MARYLAND AVENUE TEST
4 TO 3 LANE CONVERSION

JANUARY 24, 2017
TODAY’S PRESENTATION:

- PROJECT BACKGROUND
- TEST PROJECT DETAILS
- COMMUNITY ENGAGEMENT
- DATA COLLECTION
- MOVING FORWARD
- QUESTIONS
MARYLAND AVENUE
PROJECT LIMITS - PAYNE AVE. TO JOHNSON PARKWAY
PROJECT LIMITS

- ORANGE AVENUE
- HAWTHORNE AVENUE
- MARYLAND AVENUE
- ROSE AVENUE
- GERANIUM AVENUE

PAYNE AVENUE
GREENBRIER STREET
WALSH STREET
WEIDE STREET
ARCADE STREET
MENDOTA STREET
FOREST STREET
CYPRUS STREET
EARL STREET
FRANK STREET
DULUTH STREET
LANE PLACE
BURNQUEST STREET
JOHNSON PARKWAY
NARROW SECTION OF 4 – 10 FOOT LANES.
MULTIPLE THREAT CRASH:
ONE CAR STOPS FOR A PEDESTRIAN, BUT THE DRIVE IN THE NEXT LANE DOES NOT RESULTING IN A CRASH
Ramsey County’s Paradigm Shift
A Work in Progress

- County Wide Pedestrian and Bicycle Plan
- All Abilities Transportation Network Policy
  - Shared Vision/Implementation
  - Equitable Access
  - Safety for All Users
  - Fully Integrated/Interconnected
  - Sensitivity to Environment and Context
  - Meaningful Engagement
  - Hierarchy of System Users
Ramsey County’s Paradigm Shift
A Work in Progress

- Community attitude/cultural shifts
- Organized voice of advocacy groups
- How can services levels address peds/bikes/transit
- Modeling is an approximation based on statistical data
- Field tests provide real information on human behavior
- Hardship vs. convenience
- In the end its an issue of community values
HOW DID WE GET TO A TEST?

• Fatal Pedestrian Accident at Greenbrier spurred a call to action.
• County Commissioner, county Engineer, Saint Paul Police, City Traffic Engineer requested to speak about what can be done
• Tough meeting – social media was rampant – not kind
• Desire/need to do something
• Crash statistics show 4 lane roads are problematic for all modes of travel
• County had a Mill and Overlay planned for later in the 2017 season for Maryland from Greenbrier to Johnson Parkway.
CAN WE JUSTIFY 4 TO 3 LANE CONVERSION?

NOT OUR FIRST 3 LANE CONVERSION:

- Fairview – Ford to Randolph    12,375 – 13,900 ADT
- Lexington – Jefferson to Lincoln 18,740 – 21,300
- Rice – Maryland to Wheelock    16,175
- West 7th Street – Goodhue to May  9,150 – 13,175
- Pierce Butler – transfer Rd to Minnehaha 11,300
- Montreal – Snelling to Hamline    9,450
- Ford – Snelling to Fairview       9,675 – 10,500
- Como - Dale to Rice         8,450 – 15,175
- Maryland Ave. – Greenbrier to Johnson Pkwy 17,700 – 20,300
CAN WE JUSTIFY 4 TO 3 LANE CONVERSION?

WHY NOT?

- Odd lane roadways are safer! Vehicular and Pedestrian
- 15,000 ADT is just a number
- If traffic diverts is that really bad?
- If community is involved in the decision and makes “value Choices” is that wrong?
- As engineers is it our responsibility to make “Value Judgements”
- The design we propose will meet all design standards
- If there is an issue we can fix it quickly with the overlay
4 TO 3 LANE CONVERSION

ADVANTAGES
- Crash severity reduced
- Reduced speed
- Improved ped crossing

DISADVANTAGES
- Reduced capacity
- Less gaps in traffic
- Busses stop in through lane
- Traffic on side streets
3 Lane Cross Section

MARYLAND AVENUE
PROPOSED 3 LANE WITH CENTER LEFT TURN LANE

- 2.5' SHOULDER
- 11' THRU LANE
- 11' THRU LANE
- 2.5' SHOULDER
- 13' CENTER LEFT TURN LANE
TEMPORARY MEDIANS FOR PED REFUGE
Data Collection (before/after)

1. Survey/feedback from community
2. Traffic Volumes – Maryland/other streets
3. Vehicle Speeds
4. Turning movements
5. Congestion
6. Crashes
COMMUNITY FEEDBACK:

- Online comment section on project page at ramseycounty.us (585 comments)
- Online survey after project implemented (813 users)
- Popup truck at Arlington Library and Golden Harvest (230 comments)
- TOTAL = 1628 comments
- Approximate even split of comments supporting and opposing test.
MARYLAND AVENUE

ENJOY SITTING IN TRAFFIC?
THIS HAS BEEN FORCED ON YOU BY DESIGN!
MARYLAND AVE IS A COUNTY ROAD CONTROLLED BY RAMSEY COUNTY
COUNCILMAN DAN BOSTROM’S STAFF FOUGHT THIS ALL THE WAY

THOSE LISTED BELOW ARE RESPONSIBLE FOR THIS EXPERIMENT (THEY CALL IT A TEST)
PLEASE CONTACT THEM AND LET THEM KNOW HOW YOU FEEL.

Ramsey County Commissioner Jim McDonough 651-266-8365
Jim McDonough Staff: JoAnn Ellis 651-266-8357 joann.ellis@co.ramsey.mn.us
Kim Burback 651-266-8354 kim.burback@co.ramsey.mn.us

Ramsey County Engineer Jim Tolass 651-266-7100
Payne-Phalen District Five Planning Council 567 Payne Ave 651-774-5234
- director@paynephalen.org
- robinh@paynephalen.org
- Eric Foster, President 651-348-8181
- Eric Saathoff, Transportation ericsaathoff@gmail.com ericsaathoff@spps.org

Sidewalk Philosopher at University of Minnesota William Lindeke
(Sits as Saint Paul’s Transportation Committee Chair) 651-983-1672 blindeke@gmail.com

THEIR COMMENTS:
“We think this is a really great opportunity to test this for a couple months, and really see it in action,”
-Ramsey County Commissioner Jim McDonough

“We may actually see less car traffic on Maryland because of this, and that’s a good thing, it would improve safety,” McDonough said

THEIR GOAL IS TO REMOVE YOUR CARS.
PLEASE DRIVE SAFELY

Comments to nomore1210@aol.com
FEEDBACK THEMES IDENTIFIED:

SUPPORTING THEMES:
- SAFER PEDESTRIAN CROSSINGS
- SAFER FOR BICYCLISTS
- SLOWER SPEEDS
- MORE COMFORTABLE DRIVING ENVIROMENT
- SAFER ROAD FOR DRIVERS

OPPOSING THEMES:
- INCREASED CONGESTION
- LESS GAPS IN TRAFFIC
- DIFFICULT TO TURN LEFT
- TRAFFIC DIVERTED TO SIDE STREETS
TRAFFIC VOLUMES ON MARYLAND

Maryland Avenue Average Daily Traffic

- Welsh to Weide
- Arcade to Mendota
- Cypress to Forest
- Frank to Duluth

Before (April 2017) vs. After (June 2017)
TRAFFIC VOLUMES ON PARALLEL STREETS

Average Daily Traffic on Routes Parallel to Maryland Avenue

- Walsh to Greenbrier
- Cypress to Forest
- Weide to Arcade
- Arcade to Mendota
- Cypress to Forest
- Earl to Frank
- Walsh to Weide
- Arcade to Mendota
- Cypress to Forest
- Earl to Frank

Before (April 2017) vs. After (June 2017)
TRAFFIC SPEEDS ON MARYLAND

85th Percentile Speeds on Maryland Avenue

<table>
<thead>
<tr>
<th></th>
<th>EB</th>
<th>WB</th>
<th>EB</th>
<th>WB</th>
<th>EB</th>
<th>WB</th>
<th>EB</th>
<th>WB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walsh to Weide</td>
<td>37.5</td>
<td>36.5</td>
<td>35.5</td>
<td>34.5</td>
<td>36.0</td>
<td>35.0</td>
<td>36.5</td>
<td>35.5</td>
</tr>
<tr>
<td>Arcade to Mendota</td>
<td>35.5</td>
<td>34.5</td>
<td>34.5</td>
<td>33.5</td>
<td>35.0</td>
<td>34.0</td>
<td>35.5</td>
<td>34.5</td>
</tr>
<tr>
<td>Cypress to Forest</td>
<td>32.5</td>
<td>31.5</td>
<td>32.0</td>
<td>31.0</td>
<td>33.0</td>
<td>32.0</td>
<td>32.5</td>
<td>31.5</td>
</tr>
<tr>
<td>Frank to Duluth</td>
<td>30.5</td>
<td>29.5</td>
<td>30.5</td>
<td>29.5</td>
<td>31.0</td>
<td>30.0</td>
<td>31.5</td>
<td>30.5</td>
</tr>
</tbody>
</table>

- EB: Eastbound
- WB: Westbound

Legend:
- Blue: Before (April 2017)
- Red: After (June 2017)
TRAFFIC SPEEDS ON PARALLEL ROADS

85th Percentile Speeds on Parallel Routes

Note: 85th Percentile Speeds are the average of all count stations on each roadway.

EB | WB | EB | WB | EB | WB
---|----|---|----|---|----
Geranium | 25 | 25 | 25 | 25 | 25 | 25
Rose | 30 | 30 | 30 | 30 | 30 | 30
Hawthorne | 35 | 35 | 35 | 35 | 35 | 35

Before (April 2017)  After (June 2017)
TURNING MOVEMENTS

- **Weide Street** AM counts – southbound rights increased from 12 to 42 in peak hour
- **Greenbrier Street** PM counts – southbound rights increased from 10 to 27 in peak hour
- **Frank Street** PM counts – westbound lefts increased from 9 to 41 in peak hour
## ACCIDENTS

1. **Summary of crashes on Maryland Ave (June 1st – September 5th)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of crashes</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>Crash Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left turn: 9 (33.3 %)</td>
<td></td>
<td>Left turn: 2 (9.1 %)</td>
</tr>
<tr>
<td>Rear Ends: 5 (18.5 %)</td>
<td></td>
<td>Rear Ends: 12 (54.5 %)</td>
</tr>
<tr>
<td>Pedestrian: 1 (3.7 %)</td>
<td></td>
<td>Pedestrian: 0 (0.0 %)</td>
</tr>
<tr>
<td>Severity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property Damage: 20 (74.1 %)</td>
<td></td>
<td>Property Damage: 18 (81.8 %)</td>
</tr>
<tr>
<td>Personal Injury: 7 (25.9 %)</td>
<td></td>
<td>Personal Injury: 4 (18.2 %)</td>
</tr>
</tbody>
</table>
DELAY TURNING LEFT

Mendota St.

<table>
<thead>
<tr>
<th>Direction</th>
<th>4 Lanes</th>
<th>3 Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB LT</td>
<td>0.8</td>
<td>5.4</td>
</tr>
<tr>
<td>EB LT</td>
<td>2.4</td>
<td>8.6</td>
</tr>
<tr>
<td>NB LT</td>
<td>19.2</td>
<td>41.0</td>
</tr>
<tr>
<td>SB LT</td>
<td>20.3</td>
<td>27.8</td>
</tr>
</tbody>
</table>
DELAY TURNING LEFT

Walsh St.

- **4 Lanes**
- **3 Lanes**

<table>
<thead>
<tr>
<th>Direction</th>
<th>Delay (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB LT</td>
<td>4.9 (2.6)</td>
</tr>
<tr>
<td>EB LT</td>
<td>2.6 (4.7)</td>
</tr>
<tr>
<td>NB LT</td>
<td>19.7 (24.9)</td>
</tr>
<tr>
<td>SB LT</td>
<td>33.7 (30.0)</td>
</tr>
</tbody>
</table>
## TRAVEL TIMES

1. **Comparison between 4 lanes (Before) and 3 lanes (After)**

<table>
<thead>
<tr>
<th>Direction</th>
<th>Time</th>
<th>Travel time ¹) (Seconds)</th>
<th></th>
<th></th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4 lanes</td>
<td>3 Lanes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EB</strong></td>
<td>AM Peak ³)</td>
<td>204.0</td>
<td>218.8</td>
<td>+ 7.3 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mid-Day ⁴)</td>
<td>213.1</td>
<td>236.9</td>
<td>+ 11.1 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PM Peak ⁵)</td>
<td>225.0</td>
<td>291.0</td>
<td>+ 29.3 %</td>
<td></td>
</tr>
<tr>
<td><strong>WB</strong></td>
<td>AM Peak ³)</td>
<td>211.7</td>
<td>263.8</td>
<td>+ 24.6 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mid-Day ⁴)</td>
<td>213.8</td>
<td>243.7</td>
<td>+ 14.0 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PM Peak ⁵)</td>
<td>255.4</td>
<td>288.5</td>
<td>+ 13.0 %</td>
<td></td>
</tr>
</tbody>
</table>

¹) Travel time between Edgerton St and Johnson Pkwy
PEDESTRIAN SAFETY

- Greenbrier and Duluth have highest pedestrian counts (PM 20 to 30 peds crossing in 1 hour)
- Medians do provide a safety feature
- 3 lane eliminates double threat present with a 4 lane road
BUS STOPS

- Bus stops create back ups.
- Metro Transit’s schedule has not been impacted
WHAT WE LEARNED:

- Congestion on Maryland occurs Arcade
  - 3 lane operates effectively east of Arcade
- Wheelock closures increased traffic on Maryland
- Difficult making left turn onto and off of Maryland
- Metro Transit’s schedule has not been impacted
- 3 lane road safer for pedestrians
- 3 lane is more comfortable to drive
- Accidents tend to be less severe in 3 lane section
WHAT WE NEED TO UNDERSTAND:

- How is Maryland functioning at Arcade now that Wheelock is open?
- How far west is a 3 lane appropriate?
  - Maryland & Edgerton reconstruction scheduled for 2019
  - Traffic increases toward 35E to 28,500 ADT
  - Ramsey County is modeling options
PLANS TO PROCEED:

- Mill & Overlay from Greenbrier to Johnson Parkway delayed until summer of 2018
- Maryland will be studied over winter to determine extents west of Arcade for a 3 lane
- Additional information to be provided in Spring of 2018 at a public meeting
QUESTIONS?

Additional information at: [www.ramseycounty.us/marylandave](http://www.ramseycounty.us/marylandave)

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