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X069

COST AND SCHEDULE
STATUS REPORT
DECEMBER 1984

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RTD

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

NOVEMBER 1984



METRO RAIL PROJECT PROJECT UNIT INDEX

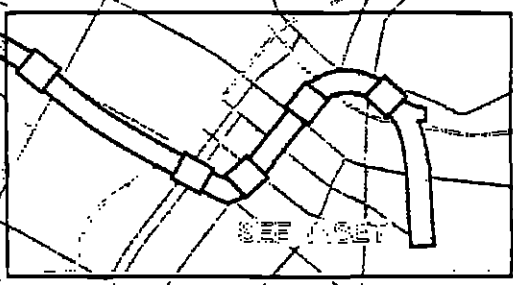
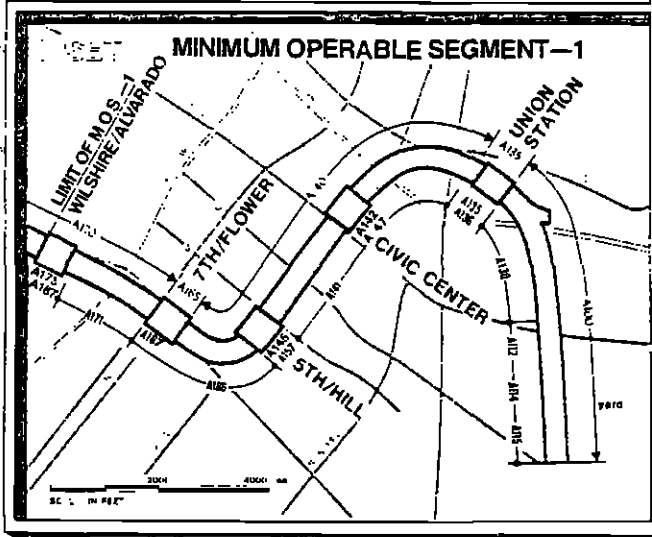
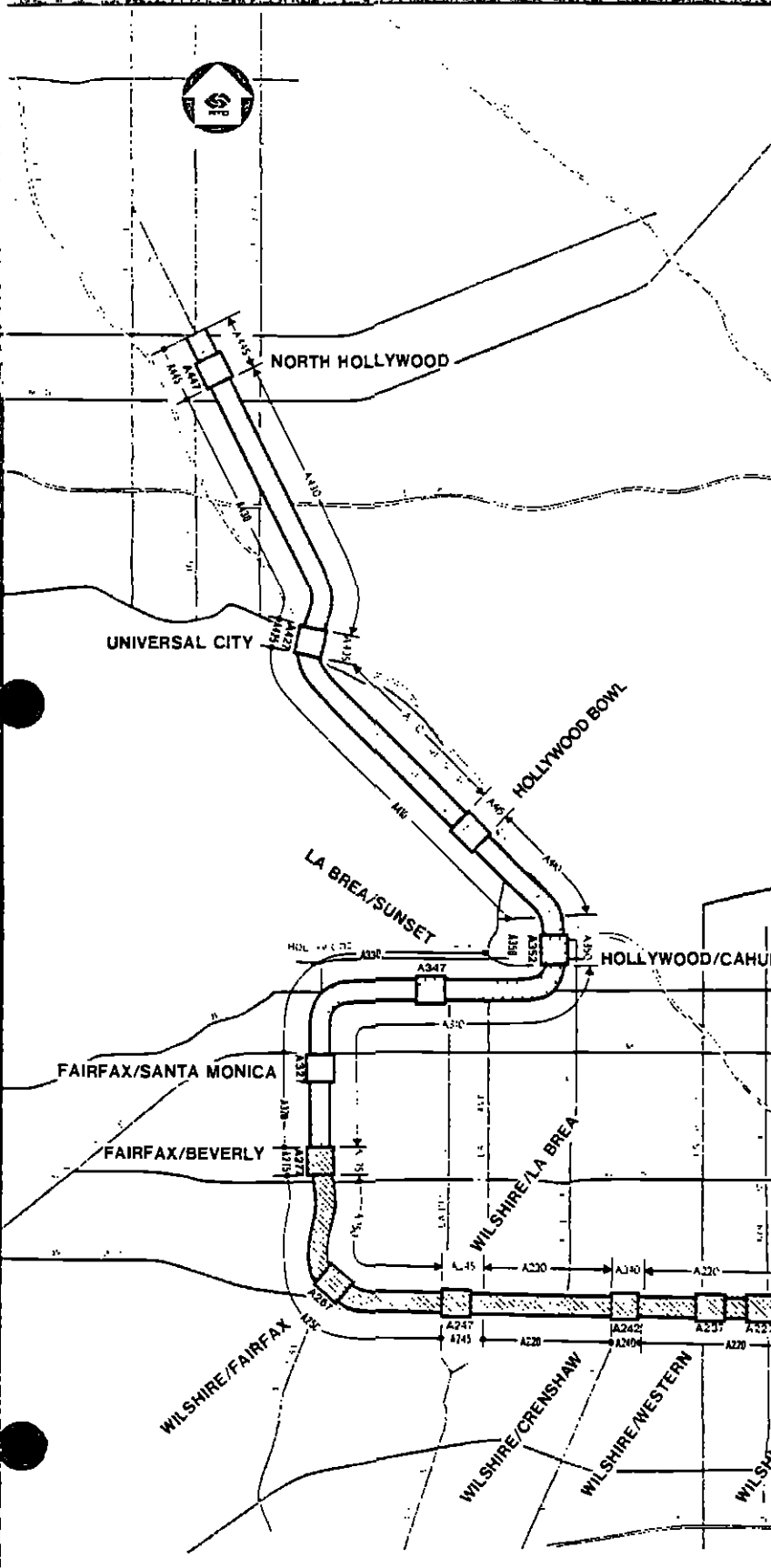
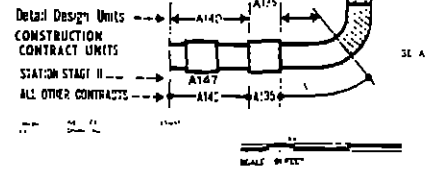


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SECTION I BUDGET SUMMARY

RTD METRO RAIL PROJECT

STATUS NARRATIVE

DECEMBER 1984

The Total Project Approved Budget is now \$348 790 million, Expenditures to date total \$126.501 million

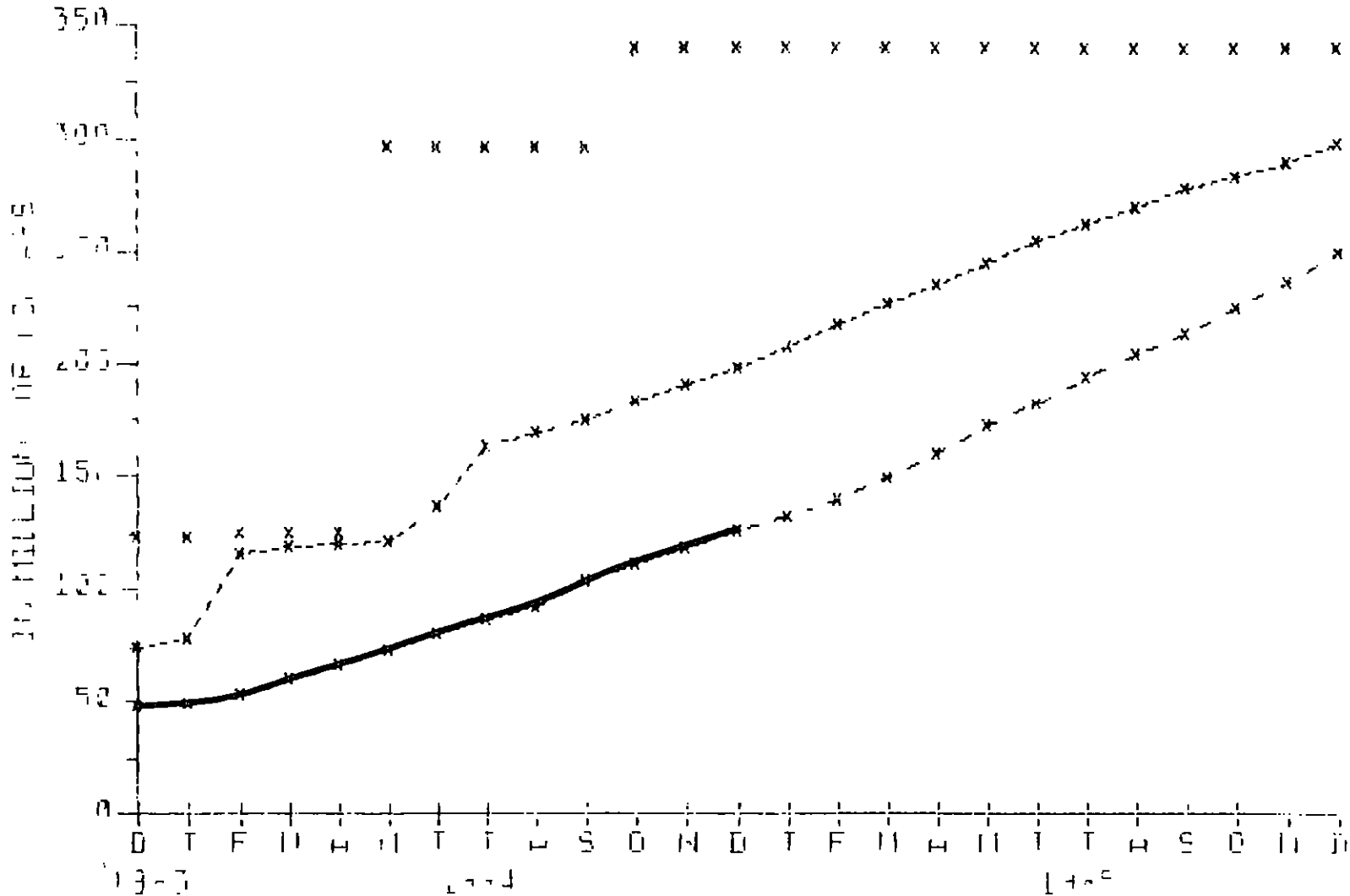
The accompanying graph illustrates the planned expenditures of \$199 million against the actual expenditures. This variance of \$72.5 million is primarily due to the late issuance of contract NTP's and the late acquisition of R-O-W properties.

Presently, Preliminary Engineering is complete and Program Control is taking steps to close out Continued Preliminary Engineering.

SCTD METRO RAIL PROJECT
TOTAL PROJECT BUDGET
SUMMARY BY MACS CODE (5000 #)
STATUS AS OF: 12/11/84

AFL	(MACS CODE) DESCRIPTION	UNRELIANT			OBLIGATIONS TO DATE			FORECAST BUDGET (7=3+4)	APPROVED BUDGET (8)	VARIANCE (9=8-7)
		RESERVED (1)	COMMITTED (2)	TOTAL (3=1+2)	UNEXPENDED (4)	EXPENDED (5)	TOTAL (6=4+5)			
02101	(20 02 01) Purchase of Support Autos	\$ - 0 -	\$ - 0 -	\$ - 0 -	\$ 48	\$ 22	\$ 70	\$ 70	\$ 70	- 0 -
02102	(20 02 02) Purchase/Installation of Support Equipment	950	- 0 -	950	125	1,215	1,340	2,290	2,290	- 0 -
02108	(20 02 07) Purchase/Installation of MTS Equipment	177	- 0 -	177	823	- 0 -	823	1,000	1,000	- 0 -
02109	(20 02 08) Purchase/Installation of Communications Equipment	100	- 0 -	100	- 0 -	- 0 -	- 0 -	100	100	- 0 -
04501	(20 06 10) Yard & Shops Acquisition (CALTRANS)	31,000	- 0 -	31,000	- 0 -	- 0 -	- 0 -	31,000	31,000	- 0 -
04502	(20 06 10) Yard & Shops Acquisition (LACTO)	1,630	- 0 -	1,630	- 0 -	- 0 -	- 0 -	1,630	1,630	- 0 -
02110	(20 06 10) Right-of Way	33,644	- 0 -	33,644	26,831	388	27,219	60,863	60,863	- 0 -
02103	(20 08 01) Professional Services Contracts for Eng & Design	- 0 -	1,092	1,092	40,532	102,533	143,065	144,157	141,975	<2,182
02111	(20 08 02) Professional Services Contracts for Constr Mgmt	2,410	- 0 -	2,410	4,860	1,730	6,590	9,000	9,000	- 0 -
02112	(20 11 01) Owner Controlled Insurance	3,106	- 0 -	3,106	794	100	894	4,000	4,000	- 0 -
02104	(20 15 02) Force Account Work	6,045	- 0 -	6,045	- 0 -	13,371	13,371	19,416	19,416	- 0 -
02106	(20 16 00) General & Administrative	183	9	192	80	553	633	825	825	- 0 -
02105	(20 16 90) Other Supporting Services	147	- 0 -	147	- 0 -	3,201	3,203	3,350	3,350	- 0 -
02107	(32 00 00) Contingencies	- 0 -	- 0 -	- 0 -	- 0 -	- 0 -	- 0 -	- 0 -	3,537	3,537
02114	(41 00 00) Revenue Financing	- 0 -	- 0 -	- 0 -	- 0 -	<5,289>	<5,289>	<5,289>	- 0 -	5,289
02115	(41 00 00) Revenue Financing	- 0 -	- 0 -	- 0 -	- 0 -	3,200	3,200	3,200	- 0 -	<3,200>
02116	(20 13 11) Railroad Relocation	- 0 -	- 0 -	- 0 -	16,500	- 0 -	16,500	16,500	17,000	500
0-401	(10 06 90) Advanced Land Acquisition	6,006	2,112	8,118	3,867	5,475	9,342	18,450	18,450	- 0 -
XXXXX	(XX XX XX) Funds available for Future Match/Use	26,284	- 0 -	26,284	- 0 -	- 0 -	- 0 -	26,284	26,284	- 0 -
GRAND TOTAL		\$112,472	\$ 3,213	\$115,685	\$94,460	\$176,501	\$220,961	\$336,846	\$340,790	\$1,944

PDU METRO FAIL PROTECT
 TOTAL PROTECT STATUS
 AS OF DECEMBER 1984



- * - FORECAST ——— TOTAL - * - PLANNED EXPENDITURES * CAPITAL INVESTMENTS

SOLID METRO RAIL PROJECT
DETAILED FUNDING BREAKDOWN

Funding Increment	FUNDING SOURCE					TOTAL
	UMTA SECTION 1	UMTA	STATE	LOCAL	-	
Preliminary Engineering Phase I (5/80) CA-03-0130	\$ 12,000,000	\$ -0-	\$ 2,816,250	\$ 750,000	\$ -0-	\$ 15,566,250
Preliminary Engineering Phase II (5/82) CA-03-0130-01	\$ 9,800,000	\$ -0-	\$ 1,683,250	\$ 612,500	\$ -0-	\$ 12,095,750
Preliminary Engineering Phase III (7/82) CA-03-0130-02	\$ 9,274,400	\$ -0-	\$ 1,326,950	\$ 579,650	\$ -0-	\$ 11,181,000
SUB-TOTAL Preliminary Engineering	\$ 31,074,400	\$ -0-	\$ 5,826,450	\$ 1,942,150	\$ -0-	\$ 38,843,000
Continued Preliminary Engineering, Phase I (9/82) CA-03-0130-03	\$ 15,000,000	\$ -0-	\$ 2,812,500	\$ 937,500	\$ -0-	\$ 18,750,000
Continued Preliminary Engineering, Phase II (4/83) CA-03-0130-04	\$ 25,000,000	\$ -0-	\$ 5,503,000	\$ 2,830,000	\$ -0-	\$ 33,333,000 (1)
SUB-TOTAL Continued Preliminary Engineering	\$ 40,000,000	\$ -0-	\$ 8,315,500	\$ 3,767,500	\$ -0-	\$ 52,083,000
Acquisition of Santa Fe Rail Yard (9/83) X-7619	\$ -0-	\$ -0-	\$ 31,000,000	\$ 1,630,000	\$ -0-	\$ 32,630,000
Advanced Land Acquisition (9/83) CA-90-0022	\$ -0-	\$ 14,760,000	\$ -0-	\$ -0-	\$ 3,690,000	\$ 18,450,000
Pre-Construction (5/84) CA-03-0130-05,06	\$ 105,400,000	\$ -0-	\$ 27,100,000	\$ 37,500,000	\$ -0-	\$ 170,000,000
Busway Modification (7/84)	\$ -0-	\$ -0-	\$ -0-	\$ 2,500,000	\$ -0-	\$ 2,500,000
Funds Available For Future Use/Match	\$ -0-	\$ 25,483,720	\$ 300,000	\$ 500,000	\$ -0-	\$ 26,283,720
TOTAL, ALL GRANT ALLOCATIONS	\$ 176,474,400	\$ 40,243,720	\$72,541,950	\$ 47,839,650	\$ 3,690,000	\$ 340,789,720

(1) Share ratio changes from 80% Federal/20% State and Local to 75% Federal/25% State And Local

PC-(DUMP) 18
1/22/85

RTD METRO RAIL PROJECT
OPEN PROFESSIONAL SERVICES CONTRACTS

12/31/84

<u>AUDIT #</u>	<u>CONTRACT</u>	<u>BUDGET</u>
I Transit Facilities		
350 ^a	Westec	15,000
2284-5	Lindvall Richter (Geotech. II)	480,900
3138	City of Los Angeles (Master Agreement)	693,000
3172	Pacific Bell	156,000
3301	CALTRANS	2,553,000
3237	Western Union Telegraph	60,000
3351	John Gordon	20,000
3320	Julia Brown -	20,000
3323	Alan Steorty	20,000
3464-A	Dept of Water & Power - Water Section	90,000
3173-A	Dept of Water & Power - Power Section	360,000
2160-6	Barton Aschman	161,700
2611-3	County of Los Angeles (Staff Asst.)	229,300
2274	Carl Englund	14,153
3212	W H. Patterson	7,000
3520	Southern California Gas Co	45,000
3480	O'Brien & Kreitzberg	24,900
3535	Flood Control District	53,000
	Sub-Total	\$ 5,002,953

II. System Design & Analysis

3394	MIDCOM	10,000
3282	SRI International	19,985
3090-1	Cons. Fire Prot. District	103,286
3136-1	Booz-Allen & Hamilton	1,499,031
3170-1	Meillon Institute	24,900
3371	COMMUNICOM	7,500
2218	Commission de Transport	5,000
2218	Walter Woods	1,020
	Sub-Total	\$ 1,670,722

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RTD METRO RAIL PROJECT
 OPEN PROFESSIONAL SERVICES CONTRACTS
 (CONT)

12/31/84

<u>AUDIT #</u>	<u>CONTRACT</u>	<u>\$</u> <u>BUDGET</u>
III	Planning	
3010-1	Community Redevelopment Agency	542,000
3137	City of Los Angeles (Station Dev)	573,000
3254-2	Schimpeier - Corradino	927,213
2900-2	Schimpeier - Corradino	151,000
3328	CMB Communications	<u>2,500</u>
	Sub-Total	\$ 2,195,713
IV.	Real Estate	
	A. Yard & Shops Acquisition	
2963	AT & SF Railway	64,000
3033	Lea Associates	50,000
3102-1	Robert Swanson	<u>22,500</u>
	Sub-Total	\$ 136,500
	B. Other Real Estate	
3223	Flavell & Assoc.	12,000
3032	Flavell & Assoc.	50,000
3116	Chicago Title Insurance	50,000
3175	TICOR Title Insurance	75,000
3379	Joseph Gary	10,000
3357	Business Valuation Services	8,500
3462	James Himes	6,250
3209	Arthur Anderson	1,550
3463	R P. Laurain	7,500
2930	Lincoln Inst of Land Policy	24,500
2210-4	R H Flavell & Asoc	71,036
3189-2	Joseph Gary	10,026
3523	Thomas Scalora	6,000
3550	William Helpes	12,500
3073-1	Leroy Crandall	N/A
3547	Universal Appraisal	16,000

RTD METRO RAIL PROJECT
 OPEN PROFESSIONAL SERVICES CONTRACTS
 (CONT)

12/31/84

<u>AUDIT #</u>	<u>CONTRACT</u>	<u>BUDGET</u>
3431	Jack Jue	3,000
3484	Robert Swanson	2,750
3483	Norman Eichel	13,250
2211-4	George Jones	<u>74,000</u>
	Sub-Total	\$ 453,862

V Legal

2010-4	NMBW & M	115,000
2943	O'Melveny & Myers	<u>100,000</u>
	Sub-Total	\$ 215,000

VI. Misc. Contracts

3065	David Ashley	7,000
3030	Dillon Read & Co	24,900
3054	Haverson International	24,900
2499	Barton-Aschman	4,121
2430	Bureau de Transit Metro	2,187
2940	Steve Mertz (U.S C.)	5,000
2276	U.S C.	4,320
3506	California Newspaper Service Bureau	<u>105,000</u>
	Sub-Total	\$ 177,428

VII. Owner Controlled Insurance

3504	James/Kadowski/Ortiz/Rideau	894,154
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VIII. General Consultant

2967	MRTC	102,388,000
	Sub-Total	\$ 102,388,000

VIII. Construction Management

3369	PDCD	<u>6,589,849</u>
	Sub-Total	\$ 6,589,849

TOTAL OPEN PROFESSIONAL SERVICES CONTRACTS	\$ 119,724,181
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SECTION II

CONTRACT EVALUATIONS

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A COST

EXPLANATION OF TERMS

Cost Performance Index (C P I)	- Used to indicate the actual cost of each planned dollar of work accomplished
	$= \frac{\text{Earned Costs}}{\text{Expenditures}}$
Cost Variance (C V)	- The difference between the actual dollars spent and the actual dollars earned
	$= \text{Actual \$ Spent} - \text{Earned \$}$
Current Contract Cost	- The dollar value on which contractual agreement has been reached
Expended	- The entry into official RTD accounting ledgers of the use of resources
Forecast at Completion	- An estimate and prediction of the total cost of the contract
Independent Estimate at Completion (I E A C)	- A calculated EAC based on the current rate of cost performance
	$= \frac{\text{Forecast at Completion}}{\text{C P I}}$
Negotiated Contract Changes	- The cumulative cost applicable to definitized contract changes which have occurred since the beginning of the contract
Original Contract Cost	- The dollar value negotiated in the original contract
Pending Changes	- The estimated cost for contract changes that have yet to be negotiated or approved
Percent Complete	- A comparison of the completion status to the current projection of total work
Productivity	- A relative measure of labor efficiency compared to an established base
	$= \frac{\% \text{ complete} \times \text{Total MH forecast}}{\text{MH's spent}}$

To Complete Performance Index

(T C P I) -

Basically a comparison of the work remaining to the amount of money remaining. The results of this formula indicate the cost efficiency the contractor must perform to meet the Forecast at Completion.

$$= \frac{\text{Forecast at Completion} - \text{Earned Costs}}{\text{Forecast at Completion} - \text{Actual \$ Spent}}$$

Variance

- Any actual or potential deviation from a budget or plan

OVERALL COST ASSESSMENT

This month's report analyzes reported actuals against MRTC's latest forecast (cost, labor and progress) In general, actual progress is running behind MRTC's forecasted progress for the section design contracts. For details on each individual contract, refer to the Section Design Evaluation Summary in this report

The major concerns with this month's report are as follows

- o Contracts A100, A135, A165 and A170 expenditures are all above the current contract costs as reported in the Monthly Trend report. One explanation may be that some change orders have been negotiated but are pending approval by the RTD, and therefore have not been reflected in the current contract cost.
- o The To Complete Performance Index (T.C.P.I.) on contracts A100, A160, A165 and A170 reflect unrealistically high performance indices. These high indices are a result of MRTC's forecasted cost at completion being understated.

METRO RAIL PROJECT
SECTION DESIGN EVALUATION SUMMARY
DECEMBER 1984

UNIT NO	DESCRIPTION	TOTAL % COMPLETE		CURRENT INCRE- MENTAL PROGRESS	PRODUCTIVITY BASED ON		ORIGINAL NEGOTIATED CONTRACT AMOUNT	FORECAST AT COMPLETION		TO COMPLETE AVERAGE EFFICIENCY *
		F'CAST	ACTUAL		MHRS	\$\$		MRTC	TSD PROJECTED	
MOS-1 CONTRACTS										
A100	YARD AND SHOPS	95%	91%	5%	95%	96%	\$ 4,080,878	\$ 6,550,000	\$ 6,822,917	188%
A135	UNION STATION	95%	92%	1%	99%	100%	2,897,000	4,200,000	4,200,000	103%
A140	CIVIC CENTER/5TH & HILL/LINE	71%	61%	1%	101%	111%	6,203,707	6,826,439	6,126,126	88%
A165	7TH & FLOWER	98%	89%	2%	94%	95%	2,129,587	3,800,000	4,000,000	162%
A170	WILSHIRE/ALVARADO + LINE	97%	91%	(1)%	92%	92%	3,119,430	3,900,000	4,239,130	605%
TOTAL MOS-1 CONTRACTS							\$ 18,430,602	\$ 25,276,439	\$ 25,388,173	

* FOR CONTRACTS TO BE COMPLETED AT MRTC'S FORECAST

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COST PERFORMANCE REPORT
SECTION DESIGNER

CONTRACT NO A100, Yard & Shops
 CONTRACTOR DMJM/PBQD
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
\$ 4,080,878	\$ 479,020	\$ 4,559,898	\$ 1,990,102	\$ 6,550,000	\$ 6,237,000	\$ 313,000

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CUMULATIVE TO DATE
(BASED ON MRTC MONTHLY PROGRESS REPORT DATA)

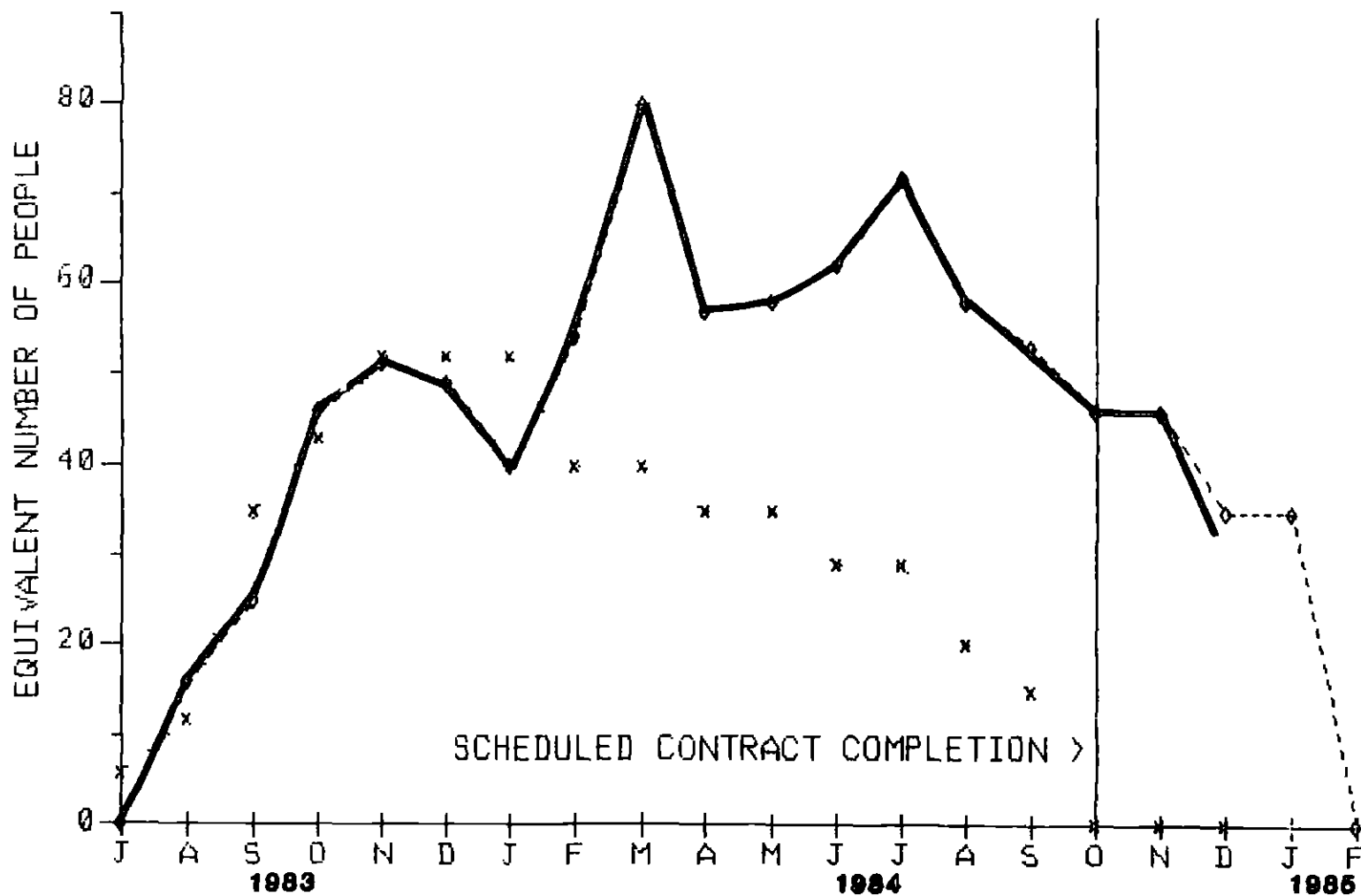
PERCENT COMPLETE			MANHOURLY PRODUCTIVITY	\$ C.P.I.	\$ COST VARIANCE	T.C.P.I.	\$ RTD I.E.A.C.
PLANNED	FORECAST	ACTUAL					
100%	95%	91%	95%	\$ 0.96	\$ 276,500	188%	\$ 6,822,917

CONCLUSIONS AND OBSERVATIONS

The forecast has been reduced by \$67,000 this month with an explanation in the report. Since this contractor has 9% of progress to complete within the next month and has been consistently working at less than 100% productivity, it appears highly unlikely that the contract will come in on schedule or at projected costs. However, the RTD Project Manager still feels that the MRTC estimate at completion is attainable.

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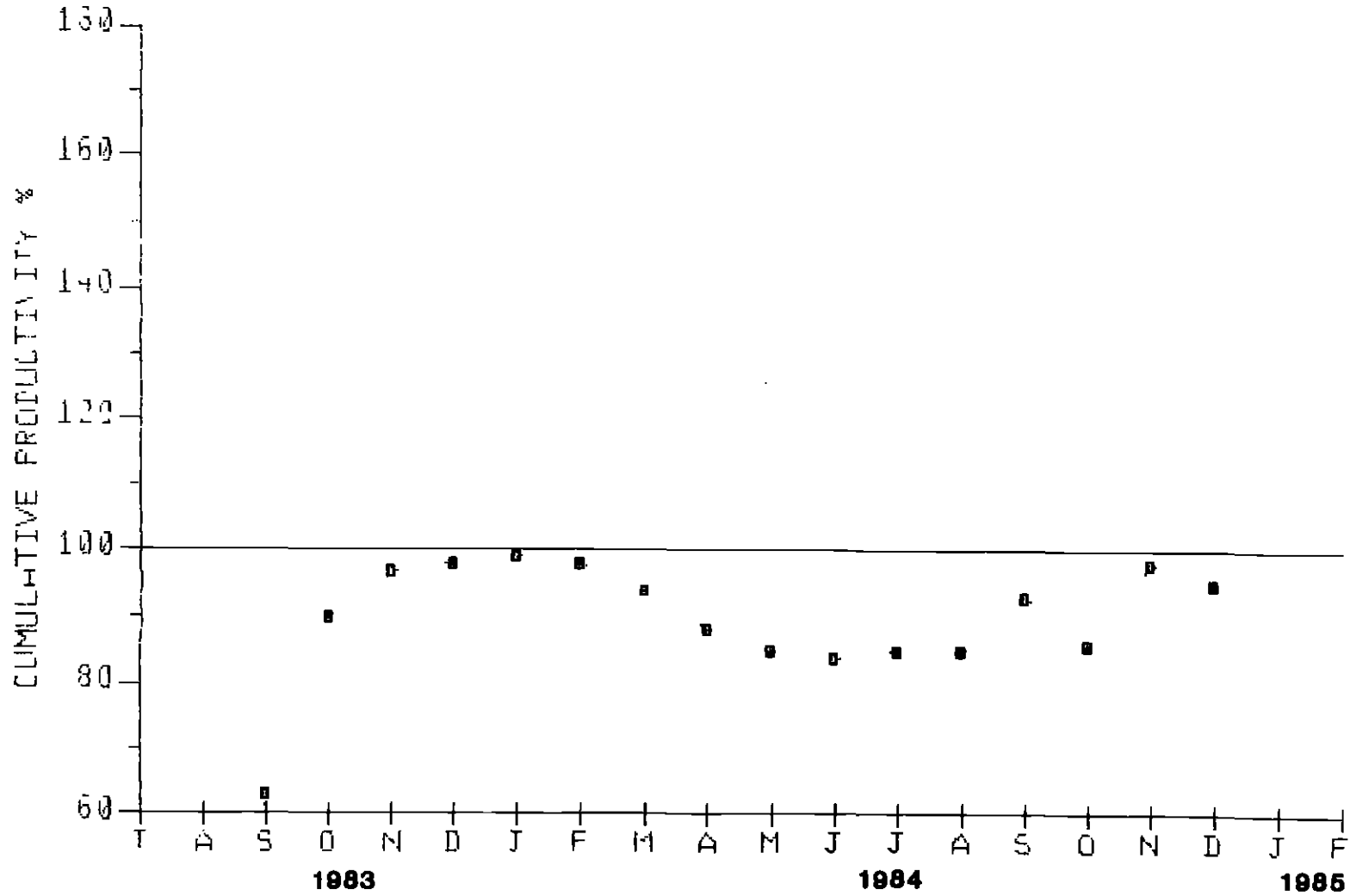
RTD METRO RAIL PROJECT
 CONTRACT A100 - MAIN YARD AND SHOPS
 SECTION DESIGNER DMJM/PBQD
 DECEMBER 1984



--◇-- FORECAST	— ACTUAL	x PLANNED
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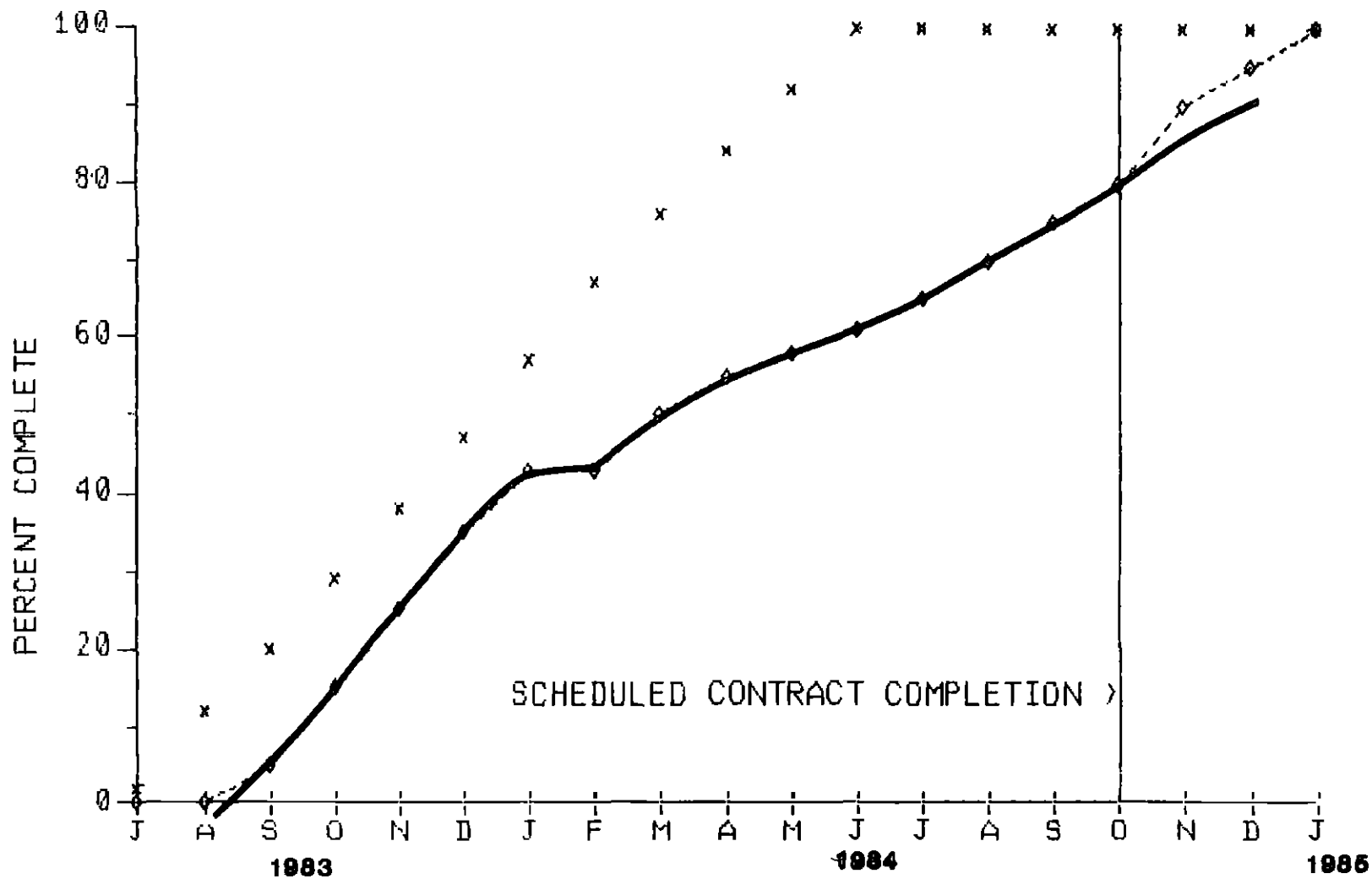
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PTD METRO RAIL PROTECT
CONTRACT A100 - MAIN YARD AND SHOPS
SECTION DESIGNER DUJH/PBQD
DECEMBER 1984



■ ACTUAL

RTD METRO RAIL PROJECT
 CONTRACT A100 - MAIN YARD & SHOPS
 SECTION DESIGNER DMJM/PBDD
 DECEMBER 1984



--◇-- FORECAST	— ACTUALS	x PLANNED
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COST PERFORMANCE REPORT
SECTION DESIGNER

CONTRACT NO A135, Union Station
 CONTRACTOR Harry Weese & Associates
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
\$ 2,897,000	\$ 457,997	\$ 3,354,997	\$ 845,003	\$ 4,200,000	\$ 3,873,000	\$ 327,000

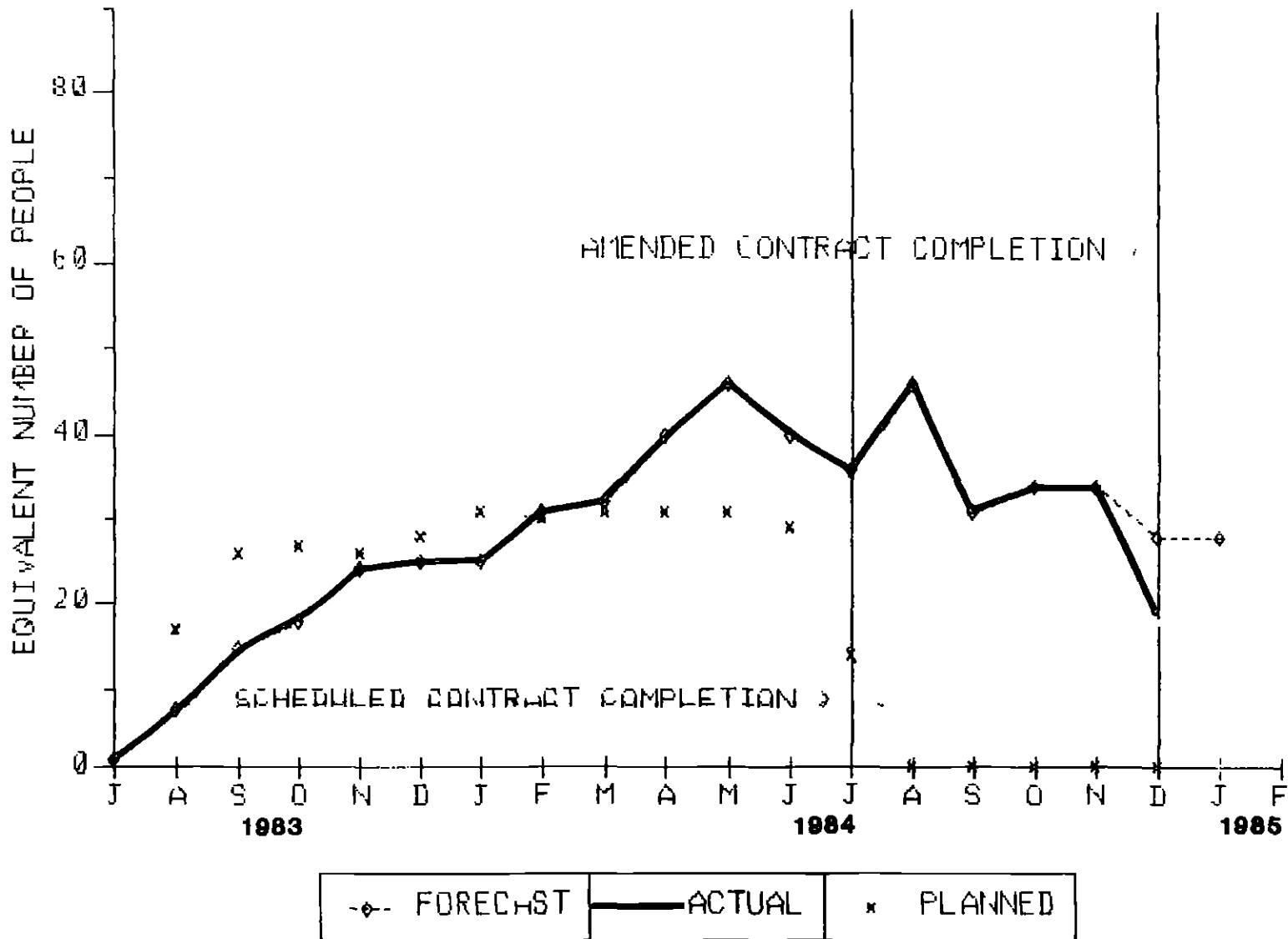
CUMULATIVE TO DATE
(BASED ON MRTC MONTHLY PROGRESS REPORT DATA)

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C P I.	\$ COST VARIANCE	T C P.I.	\$ RTD I.E.A C
PLANNED	FORECAST	ACTUAL					
100%	95%	92%	99%	\$ 1.00	\$ (9,000)	103%	\$ 4,200,000

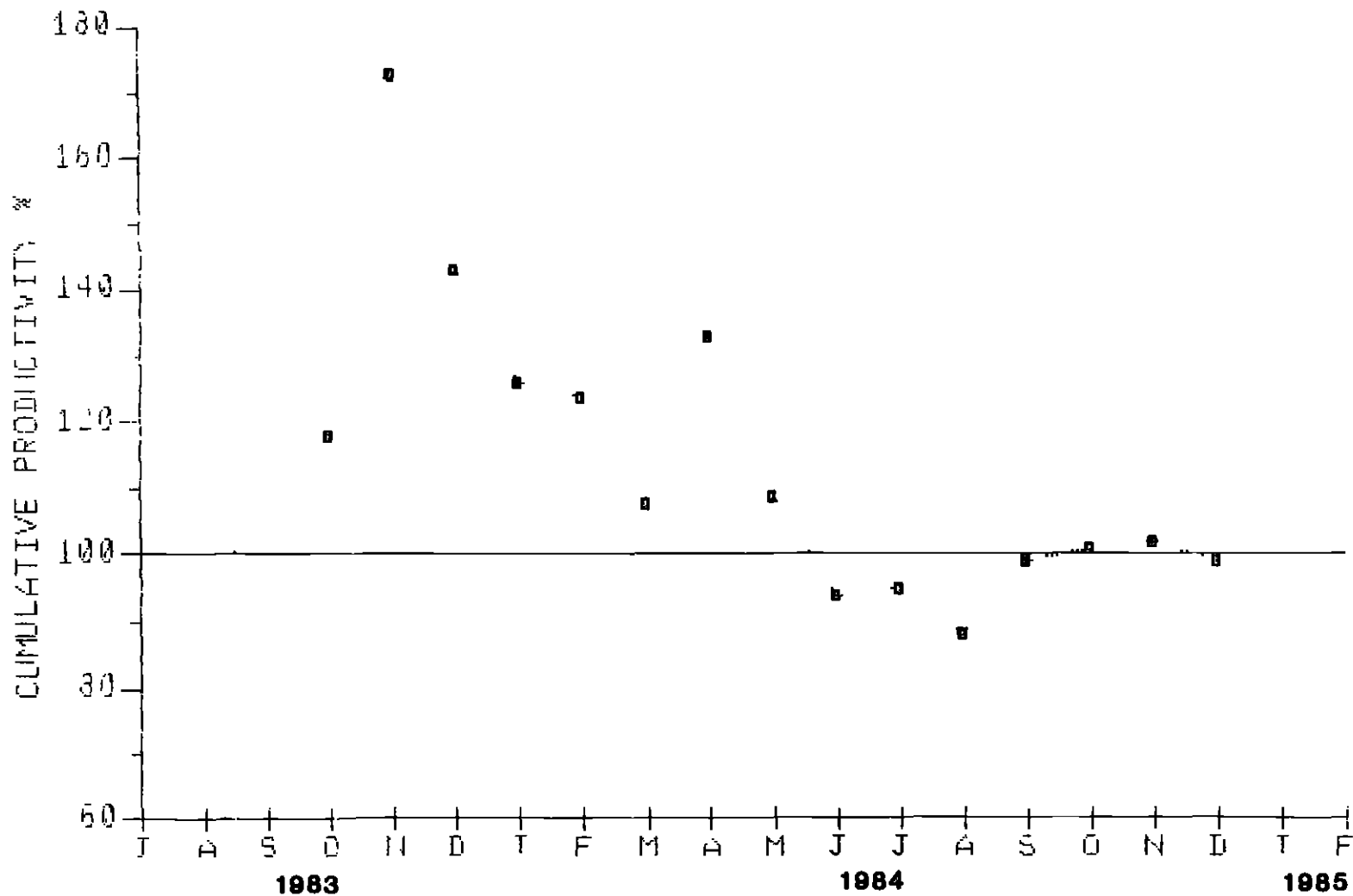
CONCLUSIONS AND OBSERVATIONS

With two months remaining until Final Submittal (100%), this Section Designer is proceeding satisfactorily. However, the consultant must achieve 8% progress within that time period—compare this to the preceding two months, during which the consultant progressed only 4%.

RTD METRO RAIL PROJECT
 CONTRACT A135 - UNION STATION
 SECTION DESIGNER HARRY WEESE & ASSOC
 DECEMBER 1984

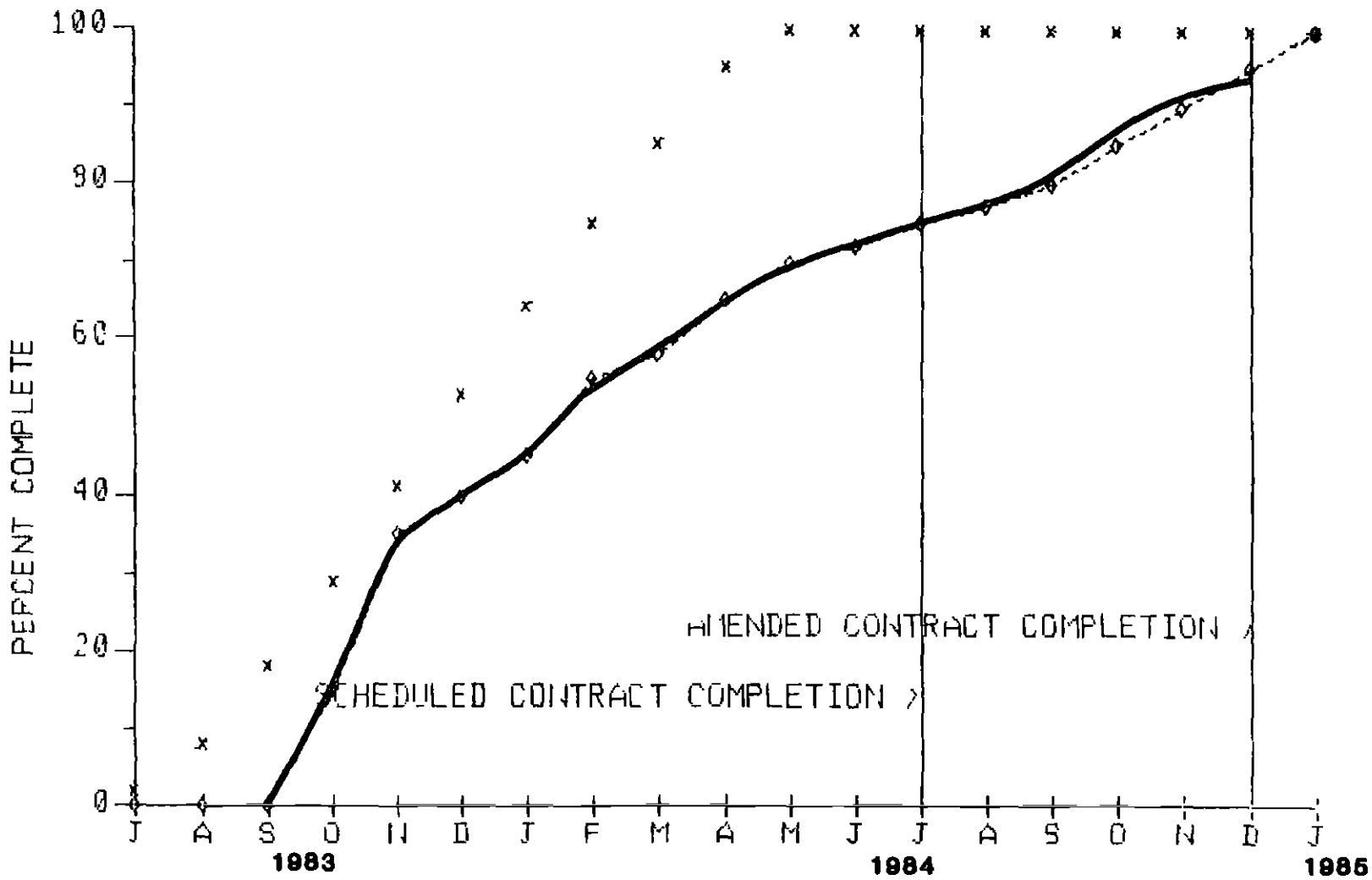


RTD METRO FAIL PROJECT
 CONTRACT A135 - UNION STATION
 SECTION DESIGNER HARRY WEESE AND H550C
 DECEMBER 1984



■ ACTUAL

RTD METRO RAIL PROJECT
 CONTRACT A135 - UNION STATION
 SECTION DESIGNER HARRY WEESE & ASSOC
 DECEMBER 1984



--◇-- FORECAST — ACTUALS * PLANNED

COST PERFORMANCE REPORT
SECTION DESIGNER

CONTRACT NO A140, Civic Center/ 5th & Hill Stations + line
 CONTRACTOR Delon Hampton & Associates
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
\$ 6,203,707	\$ 6,732	\$ 6,210,439	\$ 616,000	\$ 6,826,439	\$ 3,766,000	\$3,060,439

CUMULATIVE TO DATE
(BASED ON MRTC MONTHLY PROGRESS REPORT DATA)

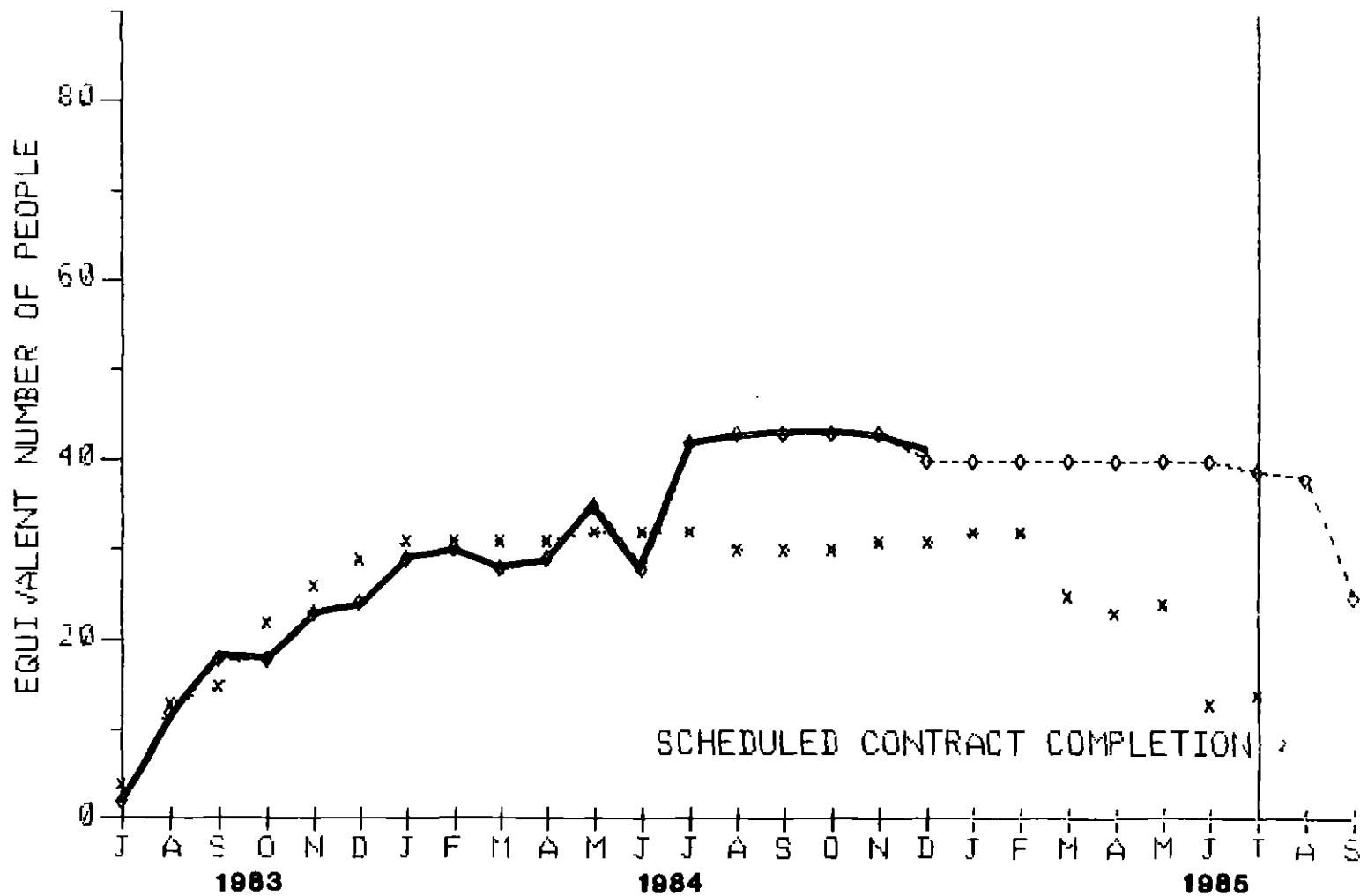
PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C.P.I.	\$ COST VARIANCE	T.C.P.I.	\$ RTD I.E.A.C.
PLANNED	FORECAST	ACTUAL					
76%	71%	61%	101%	\$ 1.11	\$ (382,000)	88%	\$ 6,126,126

CONCLUSIONS AND OBSERVATIONS

Productivity and C.P.I. continue to be satisfactory, though both have dropped considerably since November's report, as did the cost underrun. The actual percent complete continues to slip further behind the forecasted percent complete. If this trend persists, evidence of productivity and C.P.I. erosion may be visible as early as next month.

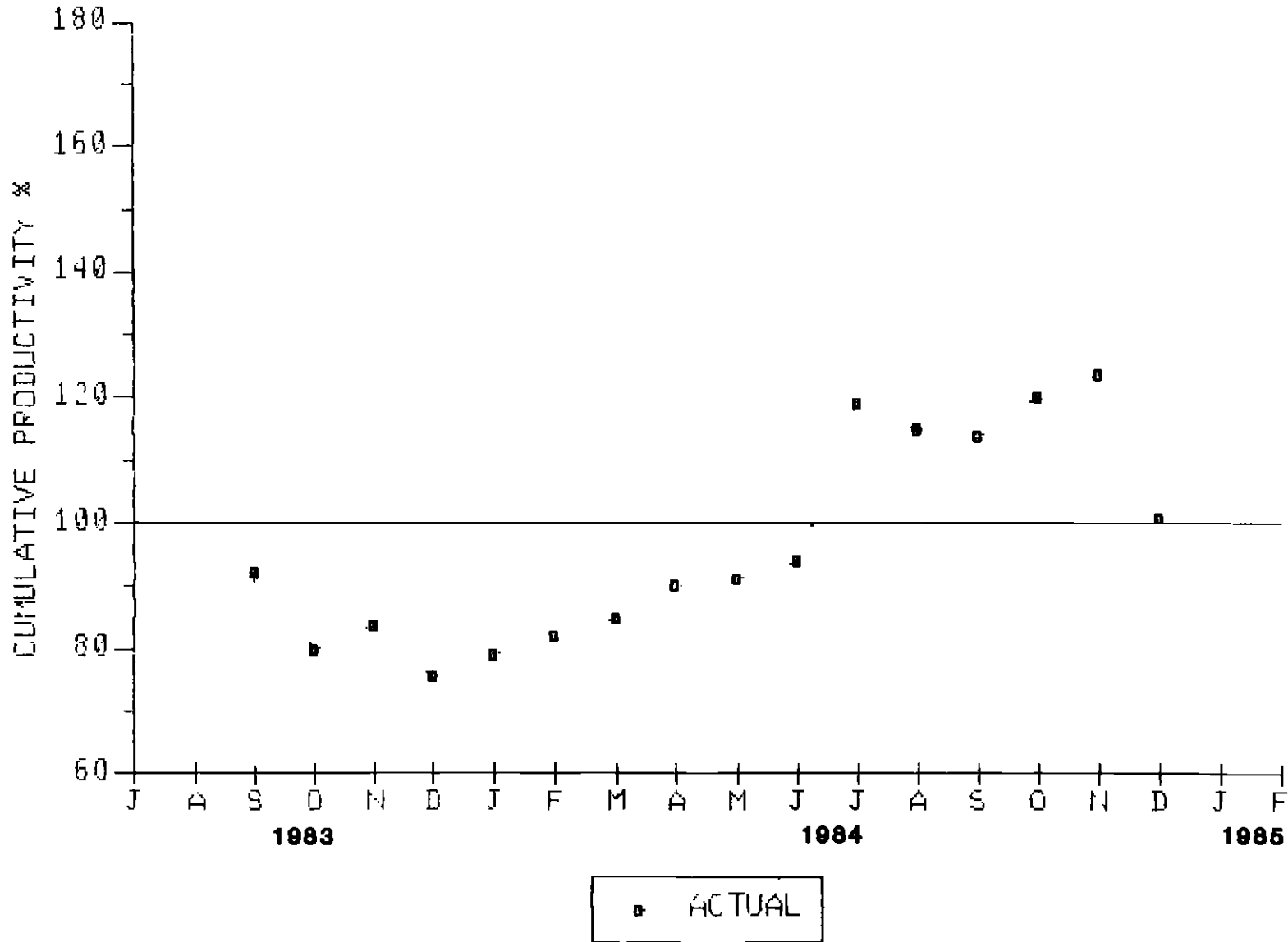
Section Designers work for A142, Civic Center excavation, has been completed

RTD METRO RAIL PROJECT
 CONTRACT A140 - CIVIC CENTER/FIFTH & HILL
 SECTION DESIGNER DELON HAMPTON & ASSOC
 DECEMBER 1984

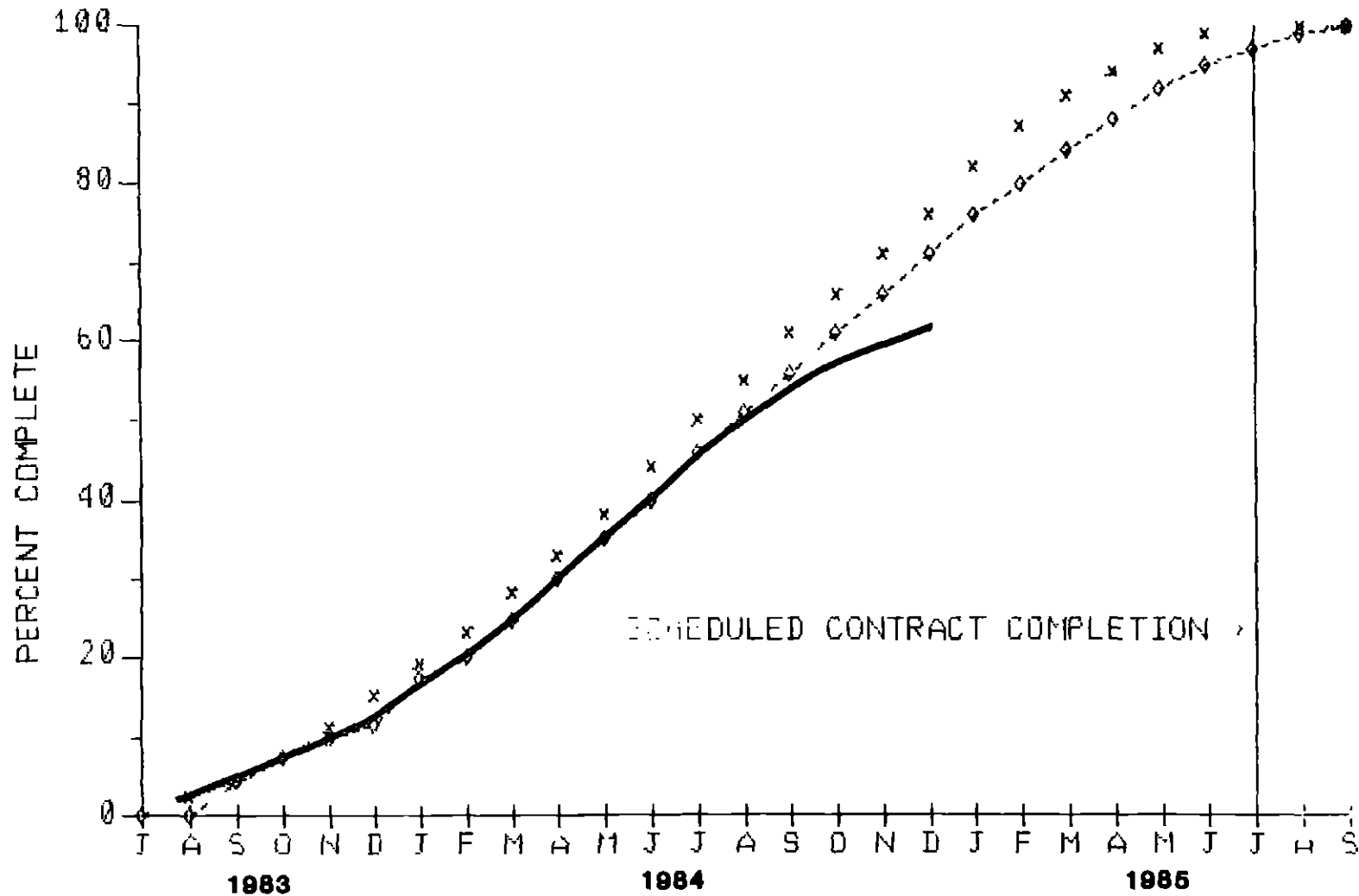


--◇-- FORECAST	— ACTUAL	* PLANNED
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PTD METRO RAIL PROJECT
CONTRACT A140 - CIVIC CENTER/FIFTH & HILL
SECTION DESIGNER DELON HAMPTON & ASSOC
DECEMBER 1984



RTD METRO RAIL PROJECT
 CONTRACT A140 - CIVIC CENTER/FIFTH & HILL
 DESIGNER DELON HAMPTON & ASSOC
 DECEMBER 1984



-◇-	FORECAST	—	ACTUAL	*	PLANNED
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COST PERFORMANCE REPORT
SECTION DESIGNER

CONTRACT NO. A165, 7th/Flower Station
 CONTRACTOR • Gannett Fleming/Dworsky
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
\$ 2,129,587	\$ 824,675	\$ 2,954,262	\$ 845,738	\$ 3,800,000	\$ 3,542,000	\$ 258,000

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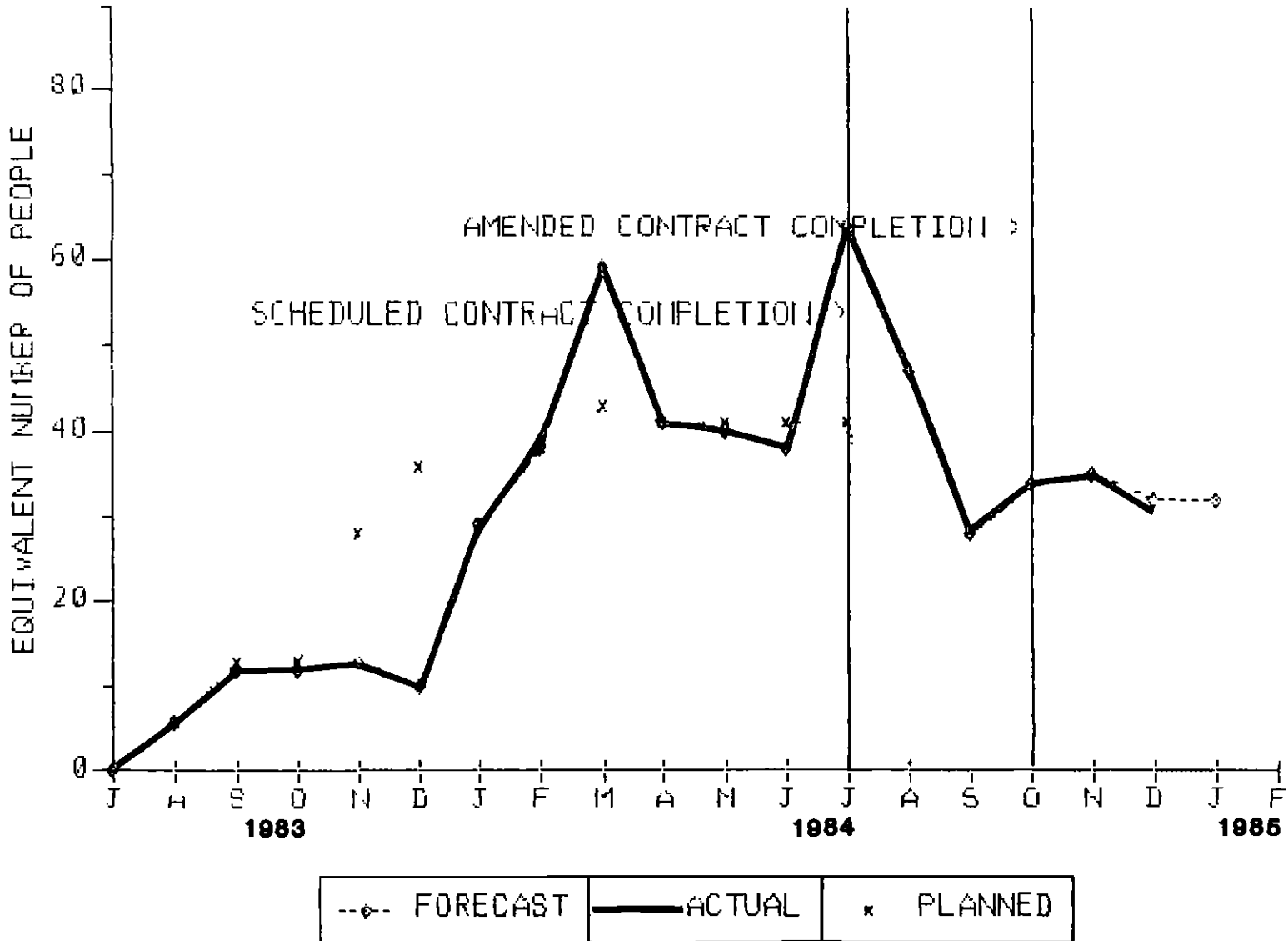
CUMULATIVE TO DATE
(BASED ON MRTC MONTHLY PROGRESS REPORT DATA)

PERCENT COMPLETE			MANHOURLY PRODUCTIVITY	\$ C.P.I.	\$ COST VARIANCE	T.C.P.I.	\$ RTD I.E.A.C.
PLANNED	FORECAST	ACTUAL					
100%	98%	89%	94%	\$.95	\$ 160,000	162%	\$ 4,000,000

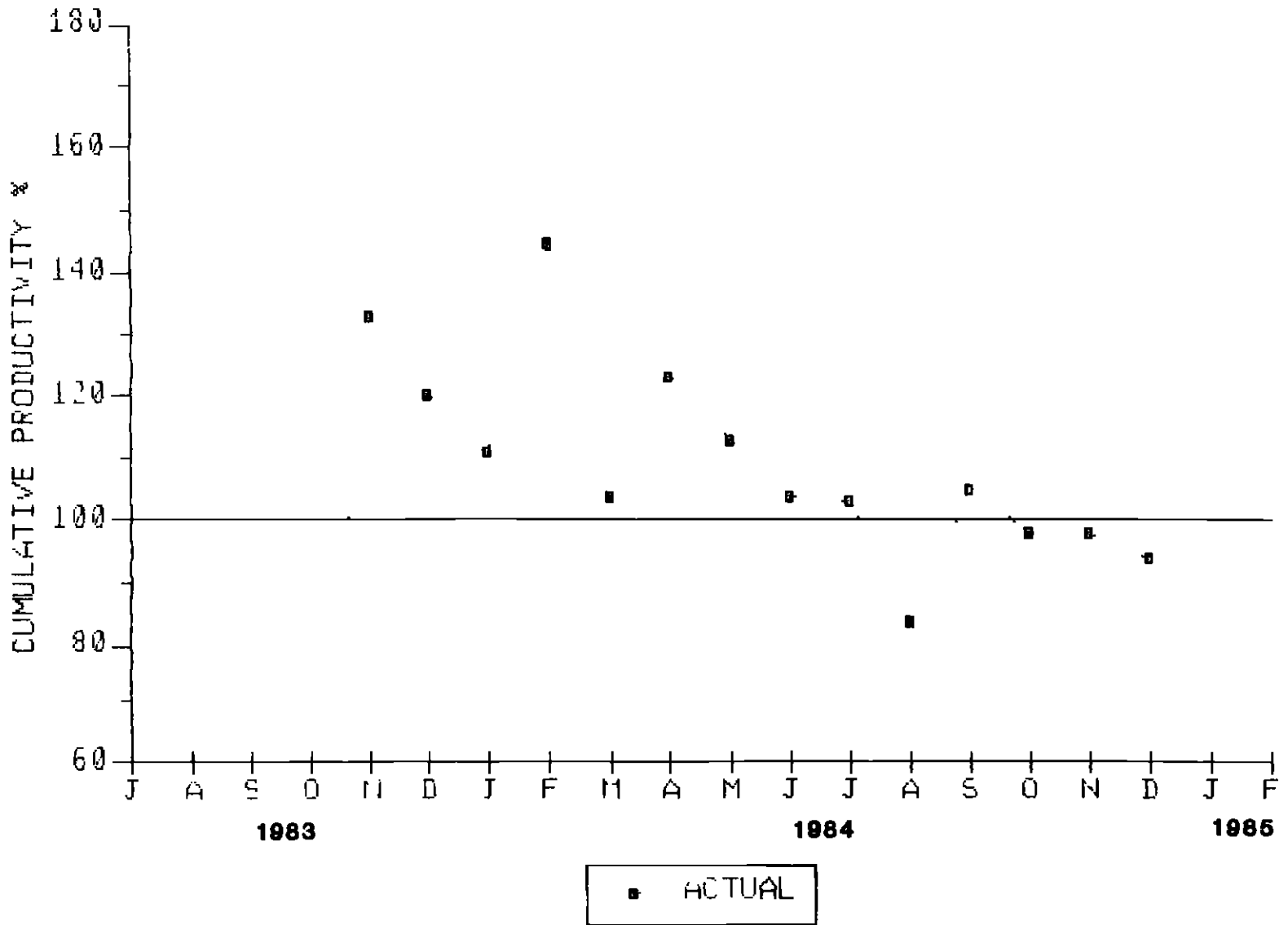
CONCLUSIONS AND OBSERVATIONS:

The expenditures on this contract continue to exceed the approved contract amount. Even when the latest amendment is approved (No. 13), the contract total will be increased to only \$3,360,000, \$182,000 short of the current expenditure level. As of the end of December the consultant is only 89% complete, yet MRTC is forecasting 100% completion by 3/1/85. This will require 5.5% progress for each of the next 2 months. The possibility of achieving such progress is doubtful since the consultant's incremental progress in December was only 2%.

RTD METRO PAIL PROJECT
 CONTRACT #115 - SEVENTH & FLOWER
 SECTION DESIGNER GANNETT FLEMING / DWORSKY
 DECEMBER 1984

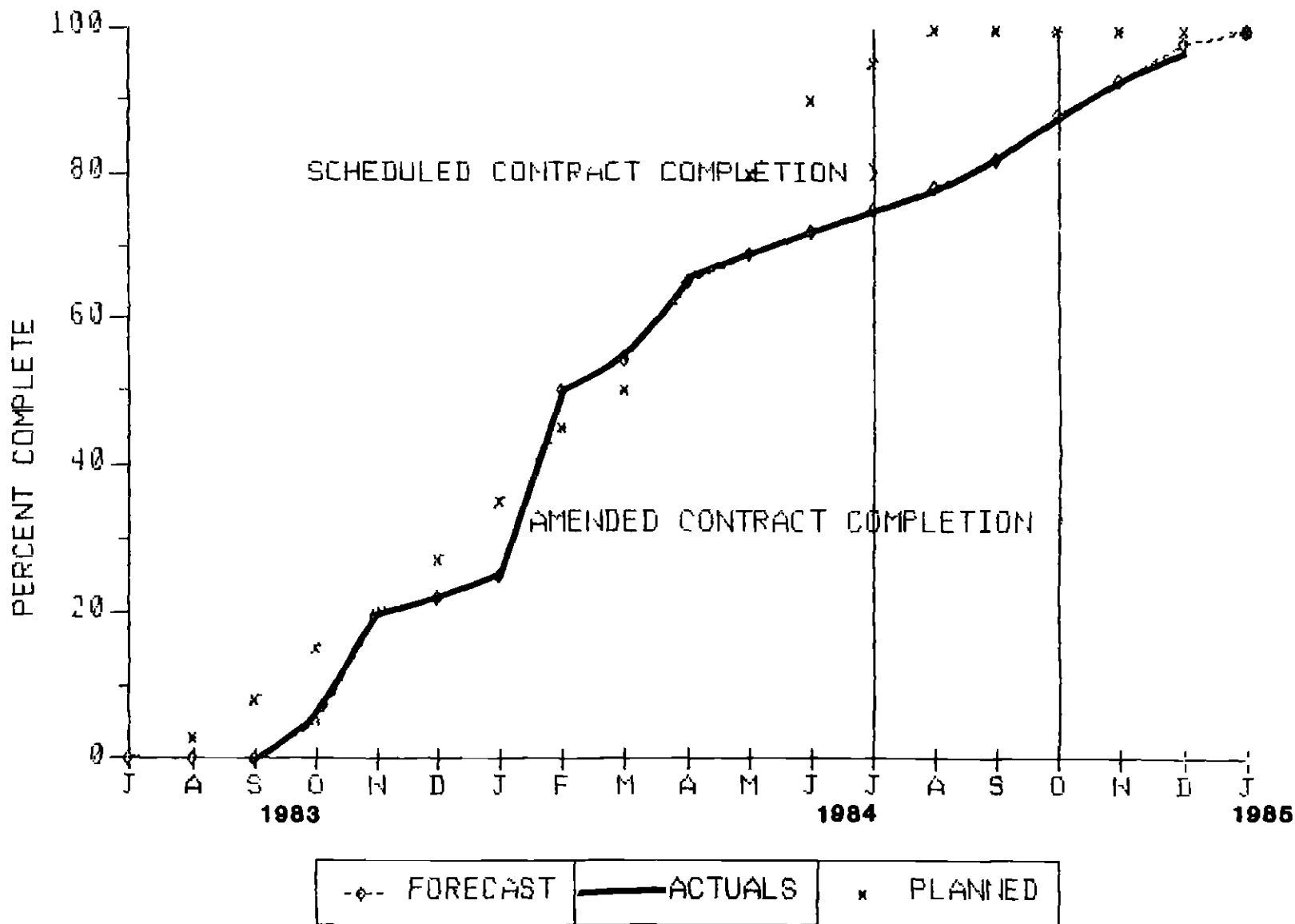


RTD METRO RAIL PROJECT
 CONTRACT A165 - SEVENTH & FLOWER
 SECTION DESIGNER GANNETT FLEMING/DWORSKY
 DECEMBER 1984



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RTD METRO RAIL PROJECT
 CONTRACT #105 - SEVENTH & FLOWER
 SECTION DESIGNER GANNETT FLEMING/DWORSKY
 DECEMBER 1984



COST PERFORMANCE REPORT
SECTION DESIGNER

CONTRACT NO. A170, Wilshire/Alvarado Station
 CONTRACTOR Sverdrup Corporation
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
\$ 3,119,430	\$ 233,496	\$ 3,352,926	\$ 780,570	\$ 3,900,000	\$ 3,842,000	\$ 58,000

CUMULATIVE TO DATE
(BASED ON MRTC MONTHLY PRGOGRESS REPORT DATA)

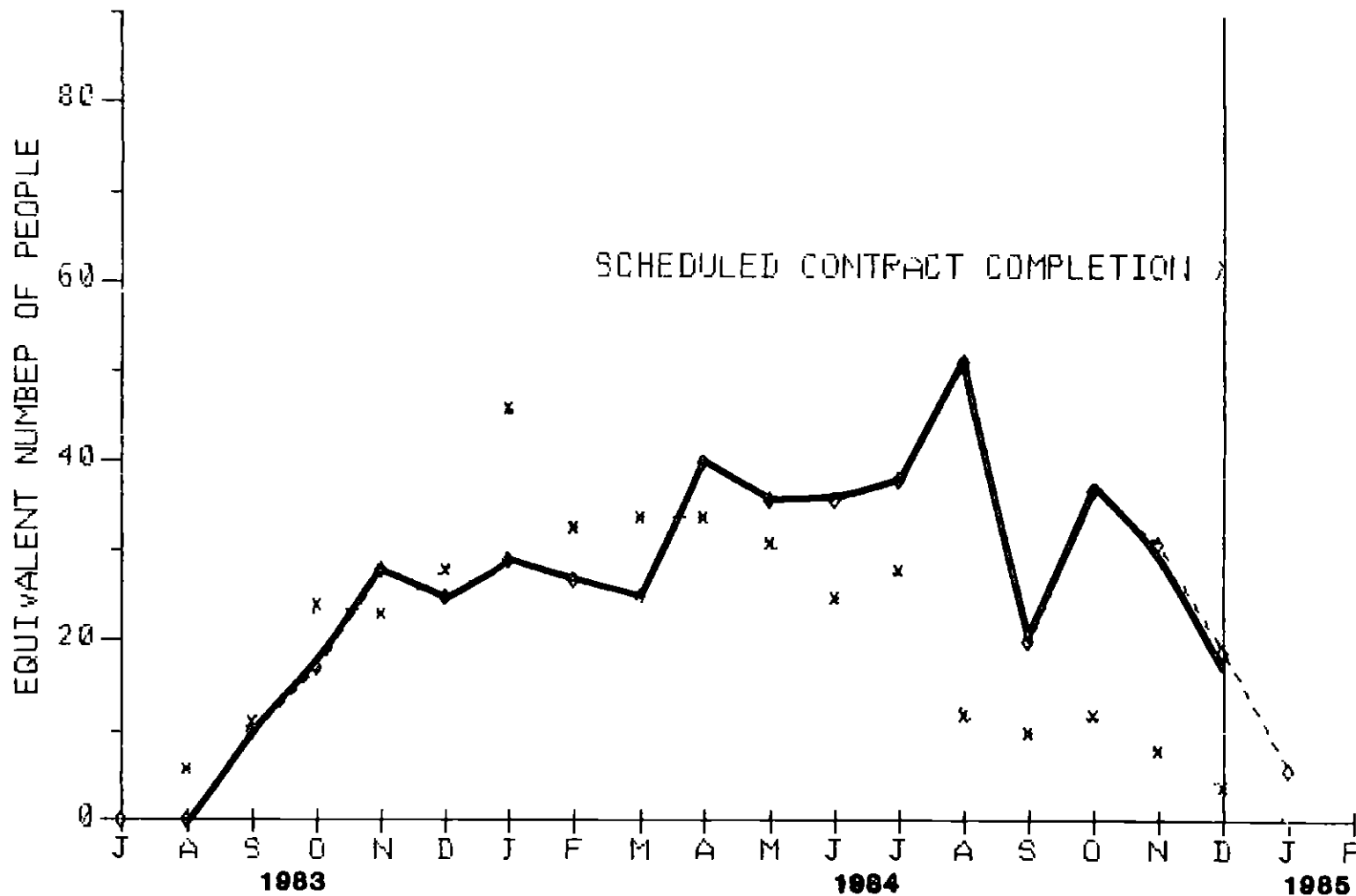
PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C.P.I	\$ COST VARIANCE	T.C.P.I.	\$ RTD I.E.A.C.
PLANNED	FORECAST	ACTUAL					
100%	97%	91%	92%	\$.92	\$ 293,000	605%	\$ 4,239,130

CONCLUSIONS AND OBSERVATIONS:

The negotiated cost to complete for this contract is still not finalized, meanwhile expenditures continue to exceed the approved contract amount. The To Complete Performance Index (T.C.P.I.) is unusually high this month because only \$58,000 remains to complete this contract at the MRTC estimated amount. A more realistic Estimate at Completion would reduce the T.C.P I figure substantially

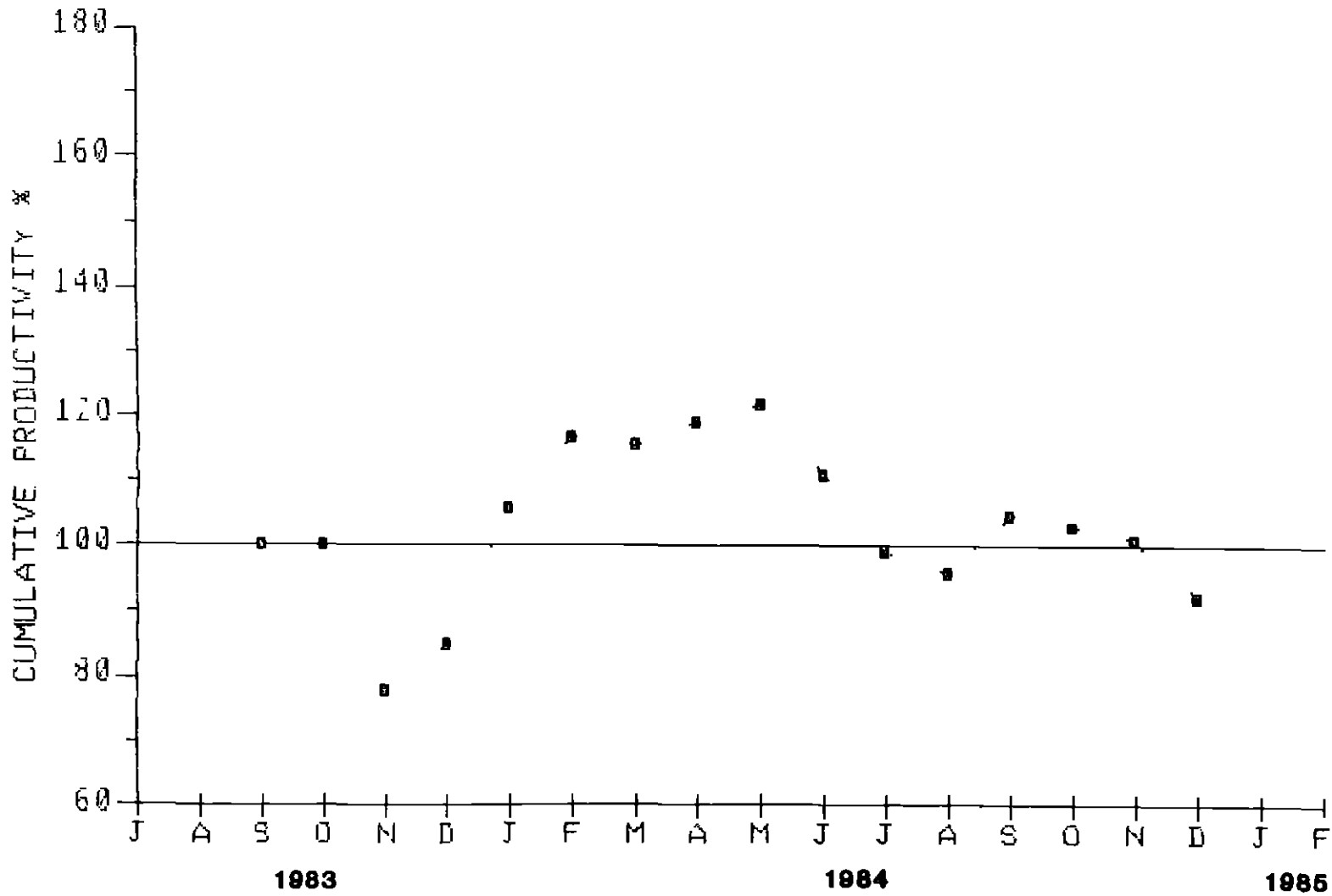
32
MTA LIBRARY

RTD METRO RAIL PROJECT
 CONTRACT A170 - WILSHIRE /ALVARADO
 SECTION DESIGNER SVERDRUP CORP
 DECEMBER 1984



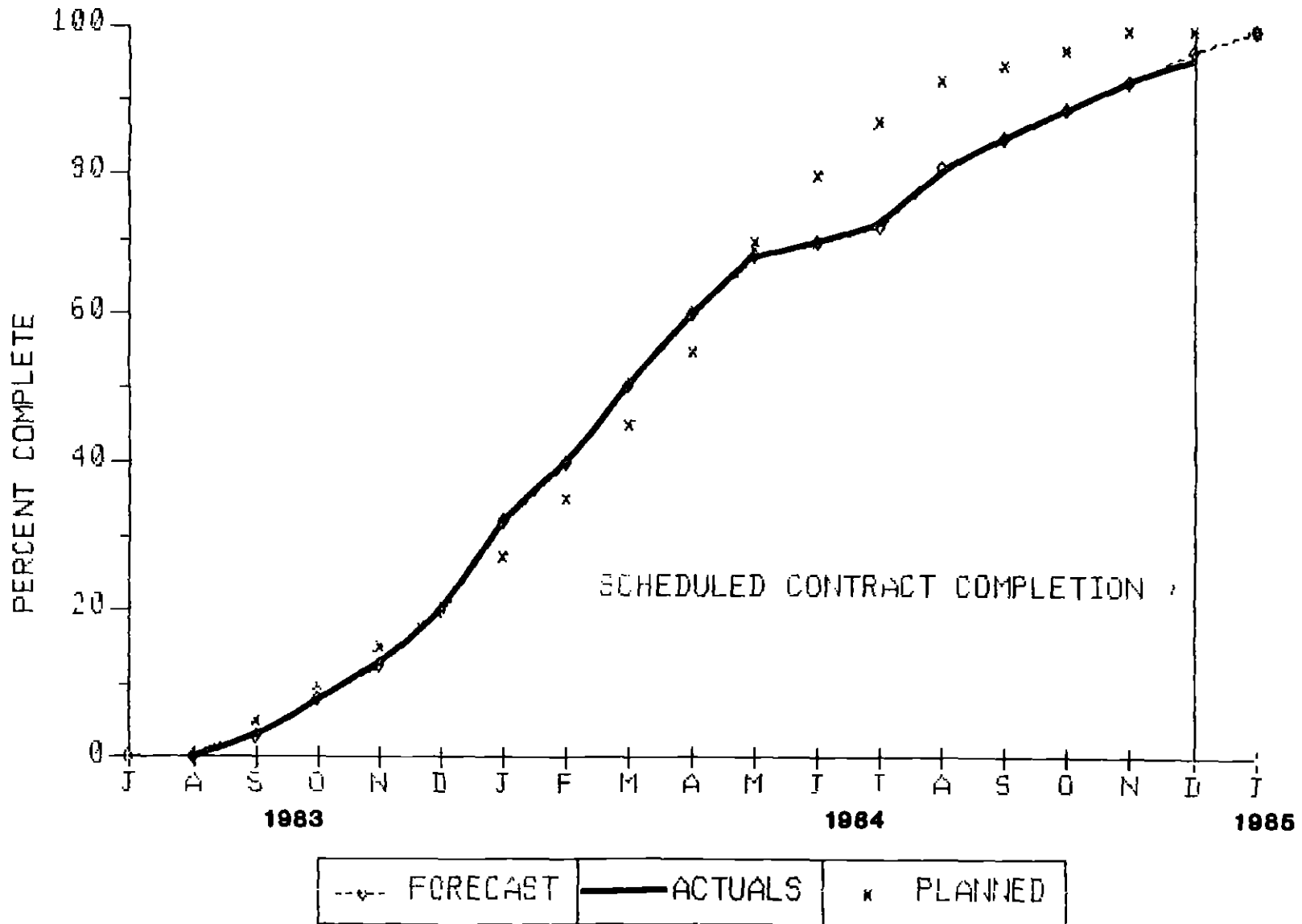
- - - FORECAST
— ACTUAL
* PLANNED

RTD METRO RAIL PROTECT
CONTRACT A170 - WILSHIRE/ALVARADO
SECTION DESIGNER SYERDRUP CORP
DECEMBER 1984



■ ACTUAL

RTD METRO RAIL PROJECT
 CONTRACT A170 - WILSHIRE /ALVARADO
 SECTION DESIGNER SVERDRUP CORP
 DECEMBER 1984



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COST PERFORMANCE REPORT
SYSTEMS DESIGNER

CONTRACT NO A612, A615, A630 - Traction Power Procurement
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$912,000	\$829,000	\$83,000

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOURL PRODUCTIVITY	\$ C.P.I.	\$ COST VARIANCE	T C.P I.	\$ RTD I.E.A C.
PLANNED	FORECAST	ACTUAL					
90%	N/A	85%	94%	\$0.94	\$53,800	165%	\$970,213

CONCLUSIONS AND OBSERVATIONS

The traction power procurement contracts continue to overrun. By the completion of these contracts, the cost overrun is projected to be 7%, up one percent from last month.

COST PERFORMANCE REPORT
SYSTEMS DESIGNER

CONTRACT NO A620, Automatic Train Control
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$888,000	\$533,000	\$355,000

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C.P.I	\$ COST VARIANCE	T C.P I.	\$ RTD I.E.A C
PLANNED	FORECAST	ACTUAL					
88%	61%	50%	99%	\$1.00	\$200	100%	\$888,000

CONCLUSIONS AND OBSERVATIONS

The District Train Control Engineer feels that the reported percent complete is overstated, thereby resulting in inflated cost and labor performance figures.

COST PERFORMANCE REPORT
SYSTEMS DESIGNER

CONTRACT NO A631, Traction Power Installation
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$461,000	\$116,000	\$345,000

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C.P.I.	\$ COST VARIANCE	T C P.I	\$ RTD I.E A.C
PLANNED	FORECAST	ACTUAL					
25%	25%	25%	99%	\$1 00	\$750	101%	\$461,000

CONCLUSIONS AND OBSERVATIONS

This contract unit is proceeding satisfactorily

COST PERFORMANCE REPORT
SYSTEMS DESIGNER

CONTRACT NO. • A640, Communications
 CONTRACTOR MRTC
 REPORT PERIOD • December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
N/A	N/A	N/A	N/A	\$1,362,000	\$752,000	\$610,000

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C.P I.	\$ COST VARIANCE	T.C P.I	\$ RTD I.E.A C.
PLANNED	FORECAST	ACTUAL					
75%	52%	52%	92%	\$.94	\$43,760	107%	\$1,448,936

CONCLUSIONS AND OBSERVATIONS

The MRTC is using more labor and costs than forecasted, yet is not making any extra progress. If this trend continues, the contract is in danger of increasing the overrun.

COST PERFORMANCE REPORT
SYSTEMS DESIGNER

CONTRACT NO A650, Passenger Vehicles
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$898,000	\$635,000	\$263,000

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C P I	\$ COST VARIANCE	T.C P I	\$ RTD I F A C
PLANNED	FORECAST	ACTUAL					
90%	75%	76%	105%	\$1.07	\$(47,480)	82%	\$839,252

CONCLUSIONS AND OBSERVATIONS

The District vehicles Engineer feels that the reported percent complete is slightly overstated, thereby resulting in inflated productivity and C P I. figures

COST PERFORMANCE REPORT
SYSTEMS DESIGNER

CONTRACT NO A660, Fare Collection
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$507,000	\$239,000	\$268,000

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C P I.	\$ COST VARIANCE	T C P.I	\$ RTD I E.A C.
PLANNED	FORECAST	ACTUAL					
55%	52%	50%	104%	\$1.06	\$(14,500)	95%	\$478,302

CONCLUSIONS AND OBSERVATIONS

No comment.

COST PERFORMANCE REPORT
SYSTEMS DESIGNER

CONTRACT NO. A671-679, Auxiliary Vehicles
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$213,900	\$156,397	\$57,503

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOURLY PRODUCTIVITY	\$ C P I	\$ COST VARIANCE	T C . P I .	\$ RTD I . E A C
PLANNED	FORECAST	ACTUAL					
*	*	*	*	*	*	*	*

CONCLUSIONS AND OBSERVATIONS

* Insufficient information

COST PERFORMANCE REPORT
FACILITIES DESIGNER

CONTRACT NO. A720, Elevators
CONTRACTOR MRTC
REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$64,000	\$ 59,780	\$ 4,220

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C P I	\$ COST VARIANCE	T C P I	\$ RTD I E A C
PLANNED	FORECAST	ACTUAL					
100%	N/A	100%	99 %	\$1 07	\$(4,220)	N/A	N/A

CONCLUSIONS AND OBSERVATIONS

Final documents are completed, but are being repackaged for MOS-1

COST PERFORMANCE REPORT
FACILITIES DESIGNER

CONTRACT NO A740, Fans & Blowers
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) + (6)
				\$ 51,000	\$ 79,460	\$ (28,460)

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C.P.I	\$ COST VARIANCE	T.C P I	\$ RTD I.E A C
PLANNED	FORECAST	ACTUAL					
100%		95%	56%	\$ 0 61	\$ 31,010	N/A %	\$ 83,607

CONCLUSIONS AND OBSRVATIONS

This contract is overrunning by 56% at present. At contract completion, a 64% cost overrun is projected

COST PERFORMANCE REPORT
FACILITIES DFSIGNER

CONTRACT NO. A745, Station Air-Handling Units
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				*	\$ 9,900	*

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C P.I	\$ COST VARIANCE	T.C P.I	\$ RTD I.E.A.C
PLANNED	FORECAST	ACTUAL					
*	*	50%	* %	*	*	*	*

CONCLUSIONS AND OBSERVATIONS

* Insufficient information

COST PERFORMANCE REPORT
FACILITIES DESIGNER

CONTRACT NO. A610, Mainline Trackwork Installation
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
\$ 1,175,000	\$ - 0 -	\$ 1,175,000	\$ - 0 -	\$1,175,000	\$452,000	\$723,000

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C P.I.	\$ COST VARIANCE	T C.P.I	\$ RTD I.E A C
PLANNED	FORECAST	ACTUAL					
58%	58%	53%	98 %	\$1 38	\$ 170,750	76%	\$851,500

CONCLUSIONS AND OBSERVATIONS

No Comment.

COST PERFORMANCE REPORT
FACILITIES DESIGNER

CONTRACT NO A710, Escalators
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$ 95,000	\$ 85,976	\$ 9,024

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOUR PRODUCTIVITY	\$ C.P I.	\$ COST VARIANCE	T.C P I	\$ RTD I E.A.C
PLANNED	FORECAST	ACTUAL					
100%	N/A	100%	103 %	\$1 11	\$ (9,024)	N/A	N/A

CONCLUSIONS AND OBSERVATIONS

Final documents are completed, but are being repackaged for MOS-1.

COST PERFORMANCE REPORT
FACILITIES DESIGNER

CONTRACT NO A760, Graphics and Signage
 CONTRACTOR MRTC
 REPORT PERIOD December 1984

(1) ORIGINAL CONTRACT COST	(2) APPROVED CONTRACT CHANGES	(3) CURRENT CONTRACT COST (1) + (2)	(4) PENDING CHANGES	(5) MRTC ESTIMATE AT COMPLETION (3) + (4)	(6) EXPENDED	(7) ESTIMATE TO COMPLETE (5) - (6)
				\$72,500	\$ 92,210	\$ (19,710)

CUMULATIVE TO DATE

PERCENT COMPLETE			MANHOURL PRODUCTIVITY	\$ C P I.	\$ COST VARIANCE	T C.P.I	\$ RTD I.E.A C
PLANNED	FORECAST	ACTUAL					
N/A	N/A	50%	32 %	\$0 40	\$55,960	N/A	\$181,250

CONCLUSIONS AND OBSERVATIONS

This contract is overrunning by 28% At contract completion, a 150% cost overrun is projected At 50% complete, there is still time to introduce some cost savings into this contract

B. SCHEDULE

MOS-1 CRITICAL PATH

The Critical Path (MOS-1) defined in the Level II Schedule originates at Design Contract A140 (Civic Center Station, 5th & Hill and Line Section) and continues to Design Completion and the Construction Bid Process. This path follows construction through Utility Relocation, Support and Excavation, Tunnel Excavation and Invert Placement. The path then shifts to Trackwork Installation and on to Automatic Train Control and Communications Cabling and Installation to Energization of the system. The path then continues through Vehicle Acceptance Testing, ATC Dynamic Testing and finally to Simulated Revenue Service.

METRO RAIL PROJECT
SCHEDULE EXCEPTION REPORT

Minimum Operable Segment-1 Design Contracts

CONTRACT A135 Union Station

AREA OF CONCERN Contract completion is forecast 10 weeks beyond the Contract Time of Performance (12/31/84) Delay is due to the late submittal of seismic design criteria to Section Designer The schedule has been revised to show remaining work items and is updated weekly

RECOMMENDATION MRTC to transmit to RTD all updated schedules.

CONTRACT A165 7th/Flower Station

AREA OF CONCERN Contract completion is forecast 5 weeks beyond the Contract Time of Performance (01/31/85). Delay is due to the following

- o lack of design criteria,
- o continuous design changes,
- o late receipt of seismic design criteria

RECOMMENDATION It is again recommended the schedule be revised to reflect remaining work items and strictly monitored to avoid further delays

CONTRACT: A170 Wilshire/Alvarado Station and Line

AREA OF CONCERN 1) Contract Completion is forecast 16 weeks beyond the Contract Time of Performance (12/7/84).

2) Relocation of Fire Station #11 is required

RECOMMENDATION 1) A Contract Amendment to extend the Time of Performance should be expedited The schedule should be revised accordingly.

2) Replacement site for the Fire Station should be determined, and UMTA approval secured in order to meet the forecast construction NTP.

Minimum Operable Segment-1 Design Contracts

CONTRACT A196/A197 Wilshire/Vermont Station and Line

AREA OF CONCERN Contract completion is forecast 26 weeks beyond the Contract Time of Performance (08/11/84) Delay is due to the following

- o numerous changes in the standard and directive drawings,
- o breaking out A195 contract into A196 Stage I and A197 Stage II contract,
- o late submittal of seismic design criteria to Section Designer.

RECOMMENDATION Contract Amendment #5 (which includes extension to the Time of Performance) should be expedited.

Beyond Minimum Operable Segment-1 Design Contracts

CONTRACT• A240 Wilshire/Crenshaw Station

AREA OF CONCERN• Contract completion is forecast 11 weeks beyond the contract Time of Performance (1/26/85). Delay is due to the following-

- o late receipt of seismic design criteria,
- o numerous ECR's that require changes in the design,
- o late direction of street lighting design.

RECOMMENDATION• All outstanding ECR's have been negotiated with the section designer. The Contract Amendment for Increment I (which extends the Time of Performance to 4/15/85) should be expedited

CONTRACT A245 Wilshire/La Brea Station

AREA OF CONCERN Contract completion is forecast 42 weeks beyond the contract Time of Performance (10/15/84). Delay is due to the following

- o late direction on street lighting design,
- o late receipt of seismic design criteria,
- o numerous ECR's that require changes in the design,
- o section designer is short of personnel.

RECOMMENDATION All outstanding ECR's have been negotiated with the section designer. The final submittal has been re-scheduled (3/30/85) as agreed upon during Increment I contract negotiations. Contract Amendment for Increment I should be expedited

Beyond Minimum Operable Segment-1 Design Contracts

CONTRACT A275 Fairfax/Beverly Station

AREA OF CONCERN Contract completion is forecast 9 weeks beyond the Contract Time of Performance (12/27/84) Delay is due to the following

- o late receipt of seismic design criteria,
- o numerous ECR's that require changes in the design,
- o late direction on street lighting design

RECOMMENDATION- Pending agreement during negotiations the Final Submittal for Increment I will be rescheduled and a Contract Amendment should be expedited to extend the Time of Performance

CONTRACT- A410 Line Between Hollywood Cahuenga and Universal City

AREA OF CONCERN Contract completion is forecast 3 weeks beyond the Contract Time of Performance (12/29/84). Delay is due to lack of geotechnical information necessary for final submittal

RECOMMENDATION. A contract Amendment should be expedited to extend the Contract Time of Performance, and the schedule revised accordingly.

CONTRACT A425 Universal City Station

AREA OF CONCERN- Contract Completion is forecast 5 weeks beyond the Contract Time of Performance (2/11/85). Delay is due to the late receipt of seismic design criteria.

RECOMMENDATION- Contract Amendment #4 Proposal (which incorporates Increment I negotiated changes and time extension to 3/31/85) should be expedited

Systemwide In-House Design

CONTRACT A610 MOS-1 Trackwork

AREA OF CONCERN The main line trackwork installation, yard trackwork, running rail, timber tie, direct fixation rail fastener, and rail welding contracts have been combined into one "furnish and install" contract. Design completion is critical to the project construction schedule (MOS-1 LEVEL II). Timely issuance of Notice to Proceed is necessary to allow adequate procurement time for long lead items.

RECOMMENDATION A revised base-line schedule should be established and strictly monitored to avoid any slippages

CONTRACT* A612 Contact Rail Procurement
 A615 Coverboard Procurement
 A630 Traction Power Substation
 Equipment Procurement

AREA OF CONCERN Project completion is forecast 9 weeks beyond the original scheduled date (2/25/85). Slippage is due to the design directive to incorporate procurement options for Phases II, III and IV.

RECOMMENDATION The schedule should be revised to correspond to the LEVEL II Project Schedule. This will insure availability of the procurement packages for long lead items.

CONTRACT A650 Passenger Vehicles

AREA OF CONCERN Project completion is forecast 19 weeks beyond the original scheduled date (2/15/85). Delay is due to incorporation of numerous review comments to the General Conditions, Special Conditions, and Technical Provisions

RECOMMENDATION* The forecast completion date for the pre-final submittal should correspond to the LEVEL II MOS-1 Schedule and strictly monitored to avoid further delays.

Systemwide In-House Design

CONTRACT A620 Automatic Train Control

AREA OF CONCERN Project completion is forecast 23 weeks beyond the original scheduled date (4/19/85). Delay is due to incorporation of numerous industry review comments.

RECOMMENDATION The schedule should be revised to correspond to the LEVEL II Project Schedule This will insure availability of the procurement packages for long lead items.

CONTRACT A745 Air Handling Equipment

AREA OF CONCERN Contract Completion is forecast 6 weeks beyond the original scheduled date (3/15/85) Delay is due to lack of work performed during November and December. A presentation was made proposing that fan procurement be the responsibility of the facilities contracts. Currently an assessment of the cost savings is being made

RECOMMENDATION The decision should be made and design progress should resume.

CONTRACT A750 Tunnel Liners

AREA OF CONCERN The final completion date is forecast for 3/01/85, 15 weeks beyond the scheduled completion date (11/16/84) Delay is due to continuing research for a suitable membrane that will eliminate gas penetration.

RECOMMENDATION: It is recommended that efforts be increased in locating a material that is impervious to methane gas and will withstand heavy construction operations, in order to meet the forecast date of 3/01/85

2/1/85
PC-SA 6

METRO RAIL PROJECT
DESIGN SCHEDULE STATUS

STATUS AS OF: DECEMBER 31, 1984

Page 1 of 5

DESIGN CONTRACTS & CONSTRUCTION PACKAGES	NOTICE TO PROCEED	CONTRACT TIME OF PERFORM	IN PROGRESS		PRE-FINAL SUBMITTAL		FINAL SUBMITTAL		BID DOCUMENTS		CURR MONTH SLIPPAGE (C D)	TOTAL DELAY (WEEKS)
			SCHEDULE	F'CAST(F) ACTUAL(A)	SCHEDULE	F'CAST(F) ACTUAL(A)	SCHEDULE	F'CAST(F) ACTUAL(A)	SCHEDULE	F'CAST(F) ACTUAL(A)		
MOS-1: YARD & SHOPS	07/13/83	01/31/85	02/01/84	06/14/84A	03/28/84	10/11/84A	05/23/84	12/10/84A	-	01/07/85F	-	-
A112			-	01/27/84A	04/25/84	05/30/84A	06/13/84	06/27/84A	-	09/10/84A	-	-
A114			09/10/84	09/24/84A	10/08/84	11/01/84A	12/10/84	12/28/84A	-	01/07/85F	-	-
A115			03/07/84	09/10/84A	05/02/84	12/24/84A	06/27/84	01/11/85F	-	01/29/85F	4	-
A130			-	11/08/84A	-	-	-	12/14/84A	-	02/01/85F	-	-
UNION STATION A133 BAGGAGE HANDLING	07/13/83	12/31/84	-	11/08/84A	-	-	-	12/14/84A	-	02/01/85F	-	-
A135 STAGE I			02/01/84	03/09/84A	04/01/84	11/30/84A	06/01/84	02/01/85F	07/18/84	03/15/85F	-	10
A136 STAGE II			02/01/84	03/09/84A	04/01/84	11/30/84A	06/01/84	02/01/85F	07/18/84	03/15/85F	-	10
LINE, CIVIC CENTER/ 5TH & HILL, LINE	07/27/83	07/27/85	08/01/84	08/01/84A	03/01/85	03/01/85F	06/10/85	06/10/85F	07/15/85	07/15/85F	-	-
A141&A145 STAGE I			08/01/84	07/16/84A	09/07/84	09/21/84A	10/15/84	01/14/85F	11/15/84	12/21/84F	37	-
A142 EXC /SUP			08/01/84	08/01/84A	03/01/85	03/01/85F	06/10/85	06/10/85F	07/15/85	07/15/85F	-	-
A147 STAGE II			08/01/84	08/01/84A	03/01/85	03/01/85F	06/10/85	06/10/85F	07/15/85	07/15/85F	-	-
A157 STAGE II					02/07/84	03/12/84A	05/22/84	11/26/84A	08/07/84	01/14/85F	10/14/84	03/05/85F
7TH & FLOWER A166 STAGE I	08/09/83	01/31/85	02/07/84	03/12/84A	05/22/84	11/26/84A	08/07/84	01/14/85F	10/14/84	03/01/85F	-	4
A167 STAGE II					02/14/84	02/16/84A	05/30/84	11/26/84A	08/14/84	02/28/85F	09/26/84	03/28/85F
WILSH /ALVARADO A171&A175 STAGE I	08/09/83	12/07/84	04/02/84	05/07/84A	07/25/84	11/26/84A	11/05/84	02/28/85F	12/28/84	03/28/85F	-	16
A187 STAGE II												

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DESIGN CONTRACTS & CONSTRUCTION PACKAGES	NOTICE TO PROCEED	CONTRACT TIME OF PERFORM	IN PROGRESS		PRE-FINAL SUBMITTAL		FINAL SUBMITTAL (85%)*		CURR MONTH SLIPPAGE (C D)	TOTAL DELAY (WEEKS)
			SCHEDULE	F' CAST (F) ACTUAL (A)	SCHEDULE	F' CAST (F) ACTUAL (A)	SCHEDULE	F' CAST (F) ACTUAL (A)		
<u>BEYOND MOB-1</u>										
WILSH /VERMONT A196 STAGE I A197 STAGE II	08/12/83	08/11/84	02/07/84	02/10/84A	05/22/84	12/14/84A	08/07/84	02/11/85F	-	26**
			02/07/84	02/10/84A	-	-	-	-	-	
WILSH /WESTERN A220 STAGE I A237 STAGE II	10/10/83	10/07/85	08/06/84	08/23/84A	11/05/84	01/09/85F	02/04/85	03/15/85F	-	-
			08/06/84	08/23/84A	-	-	-	-	-	
WILSH /NORMANDIE A220 STAGE I A227 STAGE II A222 LINE			12/03/84	02/20/85F	03/04/85	05/01/85F	06/03/85	06/26/85F	-	-
			12/03/84	02/20/85F	-	-	-	-	-	
			10/08/84	06/26/84A	04/08/85	03/06/85F	10/07/85	04/15/85F	-	
WILSH /CRINSHAW A240 STAGE I A242 STAGE II	01/27/84	01/26/85	07/26/84	09/13/84A	11/01/84	03/14/85F	01/15/85	04/15/85F	-	-
			07/26/84	09/13/85A	-	-	-	-	-	
WILSH /LA BREA A245 STAGE I A247 STAGE II	10/10/83	10/15/84	04/16/84	05/07/84A	07/07/84	02/22/85F	10/16/84	03/30/85F	-	-
			04/16/84	05/07/84A	-	-	-	-	-	
WILSH /FAIRFAX & LINE A250 STAGE I A267 STAGE II	03/02/84	06/17/85	11/12/84	11/15/84A	03/04/85	03/04/85F	05/06/85	05/06/85F	-	-
			11/12/84	11/15/84A	-	-	-	-	-	

*DESIGN CONTRACTS BEYOND MOB-1 WILL TERMINATE AT THE 85% DESIGN LEVEL.

**AMENDMENT #5 (INCREMENT 1) TO BE EXPEDITED; WILL INCREASE CONTRACT TIME OF PERFORMANCE

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DESIGN CONTRACTS & CONSTRUCTION PACKAGES	NOTICE TO PROCEED	CONTRACT TIME OF PERFORM	IN PROGRESS SCHEDULE	SUBMITTAL F'CAST(F) ACTUAL(A)	PRE-FINAL SCHEDULE	SUBMITTAL F'CAST(F) ACTUAL(A)	FINAL SUBMITTAL(85%)* SCHEDULE	F'CAST(F) ACTUAL(A)	BID DOCUMENTS	
									SLIPPAGE (C D)	DELAY (WEEKS)
FAIRFAX/BEVERLY A275 STAGE I A277 STAGE II	12/30/83	12/27/84	06/28/84	06/28/84A	09/27/84	01/16/85P	12/27/84	03/01/85P	-	9
			06/28/84	06/28/84A	-	-	-	-	-	-
FAIRFAX/SANTA MONICA & TUNNEL A320 STAGE I A327 STAGE II	12/05/83	12/05/85	11/10/84	11/02/84A	05/29/85	05/29/85P	06/31/85	06/31/85P	-	-
			11/10/84	11/12/84A	-	-	-	-	-	-
LA BREA/SUNSET A330 STAGE I A347 STAGE II			02/06/85	02/06/85P	05/29/85	05/29/85P	06/31/85	06/31/85P	-	-
			-	-	-	-	-	-	-	-
HOLLYWOOD/CAHUENGA A350 STAGE I A352 STAGE II	12/29/83	05/02/85	08/27/84	09/10/84A	12/20/84	03/04/85P	05/02/85	04/15/85P	-	-
			08/27/84	09/10/84A	-	-	-	-	-	-
LINE BETWEEN HOLLYWOOD/CAHUENGA AND UNIVERSAL CITY A410	12/29/83	12/29/84	06/28/84	07/31/84A	09/28/84	11/26/84A	12/28/84	01/18/85P	-	3
HOLLYWOOD BOWL A415	02/13/84	02/11/85	08/13/84	11/16/84A	DESIGN TERMINATED AT 50% DESIGN LEVEL			-	-	
UNIVERSAL CITY A425 STAGE I A427 STAGE II	02/13/84	02/11/85	08/15/84A	11/19/84	02/04/85P	02/11/85	03/18/85P	-	5	
		08/13/84	08/15/84A	-	-	-	-	-	-	

*DESIGN CONTRACTS BEYOND MOG-1 WILL TERMINATE AT THE 85% DESIGN LEVEL.

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DESIGN CONTRACTS & CONSTRUCTION PACKAGES	NOTICE TO PROCEED	CONTRACT TIME OF PERFORM	IN PROGRESS SCHEDULE	SUBMITTAL P'CAST(F) ACTUAL(A)	PRE-FINAL SCHEDULE	SUBMITTAL P'CAST(F) ACTUAL(A)	FINAL SUBMITTAL(85%)* SCHEDULE	P'CAST(F) ACTUAL(A)	CURR MONTH SLIPPAGE (C D)	TOTAL DELAY (WEEKS)
LINE BETWEEN UNIVERSAL CITY & NO HOLLYWOOD A430	12/29/83	03/20/85	07/06/84	08/06/84A	02/06/85	02/06/85F	03/20/85	03/20/85F	-	-
NORTH HOLLYWOOD A445 STAGE I	12/29/83	05/03/85	09/20/84	10/01/84A	01/31/85	03/01/85F	05/27/85	05/03/85F	-	-
A447 STAGE II			09/20/84	10/01/84A	-	-	-	-	-	-

* DESIGN CONTRACTS BEYOND MOS-1 WILL TERMINATE AT THE 85% DESIGN LEVEL.

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DESIGN CONTRACTS & CONSTRUCTION PACKAGES	NOTICE TO PROCEED	CONTRACT TIME OF PERFORM	IN PROGRESS SCHEDULE	SUBMITTAL		PRE FINAL SUBMITTAL		FINAL SUBMITTAL		BID DOCUMENTS		CURR MONTH SLIPPAGE (C D)	TOTAL DELAY (WEEKS)
				F'CAST(F) ACTUAL(A)	F'CAST(F) ACTUAL(A)	SCHEDULE	F'CAST(F) ACTUAL(A)	SCHEDULE	F'CAST(F) ACTUAL(A)	SCHEDULE	F'CAST(F) ACTUAL(A)		
SYSTEMWIDE A610 MOS-1 TRACKWORK	03/01/84	-	01/15/85	01/15/85P	03/15/85	03/15/85P	05/15/85	05/15/85P	07/15/85	07/15/85P	-	-	
A620 AIC	05/02/83	-	09/28/84	02/14/85P	12/09/84	07/09/85P	04/19/85	09/26/85P	-	-	-	23	
A630 TRACTION POWER EQUIP	02/01/84	-	04/30/84	05/29/84A	11/30/84	01/10/85P	02/25/85	04/30/85P	-	-	-	9	
A631 TRACTION POWER INSTAL	02/01/84	-	07/01/85	07/01/85P	01/31/86	01/31/86P	04/30/86	04/30/86P	-	-	-	-	
A640 COMM	05/02/83	-	03/30/85	02/15/85P	05/30/85	08/19/85P	07/30/85	12/02/85P	-	-	-	-	
A650 PASS VEHICLES	05/02/83	-	07/23/84	07/23/84A	11/01/84	03/01/85P	02/15/85	07/01/85P	-	-	-	19 5	
A660 FARE COLLECTION	05/02/83	-	11/01/84	03/29/85P	06/01/85	07/31/85P	01/02/86	02/01/86P	-	-	-	-	
A671 AIX VEHIC LOCOMOTIVE	05/02/83	-	05/01/84	05/11/84A	10/01/84	11/07/84A	02/15/85	02/15/85P	-	-	-	-	
A710 ESCALATORS	05/02/83	-	01/30/84	02/08/84A	05/02/84	06/21/84A	07/02/84	01/04/85P	-	02/17/85P	-	-	
A720 ELEVATORS	05/02/83	-	05/01/84	07/02/84A	N/A	N/A	08/01/84	01/04/85P	-	02/17/85P	-	-	
A740 FANS	01/15/84	-	04/02/84	04/16/84A	N/A	N/A	09/01/84	01/15/85P	05/13/85	03/12/85P	-	-	
A745 TPSS AIR HANDLING EQUIP	05/15/84	-	11/15/84	03/01/85P	N/A	N/A	03/15/85	04/30/85P	04/15/85	06/30/85P	11	6	
A750 TUNNEL	10/01/83	-	05/16/84	05/16/84A	08/15/84	08/23/84A	11/16/84	03/01/85P	N/A	N/A	-	15	
A760 SIGNING	02/22/84	-	08/27/84	02/15/85P	10/22/84	03/22/85P	12/17/84	04/19/85P	-	06/19/85	-	-	

N/A = Not Applicable