sunset
coast
line

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BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
869 HALL OF ADMINISTRATION / LOS ANGELES, CALIFORNIA 90012

BAXTER WARD
SUPERVISOR, FIFTH DISTRICT
974-5555

March 16, 1976

To the Rapid Transit District Board of Directors:

This past Friday, the consultants commissioned by your Board returned completed reports of their first-round analysis of the Sunset Coast Line proposal.

Even though I take serious exception to many of their cost conclusions, I believe it is important we accept their financial calculations as the framework within which we should proceed.

Consequently, we have utilized the financial data provided by the consultants, with its specific combination of restrictions and opportunities, to reorganize the project on a scale that will permit completion of a somewhat smaller system within an expanded period of years.

There can be several approaches -- full bonding for 24 years; a combination of modest bonding with pay-as-you-go; and full pay-as-you-go.

We have prepared a series of tables that demonstrate some of these opportunities. In each, there are certain basic considerations:

-- In 1976 dollars, the 244 mile system would cost $5.7 billion.

-- This averages to $23.4 million per project mile, and that figure increases 8.5% every successive year.

-- Operations would begin on a 22 mile system (as in the Stanford Research report) in 1984, but, unlike Stanford, the introductory fare would be 75¢, with Airporter fares proportionately higher.

-- Spending in the first years would be somewhat higher than proposed by the consultants in order to purchase and develop Union Station, yards and shops, rights of way, and at least 250 vehicles for the anticipated 1984 startup date.

-- During the first seven years of construction, the system develops at exactly the same rate (miles, structures, and dollars spent) under either full bonding or full pay-as-you-go.

That last point is extremely important -- it could permit the RTD Directors to allow the public to decide not only on transit, but on whether bonds should be used (with a Year 2000 balance owing of $6,714,000,000) or whether construction should be totally pay-as-you-go, with no balance owing at the end of construction.

In fact, with no balance due, construction could continue on in a truly open-ended transit program. Or, the construction could be stopped at any time on the will of the voters, with no money owed.

By the Year 2000, the fully-bonded system would have built 257 miles, while pay-as-you-go could build only 220 miles.

Still continuing to use the consultants' framework, it would be possible for the RTD Board, and the public, to give a second consideration to a subway under Wilshire.

While I was totally opposed to including the high cost of a
Wilshire subway within the originally proposed 15 year County-wide
development program, I did feel the subway might be built in
some later round of financing. Now that the entire project is
proposed to be extended to a 24 year construction period, the
Wilshire subway costs can be re-analyzed in terms of the longer
amortization.

Members of the City of Los Angeles Technical Committee
have criticized the Main Line elevated trackage on the Santa Monica
Freeway between the San Diego Freeway and the River Bypass Lines
as being unnecessarily competitive to the nearby Wilshire Line (whatever
the Wilshire configuration). That 12 mile freeway stretch is totally
within the City of Los Angeles, and could be deferred until some later
construction phase.

Funds thus saved from that deferral can be worked into the
following arrangement:

-- Present allocations for Wilshire and La Brea
connector (elevated configuration) are $148. 6 million
and $54. 49 million, respectively. Escalated for
engineering, management, and contingency, they
total $290 million.

-- The 12 mile Santa Monica Freeway segment is priced
at $257 million, similarly escalated.

-- The total of these allocations, in 1976 dollars, is
$547 million.

-- RTD consultant De Leuw, Cather, is estimating subway
costs at $50 million per mile (including stations). The
distance from 8th and Flower to Century City is 9. 4
miles. From Wilshire at La Brea to the Hollywood Bowl
is 3. 4 miles. The cost for that 12. 8 mile stretch, in
subway, would be $640 million, in 1976 dollars.

-- The money available ($547 million) is $97 million short of
constructing the subway. This means adding approximately
$100 million to the cost of the project.

-- Thus, with a Wilshire subway in this arrangement, the new total project cost will rise to $5.8 billion.

-- The new mileage figure will reduce to 232.

-- The new average construction cost per mile, in 1976 dollars, will rise to $25 million per mile.

The 232 mile system, including the Wilshire subway, could be built through utilizing full bond capacity, by 1997 -- project time: 20 years.

The 232 mile system, including the Wilshire subway, could be built fully pay-as-you-go, by the year 2005 -- project time: 28 years.

Both of these two methods yield the identical finished construction and mileage at the end of year 1982.

Despite my disagreement with some of their conclusions, I still am grateful to all of you for having provided the consultants who have organized this cost outline with which we can work.

Best wishes,

BAXTER WARD

BW:eva

Enclosure

FULL BOND USAGE ··· ROUTE INCLUDES WILSHIRE SUBWAY

This alternative uses a combination of bond revenue and sales tax income. In this approach, the bond funds available are used to the ultimate limits prescribed in the recent consultant report from Stanford Research. Bonding begins in 1977 and continues in varying rates until the completion of the project in 1998.

The sales tax revenue, which is also utilized for construction and operation, is a constantly escalating source of funds.

In this alternative, Wilshire Boulevard is built as a subway, paid for by the combination funding sources.

Due to the inclusion of Wilshire Boulevard as a subway, the Cross-County line along the Santa Monica Freeway between the San Diego Freeway and the Los Angeles River has been deferred in favor of the Wilshire Line.

The system is 232 miles in length and requires 22 years to complete.

A YEAR	1 Cumulative Mileage Equivalent	2 Cumulative Operational System Miles	3 Yearly Cost Per Mile (Increases 8.5% Annually)	4 Operating Costs	5 Fare Income	6 Operating Differential (+ or -)	7 1% Tax Income	8 Operations Service	9 Available Tax Income
1977	3.1		27.1	0	0	0	284	0	284
1978	6.2		29.4	0	0	0	302	0	302
1979	10.9		31.9	0	0	0	321	0	321
1980	18.1		34.6	0	0	0	342	0	342
1981	32.8		37.5	0	0	0	364	0	364
1982	54.9		40.7	0	0	0	387	0	387
1983	82.0		44.2	0	0	0	412	0	412
1984	107.0	22.0	48.0	18	28.5	10.5	438	0	438
1985	129.9	55.0	52.1	49	73.5	24.5	466	0	466
1986	139.4	88.0	56.5	83	120.0	37.0	496	0	496
1987	148.9	116.9	61.3	118	165.0	47.0	527	0	527
1988	158.2	128.0	66.5	138	186.0	48.0	561	0	561
1989	167.2	139.0	72.2	161	210.0	49.0	597	0	597
1990	176.0	149.9	78.3	185	233.0	48.0	635	0	635
1991	184.7	160.7	85.0	213	258.0	45.0	676	0	676
1992	193.1	171.4	92.2	243	284.0	41.0	719	0	719
1993	201.3	181.9	100.0	276	311.0	35.0	765	0	765
1994	209.2	192.1	108.5	312	339.0	27.0	814	0	814
1995	216.9	201.9	117.7	351	368.0	17.0	866	0	866
1996	224.3	211.3	127.7	393	398.0	5.0	922	0	922
1997	231.4	220.4	138.6	438	426.0	(12)	981	(12)	969
1998	234.0	234.0	150.4	488	459.0	(29)	1044	(29)	1015

10	11	12	13	14	15	16	17	18
Interest	New Bond Income	Bond Debt Service	Bond Net	Available cash (total of cols. 6, 9, 10, 13, and previous 16)	Construction Costs	Balance for Deposit	Bonds Issued	Accumulated Bonds
--	320	--	320	604	85	519	320	320
38.9	350	(27.0)	323	1183	90	1093	670	667
82.0	384	(57.0)	327	1823	150	1673	1054	1044
125.5	420	(89.0)	331	2472	250	2222	1474	1453
166.7	182	(125.0)	57	2810	550	2260	1656	1619
169.5	148	(140.0)	8	2825	900	1925	1804	1748
144.4	162	(153.0)	9	2490	1200	1290	1966	1888
96.8	175	(166.0)	9	1844	1200	644	2141	2038
48.3	190	(181.0)	9	1192	1192	0	2331	2200
0	203	(197.0)	6	539	539	0	2534	2371
0	222	(214.0)	8	582	582	0	2756	2556
0	240	(233.0)	7	616	616	0	2996	2755
0	261	(254.0)	7	653	653	0	3257	2969
0	284	(276.0)	8	691	691	0	3541	3200
0	316	(300.0)	16	737	737	0	3857	3456
0	343	(327.0)	16	776	776	0	4200	3732
0	374	(356.0)	18	818	818	0	4574	4030
0	407	(387.0)	20	861	861	0	4981	4352
0	443	(422.0)	21	904	904	0	5424	4700
0	482	(459.0)	23	950	950	0	5906	5075
0	524	(500.0)	24	981	981	0	6430	5480
0	571	(544.0)	27	1013	1013	0	7001	5918

Table B

PAY·AS·YOU·GO ··· ROUTE INCLUDES WILSHIRE SUBWAY

This alternative requires no bonds for the construction of the system.

By stretching the duration of construction to 30 years, it is possible to completely pay for the revised system to include Wilshire Boulevard as a subway, and the balance of the 232 mile system on a pay-as-you-go basis, strictly from sales tax income.

Table B: Pay-As-You-Go
(Including Wilshire Subway)

B.	YEAR	1 Cumulative Mileage Equivalent	2 Cumulative Operational System Miles	3 Yearly Cost Per Mile (Increases 8.5% Annually)	4 Operating Costs	5 Fare Income	6 Operating Differential (+ or -)	7 1% Tax Income	8 Operations Service	9 Available Tax Income
	1977	3.1		27.1	0	0	0	284	0	284
	1978	6.2		29.4	0	0	0	302	0	302
	1979	10.9		31.9	0	0	0	321	0	321
	1980	18.1		34.6	0	0	0	342	0	342
	1981	32.8		37.5	0	0	0	364		364
	1982	54.9		40.7	0	0	0	387	0	387
	1983	68.5		44.2	0	0	0	412	0	412
	1984	77.8	22.0	48.0	18	28.5	10.5	438	0	438
	1985	87.2	55.0	52.1	49	73.5	24.5	466	0	466
	1986	96.6	88.0	56.5	83	120	37	496	0	496
	1987	106.0	106.0	61.3	118	165	47	527	0	527
	1988	115.2	115.2	66.5	138	186	48	561	0	561
	1989	124.1	124.1	72.2	161	210	49	597	0	597
	1990	132.8	132.8	78.3	185	233	48	635	0	635
	1991	141.3	141.3	85.0	213	258	45	676	0	676
	1992	149.5	149.5	92.2	243	284	41	719	0	719
	1993	157.5	157.5	100.0	276	311	35	765	0	765
	1994	165.3	165.3	108.5	312	337	27	814	0	814
	1995	172.8	172.8	117.7	351	368	17	866	0	866
	1996	180.1	180.1	127.7	373	398	5	922	0	922
	1997	187.0	187.0	138.6	438	426	(12)	981	(12)	969
	1998	193.6	193.6	150.4	488	459	(29)	1044	(29)	1015
	1999	199.8	199.8	163.2	541	491	(50)	1110	(50)	1060
	2000	205.6	205.6	177.1	594	519	(75)	1182	(75)	1107
	2001	211.1	211.1	192.2	636	536	(100)	1257	(100)	1157
	2002	216.3	216.3	208.5	681	554	(127)	1338	(127)	1211
	2003	221.2	221.2	226.3	728	572	(156)	1423	(156)	1267
	2004	225.8	225.8	245.5	779	590	(189)	1514	(189)	1325
	2005	230.2	230.2	266.4	834	608	(226)	1611	(226)	1385
	2006	234.3	234.3	289.0	892	627	(265)	1714	(265)	1449

Cost le (In- s 8.5% ally)	4 Operating Costs	5 Fare Income	6 Operating Differential (+ or -)	7 1% Tax Income	8 Operations Service	9 Available Tax Income	10 Interest	11 Available Cash (total of Columns 6, 9, 10, prev. 16)	12 Construction Costs	13 Balance for Deposit
7.1	0	0	0	284	0	284	0	284	85	199
9.4	0	0	0	302	0	302	14.9	516	90	426
1.9	0	0	0	321	0	321	32.0	779	150	629
4.6	0	0	0	342	0	342	47.2	1018	250	768
7.5	0	0	0	364	0	364	57.6	1190	550	640
0.7	0	0	0	387	0	387	48.0	1075	900	175
4.2	0	0	0	412	0	412	13.1	600	600	0
8.0	18	28.5	10.5	438	0	438	0	448.5	448.5	0
2.1	49	73.5	24.5	466	0	466	0	490.5	490.5	0
6.5	83	120	37	496	0	496	0	533	533	0
1.3	118	165	47	527	0	527	0	574	574	0
5.5	138	186	48	561	0	561	0	609	609	0
2.2	161	210	49	597	0	597	0	646	646	0
3.3	185	233	48	635	0	635	0	683	683	0
5.0	213	258	45	676	0	676	0	721	721	0
.2	243	284	41	719	0	719	0	760	760	0
.0	276	311	35	765	0	765	0	800	800	0
.5	312	337	27	814	0	814	0	841	841	0
.7	351	368	17	866	0	866	0	883	883	0
.7	373	398	5	922	0	922	0	927	927	0
.6	438	426	(12)	981	(12)	969	0	957	957	0
.4	488	459	(29)	1044	(29)	1015	0	986	986	0
.2	541	491	(50)	1110	(50)	1060	0	1010	1010	0
.1	594	519	(75)	1182	(75)	1107	0	1032	1032	0
.2	636	536	(100)	1257	(100)	1157	0	1057	1057	0
.5	681	554	(127)	1338	(127)	1211	0	1084	1084	0
.3	728	572	(156)	1423	(156)	1267	0	1111	1111	0
.5	779	590	(189)	1514	(189)	1325	0	1136	1136	0
.4	834	608	(226)	1611	(226)	1385	0	1159	1159	0
0	892	627	(265)	1714	(265)	1449	0	1184	1184	0

Table C

PAY·AS·YOU·GO · · · WILSHIRE IS ELEVATED (NOT SUBWAY)

This alternative does not include Wilshire Boulevard in subway configuration. Provision is made for above-ground fixed rail transit along the Wilshire corridor by the allocation of $290 million for the Wilshire and La Brea segments.

In this alternative, the line along the Santa Monica Freeway is retained, leaving the system mileage at 244. No bonds are required for issuance in this approach -- but rather, a pay-as-you-go method would be employed, using only the income from the one cent sales tax increase.

This alternative would require 29 years to complete the 244 miles.

Table C: Pay-As-You-Go
(Wilshire is Elevated)

C	1	2	3	4	5	6	7	8	9
YEAR	Cumulative Mileage Equivalent	Cumulative Operational System Miles	Yearly Cost Per Mile (Increases 8.5% Annually)	Operating Costs	Fare Income	Operating Differential (+ or -)	1% Tax Income	Operations Service	Available Tax Income
1977	3.4		25.3	0	0	0	284	0	284
1978	6.7		27.5	0	0	0	302	0	302
1979	11.7		30.0	0	0	0	321	0	321
1980	19.4		32.3	0	0	0	342	0	342
1981	35.1		35.1	0	0	0	364	0	364
1982	58.8		38.0	0	0	0	387	0	387
1983	73.3		41.3	0	0	0	412	0	412
1984	83.3	22.0	44.8	18	28.5	10.5	438	0	438
1985	93.4	55.0	48.6	49	73.5	24.5	466	0	466
1986	103.5	88.0	52.7	83	120.0	37.0	496	0	496
1987	113.5	113.5	57.2	118	165	47.0	527	0	527
1988	123.3	123.3	62.1	138	186	48.0	561	0	561
1989	132.9	132.9	67.3	161	210	49.0	597	0	597
1990	142.2	142.2	73.1	185	233	48.0	635	0	635
1991	151.3	151.3	79.3	213	258	45.0	676	0	676
1992	160.1	160.1	86.0	243	284	41.0	719	0	719
1993	168.7	168.7	93.3	276	311	35.0	765	0	765
1994	177.0	177.0	101.2	312	337	27.0	814	0	814
1995	185.0	185.0	109.8	351	368	17.0	866	0	866
1996	192.8	192.8	119.2	393	398	5.0	922	0	922
1997	200.2	200.2	129.3	438	426	(12)	981	(12)	969
1998	207.2	207.2	140.3	488	459	(29)	1044	(29)	1015
1999	213.8	213.8	152.2	541	491	(50)	1110	(50)	1060
2000	220.1	220.1	165.1	594	519	(75)	1182	(75)	1107
2001	226.0	226.0	179.1	636	536	(100)	1257	(100)	1157
2002	231.6	231.6	194.4	681	554	(127)	1338	(127)	1211
2003	236.9	236.9	210.9	728	572	(156)	1423	(156)	1267
2004	241.9	241.9	228.8	779	590	(189)	1514	(189)	1325
2005	244.0	244.0	248.3	834	608	(226)	1611	(226)	1385

	4	5	6	7	8	9	10	11	12	13
Cost (In- 8.5% ly)	Operating Costs	Fare Income	Operating Differential (+ or -)	1% Tax Income	Operations Service	Available Tax Income	Interest	Available Cash (total of Columns 6 9, 10, prev. 16)	Construction Costs	Balance for Deposit
	0	0	0	284	0	284	0	284	85	199
	0	0	0	302	0	302	14.9	516	90	426
	0	0	0	321	0	321	32.0	779	150	629
	0	0	0	342	0	342	47.2	1018	250	768
	0	0	0	364	0	364	57.6	1190	550	640
	0	0	0	387	0	387	48.0	1075	900	175
	0	0	0	412	0	412	13.1	600	600	0
	18	28.5	10.5	438	0	438	0	449	449	0
	49	73.5	24.5	466	0	466	0	491	491	0
	83	120.0	37.0	496	0	496	0	533	533	0
	118	165	47.0	527	0	527	0	574	574	0
	138	186	48.0	561	0	561	0	607	607	0
	161	210	49.0	597	0	597	0	646	646	0
	185	233	48.0	635	0	635	0	683	683	0
	213	258	45.0	676	0	676	0	721	721	0
	243	284	41.0	719	0	719	0	760	760	0
	276	311	35.0	765	0	765	0	800	800	0
	312	337	27.0	814	0	814	0	841	841	0
	351	368	17.0	866	0	866	0	883	883	0
	393	398	5.0	922	0	922	0	927	927	0
	438	426	(12)	981	(12)	969	0	957	957	0
	488	459	(29)	1044	(29)	1015	0	986	986	0
	541	491	(50)	1110	(50)	1060	0	1010	1010	0
	594	519	(75)	1182	(75)	1107	0	1032	1032	0
	636	536	(100)	1257	(100)	1157	0	1057	1057	0
	681	554	(127)	1338	(127)	1211	0	1084	1084	0
	728	572	(156)	1423	(156)	1267	0	1111	1111	0
	779	590	(189)	1514	(189)	1325	0	1136	1136	0
	834	608	(226)	1611	(226)	1385	0	1159	1159	0

Table D

LIMITED BONDING ·· WILSHIRE IS ELEVATED (NOT SUBWAY)

This approach is a combination of pay-as-you-go with only limited bonding required.

Whereas Table A showed the utilization of all available bond income, this method in Table D examines one of a variety of limited uses of bond revenue. The purpose is to reduce dramatically the final indebtedness remaining to be paid off at the end of the transit line construction.

This alternative assumes that bonds would be issued beginning in 1983 (instead of the beginning of the program, 1977, as in Alternative A).

This alternative relies more heavily on a longer use of sales tax income.

The construction approach in Table D considers the Wilshire and La Brea lines in their original elevated concept, and (as with Alternative C) will maintain the elevated transit line along the Santa Monica Freeway.

This delayed bonding method would complete the 244 mile system in 23 years.

Table D: Limited Bonding

YEAR	1 Cumulative Mileage Equivalent	2 Cumulative Operational System Miles	3 Yearly Cost Per Mile (Increases 8.5% Annually)	4 Operating Costs	5 Fare Income	6 Operating Differential (+ or -)	7 1% Tax Income	8 Operations Service	9 Available Tax Income
1977	3.4		25.3	0	0	0	284	0	284
1978	6.7		27.5	0	0	0	302	0	302
1979	11.7		29.8	0	0	0	321	0	321
1980	19.4		32.4	0	0	0	342	0	342
1981	35.1		35.1	0	0	0	364	0	364
1982	58.7		38.1	0	0	0	387	0	387
1983	80.9		41.4	0	0	0	412	0	412
1984	98.1	22.0	44.9	18	28.5	10.5	438	0	438
1985	114.9	55.0	48.7	49	73.5	24.5	466	0	466
1986	131.3	88.0	52.8	83	120.0	37.0	496	0	496
1987	142.3	116.9	57.3	118	165.0	47.0	527	0	527
1988	152.2	128.0	62.2	138	186.0	48.0	561	0	561
1989	161.9	139.0	67.5	161	210.0	49.0	597	0	597
1990	171.4	149.9	73.2	185	233.0	48.0	635	0	635
1991	180.6	160.7	79.4	213	258.0	45.0	676	0	676
1992	189.5	171.4	86.2	243	284.0	41.0	719	0	719
1993	198.1	181.9	93.5	276	311.0	35.0	765	0	765
1994	206.5	192.1	101.4	312	339.0	27.0	814	0	814
1995	214.6	201.9	110.1	351	368.0	17.0	866	0	866
1996	222.4	211.3	119.4	393	398.0	5.0	922	0	922
1997	229.9	220.4	129.6	438	426.0	(12)	981	(12)	969
1998	237.0	234.0	140.6	438	459.0	(29)	1044	(29)	1015
1999	244.0	244.0	157.5	541	490.5	(50.5)	1110	(50)	1060

10 Interest	11 New Bond Income	12 Bond Debt Service	13 Bond Net	14 Available cash (total of cols. 6, 9, 10, 13, and previous 16)	15 Construction Costs	16 Balance for Deposit	17 Bonds Issued	18 Accumulated Bonds
0	0	0	0	284	85	199	0	0
14.9	0	0	0	516	90	426	0	0
32.0	0	0	0	779	150	629	0	0
47.2	0	0	0	1018	250	768	0	0
57.6	0	0	0	1190	550	640	0	0
48.0	0	0	0	1075	900	175	0	0
13.1	320	0	320	920	920	0	320	320
0	350	(27)	323	772	772	0	670	667
0	384	(57)	327	818	818	0	1054	1044
0	420	(89)	331	864	864	0	1474	1453
0	182	(125)	57	631	631	0	1656	1619
0	148	(140)	8	617	617	0	1804	1748
0	162	(153)	9	655	655	0	1966	1888
0	175	(166)	9	692	692	0	2141	2038
0	190	(181)	9	730	730	0	2331	2200
0	203	(197)	6	766	766	0	2534	2371
0	222	(214)	8	808	808	0	2756	2556
0	240	(233)	7	848	848	0	2996	2755
0	261	(254)	7	890	890	0	3257	2969
0	284	(276)	8	935	935	0	3541	3200
0	316	(300)	16	973	973	0	3857	3456
0	343	(329)	16	1002	1002	0	4200	3732
0	374	(356)	18	1028	1028	0	4574	4030