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CONSTRUCTION

COMMITTEE RECOMMENDATION

The Committee concurred with the staff recommendation to approve:

- A. Amendment No. 1 to Contract No. E0060 with Booz-Allen & Hamilton covering extension to the period of performance for Systems Engineering & Analysis on the Metro Rail Projects, in the amount of \$990,176, increasing the total contract value to \$3,481,600; and
- B. an increase to the Authorization for Expenditure (AFE) in the amount of \$1,089,194, which includes the amendment value plus a 10% contingency amount of \$99,019, for a revised total AFE amount of \$3,829,760.

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July 24, 1995

Los Angeles County
Metropolitan
Transportation
Authority

TO: CONSTRUCTION COMMITTEE

THROUGH: FRANKLIN E. WHITE

FROM: STANLEY G. PHERNAMBUCO 

SUBJECT: METRO RAIL PROJECTS
CONTRACT NO. E0060
BOOZ-ALLEN & HAMILTON
SYSTEMS ENGINEERING & ANALYSIS
APPROVAL OF AMENDMENT NO. 01 AND APPROVAL TO
INCREASE AUTHORIZATION FOR EXPENDITURE

818 West Seventh Street
Suite 300
Los Angeles, CA 90017

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Mailing Address:

P.O. Box 194
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RECOMMENDATION

It is recommended that the Board approve Amendment No. 1 in the amount of \$990,176 with an extension to the period of performance through August 31, 1996, to increase the total contract value to \$3,481,600 which is not within the current Authorization for Expenditure (AFE) amount of \$2,740,566. A corresponding increase in the AFE in the amount of \$1,089,194, which includes the amendment value plus a 10% contingency of \$99,018, is required to increase the total AFE to \$3,829,760, in accordance with Attachment A.

DBE PARTICIPATION

This contract has a Disadvantaged Business Enterprise (DBE) goal of forty percent (40%) which Booz-Allen is meeting.

ALTERNATIVES CONSIDERED

The Board has the option to withhold approval. This option is not recommended because Booz-Allen provides crucial systems engineering on several projects, especially in support of the opening of the Green Line this year and the Wilshire Corridor next year. Should the amendment not be approved, work in support of the Green Line and in support of the Wilshire Corridor would be significantly delayed.

IMPACT ON BUDGET AND OBJECTIVES

Funds for this action are available within the MTA approved project budgets for Metro Red Line Segments 2 & 3, Metro Green Line, Systemwide, and Rail Planning.

BACKGROUND

Booz-Allen was awarded Contract No. E0060 by the MTA Board on December 15, 1993 with a period of performance of two years and a contract dollar amount of \$2,491,424 with a 10% contingency for a total Authorization for Expenditure of \$2,740,566 as a result of a competitive solicitation. Booz-Allen performs the following services under Contract No. E0060:

<i>SERVICE</i>	<i>ORIGINAL BUDGET</i>
●Operations and Maint. Support	\$1,269,954
●Systems Safety Support	766,913
●Fare Collection Support	160,113
●Administration	294,444
	2,491,424
●Contingency (10%)	249,142
Authorization for Expenditure (AFE)	\$2,740,566

Contract No. E0060 does not contain any options to extend the period of performance and staff intends to solicit for a new contract to be awarded by January 1, 1996. However, staff requests that the current contract be extended beyond that date another eight months (1/1/96 through 8/31/96) to retain Booz-Allen for services related to the opening of the Wilshire Corridor in July of 1996. Staff requests an eight month extension because such services are required before and after the actual opening date. This extension is deemed necessary in order to maintain continuity in the systems engineering support for the Wilshire opening. Staff also requests an increase to the AFE due to unanticipated activities and increased levels of efforts that have arisen during the course of the contract. Below is a detailed description of the requested increase of \$990,176 to the original contract award:

<i>SERVICE</i>	<i>ORIGINAL BUDGET</i>	<i>REQUESTED INCREASE</i>	
●Operations and Maint. Support	\$1,269,954	573,176	(See 1. below)
●Systems Safety Support	766,913	176,000	(See 2. below)
●Fare Collection Support	160,113	155,000	(See 3. below)
●Administration	294,444	86,000	(See 4. below)
	\$2,491,424	\$990,176	

1. Operations and Maintenance Support for Rail Activation (O&M)

An increase of \$273,176 is required for services through December 31, 1995, because of two significant activities that could not have been anticipated before the contract was awarded. The first was \$115,000 of service required when construction of the Gateway Center created a change in the airflow configuration in the metro tunnels. Ventilation tests that had been completed, had to be conducted again to ensure the safety of passengers in the event of a fire. The tests confirmed that the tunnel ventilation, after some updates, met all safety requirements and regulations. The second major activity that was unanticipated was the amount of planning tasks in the amount of \$158,176 required by MTA Planning for the dramatic revision of the Long Range Plan that resulted in over \$400 million in cost containment strategies highlighted in the subsequent Cost Containment Plan.

An increase of \$300,000 is also requested to cover the eight month extension of the contract in relation to opening of the Wilshire Corridor. Such funds will cover Red Line Segment 2A startup support, creation of a Digest of Equipment for Operation, and Mid-City alignment and track work alternatives.

Cost of O&M Services Required Through 12/31/95	
Rail Planning	\$158,176
Safety	\$115,000

Cost for Additional O&M Support for eight month extension in support of Wilshire Corridor Opening:

Systemwide	\$ 50,000
Metro Red Line Segment 2	<u>\$250,000</u>

Total increase requested for O&M: \$573,176

2. Systems Safety Support

An increase in the AFE of \$176,000 is requested due to the higher level of effort that the MTA Safety staff has needed from Booz-Allen for System Safety Support covering a variety of rail projects. Because EMC has reduced its staff that conducted tasks related to safety and security, Booz-Allen has been issued contract work orders to execute tasks that might otherwise have been conducted by EMC staff. An increase of \$64,000 is required for services through December 31, 1995.

An increase of \$112,000 is requested to cover the eight month extension of the contract in relation to the opening of the Wilshire Corridor. The tasks associated with these costs include Airflow Validation Testing (\$36,000), Reliability Demonstration Testing Support (\$12,000), Reliability and Maintainability Support (\$23,200), Certification Support (\$12,000), and Emergency Response Procedures/Station Layout Drawings for Emergency Management Panels (\$28,800):

Cost of Safety & Security Services Required Through 12/31/95

System Wide	\$ 38,400
Green Line	\$ 25,600

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Cost for Additional Safety & Security Services for eight month extension in support of Wilshire Corridor Opening:

Metro Red Line Segment 2 \$ 112,000

Total increase requested for
Safety & Security: \$176,000

3. Fare Collection Support

An increase in the AFE of \$155,000 is requested for fare collection in support of the Metro Green Line and Metro Red Line Segments 2. An increase is requested due to a higher level of effort that the MTA Systems staff has needed from Booz-Allen for fare collection support on the Metro Green Line. Booz-Allen is responsible for inspecting each Green Line station site where TVMs are to be installed and for managing the installation of the Ticket Vending Machines (TVMs). Field inspection provided by Booz Allen for each station on the Green Line has been significantly increased due to the extra coordination effort needed to resolve the facilities interfaces with the Construction Manager and Caltrans. This also resulted in delays in the ticket vending machine sites being ready for installation work with a corresponding increase in Booz-Allen's effort. The extra coordination provided by Booz-Allen benefited the MTA and has prevented any claims by General Farebox, Inc. (GFI), the installation contractor. An increase of \$74,000 is requested for services through December 31, 1995. This increase will also cover the close out of the Green Line portion of the fare collection contract.

Booz-Allen is also responsible for performing the Resident Engineer Function and the management of TVM installation for the Metro Red Line Wilshire Corridor. Currently, the MTA is working toward a July 1996 Revenue Operating Date (ROD). Staff considers it prudent to continue with Booz-Allen through the Wilshire Corridor ROD to provide continuity in the management of the TVM installation and particularly the installation work which is scheduled to take place during the last quarter of 1995 and first quarter of 1996. Re-competing the services could result in a new consultant near the end of the project which would incur risks associated with any learning curve and change in management. Therefore, an increase of \$73,000 is requested to cover the eight

month extension of the contract in relation to opening of the Wilshire Corridor.

Cost of Fare Collection Services Required Through 12/31/95:

Metro Red Line Segment 2 \$ 74,000

Cost for Additional Fare Collection Services for eight month extension in support of Wilshire Corridor 1/1/96 - 6/30/95:

Metro Red Line Segment 2 \$81,000

Total increase requested for Fare Collection Services: \$155,000

4. Administration

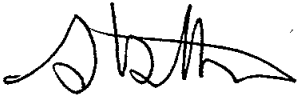
An increase of \$86,000 is requested in support of Administration. As a result of the additional work requested during the course of the contract, as explained above, additional administrative activities in the amount of \$86,000 is requested.

The total AFE increase requested for Administration is \$86,000.

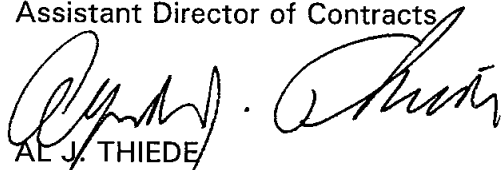
An increase in the contingency in the amount of \$99,018 is requested based on historical trends of unanticipated tasks requiring prompt completion. If approved, the total contingency would be \$348,160, approximately 10% of the requested total contract amount.

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Given the urgent and compelling need to continue with utilizing the same contractor, staff recommends approval of the eight month extension.



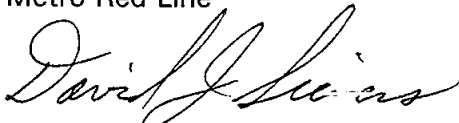
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Metro Green Line



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Metro Red Line, Eastside

ATTACHMENT A
 CONTRACT VALUE STATUS
 CONTRACT NO. E0060, SYSTEMS ENGINEERING & ANALYSIS
 CONTRACTOR: BOOZ-ALLEN & HAMILTON
 APPROVAL OF AMENDMENT NO. 1

Date: July 19, 1995

CONTRACT VALUE STATUS: VALUES COMMENTS

CONTRACT VALUE STATUS:		VALUES	COMMENTS
1	Contract Award Amount	\$2,491,424	
2	Executed Amendments as of: July 19, 1995	\$0	
3	Current Contract Value (Line 1+2)	\$2,491,424	
4	Advance Work Authorizations (AWA's) as of:	\$0	
5	Obligated Contract Value (Line 3+4)	\$2,491,424	
6	This Amendment / Award Value	\$990,176	Requesting \$990,176 to be amended to the original Contract Amount of \$2,491,424
7	Proposed Obligated Contract Value (Line 5+6)	\$3,481,600	

AUTHORIZED FOR EXPENDITURE STATUS (AFE) INCREASE IN AFE REQUESTED: \$1,089,194

8	MTA Approved AFE	\$2,740,566	Based on contract award of \$2,491,424 plus a contingency of \$249,142
9	Total Estimated Contract Value (Line 7)	\$3,481,600	
10	Remaining AFE (Line 8-9)	(\$741,034)	
11	Other Pending Changes (Merited)	\$0	
12	Remaining AFE with Changes (Line 10-11)	(\$741,034)	
13	Trends and Contingencies (Pending Merit Finding)	\$348,160	Original contingency: \$249,142 + Requested increase in contingency of \$99,018 Requesting \$1,089,194 increase in AFE
14	Remaining AFE with Trends (Line 12-13)	(\$1,089,194)	

BUDGET STATUS:

15	Current Contract Budget	\$5,000,000	Budget for Systems Engineering and Analysis on all Rail Projects.
16	Forecast Contract Value (Line 9+11+13)	\$3,829,760	
17	Remaining Contract Budget (Line 15-16)	\$1,170,240	

CONTRACT INCREASE PERCENTAGES:

18	% of Budget (This Change)	21.78%
19	% of Budget (Merited Changes)	0.00%
20	% of Budget (All Changes)	21.78%
21	% Contract Complete	76.60%

ATTACHMENT B

LIST OF SUBCONTRACTORS

CONTRACT NO. E0060, METRO RAIL PROJECT, SYSTEM ENGINEERING AND ANALYSIS

CONSULTANT NAME AND ADDRESS CONTACT PERSON/TEL.#	PROPOSED SUBCONTRACTORS	SUBCONTRACTOR CONTACT PERSON TEL. #	DBE'S ETHNICITY	PERCENT*	DESCRIPTION OF WORK TO BE DONE DISCIPLINE
Booz-Allen & Hamilton, Inc. 523 West Sixth Street Suite 650 Los Angeles, CA 90014 Thomas E. Frawley (213) 620-1900					
	Aegir Systems, Inc. 2051 N. Solar Drive Suite 200 Oxnard, CA 93030	Elfa D. Williams (805) 485-4888	African American	5.76	Safety & System Assurance
	H. Cruz Consulting 16829 Silktree Street Fountain Valley, CA 92708	Heather Cruz (714) 968-4155	Hispanic	.57	O&M Planning and Analysis
	Eiger Tech Systems, Inc. 1265 Van Horne Avenue Suite 100 Hermosa Beach, CA 90254	Tung-Ming Lee (310) 376-1719	Asian	2.92	Safety & System Assurance
	Gardner Consulting Planners 1005 Del Amo Street Redondo Beach, CA 90277	Emile A. Gardner (310) 522-9584	African American	1.57	O&M Planning and Analysis
	Kal Krishnan Consulting Services, Inc. 900 Wilshire Boulevard Suite 1214 Los Angeles, CA 90017	Kal Krishnan (213) 488-0900	Asian	3.20	Cost Estimating and Value Experience
	Laughlin Consultants 1984 Landa Street Los Angeles, CA 90039	Aileen Laughlin (213)669-1447	Anglo Woman	1.46	Editorial Services and Document Control

LIST OF SUBCONTRACTORS
 CONTRACT NO. E0060, METRO RAIL PROJECT, SYSTEM ENGINEERING AND ANALYSIS (CONT'D.)

CONSULTANT NAME AND ADDRESS CONTACT PERSON/TEL.#	PROPOSED SUBCONTRACTORS	SUBCONTRACTOR CONTACT PERSON TEL. #	DBE'S ETHNICITY	PERCENT*	DESCRIPTION OF WORK TO BE DONE DISCIPLINE
	E.W. Moon, Inc. 1131 Venice Blvd. Los Angeles, CA 90066	Elvin Moon (310) 915-1018	African American	7.53	Fare Collection Administration
	Manuel Padron & Assoc. 1175 Peachtree Street Suite 414 Atlanta, GA 30361	Manuel Padron (310) 827-1145 (404) 873-3206	Hispanic	7.73	O&M Planning and Analysis
	Transit Research Systems 2961 Columbia Street Suite 18 San Diego, CA 92103	Gena Holle (619) 260-1332	Anglo Woman	2.14	O&M Planning and Analysis
	Transportation Resource Associates, Inc. 1505 E. 17th Street Suite 211 Santa Anna, CA 92701	Barbara J. Hanson (714) 836-1651	Anglo Woman	4.10	
	Virginkar & Associates, Inc. 1280 West Lambert Road Suite C2 Brea, CA 92621	Arun M. Virginkar (310) 690-1992	Asian	3.35	Safety & System Assurance