



MICRO OR MACRO DESIGN?

The challenge of environmentally
sound and sustainable ferry design

*By Hendrik F. van Hemmen
Photos by the author*

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1. Flexibility, as ferry terminals can be shifted and moved as needed and, depending on traffic loads and system destinations, an MT may be shunted to one ferry terminal one day and the next terminal on another day
2. Removal of chokepoints. Instead of crossing with one artery, there are many entry points and arriving ferries can be shunted into the system at low-traffic density points
3. Redundancy. Ferries can be added and removed and there is no critical component system loss if one component drops out
4. Even assuming that MT rideshare ferries will compete against MT rideshare bridge/tunnels, the overall shorter driving distances for ferries will offset the additional energy needs for the ferries
5. Because both the ferry and the bridge/tunnel systems will need passenger resorting (transfer), the door-to-door time for ferries will probably be lower as long as sufficient system densities are achieved.

This system shows that, if properly designed, transportation systems with ferries may be more attractive and more efficient on a macro system level than fixed bridges or tunnels. While on the micro analysis level, the ferry is not the most efficient component, as part of a macro system it is very attractive—not just to the rider,

but also from an environmental efficiency point of view and from a sustainability point of view.

As NAMEs, we cannot predict the future. But the presence of water on our Earth and the presence of navigable water in many urban centers will almost certainly include ferries in the design of optimized transportation systems. It is our job to remain quick on our feet to provide highly effective solutions incorporating all available technologies. It also would not hurt to speak up when we note that our country's future is staked on high-cost infrastructure projects such as high-speed rail, to which we may be married for generations to come whether we want to be or not. MT

Hendrik F. van Hemmen is president of New Jersey-based Martin, Ottaway, van Hemmen & Dolan, Inc.

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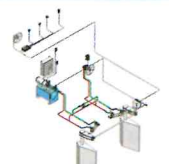
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