

# *Hagadorn Corridor Study*

*East Lansing, Michigan*

Urban & Regional Planning Program

UP 894/494 Planning Practicum

Michigan State University

Spring 2005

Kevin Newman Robin Palmer Jennifer Rigterink Rachael Tupica Tom Veldman

# *Client Information*

City of East Lansing

Department of Planning & Community Development

Lori Mullins, Senior Project Manager



# *Presentation Overview*

- Project Background & Goals
- Study Area Boundaries
- A Sense of the Hagadorn Corridor
- Strengths, Weaknesses, Opportunities, Threats
- Socio-Economic Profile
- Methods
- Recommendations

# *Project Background & Goals*

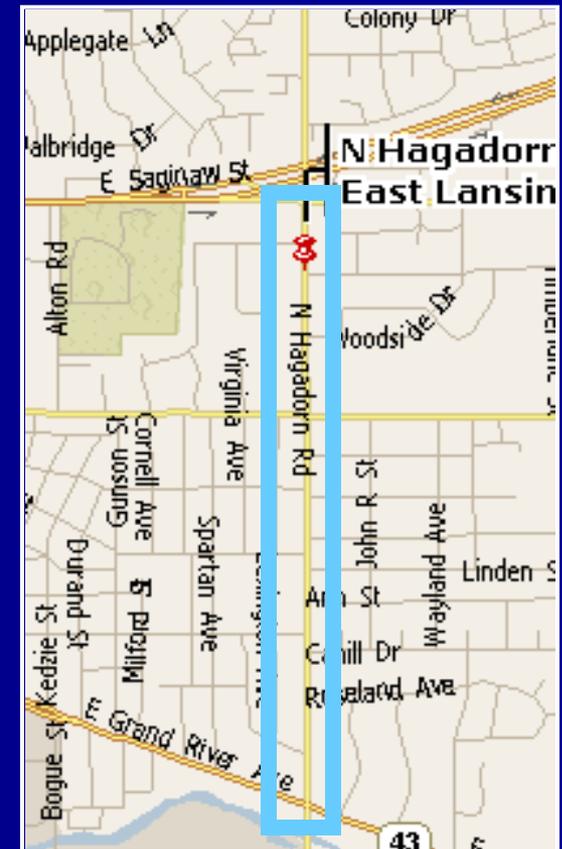
Working with the City of East Lansing to:

- Conduct a corridor study of North Hagadorn Road to identify, inventory, and assess current land use, pedestrian friendliness, traffic flow and roadway design
- Make recommendations for future development in terms of pedestrian safety, sense of place, zoning and capital improvements

# Study Area Boundaries

Hagadorn Road

Grand River Avenue to  
Haslett Road



# *A Sense of the Hagadorn Corridor*





HAGADORN RD

SPEED LIMIT 30



SCHOOL SPEED LIMIT 25

Eastminster Child Development Center  
A non-profit organization devoted to enhancing the learning potential of all children since 1966  
(517) 332-2311



MSU



# *Strengths, Weaknesses, Opportunities, Threats*

## Strengths

- Proximity to Michigan State University
- Proximity to elementary & middle schools

## Weaknesses

- Lack of mixed-use
- Lack of pedestrian amenities such as sidewalk buffers, lighting, and an adequate number of crosswalks

## Opportunities

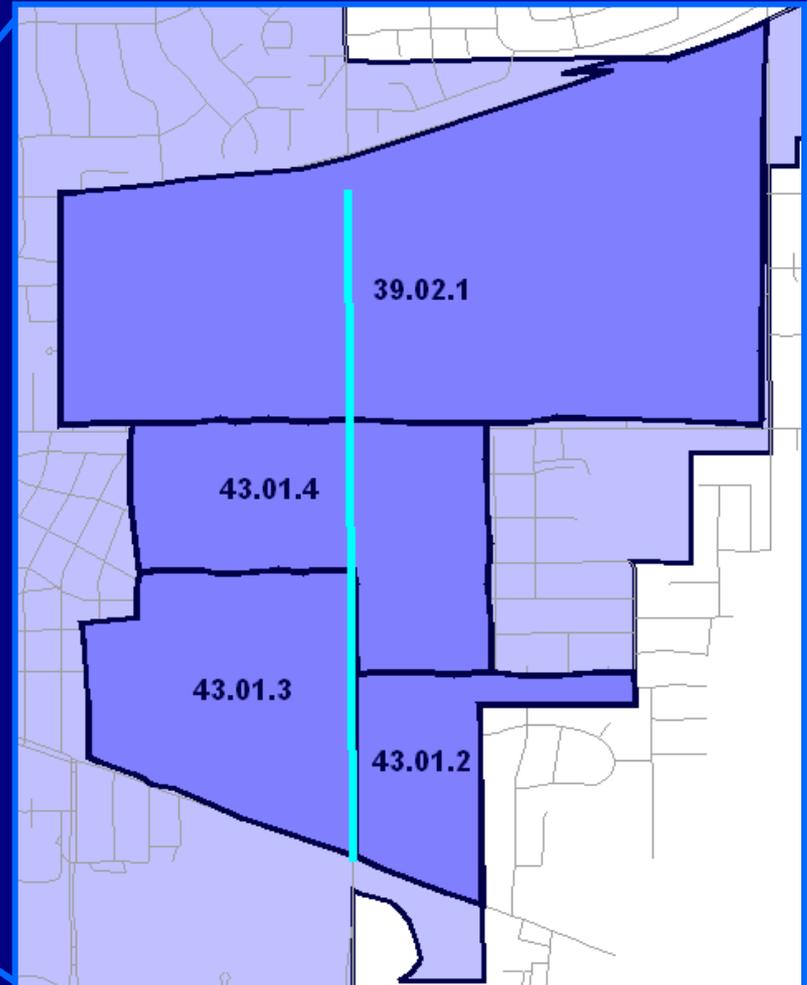
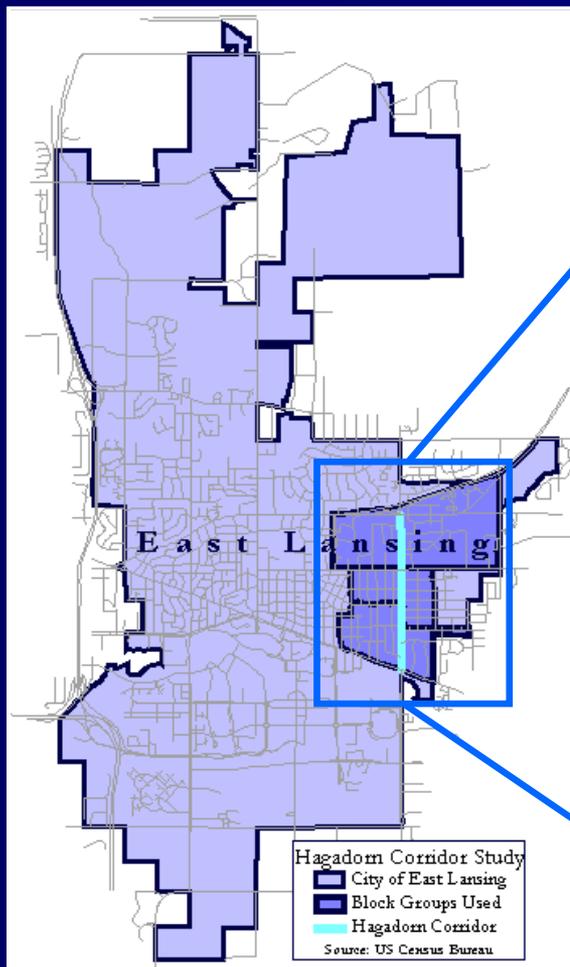
- Width of the roadway provides for the possibility to be redesigned

## Threats

- Roadway design does not allow for proper traffic control measures to slow speeds

# Socio Economic Profile

Source: 2000 US Census



# Socio Economic Profile

Source: 2000 US Census

## Total Population: 6,331

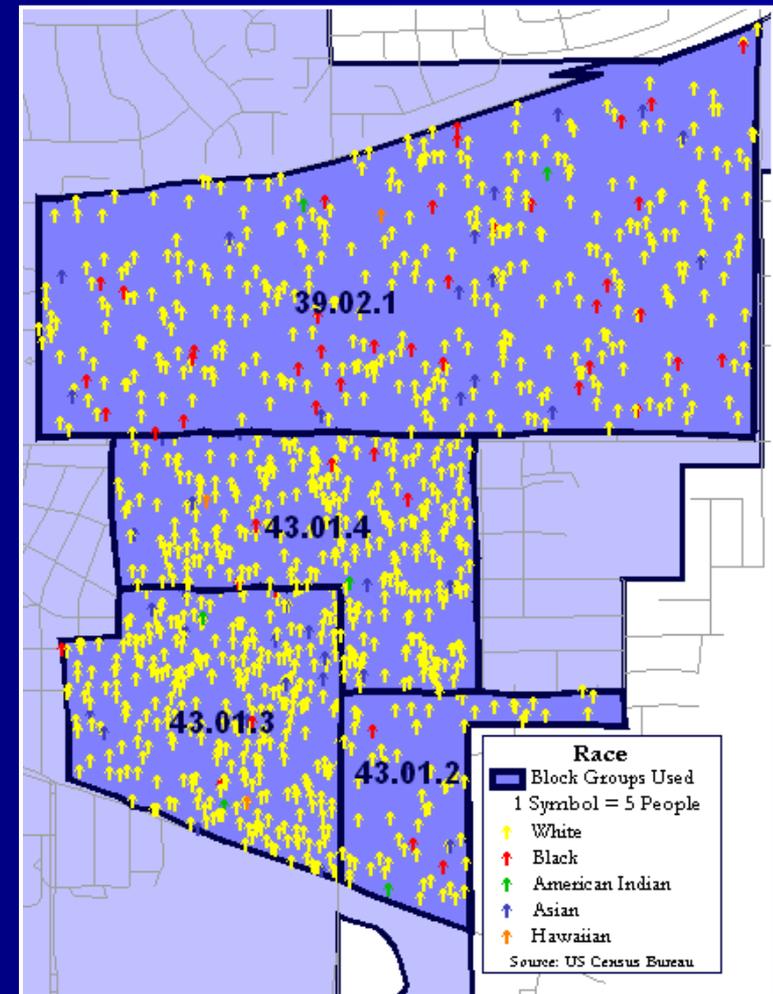
- Block Group 1: 2,160
- Block Group 2: 862
- Block Group 3: 1,673
- Block Group 4: 1,636

City of East Lansing Population: 46,687

## Race:

- Block Group 1: 84.3% White / 5.0% Black
- Block Group 2: 93.9% White / 5.0% Asian
- Block Group 3: 89.0% White / 4.2% Asian
- Block Group 4: 94.2% White / 2.4% Asian

City of East Lansing: 81% White / 8% Asian



# Socio Economic Profile

Source: 2000 US Census



## Age

- Block Group 1: 75+ yrs (20.0%)
- Block Group 2: 19-24 yrs (25.0%)
- Block Group 3: 19-24 yrs (70.1%)
- Block Group 4: 19-24 yrs (57.9%)

City of East Lansing: 19-24 yrs (51.2%)

## Median Income

- Block Group 1: \$32,461
- Block Group 2: \$38,828
- Block Group 3: \$23,750
- Block Group 4: \$31,433

City of East Lansing Median Income: \$28,217

# Socio Economic Profile

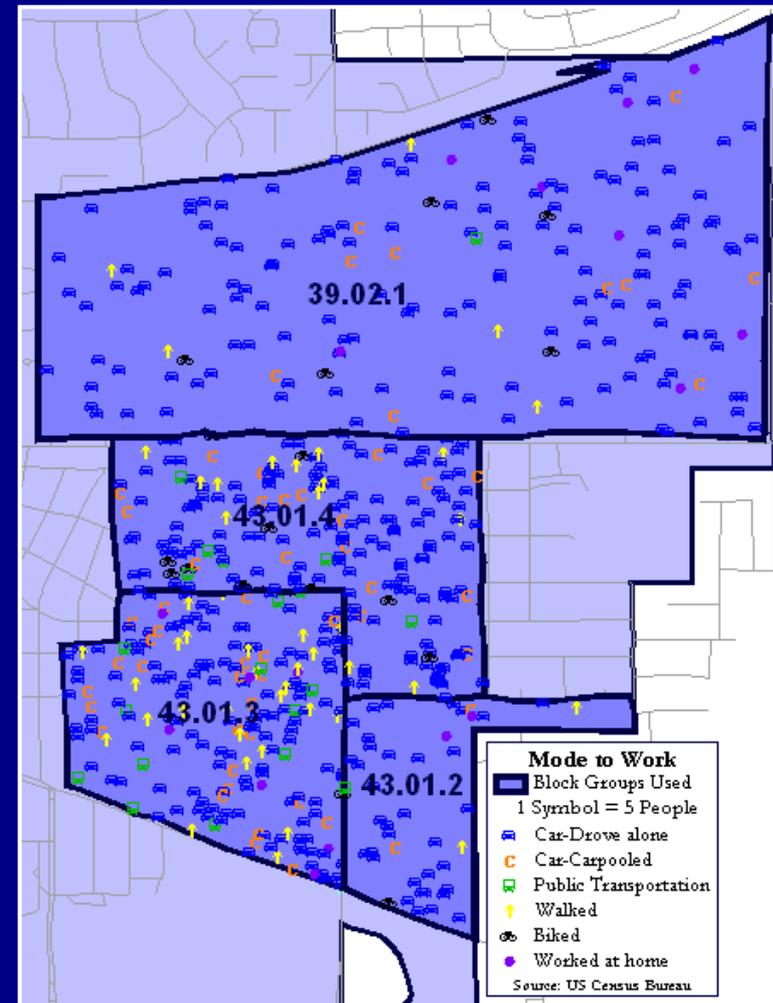
Source: 2000 US Census

## Mode of Transportation to Work:

- Car-Drove Alone: 2,630
- Car-Pooled: 313
- Public Transportation: 99
- Walked: 254
- Biked: 90
- Worked at Home: 94

## Mean Travel Time to Work:

- Block Group 1: 15 minutes
- Block Group 2: 7 minutes
- Block Group 3: 17 minutes
- Block Group 4: 16 minutes



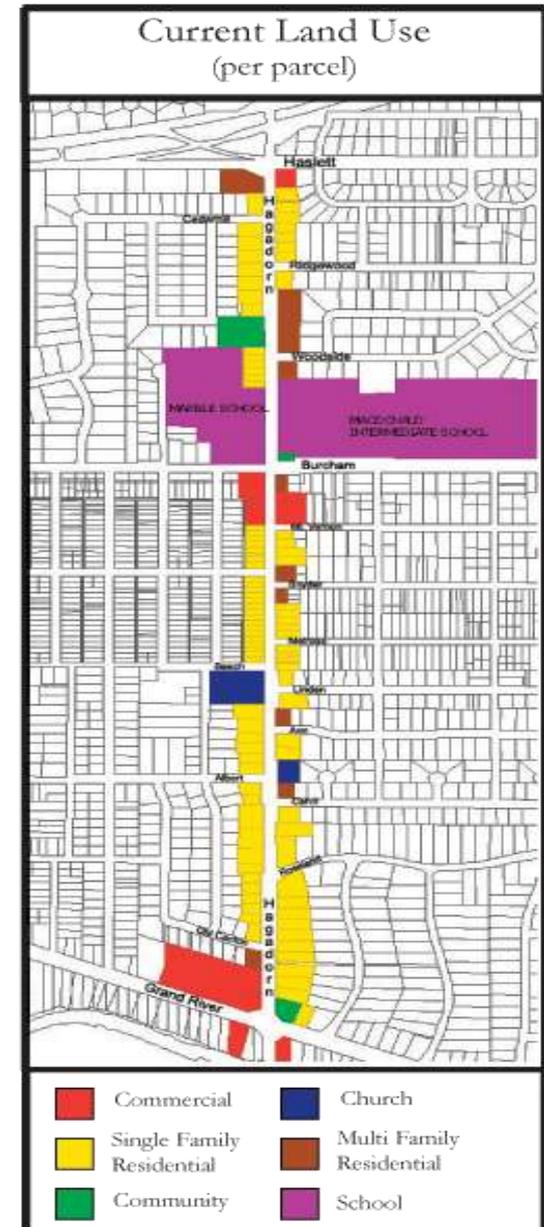
# *Methods*

- Residential & Commercial Evaluation
- Walkability Evaluation
- Sidewalk Quality Evaluation
- School Zone Evaluation
- Traffic Analysis and Comparables

# Land Use

- 98 Residential Properties
  - 51% Owner Occupied
  - 49% Renter Occupied
- 7 Commercial Use Areas
- 3 Community Uses
- 2 Schools
- 2 Churches

123 Parcels Total



# Land Use Evaluation

## Criterion Used

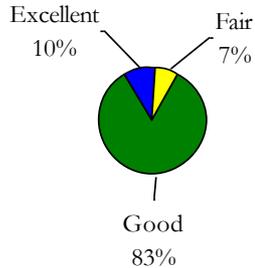
	Excellent	Good	Fair	Poor
Exterior	Undamaged, no sign of weathering	Some weathering	Over 1/4 observed damaged	Over 1/2 observed damaged
Windows/ Doors	Intact, no sign of weathering	Minor damage	Over 1/4 broken/damaged	Over 1/2 broken/damaged
Roof	Fully intact, no visible sign of damage	Minor damage and weathering	Over 1/4 damaged/weathered	Over 1/2 damaged/weathered
Yard	Clean and free of debris	Clean, small amount of debris	Some debris and some overgrowth	Significant debris and overgrowth

Source: Adapted from "Neighborhood Commercial Corridor Revitalization Study: For the South West Area Neighbors West Fulton Street Corridor Study, Grand Rapids, Michigan, 2003

# Land Use Evaluation

## Residential

**Residential Property  
Overall Condition Rating**



*Example of house rated "Excellent"*



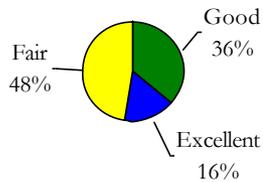
*Example of a house rated "Good"*



# Land Use Evaluation

## Commercial & Other Uses

Commercial Stock and Other Use Properties Overall Condition Rating



Example of a property rated



Example of a property rated "Excellent"



# *Walkability Evaluation*

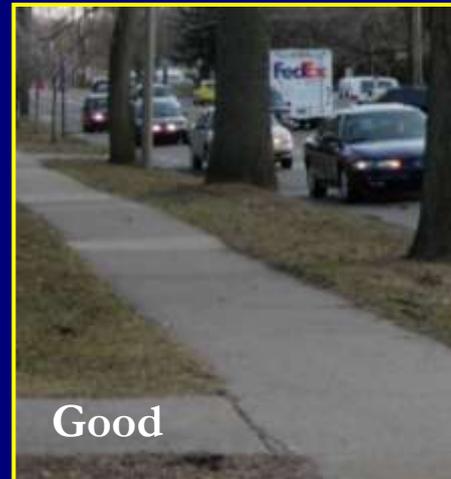
## *How Walkable Is Your Community? Survey*

- Crosswalks located only at major intersections (Haslett Road, Burcham Drive, Grand River Avenue)
- Inadequate benches, public art, trash facilities, lighting, and buffers
- Timing of crosswalks not adequate, especially for persons with disabilities
- Sidewalks are adequate width



# Sidewalk Quality Evaluation

Excellent	Free of cracks, debris, or unevenness
Good	Mostly clear of cracks, debris, or unevenness
Fair	Over 1/4 has cracks, debris, or unevenness
Poor	Over 1/2 has cracks, debris, or unevenness



# *School Zone Evaluation*

## *Safe Routes to School Audit*

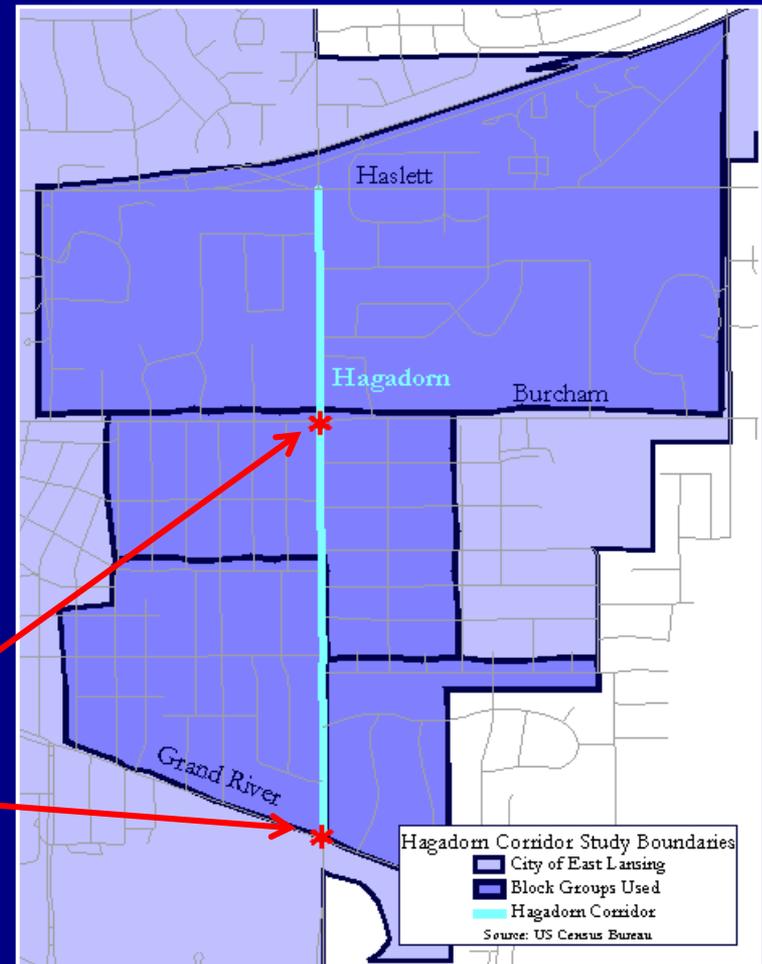
- A crosswalk was observed to be needed on Burcham Drive at John R Street
- Sidewalk ends on Burcham Drive, east of school
- Pedestrian signals at Hagadorn Road and Burcham Drive do not provide adequate time to cross
- School zone signage is inconsistent
- Crosswalks need to be repainted at Hagadorn Road and Burcham Drive



# Traffic Evaluation

## Snapshot of the Hagadorn Corridor

- 4-lane undivided 2-way road, with no center turn lane
- Lane width is 12 feet
- Posted speed is 30 mph (except during specific times in school zones where it is 25 mph)
- No areas of permitted parking
- 2 prohibited turns, at Burcham Drive and Grand River Avenue
- No bike lanes



# Traffic Evaluation

Accident Data 1994-2003

Source: City of East Lansing

536 Accidents Total:

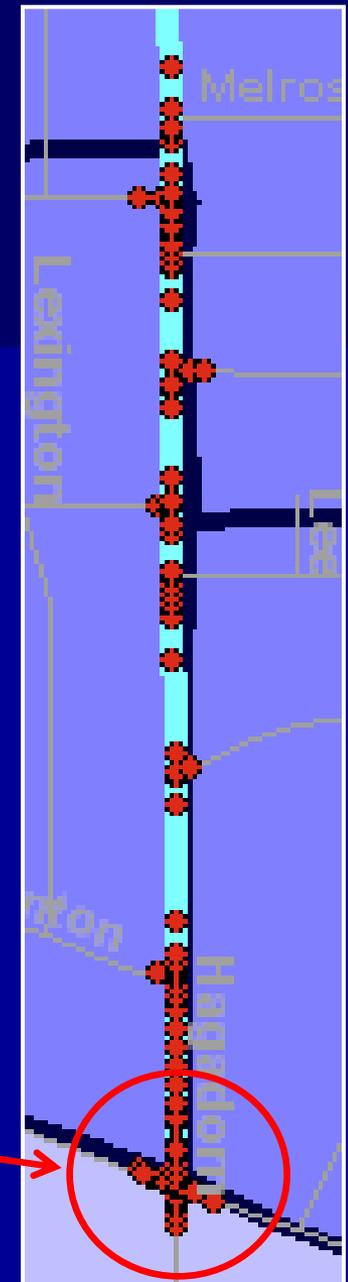
- Approximately 96% Vehicular
- 4% Bicycle
- 0.4% Pedestrian

High percentage of accidents at:

- Grand River Avenue



Northern Half



Southern Half

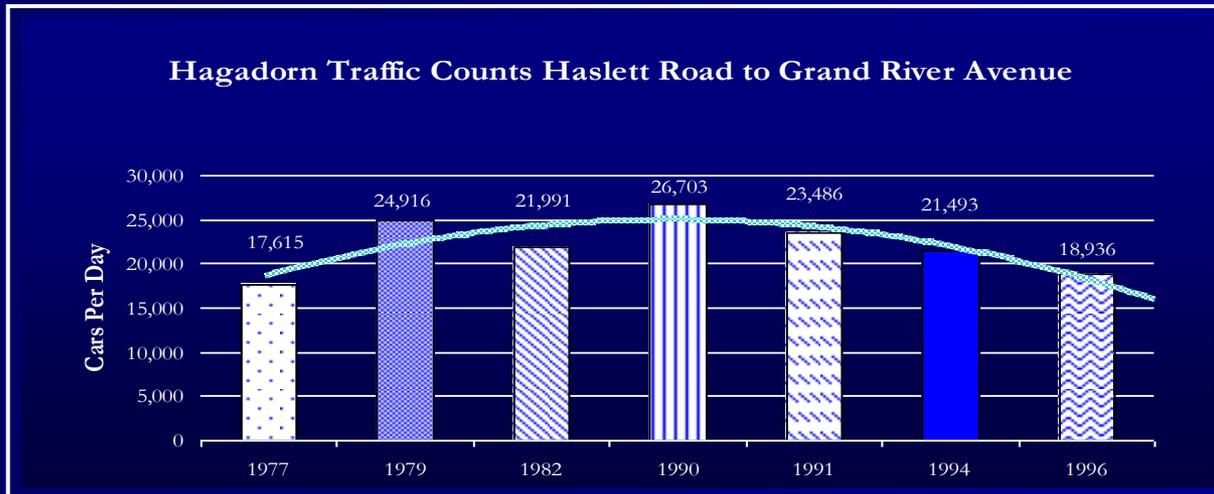
# Traffic Evaluation

## Current Counts and Future Projections

**Capacity of a 4-Lane Road: 63,600 vpd**

2002 Estimate: 19,000 vpd

2025 Estimate: 18,400 vpd



Source: Tri-County Regional Planning Commission and City of East Lansing

## 2025 Projections



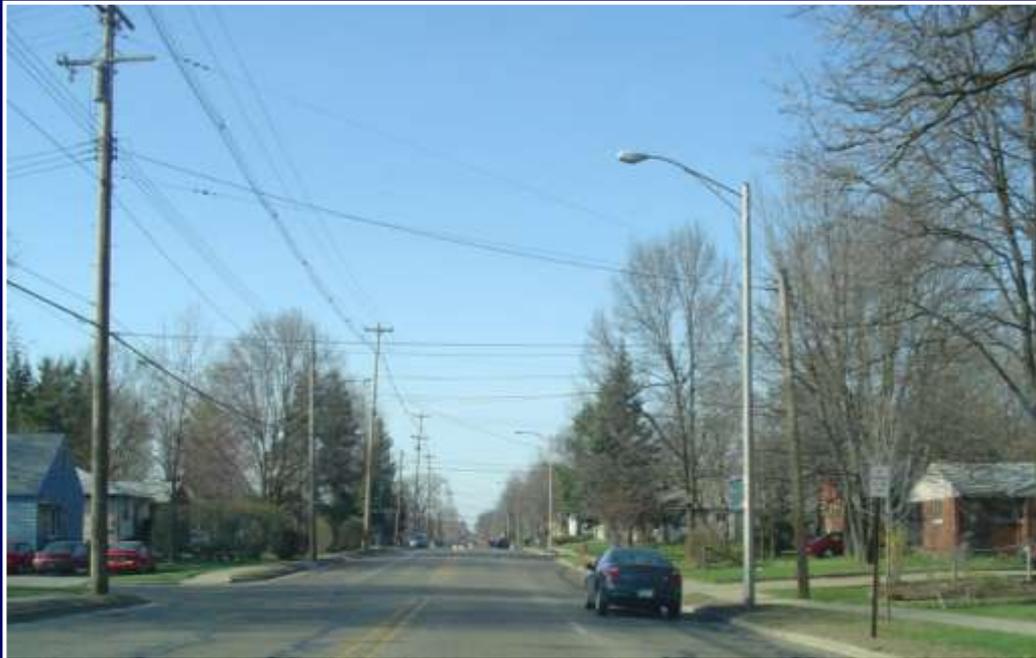
# *Recommendations for Hagadorn Road*

- Power Lines
- School Zone
- Land Use
- Pedestrian Improvements
- Four-Lane to Three-Lane Conversion
- Bike Lanes
- Future Follow-up

# *Recommendation*

## *Facilities Improvements*

- Determine feasibility of burying power lines to improve aesthetics of corridor



# *Recommendation*

## *School Zone*

- Consistent distances from schools
- Uniform design





# *Recommendation*

## *Pedestrian Improvements*

- Stripe new, and restripe existing, pedestrian crosswalks at intersections
- Add appropriate signage at new crosswalks
- Increase timing of crosswalks
- Add pedestrian oriented lighting
- Add benches and trash facilities along corridor



# Recommendation

## Four-Lane to Three-Lane Conversion

### Feasibility

Vehicles Per Hour (vph)	Feasibility	Hagadorn vph (TCRPC 2025 projections)	Feasible on Hagadorn?
≤ 1,500 vph	Probable	750-800 vph	Yes

- Capacity of Two-Lane Road with TWCTL: 35,604 vpd
- Current 2002 Estimate: 19,000 vpd
- Future 2025 Estimate: 18,400 vpd

# *Recommendation*

## *Four-Lane to Three-Lane Conversion*

### Benefits

- Improves vehicular, pedestrian, and bicycle safety
- Traffic calming
- Aesthetically pleasing
- Relatively inexpensive
- Improved emergency vehicle response time

# *Four-Lane to Three-Lane Conversion*

## *Improves Safety and Traffic Calming*

- 3 lane roads have fewer accidents than 4 lane roads
- Average speeds are lower on 3 lane roads
- The center lane provides a safe haven for pedestrian and bicyclists trying to cross the road

**Abbott Road Traffic Crash Data (Grand River to Saginaw)**  
**(Approximately 10 months Before and After Four-Lane to Three-Lane Conversion)**

	Angle	Rear End	Sideswipe	Left Turn	Bike	Other	Total
July 18,1998 to May 31, 1999	10	21	7	8	4	4	54
July 18, 1999 to May 31, 2000	7	10	1	8	0	4	30

- 44% Reduction in overall accidents after three-lane conversion
- 100% Reduction in bicycle-related accidents

# *Four-Lane to Three-Lane Conversion*

*Aesthetically Pleasing & Relatively Inexpensive*



- Change in roadway character

- No reconstruction needed—just restriping of lanes
- Determine feasibility of adding bus pull-outs



# Recommendation

## Bike Lanes

- Add one bike lane for each travel direction
- Consult the Tri-County Bicycle Association for proper design, signage, and maintenance
- Provides buffer between pedestrians and motorists
- Provides an alternative form of transportation to automobiles



# *Recommendation*

## *Recommended follow-up for the City of East Lansing*

- Take traffic counts every one to two years
- Continue to monitor traffic accidents
- Periodically examine the timing configuration of traffic signals
- Determine feasibility of adding bus pull-outs
- Determine feasibility of burying power lines

## *Conclusion*

Through our recommendations we hope to improve pedestrian friendliness, sense of place, and implement the correct traffic control measures to improve the quality of life for those living along the Hagadorn corridor.

*Thank You!*