

# N. GAMMON RD

Short and Long-Term Options

March 11, 2014

6:30 pm

Lussier Neighborhood Center



- ▶ Alder Paul Skidmore D9, Alder Mark Clear D19
- ▶ Christy Bachmann, P.E. City Engineering
- ▶ David Dryer, P.E. City Traffic Engineering

## INTRODUCTIONS



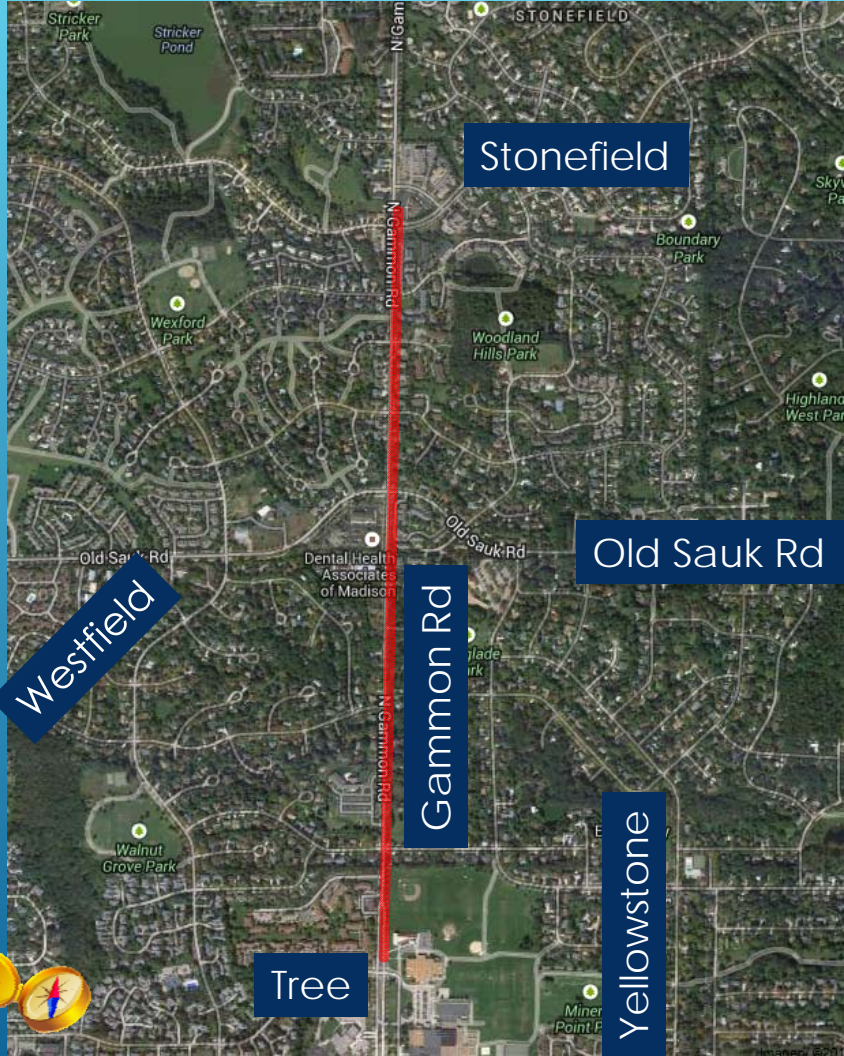


# PAVEMENT RESURFACING SCHEDULED 2014



~1.2 Mile Segment

# LIMITS



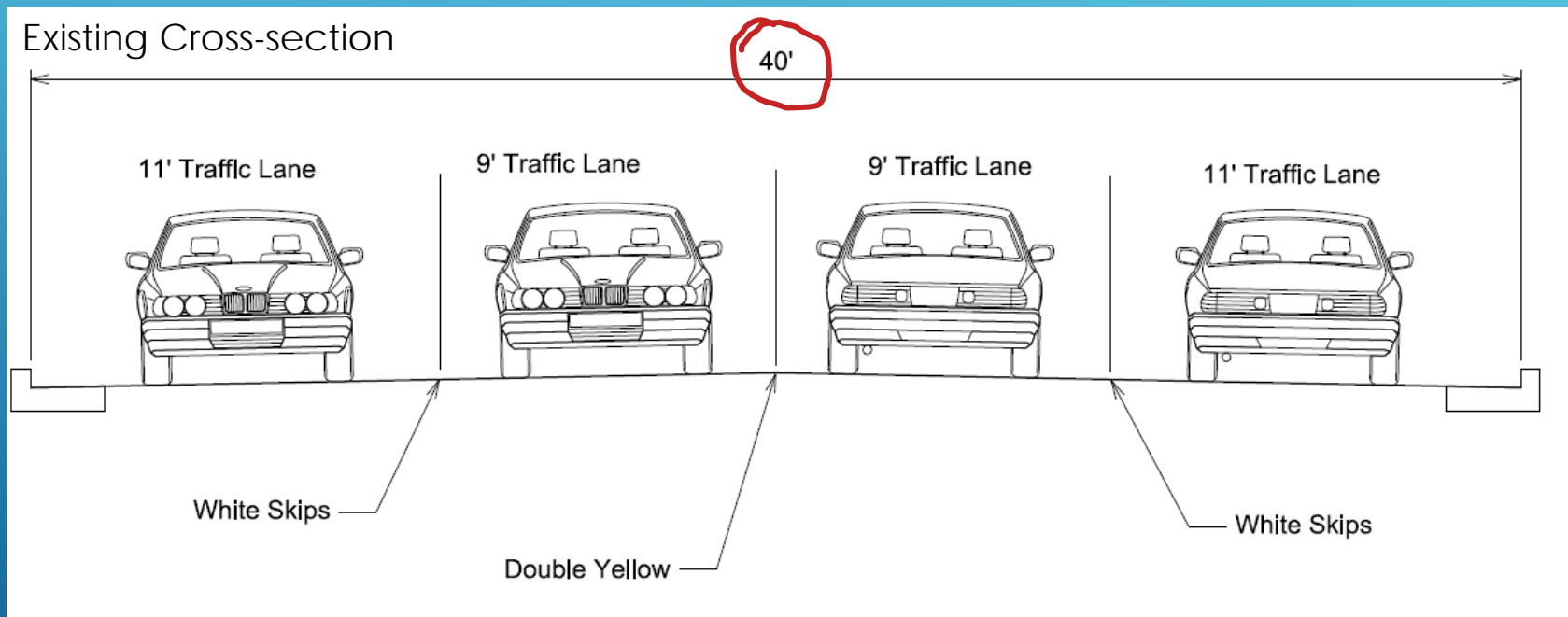
- ▶ Speeding
- ▶ Crashes
- ▶ Difficulty getting into and out of driveways
- ▶ Challenge to safely enforce speed limit

Alder's Requested we pause and review our options....

## RESIDENTS RAISED CONCERNS



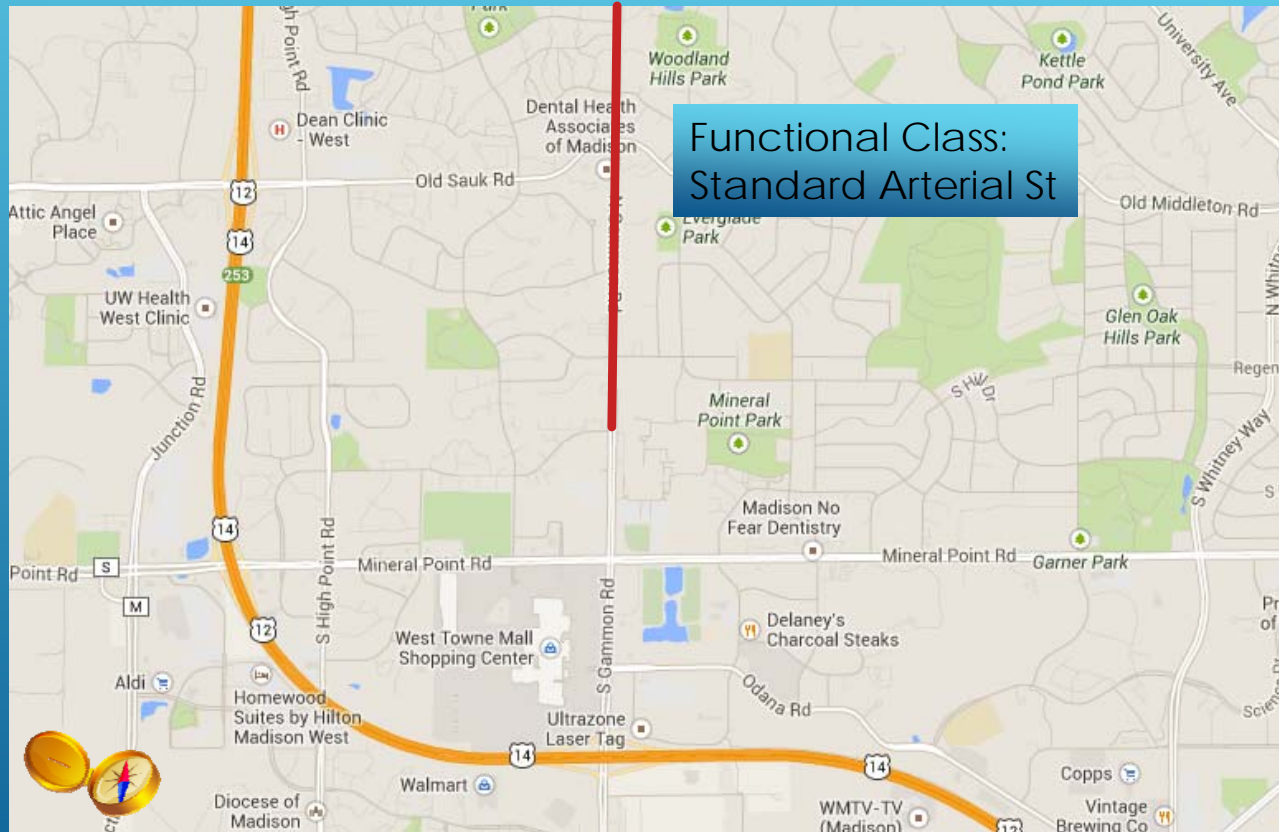
WHAT SHOULD THE STREET LOOK LIKE?  
HOW WOULD IT OPERATE?  
WHAT WOULD CHANGES MEAN TO RESIDENTS AND THE REGION?



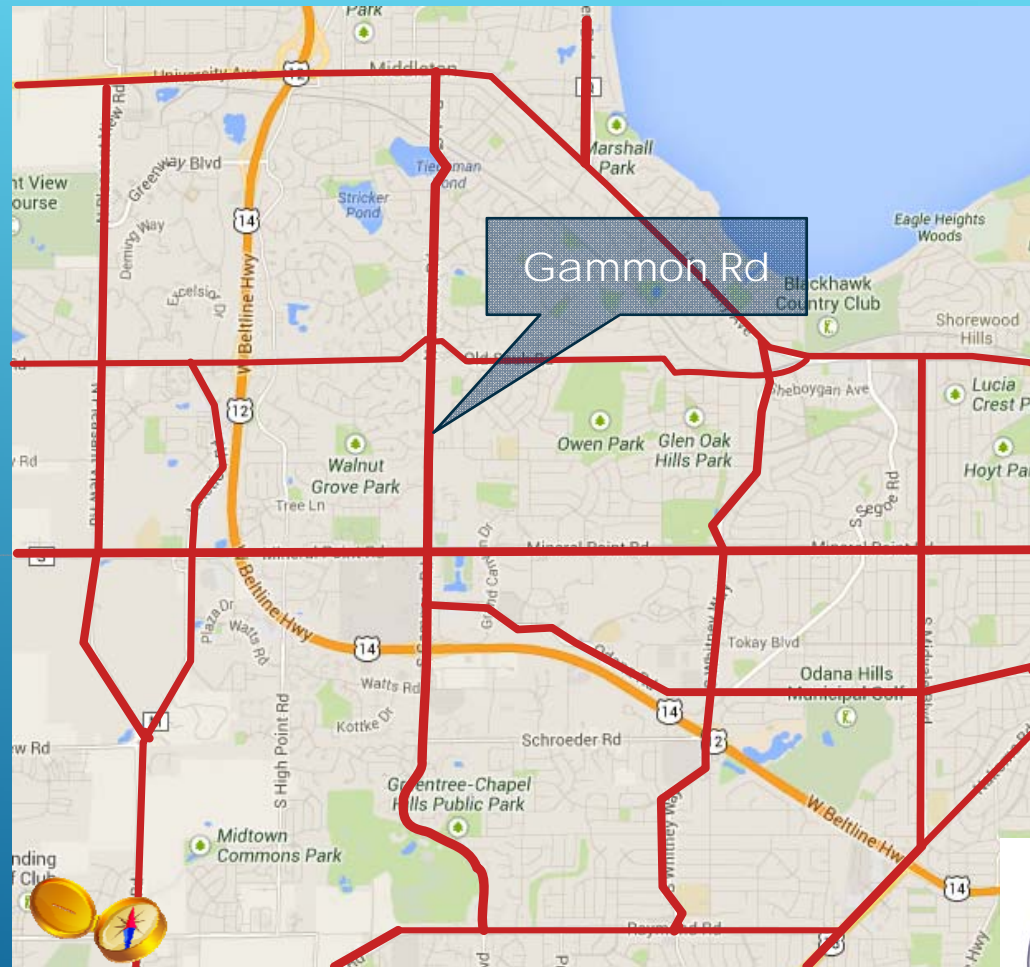
Right-of-Way width varies  
EXISTING CROSS-SECTION (width varies at OSR)



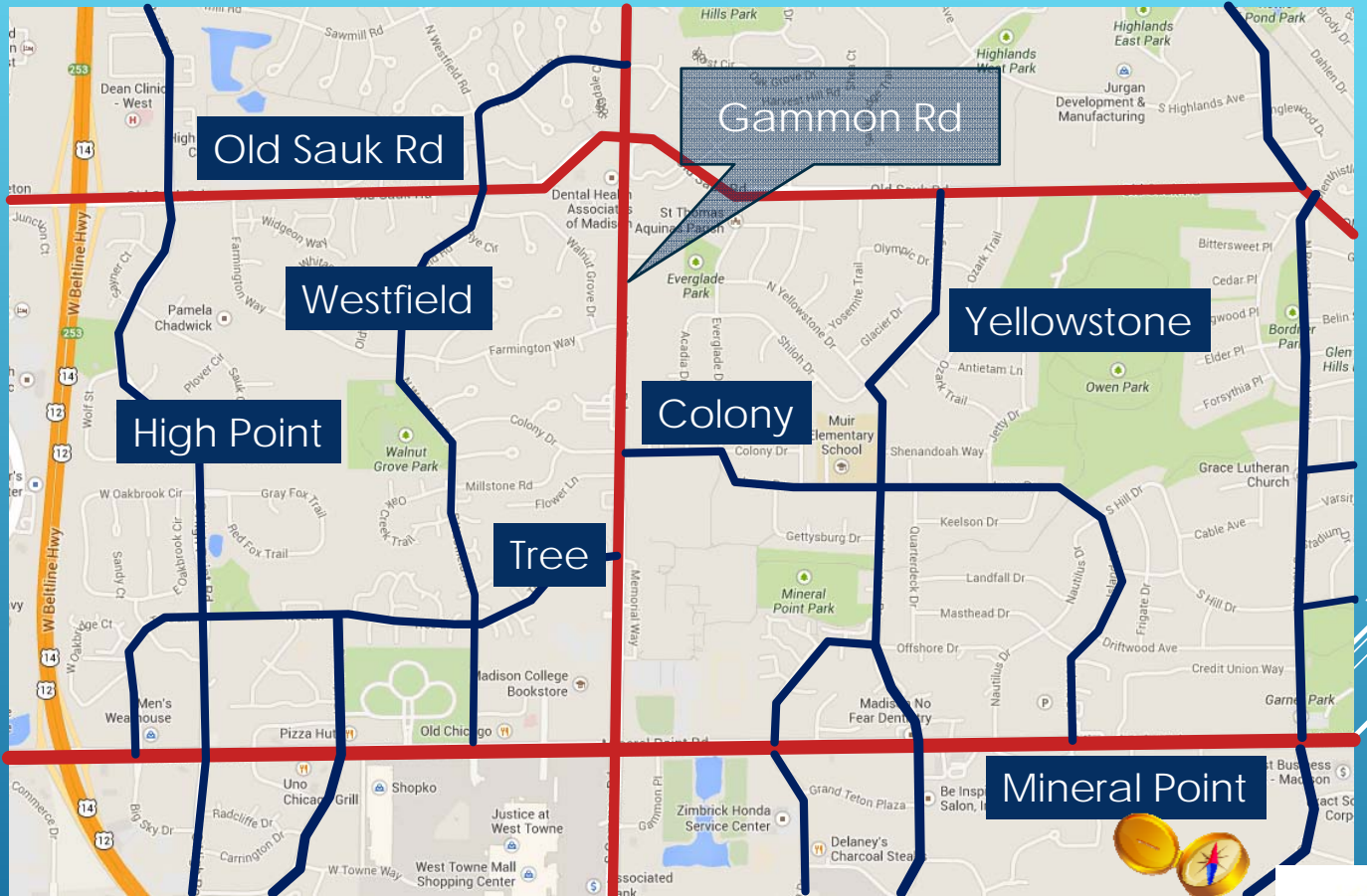
# BACKGROUND



# REGIONAL ARTERIAL STREETS







# ARTERIAL & COLLECTOR STREETS



Traffic Volume ~17,300 Vehicles per day (VPD) (South end)  
~15,200 VPD North end (North of Old Sauk Rd)

Average Travel Speed (at time posted Speed Limit 35 mph)

- 38 mph

85<sup>th</sup> Percentile Speed

- 43 mph

# SPEED AND VOLUME DATA



Average Travel Speed (Posted Speed Limit 30 mph)

- 37 mph-----before 38 mph

85<sup>th</sup> Percentile Speed

- 40 mph-----before 43 mph

SPEED AND VOLUME DATA CURRENT





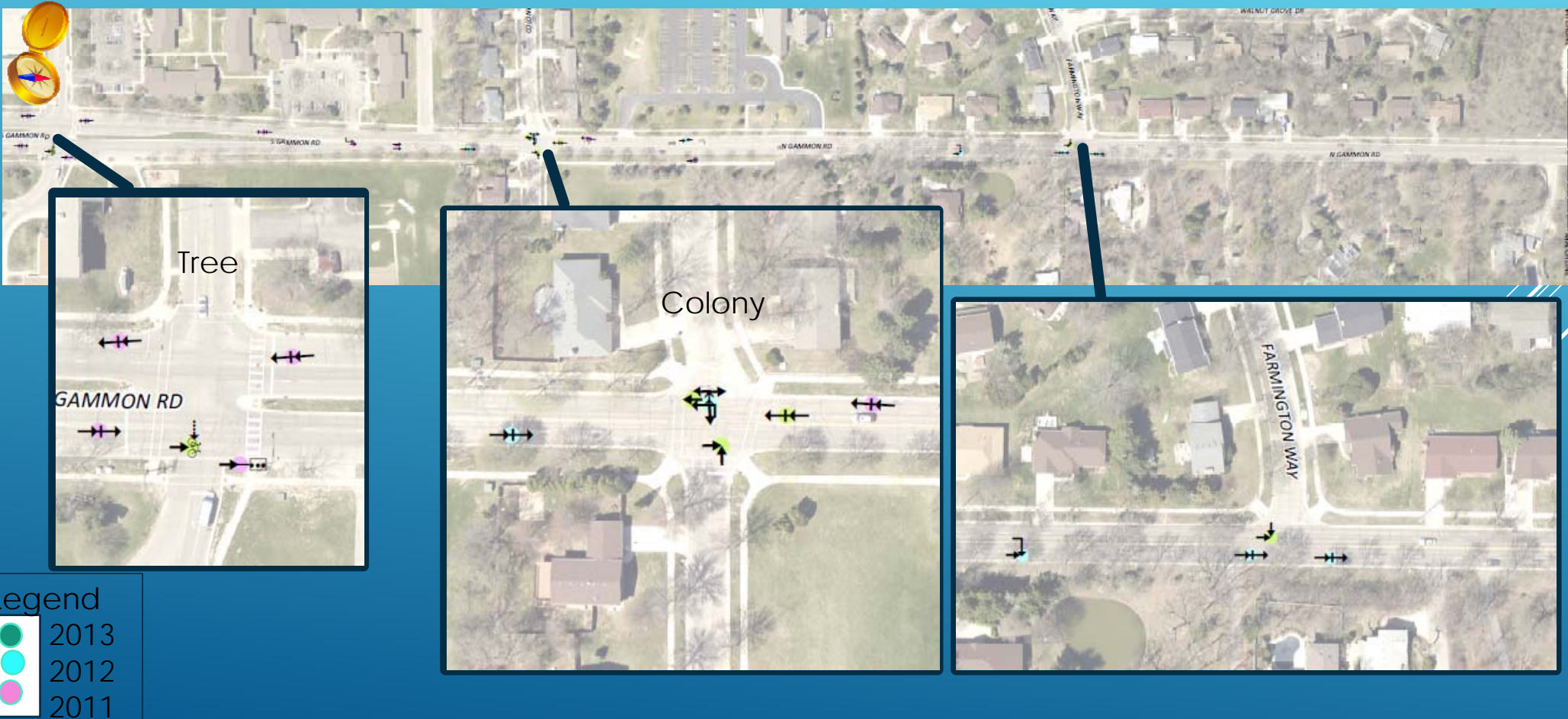
	2011	2012	2013	3 Year Average
@ Tree Lane	4	--	1	1.67
Tree-Colony	3	1	--	1.33
@ Colony	--	1	2	1.33
Colony-Farmington	1	3	1	1.67
@ Farmington	--	2	1	1.33
Farmington-Old Sauk Rd	--	--	--	--
@ Old Sauk Rd	5	7	2	4.67
Old Sauk Rd-Sawmill	--	1	1	0.67
@ Sawmill	2	2	2	2.00
Sawmill-Stonefield	--	--	--	--
@ Stonefield	1	1	1	1.0
<b>Total</b>	16	18	11	15

# TRAFFIC CRASHES ON N GAMMON RD

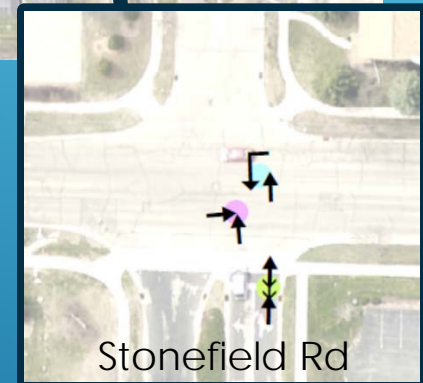
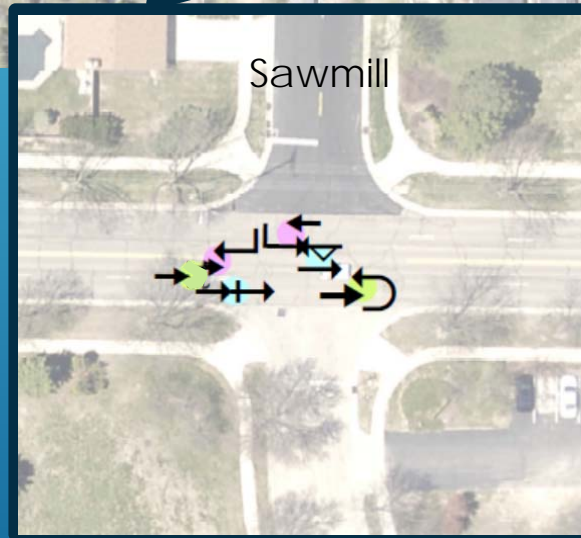
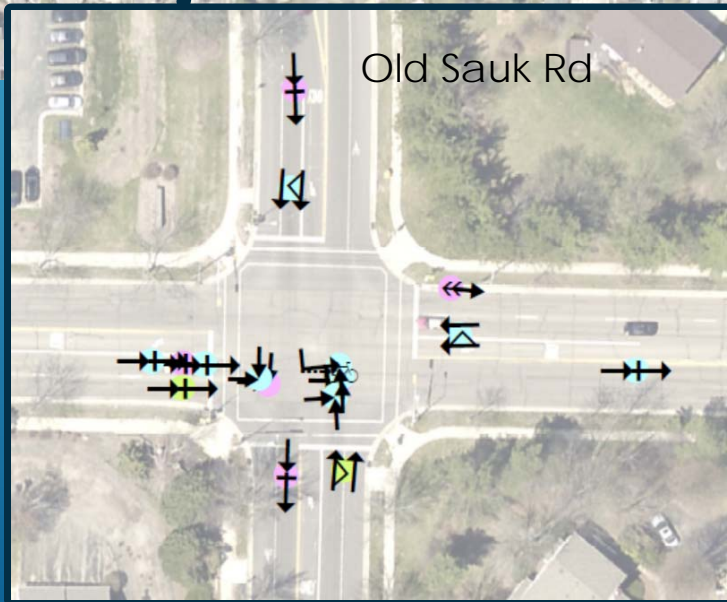
(TREE LANE TO STONEFIELD RD)



# CRASH STRIP MAP



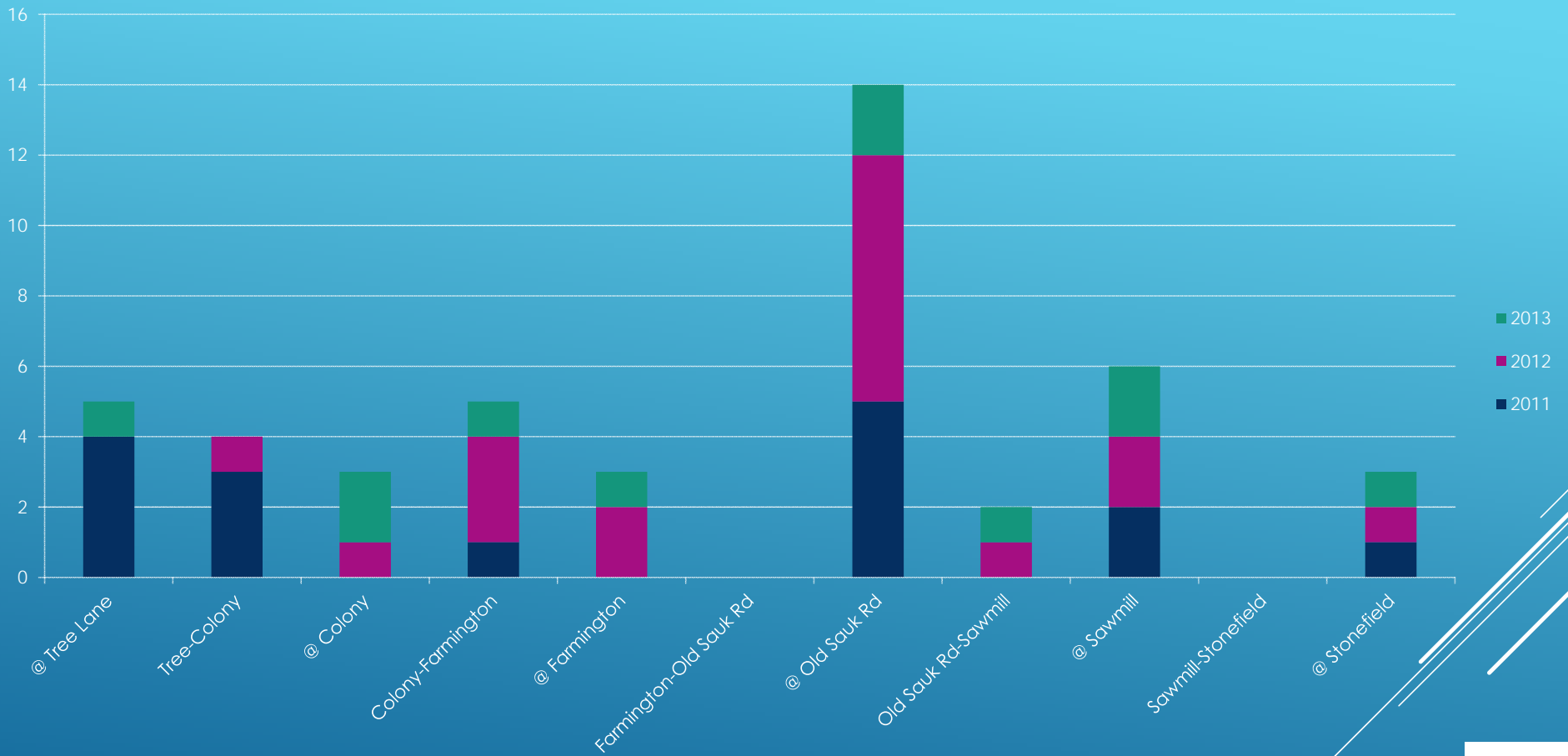
# CRASH STRIP MAP



Legend

	2013
	2012
	2011





# TREE-STONEFIELD TOTAL CRASH COMPARISON



INTERSECTION LOCATIONS	Crashes per Million Entering Vehicles (MEV)	Statewide Average (MEV)
@ Tree Lane(signal)-	0.26	0.59
@ Colony-	0.16	0.40
@ Farmington-	0.16	0.40
@ Old Sauk Rd (signal)-	0.44	0.59
@ Sawmill-	0.36	0.40
@ Stonefield-	0.18	0.40

All locations are below Statewide average in crashes per intersection location...

## HOW DO WE COMPARE?





MIDBLOCK SEGMENTS	Average Crashes Per Year	Crashes Per Mile	Crashes per 100 Million Vehicle Miles Traveled	Urban Local Road Crash Rate Statewide per 100 Million Vehicle Miles Traveled
Tree-Colony-	1.33	7.4	135	237
Colony-Farmington-	1.67	7.9	146	
Farmington-Old Sauk Rd-	0	0	0	
Old Sauk Rd-Sawmill-	0.67	2.2	48	
Sawmill-Stonefield	0	0	0	

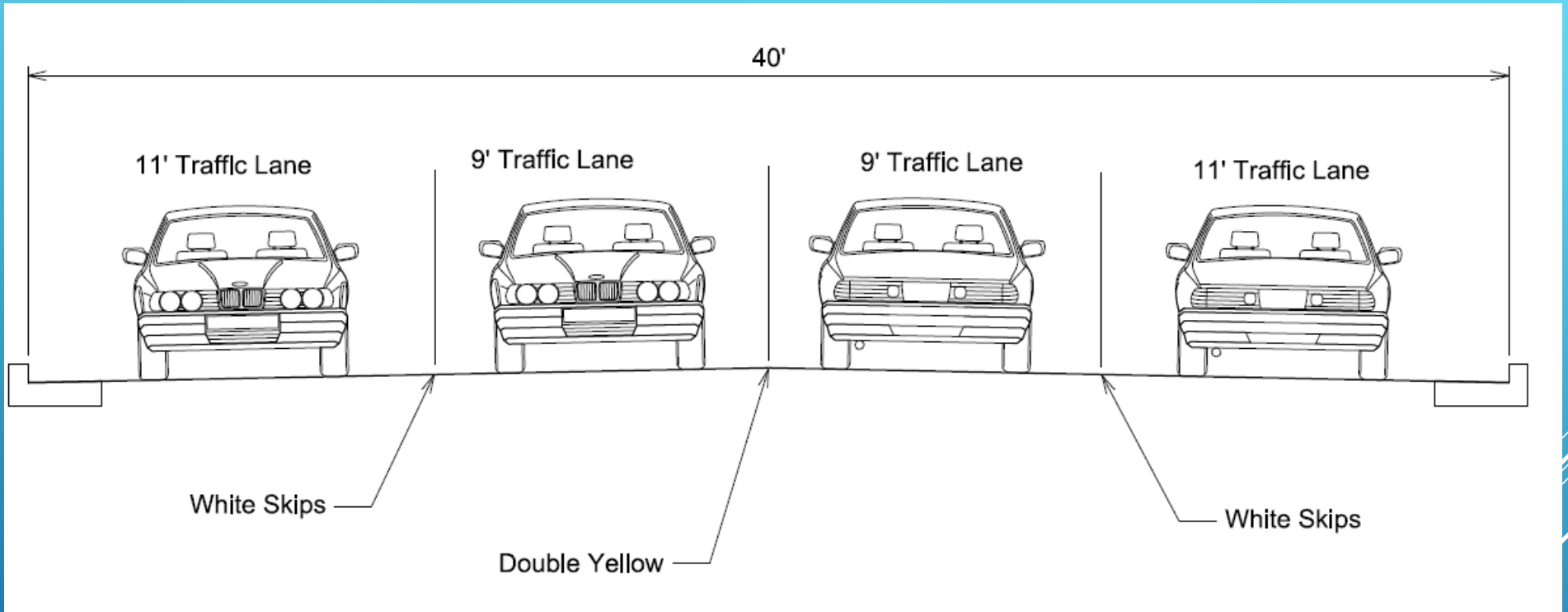
All locations are below Statewide average in crashes per segment...

## HOW DO WE COMPARE?



# CROSS-SECTION OPTIONS (NO WIDENING)





Existing Cross-section

STATUS QUO—REMARK AS IS TODAY  
(NWOPT1)



## PROS

Least expensive

Maintains street capacity

Traffic diversion--little to none

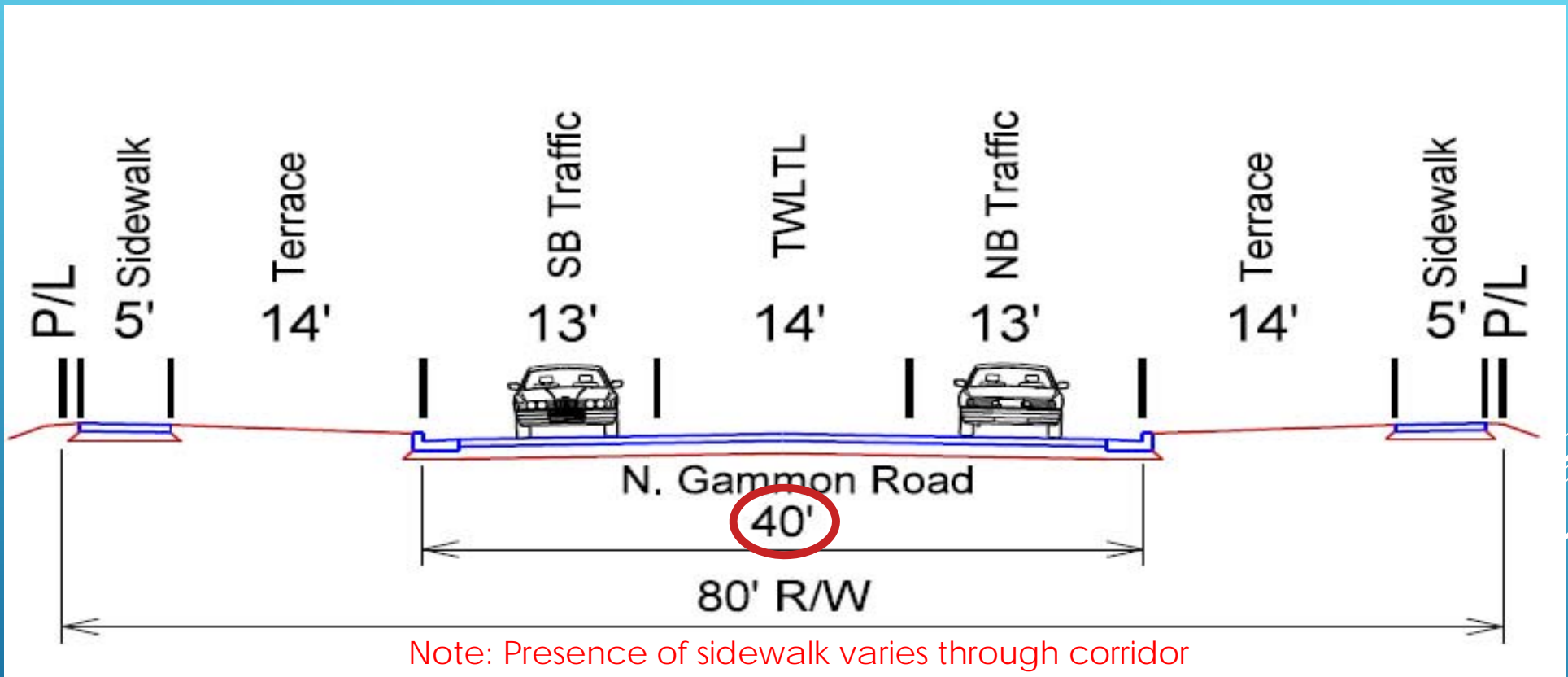
## CONS

Does not address neighborhood request

No facilities for pedestrians and bicyclists

STATUS QUO-REMARK AS IS TODAY  
(NWOPT1)





3 LANE, NO WIDENING, NO BIKE LANES (RESTRIPING)  
(NWOPT2)



## PROS

Can be safer if transitions can be made appropriately and volumes are not too high

Benefit to left turning motorists from/to driveways

More uniform speed once in the 3 lane section

## CONS

Driveway operations begin to fail at volumes over 17,500 vpd

Metropolitan Planning Organization (MPO) projected volumes exceed 17,500 vpd

Expect diversion to parallel collector streets

Problematic lane drop near schools as people jockey for position

Without reconstruction signal fails under future traffic at Old Sauk Rd and Gammon

# 3 LANE, NO WIDENING PROS & CONS (NWOPT2)



- ▶ City of Middleton desires 3 lane cross-section with bikes, North of Old Sauk Rd—Stonefield. To provide this space for bikes requires widening Gammon Rd.
- ▶ 3 Lane section reduces the capacity of Gammon Rd—result, diverted traffic
- ▶ Requires Gammon Rd lane drop North of Tree Lane
- ▶ Has negative impacts on the intersection operation of Old Sauk Rd and Gammon Rd—lane drops and unbalanced lane use reduce intersection capacity

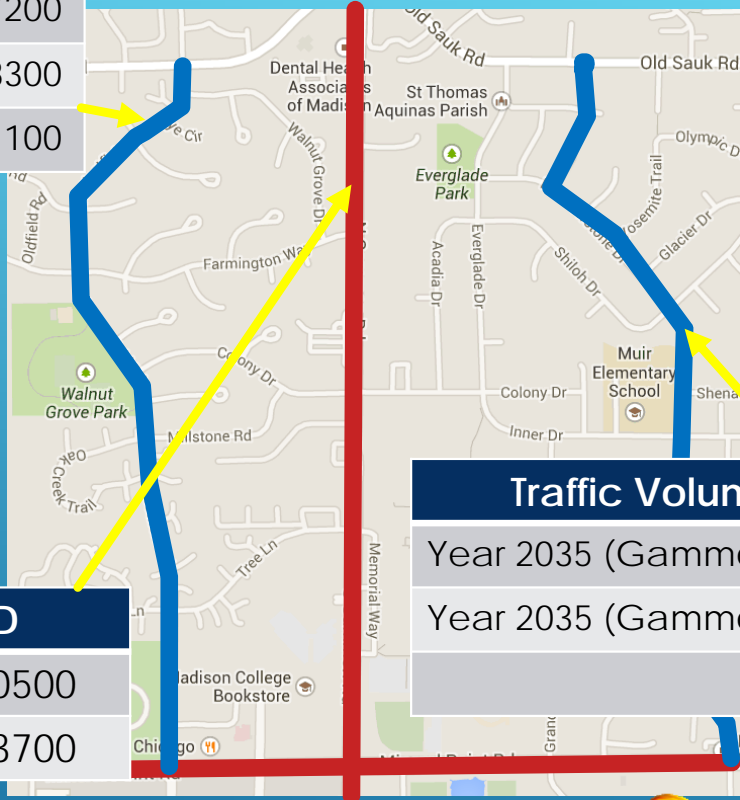
## ADDITIONAL CONSIDERATIONS...

(NWOPT2)



### Traffic Volume on WESTFIELD RD

Year 2035 (Gammon Rd current lanes)	7200
Year 2035 (Gammon Rd 3 lanes)	8300
Difference	1100



### Traffic Volume on YELLOWSTONE RD

Year 2035 (Gammon Rd current lanes)	2500
Year 2035 (Gammon Rd 3 lanes)	4000
Difference	1500

### Traffic Volume on N GAMMON RD

Year 2035 (Gammon Rd current lanes)	20500
Year 2035 (Gammon Rd 3 lanes)	13700

# TRAFFIC DIVERSION PROJECTIONS





# TRAFFIC SIGNALS



## PROS

Can improve safety where majority of crashes are right angle crashes

Can reduce congestion when volumes are so high that access from sidestreets is difficult

Can provide a defined gap in traffic for pedestrians and cyclists to cross

## CONS

Will increase certain crashes—rear ends in particular

Can increase delay to side street traffic

Increase auto exhaust emissions

Increase fuel consumption

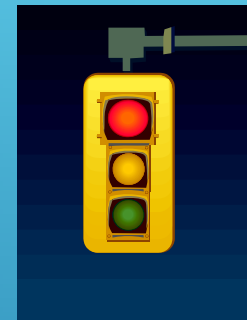
Cost \$100,000+

# TRAFFIC SIGNALS



# SIGNAL INSTALLATION CRITERIA<sup>1</sup>(nine of them)

- ▶ 1, 2 and 3--Volume of traffic on main and side streets
- ▶ 4 and 5—Peds and Schools
- ▶ 6 Part of a system
- ▶ 7 Crashes
- ▶ 8 & 9 Network and RR related



## TRAFFIC SIGNALS

<sup>1</sup> Per the State of Wisconsin and US Federal Highway Administration



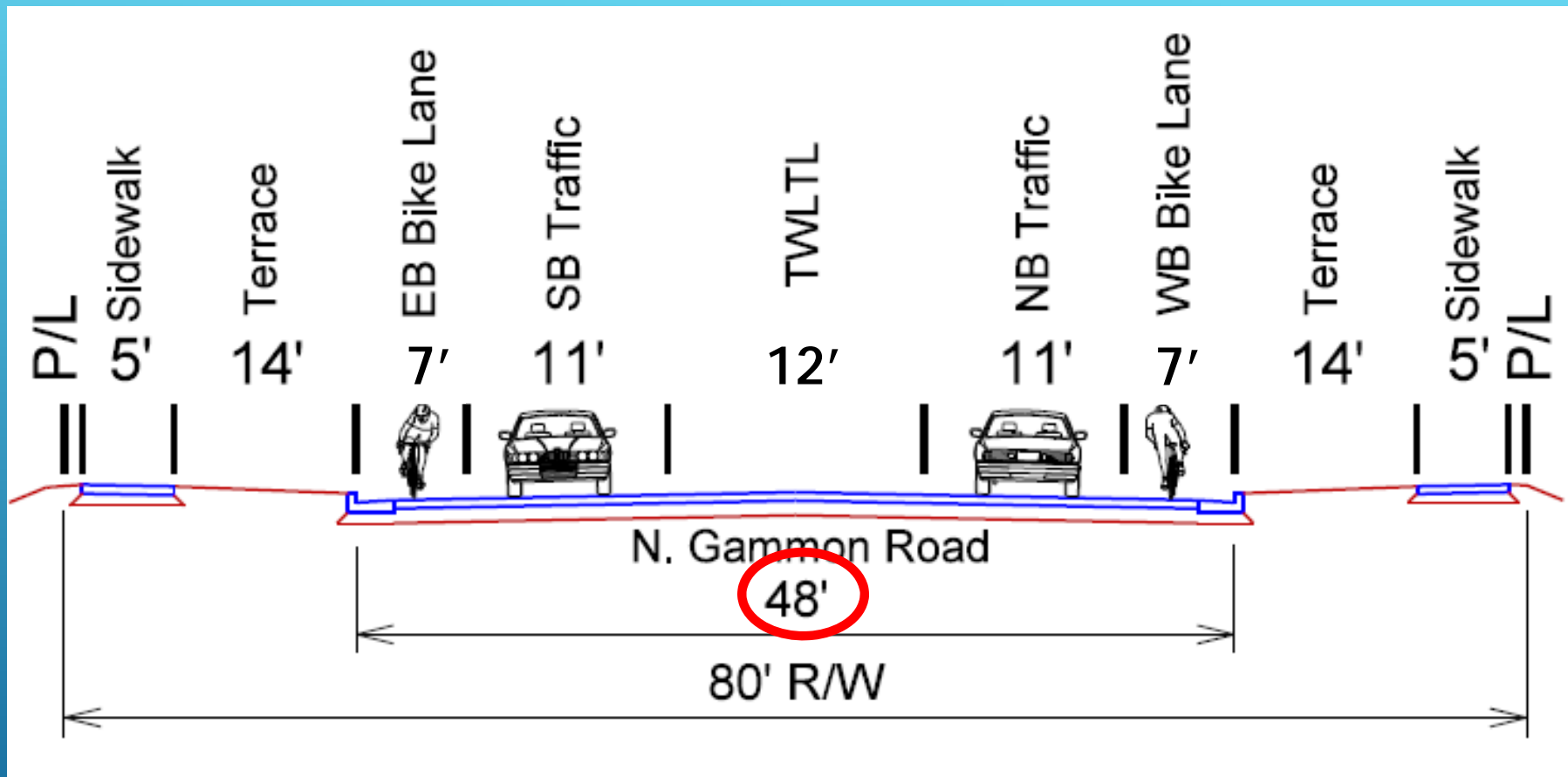
# TRAFFIC SIGNALS

Intersection	Meet Criteria (Y/N)	Ranking
Colony	No	9 <sup>th</sup> in 2009
Stonefield	No	27 <sup>th</sup> last year



# CROSS-SECTION OPTIONS (REQUIRE WIDENING)





## 3 LANE WIDENING WITH BIKES, SIDEWALKS

(WOPT1)



## PROS

Can be safer if lane transitions can be made appropriately and volumes are not too high

Provides Bike Facilities

Benefit to left turning motorists from/to driveways

More uniform speed once in the 3 lane section

## CONS

Requires widening

Driveway operations begin to fail at volumes over 17,500 vpd

Volumes are expected to exceed 17,500 vpd

Diversion to parallel collector streets

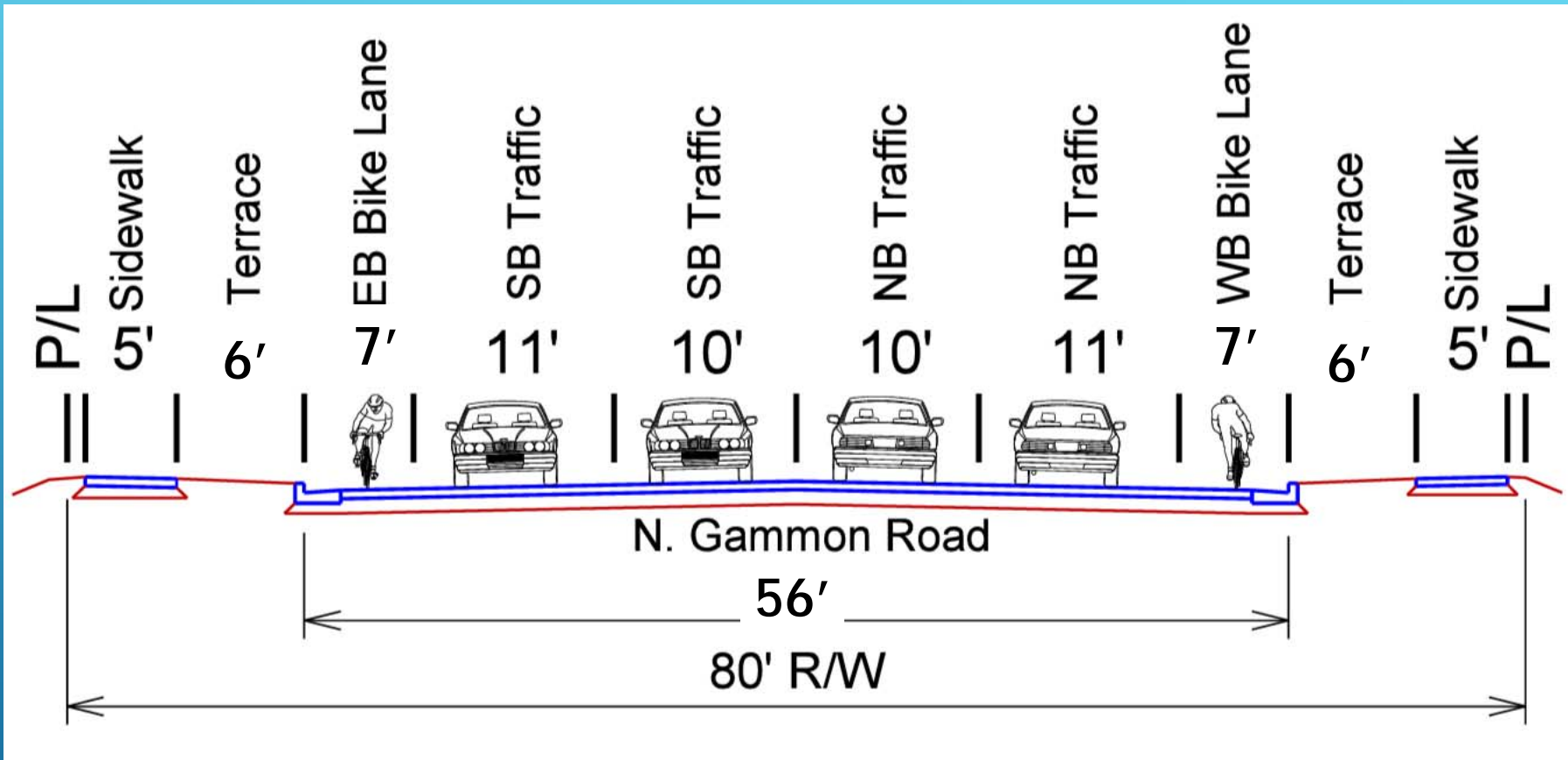
Problematic lane drop as people jockey for position

Without reconstruction signal fails under future traffic at Old Sauk Rd and Gammon

Cost \$

# 3 LANE, WIDENING-WITH BIKES PROS/CONS (WOPT1)





# 4 LANE, WIDENING-WITH BIKES, SIDEWALKS (WOPT2)





## PROS

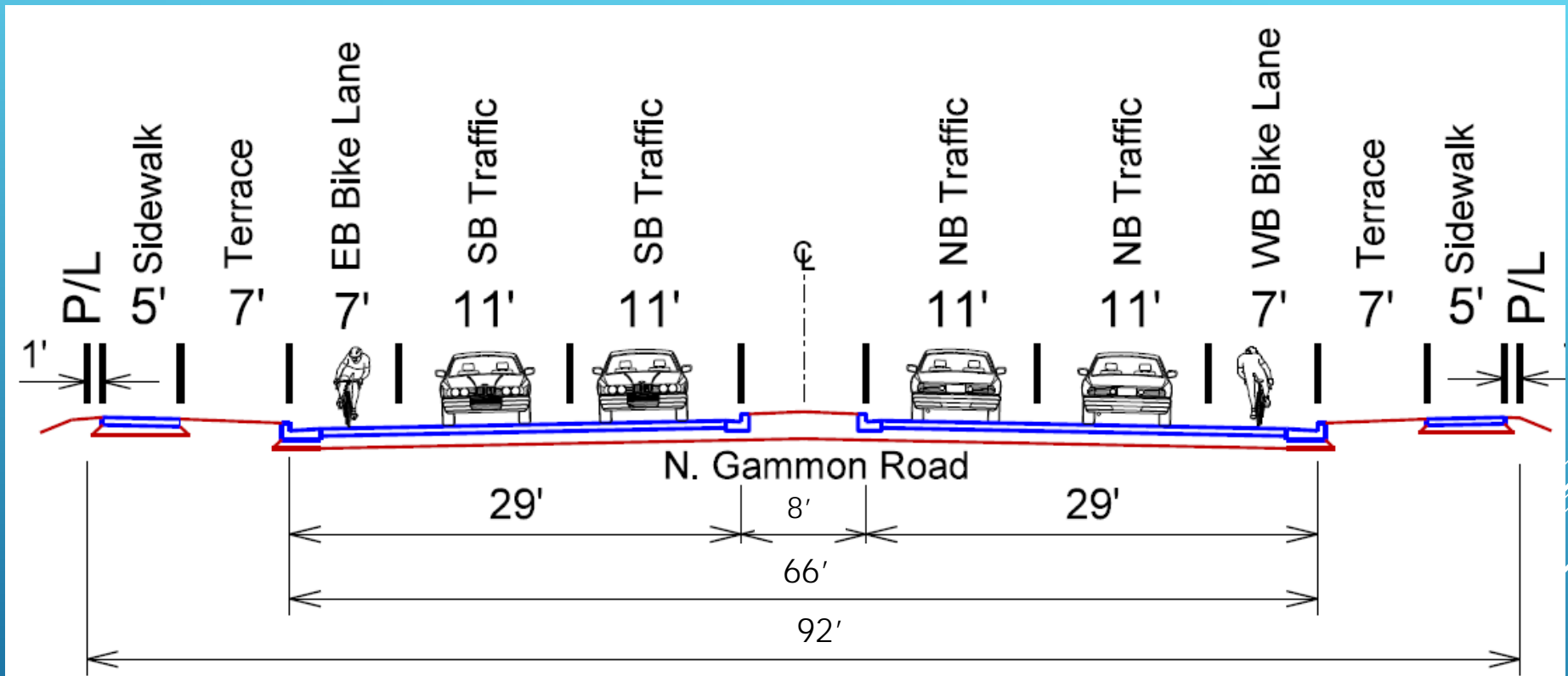
- Maintains capacity
- Facilities for bicyclists
- Traffic diversion—little to none

## CONS

- Requires widening
- Does not address Neighborhood request
- Cost \$\$

4 LANE, WIDENING WITH BIKES, SIDEWALKS PROS/CONS  
(WOPT2)





## 4 LANE, WIDENING-BOULEVARD, WITH BIKES, SIDEWALKS (WOPT3)



## PROS

- Safest cross-section, location for U-turns provided
- Safer environment for pedestrians and bicyclists
- Opportunity for landscaping

## CONS

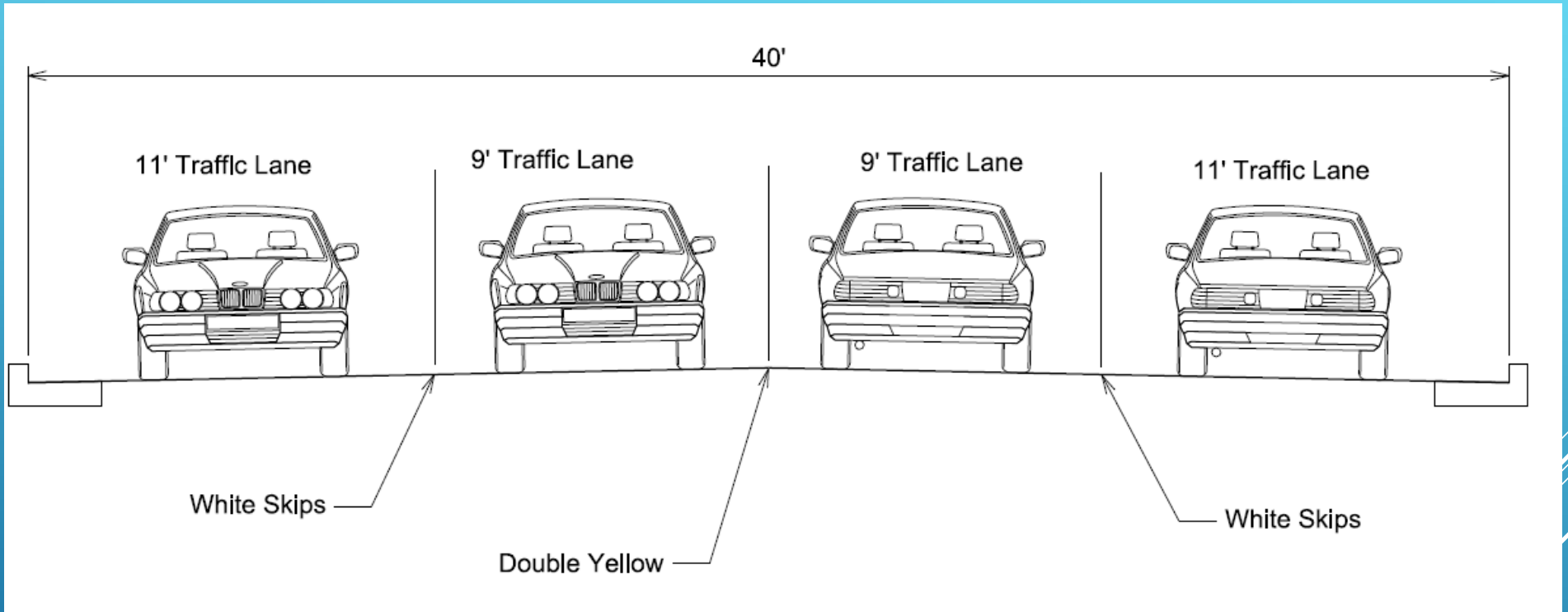
- Requires widening/right-of way expansion
- To minimize impact on adjoining property median is narrow
- No direct left-turn access to/from property
- Cost \$\$\$

4 LANE, WIDENING BOULEVARD-WITH BIKES, SIDEWALKS PROS/CONS  
(WOPT3)



# STAFF RECOMMENDATION





NO WIDENING, EXISTING SECTION WITH MODIFICATIONS  
(RECOMMENDED OPTION)



Install pedestrian islands at Colony and Sawmill—improving pedestrian crosswalks and signing

Install Radar Display Speed Boards for both directions of traffic (south of Old Sauk Rd.)

Maintain lower posted speed limit

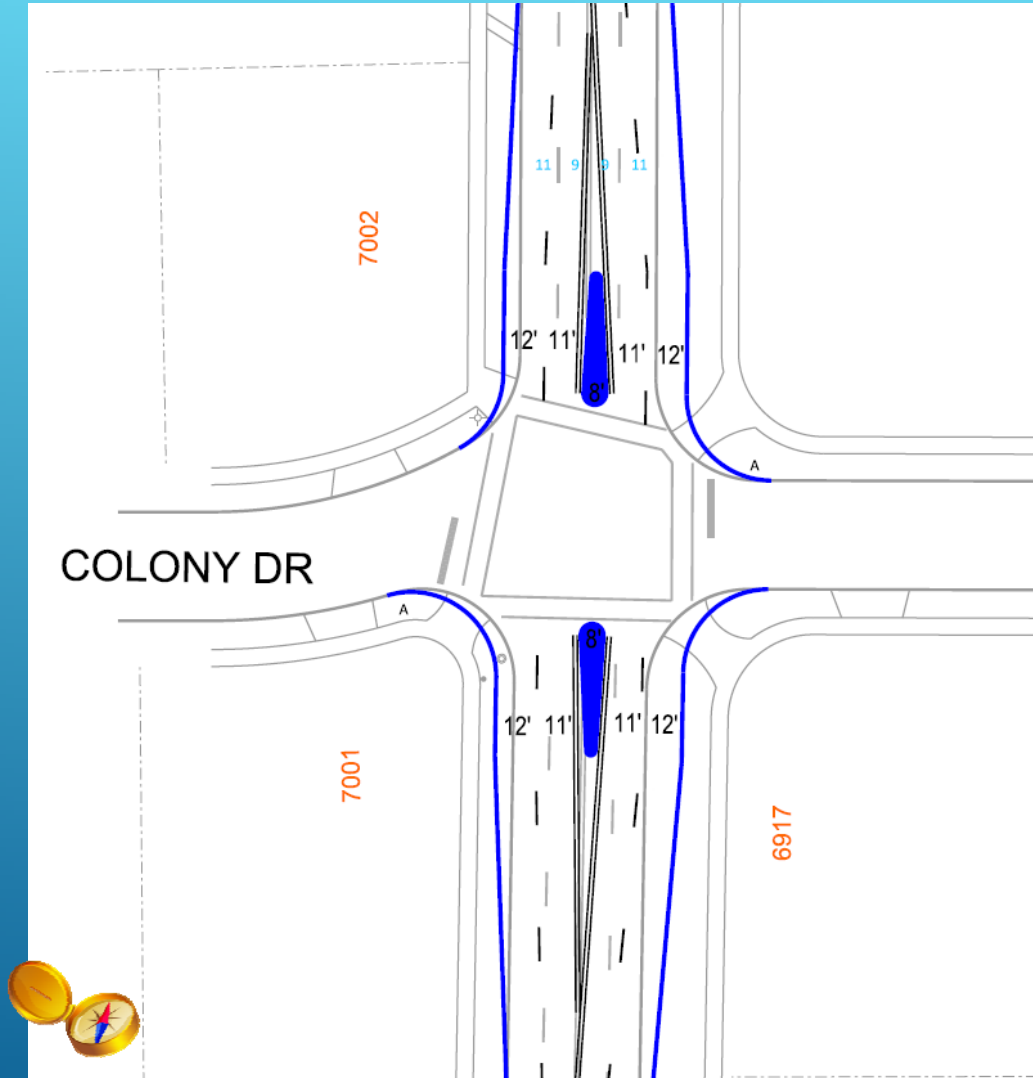


## MODIFICATIONS

(RECOMMENDED OPTION)



# PED REFUGE ISLANDS



Does require some tree removal



## PROS

- Improved conditions for crossing—both peds and cyclists
- Some space at island locations for motorists to stage for turns
- Not as costly as widening options
- Maintains circulation without impacting parallel neighborhood streets
- No lane drop jockeying
- Better compliance with posted speed limit

## CONS

- Cost \$

**NO WIDENING WITH MODIFICATIONS PROS/CONS**  
(RECOMMENDED OPTION)

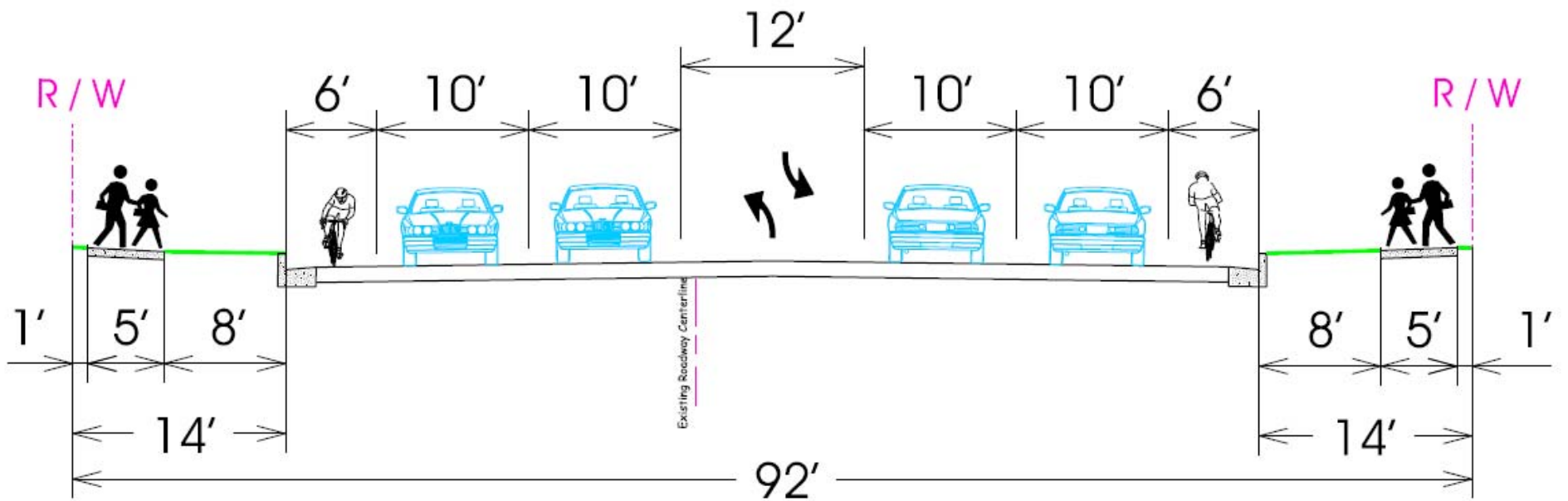




# LONG-TERM RECOMMENDATION



# Aquire Additional 12' ROW--12' TWLTL & 10' Travel Lanes & Bike Lanes



WIDEN, FOR BIKES WITH CENTER LEFT-TURN LANE, SIDEWALK, AND SELECT ISLAND LOCATIONS



## PROS

- Provides room for left-turns to/from driveways
- Improved conditions for crossing—both peds and cyclists
- Provides bike facilities
- Maintains circulation without impacting parallel neighborhood streets
- No lane drop jockeying

## CONS

- Cost \$\$\$

**NO WIDENING WITH MODIFICATIONS PROS/CONS**  
(RECOMMENDED LONG-RANGE OPTION)



QUESTIONS

