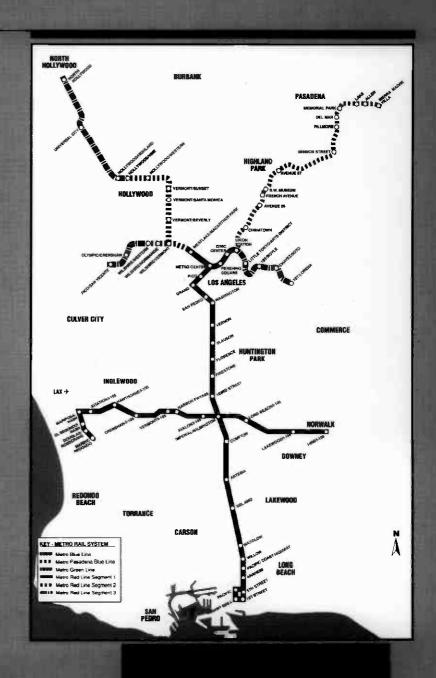
MTA METRO CONSTRUCTION



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% 11.6% Actual 80.3% 8.6%

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

....

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

• The project is incurring 14,000 work hours per month with no Lost Time Injuries.

Areas of Concern

Validation of \$803.9 baseline estimates.

Monthly Highlights

- Finished delivery of concrete ties for P2100 Precast Concrete Ties.
- Began final design on C6450 Del Mar to Memorial Park Line Segment.
- Continued negotiations of CWO 40 estimated costs with EMC for final design services.

METRO RED LINE SEGMENT 2

Cost Status

Current Budget \$1,640,000

• There was no change to the Current Budget during the period.

Schedule Status Design Progress Construction Progress

 Plan
 92.0%
 89.0%

 Actual
 93.9%
 81.3%

Wilshire Corridor - Revenue operations - July 13, 1996

Vermont/Hollywood - Current Plan Dec 1998

Vermont/Hollywood Corridor is behind schedule due to tunnel delays under Hollywood Blvd.

Safety Status Project Rate National Average Lost Time Rate 2.6 4.9

Lost Work Days 69.7 148.1

• The project completed 170,000 work hours with no Lost Time Injuries.

Areas of Concern

 Installation of piles and excavation of B251E Sink Hole Shaft and B251F Hollywood/Vine Access Shaft are delaying trackwork access.

Monthly Highlights

- Mobilized B610 Trackwork Installation.
- Began negotiations with B620 Automatic Train Control contractor for completion of work per the Vermont/Hollywood Corridor recovery plan.
- Mitigation efforts between the B610 and B620 contractors continued for access and schedule.

METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION

Cost Status

Current Budget

\$1,313,848,000

The were no changes to the Current Budget during the period.

Schedule Status

Design Progress

Construction Progress

Current Plan May 2000

Pian 93.6% Actual 92.5% 64.8% 32.8%

 Contract C0311 Line Section from Universal City Station to Station 630 + 00 continues to be behind schedule. Efforts to mitigate these delays continue.

Safety Status

Project Rate

National Average

Lost Time Rate

0.4

4.9

Lost Work Davs

18.4

148.1

The project has completed 2,466,000 work hours with five Lost Time Injuries.

Areas of Concern

Mitigation efforts incorporated into the project schedule to maintain the May 2000 ROD do not include allowances for contingency.

Monthly Highlights

- A final package for B620 Automatic Train Control was submitted on November 11,1996.
- Acceleration options for C1610 Trackwork Installation were included in the November
- The MTA is working with the EMC to reduce their cost forecast as the project moves into construction.

METRO RED LINE SEGMENT 3 MID-CITY EXTENSION

Cost Status

Current Budget

\$490,663,000

• The Current Budget value is contingent on the preferred alternative selected.

Schedule Status

Plan

Construction Progress

Current Plan TBD

Actual

0% 0%

Design Progress

0% 0%

Safety Status

Project Rate

National Average

Lost Time Rate Lost Work Days N/A N/A

4.9 148.1

No Construction Safety activity for this period.

Areas of Concern

 The overall schedule and project cost for final design and construction is on hold pending the MTA Board determination of the preferred alternative.

Monthly Highlights

- EMC is developing a site plan feasibility study to address interfaces between an expanded bus terminal and two new station options at Pico/San Vicente.
- The MTA Board selected Ultrasystems Environmental, an environmental consultant, to prepare an SEIS/SEIR incorporating the Wilton/Arlington alignment alternatives.

METRO RED SEGMENT 3 EAST SIDE EXTENSION

Cost Status

Current Budget \$979,601,000

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

Schedule Status Design Progress Construction Progress

Current Plan November 2002 Plan 52.1% 0.0% Actual 47.4% 0.0%

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

Safety Status Project Rate National Average
Lost Time Rate N/A 4.9
Lost Work Days N/A 148.1

• No Construction Safety activity for this period.

Areas of Concern

Parcel EB-037 at Little Tokyo needs to be recertified due to detour requirement at the site.

Monthly Highlights

- Amendment 8 for the continuation of final design services was submitted to the MTA.
- Fluor Daniel was selected to review, expand and maintain the project schedule.
- The MTA, EMC and PMA consultant are reviewing potential schedule mitigation measures.

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 February 1998 90% 30%

52nd Car June 1999

• The schedule from the contractor reflects 16 months delay in first car deliveries due to design and manufacturing problems.

Areas of Concern

Lack of progress in the design of the Vehicle Communications Systems.

Monthly Highlights

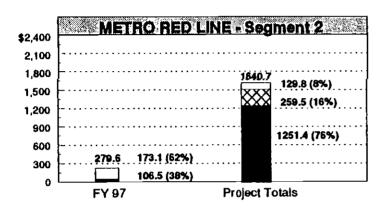
- A second carshell was shipped from Carson to Sacramento for final assembly.
- MTA met with STS to review vehicle delivery locations. Currently, two locations are under along the Metro Blue Line are being considered.
- Siemens is building an additional spackling room at the Carson facility to improve the vehicle production rate.

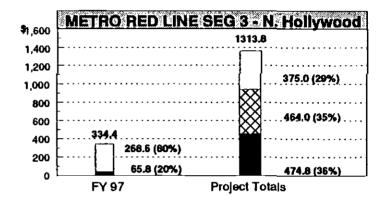
METROPOLITAN TRANSPORTATION AUTHORITY PROJECT COST REPORT - TOTAL RAIL PROGRAM SUMMARY BY COST ELEMENT (IN THOUSANDS)

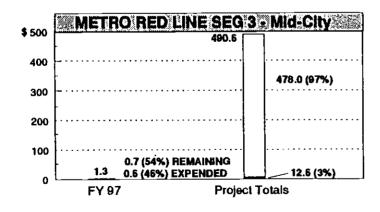
PROJECT: TOTAL RAIL PROGRA	М						STATUS DATE:	11/29/96
ELEMENT	BUD	3ET	COMMIT	MENTS	EXPEND	ITURES	CURRENT	VARIANCE
DESCRIPTION	ORIGINAL	CURRENT	PERIOD	TO DATE	PERIOD	TO DATE	FORECAST	(7-2)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T CONSTRUCTION	5,153,507	5,343,640	9,923	3,720,287	30,430	2,859,820	5,312,541	(31,099)
S PROFESSIONAL SERVICES	1,685,529	2,101,723	354	1,626,063	5,508	1,438,023	2,150,927	49,204
R REAL ESTATE	480,002	537,113	3,746	410,618	4,385	408,890	546,547	9,434
F UTILITY/AGENCY	146,279	160,748	3,614	141,168	729	111,875	170,587	9,839
FORCE ACCOUNTS								
D SPECIAL PROGRAMS	11,045	16,747	228	5,888	38	4,861	15,709	(1,038)
C CONTINGENCY	560,120	340,634	o	0	0	o	274,205	(66,429)
A PROJECT REVENUE	(18,115)	(37,411)	٥	(2,824)	0	(11,310)	(33,161)	4,250
PROJECT GRAND TOTAL	8,018,367	8,463,194	17,865	5,901,200	41,090	4,812,159	8,437,355	(25,839)

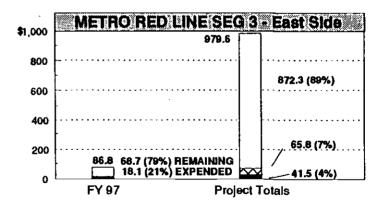
NEW REQUIREMENTS	BUD	GET	СОММП	MENTS	EXPEND	ITURES	CURRENT	VARIANCE
DESCRIPTION	ORIGINAL	CURRENT	PERIOD	TO DATE	PERIOD	TO DATE	FORECAST	(7-2)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T CONSTRUCTION	0	49,404	0	43,085	677	23,573	60,046	10,642
S PROFESSIONAL SERVICES	0	17,484	0	16,464	0	9,573	17,657	173
R REAL ESTATE	0	0	0	0	0	37	0	0
F UTILITY/AGENCY	o	0	0	0	0	0	0	0
FORCE ACCOUNTS								
D SPECIAL PROGRAMS	0	20	0	452	0	35	3,142	3,122
C CONTINGENCY	o	1,348	0	0	0	0	1,014	(334)
A PROJECT REVENUE	0	0	0	0	0	0	(11,462)	(11,462)
NEW REQ. SUBTOTAL	0	68,256	0	60,001	677	33,218	70,397	2,141
PROJECT GRAND TOTAL	8,018,367	8,531,450	17,865	5,961,201	41,767	4,845,377	8,507,752	: (23,698)

BUDGET STATUS - November 29, 1996 (in \$ Millions)







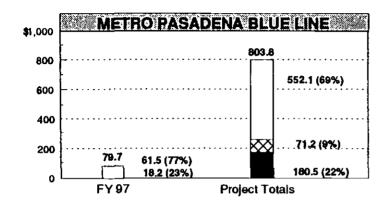


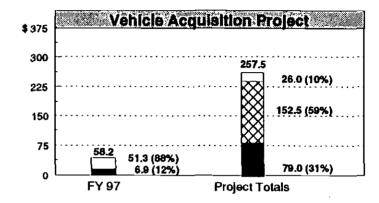
Actual Spent



Remaining Budget

BUDGET STATUS - November 29, 1996 (in \$ Millions)





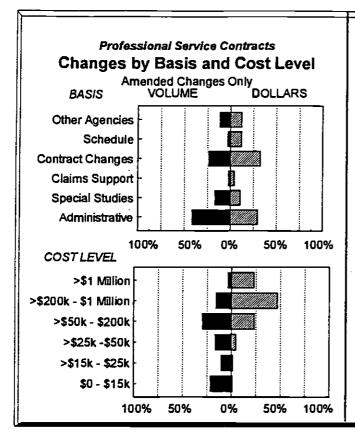
Actual Spent Encumbered Remaining Budget

Page :

METROPOLITAN TRANSPORTATION AUTHORITY

							FUNDIN				UTHORI SNS)	11						м	VEMBER	
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ŀ	LINI	E*	BLUE	UNE I	UNI	E % .	SEGM	ENT 1**	SEGMI	ENT 2	SEG :	3 - NN %	SEG :	· MC	9EG :	3 - ES %	PRO 8	DJECT	PROG	RAM
ORIGINAL SCOPE:	Ť		Ť				Ť		Ť		1		Ť				_		<u> </u>	<u> </u>
FTA-SECTION 3							605.3	42	667.0	40	681.0	52	242.5	49	492.9	50			2688.7	32
FTA - OTHER																<u> </u>	11.9	4	11.9	0
ISTEA - FEO SURFACE TRANSIT PROG									52.1	3	50.0	4			25.0	2	84.0	32	211.1	3
FED-ISTEA RSTP/GMAQ					į						39.9	3	40.4	i s	86.1	.9	6.1	3	172.5	2
FTA-SECTION 9							90.6	6											90.6	1
STATE			387.8	48	106.4	15	210.3	15	133.0	8	65.0	5	40.0	8	65.0	7	33.5	13	1041.0	12
STATE TSM MATCH											3.2	0	7.2	2	11.1	,			21.5	a
98 1995 TRUST FUND											75.0	6							75.0	1
PROPOSITION A	877.2	100	202.6	25	205.1	28	179.5	12	501.9	31								ļ	1966.3	23
PROPOSITION C		,	213.5	27	400.3	56					192.8	15	151.6	32	299.1	31	122.0	48	1379.3	16
PROP C (AMERICAN DISABILITY ACT)					6,0	1													6.0	o
CITY OF LOS ANGELES	:						34.0	2	157.5	10	190.7	14	9.0	1	0.3	o			391.5	5
BENEFIT ASSESSMENT							130.3	9	58.0	4	13.5	1						:	201.8	2
COST OVERRUN ACCOUNT							200.1	14											200.1	2
TOTAL	877.2	100	803.9	100	717.8	100	1450.1	100	1569.5	96	1311.1	100	490.7	100	979.5	100	257.5	100	8457.3	99
OTNER LOCALLY FUNDED ACTIVITIES:																				
PROP C (TRANSIT ENHANCEMENTS)									68.7	4	2.7	o							71.4	1
FED ISTEA RSTP/CMAQ									2,5	o			İ						2.5	0
TOTAL									71.2	4	2.7	0							73.9	1

Note: Data reflacts Current Budget



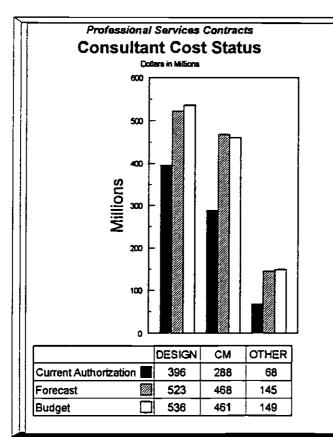
CHANGE BASIS ANALYSIS

Administrative changes account for approximately 42% or 304 of the 731 Consultant Change Notices overall. This equals 29% 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 69.5% of all change costs associated with the Rail Project or \$69M of a total change cost of \$99M. This equals 20% of the total change volume or 148 of 731 total changes.

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



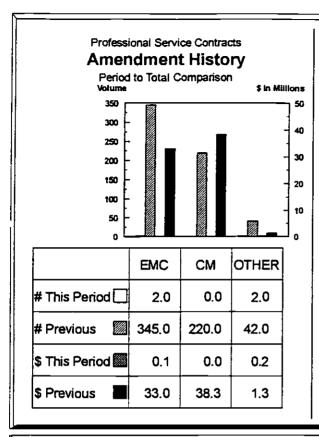
PROFESSIONAL SERVICES COST ANALYSIS

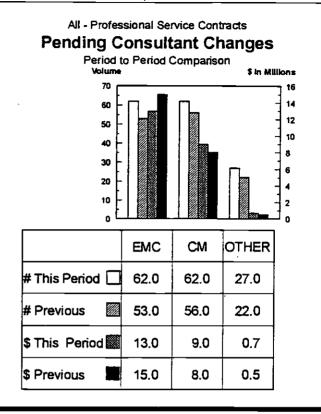
Categories represent all professional services contracts, not individual contracts (i.e. "design" includes all line 11 contracts not just EMC).

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.





CONSULTANT CHANGE NOTICE ANALYSIS

Eight new Requests for Change (RFC) were received during the period with an estimated value of \$2.4 million.

Twenty-four new Consultant Change Notices (CCN's) were assigned or issued during the period with an estimated value of \$1.5 million.

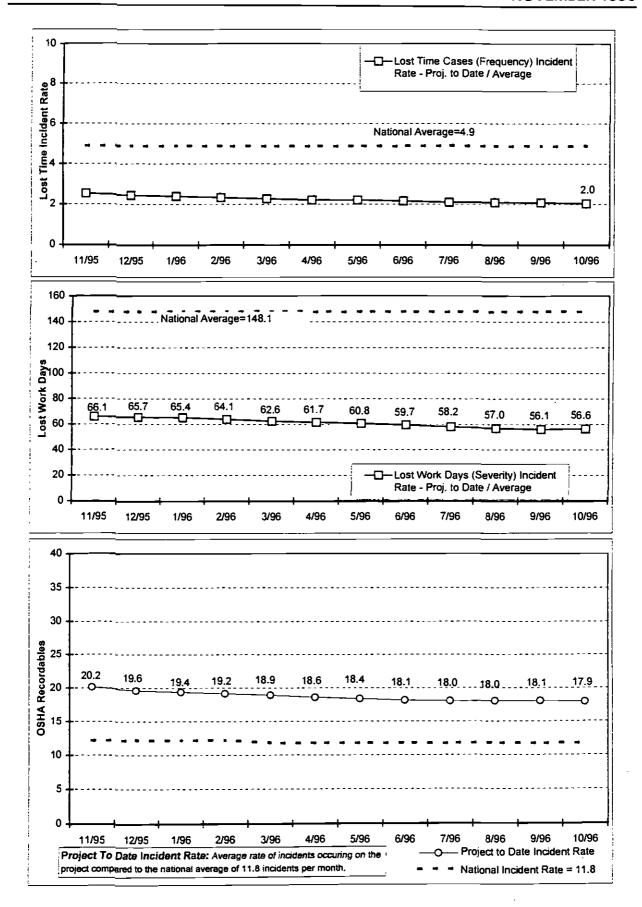
Four CCN's were amended during the period with a negotiated value of \$348 thousand.

No CCN's were rejected or cancelled during the period.

Cost Performance Relative to Corporate Goals (NT) THOUGANDS)

							•														
	METRO	PALLET LINE	METRO	ASADENA	METRO G	DCTEM I INC	METRO	RED LINE	Lievon	RED LINE	Lecro		1 14-5	K						NOVEMB	ER 1996
				LINE		*****		MENT I		MENT 2	SEGMEN	RED LINE		AED LINE				ACCUISITIC			CORP
	COLLARS	PERCENT	DOLLARS	PERCENT	COLUMN T	DEOCEAN	W 1799	DEDUCE OF	~ 323	MENI &	DOLLARS		SEOME		SEGME!			<u>JECT</u>	PROX		GCAL
CONSTRUCTION	657,467	74.95%	448,417	56.70%	177 236	88.49%	612.270	LECTED	1,138,898	60.41 %			DOLLARS	H-HC-NI				PERCENT			
		1	,]	سر		012210	30.02%	1,130,000	90.41%	532,795	63.49%		, ,	658,534	65.00%	180,844	89.72%	5,206,281	64.94%	226
REAL ESTATE	55,592	8.34%	59,918	7.44%	28,047	3,63%	140,000	9.00%	87,773	5.35%						l		l	l :	1	
1	,		,-,-	7.44,5			,	1	87,7/3	, ,,,,,,	59,078	8.79%	٥	י ו	27,450	2.71%	Į o	0.00%	465,863	0.00%	
PROFESSIONAL	į .]		ļ.	1	1	i		i		į.	į.			Į.			l	11.19
SERVICES:	l	1		ł		Ī	1	1			1			F		ı	l .			ı	4
	ŀ	1	l .	1	ı	l	ł	1	1	l	1				•	l .	ŀ	l		ı	<i>"</i> 198
ENGINEERING/DEB	89,557	7.83%	119,401	14.83%	63,296	11.00%	221,659	15.20%	165,514	10.09%	67,121	5.64%	ا م		1		l			ı	
			***********	1]		100,514		37,121	0.04%		, ,	101,488	10.02%	1,700	0.84%	849,786	10.60%	200
CONSTRUMENT.	91,642	10.45%	66,854	8.30%	76,213	10.90%	118,429	8.03%	164,563	10.03%	115,919	5.64%	ا ا	٥	64,963		۱ .				31.80
		,,	,	1				"	104,000		113,515	0.0476	"	· ·	04,803	8.39%	0	0.00%	715,803	0.96%	
STAFF	17,665	2.01%	45,620	5.82%	24,179	3.37%	95,558	6.59%	55,749	3.40%	59,586	4.54%	ا م	_	37,565	3.71%					l .
1	ŀ	l	-		1		1,			1		7.27,6	j "	·	37,000	3.71%	3,540	1.91%	340,954	4.25%	4%
OTHER	14,222	1.02%	22,075	2.74%	17,337	2.42%	32,671	2,25%	22,854	1.39%	41.226	3.14%		٥	17,358	1.71%					
					1							4.176		•	17,336	1.71%	9,237	4.59%	177,010	2.21%	
SUBTOTAL	193,106	22.01%	255,150	31.59%	203,025	28 28%	466,317	32.16%	400,710	24.91%	303,854	23.17%	-	- 0	241,394	23,63%	14,777	7.34%	0.000.000	70 70-1	ł
	1	1			i '				,,-		333,200	24.71.2	"	•	471,304	23,533	19,777	1.34%	2,086,333	26.02%	20%
CONTINUENCY	963	0.11%	42,628	5.32%	12.757	1.70%	31,432	2.17%	6,210	0.35%	97,372	7.42%	ا م	٥	85,744	8,46%	5,930	2.95%	263,236	* =	
		1							i			7.7-2			٠٠,, ٠٠٠	1	3,255	4.50%	201,235	3.53%	
PROJECT REVENUE	29,877	3.41%	(1,211)	-0.15%	(1,263)	-0.18%	اه ا	0.00%	(810)	40.00%	(11,462)	-0.87%	اه ا	۵	۵	0.00x	اما	0.00%	(44,623)	-0.56%	1 6
							1	l	[]		1		ľ	•	•	J	"		الجونوبي	-U.007A	100
																—				-	1300
GRAND TOTAL	677,271	100.00%	805,100	100.00%	717,802	100.00%	1,450,019	100.00%	1,540,781	100.00%	1,311,635	100.00%	اه ا	٥	1,013,131	100.00%	201,351	100.00%	8,017,090	100.00%	S. 3
L			ļ. —	l			i		l '_				Ĭ	1	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				0,0,7,000	(W.M/M)	A. 1
"METRO RED LINE 6	EGMENT 3	MO CITY I	PORFCART	MITT AVAIL	ARIE																

"METRO PIED LINE SEGMENT 3 MID (NOTE: Data reflects Current Forecast.



EXECUTIVE SUMMARY

Summary Status Report

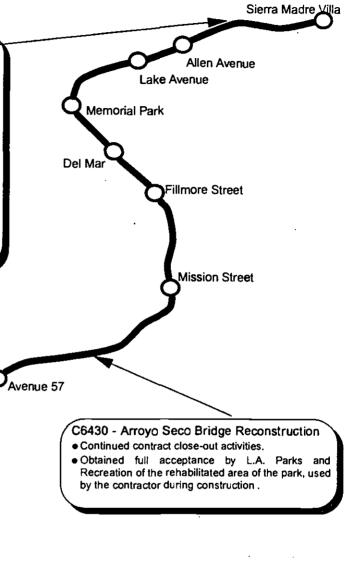
Period Ending - November 29, 1996



MAJOR ACTIVITIES THIS PERIOD

C6435 - Reconstruction & Retrofit of Steel & Concrete Bridges

- Lake Ave.: Completed erection of column casings, welding and grouting. Completed fabrication of pre-cast concrete girders for Stage 2 widening. Completed demolition of the remaining portion overhang.
- Allen Ave.: Completed concrete placement for the column extension at Bent #2. Completed roadway section and restored traffic control to original condition.
- Sierra Madre Ave.: Completed erection of column casings, welding and testing for all three columns.
- Lacy St. Bridge: Caltrans reviewed design of span 4.



Avenue 26

French Avenue

Southwest Museum

SYSTEMWIDE ACTIVITIES

Jnion Station

Chinatown

- Completed delivery of concrete ties for Contract P2100, Precast Concrete Ties.
- Continued interface with community representatives regarding work scope changes.
- Continued negotiations of CWO 40 estimated costs for final design of C6420, C6440, C6450, H0070, H0090, and Ave. 57/Southwest Museum Stations with the Design Consultants.
- Started final design on limited basis for Contract C6450, Del Mar to Memorial Park Line Segment.
- Begun review of CWO 41 estimated costs for final design of C6390, C6400, C6460, C6475, C6480, C6500, C6510 and C6520 in preparation for final negotiations with the Design Consultants.

Summary Status Report

Period Ending - November 29, 1996



MAJOR ACTIVITIES NEXT PERIOD Sierra Madre ¥illa C6435 - Reconstruction & Retrofit of Steel & Concrete Bridges Allen Avenue · Lake Ave.: Begin form and pour bottom slab Lake Avenue and top slab of Stage 1. Begin form pour and strip modified barriers for Stage 1. Memorial Park Allen Ave.: Complete abutment excavation and lagging. CM to finish bridge falsework and review deck design. Begin assembling Abutment 1 and 3 pile cages. Del Mai • Fremont Ave.: Begin form and pour abutment anchor blocks and backfill abutments. Fillmore Street • Foothill Blvd.: Begin form pour and strip girders and deck. Install elasto pads and polystyrene. Mission Street Avenue 57 C6430 - Arroyo Seco Bridge Reconstruction • Complete corrective work on OCS footings, per NCR Southwest Museum • Continue punchlist work. Continue close-out activities. • Complete remaining four (4) safety certification French Avenue Avenue 26 Chinatown Jnion Station

SYSTEMWIDE ACTIVITIES

- Complete final PIP negotiations for CWO 40.
- Continue to support cash flow and funding special studies.
- Continue final design for Contract C6450, Del Mar to Memorial Park Line Segment.
- Continue to review CWO 41, estimated costs for final design, in preparation for final negotiations with the Design Consultants.
- Close-out Contract C6410, L.A. River Bridge, is complete. Project records will be transmitted to MTA Records Management Center (RMC) in mid December.

Summary Status Report

Period Ending - November 29, 1996



BUDGET

	Amount (\$ in mil)	Change from Last Month (\$ in mil)
Original Budget	841	None
Approved Budget	804	None
Current Forecast	804	None
Commitments	251	+1
Expenditures	181	+ 2

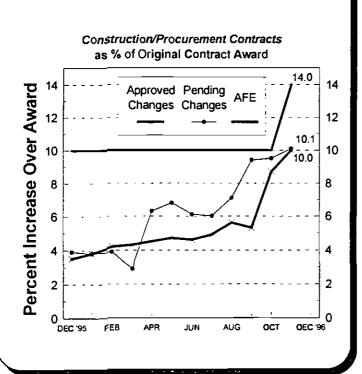
ADDITIONAL LOCALLY FUNDED ACTIVITIES

	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

- There is no change to the overall budget or forecast during the period. The Board approved the change notice for Contract C6435, Reconstruction & Retrofit of Steel & Concrete Bridges, for \$1.2M for the fire damage repair at the Lacy St. Bridge. An insurance rebate from the responsible trucking firm is anticipated to offset this cost.
- The \$1.9M Expenditures for November were attributed to work performed on Contract C6435, Owner's Insurance and Professional Services contracts.

CONTRACT CHANGES



CONTRACT CHANGE ANALYSIS

The percent of approved changes shows an increase this period because the change order to provide traffic control was executed for Contract C6435, Reconstruction and Retrofit of Concrete & Steel Bridges. The increase to the AFE was approved by the Board for C6430 Operating Engineer's Strike and C6435 Lacy St. Bridge Repair.

The significant approved and pending changes include:

- C6410 (L.A. River Bridge) CO 8.00, Differing Site Conditions at Bents 5 & 6; CO 14.00, Adjust Bid Quantities.
- C6430 (Arroyo Seco Bridge Reconstr.) CO 4.00, Adjust Bid Quantities; CO 16.00, Cost for Operating Engineer's Strike; credit CN 65.00, Delete 9-Way Ductbank & Related Electrical.
- C6435 (Reconstruction & Retrofit of Steel & Concrete Bridges) CO 12.00, Lacy St. Bridge Repair; CN 26.02, Delayed Release of Lake & Allen Ave. Work Scope; CN 53.00, Pea Gravel; credit CN 23.01, Eliminate Load Tests for CIDH Piles; credit CN 45.00, Delete Madre St. Bridge SOW.

METRO PASADENA BLUE LINE Summary Status Report Period Ending - November 29, 1996



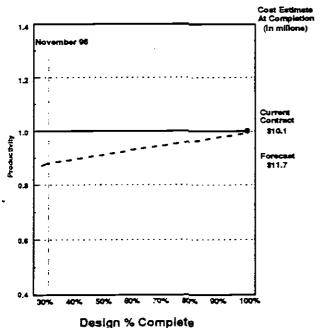
SCHEDULE

		Change from Last Month
Current ROD	May 2001	None
Design Progress*	80.3%	None
Constr. Progress	8.6%	+0.3
Critical Path Float (Calendar Da	-75 days ays)	-15

SCHEDULE ANALYSIS

- The forecast ROD is May 2001. The schedule update for November shows 75 calendar days (CD) of negative float. As of November 1st, the Project Schedule contained 60 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 Design Consultants have 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.
- A complete recovery of negative float is a possibility once final design progresses to the point that a detailed constructability review can be conducted on the remaining critical path contracts.
- Final design on the most critical package, Contract C6450, Del Mar to Memorial Park Line Segment, began on a limited basis in mid November.

EMC COST PERFORMANCE CWO 037 & 039



EMC COST PERFORMANCE ANALYSIS

- Through the November reporting period, the Design Consultants are reporting 33.9% progress on CWO's 037 and 039.
- The Design Consultants have submitted \$1.2M in RFC's for CWO 037 work scope in excess of original contract value.
- Based on the 75 calendar days (CD) of negative float reported during the period, it is estimated that CWO 039 may incur an additional \$1.0M.

^{*}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.

Summary Status Report

Period Ending - November 29, 1996



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

Project Rate

3.1 0.3

Lost Time Incident Rate:

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

1994 National Average

4.9

0.0 None

Lost Work Days:

The number of lost work days per 100 man years.

1991 National Average

148.1

Project Rate (Cum.)

None

NOTE: Based on October statistics.

CONSTRUCTION SAFETY SUMMARY

 The Project is incurring 14,000 work hours per month. Through the October reporting period, the Project has completed over 589,000 work hours without a Lost Time injury and only eight Recordable Injury cases.

AREAS OF CONCERN

ONGOING

Item (Date Initiated: September 1996)

Validation of \$803.9M Baseline Estimates

Concern/Impact

When the Pasadena Blue Line Project was re-adopted in February 1996, the Design Consultants had not prepared updated estimates which included the proposed Value Engineering/Cost Containment items approved by Board. Included in the scope of CWO 037 was the development of a capital cost estimate based on the new construction work scope. Until estimates of the new construction work scope are complete, the validity of \$803.9M baseline estimates cannot be ascertained.

Status/Action

The Design Consultants were expected to deliver the capital cost estimates in November. Completion has now been delayed until December.

Summary Status Report

Period Ending - November 29, 1996



AREAS OF CONCERN (Con't)

ONGOING((Cotili)

Item (Date Initiated: March 1996)

Start of Final Design

Concern/Impact

The current schedule shows -75 calendar days of negative float because final design has not begun as planned.

Status/Action

Final design production began 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 Design Consultants are experiencing delays in mobilizing section designers and completing negotiations with MTA. 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.

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, MTA submitted a follow-up letter to Ratkovich requesting additional information concerning the lease on the property. The parcels for underpinning were certified in mid November.

Summary Status Report Period Ending - November 29, 1996



AREAS OF CONCERN (Con't)

ONGOING(COTH)

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 number of elevators and the canopy, platform, and plaza design remain to be resolved. These issues may delay the final design of the station and impact the schedule. For Marmion Way, additional conceptual designs are being prepared for Community input and additional funding is being pursued to fund upgrades.

Status/Action

Although the Chinatown Station has been approved by the Board to start final engineering, the design cannot be completed until these issues are resolved with community representatives. During November, discussions continued on the choice of canopy, platform, and plaza design. If required, a follow-up meeting has been planned for the first week of December. A final decision on the station design is anticipated prior to the January 1997 Board meeting. Design is continuing along Marmion Way with upgrades. They will be incorporated when funds are identified and the Community agrees on a design.

METRO RED LINE SEGMENT 2

EXECUTIVE SUMMARY

METRO RED LINE Segment 2 Summary Status Report

Period ending - November 29, 1996



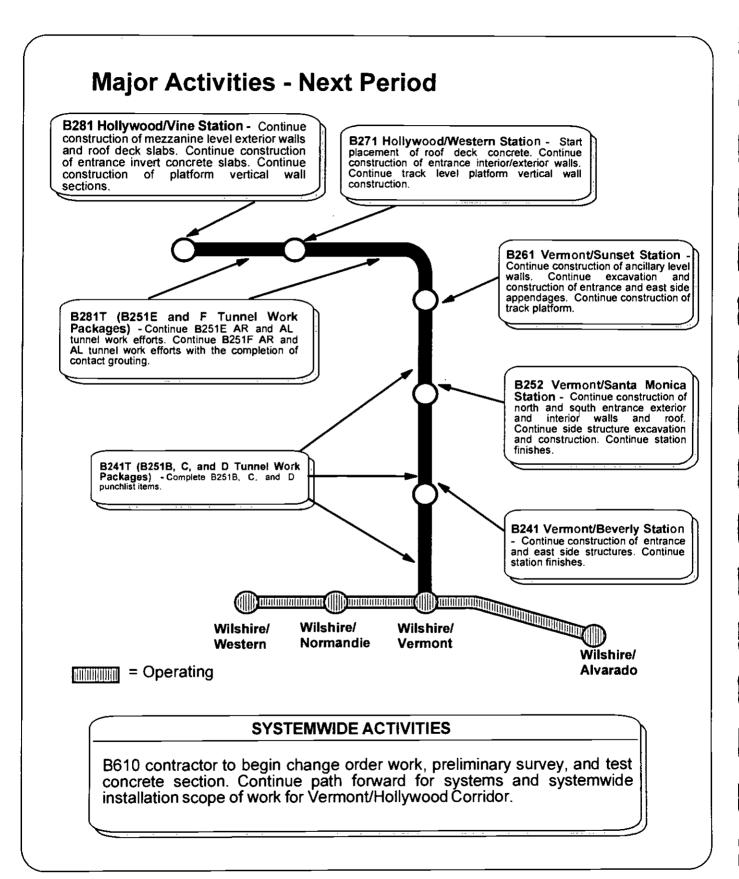
Major Activities - This Period B271 Hollywood/Western Station Completed construction of mezzanine level exterior walls. Continued installation of entrance interior walls. Started installation of roof deck shoring, forms, and rebar. Continued excavation for blast relief shaft 1 **B281 Hollywood/Vine Station** Continued construction mezzanine level exterior walls. Continued construction of track B261 Vermont/Sunset Stationand concrete activities for blast relief shafts 2 Completed construction of main station roof deck. Excavation and 3. Continued construction of track continued of appendix platform vertical sections. Contract platform vertical sections. Contract is 59% is 62% complete. continued on the east side appendages. Continued construction complete. of track platform vertical sections. Contract is 63% complete. B252 Vermont/Santa Monica B281T (B251 E & F Tunnel Work Packages) Station - Construction continued B251E - AR tunnel work continued with the contact grouting and installation of electrical/mechanical items. on the north entrance with placement of concrete for three exterior wall sections. Masonry interior walls were essentially completed. B251E - AL tunnel work progressed with the continuation of sinkhole area invert rebar and concrete activities, as well as the completion of arch concrete between Vermont/Sunset and Barnsdall, and the start Contract is 78% complete. and installation rebar between Hollywood/Western and Barnsdall. B251F - AR tunnel work progressed with the completion of walkway concrete, the start of contact grouting, and installation of electrical items. B251F - AL tunnel work progressed with the completion of arch concrete and the start of walkway concrete. Change Order is 80% complete. B241 Vermont/Beverly Station -Station entrance exterior wall concrete activities continued to approximately 80% complete. Main station installation of HVAC, electrical equipment, and conduit/cabletray B241T (B251 B, C, D, Tunnel Work continued. Contract is 77% complete. Packages) - Punchlist clean up continued for B251B, C, and D tunnel sections. Change Order is 99% complete. Wilshire/ Wilshire/ Wilshire/ Normandie Vermont Western Wilshire/ Alvarado ————— = Operating SYSTEMWIDE ACTIVITIES Continued critical Contract B610, Trackwork Installation, contractor mobilization. Advanced negotiations with B620 automatic train control installation contractor for establishing agreements for completion of work according to objectives of the Vermont/Hollywood Corridor recovery plan.

METRO RED LINE Segment 2

Summary Status Report

Period ending - November 29, 1996





METRO RED LINE Segment 2 Summary Status Report Period ending - November 29, 1996



BUDGET

Expenditures

Original Scope	Amount (in \$ mil)	Change from Last Month (in \$ mil)						
Original Budget	1,446	. None						
Approved Budget	1,576	None						
Current Forecast	1,576	None						
Expenditures	1,222	19						
Additional Locally Funded Activities								
Original Budget	0	None						
Approved Budget	65	None						
Current Forecast	65	None						

30

1

BUDGET ANALYSIS

Original Scope

Original scope expenditures increased \$19 million in construction contracts. The expenditures to date are 77.5% of the current total forecast.

Additional Locally Funded Activities

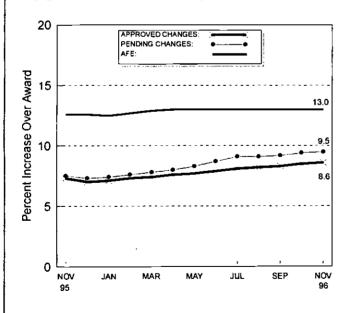
Expenditures for Additional Locally Funded Activities increased \$1 million in construction contracts. The expenditures to date are 46.2% of the current total forecast.

Overall, there were no changes to the total budget and forecast categories for either Original or Additional Locally Funded Activities this period.

This period's expenditures reflect the cumulative expenditure amounts through October.

Expenditure data lags the report date by one month.

CONTRACT CHANGES



CONTRACT CHANGE ANALYSIS

The percent increase over the award value for approved changes and pending changes showed a slight increase this period. For approved changes this was attributable to the progress of work on the B261, B281, and B281T contracts. For pending changes it was attributable to work on the B271, B281T, and B620 contracts.

The significant approved changes total \$1.1 million, including:

- B261, Vermont/Sunset Station—Executed CO 52, Subsurface investigation at parcel B2-204 and offsite locations; Work Authorized Change Notice (WACN) 147, Relocate deck beams; and WACN 148, Pile installations inefficiencies.
- B281, Hollywood/Vine Station—WACN 136.01, Continuous construction ventilation; WACN 144, Modification of station roof slab to support electrical manhole number 1701; WACN 145, Revise wall opening and beam reinforcing.
- B281T, Tunnel Repair/Completion-WACN 20, Correction of pre-existing B251 safety deficiencies; WACN 35, Rental of man hoist at Barnsdall Shaft; and WACN 47 and 48, Work on critical path activities for section E and F.

The significant pending changes total \$0.2 million, including:

- B271, Hollywood/Western Station—CN 13, Elevator and escalator pit modifications; and CN 61, Quantity adjustment bid item number 03300.02, slab on grade.
- B281T, Tunnel Repair/Completion—CN 18.03, Starter wall construction joint and supplemental reinforcement; and CN 53, B251 Vermont Avenue street restoration between Wilshire and Beverly Station.
- B620, Automatic Train Control—CN 64, Remove/replace tunnel cable tray covers.

METRO RED LINE Segment 2 Summary Status Report Period ending - November 29, 1996



SCHEDULE

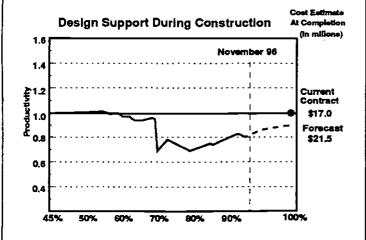
Vermont/Hollyw	Change from Last Month		
Current ROD	Dec. 31, 1998	None	
Design Progress	93.2%	0.4	
Critical Path Float	-109 Days	None	
Const. Progress	81.3%	1.0%	

SCHEDULE ANALYSIS

Vermont/Hollywood Corridor

- The Vermont/Hollywood Corridor critical path starts with B251E tunnel construction. The critical path then continues through B610, Trackwork Installation; B620, Train Control Installation; System Integrated Testing; and Pre-Revenue Operations.
- The forecast revenue operations date remained the same this period. Kajima/Ray Wilson improved forecasts on the B251F tunnel construction activities and maintained progress on the critical B251E tunnel efforts.

EMC COST PERFORMANCE



EMC COST PERFORMANCE ANALYSIS

The EMC Cost Performance chart represents the cost performance for design support during construction (DSDC) on a cumulative to-date basis.

The chart displays the Cost Performance Index (CPI) for DSDC. DSDC is 93.9% complete through November 1996 at a CPI of 0.80.

The actual numbers of Requests for Information, submittals, and Change Notices processed by the EMC for both the Wilshire and Vermont/Hollywood Corridors continue to significantly exceed the number budgeted. Consultant Change Notice (CCN) 500 provides funding for Fiscal Year 1997, as well as for items processed in excess of the number originally anticipated. Once this funding is officially approved and incorporated into the schedule, the earned value will increase.

METRO RED LINE Segment 2 Summary Status Report Period ending - November 29, 1996



CONSTRUCTION SAFETY STATISTICS

Project-to-Date Rates	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	20.0	-0.2		
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	2.6	None		
Lost Work Days				
The number of lost work days per 100 man years.				
1991 National Average	148.1			
Project Rate	69.7	0.2		
(Based on October statistics)				

CONSTRUCTION SAFETY SUMMARY

- Thirteen active contracts continued with 170,000 work hours in October without a Lost Time Injury.
- Lost Time Injuries (year-to-date) have occurred at a rate of 1.2 per 200,000 work hours. This is approximately 75% less than the National Average of 4.9.
- To date, the project has completed over 9,750,000 work hours and will surpass 10,000,000 work hours by December. These statistics will reduce the impact that the monthly safety statistics have on the project-to-date rates.

ONGOING

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.

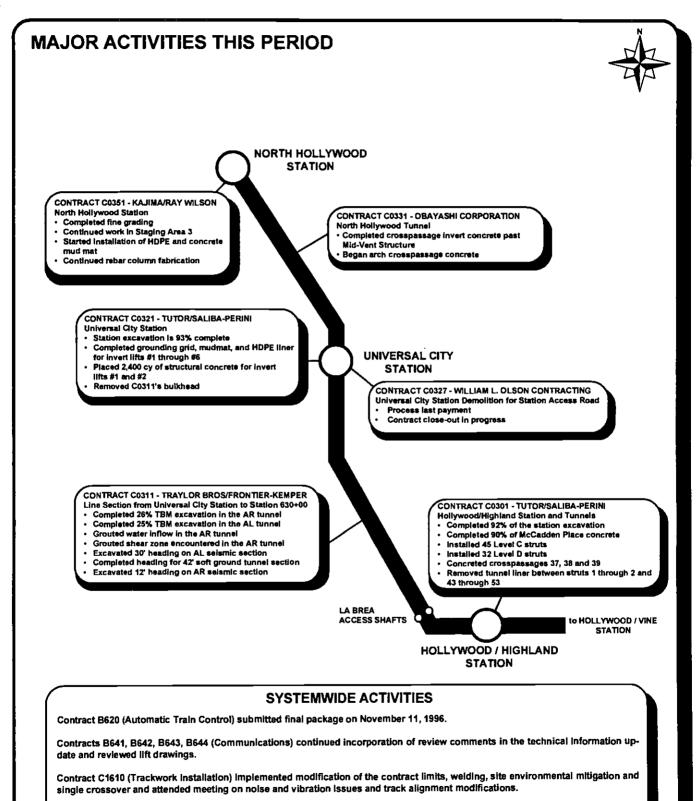
Status/Action

The Contractor's aggressive efforts this period to perform multiple tunnel and concurrent invert, arch, and walkway concrete operations has resulted in some schedule improvements and an increased level of confidence that the Contractor will adhere to schedule. Further schedule improvement strategies are being evaluated with the contractor to try and attain original tunnel access objectives.

METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION

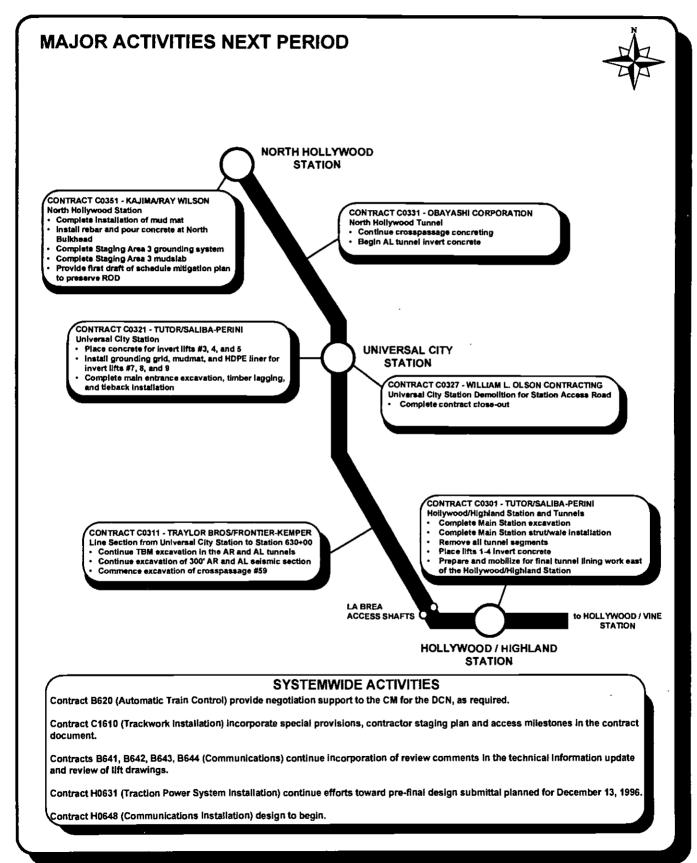
EXECUTIVE SUMMARY





Contract H0631 (Traction Power System Installation) continued design toward pre-final submittal and reviewed lift drawings.





ES-2



BUDGET

ORIGINAL SCOPE ACTIVITIES

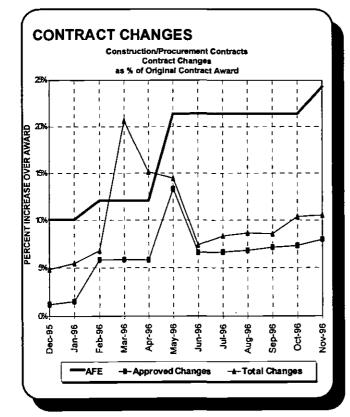
·	Amount (in \$ mil)	Change from Last Month (in \$ mil)
Original Budget	1310.8	None
Approved Budget	1310.8	None
Current Forecast	1310.8	None
Expenditures	471.3	12.5

ADDITIONAL LOCALLY FUNDED ACTIVITIES (ALFA)

	Amount (in \$ mii)	Change from Last Month (in \$ mil)
Original Budget	0.0	None
Approved Budget	3.0	None
Current Forecast	8.0	None
Expenditures	3.6	None

BUDGET ANALYSIS

- The Expenditures for Original Scope work and ALFA through the October period are 471.3M and \$3.6M, respectively. This represents 36.2% of the Total Current Forecast. Total expenditures for the current period were \$12.5M. FIS is continuing its prior period reconciliations. Final reports for FY 96 closeout will be provided upon final reconciliation.
- ALFA Expenditures exceed the ALFA Current Forecast by \$2.7M. This is due to the charges associated with the Tunnel Settlement of Contract B251 (Vermont/Hollywood Tunnel). These ALFA charges are anticipated to be offset with revenues from insurance and claims settlement. Upon realization of these anticipated revenues, the expenditures are expected to fall in line with the \$0.8 M forecast.



CONTRACT CHANGE ANALYSIS

- The AFE for MRL Segment 3 North Hollywood increased this reporting period by approximately \$14.1M due to reconciliation of approved AFE amount to those recorded on the CCS for Contract C0311.
- Otherwise, Pending Change Order values reduced by \$2.5 M, mainly due to a significant reduction of almost \$4 M to C0311's projections (\$2.9 M transferred to approved changes status), in turn offset by increases to C0301 (\$785K), C0351 (\$580K) and other minor adjustments to A650, B614, B641, C0321, C0327, and C0331.
- Approved Changes values increased by almost \$3.3 M, mainly due to the transfer of pending changes to C0311 (\$2.9 M), and a \$345K increase to C0321. Other minor adjustments were made to A650, B281, B614, C0301, and C0327.
- Current total change order exposure forecast at present (Approved plus Pending) stands at just over 10% of contract award values, or approximately \$51.6M.

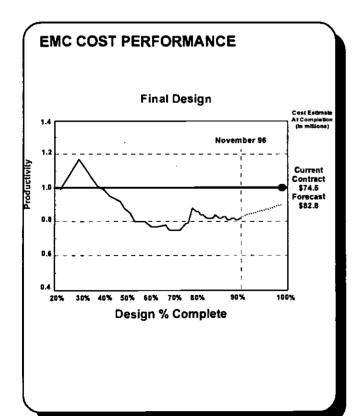
ES-3



SCHEDULE		
		Change from Last Month
Current ROD	May 17, 2000	-6
Design Progress	92.5%	+0.6%
Construction Progress (estimated)	32.8%	+1.7%
Critical Path Float	0 cal. days	-6

SCHEDULE ANALYSIS

- The November 1996 Project Master Schedule includes changes to B620 (Automatic Train Control) and C1610 (Trackwork Installation). The acceleration option of the Automatic Train Control contract included in the October 1996 Schedule Update was revisited this period and has been postponed but will be maintained as an option to mitigate future delays, if needed. Changes to C1610 are related to a further acceleration of the trackwork plinth, running rail and contact rail installation through the tunnels under the Santa Monica Mountains. After these changes the project completion date of May 17, 2000 was maintained.
- All known schedule impacts to C0311 contract due to ground condition encountered in Reaches 6C and 5, seasonal springs protection, additional standard tunnel excavation, enclosure at La Brea Shafts, and Special Seismic section redesign are incorporated into the schedule. These delays amount to approximately seven months. Mitigation plans underway with the contractor for C0311 may only be able to partially recover the delays.
- There continue to be unknown risks associated with the tunnels driven under the Santa Monica Mountains. However, at this point there is no project contingency left on the schedule. The project forecast completion date will be updated as the tunnel excavation progresses.
- Critical path continues to run through Contract C0311 (Line Section from Universal City Station to Station 630+00), C1610 (Trackwork Installation), B620 (Automatic Train Control), B645 (SCADA), Systems Integration Test-Ing and Pre-Revenue Operations.



EMC COST PERFORMANCE ANALYSIS

- Final Design is approximately 92.5% complete, with all of the Major Facilities (Stations and Tunnels) at 100% complete. The Cost Performance Index is expected to improve to 90% over the next 12-18 months as the final design of site restoration and systems is completed, based on improvement in productivity and efficiencies.
- The MTA has calculated a Forecast at Completion of \$82.8M. The EMC has a current Forecast at Completion of \$85M.
- The MTA is working with the EMC to reduce their overall cost forecast by as much as 5% as the project moves fully into construction. To date, the MTA has worked with the EMC to reduce their forecast by \$2M over the past several months. The MTA has identified additional areas such as Design Change Notice (DCN) tasks that may be modified to lower the cost of EMC services.

ES-4 EXE 10



CONSTRUCTION SAFETY STATISTICS

Project-to-Date Rates		Change from Last Month
Recordable Injury Rate: The number of recorded Injuries simple first ald or minor medica per 100 man years.		
1994 National Average Project Rate	11.8 00.0	0.0
Lost Time Rate The number of Injuries resulting away from work per 100 man ye		
1994 National Average Project Rate	4.9 0.0	0.0
Lost Work Days: The number of lost work days per 100 man years.		
1991 National Average Project Rate	148.1 00.0	0.0
(Based on October statistic	s)	

CONSTRUCTION SAFETY SUMMARY

- No Lost Time Injury were reported in October.
- To date, the project has completed 2,466,000 work hours with only five Lost Time Injuries.
- Project-to-Date Lost Time Injury Rate continues at less than 10% of the last reported National Average.

AREAS OF CONCERN

ONGOING

Item (Date Initiated: October 1996)

ROD Mitigation Effort Maintained ROD of May 17, 2000, But Left the Project Schedule Without Unallocated Contingency

Concern/Impact

While there continues to be unknown risks associated with the excavation of the tunnels under the Santa Monica Mountains, allowances for all known-to-date schedule impacts due to ground conditions encountered in Reach 6C, seasonal springs protection, enclosure at the La Brea Shafts, additional 429' of standard tunnel excavation, and Special Seismic Section redesign are incorporated into the schedule. However, the project schedule has no other allowances for contingency.

Status/Action

Different options are currently being reviewed with the C0311 contractor to recover some of the lost time and to add contingency back into the program. Some of the mitigation options are shotcreting crossovers, resequencing track level rooms and tunnels concreting lining work. MTA review of these options is scheduled for December.

ES-5



AREAS OF CONCERN

ONGOING

Item (Date Initiated: February 1996)

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

Project Impacts Due to Implementation of MTA Board Motion Dated January 24, 1996 Regarding Tunneling Under the Santa Monica Mountains

Concern/Impact

Implementation of MTA Board Motion to adopt community mitigation measures have impacted overall project schedule and forecasts. Measures instituted by the Board include reducing the amount and intensity of blasting, increasing tunnel grouting to prevent surface springs leaking into the tunnel, and monitoring tunneling effects on surrounding public and private property ecosystems.

Status/Action

The effort to recover ROD, which included revisions to contingency and to follow-on Trackwork and Systems Installation contracts, which was completed in October, was revised in November. The result is a return to the original schedule for B620 (adding 51 days) and a further acceleration of C1610. The acceleration of B620 will be maintained as an option, only to mitigate future delays, if needed. The result is ROD of May 17, 2000 is maintained. Additional mitigation efforts are being investigated with C0311 in an effort to offset potential future delays as a high level of risk is still associated with the tunnel drives.

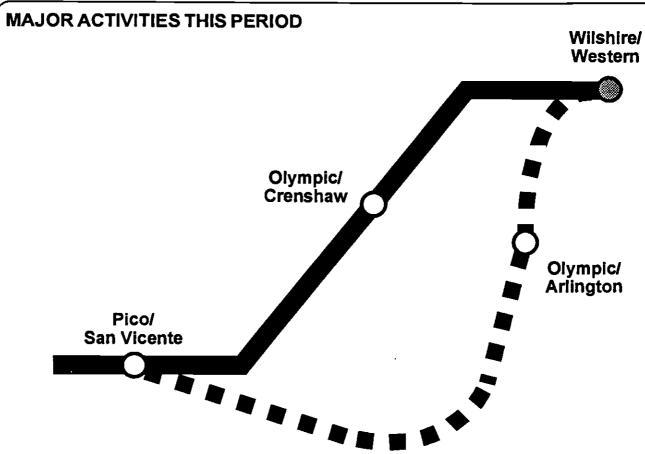
ES-6 EXE 12

METRO RED LINE SEGMENT 3

MID-CITY EXTENSION

EXECUTIVE SUMMARY

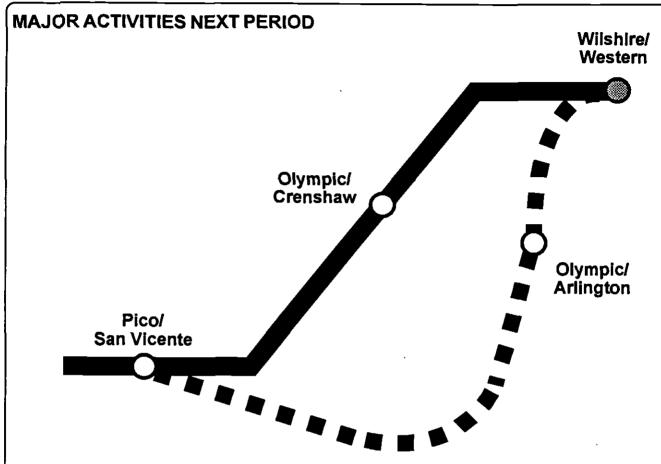




SYSTEMWIDE ACTIVITIES

- EMC began work on a site plan feasibility study addressing interfaces between an expanded bus terminal and the two new station options at Pico/San Vicente. This will provide the necessary traffic circulation/access information that will be needed to do the traffic and air quality analysis in the SEIS/SEIR.
- MTA concluded the procurement process of an environmental consultant to prepare an SEIS/SEIR incorporating the Wilton/Arlington alignment alternatives. At the November 20, 1996 meeting, the Board selected Ultrasystems Environmental inc.





SYSTEMWIDE ACTIVITIES

- EMC will continue with the short study to develop feasible bus-interface site plans for the Pico/San Vicente station options along Venice Boulevard.
- Ultrasystems Environmental Inc., the lead of the recently-approved environmental consultant team, will be given Notice to Proceed and begin preparation of an SEIS/SEIR incorporating the Wilton/Arlington alignment alternatives.



BUDGET

Original Budget	Amount (In \$ mil) 490.7	Change from Last Month (In \$ mil) None
Approved Budget	490.7	None
Current Forecast	TBD	TBD
Expenditures	12.6	0.0

OTHER LOCALLY FUNDED ACTIVITIES

	Amount (In \$ mil)	Change from Last Month (In \$ mil)
Original Budget	0.0	0.0
Approved Budget	0.0	0.0
Current Forecast	0.0	0.0
Expenditures	0.0	0.0

BUDGET ANALYSIS

 Budget and Forecast values are subject to outcome of alignment alternative selected.

None at this time.

SCHEDULE

Current ROD	7/16/99	Change from <u>Last Month</u> None
Design Progress	0%	None
Construction Progress	0%	None
Critical Path Float	N/A	None

SCHEDULE ANALYSIS

 An SEIS/SEIR will be prepared beginning in December 1996, leading to an FTA Record of Decision, scheduled for March 1998, and the subsequent resumption of final design.

CONSTRUCTION SAFETY

• No activity for this period.



AREAS OF CONCERN

NEW

None

ONGOING

Item

Mid-City Master Schedule (initiated 8/95)

Concern/Impact

The Draft SEIS/SEIR when completed will define the project alternatives. The MTA Board will be able to make a decision on the preferred alternative for the Final SEIS/SEIR. The overall schedule for final design and construction is on hold pending the MTA Board determination of the preferred alternative. The impact to R.O.D. cannot be finalized until the preferred alternative is selected.

Status/Action

MTA is now proceding with a Draft SEIS/SEIR that incorporates the Wilton/Artington alignment alternatives. See SD-1 for discussion.

RESOLVED

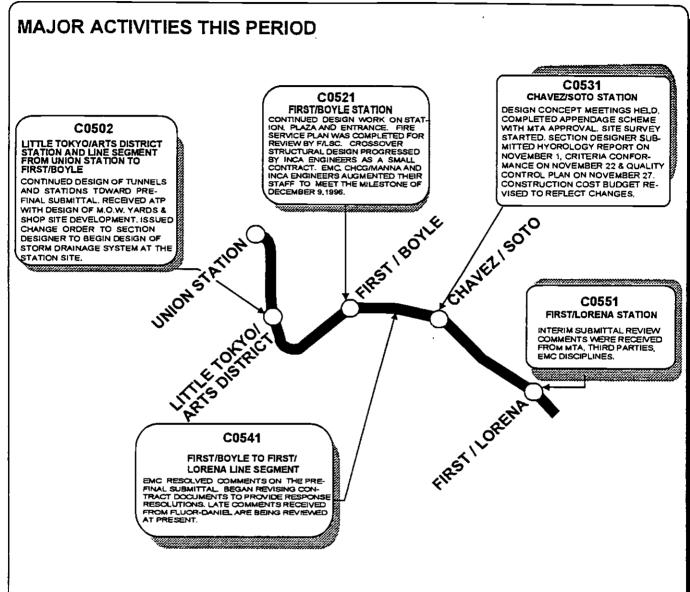
None

METRO RED LINE SEGMENT 3

EAST SIDE EXTENSION

EXECUTIVE SUMMARY





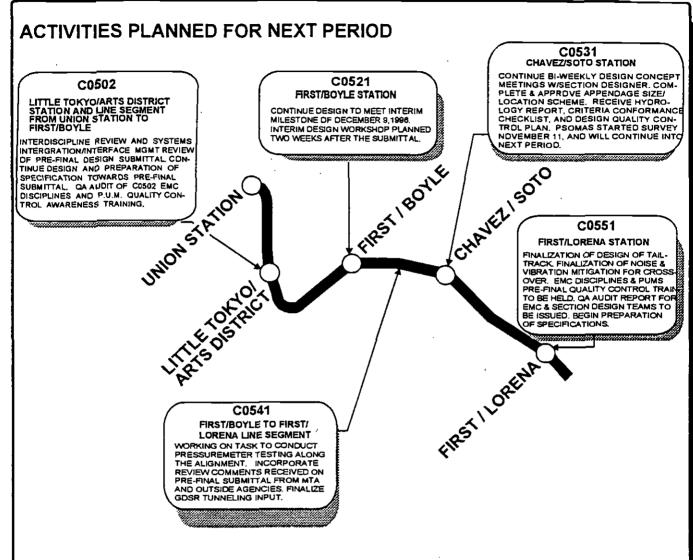
SYSTEMWIDE ACTIVITIES

SUBMITED TO MTA AMENDMENT #8 FOR CONTINUATION OF FINAL DESIGN SERVICES. CONTRACT C0538, PHASE I DEMOLITION, CAMERA READY WAS ISSUED ON NOVEMBER 11, 1996. CONTRACT P1614, DIRECT FIXATION RAIL FASTENERS, CONTINUED WORK ON SPECIAL TRACKWORK COMPONENTS AND SPECIFICATIONS FOR THE PRE-FINAL SUBMITTAL. THIRTY-THREE APPRAISALS WERE COMPLETED. RECERTIFIED 18 SUBSURFACE EASEMENTS FOR C0502, ONE FULL TAKE PARCEL FOR C0551, TWO TEMPORARY CONSTRUCTION EASEMENTS FOR C0541.

METRO RED LINE - Segment 3 East Side Extension

Summary Status Report Period Ending - November 29, 1996





SYSTEMWIDE ACTIVITIES

RECEIVE FROM MTA AMENDMENT #8 FOR CONTINUATION OF FINAL DESIGN SERVICES. MTA REAL ESTATE IS FORMALIZING THE PROPERTY ACQUISITION SCHEDULE. EMC TO RECERTIFY 25 SUB-EASE-MENTS AND BUILDING PROTECTION EASEMENTS FOR C0541, AND 26 SUB SURFACE AND BUILDING PROTECTION EASEMENTS FOR C0502.



BUDGET

	Amount (In Millions)	Change from Last Month (In Millions)
Original Budget	\$979.6	None
Approved Budget	\$979.6	None
Current Forecast	\$1,017.4	\$7.4

OTHER LOCALLY FUNDED ACTIVITIES

	Amount (In Millions)	Change from Last Month (In Millions)
Original Budget	\$0.0	None
Approved Budget	\$0.0	None
Current Forecast	\$3.1	None

BUDGET ANALYSIS

- In October MTA Board approved an additional \$6.3M AFE to continue Final Design Services, Amendment #8 for that amount was submitted to the MTA.
- EMC and MTA are continuing efforts to identify, analyze and implement additional cost mitigation measures.
- In November the project forecast was increased by \$7.4M due to an increase in the real estate projections.
- Project Contingency was reduced by \$3.6M due to the incorporation of the Interim Design Review Estimates for contract P1614 Special Trackwork Procurement and contract P1616 Direct Rail Fasteners.

CONTRACT CHANGES

No activity for this period.

CONTRACT CHANGE ANALYSIS

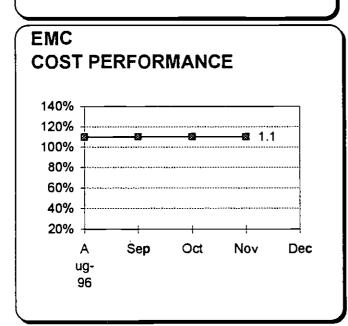
• No activity for this period.



SCHEDULE		
		ange from <u>ist Month</u>
Current (FFGA) R.O.D.	Nov. 2002	None
Final Design progress	47.4%	3.5%
Construct. Progress	N/A	N/A
Critical Path Float	-358	None

SCHEDULE ANALYSIS

- The forecast R.O.D.remains at November 3, 2003.
 The forecast Revenue Operation Date is 358 calendar days (256 working days) behind the FFGA scheduled R.O.D. of November 11, 2002.
- Complete recovery of the full 358 days presently seems unlikely until substantially more detail is incorporated into the schedule to precisely define the critical activity relationships and refine the construction logic.
- Schedule mitigation measures currently being evaluated for consideration include:
 - -Construction/design activity resequencing
 - -Simplified contractor interfaces
 - -Possible second tunnel concreting crew
 - -Possible second fiber optics crew
- The final design schedule has been accepted by MTA as a baseline. The project schedule, which incorporates the baseline design schedule, has been completed by the EMC and has been submitted to the MTA for reviews. Approval as a baseline schedule is expected by the first week in December.
- MTA has begun discussion with Fluor Daniel to review, expand and maintain the project schedule.
 Plans are for FDI to begin this work in December 1996.



EMC COST PERFORMANCE ANALYSIS

The EMC Cost Performance Index for the month of November is 1.1 Final Design progress is 47.4%



AREAS OF CONCERN

NEW

Item [Initiated November 1996]
Parcel EB-037 at Little Tokyo status in question.

Concern/Impact

Parcel EB-037 at Little Tokyo needs to be recertified because of the detour requirement recently identifed at this site. MTA forecasted ownership cannot be made until recertification and approval of this parcel has been completed. This parcel has been completed. This parcel is critical as far as the C0502 contract is concerned, the NTP being September 3, 1997.

Status/Action

Recertification must proceed immediately due to the long lead time required for parcel acquisition.

NEW

Item [Initiated November 1996]

Five parcels needed by the C0541 contractor at the C0531 site are behind schedule.

Concern/Impact

Per the latest MTA acquisition schedule, five full take parcels needed by the C0541 contractor are impacting the project schedule by an average of 84 working days.

Status/Action

MTA real estate and environmental departments are formalizing the property acquisition /environmental schedules for all full take parcels that require demolition. Results of this exercise are expected to be available within the first quarter of 1997.



AREAS OF CONCERN (Continued)

ONGONG

Item [Initiated September 1996] Increased Project Cost Forecasts.

Concern/Impact

The added costs of the tunnel boring machines and tunnel lining technologies increased the project forecast to \$46.5 million over the current budget. Further potential cost impacts foreseen at this time but still being quantified include commercial building protection, environmental mitigation along the tunnel alignment, increased real estate costs due to additional parcel acquisition and changes to MTA's Risk Management program.

Status/Action

Last month a cost forecast reduction of \$21M was identified, resulting from cost-driven changes to the tunnel lining technology. MTA and EMC are developing other mitigation measures to potentially offset the remainder of these increases. Cost reduction results from these efforts should begin to appear in coming months.

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. Previous reports have indicated a potential completion of this process in December 1996. It now appears that April 1997 is more realistic. This delay may impact the critical path and currently forecast R.O.D. of November 2003, and could also result in additional cost increases.

Status/Action

The earliest date foreseen for approving the EIS/EIR Addendum is April 1997. MTA is currently reviewing the approval process to mitigate this potential schedule delay.



AREAS OF CONCERN (Continued)

ONGOING

Item [Initiated September 1996] Increased negative float to the Project Schedule.

Concern/Impact

The project schedule now stands at 358 calendar days (256 working days) of negative float behind the FFGA original ROD of November 11, 2002. The new forecast ROD is November 3, 2003.

Status/Action

Although additional schedule detail has increased the project's negative float, several schedule mitigation measures are being considered. MTA and its project management consultant, will incorporate more detail within the project schedule and refine the construction sequences and logic to potentially mitigate some of the negative float.

ONGOING

Item [Initiated July 1996]

Nine parcels needed by the C0541Contractor at the C0521 site are behind schedule.

Concern/Impact

Per the latest MTA acquisition schedule, the nine parcels needed by C0541 contractor are impacting the project schedule by an average of 119 working days. Two additional parcels at the C0521 site needed by the C0541 contractor are impacting the project schedule by 40 working days each.

Status/Action

MTA Real Estate and Environmental Departments are formalizing the property acquisition/ environmental schedules for all full take parcels that require demolition. Results of this exercise are expected to be available the 1st Quarter of 1997.



AREAS OF CONCERN (Continued)

ONGOING

Item [Initiated February 1996]

Identification of 14 (full-take) additional property acquisitions for Contract C0551 which impact the C0558 Demolition contract.

Concern/Impact

Per the latest MTA Acquisition Schedule and EMC's demolition scheduling matrix, eleven parcel acquisition dates continue slipping due to delay of the Board approval of the EIR Addendum. Presently demolition complete 3 to 4 working days prior to the follow on Facility contractor's need date for six of the parcels. Any further delays in acquisition will impact the project schedule.

Status/Action

Project Schedule logic has been further revised and refined in regards to the C0558 Contract and has resulted in NTP date slipping to April 30, 1997.

ONGOING

Item [Initiated February 1996]

Revised Baseline documents including scope of services and schedule.

Concern/Impact

Due to changes in work scope that have been incorporated into the work in progress, the previous design status baseline is no longer valid. The baseline is used as the basis for measuring design progress and performance measurement and without one, accurate performance measurement is unable to be performed and reported.

Status/Action

PIP scope of services and corresponding cost negotiations were finalized with EMC in August. The Final Design schedule was submitted October 1 and formally approved by the MTA October 30, 1996. The Project Schedule has also been submitted. Approval is expected in December 1996.

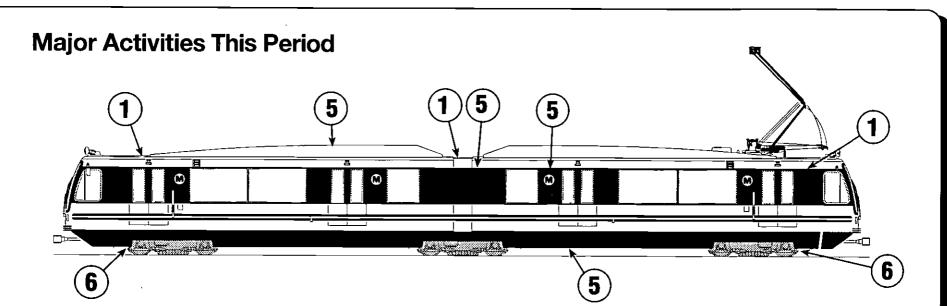
VEHICLE ACQUISITION PROJECT

EXECUTIVE SUMMARY

L.A. Light Rail Vehicle

Summary Status Report Period Ending - November 29, 1996



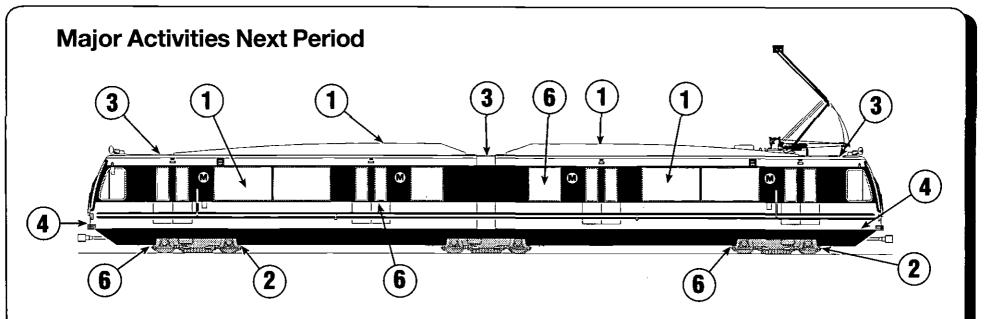


- 1. A second carshell was shipped from Carson to Sacramento for final assembly.
- 2. Assembly of Car No. 1 and 2 in Sacramento progressed but at a slower rate than anticipated.
- 3. Manufacturing of carshell parts are progressing well. Siemens is building an additional spackling room to improve the production rate at Carson.
- 4. Met with STS to review vehicle delivery locations. Two locations along the Metro Blue Line, at Artesia and at Washington have been proposed.
- 5. Participated in pre-FAI/FAI for the Communication System, HVAC and Battery Box. Witnessed the successful completion of the Brake System Dynamometer Test.
- 6. The friction brake arm mockup test was completed successfully. Began life cycle testing of the entire truck assembly, including the arm.

L.A. Light Rail Vehicle

Summary Status Report Period Ending - November 29, 1996





- 1. Meet with car seat manufacturer and HVAC supplier management to discuss progress delays.
- 2. Complete Power Truck life cycle test.
- 3. Complete the third carshell and ship to Sacramento for final assembly.
- 4. Participate in Siemens demonstration test of the Between-Car Warning Devices.
- 5. Meet with Siemens to finalize a vehicle delivery site location.
- 6. Participate in FAI of Door Control, Truck Frame and Communication Systems.

ES-S

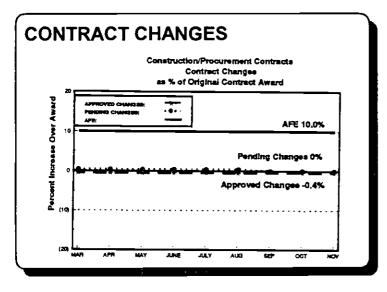
CONTREMENDATE 1206



BUDGET		
	Amount (in \$ mil)	Change from Last Month (in \$ mil)
Original Budget	257.6	-0-
Approved Budget	257.6	-0-
Current Forecast	201.4	-0-
Expenditures	78.1	0.1

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 November 1996 are as follows:

Approved Changes	. (0.4%)
Pending Changes	0%
AFE	10%

SCHEDULE		
	Change from <u>Last Month</u>	
Schedule Car Delivery	1	
1st Car	February 1998	N/C
52nd Car	June 1999	N/C
Design Progress	90-95% complete	N/C
Fabrication Progress	30-35% complete	+5%
Critical Path	Carshell assembly	N/C
Delay (1st Car)	-16 months	N/C
Data Date	November 1, 1996	

SCHEDULE ANALYSIS

The Contractor's last forecast schedule reflected a total of 16 months delay in 1st car deliveries. Subsystems with potential impact on delivery are air conditioning, doors and communications equipment. Carshell assembly is still on the critical path. Acceleration of the delivery schedule for the first several carshells 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 Design of Vehicle Communications

Concern/Impact

Siemens selected Vale Harmon (VH) of Montreal to design and build the vehicle communications systems. To date, two areas of concern exist:

- VH is consistently late with design deliverables. Because their deliverables are on the critical path, this may impact the delivery of cars.
- VH has not always demonstrated a comprehensive understanding of the P2000 contract technical requirements.

Status/Action

MTA held a meeting with Vale Harmon's Executive Management and new P2000 Program Staff on October 24, 1996. Vale Harmon agreed to increase executive oversight of the P2000 Program, and provide the vehicle communications equipment in a timely manner.

Subsequent to that meeting, MTA attended a pre-FAI at Vale Harmon in Montreal including representatives of the Operating Department. This meeting was encouraging and the equipment offered for review was generally consistent with the design requirements. Several software changes were requested and implemented without incident.

Vale Harmon postponed the actual FAI, originally scheduled for the end of November, until sometime in December. Additionally, the DBE assembly subcontractor (TTA or Homell, New York) is being replaced with another DBE subcontractor. This change may delay production of the vehicle communications equipment even further.



AREAS OF CONCERN (CON'T)

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

TransEd subcontracted Repair and Parts Manuals, the Integrated Schematics and Narrative, to MRA. The MTA is satisfied with MRA's work, however, progress has slowed due to the fact that MRA has not been paid by TEI. TEI maintains that they have not paid MRA because their work was unsatisfactory, however, this is a questionable argument since work completed to date appears satisfactory to MTA.

The Training Program, which is TEI's responsibility, is behind schedule. STS noted that training deliverables submitted to date are incomplete and substandard, and STS will not submit them to the MTA for review.

STS issued an ultimatum to TEI to abide by the contract or they will take corrective action. A number of important STS Contract Milestone Payments are dependent on the submittal of User Education deliverables.

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, No. 11, includes the actual carshell weight, and the weight of several on board systems measured during FAI. The vehicle assembly process tends to add additional weight and continued vigilance is necessary. Weight report No. 12 is scheduled for delivery in January 1997.



AREAS OF CONCERN (CON'T)

Item (Date Initiated March 1996)

Fatigue Test of Power Truck

Concern/Impact

The Duewag power truck failed fatigue testing for a third time. Duewag reported that a weld attaching the newly designed cast friction bracket to the power truck transom failed during fatigue testing. The test was approximately 25% complete at the time of failure. By mutual agreement of all concerned parties, the test was stopped pending an investigation.

Status/Action

The weld which failed attaches the new casting to the truck transom. The problem may be related to either workmanship (poor weld) or design (fatigue stresses greater than anticipated). Until the cause is found, no remedy can be applied.

The current plan is for LTK, STS, and Duewag Engineers to convene and investigate the failure. This investigation is scheduled for 02DEC96.

Item (Date Initiated February 1996)

Schedule Slippage

Concern/Impact

The November delivery schedule indicates a delay of 16 months for the first car with delivery of the last car approximately 7 months late.

Status/Action

No significant change.



AREAS OF CONCERN (CON'T)

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

STS submitted an ROM Cost to outfit 16 cars (plus 2 spares, for a total of 18 units) with a carborne ATC package capable of operation on the Metro Blue Line. No schedule was submitted with this proposal, and additional work remains to be done. For example, it must be determined if STS has considered all costs involved, including the vehicle antenna network, and rack and wiring interfaces, etc. Additionally, specifications and contract documents must be prepared, and the change order process must commence. MTA requested additional information on the ROM Cost for further consideration.

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 is under evaluation by MTA.



AREAS OF CONCERN (CON'T)

Item (Date Initiated March 1995)

HVAC Design

Concern/Impact

Sutrak conducted the first Design Conformance Test of the P2000 HVAC unit. Problems were encountered resulting in the failure of two key test series.

Status/Action

The following HVAC Design Conformance Tests were conducted at ITS in Cortland, New York, with results as indicated (reference LTK MOC No. 160 for details):

Cooling Capacity:

Maximum Operating Conditions:

• High Ambient Temperature:

Low Temperature Operation:

Insulation Efficiency & Condensate Carryover:

Passed

Failed

Failed

Passed

Conditionally Passed, after 3 unsuccessful attempts

Sutrak is working on the problems encountered during these tests and will re-test as required at their facility in Lamar, CO. Re-testing is tentatively scheduled for the end of January 1997. MTA requested STS plan a meeting with Sutrak's management in Los Angeles to review issues of concern.