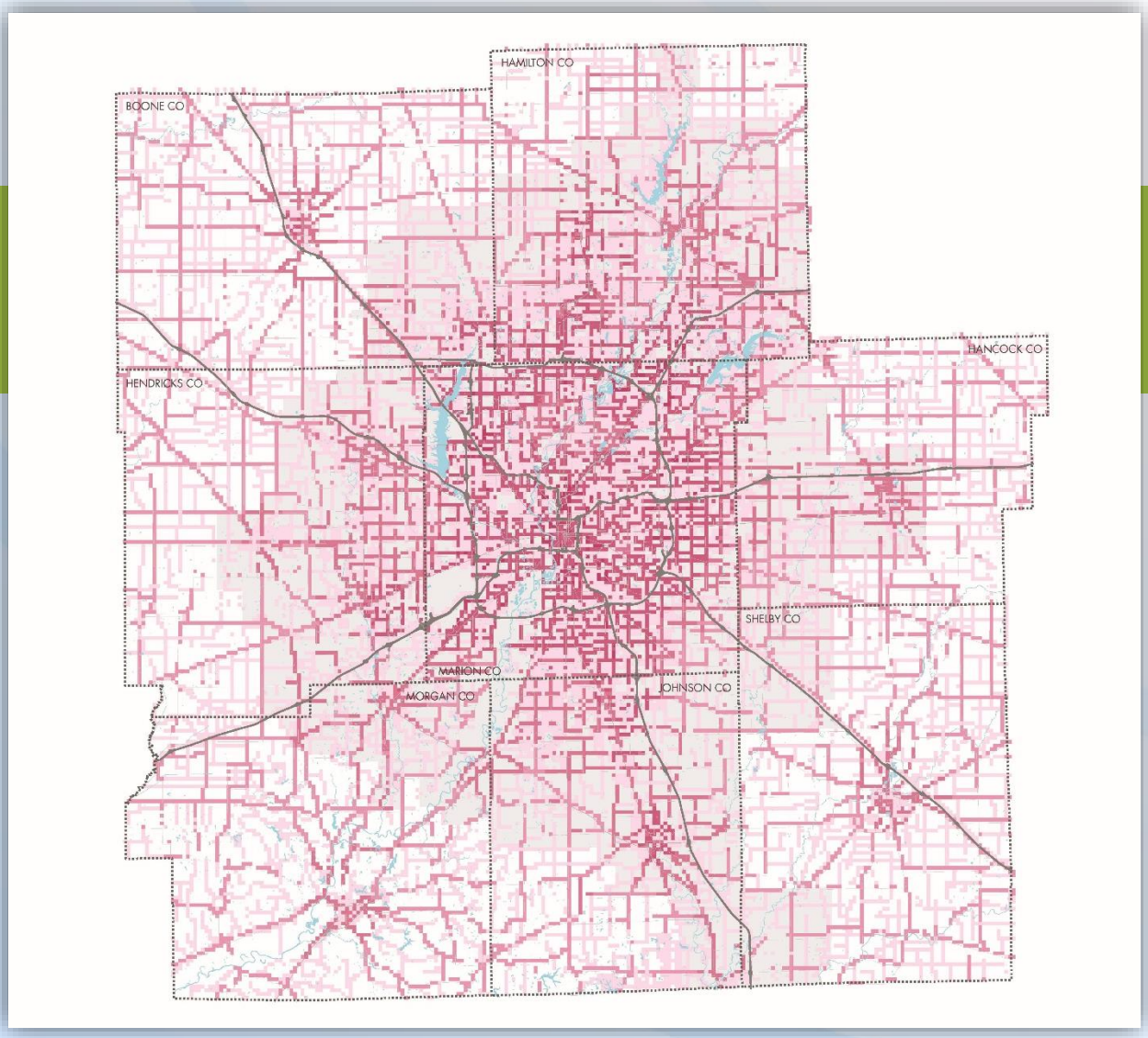
PRIORITY INVESTMENT AREA INDICES

WALKING COMFORT

Prioritize investment in areas where the level of walking comfort (the level of comfort people feel that the street provides for their mental and physical needs) can be improved.

Measures of Walking Comfort:

1. Traffic Volumes (AADT)
2. Speed Limits
3. Existing Pedestrian Infrastructure Network

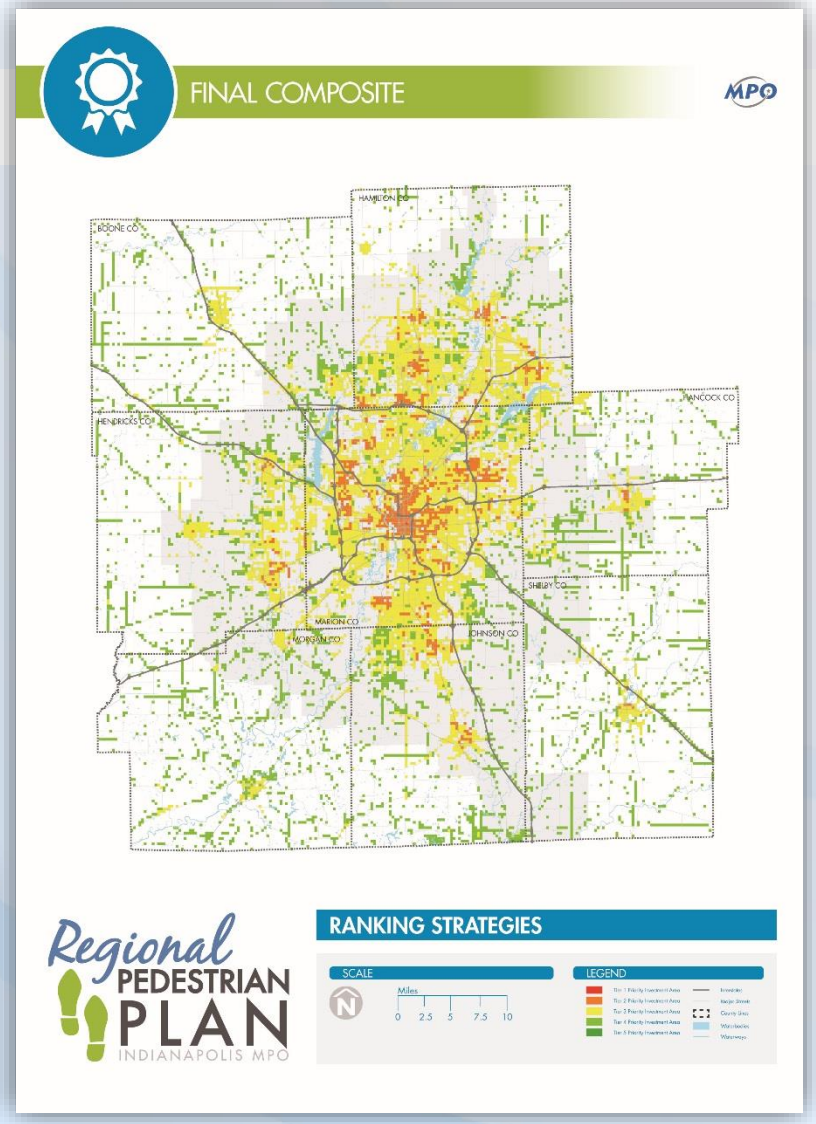

HAMILTON CO
BOONE CO
HANCOCK CO
HENDRICKS CO
SHELBY CO
MARION CO
JOHNSON CO
MORGAN CO

Layering

- Public survey
- Steering Committee input
- Regional Transportation Council input

Composite

- Prioritization results are as follows:
  - Pedestrian Safety
  - Equity
  - Wellness
  - Pedestrian Demand
  - Walking Comfort



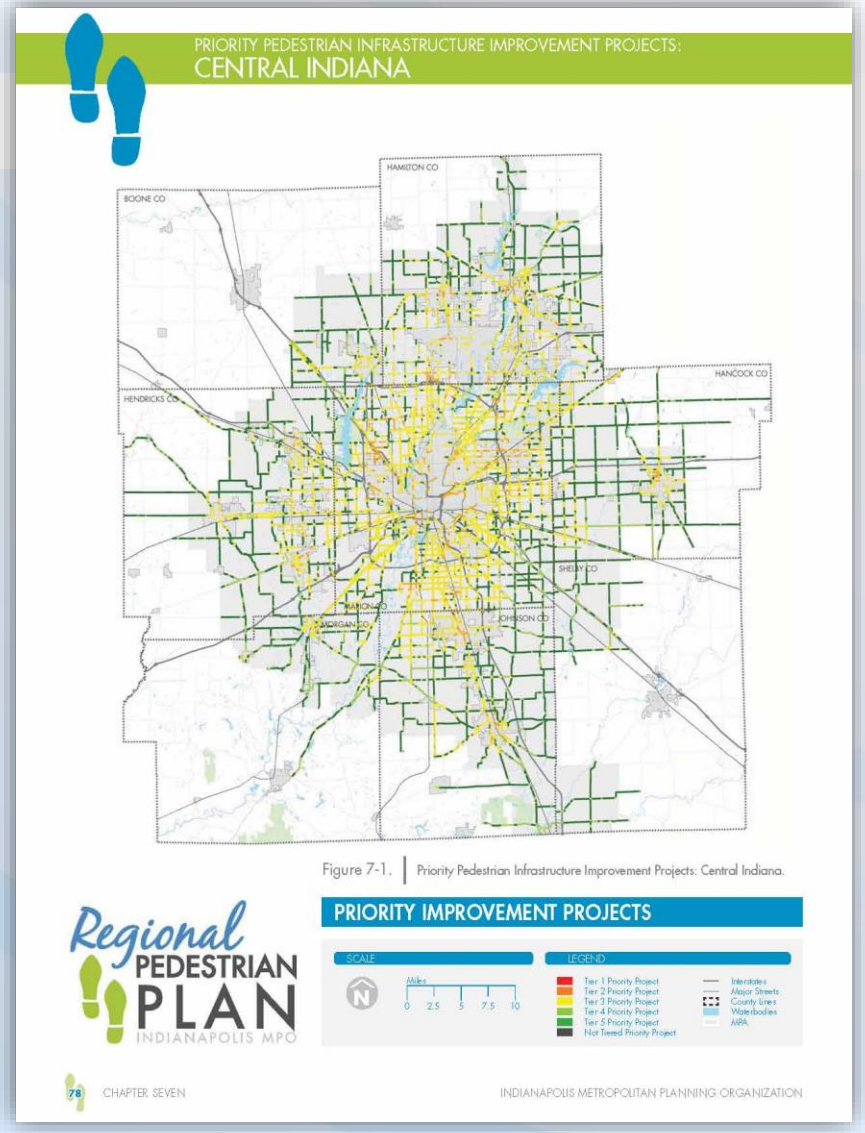
Tier 1 Priority Investment Area
Tier 2 Priority Investment Area
Tier 3 Priority Investment Area
Tier 4 Priority Investment Area
Tier 5 Priority Investment Area

MPO Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

Gap Tiers

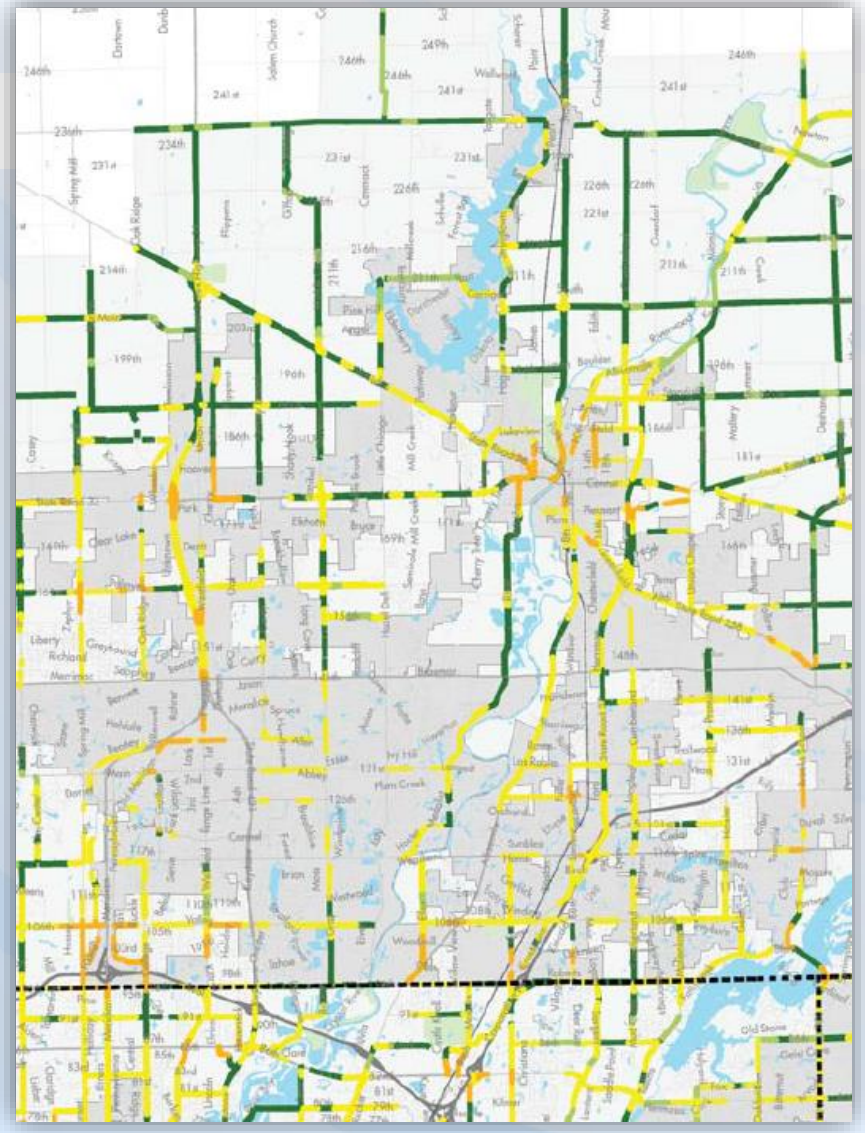
- Process:
  - 5-tier grid
  - Cross-referenced with gap network
  - Non-intersecting gaps were not assigned a tier
  - Individual county maps

- Tier 1 Priority Project
- Tier 2 Priority Project
- Tier 3 Priority Project
- Tier 4 Priority Project
- Tier 5 Priority Project
- Not Tiered Priority Project



Gap Tiers

- Process:
  - 5-tier grid
  - Cross-referenced with gap network
  - Non-intersecting gaps were not assigned a tier
  - Individual county maps



- Tier 1 Priority Project
- Tier 2 Priority Project
- Tier 3 Priority Project
- Tier 4 Priority Project
- Tier 5 Priority Project
- Not Tiered Priority Project

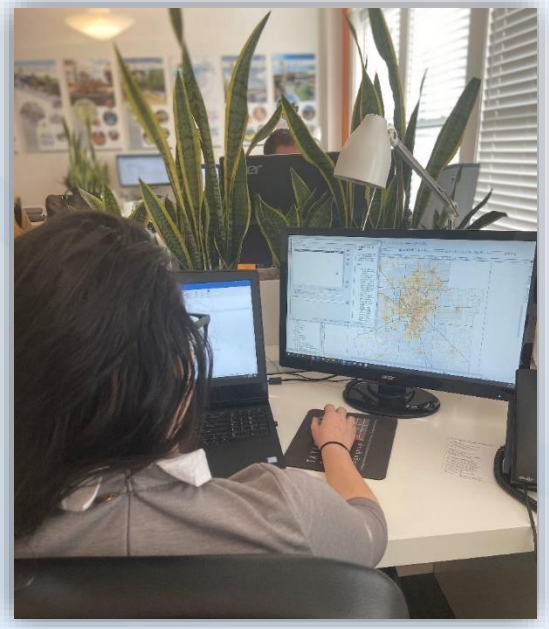
MPO Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

Perspective

- Plan uses regional priorities to recommend investments
- May not match local priorities
- Plan does not propose what communities should do or build
  - data-driven analysis
  - resource for local pedestrian planning and implementation
  - Communities are encouraged to adapt the methodology to their own needs and apply their own priorities to this analytical process

Data Limitations

- Limited to data applicable to the entire MPA
- Incomplete data sets that excluded one or more county were not used to reduce bias
  - Fixed transit service
  - Health department data
- Local streets were left out for scale
- Communities and organizations with specific boundaries are encouraged to apply data that was left out of the regional analysis



IMPLEMENTATION RECOMMENDATIONS

Get more people walking

- Examine factors that affect how and where people are walking
- Examine concerns and challenges related to pedestrian connectivity
- Examine ways in which pedestrian infrastructure can impact the options and outcomes of walking

MPO Regional Pedestrian Plan

Pedestrian Safety Measures

- Along the Roadway
  - Multi-Use Paths
  - Paved Shoulders
  - Sidewalks
  - Pedestrian Amenities

Pedestrian Safety Measures

Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

ALONG THE ROADWAY

Multi-Use Paths

Multi-use paths, or shared-use paths, are wide, paved facilities that support non-motorized users such as pedestrians, cyclists, and skaters. These paths are located along or away from the roadway and may be found in transitional areas between residential, commercial, and rural uses. They connect our communities and serve as regional recreation destinations (FHWA, 2013).

Paved Shoulders

Paved shoulders are emergency stopping lanes for motorists. Shoulders are not intended for use by through traffic, and may be used by pedestrian and cyclists in areas without sidewalks or multi-use paths (FHWA, 2013). In rural areas, extra-wide shoulders separated from traffic with rumble strips may be appropriate. They may also be enhanced with colored or textured pavement to increase visibility.

Sidewalks

Sidewalks are exclusive, paved facilities for people to walk, run, and play away from motorized vehicles. They are the fundamental building blocks of the regional pedestrian system and provide access to high demand destinations such as employment centers, educational facilities, public transit, medical services, grocery stores, entertainment, and for exercise. Sidewalks may be located on one or both sides of the street and are commonly located in residential and commercial areas. Sidewalks offer safety and walking comfort for pedestrians in the regional transportation network (FHWA, 2013).

Pedestrian Amenities

Well-designed pedestrian environments may include pedestrian amenities such as benches, street trees, lighting, trash receptacles, and bus shelters to increase pedestrian comfort. Pedestrian amenities not only provide a place for pedestrians to stop, rest, and interact with others, they can also serve as protective barriers between the sidewalk and the street. Areas with pedestrian amenities should be maintained to prevent collection of debris, overgrowth, and potential tripping hazards to protect pedestrian mobility (FHWA, 2013).

MPO Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

Pedestrian Safety Measures

- Across the Roadway
  - Accessible Curb Ramps
  - Automated Pedestrian Detection
  - Pedestrian Signalization
  - Crossing Islands
  - Curb Extensions
  - Raised Pedestrian Crosswalks
  - Marked Crosswalks
  - Pedestrian Overpasses/Underpasses
  - Advance Stop/Yield Lines
  - Road Diet
  - High-Intensity Activated Crosswalk Beacon (HAWK)
  - Rectangular Rapid Flash Beacon (RRFB)

Pedestrian Safety Measures

Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

ACROSS THE ROADWAY

Accessible Curb Ramps

Accessible curb ramps provide access from the roadway to the sidewalk for people with mobility limitations (using assistive devices such as wheelchairs, walkers, or canes to move as a pedestrian), or those with visual or cognitive impairments. According to federal legislation, curb ramps must be installed at all intersections and midblock locations where pedestrians are crossing. Detectable warnings should be provided at the edge of the ramp to alert pedestrians they are about to cross the street (FHWA, 2013).

Automated Pedestrian Detection

Automated pedestrian detection devices are able to detect when a pedestrian is waiting at a crosswalk and send a signal to the system to switch to the "WALK" phase. Using the "DON'T WALK" signal, the devices are able to cut down on pedestrians crossing the road at inappropriate times. Automated pedestrian detection devices are beneficial in situations where pedestrians don't push buttons to cross the street, or where visually impaired pedestrians may not know there is a button to push. They provide convenient crossing indications and give pedestrians enough time to safely cross the street (FHWA, 2013).

Pedestrian Signalization

Where pedestrian volumes warrant them, pedestrian signals should be installed at controlled intersections to provide gaps in traffic flow and allow pedestrians enough time to safely cross the street. To encourage crossing compliance, signal timing should be convenient and favor the pedestrian. Crossing signals should be usable by pedestrians of all ages and abilities and provide both visual and audible cues (FHWA, 2013).

Crossing Islands

Crossing islands are protected refuge areas in medians that help pedestrians cross multi-lane roads. They increase walkability by allowing pedestrians to focus on one direction of traffic at a time. They reduce the amount of time pedestrians are exposed to vehicular traffic and provide adequate space to cross the road. They are appropriate at signalized and unsignalized intersections and mid-block crossings and increase pedestrian safety. Crossing islands should be paired with marked crosswalks to increase visibility and slow traffic (FHWA, 2013).

MPO Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

Policies & Procedures

- Complete Streets Policies
  - Funding Policies
  - Planning Policies
  - Design Policies
  - Maintenance Policies

Policies & Procedures

Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

COMPLETE STREETS POLICIES

Complete Streets policies address the funding, planning, and design of streets to ensure safe and equitable access for all users, including pedestrians, bicyclists, motorists, transit riders, and freight. In Central Indiana, the City of Indianapolis, the City of Westfield, the Indianapolis MPO, and INDOT have adopted Complete Streets policies. As of the writing of this plan, the town of Cumberland is currently in the process of adopting a similar policy.

The benefits of Complete Streets policies extend beyond the pedestrian; they also increase economic development, reduce transportation costs, and increase sustainability by encourage active modes of transportation (Federal

Complete Streets: Policy Typologies

Funding Policies

These policies set aside funding for new pedestrian improvement projects, programming, or maintenance of existing sidewalks and paths.

Planning Policies

These policies guide the identification and development of pedestrian improvement projects and programming.

Design Policies

These policies guide the physical design of street and pedestrian projects (materials, measurements, etc.).

Maintenance Policies

These policies specify how sidewalks and paths should be maintained (sweeping, snow removal, repair, etc.).

MPO Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

Policies & Procedures

- Support Policies
  - Parking Policies
  - Encouragement Policies
  - Transit Integration Policies
  - Safety and Enforcement Policies
  - Education Policies

Policies & Procedures

Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

SUPPORT POLICIES

Parking Policies

Parking policies are those that guide the pricing, location, and availability of vehicular parking opportunities. Where parking is expensive or limited, people may choose alternative modes of transportation, such as walking. Parking policies can improve the economy, environment, and overall wellness of our communities (Shoup, 2019).

Transit Integration Policies

Transit integration policies are those aimed at making the connections between walking and transit more convenient. These may include locating transit stops in areas with high population densities and/or high densities of people who may be more dependent on walking or public transit for the majority of their trips.

Safety and Enforcement Policies

Enforcement policies are those that guide the enforcement of existing traffic laws to increase pedestrian safety, access, and mobility. Effective safety enforcement policies partner with local organizations to expand pedestrian safety resources, coordinate with local officials to ensure that enforcement policies comply with local traffic laws, coordinate with design and planning personnel to determine locations where enforcement operations may be most effective, and offer public outreach opportunities to educate community members (National Highway Traffic Safety Administration, 2019)

Encouragement Policies

Encouragement polices are those that guide the encouragement of walking as an active, sustainable form of transportation. Encouragement policies such as social media campaigns, special events related to walking, community benefit programs, employer incentives, and collaboration with local bicycling and walking organizations can improve walkability (U.S. Department of Transportation, 2019).

Education Policies

Education policies are those that guide the instruction of safe and legal operation by road users and seek to reduce injuries and deaths through the education of residents.

MPO Regional PEDESTRIAN PLAN INDIANAPOLIS MPO

- Full Plan:
  - tinyurl.com/ulo2a8v
- Prioritization Maps:
  - tinyurl.com/u9m64da

Regional PEDESTRIAN PLAN

INDIANAPOLIS MPO

Approved: February 2020

ISDH: Injury Prevention Advisory Council (IPAC) +Indiana Violent Death Reporting System (INVDRS)