Agenda Item No. 6.C.

To: Board of Directors
Meeting of November 18, 2005

From: Ewa Z. Bauer, Deputy District Engineer
Denis J. Mulligan, District Engineer
Celia G. Kupersmith, General Manager

Subject: **STATUS REPORT ON ENGINEERING PROJECTS**

## Recommendation

The following report is provided for informational purposes and no action is required.

## Summary

Phase II: Golden Gate Bridge Seismic Retrofit of South Approach Structures, Contract No. 99-B-5. This contract includes structural retrofit of the South Approach Viaduct (SAV), the South Anchorage Housing, Pylons S1 and S2, and the Fort Point Arch (FPA); relocation of various utilities; and retrofit of utility conduits along the south approach structures.

On May 11, 2001, the Board awarded the contract to the low bidder, Shimmick Construction Company, Inc./Obayashi Corporation, a Joint Venture, in the amount of $122,292,503. The Notice to Proceed was issued to the Contractor on June 4, 2001. Weekly construction meetings between the District and the Contractor are being held every Friday.

Most of the retrofit work at the South Anchorage Housing has been completed, except concrete strut construction and concrete finish work on the new shear walls, removal and reconstruction of the last section of the west wall (on hold pending completion of the pylon concrete cover), and installation of drainage and placement of surfacing inside the Housing.

Painting operations are proceeding throughout the FPA Deck Truss and Lower Arch. Most of the retrofit work in the FPA has been completed except for installation of the Emergency Dissipation Devices, the Arch bearing retrofit and the CCO No. 91 work at the Lower Arch.

The SAV new Tower 1, Tower 2, Tower 3, Bent S9, Bent S10, the Span 6/Pylon S2 interface and the San Francisco Abutment bearings replacement have been completed. Structural steel repairs and painting at the SAV, added to the contract by contract change orders, is proceeding.

The steel plating installation at Pylon S1 has been completed. Cleaning and coating the plating for corrosion protection is continuing at Pylon S1. Concrete cover installation on both the west leg and east leg of Pylon S1 is underway. The steel plating installation at Pylon S2 has been completed. Cleaning and coating the plating for corrosion protection is continuing at Pylon S2. Cover concrete installation at Pylon S2 is underway. Scaffolding and swing staging are being utilized around the legs of both pylons to access higher elevations.
Shop fabrication of structural steel members at XKT on Mare Island has been completed. Fabrication of

miscellaneous steel members continues at Mountain States Steel in Utah.

All CIDH piling and tie-down work has been completed.

Night work on the isolation deck joints at Pylons S1 and S2 above the Fort Point Arch has been completed. Night work continues on the sidewalk expansion joints, and at the SAV/Pylon S2 and San Francisco Abutment isolation joint.

Electrical/utility relocation work is continuing.

Meetings involving the District, the Designers and the Contractor are being held to facilitate efficient exchange of information to mutually resolve arising issues and to maintain a cooperative relationship to the benefit of the project. Management-level partnering meetings are held every three months.

On June 25, 2004, the Board increased the contingency by $6,765,000 to finance two CCOs covering repair and painting of steel members of the Fort Point Arch. On August 27, 2004, the Board increased the contingency by $6,250,000 to finance five CCOs covering repair and painting of steel elements in the South Approach Viaduct. On May 27, 2005, the Board authorized execution of Contract Change Order No. 91 in the amount of $3,600,000 for repair and painting of the designated members of the Fort Point Arch Lower Truss, an increase in Contract No. 99-B-5 contingency by the same amount. These actions increased the authorized contract contingency to $28,840,000 (100% Federal grant funds). The total of authorized CCOs is approximately $26,980,000.

On May 27, 2005, the Board authorized a $2,057,500 increase in the Phase II project budget (to be funded with the Federal grant funds) to finance the extension of construction administration by District and consultant's (HNTB Corporation) staff related to the authorized steel repair and painting CCOs.

Phase III: Golden Gate Bridge Seismic Retrofit Phase IIIA, North Anchorage Housing and North Pylon, Design and Prepare Bid Documents, Contract No. 2004-B-6. The North Anchorage Housing and the North Pylon are part of the Phase III Golden Gate Bridge Seismic Retrofit Project. At its June 25, 2004, meeting, the Board of Directors awarded the professional services contract to HDR Engineering, Inc. for the design of the seismic retrofit of the North Anchorage Housing and North Pylon. The consultant is proceeding with the design work.

To comply with the Federal Highway Administration project development procedures, in December 2004 the District conducted a formal Value Engineering study of Phase IIIA with the assistance of a consultant, Value Management Strategies, Inc. (VMS). A professional services contract in the amount of $58,109 was awarded to VMS in November 2004 after a competitive consultant selection process. The consultant has completed all work under this contract.

Staff is working to finalize the plans, specifications and estimate. The plans and specifications have been submitted to Caltrans and FHWA for final review. On September 9, 2005, FHWA obligated the funding for the construction phase.

On May 27, 2005, the Board authorized an amendment in an amount not to exceed $175,000 to the Professional Services Agreement (PSA), Contract No. 2004-B-4, with HDR Engineering to design an

inspection and maintenance access system under the new roadway deck of the North Anchorage Housing. At that time, the Board also authorized execution of an amendment to the PSA with HDR in the amount of $300,000 to provide design support during the advertising of the Phase IIIA construction contract, Contract No. 2006-B-1.

Golden Gate Bridge North Approach and Side Span Physical Security Improvements, Contract No. 2006-B-10. Staff is in the process of preparing the design plans and bid documents. This project is scheduled to be advertised for bids in November, 2005.

Biennial Bridge Inspection Program. In order to ascertain the structural condition of the Bridge and to comply with FHWA regulations, the District started the Biennial Bridge Inspection Program on May 21, 2001. Inspection of the suspension spans, main towers, North Anchorage Housing, and North Approach Viaduct was completed. This inspection data was analyzed and organized to facilitate Bridge maintenance operations and to assist the budget development process. The inspection report was submitted to FHWA and Caltrans on April 25, 2002. The next Biennial Bridge Inspection commenced. This work inspected the South Approach Structures, since this area was not part of the 2001 Inspection, and this inspection revisited those bridge components identified as level "red" in the 2001 Inspection. Inspection of Spans 4, 5 and 6 of the South Approach Viaduct was completed in April 2003. Inspection of the Suspension Bridge, North Anchorage Housing and North Approach Viaduct was completed in May 2004. The summary of condition ratings, appraisal ratings and load ratings of the Bridge was submitted to Caltrans and FHWA on April 11, 2005. The final inspection report was submitted to Caltrans and FHWA on October 6, 2005.

Golden Gate Bridge Main Cable Renovation. On April 13, 2001, the Board accepted staff's recommendation to revise the contract documents and to re-advertise the project for construction bids. The revisions will include adding provisions for alternate work access systems to be proposed by contractors. Plans are being revised and specifications are being finalized.

Seismic Instrumentation. The State of California, Division of Mines and Geology – Strong Motion Instrumentation Program (SMIP) has completed installing and testing the Phase I seismic instrumentation system. Seventy-six seismic sensors and two recording stations have been installed.

On April 10, 2001, the Seismic Instrumentation Advisory Panel approved the Phase II sensor locations for the South Approach Structures. Twenty-two additional sensors were proposed for the South Approach and were included as part of the Phase II Seismic Retrofit project. Three additional sensors at the downhole location were recommended by the panel. On September 24, 2002, the panel approved the design plans of Phase II Seismic Instrumentation, North Approach Structures. Twenty-four additional sensors for the North Approach were added to the Seismic Instrumentation System. Subsequent panel meetings were held on September 30, 2003 and September 21, 2004, to review the progress of construction of the Phase II Seismic Instrumentation and the MEMS system being developed by the U.C. Berkeley Citris program.

Earthquake Response Plan. During the past five years, staff has developed and finalized an Earthquake Response Plan. The Plan recommends establishment of an on-call Bridge emergency repair service and computer analytical capability and a list of on-call contractors for emergency repairs was established. Staff is developing an in-house computer analytical system with assistance from International Civil Engineering, Inc. (ICEC) for earthquake input data analyses. To date, ICEC has performed conversion of the Suspension Bridge and the South Approach Structures computer models to the ADINA program. The conversion of the North Viaduct model is pending. In 2002, SMIP installed an independent seismic sensor with a warning light and buzzer in the Sergeant's control room. On November 1, 2005, the Bridge Earthquake Response Pager System was tested with satisfactory results.

In 2002, the Ironworkers, the Engineers and the Inspectors were given training in performing post-earthquake Bridge inspection in accordance with the Earthquake Response Plan.

Toll Plaza Administration Building HVAC Improvements, Contract No. 2004-D-3. Staff is working with a mechanical consultant to perform an investigation to prepare a list of recommended improvements to the existing HVAC system. Preparation of design plans and bid documents will follow after a scope of improvement has been established.

## BUS TRANSIT FACILITIES

Toll Plaza Transfer Point Improvements, Contract No. 2006-B-6. This project will improve the four bus stops and two bus shelters at the Toll Plaza, the East Parking Lot and access to the IT trailers, and was advertised for construction on June 7, 2005. The contract was awarded to Maggiora & Ghilotti, Inc., on July 22 and the Notice to Proceed was issued effective August 9, 2005. The Contractor has started demolition and excavation for construction of the retaining wall and the bus pad at the Directors' parking lot.

San Rafael Bus Facility Gas Tank Replacement, Contract No. 2004-BT-9. Staff prepared the design plans and bid documents to remove the existing single-wall gas storage tank to comply with regulatory requirements and install a new aboveground double-walled tank.

Notice to Proceed was issued July 19, 2004, to American Construction & Environmental Services, Inc. The project was completed on March 17, 2005. The final contract payment is withheld pending resolution of a stop notice filed by a subcontractor.

San Rafael Bus Maintenance Facility Site Remediation Investigation. The District has been working for over five years to close out this site. The criteria for closeout has changed with the passage of time. The Regional Water Quality Control Board requested testing for a groundwater constituent (MTBE) that was not part of the original testing protocol. The District has attempted to address the RWQCB's concerns with prior test samples. This has not proven successful. The RWQCB will not close out this site until this new testing is performed and results are found to be acceptable. The District advertised on November 8, 2005, an RFP for a new contract to obtain additional test samples required by the RWQCB. The sample results will determine what additional work will be required prior to site closeout.

Santa Rosa Bus Facility – Site Remediation. The District removed leaking underground tanks at the site in 1990. As part of the ensuing site investigation of diesel contamination, a soil vapor extraction system was installed and operated over a three-year period. In response to a 1997 request for site closure, the North Coast Regional Water Quality Control Board (NCRQWCB) requested additional groundwater monitoring. In October 1999, staff received a letter from NCRWQCB that contained additional requirements for site closure. Based on the presence of volatile organic compounds (VOCs) in the groundwater, in particular the solvents TCE and TCA, the NCRWQCB, in December 2000, requested additional investigation regarding the presence of VOC pollutants on the site. The District responded that the VOC pollutants did not originate from the District property but migrated onto the site from the neighboring Hewlett-Packard (HP) property, which has had known releases of VOCs on their site.

The NCRWQCB responded that the two property owners needed to resolve this issue. The District and HP agreed to conduct joint groundwater sampling for presence of VOCs and provide recommendations for resolving the issue. Two rounds of joint sampling were performed in April and October, 2001.

The District completed the site-closure actions requested by the Water Board and submitted a final report in February 2002. The Water Board responded in May 2002 with a request for additional monitoring for diesel hydrocarbons and VOC pollutants. The parties did not reach agreement on recommendations for resolving the VOC issue.

HP issued its own report on the joint monitoring in October 2002. The NCRWQCB requested a written response from the District to the HP report. The District responded with a comprehensive *Forensic Evaluation Report* that explained the occurrence of VOCs on GGB property and met with the NCRWQCB to reach an agreement on remaining concerns. The final report addressed the Board's comments and was submitted in December 2003.

The NCRWQCB responded in March 2005, requesting that the District develop a plan for further mitigation of VOCs and diesel hydrocarbons. The District has met with the NCRWQCB to clarify its request. The NCRWQCB is reviewing information submitted by the District and will clarify its request regarding additional testing for VOC pollutants on the property. The NCRWQCB is concerned that historic use of the site as a small aviation airport could have contributed to VOCs found in groundwater on the District site. The District's position is that there is no evidence to support that concern. On November 8, 2005, the District advertised an RFP for a new contract to obtain additional test samples required by the water board. The District will test another groundwater sample during the first quarter of 2006 to determine if the site may be closed with respect to diesel hydrocarbons.

Novato Bus Facility – Site Remediation. The final site remedial investigation report regarding previous fuel leaks at the site was submitted to the San Francisco Regional Water Quality Control Board (SFRWQCB) in May of 1997. The SFRWQCB reviewed and approved the recommended corrective actions identified in the report, which included replacing the existing diesel underground storage tanks (USTs). Two existing 12,000-gallon single-walled underground storage diesel tanks were removed in 1998 and replaced with two new double-walled 15,000 gallon USTs nearby.

In June 1999, the District submitted a report for implementation of the remaining corrective actions, which included quarterly groundwater monitoring, closure of a deep well, installation of additional monitoring wells and a sensitive receptor survey. The scope also included treatment of residual subsurface diesel pollutants by injecting oxygen-releasing compounds into the soil and groundwater. The District has been implementing these corrective actions periodically since 2000.

The last round of monitoring discovered a spike in contaminant levels in the monitoring wells. The District reported the findings to the SFRWQCB in its April 2004 progress report and included recommendations that would lead to site closure. The SFRWQCB approved the recommendations, added a few of its own and required that the District implement those recommendations. The District implemented two rounds of quarterly groundwater monitoring that were concluded in March 2005. On November 8, 2005, the District advertised an RFP for a new contract to perform additional testing and monitoring as required by the water board.

## FERRY FACILITIES

Larkspur Ferry Terminal Channel Maintenance Dredging, Contract No. 2006-FT-1. The navigational approach channel and turning basin of the Larkspur Ferry Terminal require maintenance dredging every three to four years to return the channel and turning basin to their specified operational depth and width. The District prepared a Request for Proposals soliciting firms to provide dredging design and permitting support services for the project. On August 26, 2005, the Board awarded the professional services contract to Anchor Environmental CA, L.P., for the design and permitting support services. The District issued the Notice to Proceed to Anchor on September 1, 2005. The consult is proceeding with the work.

Ferry Security Enhancements, Contracts No. 2004-FT-7A and 2005-FT-2. Staff prepared design plans to enhance the security at the San Francisco and Larkspur Ferry Terminals. An architectural consultant, FMG Architects, was engaged to review the design plans to ensure esthetics and compatibility with existing facilities, and to address other issues related to architectural design. This TSA-funded project was advertised twice, the first bid being rejected on June 25, 2004. The recommendation to award the contract to Valentine Corporation was approved by the Board on September 24, 2004, and Notice to Proceed was issued effective October 13, 2004. The Contractor has completed all field work, including the punch list items. The Contractor is in the process of submitting project closeout documentation. The project was completed on September 19, 2005.

Larkspur Ferry Terminal Kiosk Roof Replacement, Contract No. 2004-FT-1. Staff prepared the design plans and bid documents to replace the built-up roofing of the office and bathroom kiosks. The contract was advertised for bids on July 15, 2003, and the General Manager approved awarding the contract to the low bidder, Avalon Restoration Company. The Notice to Proceed was issued on September 17, 2003, and field construction started on September 30, 2003. The Contractor completed contract work on November 20, 2003, and punch list items on May 12, 2004. The final contract payment is withheld pending resolution of two stop notices filed by subcontractors.

Corte Madera Ecological Reserve (CMER) Tidal Wetlands Restoration Project. As a condition of a 1988 U.S. Army Corps of Engineers (COE) permit for maintenance dredging of the Larkspur Ferry Terminal, the District was required to perform a study to assess the potential impact of ferry operations on erosion of the shoreline at the CMER. The study also investigated creating replacement habitat for a native bird species, the clapper rail, due to erosion of existing habitat. The study was inconclusive

regarding the impact of ferry operations on erosion of the shoreline. In consultation with the COE and U.S. Fish & Wildlife Service (USFWS), the District agreed to create 4 acres of tidal marsh habitat on the District's 72-acre parcel adjacent to CMER as mitigation for the erosion impacts. A conceptual design report and a draft environmental Initial Study (IS) for the marsh restoration project, which proposed the restoration of 3½ acres of tidal wetlands, 2 acres of seasonal wetlands, and the relocation of a public access easement that exists on the levee surrounding the parcel, were prepared in 1999. Preparation of Final Plans and Specifications and acquisition of permits from the Town of Corte Madera, the COE, USFWS and BCDC resumed in September 2003 with the award of a Professional Services Agreement to Philip Williams & Associates. The COE met with District staff in March 2004 and stated they wanted to re-evaluate the proposed mitigation plan as well as perform a new jurisdictional determination (JD) of the entire 72-acre parcel. The consultant is in the process of performing the new JD. The District and COE will meet after the JD is performed to further discuss the project.

**Contract Time Expended as of October 30, 2005**

| Project | Contract | Contract Working Days | Elapsed Contract Days | Authorized Contract Time Extension Days | Contract Time Expended |
|---|---|---|---|---|---|
| GGB Seismic Retrofit of South Approach (Phase II) (SOJV) | 99-B-5 | 1,300 (calendar | 1,610 days) | 448 (NOTE 1) | 92.11% |
| Toll Plaza Transfer Point Improvements (Maggiora & Ghilotti) *NTP 8/9/05* | 2006-B-6 | 120 | 58 | 0 | 48.33% |

NOTE 1 – 448 days added to the contract time for the authorized extra work of repairing and painting at the South Approach Viaduct and the Fort Point Arch.

## Fiscal Impact

There is no fiscal impact relative to this status report.

DJM/dh