

Los Angeles County
Metropolitan Transportation Authority

QUARTERLY PROJECT STATUS REPORT
2550 Rail Vehicle Program

September 2007



Metro
America's Best

2550 RAIL VEHICLE PROGRAM

QUARTERLY PROJECT STATUS REPORT

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION (FTA), UNDER THE FEDERAL TRANSIT ACT OF 1964, AS AMENDED AND WITH FUNDS FROM THE STATE OF CALIFORNIA

TABLE OF CONTENTS

| | Page No. |
|---|-----------------|
| Project Overview..... | 1 |
| Management Issues..... | 2 |
| Project Status | |
| • Schedules | |
| • Conditional Acceptance of Vehicles #706 & #708..... | 3 |
| • P2550 Vehicle Contract & Proposed Delivery Schedule..... | 4 |
| • Schedule Narrative as of September 28, 2007..... | 5-6 |
| • Project Budget Status..... | 7 |
| • Financial/Grant Status..... | 8 |
| • Current Photos..... | 9 |
| Appendices..... | 10-11 |

PROJECT OVERVIEW

The 2550 Light Rail Vehicle Base Contract for a Base order of 50 LRVs was awarded to AnsaldoBreda, S.p.A. of Pistoia and Naples, Italy. The 2550 Contract also includes two 50-LRV pre-priced options for future growth, expansions, and new lines. These options are subject to specific U.S. Department Of Labor Producer Price Index escalation and will require future Metro Board approval in order to become a binding contract requirement.

As a result of the departure of MTA's General Manager, Rail Operations and the DEO Rail Fleet Services, the management responsibilities of the P2550 Contract have been assigned by the new General Manager, Rail Operations, Mr. Mike Cannell to Mr. Richard M. Lozano, Director of Rail Vehicle Acquisition and Maintenance. Further, MTA Management has assigned a new Project Manager and an Engineering/Vehicle Commissioning Manager to further increase the P2550 Project Team capabilities.

Project accomplishments as of this writing and for September 2007 included:

1. The Project Team evaluated overall project status and organized a new MTA team to support project objectives. A series of four critical technical items list was identified as a basis of discussions with AnsaldoBreda (AB). Numerous meetings have been held with AB engineers to determine the status and to close engineering open items.
2. The Project Team met with the new Project Director of AnsaldoBreda, Mr. Fantappie and the Final Assembly staff at the Final Assembly Plant in Pittsburg, California. Metro received AnsaldoBreda's pledge to improve their Final Assembly and Delivery performance.
3. AnsaldoBreda agreed to temporarily hold shipment of car shells from Italy to Pittsburg and shipment of vehicles from Pittsburg to Los Angeles until such time as quality and workmanship issues are addressed and vehicle configuration is finalized.
4. The Project Team continued to focus on Pittsburg Final Assembly Plant issues, use of American Flag Vessels for shipments from Italy, and accelerated deliveries of the Light Rail Vehicles to Metro.
5. To date Metro has received a total of nine (9) vehicles at Los Angeles from the Pittsburg Final Assembly Facility. Further to date twelve (12) car shells are at Pittsburg Facility for a total of 21 car shells shipped to USA from Italy. One additional car (#703) is held in Italy to be used as a test car until such time as all qualification testing have been approved.

MANAGEMENT ISSUES

Concern No. 1: The Project Team continues to be concerned about AnsaldoBreda's (AB) inability to utilize American Flag Vessels as required by the Contract. Compliance requires that 50% of the shipments to the U.S. be on American Flag Vessels. While there is sufficient time to bring this requirement into compliance, both the Project Team and the U.S. Maritime Administration are concerned that AnsaldoBreda will wait until the final shipments to meet American Flag Vessels compliance when the availability of such vessels may have more serious schedule impacts.

Status/Action No. 1: AnsaldoBreda has agreed to begin utilizing American Flag Vessels but has also expressed concern that using those vessels will require an additional 3000 miles of overland movement by truck through several European Union countries and several more American states. This extra surface trucking mileage is perceived as presenting a great risk of in-transit damage to the vehicles based upon their past experience. AnsaldoBreda has not formally responded to the requested compliance plan, in writing. AnsaldoBreda has submitted a second request for an American Flag Vessel waiver from the U.S. Maritime Administration.

Concern No. 2: The AnsaldoBreda proposed revised "worse-case" schedule displays a considerable slip in the Contract Schedule but still sufficient to meet the operational schedules of the next two light rail lines that are scheduled for substantial completion from 2009 onward. This schedule is currently under revision.

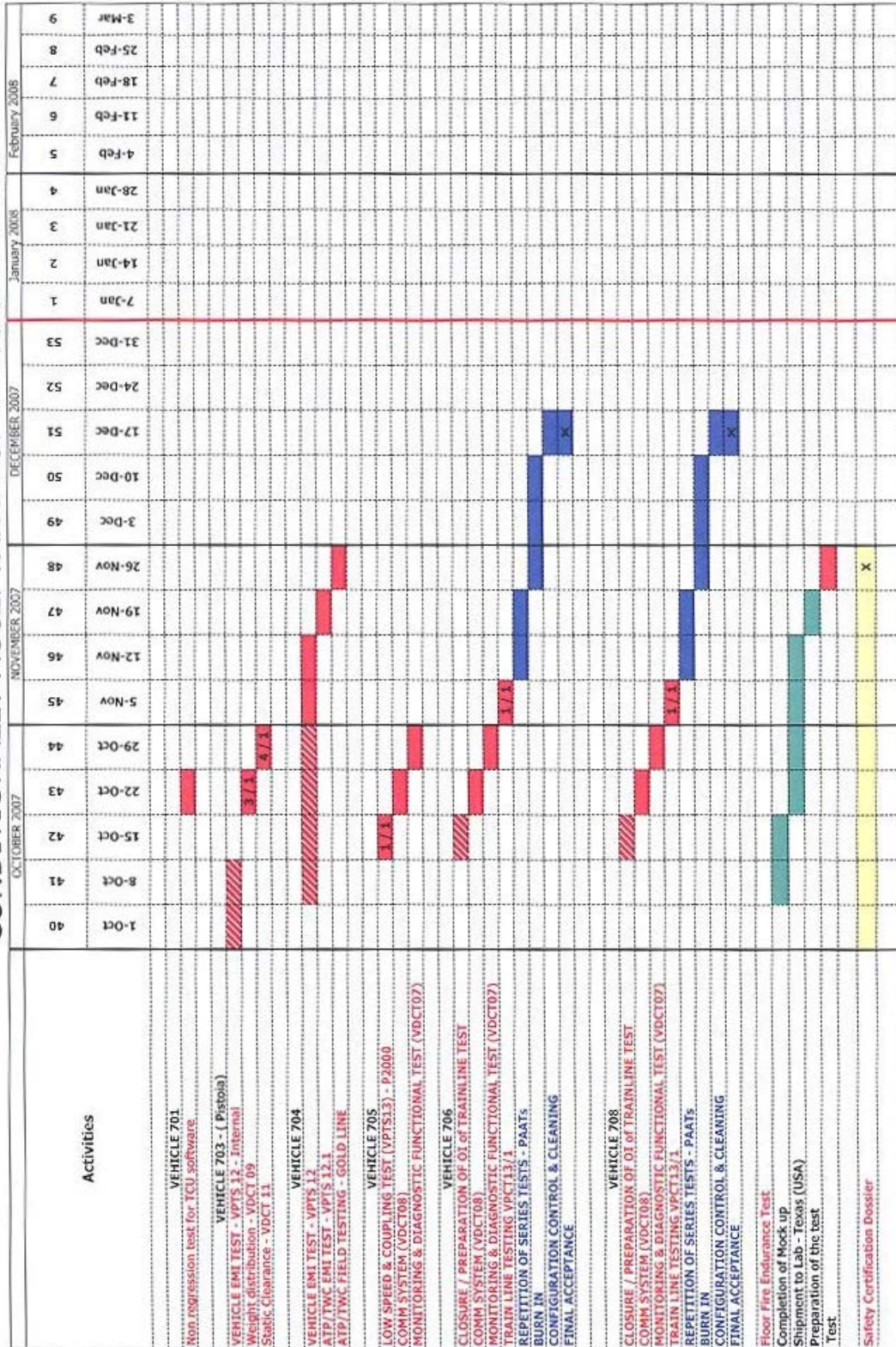
Status/Action No. 2: In order to better assess project schedule and to be in a position to evaluate the scope of the work required to accept the first vehicle, the Project Team tasked AB to provide a realistic schedule to have two vehicle (#706 and #708) ready for revenue service. In response AB has proposed a working schedule (following page) to accomplish specific tests in order to have the above cars ready for revenue service prior to the end of December 2007. The Project Team is evaluating the proposed schedule, working with AB and facilitating testing to accomplish the schedule's objectives.

Concern No. 3: The car-borne signaling system is a concern to the Project Team based upon Metro's experience with the same firm, US&S, on the previous LRV procurement. The concern is primarily with the software development by US&S for different Automatic Train Protection (ATP) and Train to Wayside Communications (TWC) for the three MTA light rail systems.

Status/Action No. 3: On the 2550 Contract, US&S is a wholly owned subcontractor of AnsaldoBreda instead of totally separate contractor as they were on the previous LRV procurement. Several meetings and conference calls have been held by the new Project Team with AB and US&S to assess the status of technical open items and plan for corrective actions. Both field testing and simulated laboratory testing are scheduled in November to evaluate the system performance and its safety requirements.

CONDITIONAL ACCEPTANCE OF #706 AND #708

CONDITIONALLY ACCEPTANCE OF # 706 and # 708



Legend
 Internal qualification test
 Official qualification test
 Series test
 1/1 Days of internal test / days of official te

Mandatory Documentation for acceptance:
 Completion of Safety Certification Dossier to be presented by MTA to CPUC with 21 days of advance

P2550 LIGHT RAIL VEHICLE CONTRACT & PROPOSED DELIVERY SCHEDULE

| No. Of Cars | VEHICLE NUMBER | CONTRACT DELIVERY REQUIREMENT - MONTHS AFTER JUNE 6, 2003 NTP | CONTRACT REQUIRED DELIVERY DATE (End of Month) | UNAPPROVED DELIVERY SCHEDULE | ACTUAL DATE OF ARRIVAL AT METRO | ACTUAL DELIVERY DATE | ACTUAL ACCEPTANCE DATE |
|-------------|----------------|---|--|------------------------------|---------------------------------|----------------------|------------------------|
| 1 | 701 | 24 MONTHS | JUNE/05 | 6/15/05 | 6/11/05 | | |
| 2 | 702 | 24 MONTHS | JUNE/05 | 7/22/05 | 7/26/05 | | |
| 3 | 705 | 26 MONTHS | AUGUST/05 | 10/31/06 | 1/09/07* | | |
| 4 | 704 | 27 MONTHS | SEPTEMBER/05 | 11/30/06 | 1/30/07* | | |
| 5 | 706 | 28 MONTHS | OCTOBER/05 | 12/31/06 | 2/28/07* | | |
| 6 | 707 | 28 MONTHS | OCTOBER/05 | 12/31/06 | 5/31/07* | | |
| 7 | 708 | 29 MONTHS | NOVEMBER/05 | 1/31/07 | 6/20/07* | | |
| 8 | 709 | 29 MONTHS | NOVEMBER/05 | 1/31/07 | 7/31/07* | | |
| 9 | 710 | 30 MONTHS | DECEMBER/05 | 2/28/07 | 8/30/07* | | |
| 10 | | 30 MONTHS | DECEMBER/05 | 2/28/07 | | | |
| 11 | | 31 MONTHS | JANUARY/06 | 3/31/07 | | | |
| 12 | | 31 MONTHS | JANUARY/06 | 3/31/07 | | | |
| 13 | | 32 MONTHS | FEBRUARY/06 | 4/30/07 | | | |
| 14 | | 32 MONTHS | FEBRUARY/06 | 4/30/07 | | | |
| 15 | | 33 MONTHS | MARCH/06 | 4/30/07 | | | |
| 16 | | 33 MONTHS | MARCH/06 | 5/31/07 | | | |
| 17 | | 34 MONTHS | APRIL/06 | 5/31/07 | | | |
| 18 | | 34 MONTHS | APRIL/06 | 5/31/07 | | | |
| 19 | | 35 MONTHS | MAY/06 | 6/30/07 | | | |
| 20 | | 35 MONTHS | MAY/06 | 6/30/07 | | | |
| 21 | | 36 MONTHS | JUNE/06 | 6/30/07 | | | |
| 22 | | 36 MONTHS | JUNE/06 | 7/31/07 | | | |
| 23 | | 37 MONTHS | JULY/06 | 7/31/07 | | | |
| 24 | | 37 MONTHS | JULY/06 | 7/31/07 | | | |
| 25 | | 38 MONTHS | AUGUST/06 | 8/31/07 | | | |
| 26 | | 38 MONTHS | AUGUST/06 | 8/31/07 | | | |
| 27 | | 39 MONTHS | SEPTEMBER/06 | 8/31/07 | | | |
| 28 | | 39 MONTHS | SEPTEMBER/06 | 9/30/07 | | | |
| 29 | | 40 MONTHS | OCTOBER/06 | 9/30/07 | | | |
| 30 | | 40 MONTHS | OCTOBER/06 | 9/30/07 | | | |
| 31 | | 41 MONTHS | NOVEMBER/06 | 10/31/07 | | | |
| 32 | | 41 MONTHS | NOVEMBER/06 | 10/31/07 | | | |
| 33 | | 41 MONTHS | NOVEMBER/06 | 10/31/07 | | | |
| 34 | | 42 MONTHS | DECEMBER/06 | 11/30/07 | | | |
| 35 | | 42 MONTHS | DECEMBER/06 | 11/30/07 | | | |
| 36 | | 42 MONTHS | DECEMBER/06 | 12/31/07 | | | |
| 37 | | 43 MONTHS | JANUARY/07 | 12/31/07 | | | |
| 38 | | 43 MONTHS | JANUARY/07 | 1/31/08 | | | |
| 39 | | 43 MONTHS | JANUARY/07 | 1/31/08 | | | |
| 40 | | 44 MONTHS | FEBRUARY/07 | 2/28/08 | | | |
| 41 | | 44 MONTHS | FEBRUARY/07 | 2/28/08 | | | |
| 42 | | 44 MONTHS | FEBRUARY/07 | 3/31/08 | | | |
| 43 | | 45 MONTHS | MARCH/07 | 3/31/08 | | | |
| 44 | | 45 MONTHS | MARCH/07 | 4/30/08 | | | |
| 45 | | 45 MONTHS | MARCH/07 | 4/30/08 | | | |
| 46 | | 46 MONTHS | APRIL/07 | 5/31/08 | | | |
| 47 | | 46 MONTHS | APRIL/07 | 5/31/08 | | | |
| 48 | | 46 MONTHS | APRIL/07 | 6/30/08 | | | |
| 49 | | 47 MONTHS | MAY/07 | 6/30/08 | | | |
| 50 | | 47 MONTHS | MAY/07 | 7/31/08 | | | |

* Note: The Contract defines "Delivery" as arrival at Metro in a final production configuration that allows Metro to immediately commence inspection and pre-acceptance testing. Vehicles that arrive and require further Contractor labor to achieve final production configuration are NOT considered DELIVERED for the purposes of Delivery payment until production configuration is achieved. Project Team's goal is that all future shipments from AnsaldoBreda/Pittsburg be in final configuration.

SCHEDULE NARRATIVE

Notice to Proceed was given June 6, 2003. The base contract engineering effort was scheduled to take approximately two years and delivery of the first two cars was scheduled for June 2005. The 50 car base contract funding was divided between Metro (40 cars) and the FTA (10 cars). The last (fiftieth) base contract LRV was scheduled for delivery 48-months after NTP, or approximately May 2007.

Status as of this writing follows:

This is a performance-based contract under which compensation is only paid when deliverables are received and approved by Metro. Compensation for contract milestone completion is an ongoing process directly related to Contractor performance. While progress is continuing, sufficient accomplishment for payment of Contract payment milestones lags behind. Performance improvement is promised by AnsaldoBreda Project Director, with the addition of more engineering staff at the Pittsburg, California Final Assembly Facility and Project Management staff at Pistoia Italy.

Subsequent to several meetings by MTA Management with AB management and site visits at Pittsburg CA, AB has proposed a best effort schedule for delivery of two (2) vehicles (#706 and #708) for conditional acceptance by MTA by mid-December 2007.

Some of the known time critical and technical/safety related issues that remain to be resolved to achieve the above conditional acceptance schedule are:

- **Vehicle Electro Magnetic Interference (EMI) Test.** Testing of vehicle EMI is ongoing. Though progress is being made, AB is pursuing additional corrective measures to mitigate the remaining specification non-compliance items.
- **Vehicle coupling interference issues.** Coupling P2550 vehicle with another P2550 vehicle and with P2000 vehicles (present Gold Line fleet) has been problematic. Test and wiring analysis have been performed leading to existence of wiring discrepancy of P2550 vehicles. Correction to wiring is being implemented and testing will be conducted to close this open item.
- **Vehicle Communications and Vehicle Monitoring and Diagnostic Systems.** Systems functionality and specification compliance need to be demonstrated. Tests are underway by AB's subcontractors at this time.
- **Safety Certification and CPUC requirement compliance.** In order for MTA to perform safety compliance check and obtain CPUC Certification, AB must provide documentation and test reports to demonstrate compliance. AB has scheduled a Floor Fire Endurance test for the second half of November 2007 and is gathering smoke and toxicity documentation for MTA's approval.
- **Burn-in tests.** A 1,000 mile vehicle Burn-in test is scheduled once the vehicles #706 and 708 have been delivered to MTA for Acceptance Testing. The testing consists of running simulated revenue service as a prerequisite to actual revenue service.

SCHEDULE NARRATIVE

Presently nine (9) vehicles have arrived at the MTA's shop facilities. Cars #701 and 702 remain at Metro Green Line facilities and used primarily for Operations and Maintenance staff training. The remaining seven (7) vehicles are located at Metro Gold Line facilities. Vehicles are used for various testing referenced above. Additional work is being performed on vehicles 706 and 708 to address quality and workmanship open items for preparation for conditional acceptance of these vehicles.

PROJECT BUDGET STATUS

| ELEMENT | LRV PROJECT BUDGET FOR 800151 (40 LRV'S) | LRV PROJECT BUDGET FOR 800088 (10 LRV'S) | TOTAL LRV PROJECT BUDGET | COMMENTS |
|--|---|---|---|--|
| Base Buy 50 LRVs | \$119,734,00 | \$29,933,500 | \$149,667,500 | 10-LRVs Federal Funds 40-LRV's Local Funds |
| Base Buy Spare Parts | \$5,849,886 | \$1,462,471 | \$7,312,357 | |
| Base Buy Special Tools & Test Equip | \$1,407,051 | \$351,763 | \$1,758,814 | |
| Subtotals | \$126,990,937 | \$31,747,734 | \$158,738,671 | |
| Contingency | \$12,699,094 | \$3,174,773 | \$15,873,867 | . |
| Subtotals | \$139,690,031 | \$34,922,507 | \$174,612,538 | |
| Rail Consultant | | | | |
| Rail Consultant | \$6,870,830 | \$1,717,707 | \$8,588,537 | Contract PS 8310-1267 for Rail Consultant staff technical services |
| Contingency | \$343,542 | \$85,885 | \$429,427 | |
| Subtotals | \$7,214,372 | \$1,803,592 | \$9,017,964 | |
| MTA Staff | | | | |
| MTA Staff | \$6,014,602 | \$1,577,798 | \$7,592,400 | |
| TOTALS | \$152,919,004 | \$38,303,898 | \$191,222,902 | |

To be revised to show reduction in awarded Contractor value resulting from a sales tax exemption on rail cars (Granted by the California State Board of Equalization).

Fiscal Year Cashflow Table (Milestone Payment) is currently under review.

FINANCIAL/GRANT STATUS

| SEPTEMBER 2007 | | STATUS OF FUNDS BY SOURCE | | | | | | | |
|-----------------------------|---------------------------|--------------------------------------|------------------------------------|--------------------------|------------|---------------------------|------------|--|------------|
| SOURCE | (A) ORIGINAL BUDGET | (B) TOTAL FUNDS ANTICIPATED | (C) TOTAL FUNDS AVAILABLE | (D) (D/B) COMMITMENTS | | (E) (E/B) EXPENDITURES | | (F) (F/B) BILLED to FUNDING SOURCE | |
| | | | | \$ | % | \$ | % | \$ | % |
| FEDERAL - STIP | 71.1 | 15.4 | 15.4 | 15.4 | 100% | 15.4 | 100% | 15.4 | 100% |
| FED-SEC 5309 FIXED GUIDEWAY | 38.3 | 25.9 | 25.9 | 25.9 | 100% | 25.9 | 100% | 25.9 | 100% |
| FEDERAL - RSTP | 7.7 | 7.7 | 7.7 | 7.7 | 100% | 0.0 | 0% | 0.0 | 0% |
| FEDERAL - CMAQ | 14.2 | 14.2 | 14.2 | 14.2 | 100% | 0.0 | 0% | 0.0 | 0% |
| STATE STIP | 6.0 | 61.7 | 61.7 | 57.6 | 93% | 10.5 | 17% | 7.9 | 14% |
| STATE STA | 15.6 | 15.6 | 8.6 | 15.6 | 100% | 8.6 | 55% | 8.6 | 55% |
| PROPOSITION A 35% BONDS | 0.0 | 12.3 | 0.0 | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% |
| UNBILLED ACRUALS | | | | | | | | | |
| TOTAL | 152.9 | 152.9 | 133.6 | 136.4 | 89% | 60.4 | 40% | 57.9 | 38% |

(1) Based on September 06 Regional Programming Funding Plan.
 Note: Expenditures are cumulative through September 2007.
 The 2550 Rail Vehicle Program consists of 40 light rail vehicles (LRV) and associated costs. The remaining 10 LRV's and associated costs under Contract P2550 are being charged directly against the Metro Gold Line Eastside Extension Project.

STATUS OF FUNDS ANTICIPATED

STIP STATE: LACMTA requests for STIP allocation have been approved. \$61.73 million is available for drawdown.

FEDERAL SECTION 5309: LACMTA grant applications have been approved. \$25.9 million in section 5309 funds were approved. Funds have been drawdown.

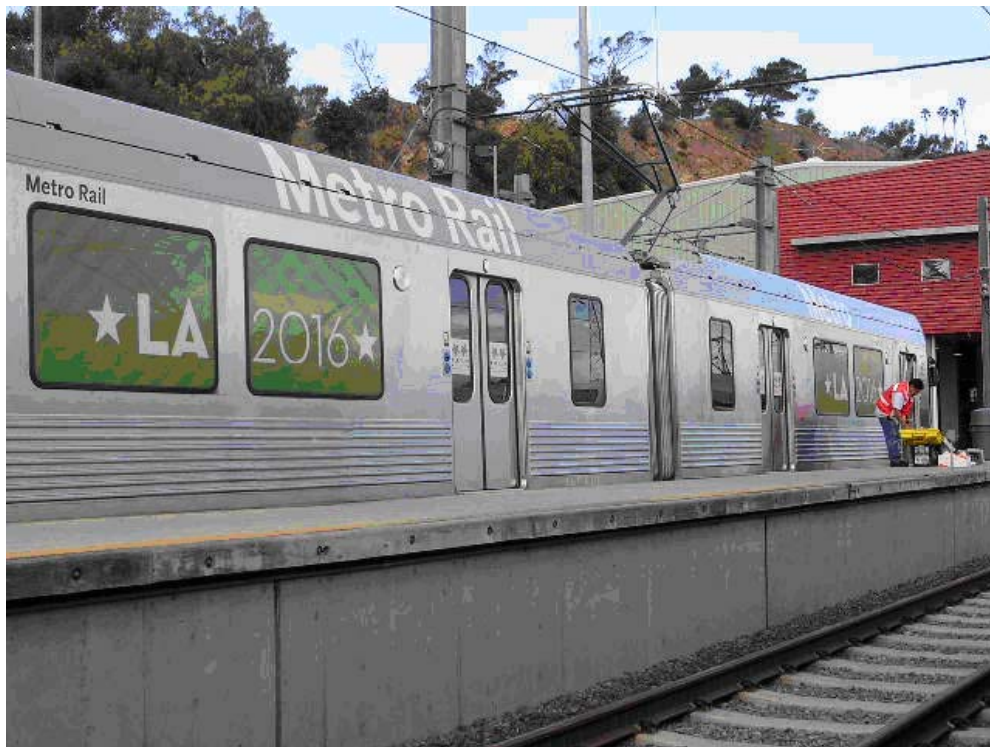
FEDERAL RSTP: A grant agreement for \$7.7 million was executed on April 7, 2005. Funds are available for drawdown.

FEDERAL CMAQ: A grant agreement for \$14.2 million was executed on August 25, 2005. Funds are available for drawdown.

CURRENT PHOTOS



2550 LRV Coming Around the Curve into Union Station.



2550 LRV at Metro Gold Line Yard with Decals for LA Olympic Bid.

APPENDIX

COST AND BUDGET TERMINOLOGY

COMMITMENTS: The total of actual contract awards, executed change orders or amendments, approved work orders of Master Cooperative Agreements, offers accepted for purchase of real estate, and other Metro actions that will result in specific expenditures at a future time.

INCURRED COST: The total value of work performed to date of services received and acquired materials or properties.

EXPENDITURES: The total dollar amount of checks written by Metro's Accounting department for contractor or consultant invoices, third party invoices, staff salaries, and closing payments for escrow accounts that is reported in Metro's Financial Information System (FIS).

CONSTRUCTION: Includes guideways, yards and shops, systems equipment, stations, and vehicles.

PROFESSIONAL SERVICES: Includes general engineering, construction management services, consultant design support services during construction, legal counsel, and agency (Metro staff) costs.

CONTINGENCY: A fund established at the beginning of a project to provide for anticipated but unknown additional costs that may arise during the course of the project.

SPECIAL CONDITIONS: Includes utilities relocation, environmental compliance and mitigation, master cooperative agreements, insurance program, artwork, systems integration testing and pre-revenue operations.

**APPENDIX
LIST OF ACRONYMS**

| | |
|-----------------|--|
| ATP | Automatic Train Protection |
| CN | Change Notice |
| CO | Change Order |
| CMAQ | Congestion Mitigation & Air Quality |
| CTC | California Transportation Commission |
| FFGA | Full Funding Grant Agreement |
| FIS | Financial Information System |
| FTA | Federal Transit Administration |
| FY | Fiscal Year |
| HVAC | Heating, Ventilation, Air Conditioning |
| LACMTA | Los Angeles County Metropolitan Transportation Authority (Metro) |
| LNTP | Limited Notice To Proceed |
| LRV | Light Rail Vehicle |
| METRO | Los Angeles County Metropolitan Transportation Authority |
| MGLEE | Metro Gold Line Eastside Extension |
| N/A | Not Applicable |
| NTE | Not to Exceed |
| NTP | Notice To Proceed |
| PGL | Pasadena Gold Line |
| PMOC | Project Management Oversight Consultant |
| QPSR | Quarterly Project Status Report |
| RSTP | Regional Surface Transportation Program |
| SSPP | System Safety Program Plan |
| STIP | State Transportation Improvement Program |
| TBD | To Be Determined |
| TWC | Train to Wayside Communications |
| US&S | Formerly Union Switch and Signal |