REPORT OF AN ACTUARIAL STUDY OF THE TWIN CITY LINES RETIREMENT PLAN

Prepared and Submitted
by
MARSH & McLENNAN, INC.
Minneapolis, Minnesota

April 28, 1970

FILE COPY

MARSH & McLENNAN
INCORPORATED
1515 NORTHWESTERN BANK BUILDING
MINNEAPOLIS, MINNESOTA 55402
AREA CODE 612 336-5371

PENSION DEPARTMENT
CONSULTING ACTUARIES

April 28, 1970

Metropolitan Transit Commission
550 Cedar
St. Paul, Minnesota

Gentlemen:

The attached report summarizes the results of actuarial calculations and analyses made at your request in respect to the January 1, 1970 status of the Retirement Plan covering employees of the Twin City Rapid Transit Company.

Very briefly, our study indicates the following two things: (1) the plan has a $7,426,100 unfunded liability for accrued benefits and (2) the present level of annual deposits to the fund of 14.7% of payroll is adequate and reasonable if the size of the group remains relatively stable.

The undersigned hereby certify that the calculations summarized herein have been performed on the basis of the methods and assumptions as set forth and that, to the best of their knowledge, they are true and correct.

Respectfully submitted,

MARSH & McLENNAN, INCORPORATED

Boyd S. Mast
Vice President & Consulting Actuary
Fellow, Society of Actuaries
Member, American Academy of Actuaries

Duane Hanf
Actuarial Assistant

BSM/DH:sm

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REPORT OF AN ACTUARIAL STUDY OF THE TWIN CITY LINES RETIREMENT PLAN

Objective of Study:

The study was conducted to determine the following items of information:

1. The amount of the plan's unfunded past service liability.
2. The adequacy of the present level of deposits into the fund and
3. The portion of the present deposits attributable to the funding of benefits already accrued under the plan.

Background:

Present Plan - The provisions of the Retirement Plan are set forth in an agreement between the Company and the Union. It is a program which provides pensions whose amounts are based on the person's earnings and his period of service with the Company. (See Exhibit IV) The benefits are provided through the medium of a trust fund into which deposits are made in an amount sufficient to cover the sum of the estimated cost of benefits currently accruing and an amount to reduce the unfunded liability for benefits which have accrued in the past. Deposits of 14.7% of total payroll are currently being made into the fund annually; two-thirds

(9.8%) is paid by the Company and one-third (4.9%) by the employee. Although by legal structure, the agreement between the Union and the Company might be identified as a commitment to a specified deposit level, as a practical matter, there is a commitment to make deposits which are sufficient to fund the benefits as specified in the plan.

Nature of Company's Retirement Plan Obligations - Neither the fund assets (approximately $5,700,000) nor the plan's unfunded past service liability (approximately $7,500,000) are assets or liabilities of the Company in the normal accounting sense. The assets of the fund can only be used to provide benefits as provided for under the terms of the plan instrument and, if the plan were terminated, the liabilities of the plan would be limited to the assets of the fund. The unfunded past service liability of the plan has a bearing on the price paid for TCRT because it effects the future level of company deposits required to support the plan. If there were no unfunded past service liability the total deposits required to adequately support the plan would be smaller by about $550,000.

The deposit level has been determined by application of assumptions and methods which reflect estimates

by the actuary of future experience under the Plan. In essence the Company's obligation in respect to the Retirement Plan is one of making annual deposits amounting to two-thirds of the total amount which is determined to be necessary to adequately support the plan; the factor of two-thirds was established in an agreement with the Union and has persisted for over 15 years.

Approach Of The Study:

The basic objective of our calculation has been to make an independent determination of the amount and composition of the annual funding requirements based on the best possible estimate of what actual future experience under the plan will be. (Normal determinations of funding requirements typically intend to have some margin of conservatism built into them and their composition between past and current service is not of any particular importance.

Results of Study:

Based on the "best estimate" assumptions as described in the preceding paragraph and as set forth in Exhibit II, the results of our study are summarized as follows:

1. The plan's unfunded past service liability as of January 1, 1970 was $7,426,100.

2. The present annual support of the plan of 14.7% of the covered payroll of the employee participants is adequate and reasonable.

3. Of the estimated total annual deposit for 1970 of $1,389,100, it is estimated that $550,500 will be allocable to funding the past service obligation of $7,426,100. (Funding at this level would amortize the past service liability over a period of 23 years.)

The composition of the above funding requirements pertaining to 1970 is as follows:

Element	Total (Company and Employee) Deposit Requirement Amount	% of Payroll
1. Current service (normal) Cost	$ 838,600	8.9%
2. Deposit applied to unfunded past service liability of $7,426,100	550,500	5.8%
3. Total (14.7% of 1970 payroll of $9,449,700)	$1,389,100	14.7%

The current service cost has been determined in a manner such that it will be a constant percent of payroll (if the actual experience corresponds with the assumptions). In contrast, the past service costs pertaining to a given funding period will remain constant in dollar amount, not constant as a percent of payroll.

Cost Implications of Changes in Number of Employees:

Because the past service funding requirements associated with a given period of funding will be essentially

independent of future changes in the total payroll of employees covered under the plan, the total funding requirements as a percent of payroll will change with changes in that payroll amount.

For example, if the payroll were suddenly cut by 25%, the total funding requirements related to 23 year past service funding might increase from 14.7% to 16.5%. If the payroll were suddenly increased by 25% (over the payroll assumed for 1970) the total funding costs based on 23 year past service funding would decrease to approximately 13.7% from the corresponding 14.7% level.

If the present number of persons employed remains constant and there is a normal increase in pay levels, the effect will be a very gradual decrease in the deposit requirements as a percent of payroll.

Credit:

This office wishes to acknowledge the fine cooperation it received from the Geo. V. Stennes and Associates firm in providing data and other information pertinent to our study.

EXHIBIT I

Determination of Funding Requirements

A. Determination of Normal Cost

1.	Present value of benefits to accrue in future for Hourly Participants		
	a. Retirement	$5,346,800	
	b. Death	494,700	
	c. Withdrawal	346,100	
	d. Disablement	868,800	
	e. Total		$ 7,056,400
2.	Present value of benefits to accrue in future for Salaried Participants		
	a. Retirement	$ 734,800	
	b. Death	60,400	
	c. Withdrawal	30,100	
	d. Disablement	120,300	
	e. Total		945,600
3.	Total value of benefits to accrue in future		8,002,000
4.	Present value of future payroll		90,140,800
5.	Current Annual earnings		9,449,800
6.	Level funding factor: (5) ÷ (4)		.1048
7.	Normal Cost: (3) x (6)		838,600
8.	Normal Cost as % of payroll: (7) ÷ (5)		8.9%

EXHIBIT I, Continued

B. Determination of Past Service Funding Costs

1.	Present value of benefits to present pensioners		
	a. Service	$6,364,700	
	b. Disability	999,000	
	c. Total		$ 7,363,700
2.	Accrued Benefits (Hourly)		
	a. Retirement	$4,049,600	
	b. Death	323,600	
	c. Withdrawal	270,200	
	d. Disablement	615,300	
	e. Total		5,258,700
3.	Accrued Benefits (Salaried)		
	a. Retirement	$ 648,100	
	b. Death	46,700	
	c. Withdrawal	41,000	
	d. Disablement	91,900	
	e. Total		827,700
4.	Vested Termination		65,000
5.	Total Past Service Liability		13,515,100
6.	Assets*		6,089,000
7.	Unfunded Past Service Liability as of 12/31/69		7,426,100
8.	Amounts to excess of total deposit requirement of 14.7% over the normal cost of 8.9% of payroll. This amount will fund the past service liability over 23 years.		550,500 (5.8% of payroll)

EXHIBIT I, Continued

*Development of12/31/69 asset value (rounded to nearest $100)

1.	Cost value of assets 12/31/69		$ 5,725,700
2.	Three year average margin of market value over cost value of common stocks		
	a. 12/31/67 margin	$ 395,200	
	b. 12/31/68 margin	515,500	
	c. 12/31/69 margin	179,200	
	d. Three year total	$1,089,900	
	e. Average: (d) ÷ (3)		363,300
3.	Actuary's Asset value as of 12/31/69: (1) + (2e)		6,089,000

C. Total Annual Funding - A(7) + B(8)

Funding at rate under current agreement: (This is sufficient to become fully funded as to accrued benefits in 23 years)	1,389,100 (14.7% of payroll)

EXHIBIT II

Actuarial Assumptions and Methods

Rate of Interest and Common Stock Appreciation:	5% per annum, net of trustee expenses
Mortality:	
a) In service and after age retirement	According to the 1951 Group Annuity Table projected to 1960 by Scale C.
b) After disability retirement	According to the Ultimate 1965 Railroad Retirement Board Totally Disabled Annuitants Mortality Table.
Increases in Earnings:	Earnings are assumed to increase at a rate of 5% per annum.
Current earnings for Projection Purposes:	1969 earnings were used, except that for hourly employees they were increased by 19% to adjust to the earnings lost from strike and to reflect the 40¢ increase which was negotiated.
Asset Valuation:	Cost value plus 100% of the average margin of market value over cost value of common stocks as of December 31 in last three years.
Retirement Age:	Retirements for age have been assumed to occur at age 65.

Election Upon Vested Termination:	It has been assumed that all persons who leave before completing 20 years will elect to receive the return of their contributions in lieu of their accrued deferred pension.
Cost Method:	Attained age level cost method.

TWIN CITIES LINES

Withdrawal Rates Per 1000

Age	Male	Female
25	432	432
30	343	343
35	192	192
40	101	101
45	14	14
50	0	0
55	0	0
60	0	0
65	0	0

Disablement Rates Per 1000

Age	Male	Female
25	1	0
30	1	1
35	2	1
40	2	1
45	2	1
50	3	2
55	6	5
60	16	12
65	40	29

EXHIBIT III

12-31-69 Census Summary

Hourly - Actives

a)	Number of people	914
b)	Average Salary*	$9,196
c)	Average Age at hire	29.8
d)	Average attained age	44.9
e)	Average completed years of service	15.1
f)	Average number of years to retirement	20.1
g)	Average projected retirement benefit (no salary scale)	$3,820
h)	Average projected retirement benefit (using 5% salary scale)	$5,240

914
124
1038

Salaried - Actives

a)	Number of people	124
b)	Average Salary	$8,423
c)	Average Age at hire	28.4
d)	Average attained age	46.9
e)	Average completed years of service	18.3
f)	Average number of years to retirement	18.1
g)	Average projected retirement benefit (no salary scale)	$3,451
h)	Average projected retirement benefit (using 5% salary scale)	$4,923

*Because of the pay lost due to the bus strike and the resulting higher pay rate, this figure is 19% higher than the actual 1969 average.

EXHIBIT III, (Continued)

Service Retirements - (Pensioners)

a)	Number of people	654
b)	Average annual pension	$1,386
c)	Average attained age	74.6

Disability Retirements

a)	Number of people	142
b)	Average annual pension	$1,217
c)	Average age at disablement	57.6
d)	Average attained age	68.5

TWIN CITIES LINES - HOURLY VALN DATE 12/31/69

TABLE A, ANNUAL EARNINGS BY AGE GROUPS

AGE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0-19	3	15445	5148	0	0	0	3	15445	5148
20-24	55	412531	7501	0	0	0	55	412531	7501
25-29	100	853038	8530	0	0	0	100	853038	8530
30-34	98	943162	9624	0	0	0	98	943162	9624
35-39	63	599468	9515	0	0	0	63	599468	9515
40-44	77	748513	9721	0	0	0	77	748513	9721
45-49	124	1220408	9842	0	0	0	124	1220408	9842
50-54	155	1460956	9426	0	0	0	155	1460956	9426
55-59	140	1277084	9122	1	8314	8314	141	1285398	9116
60-64	86	763764	8881	5	38882	7776	91	802646	8820
65-69	7	63727	9104	0	0	0	7	63727	9104
70-74	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0	0
TOTAL	908	8358098	9205	6	47196	7866	914	8405294	9196

TABLE B, ANNUAL EARNINGS BY SERVICE GROUPS

SERVICE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0	70	431254	6161	0	0	0	70	431254	6161
1	91	798462	8774	0	0	0	91	798462	8774
2	75	718658	9582	0	0	0	75	718658	9582
3	47	469975	9999	0	0	0	47	469975	9999
4	41	423524	10330	0	0	0	41	423524	10330
0-4	324	2841872	8771	0	0	0	324	2841872	8771
5-9	95	942560	9922	0	0	0	95	942560	9922
10-14	29	293970	10137	0	0	0	29	293970	10137
15-19	35	344402	9840	0	0	0	35	344402	9840
20-24	204	1932834	9475	0	0	0	204	1932834	9475
25-29	124	1143768	9224	6	47196	7866	130	1190965	9161
30-34	68	603778	8879	0	0	0	68	603778	8879
35-39	16	141141	8821	0	0	0	16	141141	8821
40+	13	113772	8752	0	0	0	13	113772	8752
TOTAL	908	8358098	9205	6	47196	7866	914	8405294	9196

TWIN CITIES LINES - HOURLY VALN DATE 12/31/69

TABLE C, SERVICE GROUPS BY AGE GROUPS

AGE GROUP	SERVICE GROUP 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 +	TOTAL
				M A L E						
0-19	3									3
20-24	55									55
25-29	89	11								100
30-34	64	29	5							98
35-39	40	20	3							63
40-44	34	25	7	8	3					77
45-49	19	10	5	13	73	4				124
50-54	17		6	6	67	40	19			155
55-59	3		2	5	40	51	33	3	3	140
60-64			1	3	19	29	15	11	8	86
65-69					2		1	2	2	7
70-74										
75-79										
80-84										
85+										
TOTAL	324	95	29	35	204	124	68	16	13	908
				F E M A L E						
0-19										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59						1				1
60-64						5				5
65-69										
70-74										
75-79										
80-84										
85+										
TOTAL						6				6

TWIN CITIES LINES - SALARIED VALN DATE 12/31/69

TABLE A, ANNUAL EARNINGS BY AGE GROUPS

AGE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0-19	3	13749	4583	0	0	0	3	13749	4583
20-24	4	20603	5151	7	38152	5450	11	58755	5341
25-29	3	23128	7709	1	4515	4515	4	27642	6911
30-34	8	73245	9156	1	6628	6628	9	79873	8875
35-39	7	61992	8856	1	6162	6162	8	68154	8519
40-44	7	62990	8999	4	24840	6210	11	87830	7985
45-49	17	170872	10051	5	23566	4713	22	194439	8838
50-54	19	190902	10047	3	19829	6610	22	210731	9579
55-59	14	122550	8754	2	14683	7342	16	137234	8577
60-64	15	143174	9545	2	14420	7210	17	157594	9270
65-69	1	8438	8438	0	0	0	1	8438	8438
70-74	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0	0
TOTAL	98	891642	9098	26	152796	5877	124	1044438	8423

TABLE B, ANNUAL EARNINGS BY SERVICE GROUPS

SERVICE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0	7	34537	4934	4	14544	3636	11	49080	4462
1	2	10054	5027	2	10445	5222	4	20498	5125
2	5	44211	8842	3	16599	5533	8	60810	7601
3	4	29343	7336	3	15846	5282	7	45190	6456
4	0	0	0	2	12949	6475	2	12949	6475
0-4	18	118145	6564	14	70383	5027	32	188528	5891
5-9	16	172273	10767	3	17376	5792	19	189649	9982
10-14	4	42598	10649	1	6628	6628	5	49226	9845
15-19	5	41203	8241	3	22017	7339	8	63221	7903
20-24	21	200708	9558	3	20867	6956	24	221575	9232
25-29	15	149125	9942	1	7057	7057	16	156182	9761
30-34	10	88496	8850	0	0	0	10	88496	8850
35-39	3	25362	8454	1	8467	8467	4	33829	8457
40+	6	53733	8956	0	0	0	6	53733	8956
TOTAL	98	891642	9098	26	152796	5877	124	1044438	8423

TWIN CITIES LINES - SALARIED VALN DATE 12/31/69

TABLE C, SERVICE GROUPS BY AGE GROUPS

AGE GROUP	SERVICE GROUP 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 +	TOTAL
MALE										
0-19	3									3
20-24	4									4
25-29	2	1								3
30-34	4	4								8
35-39	1	4	1	1						7
40-44		2	1		4					7
45-49	2	1	2	2	7	3				17
50-54		2		2	6	6	3			19
55-59	1	1			2	4	5	1		14
60-64	1	1			2	2	2	2	5	15
65-69									1	1
70-74										
75-79										
80-84										
85+										
TOTAL	18	16	4	5	21	15	10	3	6	98
FEMALE										
0-19										
20-24	6	1								7
25-29	1									1
30-34			1							1
35-39		1								1
40-44	2			2						4
45-49	4	1								5
50-54	1			1	1					3
55-59					1			1		2
60-64					1	1				2
65-69										
70-74										
75-79										
80-84										
85+										
TOTAL	14	3	1	3	3	1		1		26

TABLE A, ANNUAL EARNINGS BY AGE GROUPS

AGE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0-19	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	1	1298	1298	0	0	0	1	1298	1298
55-59	3	1902	634	0	0	0	3	1902	634
60-64	22	29458	1339	0	0	0	22	29458	1339
65-69	112	174906	1562	8	9111	1139	120	184016	1533
70-74	164	238206	1452	16	15858	991	180	254063	1411
75-79	148	206734	1397	8	7769	971	156	214503	1375
80-84	112	155235	1386	4	3682	920	116	158917	1370
85+	56	62264	1112	0	0	0	56	62264	1112
TOTAL	618	870004	1408	36	36420	1012	654	906423	1386

TABLE B, ANNUAL EARNINGS BY SERVICE GROUPS

SERVICE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0	0	0	0	0	0	0	0	0	0
1	618	870004	1408	36	36420	1012	654	906423	1386
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
0-4	618	870004	1408	36	36420	1012	654	906423	1386
5-9	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40+	0	0	0	0	0	0	0	0	0
TOTAL	618	870004	1408	36	36420	1012	654	906423	1386

TWIN CITIES LINES - RETIRED LIVES VALN DATE 12/31/69

TABLE C, SERVICE GROUPS BY AGE GROUPS

AGE GROUP	SERVICE GROUP 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 +	TOTAL
MALE										
0-19										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54	1									1
55-59	3									3
60-64	22									22
65-69	112									112
70-74	164									164
75-79	148									148
80-84	112									112
85+	56									56
TOTAL	618									618
FEMALE										
0-19										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69	8									8
70-74	16									16
75-79	8									8
80-84	4									4
85+										
TOTAL	36									36

TWIN CITIES LINES - DISABLED LIVES VALN DATE 12/31/69

TABLE A, ANNUAL EARNINGS BY AGE GROUPS

AGE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0-19	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	4	5116	1279	0	0	0	4	5116	1279
50-54	7	8346	1192	0	0	0	7	8346	1192
55-59	17	21896	1288	0	0	0	17	21896	1288
60-64	18	23608	1312	0	0	0	18	23608	1312
65-69	20	23382	1169	0	0	0	20	23382	1169
70-74	26	31799	1223	0	0	0	26	31799	1223
75-79	30	35595	1186	0	0	0	30	35595	1186
80-84	19	21941	1155	0	0	0	19	21941	1155
85+	1	1181	1181	0	0	0	1	1181	1181
TOTAL	142	172865	1217	0	0	0	142	172865	1217

TABLE B, ANNUAL EARNINGS BY SERVICE GROUPS

SERVICE GROUP	MALE NUMBER OF PEOPLE	MALE TOTAL ANNUAL EARNINGS	MALE AVERAGE ANNUAL EARNINGS	FEMALE NUMBER OF PEOPLE	FEMALE TOTAL ANNUAL EARNINGS	FEMALE AVERAGE ANNUAL EARNINGS	ALL NUMBER OF PEOPLE	ALL TOTAL ANNUAL EARNINGS	ALL AVERAGE ANNUAL EARNINGS
0	0	0	0	0	0	0	0	0	0
1	8	13459	1682	0	0	0	8	13459	1682
2	6	8612	1435	0	0	0	6	8612	1435
3	6	7679	1280	0	0	0	6	7679	1280
4	8	11409	1426	0	0	0	8	11409	1426
0-4	28	41159	1470	0	0	0	28	41159	1470
5-9	28	33757	1206	0	0	0	28	33757	1206
10-14	23	25621	1114	0	0	0	23	25621	1114
15-19	56	65628	1172	0	0	0	56	65628	1172
20-24	7	6699	957	0	0	0	7	6699	957
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40+	0	0	0	0	0	0	0	0	0
TOTAL	142	172865	1217	0	0	0	142	172865	1217

TWIN CITIES LINES - DISABLED LIVES — VALN DATE 12/31/69

TABLE C, SERVICE GROUPS BY AGE GROUPS

AGE GROUP	SERVICE GROUP 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 +	TOTAL
MALE										
0-19										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49	3	1								4
50-54	3	3	1							7
55-59	8	6	2	1						17
60-64	9	5	3	1						18
65-69	5	7	2	6						20
70-74		6	7	13						26
75-79			8	21	1					30
80-84				14	5					19
85+					1					1
TOTAL	28	28	23	56	7					142
FEMALE										
0-19										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75-79										
80-84										
85+										
TOTAL										

EXHIBIT IV

Summary of Current Benefit Provisions

(Excerpt from June 13, 1969 Report of George V. Stennes & Associates)

1. Normal retirement allowance is a monthly pension payable for life commencing on the first day of the month following the employee's sixty-fifth birthday equal to 1% of past service compensation for each year, or fraction thereof in complete months, of continuous service prior to January 1, 1950 plus 1¼% of the employee's total creditable compensation between that date and December 31, 1964, plus 1½% of the employee's total creditable compensation after December 31, 1964 subject to minimum and maximum provisions. (Past Service compensation is defined at specified amounts of $3,120, $3,480 and the total earnings for the best of the five years preceding January 1, 1950, for various classes of employees.) The minimum allowance is $75 provided an employee has 20 years creditable service and has attained age 65 or more. The minimum is proportionately reduced for shorter periods of service. The maximum allowance is $7,500 per year.

2. Early retirement is permitted after attainment of age 55. The early retirement allowance is equal to a participant's earned allowance up to his actual retirement reduced by 5% for each year that his age is below 65 at retirement. No reduction is made if retirement occurs after age 60 if the employee has completed 35 years of service. The allowance paid upon late

EXHIBIT IV, (Continued)

retirement is the same as if the employee had retired on his normal retirement date.

3. Disability retirement allowance is permitted under certain circumstances after an employee has been employed continuously by the Company for 10 years. The disability retirement allowance is equal to his earned allowance up to the date of his disability, but not less than $85 monthly.

4. Return of employee contributions are made to an employee who resigns or is dismissed before retirement. The amount is equal to: (a) his contributions made after January 1, 1950 with interest at 2% plus (b) one-half of his contributions made prior to that date without interest.

5. In the event of the death of a participant before retirement, a death benefit will be paid which is equal to the withdrawal benefit described in item (4) above minus any benefits received from the Plan prior to his death. In the event a participant dies after retirement, the death benefit is the withdrawal benefit described in item (4)(a) above, minus any benefit received from the Plan.

6. The allowance accrued by a participant up to the time of his withdrawal is vested in him if he has completed 10 years of service at that time provided he does not withdraw his contributions. The benefit provided is a retirement allowance starting at age 65 equal to his accrued credits to the date of his termination.

EXHIBIT IV, (Continued)

7. The retirement allowance of all pensioners on the rolls as of December 31, 1964 was increased $5.00 per month, effective January 1, 1965.

Current (1969) Contribution Rate

Total contributions in support of the plan are currently made at the rate of 14.7% of payroll, with 9.8%, or two-thirds, paid by the Company and one-third by the employee.

EXHIBIT V

Determination on Basis* Pursuant To Specifications of the Minnesota State Legislative Retirement Study Commission

The following figures summarize the results of calculations based on a 3½% interest assumption and the Entry Age Normal Cost Method as specified by the Commission. Other assumptions are as set forth in Exhibit II except that no future salary improvements have been assumed and the cost value of assets has been used. It is to be noted that we do not consider the results to give an adequate funding requirement.

I.	Normal (Future Service) Cost			
	a. For service retirements		$180,500	
	b. For death, quit, and disability benefits		45,300	
	c. Total Annual Cost			$225,800 (See Note Below)
II.	Past Service Liability			
	a. For pensioners		$8,014,600	
	b. For vested terminations		80,000	
	c. For active lives			
	(1) For service retirements	$10,310,100		
	(2) For other benefits	2,583,900		
	(3) Total		12,894,000	
	d. Total Past Service Liability			$20,988,600
III.	Assets (At Cost)			5,726,000
IV.	Unfunded past service liability			$15,262,600 (See Note Below)

9,449,700

EXHIBIT V, (Continued)

V.	Annual past service funding (based on 30 year amortization)	$ 830,300
VI.	Total Annual Funding: Ic + V	$1,056,100 (See Note Below)

NOTE: Under no circumstances should the results shown in this determination be construed to represent either an appropriate funding level or a realistic separation between past service and future service. Due to the combination of the high withdrawal rates assumed, the earnings related benefit, and the nature of the cost method employed, there is an unrealistically large part of total liabilities which is identified within the past service liability. As a result, if the indicated unfunded past service liability were funded over a 30 year period the deposits would be so small that the true unfunded liability would increase each year.