

Ayd Mill Road Transportation Committee

Monday, April 20, 2020



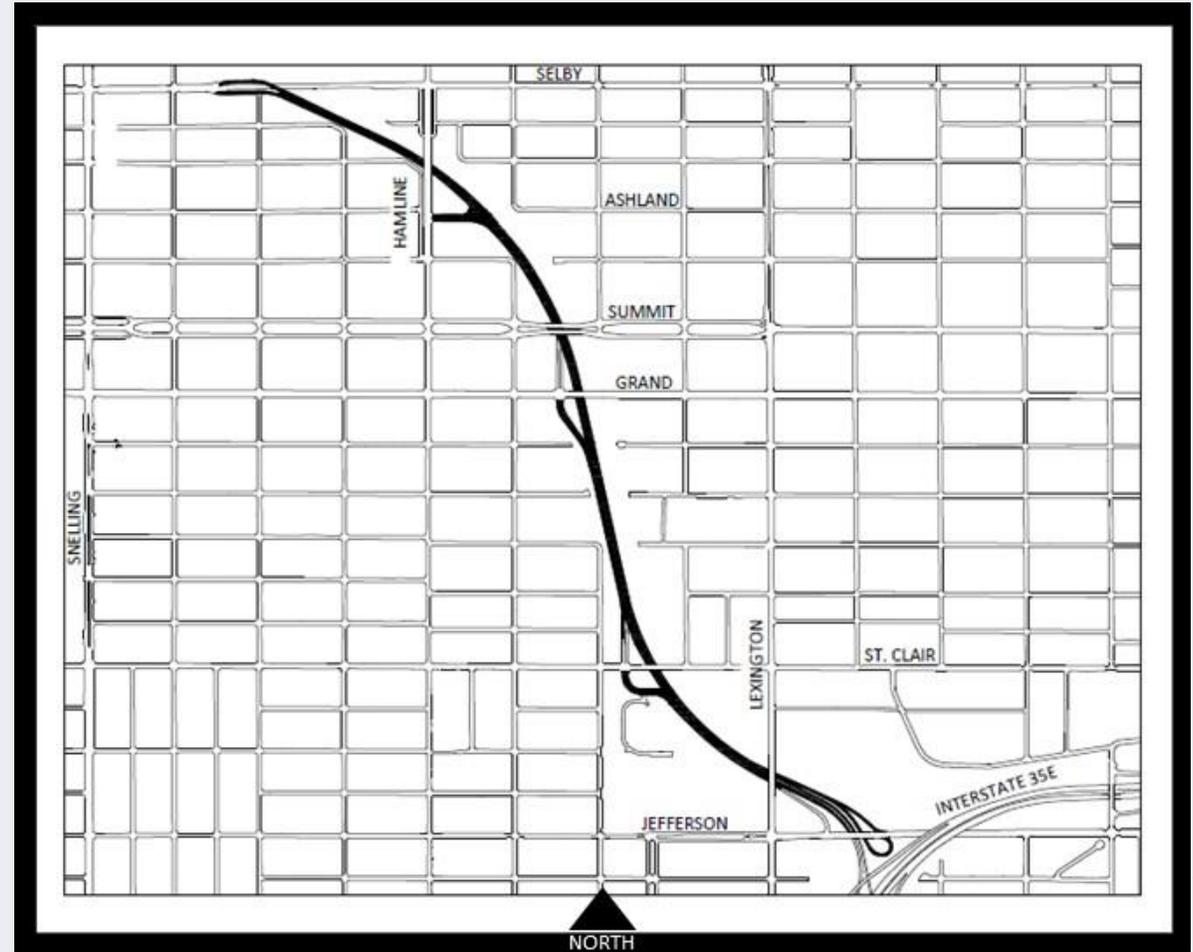
Agenda

- Welcome
- Purpose of Meeting
- Project Info
- Timeline
- Current Proposal



Recap

- City street in R/R property
- In need of pavement repair
- Heavy traffic use
- Desire to add non-motorized facility



Project Timeline

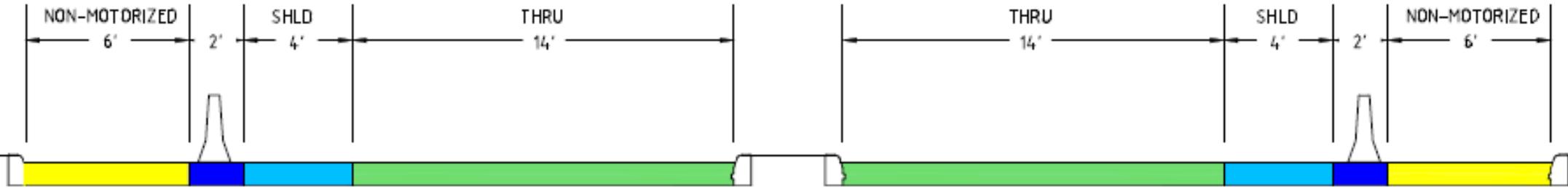
1st Half of 2019



What About Bikes?

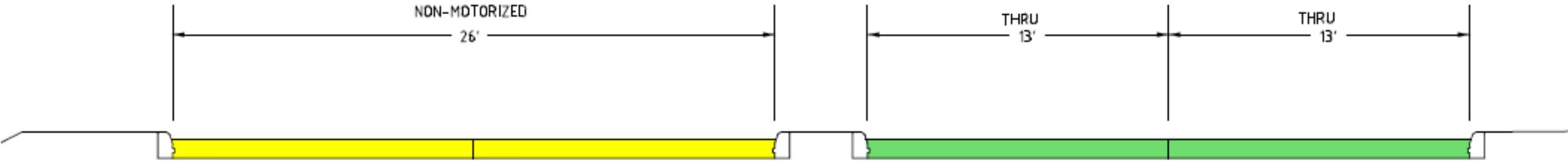
- March 2019: Began bike planning effort
 - Three concepts
- April 2019: Internal PW meeting to review concepts
 - Non-motorist experience
 - Operation of traffic lane
 - Maintenance considerations

Conceptual Bike Option 1



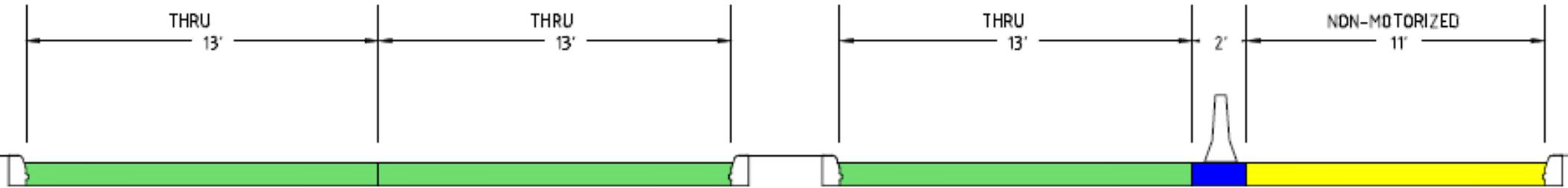
Option	Description	Accommodation	PRO	CON
1	2 Lanes Divided + Bike Lanes	Bikes Only	<ul style="list-style-type: none"> • No reconstruction • Breakdown space • Median for opposing traffic 	<ul style="list-style-type: none"> • No ped accommodations • Reduced traffic capacity • Challenge with crossings • Maintenance challenges • Aesthetics

Conceptual Bike Option 2



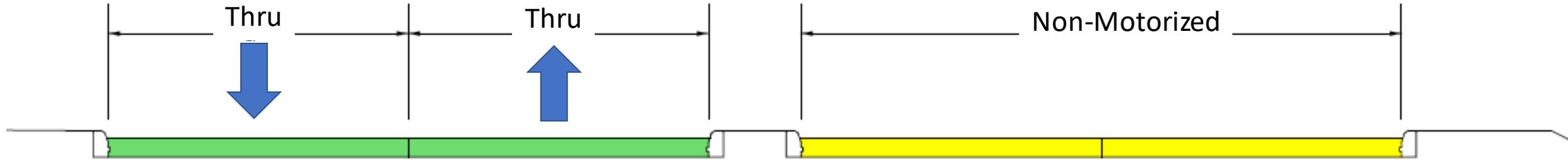
Option	Description	Accommodation	PRO	CON
2	2 Lanes Undivided + Bike Way	Pedestrians and Bikes Separated	<ul style="list-style-type: none"> Provides most space for non-motorist 	<ul style="list-style-type: none"> Requires reconstruction No breakdown space Reduced traffic capacity No median for opposing traffic

Conceptual Bike Option 3



Option	Description	Accommodation	PRO	CON
3	3 Lanes Divided + Bike Space	Shared Trail	<ul style="list-style-type: none"> • No reconstruction • SB traffic capacity maintained • Median for opposing traffic • Least expensive 	<ul style="list-style-type: none"> • No breakdown on NB • Reduced traffic capacity on NB

Concept 2 It Is!

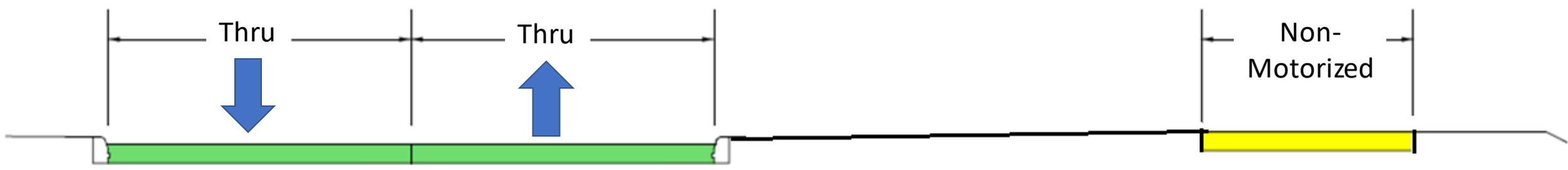


- May 2019: 2 Lane concept was preferred based on limited engineering
 - Easier to maintain
 - Maximizes non-motorist space
 - Geotech evaluations are complete
 - Bike concepts considered for potential addition to M/O project
 - Construct only half the roadway in 2019
- June – August 2019: M/O plan begins and bikes are added
 - Requires reconstruction at intersection
 - Construction moved to 2020

Still moving forward with bike concept!

Project Timeline

2nd Half of 2019



Concept 2 Traffic Evaluations

Concept	AM			PM		
	Uninterrupted Volumes	Intersection Critical Lane Capacity	SimTraffic	Uninterrupted Volumes	Intersection Critical Lane Capacity	SimTraffic
2	NB over capacity at Jefferson and St. Clair	Over capacity at St. Clair, Grand and Ashland	NB backup at St. Clair	SB between Jefferson and St. Clair	Over capacity at all intersections	Gridlock or slow moving queues
3	NB over capacity at Jefferson and St. Clair for short period	Over capacity at St. Clair and Grand	NB backup at St. Clair, but can get more cars through St. Clair due to longer LTL green time	All sections handle capacity	Over capacity at St. Clair for short period, nearing capacity at Grand most period	Runs ok

Concept 2 Cost Progression

Estimate Type	2 Lane Conceptual	2 Lane Detailed	3 Lane Detailed
Roadway	M/O Only	Full Recon at Intersections	One NB Lane Recon
Trail	Full Width Bituminous	12' Trail	12' Trail
Sewer	Gen Repairs	Full Recon	Half Recon
Lighting	No Lighting	One Lighting Sys	Two Lighting Sys
Signal	ADA Retrofit	Full Replacement	Full Replacement
Total	\$ 5,200,000	\$ 9,800,000	\$ 7,500,000

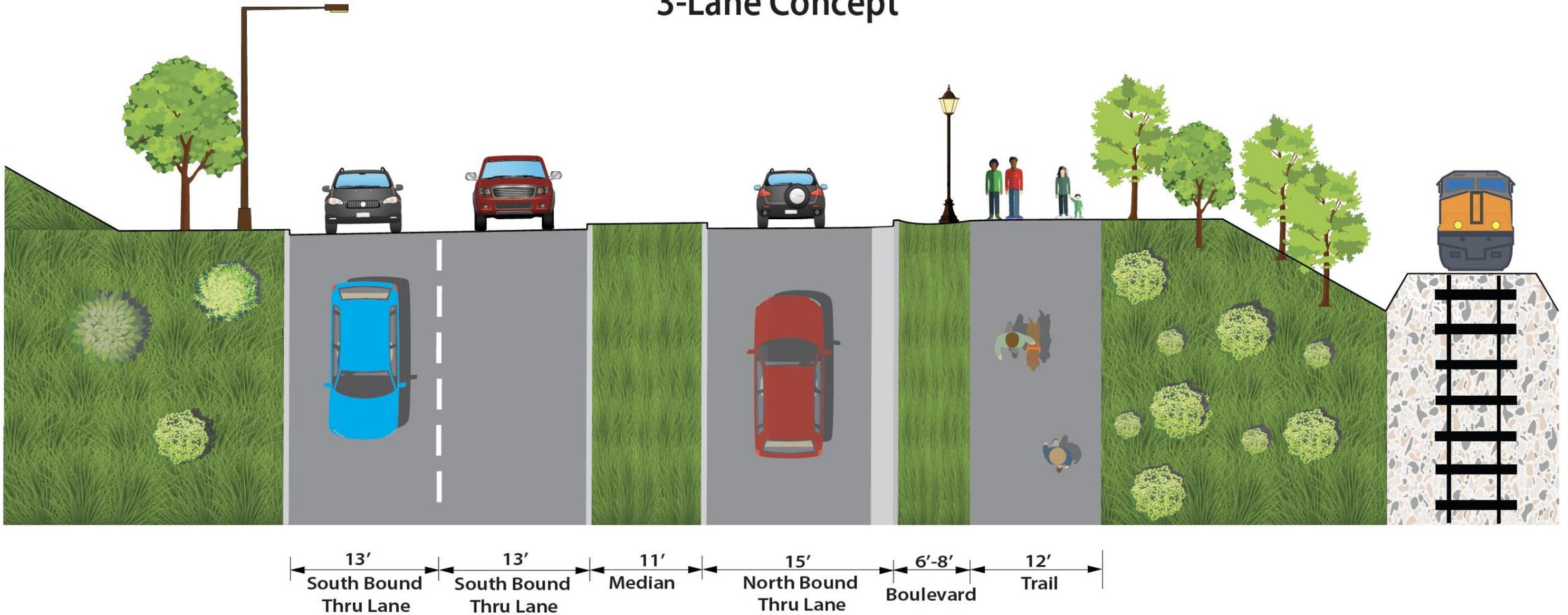
2 Lane VS 3 Lane

Concept	Cost	Positives				Negatives		
		Non-motorized Safety	Non-motorized Experience	Vehicle Safety	Traffic Impacts	Vehicle Safety	Traffic Impacts	Drainage
2	\$9.8M	Separated facility	84% of corridor >= 6-ft blvd	Pavement overlay		Undivided opposing traffic	NB & SB traffic breakdown	High drainage costs
		Signalized crossings	76% of corridor >= 10-ft blvd			No breakdown space both directions	Overall traffic diversion ~ 20-25%	
			Signalized crossings					
			New facility					
3	\$7.5M	Separated facility	81% of corridor >= 6-ft blvd	Median-separated traffic	Less diversion	No breakdown space NB	NB traffic breakdown AM only	High drainage costs
		Signalized crossings	7% of corridor >= 10-ft blvd	Pavement overlay			Overall traffic diversion ~ 15-20%	
			Signalized crossings	SB breakdown space				
			New facility					



Further Evaluating Concept 3

3-Lane Concept

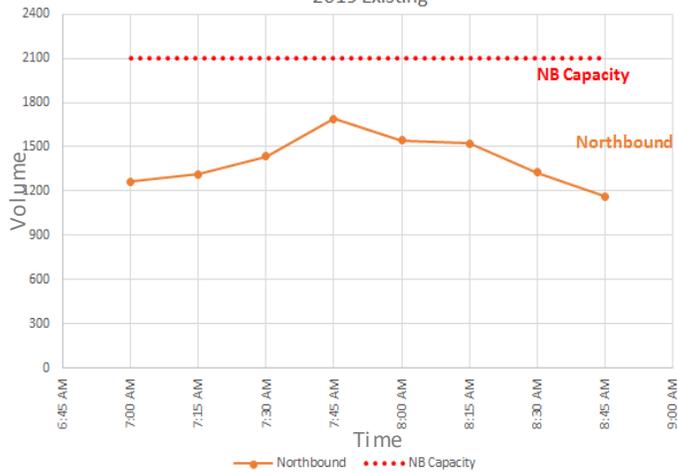


Project Timeline 2020

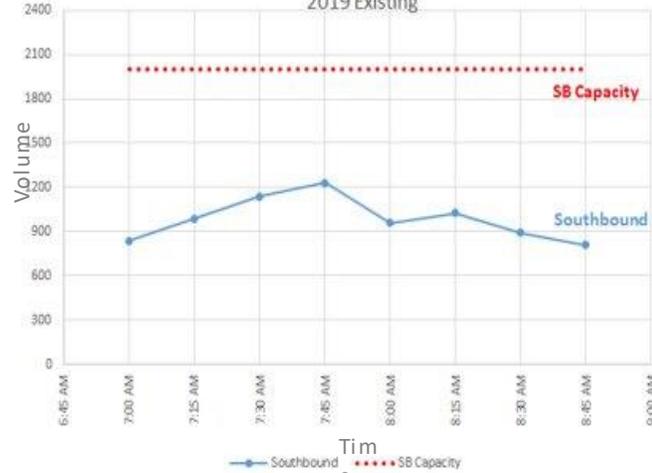


Existing Traffic

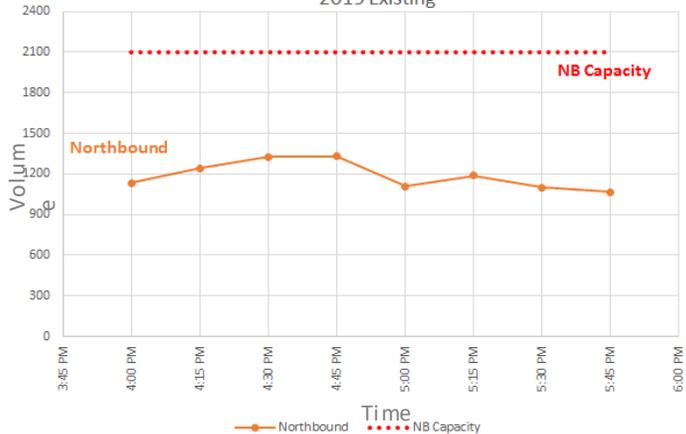
Ayd Mill Rd - St. Clair to Grand
Northbound AM
2019 Existing



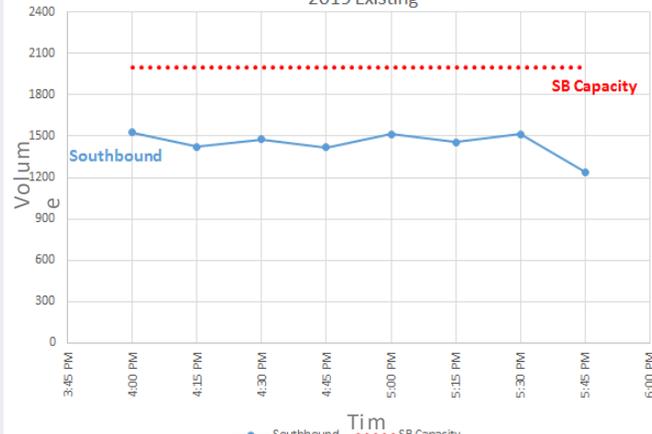
Ayd Mill Rd - St. Clair to Grand
Southbound AM
2019 Existing



Ayd Mill Rd - St. Clair to Grand
Northbound PM
2019 Existing



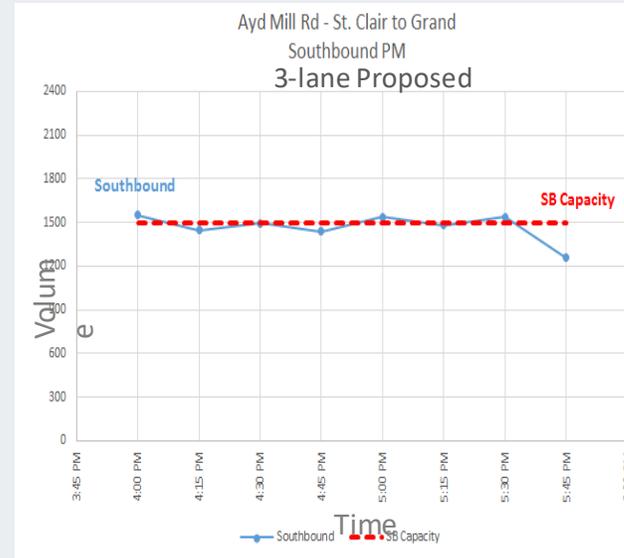
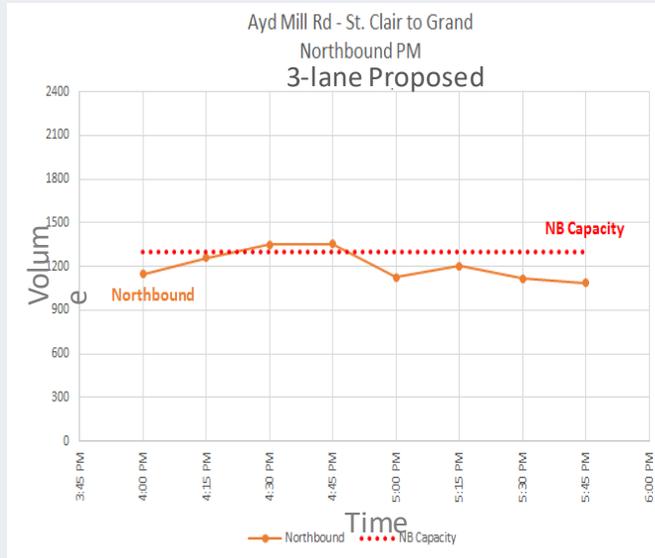
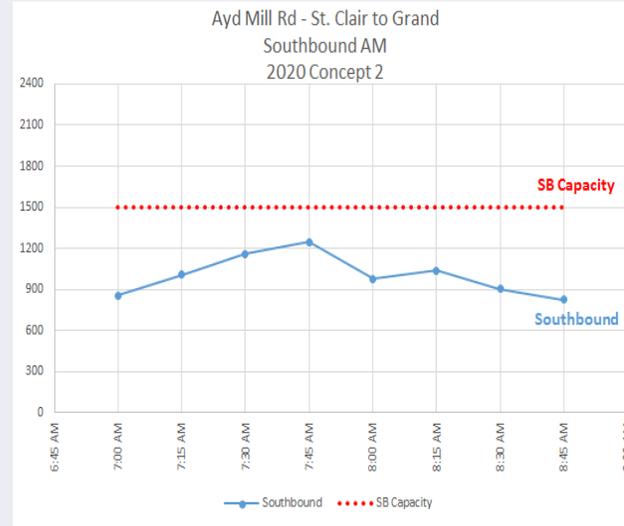
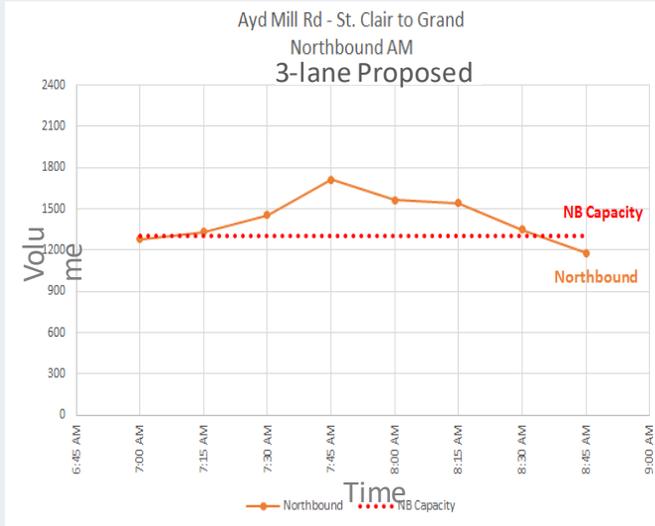
Ayd Mill Rd - St. Clair to Grand
Southbound PM
2019 Existing



- Vehicle data collected in 2019 (May and September)
- Both NB and SB does not exceed capacity of road
- No pedestrian on roadway



Proposed Traffic



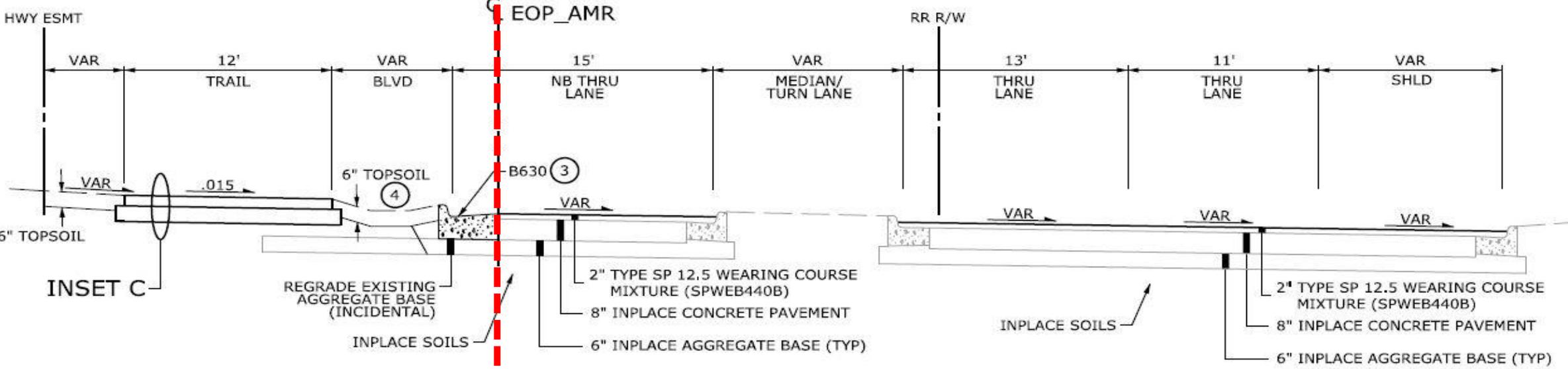
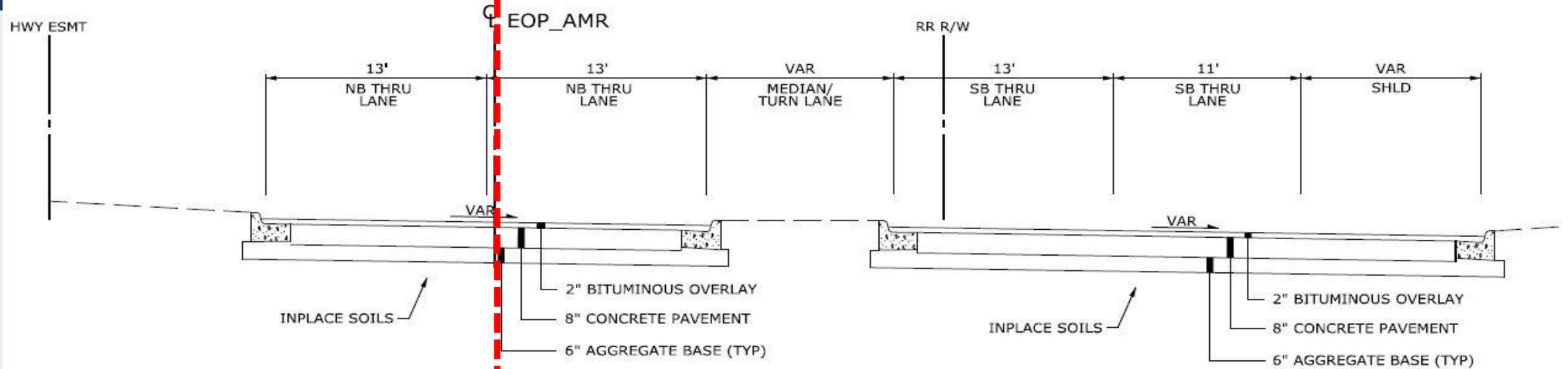
- NB capacity is reduced due to lane drop
- SB capacity is reduced due to ped crossing
- AM Rush Hour – Northbound
20% diversion of traffic would minimize Northbound back-ups at St. Clair
- PM Rush Hour – Southbound
0% diversion of traffic would maintain similar operations
- Other results – event traffic and diversion routes



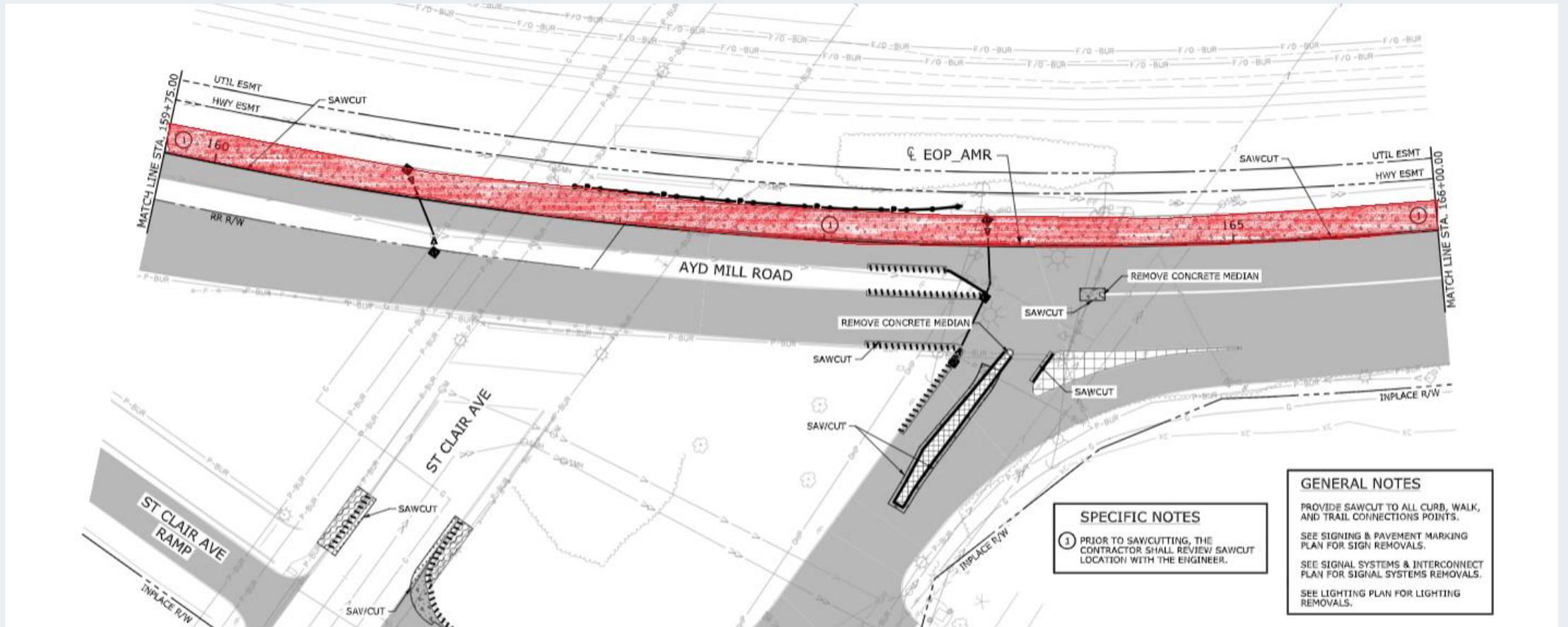
Current Design – 3 Lane



Design Section



Removals



SPECIFIC NOTES

1 PRIOR TO SAWCUTTING, THE CONTRACTOR SHALL REVIEW SAWCUT LOCATION WITH THE ENGINEER.

GENERAL NOTES

PROVIDE SAWCUT TO ALL CURB, WALK, AND TRAIL CONNECTIONS POINTS.

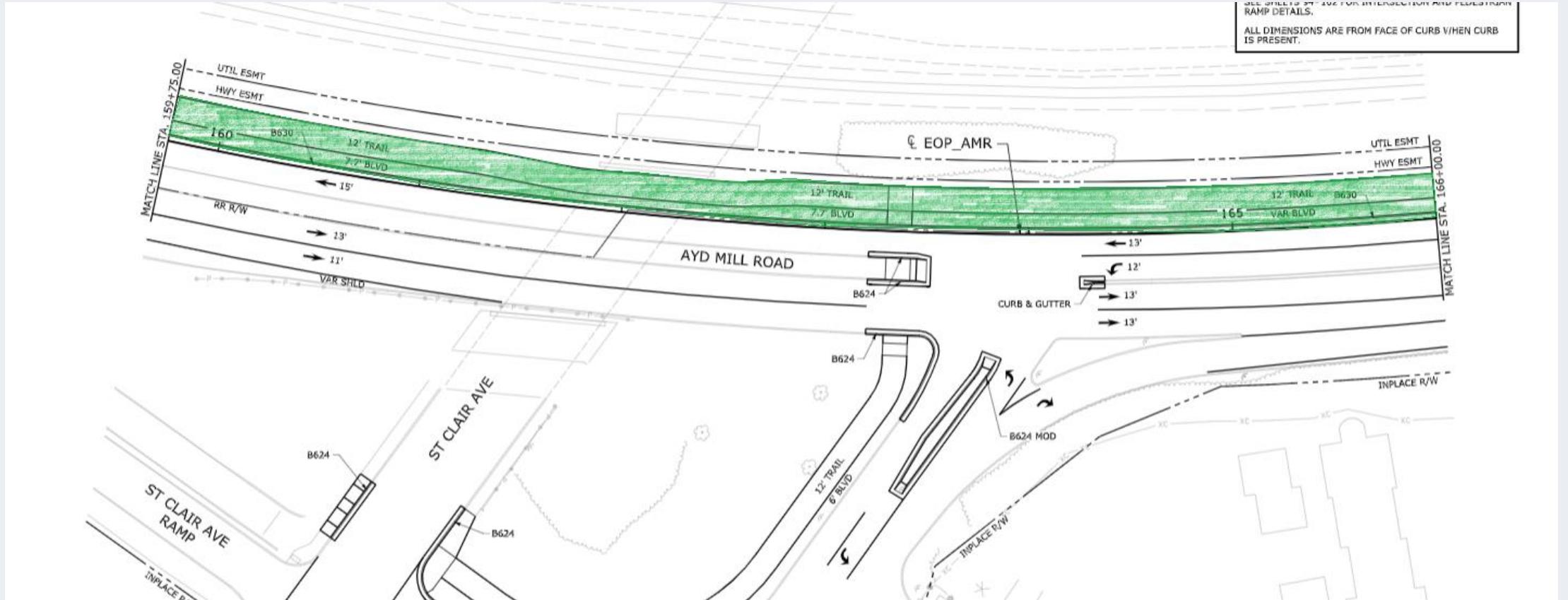
SEE SIGNING & PAVEMENT MARKING PLAN FOR SIGN REMOVALS.

SEE SIGNAL SYSTEMS & INTERCONNECT PLAN FOR SIGNAL SYSTEMS REMOVALS.

SEE LIGHTING PLAN FOR LIGHTING REMOVALS.

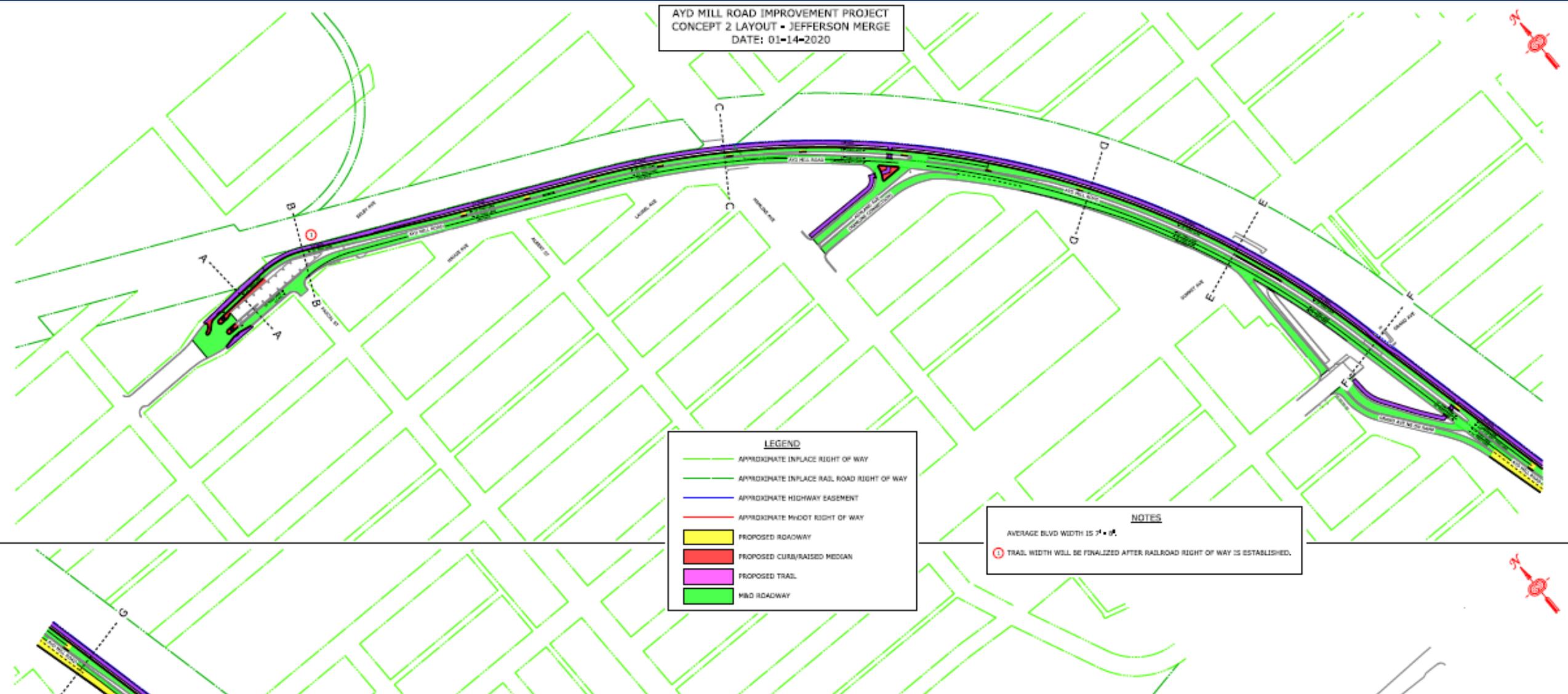


Construction



Selby to Grand

AYD MILL ROAD IMPROVEMENT PROJECT
CONCEPT 2 LAYOUT - JEFFERSON MERGE
DATE: 01-14-2020



LEGEND

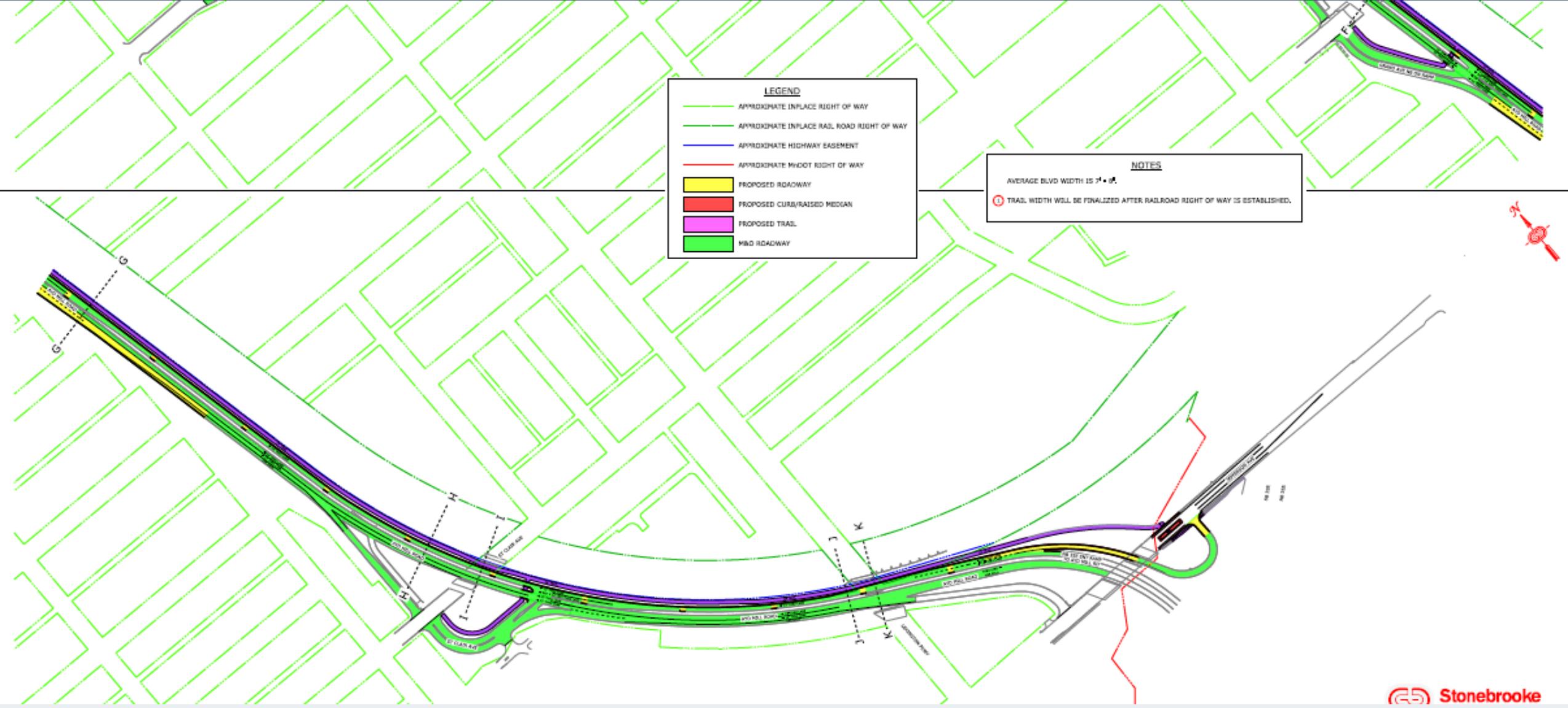
- APPROXIMATE INPLACE RIGHT OF WAY
- APPROXIMATE INPLACE RAIL ROAD RIGHT OF WAY
- APPROXIMATE HIGHWAY EASEMENT
- APPROXIMATE MIDDOT RIGHT OF WAY
- PROPOSED ROADWAY
- PROPOSED CURB/RAISED MEDIAN
- PROPOSED TRAIL
- M&D ROADWAY

NOTES

AVERAGE BLVD WIDTH IS 74' ±.

① TRAIL WIDTH WILL BE FINALIZED AFTER RAILROAD RIGHT OF WAY IS ESTABLISHED.

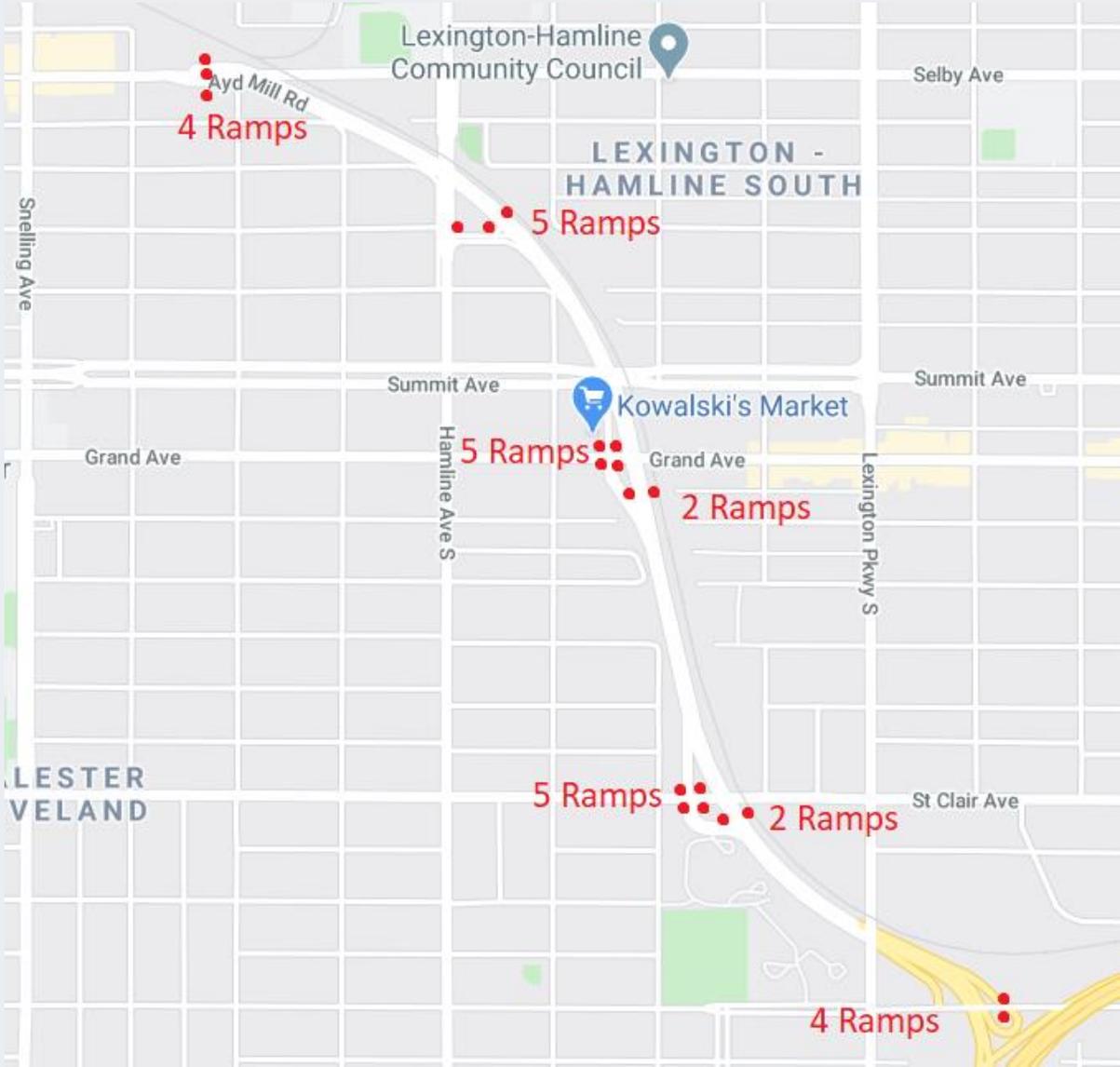
Grand to Jefferson



Intersection Design



Ped Ramp Locations

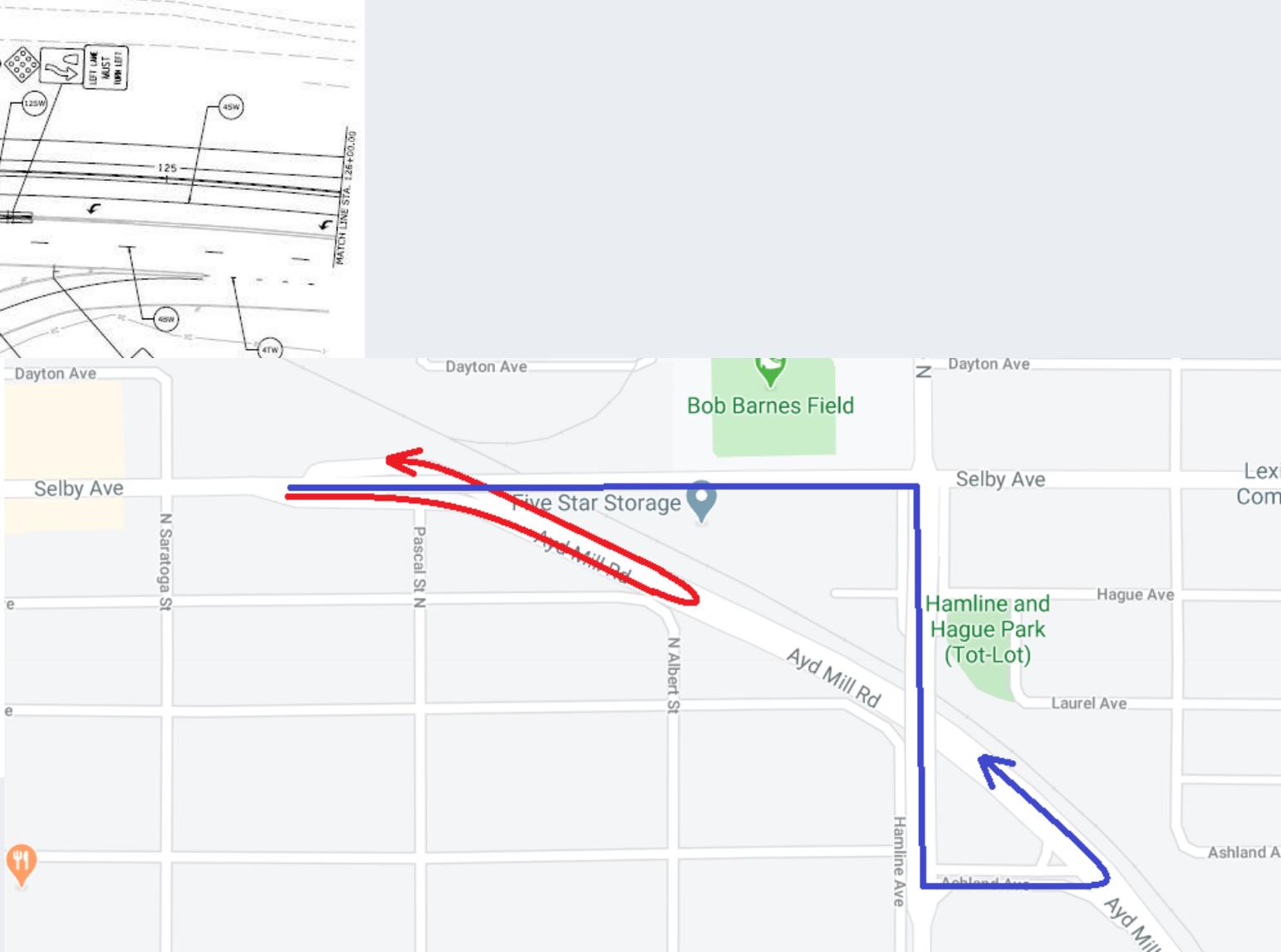
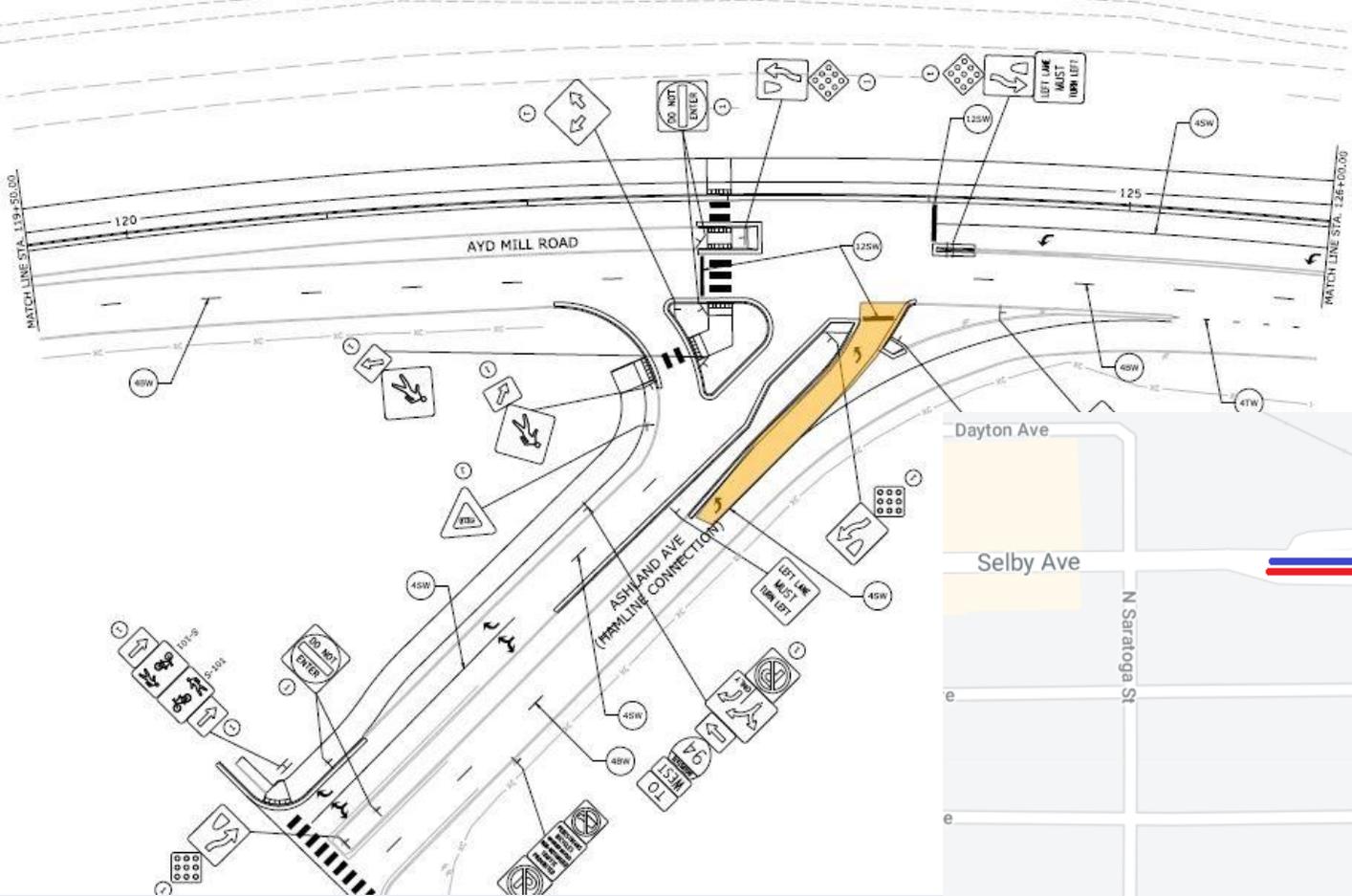


Stop Signs on Ayd Mill



ISTRATION
NOW
OP

New Left Turn at Ashland/Hamline



3 Lane Summary

- \$7.5 Million
- Conventional M/O with removal of one NB lane
- Separated bike facility
- Divided traffic lanes
- New lighting, signals, signs and partial sewer
- Schedule
 - Final Plans: End of May 2020
 - Construction: Begins August 2020, Ends Mid November 2020

Thank You!

