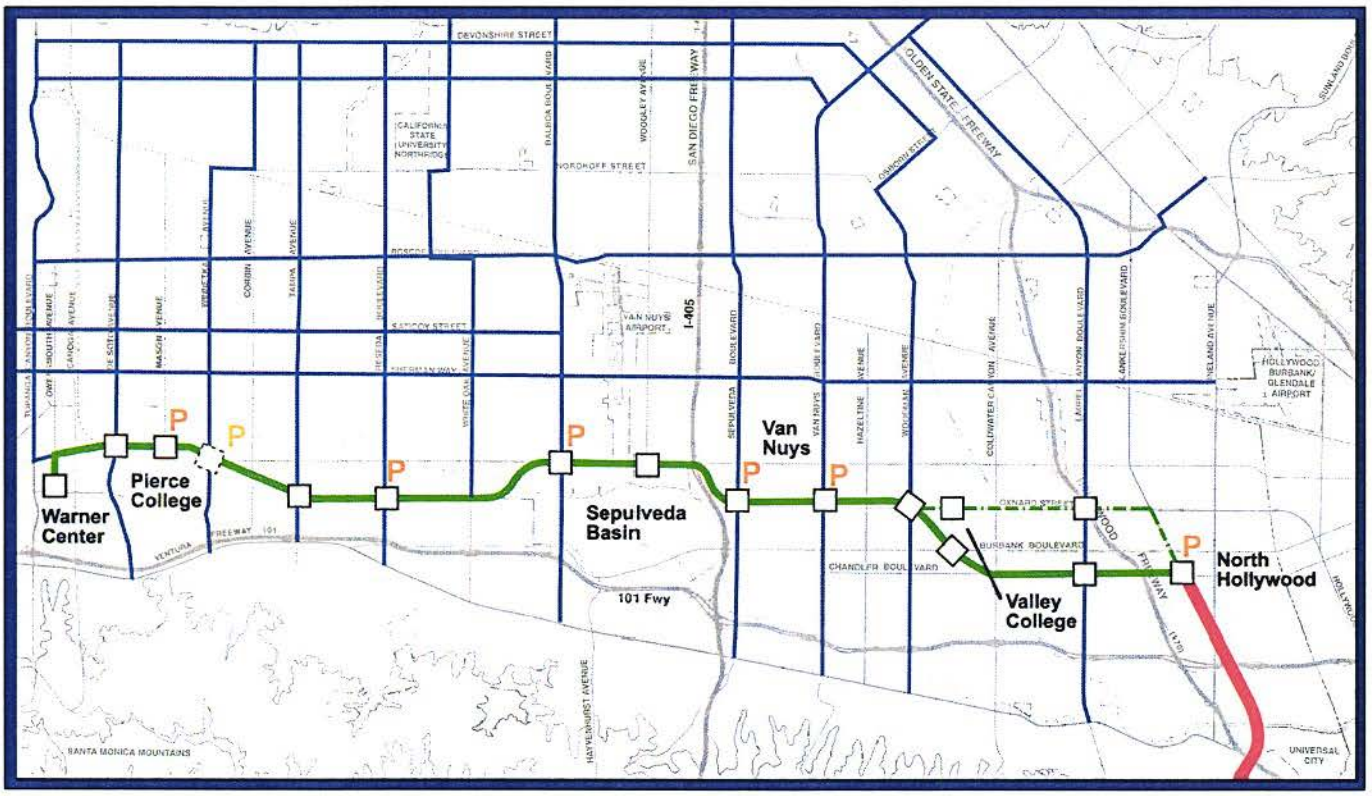
Revised Final Environmental Impact Report
Volume 5 – Chapter 9 (Book 3 of 6)



SAN FERNANDO VALLEY EAST-WEST TRANSIT CORRIDOR

Metro **Los Angeles County Metropolitan Transportation Authority (MTA)**

December 2004

EXHIBIT XI

MTA BOARD ACTIONS AND RELATED REPORTS

31

Metropolitan
Transportation
Authority

One Gateway Plaza
Los Angeles, CA
90012-2952

PLANNING AND PROGRAMMING COMMITTEE
February 21, 2002

SUBJECT: METRO RAPID EXPANSION PROGRAM

ACTION: APPROVE IMPLEMENTATION OF THE METRO RAPID EXPANSION PROGRAM

RECOMMENDATIONS

A. Adopt the Metro Rapid Expansion Program report findings and phased countywide implementation plan (Attachment A);

B. Authorize the Chief Executive Officer to implement the funded portion of Phase IIA of the Metro Rapid Expansion Program (Table A);

C. Direct staff to develop a five-year expansion plan for the Metro Rapid Program which identifies the operating and capital requirements necessary to complete Phase IIA and the remaining three expansion phases.

ISSUE

The Metro Rapid Demonstration Program has proven successful. Passenger travel times have been reduced by approximately 25%. Ridership has increased nearly 35%, with one-third of the increase new to public transit. Operating speeds, service quality, and customer response have all exceeded objectives, with very little or no negative impact on the rest of the system and other travel modes. Based on this success, staff has developed the Metro Rapid Expansion Program that, when complete, will offer a network of fast, reliable bus service throughout Los Angeles County. The expansion program includes corridors operated by both the MTA and Municipal Operators.

POLICY IMPLICATIONS

The purpose of the Metro Rapid Expansion Program is to introduce a new, high quality mode of transit that will offer faster travel choices for bus riders, especially the transit-dependent. The Metro Rapid Program is an integral part of the FY 2001 Long Range Transportation Plan.

OPTIONS

Options considered include (1) terminating the Metro Rapid Program and returning to the type of service operated prior to Metro Rapid in the two demonstration corridors, (2) continuing to operate Metro Rapid along the two demonstration corridors but not expanding the Metro Rapid Program beyond the demonstration corridors, and (3) expanding the demonstration program with one or two additional bus lines and evaluating the results of the expanded demonstration prior to recommending a countywide system expansion of the program. Options 1 and 2 are not recommended because of the success of the Metro Rapid Demonstration Program. Passenger travel times and service quality have been improved to the point that they are now noticed and appreciated by the public. Ridership has increased as a result. Option 3 is not recommended because data from the two Demonstration lines was found to be more than adequate to develop reliable and consistent findings and recommendations.

FINANCIAL IMPACT

Operating and capital cost estimates associated with implementing Phase IIA of the expansion program are predicated on the following assumptions.

Operating costs - The improved operating performance of Metro Rapid service is expected to allow for an increase of 12-15% in corridor service levels with no increase in operating cost. An additional 10% increase in Metro Rapid service will be made by optimizing both local and Metro Rapid schedules within the same corridor. However, based on ridership increases experienced on the first two Metro Rapid corridors, it is likely that additional capacity will be needed beyond the above. In such cases, staff will develop for Board consideration corridor-specific plans to cover the increase in operating costs.

Capital Costs – Capital cost estimates are derived from the Metro Rapid Demonstration Program. Given the same design and quality of station construction, the same bus signal priority technology, additional equipment to maintain and monitor each corridor, and a 25% contingency, one-time capital costs associated with implementing Phase IIA are estimated at $24.6 million. Table A shows the estimated costs for each of the six Phase IIA corridors.

Approximately $17.2 million is immediately available to fund Phase IIA construction; $12.2 million in previously allocated Bus Signal Priority (BSP) Call for Projects funds and $5.0 million in Regional Improvement Program funds set aside for Metro Rapid station construction. Since BSP funding is available for all six corridors, and since BSP construction is the longest lead-time project element, staff will immediately start bus signal priority construction. The South Broadway, Vermont, and Van Nuys corridors are planned to be operational in 12 to 18 months.

BACKGROUND

MTA developed a conceptual plan for expanding the Metro Rapid Demonstration Program as part of the FY 2001 LRTP. The plan recommended 22 expansion lines and was based on a limited evaluation process. Following adoption of the LRTP, a more rigorous selection process

was developed to identify both MTA and Municipal Operator corridors where application of the Metro Rapid Program goals and objectives would best meet the needs of transit patrons. Corridors were evaluated on the basis of existing success (current transit service), potential success (corridor transit potential), and the need for transit (corridor transit dependence). The selection process involved the following four steps:

1. Identify candidate Metro Rapid corridors countywide based on the number of unlinked weekday passenger boardings per mile of route. This process resulted in 36 candidate corridors being considered for Metro Rapid service.

2. Identify the core segment of each candidate line upon which to evaluate Metro Rapid opportunities based on the following three criteria:

   - Corridor Transit Potential – measures transit potential by a composite index of residential and employment density within walking distance of the candidate Metro Rapid alignment
   - Corridor Transit Dependence – measures transit dependency by a composite index of percentage of households below poverty and percentage of households without vehicles
   - Current Transit Service – measures transit utilization through current transit characteristics (weekday ridership and weekday passengers per mile of route)

3. Rank each candidate corridor based on a scoring process whereby the top ranked candidate in each of the above criteria received 100%, with all remaining corridors ranked relative to the top score. The following five performance measurements were added to the Current Transit Service criteria for this step: operating speed, average passenger trip length, percent of weekday ridership retained on weekends, weekday passengers per revenue hour, and weekday seat utilization.

4. Balance individual corridor evaluations with the needs of the network in terms of connectivity and achieving geographic coverage. Duplication and competition for the same markets were avoided, as was over saturating one part of a service area

As a result of the above process, 23 corridors have been identified for inclusion in the Metro Rapid Expansion Program. To a great extent, the expansion plan is similar to the conceptual plan first developed in the LRTP, with several corridors modified, added, or deleted from the original LRTP list of lines. All 23 corridors have been prioritized into four implementation phases. It is estimated that each phase represents a three-year implementation schedule of 5-6 Metro Rapid lines. Tables A and B present the phased implementation plan of the Metro Rapid Expansion Program. Table A presents the recommended construction sequence of the Phase IIA corridors. Table C lists the partnership jurisdictions in each corridor.

It should be noted that full implementation of the Metro Rapid Program was included in the Special Master's suggested Five Year Expansion Plan. The Bus Riders Union has expressed strong support for Metro Rapid expansion but has concerns about the reduction in local and

limited-stop service in Metro Rapid corridors. Staff will continue to seek participation of the Joint Working Group in the implementation of future Metro Rapid phases.

NEXT STEPS

With Board approval of the above recommendations, staff will develop construction and operating plans for each Phase IIA Metro Rapid corridor. The plans will build off the approach taken in the Demonstration, but will be refined based on "lessons learned". The plans will include operating plans, schedules, and protocols, station locations, dedicated lane options, vehicle requirements, bus signal requirement interface, and marketing recommendations. Staff will begin operation of each Metro Rapid corridor immediately following construction.

Prepared by Rex Gephart
Project Manager
Countywide Planning & Development

JAMES L. de la LOZA
Executive Officer
Countywide Planning & Development

ROGER SNOBLE
Chief Executive Officer

Table A
Proposed Metro Rapid Corridor Phasing

		Phase							BSP		Station	
Existing Line	Corridor	II-A *	II-B	II-C	II-D	Score	Miles	Total Cost	Cost	Revenue	Cost	Revenue
45-345	South Broadway	1 **				74.1%	10.1	2,686,589	1,329,995	1,329,995	1,356,594	1,356,594
204-354	Vermont	1 **				72.7%	12.7	3,378,186	1,672,369	1,672,369	1,705,817	1,705,817
30-31/33/SM7	Pico-Pico-Venice	2				63.4%	29.5	7,841,648	3,882,004	3,882,004	3,959,644	***
111-311	Florence	3				58.9%	16.2	4,309,183	2,133,259	2,133,259	2,175,924	***
251-252	Solo	3				55.3%	11.7	3,106,867	1,538,053	1,538,053	1,568,814	***
233-561	Van Nuys	1 **				48.7%	12.4	3,309,027	1,638,132	1,638,132	1,670,895	1,670,895
						Total	92.6	$ 24,631,500	$ 12,193,812	$ 12,193,812	$ 12,437,688	$ 4,733,306
53	Central		X			69.8%	10.6					
4-304	Santa Monica		X			63.7%	20.0					
40	Hawthorne		X			60.3%	20.2					
60	Long Beach Ave		X			57.9%	22.4					
180-181/217	Hollywd-Fairfax-Psdna		X			49.4%	24.4					
						Total	97.6	$ -	$ -	$ -	$ -	$ -
207-357	Western			X		64.4%	13.2					
14	Beverly			X		61.8%	13.0					
105	Vernon-La Cienega			X		53.5%	18.2					
260/LB60	Atlantic			X		46.6%	31.1					
94-394	San Fernando Rd			X		46.2%	25.6					
CC6	Sepulveda (south)			X		36.4%	12.3					
						Total	113.4	$ -	$ -	$ -	$ -	$ -
28-328	West Olympic				X	72.6%	12.4					
68/70	Garvey-Chavez				X	58.2%	16.2					
115-315	Manchester				X	47.1%	22.4					
210-310	Crenshaw-Rossmore				X	46.6%	19.6					
TT3	Torrance-Long Beach				X	39.0%	17.0					
SM3	Lincoln				X	33.2%	11.0					
						Total	98.6	$ -	$ -	$ -	$ -	$ -
		6	5	6	6		402.2					

* Recommended Phase IIA construction sequence.

** Budgeted corridors.

*** Funding to be identified in the Metro Rapid Program Five-Year Expansion Plan.

Table B

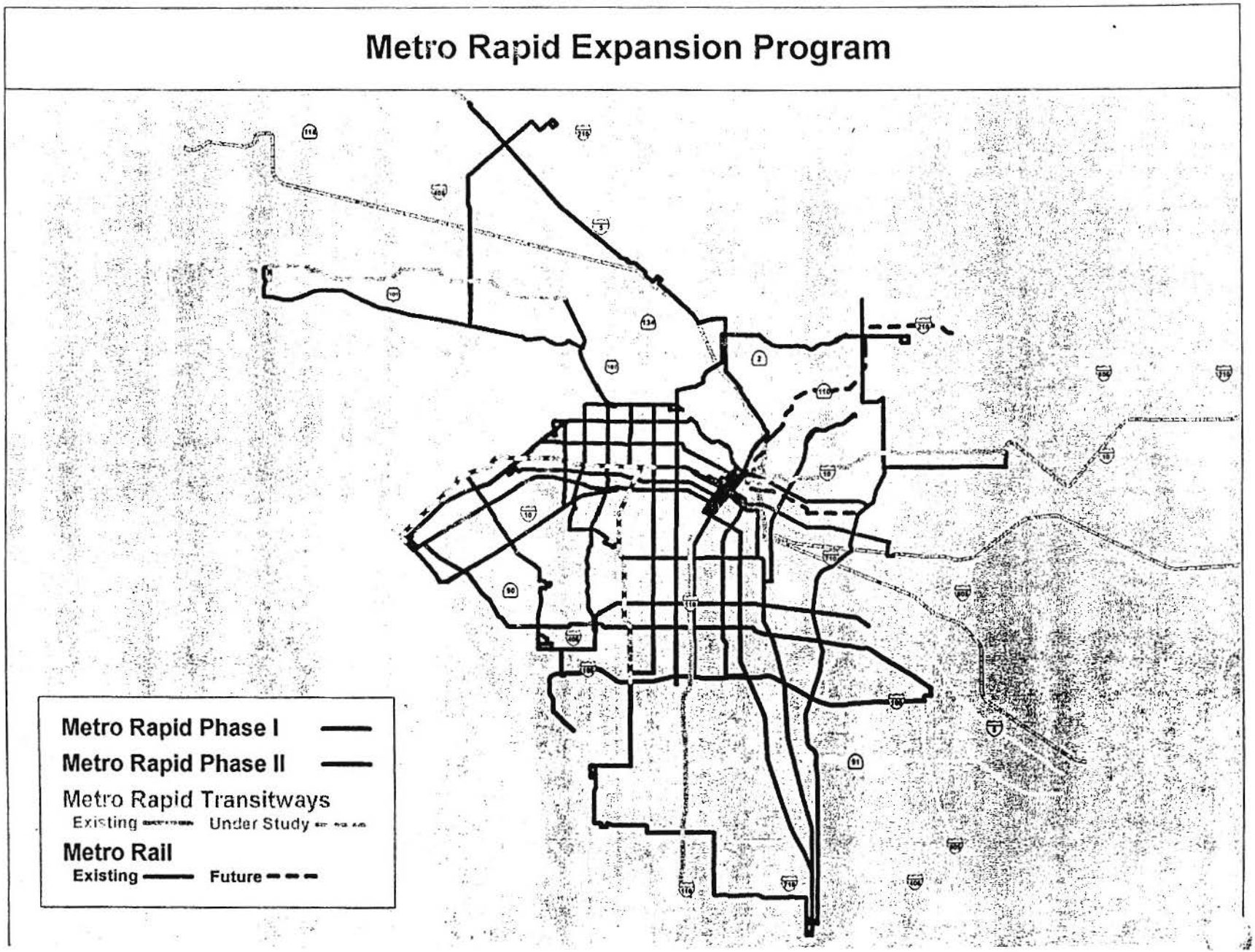

Metro Rapid Expansion Program
Metro Rapid Phase I
Metro Rapid Phase II
Metro Rapid Transitways
Existing
Under Study
Metro Rail
Existing
Future

Table C
Partnership Jurisdictions

EXISTING LINE	CORRIDOR	II-A	II-B	II-C	II-D	JURISDICTIONS
45-345	South Broadway	1				City of Los Angeles
204-354	Vermont	1				City of Los Angeles
30-31/33/SM7	Pico-Pico-Venice	2				City of Los Angeles, Santa Monica
111-311	Florence	3				Inglewood, City of Los Angeles, County of Los Angeles (Walnut Park), Huntington Park, Bell, Bell Gardens
251-252	Soto	3				Alhambra, City of Los Angeles, Vernon, Huntington Park, County of Los Angeles (Walnut Park), South Gate
233-561	Van Nuys	2				City of Los Angeles
53	Central		X			City of Los Angeles, County of Los Angeles (Florence, Willowbrook)
4-304	Santa Monica		X			City of Los Angeles, West Hollywood, Beverly Hills
40	Hawthorne		X			City of Los Angeles, Inglewood, County of Los Angeles (Lennox), Lawndale, Redondo Beach, Torrance
60	Long Beach Ave		X			City of Los Angeles, Vernon, Huntington Park, County of Los Angeles (Walnut Park), South Gate, Compton, Lynwood, Long Beach
180-181/217	Hollywd-Fairfax-Psdna		X			Pasadena, Glendale, City of Los Angeles, West Hollywood
207-357	Western			X		City of Los Angeles, County of Los Angeles (Athens)
14	Beverly			X		City of Los Angeles, West Hollywood, Beverly Hills
105	Vernon-La Cienega			X		West Hollywood, City of Los Angeles, Beverly Hills, County of Los Angeles (View Park), Vernon, Huntington Park
260/LB60	Atlantic			X		South Pasadena, Alhambra, Monterey Park, County of Los Angeles (East L.A.), City of Commerce, Vernon, Maywood, Bell, Cudahy, South Gate, Lynwood, East Rancho Dominguez, Compton, Long Beach
94-394	San Fernando Rd			X		San Fernando, City of Los Angeles, Burbank, Glendale
CC6	Sepulveda (south)			X		City of Los Angeles, Culver City, El Segundo
28-328	West Olympic				X	City of Los Angeles, Beverly Hills
68/70	Garvey-Chavez				X	El Monte, South El Monte, Rosemead, Monterey Park, County of Los Angeles (East L.A., City Terrace), City of Los Angeles
115-315	Manchester				X	Norwalk, Downey, South Gate, County of Los Angeles (Walnut Park, Athens), City of Los Angeles, Inglewood
210-310	Crenshaw-Rossmore				X	City of Los Angeles, Inglewood, Hawthorne, Gardena, County of Los Angeles (El Camino Village), Torrance
TT3	Torrance-Long Beach				X	Redondo Beach, Torrance, City of Los Angeles, Carson, Long Beach
SM3	Lincoln				X	Santa Monica, City of Los Angeles, County of Los Angeles (Marina Del Rey)

Metro Rapid Expansion Program

1 Background

Los Angeles County Metropolitan Transportation Authority (MTA) developed a conceptual plan for expanding the successful Metro Rapid Demonstration Program as part of the most recent Long Range Transportation Plan. The conceptual plan included 22 expansion lines and was based on a limited selection process. The process included only MTA lines and was confined to those lines with more than 10,000 weekday unlinked boardings.

The MTA Board of Directors approved work to expand the demonstration Program (Phase I) in May 2001, based on the plan identified in the Long Range Transportation Plan (LRTP). This direction called for three principal work efforts:

- Reconfirm the lines identified in the LRTP through more extensive analysis and the consideration of additional MTA and Municipal lines, and prioritize potential Metro Rapid candidate lines into an updated phased implementation plan
- Implement an initial expansion phase of 6-7 lines
- Monitor, analyze, and improve Metro Rapid operations, facilities, and customer experience

This report presents the first element in this work: selection of the Metro Rapid Expansion Program lines (Phase II).

2 Selection Process

The selection process involved three principal steps:

- Identify potential candidate lines for Metro Rapid service
- Refine and evaluate candidate lines
- Recommend candidate lines on a priority basis

Identify Potential Candidate Lines

The LRTP Metro Rapid conceptual plan evaluated all MTA lines with over 10,000 weekday boardings based on the idea that a critical threshold of ridership would be required to justify and support both Metro Rapid

and local service[1] on a given corridor. This resulted in a short list of 41 line corridors and was considered sufficient at that time. However, since then there has been a desire on the part of both MTA and Municipal Operators to consider "Muni" line corridors as possible Metro Rapid candidates based on the premise that certain corridors had the necessary characteristics to support Metro Rapid service and provided necessary network linkages.

Initially, a lower ridership level of 5,000 weekday unlinked passenger boardings was considered the threshold for Metro Rapid consideration, recognizing that most Muni lines were shorter than MTA lines. However, working sessions with MTA Planning and Operations staff suggested using a new threshold based on unlinked weekday passenger boardings per mile of route in order to factor out the effect of the overall route length. The candidate selection was modified to reflect this approach.

Minimum thresholds for Phase II were established at 500 weekday passenger boardings per mile of route with a minimum route length of 10 miles in order to ensure that the necessary ridership levels and opportunities for significant travel time savings were met. A secondary consideration, for possible inclusion, was given to routes with boardings per route mile of 400 to 500 as noted in Exhibit 1. Thirty-six candidate lines were selected for evaluation in the end.

Refine and Evaluate Candidate Lines

Key criteria were identified as influencing the success of Metro Rapid and, in fact, any major transit investment. These criteria are:

- Corridor Transit Potential - measures transit potential by a composite index of residential and employment density within walking distance of the possible Metro Rapid alignment.

- Corridor Transit Dependency - measures transit dependency by a composite index of percentage of households below poverty and percentage of households without vehicles.

- Current Transit Service - measures transit utilization through a variety of service and ridership variables, including weekday ridership, percent of weekday ridership retained on weekends, weekday passengers per mile of route, weekday passengers per revenue hour, weekday seat utilization, average passenger trip length, and revenue operating speed.

[1] The service protocol for arterial Metro Rapid operation includes both Metro Rapid and local bus service.

Exhibit 1
Potential Candidate Lines

Line	Weekday Ridership	Route Length (miles)	Weekday Ridership Per Line Mile	Include/Not Include (Factors)
204	49,493	12.7	3,897	Include
16	25,611	10.0	2,574	Include
207	36,322	18.2	1,996	Include
66	25,480	12.9	1,975	Include
200	12,504	6.4	1,954	Not Include: below minimum length
30	28,793	14.9	1,930	Include
20	24,607	15.1	1,630	Current Metro Rapid
4	32,533	20.0	1,627	Include
SM7	16,770	10.8	1,553	Include
40	30,590	20.2	1,514	Include
217	14,804	10.1	1,466	Include
45	24,055	16.7	1,440	Include
33	22,268	17.3	1,291	Include
18	24,452	21.3	1,148	Current Metro Rapid
60	25,463	22.4	1,137	Include
14/38	21,810	20.7	1,054	Include
68	20,440	19.5	1,048	Include
206	14,625	14.2	1,030	Include
210	20,046	20.0	1,002	Include
81	19,062	20.1	948	Include
28	32,555	34.8	934	Include
55	11,729	12.7	924	Include
251	21,128	23.0	919	Include
70	14,208	15.9	894	Include
156	16,815	19.2	876	Include
51/26	22,289	26.1	854	Include (51)
53	13,387	15.7	853	Include
2	22,306	26.2	851	Include
180	17,013	21.4	795	Include
212	11,640	14.7	792	Include
LB60	8,845	11.2	790	Include
111	21,248	27.9	762	Include
117	9,738	12.8	761	Include
105	16,514	21.8	758	Include
150	13,290	18.4	722	Current Metro Rapid
CC1	5,604	7.9	709	Not Include: below minimum length
10/48	14,544	20.7	703	Include
SM3	7,658	11.0	696	Include
SM12	8,192	12.2	671	Not Include: non-linear alignment
115	14,586	23.3	626	Include
561	15,923	25.5	624	Include
260	16,403	26.7	614	Include
SM14	3,994	6.5	612	Not Include: below minimum length
SM8	5,968	9.9	603	Not Include: below minimum length
108	14,940	25.1	595	Include
76	9,577	16.3	588	Include
CC6	6,890	12.2	565	Include
94	15,600	28.1	555	Include
38/71	9,904	18.2	544	Not Include: non-linear alignment (Line 71)
120	6,392	11.9	537	Not Include: borderline length
110	9,745	21.1	462	Not Include: secondary arterial alignment
TT3	7,812	17.1	457	Include
LB110	5,381	12.2	441	Not Include: long branches; secondary arterial alignment
LB190	7,473	17.3	432	Not Include: non-linear alignment; long branches
LB20	4,774	11.3	422	Not Include: long branches; below minimum length

The evaluation was conducted in two steps using both tabular and geographic information assessment:

1. Step I Refinement – evaluated a subset of the above criteria in terms of refining the existing transit route alignments. Many of the current routes contain both segments with strong transit orientation and segments where Metro Rapid is clearly inappropriate. The objective was to identify the core part of the corridor upon which to evaluate Metro Rapid opportunities.

2. Step 2 Evaluation – evaluated the refined Metro Rapid candidate corridors using all above criteria.

3. Step 3 Service Warrants – considered other important factors in assessing the candidates for Phase II Metro Rapid service. These factors included whether current service frequencies could sustain two types of all day service, the current presence of limited stop or express service, whether it duplicates other Metro Rapid Transit (Metro Rapid or Metro Rail), and lastly whether there are special network issues to consider.

STEP ONE – REFINEMENT

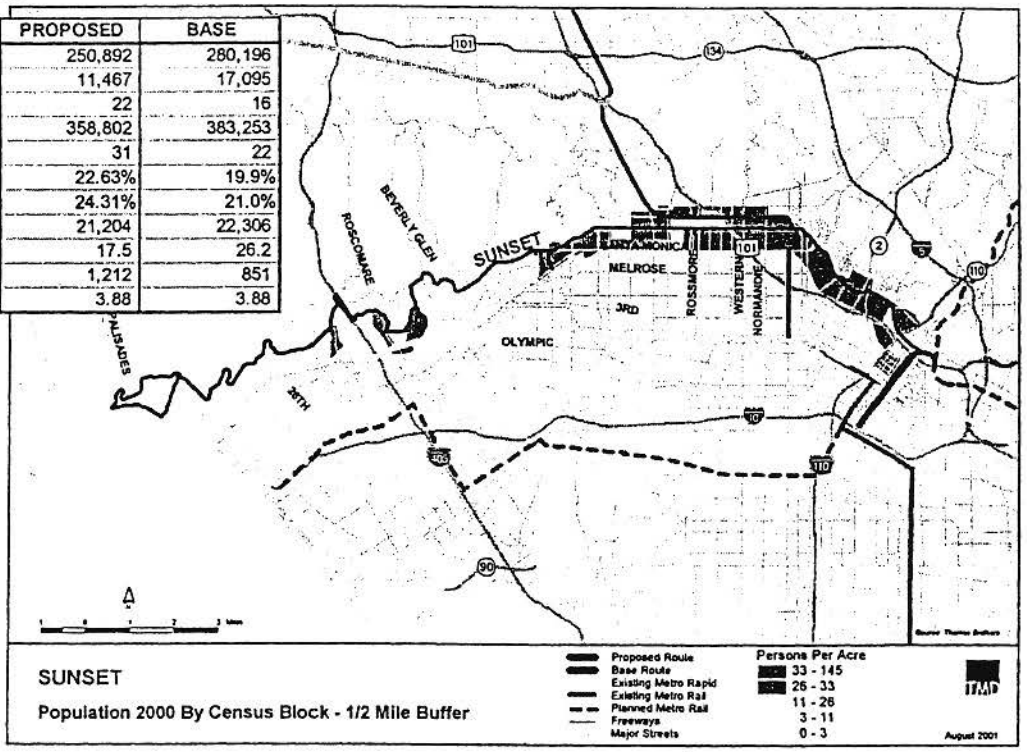
The subset of evaluation criteria included transit potential (population and employment density), transit dependence (households below poverty and without vehicles), and two current transit characteristics (weekday ridership and ridership per mile of route). To assist in identifying corridor strengths by segment, population density, employment density, households below poverty, and households without vehicles were mapped at the census block level within ½ mile of the candidate corridor. In addition, ridership was reviewed at a bus stop level using the latest available ridership information (ride checks).

The baseline corridor was analyzed and a proposed refined corridor was identified for each of the candidate lines. Most were somewhat changed, with a few changing significantly and a few not changing at all. An example of this analysis is presented in Exhibit 2. The complete set of all candidates is available in a separate Technical Appendix.

IMD

Exhibit 2
Refinement Example

SUNSET	PROPOSED	BASE
Population - Year 2000	250,892	280,196
1/2 mile buffer (acres)	11,467	17,095
Population Density (persons/acre)	22	16
Employment - Year 1997	358,802	383,253
Employment Density (jobs/acre)	31	22
Persons in Poverty (%)	22.63%	19.9%
Zero Vehicle Households (%)	24.31%	21.0%
Weekday Ridership	21,204	22,306
Route Length (miles)	17.5	26.2
Weekday Ridership/Route Mile	1,212	851
Average Trip Length	3.88	3.88



STEP TWO – EVALUATION

The evaluation consisted of analyzing all criteria in the transit potential, transit dependence, and transit characteristics elements and comparing the refined candidate corridors using a ranked scoring process. This scoring process used a "percentage of the best" approach, whereby the top-scoring candidate in each criterion received "100%", with the other candidates receiving scores relative to the top score. For instance, if the top population density were 40 persons per acre (100%), then a candidate with a population density of 30 would receive a score of 75%. Each candidate line received a score for each criterion. An overall score was determined by averaging the individual criteria scores. Transit potential and transit dependency carried a weight of one with transit service carrying a weight of two to allow existing transit success to carry equal weight with the collective transit potential and dependency. The results are presented in Exhibits 3 through 7.

STEP THREE – SERVICE WARRANTS

Service warrants addressed non-quantitative factors that would likely influence the success of the Metro Rapid Expansion Program. These issues included whether current service frequencies could sustain two types of all day service, the current presence of limited stop or express

Exhibit 3

Transit Potential Scoring

Corridor	Population Density (persons/acre)	Employment Density (jobs/acre)	Population Density Index	Employment Density Index	Transit Potential Score
Atlantic	18.72	7.25	51.1%	17.6%	34.4%
Avalon	21.18	19.94	57.8%	48.4%	53.1%
Beverly	24.87	40.76	67.9%	99.0%	83.5%
Central	24.25	28.09	66.2%	68.2%	67.2%
Century Blvd	19.35	5.11	52.8%	12.4%	32.6%
Compton Ave.	14.65	19.98	40.0%	48.5%	44.3%
Crenshaw-Rossmore	19.53	8.02	53.3%	19.5%	36.4%
E. Olympic-West 8th	27.80	27.09	75.9%	65.8%	70.9%
Figueroa	20.31	23.09	55.5%	56.1%	55.8%
Florence	24.85	6.59	67.9%	16.0%	41.9%
Garvey-Chavez	15.60	17.89	42.6%	43.5%	43.0%
Hawthorne	21.68	23.18	59.2%	56.3%	57.7%
Hollywood-Fairfax-Pasadena	14.33	8.24	39.1%	20.0%	29.6%
La Brea	21.10	10.22	57.6%	24.8%	41.2%
Lincoln	8.81	9.86	24.1%	24.0%	24.0%
Long Beach Ave	19.56	22.17	53.4%	53.8%	53.6%
Manchester	17.66	6.15	48.2%	14.9%	31.6%
Melrose	28.71	39.80	78.4%	96.7%	87.5%
NoHo-Panorama City	21.66	6.50	59.2%	15.8%	37.5%
Normandie	34.70	8.72	94.8%	21.2%	58.0%
Pico-Pico-Venice	18.85	18.80	51.5%	45.7%	48.6%
San Fernando Rd	11.80	14.41	32.2%	35.0%	33.6%
Santa Monica	23.39	34.52	63.9%	83.8%	73.9%
Sepulveda (south)	12.08	12.06	33.0%	29.3%	31.1%
Slauson	19.41	6.11	53.0%	14.8%	33.9%
Soto	15.42	9.79	42.1%	23.8%	32.9%
South Broadway	22.36	36.01	61.1%	87.5%	74.3%
Sunset	21.88	31.29	59.8%	76.0%	67.9%
Torrance-Long Beach	15.16	8.38	41.4%	20.3%	30.9%
Valley Blvd	15.16	29.56	41.4%	71.8%	56.6%
Van Nuys	16.36	4.95	44.7%	12.0%	28.3%
Vermont	36.62	11.13	100.0%	27.0%	63.5%
Vernon-La Cienega	22.17	10.96	60.5%	26.6%	43.6%
West Olympic	26.02	41.17	71.1%	100.0%	85.5%
West Third	29.09	39.45	79.5%	95.8%	87.6%
Western	28.44	6.96	77.7%	16.9%	47.3%

Exhibit 4

Transit Dependency Scoring

Corridor	Persons In Poverty (%)	Zero Vehicle Households (%)	Transit Dependency Average	Transit Dependency Score
Atlantic	20.5%	16.2%	18.3%	48.8%
Avalon	33.7%	35.5%	34.6%	92.0%
Beverly	22.1%	26.7%	24.4%	64.9%
Central	37.1%	38.1%	37.6%	100.0%
Century Blvd	24.3%	16.7%	20.5%	54.5%
Compton Ave.	36.5%	35.8%	36.1%	96.2%
Crenshaw-Rossmore	17.0%	17.1%	17.1%	45.4%
E. Olympic-West 8th	29.6%	36.7%	33.1%	88.2%
Figueroa	30.0%	29.9%	29.9%	79.6%
Florence	25.1%	18.0%	21.6%	57.4%
Garvey-Chavez	24.5%	25.5%	25.0%	66.6%
Hawthorne	21.7%	21.3%	21.5%	57.2%
Hollywood-Fairfax-Pasadena	17.2%	17.7%	17.4%	46.4%
La Brea	18.4%	19.3%	18.8%	50.2%
Lincoln	8.5%	8.6%	8.5%	22.8%
Long Beach Ave	24.8%	25.9%	25.4%	67.5%
Manchester	19.9%	13.5%	16.7%	44.3%
Melrose	22.2%	26.8%	24.5%	65.2%
NoHo-Panorama City	15.3%	11.2%	13.2%	35.2%
Normandie	27.1%	27.3%	27.2%	72.4%
Pico-Pico-Venice	18.2%	19.1%	18.6%	49.6%
San Fernando Rd	17.9%	16.9%	17.4%	46.2%
Santa Monica	19.4%	21.4%	20.4%	54.3%
Sepulveda (south)	10.7%	7.4%	9.1%	24.1%
Slauson	25.8%	19.4%	22.6%	60.1%
Soto	23.3%	19.9%	21.6%	57.4%
South Broadway	35.3%	37.4%	36.4%	96.7%
Sunset	22.6%	24.3%	23.5%	62.5%
Torrance-Long Beach	16.3%	14.9%	15.6%	41.6%
Valley Blvd	23.8%	25.5%	24.7%	65.7%
Van Nuys	15.8%	11.1%	13.4%	35.8%
Vermont	30.1%	28.5%	29.3%	78.0%
Vernon-La Cienega	22.0%	19.0%	20.5%	54.5%
West Olympic	25.0%	30.5%	27.8%	73.9%
West Third	22.6%	30.1%	26.4%	70.1%
Western	24.3%	25.2%	24.7%	65.9%

Exhibit 5

Transit Service - Data

Corridor	Weekday Ridership Proposed	Weekday Ridership Per Line Mile	Average Trip Length	Operating Speed (mph)	Weekday Seat Utilization	Weekday Riders Retained on Weekends	Weekday Passengers per Bus Hour
Atlantic	24,308	782	3.70	12.6	52.9%	45.4%	71.9
Avalon	19,620	1,250	2.92	10.6	38.4%	72.7%	55.8
Beverly	14,274	1,098	3.15	10.5	36.0%	57.4%	47.9
Central	12,097	1,141	3.32	11.6	57.9%	63.6%	80.7
Century Blvd	9,738	761	3.03	11.2	42.5%	73.2%	62.9
Compton Ave.	11,729	924	2.67	10.4	32.5%	60.9%	50.6
Crenshaw-Rossmore	20,046	1,023	3.90	11.6	50.7%	48.0%	60.4
E. Olympic-West 8th	25,480	2,022	2.60	9.7	43.1%	59.9%	64.2
Figueroa	18,498	1,016	3.53	11.3	48.1%	70.4%	61.5
Florence	22,756	1,405	3.23	12.0	87.0%	62.4%	129.4
Garvey-Chavez	21,100	1,302	4.00	11.6	67.1%	64.9%	77.8
Hawthorne	30,590	1,514	3.61	11.1	59.1%	67.1%	72.9
Hollywood-Fairfax-Pasade	30,257	1,240	3.28	9.7	54.8%	61.8%	64.6
La Brea	11,640	792	4.05	10.5	56.9%	48.8%	59.1
Lincoln	7,658	696	2.63	12.2	36.2%	48.2%	67.4
Long Beach Ave	25,463	1,137	3.44	10.8	41.0%	66.7%	51.6
Manchester	12,890	786	4.40	12.4	65.5%	61.7%	73.6
Melrose	14,544	1,469	3.18	10.0	40.0%	53.2%	50.4
NoHo-Panorama City	11,590	1,380	3.87	12.2	66.3%	67.4%	83.6
Normandie	14,625	1,030	2.49	10.6	42.9%	49.0%	73.3
Pico-Pico-Venice	60,572	2,055	4.14	11.2	82.9%	62.6%	89.7
San Fernando Rd	14,784	577	6.29	14.1	48.1%	60.0%	43.1
Santa Monica	32,533	1,627	3.98	10.3	49.0%	74.3%	50.9
Sepulveda (south)	6,890	560	3.83	11.3	44.0%	44.7%	51.9
Slauson	13,773	1,111	3.69	11.6	84.4%	51.2%	106.5
Soto	18,534	1,587	2.71	9.6	83.9%	46.1%	119.0
South Broadway	20,057	1,986	2.89	11.0	57.9%	68.6%	88.5
Sunset	21,204	1,212	3.88	11.5	60.2%	51.5%	71.4
Torrance-Long Beach	8,711	512	3.50	13.2	35.4%	49.9%	53.5
Valley Blvd	9,577	588	4.82	11.0	51.3%	59.4%	47.0
Van Nuys	16,744	1,346	4.80	12.6	93.2%	54.9%	97.7
Vermont	49,493	3,897	2.44	10.3	53.3%	61.2%	90.4
Vernon-La Cienega	22,476	1,235	3.13	12.1	59.9%	57.3%	92.6
West Olympic	22,335	1,801	2.87	11.1	69.6%	64.9%	107.4
West Third	25,611	2,227	2.71	10.3	42.0%	60.7%	63.8
Western	35,576	2,695	2.57	10.5	68.8%	63.8%	112.7

Exhibit 6

Transit Service – Scoring

Corridor	Weekday Ridership Proposed	Weekday Ridership/Route Mile Proposed	Average Trip Length	Revenue Operating Speed	Weekday Seat Utilization	Weekday Riders Retained on Weekends	Weekday Passengers per Bus Hour	Transit Service Score
Atlantic	40.1%	20.1%	58.8%	69.2%	56.8%	61.1%	55.6%	51.7%
Avalon	32.4%	32.1%	46.4%	89.7%	41.2%	97.9%	43.1%	54.7%
Beverly	23.6%	28.2%	50.1%	91.0%	38.7%	77.3%	37.0%	49.4%
Central	20.0%	29.3%	52.8%	79.7%	62.2%	85.7%	62.4%	56.0%
Century Blvd	16.1%	19.5%	48.2%	83.4%	45.7%	98.5%	48.7%	51.4%
Compton Ave.	19.4%	23.7%	42.4%	92.0%	34.9%	82.0%	39.1%	47.7%
Crenshaw-Rossmore	33.1%	26.2%	62.0%	79.1%	54.4%	64.6%	46.7%	52.3%
E. Olympic-West 8th	42.1%	31.9%	41.3%	99.2%	46.2%	80.6%	49.6%	58.7%
Figueroa	30.5%	26.1%	56.1%	82.5%	51.6%	94.8%	47.6%	55.6%
Florence	37.6%	36.0%	51.4%	75.1%	93.4%	84.0%	100.0%	68.2%
Garvey-Chavez	34.8%	33.4%	63.6%	79.5%	72.1%	87.3%	60.1%	61.6%
Hawthorne	50.5%	38.9%	57.4%	84.2%	63.5%	90.3%	56.4%	63.0%
Hollywood-Fairfax-Pasadena	50.0%	31.8%	52.2%	99.4%	58.8%	83.2%	50.0%	60.8%
La Brea	19.2%	20.3%	64.4%	90.5%	61.1%	65.7%	45.7%	52.4%
Lincoln	12.6%	17.9%	41.8%	72.7%	38.9%	64.8%	52.1%	43.0%
Long Beach Ave	42.0%	29.2%	54.7%	87.3%	44.0%	89.8%	39.9%	55.3%
Manchester	21.3%	20.2%	70.0%	71.5%	70.3%	83.1%	56.9%	56.2%
Melrose	24.0%	37.7%	50.6%	95.8%	42.9%	71.6%	38.9%	51.6%
NoHo-Panorama City	19.1%	35.4%	61.5%	73.0%	71.2%	90.8%	64.6%	59.4%
Normandie	24.1%	26.4%	39.6%	89.3%	46.0%	66.0%	56.7%	49.7%
Pico-Pico-Venice	100.0%	52.7%	65.9%	83.3%	88.9%	84.3%	69.3%	77.8%
San Fernando Rd	24.4%	14.8%	100.0%	53.6%	51.7%	80.7%	33.3%	51.2%
Santa Monica	53.7%	41.7%	63.3%	92.5%	52.6%	100.0%	39.3%	63.3%
Sepulveda (south)	11.4%	14.4%	60.8%	82.6%	47.2%	60.2%	40.1%	45.2%
Slauson	22.7%	28.5%	58.7%	78.9%	90.6%	69.0%	82.3%	61.5%
Soto	30.6%	40.7%	43.1%	100.0%	90.0%	62.1%	92.0%	65.5%
South Broadway	33.1%	51.0%	45.9%	85.2%	62.2%	92.3%	68.4%	62.6%
Sunset	35.0%	31.1%	61.7%	80.3%	64.6%	69.3%	55.1%	56.7%
Torrance-Long Beach	14.4%	13.1%	55.6%	62.6%	38.1%	67.2%	41.4%	41.8%
Valley Blvd	15.8%	15.1%	76.6%	85.3%	55.1%	80.0%	36.3%	52.0%
Van Nuys	27.6%	34.5%	76.3%	69.2%	100.0%	73.9%	75.5%	65.3%
Vermont	81.7%	100.0%	38.8%	92.4%	57.2%	82.3%	69.8%	74.6%
Vernon-La Cienega	37.1%	31.7%	49.8%	74.1%	64.2%	77.1%	71.6%	57.9%
West Olympic	36.9%	40.2%	45.6%	84.9%	74.7%	87.4%	83.0%	65.5%
West Third	42.3%	57.1%	43.1%	93.0%	45.1%	81.8%	49.3%	58.8%
Western	58.7%	69.2%	40.9%	90.5%	75.9%	85.9%	87.1%	72.6%

Exhibit 7

Overall Scoring

Corridor	Transit Potential Score (weight 1)	Transit Dependency Score (weight 1)	Transit Service Score (weight 2)	Overall Score
Atlantic	34.4%	48.8%	51.7%	46.6%
Avalon	53.1%	92.0%	54.7%	63.6%
Beverly	83.5%	64.9%	49.4%	61.8%
Central	67.2%	100.0%	56.0%	69.8%
Century Blvd	32.6%	54.5%	51.4%	47.5%
Compton Ave.	44.3%	96.2%	47.7%	58.9%
Crenshaw-Rossmore	36.4%	45.4%	52.3%	46.6%
E. Olympic-West 8th	70.9%	88.2%	58.7%	69.1%
Figueroa	55.8%	79.6%	55.6%	61.6%
Florence	41.9%	57.4%	68.2%	58.9%
Garvey-Chavez	43.0%	66.6%	61.6%	58.2%
Hawthorne	57.7%	57.2%	63.0%	60.3%
Hollywood-Fairfax-Pasadena	29.6%	46.4%	60.8%	49.4%
La Brea	41.2%	50.2%	52.4%	49.1%
Lincoln	24.0%	22.8%	43.0%	33.2%
Long Beach Ave	53.6%	67.5%	55.3%	57.9%
Manchester	31.6%	44.3%	56.2%	47.1%
Melrose	87.5%	65.2%	51.6%	64.0%
NoHo-Panorama City	37.5%	35.2%	59.4%	47.9%
Normandie	58.0%	72.4%	49.7%	57.5%
Pico-Pico-Venice	48.6%	49.6%	77.8%	63.4%
San Fernando Rd	33.6%	46.2%	51.2%	45.6%
Santa Monica	73.9%	54.3%	63.3%	63.7%
Sepulveda (south)	31.1%	24.1%	45.2%	36.4%
Slauson	33.9%	60.1%	61.5%	54.3%
Soto	32.9%	57.4%	65.5%	55.3%
South Broadway	74.3%	96.7%	62.6%	74.1%
Sunset	67.9%	62.5%	56.7%	61.0%
Torrance-Long Beach	30.9%	41.6%	41.8%	39.0%
Valley Blvd	56.6%	65.7%	52.0%	56.6%
Van Nuys	28.3%	35.8%	65.3%	48.7%
Vermont	63.5%	78.0%	74.6%	72.7%
Vernon-La Cienega	43.6%	54.5%	57.9%	53.5%
West Olympic	85.5%	73.9%	65.5%	72.6%
West Third	87.6%	70.1%	58.8%	68.8%
Western	47.3%	65.9%	72.6%	64.6%

Exhibit 8
Service Warrants

Corridors	Achieves Minimum Service Thresholds			Duplicates Other MTA Rapid Transit (e-existing; p-potential)		Network Connections
	Peak (<10 min)	Off Peak (12-min)	Limited Service	Metro Rapid	Metro Rail	
Atlantic	Partial Peak	No				Only north-south Eastside route
Avalon	Yes	Yes	Yes (wkdy peak bi-direct)	Central Rapid (p)		
Beverly	Yes	Yes (No Sundays)		Melrose and West 3rd Rapid (p)		
Central	Yes (Peak direction only)	No midday-Sundays		Avalon Rapid (p)	Blue Line	
Century Blvd	No	No				
Compton Ave.	Yes (Peak direction only)	No			Blue Line	
Crenshaw-Rossmore	Yes	Yes(No Weekends)	Yes (wkdy peak bi-direct)			
E. Olympic-West 8th	Yes	Yes		Wilshire-Whittier Rapid (e)		
Figueroa	Yes	Yes		Vermont and Broadway Rapid (p)	Pasadena Blue Line	
Florence	Yes	Yes	Yes (wkdy peak bi-direct)			
Garvey-Chavez	Yes	Yes			East Side LRT (p)	
Hawthorne	Yes	Yes	Yes (wkdy peak bi-direct)	Short overlap with Crenshaw & Florence Rapids (n)		
Hollywood-Fairfax-Pasadena	Yes	Yes (No Sundays)			Short overlap with Red Line	
La Brea	Yes (Peak direction only)	No				
Lincoln	Yes	No				
Long Beach Ave	Yes	Yes				
Manchester	Yes	No	Yes (wkdy peak bi-direct)			
Melrose	Yes	No midday-Sundays		Santa Monica & Beverly Rapids (p)		
NoHo-Panorama City	Yes	Yes		Short overlap with Van Nuys and SFV E-W BRT (n)		
Normandie	Yes	No		Vermont & Western Rapids (p)		
Pico-Pico-Venice	Yes	Yes (E Pico-Venice); No (W Pico)	Yes (wkdy peak bi-direct)	West Olympic (p)		
San Fernando Rd	Yes	Yes (No Sundays)	Yes (wkdy peak bi-direct)		Santa Clarita Metrolink	
Santa Monica	Yes	Yes	Yes (wkdy peak bi-direct)	Wilshire-Whittier Rapid (west of Westwood)		
Sepulveda (south)						North-South Westside Connector
Slauson	Yes	No				
Soto	Yes	Yes (No Sundays)				
South Broadway	Yes	Yes	Yes (wkdy peak direction)			
Sunset	Yes	Yes (No Sundays)	Yes (wkdy peak direction)	Santa Monica & Hollywood Rapid		
Torrance-Long Beach						South Bay Connector
Valley Blvd	No	No				
Van Nuys	Yes	Yes (No Sundays)	Yes (seven day bi-direct)	Short Overlap with Noho-Pan. City Rapid (p)		North-South SFV Connector
Vermont	Yes	Yes	Yes (wkdy bi-direct)	Normandie and Figueroa Rapid (p)	Short overlap with Red Line	
Vernon-La Cienega	Yes	No				
West Olympic	Yes	Yes	Yes (wkdy peak bi-direct)	Wilshire-Whittier (e) and Pico Rapid (p)		
West Third	Yes	Yes	Yes (wkdy peak bi-direct)	Wilshire-Whittier (e) and Beverly Rapid (p)		
Western	Yes	Yes	Yes (wkdy/Sat bi-direct)	Normandie Rapid (p)		

Exhibit 9

Candidate Ranking

CORRIDOR	Overall Ranked Score	Service Warrants
South Broadway	74.1%	Duplication with Avalon & Figueroa Rapids
Vermont	72.7%	Duplicates Normandie & Figueroa Rapids
West Olympic	72.6%	Duplicates Wilshire-Whittier Rapid
Central	69.8%	Duplicates Avalon and Compton Rapid
E. Olympic-West 8th	69.1%	Duplicates Wilshire-Whittier Rapid
West Third	68.8%	Duplicates Wilshire-Whittier Rapid
Western	64.4%	Duplicates Normandie Rapid
Melrose	64.0%	Possible duplication with other Westside Rapids
Santa Monica	63.7%	Partial duplication with Wilshire-Whittier Rapid (far west)
Avalon	63.6%	Duplicates Central and Broadway Rapids
Pico-Pico-Venice	63.4%	Possible duplication with other Westside Rapids
Beverly	61.8%	Possible duplication with other Westside Rapids
Figueroa	61.6%	Duplicates Pasadena Blue Line (North); Broadway Rapid (South)
Sunset	61.0%	Duplicates Santa Monica & Hollywood Rapids
Hawthorne	60.3%	
Compton Ave.	58.9%	
Florence	58.9%	Duplicates Central Rapid and Blue Line
Garvey-Chavez	58.2%	Partial duplication with Eastside LRT
Long Beach Ave	57.9%	
Normandie	57.5%	Duplicates Vermont and Western Rapids
Valley Blvd	56.6%	Service Frequencies
Soto	55.3%	
Slauson	54.3%	Service Frequencies
Vernon-La Cienega	53.5%	Service Frequencies
Hollywood-Fairfax-Pasadena	49.4%	Connects Westside with Arroyo Verdugo
La Brea	49.1%	Service Frequencies
Van Nuys	48.7%	North-South SFV Connector
NoHo-Panorama City	47.9%	Partial duplication with SFV E-W & Van Nuys Rapid
Century Blvd	47.5%	Service Frequencies
Manchester	47.1%	
Atlantic	46.6%	Eastside connector route
Crenshaw-Rossmore	46.6%	
San Fernando Rd	45.6%	Connects East SFV
Torrance-Long Beach	39.0%	South Bay Connector
Sepulveda	36.4%	North-South Westside Connector
Lincoln	33.2%	Service Frequencies

service, whether the service unproductively competes with other Metro Rapid Transit (Metro Rapid or Metro Rail), and whether there are special network issues to consider. Exhibit 8 presents the service warrant findings for the Metro Rapid Phase II candidates.

EVALUATION SUMMARY AND CANDIDATE RANKING

The overall ranked scoring and service warrants for the candidate corridors are presented in Exhibit 9.

3 Proposed Metro Rapid Expansion Program

The evaluation process resulted in corridors scored on the basis of existing success (transit service score), potential success (transit potential), and the need for transit (transit dependence). The challenge in selecting corridors is to balance the individual corridor scoring with the needs of the network in terms of connectivity and achieving geographic coverage. Specifically, duplication and competition for the same markets were avoided, as was over saturating one part of a service area.

The Metro Rapid Expansion Program has been prioritized into four sub-phases. It is anticipated that each sub-phase represents a two-year implementation plan of 4-6 Metro Rapid lines. Depending on MTA's level of interest in and willingness to commit the necessary resources to moving forward quickly, this two-year time frame could be relaxed to three-years if necessary. Exhibit 10 presents the phased implementation plan of the Metro Rapid Expansion Program.

Metro Rapid line descriptions have been prepared by phase.

PHASE IIA – 6 Lines

- South Broadway – operates from the Green Line to Gateway Center via the current alignment. One option for consideration is to connect this line with one proposed on North Broadway through Lincoln Heights and El Sereno.

- Vermont – follows the current alignment; some concern has been expressed over the overlap with the Metro Red Line; however, it is believed that these are separate markets and the results will be similar to the Wilshire-Whittier line with both Metro Rapid and Metro Rail benefiting from the new service.

- Pico-Pico-Venice – the only Metro Rapid with branches; the line initiates at Gateway and operates via downtown LA to Pico

Exhibit 10

Metro Rapid Proposed Line Phasing

Existing Lines	Corridor	Phase IIA	Phase IIB	Phase IIC	Phase IID	Score	Explanation
45-345	South Broadway	X				74.1%	
207-357	Vermont	X				72.7%	
30-31/33/SM7	Pico-Pico-Venice	X				63.4%	
111-311	Florence	X				58.9%	
251-252	Soto	X				55.3%	
233-561	Van Nuys	X				48.7%	To be extended to Westwood when I-405 special lanes available
53	Central		X			69.8%	
4-304	Santa Monica		X			63.7%	
40	Hawthorne		X			60.3%	
60	Long Beach Ave		X			57.9%	
180-181/217	Hollywood-Fairfax-Pasadena		X			49.4%	Connects Westside with Arroyo Verdugo
204-354	Western			X		64.4%	
14	Beverly			X		61.8%	
105	Vernon-La Cienega			X		53.5%	"L" shaped network connector
260/LB60	Atlantic			X		46.6%	
94-394	San Fernando Rd			X		46.2%	
CC6	Sepulveda (south)			X		36.4%	Muni
28-328	West Olympic				X	72.6%	Possible need if demand on Wilshire-Whittier continues to grow
68/70	Garvey-Chavez				X	58.2%	
115-315	Manchester				X	47.1%	
210-310	Crenshaw-Rossmore				X	46.6%	Either La Brea or Crenshaw
TT3	Torrance-Long Beach				X	39.0%	Muni
SM3	Lincoln				X	33.2%	Muni
66	E. Olympic-West 8th					69.1%	Duplicates Wilshire-Whittier
16-316	West Third					68.8%	Duplicates Wilshire-Whittier
10-11	Melrose					64.0%	Duplicates Santa Monica/Beverly
51	Avalon					63.6%	Duplicates Central/Broadway
81	Figueroa					61.6%	Duplicates Vermont/Broadway
2-302	Sunset					61.0%	Duplicates Santa Monica/Hollywood
55	Compton Ave.					58.9%	Duplicates Central/Blue Line
206	Normandie					57.5%	Duplicates Vermont & Western
76	Valley Blvd					56.6%	Garvey had much higher transit score
108	Slauson					54.3%	Competes with Vernon Rapid
212	La Brea					49.1%	Possible future candidate
156	NoHo-Panorama City					47.9%	Duplication with SFV E-W & Van Nuys Rapid
117	Century Blvd					47.5%	Lacks continuous arterial; Green Line
Totals		6	5	6	6		

- Boulevard, continuing west to Rimpau where the line splits into two branches (the frequency needed on the trunk is higher than needed on the outer parts); one branch continues out via Pico to Santa Monica with the other operating via Venice also to Santa Monica. This line will present opportunities to possibly involve Big Blue Bus in Metro Rapid operations, albeit with a Big Red Bus.

- Florence – operates from an east terminal near Garfield via the current alignment west to Hawthorne, then following a revised alignment on Century to the LAX terminal.

- Soto – only the branch serving LACUSC Medical Center, Figueroa, and the Pasadena Blue Line is proposed with the south terminal in the vicinity of Firestone in order to maintain arterial access and stay out of residential neighborhoods.

- Van Nuys – serves the full Van Nuys corridor to Lake View Terrace, rather than to the Sylmar/San Fernando Metrolink Station; service needs to continue through the Sepulveda Pass to Westwood, but needs some priority measures on I-405 to be effective.

PHASE IIB – 6 Lines

- Central – current alignment south to Blue/Green Line station.

- Santa Monica – follows the current alignment to Santa Monica from downtown Los Angeles.

- Hawthorne – follows the current alignment.

- Long Beach – follows the current alignment to Long Beach from downtown Los Angeles.

- Hollywood-Fairfax-Pasadena – represents the joining of the Fairfax-Hollywood line with the Hollywood-Glendale-Pasadena service. Operates via the current alignment from West LA Transit Center to Glendale then via Colorado to Pasadena City College.

PHASE IIC – 6 Lines

- Western – current alignment south to Blue/Green Line station.

- Beverly – follows current alignment from downtown Los Angeles to a new terminal at Century City; possibly replacing Line 316.

- Vernon-La Cienega – operates via the current alignment with a new east terminal south on Pacific to Florence.

- Atlantic – generally the current alignment with an extension south to downtown Long Beach (the old 260) with Long Beach Transit still operating local services; from Huntington north via Fremont north to Washington.

- San Fernando – follows current alignment except that north terminal is at Sylmar/SF Metrolink Station, no deviation for BGP Airport, and deviation via Glendale CBD.

- Sepulveda – follows the current alignment with a north terminal located closely to the future Westwood Transit Center (Gayley/Wilshire) and to a south terminal at the Aviation Way Green Line Station.

PHASE IID – 6 Lines

- West Olympic – possible line if needed from downtown Los Angeles to Century City via current Line 28/328.

- Garvey-Chavez – operates from downtown Los Angeles via current Line 68 to Atlantic, then continues on regular Garvey route to El Monte.

- Manchester – current east terminal to new west terminal around Sepulveda; no deviations.

- Crenshaw-Rossmore – via the current routing (no Western Station deviation).

- Torrance-Long Beach – follows current alignment from Long Beach to north on Main Street to Carson to Torrance, then continues north on Hawthorne to South Bay Galleria.

- Lincoln – follows current alignment between Aviation Green Line Station to downtown Santa Monica.

4 Next Steps

The next steps will focus on continuing the refinement process and developing an implementation plan for Phase IIA if and when approved by the Board of Directors.

Metropolitan
Transportation
Authority

One Gateway Plaza
Los Angeles, CA
90012-2952

SUBJECT: METRO RAPID FIVE-YEAR IMPLEMENTATION PLAN

ACTION: APPROVE IMPLEMENTATION OF THE METRO RAPID FIVE-YEAR IMPLEMENTATION PLAN

RECOMMENDATIONS

A. Adopt the Metro Rapid Five-Year Implementation Plan report findings and accelerated, phased countywide expansion plan (Attachment A);

B. Set aside $92.3 million of future regional funds to complete the Metro Rapid Five-Year Implementation Plan (Attachment A, Table 10);

C. Amend the FY 2003 Special Revenue budget to include $3.8 million for Phase II station construction. Funds are included in the FY 2002 Regional TIP for this purpose;

D. Authorize the Chief Executive Officer to negotiate and execute agreements with the local jurisdictions in each corridor so as to expedite deployment of the Five-Year Implementation Plan.

ISSUE

In February 2002, MTA adopted the Metro Rapid Expansion Program, a conceptual plan for expanding the Metro Rapid Demonstration Program. The Expansion Program recommended implementing countywide Metro Rapid service, and included a selection process for evaluating the merits of candidate corridors. To build on the program's success, the Board requested that staff develop an accelerated deployment plan and return to the Board for consideration.

Staff is presenting a Metro Rapid Five-Year Implementation Plan which recommends dedicating $92.3 million of regional funds to implement 24 lines on an accelerated schedule by 2008. This recommended funding will be used to construct bus signal priority, stations, and related communications equipment.

This Plan was developed following a rigorous selection process to identify both MTA and Municipal Operator corridors where Metro Rapid Program service would best meet the needs of transit patrons (Attachment A). Corridors were evaluated on the basis of existing success (current transit service), potential success (corridor transit potential), and the need for transit (corridor transit dependence). As a result of the

above process, 24 corridors have been identified for inclusion in the Metro Rapid Five-Year Implementation Plan.

POLICY IMPLICATIONS

The purpose of the Metro Rapid Five-year Implementation Plan is to introduce a new, high quality mode of transit that will offer faster travel choices for bus riders, especially the transit-dependent. The Metro Rapid Program is an integral part of the adopted Long Range Transportation Plan.

OPTIONS

Options considered include (1) continuing to operate Metro Rapid along the two demonstration corridors, but not expanding the Metro Rapid Program beyond these corridors, and (2) expanding the demonstration program with one or two additional corridors and evaluating the results of the expanded demonstration prior to recommending a countywide system expansion of the program. Option 1 is not recommended because of the success of the Metro Rapid Demonstration Program. Passenger travel times and service quality have been improved to the point that they are now noticed and appreciated by the public. Ridership has increased significantly as a result. Option 2 is not recommended because data from the two Demonstration lines was found to be more than adequate to develop reliable and consistent findings and recommendations.

FINANCIAL IMPACT

Operating and capital cost estimates presented in the Implementation Plan are predicated on the following assumptions.

Operating costs – Implementation of the Broadway and Vermont corridors in December 2002 is scheduled at approximately 5,300 ~~revenue~~ service hours ($1.1 million) more than pre-existing levels during FY 2003. Funds to implement these services are available within the existing FY 2003 budget.

When complete in FY 2008, the Implementation Plan provides a net increase of 15,646 annual revenue hours for the 24 expansion corridors over the pre-existing service levels in those corridors. This increase in service is within the levels assumed in the 10-year forecast. However, based on ridership increases experienced on the two Metro Rapid demonstration corridors, it is likely that additional capacity will be needed beyond the above funding. In such cases, staff will develop for Board consideration corridor-specific plans to cover the increase in operating costs.

Capital Costs – Capital cost estimates are derived from the Metro Rapid Demonstration Program. Given the same design and quality of station construction, the same bus signal priority and "next trip" display technology, and additional equipment to maintain and monitor each corridor, one-time capital costs associated with implementing the entire program are estimated at $110.5 million, escalated (Five-Year Implementation Plan, Table 10).

Funding for the continued implementation of Phase II is consistent with the 10-year financial forecast and included in the Long Range Transportation Plan but not in the MTA FY 2003 budget. Approval of this action would direct staff to include Phase II capital expenditures and revenues in MTA's Special Revenue budget. Approximately $4.5 million will be transferred from the MTA Capital budget since the assets constructed will not become MTA property. Additionally, the FY 2003 Budget does not include station construction expenditures and revenues for Phase II of $3.8 million that were approved by the State after the budget was prepared.

BACKGROUND

The Metro Rapid Demonstration Program has proven successful with the implementation of key attributes, including unique vehicle and station "branding", transit signal priority, special stations with "next trip" displays and information kiosks, and "rail-like" operating characteristics. This has resulted in passenger travel times reduced by approximately 25 percent and a nearly 40 percent increase in ridership, with one-third of the increase new to public transit. Based on this success, staff developed the Metro Rapid Expansion Program and presented it to the Board in February 2002. The Expansion Program identified the corridors which best met the programs' goals and objectives, and recommended a phasing plan designed to construct a network of Metro Rapid service over the next eleven years.

Accelerated Deployment

At the Board's request to accelerate deployment of the Metro Rapid Program, staff developed the Metro Rapid Five-year Implementation Plan (Attachment A). The Implementation Plan identifies the operating and capital costs associated with constructing and operating each corridor, and proposes a five-phase accelerated deployment schedule significantly shorter than that presented in the original Expansion Program. While significant staff work will be needed to refine the Plan as it moves forward to actual implementation, the accelerated schedule is achievable, contingent on resolving the following issues.

A construction and implementation critical path was developed for the initial phase of the Metro Rapid expansion program. Issues considered in the critical path included station design, fabrication, and installation; signal priority design, construction, and testing; vehicle procurement and make-ready; schedule development and operational training; marketing campaigns; and execution of the contracts and agreements necessary to fund the construction program. Two key elements in the critical path were the station construction and signal priority implementation schedules.

While it is unlikely that the station construction contract between the City of Los Angeles and MTA will be executed in time to complete construction prior to the opening of the first two expansion corridors planned for this December (Vermont and Broadway), it is expected that station development will keep pace with the Metro Rapid phased corridor implementation plan after that point.

The critical element in the Metro Rapid expansion schedule is the construction of bus signal priority in the City of Los Angeles, Los Angeles County, and other cities. The City of Los Angeles is currently capable of deploying approximately 20 miles of signal priority per year. The City believes, however, that they can double the current rate of construction *provided* that additional resources are made available either through LADOT in-house staffing or a contractor. Accelerated implementation of the Five-Year Implementation Plan is dependent on LADOT resolving this important issue.

The County of Los Angeles recently began bus signal priority construction along Whittier Boulevard as part of the Wilshire/Whittier Metro Rapid. The City of Beverly Hills will soon begin construction along Wilshire Boulevard, also as part of the Wilshire/Whittier Metro Rapid. Staff will work closely with the cities in each corridor to expedite bus signal priority construction as future corridors are implemented. Table 7 of the Five-Year Implementation Plan presents the accelerated deployment schedule.

Deployment Within Available Revenue

The Five-Year Implementation Plan assumes deployment of all Phase II Metro Rapid corridors within available operating revenues. In order to meet this financial objective, and taking into account the efficiency improvements resulting from both faster operating speeds and restructured operator schedules, the following modifications in Metro Rapid attributes were made. Staff will identify additional operating hours should ridership exceed the added capacity.

- *Seven Day Service* – the policy of providing Metro Rapid service seven days a week has been modified to allow deployment only within available revenue. In some cases, operation of six or seven day schedules is appropriate regardless of operating cost constraints; in other cases expansion to a seven day service is sound only if funds become available. The proposed span of Metro Rapid service recommends that 6 of the 24 Metro Rapid expansion corridors operate seven-days a week, 5 operate weekdays and Saturdays, 6 operate all-day on just weekdays, and 7 operate in just weekday peak periods.

- *Minimum Service Frequencies* – the Metro Rapid program calls for very frequent service as one of the basic attributes, with at least 10-minute peak and 12-minute off-peak service in order to attract riders. However, 19 of the planned 24 Metro Rapid expansion corridors will initially not meet these minimum standard frequencies. The impact of less frequent service will vary from corridor to corridor, but will result in less ridership growth until additional service can be added.

- *Service Capacity* – when implementing the Metro Rapid Demonstration Program, additional capacity was deployed from the outset. On one corridor (Ventura) this capacity was adequate for passenger needs. However, the second corridor (Wilshire/Whittier) has required ongoing increases in capacity to meet ridership growth. Expansion of Metro Rapid service within available operating revenue requires that each line be scheduled as close to existing hours as possible while

allowing the miles to increase due to increased operating speeds and schedule restructuring. It is anticipated that additional operating resources may be needed to meet ridership demand.

NEXT STEPS

Consistent with the proposed phasing plan, and working closely with each Service Sector, agreements will be executed with local jurisdictions to design and construct the signal priority and station elements of the program. To expedite implementation, staff will work with the Municipal Operators to accelerate those corridors which have been prepared for Metro Rapid deployment. Improvements to both the system attributes and operational performance of the program will be made, in part, based on the results of a recent MTA-sponsored Metro Rapid operator/customer survey. Consistent with the survey recommendations, staff will consider implementing one or more of the Metro Rapid attributes on other regional corridors in an effort to expand the program's qualities as quickly as possible. Staff will return to the Board with progress reports as Metro Rapid corridors are implemented.

ATTACHMENT

A. Metro Rapid Five-Year Implementation Plan

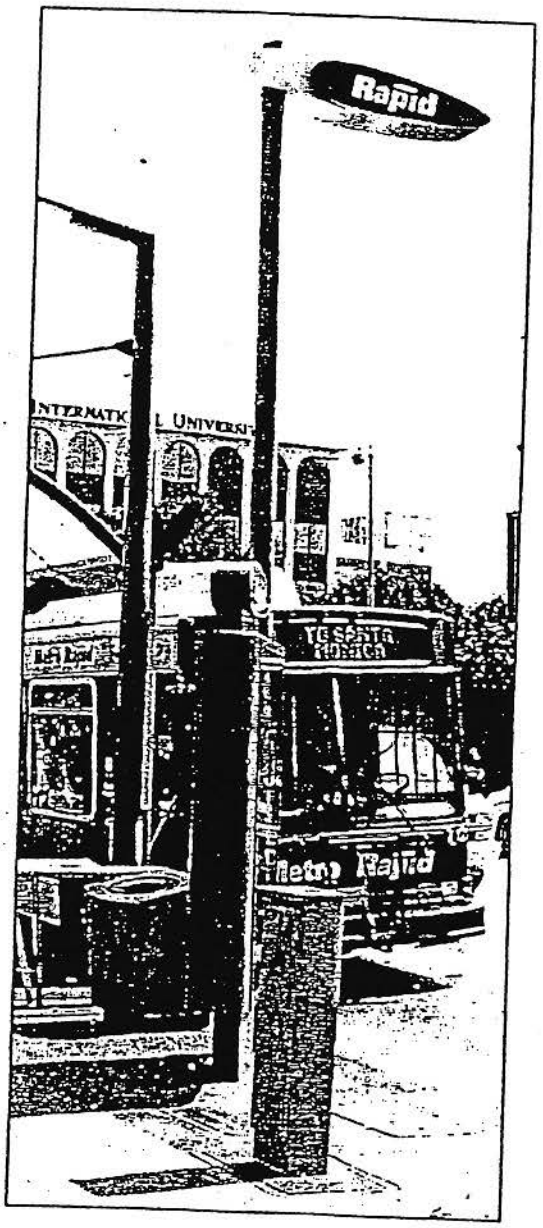
Prepared by: Rex Gephart, Project Manager
Long Range Planning & Coordination

James L. de la Loza
Executive Officer
Countywide Planning & Development

Roger Snoble
Chief Executive Officer

Attachment A

Metro Rapid
LOS ANGELES



Five Year Implementation Plan

Prepared by:

TMD TRANSPORTATION MANAGEMENT & DESIGN, INC.

August 2002

Metro Rapid
LOS ANGELES

Five Year Implementation Plan

1 Five Year Implementation Plan Background

1.1 Metro Rapid Demonstration

In March 1999 the MTA Board of Directors approved a two-corridor Metro Rapid Demonstration Program based on a purpose and need assessment that followed a visit to the very successful system in Curitiba, Brazil, by some MTA Board members and staff. In June 2000, together with the San Fernando Valley extension of the Metro Red Line, MTA introduced Metro Rapid Lines 720 and 750 serving the Wilshire-Whittier and Ventura corridors, respectively. From the first day, the demonstration has proven successful with the implementation of key Metro Rapid attributes, including unique vehicle and station "branding", transit signal priority, special stations with "next trip" displays and information kiosks, and "rail-like" operating characteristics. This has resulted in passenger travel times reduced by at least 25 percent and a nearly 40 percent increase in ridership, with one-third of the increase new riders to public transit. MTA's Metro Rapid program has become a model for other transit systems in both North American and overseas.

1.2 Expansion Program

Based on this success, staff developed the Metro Rapid Expansion Program and presented it to the Board in February 2002. The Expansion Program identified over 20 corridors which best met the Metro Rapid program goals and objectives, and recommended a phasing plan designed to construct a network of Metro Rapid service over the next eleven years. The Board approved the expansion program for Metro Rapid, but requested an accelerated deployment of the Metro Rapid Program.

2 Accelerated Deployment

Working together with the City of Los Angeles, MTA has prepared an accelerated deployment Five Year Metro Rapid Implementation Plan. The Implementation Plan identifies the operating and capital costs associated with constructing and operating each corridor, and proposes an accelerated deployment schedule significantly shorter than that presented in the original Expansion Program. While significant staff work will be needed to refine the Plan as it moves forward to actual implementation, the accelerated schedule is achievable, contingent on resolving certain issues.

A construction and implementation critical path was developed for the initial phase of the Metro Rapid expansion program. Issues considered in the critical path included station design, fabrication, and installation; signal priority design, construction, and testing; vehicle procurement and make-ready; schedule development and operational training; marketing campaigns; and execution of the contracts and agreements necessary to fund the station construction and signal priority programs. The two key elements in the critical path were the station construction and signal priority implementation schedules.

2.1 Station Construction

It is unlikely that the station construction contract between the City of Los Angeles and MTA utilizing the City's new shelter advertising contractor, Viacom Decaux, will be executed in time to complete construction prior to the opening of the first two expansion corridors currently planned for December 2002. Consequently, it is recommended that implementation of these first two expansion lines move forward with temporary stations, as was done with the demonstration lines. It is expected that station development in the City of Los Angeles will keep pace with Metro Rapid corridor implementation after that point and will not be a further issue.

A second issue centers on construction of Metro Rapid stations in other cities and in the County of Los Angeles. To date, MTA has not constructed stations outside the City of Los Angeles, but is moving ahead with developing the necessary agreements to make this possible. It is anticipated that these agreements will be in place in time to meet station construction schedules for June and December 2003.

2.2 Signal Priority

The second issue in the Metro Rapid expansion schedule was found to be the signal priority construction schedule. To date, LADOT has installed and operated all of the transit signal priority, including certain areas outside of the City of Los Angeles under inter-local agreements. At the same time, MTA has been in the process of developing a test of an alternative transit priority system along a segment of Crenshaw Boulevard for the past several years and is likely to be ready for operational testing in 2003. Regardless, the Five Year Metro Rapid Implementation Plan calls for continued reliance on LADOT's highly successful signal priority system wherever feasible. The LADOT priority system has proven to be very reliable while achieving significant time savings for Metro Rapid without noticeable impact on other traffic and at minimal operating and capital cost.

LADOT is currently capable of deploying approximately 20 miles of signal priority per year. LADOT believes, however, that they can double the current rate of construction to over 40 miles annually provided that

additional resources are made available either through in-house staffing or a contractor. This accelerated rate of construction is anticipated to reduce the Metro Rapid deployment schedule from eleven years to six years (the current fiscal year, plus the next five), recognizing that the City of Los Angeles comprises only 2/3 of the entire 357 miles of planned Metro Rapid service.

2.3 Other Issues

The only other issue that had a possible impact on accelerated deployment was the availability of suitable transit vehicles for Metro Rapid service. Metro Rapid calls for operation of low-floor standard or high capacity buses. MTA has enough NABI low-floor CNG coaches, like those currently in operation of the Metro Rapid demonstration lines, to meet immediate term needs if they are "rebranded" and transferred to Metro Rapid. The high capacity vehicle procurement currently underway will provide the necessary vehicles for the balance of the five-year Metro Rapid implementation.

3 Operational Plan

The successful operation of the Phase I demonstration formed the basis of the operational elements for the Five Year Metro Rapid Implementation Plan. No fundamental changes are proposed.

3.1 Metro Rapid Attributes

Metro Rapid is defined by a number of attributes that contribute to its success, as shown below.

Attribute	Phase I Demonstration	Phase II
1. Frequent Service	Yes	Yes
2. Bus Signal Priority	Yes	Yes
3. Headway-based Schedules	Yes	Yes
4. Simple Route Layout	Yes	Yes
5. Less Frequent Stops	Yes	Yes
6. Integrated with Local Bus Service	Yes	Yes
7. Level Boarding and Alighting	Yes	Yes
8. "Branded" Buses and Stations	Yes	Yes

Attribute	Phase I Demonstration	Phase II
9. High Capacity Buses	No	Yes
10. Exclusive Lanes	No	Yes
11. All-Door Boarding	No	Yes

MTA reviewed the various attributes demonstrated in Phase I and those planned in Phase II to determine their continued viability.

The basic service attributes of frequent service, headway-based schedules, simple route layout, less frequent stops, integration with local bus service, and level boarding and alighting have all clearly resulted in a superior transit service based on customer, operator, and street supervisor reports. The remaining attributes involve additional capital investment by MTA and warrant additional discussion.

- Bus Signal Priority – analysis of LADOT's bus signal priority system indicates that it has improved running times by some 8-10 percent, while simultaneously improving headway reliability by actively minimizing vehicle bunching. Both faster and more reliable operations are major customer attractors that directly result in increased ridership and revenue. As well, the reduced round trip cycle times attributable to bus signal priority directly reduce operating and capital expenses. For instance, the speed improvement on Line 720 serving Wilshire-Whittier translates into running time savings of 10-12 minutes per round trip, reducing operating expenses by some $500,000 annually and eliminating the need for 3-5 peak vehicles, saving between $1.05 and $1.4 million in capital costs. This makes implementation of bus signal priority a very good return on investment for MTA.

- "Branded" Buses and Stations – MTA's original model for Metro Rapid was Curitiba, Brazil's now famous Bus Rapid Transit, which had "branded" services. The vehicle branding results in little capital cost, but requires MTA Operations and Maintenance to have two fleets ready every day, Metro Rapid and local. This has not been an issue as MTA Operations and Maintenance has done an excellent job in delivering the vehicles and service every day without increased cost. The "branded" stations have also received positive response from customers, operators, and street supervisors. The aspects most often cited: clear differentiation from local service, consistent with "rail-like" higher quality service including kiosks and "real-time" passenger information, longer distance visibility, station gates which help pre-queue

passengers for boarding and allow for more precise operator placement of the vehicle thereby minimizing dwell times, and few complaints from adjacent property owners. There also have been suggestions both internally and externally regarding ways to further refine the stations to make them even more effective. This is part of the five year implementation plan.

- High Capacity Buses – MTA commissioned a detailed review of the potential opportunities to use high capacity buses in both regular and Metro Rapid service. The report found that today's 45-foot buses and 60-foot articulated buses were mature cost-effective vehicles and had significant application for MTA in both Metro Rapid and regular operations. While the five year financial plan presented here is based on operation of the current 40-foot transit bus, the Plan will be updated for operation of high capacity vehicles as the availability and cost of these buses becomes known (MTA has just released a vehicle procurement for these buses).

- Exclusive Lanes – MTA in concert with the City of Los Angeles is initiating a test of exclusive lanes for Metro Rapid along Wilshire Boulevard in West Los Angeles. While it is clear that exclusive lanes will greatly help speed Metro Rapid service in congested areas, their benefit is less clear in areas of less or no congestion. While the Five Year Metro Rapid Implementation Plan presented here does not include exclusive lanes, the Plan will be updated based on the findings of the Wilshire test.

- All-Door Boarding – the MTA Universal Fare system includes the capability for boarding passengers with Smart Cards through the rear door(s). While expectations are that all-door boarding will reduce station dwell times, the benefit depends on passenger volumes. The Plan presented here does not include this capacity, but it will be considered once testing is undertaken. If there are significant benefits, then the Plan will be refined to include this capability for all-door boarding.

3.2 Metro Rapid Service Providers

The Phase II Metro Rapid program calls for expansion of the service area to much of Los Angeles County. While most of the planned Metro Rapid services fall within MTA's historic service corridors, four lines do not and would be potential candidates for operation by municipal operators. The lines and likely operators are:

- Pico — Santa Monica Municipal Bus Lines
- Sepulveda — Culver City Municipal Bus Lines
- Torrance–Long Beach — Torrance Transit
- Lincoln — Santa Monica Municipal Bus Lines

This Plan calls for the same attributes, operating protocols, and branding to ensure a consistent "product" for the customer regardless of operator. MTA will be continuing to work closely with these Municipal operators regarding Metro Rapid implementation.

3.3 Deployment Within Available Revenue

Previous Board action provided funds for capital requirements, but did not include additional operating funds. Consequently, the Metro Rapid Implementation Plan assumes a deployment of Phase II corridors that is funded with available operating revenues. In order to meet this financial requirement, and taking into account the efficiency improvements resulting from both faster operating speeds and restructured operator schedules, the following modifications in Metro Rapid attributes were made:

- Seven Day Service – the policy of providing Metro Rapid service seven days a week has been modified to allow deployment only where appropriate from an operating cost standpoint. In some cases, operation of six or seven day schedules is appropriate regardless of operating cost constraints; in other cases expansion to a seven day service is sound only if funds become available. The proposed span of Metro Rapid service recommends that 6 of the 24 Metro Rapid expansion corridors operate seven-days a week, 5 operate weekdays and Saturdays, 6 operate all-day on just weekdays, and 7 operate in just weekday peak periods.

- Minimum Service Frequencies – the Metro Rapid program calls for very frequent service as one of the basic attributes, with at least 10-minute peak and 12-minute off-peak service in order to attract riders. However, 19 of the planned 24 Metro Rapid expansion corridors will not meet these minimum standard frequencies as currently proposed. The impact of less frequent service will vary from corridor to corridor, but will result in less ridership growth compared with the demonstration corridors which met the minimum requirements on opening day.

- Service Capacity – the Metro Rapid Demonstration Program deployed additional capacity from the outset. On one corridor (Ventura) this capacity was adequate for passenger needs. However, the second corridor (Wilshire/Whittier) has required ongoing increases in capacity to meet ridership growth.

Expansion of Metro Rapid service within available operating revenue requires that each line be scheduled as close to existing hours as possible while allowing the miles to increase due to increased operating speeds and schedule restructuring. It is anticipated that additional operating resources may be needed to meet ridership demand.

Implementation of Metro Rapid service attributes as originally adopted in the Long Range Transportation Plan (LRTP) will require additional resources. Given the need to work within existing budget limitations, the most likely source of these additional resources will be through service restructuring efficiencies achieved in conjunction with the Service Sectors and Area Teams.

3.4 Development of Corridor Service Plans

The expansion of Metro Rapid service calls for developing corridor service plans that efficiently utilize vehicle and labor resources in order to maximize service growth within existing operating revenue. To achieve this efficiency, the development of service plans for each corridor involves several essential steps:

- Review corridor ridership and characteristics to identify preliminary corridor alignment, station locations, and terminal sites.
- Continue policy whereby all station maintenance costs are funded through advertising and/or local jurisdictions.
- Review current service spans, frequencies, and running times
- Identify service periods during which Metro Rapid service would be provided (e.g., weekday peak, weekday midday, later evenings, Saturdays, and Sundays)
- Develop specific service frequencies by time of day and running times for both Metro Rapid and local services
- Prepare "pilot" Metro Rapid and local operating schedules for costing purposes (these will need considerable refinement for actual implementation)
- Determine service hours, miles, and peak vehicles by corridor and service type
- Determine additional TOS and BOC needs; plan calls for one dedicated TOS in the field during Metro Rapid operations and each BOC staff to handle 5-6 Metro Rapid lines when implementation is completed *(the investment in BOC/TOS support*

has proven to improve cost efficiency through the ability to maintain reduced running times and decreased vehicle bunching).

The service plans provided the basis for determining Metro Rapid operating and capital costs.

4 Proposed Metro Rapid Services

The proposed corridor services are those presented in the February 2002 Metro Rapid Expansion Program with three modifications based on continued refinement in developing the Implementation Plan.

- South Broadway
- Vermont
- Florence
- Van Nuys
- Soto
- Crenshaw-Rossmore
- Pico *(two branch line consolidated onto only the Pico corridor)*
- Santa Monica
- Hawthorne
- Long Beach Ave
- Hollywood-Fairfax-Pasadena
- Western
- Beverly
- Vernon-La Cienega
- Atlantic
- Central
- San Fernando-Lankershim *(San Fernando split into two lines)*
- West Olympic
- Garvey-Chavez
- Manchester
- San Fernando (south) *(San Fernando split into two lines)*
- Sepulveda (south)
- Torrance-Long Beach
- Lincoln

4.1 Corridor Characteristics and Phasing

The proposed corridor characteristics including length of the Metro Rapid line, number and type of stations, and average station spacing are presented in Table 1.

Table 1 also presents the Metro Rapid implementation groups in five phases. The phase groupings were based on:

- Phase IIA *Expand the network by introducing key connections*
- Phase IIB *Introduce Metro Rapid on some of the region's heaviest corridors while continuing development of the network*
- Phases IIC-IIE *Continue network development while focusing on major corridors*

4.2 Proposed Service Levels

The proposed Metro Rapid service is tailored to the current corridor needs while staying within available operating revenue. The proposed service spans and days of operation are presented in Table 2.

Table 3 presents the proposed service frequencies on each corridor. The frequencies shown are the combined local and Metro Rapid service and provide an indication of planned corridor capacity with Metro Rapid.

5 Metro Rapid Corridor Costs

Metro Rapid corridor operating and capital costs have been estimated based on the planned services and the facilities, vehicles, and staff needed to support the operation.

5.1 Service Requirements

Table 4 presents the estimated service trips, revenue hours and miles, and peak vehicles required for the corridor, including both local and Metro Rapid services in comparison with current services. As well, Table 4 provides a breakout of peak and total Metro Rapid buses required by line.

The introduction of Metro Rapid will result in almost no change in peak vehicles and revenue hours, while providing a 9-10 percent increase in both service trips and revenue miles. This is the result of Metro Rapid's faster running.

5.2 Operating Costs

Table 5 indicates the estimated annual operating costs for each of the Metro Rapid corridors based on the most recent available MTA cost allocation model for marginal costing. The incremental operating cost of implementing Metro Rapid over the current service operation is also included, as well as the estimated cost of operations support staff, including bus operations control center and transit operations supervision.

Metro Rapid will result in an increase of approximately $11.6 million in additional annual costs for the 24 expansion lines. This will be offset by an additional $6.5 million in estimated new passenger revenue.

5.3 Capital Costs

Table 6 presents the estimated capital costs for Metro Rapid, including stations, signal priority, revenue and non-revenue vehicles, and expansion of the Bus Operations Control Center. The overall capital cost of $101.9 million is just over $250,000 per mile for the additional 357 miles included in the Metro Rapid expansion program.

6 Metro Rapid Implementation Phasing

The Metro Rapid corridor implementation was phased based on both network expansion needs and the goal of expediting deployment of Metro Rapid on the heaviest corridors. The expansion of the LADOT bus signal priority system also influenced the phasing by limiting the number of line miles installed annually. Table 7 presents the proposed Metro Rapid five year implementation phasing.

7 Metro Rapid Financial Plan

Based on the planned Five Year Implementation Plan for Metro Rapid, a financial plan was prepared.

Table 8 presents the annual operating costs.

Table 9 presents the annual capital costs.

Table 10 presents the annual funding requirements.

8 Metro Rapid Implementation

This Five Year Implementation Plan provides the initial groundwork for developing the full network of Metro Rapid services. There is much additional work and refinement that will take place prior to the actual startup of services:

- Finalize alignments, station locations, and end-of-line terminals, including station layouts
- Refine the original station design to improve effectiveness, increase deployment opportunities, and reduce operating and capital costs; develop final station construction plan
- Identify opportunities for exclusive lane segments
- Finalize signal priority and passenger information display technology throughout the system
- Construct stations and any exclusive lane segments

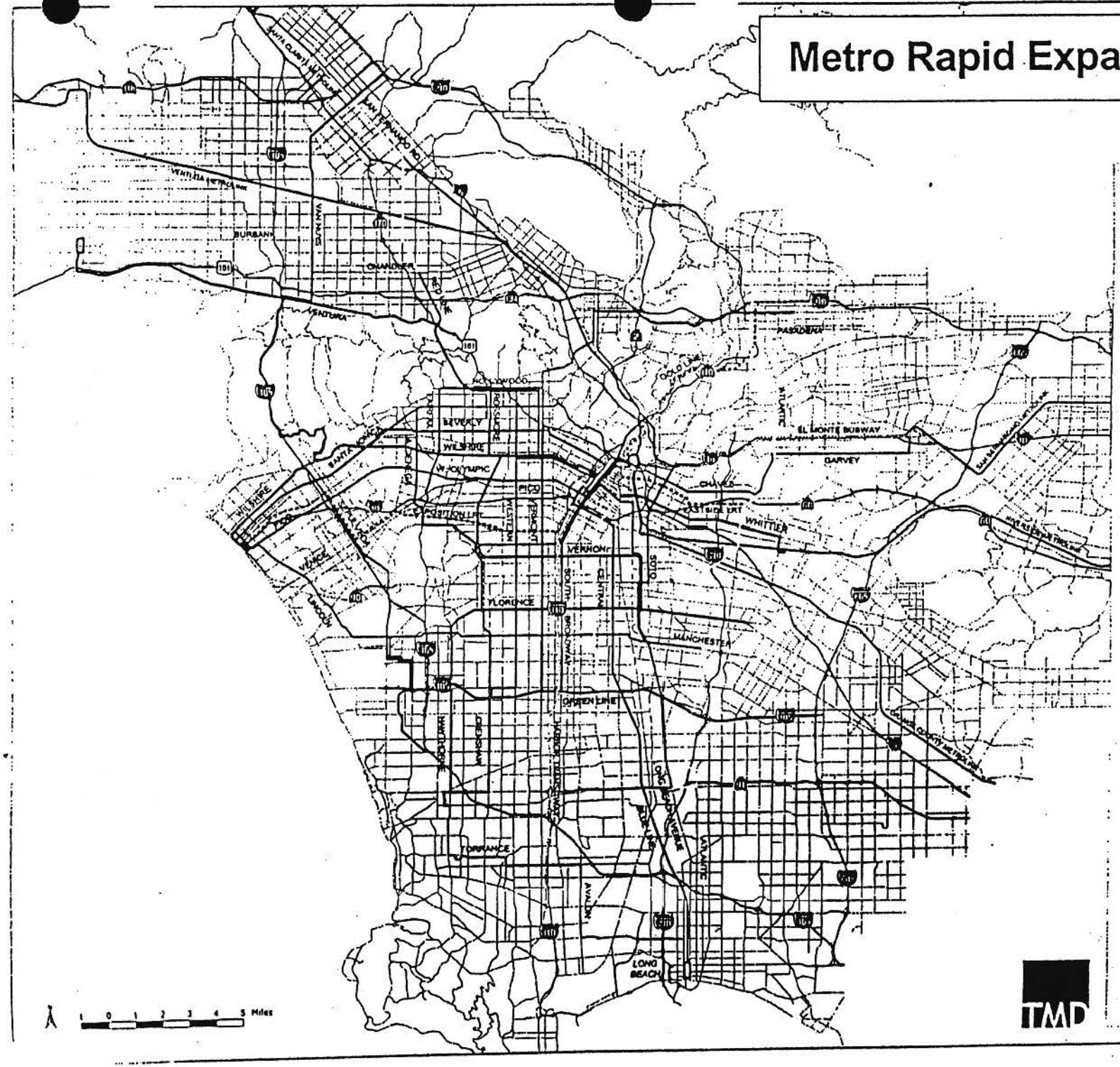
- Install signal priority and passenger information display technology
- Refine of draft operating schedules
- Secure and prepare the Metro Rapid fleet, including consideration of upcoming high capacity buses for Metro Rapid operation
- Select and train operations staff
- Secure all necessary agreements required for implementation

The schedule for implementation of Metro Rapid Phase IIA is at present:

- December 2002 – South Broadway and Vermont
- June 2003 – Florence and Van Nuys
- December 2003 – Soto and Crenshaw-Rossmore

Throughout the implementation process will be close coordination among MTA's Metro Rapid group, MTA's Service Sectors, municipal operators, and local jurisdictions.

Metro Rapid Expansion Progra



Rapid

Metro Rapid Phase I
- Ventura
- Wilshire-Whittier

Metro Rapid Phase II A
- South Broadway
- Vermont
- Florence
- Van Nuys
- Soto
- Crenshaw-Rossmore

Metro Rapid Phase II B
- Pico
- Santa Monica
- Hawthorne
- Long Beach Blvd

Metro Rapid Phase II C
- Hollywood-Fairfax-Pasadena
- Western
- Beverly
- Vernon-La Cienega

Metro Rapid Phase II D
- Atlantic
- Central
- San Fernando-Lankershim
- West Olympic

Metro Rapid Phase II E
- Garvey-Chavez
- Manchester
- San Fernando (south)
- Sepulveda (south)
- Torrance-Long Beach
- Lincoln

Metro Rapid Transitways
Existing Proposed

Metro Rail
Existing Under Construction or Planned

Metro Link

TMD

Table 1
Metro Rapid Corridor Characteristics

	Metro Rapid Line	Line Miles	Station Pairs	Average Station Spacing (miles)
PHASE II A	South Broadway	10.5	16	0.66
	Vermont	11.9	17	0.70
	Florence	10.3	13	0.79
	Van Nuys	21.4	20	1.07
	Soto	10.0	15	0.67
	Crenshaw-Rossmore	18.8	22	0.85
PHASE II B	Pico	17	27	0.64
	Santa Monica	20.2	27	0.75
	Hawthorne	18.4	23	0.81
	Long Beach Blvd	15.3	23	0.67
PHASE II C	Hollywood-Fairfax-Pasadena	21.5	27	0.80
	Western	13.1	19	0.69
	Beverly	11.0	16	0.69
	Vernon-La Cienega	16.5	23	0.72
PHASE II D	Atlantic	25.1	27	0.93
	Central	10.6	13	0.81
	San Fernando-Lankershim	9.9	10	0.99
	West Olympic	12.1	21	0.58
PHASE II E	Garvey-Chavez	14.7	22	0.67
	Manchester	13.5	15	0.90
	San Fernando (south)	13.6	18	0.76
	Sepulveda (south)	12.8	16	0.80
	Torrance-Long Beach	15.6	20	0.78
	Lincoln	12.1	13	0.93
	Total Phase II	356.5	460	0.78

Table 2

Metro Rapid Corridor Proposed Service Spans

		Weekday Peak	Weekday Midday	Weekday Evening[1]	Saturday	Sunday
PHASE II A	South Broadway	X	X	X	X	X
	Vermont	X	X	X	X	X
	Florence	X	X		X	X
	Van Nuys	X	X	X	X	X
	Soto	X	X		X	
	Crenshaw-Rossmore	X	X			
PHASE II B	Pico	X	X	X	X	X
	Santa Monica	X	X	X	X	X
	Hawthorne	X	X		X	
	Long Beach Blvd	X	X		X	X
PHASE II C	Hollywood-Fairfax-Pasadena	X	X			
	Western	X	X	X	X	X
	Beverly	X				
	Vernon-La Cienega	X				
PHASE II D	Atlantic	X				
	Central	X				
	San Fernando-Lankershim	X	X			
	West Olympic	X	X			
PHASE II E	Garvey-Chavez	X	X		X	
	Manchester	X				
	San Fernando (south)	X	X			
	Sepulveda (south)	X				
	Torrance-Long Beach	X				
	Lincoln	X	X			

[1] *Weekday evening indicates service that operates after 9:00 pm.*

Table 3

Metro Rapid Corridor Frequency Comparison (in minutes)

	Metro Rapid Line	AM Peak				Off Peak				PM Peak				Saturday				Sunday			
		Existing	Proposed	Change	% Change	Existing	Proposed	Change	% Change	Existing	Proposed	Change	% Change	Existing	Proposed	Change	% Change	Existing	Proposed	Change	% C
PHASE II A	South Broadway	2.7	2.6	0.1	4.3%	10.0	7.5	2.5	25.0%	3.6	3.3	0.2	4.8%	7.0	7.5	(0.5)	-7.1%	10.0	7.5	2.5	
	Vermont	3.0	2.9	0.1	4.8%	5.0	4.6	0.4	7.7%	3.0	2.9	0.1	4.9%	6.0	4.8	1.2	20.0%	7.5	6.7	0.8	
	Florence	5.5	5.5	0.0	0.0%	11.0	10.0	1.0	9.1%	8.0	8.0	0.0	0.0%	10.0	10.0	0.0	0.0%	10.0	10.0	0.0	
	Van Nuys	6.3	6.0	0.3	5.0%	12.0	8.6	3.4	28.6%	7.5	6.0	1.5	20.0%	12.0	8.6	3.4	28.6%	15.0	6.6	8.4	
	Soto	6.0	5.0	1.0	16.7%	9.0	8.6	0.4	4.8%	8.0	6.0	2.0	25.0%	12.0	10.0	2.0	16.7%				
	Crenshaw-Rosemore	6.2	6.0	0.2	3.8%	12.0	10.0	2.0	16.7%	6.0	5.5	0.6	9.1%								
PHASE II B	Pico	3.0	3.0	0.0	0.0%	7.5	6.7	0.8	11.1%	3.6	3.3	0.2	4.8%	6.0	6.0	0.0	0.0%	7.5	7.5	0.0	
	Santa Monica	3.4	2.9	0.5	15.2%	8.6	6.0	2.6	28.4%	3.8	3.3	0.7	11.1%	7.0	6.5	1.5	22.1%	7.5	6.6	2.0	
	Hawthorne	6.0	6.0	0.0	0.0%	10.0	8.6	1.4	14.3%	6.0	6.0	0.0	0.0%	10.0	8.6	1.4	14.3%				
	Long Beach Blvd	4.0	3.8	0.3	8.3%	8.4	7.5	1.0	11.8%	3.4	3.3	0.1	2.0%	9.0	7.5	0.6	8.3%	10.0	10.0	0.0	
PHASE II C	Hollywood-Fairfax-Pasadena	7.5	6.0	1.5	20.0%	12.0	10.0	2.0	16.7%	7.5	6.0	1.5	20.0%								
	Western	5.0	4.6	0.4	7.7%	6.0	5.4	0.6	9.6%	4.0	3.6	0.5	11.4%	6.0	6.0	0.0	0.0%	6.0	7.5	0.5	
	Beverly	6.5	6.0	0.5	7.7%					6.5	6.0	0.5	7.7%								
	Vernon-La Cienega	7.0	6.7	0.3	4.8%					7.0	6.7	0.3	4.8%								
PHASE II D	Atlantic	6.1	5.6	0.5	8.8%																
	Central	6.0	6.0	0.0	0.0%																
	San Fernando-Lankershim	6.0	5.3	1.7	33.3%	15.0	13.6	1.4	11.9%												
	West Olympic	2.9	2.7	0.2	7.8%	8.0	7.6	0.4	5.3%												
PHASE II E	Garvey-Chavez	4.5	3.4	1.1	23.8%	6.0	5.0	1.0	16.7%	4.0	3.9	0.1	3.2%	6.5	6.0	0.5	7.7%				
	Manchester	5.2	5.0	0.2	4.2%					6.0	6.0	0.0	0.0%								
	San Fernando (south)	6.0	5.6	0.4	6.3%	15.0	10.0	5.0	33.3%	8.5	8.0	0.6	7.1%								
	Sepulveda (south)	12.0	10.0	2.0	16.7%					12.0	10.0	2.0	16.7%								
	Torrance-Long Beach	15.0	12.0	3.0	20.0%					15.0	12.0	3.0	20.0%								
	Lincoln	10.0	10.0	0.0	0.0%	10.0	10.0	0.0	0.0%	10.0	10.0	0.0	0.0%								
	Averages	6.1	5.5	0.6	9.8%	9.7	7.9	1.8	18.6%	6.6	5.8	0.8	12.1%	8.2	7.3	0.9	11.0%	8.4	7.9	1.5	

Table 4

Corridor Service Requirement Comparison

Phase	Metro Rapid Line	Corridor Daily Trips				Corridor Peak Vehicles			
		Existing	Proposed	Change	% Change	Existing	Proposed	Change	% Change
PHASE II A	South Broadway	294	338	44	15.0%	45	43	(2)	-4.4%
	Vermont	455	515	60	13.2%	52	50	(2)	-3.8%
	Florence	242	269	27	11.2%	25	26	1	4.0%
	Van Nuys	204	256	52	25.5%	29	29	0	0.0%
	Soto	267	304	37	13.9%	32	31	(1)	-3.1%
	Crenshaw-Rosemore	209	230	21	10.0%	33	31	(2)	-6.1%
PHASE II B	Pico	349	393	44	12.6%	60	62	2	3.3%
	Santa Monica	354	423	69	19.5%	55	54	(1)	-1.8%
	Hawthorne	247	260	13	5.3%	42	33	(9)	-21.4%
	Long Beach Blvd	311	334	23	7.4%	46	50	4	8.7%
PHASE II C	Hollywood-Fairfax-Pasadena	442	386	(56)	-12.7%	50	47	(3)	-6.0%
	Western	361	377	16	4.4%	36	37	1	2.8%
	Beverly	390	390	0	0.0%	32	35	3	9.4%
	Vernon-La Cienega	176	187	11	6.3%	26	28	2	7.7%
PHASE II D	Atlantic	142	154	12	8.5%	26	28	2	7.7%
	Central	184	219	35	19.0%	24	25	1	4.2%
	San Fernando-Lankershim	[illegible]	121	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	West Olympic	349	[illegible]	23	6.6%	[illegible]	[illegible]	[illegible]	2.4%
PHASE II E	Garvey-Chavez	408	427	19	4.7%	45	44	(1)	-2.2%
	Manchester	178	185	7	3.9%	28	27	(1)	-3.6%
	San Fernando (south)	193	226	33	17.1%	37	31	(6)	-16.2%
	Sepulveda (south)	140	149	9	6.4%	15	15	0	0.0%
	Torrance-Long Beach	130	130	0	0.0%	11	14	3	27.3%
	Lincoln	184	205	21	11.4%	17	18	1	5.9%
	Totals	8,206	9,047	841	10.3%	888	889	1	0.1%

Phase	Metro Rapid Line	Annual Corridor Revenue Hours				Annual Corridor Revenue Miles			
		Existing	Proposed	Change	% Change	Existing	Proposed	Change	% Change
PHASE II A	South Broadway	123,047	132,379	9,332	7.6%	1,384,878	1,546,746	161,868	13.3%
	Vermont	183,575	184,899	1,324	0.7%	1,891,100	2,182,780	291,680	15.4%
	Florence	99,913	101,271	1,358	1.4%	1,223,062	1,287,931	64,869	5.3%
	Van Nuys	112,379	110,810	(1,569)	-1.4%	1,457,281	1,576,246	118,965	8.2%
	Soto	101,555	102,195	640	0.6%	1,000,927	1,112,225	111,298	11.1%
	Crenshaw-Rosemore	105,280	105,815	535	0.5%	1,241,297	1,355,969	114,672	9.2%
PHASE II B	Pico	204,753	208,011	3,257	1.6%	2,060,721	2,291,879	231,158	11.2%
	Santa Monica	216,705	207,935	(8,770)	-4.0%	2,255,300	2,556,846	301,547	13.4%
	Hawthorne	140,910	138,799	(1,111)	-0.8%	1,582,080	1,641,161	59,082	3.7%
	Long Beach Blvd	183,821	186,908	3,187	1.9%	1,821,421	2,066,148	244,727	13.4%
PHASE II C	Hollywood-Fairfax-Pasadena	181,724	188,481	6,758	3.7%	1,809,161	2,091,104	281,942	15.6%
	Western	145,202	143,090	(2,112)	-1.5%	1,536,749	1,732,861	196,112	12.8%
	Beverly	107,769	108,432	663	0.6%	1,119,624	1,175,546	55,922	5.0%
	Vernon-La Cienega	91,253	91,508	255	0.3%	1,113,208	1,109,893	(3,315)	-0.3%
PHASE II D	Atlantic	84,071	84,224	153	0.2%	1,100,371	1,185,643	85,272	7.7%
	Central	74,634	76,037	1,403	1.9%	971,729	1,022,243	50,514	[illegible]
	San Fernando-Lankershim	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	300,000	300,000	[illegible]
	West Olympic	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	377,226	34.3%
PHASE II E	Garvey-Chavez	192,779	178,776	(13,993)	-7.3%	2,224,885	2,173,881	(50,984)	-2.3%
	Manchester	81,064	81,064	0	0.0%	1,018,283	1,029,993	10,710	1.1%
	San Fernando (south)	120,556	113,084	(7,472)	-6.2%	1,719,031	1,648,141	(70,890)	-4.1%
	Sepulveda (south)	90,029	89,519	(510)	-0.6%	602,700	633,556	30,856	5.1%
	Torrance-Long Beach	51,912	48,597	(3,315)	-6.4%	690,071	684,206	(5,865)	-0.8%
	Lincoln	72,535	73,657	1,122	1.5%	810,138	911,042	100,904	12.5%
	Totals	2,827,971	2,843,817	15,846	0.6%	31,711,186	34,595,403	2,884,218	9.1%

Phase	Metro Rapid Line	Required Metro Rapid Fleet			
		AM Peak	PM Peak	Spares (20%)	To[illegible]
PHASE II A	South Broadway	22	20	6	
	Vermont	34	32	7	
	Florence	9	10	2	
	Van Nuys	18	20	4	
	Soto	15	15	3	
	Crenshaw-Rosemore	16	18	4	
PHASE II B	Pico	21	28	6	
	Santa Monica	33	37	8	
	Hawthorne	21	20	8	
	Long Beach Blvd	20	23	5	
PHASE II C	Hollywood-Fairfax-Pasadena	20	23	5	
	Western	18	23	5	
	Beverly	8	9	2	
	Vernon-La Cienega	14	15	3	
PHASE II D	Atlantic	13	15	3	
	Central	10	10	2	
	San Fernando-Lankershim	7	8	2	
	West Olympic	18	[illegible]	4	
PHASE II E	Garvey-Chavez	17	20	4	
	Manchester	11	10	3	
	San Fernando (south)	12	14	3	
	Sepulveda (south)	6	8	2	
	Torrance-Long Beach	4	4	1	
	Lincoln	6	5	1	
	Totals	372	404	81	

Note: Hollywood-Fairfax-Pasadena Metro Rapid operates over a combination of Line 217-Fairfax and Lines 180/181-Hollywood-Pasadena; this results in 2 local trips combined into one longer Metro Rapid trip, reducing the number of trips, but not service.

Table 5

Annual Corridor Operating Cost Comparison

	Metro Rapid Line	Existing	Proposed	Net Change (Incremental Cost)	Percent Change
PHASE II A	South Broadway	$7,331,000	$8,484,000	$1,153,000	15.7%
	Vermont	$10,476,000	$11,555,000	$1,079,000	10.3%
	Florence	$6,017,000	$6,457,000	$440,000	7.3%
	Van Nuys	$6,929,000	$7,605,000	$676,000	9.8%
	Soto	$5,752,000	$6,186,000	$434,000	7.5%
	Crenshaw-Rossmore	$6,336,000	$6,726,000	$390,000	6.2%
PHASE II B	Pico	$11,620,000	$12,443,000	$823,000	7.1%
	Santa Monica	$12,329,000	$12,829,000	$500,000	4.1%
	Hawthorne	$8,307,000	$8,704,000	$397,000	4.8%
	Long Beach Blvd	$9,583,000	$10,454,000	$871,000	9.1%
PHASE II C	Hollywood-Fairfax-Pasadena	$10,236,000	$11,137,000	$901,000	8.8%
	Western	$8,297,000	$8,859,000	$562,000	6.8%
	Beverly	$6,185,000	$6,441,000	$256,000	4.1%
	Vernon-La Cienega	$5,528,000	$5,648,000	$120,000	2.2%
PHASE II D	Atlantic	$5,394,000	$5,860,000	$466,000	8.6%
	Central	$4,484,000	$4,731,000	$247,000	5.5%
	San Fernando-Lankershim	$0	$1,521,000	$1,521,000	N/A
	West Olympic	$6,482,000	$7,191,000	$709,000	10.9%
PHASE II E	Garvey-Chavez	$11,321,000	$10,950,000	($371,000)	-3.3%
	Manchester	$5,022,000	$5,122,000	$100,000	2.0%
	San Fernando (south)	$7,794,000	$7,516,000	($278,000)	-3.6%
	Sepulveda (south)	$3,372,000	$3,504,000	$132,000	3.9%
	Torrance-Long Beach	$3,202,000	$3,207,000	$5,000	0.2%
	Lincoln	$4,211,000	$4,633,000	$422,000	10.0%
Total Phase II Operating Cost [1,2]		**$166,208,000**	**$177,763,000**	**$11,555,000**	**7.0%**

[1] *Existing operating cost includes both local and limited services on the corridor in FY2002 dollars.*

[2] *Proposed operating cost includes both Metro Rapid and local services on the corridor in FY2002 dollars.*

Table 6
Corridor Capital Costs

	Metro Rapid Line	Stations					Signal Priority			Revenue Vehicles			Ops. Support	Line Capital Cost
		Single Gate	Single Gate Cost	Double Gate	Double Gate Cost	Cost	Line Miles	Ave Cost per Mile	Cost	40-foot Buses	40-ft Bus Cost	Cost	Cost	
PHASE II A	South Broadway	26	$54,900	4	$88,200	$1,780,200	10.5	$141,800	$1,486,000	(2)	$340,000	($680,000)	$214,000	$2,800,200
	Vermont	28	$54,900	6	$88,200	$1,956,600	11.9	$250,699	$2,983,000	(2)	$340,000	($680,000)	$339,000	$4,598,600
	Florence	24	$54,900	0	$88,200	$1,317,600	10.3	$155,157	$1,598,000	1	$340,000	$340,000	$44,000	$3,299,600
	Van Nuys	38	$54,900	0	$88,200	$2,086,200	21.4	$121,262	$2,600,000	0	$340,000	$0	$44,000	$4,730,200
	Soto	30	$54,900	0	$88,200	$1,647,000	10.0	$119,187	$1,194,000	(1)	$340,000	($340,000)	$214,000	$2,715,000
	Crenshaw-Rossmore	42	$54,900	0	$88,200	$2,305,800	18.8	$114,473	$2,152,000	(2)	$340,000	($680,000)	$44,000	$3,821,800
PHASE II B	Pico	36	$54,900	2	$88,200	$2,152,800	17.5	$102,631	$1,777,000	2	$340,000	$680,000	$44,000	$4,653,800
	Santa Monica	44	$54,900	4	$88,200	$2,766,400	20.2	$125,817	$2,537,000	(1)	$340,000	($340,000)	$44,000	$5,009,400
	Hawthorne	21	$54,900	0	$88,200	$1,152,900	18.7	$146,262	$2,734,000	(9)	$340,000	($3,060,000)	$214,000	$1,040,900
	Long Beach Blvd	28	$54,900	0	$88,200	$1,537,200	15.3	$149,983	$2,295,000	4	$340,000	$1,360,000	$44,000	$5,236,200
PHASE II C	Hollywood-Fairfax-Pasadena	52	$54,900	0	$88,200	$2,854,800	21.5	$134,112	$2,883,000	(3)	$340,000	($1,020,000)	$44,000	$4,761,800
	Western	31	$54,900	5	$88,200	$2,142,900	13.1	$256,231	$3,357,000	1	$340,000	$340,000	$44,000	$5,883,900
	Beverly	30	$54,900	0	$88,200	$1,647,000	11.0	$140,711	$1,548,000	3	$340,000	$1,020,000	$44,000	$4,259,000
	Vernon-La Cienega	34	$54,900	0	$88,200	$1,866,600	16.5	$182,279	$3,008,000	2	$340,000	$680,000	$44,000	$5,598,600
PHASE II D	Atlantic	52	$54,900	0	$88,200	$2,854,800	25	$162,117	$4,069,000	2	$340,000	$680,000	$44,000	$7,647,800
	Central	19	$54,900	0	$88,200	$1,043,100	10.6	$174,245	$1,842,000	1	$340,000	$340,000	$44,000	$3,269,100
	San Fernando-Lankershim	16	$54,900	0	$88,200	$988,200	9.9	$120,918	$1,197,000	8	$340,000	$2,720,000	$44,000	$4,949,200
	West Olympic	38	$54,900	2	$88,200	$2,262,600	12	$149,474	$1,809,000	1	$340,000	$340,000	$44,000	$4,455,600
PHASE II E	Garvey-Chavez	30	$54,900	0	$88,200	$1,647,000	14.7	$161,764	$2,378,000	(1)	$340,000	($340,000)	$44,000	$3,729,000
	Manchester	28	$54,900	0	$88,200	$1,537,200	13.5	$156,659	$2,115,000	(1)	$340,000	($340,000)	$44,000	$3,356,200
	San Fernando (south)	25	$54,900	4	$88,200	$1,725,300	13.6	$314,723	$4,280,000	(6)	$340,000	($2,040,000)	$44,000	$4,809,300
	Sepulveda (south)	24	$54,900	0	$88,200	$1,317,600	12.8	$120,918	$1,548,000	0	$340,000	$0	$44,000	$2,909,600
	Torrance-Long Beach	38	$54,900	0	$88,200	$2,086,200	15.6	$202,913	$3,165,000	3	$340,000	$1,020,000	$44,000	$6,315,200
	Lincoln	18	$54,900	0	$88,200	$988,200	12.1	$118,509	$1,434,000	1	$340,000	$340,000	$44,000	$2,806,200
	Total Phase II	**752**		**27**		**$43,666,200**	**356.5**	**$157,047**	**$55,989,000**	**1**	**$340,000**	**$340,000**	**$1,861,000**	**$101,856,200**

All capital costs in FY2002 dollars

[1] *These are individual stations; Table 1 shows station pairs. More than one Metro Rapid line may share a station; in these cases station costs are shown for the first line implemented.*

Table 7

Five Year Implementation Phasing

Metro Rapid Line	Total Miles of Metro Rapid Corridor						
	FY2002 – FY2003	FY2003 – FY2004	FY2004 – FY2005	FY2005 – FY2006	FY2006 – FY2007	FY2007 – FY2008	TOTAL
South Broadway	10.5						10.5
Vermont	11.9						11.9
Florence		10.3					10.3
Van Nuys		21.4					21.4
Soto		10.0					10.0
Crenshaw-Rossmore		18.8					18.8
Pico			17.3				17.3
Santa Monica			20.2				20.2
Hawthorne			18.7				18.7
Long Beach Blvd			15.3				15.3
Hollywood-Fairfax-Pasadena				21.5			21.5
Western				13.1			13.1
Beverly				11.0			11.0
Vernon-La Cienega				16.5			16.5
Atlantic					25.1		25.1
Central					10.6		10.6
San Fernando-Lankershim					9.9		9.9
West Olympic					12.1		12.1
Garvey-Chavez						14.7	14.7
Manchester						13.5	13.5
San Fernando (south)						13.6	13.6
Sepulveda (south)						12.8	12.8
Torrance-Long Beach						15.6	15.6
Lincoln						12.1	12.1
Total Phase II	**22.4**	**60.6**	**71.5**	**62.1**	**57.7**	**82.3**	**356.5**

Table 8

Five Year Plan Incremental Operating Costs[1]

	Metro Rapid Line	Incremental Operating Costs (FY2002 Dollars)					
		FY2002 – FY2003[2]	FY2003 – FY2004	FY2004 – FY2005	FY2005 – FY2006	FY2006 – FY2007	FY2007 – FY2008
PHASE II A	South Broadway	$576,500	$1,153,000	$1,153,000	$1,153,000	$1,153,000	$1,153,000
	Vermont	$539,500	$1,079,000	$1,079,000	$1,079,000	$1,079,000	$1,079,000
	Florence		$440,000	$440,000	$440,000	$440,000	$440,000
	Van Nuys		$676,000	$676,000	$676,000	$676,000	$676,000
	Soto		$434,000	$434,000	$434,000	$434,000	$434,000
	Crenshaw-Rossmore		$390,000	$390,000	$390,000	$390,000	$390,000
PHASE II B	Pico			$823,000	$823,000	$823,000	$823,000
	Santa Monica			$500,000	$500,000	$500,000	$500,000
	Hawthorne			$397,000	$397,000	$397,000	$397,000
	Long Beach Blvd			$871,000	$871,000	$871,000	$871,000
PHASE II C	Hollywood-Fairfax-Pasadena				$901,000	$901,000	$901,000
	Western				$562,000	$562,000	$562,000
	Beverly				$256,000	$256,000	$256,000
	Vernon-La Cienega				$120,000	$120,000	$120,000
PHASE II D	Atlantic					$466,000	$466,000
	Central					$247,000	$247,000
	San Fernando-Lankershim					$1,521,000	$1,521,000
	West Olympic					$709,000	$709,000
PHASE II E	Garvey-Chavez						($371,000)
	Manchester						$100,000
	San Fernando (south)						($278,000)
	Sepulveda (south)						$132,000
	Torrance-Long Beach						$5,000
	Lincoln						$422,000
TOTAL PHASE II							
Incremental Operating Cost		$1,116,000	$4,172,000	$6,763,000	$8,602,000	$11,545,000	$11,555,000
Incremental Operating Revenue[3]		$595,000	$2,321,000	$3,769,000	$5,122,000	$6,332,000	$6,480,000
Net Required Operating Subsidy		($521,000)	($1,851,000)	($2,994,000)	($3,480,000)	($5,213,000)	($5,075,000)

[1] *Incremental operating cost is the differential of the proposed operating cost and the existing operating cost.*

[2] *FY2002-2003 costs reflect mid-year implementation of Metro Rapid service.*

[3] *Incremental operating revenue is the estimated increase in patronage times the average fare of $0.692.*

Table 9
Five Year Plan Capital Costs

	Metro Rapid Line	Capital Costs (FY2002 Dollars)					
		FY2002 FY2003	FY2003 FY2004	FY2004 FY2005	FY2005 FY2006	FY2006 FY2007	FY2007 FY2008
PHASE II A	South Broadway	$2,800,200					
	Vermont	$4,598,600					
	Florence		$3,299,600				
	Van Nuys		$4,730,200				
	Soto		$2,715,000				
	Crenshaw-Rossmore		$3,821,800				
PHASE II B	Pico			$4,653,800			
	Santa Monica			$5,009,400			
	Hawthorne			$1,040,900			
	Long Beach Blvd			$5,238,200			
PHASE II C	Hollywood-Fairfax-Pasadena				$4,761,800		
	Western				$5,883,900		
	Beverly				$4,259,000		
	Vernon-La Clenega				$5,598,600		
PHASE II D	Atlantic					$7,647,800	
	Central					$3,269,100	
	San Fernando-Lankershim					$4,949,200	
	West Olympic					$4,455,600	
PHASE II E	Garvey-Chavez						$3,729,000
	Manchester						$3,356,200
	San Fernando (south)						$4,009,300
	Sepulveda (south)						$2,909,600
	Torrance-Long Beach						$6,315,200
	Lincoln						$2,806,200
	Total Phase II	**$7,398,800**	**$14,566,600**	**$15,940,300**	**$20,503,300**	**$20,321,700**	**$23,125,500**

All costs are in FY2002 dollars.

Table 10

Metro Rapid Five-Year Implementation Plan
Capital Expenditure and Funding Plan FY 03-08
($ Escalated and in Millions)

Expenditure Plan	FY 03	FY 04	FY 05	FY 06	FY 07	FY08	FY09	FY10	Total
BSP Installation	4.570	7.884	9.975	11.770	8.915	16.921			61.035
Station Construction	3.821	7.688	8.126	9.279	7.949	10.549			47.413
TOS vans	0.088	0.186	0.191	0.196	0.201	0.309			1.171
BOCC/Other ITS Hardware	0.025	0.824							0.849
Total Expenditure	**8.504**	**16.583**	**18.293**	**21.245**	**18.064**	**27.779**	**-**	**-**	**110.468**

Funding Plan	Funding Source	FY 03	FY 04	FY 05	FY 06	FY 07	FY08	FY09	FY10	Total
BSP Installation	CFP	4.570	3.228	1.735	3.066	1.632				14.231
Station Construction	Fed/Local	3.821	1.754							5.575
TOS vans	Local	0.088								0.088
BOCC/Other ITS Hardware[2]	Fed/Local	0.025								0.025
Long Range Plan (LRTP)	Fed/Local			12.500	19.600	13.100	14.200	12.200	20.700	92.300
Total Funding		**8.504**	**4.982**	**14.235**	**22.666**	**14.732**	**14.200**	**12.200**	**20.700**	**112.219**

Balance[3]	**-**	**(11.601)**	**(4.058)**	**1.421**	**(3.332)**	**(13.579)**	**12.200**	**20.700**	**1.752**

Notes:

1. *Approved as STIP funds in the 2001 Call for Projects (Board report November 2001). Project has since been funded with CMAQ.*
2. *Funding comes from FY02 carryover funds.*
3. *It is anticipated that internal fund transfers and other short-term financing mechanisms will be used to annually balance FY04-08 of the Five-Year Implementation Plan.*

Abbreviations:

BSP = Bus Signal Priority
TOS = Transit Operations Supervisor
BOCC = Bus Operations Control Center
ITS = Intelligent Transportation Systems
STIP = State Transportation Improvement Program
CMAQ = Congestion Mitigation and Air Quality Improvement Program
CFP = Call for Projects

27

27

Metropolitan
Transportation
Authority

One Gateway Plaza
Los Angeles, CA
90012-2952

OPERATIONS COMMITTEE
FEBRUARY 20, 2003

SUBJECT: CONTRACT NUMBER OP33200646, FOR PROCUREMENT OF 200 LOW FLOOR CNG ARTICULATED TRANSIT VEHICLES, FROM NORTH AMERICAN BUS INDUSTRIES

ACTION: AWARD CONTRACT FOR VEHICLES

RECOMMENDATION

Authorize the Chief Executive Officer to:

A. Award a fixed price unit rate contract, Contract No. OP33200646, to North American Bus Industries (NABI) for 200 Low Floor CNG Articulated Vehicles; spare parts; training aids; and other miscellaneous equipment, in an amount not to exceed $138,888,329, inclusive of sales tax.

B. Execute a contract with NABI after funding is approved for this project by the California Transportation Commission (CTC).

C. Negotiate and execute change orders for this procurement only in amounts of less than $1,000,000 per change order, with cumulative change orders not to exceed 10% of the current approved contract value.

RATIONALE

At their April 25, 2002 meeting, the MTA Board of Directors recommended the procurement of Advanced Design, Low Floor CNG Articulated buses to support expansion of various projects and services. In addition to supporting the scheduled opening of Bus Rapid Transit (BRT) corridors that were recently approved by the Board, at least 200 additional higher capacity vehicles could be put into service on other MTA high capacity routes, including routes planned within MTA's expanded Rapid Bus program.

Due to the State's budget deficit, Traffic Congestion Relief Program (TCRP) funding for this contract has been temporarily suspended. Any final contract execution for these buses must be deferred until such time that TCRP or other suitable state/local funding is identified for this project.

BACKGROUND

MTA has determined that due to high, sustained ridership levels, many MTA routes could be operated more effectively with higher capacity articulated vehicles. In particular, staff has determined that articulated vehicles could be used in the majority of MTA's highest ridership lines, including Metro Rapid lines. Over the next several years, staff estimates that over 25% of MTA's service (which equates to roughly 600 vehicles) could be provided more effectively with higher capacity vehicles. Staff intends to use the 200 articulated buses in this contract as a direct replacement for retirement-eligible diesel buses scheduled for replacement in the next three years.

Since no proposals are recommended for award under RFP No. OP33200645 (up to 92 CNG Hybrid or CNG Electric Drive Articulated Vehicles), some of the CNG articulated buses under contract OP33200646 will be used to support the San Fernando Valley and Wilshire BRT projects. While vehicles under this procurement will use a conventional CNG drive train, they will still be significantly quieter than existing MTA buses. In addition, these vehicles feature: advanced aerodynamic design, large passenger windows, three large doors for entry and egress, updated comfortable seating, exceed the desired operational performance requirements, and with a reduced exterior sound level of 78 dBA, these vehicles will be suitable for operation on proposed BRT routes.

Because of the new technology being provided on these vehicles, staff has also requested change order authority for up to 10% of the value of the contract. This action is consistent with authorizations approved in prior Board actions.

FINANCIAL IMPACT

Due to the State of California's budget deficit, TCRP funding that had been programmed for this project is currently suspended. At the CTC's February 2003 meeting, the MTA will present the STIP amendment for $27.8 million to backfill a portion of the $109 million TCRP shortfall. The balance of the TCRP funding shortfall will be filled with $25 million of lease-leaseback revenues, $15.4 million from the SFVBRT and federal and local funds from the MTA bus capital program. If the CTC does not approve authorizing the use of state funding for this project, then execution of the contract will be deferred until such time as suitable alternative funding sources are identified.

While this action is not expected to impact the FY03 budget, if project start-up funding is required, funding would be reprogrammed from within the Vehicle Acquisition Department's FY03 budget to cover these start-up expenses. Funding of $142 million for this project is included in the capital program for FY04-FY06 in cost center 3320, Vehicle Technology under project number 200004, Bus Acquisition. Since this is a multi-year contract, the Deputy Chief Executive Officer and the cost center manager will be accountable for budgeting the cost in future years, including any options exercised.

ALTERNATIVES CONSIDERED

The "no-build" alternative was considered and rejected because the MTA ridership necessitates the use of higher capacity vehicles. These buses will also be used for the scheduled replacement of diesel buses that have reached the end of their 12 year design life. Staff also considered continuing MTA's past practice of using only forty-foot, forty-passenger transit vehicles. This approach was also rejected due to the inherent operating inefficiency of providing high capacity service through the use of smaller capacity transit vehicles used more frequently.

ATTACHMENT(S)

A Procurement Summary
A-1 Procurement History
A-2 List of Subcontractors

Prepared by: Richard Hunt, Deputy Executive Officer for Vehicle Technology
John Drayton, Manager, Vehicle Technology

John B. Catoe Jr.
Deputy Chief Executive Officer

Roger Snoble
Chief Executive Officer

BOARD REPORT ATTACHMENT A
PROCUREMENT SUMMARY

CONTRACT NUMBER OP33200646, UP TO 200 LOW FLOOR CNG ARTICULATED TRANSIT VEHICLES, NORTH AMERICAN BUS INDUSTRIES

1.	Contract Number: OP33200646		
2.	Recommended Vendor: North American Bus Industries		
3.	Cost/Price Analysis Information:		
	A. Bid/Proposed Price: $138,888,328.75	Recommended Price: $138,888,328.75	
	B. Details of Significant Variances are in Attachment A-1.D		
4.	Contract Type: Fixed Unit Rate		
5.	Procurement Dates:		
	A. Issued: June 14, 2002		
	B. Advertised: June 14, 2002		
	C. Pre-proposal Conference: June 28, 2002		
	D. Proposals Due: October 23, 2002		
	E. Pre-Qualification Completed: November 6, 2002		
	F. Conflict of Interest Form Submitted to Ethics: December 23, 2002		
6.	Small Business Participation:		
	A. Bid/Proposal Goal: 0%	Date Small Business Evaluation Completed: Not applicable	
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: 33	Bids/Proposals Picked up: 63	Bids/Proposals Received: 4
8.	Evaluation Information:		
	A. Bidders/Proposers Names:	Bid/Proposal Amount:	Best and Final Offer Amount:
	New Flyer of America	$750,000 per vehicle	
	North American Bus Industries (2 proposals)	$632,914 per vehicle	Not applicable
	Neoplan USA	Eliminated from consideration	
	B. Evaluation Methodology: Describe Methodology Details that are in Attachment A-1.C		
9.	Protest Information:		
	A. Protest Period End Date: February 24, 2003		
	B. Protest Receipt Date:		
	C. Disposition of Protest Date:		
10.	Contract Administration Mgr: Margaret E. Merhoff	Telephone Number: 922-1073	
11.	Project Manager: Mike Bottone	Telephone Number: 922-5911	

BOARD REPORT ATTACHMENT A-1
PROCUREMENT HISTORY

CONTRACT NUMBER OP33200646 UP TO 200 LOW FLOOR CNG ARTICULATED TRANSIT VEHICLES, CONTRACTOR'S NAME

A. Background on Contractor

North American Bus Industries (NABI) was established in 1992. It has manufacturing facilities in Budapest and Kaposvar, Hungary and Anniston, Alabama and Leeds, England. NABI currently produces approximately 850 buses per year and has the production capacity to produce approximately 1000 buses per year. Its production capabilities include 30 foot – 60 foot steel frame buses and 30 – 45 ft. composite buses.

NABI has delivered 770 low floor CNG buses for MTA and is currently producing 20 low floor CNG buses for MTA. In addition, the firm will be producing 30 forty-five foot composite low floor CNG buses for MTA. (The Board will also be considering authorizing an option for another 70 of the forty-five foot composite buses.) Bus quality and reliability have been very good. In addition, the company has produced buses for many other major transit agencies. The firm understands the expectations of the MTA regarding warranty support and required training documentation. NABI has a local support services facility in Upland CA. In addition, NABI is developing a Parts Distribution Location in Upland CA. The company is publicly traded on the Hungarian Stock Exchange and is well capitalized. There is a low financial or performance risk with this company. The firm did not take any major exception to the contract terms and conditions.

B. Procurement Background

In May 2002, the Board of Directors approved an acquisition strategy to utilize competitive negotiation rather than a sealed bid process and to consider factors other than price in the award of contracts for these buses as described in PCC §20217. The law states that, "Broadest possible range of competing products and materials available, fitness of purpose, manufacturer's warranty, vendor financing, performance reliability, standardization, life cycle costs, delivery timetables, support logistics, and other similar factors in addition to price in the award of these contracts." The competitive negotiation process permitted discussions with the proposers to evaluate the performance and reliability of the proposed components, warranty factors, cost data, and delivery schedule to determine the bus best suited for the MTA.

The Diversity and Economic Opportunity Department did not recommend a Disadvantaged Business Enterprise (DBE) participation goal for this bus procurement. FTA requires that each Transit Vehicle Manufacturer (TVM) submit for approval an annual percentage overall goal. The TVM goal is based on the amount of federal funding to be received by the TVM for transit vehicle contracts during the fiscal year. In compliance with 49 CFR Part 26.49, TVMs report directly to FTA, therefore, compliance with the DBE requirements is monitored at the federal level.

The RFP was issued for the purchase of up to 200 low floor CNG articulated vehicles. The RFP contained Options under which the MTA has the right to purchase up to 400 vehicles in two options with a minimum order of 50 vehicles per option order. The options will be valid for a period of sixty (60) months from the date of contract execution.

C. Evaluation of Proposals

In accordance with MTA Procurement Policies and Procedures, the Source Selection Committee (SSC) conducted a comprehensive evaluation of the technical proposals. The SSC consisted of MTA staff members from various technical and operational disciplines who have significant experience with similar bus technologies and systems. Per the Source Selection Plan, a "best value" procurement process was followed. For the purposes of the procurement, all evaluation factors, other than price, when combined, were significantly more important than the cost/price area in this acquisition. Therefore, the MTA could select a proposal other than the lowest priced proposal provided that the additional technical merit offered is determined to be worth the additional cost in relation to other proposals received. For evaluation purposes, if proposals were determined to be technically equivalent, then price would become relatively more important.

On October 23, 2002, proposals were received from New Flyer of America, Neoplan USA and North American Bus Industries (NABI). NABI submitted two proposals – one for a traditional style CNG articulated vehicle; the other for an advanced style CNG articulated vehicle. The proposals were initially reviewed to verify compliance with the minimum qualifications contained in the Request for Proposal (RFP). The minimum qualifications were as follows:

- The proposer must be an existing vehicle manufacturer with an existing manufacturing facility.
- The proposal must be for a nominal 60-foot articulated Vehicle.
- The proposed vehicle must have a CNG propulsion system.
- The proposed vehicle must have as many seats as practical and a maximum of 4 exit doors.

All proposals were found to be compliant with the minimum requirements. The proposals were then evaluated by members of the SSC that including staff from Vehicle Technology, Planning and Programming and Operations.

The MTA's primary program objectives are to procure vehicles that offer:

- Advanced styling including aerodynamic body lines, large panoramic windows, larger doors and modern appearances that separates the appearance of the Vehicle from MTA's current fleet.
- Reduction in exterior noise
- High Capacity (as many seats as practical)

The RFP noted that MTA will evaluate offers according to those meeting the greatest number of objectives that offer the greatest operating advantages to the MTA. Reference

checks were conducted on all three firms. While each firm had some negative references, the firms were found to have overall acceptable ratings. The technical proposals were also reviewed in detail. The SSC found that each of the proposers took a number of exceptions to the MTA's technical requirements. However staff determined that all three proposals warranted further consideration.

To validate technical capability, site visits were conducted at each facility. As a result of the site visits, all of the firms were found to have the technical capability to provide the vehicles. Staff was notified that one firm, Neoplan USA, had not successfully completed the Pre-Qualification process. Because the time schedule for completion of the procurement process and the potential delays associated with the appeal of the Pre-Qualification ruling, the decision was made to eliminate Neoplan from further consideration. Oral presentations and clarifications/discussions were then held with each firm in early December. The purpose of the presentations was to clarify any remaining issues regarding the capability of the proposed vehicle. Following the presentations and discussions, the SSC re-scored the proposals and determined that both firms had submitted technical proposals that were "acceptable." Because the advanced style NABI vehicle better complied with the major objectives of the procurement, staff decided to eliminate the "traditional" style vehicle from further consideration. New Flyer and North American Bus Industries were then asked to submit price proposals.

On December 17th, the following prices were received.

New Flyer of America	$750,000 per vehicle
North American Bus Industries (advanced style)	$625,000 per vehicle

Based on all information submitted, the proposal submitted by NABI is considered to be superior in the following key areas.

- **Range** – NABI offered greater fuel capacity with fuel analysis to validate compliance with the MTA's 400-mile range requirements while NFA proposed a range of 350 miles.
- **Exterior noise** – NABI's proposal is compliant with the MTA's 80 dBa exterior noise level. In addition, the firm provided an option for additional exterior noise reduction to 78 dBa. NFA was compliant with specification requirements but did not offer to reduce further exterior noise levels.
- **Exterior Appearance** – The exterior of the NABI vehicle is slightly superior to the vehicle offered by NFA. The vehicle offers advanced styling with a large windshield. The exterior has aerodynamic lines and a modern appearance. The NFA vehicle also offers large windows but has a more traditional look.
- **Proposed technical deviations** – NABI took only some minor proposed technical deviations while NFA proposed many deviations such as less graffiti resistant materials and compound reduction drive axle without disc brakes that have operational disadvantages to the MTA.

- **Delivery schedule** - NABI proposed to comply with the MTA delivery schedule while NFA proposed a schedule that was 15 months later than requested by the MTA.

In its offer, NABI requested an advance payment of 20%. While this type of payment is contained in the APTA Standard Bus Procurement Guidelines as a potential payment provision, MTA has not traditionally provided such advance payments. As a result of clarifications, NABI submitted a revised offer that eliminated the advance payment request but increased the unit price to $629,570 per vehicle, an increase of $4,570. Staff also requested clarification regarding NABI's proposed price of $6,687 per vehicle to reduce the exterior sound level from 80 dBA to 78 dBA. As a result of the clarifications, NABI submitted a reduced price of $3,344 for the additional noise reduction. Thus, the total price for each vehicle with the inclusion of the further noise reduction is $632,914 per vehicle.

The MTA has options to purchase up to 400 additional vehicles with a minimum quantity of 50 Vehicles and a maximum quantity of up to 200 vehicles under each option. The options are valid for five years following the date of execution of the contract. The option pricing is based on the unit price of the base order vehicles plus the increase in the Producer Price Index for Truck and Bus Bodies for that period.

As requested in the pricing forms, NABI also submitted a total price of $1,222,306 for spare parts, special diagnostic tools and training aids. Staff has recommended that funding for these purchases be authorized by the Board of Directors.

Based on the comprehensive procurement evaluation process, the SSC determined that the proposal submitted by North American Bus Industries offers the best overall value for the MTA at the lowest risk and the lowest total proposed price.

D. Cost/Price Analysis Explanation of Variances

The recommended price has been determined to be fair and reasonable based upon adequate competition and a price analysis as required by PCC 20217.

BOARD REPORT ATTACHMENT A-2

PROUCREMENT SUMMARY

LIST OF PRIME CONTRACTORS AND SUBCONTRACTORS FOR RESPONSIVE AND RESPONSIBLE PROPOSERS

Prime Contractor:	New Flyer of America
Subcontractor(s):	None
Prime Contractor:	North American Bus Industries
Subcontractor(s):	FAB Industries

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

2

FINANCE AND BUDGET COMMITTEE
MAY 20, 2004

SUBJECT: CONSENT DECREE LOAD FACTOR COMPLIANCE

ACTION: AUTHORIZE EXPENDITURES IN THE FY05 BUDGET FOR BUS SERVICE EXPANSION TO SUPPORT CONSENT DECREE COMPLIANCE

RECOMMENDATION

1. Incorporate the addition of 208,250 revenue service hours at a total cost of $11.3 million into the FY05 budget for bus service expansion for Consent Decree load factor compliance and use $11.3 million of the $18.2 million fund balance reserved for Proposition A Discretionary Incentive Program..
2. Increase the FY05 budgeted full-time equivalent positions by 119 Bus Operators, 12 Service Attendants and 4 Transit Operations Supervisors for bus service expansion.

ISSUE

The January 12, 2004 Final Order from the Special Master required the addition of 290,000 annual in-service hours by December 2004 for Consent Decree load factor compliance. Pursuant to this Order, the Board of Directors is requested to authorize the expenditure of $11.3 million in FY05 to fund bus service expansion.

POLICY IMPLICATIONS

Authorization of the recommended expenditures is consistent with Board direction to comply with several key elements of the Special Master's Order, specifically, the requirement to expand service by 290,000 annual in-service hours by December 2004. Funding of this expansion of bus service activities could result in a reduction of funds available for other projects and programs. More specifically, the staff recommendation will impact funds that are currently available to recipients of the Proposition A Discretionary Incentive Program although the staff recommendation leaves the basic Proposition A Discretionary Incentive Program intact by using part of the reserved funds from the program, so that a critical obligation with regionwide impacts can be addressed.

The Los Angeles County Transportation Commission (LACTC) originally created the Proposition A Discretionary Incentive Program in 1985 to substitute for State Transportation Development Act (TDA) Article 4.5 funding. The State intended that TDA Article 4.5

funding be used for intra-community public transportation services. However, at the time, the LACTC decided to provide Los Angeles County cities and other eligible recipients more flexible and direct funding from Proposition A Discretionary and redistribute TDA Article 4.5 funding to the MTA and the Municipal Operators through TDA Article 4. This swap became the Incentive Program, which was implemented to address the State's objective for TDA Article 4.5 by (1) encouraging coordinated paratransit systems regionwide; and (2) establishing performance standards to promote the effectiveness of participating systems as a condition for receiving funds.

OPTIONS

The Board of Directors may choose not to approve the recommended expenditure, or may choose to fund the expenditure in a manner different from staff's recommendation. These options are not recommended, as this would impact the ability to provide the service expansion required in the recent Consent Decree Order in a manner consistent with meeting agency priorities. Staff's recommended use of Proposition A Discretionary Incentive Program fund balance is the best option, as it would use funds that are available and have no scheduled near or long-term commitment.

Other options for funding the consent decree service have impacts on future programs and projects, such as, programming ROW Lease Revenues (programmed for Bus Facilities Projects in the 10-year plan), reducing the Bus Rebuild Program (could result in compromised bus reliability), or using the Proposition C 40% Discretionary fund balance (programmed to rail rehabilitation projects in the 10-year plan.) These options are not recommended based on their long-range negative impacts.

FINANCIAL IMPACT

The financial impact of this proposal is to increase the FY05 budget by $11.3 million and 135 FTE's. Since these expenditures and revenues are not currently included in the FY05 proposed budget, this action will incorporate the additional funds into the FY05 budget.

The proposed funding source is the Incentive Program reserved fund balance of $18.2 million. The Incentive program is funded with Proposition A Discretionary funds and is budgeted to spend $11.3 million in FY05. This action will reduce the Incentive Program fund balance to $6.3 million.

Subsequent years funding for the consent decree service is currently estimated to be $18.2 million beginning in FY06. Funding for these costs will be evaluated during the revision to the 10-year plan to be prepared during August 2004.

BACKGROUND

On January 12, 2004, the Special Master issued a Final Order directing MTA to undertake a significant service expansion by December 2004 to meet the 1.20 and 1.25 Load Factor targets in the Consent Decree. On February 2, 2004, the Board of Directors directed staff to comply with the service expansion requirements of the Order, while submitting an appeal to

Federal Court regarding the requirement to purchase and operate 145 additional buses during peak periods.

To meet the service expansion requirements of the Order, staff has developed a service plan that would expand bus service by 333,500 annualized revenue hours. This is the equivalent of the 290,000 annual in-service hours required by the Special Master's Order, the difference being layover time, terminal changes (interline time), etc. A total of 83,000 revenue hours (for the full year) of bus service would be added in June 2004, with an additional 125,250 revenue hours (for half of FY05) operated between December 2004 and June 2005 . For FY06 the additional hours will total 333,500 revenue hours. Operation of the additional bus service requires an increase of 119 bus operators, 12 service attendants and 4 Transit Operations Supervisors above FY05 budgeted levels at a cost of $11.3 million. Other operational support functions are able to incorporate this service expansion within budgeted levels.

The increase in bus service associated with this service expansion will be focused on adding capacity during peak service hours, as well as midday and weekend periods on approximately 70 bus routes with the highest daily ridership.

NEXT STEPS

Upon Board approval, the FY05 Budget will be amended to include funding for bus service expansion and increase the number of FTEs by 135. The first increment of expanded bus service will begin operation in June 2004, with the remainder provided in December 2004.

Prepared By: Roderick T. Goldman, Deputy Executive Officer, Service Development

John B. Catoe, Jr.
Deputy Chief Executive Officer

Roger Snoble
Chief Executive Officer

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

2

CONSTRUCTION COMMITTEE
July 15, 2004

PROJECT: METRO ORANGE LINE - BIKEWAY PROJECT

CONTRACT: C0675 DESIGN/BUILD
SHIMMICK CONSTRUCTION CO., INC./OBAYASHI CORPORATION, J.V.

ACTION: INCREASE THE LIFE OF PROJECT BUDGET FOR THE BIKEWAY PROJECT FROM $8,100,000 TO $10,637,860

RECOMMENDATION

A. Increase the life of project budget by $2,537,860 for the Bikeway portion of the Orange Line Project from a baseline value of $8,100,000 to $10,637,860;

B. Increase the Chief Executive Officer's delegated Contract Modification Authority for Contract C0675 by $2,232,500 from $15,109,502 to $17,342,002; and

C. Amend the Fiscal Year 2005 Capital Budget to appropriate $1,979,530 Federal Highway funds and $558,330 City of Los Angeles matching funds for Project 800114.

Within Construction Committee authority: Yes ☐ No ☒ N/A ☐

RATIONALE

The Current life of project budget ceiling was established lower than the available funding of $10,637,860 due to a favorable bid from the Contract No. C0675 Design/Build Contractor for the Metro Orange Line Project. However, at this time it is desirable to increase the life of project ceiling to the original Call for Projects grant amount of $10,637,860 to accommodate requests for Bikeway enhancements. A summary of the additional recommended bikeway enhancements is shown in Attachment A.

The Bikeway Project (800114), a joint MTA and Los Angeles Department of Transportation undertaking, is being built concurrently with the Metro Orange Line Busway Project (800112) but is separately budgeted. The City of Los Angeles obtained funding for the Bikeway Project through the MTA Call For Projects. Based on recent discussions with City of Los Angeles staff it is now recommended that the Bikeway Project Budget be increased to the previously approved Call for Projects value to pay for additional Bikeway enhancements. The total estimated cost required for the bikeway enhancements exceeds the current value of the budget. Recommendation A would increase the current life of project budget ceiling from $8,100,000 to $10,637,860, which is detailed in Attachment B.

On February 27, 2003, the MTA Board adopted the Metro Orange Line Bikeway Project budget with a baseline value of $8,100,000 and authorized the Chief Executive Officer to execute Contract Modifications for the combined Bikeway and Busway C0675 Design/Build Contract up to $15,109,502. Recommendation B increases the Chief Executive Officer's delegated Contract Modification Authority for the additional bikeway enhancements. Recommendation C makes a corresponding adjustment to the Fiscal Year 2005 Capital Budget for Project 800114.

Attachments C and D are included as part of new Cost Management Procedures, effective July 1, 2004, to show the Bikeway Project Cost Status and Financial/Grant Status.

IMPACTS TO OTHER CONTRACTS

None at this time.

FINANCIAL IMPACT

The increased cost in the life of project budget of $2,537,860 will be funded with $1,979,530 Federal Highway funds and $558,330 City of Los Angeles matching funds. There is an impact to the MTA FY05 Capital Budget, as additional funding of 2,537,860 was not included in the budget to cover the additional bikeway enhancements because agreement with City of Los Angeles staff was not reached until after the FY05 budget was submitted to the MTA Board. Since this is a multi-year project, the cost center manager and appropriate Executive Officer will be accountable for budgeting the project costs in future years consistent with the MTA Board adopted total project budget.

Funding sources for this project are 78 percent Federal Highway funds and 22 percent City of Los Angeles matching funds. The Bikeway Project (800114) is being built concurrently with the Metro Orange Line Busway Project (800112) and is separately budgeted.

COST RECOVERY

Potential for Cost Recovery: ☐ Yes ☒ No ☐ N/A

ALTERNATIVES CONSIDERED

The MTA Board could decide not to increase the budget ceiling for the Bikeway Project. However, the funding plan is already in place. The MTA's Contract No. C0675 Contractor is proceeding with initial bikeway enhancements within the current life of project budget ceiling. A delay in increasing the budget ceiling may prevent the Contract No. C0675 Design/Build Contractor from completing the additional enhancements for the Bikeway Project at the same time as the Busway Project in August 2005.

ATTACHMENTS

A. Bikeway Enhancements
B. Proposed Revised Bikeway Budget (Project 800114)
C. Project Cost Status
D. Financial/Grant Status

Prepared By: William R. Brown, Project Control Manager
Roger F. Dames, Deputy Executive Officer, Project Manager

Richard Thorpe
Chief Capital Management Officer
Construction Project Management

Roger Snoble
Chief Executive Officer

7/1/2004

ATTACHMENT A

METRO ORANGE LINE
BIKEWAY ENHANCEMENTS

- Design and construct new signalized bike path intersection at Chandler Boulevard South and Leghorn Avenue.
- Redwood headers at edge of asphalt.
- Storm Drainage system underneath the bikeway between Tyrone and Hazeltine avenues (shared 50% funding allocation with busway project).
- Bike path enhancements:
    - Additional striping
    - Additional pavement markings
    - Additional two foot width of asphalt pavement
- Bicycle lockers at stations.
- W3-3 "Signal Ahead" warning signs and "slow" pavement messages at bikeway intersection crossings.
- Landscaping on City of Los Angeles right-of-way immediately adjacent to MTA right-of-way.

Note: The above items will be implemented based on priorities established by LADOT to the extent sufficient funding is available. Some items may not be implemented by MTA at this time due to funding constraints.

ATTACHMENT B

METRO ORANGE LINE
PROPOSED REVISED BIKEWAY BUDGET (800114)

Elements	Adopted Budget	Proposed Action	Proposed Budget	% Of Total
Construction	$5,832,000	$2,232,500	$ 8,064,500	76%
Special Conditions	$ 175,000	$ 523,000	$ 698,000	6%
Professional Services	$1,258,000	$ 195,000	$ 1,453,000	14%
Project Contingency	$ 835,000	$ (412,640)	$ 422,360	4%
Total:	$8,100,000	$2,537,860	$10,637,860	100%

7/1/2004

ATTACHMENT C

METRO ORANGE LINE
PROJECT COST STATUS FOR BIKEWAY (800114)

Elements	Adopted Budget	Current Forecast(1)	Commitments(2)	Expenditure(3)
Guideways	$5,832,000	$6,290,000	$ 5,157,000	$ 497,000
Special Conditions	$ 175,000	$ 541,000	$ 397,000	$ 201,000
Professional Services	$1,258,000	$1,269,000	$ 896,000	$ 166,000
Project Contingency	$ 835,000	$ 0	$ 0	$ 0
Total:	$8,100,000	$8,100,000	$6,450,000	$ 864,000

Notes:

1. Excludes the proposed enhancements.
2. Includes Fiscal Year 2005 Approved MTA Agency Budget within Professional Services Element Item.
3. Expenditures are cumulative through April 2004.

ATTACHMENT D

METRO ORANGE LINE
FINANCIAL/GRANT STATUS FOR BIKEWAY (800114)

Source	Adopted Budget	Total Funds Anticipated	Total Funds Available*	Billed to Funding Source
TEA (Federal)	$6,000,000	$6,000,000	$6,000,000	$ 600,000
TEA-21 (Federal)	$1,100,000	$1,100,000	$1,100,000	$ 0
City of L.A.	$1,000,000	$1,000,000	$1,000,000	$ 100,000
Total:	$8,100,000	$8,100,000	$8,100,000	$ 700,000

*Note: This excludes the Call for Projects additional available funds of $2,537,860, which are $1,979,530 Federal Highway funds and $558,330 City of Los Angeles matching funds.

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

28

CONSTRUCTION COMMITTEE
JULY 15, 2004

PROJECT: METRO ORANGE LINE

CONTRACT: CO675 DESIGN/BUILD
SHIMMICK CONSTRUCTION CO., INC.
/OBAYASHI CORPORATION, J.V.

ACTION: EXECUTE CONTRACT MODIFICATION IN THE AMOUNT OF $1,030,239 FOR COMMUNITY LANDSCAPE ENHANCEMENTS

RECOMMENDATION

Authorize the Chief Executive Officer to execute Contract Modification No. 26 to Contract No. C0675 Design/Build with Shimmick Construction Co.,Inc./Obayashi Corp., J. V. (SOJV) for the design and construction to replace all temporary landscape irrigation systems with permanent irrigation systems, and to upgrade all permanent irrigation systems to allow future use of recycled water for the Metro Orange Line Project in the amount of $1,030,239, increasing the Total Contract Value from $156,577,600 to $157,607,839.

Within Construction Committee authority: ☒ Yes ☐ No ☐ N/A

RATIONALE

Current Landscape Irrigation System:

In February 2003, the Board awarded Contract No. CO675 Design/Build for the Metro Orange Line, which included a provisional sum line item in the amount of $1,000,000 for Community Landscape Enhancement.

Contract No. C0675 requires a permanent irrigation system for the landscaping at the bus stations, park and ride lots and along the soundwalls, and a temporary irrigation system for the drought tolerant landscaping for other areas of the busway. The Contractor is required to maintain the permanent and temporary irrigation system for a two (2) year period.

The Contractor bid an at-grade drip emitter temporary irrigation system, which could be left above ground at the end of the two year plant establishment period. This temporary irrigation system would last approximately three years, be subject to damage when walked on, become brittle due to exposure to the sun, and not allow for future use without significant additional costs.

Proposed Landscape Irrigation System:

On December 23, 2003, a Landscape Advisory Committee representing the community along the busway corridor unanimously recommended a permanent irrigation system for drought tolerant landscaping to assure more rapid plant growth and long term sustainability. MTA staff agrees with the recommendations from the community and elected officials. The proposed upgrade would include replacement of the temporary above ground drip irrigation system with a permanent underground rotor/spray/bubbler irrigation system, and changing the entire irrigation system to comply with the appropriate codes and regulations for utilization of potable or recycled water.

This irrigation system will be initially connected to a potable water supply. After Los Angeles Department of Water and Power (LADWP) completes their proposed Recycled Water Pipeline project in the vicinity of the busway, MTA will be able to connect the irrigation system to the Recycled Water Pipeline without significant changes. Use of recycled water will reduce long term water costs and is environmentally responsible, satisfying a significant Sustainable Building Concept goal.

A Change Notice was issued on September 24, 2003, requesting a proposal for an upgrade of the landscape irrigation system. The Contractor's proposed cost for this change was approximately $8 million and requested a 133-calendar day time extension.

MTA staff rejected the Contractor's proposal, and worked with the Contractor to clarify and better define specific requirements for a cost efficient permanent irrigation system, which could eventually utilize recycled water. The Contractor's proposal, received on May 28, 2004, requested a total $2,223,689 and unspecified days of delays for this new work. MTA staff has negotiated a final price of $2,030,239 for the design and construction of this new work. The schedule impacts and its associated costs, if any, will be addressed in a separate Contract Modification as a part of a global schedule recovery plan.

In order to minimize delays to the project, MTA staff has authorized $590,000 from the $1,000,000 provisional sum already available under the Community Landscaping Enhancements line item in Contract No. CO675 to fund landscape irrigation design, and pipe installation where construction is underway. The contract allows the MTA to issue a Contracting Officer's Directive to direct the Contractor to proceed with this work up to $1,000,000 without increasing the Total Contract Value. The net increase to Contract Value is $1,030,239 (negotiated total $2,030,239 minus $1,000,000 provisional sum).

IMPACTS TO OTHER CONTRACTS

For the amount identified within this Board action, only this contract, Contract No. C0675 is impacted. If, however, future Contract No. C0675 actions require funding for any delays extending Contract Milestones; there may be an impact to Contract No. MC067, Construction Management Support Services Consultant to increase Contract No. MC067 CWO No. 1.

In future years, when the LADWP Recycled Water Pipeline project is completed, a separate procurement would be required to connect the landscape irrigation system to the Recycled Water Pipeline.

FINANCIAL IMPACT

Original Contract Award	$150,717,038
Current Cumulative Contract Value	$156,577,600 as of 6/1/04
This Action	$1,030,239
New Cumulative Contract Value	$157,607,839

The funds for this contract action are available within the FY05 Capital Budget of $144,341,000; within budget Cost Center No. 8510 for Project 800112 Metro Orange Line Project. The life of project budget adopted by the Board in February 2003 is $329,500,000. This recommendation will increase the current Contract No. C0675 Total Contract Value by $1,030,239. Since this is a multi-year project, the Cost Center Manager and appropriate Executive Officer will be accountable for budgeting the project costs in future years consistent with the MTA Board adopted total project budget. Funding sources for Project 800112 are a combination of State and local funding sources.

COST RECOVERY

Potential for Cost Recovery: ☐ Yes ☒ No ☐ N/A

ALTERNATIVES CONSIDERED

The MTA Board may reject this recommendation and limit the Community Landscape Enhancements to within the $1,000,000 provisional sum included in the Contract C0675. However, rejection will not allow the staff to incorporate significant comments from the community for a complete permanent irrigation system to sustain landscaping along the entire busway corridor. Rejection will also result in significant future additional cost, and disruptions to the MTA bus operations and passengers to upgrade to a permanent irrigation system utilizing recycled water after the plants are established.

ATTACHMENTS

A. Procurement Summary
A-1. Procurement History
A-2. List of Subcontractors

Prepared By: Hitesh Patel, Director, Construction Management
Roger F. Dames, Deputy Executive Officer, Project Manager

Richard Thorpe
Chief Capital Management Officer
Construction Project Management

Roger Snoble
Chief Executive Officer

BOARD REPORT ATTACHMENT A
PROCUREMENT SUMMARY

Contract C0675 – San Fernando Valley
East-West Corridor Bus Rapid Transit Project

1.	Contract Number: C0675, Change notice/Change Order 38.03		
2.	Recommended Vendor: Shimmick Construction, Inc./Obayashi Corporation, JV		
3.	Cost/Price Analysis Information: See Attachment A-1		
	Bid/Proposed Price: $ $2,223,689	Recommended Price: $ 2,030,239	
4.	Contract Type: Fixed Price		
5.	Procurement Dates:		
	A. Issued: Change Notice 38.00 issued on February 13,2004		
	B. Advertised: N/A		
	C. Pre-proposal Conference: N/A		
	D. Proposals Due: N/A		
	E. Pre-Qualification Completed: N/A		
	F. Conflict of Interest Form Submitted to Ethics: N/A		
6.	Small Business Participation:		
	A. Bid/Proposal Goal: N/A	Date Small Business Evaluation Completed: N/A	
	Small Business Commitment: 27.83% Design 36.52% Construction		
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: N/A	Bids/Proposals Picked up: N/A	Bids/Proposals Received: N/A
8.	Evaluation Information:		
	A. Bidders/Proposers Names: N/A	Bid/Proposal Amount: N/A	Best and Final Offer Amount: $ N/A
	B. Evaluation Methodology: Cost Analysis and Technical Evaluation		
9.	Protest Information:		
	A. Protest Period End Date: N/A		
	B. Protest Receipt Date: N/A		
	C. Disposition of Protest Date: N/A		
10.	Contract Administrator: Robert P. Sechler	Telephone Number: 213-922-7334	
11.	Project Manager: Roger F. Dames	Telephone Number: 213-922-7280	

BOARD REPORT ATTACHMENT A-1
PROCUREMENT HISTORY

A. Background on Contractor

Shimmick-Obayashi is a joint venture of two firms. Shimmick Construction Company, founded in 1990, is a general engineering contractor based in Hayward, California. Its has considerable experience in heavy public works construction, including the Alameda Corridor. Obayashi Corporation, founded in 1892, is an internationally known contractor based in Japan. Its relevant experience includes subways, dams, power plants. rail lines, bridges, highways, and design-build type contracts.

B. Procurement Background

Contract No. C0675 is a fixed price contract, state and locally funded, for a design-build delivery system for the San Fernando Valley East-West Metro Rapidway, plus a federally funded bike-way and pedestrian path, and up to eight (8) Contract Options under a Contractor-Controlled Insurance Program. Contract No. C0675 was awarded to Shimmick Construction Company, Inc.,/Obayashi Corporation, A Joint Venture (SOJV) on April 3, 2003 in the amount of $150,717,038, which included five Contract Options. The Notice to Proceed (NTP) was issued on May 2, 2003, with a completion date 776 calendar days from the Commencement Date of May 2, 2003 set forth in the NTP.

C. Proposal Evaluation

N/A

D. Cost/Price Analysis Explanation of Variances

The recommended price has been determined to be fair and reasonable based upon price/cost analysis, independent cost estimates, clarification meetings and MASD audit of the Contractor's various cost proposals. The recommended price is 9% less than the contractor's proposed cost for CN 38.03.

CN No.	Proposal Amount	MTA Estimate	Negotiated Amount
38.03	$2,223,689	$2,230,112	$2,030,239

BOARD REPORT ATTACHMENT A-2
LIST OF SUBCONTRACTORS

SMALL BUSINESS PARTICIPATION (CO675)

This Contract has a Disadvantaged Business Enterprise (DBE) participation goal of 27.83% for Design and a DBE goal of 36.52% for Construction. The Contract was awarded on April 3, 2003 and is approximately 88% complete for Design and 15% complete for Construction. Current DBE attainment[1] based on the relevant amount[2] is 15.2 % for Design and 3.3% for Construction. Current DBE participation[3] based on total actual amount paid-to-date to Contractor and total actual amount paid-to-date to DBEs is 32.8% for Design and 12.2% for Construction. The Diversity & Economic Opportunity Department (DEOD) will evaluate Contract Mod. No. 26 to determine DBE participation upon receipt of the required cost information.

DEOD is currently auditing the activity shown below as reported by SOJV through March 2004. DEOD will continue to monitor this project to ensure SOJV's compliance with prompt payment requirements.

Design

Original Award Amount (Design)	$ 11,677,268
Relevant Contract Amount[2] (Design)	$ 12,662,302
Total Actual Amount Paid to Date to Prime (Design)	$ 5,862,397

* DBE firms added to project by SOJV for additional DBE attainment.

DESIGN				
Total Commitment	% Complete	Total Current Attainment	Total Current Participation	Compliance Status
27.83%	87.86%	15.20%	32.83%	PERFORMING

Subcontractor Name	% Commitment	% Complete	% Current Attainment	% Current Participation
KATZ OKITSU & ASSOCIATES	8.56%	65.90%	5.20%	11.24%
TATSUMI & PARTNERS	6.74%	69.93%	4.20%	9.07%
RICHARD CHONG	2.97%	100.0%	3.48%	7.51%
WILLIAM YANG	0.81%	34.26%	0.25%	0.55%
ASAHI SURVEYING	3.91%	54.19%	0.77%	1.66%
ANTICH SURVEYING	1.96%	52.09%	0.94%	2.03%
FPL & ASSOCIATES *	0.00%	26.92%	0.20%	0.43%
SANCHEZ DESIGN	1.60%	0.00%	0.00%	0.00%
THE SIERRA GROUP	1.28%	13.44%	0.16%	0.34%
TOTAL	27.83%	-	15.20%	32.83%

Construction

Original Award Amount (Construction)	$ 135,719,520
Relevant Contract Amount[2] (Construction)	$ 138,026,167
Total Actual Amount Paid to Date to Prime (Construction)	$ 32,628,838

CONSTRUCTION				
Total Commitment	% Complete	Total Current Attainment	Total Current Participation 12.18%	Compliance Status
36.52%	14.89%	2.88%		PERFORMING

Subcontractor Name	% Commitment	% Complete	% Current Attainment	% Current Participation
ROMERO GENERAL CONSTRUCTION	9.54%	1.03%	.10%	0.41%
RAINBOW CONSTRUCTION	5.56%	30.98%	1.69%	0.00%
WESTERN PAVING	4.81%	0.00%	0.00%	0.00%
WC BROWN WELDING	4.76%	0.00%	0.00%	0.00%
ACE FENCE	2.43%	2.20%	0.05%	0.22%
CUT CORE DEMOLITION	0.72%	91.65%	0.61%	2.57%
BCB STEEL	0.59%	8.57%	0.05%	0.21%
CONRAD CONSTRUCTORS	0.22%	63.80%	0.12%	0.50%
BLUE SKY AKA UNITED TRAFFIC	0.05%	0.00%	0.00%	0.00%
PW TRUCKING	0.01%	10.92%	0.00%	0.01%
ROSE SUPPLY	1.96%	0.94%	0.02%	0.08%
INDUSTRIAL WHOLESALE	0.80%	6.87%	0.05%	0.23%
LOOP MASTERS	0.16%	0.00%	0.00%	0.00%
DI CARLOS ASSOCIATES (A DBE SUPPLIER)	0.66%	0.00%	0.00%	0.00%
IMPERIAL IRRIGATION	0.59%	0.00%	0.00%	0.00%
GALLO'S	2.10%	0.00%	0.00%	0.00%
FAREAST LANDSCAPE	1.27%	0.00%	0.00%	0.00%
TRISTAR TRANSPORTATION	0.06%	0.00%	0.00%	0.00%
WESTERN PAVING	0.13%	0.00%	0.00%	0.00%
CUT CORE DEMOLITION	0.08%	0.00%	0.00%	0.00%
ABRATIQUE & ASSOCIATES *	0.00%	100.00%	0.14%	0.57%
MORGNER TECHNOLOGY MGT *	0.00%	54.63%	0.02%	0.09%
WAGNER ENGINEERING *	0.00%	26.23%	0.03%	0.13%
TOTAL	36.52%	-	2.88%	12.18%

[1]Current Attainment = Total Actual Amount Paid-to-Date to DBE Subs ÷ Total Current Contract Amount
[2]Relevant Contract Amount = Original Contract Value + Contract Cost Modifications
[3]Current Participation = Total Actual Amount Paid-to-Date to DBE Subs ÷ Total Actual Amount Paid-to-Date to

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

29

CONSTRUCTION COMMITTEE
JULY 15, 2004

PROJECT: METRO ORANGE LINE

CONTRACT: C0675 DESIGN/BUILD
SHIMMICK CONSTRUCTION CO., INC./OBAYASHI CORPORATION, J.V.

ACTION: ISSUE CHANGE ORDERS IN AN AMOUNT NOT-TO- EXCEED $2,000,000 FOR DESIGN AND CONSTRUCTION TO UPGRADE THE BUSWAY PAVEMENT STRUCTURAL SECTION

RECOMMENDATION

Authorize the Chief Executive Officer to issue Change Orders to Contract No. C0675 with Shimmick Construction Co., Inc./Obayashi Corporation, J.V. (SOJV) for the design and construction to upgrade the busway pavement structural section for the Metro Orange Line Project in an amount not-to-exceed $2,000,000, increasing the total contract value from $156,577,600 to $158,577,600.

Within Construction Committee authority: Yes ☒ No ☐ N/A ☐

RATIONALE

Contract No. C0675 requires completion of final design and construction of a 26-foot wide at-grade busway pavement that will run for approximately 13-miles within the Metro right of way between the North Hollywood Metro Red Line Station and Variel Avenue in the West Valley.

This authorization will allow MTA to enter into an agreement with the Contractor for the increase in pavement thickness required for a Traffic Index (TI) of 11.0 for the remaining portions of the busway for a not-to-exceed amount of $2,000,000. The Contractor's current proposal for this work is $2,280,151 and a request for a 41-day time extension. The schedule impacts and its costs, if any, will be addressed in a separate Contract Modification as part of a global schedule recovery plan.

The C0675 contract documents specified pavement structural material and thickness for the busway based on a Traffic Index (TI) of 9.5. TI is one of two major parameters used in the calculation of pavement thickness. TI is calculated based on weight and number of bus trips

#29

REVISED

projected over the design life of pavement. Heavier or more frequent traffic will result in higher TI and thicker pavement sections. STV Inc., MTA's Preliminary Engineering Consultant, calculated TI of 9.5 based on twenty years design life and the Caltrans Highway Design Manual, which is an empirical procedure based on experience.

~~The C0675 contract documents specified pavement structural material and thickness for the busway based on a Traffic Index (TI) of 9.5. TI is one of two major parameters used in the calculation of pavement thickness. TI is calculated based on weight and number of bus trips projected over the design life of pavement. Heavier or more frequent traffic will result in higher TI and thicker pavement sections. STV Inc., MTA's Preliminary Engineering Consultant, calculated TI of 9.5 based on twenty years design life and the Caltrans Highway Design Manual, which is an empirical procedure based on experience.~~

During review of SOJV's design of the busway crossing the City streets, the City of Los Angeles expressed their concern that the projected weight of the 60 foot articulated buses was not taken into consideration as part of the calculation of TI using the Caltrans method. Accordingly, the TI value was re-evaluated. Based on the results of the re-evaluation, the TI of 9.5 was determined insufficient for a 20 year busway life and that a TI of 11.0 was more appropriate.

The City of Los Angeles Pavement Evaluation Design Unit, and Caltrans Headquarters Division of Design Office of State Pavement Design, have been consulted on this issue and also concur with the revised TI calculation method. In addition, MTA has obtained an independent review of the design calculation and methodology from Carter and Burgess Inc., Construction Management Support Services Consultant, concluding that TI of 11.0 is the appropriate design parameter to use for the busway.

To reduce potential delays, MTA executed Contract Modification No. C0675-MOD-19 in the amount of $88,500 for the re-design and construction of the pavement based on TI of 11.0 for the busway east of Whitsett Ave, which has now been paved. To avoid suspending work prior to Board authorization, MTA issued Change Order No. 35.01 in the amount not-to-exceed $600,000 to allow SOJV to commence redesign and initial pavement construction of the remaining portion of busway pavement west of Whitsett Avenue. During May 2004, SOJV submitted cost and schedule proposals, for the re-design and construction of the pavement based on TI of 11.0 for the remaining portion of the busway in the amount of $2,280,151 and a 41 day time extension.

IMPACTS TO OTHER CONTRACTS

For the amount identified within this Board action, only this contract, Contract No. C0675 is impacted. If, however, future Contract No. C0675 actions require funding for any delays extending Contract Milestones; there may be an impact to Contract No. MC067, Construction Management Support Services Consultant to increase the Contract No. MC067 CWO No. 1.

FINANCIAL IMPACT

Original Contract Award	$150,717,038
Current Cumulative Contract Value	$156,577,600 as of 6/1/04
This Action	$2,000,000
New Cumulative Contract Value	$158,577,600

The funds for this contract action are available within the FY05 Capital Budget of $144,341,000 within budget Cost Center No. 8510 for Project 800112 Metro Orange Line Project. The life of project budget adopted by the Board in February 2003 is $329,500,000. This recommendation will increase the current Contract No. C0675 Total Contract Value by $2,000,000. Since this is a multi-year project, the Cost Center Manager and appropriate Executive Officer will be accountable for budgeting the project costs in future years consistent with the MTA Board adopted total project budget. Funding sources for Project 800112 are a combination of State and local funding sources.

COST RECOVERY

Potential for Cost Recovery: ☒ Yes ☐ No ☐ N/A

A portion of the costs for this contract action may be recovered from STV, Inc. for a possible error in calculating the TI value. This issue has been referred to County Counsel for further analysis.

ALTERNATIVES CONSIDERED

The MTA Board may reject staff Recommendation and not approve changing the Traffic Index. Staff is not recommending this option; as this action will result in a significant reduction in the useful life of the busway pavement, an increase to the maintenance costs and frequency, unpredictable pavement performance, and potential impacts to bus operations.

ATTACHMENTS

A. Procurement Summary
A-1. Procurement History
A-2. List of Subcontractors

Prepared By: Hitesh Patel, Director, Construction Management
Roger F. Dames, Deputy Executive Officer

Richard Thorpe
Chief Capital Management Officer
Construction Project Management

Roger Snoble
Chief Executive Officer

BOARD REPORT ATTACHMENT A
PROCUREMENT SUMMARY

Contract C0675 – San Fernando Valley East-West Corridor Bus Rapid Transit Project

1.	Contract Number: C0675, Change Notice/Change Order 35.01		
2.	Recommended Vendor:	Shimmick Construction, Inc./Obayashi Corporation, JV	
3.	Cost/Price Analysis Information: See Attachment A-1		
	Bid/Proposed Price: $ 2,280,151	Recommended Price: **$TBD**	
4.	Contract Type: Fixed Price		
5.	Procurement Dates:		
	Issued: Change Notice 35 Issued on December 24, 2003		
	B. Advertised: N/A		
	C. Pre-proposal Conference: N/A		
	D. Proposals Due: January 2004		
	E. Pre-Qualification Completed: N/A		
	F. Conflict of Interest Form Submitted to Ethics: Yes		
6.	Small Business Participation:		
	A. Bid/Proposal Commitments: N/A	Date Small Business Evaluation Completed: N/A	
	Small Business Commitment:	27.83% Design 36.52% Construction	
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: N/A	Bids/Proposals Picked up: N/A	Bids/Proposals Received: N/A
8.	Evaluation Information:		
	Bidder/Proposer Names: N/A	Bid/Proposal Amount: N/A	Best and Final Offer Amount: $ N/A
	B. Evaluation Methodology: Cost Analysis and Technical Evaluation		
9.	Protest Information:		
	A. Protest Period End Date: N/A		
	B. Protest Receipt Date: N/A		
	C. Disposition of Protest Date: N/A		
10.	Contract Administrator: Robert P. Sechler	Telephone Number: 213-922-7334	
11.	Project Manager: Roger F. Dames	Telephone Number: 213-922-7280	

BOARD REPORT ATTACHMENT A-1
PROCUREMENT HISTORY

A. Background on Contractor

Shimmick-Obayashi is a joint venture of two firms. Shimmick Construction Company, founded in 1990, is a general engineering contractor based in Hayward, California. It has considerable experience in heavy public works construction, including the Alameda Corridor. Obayashi Corporation, founded in 1892, is an internationally known contractor based in Japan. Its relevant experience includes subways, dams, power plants. rail lines, bridges, highways, and design-build type contracts.

B. Procurement Background

Contract No. C0675 is a fixed price contract, state and locally funded, for a design-build delivery system for the San Fernando Valley East-West Metro Rapidway, plus a federally funded bikeway and pedestrian path, and up to eight (8) Contract Options under a Contractor-Controlled Insurance Program. Contract No. C0675 was awarded to Shimmick Construction Company, Inc./Obayashi Corporation, A Joint Venture (SOJV) on April 3, 2003, in the amount of $150,717,038, which included five Contract Options. The Notice to Proceed (NTP) was issued on May 2, 2003, with a completion date 776 calendar days from the Commencement Date of May 2, 2003 set forth in the NTP.

C. Proposal Evaluation

N/A

D. Cost/Price Analysis

The MTA Estimates are not being disclosed at this time in order not to compromise MTA's ability to negotiate a fair and reasonable price for these Changes. Negotiations will be based upon the Contractor's Cost/Schedule Proposals, MASD Audit, MTA Independent Cost Estimate, fact finding and technical analysis of the work scope against proposed and estimated costs.

CN No.	Proposal Amount	MTA Estimate	Negotiated Amount
35.01	$2,280,251	$TBD	$TBD

ATTACHMENT A-2
LIST OF SUBCONTRACTORS

SMALL BUSINESS PARTICIPATION (CO675)

This Contract has a Disadvantaged Business Enterprise (DBE) participation goal of 27.83% for Design and a DBE goal of 36.52% for Construction. The Contract was awarded on April 3, 2003 and is approximately 88% complete for Design and 15% complete for Construction. Current DBE attainment[1] based on the relevant amount[2] is 15.2 % for Design and 3.3% for Construction. Current DBE participation[3] based on total actual amount paid-to-date to Contractor and total actual amount paid-to-date to DBEs is 32.8% for Design and 12.2% for Construction. The Diversity & Economic Opportunity Department (DEOD) will evaluate Change Order No. 35 to determine DBE participation upon receipt of the required cost information.

DEOD is currently auditing the activity shown below as reported by SOJV through March 2004. DEOD will continue to monitor this project to ensure SOJV's compliance with prompt payment requirements.

Design

Original Award Amount (Design)	$ 11,677,268
Relevant Contract Amount[2] (Design)	$ 12,662,302
Total Actual Amount Paid to Date to Prime (Design)	$ 5,862,397

* DBE firms added to project by SOJV for additional DBE attainment.

DESIGN				
Total Commitment	% Complete	Total Current Attainment	Total Current Participation 32.83%	Compliance Status
27.83%	87.86%	15.20%		PERFORMING

Subcontractor Name	% Commitment	% Complete	% Current Attainment	% Current Participation
KATZ OKITSU & ASSOCIATES	8.56%	65.90%	5.20%	11.24%
TATSUMI & PARTNERS	6.74%	69.93%	4.20%	9.07%
RICHARD CHONG	2.97%	100.0%	3.48%	7.51%
WILLIAM YANG	0.81%	34.26%	0.25%	0.55%
ASAHI SURVEYING	3.91%	54.19%	0.77%	1.66%
ANTICH SURVEYING	1.96%	52.09%	0.94%	2.03%
FPL & ASSOCIATES *	0.00%	26.92%	0.20%	0.43%
SANCHEZ DESIGN	1.60%	0.00%	0.00%	0.00%
THE SIERRA GROUP	1.28%	13.44%	0.16%	0.34%
TOTAL	27.83%	-	15.20%	32.83%

Construction

Original Award Amount (Construction) $ 135,719,520
Relevant Contract Amount[2] (Construction) $ 138,026,167
Total Actual Amount Paid to Date to Prime (Construction) $ 32,628,838

CONSTRUCTION				
Total Commitment	% Complete	Total Current Attainment	Total Current Participation	Compliance Status
36.52%	14.89%	2.88%	12.18%	PERFORMING

Subcontractor Name	% Commitment	% Complete	% Current Attainment	% Current Participation
ROMERO GENERAL CONSTRUCTION	9.54%	1.03%	.10%	0.41%
RAINBOW CONSTRUCTION	5.56%	30.98%	1.69%	0.00%
WESTERN PAVING	4.81%	0.00%	0.00%	0.00%
WC BROWN WELDING	4.76%	0.00%	0.00%	0.00%
ACE FENCE	2.43%	2.20%	0.05%	0.22%
CUT CORE DEMOLITION	0.72%	91.65%	0.61%	2.57%
BCB STEEL	0.59%	8.57%	0.05%	0.21%
CONRAD CONSTRUCTORS	0.22%	63.80%	0.12%	0.50%
BLUE SKY AKA UNITED TRAFFIC	0.05%	0.00%	0.00%	0.00%
PW TRUCKING	0.01%	10.92%	0.00%	0.01%
ROSE SUPPLY	1.96%	0.94%	0.02%	0.08%
INDUSTRIAL WHOLESALE	0.80%	6.87%	0.05%	0.23%
LOOP MASTERS	0.16%	0.00%	0.00%	0.00%
DI CARLOS ASSOCIATES (A DBE SUPPLIER)	0.66%	0.00%	0.00%	0.00%
IMPERIAL IRRIGATION	0.59%	0.00%	0.00%	0.00%
GALLO'S	2.10%	0.00%	0.00%	0.00%
FAREAST LANDSCAPE	1.27%	0.00%	0.00%	0.00%
TRISTAR TRANSPORTATION	0.06%	0.00%	0.00%	0.00%
WESTERN PAVING	0.13%	0.00%	0.00%	0.00%
CUT CORE DEMOLITION	0.08%	0.00%	0.00%	0.00%
ABRATIQUE & ASSOCIATES *	0.00%	100.00%	0.14%	0.57%
MORGNER TECHNOLOGY MGT *	0.00%	54.63%	0.02%	0.09%
WAGNER ENGINEERING *	0.00%	26.23%	0.03%	0.13%
TOTAL	36.52%	-	2.88%	12.18%

[1]Current Attainment = Total Actual Amount Paid-to-Date to DBE Subs ÷ Total Current Contract Amount
[2]Relevant Contract Amount = Original Contract Value + Contract Cost Modifications
[3]Current Participation = Total Actual Amount Paid-to-Date toDBE Subs ÷ Total Actual Amount Paid-to-Date to

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

20

REVISED

CONSTRUCTION COMMITTEE
OCTOBER 21, 2004

PROJECT: METRO ORANGE LINE

CONTRACT: C0675 DESIGN/BUILD
SHIMMICK CONSTRUCTION CO., INC./OBAYASHI CORPORATION, J.V.

ACTION: EXECUTE RECOVERY AGREEMENT FOR ORANGE LINE RECOVERY PLAN

RECOMMENDATION

Authorize the Chief Executive Officer to execute a Recovery Agreement to Contract No. C0675 Design/Build with Shimmick Construction Co., Inc./Obayashi Corp., J.V (SOJV) to recover schedule delays and settle time related claims in lieu of compensable time extensions for the Metro Orange Line Project in an amount not-to-exceed $7.9 million as further described in Attachment B.

Within the Construction Committee Authority: ☐ Yes ☒ No ☐ N/A

RATIONALE

The Metro Orange Line Project Design/Build Contractor's August 2004 schedule update forecasts that the Contract Substantial Completion milestone is five months behind the contractually specified completion of June 16, 2005. There are a multitude of reasons for the forecast delay, which includes MTA caused delays, Contractor caused delays as well as the California Court of Appeal stay of Project issued on August 2, 2004.

Staff believes it is important to move this project forward for the following reasons: MTA has already invested over $170 million in this project. Continuing to move this project forward while completing the Court ordered environmental work, would cost only a fraction more, while the alternative of stopping or further delaying would have a significant added cost. Furthermore, the Orange Line is a key Air Quality Transportation Control Measure (TCM) identified in the SCAG Regional Transportation Plan, Regional Transportation Improvement Program (RTIP), and the AQMD clean air plans. As Los Angeles County is in a non-attainment area for ozone air quality, TCMs must be implemented in a timely manner to improve air quality. Failure to do so could result in the interruption in the flow of federal

transportation funds. SCAG indicated that the region would be in jeopardy of forfeiting federal funds if there is a delay in delivering TCMS such as the Orange Line. To achieve the earliest possible Orange Line completion date (August 2005), the Contractor must take actions to increase staff plus extend hours of operation. The Contractor would incrementally ramp up operations. It is unlikely that full operations would be reached prior to a Board decision on the revised environmental work required by court order. However, it is critical this work move forward now in an effort to minimize associated delay costs to the project.

MTA staff is recommending approval of a Recovery Plan which would pay the Design/Build Contractor to recover schedule and settle time related claims, as opposed to paying for delay costs beyond the MTA Board adopted August 2005 Revenue Operations Date (ROD) and adjudicating time related claims after the Project is completed. This preferred action would minimize the cost and schedule exposure for the MTA. The potential costs for delay are in the range of $8 million to $10 million. The Recovery Plan can be implemented at less cost than delaying the Project.

The Contractor has submitted a recovery plan that would mitigate the total delay impact and allow the MTA to maintain an August 2005 ROD. The Recovery Agreement recommended for approval includes Contract terms and conditions, which allow the Contractor flexibility to hire additional direct hire employees and subcontractors. To the extent existing Disadvantaged Business Enterprise (DBE) subcontractors do not have sufficient resources immediately available to support the effort, the Contractor would be allowed to utilize other available resources. Accordingly, the dollar amount of this Agreement will not be included in the total DBE goal. However, the Contractor will use best efforts in utilizing additional DBE subcontractors when possible. ~~this will not reduce the original DBE dollar commitment made for the base scope of work.~~ It also includes a settlement of all time related claims. Payment would be based on Contractor performance and the achievement of Contract Milestones to support an August 2005 ROD.

To minimize the recovery cost, the MTA has agreed to allow the Design/Build Contractor to finish some non-critical construction activities, such as landscaping, after revenue operations. In addition, the City of Los Angeles will be asked to allow the Design/Build Contractor to construct portions of seven busway intersections using a grind and overlay technique rather than full depth pavement replacement, which decreases the contractor's construction duration and lessens community construction impacts during reconstruction of intersections. With actions above, the recovery plan allows the MTA to maximize the mitigation opportunities while the window of opportunity still exists to recover schedule.

Previous Contract actions have been authorized to mitigate schedule delays attributable to the MTA. By March 30, 2004, the Contractor was reporting a delay of four months. At that time the Chief Executive Officer initiated schedule mitigation by issuing Change Order No. 48.01 for $280,000 to initiate recovery of 28 calendar days for owner caused delays due to contaminated soils. In addition to Change Order No. 58.00 for $300,000 to initiate recovery of 33 calendar days of delay associated with redesign of the busway pavement structural section for an increased Traffic Index. These actions were initiated to take advantage of optimal construction acceleration opportunities during the initial rough grading and intersection construction phase of the Project. By the end of July 2004, these actions as well

as those of the Contractor allowed the Contractor to successfully mitigate two of the four months of delay.

On August 2, 2004, the California Court of Appeals issued a stay (ordering MTA to immediately stop all work) to the Project and consequently the MTA issued an immediate suspension of work to the C0675 Design/Build Contractor. The suspension of work was lifted on August 26, 2004. While the direct impact of the suspension was 24 days there are numerous indirect effects of the suspension that caused the impact to greatly exceed the 24 days. Such indirect effects of the stay include: (1) rehiring of field crew, (2) retraining of new employees to replace employees lost due to the suspension, (3) cancellation of material orders and reordering of such materials. A key critical procurement of steel canopies for installation at the stations was suspended and the fabrication placement in the suppliers schedule has been significantly impacted (up to a projected three months). These cumulative impacts lead to the current forecast of a five-month delay in achieving the Contract Substantial Completion Milestone.

To minimize the overall schedule delay impact due to the Court ordered stay, the Chief Executive Officer issued Change Orders No. 72.001 and 72.01 in the cumulative amount of $990,000 to the C0675 Design/Build Contractor for standby and safety work related to the MTA issued suspension of work. These actions allowed the Contractor to maintain some supervisory level workers and critical equipment on site. The cost for these Change Orders are not included in the agreement with the Contractor since these costs will be incurred regardless of whether the recovery plan is approved or not.

IMPACTS TO OTHER CONTRACTS

Since this action is taken to accelerate Contract No. C0675 Design/Build scope which will mitigate the Design/Build Contractor's schedule, there are no other contracts impacted. This action may require additional overtime by City of Los Angeles inspection forces which must be paid for by MTA.

FINANCIAL IMPACT

The cost of delay or the recovery plans, whichever is chosen, will be funded from the Orange Line Project Contingency. There is sufficient Project Contingency at this time and no increase to the Board approved life of project budget is requested. The cost elements within the total life of project budget will be reallocated to reflect the reduction of Project Contingency.

The funds for this contract action are available within the FY05 Capital Budget of $174,932,887; within the budget Cost Center No. 8510 for Project 800112 Metro Orange Line Project and the FY05 Capital Budget (as increased by the Board in July 2004) of $8,061,354 for Project 800114 Metro Orange Line Bikeway Project. The life of project budget for Project 800112 adopted by the Board in February 2003 is $329,500,000. The life of the Project budget for Project 800114 as increased by the Board in July 2004 is $10,637,860. This recommendation is within the current life of project budget for both projects. Since these are multi-year projects, the cost center manager and appropriate Executive Officer will be

accountable for budgeting both project costs in future years consistent with the MTA Board adopted total projects budgets. Funding sources for Project 800112 are a combination of Federal, State and local funding sources. Federal funds in Project 800112 are specifically earmarked for a portion of the Articulated Vehicle Procurement. Funding sources for Project 800114 are a combination of Federal and City of Los Angeles sources.

COST RECOVERY

Potential for Cost Recovery: ☐ Yes ☒ No ☐ N/A

ALTERNATIVES CONSIDERED

The MTA Board may reject the Recommendation and not approve the recovery plan for Contract No. C0675, but the Contractor will be entitled to both compensable and non-compensable time extensions. The planned August 2005 Revenue Operations Date will not be achieved and would likely slip to January 2006. In addition, MTA will incur additional staff and Construction Management consultant labor costs to manage Contract No. C0675 over the extended period of performance. Also, the time related claims would most likely have to be resolved individually within the legal system. It is estimated that these costs would be approximately the same, if not exceed, those recommended in the Recovery Agreement.

ATTACHMENTS

A Procurement Summary
A-1. Procurement History
A-2 List of Subcontractors
B Metro Orange Line Recovery Plan

Prepared By: William R. Brown, Project Control Manager
Roger F. Dames, Deputy Executive Officer, Project Manager.

RICHARD THORPE
CHIEF CAPITAL MANAEGMENT OFFICER
CONSTRUCTION PROJECT MANAGEMENT

ROGER SNOBLE
CHIEF EXECUTIVE OFFICER

BOARD REPORT ATTACHMENT A
PROCUREMENT SUMMARY

Contract C0675 – San Fernando Valley
East-West Corridor Bus Rapid Transit Project

1.	Contract Number: C0675 Change Notice/Change Order - **TBD**		
2.	Recommended Vendor:	Shimmick Construction, Inc./Obayashi Corporation, JV	
3.	Cost/Price Analysis Information: See Attachment A-1		
	Bid/Proposed Price: **$TBD**	Recommended Price: **$TBD**	
4.	Contract Type: Fixed Price		
5.	Procurement Dates:		
	Issued: **TBD**		
	B. Advertised: N/A		
	C. Pre-proposal Conference: N/A		
	D. Proposal Due: N/A		
	E. Pre-Qualification Completed: N/A		
	F. Conflict of Interest Form Submitted to Ethics: Yes		
6.	Small Business Participation:		
	A. Bid/Proposal Commitments: 25% DBE goal for Design 34% DBE goal for Construction	Date Small Business Evaluation **Completed:** N/A	
	Small Business Commitment:	27.83% Design 36.52% Construction	
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: N/A	Bids/Proposals Picked up: N/A	**Bids/Proposals Received: N/A**
8.	Evaluation Information:		
	Bidder/Proposer Names: N/A	Bid/Proposal Amount: N/A	Best and Final Offer Amount: $ N/A
	B. Evaluation Methodology: Cost Analysis and Technical Evaluation		
9.	Protest Information:		
	A. Protest Period End Date: N/A		
	B. Protest Receipt Date: N/A		
	C. Disposition of Protest Date: N/A		
10.	Contract Administrator: Robert P. Sechler	Telephone Number: 213-922-7334	
11.	Project Manager: Roger F. Dames	Telephone Number: 213-922-7280	

BOARD REPORT ATTACHMENT A-1
PROCUREMENT HISTORY

A. Background on Contractor

Shimmick-Obayashi is a joint venture of two firms. Shimmick Construction Company, founded in 1990, is a general engineering contractor based in Hayward, California. It has considerable experience in heavy public works construction, including the Alameda Corridor. Obayashi Corporation, founded in 1892, is an internationally known contractor based in Japan. Its relevant experience includes subways, dams, power plants, rail lines, bridges, highways, and design-build type contracts.

B. Procurement Background

Contract No. C0675 is a fixed price contract, state and locally funded, for a design-build delivery system for the San Fernando Valley East-West Metro Rapidway, plus a federally funded bike-way and pedestrian path, and up to eight (8) Contract Options under a Contractor-Controlled Insurance Program. Contract No. C0675 was awarded to Shimmick Construction Company, Inc./Obayashi Corporation, A Joint Venture (SOJV) on April 3, 2003 in the amount of $150,717,038, which included five Contract Options. The Notice to Proceed (NTP) was issued on May 2, 2003, with a completion date 776 calendar days from the Commencement Date of May 2, 2003 set forth in the NTP.

C. Proposal Evaluation

N/A

D. Cost/Price Analysis

N/A

BOARD REPORT ATTACHMENT A-2
LIST OF SUBCONTRACTORS

SMALL BUSINESS PARTICIPATION (CO675)

This Contract has a Disadvantaged Business Enterprise (DBE) participation goal of 27.83% for Design and a DBE goal of 36.52% for Construction. The Contract was awarded on April 3, 2003 and is approximately 97% complete for Design and 46% complete for Construction. Current DBE attainment[1] based on the relevant amount[2] is 24.56% for Design and 7.78% for Construction. Current DBE participation[3] based on total actual amount paid-to-date to Contractor and total actual amount paid-to-date to DBEs is 5.48% for Design and 17.96% for Construction.

DEOD is currently auditing the DBE progress shown below as reported by SOJV through the June 29, 2004 pay estimate. Currently, SOJV is not in compliance with the Dispute Resolution DBE requirements for this contract.

Design

Original Award Amount (Design)	$ 11,677,268
Relevant Contract Amount[2] (Design)	$ 13,228,768
Total Actual Amount Paid to Date to Prime (Design)	$ 59,145,381**

DESIGN				
Total Commitment	% Complete	Total Current Attainment	Total Current Participation	Compliance Status
27.83%	97.46%	24.56%	5.48%**	PERFORMING

Subcontractor Name	% Commitment	% Current Attainment	% Current Participation
KATZ OKITSU & ASSOCIATES	8.56%	6.58%	1.47%
TATSUMI & PARTNERS	6.74%	5.28%	1.18%
RICHARD CHONG	2.97%	3.82%	0.85%
WILLIAM YANG	0.81%	0.86%	0.19%
ASAHI SURVEYING	3.91%	3.40%	0.76%
ANTICH SURVEYING	1.96%	2.18%	0.49%
FPL & ASSOCIATES *	0.00%	0.19%	0.04%
SANCHEZ DESIGN	1.60%	0.02%	0.00%
THE SIERRA GROUP	1.28%	0.15%	0.03%
YX & ASSOCIATES *	0.00%	2.08%	0.47%
TOTAL	27.83%	24.56%	5.48%**

* DBE firms added to project by SOJV for additional DBE attainment.

** Participation is currently calculated against paid-to-date for Design and Construction. Design payments must be broken out for more accurate reporting.

[1] *Current Attainment = Total Actual Amount Paid-to-Date to DBE Subs ÷ Total Current Contract Amount*

[2] *Relevant Contract Amount = Original Contract Value + Contract Cost Modifications*

[3] *Current Participation = Total Actual Amount Paid-to-Date to DBE Subs ÷ Total Actual Amount Paid-to-Date to Prime*

Construction

Original Award Amount (Construction)	$ 135,719,520
Relevant Contract Amount[2] (Construction)	$ 136,291,461 **
Total Actual Amount Paid to Date to Prime (Construction)	$ 59,145,381***

CONSTRUCTION				
Total Commitment	% Complete	Total Current Attainment	Total Current Participation	Compliance Status
36.52%	45.94%	7.78%	17.96%	PERFORMING

Subcontractor Name	% Commitment	% Current Attainment	% Current Participation
ROMERO GENERAL CONSTRUCTION	9.54%	0.90%	2.08%
RAINBOW CONSTRUCTION	5.56%	4.16%	9.58%
WESTERN PAVING	4.81%	0.43%	0.99%
WC BROWN WELDING	4.76%	0.21%	0.49%
ACE FENCE	2.43%	0.21%	0.49%
CUT CORE DEMOLITION	0.72%	0.61%	1.42%
BCB STEEL	0.59%	0.06%	0.14%
CONRAD CONSTRUCTORS	0.22%	0.13%	0.31%
BLUE SKY AKA UNITED TRAFFIC	0.05%	0.05%	0.11%
PW TRUCKING	0.01%	0.10%	0.22%
ROSE SUPPLY	1.96%	0.38%	0.88%
INDUSTRIAL WHOLESALE	0.80%	0.16%	0.38%
LOOP MASTERS	0.16%	0.00%	0.00%
DI CARLOS ASSOCIATES	0.66%	0.00%	0.00%
IMPERIAL IRRIGATION	0.59%	0.00%	0.00%
GALLO'S	2.10%	0.00%	0.00%
FAREAST LANDSCAPE	1.27%	0.00%	0.00%
TRISTAR TRANSPORTATION	0.06%	0.00%	0.00%
WESTERN PAVING	0.13%	0.00%	0.00%
CUT CORE DEMOLITION	0.08%	0.00%	0.00%
ABRATIQUE & ASSOCIATES *	0.00%	0.16%	0.37%
MORGNER TECHNOLOGY MGT *	0.00%	0.02%	0.05%
WAGNER ENGINEERING *	0.00%	0.20%	0.45%
TOTAL	36.52%	7.78%**	17.96%***

* DBE firms added to project by SOJV for additional DBE attainment.

** Relevant Contract Amount used to calculate attainment must be verified to ensure all DBE change order dollars have been properly reported.

*** Participation is currently calculated against paid-to-date for entire Design and Construction. Construction payments must be broken out for more accurate reporting.

[1]Current Attainment = Total Actual Amount Paid-to-Date to DBE Subs ÷ Total Current Contract Amount

[2]Relevant Contract Amount = Original Contract Value + Contract Cost Modifications affecting DBE scope of work

[3]Current Participation = Total Actual Amount Paid-to-Date to DBE Subs ÷ Total Actual Amount Paid-to-Date to Prime

BOARD REPORT ATTACHMENT B
METRO ORANGE LINE RECOVERY PLAN

- Recovery Plan Cost $5.9 - $7.9 million

- Summary of Recovery Plan Proposal

  - Contractor commits to meeting July 29, 2005 Substantial Completion

  - Equal monthly payments to the Contractor totaling $6.9 million with $1.0 million in retention

  - If Contractor meets Milestones & Substantial Completion MTA releases $1.0 million retention, and gives an additional Incentive Bonus of $1.0 million.

  - If Contractor fails to meet Milestones & Substantial Completion deadline, Contractor loses all or a portion of the $1.0 million in retention, plus the Incentive Bonus of $1.0 million

  - Contractor commits to meeting original DBE dollar commitment, plus agrees to make best efforts to make additional DBE work available.

  - Landscaping is exempt from Substantial Completion deadline; landscape recovery would be addressed at a later date

  - Recovery Plan includes the following Milestones;

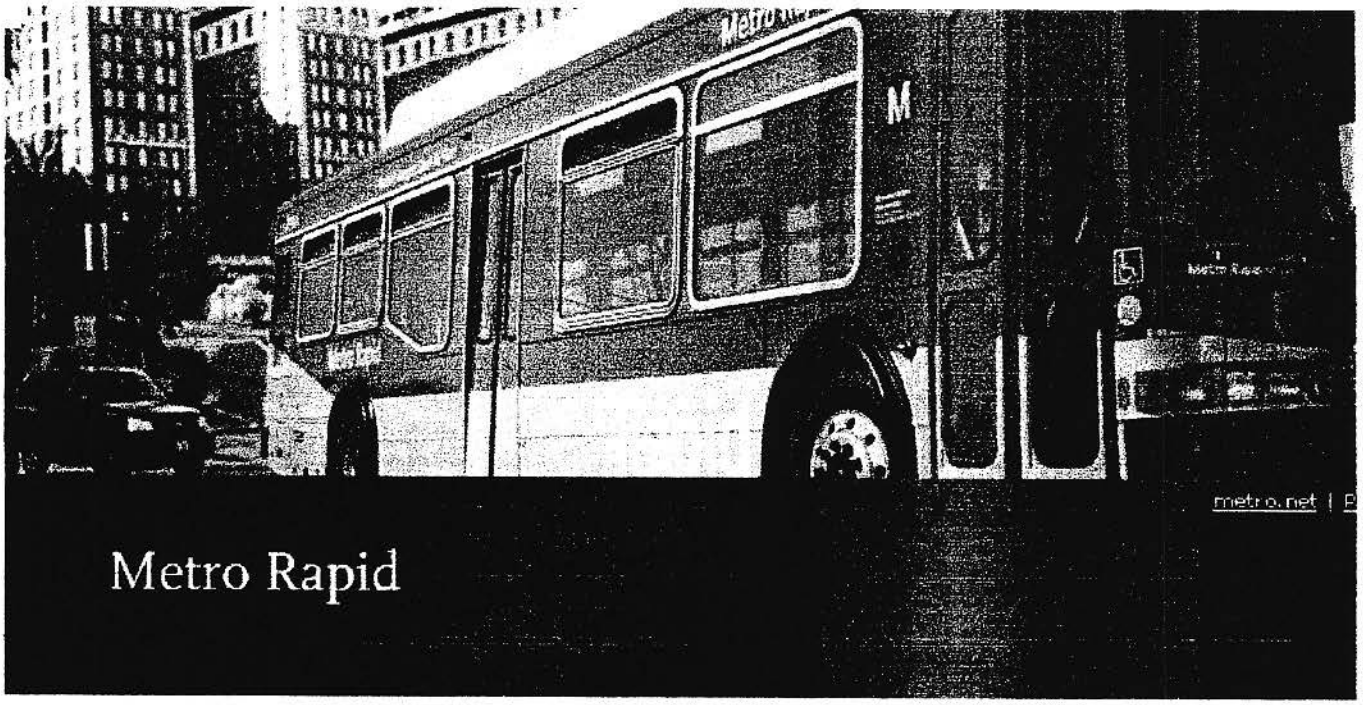
    - UFS @ Stations by March 4, 2005 ($200,000)

    - Systems by July 1, 2005 ($200,000)

    - Substantial Completion by July 29, 2005 ($600,000)

EXHIBIT XII

MTA METRO RAPID PLANS AND MAP



Update

Overview

Maps

Contact

Demonstration Program Report
(PDF 3.47MB)
For reference only: Study was completed Fall 2000. Expansion plans have since changed.

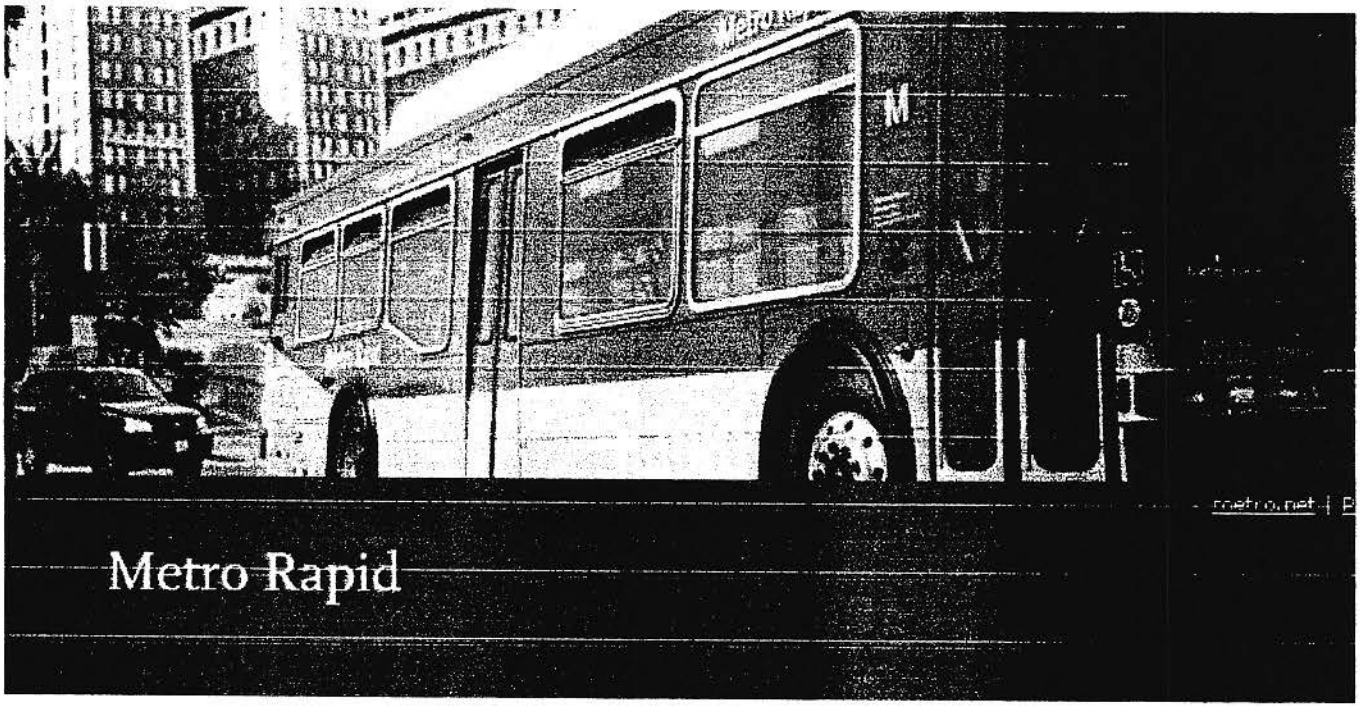
2 new lines opened June 28, 2004

Currently, nine Metro Rapid lines serve over 140 miles to help speed up passenger travel times throughout LA County. And now, Metro Rapid serves Soto and Vernon-La Cienega!

Metro Rapid can speed you to your destination up to 25% faster than local bus service because:

- **Metro Rapid gets priority.**
  Each bus has special sensors that keep traffic lights green when Metro Rapid is coming. Less time waiting at red lights means fewer delays.
- **Metro Rapid is frequent.**
  Buses come as often as every 5-15 minutes during peak hours.
- **Metro Rapid makes limited stops.**
  They're at most major intersection connecting with other transit services. Fewer stops mean shorter travel times.
- **Best of all, there's no extra cost!** Metro Rapid has the same fare as all other Metro bus lines. It accepts your passes and tokens, and you can transfer easily.

Projects and Plans | Click here to return to metro.net home



Update

Overview

Maps

Contact

Demonstration Program Report
(PDF 3.47MB)
For reference only: Study was completed Fall 2000. Expansion plans have since changed.

Overview

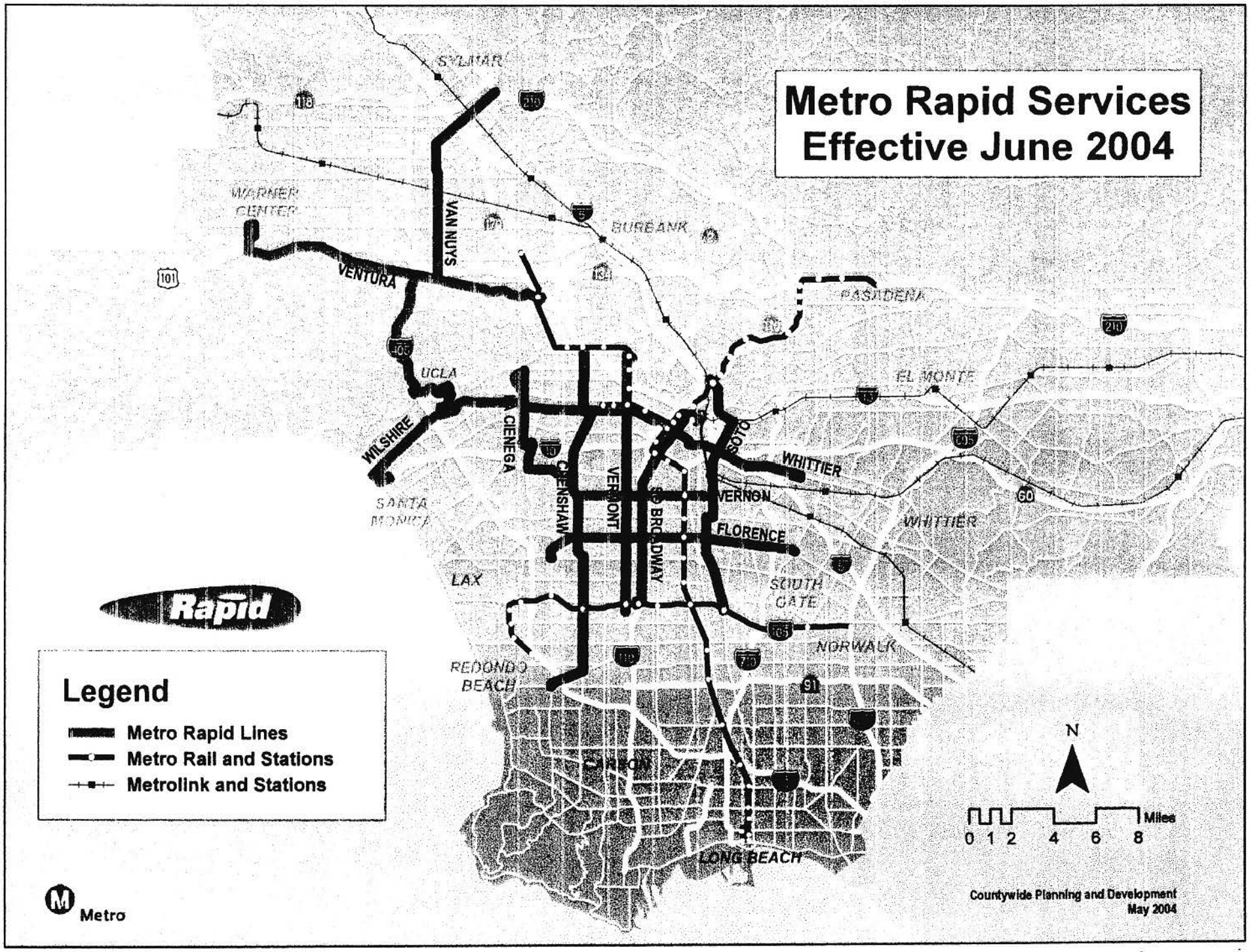
Recent studies of public bus transportation in Los Angeles have shown that half the time a bus is in service it is stopped, either at a traffic signal or at a bus stop to board patrons. To improve bus speeds, the Metro Rapid Program was implemented in June 2000. Through system integration of bus signal priority, low floor buses, headway rather than timetable-based schedules, and fewer stops, passenger travel times have been reduced by as much as 29%. As a result, ridership has increased by 40% in the two demonstration corridors, with one-third of the ridership increase from new riders who have never before ridden transit. Following the successful implementation of the Metro Rapid demonstration program, an expansion program identifying 26 additional corridors was developed. When completed in 2008, the Metro Rapid Program will operate a network of 450 miles of Metro Rapid service, complementing light and heavy rail transit throughout Los Angeles County.

Metro Rapid has seven attributes which, when implemented as one program, provide fast, frequent, bus service. One of the key elements of the program is the bus signal priority system, developed by the Los Angeles Department of Transportation in collaboration with Metro. This system, comprised of loops and radio transponders, is capable of extending the green phase or shortening of the red phase of traffic signals. Buses requesting priority are granted priority depending on the scheduled headway of the previous Metro Rapid bus detected at the intersection. The system also provides real-time passenger information signs at each station.

Key Metro Rapid Attributes:

- Simple route layout: Makes it easy to find, use and remember
- Frequent service: Buses arrive as often as every 3-10 minutes during peak commuting times
- Fewer stops: Stops spaced about a ¾ mile apart, like rail lines, at most major transfer points
- Level boarding: Low-floor buses speed-up dwell times
- Bus priority at traffic signals: New technology reduces traffic delay by extending the green light or shortening the red light to help Metro Rapid get through intersections
- Color-coded buses and stops: Metro Rapid's distinctive red paint makes it easy to identify Metro Rapid stops and buses
- Enhanced stations: Metro Rapid stations provide information, lighting, canopies and "Next Trip" displays

Projects and Plans | Click here to return to metro.net home


Metro Rapid Services
Effective June 2004
SYLMAR
MARINER CENTER
VAN NUYS
BURBANK
VENTURA
PASADENA
UCLA
EL MONTE
WILSHIRE
CIENEGA
CRENSHAW
VERMONT
BROADWAY
SOTO
WHITTIER
VERNON
SANTA MONICA
FLORENCE
LAX
SOUTH GATE
NORWALK
REDONDO BEACH
LONG BEACH
Rapid
Legend
Metro Rapid Lines
Metro Rail and Stations
Metrolink and Stations
N
Miles
0 1 2 4 6 8
Countywide Planning and Development
May 2004
Metro

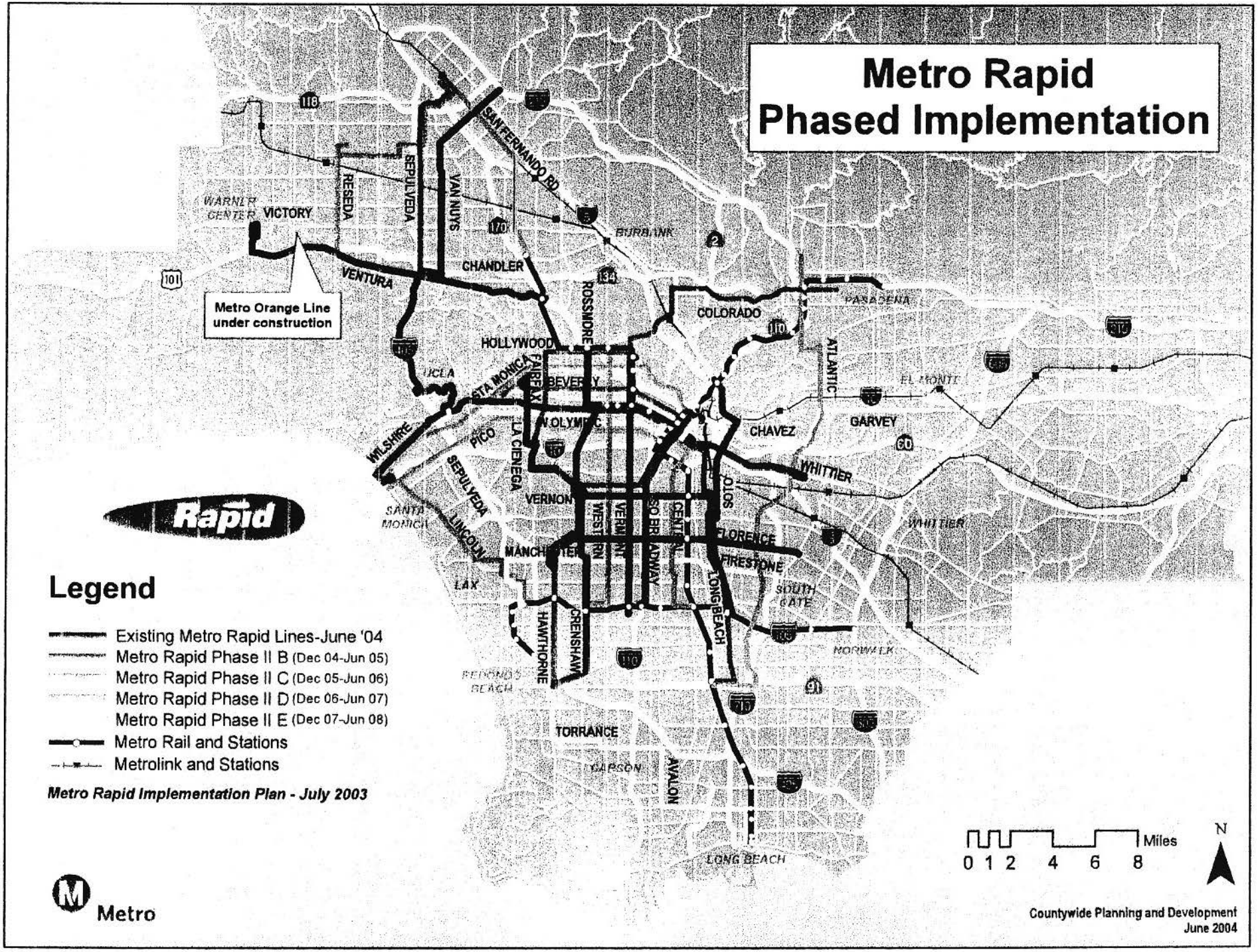
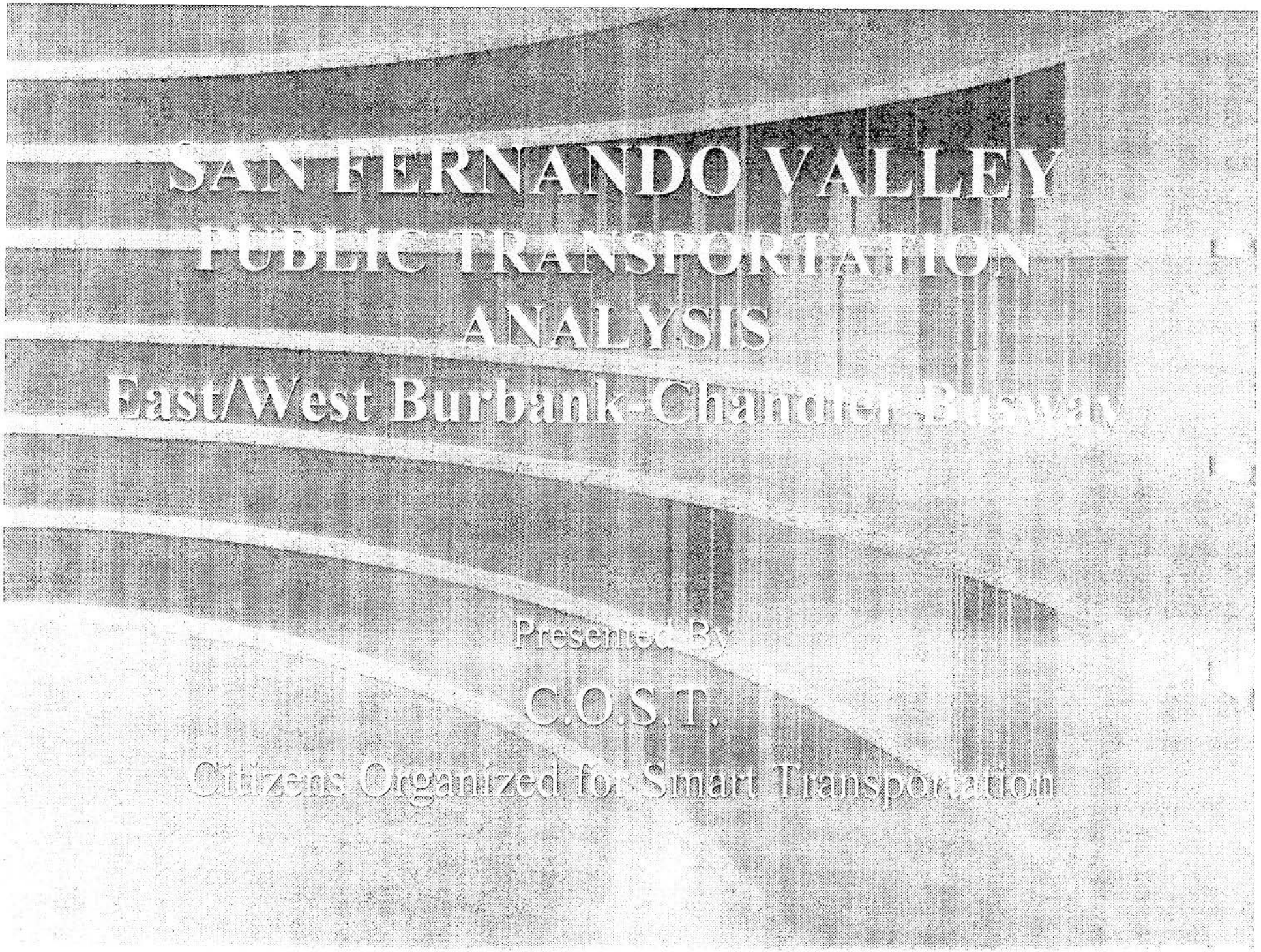

Metro Rapid
Phased Implementation
Metro Orange Line
under construction
Rapid
Legend
Existing Metro Rapid Lines-June '04
Metro Rapid Phase II B (Dec 04-Jun 05)
Metro Rapid Phase II C (Dec 05-Jun 06)
Metro Rapid Phase II D (Dec 06-Jun 07)
Metro Rapid Phase II E (Dec 07-Jun 08)
Metro Rail and Stations
Metrolink and Stations
Metro Rapid Implementation Plan - July 2003
Metro
Miles
0 1 2 4 6 8
N
Countywide Planning and Development
June 2004
VICTORY
RESEDA
SEPULVEDA
VAN NUYS
SAN FERNANDO RD
BURBANK
CHANDLER
VENTURA
ROSSMORE
COLORADO
PASADENA
HOLLYWOOD
ATLANTIC
EL MONTE
CHAVEZ
GARVEY
WHITTIER
WILSHIRE
PICO
LA CIENEGA
VERNON
SANTA MONICA
LINCOLN
LAX
MANCHESTER
FLORENCE
FIRESTONE
SOUTH GATE
LONG BEACH
NORWALK
HAWTHORNE
CRENSHAW
TORRANCE
GARDENA
AVALON

EXHIBIT XIII

CITIZENS ORGANIZED FOR SMART TRANSPORTATION

SAN FERNANDO VALLEY PUBLIC TRANSPORTATION ANALYSIS – EAST/WEST BURBANK-CHANDLER BUSWAY


SAN FERNANDO VALLEY
PUBLIC TRANSPORTATION
ANALYSIS
East/West Burbank-Chandler Busway
Presented By
C.O.S.T.
Citizens Organized for Smart Transportation


THE SAN FERNANDO VALLEY
• Sixth largest "city" in the U.S.
• Unique suburban atmosphere
• Population forecasted to reach 2.1 million residents by 2020*
• Growing Grid Lock on Freeways
C.O.S.T. agrees with the MTA
We have a desperate need for Public Transportation in the San Fernando Valley IMMEDIATELY
* Council of Cities

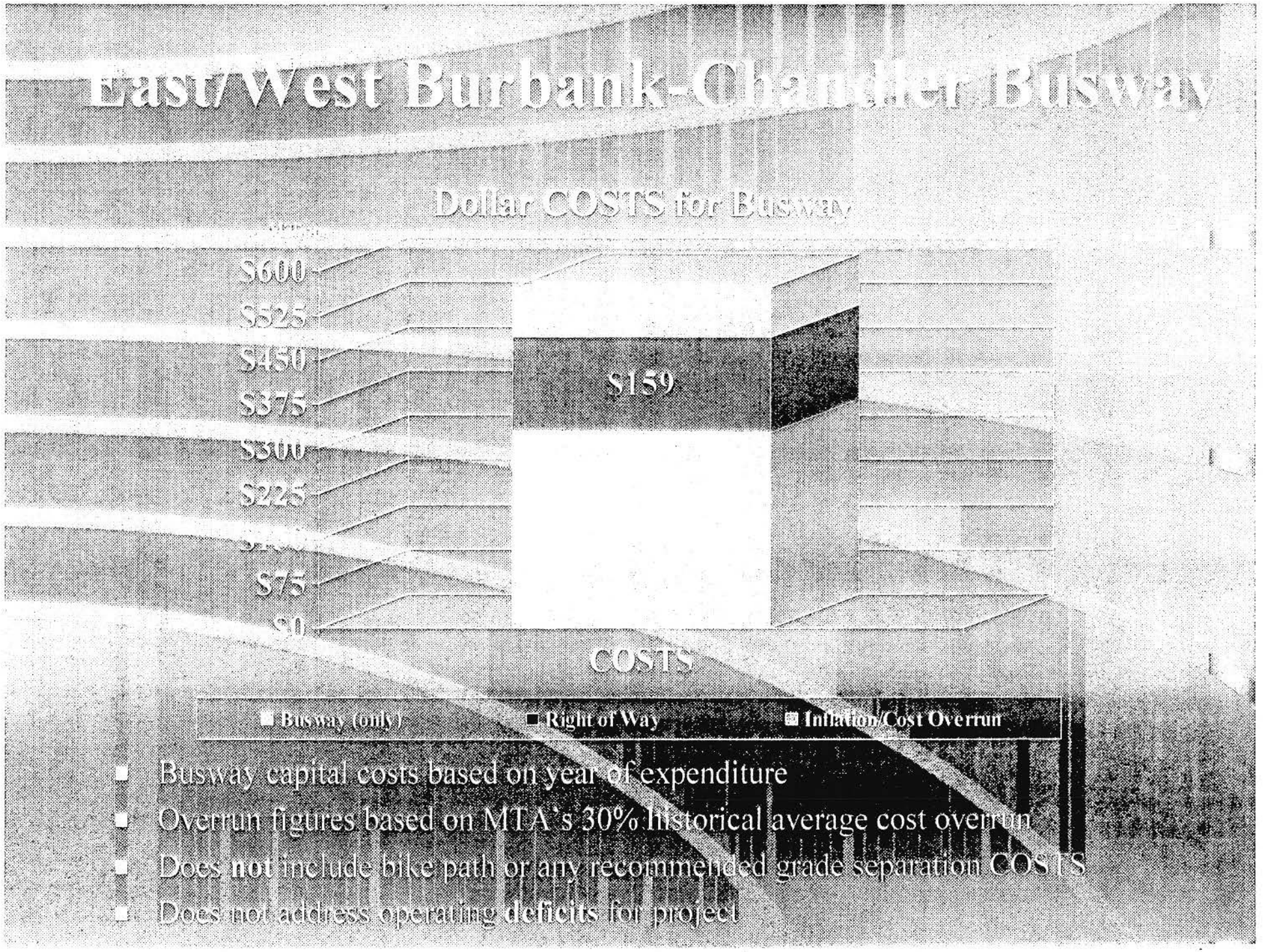
East/West Burbank-Chandler Busway

$320.5 Million on ONE East-West Corridor

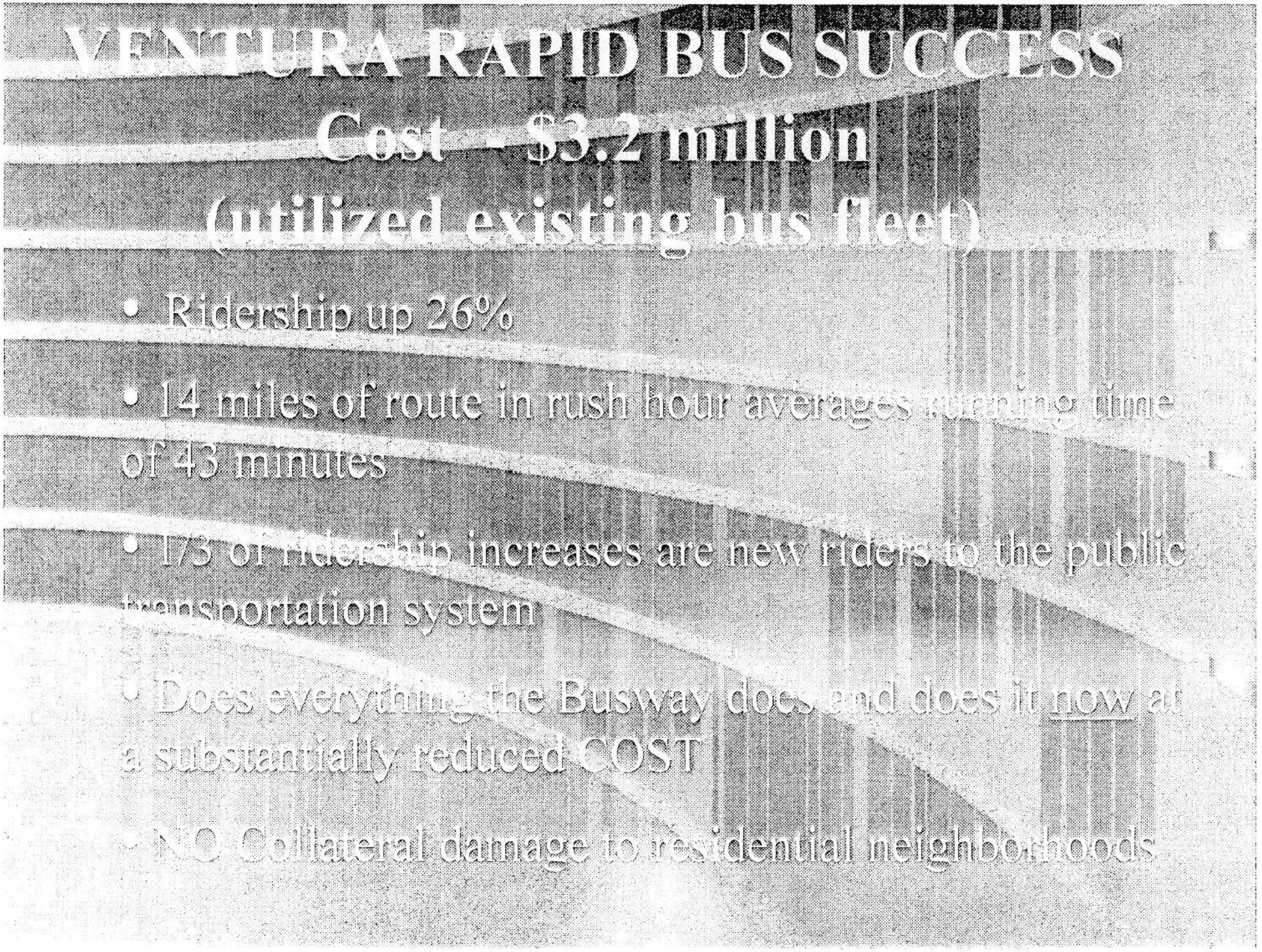
Problems

- COSTS a lot of money - COSTS a lot of time
- A single busway corridor is not the solution to the transportation needs of the entire valley
- A concentrated corridor increases already heavy traffic congestion on North-South streets
- Limited time savings not significant enough to coax people out of their cars
- Collateral damage to residential neighborhoods

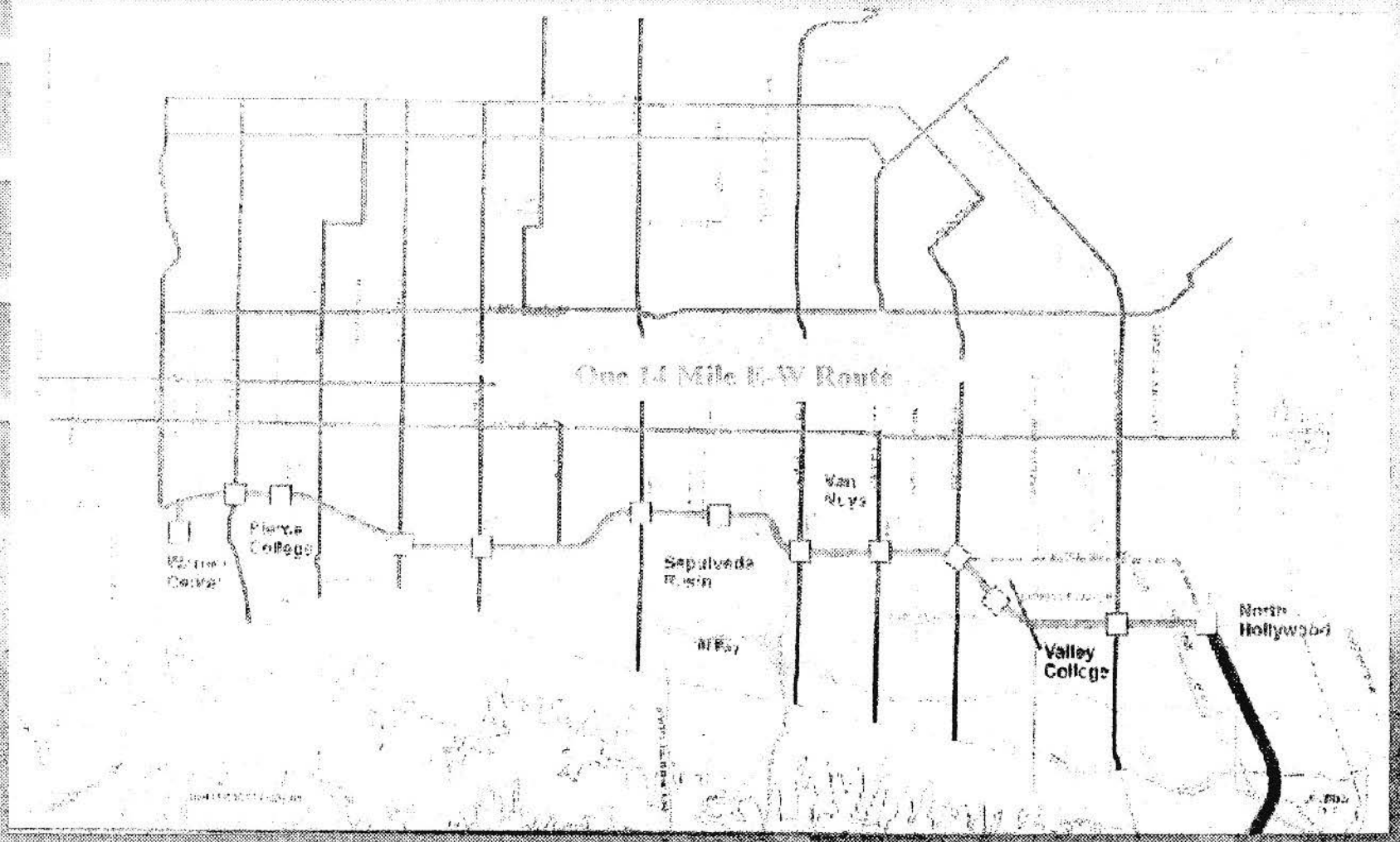
East/West Burbank-Chandler Busway



- Busway capital costs based on year of expenditure
- Overrun figures based on MTA's 30% historical average cost overrun
- Does **not** include bike path or any recommended grade separation COSTS
- Does not address operating **deficits** for project

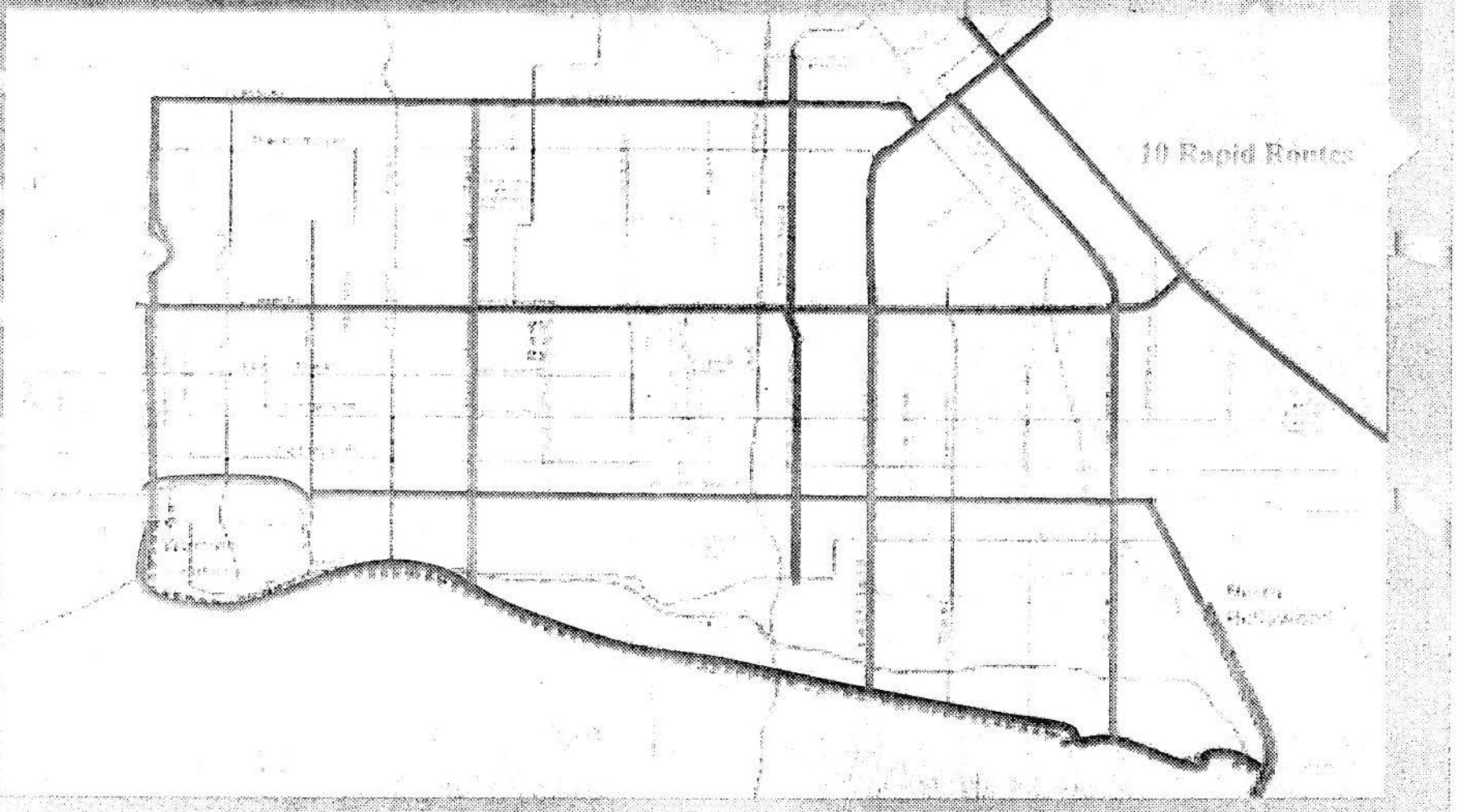

VENTURA RAPID BUS SUCCESS
Cost - $3.2 million
(utilized existing bus fleet)
• Ridership up 26%
• 14 miles of route in rush hour averages running time of 43 minutes
• 1/3 of ridership increases are new riders to the public transportation system
• Does everything the Busway does and does it now at a substantially reduced COST
• NO Collateral damage to residential neighborhoods

East/West Chandler-Burbank Busway



C.O.S.T.'S ALTERNATIVE

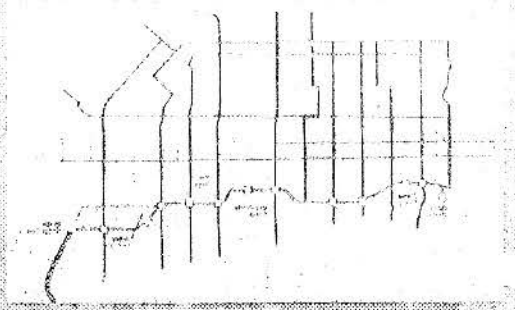
Rapid Bus Network

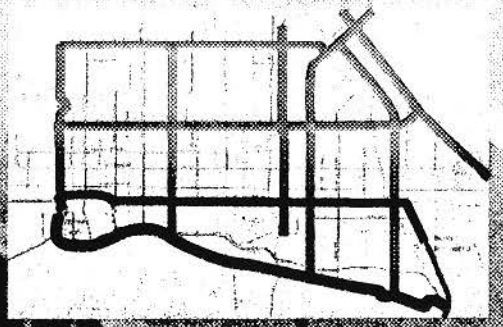


C.O.S.T.'S TRANSPORTATION PLAN

Provides more COST-effective Benefits in less time we could get ...

- Rapid Bus Routes on major roads in the Valley
- Additional upgrades to existing regular bus service
- Express routes to expedite service to key Valley locations
- Rapid services across the entire Valley
- Easy access and increased service reducing congestion across entire Valley
- New riders to mass transportation
- NO Collateral damage to residential neighborhoods





The Valley deserves a REAL Solution

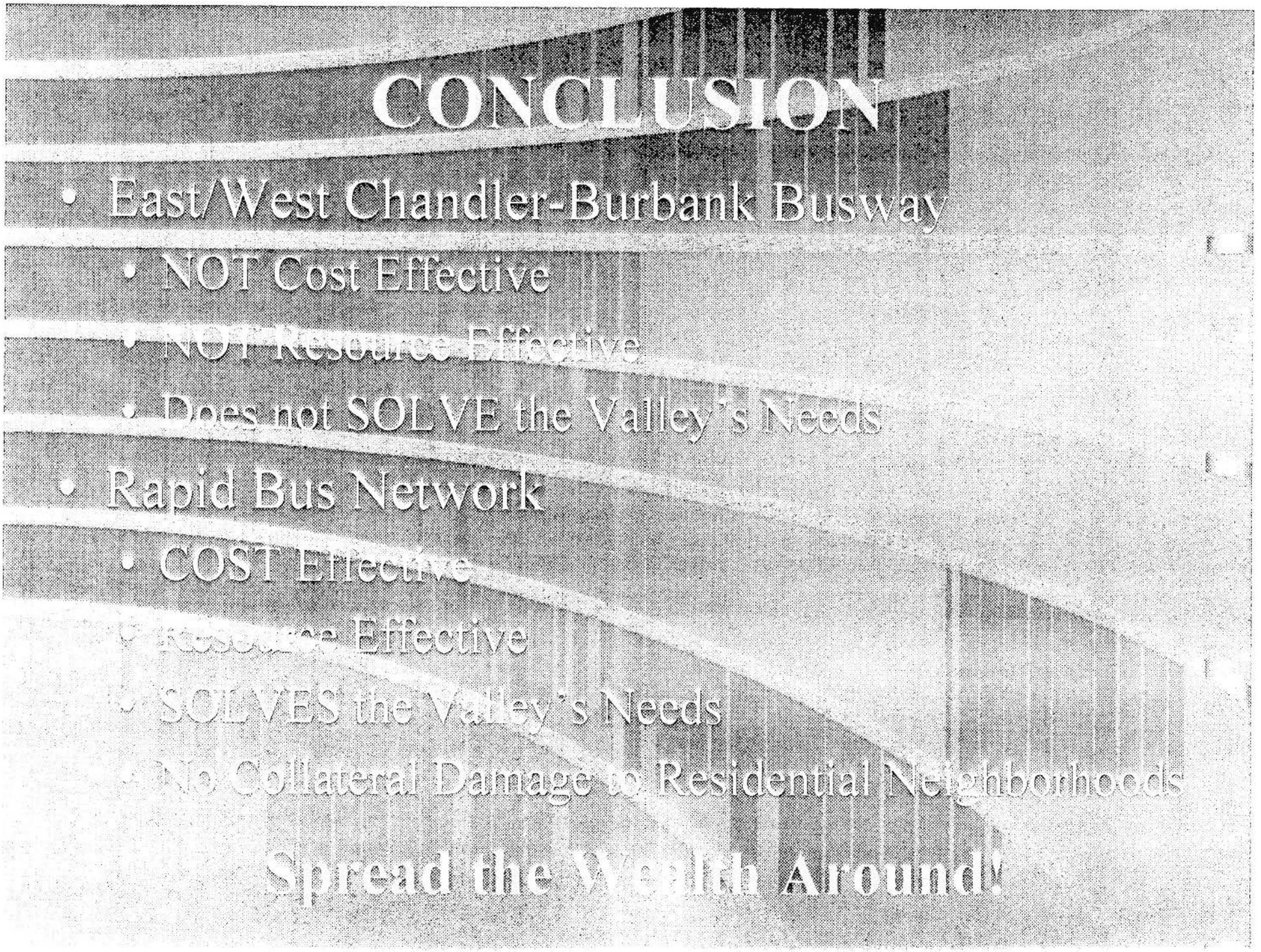

CONCLUSION
• East/West Chandler-Burbank Busway
• NOT Cost Effective
• NOT Resource Effective
• Does not SOLVE the Valley's Needs
• Rapid Bus Network
• COST Effective
• Resource Effective
• SOLVES the Valley's Needs
• No Collateral Damage to Residential Neighborhoods
Spread the Wealth Around!

EXHIBIT XIV

COST "WHITE PAPERS" ON SAN FERNANDO VALLEY TRANSIT IMPROVEMENTS

I. The Miami Busway Has Proven Very Unsafe

In the FEIR, MTA claims that the proposed SFV BRT will be safe because the Miami Busway, the only similar bus guideway in North America, has a good safety record at its "coordinated" traffic signal intersections. However, there have been so many collisions, injuries, and fatalities that ***all*** *of the Miami bus signal preferences have been turned off since November 2000. In addition, many SFV BRT intersections are far more complex than those in Miami.*

There is only one transit guideway in the United States that is at all similar to the Bus Rapid Transit operating methodology that MTA is proposing for the Burbank-Chandler alignment: the Miami-Dade Transit (MDT) South Miami Busway. Some of the main design characteristics of MDT Busway and the SFV BRT are almost identical: conversion of a former freight rail line to a dedicated busway and buses going through major surface streets at 45 mph with traffic signal priority, but no grade separation or railroad style crossing signals and no gates at intersections.

In fact, when several people commenting on the SFV BRT Draft Environmental Impact Statement/Environmental Impact Report expressed major concerns about bus vs. car/truck collisions, MTA's response was, "A busway project operating in Miami, Florida is similar to the proposed San Fernando Valley East-West Transit Corridor BRT and is offered as an example of safety performance." MTA then presented a statistic, "The accident rate at the intersections with coordinated signal control was approximately 1 accident per every 20 million entering vehicles."

What MTA *didn't* present was the entire picture. From its opening in February 1997 through October 2000, buses on the Miami Busway had approximately 68 bus vs. car/truck collisions, 79% of which involved personal injuries (a very high percentage for bus collisions) for a total of 198 bus passenger and auto passenger and 17 bus operator injuries, and two fatalities. There have been additional collisions and injuries from emergency vehicles using the Busway and from auto vs. auto collisions, such as drivers confused about the Busway who hit – or were hit by – other auto's.

The overall safety record was so bad that the traffic signal preference devices were turned off multiple times for adjustment, and then turned off for good in November 2000 following the second fatal busway collision. All busway buses now approach cross streets at 15 mph, come to a complete stop *even if they have the "green,"* and then proceed through the intersection at 15 mph. MDT has commissioned several safety studies and the current plan is to significantly increase signage and make other changes to see if the buses can be safely operated through the intersections at 15 mph.

MTA claims that its Busway will be safe because all of its intersections will have coordinated traffic signals, and that these intersections are safe in Miami. However, the people in charge of the Busway in Miami turned off *all* of the bus signal preference devices two years ago, and *they are still off.* Also, MTA has totally failed to address the numerous extremely complex intersections in the SFV, most far more difficult than those in Miami, including those where the SFV BRT will be between two active streets and those where the BRT goes through intersections at angles.

The MDT Busway is *not* an example of how a dedicated bus guideway can be safe; it is an example of why such guideways have never been attempted before – there are too many terrible collisions.

II. Many SFV BRT Intersections Will Cause Major Safety and Traffic Problems

Unlike the Miami Busway intersections, most of which are crossings of one street near a parallel major arterial, or even the Long Beach Blue Line intersections, many of the proposed SFV BRT intersections are amazingly complex. The worst is probably Burbank/Fulton, where MTA proposes to bring the BRT guideway diagonally through the dead center of the intersection. Also very troublesome is Oxnard-Buffalo/Woodman, where the BRT goes through diagonally with a slight offset. In both cases, for buses to the have the signal priority that MTA wanted, all traffic on the cross streets would be halted for all buses whenever a bus appears – which LA-DOT has ***not*** *agreed to. There are also thirteen intersections where there would be traffic on streets on* ***both*** *sides of the BRT alignment, which will make all turns across the alignment particularly difficult. Right turns on Red will also be a major concern at several intersections.*

The proposed Bus Rapid Transit Busway on the Burbank-Chandler alignment includes many of the strangest and most complex at-grade bus guideway intersections ever contemplated. MTA proposes to have buses traveling through these intersections at speeds up to 45 mph. Cars and trucks will be halted by traffic signals so that the buses can go throughout without stopping, or even significantly slowing. In many cases, the normal traffic signal cycle will be altered, throwing auto drivers off their usual pace of travel. MTA does promise increased signage and special painting for busways, streets, crosswalks, and curbs, but signs and lines of paint on the street will not stop drivers that are confused, inattentive, or more concerned about saving a little time than about safety. Rail-style grade-crossing signals and protections – loud horns on the transit vehicles signaling eleven seconds in advance of reaching the intersection, bells and flashing lights on the roadside crossing sign, and/or barrier arms blocking access to crossing traffic – are specifically *not* part of the safety plan.

Most of the SFV BRT intersections are very unusual. The *least* complex are ten intersections where the Busway is close to a parallel major surface street, but even these will present important safety and traffic flow challenges. More troublesome are the thirteen intersections where the busway is in the median of a two-way street (Coldwater) or immediately between two-way streets on both sides. There are two intersections that cross major streets in the middle of blocks, including one (Sepulveda) where buildings totally block any view of the buses from the street, and vice versa.

However, the biggest concerns focus on three truly unique intersections. At Chandler/Ethel, there will be a diagonal intersection to the center median busway close to a perpendicular cross street. At Oxnard-Buffalo/Woodman, the busway will cut across two major perpendicular streets close to their intersection with a minor street nearby. The "champion" is Burbank/ Fulton, where the busway will cut diagonally through the intersection of two major surface streets. *All* intersections will take traffic cycle time away from cars and trucks on the parallel and crossing streets, all will present unique and difficult driving requirements to drivers, especially those encountering the Busway for the first time, and all have great potential for causing major safety incidents. MTA's response is that the SFV BRT will be safe because the Miami Busway is safe, but the only Miami intersections that MTA analyzed were those similar to the ten *least* complex SFV BRT intersections, the ten that parallel an existing street on one side. There is no comparison for the others because these types of intersections have never existed before – perhaps, one might argue, for good reason?

III. The Long Beach Blue Line Is Extremely Unsafe and Is Very Similar to the SFV BRT in Many Important Respects

The Long Beach Blue Line was opened by MTA in July 1990 and has proven to be by far the most dangerous light rail line in the U.S., with 60 fatalities in its first ten years of operation, almost half of ***all*** *light rail fatalities in the U.S. over that period. The most unsafe aspect of the Blue Line is traveling through at-grade intersections in highly populated areas at high speed – as the SFV BRT is proposed to operate. However, the Blue Line has railroad crossing gates with flashing lights, ringing bells, and horizontal barriers that block streets – which the SFV BRT will not.*

The Long Beach Blue Line's fatality and serious collisions rates are head and shoulders above all other North American light rail lines – sixty fatalities between its opening in July 1990 and June 2000. 25 of these occurred during 1998-2000, which indicates that the line has not gotten safer over time, despite the many safety programs that MTA has attempted to implement.

The basic problem is very simple – this is the only light rail line in North America where trains cross through intersections in densely populated areas at speeds above 35 mph. In all other cases, light rail lines are either grade separated or otherwise isolated from surface traffic at speeds over 35 mph, or the trains slow to 35 mph or less. In terms of operating speeds and travel through non-grade separated intersections, the SFV BRT, as planned, has many significant similarities to the Blue Line.

The Blue Line does have all the rail safety devices required by law and regulation in its high-speed mid-corridor section, including loud horns on trains that sound in a pattern for 11 seconds prior to trains entering the intersection, flashing lights and bells on the roadside warning signs, and barriers that physically block approaching vehicles from the traffic lanes. At some mid-corridor intersections, MTA has implemented "four quadrant" crossing gates that are designed to prevent cars from driving around the gates that only block the right "half" of crossing streets. But, despite all these safety devices, many changes to the infrastructure of the Blue Line, plus a high level of public information and law enforcement campaigns, the human carnage has continued.

The "good" news is that there has never been a fatality, or even a serious injury, to a Blue Line passenger or a Blue Line employee riding a train – all the fatalities have been drivers or passengers in cars and pedestrians. With a impact weight ratio, two-car train:car, of approximately 200,000:4,000 pounds, the relative impact to trains and their passengers is fairly slight – at least, when compared to what happens to autos hit at or near 55 mph, where it is common to find multiple pieces spread out over hundreds of feet. Trains, being on rails, are highly resistant to derailing, overturning, and hitting anything besides the car that was where it should have never been.

Buses do not run on tracks, nor are they as heavy as trains. Even a loaded 60-foot bus has a weight ratio of about 60,000:4,000, far less than that of a train. Buses that hit cars commonly bounce off in strange and unintended directions, hitting other objects in their path and occasionally even overturning. The potential danger to BRT passengers and MTA employees on buses is far higher than that for train riders. As has been shown with the Miami busway, high-speed bus collisions frequently result in serious injuries to riders. Therefore, if MTA actually operates the SFV BRT as set forth in the FEIR, there is very strong chance that it will make the Blue Line results look safe.

IV. MTA Maintains That Rail-Style Crossing Gates Are Not Required for Safe Operation of the SFV BRT, but Reached the Exact Opposite Conclusion on the Expo Corridor BRT

Despite the terrible safety records of the Long Beach Blue Line and the Miami Busway and the pleas of concerned residents, MTA maintains that there is no safety requirement for railroad-style crossing gates at SFV BRT intersections. The California Public Utilities Commission, which has jurisdiction over rail safety, requires such gates, with flashing lights, ringing bells, a barrier that blocks the street to crossing traffic, and loud warning horns on trains, for all intersections in populated areas where trains are operating at over 35 mph. Although the BRT will operate very much like light rail in SFV, MTA has concluded that such safety devices are not required and will not be installed. Interestingly, however, in the Expo Corridor DEIS/DEIR, which was conducted at virtually the same time that the SFV BRT DEIS/DEIR was done, MTA concluded that, since BRT is so much like light rail, it ***would*** *be necessary to have full rail-style crossing protections.*

Because of the well-known safety problems with the interface of trains with people and cars and trucks, the California PUC – the agency responsible for rail safety – requires all trains that make non-grade separated crossings of surface streets in urban areas at speeds above 35 mph to have significant safety warning and prevention devices. These include loud horns on the trains themselves, bells and flashing lights on the warning signs at roadside, and barriers that block the road to on-coming traffic.

BRT buses, traveling at speeds of 45 mph through major surface streets without grade separation, would appear to generate the same safety concerns as light rail, commuter rail, and freight trains. In fact, the major difference is that, while fatalities and serious injuries to rail passengers and employees are rare in train-vs.-auto/truck collisions, high speed bus-vs.-auto/truck collisions frequently cause major injuries, or worse, to the bus passengers.

Despite major concerns expressed by many individuals and organizations that commented on the SFV BRT Draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR), MTA is not concerned about such collisions. In the *Safety and Security* section of the Final EIR, on page 4-284, we have, "The intersections will operate as an (sic) at-grade street crossing, and will not require the installation of gates, bells or whistles associated with rail crossings."

However, in the *Mid-City/Westside Transit Corridor Draft EIS/EIR* – which was circulating at the same time as the SFV BRT Draft, and evaluating BRT vs. Light Rail Transit (LRT) along the Exposition Corridor – we find the exact opposite conclusion in its *Safety and Security* section, on page 3.14-9: "The Exposition BRT line utilizes a similar alignment to that of the Exposition LRT and has similar operating parameters. As such, many of the safety treatments utilized for the Exposition LRT alignment can also be utilized for the Exposition BRT alignment." On page 50 of the *Executive Summary*, this is clearly spelled out: "Crossing gates shall be installed at all streets crossing the Exposition ROW where BRT operates at speeds above 35 mph."

How can full rail-style intersection safety devices required along one busway, not be necessary in a virtually identical type of busway, for the same agency, in two studies done at the same time?

V. The Myth of the 28.8 Minute End-to-End BRT Travel Time

MTA's widely promulgated 28.8 minute end-to-end travel time on the SFV BRT was based on every bus getting a green light virtually every time it crossed a signalized intersection. LA-DOT had never agreed to this and has told MTA in no uncertain terms it will never happen due to the extreme impacts this would have on North-South traffic through the Valley – as well as safety concerns. However, even if BRT did receive the traffic signal preemption that MTA assumed, the 28.8 minute time is ***still*** *impossible due to failure to consider slower travel sections that are part of the BRT proposal. MTA is now claiming a 35 to 40 minute end-to-end travel time.*

MTA had several major problems it had to solve: (1) It had promised the Valley a subway. Moreover, MTA promised the first leg – from North Hollywood to Sepulveda – opening years ago. But the total collapse of MTA's wildly over-optimistic financial plan and the passage of Proposition A in 1998 – which forbid using local sales taxes for subways – meant this promise was going nowhere. (2) MTA had spent $159 million of taxpayer funds to buy the Southern Pacific "Burbank Branch" and other real estate to build the subway. (3) MTA's original plans from the 1980's were to build light rail, not a subway, on the Burbank Branch. However, the local residents rose in revolt, demanded a stop to the light rail plans, and then-Senator Robbins got a prohibition against anything *but* a subway along the Burbank Branch enacted into law, so MTA could not even build light rail along this alignment. (4) Valley succession was a major problem for many of the politicians that make up MTA's Board, particularly those from the City of Los Angeles. Something had to be done to show that the City of Los Angeles, and MTA, *were* paying attention to the Valley.

Then, a proposal for a modern, high-speed busway using buses that looked a lot like trains, at a very low cost (compared to billions for a subway or almost a billion for light rail) caught the eye of many MTA Board members and staff. In one fell swoop, all of these problems could be solved.

This, however, raised another problem – how to sell Bus Rapid Transit as a wonderful kind of transit, equal to the rail lines that MTA spent many billions of dollars building for the other parts of the County? The answer, make it sexy, and make it *go fast*. MTA planners succeeded in doing that. Using every trick they could come up with, they got the end-to-end travel time down to 28.8 minutes – the BRT buses would be almost as fast as the Red Line subway trains!!!

On paper. However, in the real world, there were major problems, so MTA did what MTA does in such situations – it ignored them and pretended everything would come out the way it wanted them to. First, LA-DOT would grant full traffic signal preemption at most intersections and strong preference at the rest. Then, safety would not be a problem, because MTA said it wouldn't. Third, promises to slow to 35 mph on Chandler and 45 mph going through intersections would somehow be left out of the time/speed model. Last, travel time would be modeled with very fast 40-foot buses, while far slower, but really nifty-looking, 60-foot articulated buses would actually be utilized.

MTA has now been forced to admit that the actual SFV BRT times will be more like 35-40 minutes, with emphasis on the 40 – and even that is questionable. *But the decision to build was based on 28.8.* An old political truth – once you get people enthused about and committed to a project, they will stay enthused and committed – even after key promises have been shown to be fairy tales.

VI. Rapid Bus on Lankershim/Victory Would Be Very Competitive, Time-Wise, with BRT on Burbank-Chandler

MTA is now claiming a 35-40 minute travel time on the SFV BRT between Warner Center and the North Hollywood Red Line Station. Rapid Bus on Victory/Lankershim would, at worst, take well under 45 minutes for the same route and, at best, might actually be ***faster*** *than the BRT buses on Burbank-Chandler.*

In fact, today, the "regular," non-Rapid Bus trip from Warner Center to North Hollywood takes 53 to 55 minutes during peak times, including five minutes waiting to transfer to the second bus – so a single bus trip between these points would take 48 to 50 minutes *without* any of the speed advantages of Rapid Bus. Several MTA documents shows Rapid Bus operating with 25% higher average operating speeds than "regular" buses in the same corridor. If this speed advantage is applied to the Lankershim/Victory route, the travel time between the two SFV BRT end points would be approximately 40 minutes for Rapid Bus.

As MTA admits in the SFV BRT Final EIR [FEIR], it is impossible to precisely project bus travel times at this point. In fact, there is a possibility that Rapid Bus on Lankershim/Victory could be faster than 40 minutes and there is some chance that the wandering route of the BRT and its many strange intersection crossings would force slowdowns beyond the current 40 minute top range estimate to avoid tying up crossing traffic on major surface streets. Not only is Rapid Bus very competitive with BRT, there is actually even a chance it could be *faster*.

Here is an interesting comparison: MTA has two bus lines on Ventura Boulevard, Line 750 for the Rapid Bus and Line 150, the local. According to MTA schedules, during peak periods, and making some minor adjustments for slightly different schedule "time points," Line 750 takes 42 minutes to travel end-to-end, compared to Line 150 taking 60 minutes. On Ventura, the Rapid Bus Line 750 vehicles travel the same distance as the "regular" service Line 150 buses in 42/60, or 70%, of the schedule time for "regular" bus service. If we take the low end of the current regular bus service schedule of 48 minutes on Lankershim/Victory, 70% is about 34 minutes – a bit *less* than the low end of MTA's 35-40 minute claim for BRT.

While MTA is still clinging to the possibility of the 28.8 minute travel time in its FEIR and before the Court hearing COST's challenge to the FEIR, everywhere else – its press releases, even its "request for proposal" for the buses on run on the BRT – it is now showing 35-40 minute travel time. At recent public meetings in the Valley, MTA project personnel have used a flat, "40 minutes." Even if MTA *could* achieve a 35 minute end-to-end travel time – which no one at MTA is claiming (except their lawyers) – even a 40-minute Rapid Bus travel time would be highly competitive with BRT on Burbank-Chandler.

When the huge cost difference for the guideway – over $230 million vs. $3-4 million for Rapid Bus – and the major safety concerns are factored in, the decision is a no-brainer. Why spend well over $200 million more to *perhaps* save a few minutes for the small number of people who will travel the route end-to-end? Why not take a fraction of the cost of a dedicated busway and use the savings to buy and operate more buses and implement other transit improvements, or just bank the savings?

VII. MTA Deliberately Misrepresented Rapid Bus Travel Time to Make it Appear Less of a Competitor to the BRT

In its DEIS/DEIR for the SFV BRT, MTA compared a 28.8 minute BRT travel time (which it has since all but abandoned) between Warner Center and North Hollywood to a 50 minute time for Rapid Bus. However, until it was caught and forced to confess, MTA never disclosed that what it was ***actually*** *timing was Rapid Bus between Warner Center and the* ***Universal City Red Line Station*** *– which is a 1.3 mile longer distance, over a far more congested street with far more traffic lights, with a lower speed limit, than the BRT-comparable Lankershim/Victory Rapid Bus Route.*

In the Draft SFV BRT Environmental Impact Statement (EIS)/Environmental Impact Report (EIR), MTA wanted to show that BRT on Burbank-Chandler was far faster than Rapid Bus, so it presented a table that showed a 28.8 minute travel time for BRT from North Hollywood to Warner Center, compared to 50 minutes for Rapid Bus. In companion papers, we have discussed how the 28.8 minute BRT time was never realistic and why Rapid Bus will be far faster than 50 minutes. Here, we will show what MTA did to make Rapid Bus look non-competitive with BRT.

By detailed comments on the DEIS/DEIR, COST members forced MTA to admit that the 50 minute Rapid Bus time was *not* for the North Hollywood to Warner Center trip on Lankershim/ Victory that MTA very specifically showed in its table, but for the *Universal City* to Warner Center trip. The 50 minute trip is 1.3 miles longer on a far slower road. Not only does Ventura Blvd., the Line 750 Rapid Bus route, have far more traffic congestion than Victory, but the Ventura route has 80 signalized intersections vs. 56 for Lankershim/Victory, five turns at signalized intersections vs. two, and two dozen curves vs. one. Finally, West of I-405, the Victory route is 40 mph for 7. 2 miles, while Line 750 on Ventura has only .7 mile of 40 mph–which includes a 25 mph school zone:

MTA even went to extra trouble to make the Minimum Operating Segment (MOS) operating time look longer. Under this alternative, instead of MTA completing the full Burbank-Chandler alignment as Bus Rapid Transit, only the middle section would be BRT, with Rapid Bus at the ends. The Western end of the MOS would run on Victory for several miles. In doing the calculation of operating time, MTA utilized a 35 mph top speed for buses, vs. the actual 40 mph speed limit. Other minor time "increases" for identical operating assumptions are also apparent: for the MOS, the average intersection delay at stations was nine seconds, vs. eight for the full BRT, and the run time for a Rapid Bus is eleven seconds longer than for BRT *on the street running* approach to Warner Center. *With* all the built-in add-ons for Rapid Bus, the MOS total run time come out to 35.57 minutes against the 28.83 for BRT, a difference of 6.74 minutes.

The full BRT is projected to be over $130 million higher than the MOS. A rational individual might ask, is it is a worthwhile expenditure of over $130 million of public funds to save under seven minutes – say, $20 million per minute – for the portion of the BRT ridership that makes end-to-end trips, and a smaller amount of time for those that make shorter trips? If MTA's math were done with time statistics that were more consistent with the assumptions that were made for full BRT, the cost per minute saved would be significantly higher.

Isn't it interesting how *all* the errors tend to make MTA's favorite alternative look better?

VIII. The SFV BRT *Will* Slow over Time As Valley Traffic Increases

One of MTA's most consistent claims for the SFV BRT is that, no matter how much traffic and congestion increase in the future, the speed of the BRT will remain constant because it has its own dedicated right-of-way. What MTA fails to mention is that the BRT has no less than ***40*** *grade crossings. As North-South traffic increases, there will be smaller and smaller windows for the BRT buses to be given signal preference at intersections without seriously impacting other traffic. The increase in Valley traffic* ***will*** *slow down the SFV BRT.*

One of MTA's most consistent, persistent – and wrong – claims is that, once buses begin service on the SFV BRT, the speed will never decrease, no matter how congested Valley traffic gets and how much other traffic will slow down.

Before we get into the analysis of long-term consistency of travel times on the BRT, we need to first address an important preliminary question – exactly how fast will the BRT be on the day it opens? MTA's original projection, one that it has done everything but yell from the rooftops, is 28.8 minutes for end-to-end travel. However, now, even MTA has had to admit that this is just not going to happen, and that 35 to 40 minutes – with emphasis on the *40* minutes – is more realistic. Even this is not guaranteed, as MTA states on page S-49 of the FEIR: "Precise signal timing and priority parameters would not be set until just prior to the commencement of BRT operation and would likely be adjusted throughout the life of the project."

The biggest potential impact on BRT run times is safety. If the BRT begins to produce anything remotely close to the collision, injury, and fatality rates of the Long Beach Blue Line and the Miami Busway, there is a very strong likelihood that LA-DOT – which runs the traffic signaling system – will simply change the way that BRT buses get "green's" and make other changes until the BRT buses stop running into cars, trucks, and people. This is exactly what has happened to the Miami Busway. The key point is, we don't really know what the end-to-end run time for the BRT will be, and there is a good chance it will be a lot more than 40 minutes not too long after the BRT opens.

Returning to the main point, although the Busway *is* an *exclusive* transit guideway, and traffic growth is unlikely to have much, if any, impact on the bus speeds on the guideway proper, all the *intersections* are *not* exclusive. Here, buses must contend for traffic signal cycle time with all other traffic. We know what MTA's assumptions were for the 28.8 minute projection: zero traffic signal delay at all intersections where they wasn't a station, average eight seconds delay for twelve intersections leaving stations, plus one other. This, however, would have required that every BRT receive absolute preemption for "green's" at every crossing street except those leaving stations, and strong priority for "green's" leaving stations. This was a level of preference that LA-DOT was simply never willing to grant, but MTA just assumed that it would get. Now, we see in the Final EIR, page 2-40, "LADOT will also have to consider the traffic demand on north-south streets in determining the level of priority for buses." While this is presented in the context of buses traveling in the non-peak direction, it is clear that, as traffic increases on Valley surface streets, there will be more and more contention for traffic signal cycle seconds. There are only so many seconds to give, and, as other demands for it increase, LA-DOT will become more and more reluctant to grant more time to BRT buses, or even to maintain previously levels of priority.

IX. A Network of Rapid Bus Lines, Together with Other Improvements to Valley Bus Service, Would Provide Far More Benefits to Valley Transit Riders than the SFV BRT

Located near the Southern limit of the Valley flatland, the Burbank-Chandler BRT route simply is not very accessible to many existing and potential Valley transit users, even those that could drive or take connecting buses to reach it. A network of multiple East-West and North-South Rapid Bus lines would allow far more Valley residents to walk to Rapid Bus, or have shorter connecting bus trips, while also reducing the travel times for many existing transit riders. East-West streets that could be considered for Rapid Bus include Devonshire, Lassen, Nordhoff, Roscoe, Sherman Way, Van Owen, Victory, and Ventura (already in operation); North-South streets should include Foothill, San Fernando Road (planned for Rapid Bus by MTA), Hollywood Way, Vineland, Lankershim, Laurel Canyon, Coldwater Canyon, Woodman, Van Nuys (planned for Rapid Bus), Sepulveda, Balboa, White Oak, Reseda, Tampa, Winnetka, De Soto, and Topanga Canyon.

There are many major Valley streets that appear to be fully capable of supporting Rapid Bus lines, at very little cost for MTA to implement. MTA is currently planning for Rapid Bus only for the existing Ventura line, San Fernando Road, and Van Nuys, plus some unknown type of faster bus service on one or more mainly North-South routes. We believe that, as a minimum, there should be studies of three or more East-West Rapid Bus routes fairly evenly spaced across the Valley and a larger number of North-South, and diagonal routes in the Northeastern part of the Valley flatland.

Many of these Rapid Bus routes could be linked for single bus operation. For example, there is heavy bus passenger traffic on Topanga Canyon, especially the Southern portion. Line 750 currently comes off Ventura and turns up Topanga on its way to Warner Center. Since there is a lot of transfer activity between the bus lines on Ventura and Topanga, one obvious idea is to look at single bus Rapid Bus service on a combined route. There are several similar logical bus route connections.

There are also many opportunities for increasing Express Bus service on freeways, especially those that have already had HOV lanes installed or soon to be installed – I-5 (Golden State), I-405 (San Diego) SR118 (Ronald Reagan/Simi Valley), SR134 (Ventura), SR170 (North Hollywood). While there is Express service on some of these routes, the number of trips is small and some have virtually nothing. This type of longer trip service is especially valuable for those who live far from their job or school, but these freeway flyers must be carefully connected with local service with short waits for transfers.

One of the biggest problems in attempting to utilize transit in the Valley is that, unless one is lucky enough to live and work on the same street, it is almost always necessary to take at least one transfer to complete each one-way trip. With very long times between buses – often 30 minutes or more – the Valley has by far the longest wait times for buses of all MTA service areas. A well-known technique to shorten wait times is "timed transfer." Several different bus lines in each area all arrive at a common point at a common time, allowing riders to quickly transfer between buses with minimum waits. This has worked well in many areas similar to the Valley, but MTA has had little success in implementing it in the Valley, in large part due to opposition from major real estate interests and some homeowners. The transit users of the Valley deserve better.

X. MTA Has Refused to Even Consider Rapid Bus and Other Low Cost, Low Impact, Widespread Improvements to Valley Transit as Alternatives to the Proposed SFV BRT

There are strong indications that a network of Rapid Bus lines would produce a far greater increase in transit ridership and far greater time savings for Valley transit users, new and existing, than BRT, at far lower cost, and in far less time to implement. Besides Rapid Bus on Victory – which would appear to provide, all by itself, almost as much new ridership as BRT – other Rapid Bus lines could serve far more people because they would be far closer to more existing and potential riders and more destinations. Other cheap, fast, and productive improvements that MTA has refused to consider include timed transfer and expanded freeway express bus service. MTA has consistently refused to even evaluate how such improvement would fare as alternatives to BRT. Why? Because MTA knows the results are likely to be?

As we have shown in Paper VI., Rapid Bus on Lankershim/Victory promises travel times that look to be very competitive with BRT on Burbank-Chandler. Worst case, Rapid Bus would be eight minutes slower for the few people who would take the BRT end-to-end; best case, Rapid Bus could be faster than BRT. When the cost per route mile is taken into account – $16.8 million, projected, for the 13.9 mile BRT vs. $195,000, actual, for the first two Rapid Bus lines – it is obvious that a lot more miles of Rapid Bus could be implemented for the same capital investment dollars.

A lot more miles of higher speed bus service is exactly what COST has been all but begging MTA to consider for years. MTA, of course, has shown no interest in any type of side-by-side comparison of the advantages of a network of Rapid Bus lines vs. a single BRT line. It has gone to great lengths to make sure that there weren't Rapid Bus lines that could be seen as competing with its favored BRT. The original County Rapid Bus Plan had Rapid Bus on Roscoe – which has been removed. MTA's more recent plan used a qualification test that ignored several major Valley streets with existing bus service that appeared to meet the requirements – including Topanga, Sherman Way, Van Owen, and Victory – but were not even considered. Why not? Could it be that MTA had no interest in seeing an inexpensive Rapid Bus route traveling almost as fast as MTA's favorite BRT?

The problem with MTA's single BRT approach is that the vast majority of Valley transit patrons – and potential Valley transit patrons – simply live, work, and have other destinations that are too far from the BRT for it to be of any use to them. The Burbank-Chandler alignment crosses part of the Valley, East-West only, near the Southern edge of the "flats." For those with North-South travel requirements, or who have origins and/or destinations East of West of where the BRT ends, or need to travel North or South of where it lies, it simply will not do much for them, no matter how fast it is (or isn't) and how much it costs. COST believes that a far better approach could be a network of Rapid Bus lines, more East-West ones covering the middle and North of the Valley, plus selected East-West, and diagonal routes along the Northeastern edge of the "flats." We know that Rapid Bus can be almost as fast as BRT for little more than 1% of the guideway construction cost, so why not use the savings from not building an unneeded, expensive guideway to implement more Rapid Bus lines, bringing them far nearer to far more residents that need and can use them? Why not test BRT against a Rapid Bus network, and may the best transit plan – and the transit riders and taxpayers – win? All we are asking is, give Rapid Bus a chance to show what it could do.

XI. MTA Refuses to Consider What May Be the Greatest Ridership Increase Tool of All – Reduced Fares

When fares were reduced from 85¢ to 50¢ in 1982, ridership increased ***over 40%****, and peak period ridership increased over 35%. This was the greatest ridership increase* ***in any mature*** *U.S. transit system since World War II, and the cost was less than a .1¢ sales tax (MTA* ***now collects*** *1.25¢ sales tax on all Los Angeles County retail sales). In 1996, when the* ***monthly pass price was*** *reduced from $49 to $42, and an $11 weekly pass introduced, MTA ridership* ***stopped dropping*** *12 million a year and began increasing by over 13 million a year. Yet, MTA* ***absolutely refuses*** *to even consider fare reductions as a means of increasing transit ridership.*

In its quest to find more and more expensive capital projects to build, MTA has totally rejected – actually, refused to even consider – the transit ridership increase tool that generated the largest ridership increase in a mature transit system in a major U.S. city since World War II: lower fares.

Part of the package of promised transit improvements that was sold to voters to get the Proposition A ½¢ sales tax passed in 1980 was a fare reduction. When the promised 50¢ cash fare went into effect in July of 1982 – a reduction from the previous 85¢ – and stayed there for three years, MTA ridership soared. From 354 million riders in fiscal year 1982, the fare decrease immediately reversed the loss of over 10% of ridership over the prior two years and caused a 40+% jump – to the all-time high of 497 million in FY85. This was done with almost no increase in bus service operated, and cost less than 20% of the half-cent sales tax collections over this period. Immediately after the end of the promised three years of 50¢ fares, the cash fares went up, first to 85¢, then to $1.10 in 1988, and finally to $1.35 in 1994.

During this period of fare increases, ridership dropped almost every year. By FY96, the last year before the Consent Decree that MTA signed to settle *Labor/Community Strategy Center v. MTA*, ridership had dropped to 364 million – an average loss of over twelve million riders a year for eleven years, or over a quarter of the 1985 high, even as the County population, and particularly the numbers of low-income, mobility-challenged residents, was growing by leaps and bounds.

Starting half-way through FY97, the Consent Decree requirements began to go into effect. The $1.35 cash fare stayed, but the monthly pass price went from $49 to $42 and a new $11 weekly pass was started – important for the many MTA riders who have problems putting together $42 in cash. Equally important, service quality improved as MTA had to add buses to relieve overcrowding, to begin new bus routes for the first time in years, and to replace overage, unreliable buses with new, better ones. MTA's FY02 boardings were 445 million higher than FY96's, growth of 81 million, 22+%. The opening of new rail lines has been important, but over half of the increase has been bus boardings, and a large number of the new rail boardings are former bus riders who had their bus routes discontinued. Interesting, also, is that one of big attractions of MTA rail lines is the low, "flat" fare, which allows very long trips without the "zone" fares of MTA's express bus routes.

Are expensive capital projects a requirement to increase transit ridership? Well, the history in Los Angeles shows that the provision of good transit service at a fair price can add a lot more riders at a lot less cost to the taxpayer. Why don't we try the low-cost option first for a change?

XII. The SFV BRT Busway Cost per Mile Is Almost 100 Times That of Rapid Bus

Excluding the cost of buses, the capital cost of the Burbank-Chandler BRT is $233.6 (including contingencies) for 13.9 miles of busway, stations, signage, signals, etc. – a cost of $16.8 million per bi-directional guideway mile. The first two Rapid Bus Lines (Line 720 on Wilshire/Whittier and Line 750 on Ventura Blvd.) cost $195,000 per mile. With the lessons learned on the first segment already absorbed, and higher levels of production providing economies of scale, it is very reasonable to assume that the cost/mile for later segments, implemented as part of a large network of Rapid Bus lines, as MTA now plans, will be significantly lower.

Making almost 14 miles of the old Southern Pacific "Burbank Branch" alignment into a Bus Rapid Transit guideway will be an extremely expensive proposition. Between preparing the ground for and installing the pavement itself, building thirteen stations, some with parking, adding soundwalls and other physical barriers along its path, large numbers of new signs and safety paintwork on streets, ticket vending machines, security cameras, and many other improvements, MTA has budgeted $233.6 million for the guideway itself, including contingencies.

This does *not* include a number of other costs. For example, there is very little in the budget for landscaping along most of the right-of-way. There is nothing for a new entrance to the North Hollywood Red Line Station, on the West side of Lankershim where the BRT buses will stop. There are plans – not yet formally approved – for such an improvement, but not in the BRT budget. The planned Bus Transit Center at Warner Center is also separately budgeted.

The single biggest item not in the BRT budget is the $159 million that MTA paid to the Southern Pacific and other landholders for the current right-of-way. Arguably, this money should not be included as part of the cost for the BRT project, because it is already spent – it is "blood over the dam." However, what about the millions of dollars of annual lease income that MTA now receives from the many businesses that are now housed at various locations along the right-of-way? If MTA builds on the Burbank Branch, then all of these businesses, and their payments to MTA, will go, but the loss of future revenue is mentioned nowhere in the cost of building or operating the SFV BRT.

Counting the entire 13.9 BRT route (which includes about a mile of street-running which will not require much in new capital expenditures), the capital cost per mile is about $16.8 million – and that assumes that the project would come in within budget, something that MTA is not exactly known for doing.

What we do know is that MTA shows capital costs of $195,000 a mile for the two Rapid Bus lines it has installed on Ventura and Wilshire/Whittier. There is reason to believe that widespread expansion of the BRT program – which MTA has adopted as a plan to be implemented – will result in many of the cost elements going down. However, even if the price per mile went up eight times, it would still not be 10% of the capital cost per mile of BRT. Since the benefits of BRT over those of Rapid Bus are so little – and the safety concerns of Rapid Bus so minor compared to those of BRT – the decision between Rapid Bus and BRT appears to be one of the simplest in the history of public sector cost-benefit analysis. Why, then, is MTA having so much trouble with it?

XIII. MTA Is Proposing to Operate the SFT BRT with Extremely Complex, High-Cost Buses That Must Be Custom-Developed for this Project

To make the SFV BRT look as much like light rail as possible, MTA is now in the process of procuring 72 60-foot articulated CNG/Electric or CNG/Hybrid buses. No such bus now exists, even as a prototype – there is not even a 60-foot "pure" CNG bus that is now operating in the U.S. MTA has budgeted $1,036,000 (including contingency) for each of these buses, compared to $390,000 it paid for 40-foot CNG buses a few years ago.

The SFV BRT has a number of special circumstances that have led MTA to opt for a bus design so new that no such bus now exists. The projected BRT boardings – 24,700 in 2020, an undisclosed, but lower figure for the promised 2005 opening date – isn't particularly high compared to other MTA routes, but MTA is interested in 60-foot, articulated buses for several reasons. First, although MTA's first experiences with larger capacity buses were disappointing, MTA management believes that the current generation of such buses are significantly improved. Second, larger buses allow the same number of passengers to be carried by fewer operators on high-demand routes. Third, larger buses means fewer trips through signalized intersections, where the workings of the City of Los Angeles' traffic signal system/MTA bus signal preference system begin to break down as headways approach three minutes. Finally, MTA wants buses with the "sexiest" possible appearance in an attempt to make the buses and the BRT more acceptable to riders and the general public.

The MTA Board policy on no longer buying diesel buses has caused problems with procurement of articulated buses until recently because there has been no supplier of CNG articulated buses for U.S. operation. While there are now vendors interested in providing such vehicles, there are none currently in service. However, MTA has chosen to leapfrog to CNG/electric or CNG/hybrid arctic's for the SFV BRT, mainly because such propulsion plants are projected to be quieter, perhaps helping MTA avoid erecting soundwalls and/or other barriers. This, however, means buying buses with even more totally new features not proven in on-street operation.

These buses appear to have other limitations. As evidenced by modifications to the procurement specifications and related documents, MTA may not be able to get the desired 60 seats per bus, and at least one potential vendor did not appear confident of being able to achieve 55 mph. Artic's are slower in service than 40-foot buses because of their greater weight, but the performance of the CNG/electric or CNG/hybrid buses that MTA is now specifying appear to be making MTA's fabled 28.8 minute BRT run time even further from reality. Interestingly, although the FEIR shows a need for only 26 Artic's (in 2020) for the 40-minute BRT run time, MTA is still procuring up to 72 buses, the number required to carry the number of passengers projected for the 28.8 minute run time.

The FEIR cost estimates make this bus probably the most expensive bus ever mass produced – $1,036,000 each, including contingencies, approximately 250% of the price of 40-foot CNG's.

MTA has had major problems in the past with new technology buses because of the extreme wear and tear of operations with Los Angeles' extreme passenger loads. MTA eventually totally gave up getting its 333 Methanol/Ethanol buses to operate, replacing the power plants with diesel engines. One can hope that this experiment will not prove to be that much of a disaster.

XIV. The SFV BRT Stations at Valley College and Laurel Canyon Violate the "Robbins Bill" Requirements for Station Location

PUC §130265 requires that any station at the intersection of Burbank Boulevard and Fulton Avenue be located on the Valley College campus on the Northeast corner. MTA plans two station platforms at this corner, the Westbound one on the Southeast corner and the Eastbound one on the Northwest corner – neither in compliance with the explicit requirements of this statute. The same PUC section also prohibits a station where MTA is now planning one at Laurel Canyon Boulevard.

During the 1980's and early 1990's, Senator Alan Robbins of North Hollywood was able to introduce and get enacted several provisions to protect the interests of SFV residents in transit matters. One of the provisions he authored, codified as Public Utilities Code §130265, prohibited MTA from building any type of transit except a subway along the former Southern Pacific "Burbank Branch" and placed other restrictions on rail line construction. The following are the three most relevant subsections:

"(a) In the area between the western curb of Hazeltine Avenue and a line parallel to and 50 feet west of the western edge of the Hollywood freeway, there may not be constructed any exclusive public mass transit **rail** *(emphasis added to indicate the addition of this word late in the 2001 Legislative session)* guideway, rail rapid transit or light rail system, or other track, other than as a subway system that is covered and below grade.

"(b) In the area described in subdivision (c), no station may be constructed, other than a station where the main entrance is located on property that is currently part of the Los Angeles Valley College campus or on that portion of the existing railroad right-of-way located north of Burbank Boulevard and east of Fulton Avenue.

"(c) In the area below Tujunga Wash and at least one mile to the east and west of Tujunga Wash, there may not be constructed any exclusive public mass transit rail guideway, rail rapid transit or light rail system, or other track, other than as a subway using boring technology as a deep bore subway located at least 25 feet below ground, measured from the existing ground level to the top of the tunnel."

Opponents of surface transit guideways thought that subsection (a) would be their strongest protection. However, MTA was able to get the word, "rail," added, making the controls on surface transit therein contained relevant only to rail transit – exempting busways. This change was made very quietly in the last days of the Assembly session, with virtually no advance notice, and passed without opposition in the rush to adjournment.

However, MTA failed to have any changes made to subsection (b) or (c). (b) clearly requires any station at the intersection of Burbank/Fulton to be on the Northeast corner, while MTA has designed the two busway station platforms to be on the Northwest and Southeast corners. In addition, the boundaries set in subsection (c), taken in context with (b), prohibit the placement of the station planned at Coldwater Canyon – both the East- and Westbound boarding areas, located West and East of Coldwater, respectively, are within one mile of the Tujunga Wash.

MTA may have a significant legal problem in putting these two stations where they are planned.

XV. MTA is Improperly Using Proposition 108 *Rail* Bond Funds for the SFV BRT

MTA originally purchased the former Southern Pacific Railroad "Burbank Branch" with $40 million of funding from State Proposition 108, the "Passenger Rail and Clean Air Bond Act" of 1990. This proposition requires that its funding be used for rail transit purposes, with the sole exception that an interim use of the guideway for an exclusive busway is allowable if it is converted to passenger rail within ten years. MTA maintains there is no requirement to ever run a rail line on this guideway. There is there no conceivable way that MTA could plan, design, fund, construct, and begin operating such a rail line within ten years, even if it wanted to.

MTA proposes to construction the San Fernando Valley Bus Rapid Transit Project (SFV BRT) project along the former Southern Pacific Railroad "Burbank Branch," also known as the "Burbank-Chandler" alignment. MTA and its predecessor agencies have been studying guideway transit along this route since at least the early 1980's. However, all prior plans have been for rail transit, not bus. MTA bought the Burbank Branch (along with other property) for $159 million, including $40 million of Proposition 108 funds. This line was going to be the route of the SFV East-West Subway. When it became apparent that there was no funding for this project, the BRT was the next best thing.

The relevant language of Proposition 108, since codified as Street and Revenue Code §2701.06, is: "The money in the fund, upon appropriation by the Legislature, shall be available, without regard to fiscal years, for acquisition of rights-of-way, capital expenditures, and acquisition of rolling stock for intercity rail, commuter rail, and urban rail transit and for capital improvements which directly support rail transportation, including exclusive busways which are converted within 10 years after completion of construction into rail lines, grade separations to enhance rail passenger service, and multimodal terminals."

MTA legal counsel, in an absolutely amazing display of legal magic, has managed to conclude that (Final SFV EIR, Volume 2, response to Comment 9-3, pp. 7-130/1): "It is true that Passenger Rail and Clean Air Bond Act of 1990 funding was used to purchase the rail right-of-way that will be used for the busway. However, Streets and Highways Code §2701.06, which sets forth how such funds may be expended, clearly states that they may be used 'for acquisition of rights-of-way.' Since this is precisely how the funds were used, the requirements of the statute were clearly met. Nothing in §2701.06 requires the conversion of the busway to a rail line within 10 years. It is true that §2701.06 does allow the use of Bond Act funds 'for capital improvements which directly support rail transportation, including exclusive busways which are converted within 10 years after completion of construction into rail lines.' However, by its terms, this provision only applies when the funds are used for 'capital improvements,' (i.e. construction) related to the busway. In this instance, the Bond Act funds were used only for acquisition of the right-or-way (sic), and will not be used to construct the busway."

Nice try. However, § 2701.06 clearly says, "for acquisition of rights-of-way ... for *intercity rail, commuter rail, and urban rail transit* (italics added) ..." *Nowhere* is there any language allowing use of these bond funds for anything *but* rail transit. No amount of tortured logic in a legal opinion can change this. Any trial on this issue could be one of the shortest in the history of California.

EXHIBIT XV

ADMINISTRATIVE RECORD EXCERPTS FROM *COST V MTA*

Administrative Record Excerpts from *COST v MTA*

There are certain references to Administrative Record excerpts in the Comment Letter proper that are not included in this Exhibit because "cleaner" copies of the same document are reproduced in other exhibits. These include:

8 AR 01593	Exhibit V	MTA, FEIR, Figure 2-26: Warner Center Transit Hub Design Concept
15 R 03265-8	Exhibit VII	MTA, FEIR, Run Time Estimates for Bus Rapid Transit Alternatives: Figure A-1: Run Time Estimate for Bus Rapid Transit (BRT) – 28.8 Minute, Lower Bound Figure A-2: Run Time Estimate for Bus Rapid Transit Minimum Operating Segment Figure A-3: 36-Minute Run Time Estimate of the BRT Alternative Figure A-4: 40-Minute Run Time Estimate, the Upper Bound (UB) of the BRT Alternative (Base on 36-Minute Run Time Estimate, Figure A-3)
53 AR 12742-806	Exhibit XXI	MTA, *Final Report – Los Angeles Metro Rapid Demonstration Project*, July 2001

Table 1-5: Goals and Objectives of the San Fernando Valley East-West Transit Corridor

Goal	Objective
1. Improve east-west mobility in the San Fernando Valley.	• Connect important activity centers, including government, educational, medical, cultural, commercial, and business. • Provide an alternative to the congested Ventura Freeway (US 101/SR 134). • Relieve congestion through the Cahuenga and Sepulveda passes by providing Valley stations that are connected to the Metro Red Line North Hollywood Segment. • Minimize total travel times. • Provide enhanced bi-directional transit service. • Provide opportunities to intercept traffic passing through the valley.
2. Support land use and development goals	• Provide high-capacity transit linkages between centers (North Hollywood, Van Nuys, Warner Center). • Achieve General Plan Framework Plan goals for increased transit mode split and concentration of growth in targeted growth areas. • Provide Warner Center Specific Plan transit access enhancements. • Provide joint development opportunities. • Provide accessibility to governmental facilities in the Van Nuys Government Center.
3. Maximize community input, i.e., define the project in a manner that is responsive to community and policy makers.	• Incorporate the citizen and policy maker input from previous studies in the San Fernando Valley. • Provide opportunities for community input to the MIS/EIS/EIR process. • Seek ways to incorporate community views into planning.
4. Provide a transportation project that is compatible with and enhances the physical environment where possible.	• Identify cost-effective alternatives that minimize adverse effects on the environment. • Avoid impacts on parklands. • Minimize noise impacts. • Minimize impacts on cultural resources. • Minimize air pollution.
5. Provide a transportation project that minimizes impacts on the community.	• Minimize business and residential dislocations, community disruption, and property damage. • Avoid creating physical barriers, destroying neighborhood cohesiveness, or in other ways lessening the quality of the human environment. • Minimize traffic and parking impacts. • Minimize impacts during construction.
6. Provide a transportation project that is cost-effective and within the ability of MTA to fund, including capital and operating costs.	• Identify cost-saving measures to reduce project costs. • Maximize the benefits associated with use of right-of-way already purchased by the MTA. • Ensure fiscal consistency with the MTA Long Range Plan.

Source: *San Fernando Valley East-West Transit Corridor Major Investment Study*, February 2000.

Comment Letter C5

TPOA

Tarzana Property Owners Association, Inc.

June 11, 2001

Mr. Kevin Michel
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, 22nd Floor, MS 99-22-5
Los Angeles, CA 90012

Subject: **San Fernando Valley East-West Transit Corridor DEIS/DEIR**

After a review of the DEIS/DEIR, we find several levels of concern. At the top level the report does not demonstrate any advantage to construction of the Bus Rapid Transit project, at least to those of us in the western part of the San Fernando Valley. The major advantages cited, with respect to the Transportation System Management (TSM) to improve the existing bus system are:

1. Projected decreased number of vehicle trips
2. Projected increased bus boardings
3. Projected decreased auto vehicle miles of travel (VMT) and vehicle hours of travel (VHT) on a daily average basis
4. Projected increased daily average vehicle speed
5. Projected decreased total fuel consumption
6. Projected decreased emissions of air pollutants
7. Replacement of the unattractive existing right-of-way from White Oak to Winnetka with landscaping and a bike path.

C5-1

Our analysis of the presented data, however, does not support any of the above claims. As shown in the table below, all of the assumed advantages are so small as to be totally insignificant. Differences in the 0.1% range gains claimed for traffic flow and in the 0.03% range for air pollution would not be statistically significant if they compared two existing alternatives. To claim a distinction between alternatives of that small a magnitude based on 20-year forward projections is ludicrous. The DEIS/DEIR needs to be revised to more accurately match the advantage claims to the data.

Projected Traffic, Air Quality Improvements

Parameter	Projected TSM Value	Projected BRT Value	Percent Difference
Daily vehicle trips, county	25,705,314	25,700,964	0.02%
Daily bus boardings, county	1,596,379	1,596,147	0.01%
Daily auto VMT, valley	23,779,436	23,753,054	0.11%
Daily auto VHT, valley	804,841	802,765	0.26%
Daily average speed, valley	29.55	29.59	0.14%
CO emission	492,199 tons	492,151 tons	0.01%
NOX emission	71,939 tons	71,936 tons	0.004%
ROG emission	28,079 tons	28,071 tons	0.03%
PM10 emission	3,156 tons	3,155 tons	0.03%

Tel: (818) 344-2137 • Fax: (818) 996-0117
Post Office Box 571448, Tarzana, California 91357-1448

Response to Letter C5

Comment C5-1

This comment lists several regional transportation and air quality projections that show some advantage for the BRT Alternative over the TSM Alternative. The MTA model used to derive this data is a regional model. The Southern California region, which the model simulates, is very large, with a population of over 15 million people today and a projected population of over 20 million in 2020. When data for the alternatives of a single transit project are compared on a regionwide or countywide basis, the "percent difference" between alternatives will inevitably be small. The data that can be compared on a Valleywide basis, such as daily auto vehicle miles of travel (VMT), vehicle hours of travel, and average speed, show a greater percent difference between the BRT and TSM simply because the Valley is a smaller area within which to compare statistics. When compared in absolute terms, however, the data are more meaningful. For example, the model estimates that the upper bound of the BRT alternative in 2020 would generate approximately 10,700 fewer auto vehicle miles traveled every day in the San Fernando Valley, when compared to the TSM Alternative.

These regional and area-wide statistics are among a number of reasons that the MTA Board selected the BRT Alternative over the TSM Alternative as the Locally Preferred Alternative. For example, the on-street bus service improvements of the TSM Alternative have been incorporated into the BRT Alternative, thereby improving transit service across much of the Valley as it would have done under the TSM Alternative alone.

Also, the BRT Alternative will provide a consistent, reliable trip across the Valley both now and in 2020 and, in addition, the BRT exclusive busway would ensure that buses will not be caught in on-street congestion no matter how much traffic grows in the Valley, which constitutes a distinct advantage over the TSM Alternative.

02336

It should be noted that improvements to the appearance of the right-of-way, specifically an integrated landscape and bikeway, are not part of the BRT project. Integration of the bikeway would supposedly take place at some future time, under some other authority, causing additional construction impacts and disruption of whatever landscaping was implemented as part of the BRT project.

C5-2

In addition to failing to substantiate the claimed advantages, the DEIS/DEIR needs to make some of the critical data available in a more understandable manner. The series of tables in Section 3-3.2 concerns traffic impact at key intersections. The tables are confusing and blur the real picture. The table below, developed from the Appendix data, clearly shows that the BRT drastically increases the impact on traffic at intersections along the corridor and does nothing to solve the traffic flow problems in the area. The TSM alternative does not solve the projected problem, but at least it does not make it worse.

Intersection Delay Times, seconds (AM/PM)

Intersection	Current	No build	TSM	BRT
Owensmouth/Victory	37/74	91/127	89/126	91/127
Canoga/Victory	22/42	72/108	69/106	73/108
Variel/Victory	90/12	141/30	138/29	143/30
De Soto/Victory	40/76	59/159	57/157	60/171
Mason/Victory	9/38	12/82	12/81	24/84
Winnetka/Victory	62/109	123/203	118/204	165/205
Tampa/Topham	10/19	16/75	16/73	28/132
Balboa/Victory	39/52	91/123	89/121	93/126
405 ramp/Victory	16/21	60/34	59/35	60/47
Sepulveda/Victory	42/47	122/121	121/121	291/127
Sepulveda/Oxnard	14/33	22/72	22/72	29/123
Van Nuys/Oxnard	11/33	23/62	22/62	22/62
Laurel Canyon/Oxnard	30/41	60/63	60/63	60/63
AM Weighted Average	20	40	40	53
PM Weighted Average	26	55	55	64

C5-3

Both AM and PM impacts are shown in the table to illustrate the problem. Numbers are rounded to the nearest second; even that specificity is suspect for 20-year projections, tenths of a second numbers are nonsense. Bolded numbers show increases of more than one minute; the box around the PM BTR at Mason/Victory shows the only improvement projected for the BRT plan. That number, however, is highly suspect: how can adding parking lot ingress and egress reduce delay at that intersection? In fact, the appendix shows essentially the same traffic volume at that intersection for the TSM, BRT and MOS options, yet shows significantly decreased delays for the only option that superimposes parking ingress/egress on that traffic flow.

In fact, the whole traffic flow model used may be suspect. It is easy to see why adding the BRT would increase delays at the same level of traffic (as is the case for PM

C5-4

Comment C5-2

The BRT, as currently proposed, incorporates extensive landscaping, including the planting of approximately 4,000 trees, numerous shrubs, and groundcover. Also, reserved space for the bikeway is being included as an integral element of the design, with specific design features to follow.

Comment C5-3

Tables in section 3-3.2 have been prepared in summary form from detailed data provided in Appendix I. The tables identify significant impacts. Information provided in these tables is not intended to claim advantages or disadvantages for the project, but rather to identify the impacts of the project. Where impacts are deemed significant based on the established significance criteria, Tables 3-14, 3-16 and 3-18 clearly list the affected intersections; appropriate mitigation measures have been developed and are listed in Section 3-3.3.2. Traffic volumes for the BRT and BRT/MOS at the intersection of Mason Avenue and Victory Boulevard are lower than the TSM Alternative due to the reduction in traffic volumes along Victory Boulevard resulting from automobile users diverted to the BRT.

The reduction more than offsets the volume of traffic attracted to the BRT park-and-ride station. The numerical specificity in traffic delay analysis is consistent with standard industry practice and impact study criteria recommended by LADOT for long range projections.

Comment C5-4

The MTA travel demand model is an integrated highway and transit model, which forecasts traffic dynamically across a network using an equilibrium traffic assignment process which takes into account available highway capacity, traffic demand and the drivers' desire to take the least congested routes. There are many variables affecting the study intersections, including signal timing, delays associated with the BRT operations, traffic attracted to the park and ride lots, and reduction in traffic from automobile users diverted to the BRT.

at De Soto/Victory, Tampa/Topham and Sepulveda/Oxnard and for AM at Winnetka/Victory and Sepulveda/Victory) but it is hard to understand why that doesn't happen at essentially all intersections.

C5-4 cont'd

There are a significant number of other hard to understand or suspect analyses made in the DEIS/DEIR and assumptions to which we take exception. Noteworthy ones include:

- **Parking:** The assumption that transit patrons will only seek parking at stations with designated parking lots is nonsense. A more reasonable assumption is that a significant number of patrons will seek parking on the major streets adjacent to each station and in the residential neighborhoods surrounding each station. Resulting impacts would include added traffic impact from parking ingress/egress on the major streets, lack of parking for shoppers in adjacent commercial areas, and patron parking (with collateral litter) in the residential areas. C5-5
- **Police and Fire Services:** The DEIS/DEIR notes the number of impacted intersections and the fact that two fire stations are immediately adjacent to the SP ROW and essentially dismisses the problem. Increased time of response, for both police and fire protection, has to be an impact of the BRT due to the impacted intersections and the use of stop bars on cross streets. In addition, there is a very real possibility of collisions between the buses and the police/fire vehicles, both of which assume they have the right of way. C5-6
- **Bus/Pedestrian Accidents:** Section 2-2.3.3 of the DEIS/DEIR indicates that the pedestrian/bikeway portion of the corridor would be separated from the busway by a picket fence; Volume 2 shows a 7-foot high fence. Do we assume a 7-foot high picket fence? If so, that should provide some level of protection against people (especially children) wandering onto the busway. No mechanism is described to restrict access to the busway from the stations, however. Experience with the Blue Line shows that accidents happen with some frequency involving both cars and pedestrians at streets which cross the Blue Line. Such accidents appear much more likely in the environment envisioned for the BRT corridor, where a nice level paved "street" (the busway) separates two pedestrian areas. C5-7
- **Noise and Vibration:** The discussion of the time averaged noise measurements presented in the DEIS/DEIR is confusing, a point made by speakers at the June 21st public meeting who are familiar with noise measurement. More important, however, there does not appear to be any discussion of the instantaneous increase in noise above ambient caused by bus passage. There are currently very few trucks and buses on the Oxnard/Topham section of the corridor and those trucks and buses are clearly audible above the ambient noise. The noise generated by one of the proposed buses (assuming the current Metro Rapid buses as a model) would be clearly audible and distracting. Increasing the frequency of large vehicle passage would have a significant impact on the noise/vibration experienced by residents. The DEIS/DEIR statement that there used to be a train running through the corridor and residents should accept increased transportation noise is totally specious. That train has not run for many years, it ran once a day, and it did not run during the early morning and late evening when people are sleeping. C5-8

Most intersections are affected by one or a combination of these factors. Therefore, while some intersections will experience delays, others will not. Also, it is expected that traffic patterns will shift to take advantage of the BRT. Therefore impacts will vary from intersection to intersection. Mitigation measures have been developed for each of the affected intersections and implementation of these measures will ensure that no significant impacts remain.

Comment C5-5

Potential parking impacts were assessed in the EIS/EIR and mitigation measures proposed for locations where significant impacts are projected. Significant impacts will not occur at every station, but only where it is shown that demand will exceed provided capacity.

It is recognized that on-street parking could occur and spillover into adjacent neighborhoods. Therefore, in the parking mitigation section (Section 3-4.3.1), strategies are identified to address areas where parking supply is low or non-existent and/or parking demand is high. Included among these strategies is a monitoring program linked to additional mitigation measures.

Comment C5-6

The BRT will respond to the presence of emergency vehicles in the same fashion as all other motor vehicles – they will yield at all intersections. The City of Los Angeles Fire Department, Police Department and Emergency Medical Technician (EMT) service policies require that all emergency vehicles slow on approach into an intersection to ensure that all other vehicles have yielded and then proceed through.

There is one intersection that has an emergency vehicle preempted light; this is the intersection of Tujunga Avenue and Chandler Boulevard. The preempt signal at this intersection has been installed as an experiment to test its effectiveness on emergency response times. This test is not associated with the San Fernando Valley East-West BRT project and its results are not incorporated into this document.

02338

- **Neighborhood Cohesion:** Development of the BRT corridor would split in two the communities through which it passes. Some of those neighborhoods, particularly the Chandler area, are excellent examples of the cohesiveness possible in neighborhoods. One of the speakers at the June 21st public meeting related the warning of a minister in an area split 25 years ago by the Santa Monica freeway. That neighborhood has taken 25 years to approach the same level of cohesion as before the freeway. The experience with the Ventura freeway in Encino and Tarzana is similar.
- **Demographics:** We question the accuracy of the demographics data presented. As an example, Table 4-7 indicates that the Tampa/Topham station influence area has the highest percentage of both residents over 64 and residents under 16. I live in that area and find those numbers hard to believe. Certainly the Chandler area, with its high percentage of orthodox Jews, many of whom have large families, would have a larger percentage of residents under 16. The point is not important in and of itself, but, together with other items noted, calls into question the validity of the data and analyses used throughout the DEIS/DEIR.

C5-9

C5-10

In summary, the DEIS/DEIR documents the lack of benefits to either transportation flow or air quality of the BRT. The bottom line gain from building the BRT versus the TSM improvements to the existing bus grid is a projected 0.04 miles per hour increase in the daily average vehicle speed in the valley in 2020 (29.59 vs. 29.55 mph) and a decrease in air pollutants in the 0.01% range. These purported gains are at the expense of significant impacts to the people living in the area of the corridor from increased intersection congestion, parking, spillover, increased noise, increased accident potential, and decreased neighborhood cohesion. These impacts are poorly treated, when treated at all, in the DEIS/DEIR.

C5-1 cont'd

While the above paragraphs take issue with the content of the DEIS/DEIR, our overriding concern is with what the report does not cover, i.e., consideration of a non-invasive, comprehensive rapid transportation plan for the area. Chapter 2 provides a brief, quite hard to follow, overview of some of the rapid transit studies since the 1980 passage of Proposition A, but the rest of the DEIS/DEIR makes no mention of alternatives to the BRT as mitigators to the problems it presents. In addition, it does not address at all methods to achieve significantly greater public transit patronage. The economic and political realities, which led to the selection of the BRT corridor as a solution to the transportation problems of the Valley, have changed. We believe the DEIS/DEIR needs to include consideration of a better solution. We feel the primary aspects of that solution should include:

- A not-at-grade-level east-west valley rapid transit corridor. Eliminating the grade-level approach would alleviate many of the problems of the proposed BRT and significantly decrease transit time on the system. Decreased transit time would considerably increase patronage.
- Direct connectivity of the corridor to the Metro Red Line. Direct connection would facilitate transfer to the Red Line, especially for handicapped riders, and decrease transit time to the downtown area.
- Completion of a core rapid transit system. A Valley East-West rapid transit corridor would alleviate some current and projected traffic congestion by providing a quality

C5-11

Should there be an LADOT policy decision made at some subsequent point in time to institute emergency signal preemption at other intersections along the corridor, appropriate adjustments to the BRT operation would be made at that time.

The emergency vehicle preemption at Tujunga Avenue and Chandler Boulevard was developed and installed by a private contractor for the Fire Department to evaluate. It was installed with the assistance of LADOT (on the signals) and the Fire Department (on the trucks). Although the Fire Department found favor with the system, it did not have the funding necessary to install it at other locations. LADOT was not completely satisfied with the system and in turn put out an RFP for preemption technologies, but no bidders met the qualifications. Therefore, at present, there are no plans to install the emergency vehicle preemption system at other signals along the BRT corridor.

Comment C5-7

The BRT will be separated from pedestrian/bikeway access by two types of fencing. At stations and 200 feet preceding them, the corridor will be lined with a metal picket fence. The fence is set to 4 feet, 9 inches in height in these sections for safety reasons. As the bus approaches the station areas (which also are predominately located at intersections) the driver will be ensured a clear line-of-sight without fencing to block any views of the stations or intersections. In the Chandler Boulevard median, an approximately 4- to 5-foot-high fence will be constructed between the existing trees and the busway. The remainder of the busway will be lined with a 6- to 8-foot-high fence constructed from wire mesh. The mesh will not be the standard chain link style, but rather a grid-patterned mesh that is difficult to climb and is more aesthetic, that will decrease to approximately 4 feet in height at a distance of 200 feet before the intersection, to again ensure a line-of-sight for the bus drivers.

Intersections that do not have stations will not have the picket fence; instead, the wire mesh will extend from the main sections of the busway.

The BRT station platforms will be open facing toward the busway with the 4- to 5-foot-high fence to the rear of the station area. The station will be elevated at a standard curb height of 6 to 8 inches above the busway.

02339

alternative for cross-valley trips (RSAs 12 and 13), trips to the downtown area (RSA 23) via connection to the Red Line, and trips to the East/South Central area (RSA 21) via the Metro Blue Line. However, approximately 30% of projected trips from both the East Valley (RSA 13) and West Valley (RSA 12) go to the Hollywood, West-Central area (RSA 17) as opposed to approximately 5% each to the Downtown and East/South Central area. A rapid transit route along the general 405 freeway, Sepulveda Boulevard alignment, connecting to the proposed Westside Extension of the existing Metro and to the Metro Green Line would provide a core system for the Los Angeles area. Such a system could indeed relieve traffic congestion, reduce air pollution, and significantly increase public transportation patronage.

- Improvements to existing busways. The TSM, supplemented with additional Rapid Bus Corridors along Sepulveda Boulevard or Van Nuys Boulevard and a selected east-west street in the northern portion of the valley, would provide an effective feeder network to the Rapid Transit Corridor and increase public transportation coverage throughout the valley.

C5-11 Cont'd

Implementation of these suggestions would go a long way toward satisfying the effective traffic management, improved air quality, and increased patronage of public transit goals stated in the DEIS/DEIR. The proposed BRT does not. The DEIS/DEIR needs to acknowledge the limitations of the BRT and include some higher level considerations of an effective, comprehensive rapid transit network.

Very truly yours,

David R. Garfinkle
Tarzana Property Owner's Association

Comment C5-8

There are many ways to measure and describe noise. The maximum sound level (L_{max}) is often used to characterize a single noise event (e.g., the passing of a bus) and is similar to the "instantaneous" noise referenced in the comment. However, the use of L_{max} is not appropriate for the evaluation of noise from transit systems such as the BRT, because it ignores the frequency and duration of transit events, for example, both of which are important factors in determining people's reaction to the noise source. More appropriately, the Day-Night Sound Level (L_{dn}) is used by the Federal Transit Administration (FTA) and as part of this analysis to characterize noise associated with the proposed transit project. As discussed in Section 4-9.2 of the Final EIS/EIR, L_{dn} is a 24-hour measure of the sound energy that accounts for all of the transit events throughout the day and places extra emphasis (or weighting) on noise events that occur during nighttime hours (10 p.m. to 7 a.m.). This weighting, which overstates the actual nighttime noise, is especially important since people are more easily annoyed by noise at these hours when background noise is lower and people are generally sleeping. As referenced in the comment, noise from large trucks and buses is often audible above the background traffic noise. The increase over ambient noise conditions associated with the additional bus traffic is represented in the L_{dn} and therefore is reflected in the impact evaluation. Although sometimes difficult to conceptualize, L_{dn} is considered an appropriate descriptor of community reaction to environmental noise.

For purposes of the noise assessment in Section 4-9 of the Final EIS/EIR, the Topham/Oxnard portion of the BRT alignment is divided into two sections, the south side of Topham/Oxnard from Winnetka Avenue to White Oak Avenue and the north side of Topham/Oxnard Streets from Winnetka Avenue to White Oak Avenue. Noise measurements were performed in the year 2000 at both locations to characterize the ambient conditions. Existing noise levels on the south side (67 dBA) were much higher than those on the north (56 dBA) due to the higher traffic volumes along Oxnard Street. Additional noise measurements conducted at residences along the south sides of Topham and Oxnard Streets in October 2001 confirmed the results of the previous measurements and analysis.

References to previous freight train operations along the MTA ROW are intended to document the historic use of the BRT alignment for transit uses.

02340

Freight train operations were not considered in the analysis of potential noise impacts.

As discussed in Section 4-9.5 of the Final EIS/EIR, no vibration impacts are anticipated.

Comment C5-9

The environmental analysis has determined that there would be no adverse or significant effect on neighborhoods and community cohesion in the San Fernando Valley. As is detailed in the environmental document, the project would be consistent with the previous and current use of the corridor for transportation purposes, including the substantial amounts of automobile and truck traffic that use portions of the corridor at present. (Please refer to Chapter 3 for the transportation analysis and Section 4-3 for the demographics and neighborhoods analysis.) Moreover, by shifting patrons from automobiles to public transit, the project will increase pedestrian traffic along the corridor, thereby enhancing community cohesiveness. Pedestrian traffic and community cohesiveness will also be enhanced by the proposed pedestrian walkways that parallel the alignment near Ethel Avenue and between Goodland and Bellaire Avenues.

There is no reasonable similarity between the scale and impacts of the 10-lane, above-grade, interstate freeway example that is cited in the comment, and those effects potentially associated with the at-grade, two-lane, landscaped bus route proposed for the San Fernando Valley. The Santa Monica Freeway accommodates more than 100,000 vehicles per day while the BRT is projected to have about 464 buses per day in 2020. There are no pedestrian crossings of the Santa Monica Freeway, except grade separated, either above or below. Unlike the Santa Monica Freeway, the proposed project will not create an imposing physical barrier between neighborhoods. Rather, the project consists of an at-grade profile with signalized pedestrian crossings at all street crossings along the corridor. Access to only one street will be modified, and no culs-de-sac will be created. No ramps, overcrossings, or steep slopes will be constructed. The project will not pose a substantially greater physical barrier than a two-lane, signalized roadway. Along the alignment, the community already coexists with Chandler, Oxnard, Topham, Victory, and many other north-south streets and boulevards.

The project will include several features to maintain and enhance neighborhood character and cohesion. For instance, new landscaping will be added, and right-of-way for a bikeway will be furnished. Operating speeds will not exceed those on the parallel mixed-flow street in the Chandler Boulevard area. In the Chandler/Burbank community, two additional signalized pedestrian crossings will be provided at mid-block locations, at Goodland and Agnes Avenues. Pedestrian crossings in the community will function on timers during the Jewish Sabbath and holidays. Additionally, to the extent that the project facilitates improve mobility in the Valley, the ability of community members to move within and among neighborhoods would also be improved.

Comment C5-10

The MTA has no reason to believe that the United States Census Bureau demographic data that are presented in the environmental document are inaccurate. Data from the Census Bureau are considered to be industry standard upon which nearly all demographic analyses in the United States depend for reliability and accuracy.

Comment C5-11

While the EIS/EIR focuses on at-grade BRT alternatives and a TSM Alternative, numerous other alternatives were considered previously before the MTA narrowed the range of choices under consideration. For instance, in the Major Investment Study, the MTA Board considered light rail, heavy rail, bus rapid transit, dual mode, and diesel multiple unit rail. At-grade and grade separated options were also studied. After evaluating these, the Board directed staff to focus on an at-grade busway. Prior to the MIS, in a variety of studies over the preceding years, the Board considered different alignments and transportation alternatives, ultimately deciding to focus on an east-west project along the Burbank/Chandler alternative. This is summarized in detail in Chapter 2 of the EIS/EIR.

The comment suggests several aspects of an "alternative" transportation solution for the San Fernando Valley:

- *Grade-separated transit corridor* – Grade separations for the BRT Alternative were considered in the San Fernando Valley East-West Transit Corridor Major Investment Study (MIS), released in February 2000. In the MIS, both a completely at-grade BRT Alternative and a

02341

BRT Alternative with two grade separations (at Van Nuys Boulevard and Sepulveda Boulevard) was considered. At the March 2000 Board meeting, the MTA Board directed staff to develop an EIS/EIR for the at-grade BRT alternative, and not the grade-separated BRT.

The two basic reasons that the at-grade BRT Alternative was selected were potential impacts and high capital costs. The two grade separations studied in the MIS were aerial structures. As proposed at Van Nuys and Sepulveda Boulevards, these structures would have been constructed in a commercial/industrial area. However, in residential areas such as Tarzana and Woodland Hills, the impacts of aerial structures would clearly be adverse. Please also see the response to Comment C5-9. Aerial structures need to "ramp up" to their required height over distances of hundreds of feet. Because of this, overpass structures would be clearly visible over homes, and the necessary accompanying soundwalls would create a box-like profile that would cast long shadows.

In order to avoid the impacts of aerial structures, grade-separations in residential areas would need to be below grade, passing under existing roads. In the MIS, the additional cost of two aerial grade separations was estimated at approximately $38 million, or $19 million per grade separation. Below-grade underpasses would be substantially more expensive due to the need for excavation and utility relocation. As a result, with 31 total intersections along the exclusive BRT busway, it could add more than $600 million to the cost of the BRT Alternative to fully grade-separate the busway.

In addition, analysis conducted during Preliminary Engineering determined that even if all 31 of the intersections along the Full BRT alignment were grade separated, only 5.4 minutes of travel time would be saved. Therefore, while grade separations would improve the operations of the BRT to some degree, the high capital cost and potential impacts of grade separations would be prohibitive.

- *Direct connectivity of the corridor to the Metro Red Line* – The BRT Alternative would terminate at a new facility on the west side of Lankershim Boulevard, across the street from the existing portal to the Metro Red Line. Patrons transferring to the Red Line would cross Lankershim at the existing signal along South Chandler Boulevard, and use existing elevators and escalators to reach the Red Line. However, there is a below grade "knock-out panel" on the west side of Lankershim Boulevard which could directly connect the BRT terminus to the Metro Red Line. Although not included in this EIS/EIR, there is potential in the future to create a new portal within the BRT terminus to directly link it to the Metro Red Line. If funding becomes available, MTA will consider construction of the portal.

- *Completion of a core rapid transit system* – This comment suggests linking the Westside with the Valley via a north-south mass transit investment through the Sepulveda Pass. There would certainly be potential benefit from such a system. Construction of the BRT Alternative and implementation of an investment in the north-south corridor are not mutually exclusive, however. In fact, MTA will soon begin study of a north-south corridor in the Valley.

  In the future, north-south investments could be extended from the Valley into the Westside. In addition, MTA is currently funding construction of an HOV lane along I-405 southbound through the Sepulveda Pass and Caltrans is studying implementation of an I-405 northbound HOV lane through the Sepulveda Pass.

- *Improvements to existing busways* – This comment suggests that the TSM Alternative, along with additional Metro Rapid Bus lines in the San Fernando Valley, would provide "an effective feeder network to the Rapid Transit Corridor and increase public transportation coverage throughout the valley." In fact, the BRT Alternative includes implementation of the entire TSM Alternative. Furthermore, the Metro Rapid Bus program will continue to grow. As described in MTA's Draft *Long Range Transportation Plan* (2001), during Phase II of the Metro Rapid program, additional lines are proposed for Van Nuys Boulevard, San Fernando Road, and Roscoe Boulevard. This would occur in concert with the BRT Alternative, not exclusive of it. The Valley would be provided with a comprehensive new network of efficient, on-street and exclusive busway transit service.

02342

Comment Letter C18

Salazar, Mariana

From: Michel, Kevin
Sent: Thursday, July 05, 2001 5:35 PM
: 'BRT Opposed'
bject: RE: MTA BRT Opposed - Favor TSM Alternative

Thank you for your comments, which I will forward to the team preparing the final EIS/R.
Kevin

Kevin J. Michel, AICP, Transportation Planning Manager
L.A. County Metropolitan Transportation Authority
1 Gateway Plaza, Mail Stop 99-22-5,
Los Angeles, CA 90012-2952
Phone: (213) 922-3054 Fax: (213) 922-7420

-----Original Message-----
From: BRT Opposed [mailto:brtopposed@yahoo.com]
Sent: Saturday, June 30, 2001 1:29 PM
To: michelk@mta.net
Cc: brtopposed@yahoo.com
Subject: MTA BRT Opposed - Favor TSM Alternative

I oppose the proposed Bus Rapid Transit (BRT) in the San Fernando Valley and favor the Transportation System Management (TSM) Alternative.

Proceeding with the BRT, a bus line parallel to major metering thoroughfares, would be an obvious waste of MTA's transportation funds (i.e., approximately $280 illion plus). Until we have garnered the funds to xtinue the Metro Red Line Subway system into the alley, we should place our funds into the TSM Alternative which would increase current bus line efficiencies by the addition of buses and implementation of Rapid buses (including rapid bus technologies) along major East - West Valley streets such as Victory Blvd., Vanowen Blvd., Sherman Way, etc. Current bus lines on these streets, as well as throughout the Valley, are too few in number, make infrequent stops and are over congested - all of which make current rider ship unbearable and discourage new rider ship. We NEED to increase and build up these current bus lines, and the TSM is cheapest temporary solution to the Valley's traffic congestion problem.

The pace of population growth in Los Angeles has been enormous. In fact, rates of growth are increasing further, placing overwhelming burdens on L.A.'s infrastructure. The weakband of L.A.'s traffic congestion is buckling - and action is needed NOW. Decision makers have decided that Los Angeles' traffic problems can be dealt with quick, cheap fixes and have failed to consider the full complexities of the problem. Los Angeles enjoys the reputation for having the WORST traffic congestion problem in the U.S., yet decision makers have failed to sufficiently emphasize and allocate the necessary funds to a region with the greatest transportation needs. This is comprehensible! The Valley NEEDS the Metro Red Line tension!

In a nutshell, we should reserve money for the Metro

1

Response to Letter C18

The commenter's opposition to the BRT and support for the TSM Alternative are noted for the record.

02432

Red line subway extension into the Valley. However, until such time sufficient R-Way is reserved, we should improve current surface transportation via the TSM Alternative and not proceed with the HRT.

Sincerely,

Coalition for Community Responsibility
San Fernando Valley Based NP
email: hrtopposed@yahoo.com

July 9, 2001

Submitted at the July 9, 7-8pm Community Meeting, located at Woodcrest Elementary School, by the West Valley Concerned Citizens Group

To the MTA Board:

We are writing to you to convey our strong opposition to the proposed Bus Rapid Transit (BRT) on the railroad tracks directly north of the Melody Acres area in Tarzana (Topham and Oxnard streets).

The BRT would bring noise, inconvenience, crime, and upheaval into what are now very pleasant, quiet, safe neighborhoods. In addition, the residents flanking this busway are not citizens who ride the bus, or need to, for that matter. Furthermore, the proposed riders of this BRT would have nowhere to park, as we have been informed that parking lots would not be constructed at all of the station stops. It seems absurd to create a busway which would require people to be transported to and from itself!

This land would be put to much better use in one of the following ways:

1) A green space, providing much needed park land and a bike lane, which would be a form of transport for those intrepid souls who could ride to and from work or school, and/or a wonderful form of family recreation. A bike path and pet path would be quiet, useful and aesthetically pleasing. All of this would contribute to property values, preserving the quality of these communities.

2) A better use of taxpayers money would be to pursue the TSM alternative. It would be a far better idea to install Metro Rapid lines (if not underground Metro Rail) along existing Valley boulevards such as Victory, Oxnard, Chandler, Burbank and Sherman Way. These streets are commercially zoned, and flanked by hundreds of low income apartment buildings whose residents need a rapid, reliable bus line to get to and from work both in the Valley and L.A. Such rapid busways could provide them with access to the MetroRail Valley line, and thus to downtown. In addition, north and south lines could be established along existing arteries, further connecting these areas. These people need and currently use public transport, and would make these routes economically viable for the MTA.

3) In the future it would make sense to construct a subway system through the valley, thus connecting the Western Valley with the Red Line. This plan would allow for green space and preserve peace, quiet and safety (insured by the underground line).

We want to preserve the pastoral quality that we moved to the San Fernando Valley to find. However, we do want to be served by adequate transportation. Let's place it intelligently, where it would be of greatest use to the community. Our city planners devised wonderfully efficient boulevards which connect all points in the Valley. We have only to mirror this grid with modern, efficient, rapid transport. We believe there would be little opposition to a system such as this, which would enhance commercial opportunities along those routes, and improve adjacent residential areas. Safe, adequate parking must be provided, as well as a well-thought out system that allows you to complete the entire leg of your trip on public transport.

- more -

What good is a system you have to drive to, just so you can take public transport? It is difficult to escape the conclusion that the useless and expensive BRT being pushed through by Zev Yaroslavsky is merely to justify having bought the railroad land in the first place.

It is time we listened to the actual residents in terms of what they want and need, and follow the excellent plan that has already been laid out in our system of roadways.

Sincerely,
West Valley Concerned Citizens Group

02435

Comment Letter C20

Attn: [illegible] 213 922 6571 03 FAX

July 21,2001

Dear M.T.A. Board of Directors: John Fasana Chairman

M.T.A. says the BRT helps the greater good and C.O.S.T. is just a selfish Orthodox Jewish Community and a few nimbys. C.O.S.T. says the BRT serves the privileged few and enhanced TSM(maximal bus service with DOT's Stage 2 grid of rapid buses) serves all of the valley and is for the greater good. C.O.S.T. includes many groups along the entire 14 mile corridor proudly including the C.C.T.C., a predominantly Orthodox Jewish group. Valley Village homeowners, Valley Glen Homeowners Association, Sepulveda Homeowners Association, Melody Acres and many individuals from the entire fabric of our society. M.T.A. has done tolerance a disservice by overemphasizing and compartmentalizing the Orthodox Jewish component of dissent. C20-1

Let's examine mathematically the facts. MTA states for 20 years, until 2020, the BRT will provide rapid bus in 29 minutes versus 50 minutes on the Ventura Rapid Bus. BRT will take 29 minutes but not for 5 years, assuming they prevail against litigation and finish on time. Rapid Bus by June 2001 (L.A.Dot report) takes just 43 minutes on Ventura Blvd. A 12.5% shorter route on Victory Blvd will take 37.6 minutes. Victory Blvd is not as congested and so the trip will more likely be 35 minutes. Six minutes longer and 5 years earlier. MTA says every year traffic will get worse as population in the south valley grows. But the south valley is 99% built and we have a general plan preventing conversion of residential to apartments. We fear the MTA plans to increase population by allowing increased urbanization of the valley - adjacent to all of the stations. If the general plan is left intact, traffic should change much less in the next 20 years. If bus service and rapid bus buys us 10-20 years, who knows what superior transportation upgrade technology will develop? Perhaps in 10-20 years the MTA will desert its opulent lifestyle, gets its financial house in order, and we can have a first class deep bore subway to both the west valley as C20-2

C20-3

Response to Letter C20

Comment C20-1

There has been no attempt to organize or mischaracterize comments received from any commenting party. All comments have been reported as they have been received and are responded to individually, with the following exception. Many written comments were received that articulated identical (or nearly identical) statements of opinion either in support of or in opposition to one or another of the proposed alternatives or alignments. These comments have been grouped according to their similarity and are presented as such in Group F.

Comment C20-2

Victory Boulevard may currently be a fair candidate for transit enhancement similar to the Metro Rapid Bus program on Ventura Boulevard. However, Victory Boulevard even today is highly congested during the peak hours (with many schools in the vicinity) and its traffic congestion is expected to get significantly worse by 2020. A proposed Metro Rapid Bus on Victory Boulevard would operate in mixed-flow traffic and will not offer the same long-term transit priority benefits that a BRT project along the exclusive Chandler Boulevard right of way would provide. Please also see the responses to Comments F16-2 and F16-6 for further detail.

Comment C20-3

The MTA does not develop population growth projections. These are provided by the Southern California Association of Governments and are based on current population counts and trends, as well as planned land use and zoning information provided by the City of Los Angeles (in the case of the San Fernando Valley). In addition, the MTA does not set land use policy for the City of Los Angeles. Any growth which would occur adjacent to stations would be constrained by the legally binding land use policies of the City, contained in the General Plan, the Community Plans, and zoning. Section 4-1.3.3, Station Area Development Potential, describes whether increased development could occur in proposed station areas. In some locations, such as the North Hollywood station, planned land use and zoning would allow increased development. However, at other proposed stations, such as the Tampa Avenue station, planned land use and zoning limits development to single-family residential and neighborhood commercial.

2

originally promised, but especially in the northeast valley where it is most needed.
MTA says the BRT will end congestion on the Ventura Freeway. Mathematically, that's not true.
Maximal BRT capacity is a 60 passenger double articulated bus every 5 minutes. June 2001 DOT study of rapid bus brags that 13% of its riders earn more than $50,000 per year. (MTA's definition of a car driving "suit"). Assume ridership doubles to 25%. This will decrease traffic on the Ventura Freeway by just 3 cars per minute. It's a statistically insignificant amount. C20-4
MTA says TSM is "nothing" and besides, it is included in the BRT. Not true. C.O.S.T believes that TSM will get second priority to building BRT and be delayed for 5 years until BRT is built. Bus service in the valley stinks. TSM will decrease wait time on many major streets from 60 minutes to 30 minutes on many important routes (Roscoe,Devonshire, Tampa and Woodman) called secondary arterials. TSM will decrease rush hour wait time on major transit corridors to less than 10 minutes on major transit corridors like Sherman Way, Vanowen, Van Nuys Blvd, Sepulveda and Reseda Blvds. TSM will buy 38 new buses for our valley. C20-5
Why is TSM not in place now? Phase 2 Rapid Bus will add 4 more routes to the valley, Sepulveda Blvd, Van Nuys Blvd, San Fernando Blvd and Roscoe Blvd. C.O.S.T. proposes just adding Victory Blvd instead of BRT. Thus, immediately we could have 3 Rapid Bus routes(33-45 minutes) beginning at Warner Center (Ventura, Victory and Roscoe Blvds) going east to the Red Line. We could have 3 routes beginning in San Fernando/Pacoima (San Fernando Blvd, Van Nuys and Sepulveda) connecting them to the Red Line (San Fernando to Lankershim) to the city/county offices (Van Nuys) and to the entire cities' job opportunities. All 3 of our Community Colleges (Pierce, Valley and especially the most in need, Mission College in Pacoima) would get Rapid Bus service to the Red Line. The Victory line could switch to Burbank Blvd in the East Valley for Valley College access.
MTA says the cost of the BRT will be $284 million. Not true. They use 1999 dollars. Hello! This is 2001. Construction begins in 2002 and ends in 2006. Assume 2004 dollars as C20-6

Comment C20-4

The MTA does not claim that the BRT will end congestion on the Ventura Freeway. A major objective of the BRT, however, is to provide an alternative mode of travel across the Valley, which is integrated with other transit services in a network, connecting major activity centers, and which is convenient, efficient and competitive with the automobile for a similar trip.

Comment C20-5

The commenter's support for the TSM Alternative is noted for the record. Please also see the response to Comment F16-2.

Comment C20-6

When MTA develops its financial plans, it increases estimated costs to their year of expenditure. However, these costs must be based on available data. All of the capital cost estimates in the Draft EIS/EIR were listed in 1999 dollars, because the unit costs on which the estimates are based were developed in 1999. Because the capital cost estimates included in an EIS/EIR are used for comparison between alternatives, it would be inappropriate to escalate costs to their year of expenditure, especially as different alternatives could be implemented over different time frames. The capital cost estimates developed for the Draft EIS/EIR have been retained in the Final EIS/EIR (as a record). In addition, the Final EIS/EIR contains a refined capital cost estimate for the Locally Preferred Alternative in 1999 and 2001 dollars.

Please see the response to Comment C9-8. The cost estimate in the EIS/EIR contains the costs of construction and vehicle procurement, as well as contingencies, as shown in detail in Table 6-1. The previously acquired MTA ROW was purchased with state money from a separate bond issue not tied to this project. Therefore, the cost of the previously acquired right-of-way, while included in Table 6-1 for informational purposes, would not be added into the capital cost estimate used for evaluation of the project.

02437

more realistic. It's not likely the MTA will finish the project on time and on budget. Forget about it. C.O.S.T. estimates the true cost at $529 million - almost double, including $284 capital cost, $85 million average MTA cost overrun and $159 million dollar land purchase cost. This doesn't include the cost of bikeways, mitigation, and legal costs to fight litigation. There is no money in the budget for rapid bus operating costs. Not true. BRT operating cost is $23.7 million. TSM operating cost is $12.9 million. The state has provided a $250 million transportation grant for valley public transportation ($150 million for east-west line and $100 million for north-south line).

We could work together, pool our money, and for $150 million we could buy all the rapid buses needed for the entire project and have $100 million for a five year operating budget start up phase. this would of course take great effort from our state legislators to convert the funds for this use. They will need to work even harder for us.

MTA says we need dedicated busways to move people quickly. Not true. Rapid Bus moves people faster by reducing the time when buses are not moving, not by higher bus speeds. Rapid Bus saved 23% of time from 56 minutes to 43 minutes on Ventura Blvd. Sixteen per cent was saved by decreasing "dwell time" (boarding and alighting passengers) with less frequent stops and street level boarding on the new buses. Another 7% was saved by L.A. DOt's wonderful automated traffic control system (no bus driver control). Even more time savings will be produced in the future with fare prepayment and multiple door boarding and alighting on the 3 entrance articulated buses that can run on the major streets.

Peer Gynt, a clever community full BRt proponent who lives on Oxnard Blvd has stated he would support an urban park on the right of way if we had the money. State Proposition 12 has a 2.1 billion dollar bond funding and national "rails to trails" provides federal grants. Los Angeles can purchase the right of way for an urban park from Chatsworth to the Red Line and have paseos like in Valencia. How great would that be?

Last Thursday while hundreds of ordinary citizens poured

C20-6

C20-7

Comment C20-7

It is true that reducing station dwell times, an expedited boarding process, less frequent stops, street level boarding and automated traffic control systems, will play a major part in the attractiveness and time savings offered by the BRT. All of these will be elements of the overall BRT system. However, a dedicated busway will offer an added element, which is the ability to move people faster between the stops, because it does not have to operate on the same congested road with vehicular traffic. The savings in travel time can be significant, especially during peak commute periods.

02438

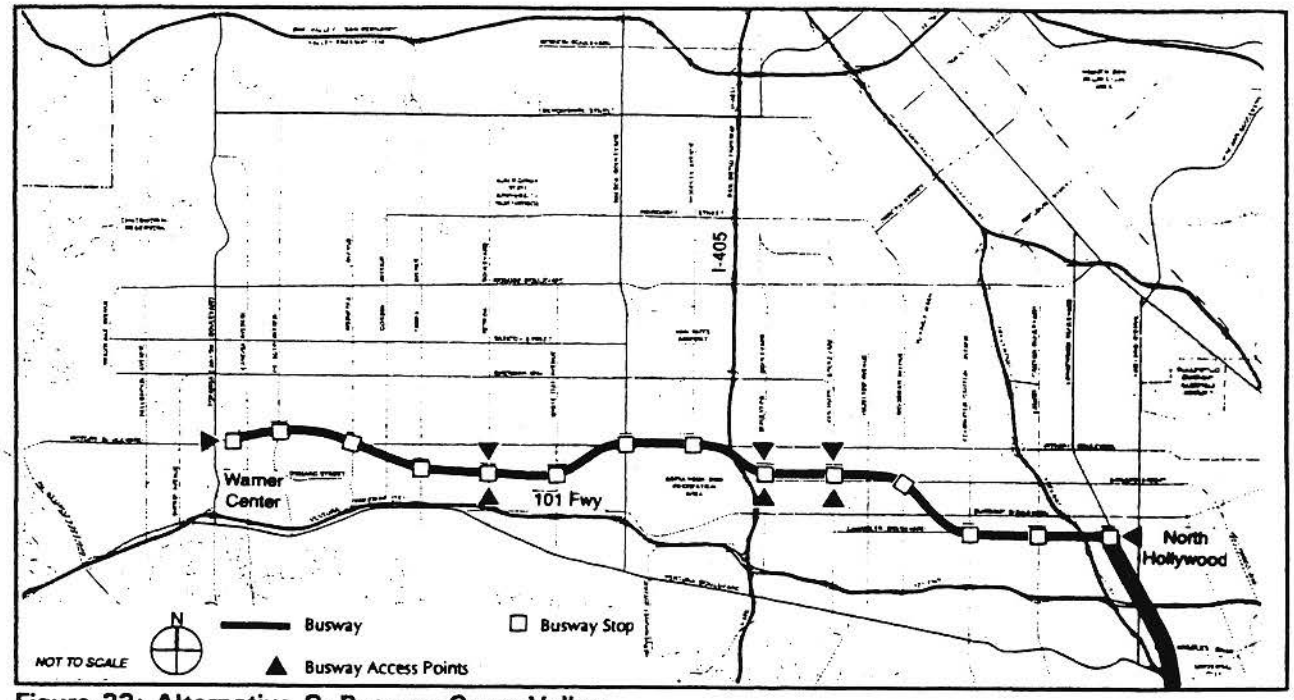


Figure 23: Alternative 8- Busway Cross-Valley

Alternative 9: Enhanced Bus/Transportation Systems Management

The goal of the Enhanced Bus alternative is to significantly improve mobility within the San Fernando Valley in general, and the East-West Transportation Corridor in particular, through enhancement of the existing bus system rather than construction of a rail transit project. The Enhanced Bus alternative assumes the same bus routes and rail network as the No Project alternative. However, additional improvements to bus service would be made on many routes serving the Valley, with emphasis on significant increases in service for buses along Ventura Boulevard, Victory Boulevard, Van Nuys Boulevard, and Sherman Way. Buses would operate at least every 10 minutes during peak travel periods on these streets and every 20 minutes at other times. On all other routes, buses would run every 20 minutes during peak periods and every 30 minutes during off-peak hours. The bus system proposed by the Enhanced Bus alternative is illustrated in Figure 24.

The Enhanced Bus alternative represents the Transportation Systems Management (TSM) alternative required by federal law, and serves as the baseline for comparing the costs and performance of the various transit alternatives in the Major Investment Study to be submitted to the FTA in pursuit of federal funds.

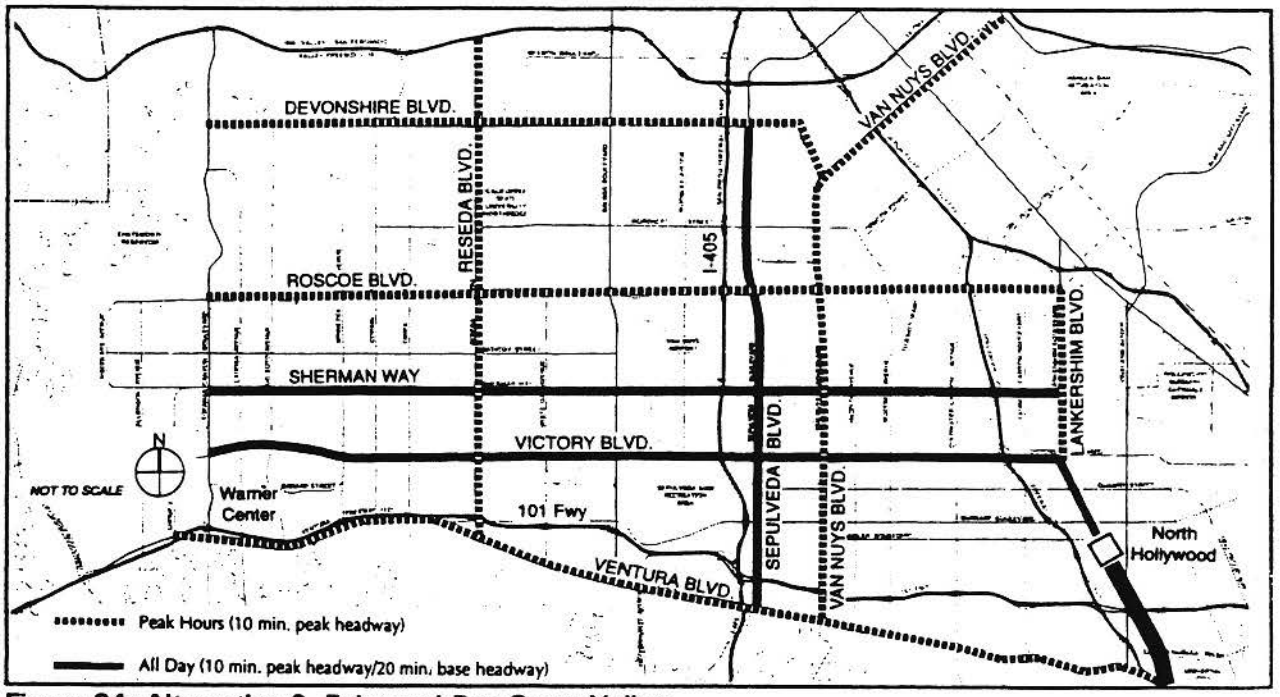


Figure 24: Alternative 9- Enhanced Bus Cross-Valley

Alternative 10: No Project

The "No Project" alternative reflects conditions anticipated in the year 2015 without any major transit improvements implemented in the East-West Transportation Corridor. In essence, this means no project would be constructed in the SP Burbank right-of-way owned by the MTA. Other transportation investments contemplated by the MTA's Long Range Plan or scheduled to be implemented by other entities (such as the City of Los Angeles) are assumed to be in place. The No Project alternative includes completion of MTA's Red Line to North Hollywood in the San Fernando Valley, as well as to Westwood and East Los Angeles. In the Valley, MTA bus routes would be restructured to provide enhanced service to the Universal City and North Hollywood Metro Rail stations. Bus routes would also be restructured to facilitate transfers at MTA transit centers to be established in Burbank, Chatsworth, Northridge, Sylmar, and Warner Center.

The No Project alternative is required by the California Environmental Quality Act (CEQA), and serves as the baseline for comparing environmental impacts of other project alternatives.

Tarzana Property Owners Association, Inc.

June 11, 2001

Mr. Kevin Michel
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, 22nd Floor, MS 99-22-5
Los Angeles, CA 90012

Subject: **San Fernando Valley East-West Transit Corridor DEIS/DEIR**

After a review of the DEIS/DEIR, we find several levels of concern. At the top level, the report does not demonstrate any advantage to construction of the Bus Rapid Transit project, at least to those of us in the western part of the San Fernando Valley. The major advantages cited, with respect to the Transportation System Management (TSM) to improve the existing bus system are:

1. Projected decreased number of vehicle trips
2. Projected increased bus boardings
3. Projected decreased auto vehicle miles of travel (VMT) and vehicle hours of travel (VHT) on a daily average basis
4. Projected increased daily average vehicle speed
5. Projected decreased total fuel consumption
6. Projected decreased emissions of air pollutants
7. Replacement of the unattractive existing right-of-way from White Oak to Winnetka with landscaping and a bike path.

Our analysis of the presented data, however, does not support any of the above claims. As shown in the table below, all of the assumed advantages are so small as to be totally insignificant. Differences in the 0.1% range gains claimed for traffic flow and in the 0.03% range for air pollution would not be statistically significant if they compared two existing alternatives. To claim a distinction between alternatives of that small a magnitude based on 20-year forward projections is ludicrous. The DEIS/DEIR needs to be revised to more accurately match the advantage claims to the data.

Projected Traffic, Air Quality Improvements

Parameter	Projected TSM Value	Projected BRT Value	Percent Difference
Daily vehicle trips, county	25,705,314	25,700,964	0.02%
Daily bus boardings, county	1,590,379	1,596,147	0.01%
Daily auto VMT, valley	23,779,436	23,753,054	0.11%
Daily auto VHT, valley	804,841	802,765	0.26%
Daily average speed, valley	29.55	29.59	0.14%
CO emission	492,199 tons	492,151 tons	0.01%
NOX emission	71,939 tons	71,936 tons	0.004%
ROG emission	28,079 tons	28,071 tons	0.03%
PM10 emission	3,156 tons	3,155 tons	0.03%

Tel: (818) 344-2137 • Fax: (818) 996-0117
Post Office Box 571448, Tarzana, California 91357-1448

13026

It should be noted that improvements to the appearance of the right-of-way, specifically an integrated landscape and bikeway, are not part of the BRT project. Integration of the bikeway would supposedly take place at some future time, under some other authority, causing additional construction impacts and disruption of whatever landscaping was implemented as part of the BRT project.

In addition to failing to substantiate the claimed advantages, the DEIS/DEIR needs to make some of the critical data available in a more understandable manner. The series of tables in Section 3-3.2 concerns traffic impact at key intersections. The tables are confusing and blur the real picture. The table below, developed from the Appendix data, clearly shows that the BRT drastically increases the impact on traffic at intersections along the corridor and does nothing to solve the traffic flow problems in the area. The TSM alternative does not solve the projected problem, but at least it does not make it worse.

Intersection Delay Times, seconds (AM/PM)

Intersection	Current	No build	TSM	BRT
Owensmouth/Victory	37/74	91/127	89/126	91/127
Canoga/Victory	22/42	72/**108**	69/106	73/108
Variel/Victory	90/12	141/30	138/29	143/30
De Soto/Victory	40/76	59/**159**	57/157	60/171
Mason/Victory	9/38	12/82	12/81	24/66
Winnetka/Victory	62/109	**123/203**	118/204	**165**/205
Tampa/Topham	10/19	16/75	16/73	28/**132**
Balboa/Victory	39/52	91/**123**	89/121	93/126
405 ramp/Victory	16/21	60/34	59/35	60/47
Sepulveda/Victory	42/47	**122/121**	121/121	**291**/127
Sepulveda/Oxnard	14/33	22/72	22/72	29/**123**
Van Nuys/Oxnard	11/33	23/62	22/62	22/62
Laurel Canyon/Oxnard	30/41	60/63	60/63	60/63
AM Weighted Average	20	40	40	53
PM Weighted Average	26	55	55	64

Both AM and PM impacts are shown in the table to illustrate the problem. Numbers are rounded to the nearest second; even that specificity is suspect for 20-year projections; tenths of a second numbers are nonsense. Bolded numbers show increases of more than one minute; the box around the PM BTR at Mason/Victory shows the only improvement projected for the BRT plan. That number, however, is highly suspect: how can adding parking lot ingress and egress reduce delay at that intersection? In fact, the appendix shows essentially the same traffic volume at that intersection for the TSM, BRT and MOS options, yet shows significantly decreased delays for the only option that superimposes parking ingress/egress on that traffic flow.

In fact, the whole traffic flow model used may be suspect. It is easy to see why adding the BRT would increase delays at the same level of traffic (as is the case for PM

at De Soto/Victory, Tampa/Topham, and Sepulveda/Oxnard and for AM at Winnetka/Victory and Sepulveda/Victory) but it is hard to understand why that doesn't happen at essentially all intersections.

There are a significant number of other hard to understand or suspect analyses made in the DEIS/DEIR and assumptions to which we take exception. Noteworthy ones include:

- **Parking**: The assumption that transit patrons will only seek parking at stations with designated parking lots is nonsense. A more reasonable assumption is that a significant number of patrons will seek parking on the major streets adjacent to each station and in the residential neighborhoods surrounding each station. Resulting impacts would include added traffic impact from parking ingress/egress on the major streets, lack of parking for shoppers in adjacent commercial areas, and patron parking (with collateral litter) in the residential areas.
- **Police and Fire Services**: The DEIS/DEIR notes the number of impacted intersections and the fact that two fire stations are immediately adjacent to the SP ROW and essentially dismisses the problem. Increased time of response, for both police and fire protection, has to be an impact of the BRT due to the impacted intersections and the use of stop bars on cross streets. In addition, there is a very real possibility of collisions between the buses and the police/fire vehicles, both of which assume they have the right of way.
- **Bus/Pedestrian Accidents**: Section 2-2.3.3 of the DEIS/DEIR indicates that the pedestrian/bikeway portion of the corridor would be separated from the busway by a picket fence; Volume 2 shows a 7-foot high fence. Do we assume a 7-foot high picket fence? If so, that should provide some level of protection against people (especially children) wandering onto the busway. No mechanism is described to restrict access to the busway from the stations, however. Experience with the Blue Line shows that accidents happen with some frequency involving both cars and pedestrians at streets which cross the Blue Line. Such accidents appear much more likely in the environment envisioned for the BRT corridor, where a nice level paved "street" (the busway) separates two pedestrian areas.
- **Noise and Vibration**: The discussion of the time averaged noise measurements presented in the DEIS/DEIR is confusing, a point made by speakers at the June 21st public meeting who are familiar with noise measurement. More important, however, there does not appear to be any discussion of the instantaneous increase in noise above ambient caused by bus passage. There are currently very few trucks and buses on the Oxnard/Topham section of the corridor and those trucks and buses are clearly audible above the ambient noise. The noise generated by one of the proposed buses (assuming the current Metro Rapid buses as a model) would be clearly audible and distracting. Increasing the frequency of large vehicle passage would have a significant impact on the noise/vibration experienced by residents. The DEIS/DEIR statement that there used to be a train running through the corridor and residents should accept increased transportation noise is totally specious. That train has not run for many years, it ran once a day, and it did not run during the early morning and late evening when people are sleeping.

- **Neighborhood Cohesion:** Development of the BRT corridor would split in two the communities through which it passes. Some of those neighborhoods, particularly the Chandler area, are excellent examples of the cohesiveness possible in neighborhoods. One of the speakers at the June 21st public meeting related the warning of a minister in an area split 25 years ago by the Santa Monica freeway. That neighborhood has taken 25 years to approach the same level of cohesion as before the freeway. The experience with the Ventura freeway in Encino and Tarzana is similar.
- **Demographics:** We question the accuracy of the demographics data presented. As an example, Table 4-7 indicates that the Tampa/Topham station influence area has the highest percentage of both residents over 64 and residents under 16. I live in that area and find those numbers hard to believe. Certainly the Chandler area, with its high percentage of orthodox Jews, many of whom have large families, would have a larger percentage of residents under 16. The point is not important in and of itself, but, together with other items noted, calls into question the validity of the data and analyses used throughout the DEIS/DEIR.

In summary, the DEIS/DEIR documents the lack of benefits to either transportation flow or air quality of the BRT. The bottom line gain from building the BRT versus the TSM improvements to the existing bus grid is a projected 0.04 miles per hour increase in the daily average vehicle speed in the valley in 2020 (29.59 vs. 29.55 mph) and a decrease in air pollutants in the 0.01% range. These purported gains are at the expense of significant impacts to the people living in the area of the corridor from increased intersection congestion, parking, spillover, increased noise, increased accident potential, and decreased neighborhood cohesion. These impacts are poorly treated, when treated at all, in the DEIS/DEIR

While the above paragraphs take issue with the content of the DEIS/DEIR, our overriding concern is with what the report does not cover, i.e., consideration of a non-invasive, comprehensive rapid transportation plan for the area. Chapter 2 provides a brief, quite hard to follow, overview of some of the rapid transit studies since the 1980 passage of Proposition A, but the rest of the DEIS/DEIR makes no mention of alternatives to the BRT as mitigators to the problems it presents. In addition, it does not address at all methods to achieve significantly greater public transit patronage. The economic and political realities, which led to the selection of the BRT corridor as a solution to the transportation problems of the Valley, have changed. We believe the DEIS/DEIR needs to include consideration of a better solution. We feel the primary aspects of that solution should include:

- A not-at-grade-level east-west valley rapid transit corridor. Eliminating the grade-level approach would alleviate many of the problems of the proposed BRT and significantly decrease transit time on the system. Decreased transit time would considerably increase patronage.
- Direct connectivity of the corridor to the Metro Red Line. Direct connection would facilitate transfer to the Red Line, especially for handicapped riders, and decrease transit time to the downtown area.
- Completion of a core rapid transit system. A Valley East-West rapid transit corridor would alleviate some current and projected traffic congestion by providing a quality

alternative for cross-valley trips (RSAs 12 and 13), trips to the downtown area (RSA 23) via connection to the Red Line, and trips to the East/South Central area (RSA 21) via the Metro Blue Line. However, approximately 30% of projected trips from both the East Valley (RSA 13) and West Valley (RSA 12) go to the Hollywood, West-Central area (RSA 17) as opposed to approximately 5% each to the Downtown and East/South Central area. A rapid transit route along the general 405 freeway, Sepulveda Boulevard alignment, connecting to the proposed Westside Extension of the existing Metro and to the Metro Green Line would provide a core system for the Los Angeles area. Such a system could indeed relieve traffic congestion, reduce air pollution, and significantly increase public transportation patronage.

- Improvements to existing busways. The TSM, supplemented with additional Rapid Bus Corridors along Sepulveda Boulevard or Van Nuys Boulevard and a selected east-west street in the northern portion of the valley, would provide an effective feeder network to the Rapid Transit Corridor and increase public transportation coverage throughout the valley.

Implementation of these suggestions would go a long way toward satisfying the effective traffic management, improved air quality, and increased patronage of public transit goals stated in the DEIS/DEIR. The proposed BRT does not. The DEIS/DEIR needs to acknowledge the limitations of the BRT and include some higher level considerations of an effective, comprehensive rapid transit network.

Very truly yours,

David R. Garfinkle
Tarzana Property Owner's Association

13030

Salazar, Mariana

From: Michel, Kevin
Sent: Thursday, July 05, 2001 5:35 PM
To: 'BRT Opposed'
Subject: RE: MTA BRT Opposed - Favor TSM Alternative

Thank you for your comments, which I will forward to the team preparing the Final EIS/R.
Kevin

Kevin J. Michel, AICP, Transportation Planning Manager
L.A. County Metropolitan Transportation Authority
1 Gateway Plaza, Mail Stop 99-22-5,
Los Angeles, CA 90012-2952
Phone: (213) 922-2854 Fax: (213) 922-3060

-----Original Message-----
From: BRT Opposed [mailto:brtopposed@yahoo.com]
Sent: Saturday, June 30, 2001 3:29 PM
To: michelk@mta.net
Cc: brtopposed@yahoo.com
Subject: MTA BRT Opposed - Favor TSM Alternative

I oppose the proposed Bus Rapid Tranist (BRT) in the San Fernando Valley and favor the Transportation System Management (TSM) Alternative.

Proceeding with the BRT, a bus line parallel to major existing thoroughfares, would be an obvious waste of MTA's transportation funds (i.e., approximately $280 'llion plus). Until we have garnered the funds to ntinue the Metro Red Line Subway System into the Valley, we should place our funds into the TSM Alternative which would increase current bus line efficiencies by the addition of buses and implementation of Rapid Buses (including rapid bus technologies) along major East - West Valley streets such as Victory Blvd., Vanowen Blvd., Sherman Way, etc. Current bus lines on these streets, as well as throughout the Valley, are too few in number, make infrequent stops and are over congested - all of which make current rider ship unbearable and discourage new rider ship. We NEED to increase and build up these current bus lines, and the TSM is cheapest temporary solution to the Valley's traffic congestion problem.

The pace of population growth in Los Angeles has been enormous. In fact, rates of growth are increasing further, placing overwhelming burdens on L.A.'s infrastructure. The waistband of L.A.'s traffic congestion is buckling - and action is needed NOW. Decision makers have decided that Los Angeles' traffic problems can be dealt with quick, cheap fixes and have failed to consider the full complexities of the problem. Los Angeles enjoys the reputation for having the WORST traffic congestion problem in the U.S., yet decision makers have failed to sufficiently emphasize and allocate the necessary funds to a region with the greatest transportation needs. This is comprehensible! The Valley NEEDS the Metro Red Line tension!

In a nutshell, we should reserve money for the Metro

13054

Red Line subway extension into the Valley. However, until such time sufficient money is reserved, we should improve current in-place transportation via the TSM Alternative and not proceed with the BRT.

.ncerely,

Coalition for Community Responsibility
San Fernando Valley Resident
email: brtopposed@yahoo.com

13055

THOMAS A. RUBIN, CPA, CMA, CMC, CIA, CGFM, CFM
2007 Bywood Drive
Oakland, California 94602-1937
Telephone/FAX: (510) 531-0624
e-mail: tarubin@earthlink.net

Kevin Michel
Mail Stop 99-22-5
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, California 90012-2932

July 3, 2001

Via United States Postal Service and FAX: (213) 922-3060

re: Comments on MTA San Fernando Valley East-West Corridor Draft EIS/EIR

Dear Mr. Michel:

We (Thomas A. Rubin and Richard K. Stone) are pleased to present our comments on the Los Angeles County Metropolitan Transportation Authority (MTA) San Fernando Valley (Valley) East-West Corridor Draft Environmental Impact Statement/Draft Environmental Impact Report (Draft EIS/EIR), May, 2001 (cover date). (All references cited below are from the Draft SEIS/SEIR unless otherwise noted.)

Our main "transportation" concern is that this report is incomplete and requires substantial additional work to analyze transportation alternatives that have not been studied. In addition to not studying those "build" alternatives, such as a Busway/High Occupancy Vehicle/High Occupancy Toll lane couplet on the Ventura (State Route 101) Freeway, that have obvious transportation merit, MTA has failed in its affirmative responsibility to compare the "Build Alternative" to a Transportation System Management (TSM) Alternative that is the "*best* that can be done to improve mobility in the corridor without the construction of major new transit facilities," as required by regulation.

At least equally important, running buses at 55 miles per hour along the proposed alignment poses a very high risk of duplicating the extreme safety problems of the Long Beach Blue Line, which has operated at 55 miles per hour through a comparable urban corridor since its inception – and has produced as many fatalities over its first nine years of operation as every other light rail transit system in the United States *combined*. The DEIS/EIR's summary dismissal of this inordinate problem in public safety is totally unacceptable.

This report, as is common with every study of this type that MTA has ever conducted, improperly focuses on the construction of a specific high-visibility, expensive project at the expense of vitally needed improvements in transit services that are actually far more useful to the numerous transit-

THOMAS A. RUBIN, CPA, CMA, CMC, CIA, CGFM, CFM
2007 Bywood Drive
Oakland, California 94602-1937
Telephone/FAX: (510) 531-0624
e-mail: tarubin@earthlink.net

Kevin Michel
Mail Stop 99-22-5
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, California 90012-2932

July 3, 2001

Via United States Postal Service and FAX: (213) 922-3060

re: Comments on MTA San Fernando Valley East-West Corridor Draft EIS/EIR

Dear Mr. Michel:

We (Thomas A. Rubin and Richard K. Stone) are pleased to present our comments on the Los Angeles County Metropolitan Transportation Authority (MTA) San Fernando Valley (Valley) East-West Corridor Draft Environmental Impact Statement/Draft Environmental Impact Report (Draft EIS/EIR), May, 2001 (cover date). (All references cited below are from the Draft SEIS/SEIR unless otherwise noted.)

Our main "transportation" concern is that this report is incomplete and requires substantial additional work to analyze transportation alternatives that have not been studied. In addition to not studying those "build" alternatives, such as a Busway/High Occupancy Vehicle/High Occupancy Toll lane couplet on the Ventura (State Route 101) Freeway, that have obvious transportation merit, MTA has failed in its affirmative responsibility to compare the "Build Alternative" to a Transportation System Management (TSM) Alternative that is the "*best* that can be done to improve mobility in the corridor without the construction of major new transit facilities," as required by regulation.

At least equally important, running buses at 55 miles per hour along the proposed alignment poses a very high risk of duplicating the extreme safety problems of the Long Beach Blue Line, which has operated at 55 miles per hour through a comparable urban corridor since its inception – and has produced as many fatalities over its first nine years of operation as every other light rail transit system in the United States *combined*. The DEIS/EIR's summary dismissal of this inordinate problem in public safety is totally unacceptable.

This report, as is common with every study of this type that MTA has ever conducted, improperly focuses on the construction of a specific high-visibility, expensive project at the expense of vitally needed improvements in transit services that are actually far more useful to the numerous transit-

dependent and near transit-dependent residents of Los Angeles County and other potential transit users. By carefully narrowing the scope of this study to only a specifically selected type of high-cost exclusive transit guideway in a portion of the MTA service area, this study attempts to "justify" the selection of a locally preferred alternative of quasi-Curitiba-style corridor bus service and a projected capital cost of almost $300 million (for the "Full Bus Rapid Transit alternative) over many far more productive and cost-effective options that could provide greater mobility improvements and other benefits to more Los Angeles County residents at lower cost and be implemented and operating far sooner. Also, we are disturbed by clear evidence that the operating speed of the BRT alternative is significantly overstated, and that of the Rapid Bus alternative significantly understated, thereby producing a material false advantage for BRT in the transportation modeling process.

THE DEIS/EIR IS IN VIOLATION OF THE REGULATORY REQUIREMENTS FOR TSM

We find MTA's methodology for this study extremely deficient, both in terms of professional standards and legal/regulatory requirements. As this report will likely be part of a Federal "new starts" grant application, MTA is required to study the Transportation Systems Management (TSM) Alternative. MTA has not properly satisfied the TSM requirements.

The *FTA's Technical Guidance on Section 5309 New Starts Criteria* ("*Technical Guidance*"), July 1999 requires a minimum of three alternatives in most circumstances, including this one (§4.2.2., page 31):

> "Many of the New Starts criteria require comparisons between the proposed New Starts project and two baseline alternatives, a No Build alternative and a TSM alternative. The baseline alternatives are designed in such a way as to distill the transit benefits of each proposed New Starts investment. While the appropriate new Starts project and baseline alternatives in each corridor will depend on local circumstances, a consistent approach must be followed in defining these alternatives.
>
> "Project sponsors should recognize that they will need to generate information on the No Build and TSM alternatives during the Preliminary Engineering (PE) and Final Design phases. Although these baseline alternatives may no longer be real options for local decision-making purposes, they will serve as essential baselines for computing FTA's project evaluation measures."

Technical Guidance describes the Transportation System Management (TSM) alternative as a "second baseline case." TSM is defined as (*Id.*, §4.3.1.2, page 36):

> "[T]he No Build Alternative *plus* lower cost transportation improvements (i.e., lower cost than the Build Alternative) which represent the *best* that can be done to improve mobility in the corridor without the construction of major new transit facilities." (Emphasis added.) (See also *id.* at page 32 §4.2.2.2., page 32.) Inside the corridor, the TSM alternative

analyzed "should offer approximately the same level of transit service (coverage, route spacing, peak and off-peak headways, etc.) as the Build Alternative or the Project, as defined below."

Analysis of both a "No Build" alternative and a TSM alternative, as well as analysis of the Project ("Build Alternative") is required in New Starts and related funding requests[1].

---

[1] *Id.*, sections 4.2.2.1, 4.2.2.2.

A new Final Rule for this type of study, 49 CFR 611, as adopted, abolished the separate requirements for No Build and TSM alternatives, substituting a single "baseline alternative" comparison requirement (Proposed rule, 64 Federal Register, 17070-71, Appendix "A".).

The Final Rule was not promulgated until December 7, 2000 (*Federal Register*, Volume 65, No. 236, pp. 76863-76884). Implementation was stayed for 60 days on February 9, 2001 (*Federal Register*, Volume 66, No. 28, pp. 9677-9678. Therefore, this Final Rule did not go into effect until April 10, 2001, when the 60-day period ended without further action being taken by the Department of Transportation. As this Draft EIS/EIS is being prepared during the interim period while the Final Rule was being adopted, it is wise to review the "new" Final Rule for changes in requirements from the previous standards. (A review of the DEIS/DEIR shows that MTA followed the "old," vice "new," rules for this study. For example, §§2.2.1-2.2.2, "No Build" and "Transportation System Management (TSM)," respectively, show that MTA studied both a "No Build" and a "TSM" Alternative in this corridor, a requirement of the "old," but *not* the "new," Rule. Several other obvious points, including the reporting of cost per new passenger, a requirement under the "old" rule that was dropped from the "new rule, further prove that this DEIS/DEIR was prepared under the "old" rules.

Under the new Final Rule, this Draft EIS/EIR *still* non-compliant. It is clear that the "baseline alternative" under the "new" Rule is, for all practical purposes, the "old" TSM alternative, *not* the No Build Alternative. Several subsections make this understanding unquestionable:

A. §611.5, "Definitions," page 76880 – "Baseline alternative is the alternative against which the proposed new starts project is compared to develop project justification measures. Relative to the No Build alternatives, it should include transit improvements lower in cost than the new start which result in a better ratio of measures of transit mobility compared to cost than the No Build alternative." Note that the "No Build" alternative is specifically identified in the last phrase as something *different* from the "baseline alternative."

B. Appendix A, page 76883 – "Depending upon the circumstances and through prior agreement with FTA, the baseline alternative can be defined appropriately in one of three ways. First, where the adopted financially constrained included within the corridor all reasonable cost-effective transit improvements short of the new start project, a no-build alternative that includes those improvements may serve as the baseline. Second, where

(continued...)

The following is presented verbatim from §2-2.2, "Transportation System Management (TSM)," page 2-17:

> "The Transportation Systems Management alternative is therefore defined as the optimal level of bus service that could be provided on the existing highway and roadway network. (see Figure 2-4) ... The TSM alternative route network remains generally the same as the No Build alternative. ... TSM improvements would include various projects to enhance the performance of bus transit on major arterials, where bus service frequencies would be increased."

While the MTA TSM alternative in the DEIS/EIR may meet MTA's definition of an "optimal level of bus service," we respectfully point out that there appear to be a very large number of well-proven bus service improvement tools that are not included, as discussed below.

The TSM alternative, for all practical purposes, is little more than a reduction in headways on 17 bus routes. However, even *after* these TSM improvements are implemented, only six routes would have peak headways under 30 minutes, a very poor level of service, and six routes would have no peak period changes at all. In the base period, only two routes would have headways under thirty minutes, and six would have headways of 40 minutes – again, hardly a level of bus service that would be described as "hearty" or "aggressive."

---

[1](...continued)
additional cost-effective transit improvements can be can be made beyond those provide by the adopted plan, the baseline will add those cost-effective transit improvements. Third, where the proposed new start project is part of a multimodal alternative that includes major highway components, the baseline alternative will be the preferred multimodal alternative without the new start project and associated transit services.

C. VI., Section-by-Section Analysis, E., §611.9: Project Justification Criteria, page 76871 – "In response to comments submitted on this issue and in recognition of the desire to simplify the new starts process, this Rule eliminates the requirement for separate no-build and TSM alternatives, and instead requires that the proposed new start be evaluated against a single 'baseline alternative.' The baseline alternative is best described as transit improvements lower in cost than the proposed new start, which result in a better ratio of measures of transit mobility compared to cost than the No Build alternative; the 'best you can do' without the new start investment." Note the similarity of this last phrase to the "best that can be done to improve mobility in the corridor without the construction of major new transit facilities," *Technical Guidance* §4.3.1.2, page 36 – the *definition* of TSM.

The DEIS/DEIR is required to perform a valid comparison to a TSM/Baseline Alternative under both the "old" and the "new" rules, to do a comparison to the "best that can be done" – it thus satisfies the requirements of *neither* the "old" *nor* the "new" Rules.

The TSM regulations quoted above specifically require that the TSM alternative analyzed "should offer approximately the same level of transit service (coverage, route spacing, peak and off-peak headways, etc.) as the Build Alternative or the Project, as defined below." Yet, in Table S-4, "Comparison of Alternatives," page S-44, we see an "Operating Cost over No Build (million 1999$) (which is the increase in operating costs over the No Build Alternative) of $23.7 million for "Full Bus Rapid Transit (BRT)," compared to $12.9 million for "Transportation System Management" – the increase in bus operating costs for the TSM alternative is only slightly over half of that for the BRT alternative. In Table 2-10, "Year 2020 Feeder Bus Route Frequencies" (for the BRT alternative), page 2-66, we see four new or substantially changed routes, with ten minute peak headways (on the non-BRT portion of their alignments). This is hardly, "approximately the same level of transit service" for the TSM and BRT alternatives[2].

THE TSM ALTERNATIVE IGNORES RAPID BUS, THE MOST VIABLE OPTION

What is even more important in many ways is that, while the main expected advantage of the BRT alternative is a significant increase in bus operating speed on this alignment, virtually nothing is done in the TSM alternative to attempt to increase the operating speeds of buses. The No Build alternative (and, therefore, the TSM and BRT alternatives) do include the operation of the Automated Traffic Surveillance and Control System (§2-2.1, page 2-16), which may provide some minor benefits, but what is totally missing is any expansion of what is undoubtedly MTA's greatest transit improvement since it came into existence, Rapid Bus. Figure 2-4, "Map of Transportation System Management (TSM) Alternative," page 2-18, shows only one Rapid Bus line operational in the Valley, on Ventura Boulevard from Universal City to Warner Center. This is, of course, Line 750, which has been operating, extremely successfully, for approximately one year as of this writing. As MTA itself states in its press release, "MTA Board Approves Wilshire Bus Rapid Transit, Exposition Light Rail Projects for Mid-City/Westside Corridor," June 28, 2001 (http://www.mta.net/press/2001/06_June/mat_094.htm), "Metro Rapid has cut the travel time of commuters ... by 26.4 percent on the Ventura Boulevard corridor in just seven months of service."

---

[2] While we will not argue that the TSM regulations require MTA to operate the same level of service in the TSM and BRT alternatives if there are differences in demand caused by speed of travel or other factors, we believe that much of the difference in reported demand is caused by MTA improperly assuming that BRT will have a far larger speed advantage over TSM options, particularly Rapid Bus, than will actually be the case.

Even if, after correcting for these errors, there is still a difference in the level of service provided along the main East-West axis of the corridor, then MTA should increase the levels of bus service in other portions of the corridor, including designing new bus routes where productive, in order to show what an equal expenditure of resources will create for each alternative.

Expansion of the MTA Rapid Bus program, *as proposed by MTA itself and documented in its recent Long Range Transportation Plan*, is clearly a very viable and effective option for improving transit service in the Valley. On page 2-47 of the February 2001 Draft *LRTP*, we see no less than *twenty-two* additional proposed Rapid Bus lines, proposed to be implemented in three phases over the next few years. Several of these lines would operate in the San Fernando Valley. This does not even consider other existing and potential alignments for additional Rapid Bus routes. MTA has clearly not included the most viable, the most proven, and the most successful alternative for improving not only bus operating speed, but ridership (up approximately 25% on Line 750), in the TSM alternative, a clear and unmistakable violation of the requirement that the TSM alternative be the "'best you can do' without the new start investment." Indeed, if one were attempting to find the perfect example of what a TSM alternative *should* be in a transit guideway EIS, it would be extremely difficult to come up with anything superior to Rapid Bus.

The great advantage of Rapid Bus over the Burbank-Chandler BRT, or any other single alignment transit guideway, is that far more existing and potential riders could utilize a network of Rapid Bus lines than could utilize a single BRT alignment. The San Fernando Valley is one of the nation's best examples of a transportation corridor without any meaningful center, without almost any significant grouping of trip generators, and with a classic, "everybody going from everywhere to everywhere" travel pattern. A single transit guideway, even one proposing speed advantages, is simply unable to serve more than a relatively small number of potential users, and at a cost that is not advantageous. A far superior approach would be a network of Rapid Bus lines that would be useful to far more riders, coupled with other transit and transportation improvements.

One of the biggest problems in the use of transit in the Valley is the combination of long headways, the grid system of lines, the resulting long waits for connecting buses, and short hours of operation of many bus lines. For many Valley transit users, including all those that are not fortunate enough to have destinations located on ordinal compass points from their trip origins, transfers are a necessity, the only other option being one-bus trips and long walks from where the bus leaves them off. With the existing grid system of routes, it is operationally impossible to arrange bus schedules for short transfer times at each point where bus routes cross, especially where there are large numbers of transfers to and from each line. Therefore, if a rider is attempting to transfer to a bus with a sixty minute headway, the average wait time is half of that, or thirty minutes – and that is often on top of waiting a similar length of time for the first bus. MTA, in its TSM alternative, proposes to shorten the headways on the many current sixty minute headway routes to forty minutes, some even to thirty minutes. While these improvement will be welcome to many, this is still a long time to wait for a bus. These wait times for first and transfer buses are even more important than they first seem, given that research has consistently shown that transit riders score "wait" time at two to two-and-one-half times that of travel time – that is, a five minute wait for a bus seems like a ten minute wait, or longer, to the rider, or to the potential rider who decides to make the trip via a different mode.

For the vast majority of current Valley bus riders, those that suffer through the difficulties of long waits for buses, the proposed BRT will offer little, if any, meaningful benefits. With the exception of those riders with destinations along the BRT alignment, or those willing to make fairly long walks (say, one to two miles) from a BRT bus stop in lieu of waiting for a transfer bus, what we will have is a change from a two-bus trip to a three-bus trip – with an additional transfer wait time.

For example, let us consider a rider who needs to go from Roscoe and Winnetka to Laurel Canyon and Moorpark. At the present time, this rider might choose to take Line 152 East on Roscoe and then transfer to Line 230 South on Laurel Canyon to Moorpark.

If the Burbank-Chandler BRT were to be implemented, and this rider wanted to utilize it for this trip, then the rider would first take Line 243 South on Winnetka to the BRT guideway, take a BRT bus East to Laurel Canyon, and then take Line 230 South to Moorpark Drive – or walk the last mile and a quarter from the BRT guideway (if we assume the four mph walking speed of a healthy, active adult, and no lost time crossing streets, this would take approximately 19 minutes, which compares favorably with the current 53 minute peak headways for Line 230, and even the proposed 30 minute headways). Even with a relatively short headways on the BRT (from Table 2-11, "Year 2 Peak Busway Frequencies," page 2-67, five minutes at Winnetka), there is still a long total wait time for three different buses. Even though this example was chosen to include a relatively long trip on the busway, to take advantage of the purported higher speed, the additional wait time works against it as the rider's choice – especially in the mind of the rider, because transit riders typically weigh non-moving time at twice to two-and-one-half times that of time in motion. When the usual concerns of schedule non-adherence and missed trips are added in, it is not clear that the BRT option is one that would be advantageous to this rider.

Of course, if the destination had been, for example, Laurel Canyon and Sherman Way, the BRT almost certainly would not even be an option, because this rider would have to double back North over two miles, adding almost four-and-one-half miles to the former trip length.

There are literally hundreds of thousands of these types of trips taken every day. There is absolutely no question – a network of Rapid Bus lines would be of significant value to far more San Fernando transit users and potential users than a single BRT line.

THE TSM ALTERNATIVE IGNORES TIMED TRANSFER BUS OPERATION

The San Fernando Valley, with its combination of a grid system bus network and long headways, has long been a classic example of where "timed transfer" bus operations would be a very productive option.

Timed transfer, at its simplest, consists of buses from several bus lines all converging at central point at the same time and remaining there while passengers transfer among them. Preferably, these

central points are at or near major trip generators or, better yet, several trip generators, in locations that provide for minimum route divergence for the majority of the bus lines.

MTA transit planners have long known that timed transfer would be a powerful tool for improving transit accessability and utility in the Valley and have frequently proposed this type of operation. However, with a few exceptions, these plans have never been implemented, and the exceptions are generally at sub-optimal locations.

The principal problem in the implementation of timed transfer locations has been neighborhood opposition. Well founded or not, MTA planners, and the politicians on the MTA Board, have chosen to not attempt to implement timed transfer operations in areas where there has been significant organized resistance. There is no question, however, that MTA's own transit and operations planners are of the opinion that timed transfer would be of significant benefit for many aspects of Valley bus operations – it is only neighborhood resistance that is preventing it from being utilized.

However, this neighborhood resistance to timed transfer cannot be utilized as a rationale for not including it as a component of the TSM alternative – the "'best you can do' without the new start investment." Certainly, one would expect opposition to a restructured network of bus routes and timed transfer points. But there has been very strong community opposition to the BRT. Indeed, as MTA Board Member and County Supervisor Zev Yaroslavsky (whose district includes the entire proposed BRT alignment) stated at the MTA Board meeting last week, after the Board approved the Wilshire BRT/Exposition light rail plan following a four-and-one-half hour public hearing and debate, "If you think this was tough, wait until next month when we discuss the Valley BRT DEIR."

If very heavy public opposition to the BRT alternative does not disqualify it from being studied in the DEIS/EIR, then would be obviously improper to disqualify the consideration of timed transfer in the TSM alternative and, therefore, it must be included.

FREEWAY EXPRESS BUS SERVICE

Another viable option that has not been considered at all is expansion of MTA freeway express bus service, and that operated by or for others, such as the City of Los Angeles Department of Transportation.

By far the most successful transportation guideway in Los Angeles County is the El Monte Busway/high occupancy vehicle (HOV) lane, which produces significantly more transportation work during peak hours than the four general purpose lanes on the San Bernardino Freeway *combined*, and produces significantly more transportation work than any of MTA's rail lines – indeed, during the peak hour, it is actually close to producing more transportation work then all of them combined. MTA has used so-called "transit" sales funds to fund the construction of HOV lanes on several

freeways, including I-405, SR118, SR134, and SR170 in the Valley. However, there is virtually no use of most of these for bus transit.

MTA should study more extensive use of these HOV lanes, along with SR101 (which does not have an HOV lane, nor is one planned for it, even though such a lane would likely be more productive than all the other Valley HOV lanes combined), for express bus service. MTA should also study these HOV lanes for use as high occupancy-toll (HOT) lanes, which would both provide a productive use of unutilized capacity and a new source of revenues.

REDUCED FARES

There is a very simple, and well proven way to significantly increase transit ridership at a very low cost per new riders: Lower the fares.

When the Southern California Rapid Transit District (SCRTD) lowered its cash fare from 85¢ to 50¢ at the beginning of its 1983 fiscal year, and kept it there for three years, SCRTD unlinked trips increased over 40%, with morning and afternoon peak ridership up 42% and 38%, respectively. The cost of this fare reduction was less than 20% of the .5% Proposition A Transit Sales Tax (less than a .1 cent sales tax). As I demonstrated in *Lower Fares for the Los Angeles County Metropolitan Transportation Authority – A Proposal from The Environmental Defense Fund, The Natural Resources Defense Council, The Coalition for Clean Air, The Asian Pacific American Legal Center of Southern California, and Communities for a Better Environment*[3] the subsidy per new passenger for ridership increases through fare reductions would be in the low $2.00 per passenger range, with costs per new passenger in the high $2.00 range, with most of this increased subsidy due to the costs to operate additional bus service within the load factor requirements of the CD. There is no option available to MTA has come remotely close to this extremely low taxpayer funding requirement while producing such huge ridership increases – certainly not the $10 cost per new passenger BRT alternative.

After 11 years of an average annual loss of almost 15 million riders a year while the SCRTD/MTA fares increased from 50¢ to 85¢ to $1.10 to $1.35 from 1985 to 1996, after the Consent Decree-imposed fare rollback (and bus service improvements) went into effect, MTA bus ridership stopped its decline and has since *increased* by an average of over nine million per year, even as millions of bus riders were shifted to newly opened MTA bus lines.

Indeed, it is very clear that much of the ridership on MTA's rail lines has been generated by their "flat" fares. For example, using today's fare structure, the Long Beach Blue Line has a $1.35

---

[3] This was presented to MTA during its public hearings for a fare increase in 1999, and I incorporate it by reference to this document.

cash/90¢ token/$42 monthly pass fare, while the two express bus lines from Long Beach, Lines 456 and 457, that were cancelled after the Blue Line began service, had $2.85-3.35/$2.40-$2.90/$87-102 fares. A set of 1989 SCRTD transportation planning model runs projected that over half of the Blue Line ridership was due to the flat fare, compared to the zone fare that was originally favored for that line. Similarly, while the Red Line ridership on the South side of the Hollywood Hills has fallen far short of projections (60,000 working weekday riders vs. 260,000 projected in the 1989 FSEIS/SEIR), Valley Red Line ridership is well above expectations (currently, approximately 70,000 vs. 38,000 projected) – again, arguably, due in large part to the flat fare structure actually implemented vice the zone fare structure in the ridership models.

If the objective is to increase transit usage, there is no option available to MTA that has anywhere close to the potential of simply lowering bus (and rail) fares and increasing the levels of bus service to handle the hordes of newly generated riders.

IMPROPER BRT AND RAPID BUS OPERATING SPEEDS

Assuming that MTA has followed standard EIS preparation practices, it has used its transportation planning model to project transit ridership under the alternatives in the EIS. One component of this type of model allocates trips to modes through a variety of logic rules tied, in part, to the relative characteristics of the modal options, including factors such as cost, trip origin, trip destination, etc. All else relatively equal, speed of travel can be an extremely important factor in the assignment of trips to modes.

The outcomes of these model runs are then compared, and coupled with other data, such as capital and operating costs, to produce the data in Table S-4, "Comparison of Alternatives," page S-44. For example, we see in this table that the BRT alternative produces daily boardings (over No Build) of 15,300, compared to 9,000 for the TSM. BRT shows 439,000 hours of Travel Time Savings, compared to 285,000 hours for TSM.

There appears to be a number of reasons for these higher values for BRT over TSM, but the most important one is the faster travel time, shown as 28.8 minutes, from North Hollywood to Warner Center, compared to 50 minutes for TSM "via rapidbus in 2000." However, when these travel times are studied more closely, it appears that the TSM value of 28.8 is understated, while the TSM value of 50 minutes is overstated, both by significant amounts.

Let us look at the TSM value first. As the Table itself clearly indicates, this is based upon the use of a Rapid Bus line. However, the only Valley Rapid Bus line that will exist in the TSM alternative is on Ventura Boulevard, as is clearly evident from Figure 2-18, "Map of Transportation System Management (TSM) Alternative," page 2-18. This line does *not* serve the "North Hollywood" end of the trip presented in Table S-4 (presumably meaning the North Hollywood Red Line Station). While the DEIS/EIR does not specifically disclose how the 50 minute travel time is computed, the

most logical method to compare the travel times for the BRT and TSM alternatives would be for trips that begin and end at the same point – which I would assume means the two end stations for the proposed BRT line. If this assumption is correct, then the BRT trip would consist of something on the order of the passenger boarding the BRT bus at the station, riding it to Warner Center, and exiting the bus. The TSM Rapid Bus trip would consist of the passenger walking from the North Hollywood BRT terminus to the entrance to the North Hollywood Red Line Station, taking the escalators to first the mezzanine and then the boarding platform, waiting for a train to arrive, board the train, wait for the train to depart, traveling to Universal City, getting off the train at the Universal City Red Line station, taking the escalator up from the platform to the mezzanine and the station entrance, walking to the boarding location for Line 750, boarding the bus, taking the bus to Warner Center, and deboarding.

While I cannot be entirely sure that MTA has utilized the above list in every detail for this computation, I see absolutely no way that the 50 minute TSM Rapid Bus time does *not* include the time to get from North Hollywood to the Line 750 Eastern terminus at Universal City, presumably via the Red Line.

This method of generation of time comparison data does not appear to be entirely proper in all respects.

To put it less delicately, this is still another case of MTA cooking the books to justify the result it wanted when it started the analysis.

Let us now attempt to find a more comparative and useful time of travel for a Rapid Bus option for TSM. From Universal City to Warner Center (which is actually slightly longer than the North Hollywood to Warner Center BRT alignment[4]) on weekdays, the MTA Line 75 Schedule (June 3, 2001), shows travel times from 41 to 45 minutes. To compensate for the longer route of Line 750,

---

[4] The length of the actual BRT route length is shown as 14.2 miles on page 3-19. Using simple mapping software (Microsoft Automap Streets Plus™), I measured the total BRT length, including the non-exclusive busway sections, at approximately 14.4 miles, assuming North Hollywood Terminal Bus Routing Alternative 1, the longest (see pages 2-22 and Figure 2-6, page 2-24). (The BRT alignment, using Alternative 3, *was* 14.2 miles.) The route of Line 750 from Universal City to Warner Center came in at approximately 15.6 miles, 1.2 miles, or approximately 8%, longer.

To test the length of potential North Hollywood-Warner Center Rapid Bus routes, I measured a North Hollywood Red Line Station (Alternative 1)–Burbank–Roseda–Oxnard–Topham–Victory–Ownesmouth route at 14.6 miles. This route does has certain sections that has posted speed limits faster than Ventura Boulevard, and approximately the same, or even a few fewer, turns at signalized intersections.

let's assume that 41 minutes, the low end of the range, would be the travel time from North Hollywood to Warner Center, calculated on a basis comparable to that of the BRT travel time.

Now let us examine the time to travel from North Hollywood to Warner Center on the proposed BRT alignment. In Table S-4, "Comparison of Alternatives," page S-44, we see a projection of 28.8 minutes. In §2.2.3, "Bus Rapid Transit (BRT) From North Hollywood to Warner Center," page 2-20, we have, "For the purposes of this environmental document, an average speed of 37 miles per hour (mph) (29 mph including station stops and intersection delay) has been assumed." If we utilize the 28.8 minute travel time and the 29 mph all-inclusive travel speed, we see that the distance traveled must be 13.9 miles ([28.8 minutes/60 minutes/hour] x 29 mph = 13.92 miles)[5].

Now let us examine the FEIS claim of 29 mph all-inclusive operating speed by comparing it with the actual, comparably calculated travel speeds of the MTA Red and Blue Lines. The line lengths below are from our actual measurements (Red Line) and MTA National Transit Database reports to the Federal Transit Administration (Blue Line); travel times are from the most recent MTA published schedules.

First, to set the operating conditions:

- Valley BRT – 13.9 miles (as calculated from MTA data above), 13 non-terminus stations, for an average distance between stations of approximately 1.07 miles[6]. Assuming North Hollywood Station Alternative 1, there are two sections that will not be on an exclusive BRT alignment at the ends of the line, totaling approximately 1.6 miles. Two sections of the BRT alignment, on Chandler and through the intersection by the Los Angeles Valley College station, totaling approximately 2.5 miles, are speed restricted to approximately 35 mph. Top operating speed appears to be 55 mph.

---

[5] This is, however, about half a mile short of the 14.4 miles we obtained though measuring using mapping software, which is puzzling. If the travel distance *is* 14.4 miles, then it would take an extra minute, to 29.8 minutes, to cover this distance at 29 mph. For the 14.2 mile BRT length from page 3-19, and the 28.8 minute travel time, the average, all-in, travel speed would be 29.6 mph – however, this would round up to 30 mph, and the FEIS states 29 mph.

Since the main purpose of this exercise was to compare the travel times for BRT vs. Rapid Bus, and the methodology utilized to project the Rapid Bus travel time was based on the relative distance of travel on the BRT and Rapid Bus routes, *as measured* utilizing the same mapping software, then the *relative* travel time between these two alternatives would not be significantly impacted, even if MTA used an incorrect BRT length in its calculations.

[6] In this calculation, the denominator is [(number of stations) - 1], which is the number of "gaps" between stations.

- Red Line, North Hollywood to Union Station – 14.7[7] miles, totally grade separated, only speed restrictions are curves and station stops, 14 stations, average distance between stations approximately 1.05 miles. Vehicle top speed is 65 mph.

- Blue Line, Long Beach to Los Angeles, 21.7/21.6 miles (Southbound/Northbound directions of travel, 21/20 stations, average distance between stations approximately 1.11 miles. Approximately 3.3 miles of track in City of Los Angeles is street-running with traffic signal preference; approximately 2.8/2.7 miles of track is in City of Long Beach without traffic signal preference. Remaining portion of track, approximately 15.6 miles, has 55 mph top operating speed.

Now to travel times and operating speeds:

- Valley BRT – 29 mph, (13.9 miles in 28.8 minutes)

- Red Line – 30 mph (14.7 miles in 29 minutes)

- Blue Line – 24 mph (21.7/21.6 miles in 53/55 minutes)

Now let us examine one additional issue. On page 2-20, we have, "For the purposes of this environmental document, an average speed of 37 miles per hour (mph) (29 mph including station stops and intersection delay) has been assumed." Using our 13.9 mile total BRT route alignment (including "normal" street running segments), at 37 mph, it would take 21.4 minutes to travel the full length, or 7.4 minutes less than the 29 mph, all-in, operating speed.

There are 13 BRT stops. Excluding the two terminus stations, there are 11 locations along the route where buses must stop to board/deboard passengers counted in the 28.8 minute end-to-end travel time. If we assume 20 seconds per stop, that would require 220 seconds, 3.7 minutes, or half of the total 7.4 minute station stop/intersection delay time. If we assume 30 seconds per stop, that would require 330 seconds, or 5.5 minutes, or 74% of the total station stop/intersection delay time.

Even with traffic signal preference, 1.9 to 3.7 minutes for intersection delay time appears to be rather short for a route that crosses a total of 25 major and secondary arterials (page 3-18), including approximately four signalized intersections in Warner Center and approximately two to three signalized intersections in North Hollywood that are *not* on the BRT proper.

Here is the main question: How can this BRT alignment, which has a slower top speed than the Red Line; has four sections, totaling almost 30% of the total length, that have significant speed

---

[7] Note: In many publications, MTA claims that the total Red Line is 17.4 miles (inclusive of the Wilshire/Vermont to Wilshire/Western leg). The actual length is 15.8 miles.

restrictions; and has signalized intersections along the high-speed portion of the alignment, possibly achieve an average all-in operating speed almost as fast as the Red Line's?

There is a simple answer – it can't. It is simply impossible.

In our opinion, buses on this BRT alignment will be doing very well if they achieve North Hollywood to Warner Center average operating speeds of the Blue Line – 24 mph.

What will this more realistic speed assumption do to the end-to-end travel time? 13.9 miles at 24 mph will take approximately 34.7 minutes – I'll round this to 35 to have consistent significant digits with the 41 minute projection for the Rapid Bus alternative.

Now let's look at the original and revised end-to-end, all in, travel times:

- MTA Projection: 28.8 minutes for BRT, 50 minutes for Rapid Bus, a savings, for BRT, of 21.2 minutes, or over 42%.

- Revised Projection: 35 minutes for BRT, 41 minutes for Rapid Bus, a savings, for BRT, of 6 minutes, or 15%.

In transportation modeling, a 42% difference in travel time would almost certainly produce a huge impact in modal shift towards the faster alternative; a 15% difference would have a much smaller impact, all else equal. Given the complexities of these models, and because it is not these two modes competing against each other for passengers, but against other modes, primarily auto travel, it is not possible to be more precise than these generalities in projecting how the ridership will change.

What we *can* predict, however, is that:

- Rapid Bus (TSM) daily boardings would be higher than the 16,700 shown in Table S-4 and BRT daily transit trips will be lower than the 24,700 shown

- Rapid Bus Transit Trips (Over No Build) would be higher than the 9,000 shown and BRT will be lower than the 15,300 shown

- Travel Time Savings for Rapid Bus would be higher than the 285,000 shown and BRT would be lower than the 439,000 shown

- Cost per New Daily Transit Trip of $5 for Rapid Bus would be lower and the $10 for BRT would be higher

- Operating and capital costs for Rapid Bus (per passenger) would decrease and those for BRT would increase[8].

---

[8] The reason for this is, the faster the vehicle speed, the more work, in the form of trips, that a transit agency gets out of each bus and each bus operator each day.

The number of buses and the relative operating costs can be estimated by using the one-way travel times above to show how things will change.

To calculate the number of buses that are required to operate a given headway, the formula is: {[(one-way travel time) x 2] + [(layover time) x 2]}/(specified headway); rounded up to the next whole number. (This is a simplified version of what can be an extremely complex process, but the results are illustrative and useful for our purposes.)

If we want to operate a 2.5 minute headway (this is the lowest headway at any point on the alignment, as per Table 2-11, page 2-67), and the MTA bus operator contract requires a minimum recovery time of six minutes at the end of each one-way trip (it *may* be possible to operate this route with one recovery period after every *other* one-way trip, but this possibility will not be considered for this example), and the one way trip travel time is 28.8 minutes, then the above formula produces: [(28.8 x 2) + (6 x 2)]/2.5 = 27.84, which rounds up to 28. This means that there would be a requirement for 28 buses in service during peak periods, given the simplifying assumptions for this example. Assuming the standard 20% bus spare ratio, it would require the purchase of 34 buses to operate 28 each day.

Now, if we assume that the one-way trip time is 35 minutes, vice the 28.8 assumed earlier, the formula produces: [(35 x 2) + (6 x 2)]/2.5 = 32.8, which rounds up to 33 buses in service at peak, and 40 buses to be purchased, counting spares.

If this were the end of this process, we could then calculate that bus operating costs would increase approximately 18% (1 - 33/28) and bus capital costs would increase a similar percentage. However, because of the slower speed, ridership is likely to be lower, and, therefore, a longer headway would be advisable. Without rerunning the MTA transportation planning model, we cannot predict how much this will change. However, one thing that we know will happen is that the cost per passenger will increase by somewhere near out 18% computation because each bus is carrying fewer passengers than originally projected.

Turning now to our Rapid Bus alternative, we will have to make an assumption as to the desired headway, as the SEIS/EIR TSM does not assume any Rapid Bus line. For the sake of consistency, we will keep with our 2.5 minute headway utilized above for the BRT alternative, even though the slower speed, particularly of the MTA 50 minute travel time projection, would surely reduce ridership and, therefore, the required bus headway.

Starting with the 50 minute case, the math is: [(50 x 2) + (6 x 2)]/2.5 = 44.8, rounded up to 45 buses required at peak, with a bus purchase, including spares, of 54.

Now for the 41 minute case, we have: [(41 x 2) + (6 x 2)]/2.5 = 37.8, rounded up to 38 buses required at peak, with a bus purchase, including spares, of 46. This is a reduction of 16% (1 - 38/45) from the 50 minute assumption.

(continued...)

We believe that all of these changes will produce materially different results for the BRT and TSM alternatives that require that this portion of the DEIS/EIR be redone.

DOCUMENTED SHORTCOMINGS OF MTA TRANSPORTATION PLANNING MODEL

We find the use of MTA's transportation model to produce the results analyzed quite troubling. In the past, I have commented frequently, and at length, on the various flawed assumptions, improper analysis, and irrational results produced by prior versions of this model and the MTA modeling personnel[9]. For our current purposes, we am most concerned about the many serious problems that Tom Rubin noted in *Major Problems with Los Angeles County Metropolitan Transportation Authority (MTA) Long Range Transportation Plan (LRTP) Model And Evaluation Criteria*, which I provided to MTA staff during the *LRTP* process last Fall, and which I incorporate into this commentary by reference.

I am specifically concerned with a serious error that was revealed in the model validation process. With such models, before they can be utilized to project future results, they must be carefully calibrated to ensure that they are producing useful, valid, *accurate* results. One of the most important steps in assuring that a model can usefully and accurately predict the future is to see how well it does in predicting the *past*. In this particular case, the model was utilized to "predict" the known values for transportation and transit usage for 1998.

While it is never possible to recreate reality, and no model of this type can ever be expected to be 100% accurate, such models must demonstrate a reasonable ability to produce accurate results. The

---

[8](...continued)

Again, we cannot simply assume that the cost will drop by 16%, because the faster operating speed will attract more riders.

In summary, then, we have a 18% "worsening" for the BRT case and a 16% "bettering" for the Rapid Bus (TSM) case, a combined change of approximately 40% against BRT [(1 + 18%)/(1 - 16%)]. This is a significant change, one that is so major that the entire set of calculations in the TSM is invalidated and must be rerun. This will require redoing the TSM and BRT transportation model runs with the new travel times, then adjusting the costs to handle the changes in travel demand, and finally, recalculating the performance indicators.

[9] See, for example, Thomas A. Rubin and James E. Moore, II, *Why Rail Will Fail: An Analysis of the Los Angeles County Metropolitan Transportation Authority's Long Range Plan*, Reason Foundation Policy Study No. 209, July 1996. This is a short version of a far more detailed analysis of the flawed 1995 MTA *LRTP* that Tom Rubin produced as a expert for plaintiffs in *L/CSC v. MTA*.

above cited paper documented a large number of major discrepancies between the products of the MTA model and the know values for the base year. Of these problems, one of the most disturbing was *that the model overestimated rail ridership, compared to bus ridership, by over 22%* for the known 1998 year. This gives rise to the question, if the model has this tendency to overstate rail ridership, compared to bus ridership, for a known past period, could it not also display similar overstatements for future periods? And, if MTA planning staff are assuming the same types of attributes for BRT that it has traditionally assumed for rail, will these same distortions apply to the BRT projections?

Of course, while the overstatement of total ridership is very important, the key quantitative decision criteria is cost per *new* passenger. Because new passengers are only a small portion of total passengers, the overstatement of *new* trips by such an erroneous process is likely to be far more than the overstatement of total ridership.

The other key factor is the assumptions, specifically, the logic that drives how the model allocates trips to modes. This raises the issue if the assumptions are somehow different. I have no specific knowledge of what these assumptions are, but past experience with the earlier versions of the same model raises certain questions:

14. Was a "modal preference" assumption made? In other words, was there a logic rule that, in simple terms, states that, all else equal, more people will decide to take a trip on BRT than on Rapid Bus? If this is the case, what are the exact details of the difference between the propensities to use BRT and Rapid Bus – especially as Line 750 has conclusively exhibited that Rapid Bus is widely popular in this Corridor?

    More important, if there is such an assumption, what is the justification for it? What research shows that a greater tendency to use BRT, as opposed to Rapid Bus, can reasonably be expected to exist in this Corridor?

15. Were there other differences in the assumptions between BRT and "regular" bus? For example, in the assumptions used for the 1995 LRTP, the experts working for the plaintiffs in *L/CSC v. MTA* discovered that the bus "walk distance" – the maximum distance that potential transit riders would walk to a bus stop – was one-quarter mile, but the rail walk distance was a full mile. This effectively made the geographic walk distance circle around a rail station sixteen times the comparable circle for a bus stop. There were additional assumptions in which bus and rail were treated differently.

By *not* including any of the above, or similar, low cost, proven elements in the TSM alternative for this study, MTA has unfairly and improperly "tilted" the playing field to favor high cost guideway transit. If these elements *had* been included, they would have generated substantial additional ridership *without* the high cost of BRT, thus making this alternative far less competitive. Indeed, I expect that even partial inclusion of some of these elements would have generated far more new

riders than the BRT alternative – just as the 50¢ fare program generated an increase of 143 million unlinked trips a year – *all* new trips – in just three years, compared with total MTA budgeted urban rail ridership (Red, Blue, and Green Lines combined) of 54 million in fiscal year 2000 (FY00)[10], with most of these being former bus riders. Of course, the cost of the fare subsidy program was a small fraction of MTA's billion-dollar-a-year-plus expenditures on rail during the period from the mid-1980's to today.

We am very disappointed that one of the alternatives considered was not a pair of limited access lanes on the Ventura (SR101) Freeway, combining one, two, or all three of the following: busway, high-occupancy vehicle (HOV), and high-occupancy/toll (HOT). While an SR101 busway/HOV/HOT lane would undoubted be expensive and would present several technical difficulties, the very large potential benefits, coupled with the likely low capital cost, make it difficult to understand why this was never an option in this corridor study.

INTERFERENCE WITH SURFACE STREET TRAFFIC FLOW

The proposed operating methodology for the BRT is almost certain to impose major impositions on the movement of autos and other rubber tire vehicles throughout the district. To illustrate the difficulties that will be generated, we will focus on what will likely be the "worst of the worse" locations, that of the Los Angeles Valley College Station at the intersection of Fulton and Burbank.

As can be seen at DEIS/EIR Volume 2, Sheet No. 49, the BRT will actually go through the middle of this intersection diagonally from Northwest to Southeast, therefore requiring all through traffic on both boulevards to come to a complete halt for buses to pass. Even two of the four "right turn on red" movements (from Southbound Fulton to Westbound Burbank and from Northbound Fulton to Eastbound Burbank) must be prohibited, as they would directly interfere with BRT bus movements.

From Table 2-11, we see that the "Maximum Combined Peak Frequency" at the Valley College stop will be 3.3 minutes. However, since this refers to travel in each direction, there will be actually be a bus coming through the middle of this intersection, on average, every 1.65 minutes – or about one bus every 100 seconds – 36 buses an hour[11].

---

[10] MTA, *Proposed Budget For the Fiscal Year Ending June 30, 2001,* Appendix 5, "FY01 Modal Operating Statistics," page 4-5.

[11] Undoubtedly, there will be some times in each peak hour when a bus traveling in each direction will arrive at the intersection at the same time, thereby requiring only one through signal for both, rather than two discrete signals, one for each bus. However, the best way to

(continued...)

If we assume that the "green" traffic signal time for the buses to enter and clear the intersection is fifteen seconds[12], plus five seconds for the yellow light on the active crossing street, then we have a signal length of 20 seconds for each BRT bus. In total, this could require as much as 12 minutes per peak hour, or 20% of each peak hour, for the buses and buses alone. Losing this large of the total time available to clear traffic – actually, well over 20%, considering the additional time lost to acceleration and deceleration due to the shorter green cycles for the traffic on Fulton and Burbank – will have a major, devastating, impact on the capacity of this intersection.

The impact on many other intersections, affecting primarily North-South travel, will be slightly under half of this, or approximately 8% of total intersection time devoted to bus travel.

While these impacts on traffic flow through arterial street intersections would be extremely troublesome in any event, they will be made worst still by the closing off of almost all non-arterial street crossings of the BRT guideway. This will funnel even more traffic onto the arterials, including causing a large number of turning movements onto and off of the arterials immediately on each side of where these arterials cross the BRT alignment. This not only will create additional traffic on the

---

[11](...continued)
provide for this would have been to locate both bus stops as "near side" stops (the stop is placed before the bus enters the intersection). This would allow the first bus of each pair to arrive to be held until the second was ready to enter the intersection.

However, both stops at this location are "far side" stop, meaning the stop is *after* the bus goes through the intersection. It would be extremely difficult, even with sophisticated speed and timing methodologies and equipment not contemplated for this project, to arrange for two buses arriving at an intersection from different directions to arrive simultaneously, or nearly so.

[12] This is *very* short. The diagonal measurement across the intersection is approximately 200 feet. This section of the BRT guideway is marked as designed for a maximum operating speed of 25 mph. The "far side" bus stops are placed approximately fifty feet from the end of the 200 foot intersection crossing, which means that a bus stopping at the bus stop – presumably, almost all buses – would be somewhat slower than 25 mph at the end of the crossing zone. If we assume 25 mph speed all the way through, then it would take approximately 6.6 seconds for 40-foot buses to cross the intersection (7.2 seconds for 60-footers) – assuming that the bus hit the leading edge of the crossing exactly as the light "turned green" for it, hardly a likely occurrence. If we assume that a bus operator would begin to brake to a stop, at a deceleration rate of three miles per hour per second, if (s)he did not see a green light at the limit point, the light must turn green slightly over eight seconds prior to the bus entering the crossing. (If the bus were to be stopped at the near side of the crossing, beginning from a dead stop, the minimum green required to make the crossing would be approximately the same.) This implies a minimum Green signal of 14 seconds, rounded to fifteen seconds.

arterials where they cross the BRT alignment, but it will also impede the arterial traffic further as vehicles slow to accommodate the many added turning movements.

Given the huge amount of total intersection time that will be required for such bus crossings at those intersections that will be most impacted, the statement in §3-3, "Study Area Traffic Impacts," page 3-18, that "The partial and full traffic signal prioritization proposed for the transit corridor may possibly increase delay for motorists crossing the corridor on the cross streets. Such impacts and delays can be minimized using the latest signal timings/synchronization technologies and vehicle detection capabilities; ..." appears to be something of an understatement of the actual impacts on several such intersections. The potential negative traffic flow impacts are so massive, at least at certain of these intersections, that any competent and compliant DEIS/EIR would appear to require considerably more detailed analysis.

HIGH-SPEED BUS TRAVEL ACROSS ARTERIAL AND OTHER STREETS IN THE VALLEY COULD EASILY PRODUCE MORE FATALITIES THAN THE LONG BEACH BLUE LINE, THE MOST DANGEROUS LIGHT RAIL LINE IN THE U.S. BY FAR

The Long Beach Blue Line is unique among North American light rail lines in two, closely linked aspects:

- It is the only North American light rail with high-speed (55 mph) operations through a densely populated urban area with grade crossing "rubber tire" traffic

- It is the most dangerous light rail line in the United States, by far – according to the latest available official U.S. Department of Transportation/Federal Transit Administration statistics, the Long Beach Blue Line not only had by far the most fatalities of any light rail operator – 53 – during the period from the commencement of operations in July 1990 through the 1999 reporting year, but it had exactly as many reported fatalities as every other light rail line in the United States *combined*.

This second very sad fact is extremely relevant to any discussion of Bus Rapid Transit operations along this proposed alignment because not only would high speed operations pose a risk of duplicating the major error of high-speed operations with grade crossings of the Blue Line, *but the risk of fatalities would likely be far higher in this corridor*[13].

---

[13] The DEIS/EIR does not appear to contain any specific mention of the speed that buses will travel while crossing arterial streets along the guideway. However, as is obvious from the guideway design notes on the various sheets in Volume 2, even the curves are to be designed for 55 mph operation. In order to obtain the claimed average operating speed (while the buses

(continued...)

The reasons that the risks are higher are that the Burbank-Chandler BRT corridor has all the risk factors of the Long Beach Blue Line, but the BRT guideway will lack significant mitigation factors that are present on the Blue Line, including:

- The minimum headway on the Blue Line is five minutes in each direction; the proposed headways on the BRT alignment are significantly shorter for the majority of its length, 2.5 to 3.3 minutes between Reseda and North Hollywood (page 2-67). With as many as twice as many buses passing through each grade crossing per hour, the number of exposures is as much as mathematically doubled.

  Far worse, however, is that these additional exposures will increase the "frustration factor" of operators of rubber tire vehicles, undoubtedly causing them to undertake many more violations of statutory safety restrictions than this simple ratio of crossing would imply.

- At the high-speed grade crossings on the Blue Line, there are standard railroad crossing protections, including two-quadrant – and now, finally, some four-quadrant – crossing gates, along with visual and auditory warning devices. I see absolutely no mention of such devices in the DEIS/EIR. While these safety devices have not prevented certain drivers from undertaking risky, in many cases, fatal, actions, on the Blue Line alignment, the absence of such devices for the proposed BRT alignment exposes the public to risks in the proposed BRT alignment that are higher by orders of magnitude.

- There has never been a fatality, or even a major injury, to a Blue Line passenger or Blue Line operator. The primary reason for this is the vast disparity in mass between Blue Line trains and automobiles. A two-car Blue Line train, with passengers, weighs well in excess of 100 tons; most automobiles are under two tons. This 50:1 mass ratio, means that, while the impact is absolutely devastating to the automobile and its occupants, with large segments of vehicle often winding up spread over hundreds of feet, the impacts on the train are relatively

---

[13](...continued)
are in motion) of 37 mph, obviously, speeds higher than 35 mph must be maintained on the BRT alignment. After factoring in the slower speeds in the non-BRT portions of the route alignment, time spent accelerating and braking for stations and other stops, and the speed restricted sections of the BRT alignment, the only possible way for this overall speed to be obtained would be to operate at 55 mph through at least some grade crossings.

However, as noted above, MTA's calculations of BRT operating speed are obviously deficient; therefore, without a specific statement as to MTA's intent, it is not possible to be 100% sure what its intentions are. At the present time, however, we are forced to assume that MTA will do what the matters presented in the DEIS/EIR imply. If MTA has omitted significant information from the DEIS/EIR – and this matter is obviously *very* significant – then it is obligated to correct the DEIS/EIR and recirculate it for public comment.

small. Even standing passengers rarely sustain more than relatively minor complaints. Also, the Blue Line trains operate on rail tracks, which makes them far more likely to veer off-track into other vehicles or stationary objects.

A 40-foot bus, loaded with passengers, weights approximately 20 tons; a longer, articulated bus, perhaps 30 to 35 tons, depending on the exact vehicles that may be specified by MTA for operation on this alignment. A ratio of 10:1 to 18:1 obviously means that, in a bus vs. auto collision, the bus – and, more important, the bus occupants – are subjected to a significantly greater relative impact than in a train-vs.-auto collision. Injuries to MTA bus operators and passengers are not uncommon, even at the low speeds associated with standard street running. At the higher speeds of buses in BRT operation, the risk of injury to passengers and operators is many times higher.

Also, it is not at all uncommon for the buses in a bus-vs.-auto collision to veer significantly off their original track, exposing them, and their passengers, to the risk of impacts with other vehicles and stationary objects. The risk of overturning can also be high at these increased speeds, particularly since most of such collisions would involve near-right angle impacts.

Undoubtedly, the high-speed operation of buses along this proposed BRT corridor would expose bus passengers and operators to a significantly higher risk of fatality and serious injury than has been the case for Blue Line passengers and operators. With 50 to 80 people in a bus, the quantitative impact of extremely serious incidents could range to the catastrophic.

Recognizing the serious risks of this type of high-speed bus operations through a dense urban area, MTA has wisely agreed to limit operating speeds to 35 mph in the Chandler Boulevard section of the proposed BRT alignment. This will, at least, mitigate, to some extent, both the exposure to serious collisions and the human/property damage resulting from the collisions that do occur, which will tend to be at lower speeds. MTA should be congratulated for at least taking this logical, sensible precaution.

However, since MTA obviously admits to the seriousness of the problem, why has it not proposed similar speed restrictions in the many other segments of the proposed BRT alignment that are equality at risk? What MTA has done for one, it must also do for others that are subject to the same risks[14].

---

[14] While there are obvious differences in the physical arrangements for the proposed BRT on Chandler and in other sections, these are generally only minor differences of degree of exposure, not greatly significant in terms of overall exposure to the risks discussed in this section.

The risks of frequent and catastrophic fatality and injury incidents along this corridor are so significant as to require a complete rethinking of the proposed operational plan. MTA cannot afford another Blue Line – and the Burbank-Chandler BRT, as currently planned, has the potential to be far more dangerous[15].

Finally, the negative impacts of such a major incident would undoubtedly result in immediate and passionate calls for safer option of the BRT, which would mean lower speeds. In this situation, it appears that MTA is planning on the operation of the BRT at speeds that cannot be sustained in the real world, once traffic safety and practical political realities set in.

* *

As we have pointed out above, we believe that there are many far superior transportation options in this corridor that, in combination, have significant potential to move far more people than the Burbank-Chandler Bus Rapid Transit Alternative, move them at far lower taxpayer cost, be up and running in a fraction of the elapsed time, and move people at a fraction of the costs in human lives, serious injuries, and property damage of the BRT. These options deserve the fair hearing that they are yet to receive, and which MTA is required, by statute and regulation, to provide to them and the people who will benefit from them.

In concluding our remarks, we demand the right of response to the MTA replies to the points we have made above. (We have far too much experience with MTA "spin control" to allow MTA the uncontested "last word" for the record.) In addition, we are making Public Records Act requests for the financial models and output reports and the detailed specifications and output reports for MTA's transportation model runs. We also request a copy of the Final Environmental Impact Statement/Environmental Impact Report and the report to the MTA Board of Directors for its adoption.

Sincerely,

Thomas A. Rubin Richard K. Stone

---

[15] It is certainly true that, in virtually every single case involving a Blue Line fatality, the cause of the incident was found to be the person fatally injured (or the driver of the car that the fatality was driving in) being found responsible due to their violation of a safety statute.

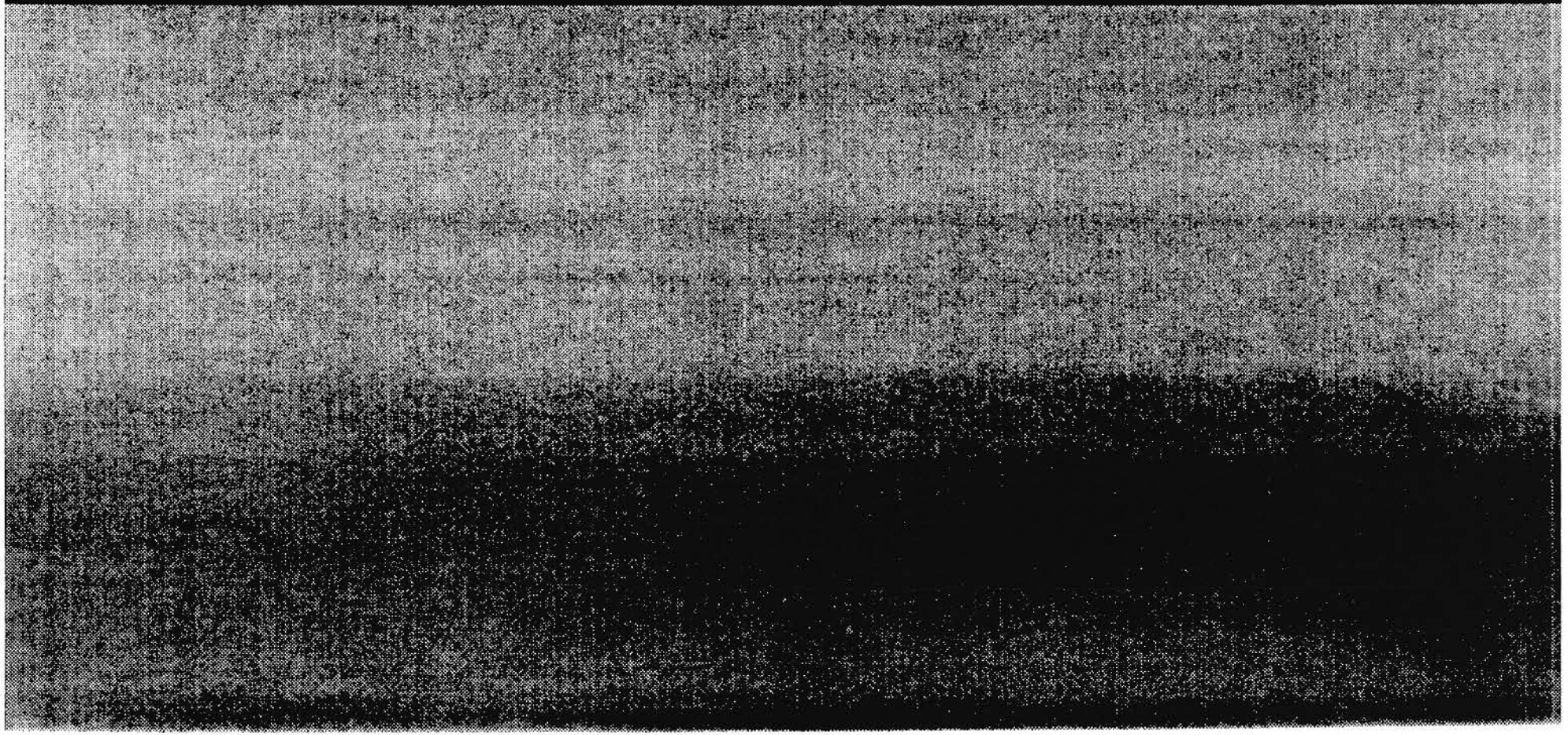
However, this does not change the major fact at issue: a large number of people are dead because of their fatal interaction with a mass transit mode. Legal liability aside, it is the responsibility of MTA to properly provide for public safety in the design of its facilities, *recognizing* that 100% compliance with safety statutes and regulations cannot ever be achieved.

EXHIBIT XVI

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY LONG RANGE TRANSPORTATION PLAN FOR LOS ANGELES COUNTY EXECUTIVE SUMMARY APRIL 26, 2001 (EXCERPTS)

2001 LONG RANGE TRANSPORTATION PLAN FOR LOS ANGELES COUNTY

EXECUTIVE SUMMARY

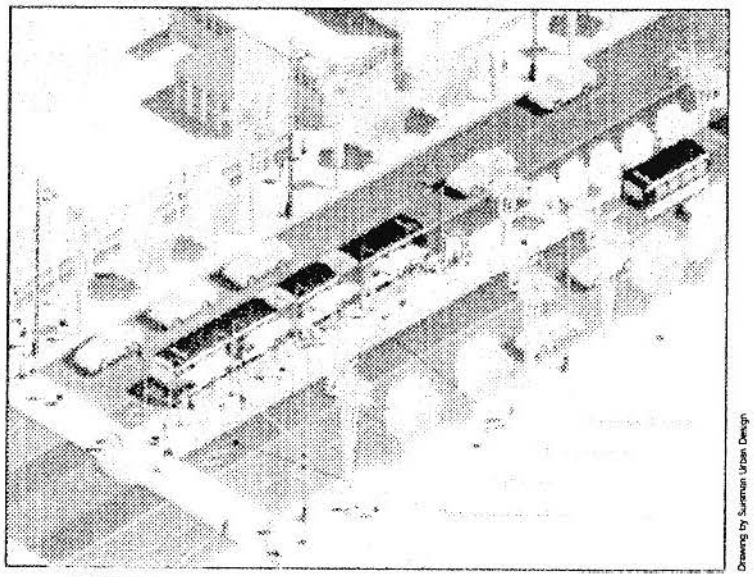


CONSTRAINED PLAN	in millions
• Additional countywide bus service improvements (Countywide bus fleet of 4,400 approx.)	$ 3,771.8
• Rapid Bus Program: Implement 22 additional lines	$ 92.3
• Tiered Transit System: Implement in consultation with municipal and local operators	$ 00.0
• Crenshaw Transit Corridor (Wilshire/Crenshaw to Green Line/LAX)[4]	$ 346.1
• Exposition Transit Corridor (Crenshaw to Santa Monica)[3]	$ 155.2
• San Fernando Valley North-South Transit Corridor (Sylmar to Ventura Blvd)[4]	$ 142.7
• Metro Green Line Extension to LAX[5]	$ 00
• Metrolink Expansion	$ 580.0
• $13.5 million total annual funding for Transit Capital projects funded through the Call for Projects	$ 438.4
Constrained Plan Estimated Total	$ 5,526.5
RECOMMENDED PLAN ESTIMATED TOTAL	$87,077.8

Public Transportation Footnotes

4 Actual transit technology (rapid bus, bus guideway or light rail guideway) and phased project length to be determined through corridor alternatives analysis.

5 Assumes non-MTA funding of Green Line extension.

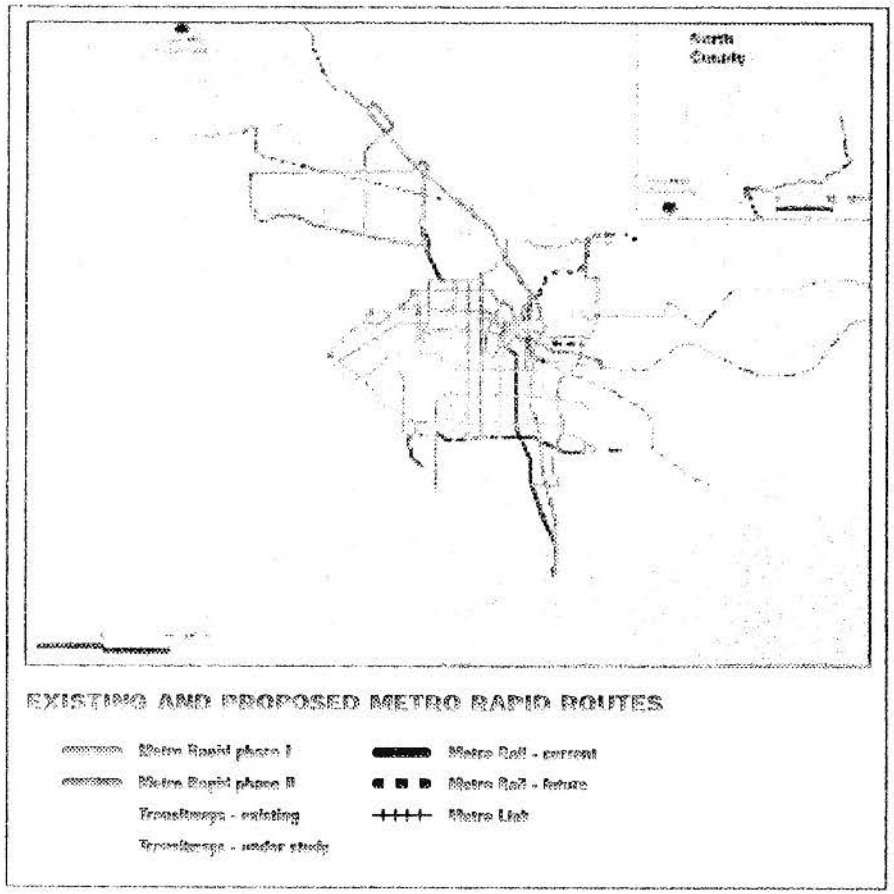


Drawing by Sussman Urban Design

AERIAL VIEW OF PROTOTYPICAL STREET WITH BUS RAPID TRANSIT

METROLINK

LIGHT RAIL



STRATEGIC PLAN	in millions
• Additional 14 Rapid Bus lines	$ 130.8
• Additional Community Transit Services (i.e., shuttles, local circulators)	$ 500.0
• Consider additional Transit Corridors such as:	
• Wilshire Red Line (extension from Wilshire/Western to mid-cities)	$ 2,461.0
• East Los Angeles Transit Corridor (extension from Atlantic to Norwalk/Whittier)	$ 671.0
• Pasadena Blue Line (extension from Sierra Madre Villa (Pasadena) to Claremont)	$ 1,276.0
• Vermont Transit Corridor (Vermont Green Line Station to Hollywood Blvd.)	$ 373.0
• Burbank/Glendale Transit Corridor (Union Station to Burbank Transit Station)	$ 788.0
• Metro Green Line (extension from Marine/Redondo to South Bay Galleria)	$ 172.0
• Extensions and/or upgrades to transit corridor projects identified in constrained plan.	$ 461.0
• Additional Metrolink Expansion	$ 380.0
• $20 million total annual funding for Transit Capital category of Call for Projects.	$ 649.5
STRATEGIC PLAN ESTIMATED TOTAL	**$ 7,862.3**