

# South Bend Smart Streets Before & After Study

March 7, 2018



**PURDUE**  
UNIVERSITY

2018 PURDUE ROAD SCHOOL



AMERICAN  
**STRUCTUREPOINT**  
INC.

# Overview

- Smart Streets
- Before & After Comparison
- Lessons Learned



# South Bend in the 1960's



# Before Smart Streets





# Before Smart Streets



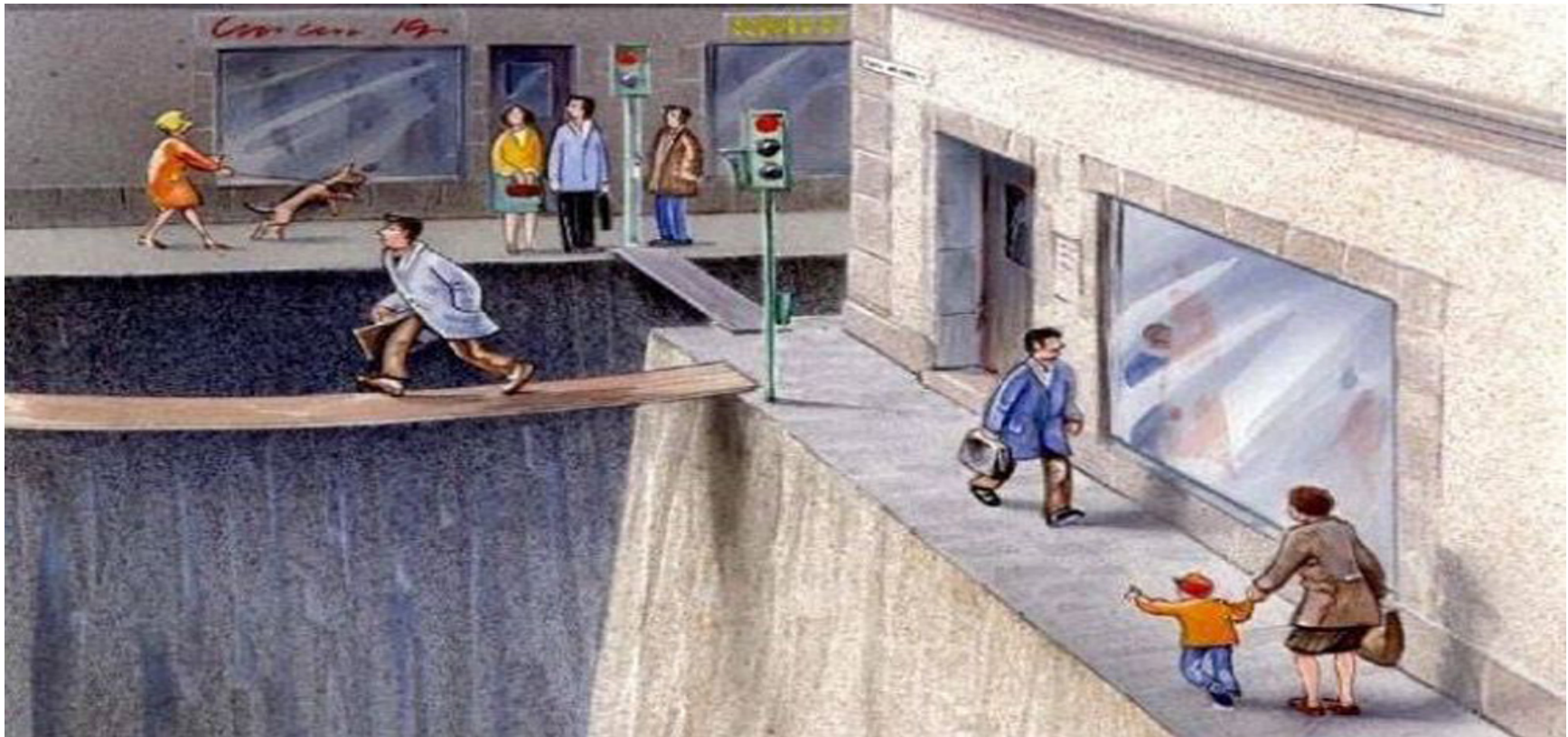


# Before Smart Streets





# Before Smart Streets



# Smart Streets Philosophy

“Smart Streets” is an effort to improve the role of streets within South Bend.

Projects within this initiative utilize the “Complete Streets” philosophy which advocates for the design of streets to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities.



# Smart Streets Elements



**SMART STREETS**  
SOUTH BEND, INDIANA

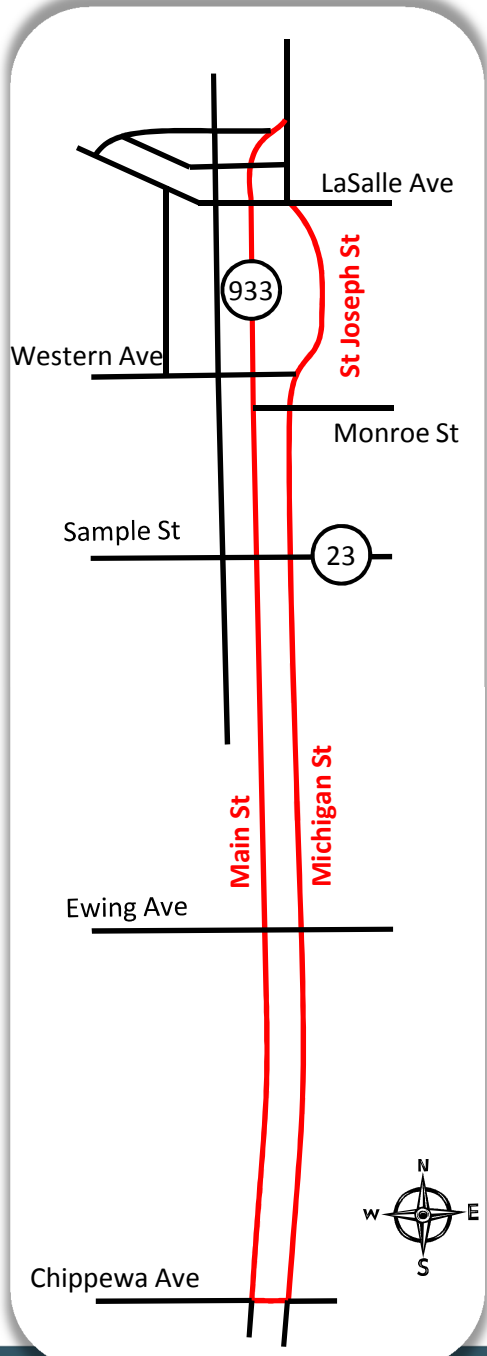
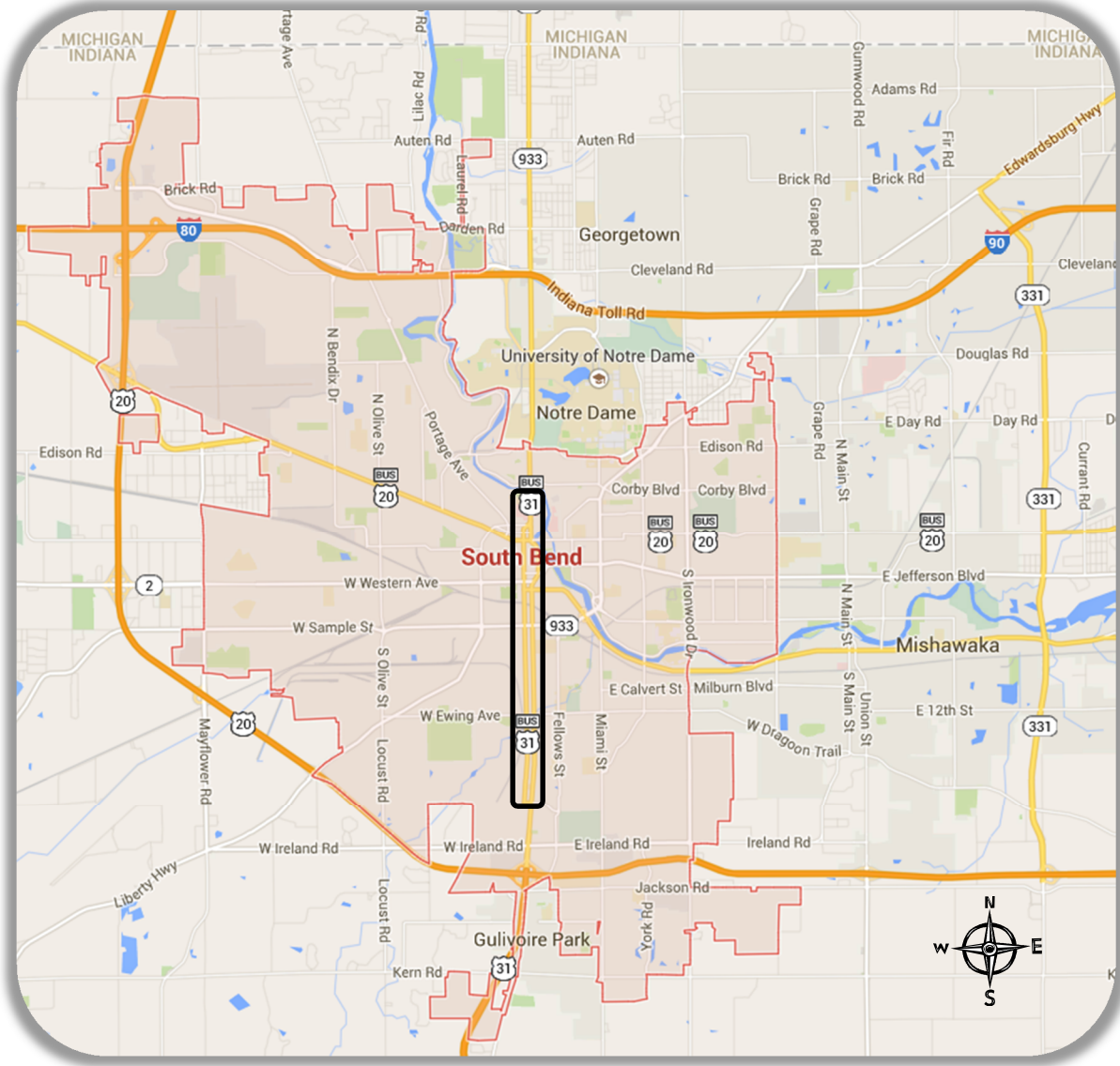
# Why Smart Streets?

- Pedestrian Safety
- Circulation Network Connectivity
  - Reduces out of direction travel distances and motorist confusion
  - Benefits 'trips serving' by providing more direct routes to destinations
- Economic Vitality





# Where are they?



# Smart Streets





# Smart Streets





# Smart Streets





# Smart Streets





# Smart Streets





# Cycle Track





# Intersection Transformations

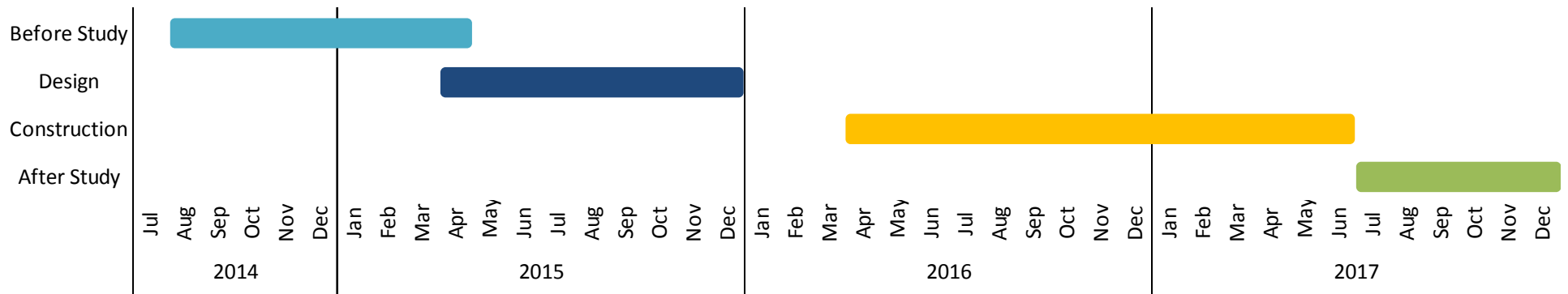




# Did it Work?

# Traffic Analysis

Before Study	After Study
2014 Counts	2017 Counts & Analysis
2014 & 2038 Analysis	2017 Analysis
Guided the Design Phase	Retimed Signals

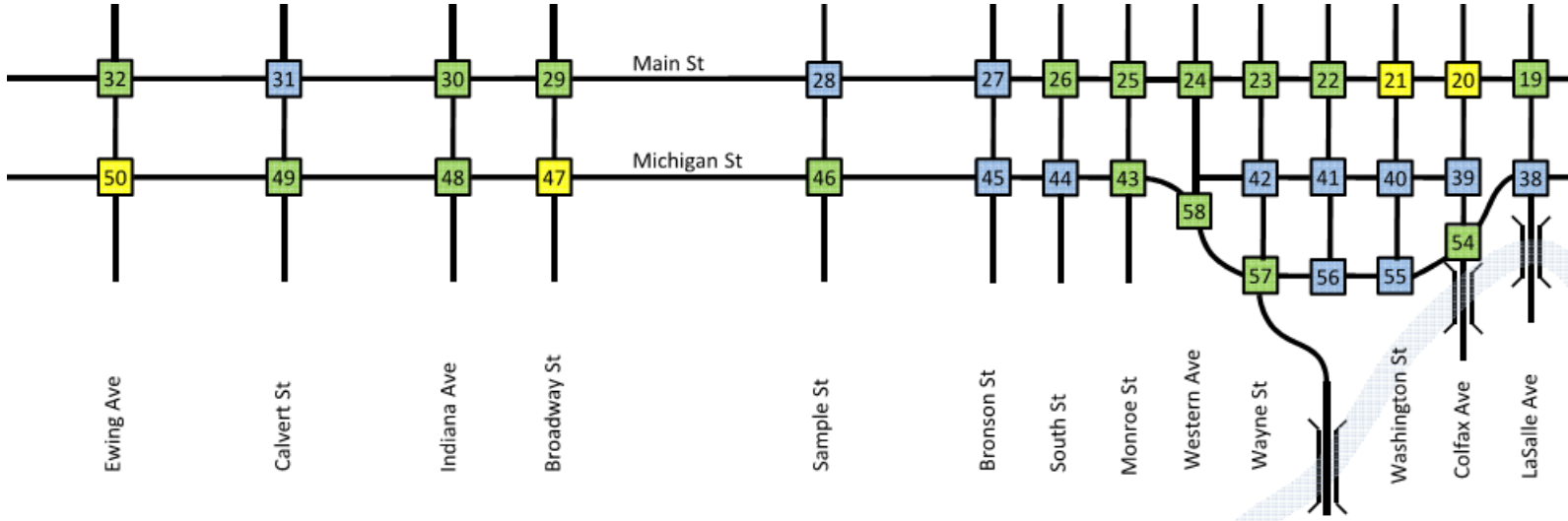




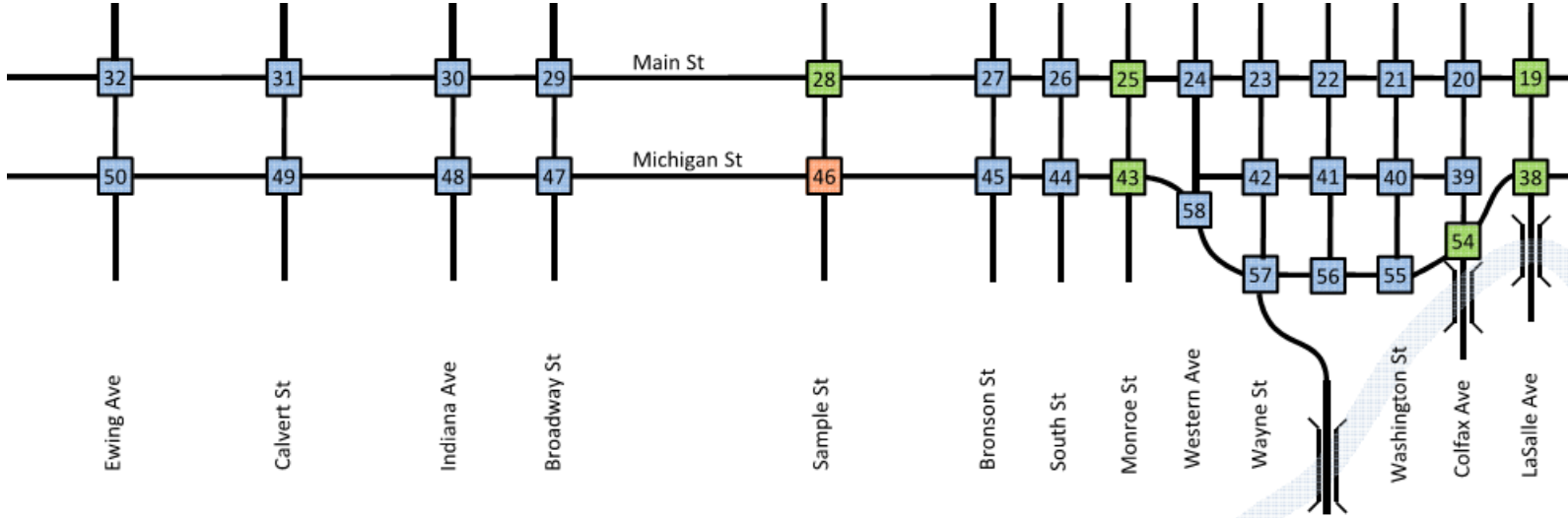
# AM Operations



Before



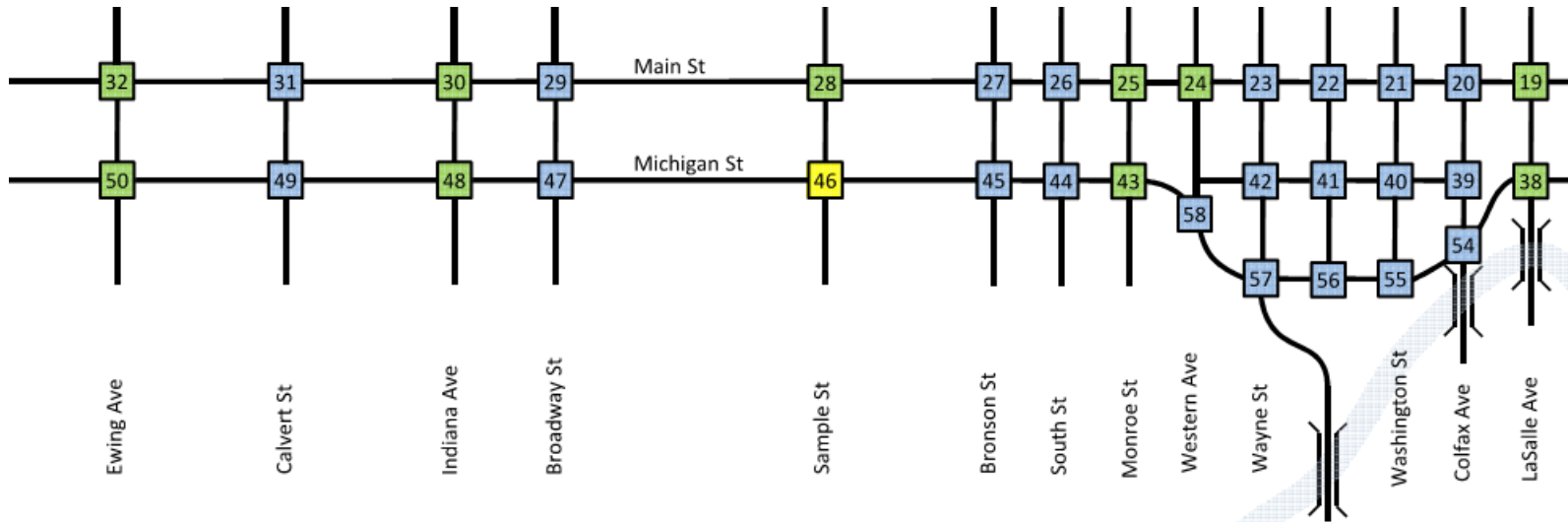
After



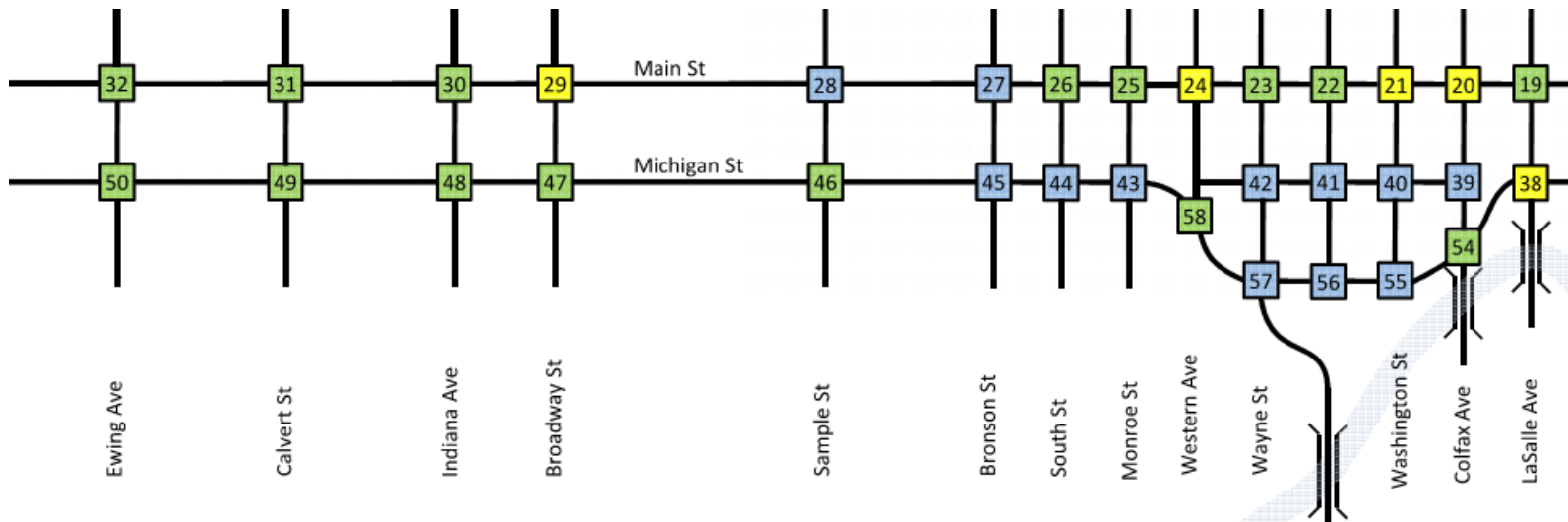
# PM Operations



Before

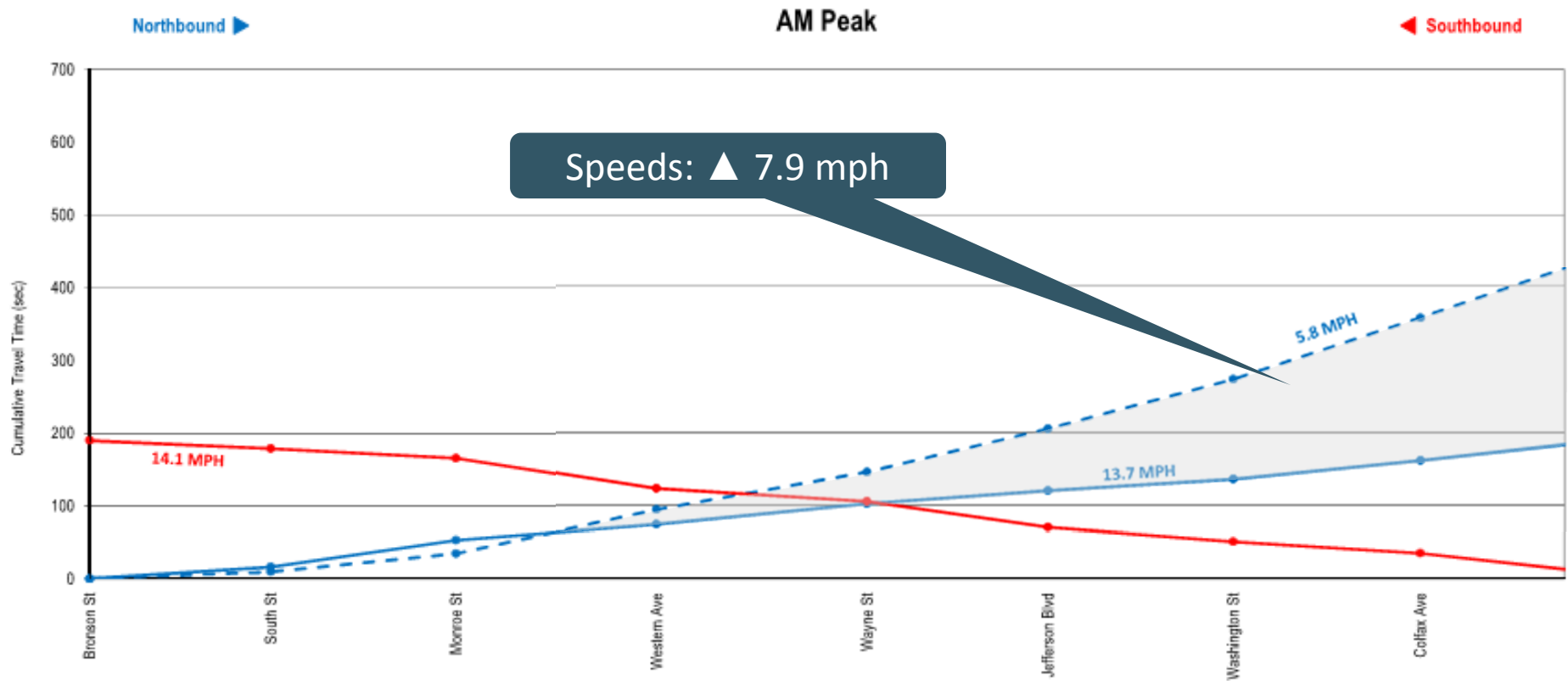


After

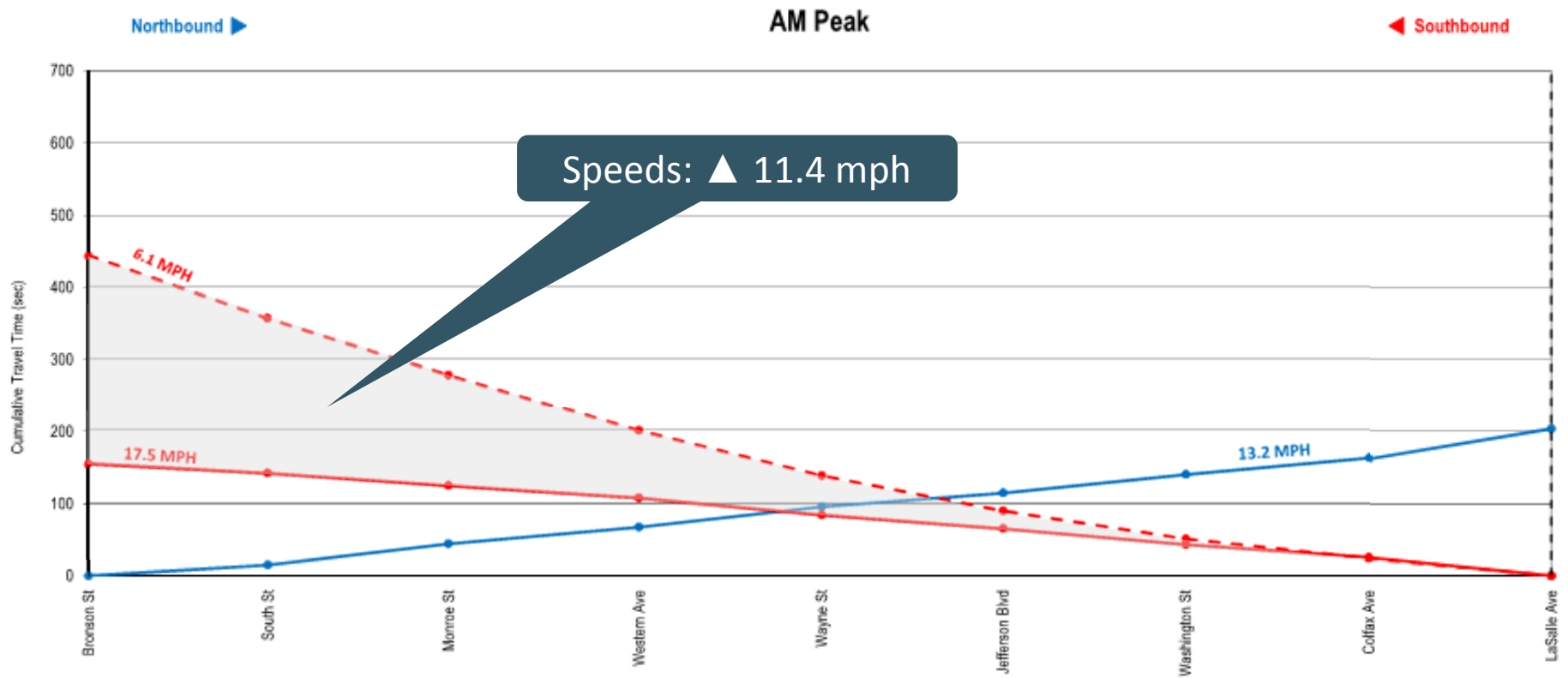




# AM Travel Times (Michigan/MLK)

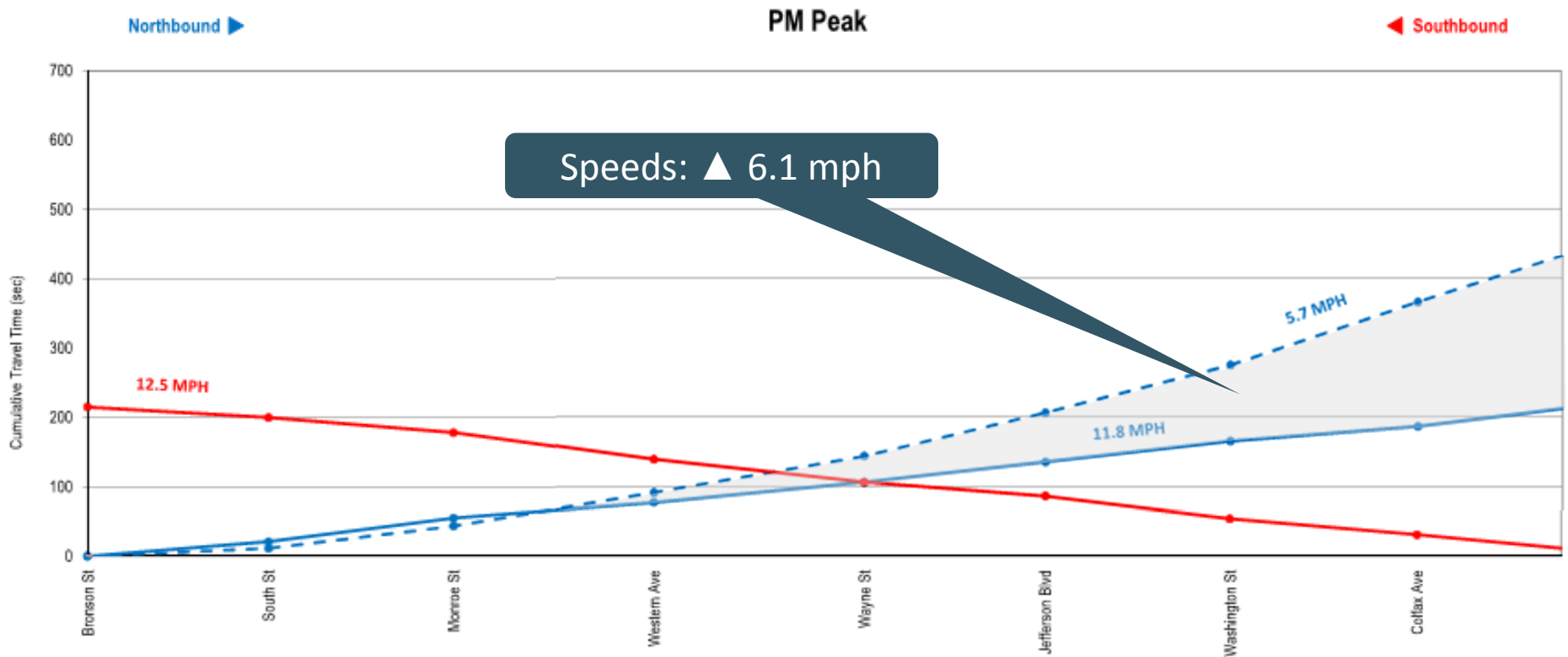


# AM Travel Times (Main St)

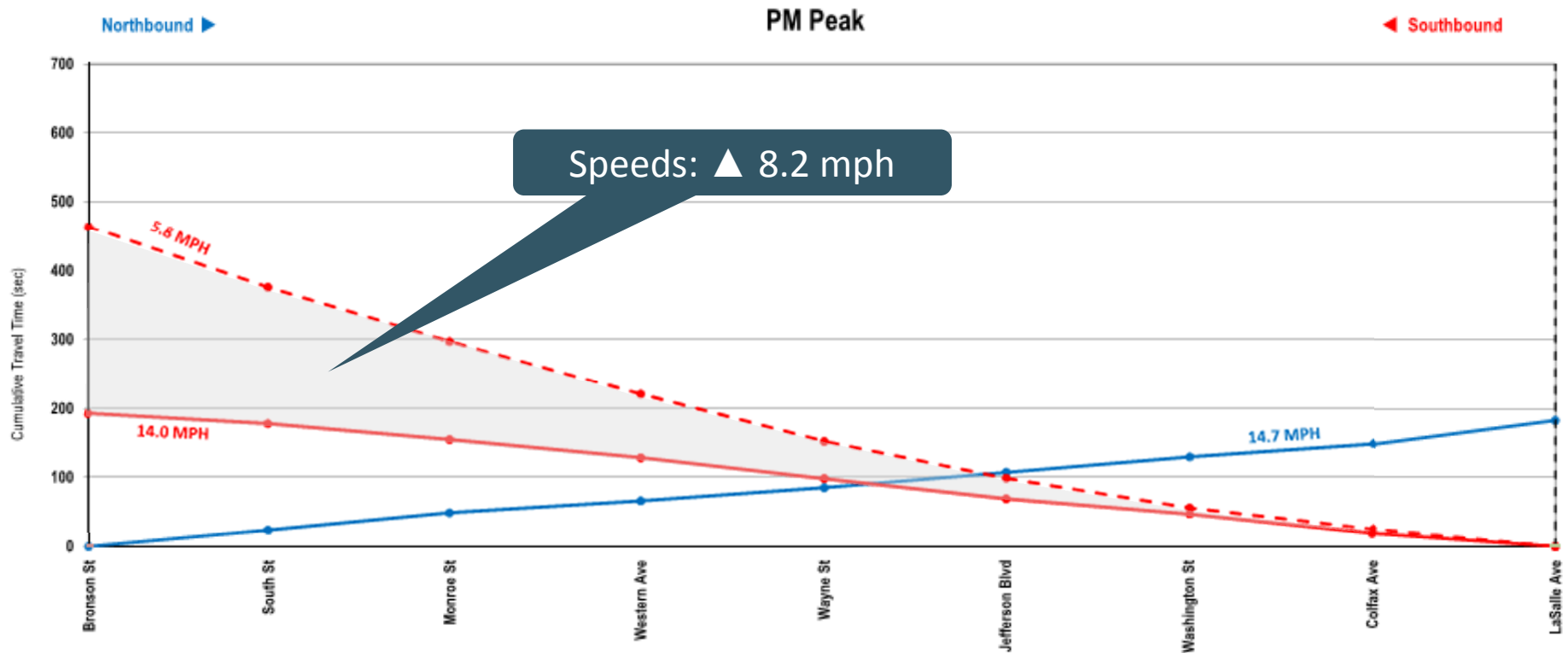




# PM Travel Times (Michigan/MLK)



# PM Travel Times (Main St)





# More Pedestrians & Bicyclists





# Redevelopment

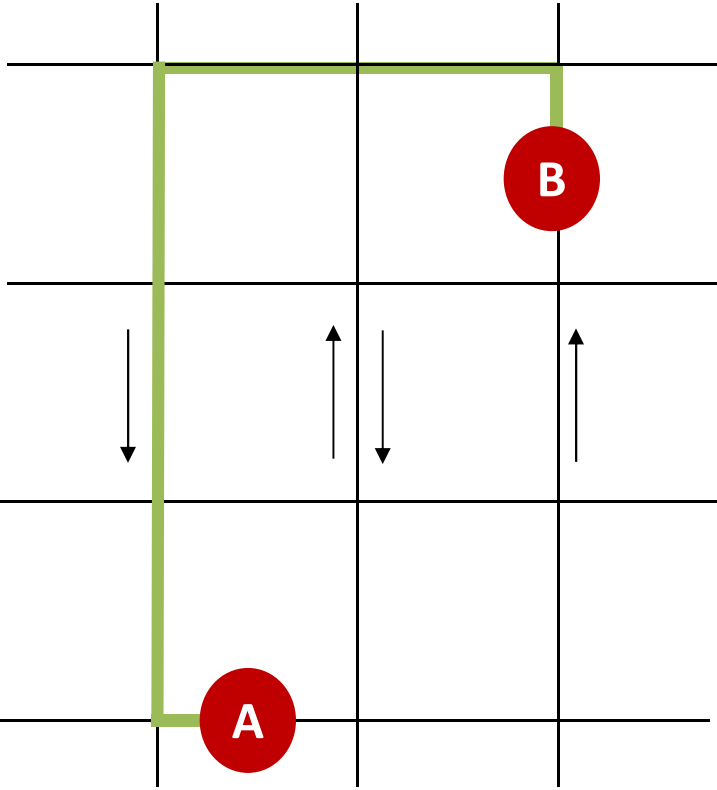




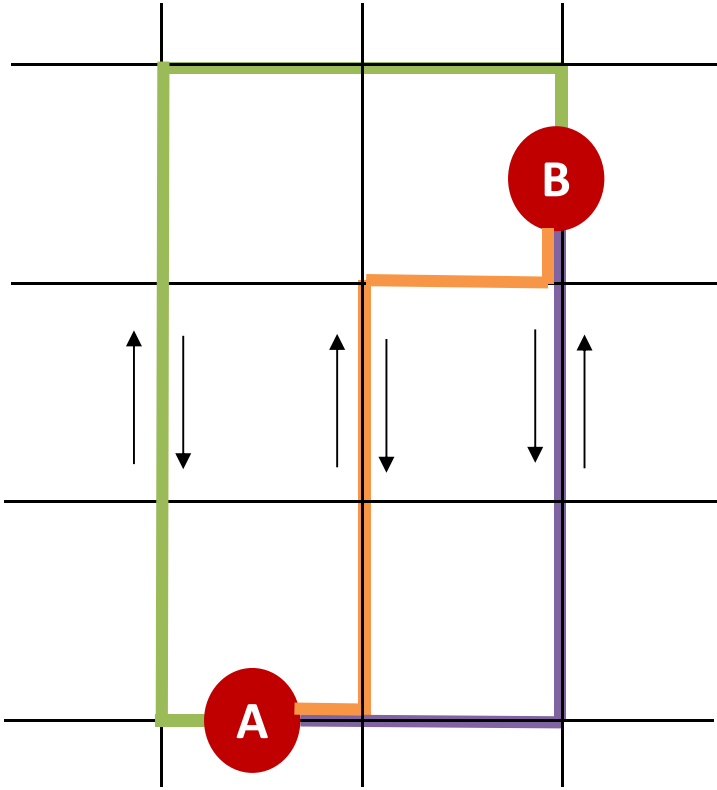
# Lessons Learned

# Travel Demand Modeling

One Way Streets



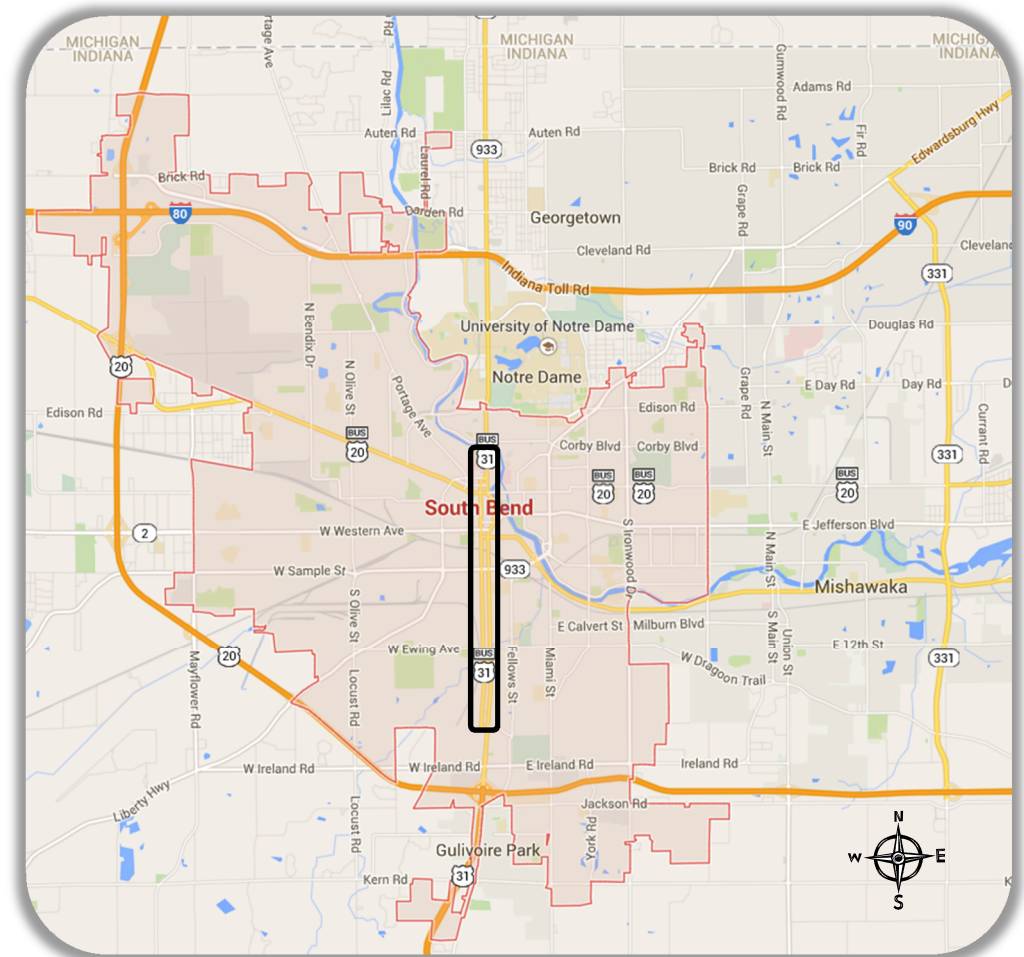
Two Way Streets





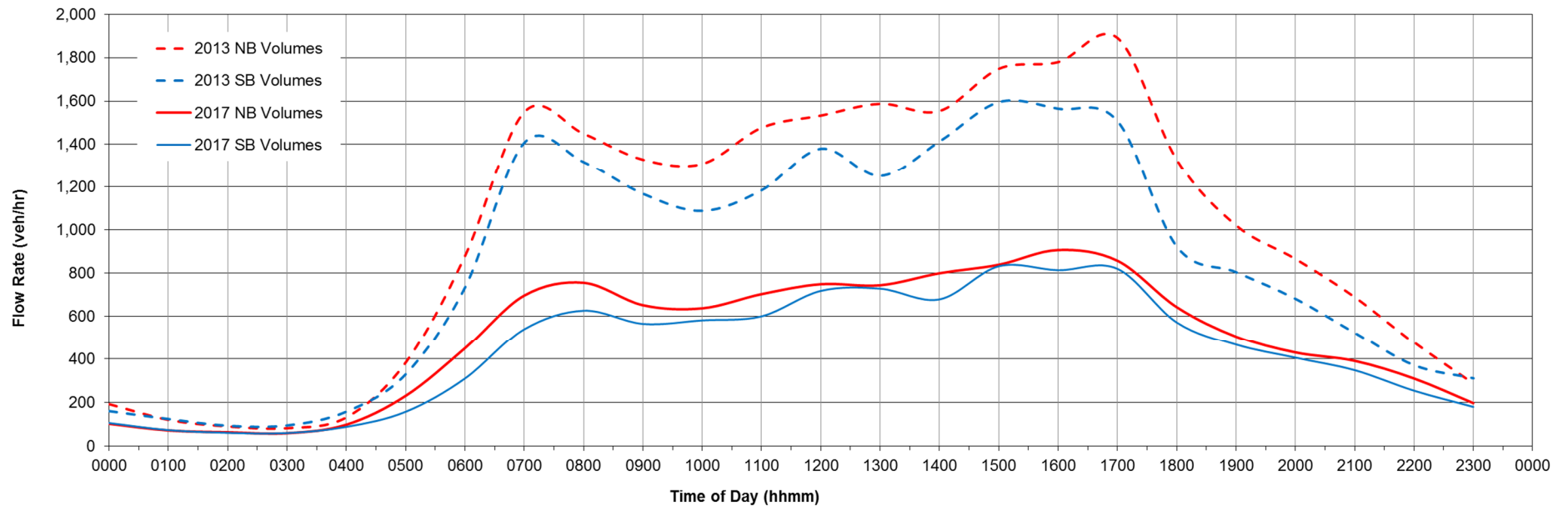
# Diversion of Thru Trips

Reduced Capacity thru  
Downtown  
= Diversion to Alternate  
Routes



# Traffic Volumes

- TDM did not accurately predict traffic volumes
- 50% Reduction in AADT
- 40%-70% Reduction in Hourly Volumes

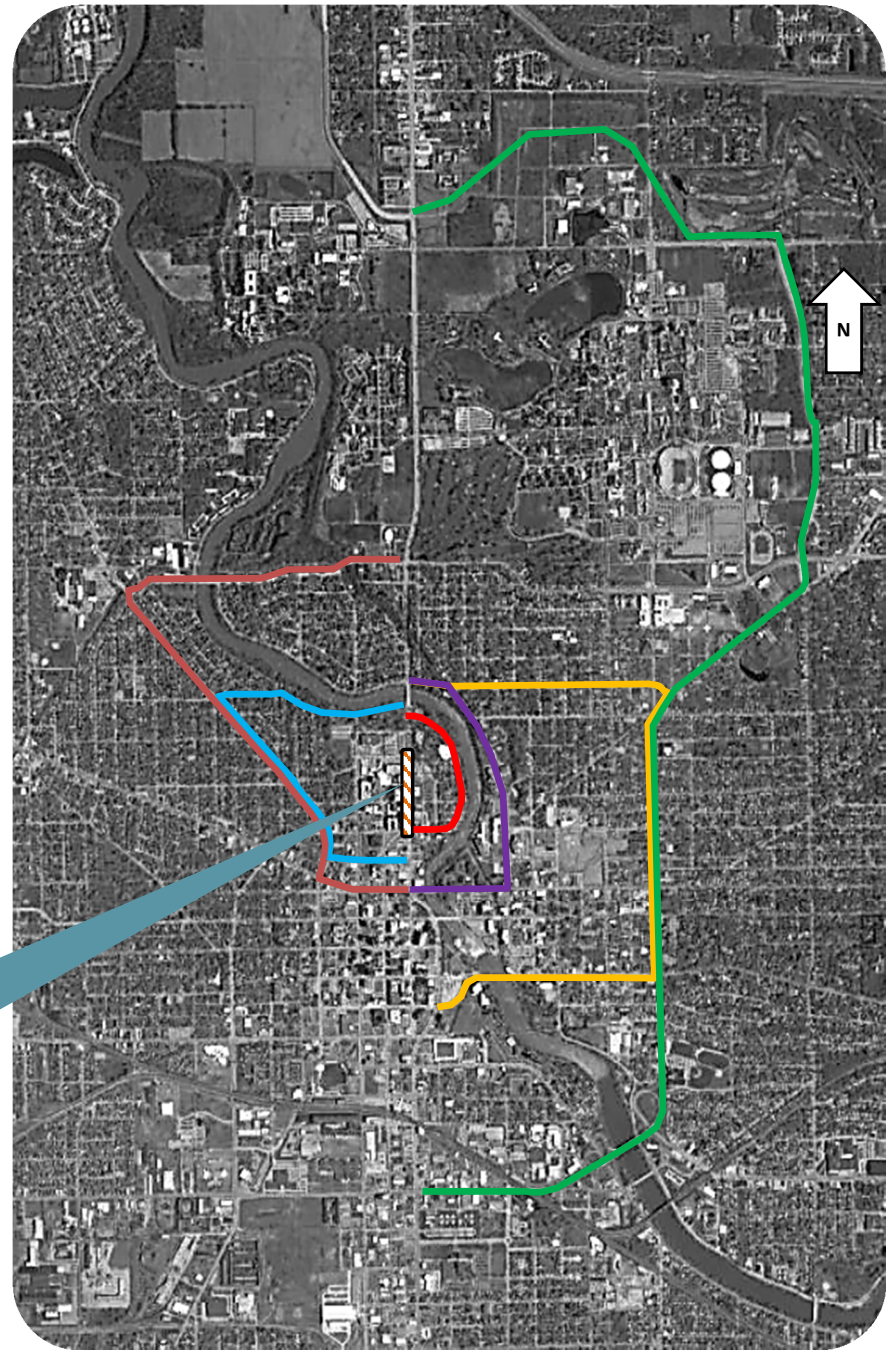




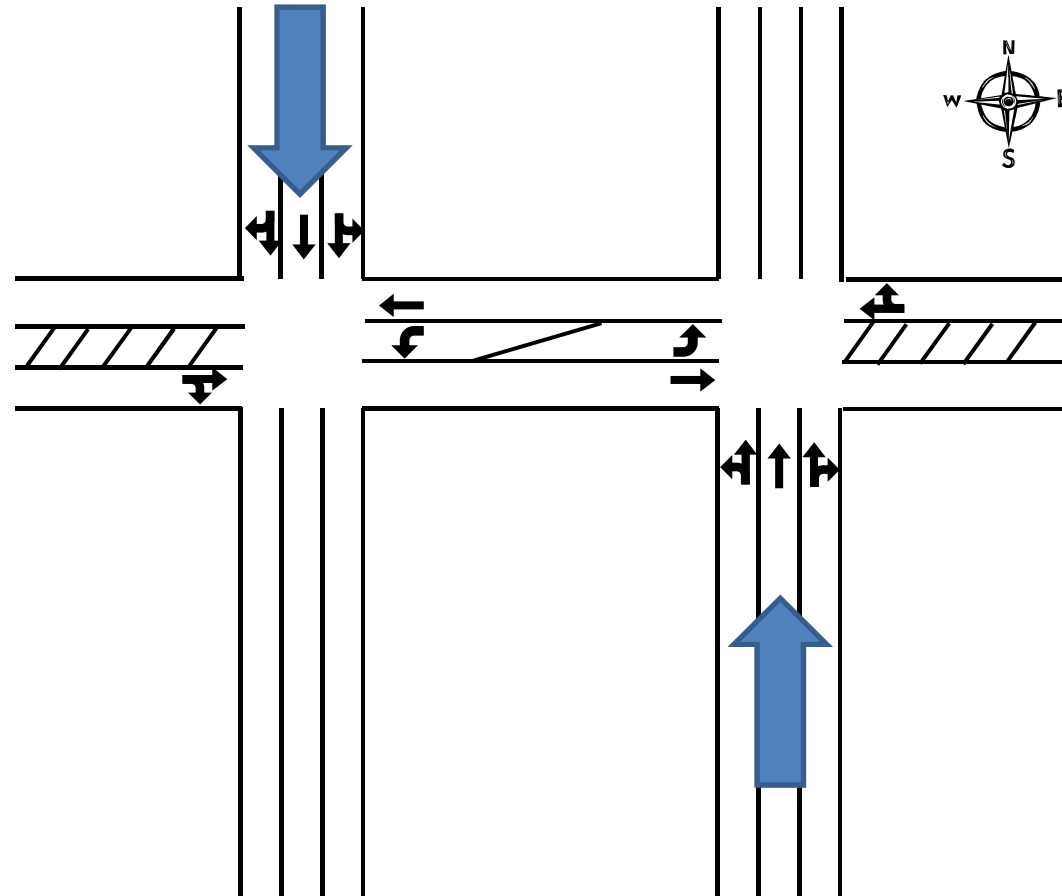
# Alternate Routes

- Multiple routes to avoid downtown
- No issues identified on these alternate routes

Downtown One-Way  
to Two-Way Street  
Conversion

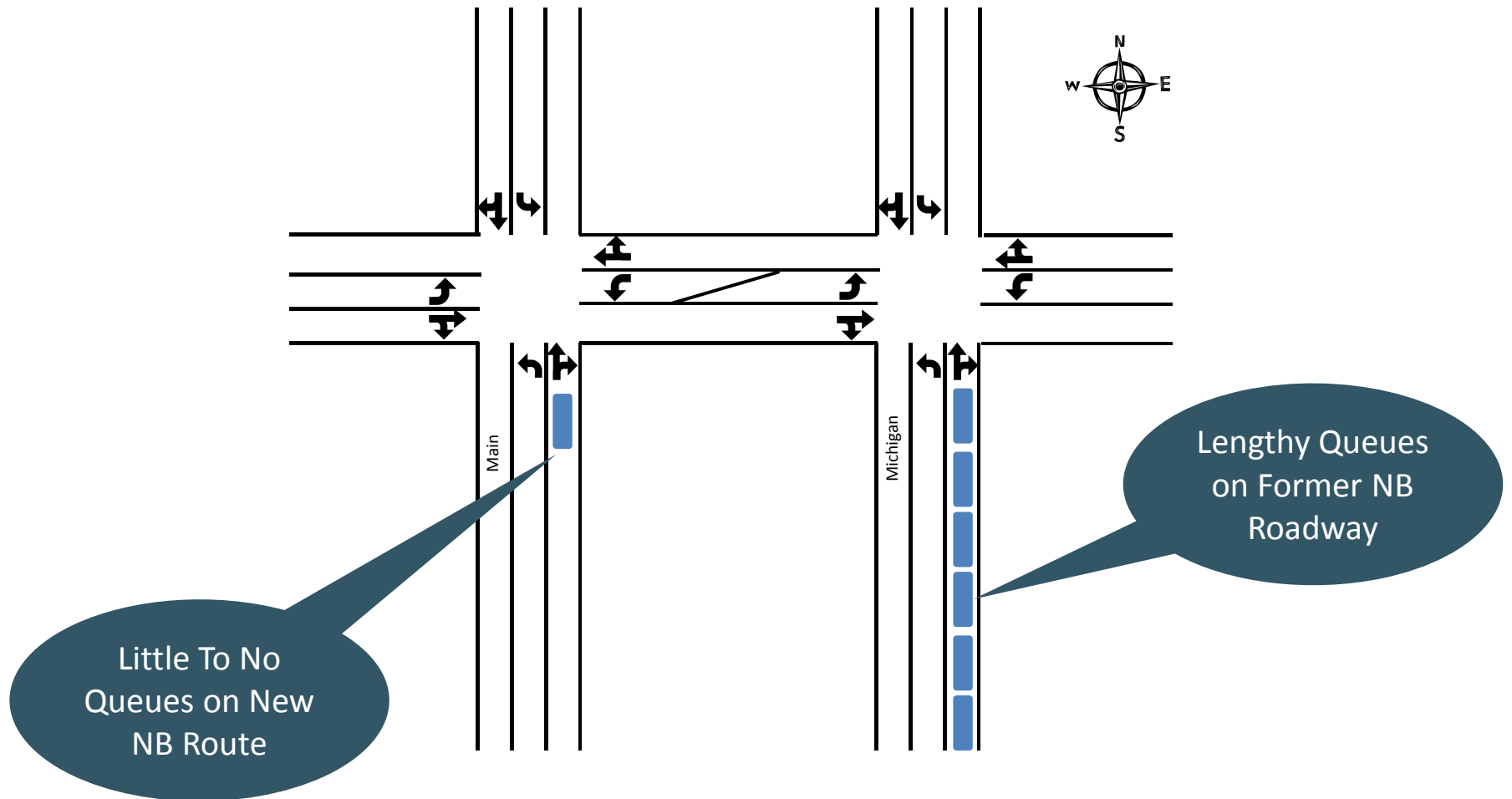


# Old Habits (Are Hard to Break)





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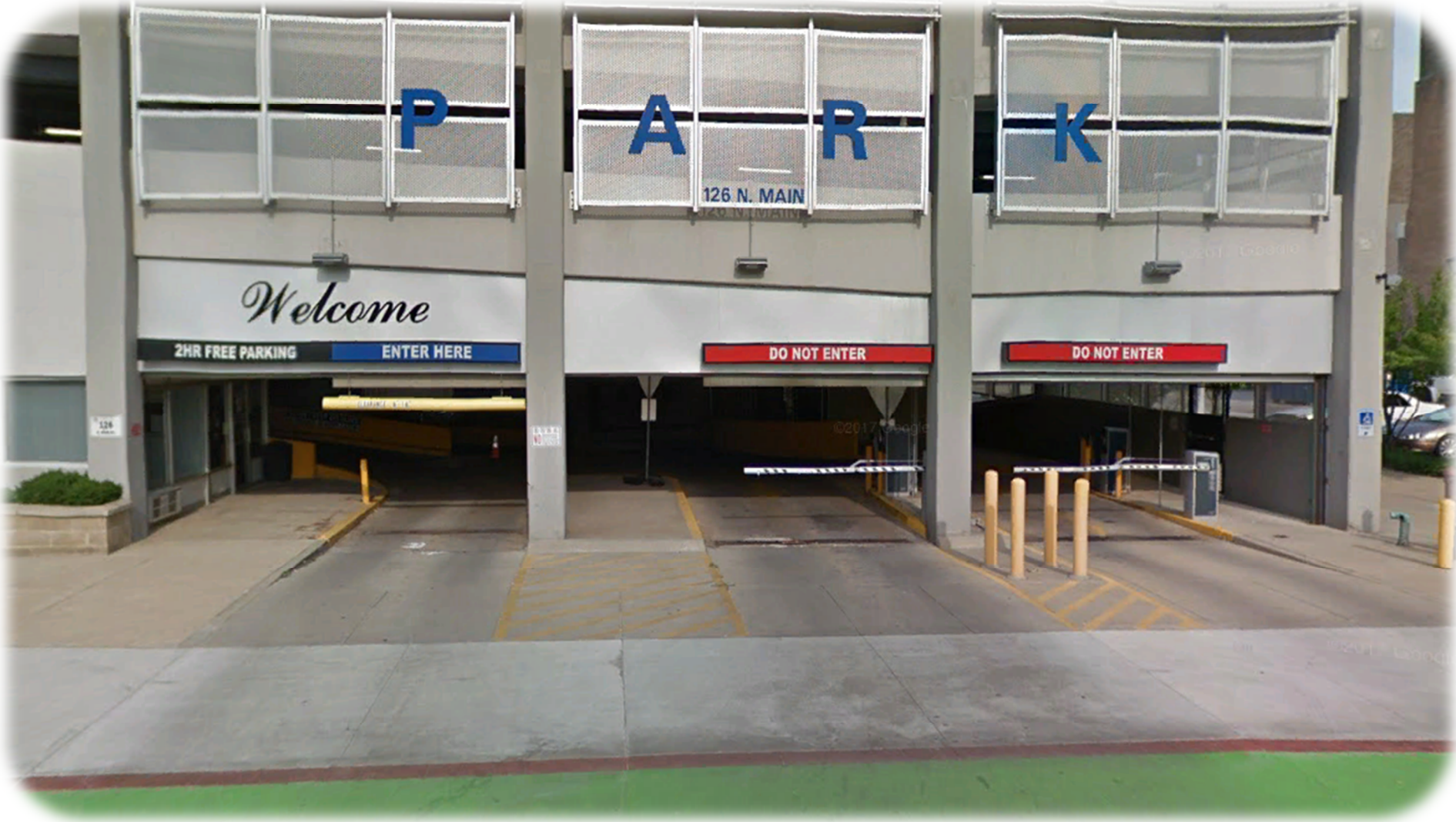


# Construction & Contractual Challenges





# Access Issues





# Knockdowns



Former  
Light Poles

# Conclusion

Smart Streets was a major success

- Slowed & Calmed Traffic
- Moved Unwanted Traffic Out of Downtown
- Beautified the Downtown
- Lead to Redevelopment Generating over \$100 Million in Investment
- Created over 500 Market Based Apartments and Condominiums
- Returned Downtown South Bend to the People



# Questions

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