



# APPLETON QUIET ZONE FINAL RECOMMENDATIONS



Appleton, Wisconsin

August 23, 2016



**SRF**  
Consulting Group, Inc.



# Minimum Requirements

- Quiet Zone must be at least 1/2-mile long and include all crossings within the quiet zone limits
- All public grade crossings must meet pre-qualifying criteria:
  - Gates and flashing lights
  - Power-out indicators
  - Constant warning time detectors

# Supplementary Safety Measures (SSMs)

- Four-quadrant vehicle gates
- Medians/channelization devices
- Closure (temporary or permanent)
- One-way street
- Wayside horns

# Diagnostic Meeting

- Site visit to review all RR crossings  
(Conducted April 26, 2016)
- Representatives from:
  - City
  - County (if County Roads present)
  - State Department of Transportation
  - Federal Railroad Administration (FRA)
  - Railroad
  - Other Stakeholders (Appvion)
- Identify Potential Crossing Improvements

# Implementation Steps

1. Diagnostic Meeting
2. Determine Necessary Crossing Improvements
3. Notice of Intent
4. Application Required if ASMs are Used
5. Install Crossing Improvements
6. Notice of Establishment

Typical Quiet Zone Project takes 1-2 Years

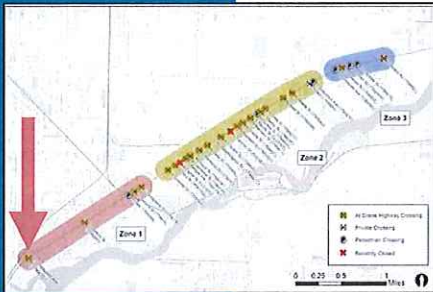
# Improvement Scenarios

- Scenario 1: Maximize Safety
- Scenario 2: Minimize Access Restrictions
- Scenario 3: Phased Implementation
- Scenario 4: Hybrid (Preferred)

# Prospect Avenue

## Prospect Avenue

|                |                       |
|----------------|-----------------------|
| Risk Reduction | 0%                    |
| Cost           | \$100,000 - \$250,000 |

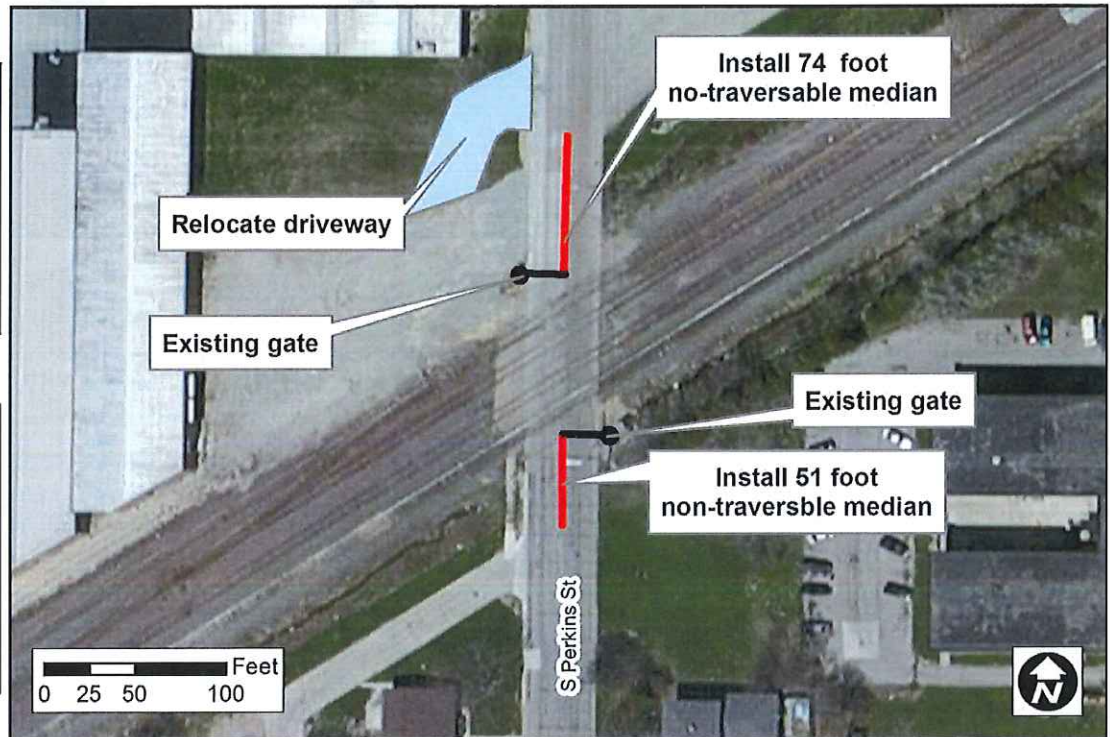
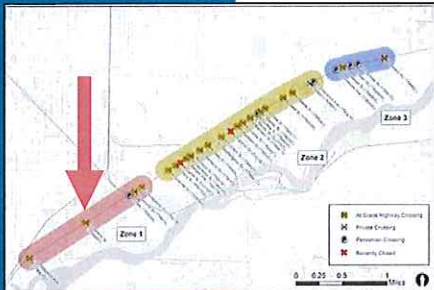




# Perkins Street – Option 2

## Perkins Street - Option 2

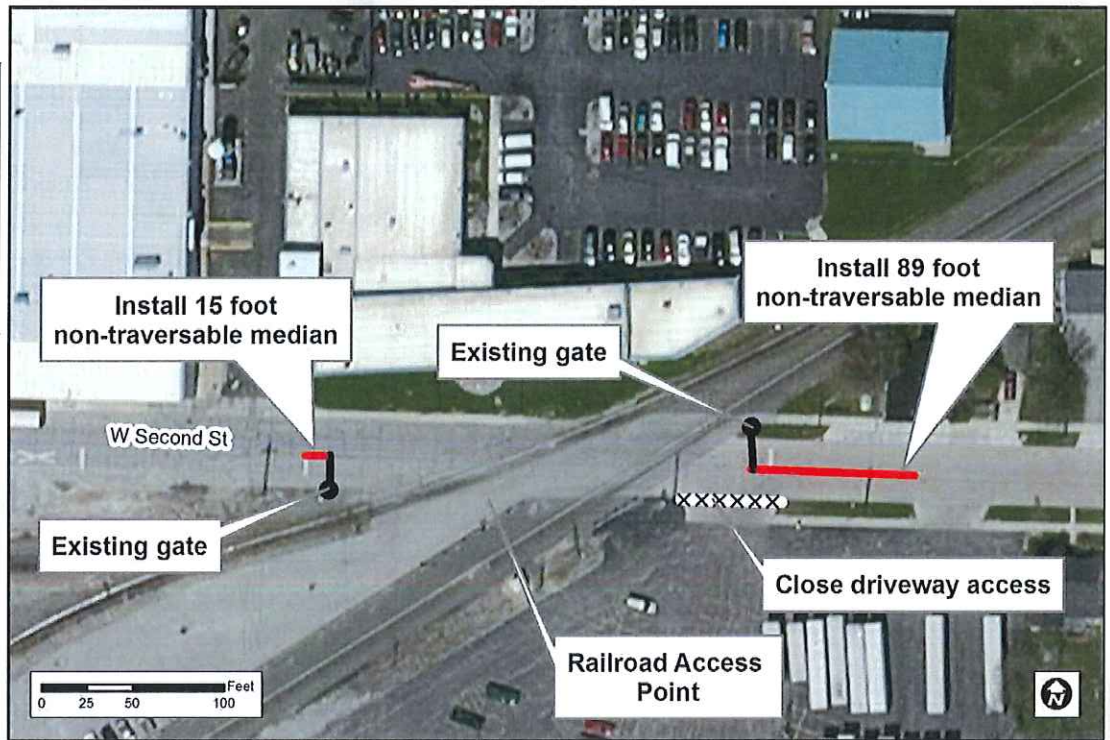
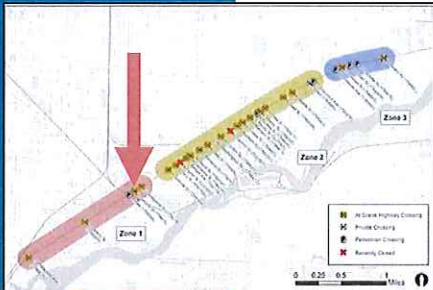
|                |          |
|----------------|----------|
| Risk Reduction | 74%      |
| Cost           | \$53,750 |



# Second Street

## Second Street

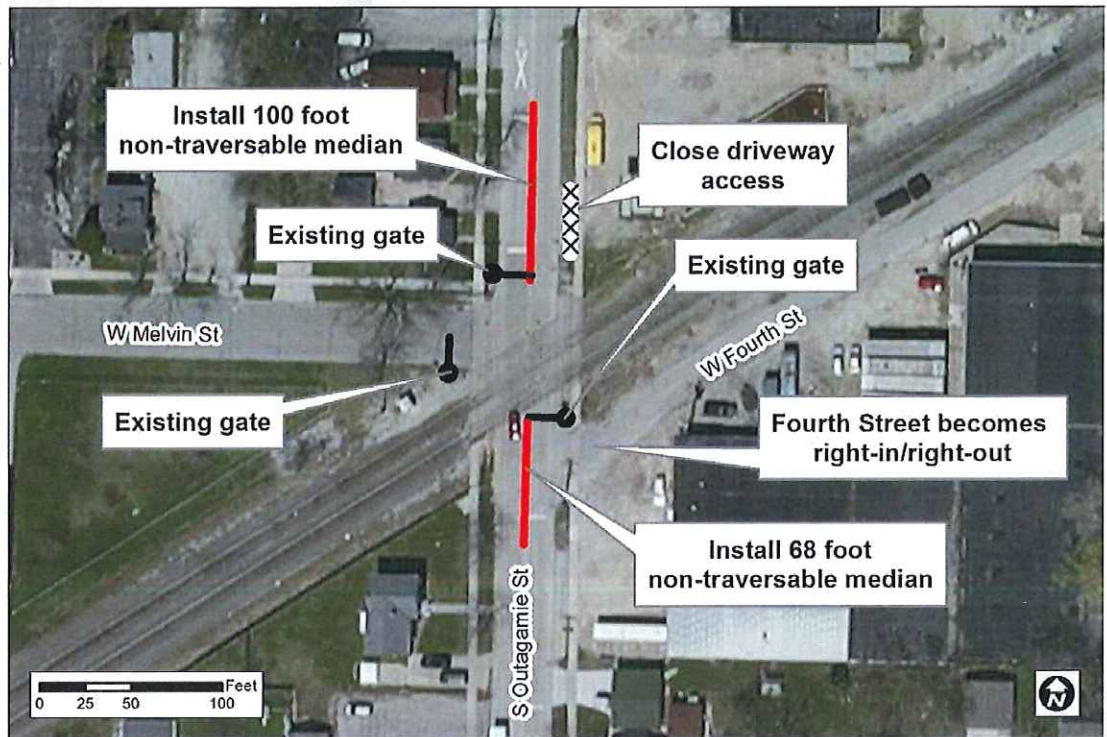
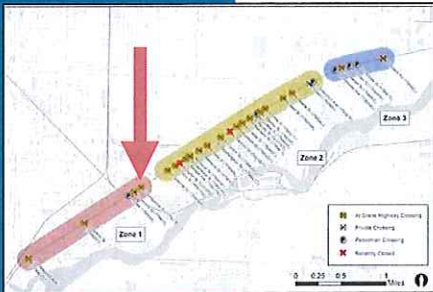
|                |          |
|----------------|----------|
| Risk Reduction | 50%      |
| Cost           | \$41,400 |



# Outagamie Street – Option 1

## Outagamie Street – Option 1

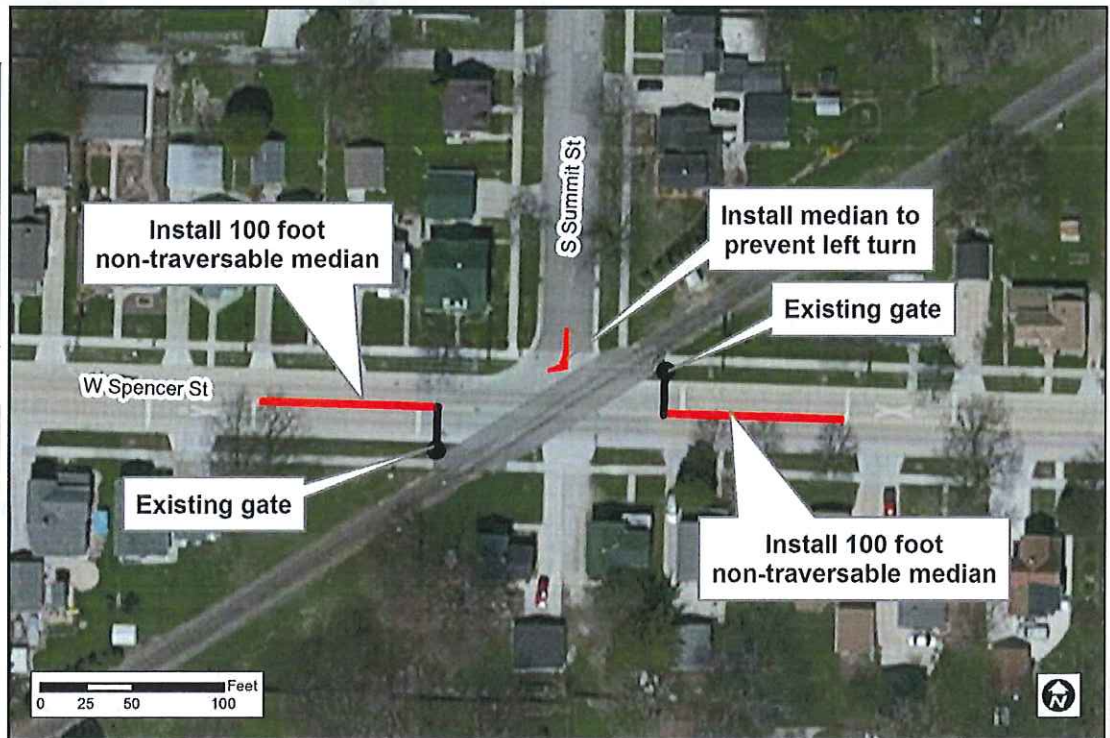
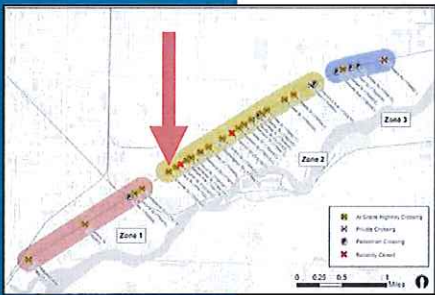
|                |          |
|----------------|----------|
| Risk Reduction | 80%      |
| Cost           | \$63,800 |



# Spencer Street – Option 1

## Spencer Street – Option 1

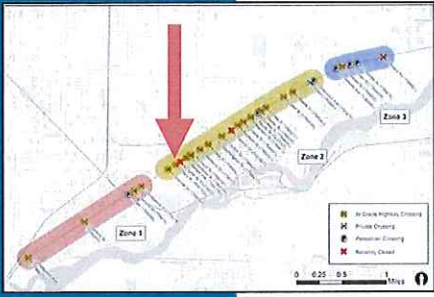
|                |          |
|----------------|----------|
| Risk Reduction | 80%      |
| Cost           | \$75,000 |



# Story Street – Option 1

## Story Street – Option 1

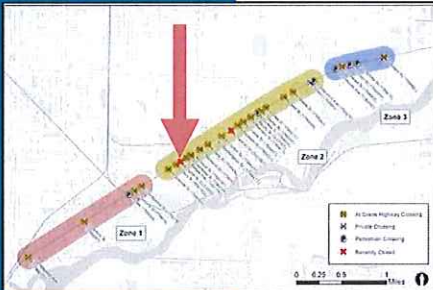
|                |          |
|----------------|----------|
| Risk Reduction | 53%      |
| Cost           | \$29,785 |



# Eighth Street

## Eighth Street

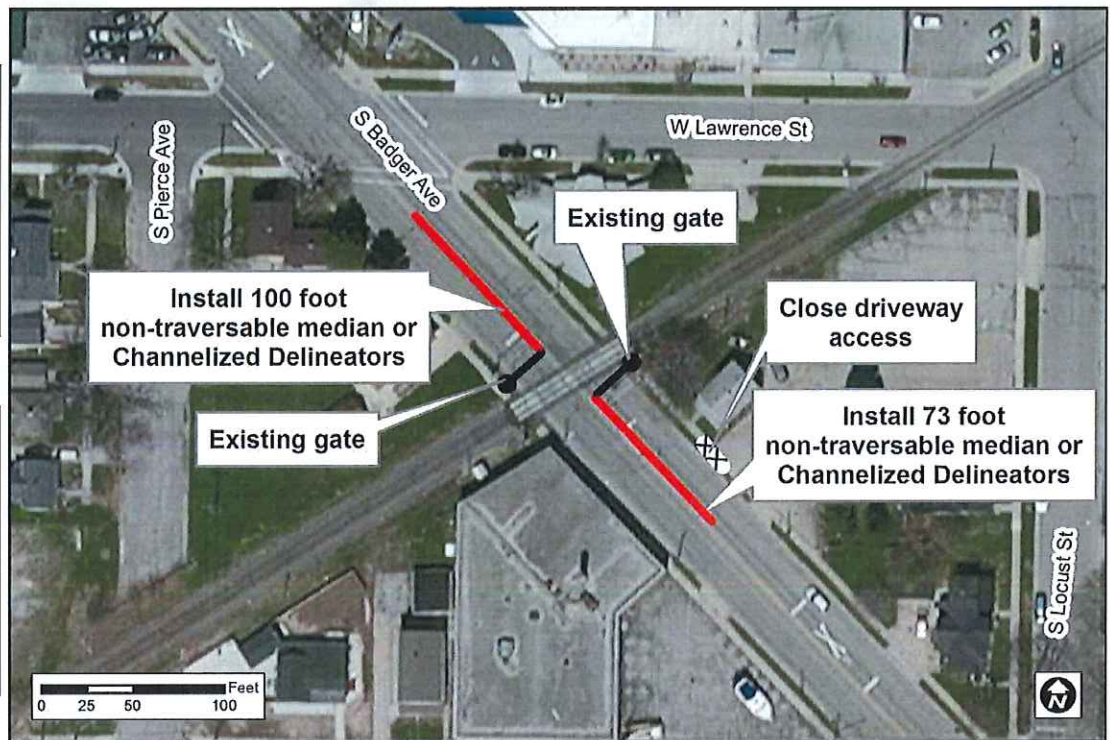
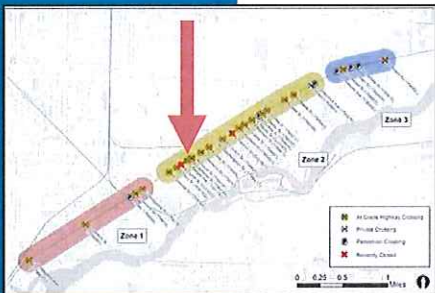
|                |      |
|----------------|------|
| Risk Reduction | 100% |
| Cost           | N/A  |



# Badger Avenue

## Badger Avenue

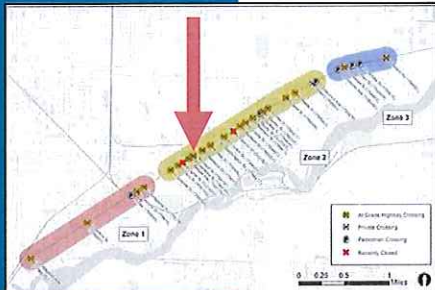
|                |          |
|----------------|----------|
| Risk Reduction | 80%      |
| Cost           | \$65,650 |



# Lawrence Street – Option 2

## Lawrence Street – Option 2

|                |          |
|----------------|----------|
| Risk Reduction | 40%      |
| Cost           | \$35,500 |

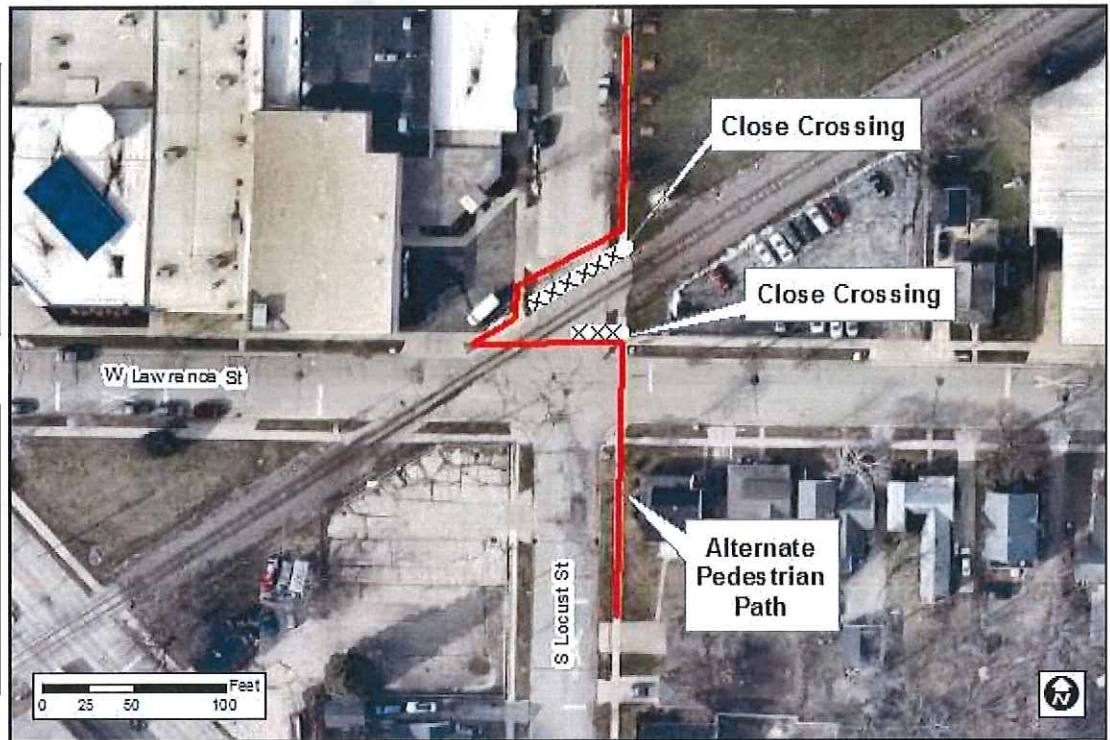
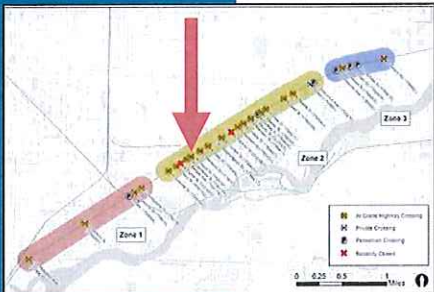




# Locust Street – Option 1

## Locust Street – Option 1

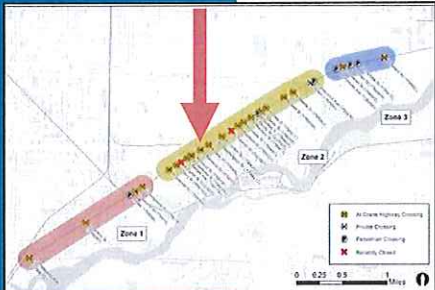
|                |      |
|----------------|------|
| Risk Reduction | 100% |
| Cost           | \$0  |



# Memorial Drive

## Memorial Drive

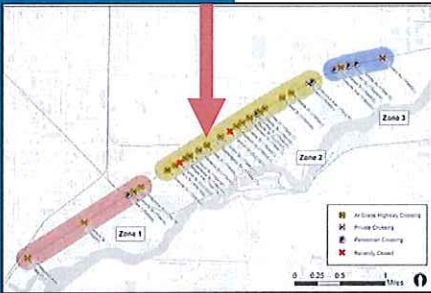
|                |          |
|----------------|----------|
| Risk Reduction | 18%      |
| Cost           | \$18,900 |



# State Street – Option 2

## State Street – Option 2

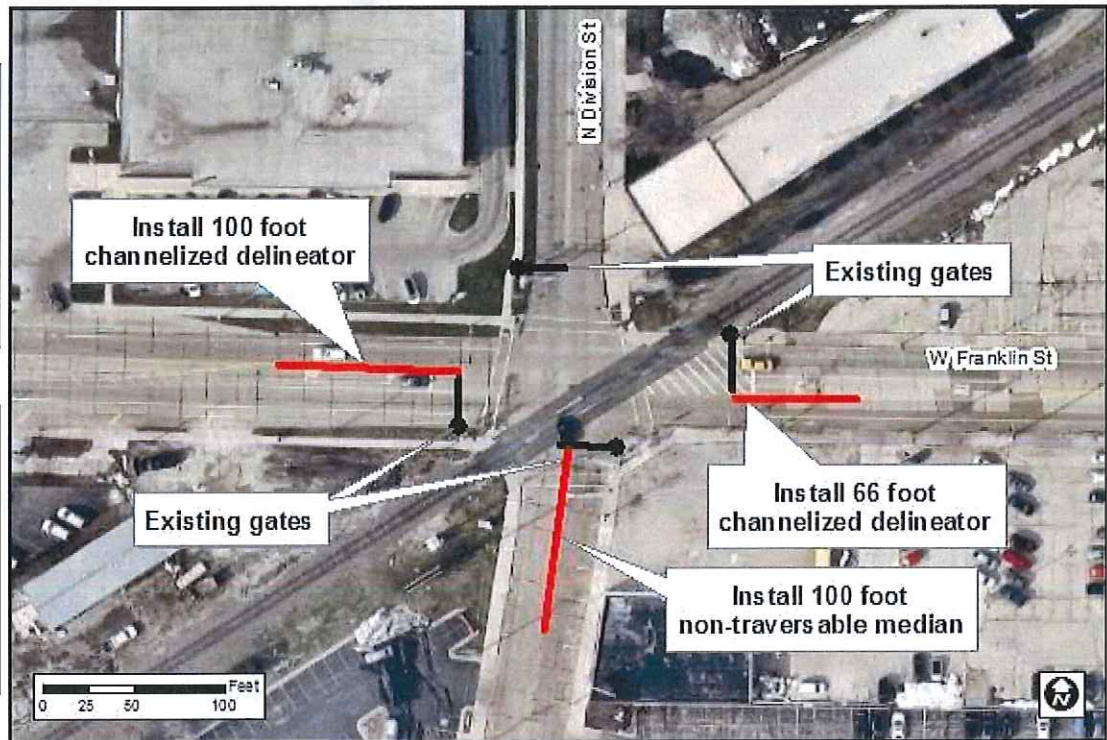
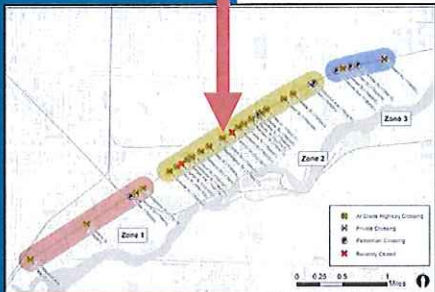
|                |          |
|----------------|----------|
| Risk Reduction | 36%      |
| Cost           | \$23,900 |



# Franklin Street – Option 1

## Franklin Street – Option 1

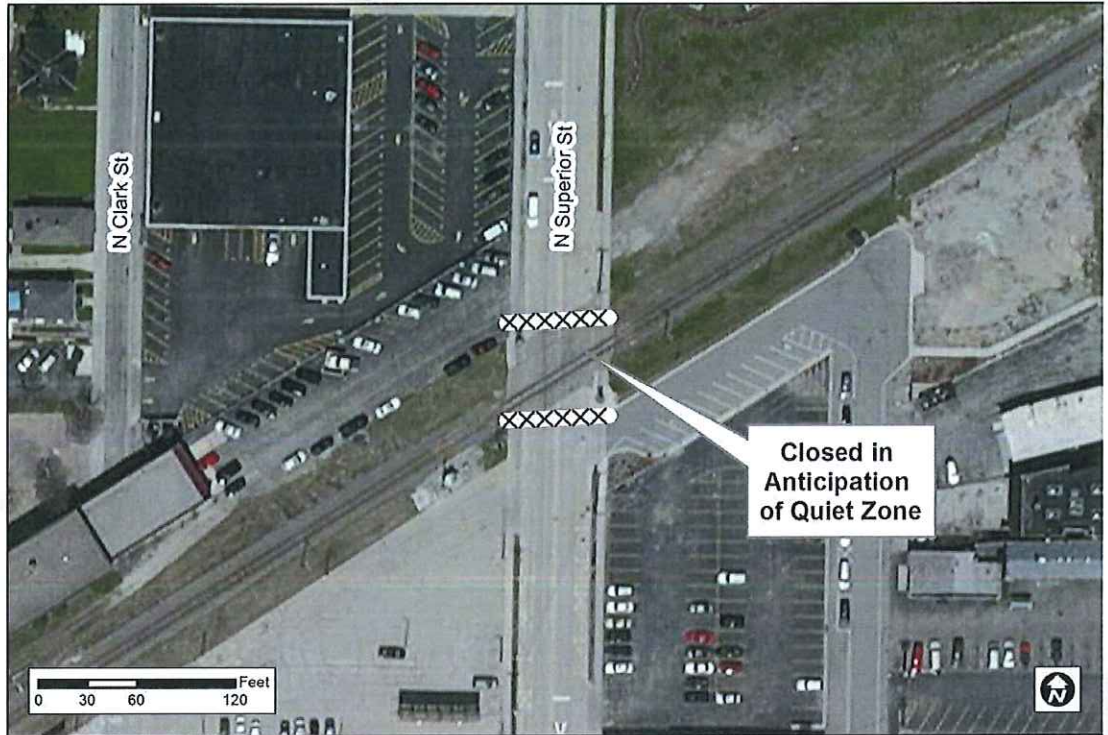
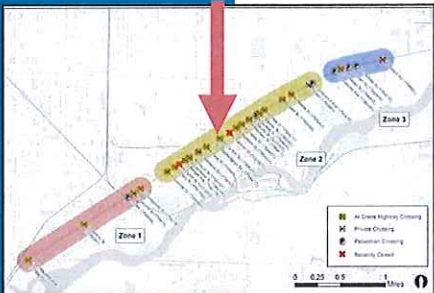
|                |          |
|----------------|----------|
| Risk Reduction | 58%      |
| Cost           | \$43,300 |



# Superior Street

## Franklin Street – Option 2

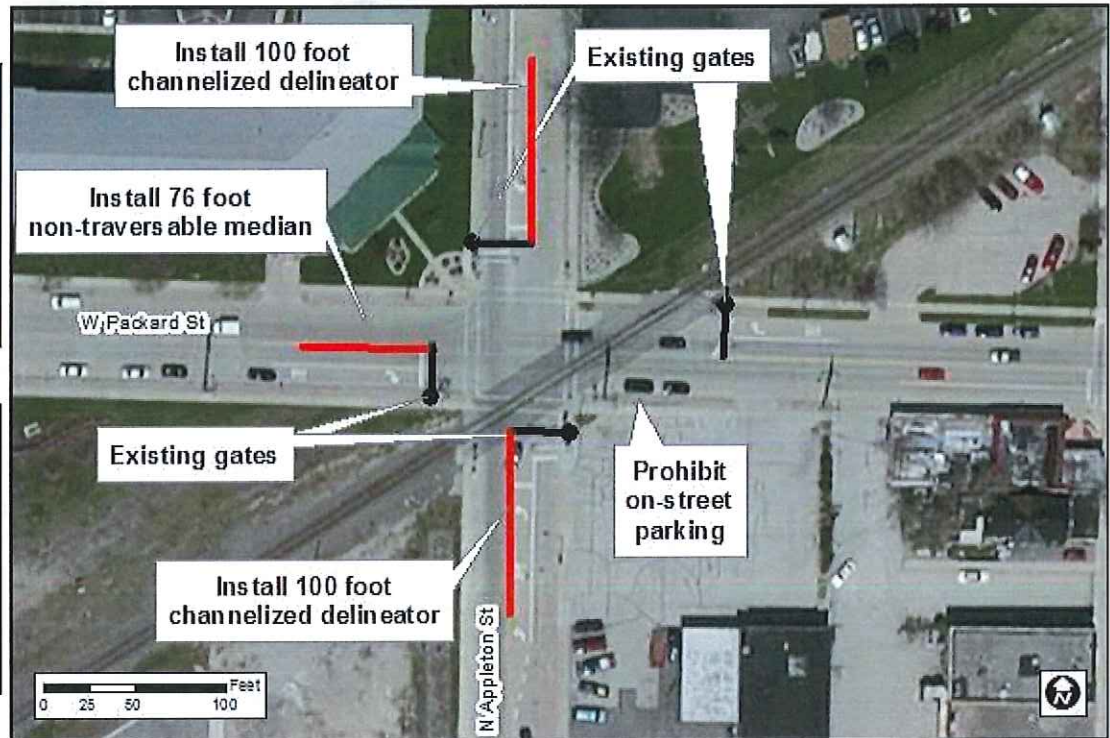
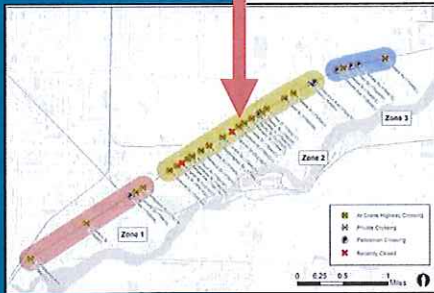
|                |      |
|----------------|------|
| Risk Reduction | 100% |
| Cost           | \$0  |



# Appleton Street – Option 1

## Appleton Street – Option 1

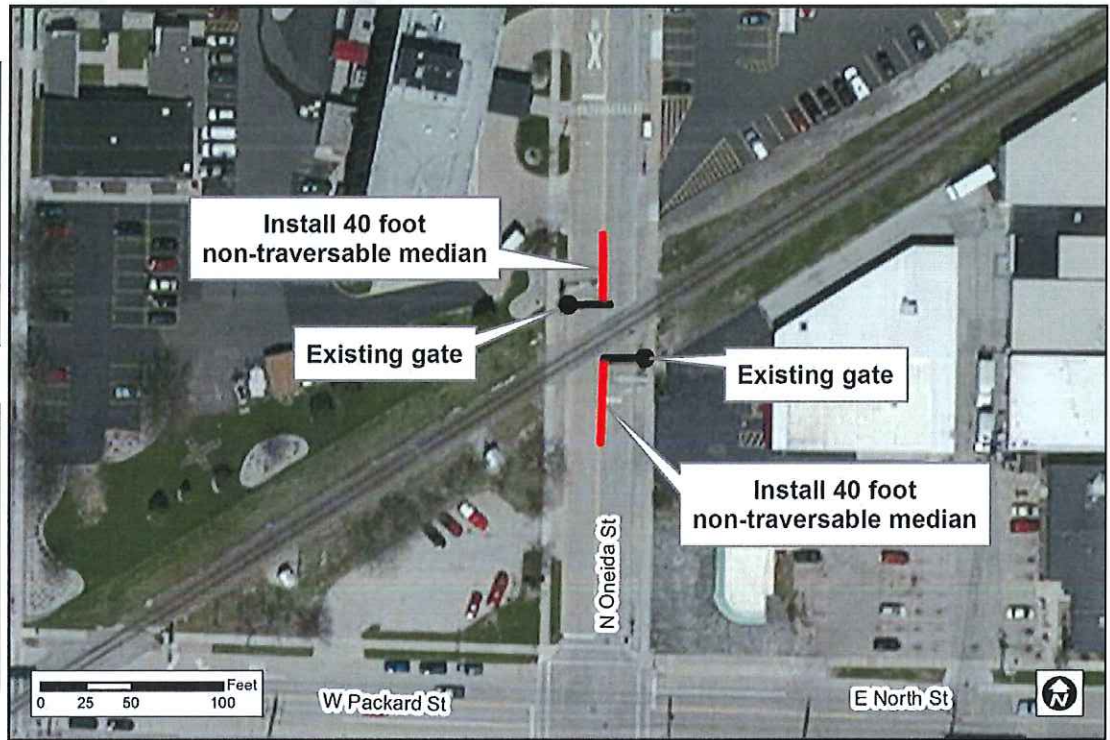
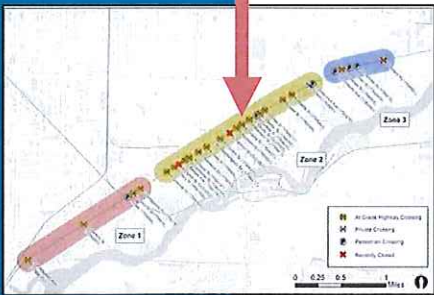
|                |          |
|----------------|----------|
| Risk Reduction | 58%      |
| Cost           | \$36,600 |



# Oneida Street – Option 2

## Oneida Street – Option 2

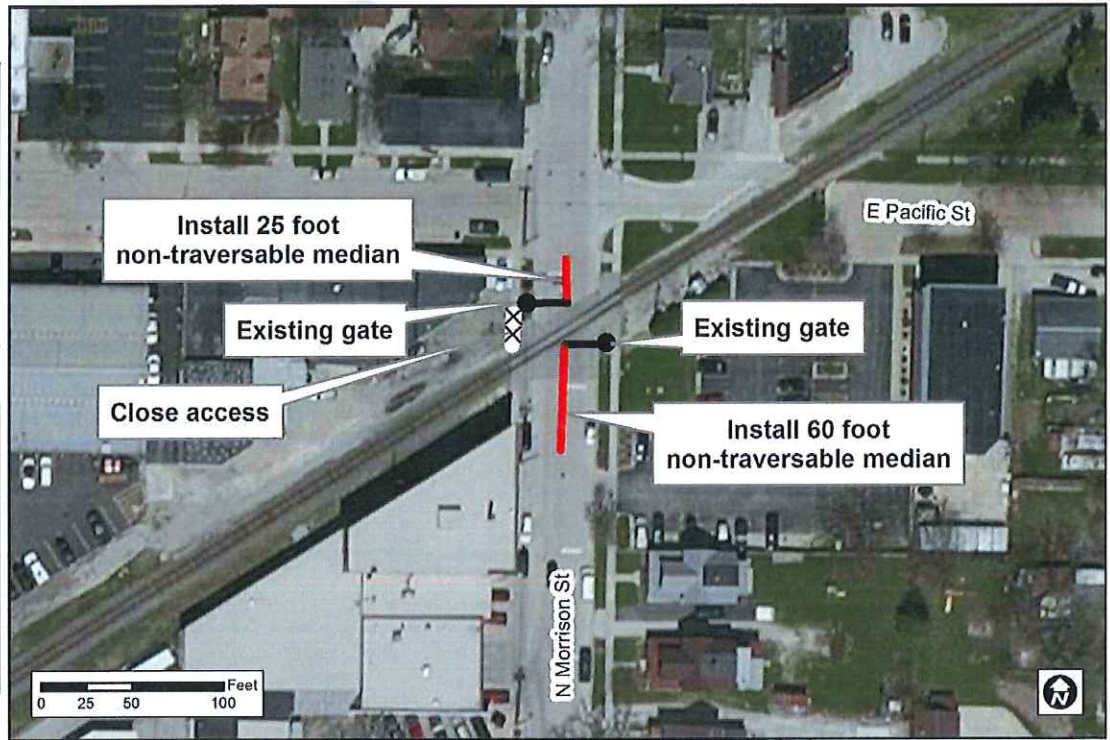
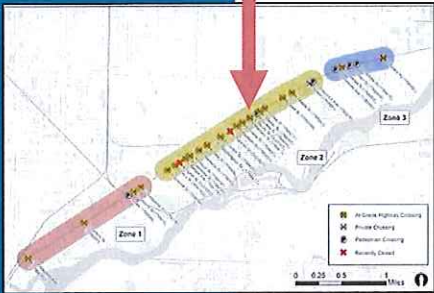
|                |          |
|----------------|----------|
| Risk Reduction | 53%      |
| Cost           | \$28,000 |



# Morrison Street – Option 2

## Morrison Street – Option 2

|                |          |
|----------------|----------|
| Risk Reduction | 57%      |
| Cost           | \$34,750 |

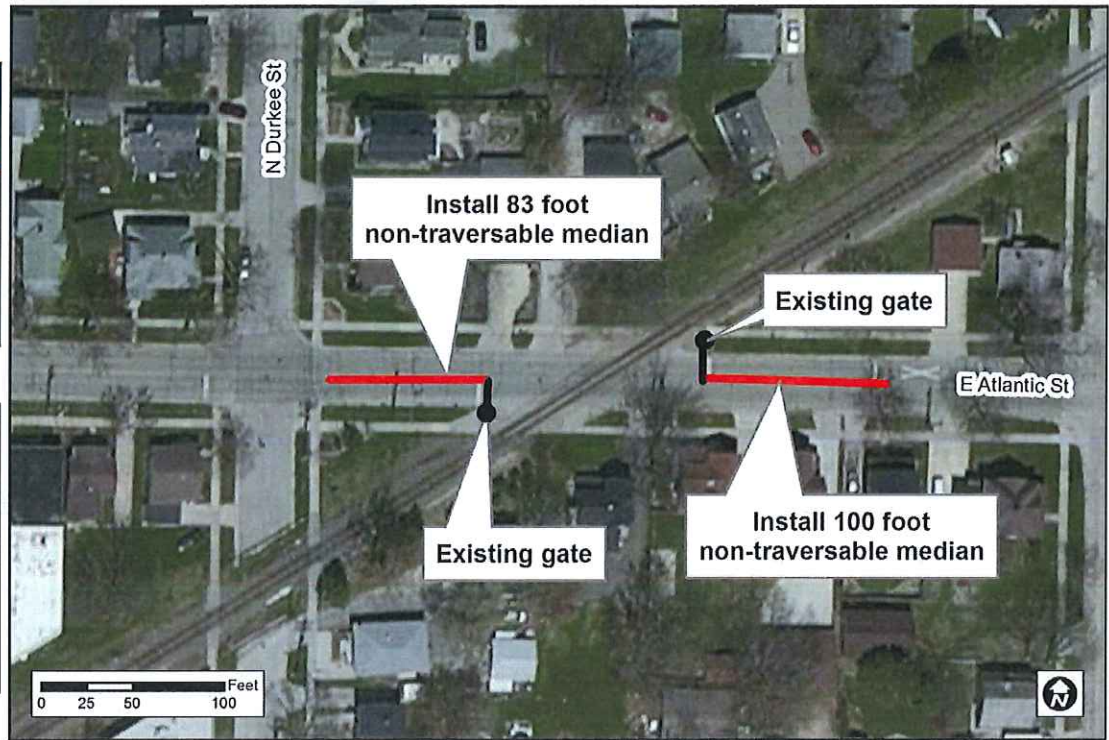
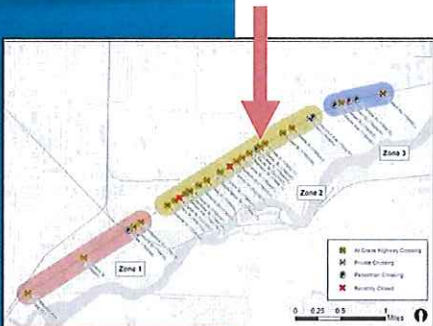




# Atlantic Street – Option 1

## Atlantic Street – Option 1

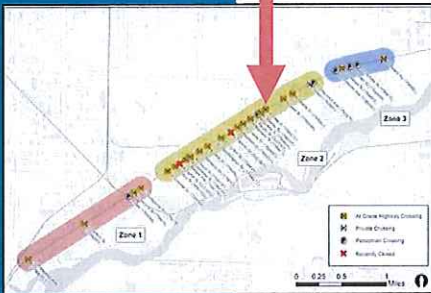
|                |          |
|----------------|----------|
| Risk Reduction | 80%      |
| Cost           | \$64,050 |



# Drew Street – Option 1

## Drew Street – Option 1

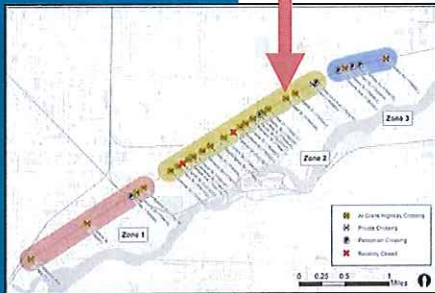
|                |          |
|----------------|----------|
| Risk Reduction | 40%      |
| Cost           | \$24,500 |



# Lawe Street – Option 2

## Lawe Street – Option 2

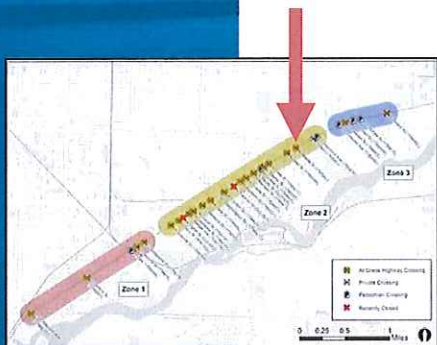
|                |         |
|----------------|---------|
| Risk Reduction | 49%     |
| Cost           | \$9,400 |



# Meade Street

## Meade Street

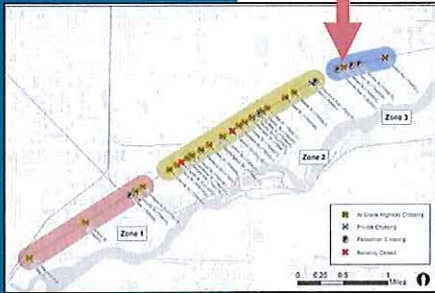
|                |         |
|----------------|---------|
| Risk Reduction | 0%      |
| Cost           | \$5,000 |



# Owaissa Street

## Owaissa Street

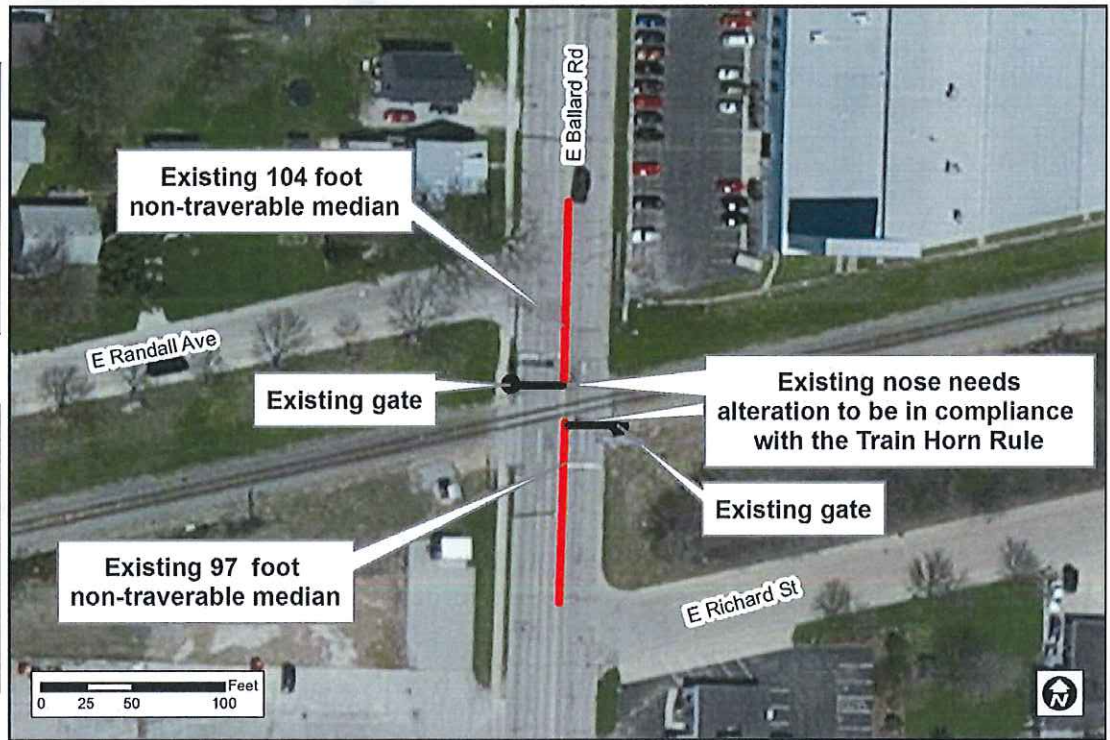
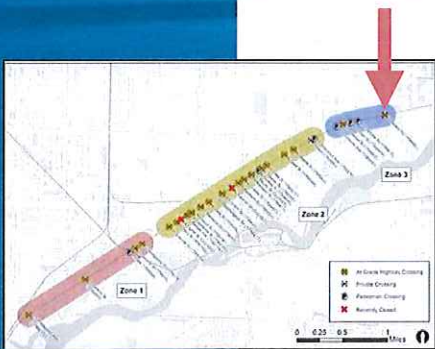
|                |          |
|----------------|----------|
| Risk Reduction | 53%      |
| Cost           | \$28,000 |



# Ballard Road

## Ballard Road

|                |         |
|----------------|---------|
| Risk Reduction | 80%     |
| Cost           | \$5,000 |



## Summary of Scenario 4

- Only two crossings untreated
- Corridor risk index reduced by 14%
  - 12,103 to 9,777
- Estimated Improvement Costs
  - \$785,685

# Summary of Scenarios

| Scenario  | Cost                  | Risk Reduction |
|---|-----------------------|----------------|
| Scenario 1: Minimal Impact to Accesses                          | \$621,785             | 9%             |
| Scenario 1a: Minimal Impact to Accesses (Excluding Prospect Av) | \$457,985             | 4%             |
| Scenario 2: Maximum Safety                                      | \$792,400             | 24%            |
| Scenario 3: Phased Implementation/Minimal Impact                | \$493,785 - \$671,085 | Varies         |
| Scenario 4: Recommended Option                                  | \$785,685             | 14%            |



# Quiet Zone Decision Process



# Questions?

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