Examples of Multi-modal Integration

Hennepin County, Minnesota
How are various modes integrated within Hennepin County projects?

- Planning – Transportation Plan, Bike Plan & Ped Plan
- Planning – Plats, Site Plans, Corridor Studies
- Design – SPAR Reports & Complete Streets Checklist
- Operations – Opportunities during Paving and Restriping
- Operations – Preservation Plus Projects
- Construction – Major Projects
- LRT - Station Area Plans
Planning – Bicycle Transportation Plan

• Update recently completed of original 1997 plan
• Composite of city and park district plans
• Three Rivers Park District important partner
• Public Engagement
• Design Guidelines
• Department Roles & Responsibilities
• City Bike Plans -> County Bikeway System
Public feedback themes

- High recognition and appreciation of the existing biking improvements
- Strong desire for facilities of high comfort & protection from conflicts
- Desire for increased connections to neighborhoods & regional trails
- Continue to address bikeway gaps
- Increased interest in winter trail maintenance
- More education and enforcement of traffic laws
• Design Guidelines
Strategy 2.6 Work with major transit providers and local communities to provide direct bicycle connections to transit stops and stations, and increase secure bicycle parking and storage to meet demand.

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<th>Actions</th>
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<th>Implementation Timeframe</th>
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<td>2.6.d</td>
<td>Provide county funding eligibility for bikeway system connections and support facilities for major transit stations.</td>
<td>HCW&amp;T</td>
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Planning – Plats, Site Plans, Corridor Studies
Bicycle and Pedestrian Accommodations

- This portion of CSAH 101 is included in the Hennepin County Bicycle Systems Plan. There is an in-place bike trail on one side of the roadway for the complete length of the corridor.

- Consideration should be given to expanding the off-road trail system to provide trails on both sides of CSAH-101. In 2000, the City of Minnetonka and Hennepin County were approached by residents along Conifer Trail who were interested in obtaining a trail connection to Clear Springs Elementary School, about 1/2 mile to the south. Topography and property issues precluded the addition of the trail at that time.

It is recommended that bicycle and pedestrian accommodations be considered for both sides of CSAH-101 as part of the project.
Operations – Opportunities during Paving / Restriping

Recent Hennepin County Conversions to 3-Lanes

- Bass Lake Road (CSAH-70), Brooklyn Center & Crystal, Spring 2007
- Douglas Drive (CSAH-102), Crystal, Golden Valley, Summer 2010
- Medicine Lake Road (CSAH-70), Crystal / New Hope, Summer 2006 Extension - 2010
- 50th Street (CSAH-23), Minneapolis, Spring 2004

- Osseo Road (CSAH-152), Minneapolis, Fall 2013
- Lake Drive (CSAH-9), Robbinsdale, Fall 2004
- Washington Ave (CSAH-152), Minneapolis, Summer 2011

- Portland Ave. (CSAH-33), 2010
- Penn Ave. (CSAH-32), 2013
- Nicollet Ave. (CSAH-52), 2014
- 66th Street (CSAH-33), 2010, Richfield

For consideration:
1) Brooklyn Blvd.
2) Franklin Ave.
3) Penn Ave.
4) Nokomis Blvd.

(Images and maps showing recent paving and restriping projects in Hennepin County.)
Operations – Preservation Plus Projects
Construction – Major Projects
LRT – Station Area Plans
Other Items / Issues

- Counting technologies – monitoring the use of improvements
- Maintenance responsibilities – especially winter maintenance
- Crosswalks and Trail Crossings
- Striping – how to remove old stripes, create a clean surface
- Propensity to minimize all dimensions at the same time

Contact Information

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Concerns with regard to combining minimum roadway design components

**Standard Automobile**

- 10-foot Road Lane
- 5-foot Bike Lane
- 7-foot Parking Lane

**Auto Essential Manoeuvering Space**

**Notes & Assumptions**
- Bicycle zone dimensions from Mn/DOT Bike Design Manual
- Auto dimensions from AASHTO Green Book
- Passing zone based on MN State Statute 169.13, Subd. 3 (Statute is unclear where clearance is measured to/from)
- Essential manoeuvring space for the auto was estimated as 2 feet based on reasonable supposition and observations

**Other Considerations**
- The conflict zone between the manoeuvring spaces of the bike and auto could easily have a greater overlap - the bike could be positioned closer to the lane of traffic, and the auto could be positioned closer to the bike lane.
- There will be a natural tendency for the auto to shy away from the roadway centerline in order to maintain a clear zone about equal to the estimated manoeuvring space. This again could increase the overlap of the auto & bike manoeuvring spaces.
- It is apparent that the State 3-foot passing law would likely be in violation if minimum roadway dimensions were used.