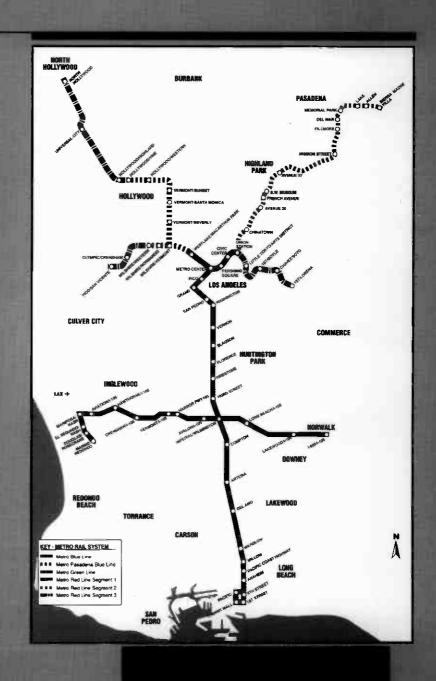
MTA METRO CONSTRUCTION



Executive Report Rail Program Status



RAIL PROGRAM STATUS SUMMARY

THE LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY
METRO CONSTRUCTION DIVISION

RAIL PROGRAM SUMMARY

Cost Status

Current Budget \$803,868,000

• There were no changes to the Current Budget during the period.

Schedule Status

Current Plan May 2001 Design Progress Construction Progress

Plan 100.0% 12.6%

Actual 80.3% 9.6%

 The construction variance is due to delays in finalizing work scope definition and delays in the start of final design.

Safety Status Project Rate National Average
Lost Time Rate 0.0 4.9
Lost Work Oays 0.0 148.1

• The project is incurring 13,000 work hours per month with no Lost Time Injuries.

Areas of Concern

• EMC is developing a recovery plan for the resequencing of critical contracts.

Monthly Highlights

- Meetings were held with community representatives to discuss project work scope changes.
- The Arroyo Seco Bridge was recognized with the "1997 Oesign Award" by the California Preservation Foundation.
- The MTA Board approved EMC's contract changes associated with the substitution of C6450 sub-consultants.

METRO RED LINE SEGMENT 2

Cost Status

Current Budget \$1,640,800,000

• There were no changes to the Current Budget during the period.

Schedule Status Oesign Progress Construction Progress

Plan 94.4% 91.5%
Actual 94.8% 84.0%

Wilshire Corridor - Revenue operations date - July 13, 1996

Vermont/Hollywood - Current Plan Dec 1998

· Mitigation efforts continue for the 8610 and 8620 contracts.

Safety Status Project Rate National Average
Lost Time Rate 2.6 4.9

Lost Work Days 69.3 148.1

• The project completed 192,000 work hours with one Lost Time Injury.

Areas of Concern

Vermont/Sunset Station (B261) interim and final milestone completion.

Monthly Highlights

- The 8610 Trackwork contractor continued form and rebar installation.
- The 8620 Automatic Train Control installation contractor continued limited work in the tunnel and station areas in preparation for formal access.
- The 8740/745 Air Handling/Ventilation contractors prepared for initial installation.

METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION

Cost Status

Current 8udget

\$1.313.848.000

• There were no changes to the Current Budget during the period.

Schedule Status

Design Progress

Construction Progress

Current Plan May 2000

94.0%

36.0%

Plan Actual

92.5%

36.0%

Overall construction progress is equal to the revised baseline plan.

Safety Status

Project Rate

National Average

Lost Time Rate

0.6

4.9

Lost Work Davs

19.3

148.1

• The project has completed 2,886,712 work hours with nine Lost Time Injuries.

• The unknown risks associated with the C0311 tunnels remains a concern. TBM production rates for running tunnel excavation on CO311 are lower than those in the baseline schedule. Six mitigation options were identified to improve production and mitigate potential delays.

Monthly Highlights

Schedule mitigation efforts for Trackwork Installation and Automatic Train Control continued.

METRO RED LINE SEGMENT 3 MID-CITY EXTENSION

Cost Status

Current 8udget

\$682,731,000

The Current 8udget reflects the Rail Recovery Plan as approved by the MTA Board.

Schedule Status

Construction Progress

Current Plan July 2009 Plan

0%

Design Progress

0%

Actual

0%

0%

• The Current Plan reflects a revised ROD of July 2009 approved by the MTA Board.

Safety Status

Project Rate

National Average

Lost Time Rate

N/A

4.9

Lost Work Days

N/A

148.1

No Construction Safety activity during the period.

Areas of Concern

Finalization of the Mid-City cost estimate and master schedule.

Monthly Highlights

- The Wilton/Arlington underground option was incorporated into the Rail Recovery Plan.
- · Community outreach efforts continued through meetings with various homeowner groups, and local Chamber of Commerce groups.
- Ultrasystems Environmental, Inc., continued preparation of the draft SEIS/SEIR.

METRO RED SEGMENT 3 EAST SIDE EXTENSION

Cost Status

Current Budget

\$1,049,200,000

· There were no changes to the Current Budget during the period.

Schedule Status

Design Progress

Construction Progress

Current Plan November 2004

Plan 66.2%

0.0%

Actual

61.4%

0.0%

• The Current Plan reflects a revised ROD of November 2004 approved by the MTA Board.

Safety Status

Lost Time Rate Lost Work Days Project Rate

National Average

N/A N/A

4.9 148.1

• No Construction Safety activity for this period.

Areas of Concern

 Approval of the EIS/EIR Addendum is scheduled for June 1997. Further delays may impact the project schedule.

Monthly Highlights

- The EMC submitted Amendment #10 to the MTA for Final Design Services.
- MTA and EMC Quality Management performed a joint audit of EMC sub-consultants Psomas and Degenkolb.
- The EMC is scheduled to recertify 25 sub-surface easements and building protection easements for C0541.

VEHICLE ACQUISITION PROJECT

Cost Status

Current Budget

\$257,597,000

· There were no changes to the Current Budget during the period.

Schedule Status

Design Progress

Fabrication Progress

Schedule Car Delivery

1st Car 52nd Car March 1998

June 1999

90%

30%

Areas of Concern

- The current schedule reflects 17 months delay in first car deliveries due to equipment and manufacturing problems.
- TransEd's (TEI) lack of progress in the development of the Repair and Parts manuals and the Vehicle Training Program.

Monthly Highlights

- Carshells no. 6 and 7 were shipped to Sacramento for final assembly.
- A site near the Metro Blue Line Washington Station was selected by Siemens as the vehicle delivery location.
- The assembly of seven cars progressed at the Sacramento facility.

TOTAL RAIL PROGRAM BUDGET/FORECAST VARIANCE

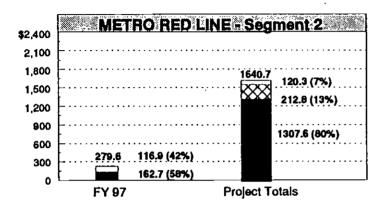
ORIGINAL SCOPE (IN MILLIONS) **STATUS DATE: 02/28/97 BUDGET/ COST ELEMENT** CURRENT CURRENT **FORECAST** FEBRUARY CHANGE BUDGET **FORECAST** VARIANCE IN FORECAST CONSTRUCTION 5397.3 5396.9 -0.4 54.0 PROFESSIONAL SERVICES 2129.2 2245.7 116.5 -3.0 REAL ESTATE 549.1 531.7 -17.4 0.2 UTILITY/AGENCY 170.4 174.4 4.0 -1.1 FORCE ACCOUNTS SPECIAL PROGRAMS 17.7 16.8 0.9 8.0-CONTINGENCY 307.7 335.6 27.9 -50.0 PROJECT REVENUE -37.3 -33.1 4.2 0.0 TOTAL PROJECT \$8,533.2 \$8,668.9 \$135.7 \$0.0

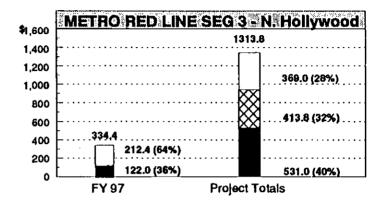
ADDITIONAL LOCALLY FUNDED ACTIVITIES

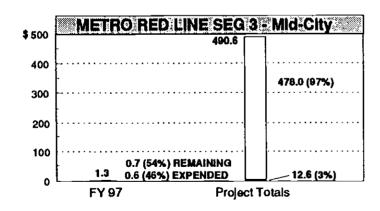
COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	BUDGET/ FORECAST VARIANCE	FEBRUARY CHANGE IN FORECAST
CONSTRUCTION	49.2	59.7	10.5	-0.1
PROFESSIONAL SERVICES	17.5	17.7	0.2	0.0
REAL ESTATE	0.0	0.0	0.0	0.0
UTILITY/AGENCY FORCE ACCOUNTS	0.0	0.0	0.0	0.0
SPECIAL PROGRAMS	0.0	3.1	3.1	0.0
CONTINGENCY	0.4	0.0	-0.4	0.0
PROJECT REVENUE	1.1	-10.2	-11.3	0.1
TOTAL ADDITIONAL LOCALLY FUNDED ACTIVITIES	\$68.2	\$70.3	\$2.1	\$0.0

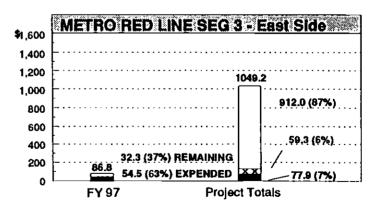
^{*} The Mid-City budget reflects the current baseline of \$491 million pending project adoption.

BUDGET STATUS - February 28, 1997 (in \$ Millions)



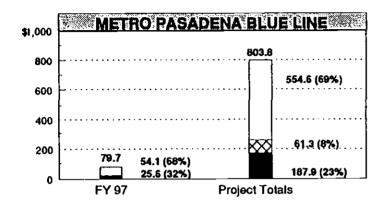


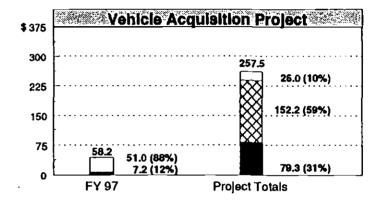




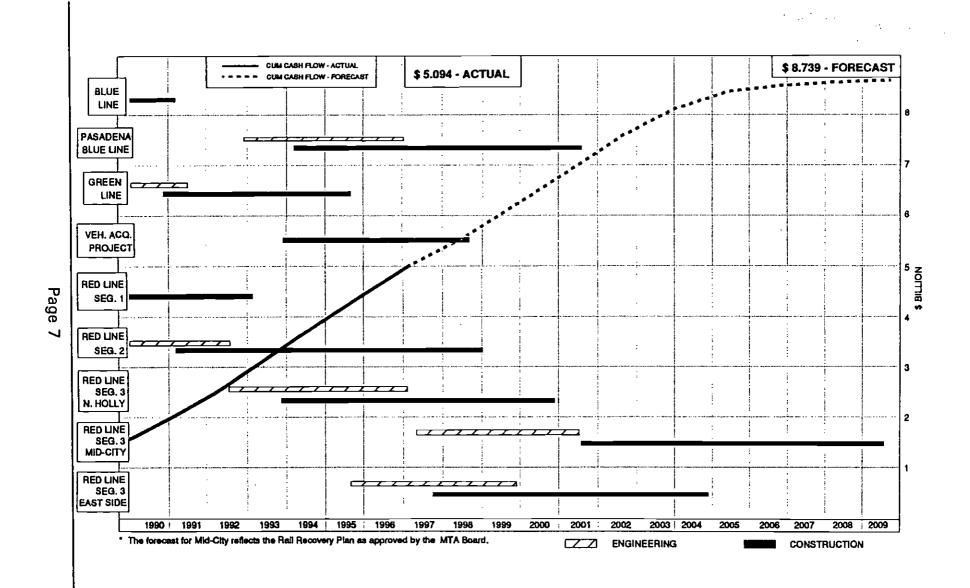
Actual Spent Encumbered Remaining Budget

BUDGET STATUS - February 28, 1997 (in \$ Millions)





Actual Spent Encumbered Remaining Budget

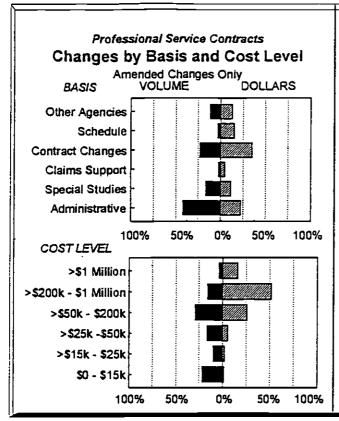


METROPOLITAN TRANSPORTATION AUTHORITY

			_				FUNDIN												BRUARY 1	
1	METRO	BLUE	PASAD		METRO	GREEN	METRO	RED ENT 1**	METRO		METRO F	-	METRO P		METRO F			JECT	PROG	
	\$	*	\$	*	- \$	*	\$ S.M.	%	\$	*	\$	%	\$	*	- 8	*	\$	%	8	*
ORIGINAL SCOPE:																				
FTA-SECTION 3							605.3	42	667.0	40	681.0	52	242.6	48	492.9	47			2688.8	32
FTA - OTHER																	11.9	4	11.9	(
ISTEA - FED SURFACE TRANSIT PROG	İ								52.1	3	50.0	4			25.0	1	84.0	32	<i>2</i> 11.1	2
FED-18TEA RSTP/CMAQ											67.9	5	20.4	1	288.6	28	6.1	3	383.0	1
FTA-SECTION 8					,		90.6	6								,	ľ	,	90.6	1
STATE			387.8	48	106.4	15	210.3	15	133.0	8	85.0	6	90.0	14	15.0	1	33.5	13	1061.0	12
STATE TSM MATCH											8.8	1	2.6	1	37.4	4			48.8	(
SB 1995 TRUST FUND											75.0	6							75.0	1
PROPOSITION A	877.2	100	202.6	25	205.1	28	179.5	12	540.5	31									2004.9	23
PROPOSITION C			213.5	27	40o.3	56					138.9	11	327.3	36	181.0	18	122.0	48	1383.0	16
PROP C (AMERICAN DISABILITY ACT)					6.0	1	•											ĺ	6,0	4
CITY OF LOS ANGELES		· '					34.0	2	157.5	10	190.7	14] 		9.3	1			391.5	٤
BENEFIT ASSESSMENT							130.3	9	25.4	4	13.5	,]						169.2	2
COST OVERRUN ACCOUNT	!						200.1	14					į						200.1	2
TOTAL	877.2	100	003.9	100	717.8	100	1450.1	100	1575.5	96	1310.8	100	682.9	100	1049.2	100	257.5	100	8724.9	99
OTHER LOCALLY FUNDED ACTIVITIES:																				
PROP C (TRANSIT ENHANCEMENTS)							:		62.7	4	2.7	o							65.4	1
FED ISTEA RSTP/CMAQ									2.5	a									2.5	6
TOTAL							<u> </u>		65.2	4	2.7	0	 						67.9	

^{*} The Mid-City budget reflects the Rail Recovery Plan as approved by the MTA Board.

Page 8



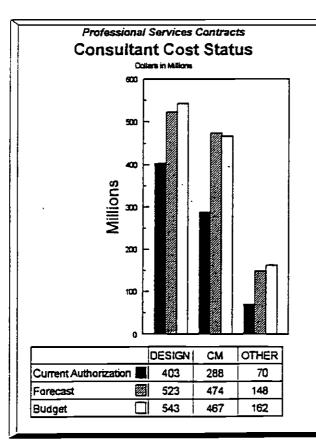
CHANGE BASIS ANALYSIS

Administrative changes account for approximately 43% or 325 of the 763 Consultant Change Notices overall. Administrative changes include capital equipment, facilities and extra work requested by the MTA. This represents approximately 22% of the overall change cost of amended changes.

CHANGE COST LEVEL ANALYSIS

As shown on the Cost Level Analysis chart opposite, the MTA Board approves 66.9% of all change costs associated with the Rail Project or \$63M of a total change cost of \$94M. This equals 21% of the total change volume or 160 of 763 total changes.

Note: Data for Basis and Cost charts includes only MTA Board amended changes.



PROFESSIONAL SERVICES COST ANALYSIS

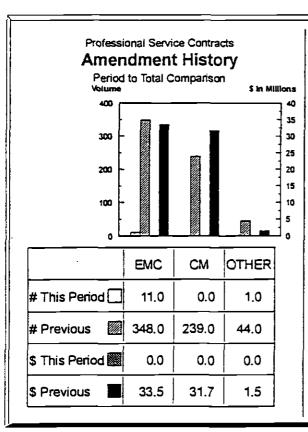
Categories represent all professional services contracts, not individual contracts (i.e. "design" includes all line 11 contracts not just EMC).

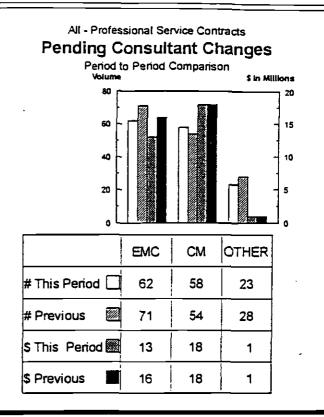
The forecast cost for design and other consultant contracts is below the current budget. While the forecast for construction management contracts continues to slightly exceed the budget amount, due to delays in project activities on the Metro Red Line Eastside Extension and Pasadena Blue Line

Data Source:

CMS: Consultant Contract Authorization, Forecast and Budget Values.

CHNGSAMP/02/97





CONSULTANT CHANGE NOTICE ANALYSIS

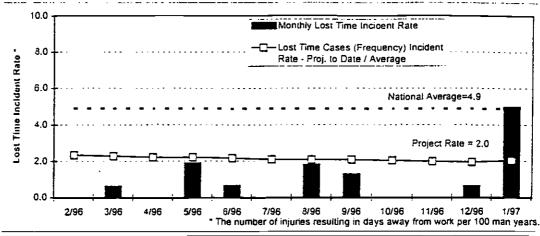
Fourteen new Requests for Change (RFC's) were received during the period with an estimated value of \$3.5 million.

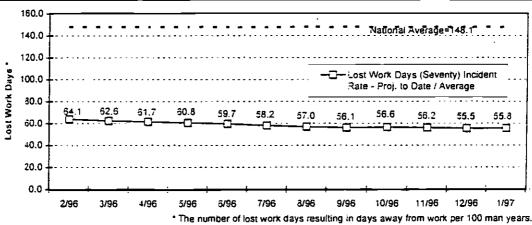
Ten new Consultant Change Notices (CCN's) were assigned or issued during the period with an estimated value of \$3 million.

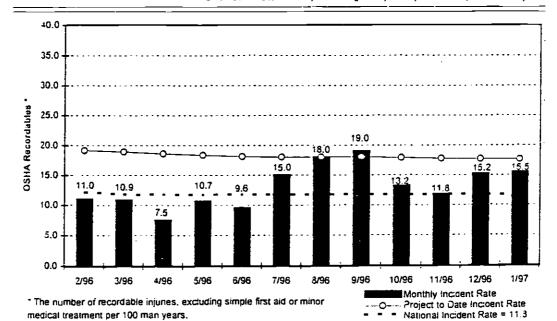
Twelve CCN's were approved for amendment by the MTA Board during the period with an estimated value of \$1.3 million.

Eight CCN's, which had an estimated value of \$741 thousand, were canceled or withdrawn during the period.

Safety Summary Status







EXECUTIVE SUMMARY

Summary Status Report

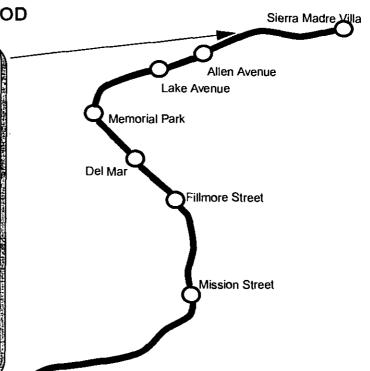
Period Ending - February 28, 1997

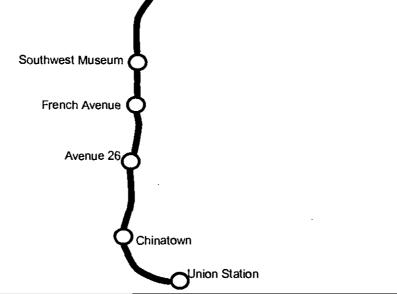


MAJOR ACTIVITIES THIS PERIOD

C6435 - Reconstruction & Retrofit of Steel & Concrete Bridges

- Lake Ave.: Completed closure pour for the bent 2 cap between precast girders A1 & A2 overcrossing. Post tensioning of the pre-cast girders and installation for the ribs, as part of the sidewalk, were completed. Reinforcement installation for the backwall of the abutments, cleaning & waterproofing of the column casings at Bent 2 and installation of electrical, communication and irrigation conduits on the sidewalk are in progress.
- Allen Ave.: Installation of the soldier piles and lagging as part of the shoring at Abutment 1 is final. Completed activities this period included: drilling and concrete placement for nine (9) CIDH piles; placement of concrete for the column flare undercrossing; and relocation of the conduits and pullboxes for the soffit lighting at Allen Bridge.
- Arroyo Seco Bridge: Drilled dowels into the piers, installed catch plates and accessories, and formed concrete placement at the piers.
- Lacy St. Bridge: Fabrication of span 4 is currently underway.





Avenue 57

SYSTEMWIDE ACTIVITIES

- Arroyo Seco Bridge was recognized with the "1997 Design Award" by the California Preservation Foundation for outstanding achievement in the field of historic preservation.
- Continued interface with community representatives regarding work scope changes, including a meeting with building owners and tenants of Old Town Pasadena to discuss the underpinning beneath their buildings.
- The MTA Board approved EMC's contract changes associated with substitution of C6450 sub-consultants.
- Continued final design for Contract C6450, Del Mar to Memorial Park Line Segment.
- Continue to support cash flow and funding special studies.
- Continued indexing of project records for Contract C6410, L.A. River Bridge, prior to transfer in March to Records Management Center (RMC).

Summary Status Report

Period Ending - February 28, 1997



MAJOR ACTIVITIES NEXT PERIOD aالنكد Sierra Madre C6435 - Reconstruction & Retrofit of Steel & Concrete Bridges Allen Avenue • Lake Ave.: Concrete placement for the closure Lake Avenue between the new and existing girder. Install rebar and place concrete for sidewalk and curb. Memorial Park Install conduits for the utilities in the sidewalk. Allen Ave.: Complete installation of CIDH piles for new abutments and retaining walls · Arroyo Seco Bridge: Fasten bolts on the catch Del Mar plates and place concrete for the piers. • Fremont Ave.: Commence retrofit work. Fillmore Street • Paint all column casings at Lake Ave., Allen Ave., and Sierra Madre Blvd. bridges. Mission Street Avenue 57 Southwest Museum French Avenue Avenue 26 Chinatown Jnion Station

SYSTEMWIDE ACTIVITIES

- Continue to support cash flow and funding special studies.
- Continue final design for Contract C6450, Del Mar to Memorial Park Line Segment.
- EMC to complete final negotiations with section designers for Contracts C6420, L.A. River to Arroyo Seco Line Segment, and C6450, Del Mar to Memorial Park Line Segment.
- Continue final preparation of project records for Contract C6410, L.A. River Bridge, for transfer to Records Management Center (RMC) in March.

Summary Status Report Period Ending - February 28, 1997



BUDGET

	Amount (\$ in mil)	Change from Last Month (\$ in mil)
Original Budget	841	None
Approved Budget	804	None
Current Forecast	804	None
Commitments	248	None
Expenditures	188	+1

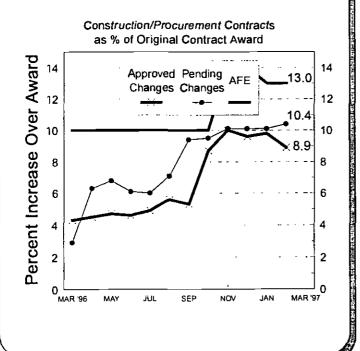
ADDITIONAL LOCALLY FUNDED ACTIVITIES

	Amount (\$ in mil)	Change from Last Month (\$ in mil)
Original Budget	0	None
Approved Budget	0	None
Current Forecast	1	None
Commitments	1	None
Expenditures	0	None

BUDGET ANALYSIS

- The Original Budget of \$841.0M was formally adopted in January 1993 and was based on a November 1997 ROD.
- The Approved Budget and Current Forecast are based on Value Engineering/Cost Containment scope changes and a May 2001 ROD adopted in February 1996, as amended in the Board report submitted in June 1996.
- The increase in Expenditures during the period is due to work performed by Owner's Insurance and Project Administration contracts.
- There were no changes to Commitments this period.

CONTRACT CHANGES



CONTRACT CHANGE ANALYSIS

There was no change to the AFE from last period. The pending changes increased slightly in February due to an adjustment of bid quantity for foundation drains at Contract C6430. Approved changes decreased during the period for Contract C6435 Foothill Blvd. abutment footing work. Approved and pending changes processed to date are less than the AFE values.

Approved and pending changes with values in excess of \$200K include:

- C6410 (L.A. River Bridge) Differing Site Conditions and Adjustment of Bid Quantities.
- C6430 (Arroyo Seco Bridge Reconstr.) -Adjustment of Bid Quantities and Cost for Operating Engineer's Strike.
- C6435 (Reconstruction & Retrofit of Steel & Concrete Bridges) - Lacy St. Bridge Repair, Delayed Release of Lake & Allen Ave. Work Scope and Differing Site Conditions - Pea Gravel.

Summary Status Report





SCHEDULE

Chang	е	from
Last	N	<u>lonth</u>

Current ROD	May 2001	None
Design Progress*	80.3%	None
Constr. Progress	9.6%	+0.8
Critical Path Float (Calendar Day	-149 days ys)	-28

*Based on original design work scope; design will be rebaselined pending an evaluation of design status, detailed definition of new work scope & preparation of an execution plan.

SCHEDULE ANALYSIS

- The ROD is May 2001. The schedule update for February shows 149 calendar days (CD) of negative float.
- Delays in the schedule are due primarily to finalizing scope definition, obtaining community concurrence for cost reduction items, and starting final design. The required Board approval process for EMC contract changes on critical contracts contributed a two (2) month delay to the project. However, the overall delay maybe partially mitigated through design recovery resequencing of construction work on critical contracts. EMC has been asked to submit a recovery plan. Refer to pages ES-6, Start of Final Design and ES-7, Community Concurrence with Design for further detail.
- Recovery of negative float maybe achieved through a combination of design and construction mitigation efforts. A design mitigation plan is currently in progress. Once drawings have progressed, a construction mitigation plan may be analyzed to allow for a detailed constructibility review on critical contracts.

EMC CWO 037 & 039 COST PERFORMANCE

EMC COST PERFORMANCE ANALYSIS

- The chart summarizes CWO's which are in place to facilitate the start of final design. This chart includes CWO 037, which was approved for development of a PIP and definition of new scope to incorporate cost reduction items, and CWO 039, which is for administrative support for final design. Refer to page EPC-4 for further analysis.
- Currently, all open CWO's total \$87.9M. The increase from last period is due to the authorization of various WACN's.
- The MTA has calculated a Forecast of \$121.8M, which includes Design Support During Construction; however the EMC has a current Forecast of \$122.5M. The EMC has been asked to issue a trend to document the forecast increase, as well as a recovery plan to mitigate the increase of costs and additional schedule slip.
- The decrease in CPI is the result of extensive Contracts Administration and excessive Project Unit Manager (PUM) involvement in fact finding/negotiations with a section designer not originally planned for CWO 039.
- Once the PIP is approved for CWO 039, the budget will be revised and earnings will improve.

Summary Status Report Period Ending - February 28, 1997



CONSTRUCTION SAFETY STATISTICS

Change from Last Month

Recordable Injury Rate:

The number of recorded injuries excluding simple first aid or minor medical treatment per 100 man years.

1994 National Average 11.8
Project Rate 3.5 -0.1

Lost Time Incident Rate:

The number of injuries resulting in days away from work per 100 man years.

1994 National Average 4.9

Project Rate 0.0 N/C

Lost Work Days:

The number of lost work days per 100 man years.

1991 National Average 148.1

Project Rate (Cum.) 0.0 N/C

NOTE: Based on January statistics.

CONSTRUCTION SAFETY SUMMARY

- The Project is producing 13,000 work hours per month and has continued with zero Lost Time Cases and no Lost Work Days.
- To date, over 618,000 work hours were completed without a Lost Time Injury.
- OSHA-200 incidence rate is less than one third of the National Average of 11.8.

AREAS OF CONCERN

ONGOING

Item (Date Initiated: March 1996)

Start of Final Design

Concern/Impact

The current schedule shows -149 calendar days of negative float because final design has not begun as planned.

Status/Action

Final design production continues on a limited basis for C6450, Del Mar to Memorial Park Line Segment. Final design on the remainder of the projects has not started because the EMC is experiencing delays in mobilizing section designers. In February, the MTA Board approved the MBE/WBE sub-consultant substitution for EMC. Completion of CWO negotiations, and agreement between EMC and section designers for C6420 and C6450 on scope and contract terms remains outstanding. If the start of engineering continues to be delayed, the projected ROD may slip and there will be a corresponding impact to the Project Forecast for additional escalation and administrative cost. The EMC has been asked to submit a recovery plan to mitigate this projected schedule slip.

Summary Status Report Period Ending - February 28, 1997



AREAS OF CONCERN (Cont'd)

ONGOING (Cont'd)

Item (Date Initiated: August 1996)

Real Estate Availability

Concern/Impact

In general, real estate availability is a concern to the extent that certain parcels may not be available to support the schedule for contracts on the critical path. The most critical real estate issues are related to:

<u>Ratkovich Property</u>: A parcel which is owned by the Federal Government and leased by Ratkovich Property is required for the Chinatown Aerial. This property may not be available in sufficient time to support the construction schedule. A resolution must be reached with Ratkovich because this parcel is not eligible for the condemnation process. In order to support the schedule, the property must be available by January 1998.

<u>Certification of Parcels for Underpinning</u>: Certification of parcels required for underpinning associated with Contract C6450, Del Mar to Memorial Park Line Segment, is required in order to obtain necessary easements for construction. To support the current construction schedule, these parcels must be available by January 1998.

Status/Action

Regarding the Ratkovich property, Project Staff submitted follow-up letters to Ratkovich requesting additional information concerning the lease on the property. The parcels for underpinning were certified in mid-November. The first meeting was held in February with the owners and tenants of the Pasadena Old Town buildings along the alignment requiring underpinning.

Item (Date Initiated: August 1996)

Community Concurrence With Design

Concern/Impact

Community concurrence with the Chinatown Station redesign and upgrades to Marmion Way between 50th and 58th Avenues remain outstanding. For Chinatown, issues relating to the canopy, platform, and plaza design remain to be resolved. These issues may delay the final design of the station and impact the schedule.

Status/Action

Although the start of final design for Chinatown Station has been approved by the MTA Board, the design cannot be completed until these issues are resolved with community representatives. During February, discussions continued on the choice of canopy, platform, and plaza design. It has been agreed to remove the Chinatown Plaza from the existing contract (C6390, Chinatown Aerial Structure) to allow design work to proceed and additional time for community input. Community concurrence with the station design concept is anticipated by the end of March 1997, to allow design work to proceed in April. Additional conceptual designs for Marmion Way have been prepared and are currently being reviewed within MTA prior to presentation to the community in April. Separate funding is being pursued to fund the community requested upgrades.

Summary Status Report Period Ending - February 28, 1997



AREAS OF CONCERN (Cont'd)

ONGOING (Cont'd)

Item (Date Initiated: September 1996)

Validation of \$803.9M Baseline Estimate

Concern/Impact

When the Pasadena Blue Line Project was re-adopted in February 1996, the EMC had not prepared updated estimates which included the proposed Value Engineering/Cost Containment items approved by the MTA Board. Included in the scope of CWO 037 was the development of capital cost estimates based on the new construction work scope.

Status/Action

The EMC has submitted the estimates for the construction work packages. Project Staff has reviewed these estimates and formalized the forecast for indirect costs such as Professional Services, Real Estate, and Master Cooperative Agreements in order to update the total Project Forecast. Once the escalation and project scope of work is validated, a revised total Project Forecast will be formally issued. The completion of this exercise has slipped from the end of February to the end of March 1997.

AREAS OF CONCERN

RESOLVED

Item (Date Initiated: January 1997)

Contract C6435 Change Order: Differing Site Conditions (Pea Gravel) at CIDH Piles & Impacts From Late Release of Lake and Allen Avenues.

Concern/Impact

The Change Order (CO) for Contract C6435, Reconstruction & Retrofit of Steel & Concrete Bridges, was issued for time and cost for differing site conditions (DSC) and late release of Lake and Allen Avenue bridges. The change order associated with DSC was determined to have merit by the Claims Review Board (CRB). Without approval of this CO, the contractor cannot be compensated for General Conditions after February 7, 1997.

Status/Action

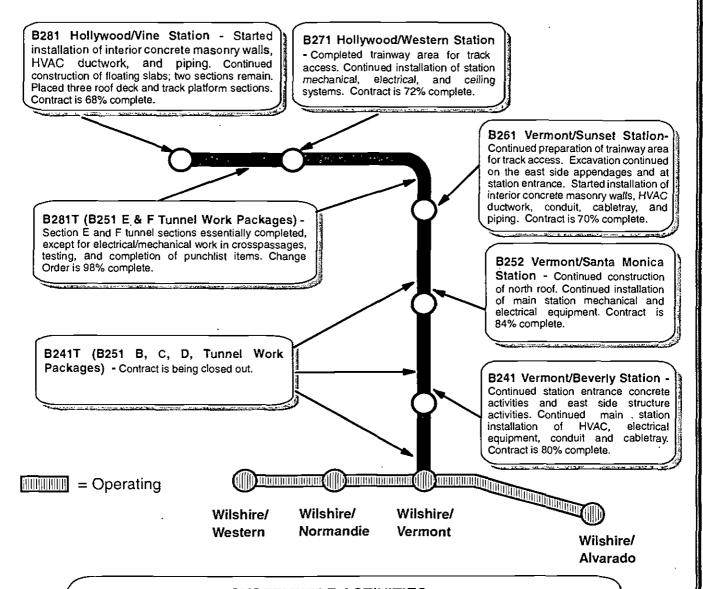
The MTA Board approved the change order on February 26, 1997.

METRO RED LINE SEGMENT 2

EXECUTIVE SUMMARY



Major Activities - This Period

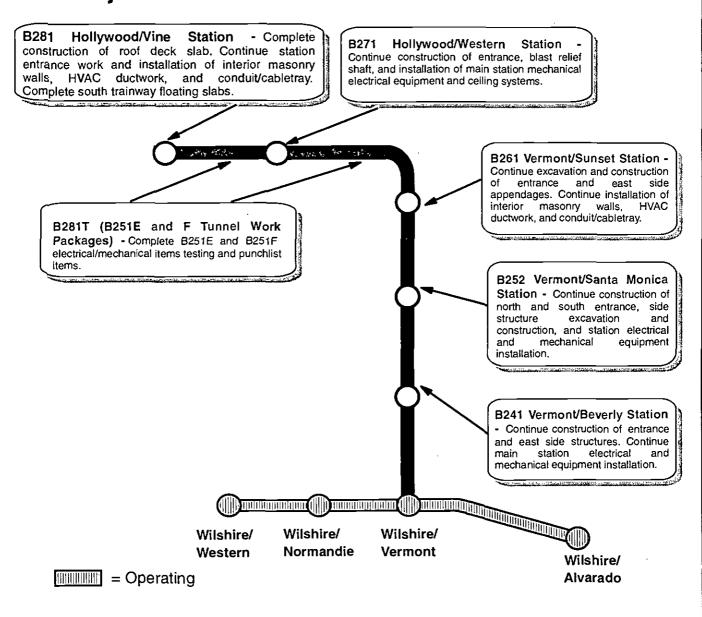


SYSTEMWIDE ACTIVITIES

B610, Trackwork, Contractor continued form and rebar installation for initial Vermont tunnel concrete pour. B620, Automatic Train Control Installation, Contractor continued limited work in available tunnel and station areas to progress work, in advance of formal access, to assist with overall schedule mitigation. B631, Traction Power, Contractor advanced installation of equipment in available station areas. B740/B745, Air Handling/Ventilation, contractors prepared for initial installation to start in early March 1997. Fabrication of systemwide equipment continued.



Major Activities - Next Period



SYSTEMWIDE ACTIVITIES

B610 Contractor to start Vermont Corridor plinth concrete installation and start survey of Hollywood tunnels. B740/B745, Air Handling/Ventilation, contractors to start installation of equipment. Fabrication of systemwide equipment to continue.



FINANCIAL STATUS

Budget/Forecast Variance (in millions)

Original Scope

COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	BDGT/FCST VARIANCE	FEBRUARY CHANGE IN FORECAST
Construction	\$1,060.5	\$1,058.0	(\$2.5)	\$0.7
Professional Services	389.0	390.6	1.6	0.0
Real Estate	88.1	88.3	0.2	0.0
Utility/Force Account	31.8	33.3	1.5	0.0
Special Programs	2.5	2.5	0.0	0.0
Contingency	3.7	3.7	. 0.0	(0.7)
Project Revenue	0.0	(0.8)	(0.8)	0.0
Total Project .	\$1,575.6	\$1,575.6	\$0.0	\$0.0

Additional Locally Funded Activities

COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	BDGT/FCST VARIANCE	FEBRUARY CHANGE IN FORECAST
Construction	\$47.3	\$47.1	(\$0.2)	(0.1)
Professional Services	16.8	16.8	0.0	0.0
Real Estate	0.0	0.0	0.0	0.0
Utility/Force Account	0.0	0.0	0.0	0.0
Special Programs	0.0	0.0	0.0	0.0
Contingency	1.1	1.3	0.2	0.1
Total Additional Locally Funded Activities	65.2	65.2	0.0	0.0

Budget/Forecast Variance Analysis

Original Scope

The forecast changes consist of a Construction increase of \$0.7 million, which was offset by a decrease of \$0.7 million from project unallocated contingency. There was no change to the Total Project. The \$0.7 million increase is due to:

Construction-Increase of \$0.7 million

- B241, Vermont/Beverly Station-the forecast increased due to Change Notices (CNs) 47.01, Temporary decking quantity overrun; and CN 99.00, Concrete reinforcing steel quantity overrun.
- B614, Special Trackwork-the forecast increased due to CN 6.00, Procure restraining rail for Vermont corridor.



Budget/Forecast Variance Analysis (Contd)

Original Scope

- B631, Traction Power Installation-the forecast increased due to costs associated with CN 8.01, Alcohol and drug-free workplace manual; and CN 40, Deletion of gas tester.
- B645, Transit Automatic Controls and SCADA-the forecast increased due to seven pending changes, which have been added in the Change Control System (CCS) or in some cases revised the estimated cost.
- B252, Vermont/Santa Monica Station-The forecast increased as a result of a fund code reallocation in CCS.

Contract MR028, Owners Control Insurance Program (OCIP) Administration, was transferred from Professional Service to Construction line item. There was no change to the Total Project; however, the \$1.6 million switch caused an increase in Construction and a decrease in Professional Services budgets and forecasts.

Budget/Forecast Variance Analysis

Additionally Locally Funded Activities

The forecast changes consist of a Construction decrease of \$0.1 million. This change resulted in an increase of \$0.1 million to project unallocated contingency. There was no change to the Total Project. The \$0.1 million decrease is due to:

Construction-Decrease of \$0.1 million

B252, Vermont/Santa Monica Station-The forecast decreased as a result of a fund code reallocation in CCS.

Note: The real estate acquired to support the Transit Enhancement covered under Additional Locally Funded Activities Budget and Forecast is \$38.1 million.

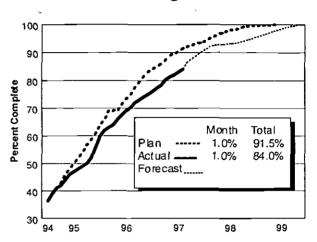


SCHEDULE STATUS

Schedule

		Change from Last Month
Current ROD	Dec. 31, 1998	None
Design Progress	94.8%	0.1
Critical Path Float	-39 Days	-7
Const. Progress	84.0%	1.0%

Construction Progress



Current Critical Path Analysis

The 39 calendar days of negative float forecast this period reflect the B610 contractor's limited ability to progress work as planned, due to access restrictions and weather-related impediments. The additional seven days of negative float this period is attributable to the Contractor's need to work through a learning curve for revised concrete/rail installation methods. Strategies to mitigate these delays, via alternative access conditions between B610 and B620 and/or by acceleration of B610 installation, will be considered when an actual production method and history have been established.

The project critical path continued to be controlled by the progress of the B610 Trackwork Contractor's efforts. Consistent with last period, track access for the B251E tunnel construction efforts follows in criticality. Next follows B261 Vermont/Sunset Station track access. The B261 contractor is now working to complete additional Change Notice work.

Construction Progress Analysis

Recent progress has advanced at an average rate of 1.0% per month to bring the overall construction progress to 84%. This progress compares to the planned progress of 91.5%.

The difference in the cumulative progress-to-date can be attributed to past station and tunnel progress affected by unforeseen conditions (conflicts of utilities with station piles and decking, contaminated soil, rain delays, stop work notices, and termination of B251 tunnel activities), design changes, and later-than-planned placement of station and tunnel concrete.

Although actual progress is behind plan, most work is being accomplished prior to late program schedule requirements. To maintain overall schedule objectives, mitigations have been taken on critical path B281T and are under evaluation for the B610 and B620 contracts.



SAFETY STATUS

Construction Safety Statistics

Project-to-Date Rates		ge From Month
Recordable Injury Rate		
The number of recorded injuries, excluding simple first aid or minor medical treatment, per 100 man years.		
1994 National Average	11.8	
Project Rate	19.7	-0.1
Lost Time Incident Rate (Frequency)		
The number of injuries resulting in days away from work per 100 man years.		
1994 National Average	4.9	
Project Rate	2.6	+0.1
Lost Work Days (Severity)		
The number of lost work days per 100 man years.		
1991 National Average	148.1	
Project Rate	69.3	+0.4
(Based on January statistics)		

Construction Safety Summary

- Over 192,000 work hours were completed in January, with only one Lost Time Injury.
- Lost Time Injuries for calendar year 1996 occurred at a rate of 1.1 per 200,000 work hours. This is approximately 75% less than the National Average of 4.9.
- To date, the project has completed over 10,000,000 work hours. This statistic reduces the impact that the monthly safety statistics have on the project-to-date rates.
- The Project-to-Date Lost Time Injury Rate is 2.6.
 This rate is slightly above one-half the 1994
 National Average of 4.9.

AREAS OF CONCERN

ONGOING

Item (Initiated December 1996)

Vermont/Sunset Station (B261) interim and final milestone completion

Concern/Impact

The level of Contractor cooperation in addressing settlement of time and safety-related issues over the past several months has been limited. As a result, the Construction Manager has little confidence that the Contractor will proceed with the work in a timely fashion to support B610, B631, B740, B745, and overall contract completion requirements.

Status/Action

Contractor has implemented staff changes. Several schedule review and coordination meetings have been conducted. Initial indications are that the Contractor has put more emphasis on completing critical areas and rooms for turnover access. Some later-than-desired completion forecasts still exist, but, with continued cooperation, these delays can be mitigated.



COMPLETE

Item (Initiated June 1996)

Hollywood Boulevard Stations and Line Trackwork Access

Concern/Impact

As a result of past delays in installation of piles and excavation of the B251E sinkhole shaft and B251F Hollywood/Vine access shaft, completion forecasts for B251E and F tunnel trackwork milestones impact the project completion forecast.

Status/Action

The Contractor's efforts to perform multiple tunnel and concurrent invert, arch, and walkway concrete operations have resulted in essentially completing B251E and B251F tunnel activities in February 1997. Electrical/mechanical testing and punchlist completion is forecast to be complete in early March 1997. Trackwork access arrangements are being made to start trackwork concrete access.

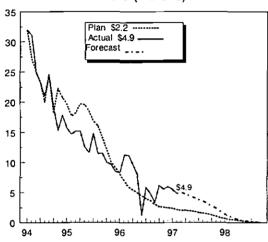


COST STATUS

Contingency Status

Original and Locally Funded Activities

Dollars (millions)



Contingency Status Analysis

The planned drawdown of unallocated project contingency this period shows a decrease of \$0.2 million. The actual amount decreased \$0.7 million.

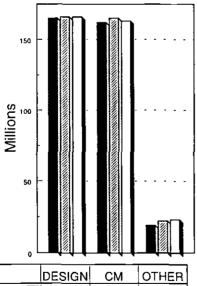
The total project unallocated contingency forecast decreased this period due to a net forecast increase in construction contracts:

- B241, Vermont/Beverly Station
- B614, Special Trackwork
- B631, Traction Power Installation
- B645, Transit Automatic Controls and SCADA
- B252, Vermont/Santa Monica Station

For details refer to ES-4, Budget/Forecast Variance Analysis

Professional Service Contracts

Consultant Cost Status



	DESIGN	СМ	OTHER
 Authorization	165	162	19
Forecast	166	165	22
Budaet	166	163	23

Professional Services Cost Analysis

Design Services

PBCR 19 adjusted the EMC budget to align with the forecast. It is anticipated that further Design Change Notices (DCNs) will be processed for MTA Board approval, which will, in turn, increase the Authorization amount.

Construction Management Services

The MTA is negotiating with the Construction Manager to reduce the forecast amount. Once the appropriate manpower requirements are aligned with the present budget, the Authorization limit will need to be increased.

Other Professional Services

For Other Professional Services, Authorization will be increased as the scope becomes more defined.

METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION

EXECUTIVE SUMMARY

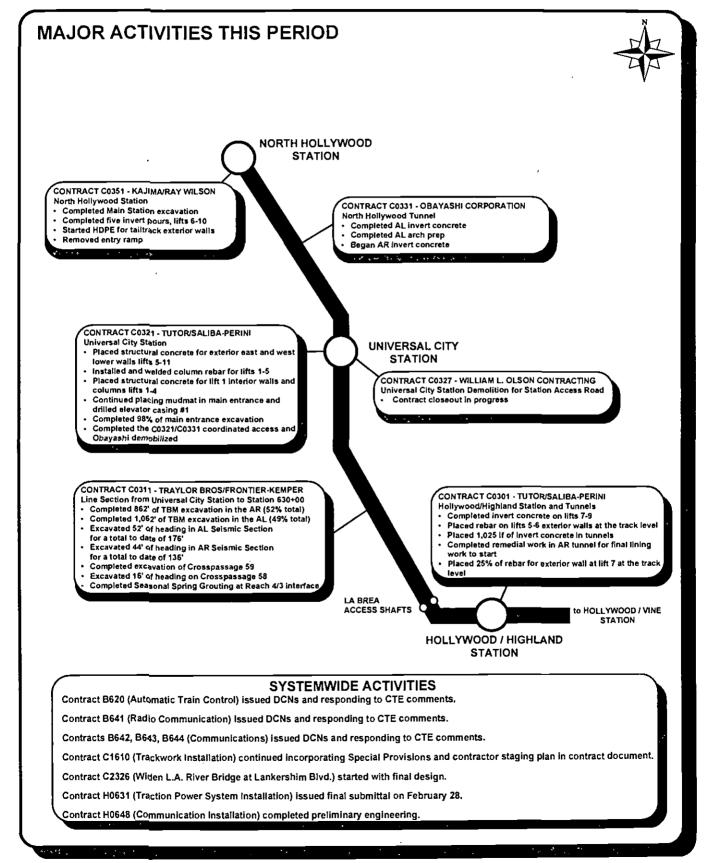
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Areas of Concern	ES-5
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EXECUTIVE SUMMARY

METRO RED LINE - Segment 3 North Hollywood Summary Status Report Period Ending - February 28, 1997

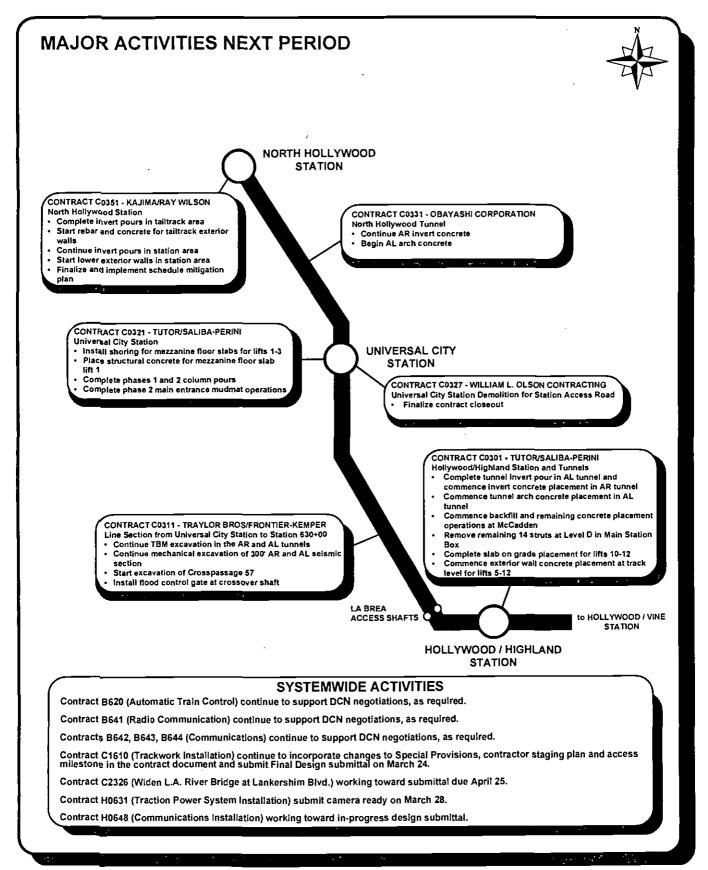




ES-1

METRO RED LINE - Segment 3 North Hollywood Summary Status Report Period Ending - February 28, 1997





ES-2

FINANCIAL STATUS

Budget / Forecast Variance (in millions) Original Scope Activities

				FEBRUARY
	CURRENT	CURRENT	BDGT/FCST	CHANGE IN
COST ELEMENT	BUDGET	FORECAST	VARIANCE	FORECAST
CONSTRUCTION	\$825.1	\$802.7	(\$22.4)	\$2.8
PROFESSIONAL SERVICES	300.8	298.3	(2.4)	(5.6)
REAL ESTATE	89.0	87.3	(1.8)	0.0
UTILITY/AGENCY FORCE ACCOUNTS	26.3	24.5	(1.8)	0.0
SPECIAL PROGRAMS	0.0	0.0	0.0	0.0
PROJECT CONTINGENCY	69.6	97.9	28.4	2.8
PROJECT REVENUE	0.0	0.0	0.0	0.0
TOTAL PROJECT	\$1310.8	\$1310.8	\$0.0	\$0.0

Additional Locally Funded Activities

CONSTRUCTION	\$1.9	\$11.4	\$9.5	\$0.0
PROFESSIONAL SERVICES	0.7	0.9	0.2	0.0
REAL ESTATE	0.0	0.0	0.0	0.0
UTILITY/AGENCY FORCE ACCOUNTS	0.0	0.0	0.0	0.0
SPECIAL PROGRAMS	0.0	0.0	0.0	0.0
PROJECT CONTINGENCY	0.4	0.0	(0.4)	0.0
PROJECT REVENUE	0.0	(11.5)	(11.5)	0.0
TOTAL ADDITIONAL LOCALLY FUNDED ACTIVITIES	\$3.0	\$0.8	(\$2.2)	\$0.0

Budget / Forecast Variance Analysis

Original Scope Activities

The Current Budget and Current Forecast totals remain unchanged at \$1,310.8M.

However, there were a number of forecast changes within the Project Elements which were offset by Project Contingency as follows:

- Contract C0301 (Hollywood/Highland Station) Forecast increase \$2.8M due to revised B251H costs, design changes related to restoration work, and quantity adjustments for concrete and temporary decking.
- Contract MC047 (JMA Construction Management) Forecast decrease (\$3.0M) due to a reassessment of the forecast to completion based on consultant change notices submitted to date and the contract budget performance.
- Contract 03369 (Parsons-Dillingham CM) Forecast decrease (\$2.6M) due to a reassessment of the forecast to completion based on realized cost transfers for B251 CM costs and consultant change notices submitted to date.
- Contact PC000 (Project Contingency) Forecast increase \$2.8M due to the cumulative forecast decreases.

Additional Locally Funded Activities (ALFA)

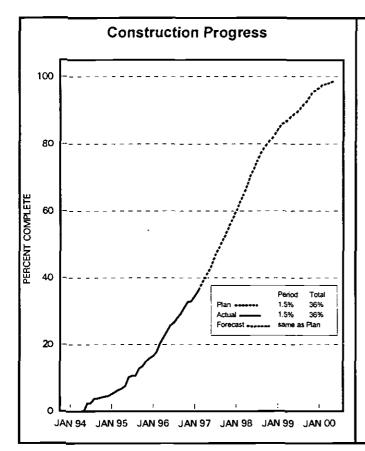
"Additionally Locally Funded Activities" (ALFA) are defined as work scope not originally covered under the FFGA such as Station Artwork, Hollywood Boulevard Settlement, Non Revenue Connector, etc. The Current Budget contains approximately \$3.0M in ALFA categories under the Construction, Professional Services and Contingency elements.

The Current Forecast carries \$12.3M in total for the ALFA work scope. In addition, Project Revenue is anticipated in the amount of (\$11.5M) which reduces the ALFA work scope costs to \$0.8M. This cumulative Current Forecast total compared to the Current Budget accounts for the (\$2.2M) variance.

ES-3

SCHEDULE STATUS

SCHEDULE



		Change from Last Month
Current ROD	May 17, 2000	0.
Design Progress	92.5%	+0.5%
Construction Progress (estimated)	36.0%	+1.5%
Critical Path Float		0

Construction Progress Analysis

The overall construction progress through February 28, 1997 was approximately 36% complete versus 36% planned, according to the revised baseline. Since the original baseline was developed, design and construction changes occurred impacting progress as follows:

Design: Mid-Line Vent Structure redesign; rebid of Contract C0301 (Hollywood/Highland Station and Tunnels); Contract C0311 (Line Section from Universal City Station to Station 630+00) "consent decree" for the seismic section redesign; C0321 (Universal City Station) section design delays; and C0351 (North Hollywood Station) design changes to tailtrack.

Construction: Contract B251 added tunnel work; Contract C0311 "consent decree" for the seismic section redesign; Contract C0331 (North Hollywood Tunnel) grouting of the alignment; and Contract C0311 TBM slow progress rate.

Project management has agreed that rebaselining at this time is appropriate to provide a better yardstick for future progress. The January 1997 schedule update was used as the basis for rebaselining. The new target schedule is depicted in the construction graph above.

Current Critical Path Analysis

The February 1997 Project Master Schedule includes additional refinements to C1610 Trackwork Installation planning schedule. Comments from MTA were incorporated. We are now in the process of finalizing the schedule and C1610 Special Provisions access and milestone dates. Also included are revisions to schedule impacts to C0301 (Hollywood/Highland Station) due to Hard Closure Permit and CN-63, Tunnel Deletion. These changes had no impact to ROD. The project completion date forecast remains May 17, 2000.

Critical path runs through Contract C0311 (Line Section from Universal City Station to Station 630+00), C1610 (Trackwork Installation), B620 (Automatic Train Control), B645 (SCADA) and Testing/Pre-Revenue Operations.

Focus continues to be on the risks associated with tunnels under the Santa Monica Mountains (Contract C0311). Six different mitigation options to recover some of the lost time and to add contingency back into the program have been identified and discussions with the contractor began (see page ES-5).

Additionally, the continuing goal of further schedule improvements will be pursued on follow-on contracts, i.e., C1610 (Trackwork Installation), B620 (Automatic Train Control) and Integration Systems Testing and Start-up.

ES-4

SAFETY SUMMARY / AREAS OF CONCERN

CONSTRUCTION SAFETY STATISTICS

Project-to-Date Rates

Change from Last Month

+0.1

+0.2

Recordable Injury Rate:

The number of recorded injuries excluding simple first aid or minor medical treatment per 100 man years.

1994 National Average Project Rate 11.8 13.4

Lost Time Rate (Frequency): The number of injuries resulting in days away from work per 100 man years.

1994 National Average Project Rate

Lost Work Days (Severity): The number of lost work days per 100 man years.

1991 National Average Project Rate 148.1

4.9

0.6

19.3 +0.6

 Segment 3 North Hollywood is incurring over 120,000 work hours per month.

(Based on January statistics)

CONSTRUCTION SAFETY SUMMARY

- To date, the project has completed 2,886,712 work hours with nine Lost Time Injuries.
- Project-to-Date Lost Time Injury Rate continues at approximately 10% of the last reported National Average.

AREAS OF CONCERN

ONGOING

Item (Date initiated: January 1997)

TBM Production Rates

Contract C0311 (Line Section from Universal City Station to Station 630+00)

Concern/Impact

The production rates achieved for the running tunnel excavation for Contract C0311 are lower than those in the baseline schedule which has resulted in the continued erosion of project schedule contingency.

In an effort to increase production rates and mitigate further delays to ROD, six schedule studies have been reviewed with the contractor and recommendations provided to MTA. The six studies are: (1) shotcrete north and south crossover transition; (2) resequence track level room excavation and concrete work; (3) concrete lining south of La Brea Shaft to be done concurrently with seismic section excavation; (4) accelerate TBM drive, (5) accelerate tunnel concrete lining south of track level room; and (6) accelerate north/south crossover shotcrete and concrete. Acceleration for options 4, 5, and 6 will be accomplished by working six days a week.

Status/Action

The contractor has taken remedial action to mitigate some delays by replacing the muck hoist with cranes and working some Saturdays. The contractor has also submitted preliminary plans for studies 1 and 2. Biweekly meetings with the CM have begun to review the plans and implementation. Option 3 will be done by the contractor and options 4, 5, and 6 are still under consideration.

AREAS OF CONCERN

AREAS OF CONCERN

ONGOING

Item (Date initiated: October 1996)
Project Schedule Contingency

Concern/Impact

Successful mitigation efforts to maintain ROD of May 17, 2000, has left the project schedule with no unallocated contingency. Allowances for all known-to-date schedule impacts due to ground conditions encountered in Reach 6C, seasonal springs protection, enclosure at La Brea shafts, additional 429 feet of standard tunnel excavation and Special Seismic Section redesign have been incorporated into the schedule. However, no other project contingency allowances exist for future risks associated with the excavation of the tunnels under the Santa Monica Mountains.

Status/Action

In addition to the six options to improve C0311 TBM production rates, as described on page ES-5, other efforts have been done to add contingency back into the program, including acceleration and resequencing of C1610 (Trackwork Installation) and returning Contract B620 (Automatic Train Control) to its original schedule. The acceleration of Contract B620 will be maintained as an option to mitigate future delays, if needed. Efforts will begin to further refine downstream systems contracts such as B645 (SCADA) and start-up.

AREAS OF CONCERN

ONGOING

Item (Date initiated: February 1996) MTA Board Motion Dated January 24, 1996

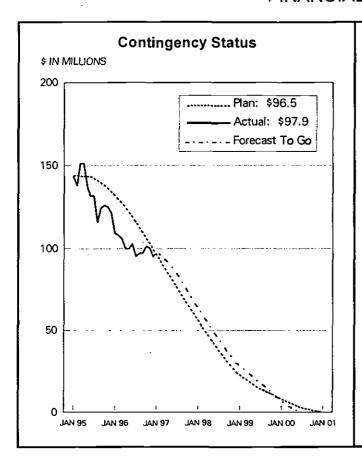
Concern/Impact

The MTA Board Motion to adopt community protection measures due to tunneling under the Santa Monica Mountains has added additional cost and time to the project. The protective measures instituted by the Board are being implemented on the tunneling Contract C0311 and include reducing the amount and intensity of blasting, increasing tunnel grouting to prevent surface springs leaking into the tunnel, and monitoring tunneling effects on the surrounding public and private property ecosystems.

Status/Action

The forecast cost and schedule impacts to Contract C0311 have been incorporated into the program. The seasonal springs protective measures included cost and schedule contingencies for four known springs and an allowance for two unknown springs. To date, three of the six springs have been encountered; one was a known spring and two were unknown springs. As additional measures are implemented, cost and schedule forecasts will be adjusted accordingly.

FINANCIAL STATUS



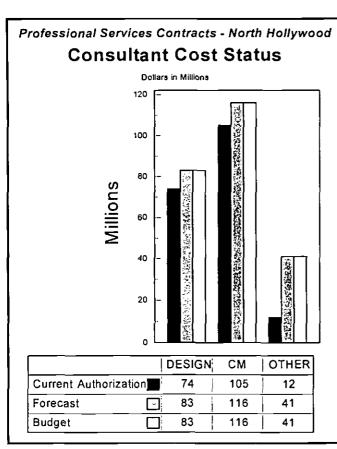
Contingent Status Analysis

February 1997 Period Status

The Contingency Forecast increased \$2.8M this period to offset a net decrease in the Construction and Professional Service Elements. Construction increased \$2.8M due to a number of out of scope issues on Contract C0301 and Professional Services decreased \$5.6M due to forecast to completion reassessments on the JMA and P-D Construction Management contracts.

Cumulative Contingency Status

The planned drawdown of Project Contingency this period was \$2.2M down to \$96.5M. The actual period amount was \$2.8M increase up to \$97.9M. The variance of \$1.4M is largely due to recent contingency adjustments for the Construction and Professional Service Elements.



Professional Services Cost Analysis

The Construction Management forecast decreased by \$5.6M due to a reassessment of the forecast to completion based on consultant change notices submitted to date and the contract budget performance.

The EMC Forecast at Completion will be reevaluated during the March period.

Other specialty consultant forecasts include costs for Configuration Management Services, Systems Engineering and Analysis, Rail Vehicle Procurement Services, Environmental Services, Legal Services, Construction Support Services, and Project Management Assistance.

DATA SOURCE:

CMS: Consultant Contract Authorization, Forecast, and Budget Value.

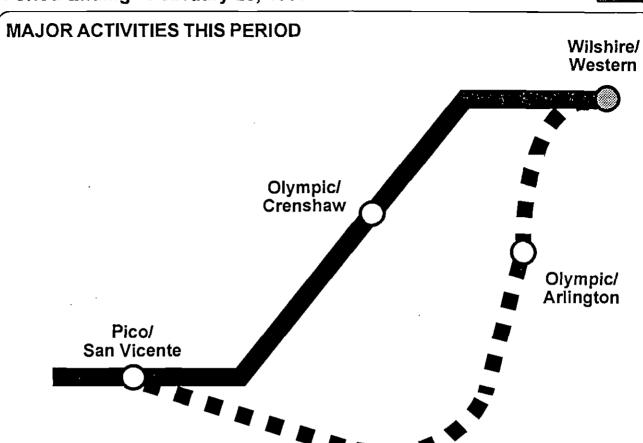
METRO RED LINE SEGMENT 3
MID-CITY EXTENSION

EXECUTIVE SUMMARY



METRO RED LINE - Segment 3 / Mid-City Extension Summary Status Report Period Ending - February 28, 1997



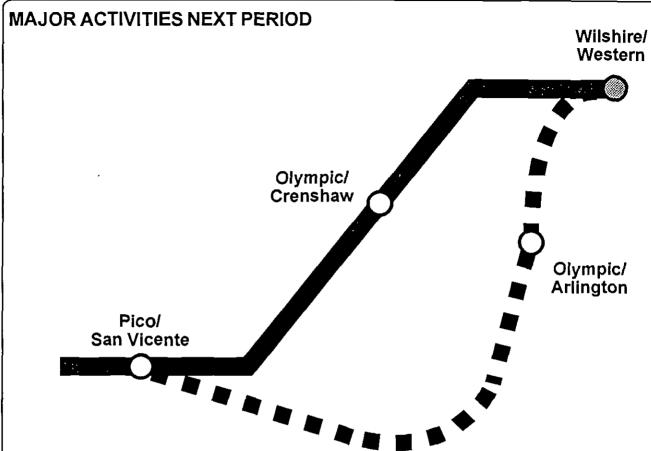


SYSTEMWIDE ACTIVITIES

- EMC received and reviewed MTA comments regarding the Bus Facility Feasibility Study Letter Report.
- The environmental consultant, Ultrasystems Environmental, Inc., continued to collect and analyze information necessary for the preparation of the Draft SEIS/SEIR.
- Community outreach activities continued through meetings with homeowner groups, chambers of commerce, and other organizations.

METRO RED LINE - Segment 3 / Mid-City Extension Summary Status Report Period Ending - February 28, 1997





SYSTEMWIDE ACTIVITIES

- Ultrasystems Environmental Inc., will continue preparation of an SEIS/SEIR incorporating the Wilton/Arlington and Crenshaw alignment alternatives. The consultant will provide initial write-ups of Draft SEIS/SEIR sections for review and comment.
- MTA will continue to meet with community and homeowner groups.
- An Interagency Advisory Group meeting is scheduled for March.
- EMC will submit the final Bus Facility Feasibility Letter Report to the MTA.

FINANCIAL STATUS

Budget/Forecast Variance (in Millions)

Original Scope Activities

COST ELEMENT	CURRENT BUDGET	CURRENT	VARIANCE	FEBRUARY CHANGE IN FORECAST
CONSTRUCTION PROFESSIONAL SERVICES REAL ESTATE UTILITY/FORCE ACCOUNTS SPECIAL PROGRAMS CONTINGENCY PROJECT REVENUE	\$334 98 54 5 0	\$377 187 44 9 2 64	\$0 0 0 0 0	\$0 0 0 0
TOTAL PROJECT	\$491	\$683	\$0	\$0

Additional Locally Funded Activities

				FEBRUARY
	CURRENT	CURRENT	•	CHANGE IN
COST ELEMENT	BUDGET	FORECAST	VARIANCE	FORECAST
	ł			
CONSTRUCTION	\$0	\$0	\$0	\$0
PROFESSIONAL SERVICES	0	0	0	0
REAL ESTATE	0	0	0	0
UTILITY/FORCE ACCOUNTS	0	0	0	0
SPECIAL PROGRAMS	0	0	0	0
CONTINGENCY	0	0	0	0
PROJECT REVENUE				
TOTAL ADDITIONAL LOCALLY FUNDED ACTIVITIES	\$0	\$0	\$0	\$0

Budget/Forecast Variance Analysis

The Forecast of \$683M shown in the chart above is based on information contained in the Rail Recovery Plan, which was approved by the Board and submitted to the FTA last period. The Mid-City Plan is based on the Wilton/Arlington underground alignment alternative with a forecast ROD of July 2009. This forecast ROD is based on funding constraints currently in the Rail Recovery Plan.

The budget baseline will be finalized when the preliminary engineering is completed and the Project is adopted, which is scheduled to occur in Spring 1998. The Current Budget shown in the chart above was changed this period from the Rail Recovery Plan amount of \$683M to reflect the current baseline amount of \$491M, pending Project adoption.

There are no Additional Locally Funded Activities at this time.

SCHEDULE STATUS

SCHEDULE			SCHEDULE ANALYSIS
		Change From Last Month	The Supplemental Environmental Impact Statement/ Subsequent Environmental Impact Report (SEIS/SEIR) document preparation which addresses the Wilton/
Current ROD	July 28, 2009	None	Arlington & Crenshaw alignment alternatives is on the critical path for the overall Mid-City Project. This
Design Progress	0%	None	documentation must be completed as scheduled in order for the Board to formally select the preferred
Construction Progress	0%	None	alignment and configuration in August 1997. During February, the MTA's environmental consultant
Critical Path Float	N/A	None	(Ultrasystems, Inc.) continued to work on this process with support from the MTA and EMC.
			The Wilton/Arlington underground option was incorporated into the Rail Recovery Plan last period. This plan, which shows a July 2009 ROD, corresponds to the forecast approved by the Board in January as a part of the Rail Recovery Plan. The schedule baseline will be finalized and and preliminary engineering work will resume pending selection of the preferred alignment alternative by the Board.

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ES-5

Task Start	Task Finish	Rem Dur	Total	% Comp	10.10.1 10.10.1 10.10.1			199	6		i i i ka						80012 80012	19	97		1	2 (4)		1118118 643111	\$			ene ene	199	8			
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02JUN97	16JUL97	32	19	0														Circ	ula(e D	raft	SEI	S/SE	IR									:
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CONSTRUCTION SAFETY

• There is no construction activity at this time.

AREAS OF CONCERN

NEW

There are no new areas of concern this period.

ONGOING

/tem

Finalization of Mid-City Cost Estimate & Master Schedule (initiated 8/95)

Concern/Impact

The Mid-City Project cost and schedule baseline cannot be finalized until an alignment alternative is selected. Finalization of the master schedule for design and construction is on hold pending completion of the draft SEIS/SEIR and Board decision on the preferred alternative.

Status/Action

MTA is proceeding with a draft SEIS/SEIR to incorporate the Wilton/Arlington & Crenshaw alignment alternatives. When the draft SEIS/SEIR is completed, the Board can make a decision on the alignment. Preliminary engineering and a final SEIS/SEIR will be done after the Board has selected the alignment. The Project Master Schedule and budget baseline will be finalized when the preliminary engineering is completed and the Project is adopted.

RESOLVED

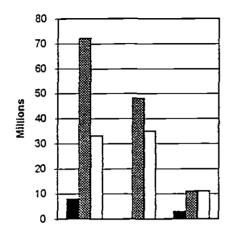
No outstanding issues were resolved this period.

FINANCIAL STATUS

Consultant Cost Status

Professional Service Contracts

Dollars in Millions



		DESIGNI	CM	OTHER
Current Authorization		8	0	_3
Forecast		72	48)	11
Budget		33	35	11

Professional Services Cost Analysis

There were no changes to Professional Service Contract values in February. The Forecast information on the chart reflects data contained in the Rail Recovery Plan. The Budget and Forecast information will be finalized when the Project is adopted in the spring of 1998.

DATA SOURCE:

CMS: Consultant Contract Authorization.

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METRO RED LINE SEGMENT 3

EAST SIDE EXTENSION

EXECUTIVE SUMMARY

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MAJOR ACTIVITIES THIS PERIOD

C0502 LITTLE TOKYO/ARTS DISTRICT STATION AND LINE SEGMENT FROM UNION STATION TO FIRST/BOYLE

MTA, PMA, Third Parties, and Interface Management review of Pre-Final Design Submittal continued through February with 95% of comments received by February 24th. MTA QA completed their audit of the C0502 Submittal and gave EMC high marks for successfully implementing quality procedures on C0502

C0521 FIRST/BOYLE STATION

EMC and Section Designer continued design to meet Pre-Final Submittal date of April 7, 1997. The Interdiscipline review was started on February 21, 1997. The Specification preparation is underway. Meetings were held with Third Parties for coordination purposes

FRETIBOYLE

C0531 CHAVEZ/SOTO STATION

Design progress is continuing by EMC and Section Designer per the schedule towards the Interim Submittal mitestone of April 7, 1997. As of the February Plan audit, the Section Designer is 52.5% complete. The fire protection plan is approved and water line pressures have been provided by LADWP. Third Party coordination meetings continue to resolve issues.

FR51 LOREMA

UNIONSTATION O

C0541 FIRST/BOYLE TO FIRST/ LORENA LINE SEGMENT

Final Design documents were issued on February4, 1997. An extensive QA/QC audit was performed by MTA and EMC auditors, and all design documents were prepared meeting DQM requirements satisfactorily. Additional new review comments were received from L.A. City BOE and DOT. All comments were resolved and incorporated where required. Camera-Ready document package was readied by Feb. 28, for issue on March 4th. Continued analysis on Pressurenter. Issued final report on large diameter Borings.

C0551 FIRST/LORENA LINE STATION

CHAVELISOTO

The C0551 Pre-Final Submittal was issued as scheduled on February 10, 1997. Pre-Final Design Review comments are due to the EMC by March 13, 1997. The EMC portion of the work is 91% complete. Nadel team is 90% complete and the Crossover design is 94% complete.

SYSTEMWIDE ACTIVITIES

EMC SUBMITTED TO MTA AMENDMENT #10 FOR CONTINUATION OF FINAL DESIGN SERVICES THRU MARCH 31,1997 EMC TO REFLECT RESULTS OF THE PROGRAMWIDE SEISMIC STUDIES ON EAST SIDE EXTENSION STATIONS DESIGN. A LETTER HAS BEEN SENT TO MTA WITH EMC RECOMMENDATIONS FOR DESIGN CRITERIA, EAST SIDE STATIONS. A FOLLOW-UP ESTIMATE OF DESIGN EFFORT FOR CHANGES WAS PROVIDED ON FEBRUARY 28TH. QUALITY MANAGEMENT AUDIT REPORTS WERE PRESENTED ON C0541 FINAL AND C0551 PRE-FINAL. THESE WERE FOUND SATISFACTORY. MTA QUALITY MANAGEMENT & EMC QUALITY MANAGEMENT PERFORMED A JOINT AUDIT OF EMC SUBCONSULTANTS, PSOMAS AND DEGENKOLB. FOLLOW-UP HAS BEEN CONDUCTED ON EACH OF THESE AUDITS TO RESOLVE FINDINGS.



ACTIVITIES PLANNED FOR NEXT PERIOD C0521 C0502 LITTLE TOKYO/ARTS DISTRICT STATION AND LINE SEGMENT FROM UNION STATION TO FIRST/BOYLE FIRST/BOYLE STATION

Disposition of Design Review comments and completion of Final Design Submittal scheduted in March.

Continue preparation of design documents for the April 7, 1997 Pre-Final Submittal. Receive Third Party designs from DWP, LADOT, and BSL. Start interdiscipline review of drawings and specifications. Commence QA review. Check CAD files for compliance. Incorporate all comments from Interim Submittal.

FIRST BOYLE

C0531 CHAVEZ/SOTO STATION

Continue Interim Phase design work toward Interim milestone submittal of April 7, 1997. Continue coordination of civil & utility drawings with Third Parties. QCCD Training for Section Designer on March 4. Complete the Specification table of contents & prepare QCCD documentation. Section Designer Plan audit scheduled March 21.

CHAVEZ SOTO

UNION STATION

LITTLE TOKYO

LITTLE TOKYO

LARTS DISTRICT

C0541

FIRST/BOYLE TO FIRST/ LORENA LINE SEGMENT

Contract on hold. MTA to direct revision of docments to include Chavez/Soto Station in the C0541contract.

C0551 FIRST/LORENA STATION

FIRSTILOREMA

Review of Pre-Final Submittal by MTA and Third Parties. Pre-Final Design Review comments are due to the EMC by March 13, 1997. Obtain Pre-Final QA surveillance report for Section Design Team.

SYSTEMWIDE ACTIVITIES

RECEIVE APPROVAL FROM MTA FOR AMENDMENT #10 FOR CONTINUATION OF FINAL DESIGN SERVICES THROUGH MARCH. EMC TO HELP PREPARE PRESENTATION TO MTA CONSTRUCTION COMMITTEE OF THE GEOTECHNICAL BORINGS COMPLETED FOR EAST SIDE EXTENSION. EMC TO RECERTIFY 25 SUB-SUR-FACE EASEMENTS AND BUILDING PROTECTION EASEMENTS FOR C0541, AND 26 SUB-SURFACE AND BUILDING PROTECTION EASEMENTS FOR C0502.



FINANCIAL STATUS

Budget/Forecast	Variance :	(In Millions)
-----------------	------------	---------------

COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	VARIANCE ·	FEBRUARY CHANGE IN FORECAST
Construction	\$668.4	\$668.4	\$0.0	\$0.0
Professional Services	\$246.7	\$246.7	\$0.0	\$0.0
Real Estate	\$34.8	\$34.8	\$0.0	\$0.0
Utility/Force Account	\$23.9	\$23.9	\$0.0	\$0.0
Special Programs	\$0.0	\$0.0	\$0.0	\$0.0
Contingency	\$75.4	\$75.4	\$0.0	\$0.0
Project Revenue	\$0.0	\$0.0	\$0.0	\$0.0
Total Project	\$1049.2	\$1049.2	\$0.0	\$0.0

Other Locally Funded Activities

COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	VARIANCE	FEBRUARY CHANGE IN FORECAST
Construction Professional Services Real Estate				
Utility/Force Account Special Programs Contingency	\$0.0	\$3.1	\$3.1	\$0.0
Total Other Locally Funded Activities	\$0.0	\$3.1	\$3.1	\$0.0

Budget/Forecast Variance Analysis

February Forecast Variance

In December 1995, the forecast was increased by \$44.3M due to escalation costs because of the delay in full release of Final Design services. By September 1996, the \$44.3M was reduced to \$1.8M due to extensive cost mitigation/value engineering savings. However, also in September, two new trends, the two pass tunnel liner and the additional costs for the EPB tunnel boring machines further increased the project forecast by \$36.2M and \$13.4M respectively. These trends combined to increased the project forecast to \$1,031M. In October, a decision was made to implement the design approach of a "one-pass-with-option" tunnel liner which reduced the project forecast by \$21M to \$1,010M. In January, the MTA Board adopted a revised schedule which moved the R.O.D. to November 2004 and changed the East Side Extension current budget and forecast to \$1,049.2M. In February, there were no new trends incorporated. The MTA & EMC continue analyzing the project for cost reduction measures to reduce overall project costs.

"Other Locally Funded Activities" are defined as work scope not originally covered under the Full Funding Grant Agreement (FFGA). The current forecast includes the MTA Art Program forecast of \$3.1M which includes EMC Contract Work Order 0036 for \$312,000, as well as contracts for four station artists at \$30,000 each. The inclusion of the Art Program increases the overall project forecast by \$3.1M. Awaiting MTA Board approval to update the current budget to reflect commitments and forecast.



SCHEDULE STATUS

	Schedule					Design Progress
			Change from Last Month	100	' %	
	Current R.O.D.	Nov. 2004	0		ĺ	
	Final Design progress	61.4%	3.4%	75	·%	
	Construct, Progress	N/A	N/A	olete		
	Critical Path Float	0	0	Percent Complete	% 	
				Percen		1
				25	%	Month Total
						/ Actual 3.4% 61.4%
- 1					ľ	/ Forecast — — 4.0% 67.0%

Design Progress Analysis

The plan reflects the Design Baseline Schedule as approved by the MTA in October 1996.

Through February, overall final design was 61.4% complete versus a plan of 66.2%. Revisions to the scope of work since March 1995 were negotiated and finalized in a revised PIP to the MTA dated August 2, 1996. With the addition of Amendment #7 for \$331,500 to prepare contract documents for bulk procurement of running rail, direct fixation rail fasteners, signs and graphics, elevators and ventilation equipment, the latest final design cost baseline stands at \$58, 119,743.

There remains several areas where differences of opinion still exist between EMC and MTA over scope of work. These include the tunnel liner configuration, alignment at the Unocal Tank Farm, and demolition contract repackaging. These issues are being resolved through the Change Control process. Contract pages detail specific recovery plans.

Current Critical Path Analysis

The Board adopted current R.O.D. is November 3, 2004.

Acquisition of parcel EB-037 in Contract C0502 may not be complete in time to meet MTA's target construction NTP date in September 1997. MTA is working with the owner to acquire the parcel in time, but if this effort is unsuccessful, a work-around has been established to mobilize on the site the last 30 workdays of the four-month mobilization window. Contracts C0531 and C0541 are on the project critical path. They became part of the critical path as a direct result of shifting the NTPs as late as possible to accommodate cash flow requirements. When station concrete is substantially complete for the station on the critical path, trackwork access is provided and the critical path becomes trackwork installation. The critical path, furthermore, contains ATC, SCADA, and Communications Installation and continues through testing and pre-revenue operations to R.O.D.



Construction Safety Statistics

Not applicable at this time

Construction Safety Summary

Not applicable at this time

AREAS OF CONCERN

ONGOING

Item [Initiated February 1996]

Real Estate acquisition for the partial-take parcel EB-037 is critical.

Concern/Impact

Acquisition of parcel EB-037 at C0502 may not be complete in time to meet MTA's target construction NTP in September 1997. Note that the MTA Board-adopted schedule incorporating a two-year time extension to complete the project has eliminated from the critical path all other previously critical parcels.

Status/Action

MTA is working with the owner to acquire parcel EB-037 in time to meet the target date for start of construction. If this proves to be impossible, a work-around plan has been established to mobilize on this site the last 30 workdays of the four-month mobilization window.



AREAS OF CONCERN (Continued)

ONGOING

Item [Initiated September 1996]

EIS/EIR Addendum Approval Process

Concern/Impact

Twenty full take property acquisitions cannot be authorized by the MTA Board until the EIS/EIR Addendum has been approved. The EIR Addendum is expected to be approved by the Board in June 1997. This delay at present is not impacting the critical path and the current forecast R.O.D. of November 3, 2004, however, further delays could impact the project schedule.

Status/Action

The earliest date foreseen for approving the EIS/EIR Addendum is June 1997. The Addendum has been submitted for FTA comments and MTA is responding to those comments as they occur.

ONGOING

Item [Initiated December 1996]

Design is on the schedule Critical Path.

Concern/Impact

Due to a slippage in the Camera Ready submittal on contract C0502, design for this contract became critical and the projected R.O.D. for the project schedule was pushed out 11 working days. The delay was due to late design decisions related to the "Two-Pass" vs. "One-Pass with Option" tunnel liner, realignment of the CR tunnel at the Unocal Tank Farm, and development of specs due to the C0541 delay, all of which required rework of drawings and specs. Due to receipt of about 2,000 Pre-Final design comments within the last 48 hours of the comment submittal period, the Final and subsequent Camera-Ready submittals will slip another two and one-half weeks.

Status/Action

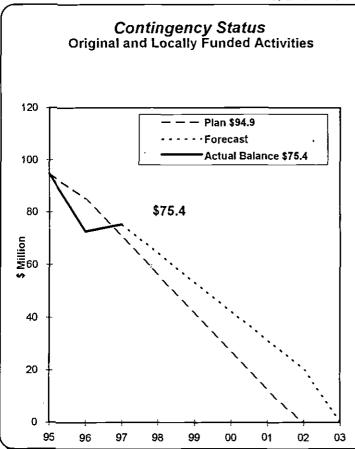
C0502, as the first major construction contract, remains vital to project success and the EMC and MTA are working to resolve comments as quickly as possible to assure a quality product and to avoid further delays. Potential schedule impact to R.O.D. is being reviewed and mitigation strategies developed.

METRO RED LINE - Segment 3 East Side Summary Status Report

Period Ending - February 28, 1997



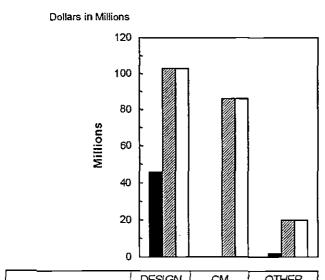
FINANCIAL STATUS



Contingency Status Analysis (Excludes non-construction allocated contingency)

Since there were no trends incorporated in February, there was no change to contingency.

Professional Services Contracts Consultant Cost Status



	_DESIGN	CM	OTHER
Current Authorization	46	0	2
Forecast	103	86	20
Budget	103	86	20

Professional Services Cost Analysis

Categories represent all professional services contracts, not individual contracts ("Design" includes all Line Item 11 contracts. CM is Line Item 12 and Other is Line Item 13).

Professional Services budgets and forecasts have been revised in accordance with the Board's approved \$1,049.2M budget.

VEHICLE ACQUISITION PROJECT

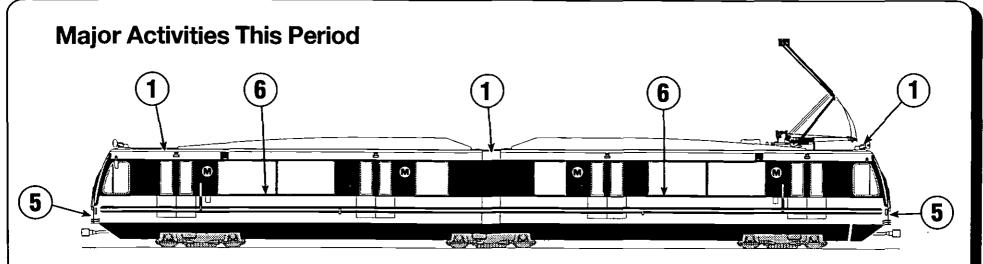
EXECUTIVE SUMMARY

ES-1

L.A. Light Rail Vehicle

Summary Status Report Period Ending - February 28, 1997



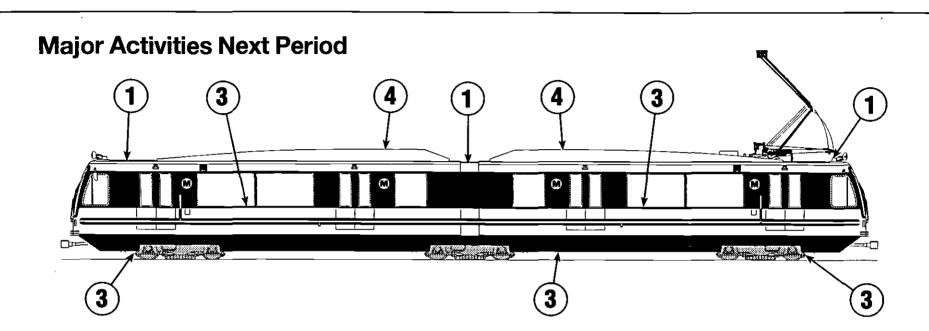


- 1. Carshells No. 6 and 7 were completed and shipped to Sacramento for final assembly.
- 2. Finalized the vehicle delivery location. Siemens agreed to ship vehicles to a site in the vicinity of Washington Station at the Metro Blue Line.
- 3. Participated in the Project Management Oversight (PMO) Quality Audits of the Carson and Sacramento facilities.
- 4. Met with Siemens management to discuss ongoing project concerns.
- 5. The assembly of seven cars at the Sacramento facility is progressing, although at a lower rate than anticipated.
- 6. Participated in the Design Conformance Test and First Article Inspection of car seats (partial).

L.A. Light Rail Vehicle

Summary Status Report Period Ending - February 28, 1997





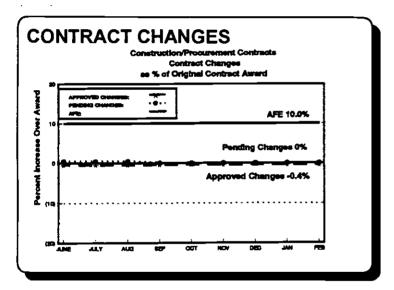
- 1. Complete and ship carshells No. 8 and 9 to Sacramento. Continue the assembly of car No. 1 through 7.
- 2. Meet with Siemens to discuss vehicle delivery logistics including the construction of the proposed delivery site near the Metro Blue Line Washington Station and crossing of Washington Boulevard.
- 3. Participate in the First Article Inspection and Design Conformance Test of the car seats, battery/battery charger, and witness the second production Traction Motor Test.
- 4. Participate in the HVAC System Qualification Tests and Quality Audit.
- 5. Meet with Siemens' Management to discus changes in Siemens' Management Organization and evaluate Siemens' new proposat on schedule, options and related issues.



Ameunt	Change from
Amount <u>(in \$ mil)</u>	Last Month (in \$ mil)
257.6	-0-
257.6	-0-
201.4	-0-
79.4	+0.1
	257.6 201.4

BUDGET ANALYSIS

- Car reduction effected 9/08/95 which will reduce the contract value from \$215 million to approximately \$170 million after termination liability is negotiated (2-4 months from now).
- The current forecast includes the reduction of both procurement contract value and other project costs.



CONTRACT CHANGE ANALYSIS

The figures for February 1997 are as follows:

Approved Changes		٠.		 					(C).4%)
Pending Changes 0%	D
AFE	 _		_	 	_	 	_	_		10%	

SCHEDULE Change from **Last Month Schedule Car Delivery** 1st Car March 1998 -21 Days 52nd Car June 1999 N/C N/C **Design Progress** 90-95% complete N/C Fabrication Progress 30-35% complete **Critical Path** Carshell assembly N/C Delay (1st Car) -17 months -1 Month **Data Date February 3, 1997**

SCHEDULE ANALYSIS

The Contractor's last forecast schedule reflected a total of 17 months delay in 1st car deliveries. Subsystems with potential impact on delivery are air conditioning and communications equipment. Car assembly is still on the critical path. Acceleration of the delivery schedule for the first several cars is unlikely, however, the delivery schedule is projected to improve for later units.

In recent schedules, STS assumed that the MTA can accept cars at a higher rate than specified (2 cars per month).



AREAS OF CONCERN

ONGOING

Item (Date Initiated September 1996)

Lack of Progress in the Development of Manuals and Training

Concern/Impact

TransEd (TEI), Siemens' DBE Subcontractor for the User Education portion of the Contract, evidenced a lack of progress in both the development of Repair and Parts Manuals, and in the Vehicle Training Program.

Status/Action

STS determined that TransEd, the DBE subcontractor for training and manuals is in default. As a result, they are requesting the MTA allow them to contract with MRA, TransEd's sub-supplier. The MTA is reviewing Siemens' request.

Item (Date Initiated June 1996)

Vehicle Weight

Concern/Impact

Vehicle Weight Report, No. 11, indicates a margin of approximately 1,300 pounds under the specified weight. Although this news is encouraging, it represents less than a 1% margin.

Status/Action

Vehicle Weight Report, Revision 12, dated December 9, 1996, indicates the margin has shrunk to 0.6%, or just over 800 lbs. The estimate reflects actual equipment weights. STS continues to monitor vehicle weight during the assembly of the first car and make improvements wherever possible.



AREAS OF CONCERN (CON'T)

Item (Date Initiated February 1996)

Schedule Slippage

Concern/Impact

The February delivery schedule indicates a delay of 17 months for the first car with delivery of the last car approximately 7 months late.

Status/Action

Siemens is expected to start a two shift operation after the first few cars have reached a stable production rate.

Item (Date Initiated November 1995)

Carborne Signal Equipment for 16 Standard Cars

Concern/Impact

The current plan calls for 16 LA Standard Cars to be assigned to the Metro Blue Line (LA→Long Beach Branch). The Standard Cars require on-board signal equipment compatible with the Blue Line wayside before they can enter revenue service. STS was requested to provide a proposal for the supply of this equipment.

Status/Action

Siemens submitted a revised ROM cost which is under review by MTA. An MTA Board Report is being prepared to authorize staff to negotiate procurement of the required Carbome Signal Equipment.

Item (Date Initiated July 1995)

Cancellation of 22 Standard Cars

Concern/Impact

STS requested \$10 million in damages from the cancellation of 22 cars. This claim must be validated before payment can be made.

Status/Action

Back-up data from STS has been evaluated by technical staff and will be submitted to the Audit Department for final determination. However, due to the Audit Departments work load, this task may be delayed or assigned to an outside consultant.



AREAS OF CONCERN (CON'T)

Item (Date Initiated March 1995)

HVAC Design

Concern/Impact

The Prototype Unit was completed and inspected. The completion of the systems test has been delayed due to postponements by Sutrak.

Status/Action

In an executive level meeting held in December 1996, Sutrak cited corporate reorganization as the reason for their delay. Sutrak's President, stated that the reorganization is behind them, and Sutrak-USA is now an independent entity, with an exclusive license to produce the P2000 HVAC design in the United States.

Design Conformance Testing (initiated in November) was conducted during January 1997 in Lamar, CO., along with a partial First Article Inspection. Further tests and a FAI are scheduled for mid-March.

This item will remain as an area of concern until Sutrak produces specification-compliant units in the required time frame.