



March 28, 1996

Los Angeles County
Metropolitan
Transportation
Authority

TO: BOARD OF DIRECTORS
FROM: STANLEY G. PHERNAMBUCO
SUBJECT: STATUS OF PROPOSED PROFESSIONAL SERVICE
CONTRACT CHANGES OVER \$200,000



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ISSUE

This monthly Board Box Item provides an advisory report to the Board which previews unexecuted professional service contract changes which may exceed \$200,000. For the period ending March 28, 1996, seven professional service contract changes have been identified as having a potential to exceed \$200,000.

BACKGROUND

The Board delegated authority to staff for the execution of professional service contract changes under \$200,000, and since June 18, 1992 the Board has been provided regular status reports on pending professional services contract changes which may exceed staff's authority. On November 19, 1992, this reporting requirement was further defined to be only those changes which have not been previously reported to the Board.

Pasadena Blue Line

STATUS OF PROPOSED CONSULTANT AMENDMENT NOTICES OVER \$200,000

The changes shown below are listed on a one-time only basis and will not appear on subsequent reports

AS OF: 03/28/96

PROJECT	CONSULTANT AMENDMENT NOTICE NUMBER	TITLE BASIS OF CHANGE	STATUS JUSTIFICATION	CURRENT ESTIMATE MTA BOARD ADVISED DATE	WORK AUTHORIZED? NOT TO EXCEED VALUE
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PROFESSIONAL SERVICES CONTRACT NO.: E0070, PARSONS-BRINKERHOFF/DMJM (EMC)

R05	476.00	COST ESTIMATING FOR OUT-OF-SCOPE WORK: ADDITIONAL SUBMITTALS AND REVIEWS, AND FINAL SUBMITTALS EXTRA/ADDITIONAL WORK REQUESTED BY LACMTA	CAN AWAITING AMENDMENT <u>WHO IDENTIFIED</u> Kirk Rummel, Project Manager, EMC	500K - 1 MILLION	NO \$0.00
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WHAT

This CCN incorporates estimating efforts beyond the scope of work considered in the Pasadena Blue Line Final design (CWO 21.00) Project Implementation Plan approved in 1993. Work covered by this CCN includes:

- 1) The addition of estimates for Final submittals resulting from scope changes - 8,950 hours. (Performed = 2,860 hours and pending = 6,090 hours)*
- 2) Additional estimates (Special Studies) required during design as on going checks for the review of impacts from changes - 714 hours.*

We estimate a total of 9,704 labor hours at the cost of \$811,314 for EMC only.

JUSTIFICATION

1) The Pasadena Blue Line Final Design (CWO #21.00) PIP approved in 1993 included 7,248 hours for estimating efforts for the In-Progress and Pre-Final Submittals only. 15,700 hours were initially proposed and were reduced during negotiations by 8,452 of which 5,790 were allocated to the engineer's estimate (CWO #25.00). The design schedule anticipated, on average, five days between Final and Camera-Ready submittals, thereby excluding an estimate at Final submittal. As a direct result of subsequent changes, estimates for Final submittals became necessary to confirm revised costs.

2) Due to changes to scope and as a result of Special Studies, additional incremental cost estimates were necessary as part of the reviews for changes and resubmittals. These costs of all studies exceed the budgeted values (see first attachment).

At the time the PIP was negotiated in June/July of 1993 the Estimating department proposed the following:

*9,940 total hours for 60% (In-Progress), 85% (Pre-Final), and 100% submittals (Final)
5,790 hours for engineer's estimate
 15,730 total hours
5,800 hours for Special Studies and changes*

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Dennis Partridge
 OVER \$200K 03/28/96 17:04:37

METRO SYSTEM

Pasadena Blue Line

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			<p>21,500 Grand Total</p> <p>During negotiations the following reductions were made:</p> <p>9,940 hours for 60%, and 85% submittals were reduced to 7,248 hours. Hours for 100% submittals were eliminated. 5,790 hours for P.E. were retained for CWO #025 5,800 hours for special studies were eliminated.</p> <p>Therefore only 7,248 hours for estimating during the Final Design Phase remained.</p> <p>On the assumption that the Final Design Phase would be completed with minimum changes, Final design schedules approved by the MTA (July 1993 Monthly Progress Report) typically indicate a 5 day period between Final and Camera Ready Submittals, thus not providing time for a Final Submittal estimate.</p> <p>Subsequently, as a direct result of late and/or unresolved Third Party comments or pending issues affecting Pre-Final submittals it became evident that estimates to evaluate impacts to contracts were necessary; and costs estimates as a part of Final submittals was a prudent thing to do. Consequently a Final estimate for C6390 - Chinatown/Aerial Line Segment was preformed; and other Final estimates were done for the following Final submittals. The Various CCNs for the changes did not include all hours resulting from the aggregate of all identified changes and are included in this CCN.</p> <p>The Arthur Andersen Report of April 1995 recognized the need for estimates at Final submittals and recommends their implementation.</p> <p>During the course of the work, detailed records were kept and reports issued by the estimating group tracking both tasks and hours, from December 1992 through August 1995.</p> <p>On June 12, 1995, at the request of the MTA, A. Amador - EMC Manager, Estimating submits a memorandum to T. Davis, Acting Chief Estimator, MTA with a breakdown of hours for Final submittal estimates.</p> <p><u>COST IMPACTS:</u></p> <p>This change is within the R05 Project budget. There is no cost recovery potential.</p>		
R05	478.00	ADDITIONAL CADD SUPPORT TO SECTION DESIGNERS EXTRA/ADDITIONAL WORK REQUESTED BY LACMTA	CAN UNDER REVIEW <u>WHO IDENTIFIED</u> Kirk Rummell, Project Manager, EMC	500K - 1 MILLION	NO \$0.00

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WHAT

This CCN #R05-E0070-478 represents substantial out-of-scope extra services required to train section designers and to oversee CADD production of contract drawings and submissions to comply with MTA-adopted CADD policies and programs. Included as part of this program is the Board-adopted policy on student interns. The Pasadena Blue Line was the first 100% CADD project.

CCN #R05-E0070-478 represents CADD services in the following categories:

- 1. Additional training and coordination of section designers in new criteria and requirements required by the CADD Manual during final design.*
- 2. Student Intern Program for CAD Operators.*

The total actual labor hours for this CCN are 13,644 at a cost of \$630,705 for EMC.

JUSTIFICATION

The following changes in scope of work from baseline occurred:

- 1. Additional training and coordination of section designers, not fully experienced in CADD systems and operation, and their subconsultants in the new criteria and requirements required by the CADD manual during final design.*

At the outset of final design, EMC provided CADD direction to the section designers from the Draft Design Quality Manual, 1992. This original design direction was supplemented by periodic updates produced by the EMC CADD department while the TEAMETRO CADD Manual was being developed. Pasadena Blue Line was the first to deal with these sharply escalating requirements while CADD production was simultaneously at a peak. These circumstances tended to maximize the impact on section designers and on EMC CADD support. The first draft of the TEAMETRO CADD manual was released for review in September 1993 and was adopted as an MTA baseline document in March 1994. March 1994 was one year after Pasadena Blue Line final design began.

As new drafting, plotting and transfer procedures were being developed and refined, section designers and their subconsultants needed continual appraisal and training in new criteria and requirements. MTA was fully aware of the need to provide significant support and training, and encouraged EMC in the effort to allow smaller contractors to upgrade their capability to meet MTA requirements. In the process of working with section designer and their subconsultants to upgrade their ability to meet our CADD standards, it was found necessary to institute 100% quality checking between drawings submitted and the corresponding CAD file. The out-of-scope portion of this task represents continual change considerably beyond the specific criteria spelled out in the Draft Design Quality manual, 1992. Continual training of section designers and their subconsultants represents a total of 10,413 hours, which represents 5,672 hours over the original budget. 2,934 hours remain in the original budget of 7,675 hours.

- 2. Job training of students to be CAD operators:
In accordance with published MTA policy, EMC is committed to a Student Intern Program to train individuals for a technical career. EMC's commitment, in compliance with the MTA policy, is to spend a minimum of 3% of direct labor. CAD training was chosen as the best opportunity for trainees, affording a readily measurable and highly*

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portable job skill that can be used in the engineering industry.

The Program was, to a large extent, on-the-job training where the individuals, after a short period of indoctrination, were performing project-related tasks at the lowest levels. As their skills improved and advanced, their project assignment (OJT) advanced in degree of difficulty.

During development of the Project Implementation Plan, no hours were allocated to this job training program. A total of 9,249 hours were spent by the Pasadena Project in this Student Intern Training program. This represents 3.18% of EMC direct labor cost.

COST IMPACTS:

This work is within the R05 Project budget. No cost recovery is associated with this change.

R05 479.00 POER INCREASE FROM 12% TO 17%
EXTRA/ADDITIONAL WORK REQUESTED BY LACMTA

CAN AWAITING AMENDMENT

200K - 500K

**NO
\$0.00**

WHO IDENTIFIED

Kirk Rummel, Project Manager, EMC Fred Origel, Sr. Contract Administrator, MTA

WHAT:

This CCN provides for an additional budget of \$223,466 as a result of the EMC Project Office Expense Rate (POER) increase from 12.00% to 17.00%. This value was determined by subtracting the EMC direct labor and overhead charges of \$11,973,498 as of July, 1994 from the approved Project Implementation Plan (PIP) POER budget of \$15,869,085. The 5.00% differential (17.00% less 12.00%) is then multiplied to the balance of \$3,895,586. This CCN includes the cost (\$194,779) of the above differential and its associated fee to the EMC.

JUSTIFICATION:

Part E, Article CP-2 Reimbursable CCSB, Section D. Program Office Expense Rate (POER) of Amendment #1 to the EMC Contract No. E0070, currently in process of approval by MTA, provides that provisional POER percentages shall be applied to all technical and management costs charged directly to CWO projects, that the POER charges be audited annually by MTA, and that the provisional POER percentages be adjusted retroactively to the actual rates as determined by the audits. The provisional POER rate was determined as 12.00% for the period September 1993 through July 1994, and at 17.00% for the period after July 1994; the increase resulted from the transfer of a number of data processing and administrative personnel who had been direct charged to the Programwide CWO #5 during the initial period to the POER pool, at the direction of MTA. The provisional POER rates has not been revised since July 1994, and the audits to adjust the provisional rates to actuals or to revise the provisional rates for future periods have not been completed.

However, the budget for the PIP for CWO #21 was developed and negotiated at the original 12.00% provisional

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			<p><i>POER rate, and was not adjusted after July 1994, to reflect the provisional POER rate increase of 17.00% (CCR's proposed and approved after July 1994 did incorporate the 17.00% POER). The amount included in this CCR is the adjustment to the EMC labor budget for the period after July 1994, to account for the 5.00 % increase in the provisional POER rate.</i></p> <p><i>This adjustment does not reflect any adjustments to EMC provisional overhead, POER or Other Direct Cost (ODC) rates to account for audited actual rates, since the audits supporting such adjustments have not been completed.</i></p> <p><u>COST IMPACTS:</u></p> <p><i>The change is within the R05 Project budget. There is no cost recovery potential.</i></p>		
TOTAL CONTRACT E0070 > \$200K		:	3 CAN(s)		

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Metro Red Line Seg-2

STATUS OF PROPOSED CONSULTANT AMENDMENT NOTICES OVER \$200,000

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PROFESSIONAL SERVICES CONTRACT NO.: E0070, PARSONS-BRINKERHOFF/DMJM (EMC)

R81	487.00	INVESTIGATIONS AND CORRECTIVE ACTIONS BY INTEGRATED TEST/RAIL ACTIVATION GROUP EXTRA/ADDITIONAL WORK REQUESTED BY LACMTA	CAN UNDER REVIEW <u>WHO IDENTIFIED</u> James Givens, Deputy Project Manager, MTA	200K - 500K	YES \$100,000.00
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WHAT:

The EMC integrated test group has been requested to perform out-of-scope work in the area of troubleshooting and to perform corrective actions for those elements requiring remedial action, as uncovered by the troubleshooting. This work was authorized previously and will continue through May 1996 and will consist of the following which includes but is not limited to:

Prepare and track discrepancy reports.

Conduct pre-tests of systems after the Construction Manager has verified that the contractor's tests have been completed.

Determine tests permitted by work-off.

Perform verification check, re-testing, test cycles, partial procedures and partial reports.

Provide for example, a TRACS support engineer to be located at the CCF to assist the test engineer in the field to conduct integration testing and/or located as required to assist in troubleshooting and in discrepancy report tracking and corrective actions.

Provide for example, an additional EMC engineer to monitor discrepancy reports, follow up their resolution, develop a plan for field personnel to verify fixes, ensure the database is updated daily, monitor incomplete steps during integration testing, resources and to schedule test time.

Support field testing, troubleshooting and monitoring of discrepancy corrections.

Provide additional secretary/data clerk to input test result and maintain status logs on integrated test procedure log, update test procedures based on field mark-ups, provide progress database and graphs, support filing systems, maintain database for discrepancy reports - open/closed.

Provide 3 additional vehicles to support these activities.

We estimate a total of 6,820 labor hours at the cost of \$602,995 for EMC.

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METRO SYSTEM

Metro Red Line Seg-2

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JUSTIFICATION:

This out-of-scope work is required to continue providing on-going ancillary construction and maintenance for the Metro Red Line Segment 2A Wilshire Corridor.

COST IMPACTS:

This change is within the R81 Project Budget. There is no cost recovery potential.

R81 494.00 R81 INCREASE LEVEL OF EFFORT FOR DESIGN SUPPORT

EXTRA/ADDITIONAL WORK REQUESTED BY LACMTA

CAN UNDER REVIEW

1 - 5 MILLION

**YES
\$100,000.00**

WHO IDENTIFIED

James Givens, Deputy Project Manager, MTA

WHAT:

Continue design support services during construction including responses to RFI's, review of Shop Drawings, development of Change Notices and other engineering services in support of the Construction contracts currently in-progress. Associated supporting costs for management, administration, project control, systems integration, project administration, other direct costs, fees, and Program Office Expense Rate (POER) are included in this CCN and are necessary to maintain EMC technical operations.

This work is not distinguishable from the original Project Implementation Plan scope of work. Isolating charges to this effort cannot be done. The scope of work is additive to the original scope, therefore it is necessary to add budget to the PIP budget.

We estimate a total of 37,730 labor hours at the cost of \$3,200,532. for EMC, and \$90,000. for the Specialty Subs.

JUSTIFICATION:

The PIP scope of work and budget for Design Services During Construction (DSDC), developed in late 1991, included only an allowance for the DSDC, but did not quantify the number of items to be processed, nor the distribution among contract units as this data were unknown at that time. In mid-1994, the EMC and the MTA estimated the number of deliverables for Design Services During Construction in order to provide more reasonable forecasts and to enable progress and performance measurement against realistic baselines. No budget adjustments were made at that time to the PIP allowance because the estimates of deliverables were made only on a limited data base from the Wilshire Corridor. Early this year the MTA and the EMC re-evaluated DSDC requirements, taking advantage of the experience and data obtained since 1994. Based upon this evaluation, new forecasts have been identified for each Contract Unit Deliverables (CUD). Although this CCN includes estimated costs for the

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duration of the EMC CWO No. 3 contract, there is an immediate need for funds in order for the EMC to continue work through fiscal year 1996.

This CCN identifies additional requirements beyond those established in mid-1994. These are not the total requirements relative to the PIP. For example, the following table establishes a representation of current status (in hours):

Task	PIP Allowance	Mid-1994 Estimates	Current Forecast (Approximate)
LOGINS	16,000	26,000	26,000
RFI'S/CN'S	58,000	85,000	108,000
SHOP DWGS	71,500	114,000	133,000
AS-BUILTS	11,000	9,000	11,000

The CCN request deals only with numbers resulting from mid-1994 estimates and ignores the difference between PIP and forecast requirements already in existence in 1994. The EMC is in the process of restoring the budget to PIP plus approved CCN's status, and will then identify additional requirements for further CCN action.

Note that in mid-1994 no budget adjustments occurred because the estimates of deliverables were made based on a limited database from the Wilshire corridor. Even the current forecast may change as a result of actions being taken to improve the design services submittal process. It is anticipated that the next CCN action will be able to take advantage of "improved" forecasts resulting from a more extensive historical database and evaluation of process improvement results.

COST IMPACTS:

This change is within the current R81 Project budget. There is no potential for cost recovery.

TOTAL CONTRACT E0070 > \$200K : 2 CAN(s)

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Metro Red Line Seg-3 N. Hlwd.

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PROFESSIONAL SERVICES CONTRACT NO.: E0070, PARSONS-BRINKERHOFF/DMJM (EMC)

R82	120.01	TRANSFER OF BULK PROCUREMENT COSTS FROM SEGMENT 2 TO SEGMENT 3 PREPARE BID/CONTRACT DOCUMENTS	CAN AWAITING AMENDMENT <u>WHO IDENTIFIED</u> Alfred Thiede, DEO Engineering, MTA Milan Kadlec, Project Manager, EMC <u>WHAT</u> This Consultant Change Notice (CCN) is for EMC to perform additional engineering services beyond those required by the Project Implementation Plan for CWO #3.00 and prepare contract documents for bulk procurement of programwide items for all MTA Projects (items include: running rail, direct fixation rail fasteners, signs and graphics, elevators, ventilation equipment, etc.). The total actual labor hours were 15,000 at the cost of \$975,000.00 (Allocated to Project R82, R83, R84) for EMC only. <u>JUSTIFICATION</u> The decision to procure these items on a total program basis rather than project by project was made after award of the original EMC contract. This work will benefit the MTA by reducing construction and operating costs. <u>COST IMPACTS</u> This change, as allocated, is within the Project Budgets. Construction costs will be reduced due to the economy of procuring items in bulk quantities. Operating costs will be reduced due to the decreased variety of spare parts which will need to be stocked and due to the simplified maintenance of uniform equipment throughout the entire program.	500K - 1 MILLION	NO \$0.00
R82	484.00	CORROSION CONTROL SERVICES DURING CONSTRUCTION FOR SEGMENT 3 OPERATIONS SUPPORT	CAN UNDER REVIEW <u>WHO IDENTIFIED</u> Dennis Mori, Deputy Project Manager, MTA John French, Corrosion Control Specialist, EMC <u>WHAT:</u> Provide corrosion control services during construction of Segment 3 North Hollywood, including: - On-site inspection and testing of contractor-installed corrosion control facilities.	200K - 500K	NO \$0.00

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- Field Testing of utility pipelines for MTA-induced stray currents, during both the construction and operations phases.

- Preparation of operations and maintenance manuals for Segment 3 corrosion control facilities.

- Corrosion stray-current testing of Segment 3 trackwork.

This CCN requests a total of 4,902 labor hours for this CCN at the cost of \$431,274. EMC's portion is 390 hours for \$45,612 while the subconsultant's participation is 4,512 hours for \$385,662.

JUSTIFICATION

EMC's current scope of work includes review of corrosion control submittals but no field testing. In the course of conducting design support during construction for Segment 2, it was found to be more efficient to have EMC conduct testing of contracts facilities rather than have it done through the Construction Manager. This method provides continuity to the overall corrosion control effort.

COST IMPACTS:

This change is within the R82 Project budget. There is no cost recovery potential.

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