



## Alternative Analysis Update Optimization of Alternatives

August, 2012

*The Gateway Corridor Commission initiated a "Transit Alternatives Analysis" (AA) study in Fall 2010, looking at the I-94 corridor from downtown Minneapolis to Eau Claire, Wisconsin. The AA is the first step in determining the best transit mode (light rail, commuter rail, bus rapid transit or express bus) and route alternative for transit service in the corridor. The study includes projected ridership, station stop locations, and estimated cost to build, operate and maintain. The study will help address issues of congestion, potential economic development/revitalization, and social and environmental impacts. A Locally Preferred Alternative (LPA) or alternatives will be identified at the end of the study.*

### Background

Eight alternatives for improving transit in the Gateway Corridor were evaluated, ranked and presented to the public in March/April 2012. The ranking (see table below) was based on both technical information and community impacts. Public and agency comments helped identify some changes that might increase the benefits and/or decrease the costs of some alternatives. Changes that were evaluated through this "optimization" process included slight changes to the design of the alternatives, changing or adding stations, and changing or reducing transit service frequency. The results of this evaluation will help lead to a decision on the best alternatives for the Corridor. This update summarizes the results of the first step in the optimization process.

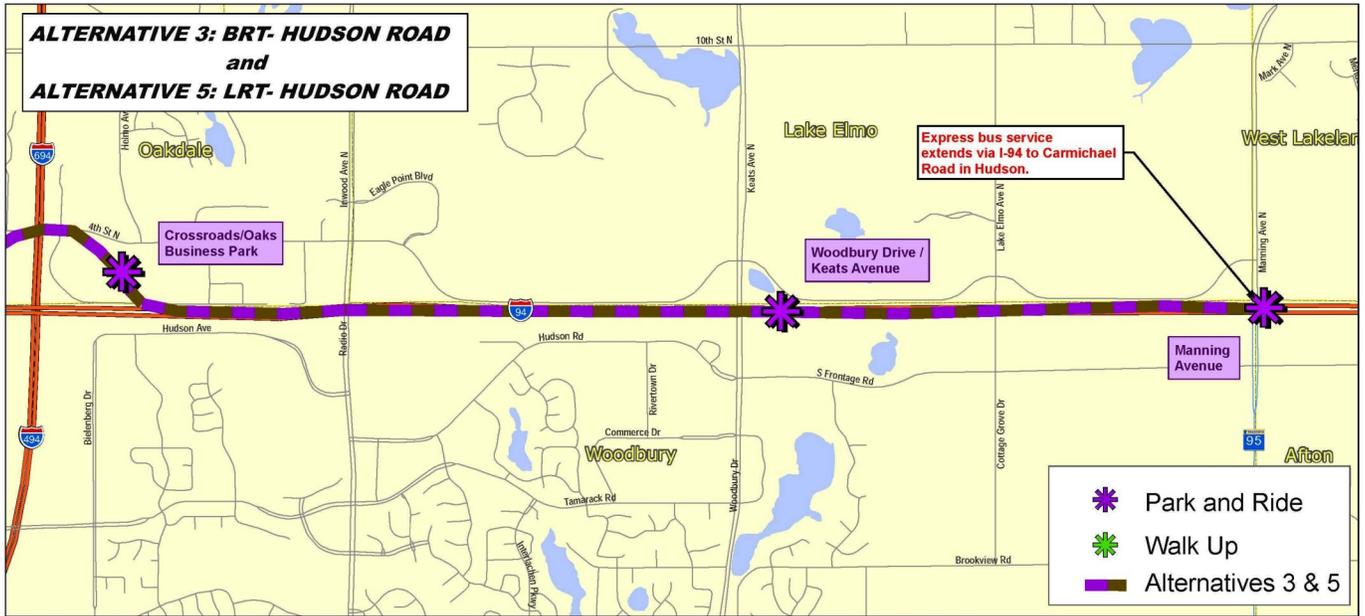
#### Ranking of Alternatives

Alternative	Alternative Description	Ranking
3	BRT along Hudson Rd/I-94 (Alt 3)	<b>HIGH</b>
8	BRT Managed Lane (Alt 8)	<b>HIGH</b>
5	LRT along Hudson Rd/I-94 (Alt 5)	<b>MEDIUM</b>
2	TSM - FTA requirement (Alt 2)	<b>MEDIUM</b>
6	LRT along St. Paul streets/Hudson Road (Alt 6)	<b>LOW</b>
4	BRT along St. Paul streets/Hudson Road (Alt 4)	<b>LOW</b>
7	Commuter Rail (Alt 7) <i>Alternative Dismissed by Gateway Corridor Commission on March 15, 2012</i>	<b>LOW</b>

## Modifying the Alignment of Alternatives 3 (BRT) and 5 (LRT)

There is strong local support for modifying Alternatives 3 and 5 to run on the south side of I-94 east of the I-494/I-694 system interchange. Both Alternatives 3 and 5 were shifted out of the I-94 median and are now located between I-94 and Hudson Road (see figures below). This alignment has more long-term potential for economic development and provides a better walking environment for passengers because it is not in the middle of the freeway. Additional analysis will be completed for this option.

### Alternatives 3 (BRT) and 5 (LRT) - Original Alignment



### Alternatives 3 (BRT) and 5 (LRT) - Modified Alignment

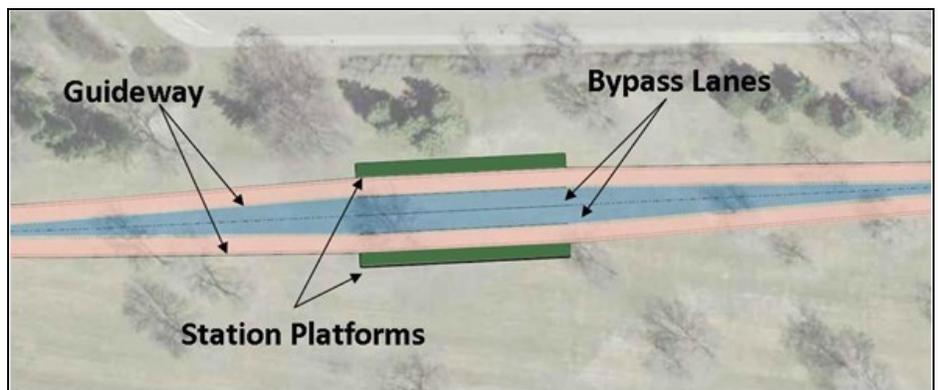


## Reducing Impacts along East 7<sup>th</sup> St, White Bear Ave and Hudson Rd

The width of the BRT and LRT alternatives along East 7<sup>th</sup> Street, White Bear Avenue and Hudson Road was re-evaluated because many concerns were expressed about the need to purchase property to build these options. The design would need to be narrowed at least 12 feet to have any meaningful impact on reducing property acquisition. The analysis determined that the transitway/roadway could only be narrowed by a maximum of 4 feet and still operate safely and properly, which was not enough to decrease property impacts. Therefore, these changes will not be incorporated into the alternatives.

## Adding BRT Bypass Lanes at Stations

Adding BRT bypass lanes at the BRT stations, as shown in the figure below, allows express buses to use the BRT lanes without stopping at the stations. This improves transit travel time for express buses and increases ridership on the BRT lanes. There is only a slight increase to construction costs. BRT bypass lanes will be incorporated into BRT Alternative 3. They are not included in BRT Alternative 4 because express buses cannot go faster on the local streets and because additional right-of-way would be required to build the bypass lanes.



## Shortening BRT and LRT Lines

Questions were raised about the impacts to cost and ridership if the LRT and BRT options ended at Radio Drive instead of Manning Avenue. Ending the BRT and LRT alternatives at Radio Drive would decrease cost but would also decrease ridership. Ending the BRT Managed Lane alternative at Manning Avenue rather than the St. Croix River would decrease cost but would not decrease ridership. All alternatives will, therefore, end at Manning Avenue with continued bus connections to Hudson.

## Changing Transit Service

Two options were evaluated for reducing transit operating costs for the Gateway Corridor alternatives:

- How often the train or bus runs outside the morning and afternoon rush hours was reduced from every 15 minutes to every 30 minutes. This substantially reduces operating and maintenance cost while only slightly decreasing ridership because nearly all riders use the bus or train during the rush hours. The operating plan will continue to be evaluated and refined during future planning processes.
- The express bus service from Eau Claire to the Twin Cities, referred to as W-100 in this study, had moderate ridership but high operating cost due to the long distance traveled. Removing this service reduces both capital and operating cost significantly.

## Adding Stations

Comments by the public and local communities led to considering three changes in station locations:

- **Landfall Station** – A station will be added at Landfall for Alternatives 3 and 5 (it is already included in Alternatives 4 and 6) because it increases ridership without significantly increasing cost.
- **Radio Drive Station** – Adding a station at Radio Drive to Alternatives 3 and 5 would increase costs slightly but would not increase ridership because most of the ridership at this station would be attracted away from other stations. Because of this, a Radio Drive Station will not be added to Alternatives 3 and 5 but may be reconsidered later in the planning process.
- **White Bear Avenue and McKnight Stations** – Because ridership was low at the proposed McKnight station in Alternative 8 (BRT Managed Lane), moving the White Bear Avenue and McKnight Stations for the BRT Managed Lane alternative east to Ruth and 3M, respectively, will undergo additional analysis.



## Next Steps

The next step in the optimization process will be to gather final ridership and cost data for modified Alternative 3 (BRT along Hudson Road/I-94), Alternative 5 (LRT along Hudson Road/I-94), and Alternative 8 (BRT Managed Lane). Alternatives will be evaluated again in order to determine which alternatives will provide the best solutions for the Gateway Corridor. It is anticipated that results will be available in Fall 2012 and the recommended alternatives to be carried forward will be identified at that time.

## Additional Opportunities for Input

The Gateway Corridor Alternatives Project Team can present more information about the Alternatives Analysis project. Contact us if your neighborhood association, educational institution, community organization or business group is interested in learning more. Your feedback will provide the Gateway Corridor Commission with valuable insights about your community needs and desires. Your input will help make a final recommendation on the best transit options for the corridor.