

## **Parking Structures vs. Rapid Shuttles**

MTC could develop a policy requiring that **new** parking structures not be subsidized. The revenues from a parking structure should cover its full cost, including land cost, planning approval process, design, contract construction cost, interest on loans, operating costs, charge collection costs, and indirect congestion, accident, and pollution costs. If a parking structure can be paid for by user charges, MTC should condition construction on charging full cost to the users. If projected real economic demand is too low to cover the full economic costs, the structure should not be built. **Existing** structures could collect parking charges based on market demand. Collection of one dollar from vehicles exiting between 3 pm and 7 pm could be a minimum.

**Parking structure opportunity costs** have never been studied. Qualitative and quantitative analysis is needed of the value of alternative residential development in the same space (capital investment, return on investment), improved viability of commerce, City fiscal revenues from purchases by residents, use of funds proposed for the structure to be used instead for access to BART (such as a rapid shuttle), decrease in traffic on streets around the station in the TOD, increased BART ridership, increased health and safety, and increased pedestrian amenity. MTC should develop a capability to advise local governments on these and related issues, advancing the parking policy study already concluded.

### **Rapid Shuttle**

Rapid shuttle is a term of art defined as a small bus shuttle system having the following characteristics:

1. **Basic characteristics**
  - a. **Short distance** to reduce costs and increase frequency: It serves distances short enough for two or three shuttles to maintain 10 minute headways or better, whatever is necessary to operate as an extension of BART service.
  - b. The service must be fast and frequent (more detail below).
  - c. **Existing parking.** Use existing parking to reduce costs and liabilities. It takes advantage of unused parking along major routes to the station. The owners of the parking negotiate agreements to allow BART parking (more detail below).
  - d. **Ecopass.** The shuttle is free to most riders, who get shuttle passes from the owners of property (more detail below)
  - e. **Parking charges.** The shuttle cannot compete with free parking. The more expensive the parking, the greater the ridership on the shuttle, within the pool of available riders. Market rate parking charges may be enough, but charges to cover land, capital, and operating would be a better basis for judging elasticity and understanding the economics.
2. **Defining the goal.** The rapid shuttle initially planned to meet **the parking demand it is designed to replace.** If the South Hayward garage has 910 spaces, the shuttle might be required to provide 1,000 or so accesses. The shuttle should not be held to a higher standard than the structure.

3. Organization. Rapid shuttles are **run by** and for the entities served, not transit agencies.
  - a. Generally, a shuttle should be run by the city in which it operates, with a citizen committee and a part-time manager who oversees the RFP (Emeryville, San Leandro, Union City).
  - b. Any large entity may run a shuttle, such as an airport, university, large development, or downtown improvement district
  - c.
  - d. The entity running the shuttle does not operate it directly, but by **using an RFP** for a private operating, renewed after a period of years. The entity is likely to have an employee part of whose time is used to manage the contractor, the public, and the RFP process.
  - e. An RFP **establishes the details** of area and route served, hours and frequency, ways to adjust service to respond to demand or more financial support, performance requirements, and incentives and penalties for performance.
  - f. RFPs are the best way to keep **costs under control**. The low bidder gets the work.
  - g. **Coordination of sponsors:** A Joint Powers agreement could cover more than one city. A rapid shuttle may also be sponsored by a city, by a large development, by an employer, university or other large institution, or by some other agency. The operating entity should have an MOU or JPA to work with supporting entities serving the same corridor. For example, the City of Hayward could oversee an RFP system supported by development requirements along Carlos Bee Blvd., Mission Blvd., and downtown, by a large development on the old quarry and by CSU Hayward.
4. Capital costs.
  - a.
5. Capital revenues. The capital cost can be financed by
  - a. public works requirements paid by developers,
  - b. public sources such as Proposition 1C Infill Infrastructure bonds for transit linkages, or
  - c. any property wanting to buy into the system to get free rides for the property.
  - d. 1c
  - e. class pass based on student parking fees.
6. Operating costs
  - a. The RFP covers the operator; operating costs are now about \$60 per bus revenue hour.
  - b. There may also be costs to the shuttle for use of parking owned by others. The operating entity may pay a fee for the use of parking spaces, based on period inventory of probable users (park before 10 am, stay all day, park close to shuttle boarding) and some estimate of how often the parkers shop in the store.
7. **Operating revenues**
  - a. **Any sources** eligible not competing with existing services should be considered but not be expected to be significant.
  - b. **New development.** All new development would be required to have durable monthly

- obligation to allow land users to have a free pass.
- c. **Employers.** Employers would negotiate a durable monthly payment obligation that would allow all their workers to have a free pass, with adjustments for the number of workers.
  - d. **Stores.** Stores would negotiate a durable monthly payment obligation that would vary with their gross revenues and allow them to give their customers a free round trip pass, a day pass, weekly pass, or monthly pass. The payment would be adjusted depending on how much of the clientele was also covered with other free passes.
  - e. **Residential Rentals.** Apartments and other rentals would negotiate a durable monthly payment obligation that would allow all their tenants to have a free pass.
  - f. **Homeowner associations.** Condos and other HOAs would negotiate a durable monthly payment and include a cost in the monthly dues and all residents would have a free pass.
  - g. **Homeowners.** A homeowner could negotiate a durable monthly payment obligation and get free passes for residents. A city might facilitate a vote by a block or neighborhood to assess itself for free service, though this might require new state law.
  - h. **Cities.** Cities could contribute a monthly amount stipulated in the RFP and collect the funds from parking on public streets and lots.
  - i. “Durable” means recorded as a “**fixed charge** or special assessment” on the property tax, which some ability to opt out, for example, with five years advance notice.
  - j. In addition to the above, or as an alternative, operating cost can come for the most part from a Special Assessment District covering the benefitted area. (My property tax statement shows 11 special assessments ranging from \$1.74 to \$48.)
  - k. Some operating costs come from ticket sales using Ticket Vending Machines at stops.
8. **Efficient, fast, frequent service.**
- a. **Efficiency.** In addition to short distances, the service should be structured around demand in order to compete and for efficiency. More service may be needed during peak hour. The shuttle headways should at least meet BART headways in the major direction of travel. The frequency can be reduced to avoid low ridership or to meet BART headways of 15 minutes or more. The level of service should be adjusted based on demand from riders, not the convenience of the providing agency.
  - b. The shuttle on ten minute or longer headways should have hard-wired meets with the trains, based on information to the shuttle driver from central control, and with an ability to hold up an on-time train by 30 seconds if needed.
  - c. The shuttle stops at the station entrance and closer than any BART parking, saving time a car driver would take to drive around in the structure, hunt for a space, park, and walk to the entrance, gaining a time advantage of one (close, vacant spaces) to seven minutes (far, more hunting, longer walk in).
  - d. The shuttle is powered enough to accelerate like a car and to move with other traffic.
  - e. It has wide doors that open at the level of the bus floor.
  - f. It serves shuttle stops that are raised to be level with the bus floor.
  - g. It uses electronically guided docking to get very close to the stops.
  - h. It uses GPS traffic signal control for signal preference to stay on schedule.
  - i. It uses right lane preference to stay on schedule.
  - j. It runs on good quality pavement with minimal camber and with priority enforcement of

traffic violations that could slow the bus.

- k. It uses proof-of-purchase fare collection; drivers do not collect fares. Collection emphasizes education, with punitive measures only for few possible repeat offenders.
- l. It uses maneuverable 30 foot buses for 30 passengers unless higher ridership justifies 40', but, whatever the size, it must be nimble in traffic.
- m. It is powered, or potentially powered, by an alternative to fossil fuel or by reduced use of fossil fuel, such as diesel hybrid, a fuel using reprocessed vegetable oil, or electricity.

Precursors of rapid shuttles already exist in airport parking lots and park-and-ride airport lots, in the Emery-Go-Round, San Leandro's shuttle to employment areas, and Union City Transit. My research shows excellent potential for Hayward BART to CSUEB Hayward and from Mission-Tennyson to South Hayward BART.

The political problem facing BART, like any other public agency, is the difficulty of not spending money in hand regardless of policy merits. In this unusual case, however, the opportunity is there to spend the money on better access.