


# Midway Rd (CTH AP) Safety Improvements

[Hemlock Ln to Telulah Av]



City of Appleton DPW  
Traffic Section  
March 10, 2015



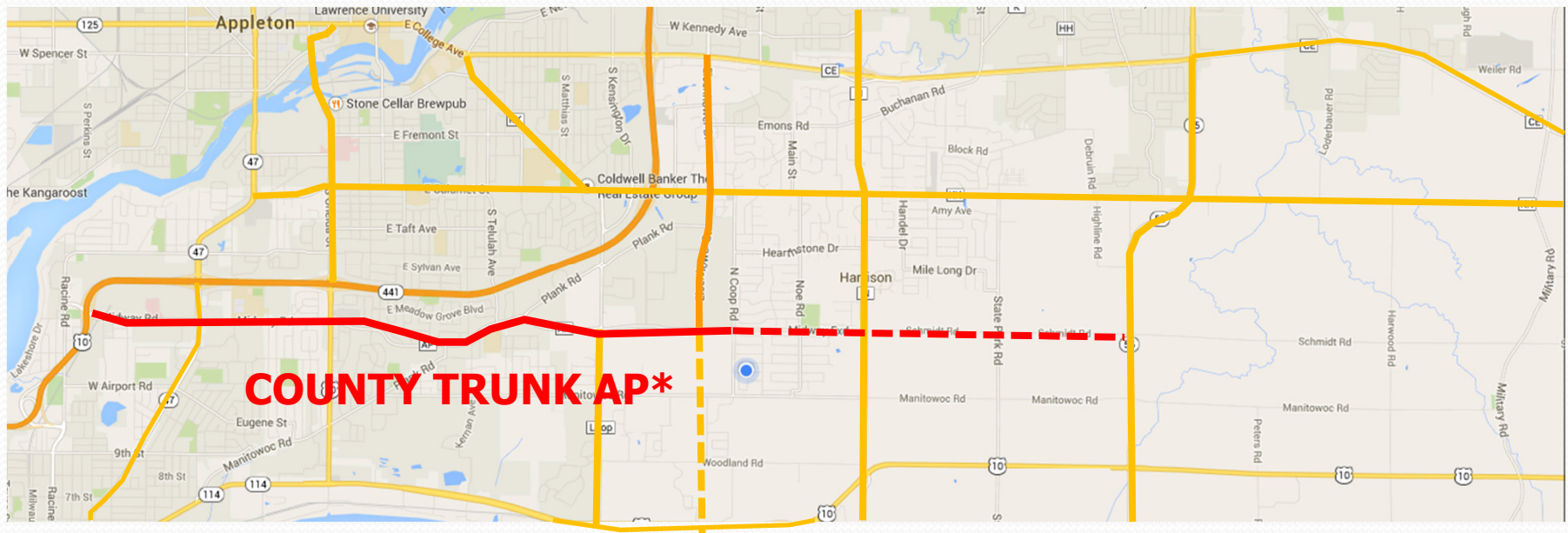
# Project Goal

To review the safety of the Midway Road (CTH AP) corridor and identify possible improvements

# Timeline

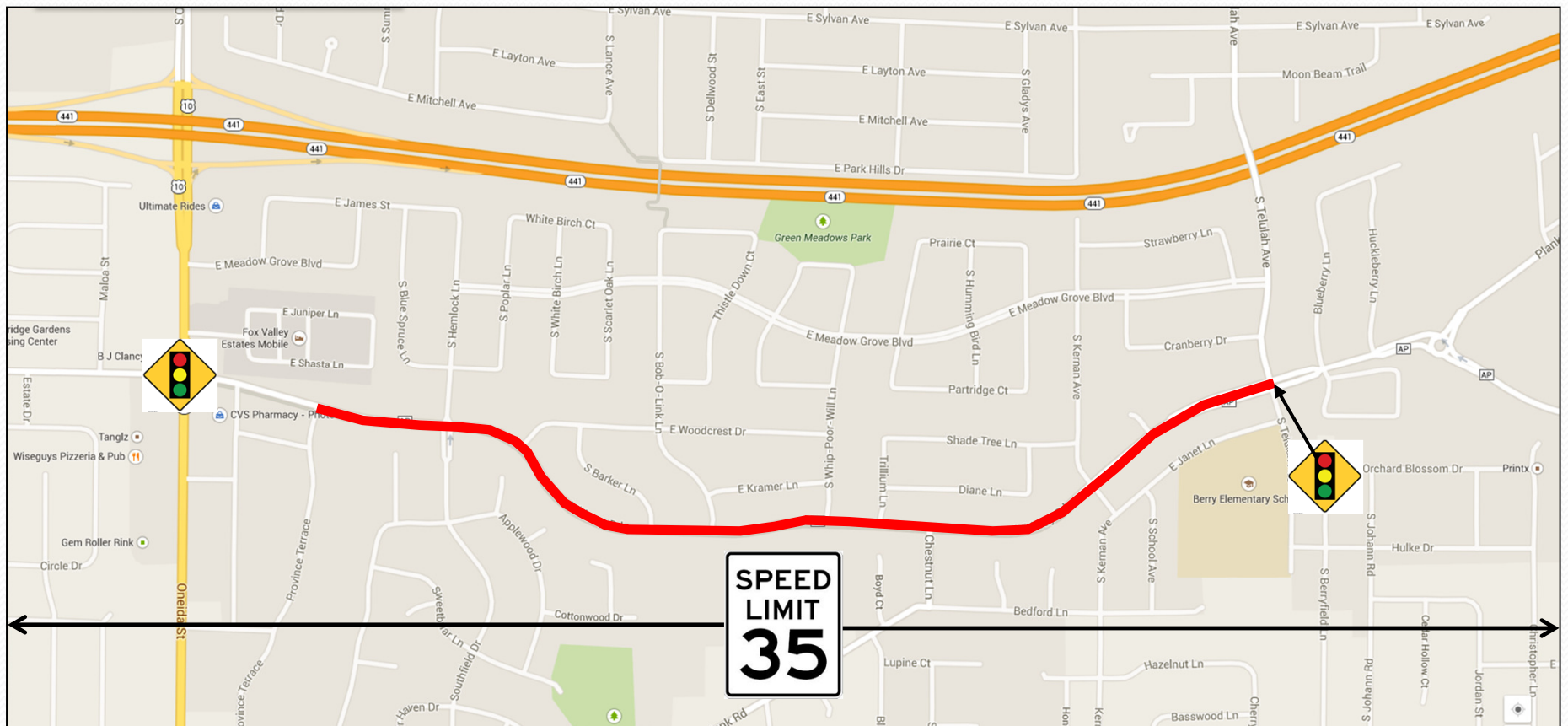
1. 1/7/14 Appleton's Municipal Services Committee reviews plan
2. 5/5/14 Calumet County Highway Commission unanimously approves project concept
3. Late 2014: Calumet County, City of Appleton & City of Menasha included project funding in their respective 2016 CIP budgets
4. Early 2015 Calumet County & City of Appleton to consider approval of project revisions
5. Construction planned for 2016

# Big Picture



- Functionally classified by WisDOT and FHWA as arterial
- Speed limit and configuration under the jurisdiction of Calumet County

# Midway Road Study Area



# Major Study Components

- **Prevailing speed / posted limit**
- Crash history (intersection/overall)
- Vehicle and pedestrian sight lines

# Speed Limits

## ADVISORY SPEED



## REGULATORY SPEED LIMIT



# Regulatory Speed Limits



- Rational speed limits are key
- Major Factors to Consider:
  - 85<sup>th</sup> percentile free-flow speed
    - Best represents the reasonable/proper speed perceived by motorists
    - Limits below 85<sup>th</sup> have little impact on drivers' choice of speed
    - Lowest risk of being involved in a crash
    - Outliers cause disproportionate share of crashes
  - Speed distribution (>70% in 10 mph pace)
  - Intersection spacing
  - Accesses
  - Pedestrian activity level



# Regulatory Speed Limits



- For a change in speed limit to be effective:
  - Reduce speed differential of vehicles
  - Should be reasonable so majority of drivers will comply voluntarily
  - Reflect consistent application of traffic engineering principals and guidelines

# Regulatory Speed Limits



Decisions regarding potential speed limit changes:

- Should be based on objective findings of a speed study
- Should **not** be installed to address:
  - Response to noise complaints
  - Accommodation of specialty vehicles
  - Future growth/concerns
  - Correction of spot safety or operational problems (such as tight curves)

# Regulatory Speed Limits



Setting the limit:

- Should be set within 5 mph of the 85<sup>th</sup> percentile
- Close correlation between design speed & operating speed



# Historical Speed Studies

<u>Date/Location</u>	<u>85<sup>th</sup> (mph)</u>
1996 (Bob-O-Link)	38
2002 ( E of Woodcrest)	40 (between curves)
2002 (Telulah)	40 (away from curves)
2012 (E of Barker)	43 (east of curves)



# Major Study Components

- Prevailing speed / posted limit
- Crash history (intersection/overall)
- Vehicle and pedestrian sight lines



# Major Study Components

- Prevailing speed / posted limit
- Crash history (intersection/overall)
- **Vehicle and pedestrian sight lines**

# Sight Distance

Major Factors influencing sight distance adequacy:

- Geometry (curves, fences, vegetation)
- Speed
- Crossing width
- Left Turns



# Sight Distance Adequacies



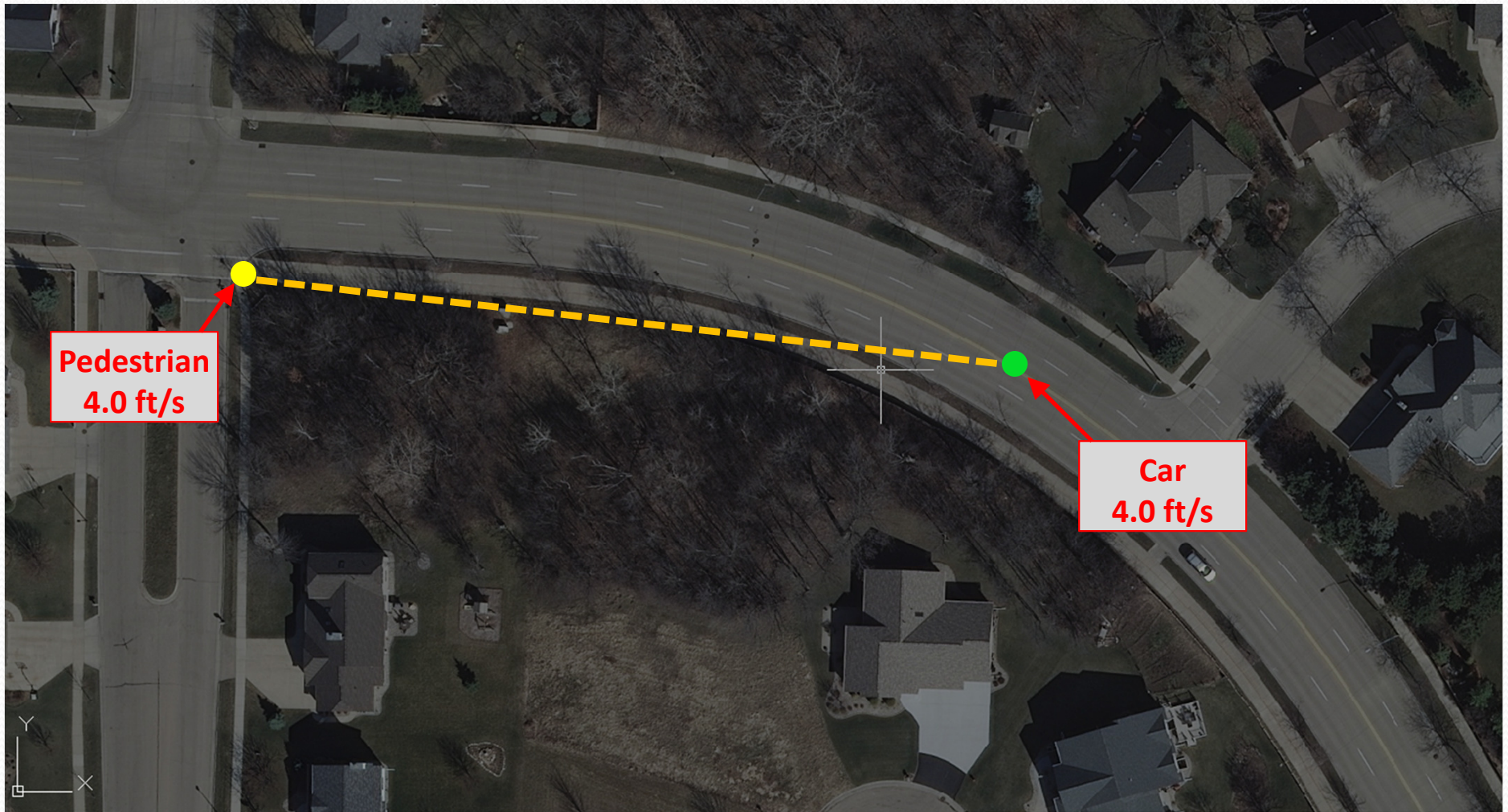
# Inadequate Sight Distance

## Southfield/Hemlock Intersection



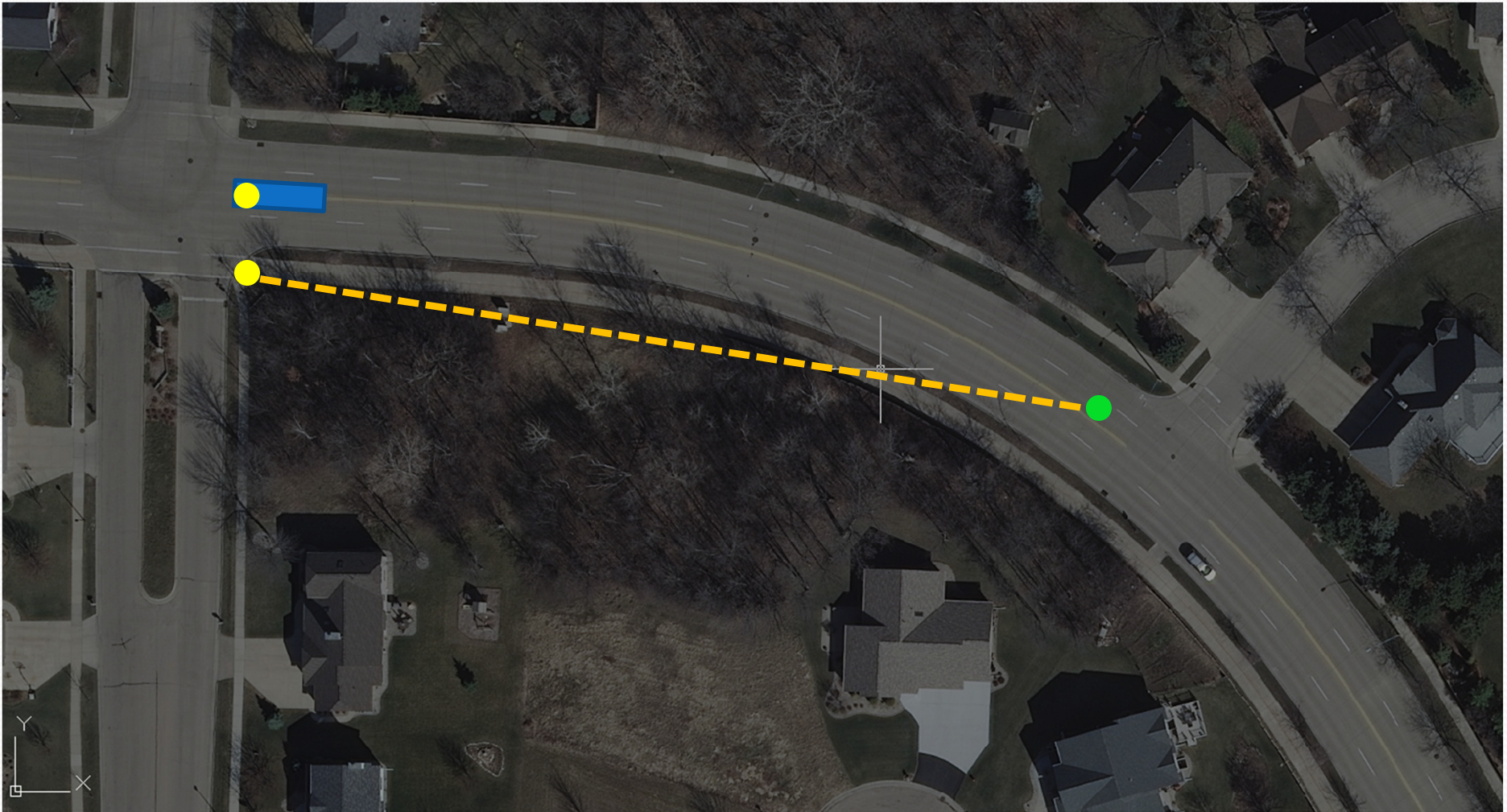
# Existing Sight Distance

Southfield/Hemlock @ Midway



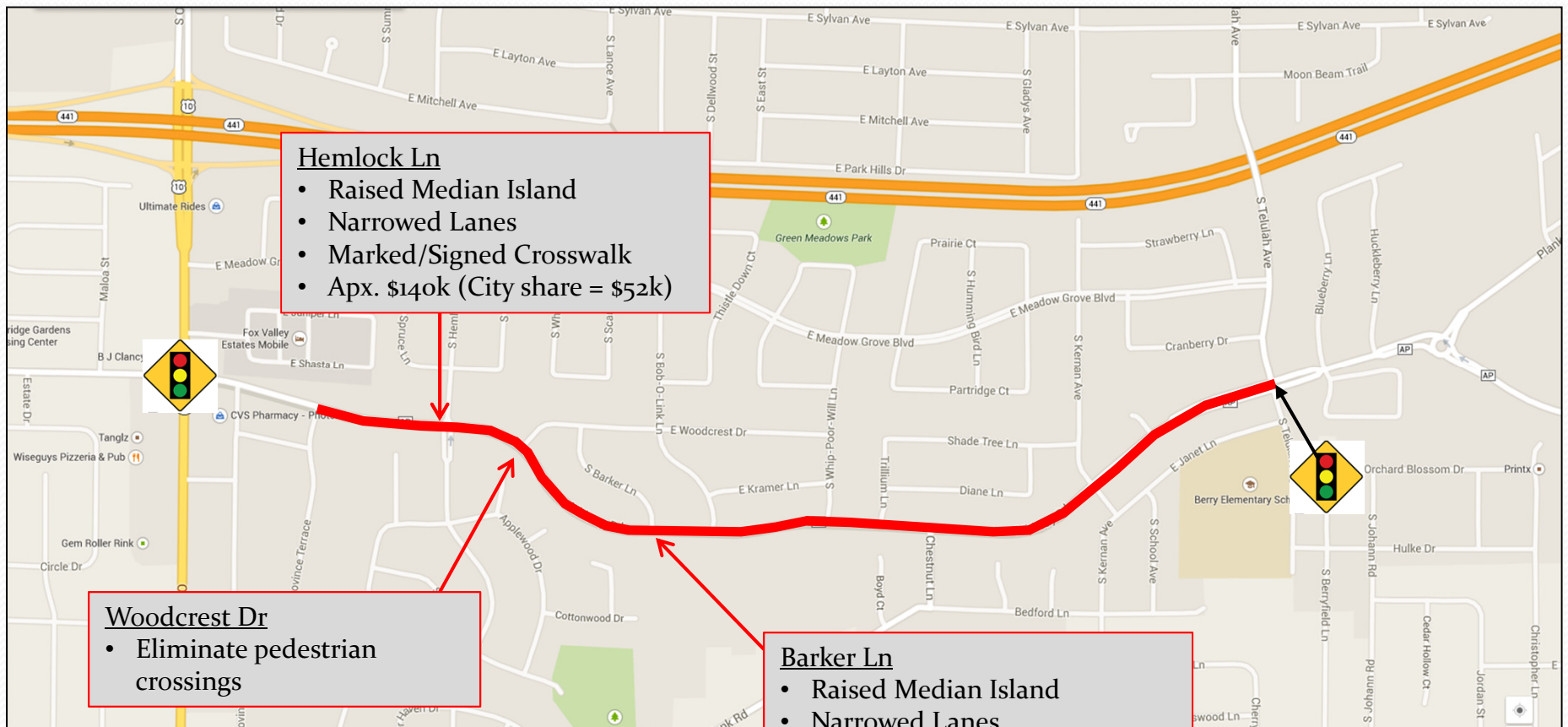
# Sight Distance with Island

Southfield/Hemlock @ Midway



# Original Plan

Total estimated cost: ~\$280k







# Revised Plan

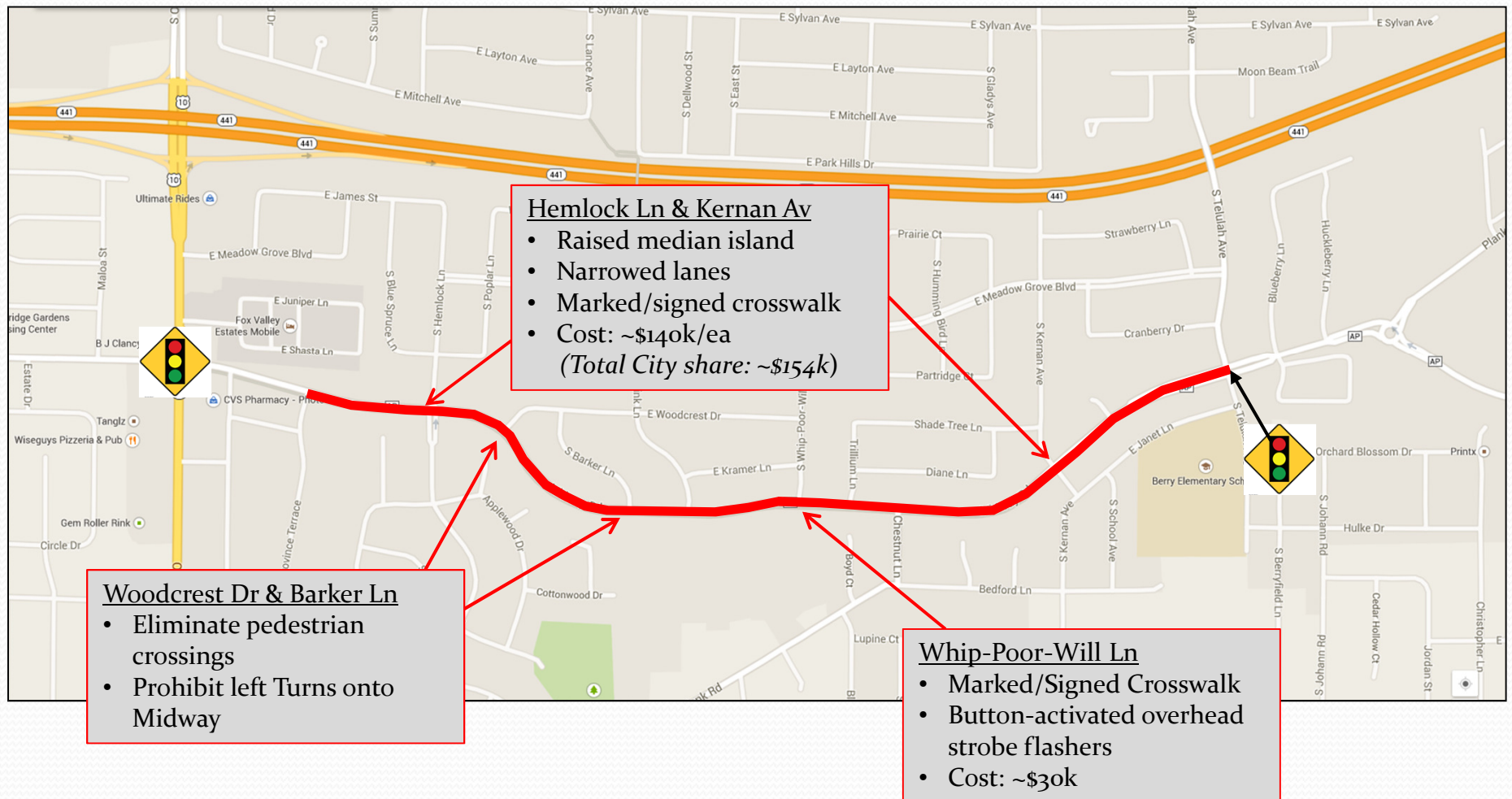
- Connecting neighborhoods
- Uniformly space enhanced crossings





# Revised Plan

Total estimated cost: ~\$310k





# Whip-Poor-Will Crossing



# Midway Rd (CTH AP) Safety Improvements

[Hemlock Ln to Telulah Av]

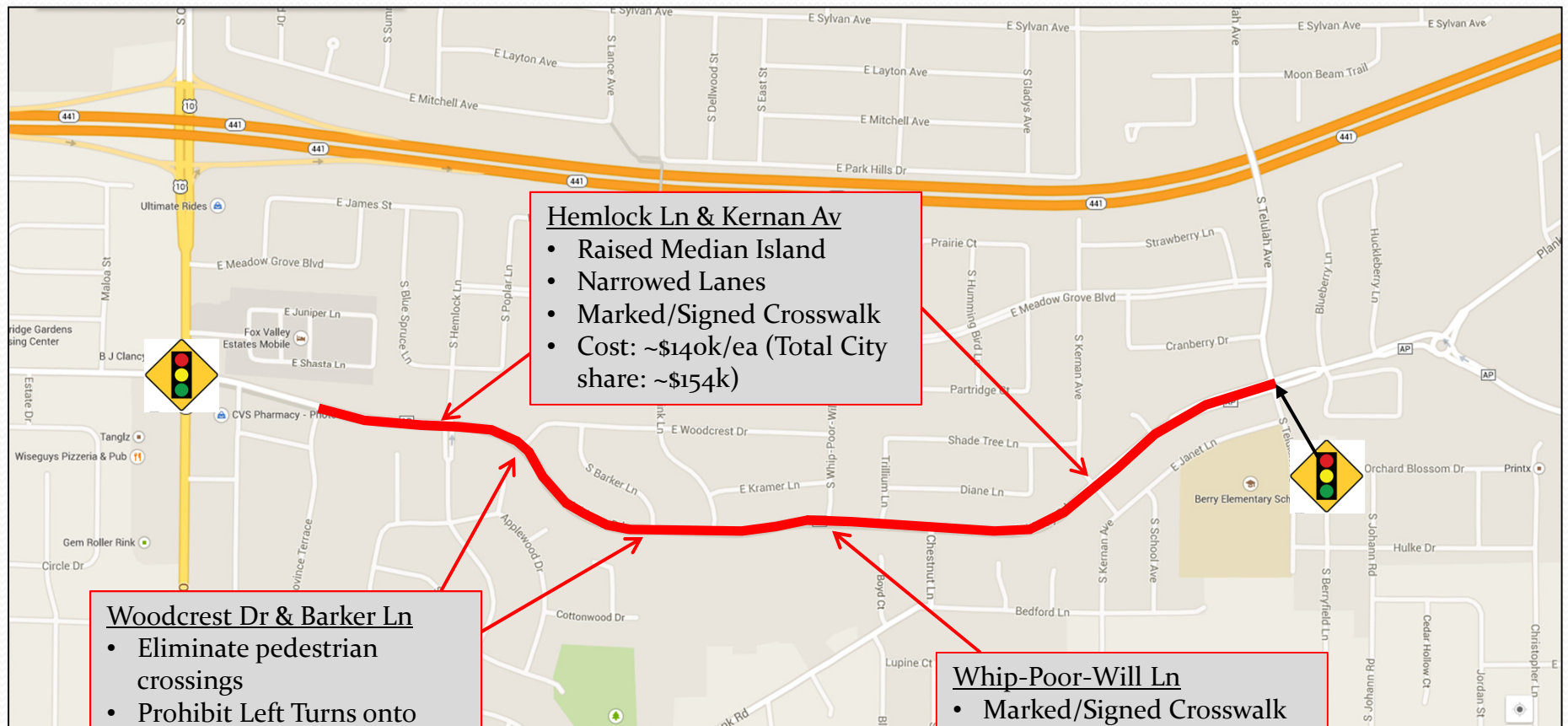
City of Appleton DPW  
Traffic Section  
March 4, 2015

County Road

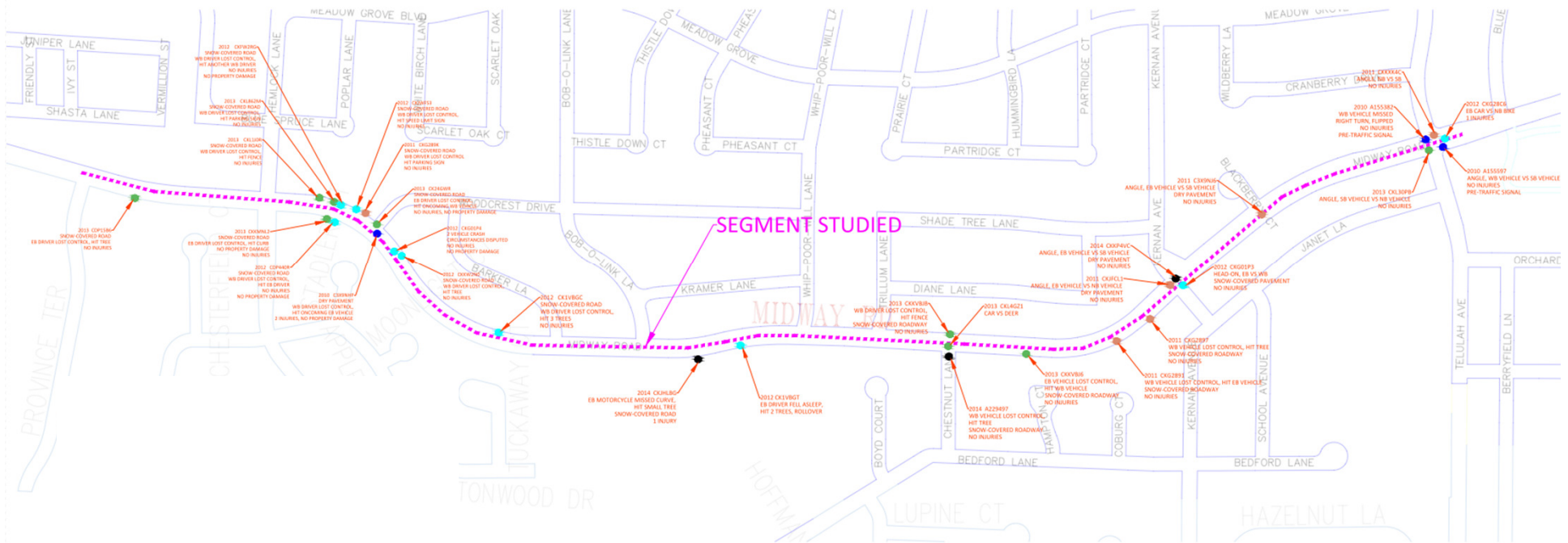


# Revised Plan

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# Crash History



## 5-Year Reportable Crash History 2010-2014

Total = 30 (4 injuries, 3B & 1A)

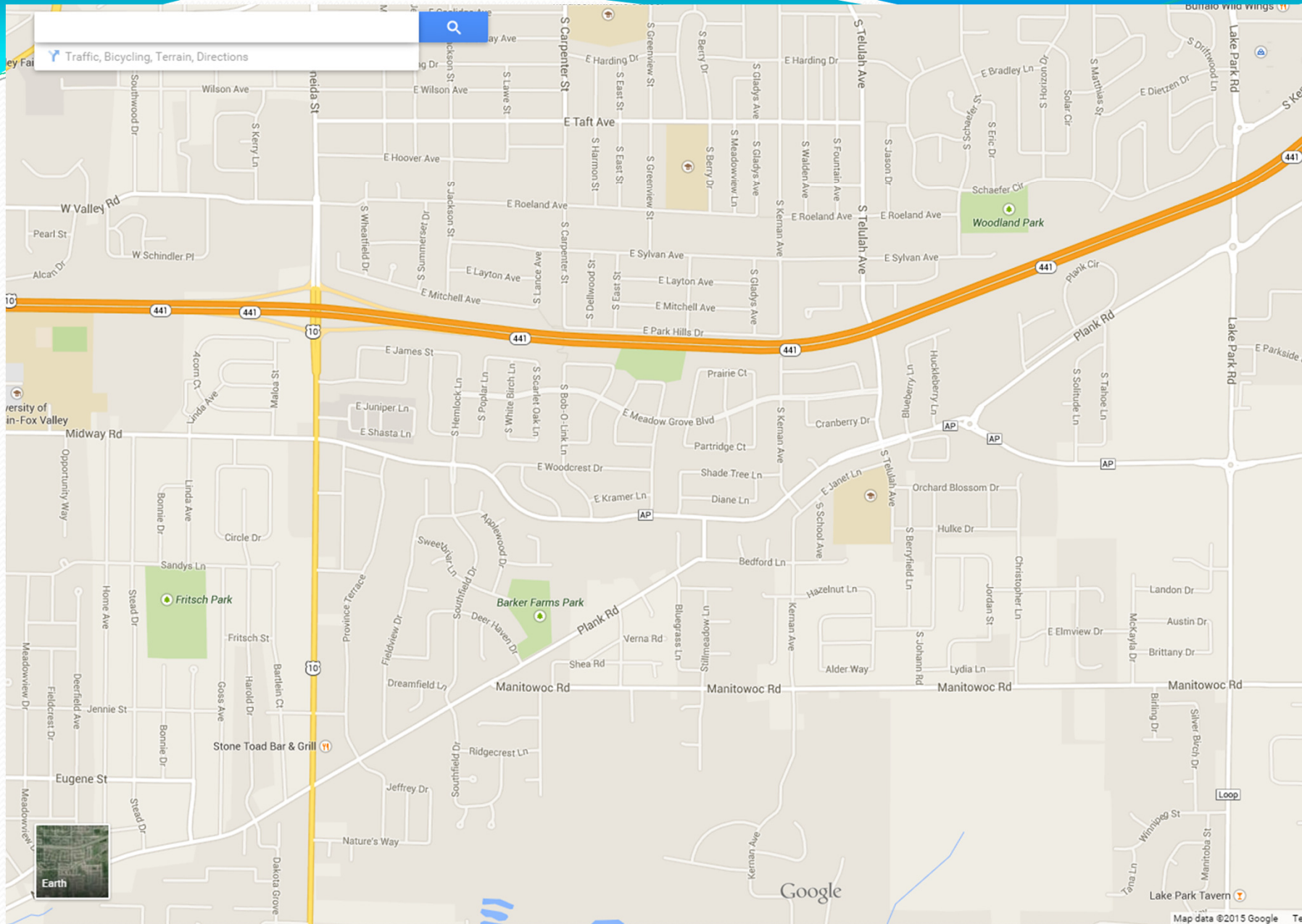
18 on snow-covered roadways (3.6/year) (~56 days/year with snow)

1 car vs deer

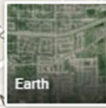
1 driver fell asleep

8 intersection related

2 at Telulah prior to signal installation



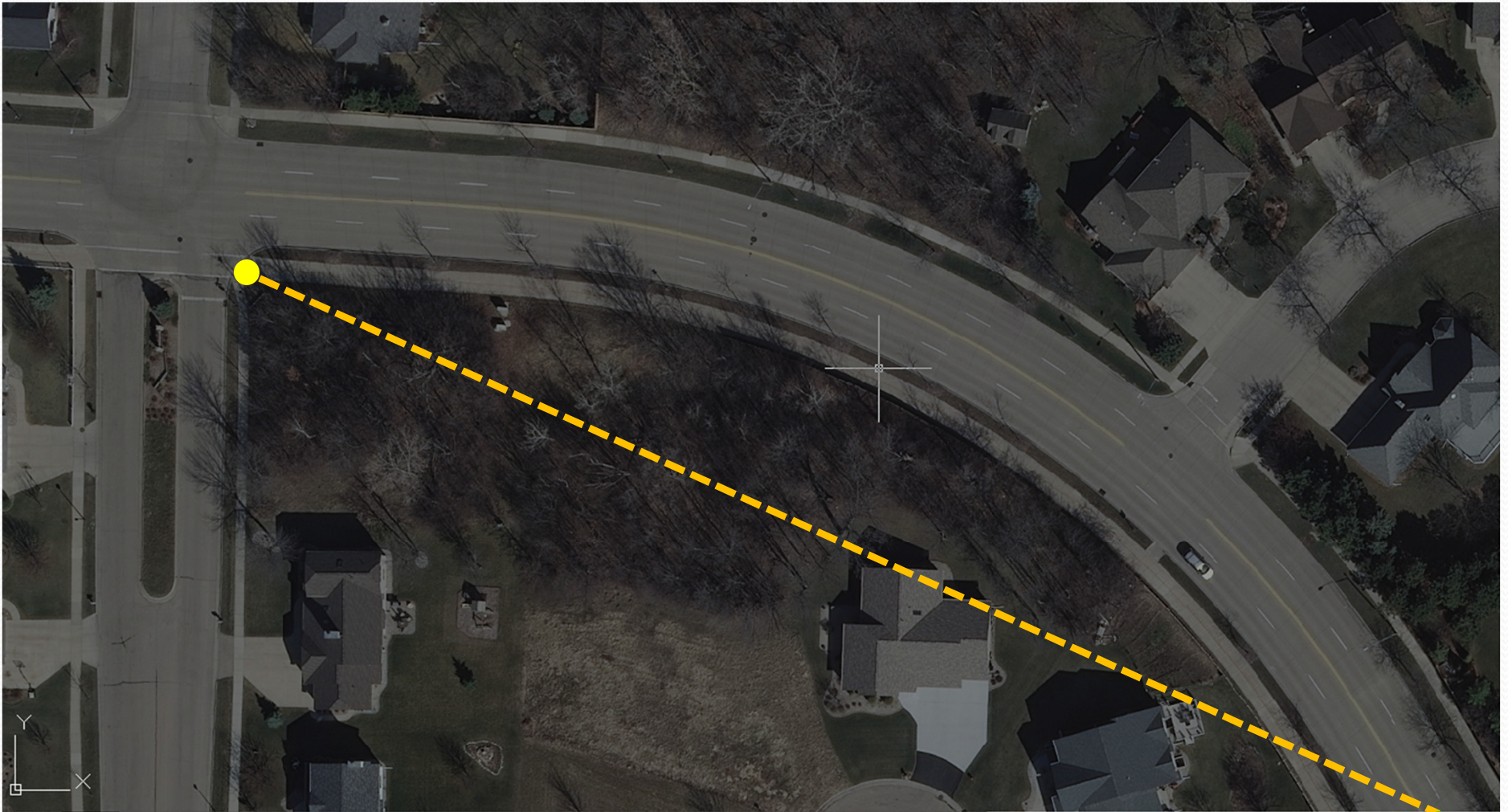
Traffic, Bicycling, Terrain, Directions



Google

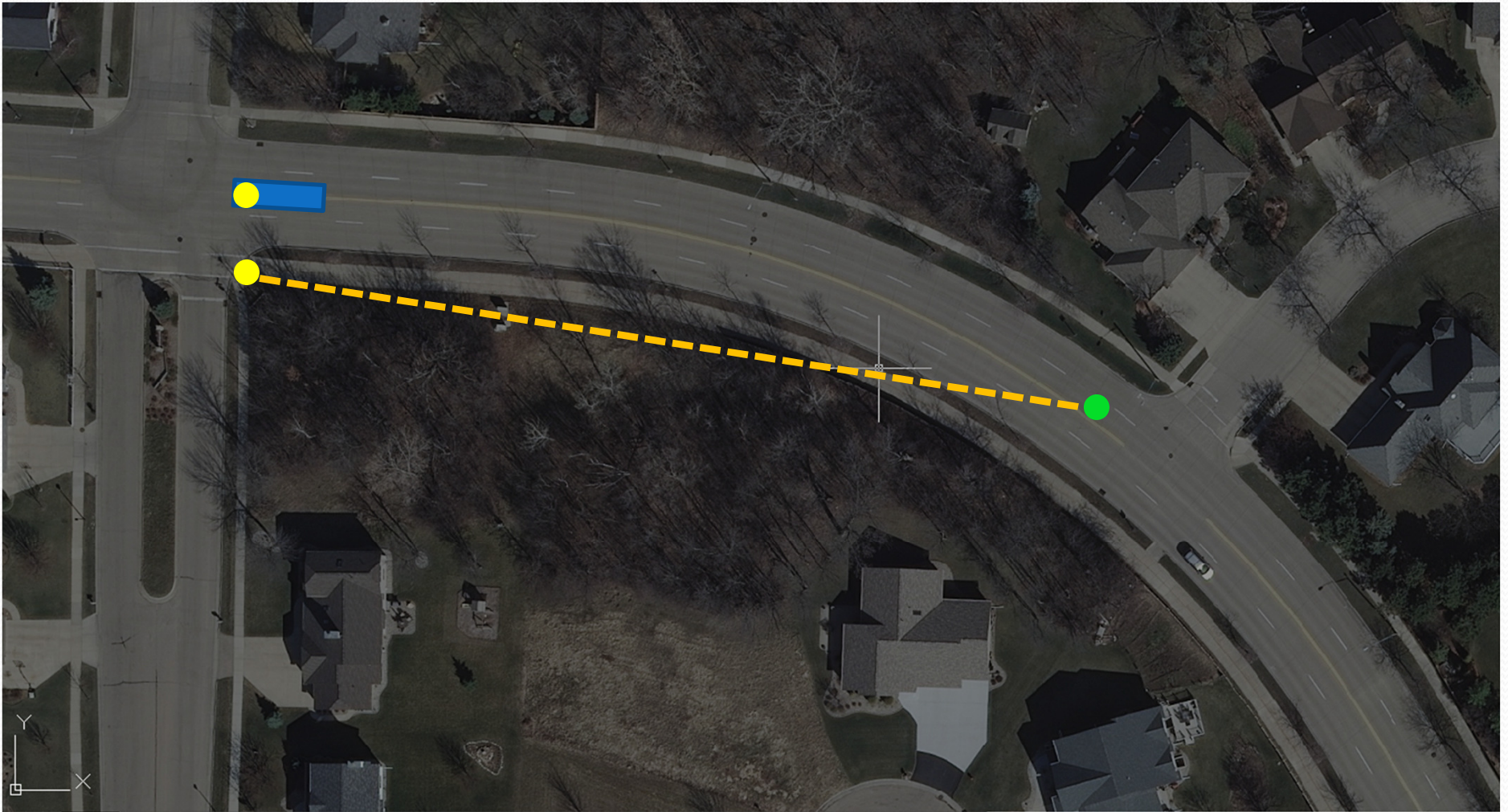
Map data ©2015 Google

# Existing Sight Distance



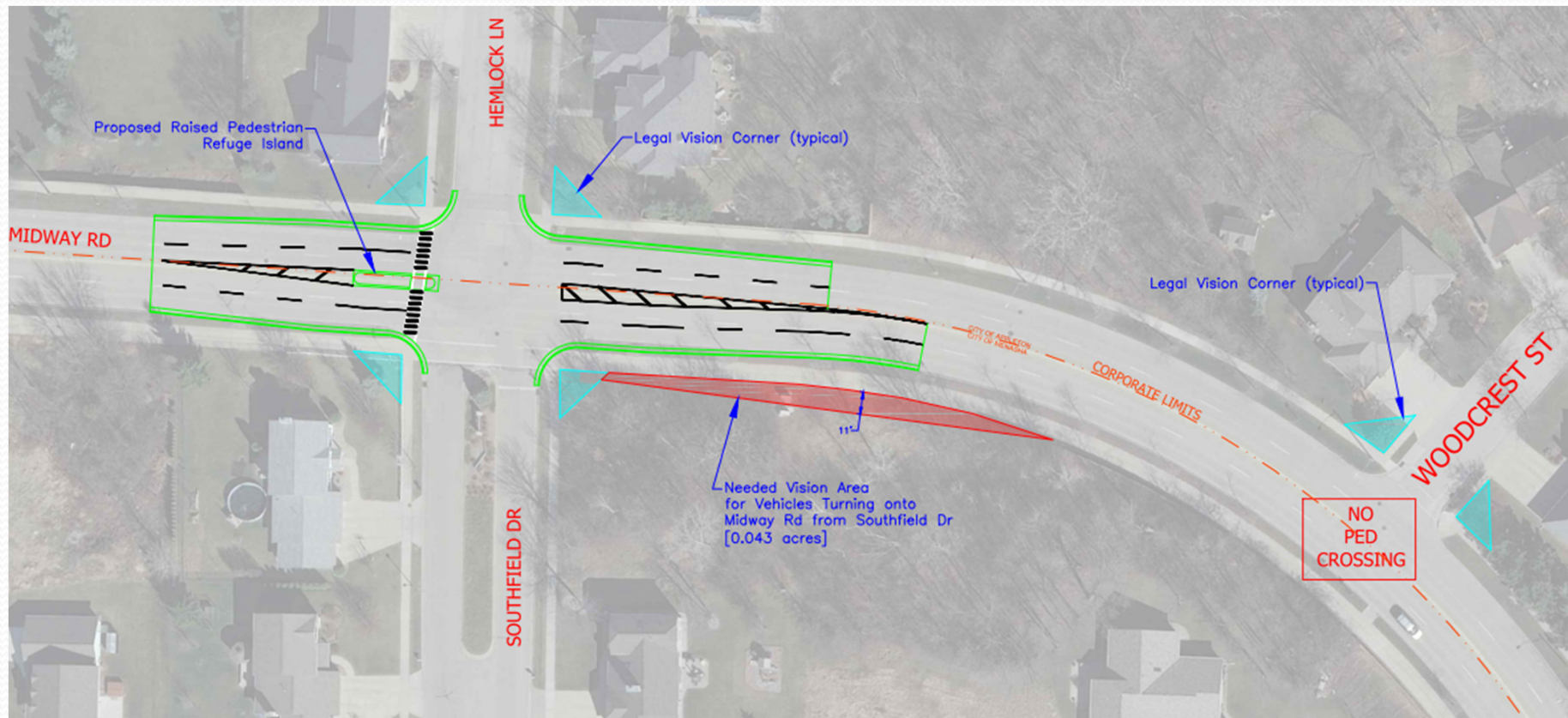


# Sight Distance with Island



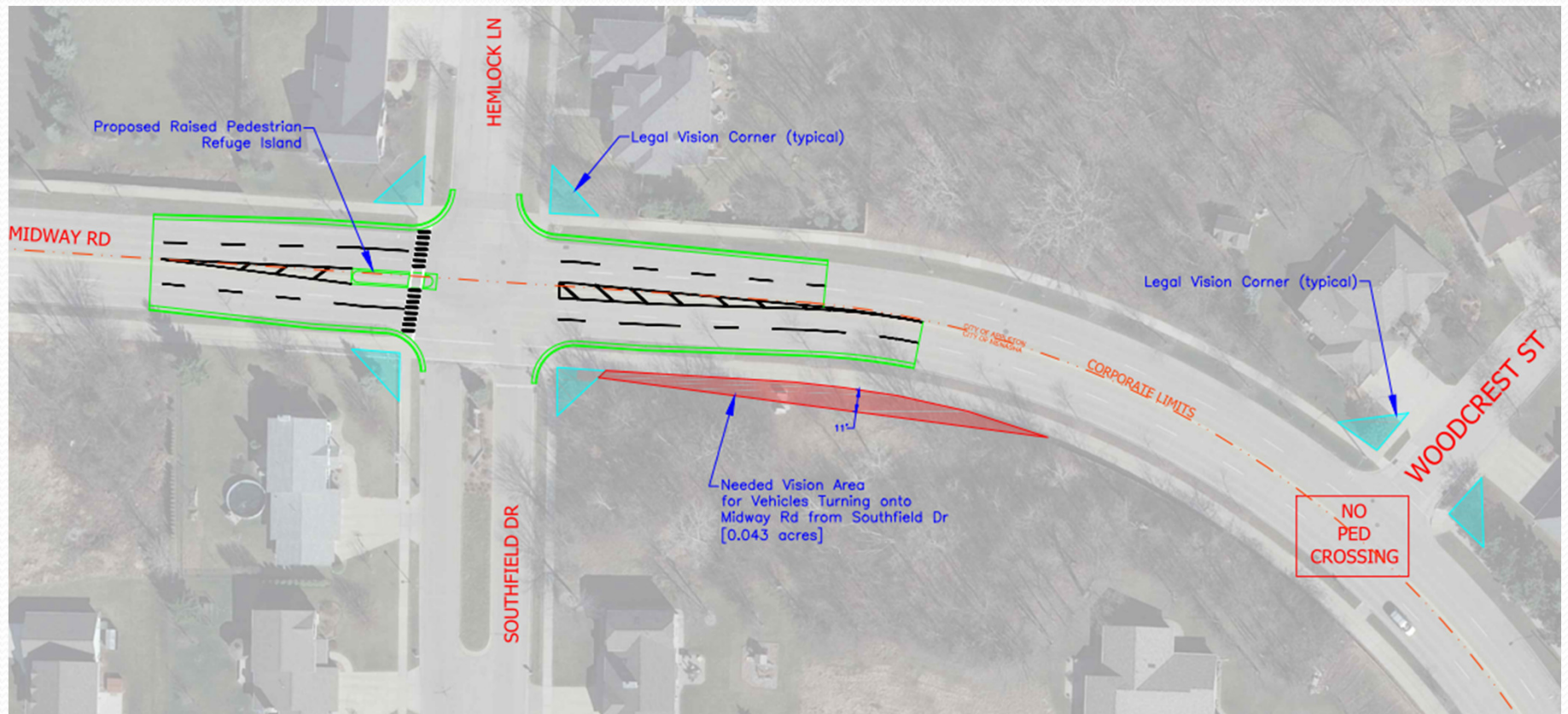
# Original Plan

## Hemlock/Woodcrest Area



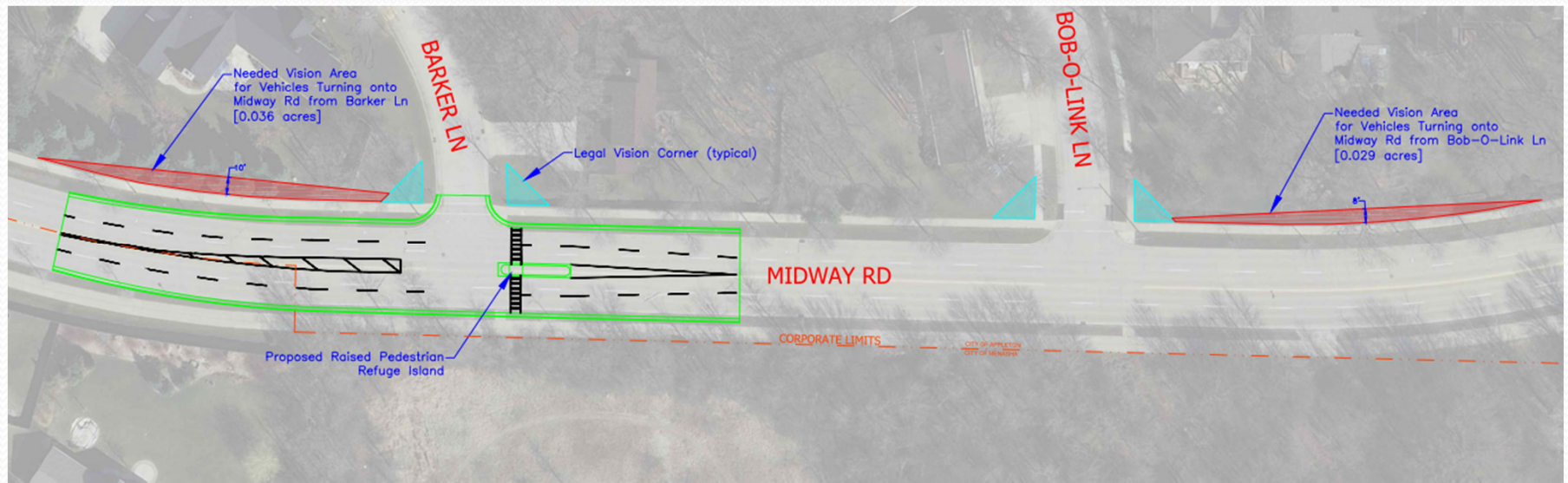
# Original Plan

## Hemlock/Woodcrest Area



# Original Plan

## Barker/Bob-O-Link Area



# Revised Plan



# Hemlock Crossing / Kernan Crossing



# Revised Plan

Total estimated cost: ~\$310k

