

# State Road 1

## Oberting Road to US 50

### Corridor Alternative Evaluation

March 22, 2016

Dearborn County



AMERICAN  
**STRUCTUREPOINT**  
INC.



# Project Extents



 Study Intersection

# Purpose of Project

Reduce congestion/queuing and improve safety within the study area

# Existing Conditions

Ridge Ave / Belleview Dr  
Signal



Ridge Ave / Oberting Rd  
Two-way stop

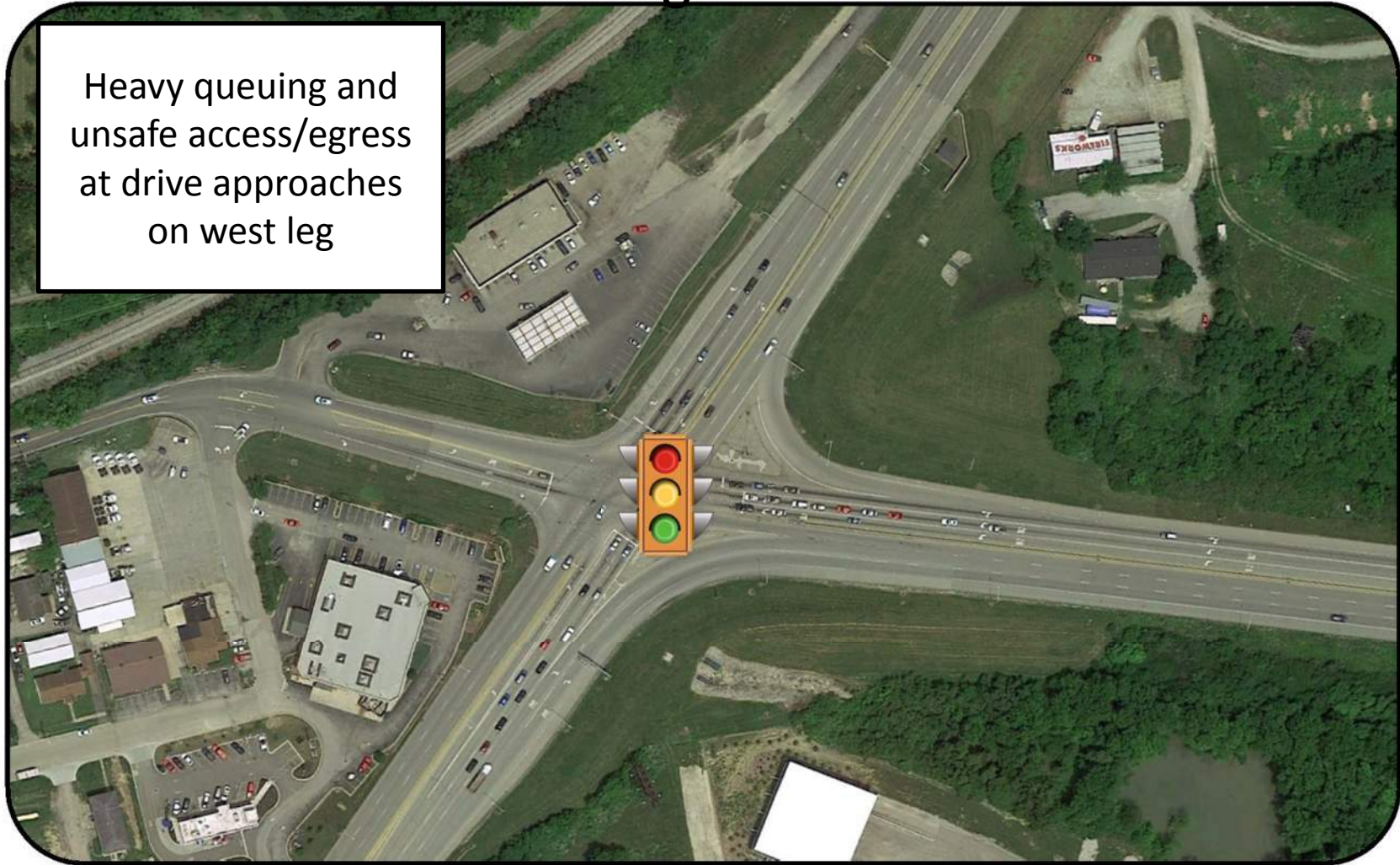


Frequent SB queuing at Belleview Dr. blocking north intersection – even in off-peak

# Existing Conditions

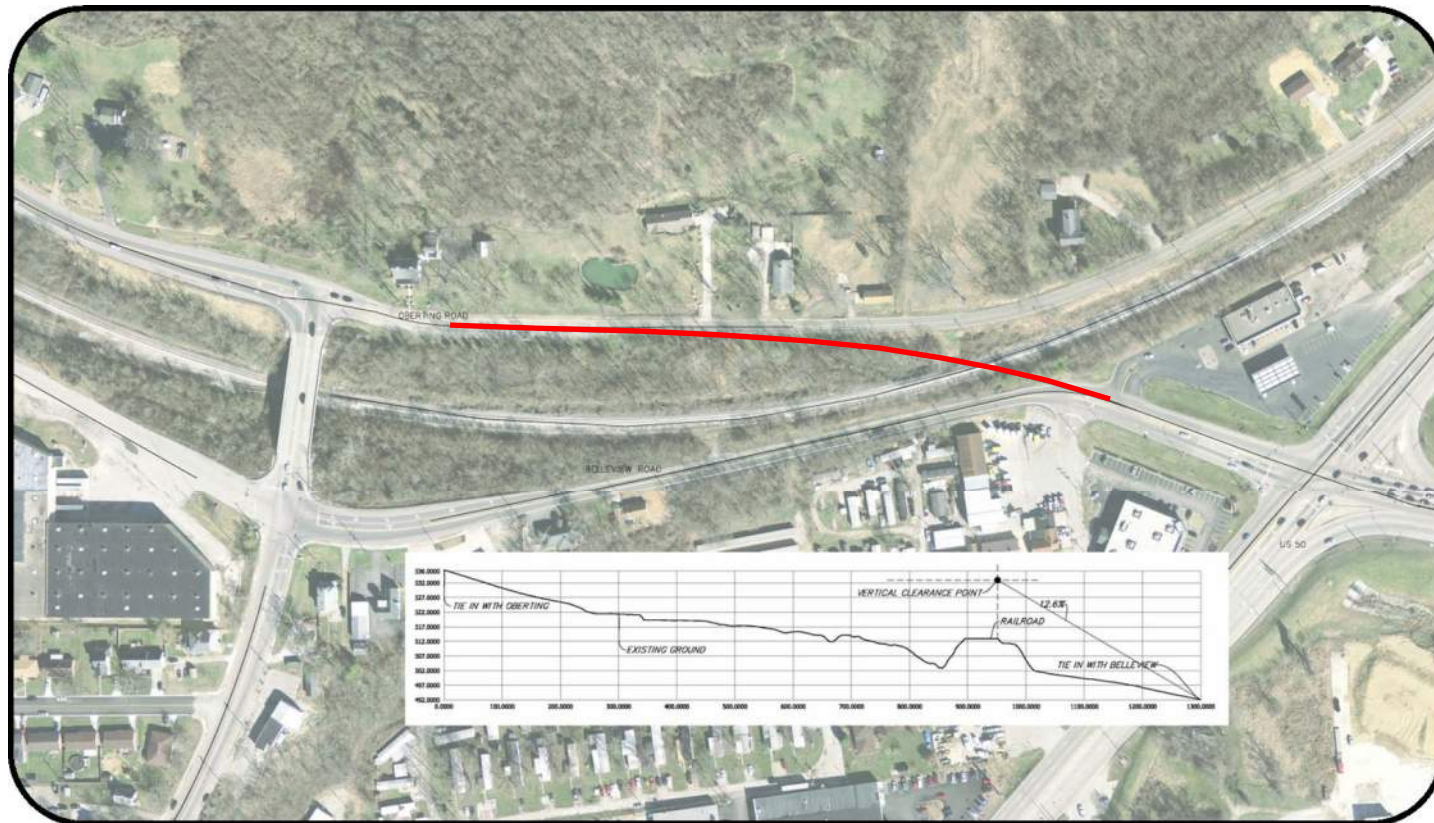
## US 50 / Belleview Dr - Signal

Heavy queuing and unsafe access/egress at drive approaches on west leg



# Alternative Concepts

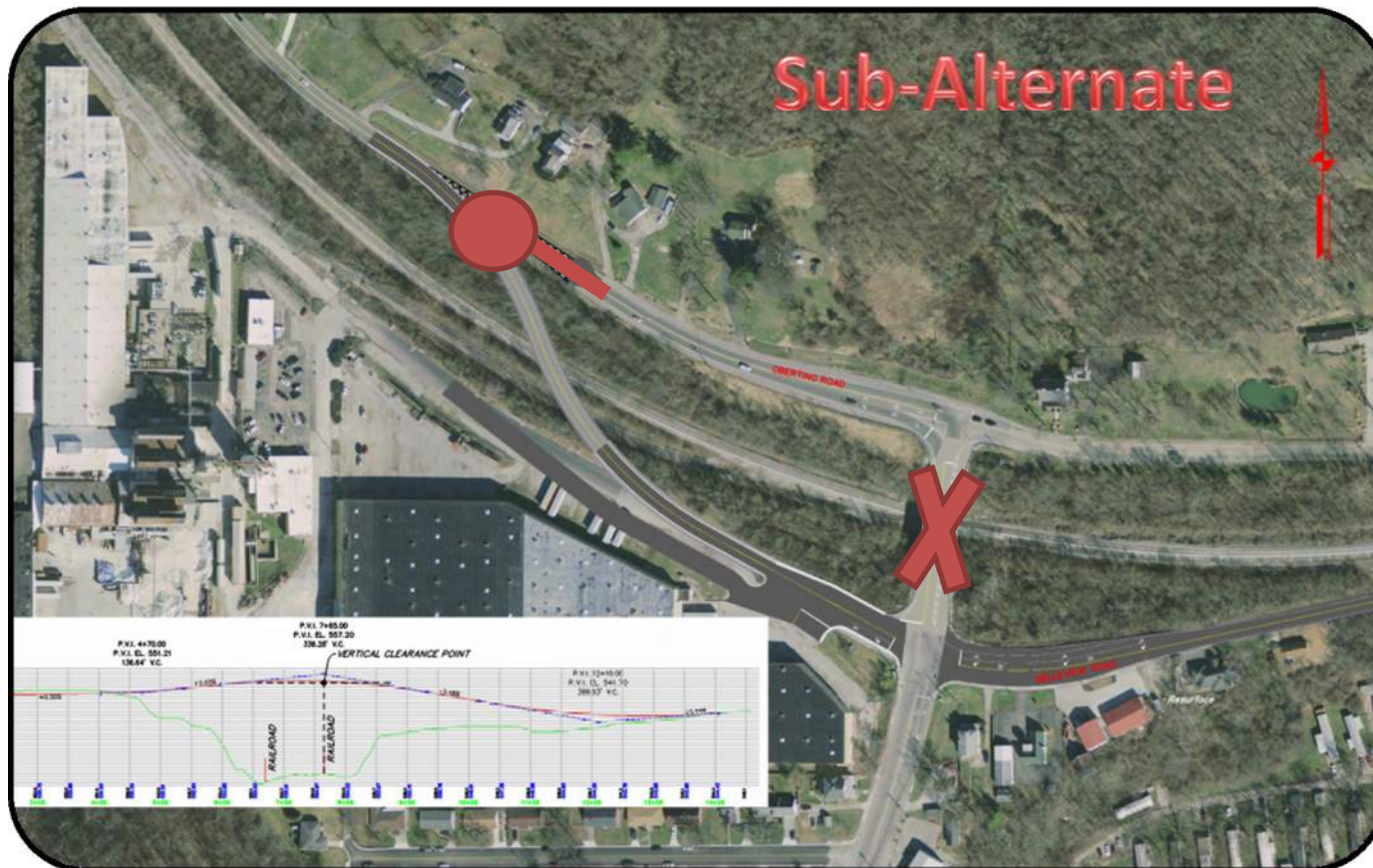
Alternative 1: New alignment  
east of existing bridge



# Alternative Concepts

Alternative 2: new alignment

west of existing bridge



# Alternative Concepts

## Alternative 3: Roundabouts on Ridge Ave





# Alternative Concepts

Alternative 3: Build as single lane roundabouts easily expandable to multi-lane

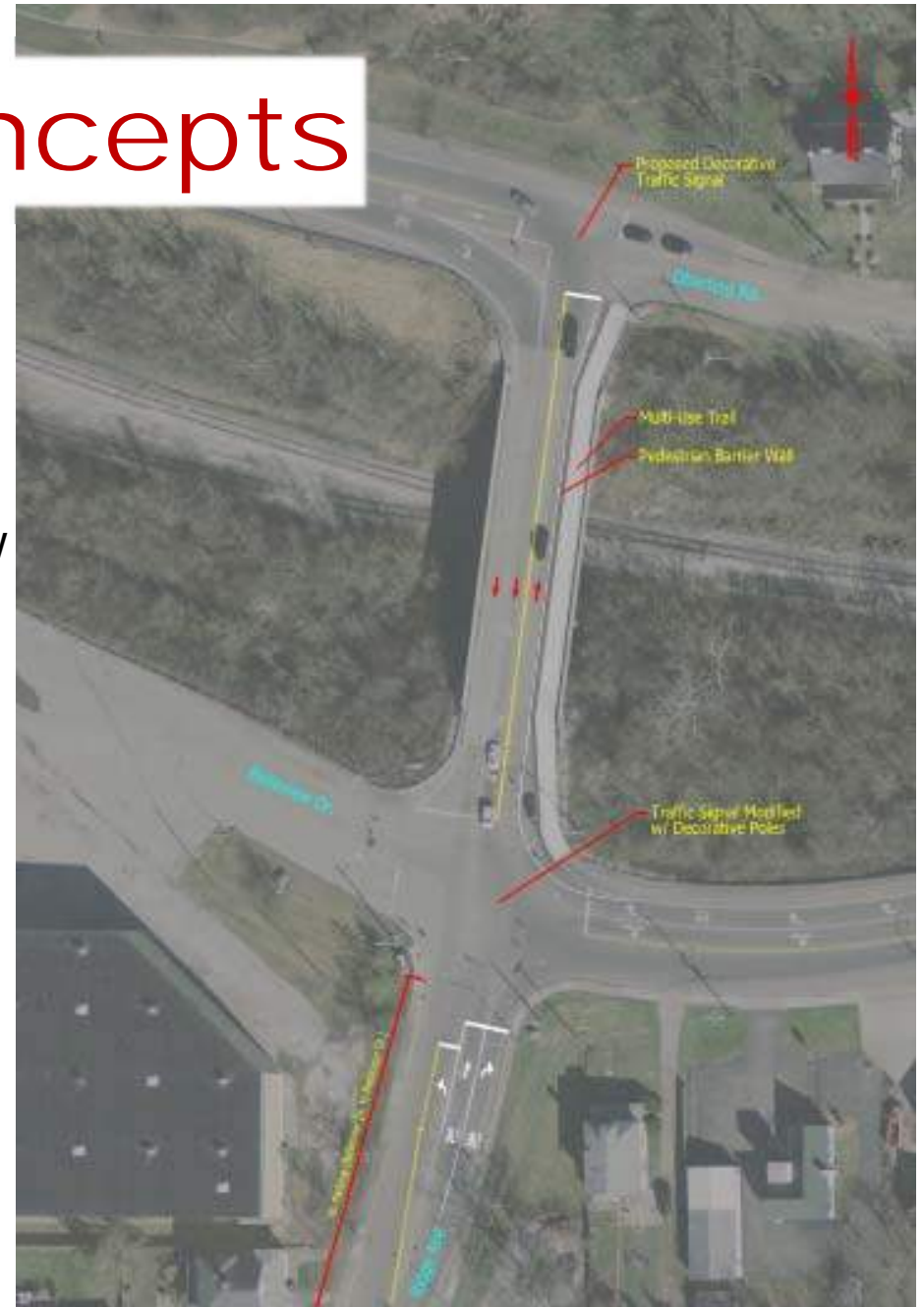


# Alternative Concepts

## Alternative 4: Traffic Signals on Ridge Ave

- 1) Reconfigure south approach of Belleview
- 2) Remove split phasing of signal at Belleview
- 3) Replace signal poles at Belleview with decorative signal poles and mast arms
- 4) New decorative signal poles and mast arms at Oberting
- 5) Add barrier to bridge to allow pedestrian trail crossing in outside lane

**Create a “gateway” into Greendale while alleviating congestion**



# US 50 Improvements



1 – Add an EB through lane

2 – Reconfigure island in SE corner of intersection to allow 2 through lanes.

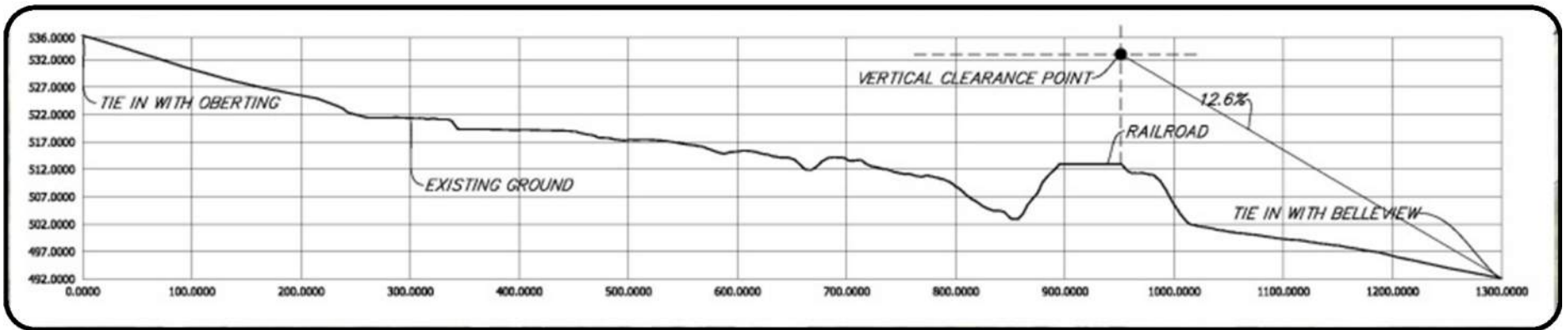
3 – Reduce NB right turn to single free-flow lane.

4 – Improve curve on Belleview

5 – Realign Craig Ave

# Alternative 1

- Infeasible due to elevation of railroad



# Alternative 2

- Capacity Analysis (Year 2034)
  - Worst Approach LOS: B
  - Worst Approach Delay: 10.7 sec
  
- Cost Estimate

Construction	\$ 11,145,030
Utility and RR Coordination	\$ 300,000
Land Acquisition	\$ 1,802,530
Engineering	\$ 2,440,798
<hr/>	
<b>TOTAL</b>	<b>\$ 15,688,358</b>

# Alternative 3

- Capacity Analysis (Year 2034)
  - Worst Approach LOS: B
  - Worst Approach Delay: 13.1 sec
  
- Cost Estimate

Construction	\$ 6,771,648
Utility and RR Coordination	\$ 60,000
Land Acquisition	\$ 1,642,438
Engineering	\$ 1,334,273
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<b>TOTAL</b>	<b>\$ 9,808,358</b>

# Alternative 4

- Capacity Analysis (Year 2034)
  - Worst Approach LOS: B
  - Worst Approach Delay: 15.8 sec
- Cost Estimate

Construction	\$ 1,626,900
Utility and RR Coordination	\$ 60,000
Land Acquisition	\$ 1,556,030
Engineering	\$ 468,113
<b>TOTAL</b>	<b>\$ 3,711,043</b>

# Simulation of Alternatives

## Year 2034

- Alternative 3 (Ridge Avenue roundabouts)
  - Saturday Peak Hour – During Ski Season
  - Weekday PM Peak Hour
- Alternative 4 (Ridge Avenue signals)
- US 50 Improvements



# Recommendations

- Implement Alternative 4 Improvements (traffic signals) on Ridge Avenue
- Implement US 50 / Belleview Improvements:
  - Addition of second EB through lane
  - Curve improvement on Belleview
  - Realignment of the Craig Avenue approach

# Recommendations

## Ridge Avenue

- Alternate 4 (signals) provides similar benefits to Alternate 2 (new bridge)
  - Capacity analysis results are similar
  - Both handle 2034 traffic volumes
- Provides a pedestrian crossing on the existing bridge
- Alternative 3 (roundabouts) could be implemented at a later date if traffic volumes increase at a rate faster than expected

# Recommendations

## Aesthetics

- Decorative traffic signals desirable on Ridge Avenue to contribute to sense of place and provide a gateway into Greendale
- Paint signal poles black and provide new signal heads at US 50 intersection