



Transportation Commission

CONSENT CALENDAR
September 20, 2005

To: Honorable Mayor and
Members of the City Council

From: Transportation Commission

Submitted by: Rob Wrenn, Commission Chair, Transportation Commission

Subject: Environmental Review of Proposed Location for Ferry Service

RECOMMENDATION

That Council ask the Water Transit Authority (WTA) to proceed with its environmental review of ferry service for Berkeley in conjunction with its long range plan to expand ferry service in the San Francisco Bay Area as follows: Environmental review should include all potential terminal sites in Berkeley (University Avenue and Gilman Street) and Albany (Buchanan Street); the scope of environmental review should include analysis of the transit market, including reverse ridership; and the ferry service plan should be consistent with the Transportation Element of Berkeley's General Plan, which calls for:

- o Ensuring transit, shuttle, and bicycle connections are in place before beginning ferry service to minimize parking demand and traffic caused by people driving to the ferry service.
- o Ensuring that public funds for ferry service will not result in a reduction of public subsidies for existing transit services.
- o Ensuring that ferry services are less environmentally detrimental than the automobile, and advocating for low-emission, environmentally sensitive ferries.

FISCAL IMPACTS OF RECOMMENDATION

None at this time. If Berkeley decides to endorse the proposed plan, it may have to commit to investing in terminal construction and mitigation costs.

CURRENT SITUATION AND ITS EFFECTS

The WTA completed its programmatic Environmental Impact Report on the effects of an expanded Bay Area ferry system in 2004. WTA proposes adding a Berkeley-San Francisco route to the ferry system in San Francisco Bay as part of its 10-year expansion plan, and has identified two potential Berkeley sites—one at Gilman Street, one at the Marina--but not yet studied them in detail. Draft environmental documents of these specific ferry terminal site proposals are scheduled to be ready for public review in the fall of 2006.

BACKGROUND

The Transportation and Waterfront Commissions hosted joint public workshops on November 6, 2004 and May 12, 2005 to hear presentations by the WTA.

On June 8, 2005, the Waterfront Commission discussed this item and recommended the following action:

Endorse pursuing ferry service for Berkeley and approve the Water Transit Authority's proposed timeline for establishing a Berkeley to San Francisco Ferry Service. That WTA proceed with environmental review and detailed site selection for a terminal location that includes all potential sites including Berkeley and direct city staff to provide support for the analysis dealing with parking and traffic impacts. Concurrent with the environmental review, direct staff to begin a process to amend the Berkeley Marina Master Plan to reflect ferry service and support, cooperate with WTA in obtaining funding for the development of a ferry terminal. There was a motion to accept Commissioner Smith's recommendations M/S/C (B. Smith/Orman) ayes- unanimous.

Funding is assured from Regional Measure 2 (bridge tolls):

- o \$12 million for vessel capital
- o \$3.2 million/year for ferry and connecting bus operations (in perpetuity from RM2 funds)
- o Fare box revenue

RM2 funds are conditioned upon:

- o Parking and land-side feeder connections are sufficient to support ridership
- o Entitled by 2010 or funds revert to ferry service at another East Bay site
- o Draft EIR completed within two years of Notice of Preparation.

Potential funding could also come from Federal Grants and transit impact fees. There is considerable background material available on the WTA website: www.watertransit.org.

The Transportation Commission also considered information provided at its regular June 16 meeting in a Memo by Ann Smulka, "Summary Report on Proposed Berkeley-San Francisco Ferry Service" (Attachment 1), and an email Memorandum from Waterfront Commission Chair Paul Kamen dated June 14, 2005 (Attachment 2).

After discussion of this item, the Commission took the following action:

It was MSC (Smulka/Landau) Unanimous, that the Transportation Commission recommends that Council ask the Water Transit Authority (WTA) to proceed with its environmental review of ferry service for Berkeley in conjunction with the WTA's long range plan to expand ferry service in the San Francisco Bay Area. This review should include all potential terminal sites in Berkeley and Albany. The Transportation Commission also recommends that the scope of the environmental review should include analysis of the transit market, including reverse ridership. The ferry service plan should be consistent with the Transportation Element of Berkeley's General Plan, which calls for:

- A. Ensuring transit, shuttle, and bicycle connections are in place before beginning ferry service to minimize parking demand and traffic caused by people driving to the ferry service.
- B. Ensuring that public funds for ferry service will not result in a reduction of public subsidies for existing transit services.
- C. Ensuring that ferry services are less environmentally detrimental than the automobile, and advocating for low-emission, environmentally sensitive ferries.

Absent: Syed, Wrenn

RATIONALE FOR RECOMMENDATION

The Transportation Commission felt the City should ask the WTA to move forward with its plans to perform an environmental study of all three sites without stating a preference, and use the resulting information as the basis for a decision.

ALTERNATIVE ACTIONS CONSIDERED

The Commission considered arguments in favor of making an early site selection prior to completion of the environmental study on multiple sites, but unanimously preferred to reserve judgment until more environmental information is available.

CITY MANAGER

The City Manager concurs with the content and recommendations of the Commission's Report. By supporting an Environmental Impact Study to be conducted by the WTA, the City of Berkeley is not making any financial commitment to the project. Numerous fiscal issues related to capital and operational costs of a Berkeley-San Francisco ferry service are of concern to the City, and these will be reviewed by the WTA in the context of the EIS, and reported to the City at a later date.

CONTACT PERSON

Peter Hillier, Commission Secretary, Public Works/Transportation, 510-981-7010

APPROVED

Rob Wrenn, Commission Chair, Transportation Commission

Attachments:

- 1: Ann Smulka Memorandum: "Summary Report on Proposed Berkeley-San Francisco Ferry Service, dated June 15, 2005
- 2: Paul Kamen email Memorandum "RE: TC Ferry Service Report for Sept 20 Council", dated June 14, 2005

MEMORANDUM

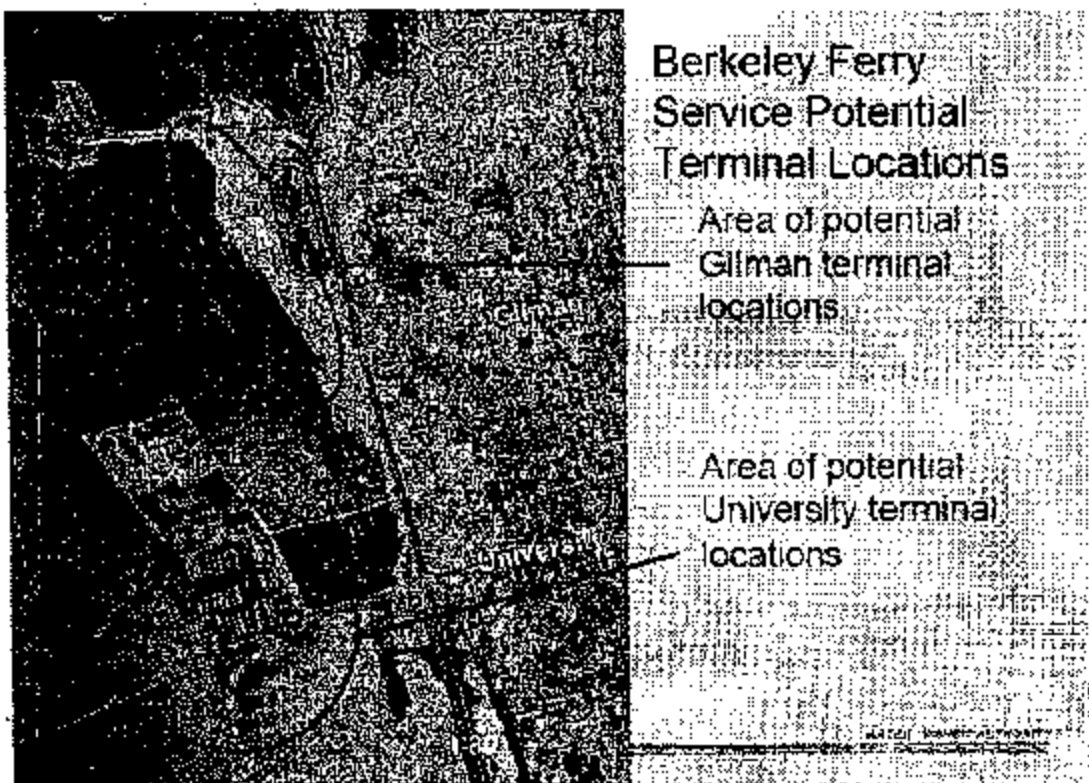
To: Berkeley Transportation Commission
From: Ann Smulka
Date: 6/15/05
Re: Summary Report on Proposed Berkeley – San Francisco Ferry Service

This memo is intended to facilitate discussion by Berkeley's Transportation Commission about the Water Transit Authority's (WTA) proposal to add a Berkeley – San Francisco route to the ferry system in San Francisco Bay. It is an *objective summarization* of the information presented by the WTA at the Waterfront and Transportation Commissions' Joint Workshops on Ferry Service in Berkeley on November 6, 2004 and May 12, 2005. It also includes information from the discussion at the June 8, 2005 Waterfront Commission meeting and email exchanges with Waterfront Commissioners Paul Kamen and Brad Smith.

The Water Transit Authority (WTA) has proposed adding ferry service between Berkeley – San Francisco as part of its 10-year plan to expand the ferry system in the San Francisco Bay Area. WTA needs the endorsement of Berkeley's City Council in order to move forward with its environmental study and implementation plan. If Berkeley is not interested, then funds planned for Berkeley ferry service will be diverted to another East Bay site.

The Transportation Commission should make its recommendation to Council soon to enable the WTA to proceed with or make changes to its plan in a timely manner.

Two potential terminal sites have been identified for Berkeley: University Ave. and Gilman St. A third site, at Buchanan St. in Albany, is also under consideration.



WTA forecasts Berkeley – San Francisco ferries will serve between 1700 – 1800 trips per day by the year 2025. Their analysis predicts passengers will come from those who would otherwise drive, not from BART or AC Transit riders, and thereby relieve some congestion on the highways.

The planning, design, and construction phase would run from 2006-2009. Service would start in 2010, assuming the availability of funds, permits, local support and commitments.

Partial funding for implementation of Berkeley – San Francisco ferry service will come from Regional Measure 2 (the Bridge toll increase which passed in 2003): \$12 million for acquisition of 2 vessels and \$3.2 million/year subsidy for ferry and connecting bus operations (20% of that is for buses).

WTA estimates \$10-20 million will be required for terminal construction, bus purchase, and mitigations (based on costs for terminal in S. San Francisco). Federal and State support is likely, but not assured.

WTA is not planning to ask cities to help fund the operating costs. WTA believes Federal money will fill most of the holes and that capital costs to the City of Berkeley will be "minimal" (Steve Castleberry, WTA, at May 12 Waterfront Commission meeting).

Background

WTA's charter, mandated by California legislation, is to develop a Bay Area water transit implementation and operations plan (IOP). The plan's objective is "to increase Bay Area regional mobility and transportation options by providing new and expanded water transit services and related ground transportation terminal access in the San Francisco Bay Area."

WTA proposes the expansion because

- Bay Area highway system is unable to meet current and future demand. Bay area growth projections for the next 25 years include: 1.2 million new Bay Area jobs and a 1.4 million population increase; a 30% increase in region-wide travel; 40% increase in transbay travel.
- Transbay BART and bridges are at capacity. In 2002, there was an average of 287,000 vehicle trips across the Bay Bridge. The Metropolitan Transportation Commission (MTC) projects that number will increase to 425,000 in 2025.
- It is a way to cope with accidents, natural disasters, and other travel disruptions.

WTA's 10-year plan recommends new ferry routes to Berkeley, Richmond, Treasure Island, Antioch/Martinez, Hercules, South San Francisco, and Redwood City. It also recommends expansion of existing routes serving Vallejo, Sausalito, Larkspur, Oakland, Alameda, and Harbor Bay Island. WTA's vision is to transform today's system of six independent, uncoordinated ferry routes on the Bay into a 13-route integrated system with better connections, cleaner ferries, and room for more bicycles.

Viewer Opinion Poll Results

WTA commissioned a public opinion poll of 400 randomly selected voters in Berkeley (and 200 in Albany). The results indicate there is public support for ferry service in Berkeley (margin of error +/- 4%):

	<u>Good Idea</u>	<u>Don't Know</u>	<u>Bad Idea</u>
Establish ferry service in your area	75%	11%	15%
At University Ave. location	75%	5%	21%
At Gilman St. location	58%	13%	29%
At Buchanan St. location	45%	28%	28%

The poll did not ask respondents if they would use the ferry service because transit models are considered to be better predictors of actual use than opinion surveys.

Ridership Analysis (from 11/06/04 workshop presentation and Q&A session)

WTA's analysis used census tract data to find out how many people commute to work in downtown San Francisco. Ridership was looked at geographically, not by income level. The model compared commute time via ferry versus other modes. It assumed that commuters would choose the faster or cheaper commute option and that there would be "penalties" for longer wait times. The model was validated using actual service and ridership changes in Larkspur and Richmond services. The analysis shows:

- 1700 to 1800 trips/day forecast for 2025
- 58% commuters, 44% non-commuters
- 10-20% forecast to be commuting to Berkeley
- 90% of riders will be walking to jobs in the Financial District
- If parking fee is removed, ridership increases 20%
- 75% will access the terminal by car
- Parking demand for 300-400 spaces
- Catchment area: Emeryville, N. Berkeley, Albany, Kensington
- A small number will connect to MUNI to reach SOMA and Civic Center destinations
- If parking fee is added to the ticket price, ridership decreases

Ridership analysis was based on these assumptions:

- Peak hours service: every 30 minutes
- Price: \$3.50 one-way
- Parking price: \$2.00
- Off-peak hours service: every 60 minutes
- Ferry travel time: 28 minutes
- ABAG land use data projections for 2025

At this price, the rider subsidy would be about \$4.00 per trip, which is in the same range as new service by other modes. AC Transit's current subsidy per trip is \$2.00, but it is expected to increase to \$4.00.

Cost Estimate for Berkeley Service

WTA's cost estimate:

- \$12 million capital to purchase 2 vessels (that use "clean marine" technology)
- \$10-20 million for terminal construction, bus purchase, and mitigations
- \$3.2 million/year subsidy for ferry and connection bus operations

Paul Kamen, Naval Architect and Chair of Berkeley's Waterfront Commission, believes the costs could be lower if Berkeley uses existing infrastructure at the Berkeley Marina (5.6 miles by water to SF) and plans for smaller and slower vessels (149 passengers; 18 knots; transport time 20 minutes) than those proposed by WTA (220 passengers; 25 knots). (See P. Kamen correspondence dated 6/14/2005.)

Funding Sources

If the Berkeley decides to endorse the proposed plan, it will have to commit to investing in terminal construction and mitigation costs.

Assured funding from:

- Regional Measure 2 (bridge tolls)
 - \$12 million for vessel capital
 - \$3.2 million/year for ferry and connecting bus operations (in perpetuity from RM2 funds)
- Farebox revenue

RM2 funds conditioned upon:

- Parking and land-side feeder connections are sufficient to support ridership
- Entitled by 2010 or funds revert to ferry service at another East Bay site
- Draft EIR completed within 2 years of Notice of Preparation

Potential funding from:

- Federal Grants, transit Impact fees

Site Selection

Neither the Gilman St. nor University Ave. sites have been studied in detail by WTA. At the November Workshop, WTA said the Gilman location has potential issues with dredging and with wake impacts on birds and the shoreline; the University location has potential parking and access impacts. If there is no clear mandate for a particular site during the scoping meetings, then WTA will study all sites equally (including Buchanan Street in Albany).

Correspondence from Waterfront Commissioner Brad Smith shows that Waterfront Commission meeting minutes reflect the following:

June 10, 1998: "Two representatives from MTC presented a preliminary report on the feasibility of establishing ferry service from the foot of Gilman Street to San Francisco. The study looked at three sites in Berkeley (the Pier, the old ferry dock in the Marina, and the site at the foot of Gilman near the race track). For a number of reasons, the study determined that the Gilman St. site offered the best opportunity."

August 31, 2001: "Both the Gilman site and the Berkeley Marina have been mentioned as potential terminal locations. Has the site been determined? Steve Castleberry/WTA answered that both sites may be researched, however the Gilman site appears to be the most realistic from previous studies."

Note that when the above meetings took place, East Shore State Park and the proposal for the Gilman Street Playing Fields did not exist.

The Sierra Club and Audubon Society are opposed to locating the terminal anywhere other than University Ave. Others advocate that WTA study all sites equally, that it is too premature to recommend a site location until the EIR is completed.

WTA Evaluation and Action Schedules

Task	at Nov. 6, 2004 Workshop
Joint Commission Meeting/ pre-scoping	11/6/2004
Additional technical studies	11/2004-2/2005
Joint Commission Meeting/pre-scoping	3/2005
Commission/Council Direction	03/2005
Environmental Document (ED) Notice of Preparation	4/2005
Environmental Document Scoping	5/2004 - 8/2005
Technical studies	7/2005 - 12/2005
Prepare draft environmental documents	1/2006 - 6/2006
Public review of draft	7/2006 - 8/2-06
Response to comments / Final ED	10/2006 - 12/2006
Notice of Determination / ROD	1/2007

At the May 25 Joint Workshop, WTA's Manager of Planning and Development presented an additional action plan timeline:

Action	Date
Commissions discuss and select terminal site	5/2005
Berkeley updates city plans to include selected terminal site	1/2006
EIR for service and terminal - WTA consultant	6/2005 - 1/2007
Terminal design - WTA consultant	6/2006 - 6/2008
Permitting - WTA, Berkeley, other agencies	1/2007 - 6/2007

Berkeley Waterfront Commission

At its June 8 meeting, the Waterfront Commission passed a motion (8-0, one absent) that endorsed pursuing ferry service to Berkeley. The text is quoted below:

Recommend that City Council take the following actions to proceed with the establishment of Berkeley - San Francisco ferry service:

1) Endorse pursuing ferry service for Berkeley and approve the Water Transit Authority's proposed timeline for establishing a Berkeley - San Francisco ferry service:

Ridership analysis	Jul 04 to Sept 04
Wake wash analysis	Aug 04 to Oct 04
Joint commission meeting/pre-scoping	Nov 8 04
Additional technical studies	Nov 04 to Feb 05
Poll	Apr 05
Joint commission meeting/pre-scoping	May 05
Commission/Council direction	Jul 05
Environmental consultant selection	Aug 05 to Sept 05
ED Notice of preparation	Oct 05
ED Scoping	Nov 05 to Feb 06
Technical studies	Feb 06 to Jun 06
Prepare Draft ED	Jun 06 to Dec 06
Public review of draft ED	Jan 07 to Mar 07
Response to comments/final ED	Apr 07 to Jun 07
Notice of determination/RCD	Aug 07
Marina Master Plan update (if required)	Jul 06 to Apr 07

2) Request that WTA proceed with environmental review and detailed site selection for a terminal location that includes all potential sites in Berkeley and Albany and direct City staff to provide support for the analysis of parking and traffic impacts.

3) Concurrent with the environmental review, direct staff to begin a process to amend the Berkeley Marina Master Plan to reflect ferry service.

4) Support and cooperate with WTA in obtaining additional funding for developing the ferry terminal.

June 14, 2005

Email from Paul Kamen, Chair, Berkeley Waterfront Commission

Paul Kamen here, from the Waterfront Commission.

I see you have only allowed 30 minutes for the ferry item at your meeting this week, so I thought I'd provide some background info and some personal opinion on various possibilities for the Berkeley ferry.

First, there is some new material on my website (<http://www.well.com/user/pk/waterfront/Ferry/index.html>) that may be of interest, especially the parking analysis that I present as an alternative to the one done by WTA. Also a preliminary evaluation of the Doubletree hotel site, a fourth possible "University Avenue" location that WTA should consider in their environmental and economic review.

To restate my basic position: The ferry is probably not the most cost-effective way to ease traffic congestion or improve air quality. However, in a regional environment in which the sensible solutions seem to evade implementation, ferries may still play an important role. Not as a large-scale solution to the above problems, but as a valuable public amenity that improves the quality of life for everyone in Berkeley, even if they only ride the ferry once or twice a year.

The commuter market is the foundation that will make the service viable, and this is what the economic analysis is necessarily based on. Still, there is a broader vision of a ferry service that serves those once-a-year riders in addition to seamlessly accommodating bicycles and wheelchairs. Maybe even people with dogs (assuming large outside decks) and tourists.

To make it work, I am advocating several modifications to what WTA has suggested so far:

1) The speed needs to be low. It is only 5.6 miles by water from the Berkeley Marina to San Francisco, and at 18 knots this distance is covered in less than 20 minutes. WTA has begun a process to acquire two new ferries with a service speed of 25 knots, and this may be excessive for this route. Remember that power to move through water is proportional to speed cubed (and therefore energy per mile is proportional to speed squared). Emissions vary along with power, so the first way to make a ferry energy-efficient and clean is to choose the shortest possible route and design for appropriately reduced speed.

2) Keep the scale of the service within the limits of the marina's infrastructure. Parking is the limiting factor - see my parking analysis at <http://www.well.com/user/pk/waterfront/Ferry/index.html>.

The marina can probably absorb 300-400 weekday cars at any of the proposed sites without significant negative effects on existing businesses, organizations, berthers and park users. This suggests a passenger volume defined by one 149-passenger ferry every hour during morning and evening commutes.

3) Minimize subsidy by keeping the ticket price relatively high. This is important for several reasons: First, it matches the demand for the ferry service to the relatively small scale that the marina can support. Second, as long as the per-trip subsidy is no greater than for other modes, public funds are not wasted on a relatively inefficient mode of transit. And third, it leaves room in the price structure for deep discounts to those arriving by bike or bus, thereby providing the same disincentive to drive as a high parking fee.

4) Minimize the investment in the terminal facility. Fast boarding is critically important (see my SNAME paper, also at <http://www.well.com/user/pk/waterfront/Ferry/index.html>), but if the expense of a terminal is borne by relatively few passengers, the subsidy per ride must necessarily be high. Keeping terminal costs low is especially critical if the relatively small scale of service is going to be viable.

Terminal development is the one component that does not have an assured outside funding stream. Federal and State support is likely but not yet in place, and the City will have to fund at least a portion of the terminal costs.

Fortunately there is existing infrastructure that can keep terminal costs low (although these potential savings have not yet been reflected in WTA's initial estimates). Incorporating the terminal into the existing fishing pier is one option. Using the existing dock behind the Marina Doubletree Hotel is another.

This last option is a new one and is particularly attractive. There are already passenger vessels of considerably larger size (Hornblower dinner cruise boats) operating from that site, so facilities are nearly all in place. No new dredging and no breakwater construction. All it needs is a couple of long ADA-compliant gangways, a boarding float, some ticket machines and a rain shelter. Most importantly, the hotel management is enthusiastic about the ferry and wants to cooperate with the City and with WTA to make it happen. This is in sharp contrast to likely opposition (albeit shortsighted, imho) from H's Lordships restaurant near the other candidate sites. Improving business at the hotel will help the Marina Fund and send more room tax revenue uptown.

Operation from this existing facility could accelerate the timeline to an '07 startup instead of '09. The downside is that it probably adds 4-5 minutes of low-speed operation to the route, although this is not nearly as bad as the 8-10 minutes of delay that the old ferry pier in the southeast corner of the marina incurred.

Here is the motion that passed 8-0 (one absent) by the Waterfront Commission last week:

Recommend that City Council take the following actions to proceed with the establishment

of Berkeley - San Francisco ferry service:

1) Endorse pursuing ferry service for Berkeley and approve the Water Transit Authority's proposed timeline for establishing a Berkeley – San Francisco ferry service:

Ridership analysis	Jul 04 to Sept 04
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2) Request that WTA proceed with environmental review and detailed site selection for a terminal location that includes all potential sites in Berkeley and Albany and direct City staff to provide support for the analysis of parking and traffic impacts.

3) Concurrent with the environmental review, direct staff to begin a process to amend the Berkeley Marina Master Plan to reflect ferry service.

4) Support and cooperate with WTA in obtaining additional funding for developing the ferry terminal.

Note that the Gilman and Buchanan sites are still on the table. My own preference would have been to screen them out for very basic reasons of geography and economics (don't need an EIR to determine the relationship between time, speed, distance, power and cost, not to mention water depth). But since WTA has assured us that narrowing the selection now is not as important as they seemed to indicate at our joint meeting in May, the Waterfront Commission saw no reason to upset the Albany advocates.

I am also proposing a resolution by CESP, Citizens for East Shore Parks, which might be approved at their June 15 meeting:

CESP recommends that WTA:

1) Select the University Ave. site and proceed with environmental review and funding options on that basis.

2) Design the level of service so that no more than 400 parking spaces are required for weekday passengers.

3) Procure vessels for the Berkeley-SF route with a service speed no greater than 22 knots.

A few more thoughts:

The Berkeley Marina offers economic advantages for reasons other than shortest distance. While it is difficult and expensive to adequately serve the large suburban catchment area with feeder busses, the point destinations of downtown and U.C. lend themselves well to a U. Ave. shuttle. This will attract reverse commuters, and reverse commuters have an extremely positive effect on the economics of the system.

Reverse commuters also have no negative impact on our limited parking resource, and because they must necessarily use a non-automotive mode to reach their destination in Berkeley, they help support better transit service for everyone along the U. Ave corridor.

The SF Ferry Building is the natural hub for the small but important network of ferries on the Bay. Transfers to other routes will make Marin, South SF and other areas not well served by public transit accessible to everyone. With this hub only 5.6 miles away, and with considerable amounts of subsidy via the RM-2 bridge toll becoming available through the WTA, it would be a great loss to miss the opportunity to connect to this mode of transportation.

The Berkeley Municipal Pier is also the historical ferry terminal location, with scheduled ferries in operation continuously from about 1880 to 1956.

Finally, note that the ferries from Tiburon and Sausalito to SF are run by an unsubsidized private operator. This is possible because of the short routes and low speeds. Our market is not exactly the same, but the Berkeley route shares many characteristics with Tiburon and Sausalito, and they demonstrate that ferries can succeed at low subsidy levels that do not divert resources from other modes.

I would be delighted to meet with any of you at the marina to look at the possible terminal sites and discuss any of these and other issues in more detail.

Thank you for your attention.

Paul Kamen
Chair, Berkeley Waterfront Commission