20-Years of the Twin Cities “A” Minor Arterial System: Looking Back and Positioning to Look Ahead

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What is an “A” Minor Arterial?

- Unique to the Twin Cities Metropolitan Area
- Administrative classification supplementing FHWA-required functional classification system
- Transportation Advisory Board (TAB) developed system in 1990, adopted soon after & maintains
  - MnDOT, counties, & cities identify roads for system – incl. from start
- System planning & investment prioritization tool, not design guidelines
  - Eligible for STP Urban Guarantee funds
Relievers

- Relief for congested principals in urban and urbanized area
- Add people moving capacity, improve safety
- Provide for alternative modes
- 420 miles estimated (2010)
Augmentors

- Substitute for principals that were not built
- Within I-494/694 ring
- Add, enhance or preserve people-moving capacity, safety
- Provide for alternative modes
- 180 miles estimated (2010)
Expanders

- Prepare/provide for safe travel in expanding urban area
- Outside I-494/694 ring
- Reserve right-of-way, build, expand, improve safety
- 660 miles estimated (2010)
Connectors

- Connect rural centers to each other & to large urban areas
- In rural areas and urban transition areas outside beltway
- Improve horizontal and vertical alignments, eliminate weight restriction, improve safety
- 670 miles estimated (2010)
Has “A” minor system successfully supplemented the region’s Principal Arterial system?

Is the defined role of the “A” minor system still valid?
- Does role fit with existing regional policies (RDF & TPP)?
- Are changes needed to make the “A” minor system more consistent with TPP?

Recommendations for Regional Development Framework, Transportation Policy Plan, and/or Regional Solicitation

Metropolitan Council Transportation Committee

“A” Minor Arterial System Evaluation

Transportation Advisory Board (TAB)

Project Management Team

Technical Steering Committee

“A” Minor Arterial System Evaluation
Challenges & Opportunities

in system-level, multi-jurisdictional study

• Getting data
  o Conflated MnDOT and Met Council GIS data
  o MnDOT, County, and City funding data

• Keeping focus
  o Everyone wants to do a corridor study

• Maintaining trust
  o Tension between detail for understanding and no assignment of blame
System Assessment
GIS-Based Analysis Objectives:

- **Objective 1:** Which jurisdictions own the “A” Minor Arterial system and how much do they own?
- **Objective 2:** How much general traffic and/or transit use the "A" Minor Arterial system?
- **Objective 3:** What is the safety performance of the “A” Minor Arterial system in the context of the rest of the functional class system?
- **Objective 4:** Is the spatial distribution and use of the “A” Minor Arterial system consistent with regional planning guidance? If not, how is it different and why?
“A” Minor Ownership by Jurisdiction (Lane-Miles)

- 1,923-mile system (centerline miles), 5,395 (lane-miles, May 2011)
- Counties have the largest portion of the “A” Minor system with 65%
- The State has 23% of the “A” Minors and thus plays an important role in this system
- Municipalities own 12% of the “A” Minors; though this is a small percentage, they are active players
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Principal Arterials make up only 14% of the system lane-miles, yet they carry 48% of the system VMT.

“A” Minor Arterials make up only 14% of the system lane-miles, yet they carry 26% of the system VMT.
### Share of “A” Minor Lane-Miles vs. Share of “A” Minor 2010 Daily VMT by “A” Minor Arterial Sub-Types

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<tbody>
<tr>
<td>Augmentor</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Reliever</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>Expander</td>
<td>36</td>
<td>40</td>
</tr>
<tr>
<td>Connector</td>
<td>26</td>
<td>17</td>
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- Connectors make up 26% of the “A” Minor Arterial lane-miles, but carry 17% of the “A” Minor Arterial VMT; reasonable since they are longer routes with lower traffic volumes in the rural areas.
Bus-Miles Travelled by Functional Classification and “A” Minor Type

- “A” Minors carry higher levels of BMT than any other functional classifications; approximately 1/3 of all BMT
- 52% of the “A” Minor BMT is carried by Relievers
- 36% of the “A” Minor BMT is carried by Augmentors
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Change in Total Crashes by Functional Classification (1995-2010)

- Between 1992 and 2010 Metro VMT increased by 43%
- 30% reduction in “A” Minor crashes compared to 21% reduction in all crashes
- 3% increase in Principal Arterial crashes
All functional class categories have seen dramatic reductions in Fatal and Serious Injury Crashes (69% overall)

Fatal and Serious Injury crashes were reduced by 56% on Principal Arterials, despite overall crash growth of 3% on this functional classification type

Fatal and Serious Injury crashes were reduced by 69% for “A” Minors
## Next Steps

<table>
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<th>Timeframe (2012)</th>
<th>Activity</th>
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<tr>
<td>June through August</td>
<td>Work with TSC to finalize DRAFT findings &amp; recommendations</td>
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<tr>
<td>August through November</td>
<td>Work with TAC (incl. sub-committees), TAB sub-committees, and Met Council Transportation Committee to finalize findings &amp; recommendations</td>
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<td>December</td>
<td>Work with TAB to accept the study and adopt the recommendations</td>
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Questions?

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