

# **BRIEFING #1**

## **GOLDEN GATE BRIDGE SUICIDE DETERRENT STUDY**

### **PHASE 1 MIDPOINT BRIEFING ON PRELIMINARY FINDINGS**

The scope of work for the two-phased study includes preparing preliminary designs, conducting wind tunnel testing, preparing environmental documents, and soliciting public input.

#### **Midpoint Briefing - Phase 1 Wind Screening of Generic Deterrent Concepts**

Phase 1 began in late October 2006, with wind tunnel testing beginning in November 2006. The three generic concepts being wind tested include (1) horizontal nets, (2) adding to the existing railing, and (3) replacement of the existing railing with new taller railing. Design variations of three basic generic design concepts have been developed for use in analyzing wind response on Bridge movement, stability, and integrity, assuming both the presence of a median barrier and the absence of a median barrier.

The wind analysis is being undertaken to assist in identifying general design parameters that prove workable and those that won't work because they negatively impact the wind response of the Bridge. A report, due in May 2007, will identify general design parameters that prove to be acceptable from a wind perspective and which should be studied further in the full engineering and environmental analysis process to be undertaken in Phase 2.

#### **Midpoint Phase 1 Preliminary Findings - Generic Design Wind Tests**

- Railing heights ranging from 8 to 14 feet are being tested.
- Analysis is showing that the structure can not be very solid; early results indicate a 12% to 24% solid ratio (88% to 76% open).
- Some form of wind channeling appendage such as a "fairing" will be necessary - either on top of the railing or underneath the Bridge for any design option to prove workable; workable means that the design option doesn't cause wind problems for the Bridge.
- It appears based on tests thus far that workable options are possible for both building a new railing and adding to the current railing.
- A workable netting option has not been identified yet, but tests continue and many ideas are still being explored. It is evident that "fairings" will be needed with net options as well.
- To date, approx. 60 design variations have undergone wind analysis.

#### **Suicide Deterrent Study Milestones**

- May 2007: Phase 1 Wind Study Report released to the Board of Directors and the public.

- May/June 2007: Begin Phase 2 (18 months) which includes the full Preliminary Engineering/Environmental and Historical Preservation studies. Phase 2 includes detailed preliminary engineering and environmental analysis, including visual analysis, historical preservation evaluation, public outreach, and preparation of cost estimates.
- Late Summer 2007: Release Draft Environmental Document (Environmental Analysis/Initial Study) for public and agency review and input.
- Spring 2008: Release Final Environmental Analysis/Initial Study for public and agency comment.
- Spring 2008: Board Action.

### **Additional Background**

- March 11, 2005, the Board approved proceeding with environmental studies and preliminary design work for development of a suicide deterrent system with the understanding that the funds required to conduct the studies would come from non-District sources. These initial actions were authorized to enable the Board to ultimately determine whether to proceed with construction of a physical suicide deterrent system.
- April 22, 2005, Suicide Deterrent System Criteria Adopted by Board
  1. Must impede the ability of an individual to jump off the Golden Gate Bridge.
  2. Must not cause safety or nuisance hazards to sidewalk users including pedestrians, bicyclists, District staff, and District contractors/security partners.
  3. Must be able to be maintained as a routine part of the District's on-going Bridge maintenance program and without undue risk of injury to District employees.
  4. Must not diminish ability to provide adequate security of the Golden Gate Bridge.
  5. Must continue to allow access to the underside of the Bridge for emergency response and maintenance activities.
  6. Must not have a negative impact on the wind stability of the Golden Gate Bridge.
  7. Must satisfy requirements of state and federal historic preservation laws.
  8. Must have minimal visual and aesthetic impacts on the Golden Gate Bridge.
  9. Must be cost effective to construct and maintain.
  10. Must not in and of itself create undue risk of injury to anyone who comes in contact with the suicide deterrent system.
  11. Must not prevent construction of a moveable median barrier on the Golden Gate Bridge.
- June 28, 2006, a Request for Proposals for the Environmental Studies and Preliminary Design for a Suicide Deterrent System was released. On September 22, 2006, the District Board of Directors authorized executing an agreement for *Environmental Studies and Preliminary Design for a Suicide Deterrent System on the Golden Gate Bridge* with DMJM Harris in an amount not to exceed \$1.8 million. An additional \$200,000 was allocated for contingencies and staff support costs.
- Funding for the study came from: The Metropolitan Transportation Commission (MTC) provided \$1,850,000. The City and County of San Francisco provided \$100,000, the

County of Marin provided \$25,000, and the public and private citizen groups have provided \$28,700.

For more information on media coverage of the topic of suicide, contact American Foundation for Suicide Prevention, NY, NY, (212) 363-3500 or visit <http://www.afsp.org>.