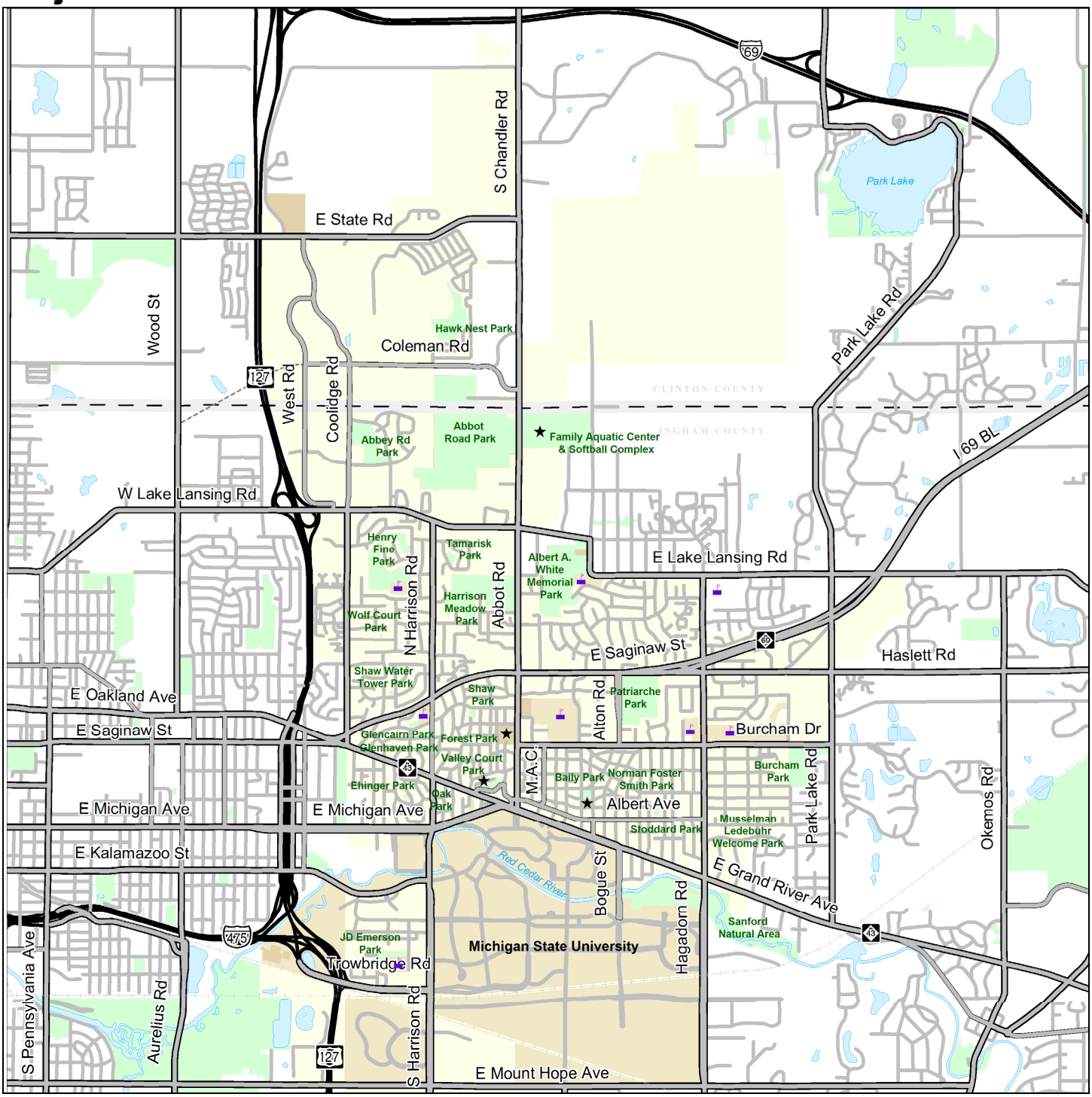
East Lansing Nonmotorized Plan
Public Workshop - Preliminary Inventory and Analysis
May 27, 2009

List of Figures

Project Overview



Legend:

- ★ Community and Recreational Centers
- Schools
- Parks
- Water
- Local Roads
- Primary Roads
- Rail Roads

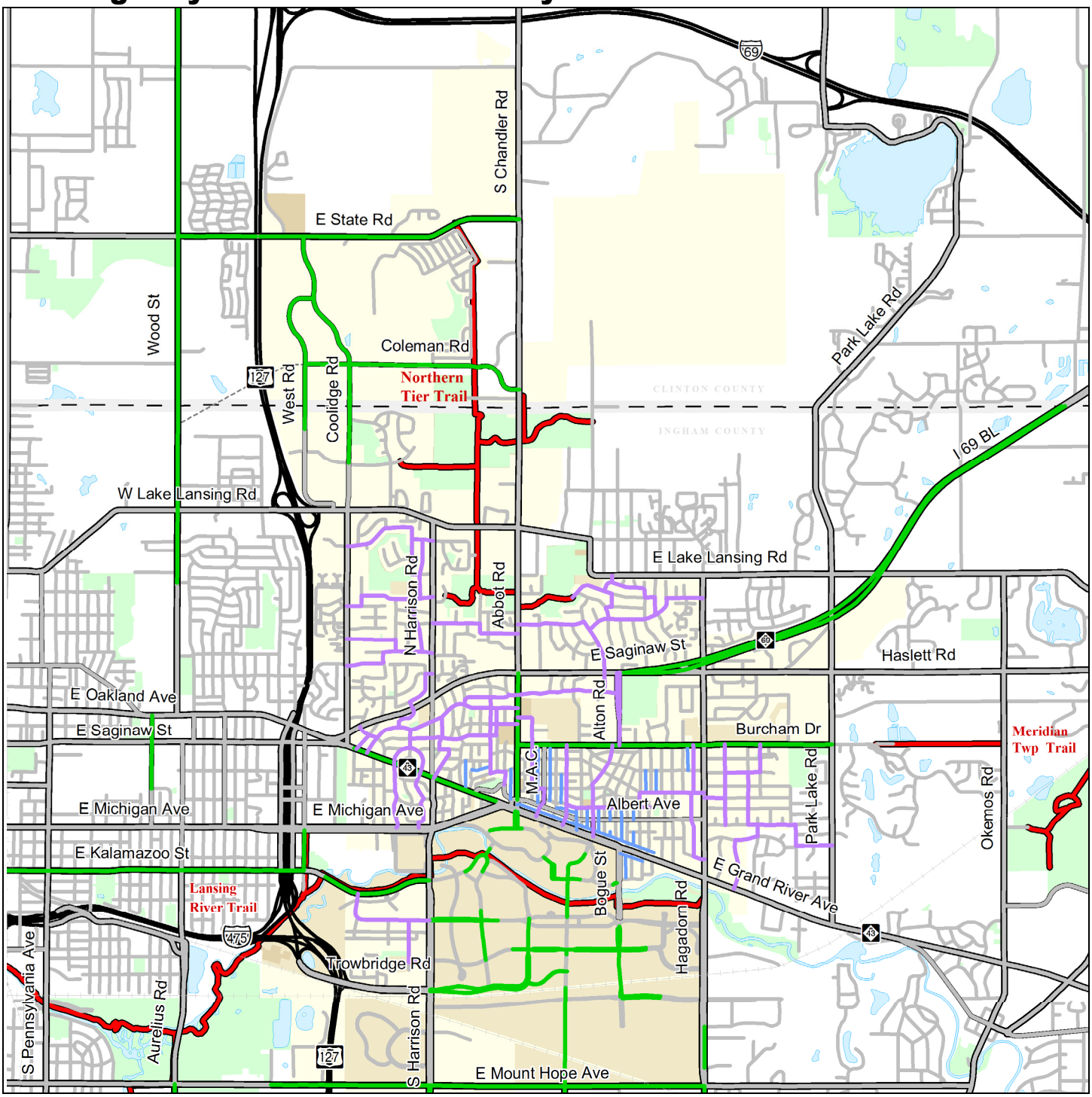
Population: currently estimated to be 46,254

Size: 11.25 Square Miles

Journey to Work Data (Based on 2000 Census):

3.1 %	By Bicycle
22 %	Walked
4.3 %	Took Public Transit
29.4 %	Non-Car Commute

Existing Bicycle Facilities Inventory

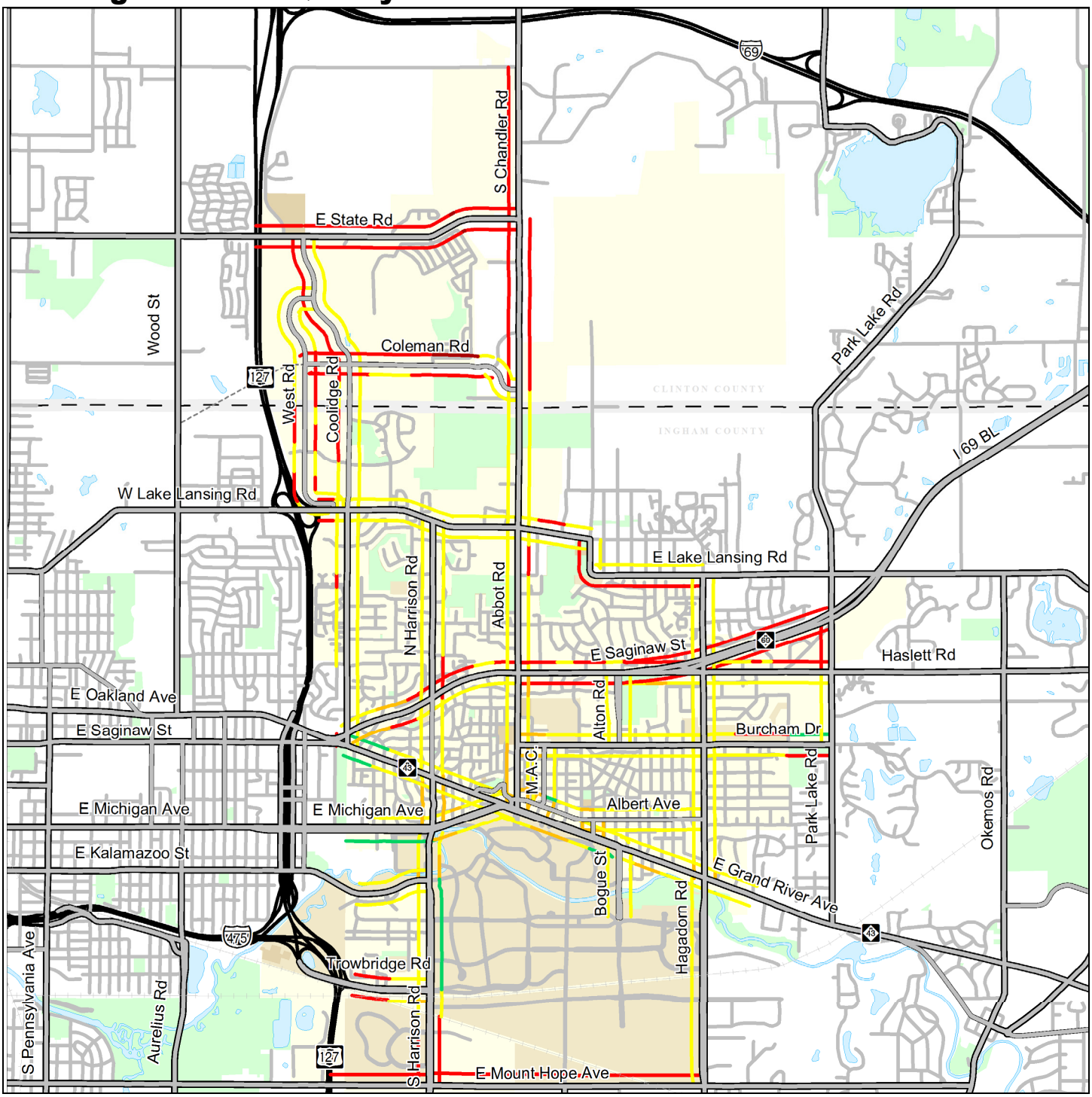


Legend:

- Trails
- Paved Shoulder/Bike Lanes
- Unmarked On-Street Routes
- Alleys
- Primary Roads
- Local Roads

There are 4.7 Miles of Existing Trail and 14.2 Miles of Existing Bike Lanes

Existing Sidewalk Quality Assessment



Legend:

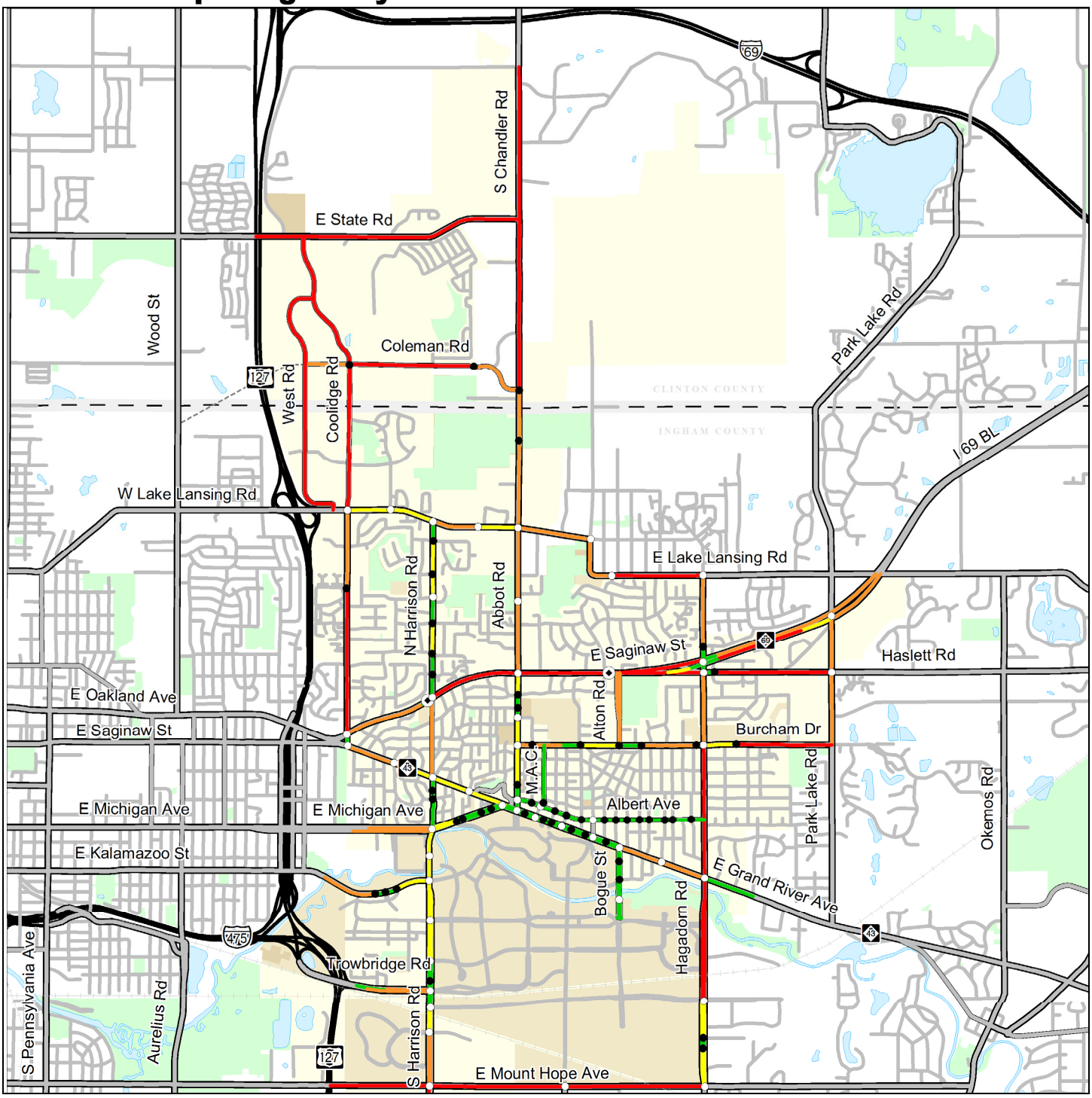
Sidewalk Rating

- A - Facilitiy with Vertical Buffer
- B - Facilitiy with Buffer
- C - Facility along Curb
- D - No Facility/ Passable
- E - No Facility/ Not Passable

A key factor to a pedestrians comfort on a sidewalk is the degree of separation from the roadway. Buffer (lawn extensions) and vertical elements such as trees and light poles increase the pedestrians comfort level.

Currently, there is 63% (46.5 Miles) of Existing Sidewalk Coverage Along Primary Roads.

Crosswalk Spacing Analysis



Legend:

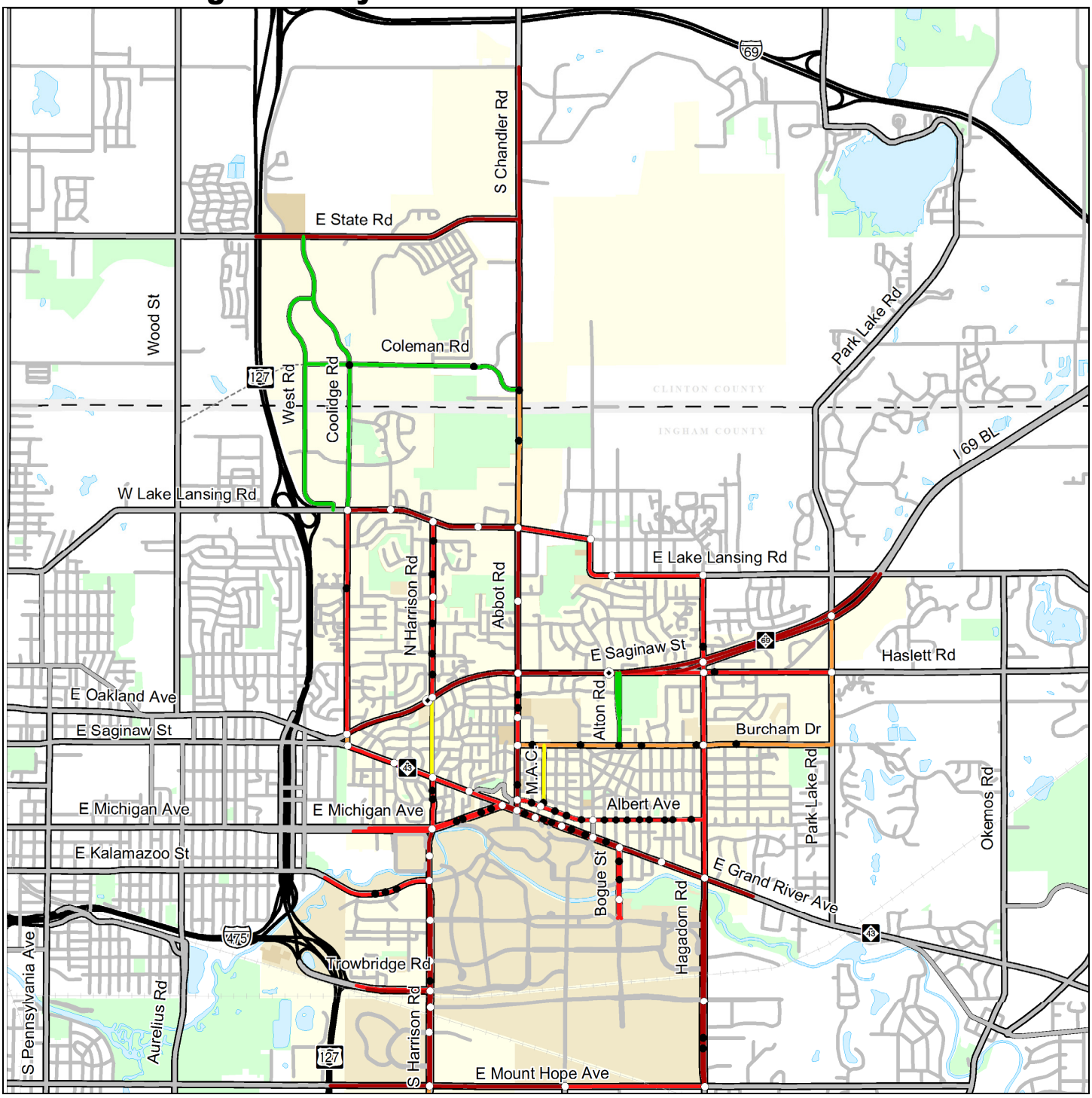
Distance Between Crosswalks

- 0 to 1/8 Mile
- 1/8 to 1/4 Mile
- 1/4 to 1/2 Mile
- Over 1/2 Mile

- Signalized Road Crossings
- Unsignalized Road Crossings
- Pedestrian Bridges

Crosswalk spacing is a key factor in directness of travel. Most pedestrian trips for personal business (like walking to the store) are about ½ a mile long. Where there is demand to cross the road and crosswalk spacing is over 1/8 of a mile apart, mid-block crossings are likely to occur.

Road Crossing Difficulty Assessment



Legend:

Crosswalk Difficulty
(Speed, No. Lanes & ADT)

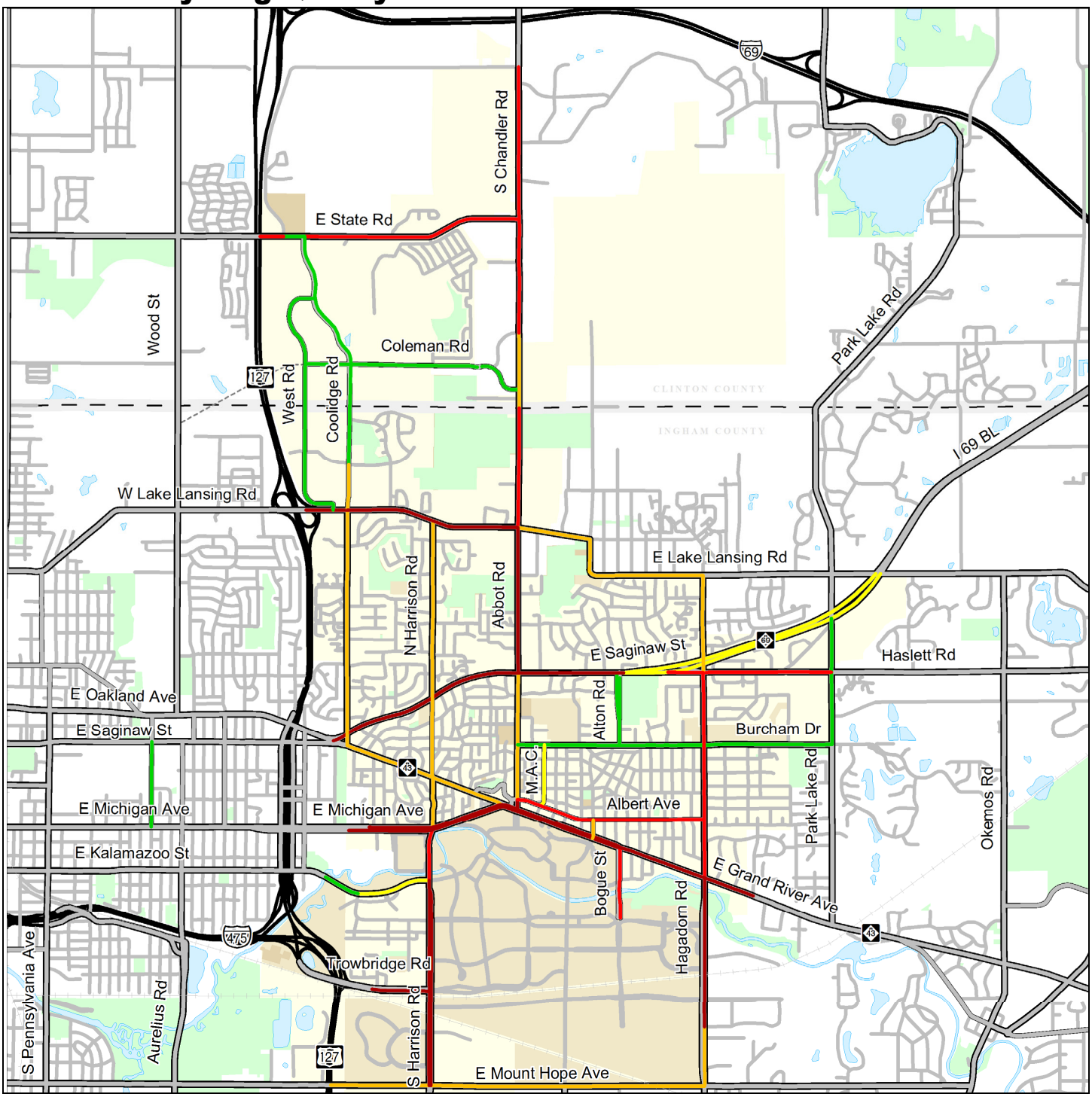
- A
- B
- C
- D
- E

- Signalized Road Crossings
- Unsignalized Road Crossings
- Pedestrian Bridges

Road crossing difficulty is a measurement of how difficult a person would typically find it to cross a road at an unmarked mid-block crosswalk. It is based on the number of lanes, speed and average daily traffic.

Grade	Lanes	Speed	ADT
A	2	<30	<5,000
B	3	30	5,000-10,000
C	4	35	10,000-15,000
D	5	40	15,000-20,000
E	6	45+	20,000+

In-Road Bicycling Quality Assessment



Legend:

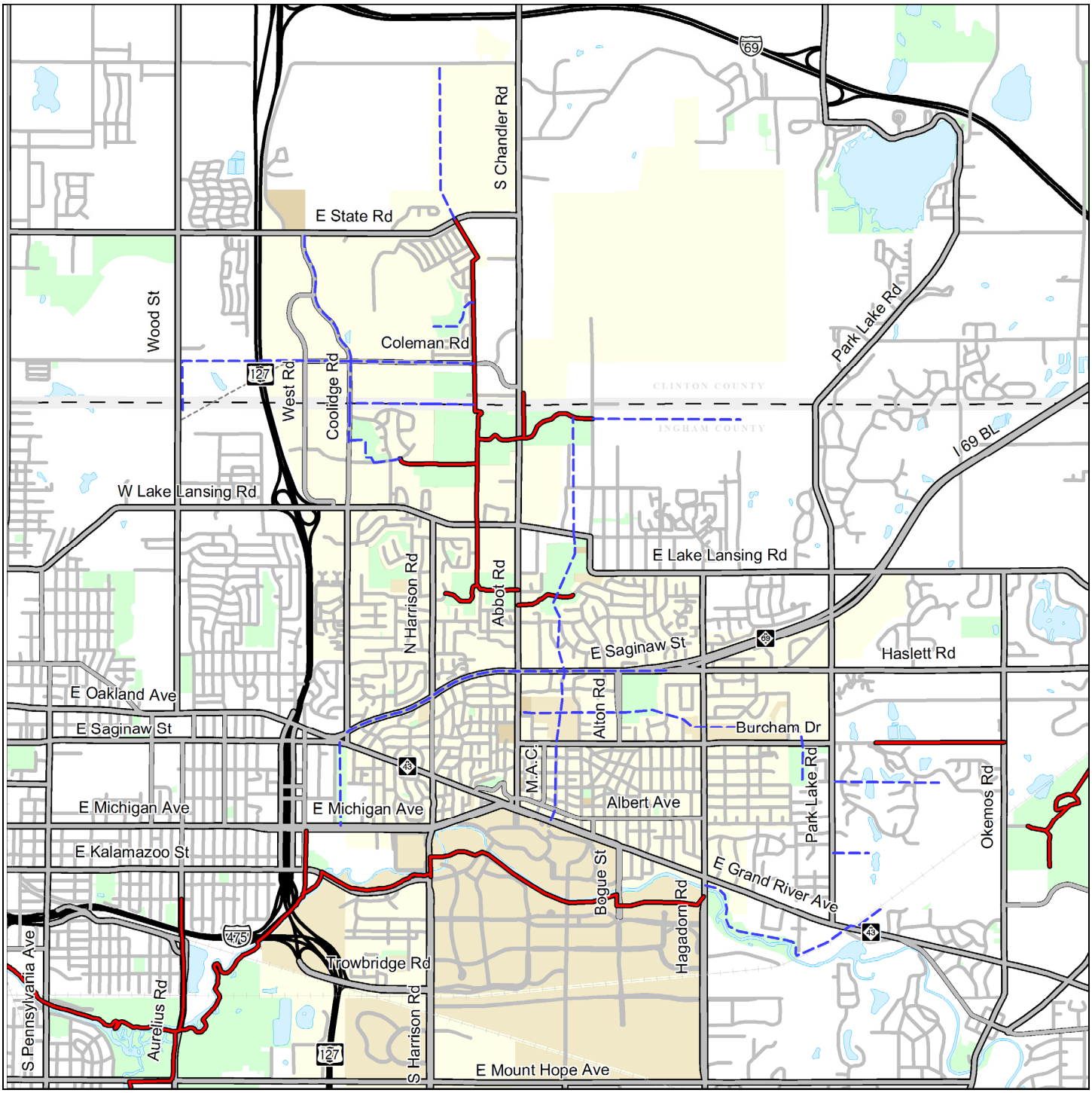
In-Road Bicycling Quality

- A
- B
- C
- D
- E

In-road bicycling facilities improve the quality of the bicycling experience on busy roads. Quality of the in-road bike facilities was based on speed limit and daily traffic volumes.

Without Bike Lane	With Bike Lane	ADT	Speed Limit
A	A	0 -5,000	25
B	A	5,000 – 10,000	30
C	B	10,000 – 15,000	35
D	C	15,000 – 20,000	40
E	C	20,000 – 25,000	45
E	D	Over 25,000	50

Trail Committee Potential Routes



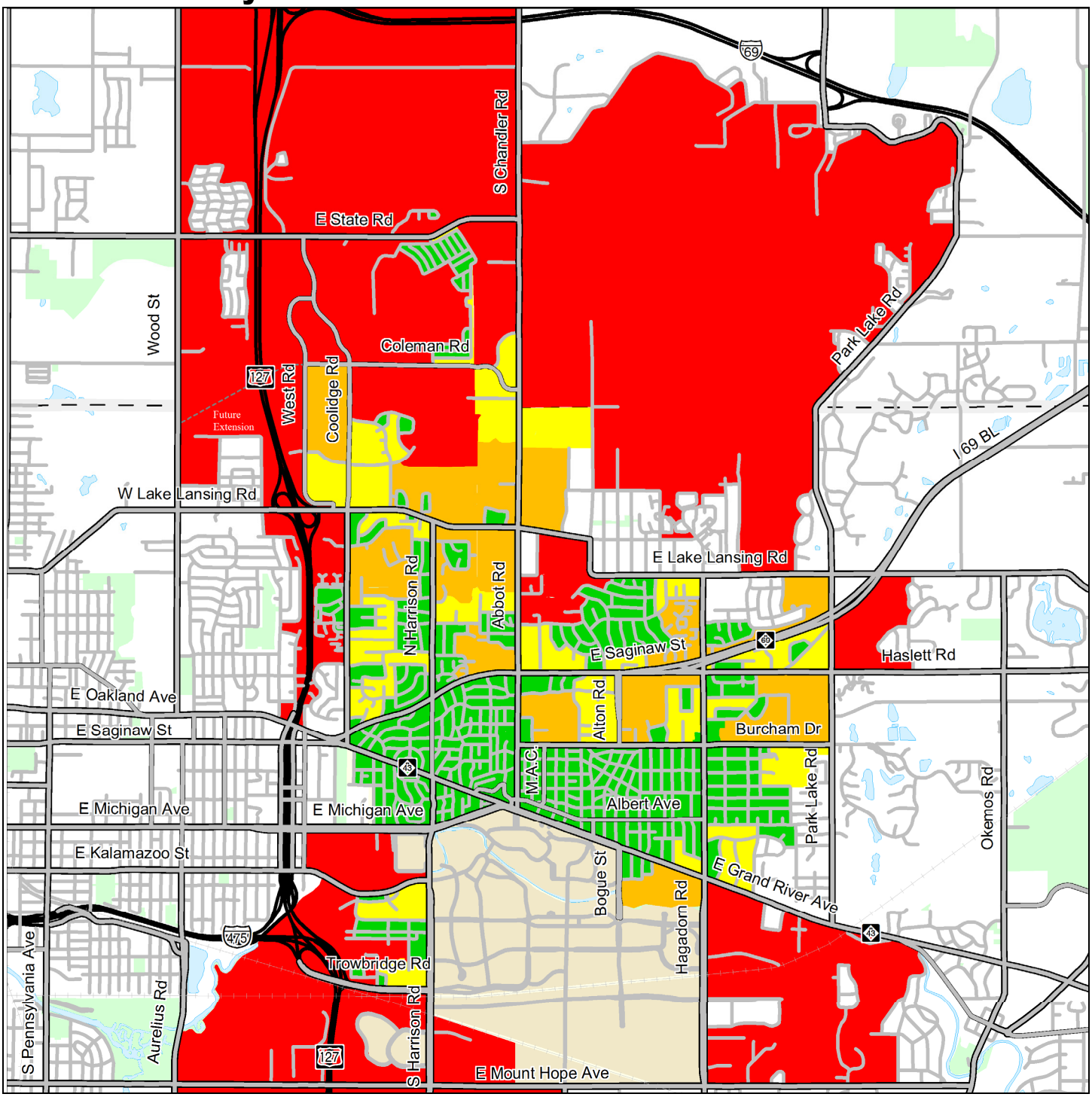
Legend:

Protential Routes

Existing Trail

These potential routes where identified by the City of East Lansing Trails Committee.

Block Size Analysis



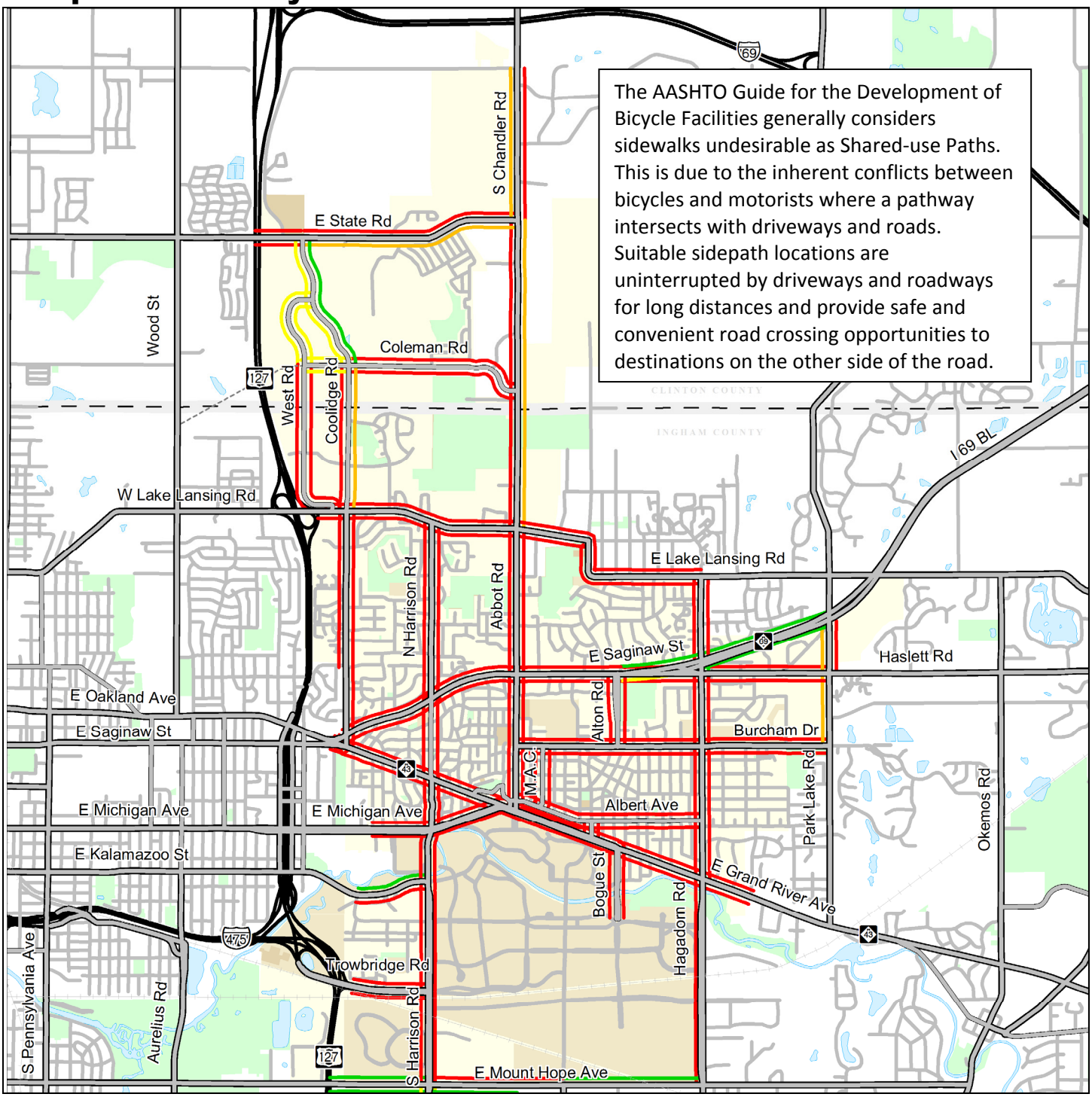
Legend:

Block Size in Acres

- Over 100
- 50 to 100
- 15 to 50
- 0 to 15

Block size is an excellent measurement of directness of travel.

Sidepath Suitability Assessment



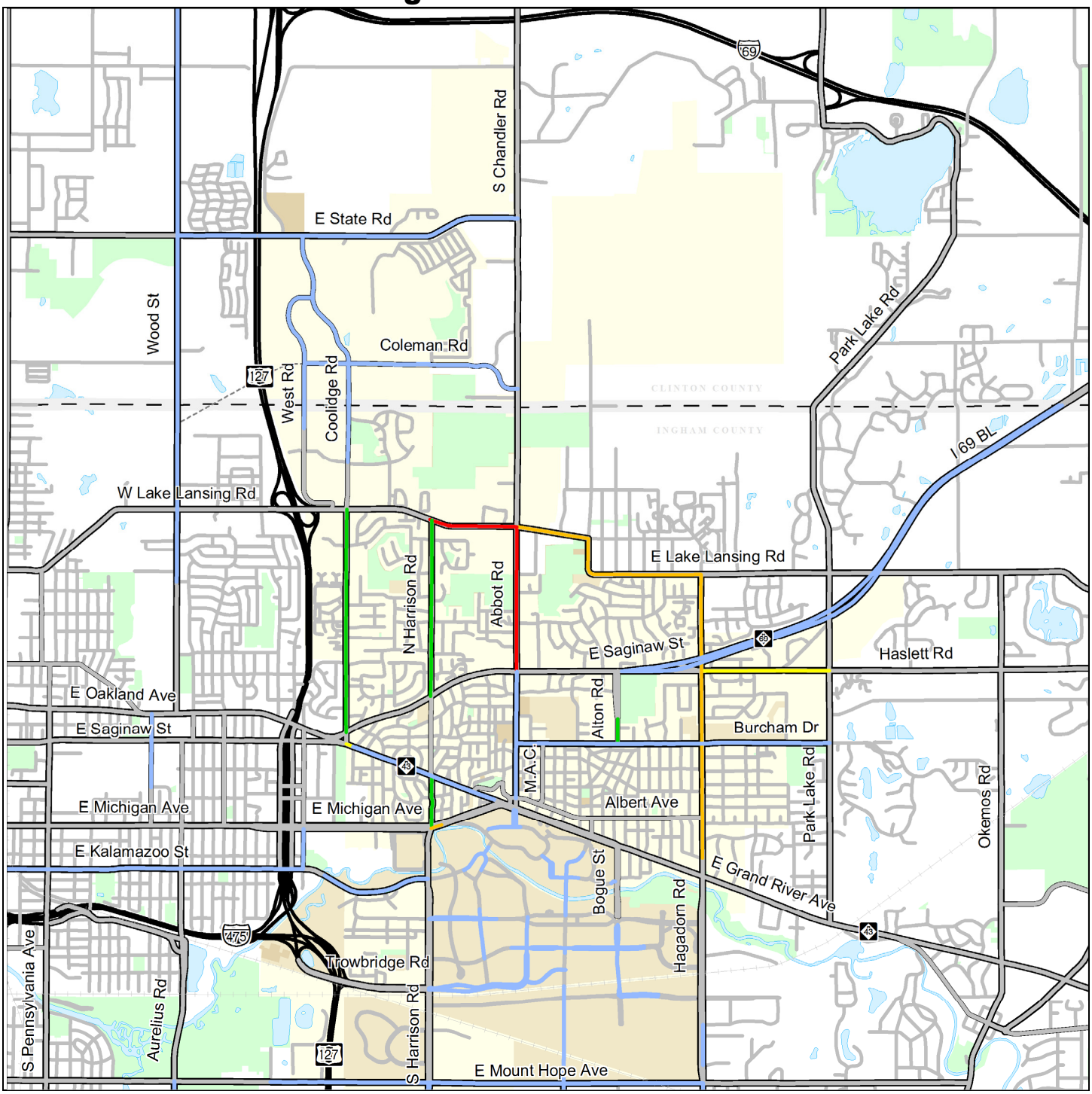
Legend:

Sidepath Suitablity Rating
Conflict Points Per Mile

- A - Less than 2
- B - 2 to 3
- C - 3 to 4
- D - Over 4

A conflict point is a local road or high traffic volume commercial driveway. For this analysis, ten minor/residential driveways were considered equal to one conflict point.

Bike Lane Potential Through 4 to 3 Lane Conversions



Legend:

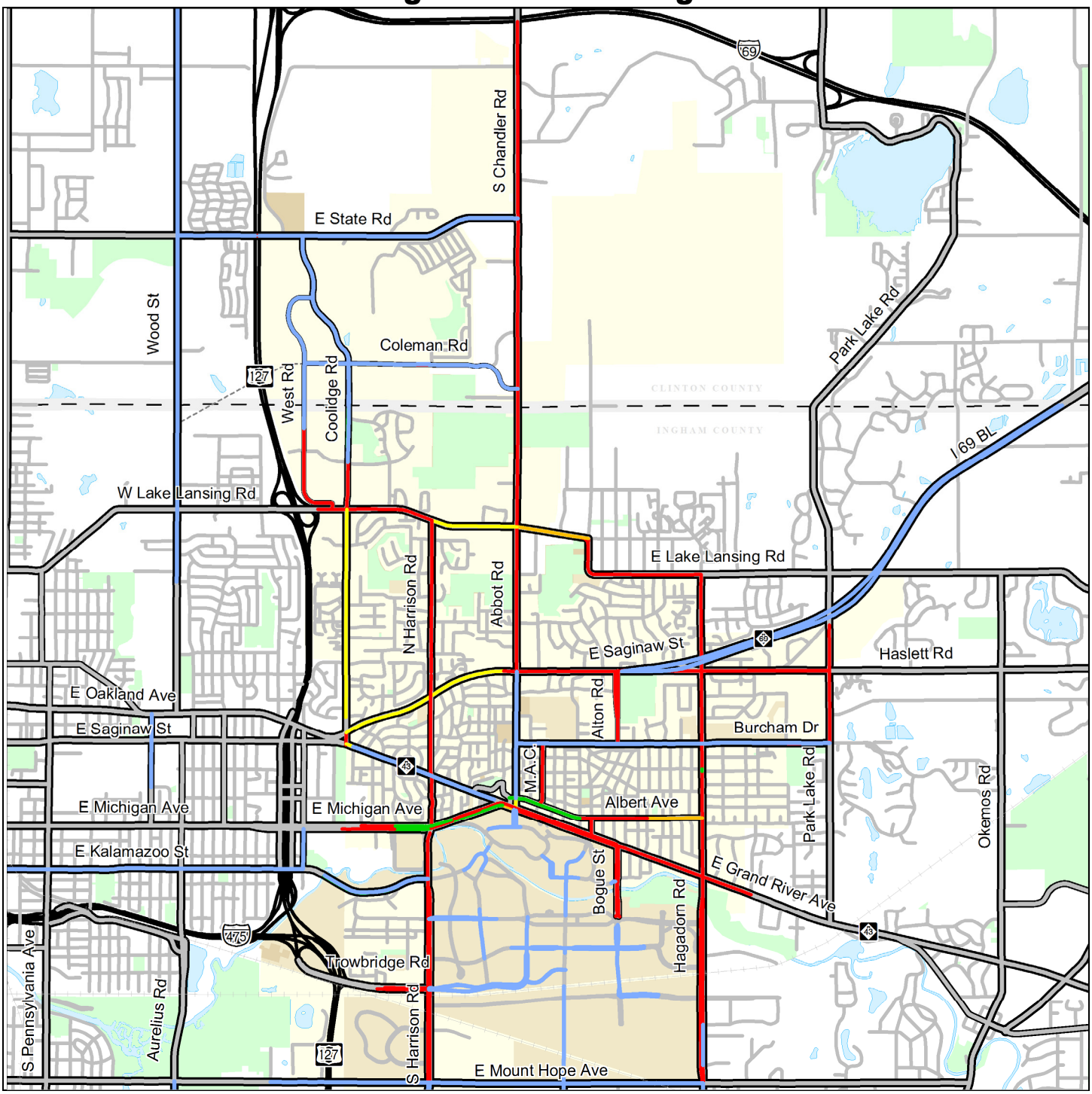
Potential 4 to 3 Lane Conversion
To Add Bike Lanes

- High Potential
- Moderate Potential
- Marginal Potential
- Low Potential
- Existing Bike Lane and Paved Shoulder

Four lane roads may be converted into three lane roads with bike lanes. The suitability of the conversion depends on the traffic volume and the delay at signalized intersections.

Grade	ADT
High Potential	<15,000
Moderate Potential	15,000-17,500
Marginal Potential	17,500-20,000
Low Potential	20,000+

Bike Lane Potential Through Lane Narrowing



Legend:

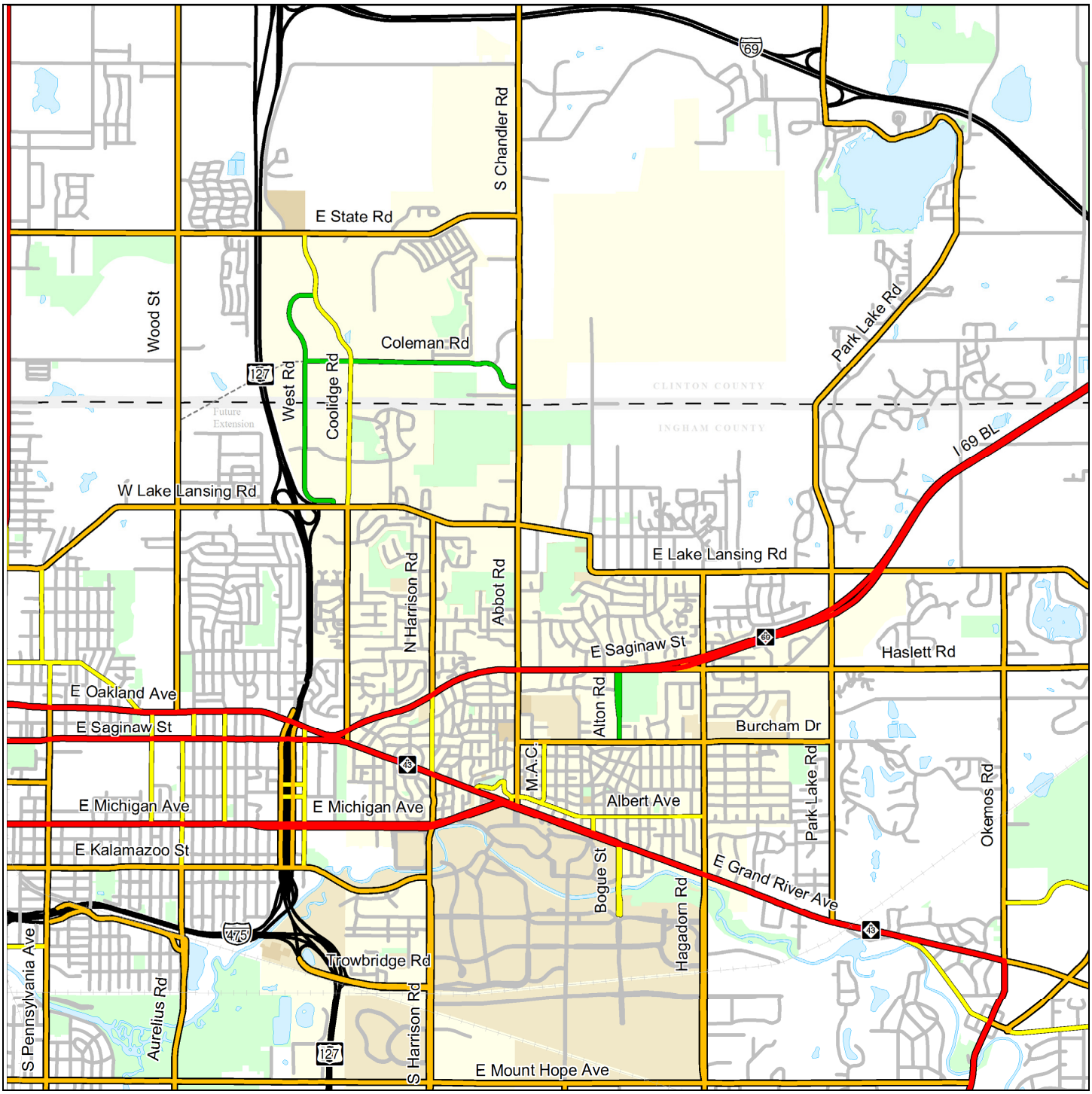
Lane Narrowing

- High Potential
- Moderate Potential
- Marginal Potential
- Low Potential
- Existing Bike Lane and Paved Shoulder

By narrowing the travel lanes of wide roads, bike lanes can easily be added by restriping the road. The ideal lane width for a travel lane is 11' for Principal Arterials; however there are areas where a 10' lane width is appropriate and/or desirable for Minor Arterials and Collectors.

Grade	Lane Min Width
High Potential	11' + Bike Lane
Moderate Potential	10-11' + Bike Lane
Marginal Potential	10' + Bike Lane
Low Potential	Too Narrow

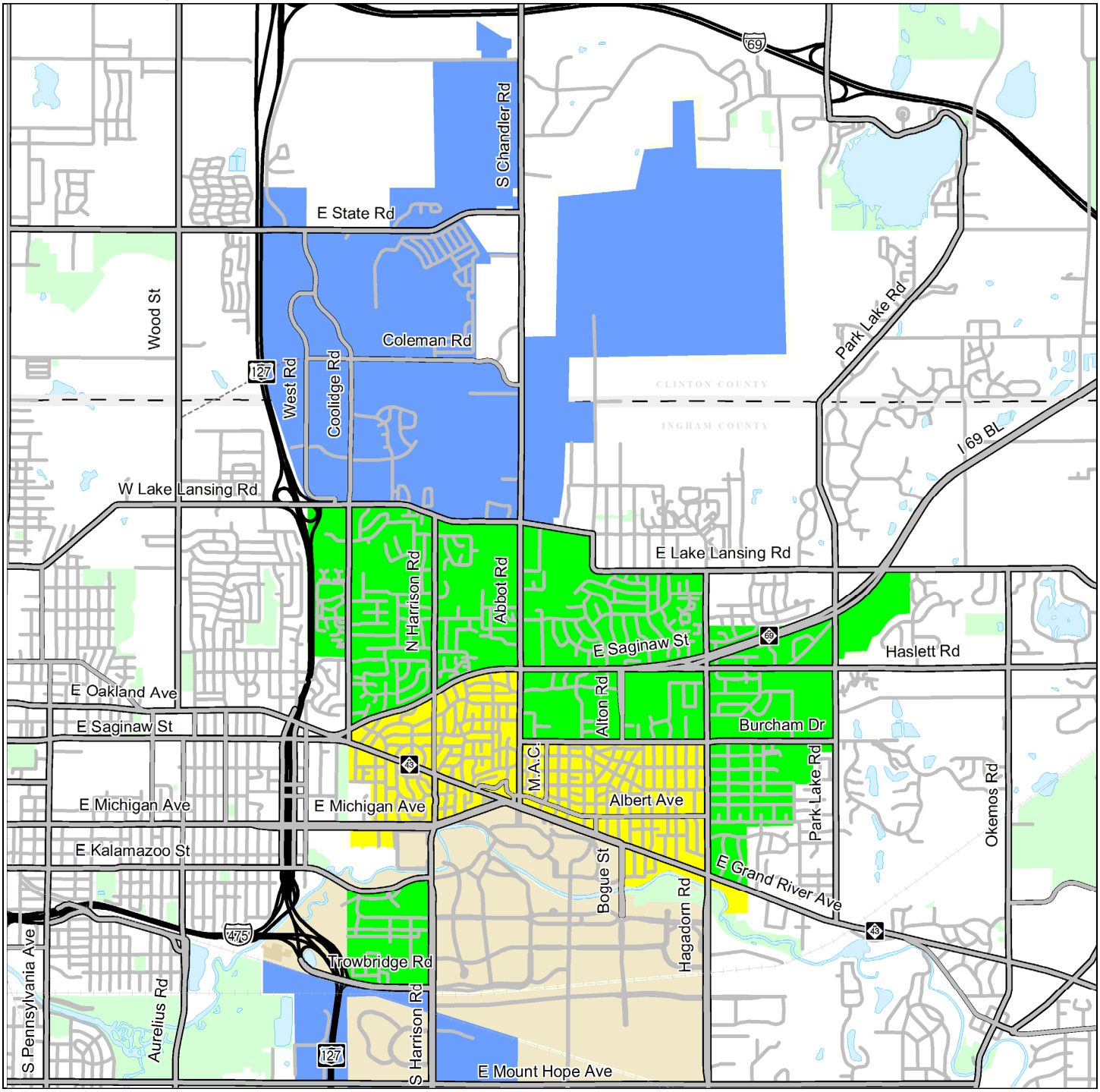
Road Functional Classification



Legend:

- Principal Arterials
- Arterials
- Collectors
- Significant Local Roads
- Local Roads

Preliminary Context Areas



Legend:

Zones

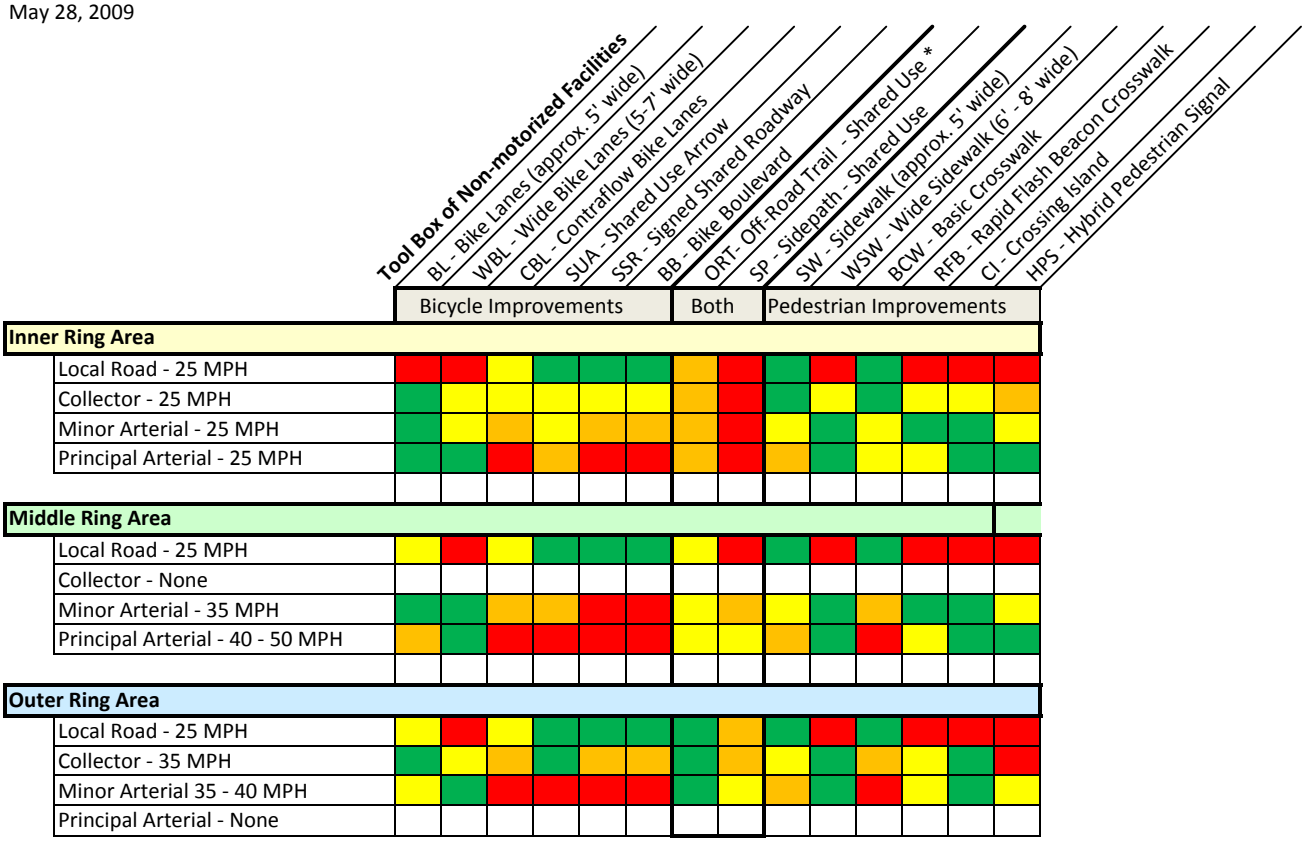
- Inner Ring
- Middle Ring
- Outer Ring

The city has been divided into three zones based on Land Use, Population Density, Street Layout, and Existing Nonmotorized Facilities. The Inner Ring consists of high density development where there is a complete sidewalk system intact. The Middle Ring consists of moderate density development, with some trail connections and a partially complete sidewalk system. The Outer Ring consists of low density development where there are long segments of shared use trails.

City of East Lansing Non-motorized Plan

Preliminary Suitability Matrix

May 28, 2009



Legend:

- Typical Location
- Under Certain Circumstances
- Rarely
- Not Typically Used
- * Outside of Road ROW

Notes:

1. In some Middle Ring and most Outer Ring Areas no sidewalks exists and bike lanes may be also used as a pedestrian facility.
2. Rapid Flash Beacons may be used in conjunction with Crossing Islands.