Exposition Metro Line Construction Authority

Exposition Corridor Transit Project Phase 2

Final Environmental Impact Report

Technical Background Report

FINAL

Operating Plans and Assumptions

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Exposition Metro Line Construction Authority

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INTRODUCTION

This technical report documents the major transit operating concepts and assumptions that comprise the alternatives analyzed under Phase II of the Exposition Corridor Transit Study. These concepts were derived from those initially utilized in the Los Angeles County Metropolitan Transportation Authority's (Metro) 2001 Long Range Transportation Plan and further refined through a series of working meetings conducted between the project team, local transit authorities, and consultants representing other transit corridor projects in Los Angeles County. The study area for this analysis extends from Culver City west to Santa Monica and includes areas of West Los Angeles, Venice, and neighboring environs.

Initial meetings were conducted between May and July 2007 to solicit input on the operating plans under a preliminary screening phase, involving the following local transit agencies or divisions:

- Metro countywide modeling
- Metro service planning
- Metro Westside sector planning
- Santa Monica Big Blue Bus
- Culver City Bus
- City of Los Angeles Department of Transportation (LADOT)

During this screening phase, operating plans were defined for the following alternatives:

- 2030 No Build
- 2030 TSM
- 2030 LRT – Exposition ROW alignment
- 2030 LRT – Venice/Sepulveda alignment
- 2030 LRT – Venice/Venice alignment
- 2030 BRT – Exposition ROW alignment

The resulting operating plans and assumptions are~~were~~ documented in a separate report, *Exposition Corridor Phase II Operating Plans and Assumptions, September 2009~~7~~*. The Venice/Venice LRT alignment and Exposition ROW BRT were not carried forward, and a variation using Colorado Avenue instead of Olympic Boulevard was added to both the Exposition ROW LRT and Venice/Sepulveda LRT alternatives. The resulting alternatives were carried forward for further analysis:

- 2030 No Build
- 2030 TSM
- 2030 LRT – Exposition ROW and Olympic alignment
- 2030 LRT – Exposition ROW and Colorado alignment
- 2030 LRT – Venice/Sepulveda and Olympic alignment

- 2030 LRT – Venice/Sepulveda and Colorado alignment

Follow-up sessions with Metro were held in February and May of 2008. Included in these discussions and the analysis that followed was modification of operating headways to meet forecasted passenger demand, where necessary.

This report documents the refined operating plans of the screened alternatives. Detailed line-by-line operating plans for each of these alternatives are presented in **Appendix A**, and station-by-station travel time estimates for each of the build alignments are available in **Appendix B**.

2030 NO BUILD ALTERNATIVE

The project team consulted heavily with Metro staff to determine the level of service and major assumptions that should comprise the No Build alternative. Given that the agency plans to introduce several different transit corridor projects into the FTA New Starts process over the next few years, the consensus of Metro countywide modeling personnel, the project team, and consultants representing other transit corridor projects in Los Angeles County was that the No Build alternative for all studies should, as much as is practical, contain identical service characteristics. The resulting Unified No Build alternative concept therefore contains none of the projects soon to be applying for New Starts funding. It represents only the service which exists or is explicitly committed for 2030.

While there was consideration of including other Long Range Plan capital projects in the No Build network (such as Crenshaw LRT) to take advantage of any synergistic benefits, ultimately it was considered preferable to leave out projects that must still undergo the alternatives analysis/environmental process. Otherwise, inclusion of these other projects would require premature assumptions regarding routing, technology and service definitions for coding in the model. **Table 1** below details the Metro fixed guideway assumptions that compose the 2030 Expo-2 No Build Alternative.

Table 1 Fixed Guideway Assumptions in the 2030 No Build Alternative

Line	Endpoints	Peak Headway (minutes)	Offpeak Headway (minutes)
MetroRail			
Purple	Union Station to Wilshire/Western	10	10
Red	Union Station to North Hollywood	5	10
Blue (full)	7th/Flower to 1st/Pacific	10	10
Blue (short)	7th/Flower to Willow	10	0
Expo	7th/Flower to Venice/Robertson	5	10
Gold	Atlantic to Sierra Madre Villa	5	10
Green	105/605 to Marine	5	10
LAX People Mover	Aviation Green Line to Central Terminal	2	2
MetroLiner BRT			
Orange	North Hollywood to Warner Center	5	10

Source: Metro countywide modeling, June 28, 2007

The Unified No Build network also includes the full implementation of the Metro Rapid Bus program, represented as 28 routes across the county, as well as planned peak-only rapid bus

lanes along Wilshire Boulevard between Western Avenue and Bundy Drive. The rest of the bus network is based on June 2007 service patterns for Metro, LADOT, Culver City, and Santa Monica Big Blue Bus, as well as committed enhancements to those services anticipated by 2030. Based on direction from Metro, their bus fleet will be assumed to include a mix of articulated and higher-capacity 45-foot buses in 2030.

Within the Exposition Phase I corridor, the operating plan insures applicable connections between local service and Expo-1 LRT stations. It also assumes that routes currently terminating at the West LA Transit Center will continue to serve that location while also connecting to either the La Cienega or Culver City LRT station. The Expo-1 LRT line is assumed to traverse the 8.75-mile corridor from downtown Los Angeles to Culver City in 26.45 minutes, for an average operating speed of 19.9 mph. Parking is assumed at the Crenshaw (500 spaces), La Cienega (530), and Culver City (600) stations.

Figure 1 below presents a map of the proposed routes in the No Build alternative. From the map, it becomes clear that while overall service in the corridor is quite robust, opportunity exists to improve the directness and frequency of service from the Expo-1 terminus and points east (downtown Los Angeles, USC, etc.) to West Los Angeles and Santa Monica.

Finally, recent Federal Transit Administration (FTA) direction is to ensure that future year service be provided at levels that meet the forecasted passenger demand, at a minimum within the study area, and ideally across the entire system. This is sometimes called “headway equilibration,” for the process will manipulate route-by-route headways in order to balance, or equilibrate, vehicle capacity against projected demand.

The Unified No Build network was analyzed at the systemwide level and determined to have capacity sufficient to handle the peak hour passenger demand in 2030. As a result of this analysis, headways on a handful of routes within the study corridor were equilibrated in order to meet forecasted demand. Route adjustments as a result of study area equilibration are presented in **Table 2**. Note that many of the changes occur on the corridor’s heaviest north-south arterials, Sepulveda and Lincoln. A detailed table of line-by-line operating assumptions (including equilibration adjustments) for all corridor routes and key countywide services is presented in **Appendix A**.

Table 2 2030 No Build Equilibrated Corridor Routes

Rapid Bus	Original Peak Headway	Equilibrated Peak Headway
SM 703 (Lincoln)	15 min	10 min NB / 15 min SB
CC 706 (Sepulveda)	12 min	5 min NB / 10 min SB
Local, Limited, and Express Bus		
CC 6 (Sepulveda)	20 min	12 min
SM 3 (Lincoln – LAX to UCLA)	15 min	10 min
SM 3 (Lincoln – Santa Monica to LAX)	20 min SB	12 min SB
SM 7 (Pico)	10 min	7.5 min
SM Super 12 (Westwood/Palms)	15 min NB	12 min NB

Notes: Metro = Los Angeles County Metropolitan Transportation Authority, SM = Santa Monica Big Blue Bus, CC = Culver City Bus, LADOT/DASH = City of Los Angeles Department of Transportation
Future route numbers based on coding conventions; actual implementation may use different numbers.
Source: Connetics Transportation Group, July 2008

Figure 1 2030 Expo-2 No Build Alternative Service Plan

2030 TSM ALTERNATIVE

The TSM alternative seeks to address the corridor transit needs short of making a major capital investment. As such, it typically involves targeted improvements utilizing existing services and technologies. The TSM alternative involves three basic components: (1) addition of a rapid bus route connecting downtown Culver City with downtown Santa Monica; (2) associated service improvements on selected north-south routes to feed stations along the new rapid bus route; and (3) service improvements on selected routes connecting westside communities to the Expo-1 LRT terminus.

The new rapid bus route roughly parallels the routing of the Build alternatives between Culver City and Santa Monica. The Expo-2 Rapid Bus would operate on headways of 5 minutes during the peak periods and 10 minutes during the midday. The route would begin at the Expo-1 LRT terminus in Culver City and travel north on Robertson Boulevard, west on National Boulevard, north on Westwood Boulevard, west on Olympic Boulevard, and north on 4th Street in Santa Monica. From here, it would loop around Broadway, Ocean Avenue, Santa Monica Boulevard, and back to 4th Street on its return to Culver City. Stops would be spaced at roughly half-mile intervals. Representative service frequencies for weekdays, Saturdays, and Sundays are shown in **Table 3**.

Table 3 2030 Expo-2 Rapid Bus Service Frequencies

Time Period	Hours	Frequency of Service (minutes)
Weekdays		
Early Morning	4:00 a.m. to 6: 00 a.m.	15-20
AM Peak	6:00 a.m. to 9:00 a.m.	5
Midday	9:00 a.m. to 3:00 p.m.	10
PM Peak	3:00 p.m. to 6:30 p.m.	5
Early Evening	6:30 p.m. to 8:00 p.m.	10
Late Evening	8:00 p.m. to 12:30 a.m.	15-20
Saturdays		
Morning	4:00 a.m. to 10:00 a.m.	15-20
Midday	10:00 a.m. to 9:00 p.m.	10-15
Late Evening	9:00 p.m. to 12:30 a.m.	15-20
Sundays/Holidays		
Morning	4:00 a.m. to10:00 a.m.	15-20
Midday	10:00 a.m. to 9:00 p.m.	10-15
Late Evening	9:00 p.m. to 12:30 a.m.	15-20

Source: Connetics Transportation Group, August 2007

Selected improvements to north-south feeder services to the Expo-2 Rapid Bus are identified for major corridors in the study area, including Sepulveda Boulevard, Bundy Boulevard, 14th & 20th Streets, and Lincoln Boulevard.

Selected service improvements providing direct service from the Expo-1 LRT terminus to points across the study area include Culver City, West Hollywood, Palms, West LA, Westwood/UCLA, Santa Monica, Venice, Mar Vista, and Marina del Rey.

Non-corridor routes would remain the same as defined in the No Build alternative.

Table 4 summarizes the changes to the transit network that would be included for the equilibrated TSM alternative as it builds over the equilibrated 2030 No Build alternative. Changes to that transit network as a result of equilibrating TSM services are identified as such. **Appendix A** contains the detailed specifics of the TSM alternative.

Table 4 2030 TSM Service Changes to No Build

Rapid Bus
Add Metro 701 (Expo-2 Rapid Bus) from Exposition LRT terminus in Culver City to Santa Monica (loop to Ocean/Santa Monica)
Add midday service for SM 703 (Lincoln)
Improve peak headway for CC 706 (Sepulveda)
Local, Limited, and Express Bus
Improve peak and midday headways for Metro 220
Improve peak and midday headways for CC 7
Add northbound midday and southbound peak and midday service for SM Super 12
Improve peak and midday headways for SM 14
Add counterclockwise service for SM Crosstown
Equilibration Changes
Improve peak headways for SM 10 WB (Downtown LA Express)

Notes: Metro = Los Angeles County Metropolitan Transportation Authority, SM = Santa Monica Big Blue Bus, CC = Culver City Bus, LADOT/DASH = City of Los Angeles Department of Transportation
Future route numbers based on coding conventions; actual implementation may use different numbers.
Source: Connetics Transportation Group, February & July 2008

Figure 2 shows a map of the proposed routes in the equilibrated TSM alternative, illustrating how these enhanced services provide the benefits of more direct service from the Expo-1 terminus to Santa Monica, along with more frequent service between nearly every major point in the study area.

2030 BUILD ALTERNATIVES

The Build alternatives all include a capital investment in the corridor designed to efficiently transport riders west from the Expo-1 LRT terminus in Culver City, each by a different alignment. Each LRT route would operate on headways of 5 minutes during the peak periods and 10 minutes during the midday. Representative service frequencies for weekdays, Saturdays, and Sundays are shown in **Table 5**.

Figure 2 2030 Expo-2 TSM Alternative Service Plan

Table 5 2030 Build Alternative Service Frequencies

Time Period	Hours	Frequency of Service (minutes)
Weekdays		
Early Morning	4:00 a.m. to 6: 00 a.m.	15
AM Peak	6:00 a.m. to 9:00 a.m.	5
Midday	9:00 a.m. to 3:00 p.m.	10
PM Peak	3:00 p.m. to 6:30 p.m.	5
Early Evening	6:30 p.m. to 8:00 p.m.	10
Late Evening	8:00 p.m. to 12:30 a.m.	20
Saturdays		
Morning	4:00 a.m. to 10:00 a.m.	15-20
Midday	10:00 a.m. to 9:00 p.m.	10-15
Late Evening	9:00 p.m. to 12:30 a.m.	15-20
Sundays/Holidays		
Morning	4:00 a.m. to10:00 a.m.	15-20
Midday	10:00 a.m. to 9:00 p.m.	10-15
Late Evening	9:00 p.m. to 12:30 a.m.	15-20

Source: Connetics Transportation Group, August 2007

Service improvements in all Build alternatives utilize the same design philosophy:

- Supporting bus service characteristics are identical to those defined under the TSM alternative (to ensure consistent evaluation of alternatives).
- Focus of terminus in downtown Santa Monica shifts from Ocean/Santa Monica loop to the 4th/Colorado or Main/Colorado station terminus.
- Area bus routes serve rail stations as appropriate.
- Parking is assumed at all stations except National/Palms, Westwood/ROW, 14th/Olympic, 14th/Colorado, and Overland/Venice.
- Non-corridor routes remain the same as defined in the No Build alternative.

2030 LRT – Exposition ROW and Olympic alignment

The proposed operating plan for the 2030 LRT – Exposition ROW and Olympic alternative provides about 6.6 miles of continuing service from the Expo-1 terminus in Culver City to 4th/Colorado in Santa Monica. From Culver City, the LRT would run in an exclusive railroad ROW for about 5.1 miles. The LRT alignment would divert from the Exposition ROW near Cloverfield and Olympic boulevards, where it would then operate along Olympic Boulevard and parallel to the I-10 for approximately 1.5 miles.

The estimated one-way travel time from the Expo-1 terminus to 4th/Colorado is 18.2 minutes, which equates to a 21.8 mph average operating speed. Light rail vehicles would have about a 23.5 mph average speed from Culver City to Cloverfield/Olympic when operating along the exclusive railroad ROW and approximately 17.5 mph average speed the rest of the way to 4th/Colorado operating on-street. **Appendix B** provides a detailed estimation of the station-to-station travel time for this alternative.

Table 6 summarizes the changes to the transit network that would be included for the equilibrated 2030 LRT – Exposition ROW and Olympic alternative as it builds over the equilibrated TSM alternative. **Appendix A** contains the plan details of the alternative.

Table 6 2030 LRT on Exposition ROW and Olympic Service Changes to TSM

MetroRail
Extend Exposition LRT from terminus in Culver City to Santa Monica (4th/Colorado) via ROW and Olympic
Rapid Bus
Eliminate Metro 701 (rapid bus route serving the Exposition corridor in the TSM alternative)
Extend Metro 704 (Santa Monica) to 4th/Colorado LRT station
Connect SM 703 (Lincoln), SM 707 (Pico), and Metro 720 (Wilshire) to 4th/Colorado LRT station
Connect CC 706 (Sepulveda) and SM 707 (Pico) to Pico/Sepulveda LRT station
Local, Limited, and Express Bus
Divert Metro 534 to 4th/Colorado LRT station
Connect SM 2, SM 3, SM 4, SM 5, SM 7, SM 8, and SM 9 to 4th/Colorado LRT station
Connect SM 5, SM 6, and SM Crosstown to Olympic/14th LRT station
Connect SM 5 and SM Sunset to Olympic/Cloverfield LRT station
Connect SM 5, SM 10 and SM 14 to Olympic/Bundy LRT station
Connect CC 6, SM 4, and SM 7 to Pico/Sepulveda LRT station
Connect CC 3, SM 8, SM 12, and LADOT 431 to Westwood/Overland LRT station
Connect SM 6 and SM 12 to National/Palms LRT station
Equilibration Changes
Improve peak headways for SM Super 12 NB (Westwood/Palms Ltd)

Notes: Metro = Los Angeles County Metropolitan Transportation Authority, SM = Santa Monica Big Blue Bus, CC = Culver City Bus, LADOT/DASH = City of Los Angeles Department of Transportation
Future route numbers based on coding conventions; actual implementation may use different numbers.
Source: Connetics Transportation Group, March & July 2008

Figure 3 maps the proposed routes for the equilibrated 2030 LRT – Exposition ROW and Olympic alternative. Note that this build alternative maintains the high frequencies from the TSM across the study area, while providing the benefit of direct LRT service from West Los Angeles and Santa Monica all the way to downtown Los Angeles.

2030 LRT – Exposition ROW and Colorado alignment

The proposed operating plan for the 2030 LRT – Exposition ROW and Colorado alternative provides about 6.7 miles of continuing service from the Expo-1 terminus in Culver City to Main/Colorado in Santa Monica. From Culver City, the LRT would run in an exclusive railroad ROW for about 5.5 miles. The LRT alignment would divert from the Exposition ROW near 17th Street and Colorado Avenue, where it would then operate along Colorado Avenue for approximately 1.2 miles.

The estimated one-way travel time from the Expo-1 terminus to Main/Colorado is 19.5 minutes, which equates to a 20.6 mph average operating speed. Light rail vehicles would have about a 23.4 mph average speed from Culver City to 17th/Colorado when operating along the exclusive railroad ROW and approximately 13.2 mph average speed the rest of the way to Main/Colorado

Figure 3 2030 Expo-2 LRT on Exposition ROW and Olympic Service Plan

operating on-street. **Appendix B** provides a detailed estimation of the station-to-station travel time for this alternative.

Table 7 summarizes the changes to the transit network that would be included for the equilibrated 2030 LRT – Exposition ROW and Colorado alternative as it builds over the equilibrated TSM alternative. **Appendix A** contains the plan details of the alternative.

Table 7 2030 LRT on Exposition ROW and Colorado Service Changes to TSM

MetroRail
Extend Exposition LRT from terminus in Culver City to Santa Monica (Main/Colorado) via ROW and Colorado
Rapid Bus
Eliminate Metro 701 (rapid bus route serving the Exposition corridor in the TSM alternative)
Extend Metro 704 (Santa Monica) to Main/Colorado LRT station
Connect SM 703 (Lincoln), SM 707 (Pico), and Metro 720 (Wilshire) to Main/Colorado LRT station
Connect CC 706 (Sepulveda) and SM 707 (Pico) to Pico/Sepulveda LRT station
Local, Limited, and Express Bus
Divert Metro 534 to Main/Colorado LRT station
Extend SM 4 and SM 9 to Main/Colorado LRT station
Connect SM 1, SM 5, SM 7, SM 8, and SM 10 to Main/Colorado LRT station
Connect SM 5, SM 6, and SM Crosstown to Colorado/14th LRT station
Connect SM 5 and SM Sunset to Olympic/Cloverfield LRT station
Connect SM 5, SM 10 and SM 14 to Olympic/Bundy LRT station
Connect CC 6, SM 4, and SM 7 to Pico/Sepulveda LRT station
Connect CC 3, SM 8, SM 12, and LADOT 431 to Westwood/Overland LRT station
Connect SM 6 and SM 12 to National/Palms LRT station
Equilibration Changes
Improve peak headways for SM Super 12 NB (Westwood/Palms Ltd)

Notes: Metro = Los Angeles County Metropolitan Transportation Authority, SM = Santa Monica Big Blue Bus, CC = Culver City Bus, LADOT/DASH = City of Los Angeles Department of Transportation
Future route numbers based on coding conventions; actual implementation may use different numbers.
Source: Connetics Transportation Group, March 2008

Figure 4 depicts the proposed routes for the equilibrated 2030 LRT – Exposition ROW and Colorado alternative. Like the ROW and Olympic alternative, this build alternative maintains the high frequencies from the TSM across the study area, while providing the benefit of direct LRT service from West Los Angeles and Santa Monica all the way to downtown Los Angeles.

2030 LRT – Venice/Sepulveda and Olympic alignment

The proposed operating plan for 2030 LRT – Venice/Sepulveda and Olympic provides about 7.5 miles of continuing service from Culver City to 4th/Colorado in Santa Monica. From the Expo-1 terminus, LRT would operate in dedicated lanes along Venice and Sepulveda boulevards for approximately 3.8 miles. It would then run in an exclusive railroad ROW for about 2.2 miles and

Figure 4 2030 Expo-2 LRT on Exposition ROW and Colorado Service Plan

then divert from the Exposition ROW near Cloverfield and Olympic boulevards, where it would operate in dedicated lanes along Olympic Boulevard for approximately 1.5 miles.

The estimated one-way travel time from Culver City to 4th/Colorado is 22.1 minutes, which equates to a 20.4 mph average operating speed. Light rail vehicles would have about a 19.5 mph average speed from Culver City to Sepulveda/Exposition ROW when operating on-street along Venice and Sepulveda boulevards. Once in the exclusive railroad ROW, the LRT trains would operate at approximately 25.4 mph and then slow to about 17.5 mph between Cloverfield/Olympic and 4th/Colorado when running in the street along Olympic Boulevard. **Appendix B** provides a detailed estimation of the station-to-station travel time for this alternative.

Table 8 summarizes the changes to the equilibrated TSM alternative transit network that are included for the equilibrated 2030 LRT – Venice/Sepulveda and Olympic alignment alternative. **Appendix A** contains the plan details of the alternative.

Table 8 2030 LRT – Venice/Sepulveda and Olympic Service Changes to TSM

MetroRail
Extend Exposition LRT from terminus in Culver City to Santa Monica (4th/Colorado) via Venice, Sepulveda, ROW and Olympic
Rapid Bus
Eliminate Metro 701 (rapid bus route serving the Exposition corridor in the TSM alternative)
Extend Metro 704 (Santa Monica) to 4th/Colorado LRT station
Connect SM 703 (Lincoln), SM 707 (Pico), and Metro 720 (Wilshire) to 4th/Colorado LRT station
Connect CC 706 (Sepulveda) and SM 707 (Pico) to Pico/Sepulveda LRT station
Connect CC 706 (Sepulveda) to Sepulveda/National LRT station
Connect CC 706 (Sepulveda) to Venice/Sepulveda LRT station
Local, Limited, and Express Bus
Divert Metro 534 to 4th/Colorado LRT station
Connect SM 2, SM 3, SM 4, SM 5, SM 7, SM 8, and SM 9 to 4th/Colorado LRT station
Connect SM 5, SM 6, and SM Crosstown to Olympic/14th LRT station
Connect SM 5 and SM Sunset to Olympic/Cloverfield LRT station
Connect SM 5, SM 10 and SM 14 to Olympic/Bundy LRT station
Connect CC 6, SM 4, and SM 7 to Pico/Sepulveda LRT station
Connect CC 6, SM 8, and SM 12 to Sepulveda/National LRT station
Connect Metro 33, Metro 333, CC 6, and SM 6 to Venice/Sepulveda LRT station
Connect Metro 33, Metro 333, and CC 3 to Overland/Venice LRT station
Equilibration Changes
Improve peak headways for CC 706 (Sepulveda)
Improve peak headways for SM 7 (Pico)

Notes: Metro = Los Angeles County Metropolitan Transportation Authority, SM = Santa Monica Big Blue Bus, CC = Culver City Bus, LADOT/DASH = City of Los Angeles Department of Transportation
Future route numbers based on coding conventions; actual implementation may use different numbers.
Source: Connetics Transportation Group, March & July 2008

Figure 5 maps the proposed routes for the equilibrated 2030 LRT – Venice/Sepulveda and Olympic alternative. This build alternative slightly improves frequencies from the Expo-1 terminus to Culver City and from there to West Los Angeles at the expense of slower overall service directly from the Expo-1 terminus to West Los Angeles.

2030 LRT – Venice/Sepulveda and Colorado alignment

The proposed operating plan for 2030 LRT – Venice/Sepulveda and Colorado provides about 7.6 miles of continuing service from Culver City to Main/Colorado in Santa Monica. From the Expo-1 terminus, LRT would operate in dedicated lanes along Venice and Sepulveda boulevards for approximately 3.8 miles. It would then run in an exclusive railroad ROW for about 2.6 miles and divert from the Exposition ROW near 17th Street and Colorado Avenue, where it would operate in dedicated lanes along Colorado Avenue for approximately 1.2 miles.

The estimated one-way travel time from Culver City to Main/Colorado is 23.4 minutes, which equates to a 19.5 mph average operating speed. Light rail vehicles would have about a 19.5 mph average speed from Culver City to Sepulveda/Exposition ROW when operating on-street along Venice and Sepulveda boulevards. Once in the exclusive railroad ROW, the LRT trains would operate at approximately 24.9 mph and then slow to about 13.2 mph between 17th/Colorado and Main/Colorado when running in the street along Colorado Avenue. **Appendix B** provides a detailed estimation of the station-to-station travel time for this alternative.

Table 9 summarizes the changes to the equilibrated TSM alternative transit network that are included for the equilibrated 2030 LRT – Venice/Sepulveda and Colorado alignment alternative. **Appendix A** contains the plan details of the alternative.

Figure 6 depicts the proposed routes for the equilibrated 2030 LRT – Venice/Sepulveda and Colorado alternative. Like the Venice/Sepulveda and Olympic option, this build alternative slightly improves frequencies from the Expo-1 terminus to Culver City and from there to West Los Angeles at the expense of slower overall service directly from the Expo-1 terminus to West Los Angeles.

Figure 5 2030 Expo-2 LRT – Venice/Sepulveda and Olympic Service Plan

Table 9 2030 LRT – Venice/Sepulveda and Colorado Service Changes to TSM

MetroRail
Extend Exposition LRT from terminus in Culver City to Santa Monica (Main/Colorado) via Venice, Sepulveda, ROW and Colorado
Rapid Bus
Eliminate Metro 701 (rapid bus route serving the Exposition corridor in the TSM alternative)
Extend Metro 704 (Santa Monica) to Main/Colorado LRT station
Connect SM 703 (Lincoln), SM 707 (Pico), and Metro 720 (Wilshire) to Main/Colorado LRT station
Connect CC 706 (Sepulveda) and SM 707 (Pico) to Pico/Sepulveda LRT station
Connect CC 706 (Sepulveda) to Sepulveda/National LRT station
Connect CC 706 (Sepulveda) to Venice/Sepulveda LRT station
Local, Limited, and Express Bus
Divert Metro 534 to Main/Colorado LRT station
Extend SM 4 and SM 9 to Main/Colorado LRT station
Connect SM 1, SM 5, SM 7, SM 8, and SM 10 to Main/Colorado LRT station
Connect SM 5, SM 6, and SM Crosstown to Colorado/14th LRT station
Connect SM 5 and SM Sunset to Olympic/Cloverfield LRT station
Connect SM 5, SM 10 and SM 14 to Olympic/Bundy LRT station
Connect CC 6, SM 4, and SM 7 to Pico/Sepulveda LRT station
Connect CC 6, SM 8, and SM 12 to Sepulveda/National LRT station
Connect Metro 33, Metro 333, CC 6, and SM 6 to Venice/Sepulveda LRT station
Connect Metro 33, Metro 333, and CC 3 to Overland/Venice LRT station
Equilibration Changes
Improve peak headways for CC 706 (Sepulveda)
Improve peak headways for SM 7 (Pico)

Notes: Metro = Los Angeles County Metropolitan Transportation Authority, SM = Santa Monica Big Blue Bus, CC = Culver City Bus, LADOT/DASH = City of Los Angeles Department of Transportation
Future route numbers based on coding conventions; actual implementation may use different numbers.

Source: Connetics Transportation Group, March 2008

Figure 6 2030 Expo-2 LRT – Venice/Sepulveda and Colorado Service Plan

Appendix A

2030 Expo Phase II Corridor
Bus and Rail Operating Plan Tables

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 No Build original peak headway, base headway (min)	2030 No Build equilibrated headways	2030 Baseline/TSM Changes to 2030 No Build equilibrated service original peak headway, base headway (min)	2030 Baseline/TSM equilibrated headways
METRO RAIL LINES							
BLUE	13001	1st/Pacific-7th/Flower	11, 12	10, 10			
	13002	Willow-7th/Flower	11, 12	10, 0			
PURPLE/	13003	Wilshire/Western-Union Station	10, 12	10, 10			
RED	13004	North Hollywood-Union Station	10, 12	5, 10			
GREEN	13005	Norwalk-Redondo Beach	7.5, 15	5, 10			
GOLD	13007	Sierra Madre Village-Pomona/Atlantic	10, 15 (term at Un Stn)	5, 10			
EXPO	13008	7th/Flower to Venice/Robertson	NA	5, 10; update run times, distances, and parking			
LAX	13011	LAX People Mover: Aviation/I105 to Sepulveda/Century	NA	2, 2			
BUS RAPID TRANSIT (BRT) ROUTES							
ORANGE	26090	Chandler/Lankershim-Warner Center	4, 10	NA			
	26001	EB Chandler/Lankershim-Warner Center	NA	5, 10 EB			
	26002	WB Chandler/Lankershim-Warner Center	NA	5, 10 WB			
RAPID BUS ROUTES (Line numbers for future routes based on model coding convention)							
701	24077	Expo-2 RB: EB Venice/Robertson-4th/Broadway	NA	NA		5, 10 EB; Robertson, Natl, Westwd, Olympic, SM loop	
	24078	Expo-2 RB: WB Venice/Robertson-4th/Broadway	NA	NA		5, 10 WB; Robertson, Natl, Westwd, Olympic, SM loop	
703	24033	Lincoln RB: NB 4th/Wilshire-Aviation GL	15, 0 NB	15, 0 NB; extend to Aviation GL stn (18828), change co. (15)	10, 0 NB	10, 30 NB	
	24034	Lincoln RB: SB 4th/Wilshire-Aviation GL	15, 0 SB	15, 0 SB; extend to Aviation GL stn (18828), change co. (15)		15, 30 SB	
704	24047	Santa Monica RB: EB Ocean/SM-Hill/Pico	NA	7, 15 EB; add stop at Ave Stars/SM			
	24048	Santa Monica RB: WB Ocean/SM-Hill/Pico	NA	7,15 WB; add stop at Ave Stars/SM			
705	24063	Vernon-La Cienega RB: SB SM/San Vicente-Santa Fe	12, 20 EB	13, 20 SB; connect to La Cienega stn			
	24064	Vernon-La Cienega RB: NB SM/San Vicente-Santa Fe	12, 20 WB	13, 20 NB; connect to La Cienega stn			
706	24051	Sepulveda South RB: NB UCLA-Aviation GL	NA	12, 20 NB	5, 20 NB		
	24052	Sepulveda South RB: SB UCLA-Aviation GL	NA	12, 20 SB	10, 20 SB		
707 (730)	24039	Pico RB: EB Ocean/Colorado-Wilshire/Western Stn	NA	10, 10 EB			
	24040	Pico RB: WB Ocean/Colorado-Wilshire/Western Stn	NA	10, 10 WB			
709	24055	Torrance-Long Beach RB: SB SBTC-1st/Long Bch	NA	12, 0 SB			
	24056	Torrance-Long Beach RB: NB SBTC-1st/Long Bch	NA	12, 0 NB			
710	24023	Crenshaw-Rossmore RB: NB WilWstn-SBTC	10, 20 NB (to Hllywd/High)	10, 15 NB; connect to Crenl/Expo stn			
	24024	Crenshaw-Rossmore RB: SB WilWstn-SBTC	10, 20 SB (to Hllywd/High)	10, 15 SB; connect to Crenl/Expo stn			
711	24027	Florence RB: EB Inglewood TC-Florence/Garfield	10, 20 EB	10, 20 EB			
	24028	Florence RB: WB Inglewood TC-Florence/Garfield	10, 20 WB	10, 20 WB			
714	24017	Beverly RB: EB Santa Monica/Canon-Pico/Grand	15, 0 EB	10, 0 EB			
	24018	Beverly RB: WB Santa Monica/Canon-Pico/Grand	15, 0 WB	10, 0 WB			
715	24037	Manchester RB: EB Atlantic/Firestone-LAX	NA	5, 20 EB			
	24038	Manchester RB: WB Atlantic/Firestone-LAX	NA	5, 20 WB			
720	24073	Wilshire RB: EB Ocn/Col-Whittier/Goodrich (PK)	NA	2.5, 0 EB; use runtime/coding for peak-only bus lane			
	24074	Wilshire RB: WB Ocn/Col-Whittier/Goodrich (PK)	NA	2.5, 0 WB; use runtime/coding for peak-only bus lane			
	24069	Wilshire RB: EB Ocn/Col-Whittier/Goodrich (OP)	4, 6 EB	0, 5 EB			
	24070	Wilshire RB: WB Ocn/Col-Whittier/Goodrich (OP)	3, 6 WB	0, 5 WB			
724 (766)	24043	San Fernando-Lankershim RB: NB Sylmar ML-NH RL	NA	10, 20 NB			
	24044	San Fernando-Lankershim RB: SB Sylmar ML-NH RL	NA	10, 20 SB			
728	24065	W. Olympic RB: EB Union Stn-Ave of the Stars/SM Blvd	NA	6, 12 EB; terminate at Ave Stars/SM			
	24066	W. Olympic RB: WB Union Stn-Ave of the Stars/SM Blvd	NA	6, 12 WB; terminate at Ave Stars/SM			
734	24049	N. Sepulveda RB: NB Sylmar ML-Sepulveda/Ventura	10, 20 NB	10, 20 NB			
	24050	N. Sepulveda RB: SB Sylmar ML-Sepulveda/Ventura	10, 20 SB	10, 20 SB			
740	24031	Hawthorne RB: NB SBTC-Union Stn	10, 20 NB	10, 20 NB			
	24032	Hawthorne RB: SB SBTC-Union Stn	10, 20 SB	10, 20 SB			
741	24041	Reseda RB: NB Reseda/Devonshire-Reseda/Ventura	10, 20 NB	10, 20 NB			
	24042	Reseda RB: SB Reseda/Devonshire-Reseda/Ventura	10, 20 SB	10, 20 SB			
745	24019	S. Broadway RB: NB I110/I105-Union Stn	4, 15 NB	4, 15 NB			
	24020	S. Broadway RB: SB I110/I105-Union Stn	8, 15 SB	8, 15 SB			
750	24059	Ventura RB: EB Univ City Stn-Warner Center	10, 15 EB	10, 12 EB			
	24060	Ventura RB: WB Univ City Stn-Warner Center	5, 15 WB	5, 12 WB			

EXPOSITION CORRIDOR PHASE II EIS/EIR
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Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 No Build original peak headway, base headway (min)	2030 No Build equilibrated headways	2030 Baseline/TSM Changes to 2030 No Build equilibrated service original peak headway, base headway (min)	2030 Baseline/TSM equilibrated headways
RAPID BUS ROUTES (Line numbers for future routes based on model coding convention)							
751	24053	Soto RB: NB Long Beach GL-Ave 26/Fig	10, 14 NB	10, 14 NB			
	24054	Soto RB: SB Long Beach GL-Ave 26/Fig	10, 14 SB	10, 14 SB			
753	24021	Central RB: NB 5th/Grand-Imperial/Wilmington GL	NA	8, 20 NB			
	24022	Central RB: SB 5th/Grand-Imperial/Wilmington GL	NA	8, 20 SB			
754	24061	Vermont RB: NB Vermont/120th-Vermont/Hollywood	6, 9 NB	6, 9 NB; connect to Vermont/Expo stn			
	24062	Vermont RB: SB Vermont/120th-Vermont/Hollywood	6, 9 SB	6, 9 SB; connect to Vermont/Expo stn			
757	24067	Western RB: NB Crenshaw GL-Western/Hollywood	10, 15 NB	10, 15 NB; connect to Western/Expo stn			
	24068	Western RB: SB Crenshaw GL-Western/Hollywood	10, 15 SB	10, 15 SB; connect to Western/Expo stn			
760	24035	Long Beach RB: NB Artesia BL-Union Stn	NA	7.5, 15 NB			
	24036	Long Beach RB: SB Artesia BL-Union Stn	NA	7.5, 15 SB			
761	24057	Van Nuys Bl RB: NB Fthill/Van Nuys-Wilsh/Vet	14, 15 NB	10, 15 NB			
	24058	Van Nuys Bl RB: SB Fthill/Van Nuys-Wilsh/Vet	9, 15 SB	10, 15 SB			
762	24015	Atlantic RB: SB Artesia BL Stn-Fair Oaks	NA	15, 20 SB			
	24016	Atlantic RB: NB Artesia BL Stn-Fair Oaks	NA	15, 20 NB			
770	24029	Garvey-Chavez RB: EB El Monte-Spring/Pico	NA	8, 10 EB			
	24030	Garvey-Chavez RB: WB El Monte-Spring/Pico	NA	8, 10 WB			
780	24025	Hollywood-Pasadena RB: EB West LA TC-Union/Hill	10, 15 EB	12, 15 EB; extend to La Cienega stn			
	24026	Hollywood-Pasadena RB: WB West LA TC-Union/Hill	12, 15 WB	12, 15 WB; extend to La Cienega stn			
794	24045	San Fernando RB: NB Spring/Pico-Olive/San Fernando	NA	10, 20 NB			
	24046	San Fernando RB: SB Spring/Pico-Olive/San Fernando	NA	10, 20 SB			
MTA LOCAL, LIMITED, AND EXPRESS BUS ROUTES							
2/302	11002	Sunset Bl, Sunset/PCH-Hill/Venice	15, 30	15, 30			
	11004	Sunset Bl, Westwood/Le Conte-Hill/Venice	12, 30	12, 30			
	11254	Sunset Bl, Sunset/Fairfax-Hill/Venice	24, 30	24, 30			
	11611	Sunset Bl, WB Sunset/Fairfax-Hill/Venice	20, 0 WB	20, 0 WB			
4/304	11007	4: Santa Monica Bl, Santa Monica/Westwood-Hill/Venice	7, 14	7, 14			
	11193	304: Santa Monica Bl Ltd, Santa Monica/2nd-Union Station	7, 14	7, 14			
16/316	11020	16: Third St, George Burns/Alden-6th/Central	6, 12	6, 12			
	11021	16: Third St, EB 3rd/Western-6th/Central	8, 0 EB	8, 0			
	11162	316: Third St, WB Constellation/Century Park-6th/Central	12, 24 WB	12, 24 WB			
20	11249	Wilshire Bl, Ocean/Colorado-7th/Maple	20, 30	18, 0			
	11292	Wilshire Bl, WB Wilshire/Westwood-7th/Maple	20, 30	6, 12 WB			
	11026	Wilshire Bl, EB Westwood/UCLA-7th/Maple	15, 30	30, 12 EB			
28/328	11036	28: Olympic Bl, Olympic/Fairfax-Temple/Spring	6, 7.5	6, 7.5			
	11037	328: Olympic Bl, Century City-Temple/Spring	9, 15	NA			
30/330	11041	330: Pico Bl, Pico/Rimpau-Dozir/Rowan	7, 30	7, 30			
	11042	30: Pico Bl, Pico/Rimpau-Atlantic/Riggin	15, 30	15, 30			
	11047	330: Pico Bl, Pico/Rimpau-1st/Main	0, 30	0, 30			
31	11043	Pico Bl, Pico/Rimpau-Atlantic/Riggin	15, 30	15, 30			
33/333	11045	33: Venice Bl, Main/Sunset-Union Stn	7.5, 15	7.5, 15; connect to Ven/Robtsn stn			
	11194	333: Venice Blvd Ltd, 2nd/Santa Monica-6th/Main	7.5, 15	7.5, 15; connect to Ven/Robtsn stn			
37	11017	Adams Bl, 1st/Fig-WLATC	10, 12	25, 36; connect to 23rd, extend to Ven/Robtsn stn			
	11018	Adams Bl, 1st/Fig-Adams/La Brea	30, 0	20, 18; connect to 23rd			
38/71	11046	Jefferson Bl, WLATC-CSULA Busway	7.5, 18	7, 15; connect to Jefferson, La Brea, and La Cienega stns			
40	11049	Hawthorne-MLK, Union Stn-SBTC	15, 15	15, 15			
	11050	Hawthorne-MLK, Hawthorne/111th-Union Stn	20, 60	15, 0			
42	11054	MLK-Stocker-La Tijera, Union Stn-LAX	20, 30	23, 24			
	11052	MLK-Stocker-La Tijera, Union Stn-King/Western	30, 0	35, 0			
68/368	11072	Washington Bl, Wash/La Brea-Riggin/Atlantic	60, 0 EB	60, 0 EB			
	11073	Washington Bl, Montebello-WLA TC	25, 30 both directions	30, 30			
	11074	Washington Bl, WLATC-Riggin/Atlantic	15, 15	15, 15			
	11075	Washington Bl, WLATC-Chavez/Rowan	20, 0	30, 0			
81/381	11081	Figueroa St, SB Colorado/Eagledale-Figueroa/117th	10, 20 SB	12, 20 SB; connect to 23rd and Jefferson stns			
	11086	Figueroa St, NB Colorado/Eagledale-Figueroa/117th	10, 20 NB	12, 20 NB; connect to 23rd and Jefferson stns			
	11092	Figueroa St, SB Figueroa/York-Figueroa/117th	15, 0 both directions	12, 20 SB; connect to 23rd and Jefferson stns			
	11082	Figueroa St, SB Figueroa/York-Figueroa/Florence	0, 20 SB	12, 20 NB; connect to 23rd and Jefferson stns			
	11093	Figueroa St, SB Colorado/Eagle-Flower/8th	20, 0 SB	20, 0 SB			

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MTA LOCAL, LIMITED, AND EXPRESS BUS ROUTES							
102	11091	Florence-Jefferson-Exposition-Coliseum/La Brea	30, 30	30, 45; connect to Jefferson, Vermont, and Western stns			
105	11094	Vernon Ave-La Cienega, Pacific/Santa Fe-San Vicente/SM	30, 20	25, 20; connect to La Cienega stn			
	11095	Vernon Ave-La Cienega, EB WLA TC-Pacific/Santa Fe	30, 60	45, 60; connect to La Cienega stn			
	NA	Vernon Ave-La Cienega, San Vicente/SM-Cudahy/53rd	45, 0	NA			
108	11099	Slauson, Slauson/Paramount-Mesmer	11, 20	60, 23			
	11208	Slauson, Slauson/Paramount-Palawan	25, 20	90, 72			
	11213	Slauson, Slauson/Paramount-Slauson/Western	22.5, 0 EB	180, 0			
110	11100	Centinela-Gage, Florence/Garfield-Jefferson/Alla	60, 20	24, 30			
	NA	Centinela-Gage, Gage/Alamo-Jefferson/Alla	30, 0	NA			
	NA	Centinela-Gage, Florence/Garfield-Florence BL	45, 0	NA			
	11125	Centinela-Gage, Florence/Garfield-Centinela/La Brea	45, 0	180, 0			
200	11141	Alvarado St	7.5, 10	8, 11			
204	11145	Vermont Ave, 120th-Hollywood	14, 12	14, 12; connect to Vermont/Expo stn			
	11610	Vermont Ave, Manchester-Hollywood	14, 0	14, 0; connect to Vermont/Expo stn			
206	11148	Normandie Ave, Hollywood/Vermont-Vermont/Imperial	10, 15	12, 15			
207	11150	Western Ave, Manchester-Franklin	12, 17	12, 17; connect to Western/Expo stn			
	11149	Western Ave, Western/Imperial-Western/Franklin	12, 17	12, 17; connect to Western/Expo stn			
209	11152	Van Ness-Arlington, Vermont/120th-Wilshire/Western	45, 60	45, 60			
210	11056	Crenshaw Bl, SBTC-Hollywood/Highland	15, 20	18, 20; connect to Crenshaw/Expo stn			
	11154	Crenshaw Bl, Crenshaw/Redondo Bch-Hwood/Highland	NA	12, 20; connect to Crenshaw/Expo stn			
	11237	Crenshaw Bl, Crenshaw/Artesia-Hollywood/Highland	60, 0	36, 90; connect to Crenshaw/Expo stn			
212/312	11157	312: La Brea Ave, Hawthorne GL-Hollywood/Vine	12, 30	12, 30; connect to La Brea stn			
	11223	212: La Brea Ave, Hillcrest/Nutwood-Hollywood/Vine	12, 30	12, 30; connect to La Brea stn			
217	11014	Fairfax Ave, Vermont/Sunset-WLA TC	12, 20	12, 20; extend to La Cienega stn			
	11001	Fairfax Ave, Hollywood/Argyle-WLA TC	0, 20	0, 20; extend to La Cienega stn			
220	11158	Robertson Bl, Santa Monica/San Vicente-Venice/Robertson	40, 40	40, 40; connect to Venice/Robertson stn		30, 30	
305	11230	UCLA-Imperial/Wilmington	30, 45	30, 45; connect to Crenshaw/Expo stn			
439	12020	LA - LAX Express, EB Aviation GL - Union Station	NA	45, 0; connect to La Cienega stn			
	12021	LA - LAX Express, WB Aviation GL - Union Station	NA	60, 0; connect to La Cienega stn			
	NA	LA - LAX Express, Union Stn - Aviation GL	40, 0	NA			
	NA	LA - LAX Express, Union Stn - LAX	0, 60	NA			
442	25075	Hawthorne-Manchester Express	30, 0 NB	36, 0 NB; connect to 23rd stn			
534	12017	Malibu Express, EB Trancas Canyon-WLA TC	30, 30 EB	30, 30 EB; divert to Venice/Robertson stn			
	12019	Malibu Express, WB Trancas Canyon-WLA TC	15, 30 WB	15, 30 WB; divert to Venice/Robertson stn			
	12047	Malibu Express, WB Malibu Canyon/Civic Ctr-WLA TC	22.5, 0 WB	22.5, 0 WB; divert to Venice/Robertson stn			
550	25065	San Pedro - W. Hollywood Express NB	50, 45 NB	60, 45; connect to Vermont and Western stn			
	25066	San Pedro - W. Hollywood Express SB	50, 45 SB	45, 45; connect to Vermont and Western stn			
	25082	San Pedro - W. Hollywood Express, Vermt/Carson-SMSV	50, 0	50, 0; connect to Vermont and Western stn			
603	11214	Rampart-Hoover-Colorado, Wash/Olive-Orange/Colorado	10, 12	10, 12; connect to 23rd stn			
608	11231	Crenshaw Connection, Normandie/48th-La Brea/Rodeo	60, 60 CW	60, 60; extend to La Brea stn			
CITY OF LOS ANGELES DEPARTMENT OF TRANSPORTATION (LADOT)							
430	21040	Sunset/PCH - Union Station EB	2 EB trp AM, 2 WB trp PM	90, 0 EB			
431	21093	Sepulveda/Montana - Union Station EB	4 EB trp AM, 4 WB trp PM	45, 0 EB			
437	21042	Venice (Wash/Pac) - Marina del Rey - LACBD (Temple) EB	6 EB trp AM, 6 WB trp PM	30, 0 EB; connect to Venice/Robertson stn			
534	15091	Union Station - Wilshire/Veteran WB	4 WB trp AM, 4 EB trp PM	45, 0 WB			
574	21047	Sylmar ML - Encino - LAX - Aviation/Space Park	5 SB trp AM, 5 NB trp PM	36, 0 SB			
DASH F	15011	DASH LACBD-USC	10, 10	10, 10; connect to 23rd, Jefferson, Vermont stn			
DASH K-E	15061	DASH King-East	20, 20	20, 20; connect to 23rd stn			
DASH SE	15015	DASH South East	20, 20	20, 20; connect to Vermont stn			
DASH LIS	15040	DASH Leimert/Slauson	25, 25	25, 25; extend to Crenshaw stn			
DASH MID	15020	DASH Midtown	30, 30	30, 30; connect to Crenshaw stn			
DASH CRN	15021	DASH Crenshaw	30, 30	30, 30; connect to Crenshaw stn			

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CULVER CITY MUNICIPAL BUS LINES							
1	17010	Washington Bl	12, 15	12, 15; connect to Ven/Rob stn, extend to La Cienega stn			
2	17011	Sunkist Park	60, 60	60, 60			
3	17012	Crosstown (Century City - Fox Hills)	20, 20	20, 20; extend to Jefferson/Mesmer			
4	17013	Fox Hills Mall - Jefferson Blvd - WLA TC	60, 60	30, 30; connect to La Cnga stn, extend to Jeff/Lncln			
5	17014	Braddock Dr	1 WB AM, 2 EB PM	90, 0			
6	17015	LAX - Sepulveda Bl - UCLA	12, 15	20, 30	12, 30		
7	17109	Culver Bl	40, 40	40, 40; connect to Venice/Robertson stn		30, 30	
8	17111	Playa Vista - LAX Limited	NA	30, 30; Playa Vista, Jefferson, Lincoln, LAX			
SANTA MONICA MUNICIPAL BUS LINES							
1	17107	UCLA - Santa Monica Bl - Venice	10, 10	10, 10			
	17112	UCLA - Santa Monica Bl - 20th - SMC	NA	30, 30			
2	17106	UCLA - Wilshire Bl - Venice - Walgrove Ave	15, 20	15, 20			
3	17081	LAX - Lincoln Bl - UCLA	15, 30	15, 30	10, 30		
	17083	LAX - 4th/Santa Monica Bl, SB	20, 0 SB	20, 0 SB	12, 0 SB		
	17110	LAX - 4th/Santa Monica Bl	0, 30	0, 30			
4	17086	SM Civic Ctr - San Vicente Bl - Olympic/Westwood	30, 30	30, 30			
5	17084	6th/Wilshire - Olympic Bl - Pico/Rimpau	20, 30	20, 30			
	17080	Olympic/Sawtelle - Pico/Rimpau, WB	60, 0 WB	60, 0 WB			
6	17113	SMC - Palms - Venice/Robertson WB (formerly SMC)	60, 0 WB	30, 0 WB; connect to Venice/Robertson stn			
	17114	SMC - Palms - Venice/Robertson (formerly SMC)	NA	0, 60; connect to Venice/Robertson stn			
7	17085	Pico Bl, SM to Pico/Rimpau	10, 10	10, 10	7.5, 10		
	17082	Pico Bl Limited	20, 0 both directions	NA			
8	17087	4th/Wilshire - Ocean Park Bl - Westwood Bl - UCLA	15, 15	15, 15			
9	17088	SM - Temescal Canyon - Sunset Bl	30, 30	30, 30			
10	21056	Santa Monica - Union Stn, EB	15, 30 EB	15, 30 EB; extend to Chinatown Gold Line			
	21057	Union Stn - Santa Monica, WB	15, 30 WB	15, 30 WB; extend to Chinatown Gold Line			10, 30 WB
	21058	Marine/Main - Union Stn, EB	60, 0 EB	60, 0 EB; extend to Chinatown Gold Line			
12	17090	Pico/Rimpau - Palms - UCLA	30, 0	45, 0; connect to Venice/Robertson stn			
	17108	Pico/Robertson - Palms - UCLA	26, 15	22.5, 15; connect to Venice/Robertson stn			
	17105	Super 12: Westwood & Palms Limited, NB	15, 0 NB	15, 0 NB; connect to Venice/Robertson stn	12, 0 NB	12, 30 NB	
	17116	Super 12: Westwood & Palms Limited, SB	NA	NA		30, 30 SB	
13	17091	Westside Pavilion-Pico/Rimpau	30, 0 WB	30, 0 WB			
14	17092	Culver City - Brentwood Village - Sepulveda/Moraga	12-15, 30	12, 30; extend S on Centinela, Playa Vista, Jeffersn/Lincoln		10, 20	
Crosstown	17089	miniBlue Crosstown: 14th/20th St Loop (formerly SM11)	15, 15 CW	15, 15 CW; rename		15, 15 both directions	
Sunset	17115	miniBlue Sunset: SMC Campus Connector	NA	15, 15; Airport/Centinela, Ocn Pk, 20th-Col-Stewart-Pico loop			

NOTES:
1. All MetroRail, BRT, and Rapid Bus patterns included (though underlying local and express routes limited to study area). Some Westside bus routes may be excluded due to no change.
2. **No Build concept:** Long Range Plan plus operator updates to "existing + committed" definition (includes existing Metrorail service updates, Expo Phase 1 LRT, Eastside Gold Line, LAX Green Line, LAX People Mover, countywide rapid bus program, Wilshire bus lane).
3. **Baseline/TSM concept:** No Build plus Rapid Bus emulator from Culver City to Santa Monica and selected improvements as needed to support emulator.
4. **Build concept:** BRT or LRT from Culver City to Santa Monica and selected improvements as needed to support project.

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				LRT-1		LRT-2	
Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 Build (LRT on ROW & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	2030 Build (LRT on Venice-Sepulveda & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
METRO RAIL LINES							
BLUE	13001	1st/Pacific-7th/Flower	11, 12				
	13002	Willow-7th/Flower	11, 12				
PURPLE/	13003	Wilshire/Western-Union Station	10, 12				
RED	13004	North Hollywood-Union Station	10, 12				
GREEN	13005	Norwalk-Redondo Beach	7.5, 15				
GOLD	13007	Sierra Madre Village-Pomona/Atlantic	10, 15 (term at Un Stn)				
EXPO	13008	7th/Flower to Venice/Robertson	NA	extend to 4th/Colorado via ROW-Olympic		extend to 4th/Colorado via Ven-Sep-ROW-Olympic	
LAX	13011	LAX People Mover: Aviation/I105 to Sepulveda/Century	NA				
BUS RAPID TRANSIT (BRT) ROUTES							
ORANGE	26000	Chandler/Lankershim-Warner Center	4, 10				
	26001	EB Chandler/Lankershim-Warner Center	NA				
	26002	WB Chandler/Lankershim-Warner Center	NA				
RAPID BUS ROUTES (Line numbers for future routes based on model coding convention)							
701	24077	*Expo-2 RB: EB Venice/Robertson-4th/Broadway*	NA	eliminate		eliminate	
	24078	*Expo-2 RB: WB Venice/Robertson-4th/Broadway*	NA	eliminate		eliminate	
703	24033	Lincoln RB: NB 4th/Wilshire-Aviation GL	15, 0 NB	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
	24034	Lincoln RB: SB 4th/Wilshire-Aviation GL	15, 0 SB	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
704	24047	Santa Monica RB: EB Ocean/SM-Hill/Pico	NA	extend to 4th/Colorado stn		extend to 4th/Colorado stn	
	24048	Santa Monica RB: WB Ocean/SM-Hill/Pico	NA	extend to 4th/Colorado stn		extend to 4th/Colorado stn	
705	24063	Vernon-La Cienega RB: SB SM/San Vicente-Santa Fe	12, 20 EB				
	24064	Vernon-La Cienega RB: NB SM/San Vicente-Santa Fe	12, 20 WB				
706	24051	Sepulveda South RB: NB UCLA-Aviation GL	NA	connect to Pico/Sepulveda stn		connect to Pico/Sepulveda, Sepulveda/Natl, Sep/Ven stns	3.5, 20 NB
	24052	Sepulveda South RB: SB UCLA-Aviation GL	NA	connect to Pico/Sepulveda stn		connect to Pico/Sepulveda, Sepulveda/Natl, Sep/Ven stns	
707 (730)	24039	Pico RB: EB Ocean/Colorado-Wilshire/Western Stn	NA	connect to 4th/Colorado, Pico/Sepulveda stn		connect to 4th/Colorado, Pico/Sepulveda stn	
	24040	Pico RB: WB Ocean/Colorado-Wilshire/Western Stn	NA	connect to 4th/Colorado, Pico/Sepulveda stn		connect to 4th/Colorado, Pico/Sepulveda stn	
709	24055	Torrance-Long Beach RB: SB SBTC-1st/Long Bch	NA				
	24056	Torrance-Long Beach RB: NB SBTC-1st/Long Bch	NA				
710	24023	Crenshaw-Rossmore RB: NB WilWstn-SBTC	10, 20 NB (to Hllywd/High)				
	24024	Crenshaw-Rossmore RB: SB WilWstn-SBTC	10, 20 SB (to Hllywd/High)				
711	24027	Florence RB: EB Inglewood TC-Florence/Garfield	10, 20 EB				
	24028	Florence RB: WB Inglewood TC-Florence/Garfield	10, 20 WB				
714	24017	Beverly RB: EB Santa Monica/Canon-Pico/Grand	15, 0 EB				
	24018	Beverly RB: WB Santa Monica/Canon-Pico/Grand	15, 0 WB				
715	24037	Manchester RB: EB Atlantic/Firestone-LAX	NA				
	24038	Manchester RB: WB Atlantic/Firestone-LAX	NA				
720	24073	Wilshire RB: EB Ocn/Col-Whittier/Goodrich (PK)	NA	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
	24074	Wilshire RB: WB Ocn/Col-Whittier/Goodrich (PK)	NA	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
	24069	Wilshire RB: EB Ocn/Col-Whittier/Goodrich (OP)	4, 6 EB	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
	24070	Wilshire RB: WB Ocn/Col-Whittier/Goodrich (OP)	3, 6 WB	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
724 (766)	24043	San Fernando-Lankershim RB: NB Sylmar ML-NH RL	NA				
	24044	San Fernando-Lankershim RB: SB Sylmar ML-NH RL	NA				
728	24065	W. Olympic RB: EB Union Stn-Ave of the Stars/SM Blvd	NA				
	24066	W. Olympic RB: WB Union Stn-Ave of the Stars/SM Blvd	NA				
734	24049	N. Sepulveda RB: NB Sylmar ML-Sepulveda/Ventura	10, 20 NB				
	24050	N. Sepulveda RB: SB Sylmar ML-Sepulveda/Ventura	10, 20 SB				
740	24031	Hawthorne RB: NB SBTC-Union Stn	10, 20 NB				
	24032	Hawthorne RB: SB SBTC-Union Stn	10, 20 SB				
741	24041	Reseda RB: NB Reseda/Devonshire-Reseda/Ventura	10, 20 NB				
	24042	Reseda RB: SB Reseda/Devonshire-Reseda/Ventura	10, 20 SB				
745	24019	S. Broadway RB: NB I110/I105-Union Stn	4, 15 NB				
	24020	S. Broadway RB: SB I110/I105-Union Stn	8, 15 SB				
750	24059	Ventura RB: EB Univ City Stn-Warner Center	10, 15 EB				
	24060	Ventura RB: WB Univ City Stn-Warner Center	5, 15 WB				

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

				LRT-1		LRT-2	
Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 Build (LRT on ROW & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	2030 Build (LRT on Venice-Sepulveda & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
RAPID BUS ROUTES (Line numbers for future routes based on model coding convention)							
751	24053	Soto RB: NB Long Beach GL-Ave 26/Fig	10, 14 NB				
	24054	Soto RB: SB Long Beach GL-Ave 26/Fig	10, 14 SB				
753	24021	Central RB: NB 5th/Grand-Imperial/Wilmington GL	NA				
	24022	Central RB: SB 5th/Grand-Imperial/Wilmington GL	NA				
754	24061	Vermont RB: NB Vermont/120th-Vermont/Hollywood	6, 9 NB				
	24062	Vermont RB: SB Vermont/120th-Vermont/Hollywood	6, 9 SB				
757	24067	Western RB: NB Crenshaw GL-Western/Hollywood	10, 15 NB				
	24068	Western RB: SB Crenshaw GL-Western/Hollywood	10, 15 SB				
760	24035	Long Beach RB: NB Artesia BL-Union Stn	NA				
	24036	Long Beach RB: SB Artesia BL-Union Stn	NA				
761	24057	Van Nuys Bl RB: NB Fthill/Van Nuys-Wilsh/Vet	14, 15 NB				
	24058	Van Nuys Bl RB: SB Fthill/Van Nuys-Wilsh/Vet	9, 15 SB				
762	24015	Atlantic RB: SB Artesia BL Stn-Fair Oaks	NA				
	24016	Atlantic RB: NB Artesia BL Stn-Fair Oaks	NA				
770	24029	Garvey-Chavez RB: EB El Monte-Spring/Pico	NA				
	24030	Garvey-Chavez RB: WB El Monte-Spring/Pico	NA				
780	24025	Hollywood-Pasadena RB: EB West LA TC-Union/Hill	10, 15 EB				
	24026	Hollywood-Pasadena RB: WB West LA TC-Union/Hill	12, 15 WB				
794	24045	San Fernando RB: NB Spring/Pico-Olive/San Fernando	NA				
	24046	San Fernando RB: SB Spring/Pico-Olive/San Fernando	NA				
MTA LOCAL, LIMITED, AND EXPRESS BUS ROUTES							
2/302	11002	Sunset Bl, Sunset/PCH-Hill/Venice	15, 30				
	11004	Sunset Bl, Westwood/Le Conte-Hill/Venice	12, 30				
	11254	Sunset Bl, Sunset/Fairfax-Hill/Venice	24, 30				
	11611	Sunset Bl, WB Sunset/Fairfax-Hill/Venice	20, 0 WB				
4/304	11007	4: Santa Monica Bl, Santa Monica/Westwood-Hill/Venice	7, 14				
	11193	304: Santa Monica Bl Ltd, Santa Monica/2nd-Union Station	7, 14				
16/316	11020	16: Third St, George Burns/Alden-6th/Central	6, 12				
	11021	16: Third St, EB 3rd/Western-6th/Central	8, 0 EB				
	11162	316: Third St, WB Constellation/Century Park-6th/Central	12, 24 WB				
20	11249	Wilshire Bl, Ocean/Colorado-7th/Maple	20, 30				
	11292	Wilshire Bl, WB Wilshire/Westwood-7th/Maple	20, 30				
	11026	Wilshire Bl, EB Westwood/UCLA-7th/Maple	15, 30				
	11036	28: Olympic Bl, Olympic/Fairfax-Temple/Spring	6, 7.5				
28/328	11037	328: Olympic Bl, Century City-Temple/Spring	9, 15				
30/330	11041	330: Pico Bl, Pico/Rimpau-Dozir/Rowan	7, 30				
	11042	30: Pico Bl, Pico/Rimpau-Atlantic/Riggin	15, 30				
	11047	330: Pico Bl, Pico/Rimpau-1st/Main	0, 30				
31	11043	Pico Bl, Pico/Rimpau-Atlantic/Riggin	15, 30				
33/333	11045	33: Venice Bl, Main/Sunset-Union Stn	7.5, 15			connect to Venice Bl stns	
	11194	333: Venice Blvd Ltd, 2nd/Santa Monica-6th/Main	7.5, 15			connect to Venice Bl stns	
37	11017	Adams Bl, 1st/Fig-WLATC	10, 12				
	11018	Adams Bl, 1st/Fig-Adams/La Brea	30, 0				
38/71	11046	Jefferson Bl, WLATC-CSULA Busway	7.5, 18				
40	11049	Hawthorne-MLK, Union Stn-SBTC	15, 15				
	11050	Hawthorne-MLK, Hawthorne/111th-Union Stn	20, 60				
42	11054	MLK-Stocker-La Tijera, Union Stn-LAX	20, 30				
	11052	MLK-Stocker-La Tijera, Union Stn-King/Western	30, 0				
68/368	11072	Washington Bl, Wash/La Brea-Riggin/Atlantic	60, 0 EB				
	11073	Washington Bl, Montebello-WLA TC	25, 30 both directions				
	11074	Washington Bl, WLATC-Riggin/Atlantic	15, 15				
	11075	Washington Bl, WLATC-Chavez/Rowan	20, 0				
81/381	11081	Figueroa St, SB Colorado/Eagledale-Figueroa/117th	10, 20 SB				
	11086	Figueroa St, NB Colorado/Eagledale-Figueroa/117th	10, 20 NB				
	11092	Figueroa St, SB Figueroa/York-Figueroa/117th	15, 0 both directions				
	11082	Figueroa St, SB Figueroa/York-Figueroa/Florence	0, 20 SB				
	11093	Figueroa St, SB Colorado/Eagle-Flower/8th	20, 0 SB				

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

				LRT-1		LRT-2	
Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 Build (LRT on ROW & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	2030 Build (LRT on Venice-Sepulveda & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
MTA LOCAL, LIMITED, AND EXPRESS BUS ROUTES							
102	11091	Florence-Jefferson-Exposition-Coliseum/La Brea	30, 30				
105	11094	Vernon Ave-La Cienega, Pacific/Santa Fe-San Vicente/SM	30, 20				
	11095	Vernon Ave-La Cienega, EB WLA TC-Pacific/Santa Fe	30, 60				
	NA	Vernon Ave-La Cienega, San Vicente/SM-Cudahy/53rd	45, 0				
108	11099	Slauson, Slauson/Paramount-Mesmer	11, 20				
	11208	Slauson, Slauson/Paramount-Palawan	25, 20				
	11213	Slauson, Slauson/Paramount-Slauson/Western	22.5, 0 EB				
110	11100	Centinela-Gage, Florence/Garfield-Jefferson/Alla	60, 20				
	NA	Centinela-Gage, Gage/Alamo-Jefferson/Alla	30, 0				
	NA	Centinela-Gage, Florence/Garfield-Florence BL	45, 0				
	11125	Centinela-Gage, Florence/Garfield-Centinela/La Brea	45, 0				
200	11141	Alvarado St	7.5, 10				
204	11145	Vermont Ave, 120th-Hollywood	14, 12				
	11610	Vermont Ave, Manchester-Hollywood	14, 0				
206	11148	Normandie Ave, Hollywood/Vermont-Vermont/Imperial	10, 15				
207	11150	Western Ave, Manchester-Franklin	12, 17				
	11149	Western Ave, Western/Imperial-Western/Franklin	12, 17				
209	11152	Van Ness-Arlington, Vermont/120th-Wilshire/Western	45, 60				
210	11056	Crenshaw Bl, SBTC-Hollywood/Highland	15, 20				
	11154	Crenshaw Bl, Crenshaw/Redondo Bch-Hwood/Highland	NA				
	11237	Crenshaw Bl, Crenshaw/Artesia-Hollywood/Highland	60, 0				
212/312	11157	312: La Brea Ave, Hawthorne GL-Hollywood/Vine	12, 30				
	11223	212: La Brea Ave, Hillcrest/Nutwood-Hollywood/Vine	12, 30				
217	11014	Fairfax Ave, Vermont/Sunset-WLA TC	12, 20				
	11001	Fairfax Ave, Hollywood/Argyle-WLA TC	0, 20				
220	11158	Robertson Bl, Santa Monica/San Vicente-Venice/Robertson	40, 40				
305	11230	UCLA-Imperial/Wilmington	30, 45				
439	12020	LA - LAX Express, EB Aviation GL - Union Station	NA				
	12021	LA - LAX Express, WB Aviation GL - Union Station	NA				
	NA	LA - LAX Express, Union Stn - Aviation GL	40, 0				
	NA	LA - LAX Express, Union Stn - LAX	0, 60				
442	25075	Hawthorne-Manchester Express	30, 0 NB				
534	12017	Malibu Express, EB Trancas Canyon-WLA TC	30, 30 EB	divert to 4th/Colorado stn		divert to 4th/Colorado stn	
	12019	Malibu Express, WB Trancas Canyon-WLA TC	15, 30 WB	divert to 4th/Colorado stn		divert to 4th/Colorado stn	
	12047	Malibu Express, WB Malibu Canyon/Civic Ctr-WLA TC	22.5, 0 WB	divert to 4th/Colorado stn		divert to 4th/Colorado stn	
550	25065	San Pedro - W. Hollywood Express NB	50, 45 NB				
	25066	San Pedro - W. Hollywood Express SB	50, 45 SB				
	25082	San Pedro - W. Hollywood Express, Vermt/Carson-SMSV	50, 0				
603	11214	Rampart-Hoover-Colorado, Wash/Olive-Orange/Colorado	10, 12				
608	11231	Crenshaw Connection, Normandie/48th-La Brea/Rodeo	60, 60 CW				
CITY OF LOS ANGELES DEPARTMENT OF TRANSPORTATION (LADOT)							
430	21040	Sunset/PCH - Union Station EB	2 EB trp AM, 2 WB trp PM				
431	21093	Sepulveda/Montana - Union Station EB	4 EB trp AM, 4 WB trp PM	connect to Westwood/Overland stn			
437	21042	Venice (Wash/Pac) - Marina del Rey - LACBD (Temple) EB	6 EB trp AM, 6 WB trp PM				
534	15091	Union Station - Wilshire/Veteran WB	4 WB trp AM, 4 EB trp PM				
574	21047	Sylmar ML - Encino - LAX - Aviation/Space Park	5 SB trp AM, 5 NB trp PM				
DASH F	15011	DASH LACBD-USC	10, 10				
DASH K-E	15061	DASH King-East	20, 20				
DASH SE	15015	DASH South East	20, 20				
DASH LIS	15040	DASH Lemert/Slauson	25, 25				
DASH MID	15020	DASH Midtown	30, 30				
DASH CRN	15021	DASH Crenshaw	30, 30				

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

				LRT-1		LRT-2	
Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 Build (LRT on ROW & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	2030 Build (LRT on Venice-Sepulveda & Olympic) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
CULVER CITY MUNICIPAL BUS LINES							
1	17010	Washington Bl	12, 15				
2	17011	Sunkist Park	60, 60				
3	17012	Crosstown (Century City - Fox Hills)	20, 20	connect to Westwood/Overland stn		connect to Overland/Venice stn	
4	17013	Fox Hills Mall - Jefferson Blvd - WLA TC	60, 60				
5	17014	Braddock Dr	1 WB AM, 2 EB PM				
6	17015	LAX - Sepulveda Bl - UCLA	12, 15	connect to Pico/Sepulveda stn		connect to Pico/Sepulveda, Sepulveda/Natl, Sep/Ven stns	
7	17109	Culver Bl	40, 40				
8	17111	Playa Vista - LAX Limited	NA				
SANTA MONICA MUNICIPAL BUS LINES							
1	17107 17112	UCLA - Santa Monica Bl - Venice UCLA - Santa Monica Bl - 20th - SMC	10, 10 NA				
2	17106	UCLA - Wilshire Bl - Venice - Walgrove Ave	15, 20	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
3	17081 17083 17110	LAX - Lincoln Bl - UCLA LAX - 4th/Santa Monica Bl, SB LAX - 4th/Santa Monica Bl	15, 30 20, 0 SB 0, 30	connect to 4th/Colorado stn connect to 4th/Colorado stn connect to 4th/Colorado stn		connect to 4th/Colorado stn connect to 4th/Colorado stn connect to 4th/Colorado stn	
4	17086	SM Civic Ctr - San Vicente Bl - Olympic/Westwood	30, 30	connect to 4th/Colorado, Pico/Sepulveda stns		connect to 4th/Colorado, Pico/Sepulveda stns	
5	17084 17080	6th/Wilshire - Olympic Bl - Pico/Rimpau Olympic/Sawtelle - Pico/Rimpau, WB	20, 30 60, 0 WB	connect to 4th/Colorado, Olympic Bl stns		connect to 4th/Colorado, Olympic Bl stns	
6	17113 17114	SMC - Palms - Venice/Robertson WB (formerly SMC) SMC - Palms - Venice/Robertson (formerly SMC)	60, 0 WB NA	connect to Olympic/14th, National/Palms stns connect to Olympic/14th, National/Palms stns		connect to Olympic/14th, Sep/Ven stns connect to Olympic/14th, Sep/Ven stns	
7	17085 17082	Pico Bl, SM to Pico/Rimpau Pico Bl Limited	10, 10 20, 0 both directions	connect to 4th/Colorado, Pico/Sepulveda stns		connect to 4th/Colorado, Pico/Sepulveda stns	6, 10
8	17087	4th/Wilshire - Ocean Park Bl - Westwood Bl - UCLA	15, 15	connect to 4th/Colorado, Westwd/Overland stns		connect to 4th/Colorado, Sepulveda/Natl stns	
9	17088	SM - Temescal Canyon - Sunset Bl	30, 30	connect to 4th/Colorado stn		connect to 4th/Colorado stn	
10	21056 21057 21058	Santa Monica - Union Stn, EB Union Stn - Santa Monica, WB Marine/Main - Union Stn, EB	15, 30 EB 15, 30 WB 60, 0 EB	connect to Olympic/Bundy stn connect to Olympic/Bundy stn connect to Olympic/Bundy stn		connect to Olympic/Bundy stn connect to Olympic/Bundy stn connect to Olympic/Bundy stn	
12	17090 17109 17105 17116	Pico/Rimpau - Palms - UCLA Pico/Robertson - Palms - UCLA Super 12: Westwood & Palms Limited, NB Super 12: Westwood & Palms Limited, SB	36, 0 26, 15 15, 0 NB NA	connect to Westwood/Overland, National/Palms stns connect to Westwood/Overland, National/Palms stns connect to Westwood/Overland, National/Palms stns connect to Westwood/Overland, National/Palms stns	10, 30	connect to Sepulveda/National stn connect to Sepulveda/National stn	
13	17091	Westside Pavilion-Pico/Rimpau	30, 0 WB				
14	17092	Culver City - Brentwood Village - Sepulveda/Moraga	12-15, 30	connect to Olympic/Bundy stn		connect to Olympic/Bundy stn	
Crosstown	17089	miniBlue Crosstown: 14th/20th St Loop (formerly SM11)	15, 15 CW	connect to Olympic/14th stn		connect to Olympic/14th stn	
Sunset	17115	miniBlue Sunset: SMC Campus Connector	NA	connect to Olympic/Cloverfield stn		connect to Olympic/Cloverfield stn	

NOTES:
1. All MetroRail, BRT, and Rapid Bus patterns included (though underlying local and express routes limited to study area). Some Westside bus routes may be excluded due to no change.
2. **No Build concept:** Long Range Plan plus operator updates to "existing + committed" definition
(includes existing Metrorail service updates, Expo Phase 1 LRT, Eastside Gold Line, LAX Green
3. **Baseline/TSM concept:** No Build plus Rapid Bus emulator from Culver City to Santa Monica and selected improvements as needed to support emulator.
4. **Build concept:** BRT or LRT from Culver City to Santa Monica and selected improvements as needed to support project.

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

				LRT-5		LRT-6	
Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 Build (LRT on ROW & Colorado) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	2030 Build (LRT on Venice-Sepulveda & Colorado) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
METRO RAIL LINES							
BLUE	13001	1st/Pacific-7th/Flower	11, 12				
	13002	Willow-7th/Flower	11, 12				
PURPLE/	13003	Wilshire/Western-Union Station	10, 12				
RED	13004	North Hollywood-Union Station	10, 12				
GREEN	13005	Norwalk-Redondo Beach	7.5, 15				
GOLD	13007	Sierra Madre Village-Pomona/Atlantic	10, 15 (term at Un Stn)				
EXPO	13008	7th/Flower to Venice/Robertson	NA	extend to Colorado/Main via ROW-Colorado		extend to Colorado/Main via Ven-Sep-ROW-Colorado	
LAX	13011	LAX People Mover: Aviation/I105 to Sepulveda/Century	NA				
BUS RAPID TRANSIT (BRT) ROUTES							
ORANGE	26000	Chandler/Lankershim-Warner Center	4, 10				
	26001	EB Chandler/Lankershim-Warner Center	NA				
	26002	WB Chandler/Lankershim-Warner Center	NA				
RAPID BUS ROUTES (Line numbers for future routes based on model coding convention)							
701	24077	*Expo-2 RB: EB Venice/Robertson-4th/Broadway*	NA	eliminate		eliminate	
	24078	*Expo-2 RB: WB Venice/Robertson-4th/Broadway*	NA	eliminate		eliminate	
703	24033	Lincoln RB: NB 4th/Wilshire-Aviation GL	15, 0 NB	connect to Colorado/Main stn		connect to Colorado/Main stn	
	24034	Lincoln RB: SB 4th/Wilshire-Aviation GL	15, 0 SB	connect to Colorado/Main stn		connect to Colorado/Main stn	
704	24047	Santa Monica RB: EB Ocean/SM-Hill/Pico	NA	extend to Colorado/Main stn		extend to Colorado/Main stn	
	24048	Santa Monica RB: WB Ocean/SM-Hill/Pico	NA	extend to Colorado/Main stn		extend to Colorado/Main stn	
705	24063	Vernon-La Cienega RB: SB SM/San Vicente-Santa Fe	12, 20 EB				
	24064	Vernon-La Cienega RB: NB SM/San Vicente-Santa Fe	12, 20 WB				
706	24051	Sepulveda South RB: NB UCLA-Aviation GL	NA	connect to Pico/Sepulveda stn		connect to Pico/Sepulveda, Sepulveda/Natl, Sep/Ven stns	3.5, 20 NB
	24052	Sepulveda South RB: SB UCLA-Aviation GL	NA	connect to Pico/Sepulveda stn		connect to Pico/Sepulveda, Sepulveda/Natl, Sep/Ven stns	
707 (730)	24039	Pico RB: EB Ocean/Colorado-Wilshire/Western Stn	NA	connect to Colorado/Main, Pico/Sepulveda stn		connect to Colorado/Main, Pico/Sepulveda stn	
	24040	Pico RB: WB Ocean/Colorado-Wilshire/Western Stn	NA	connect to Colorado/Main, Pico/Sepulveda stn		connect to Colorado/Main, Pico/Sepulveda stn	
709	24055	Torrance-Long Beach RB: SB SBTC-1st/Long Bch	NA				
	24056	Torrance-Long Beach RB: NB SBTC-1st/Long Bch	NA				
710	24023	Crenshaw-Rossmore RB: NB WilWstrn-SBTC	10, 20 NB (to Hllywd/High)				
	24024	Crenshaw-Rossmore RB: SB WilWstrn-SBTC	10, 20 SB (to Hllywd/High)				
711	24027	Florence RB: EB Inglewood TC-Florence/Garfield	10, 20 EB				
	24028	Florence RB: WB Inglewood TC-Florence/Garfield	10, 20 WB				
714	24017	Beverly RB: EB Santa Monica/Canon-Pico/Grand	15, 0 EB				
	24018	Beverly RB: WB Santa Monica/Canon-Pico/Grand	15, 0 WB				
715	24037	Manchester RB: EB Atlantic/Firestone-LAX	NA				
	24038	Manchester RB: WB Atlantic/Firestone-LAX	NA				
720	24073	Wilshire RB: EB Ocn/Col-Whittier/Goodrich (PK)	NA	connect to Colorado/Main stn		connect to Colorado/Main stn	
	24074	Wilshire RB: WB Ocn/Col-Whittier/Goodrich (PK)	NA	connect to Colorado/Main stn		connect to Colorado/Main stn	
	24069	Wilshire RB: EB Ocn/Col-Whittier/Goodrich (OP)	4, 6 EB	connect to Colorado/Main stn		connect to Colorado/Main stn	
	24070	Wilshire RB: WB Ocn/Col-Whittier/Goodrich (OP)	3, 6 WB	connect to Colorado/Main stn		connect to Colorado/Main stn	
724 (766)	24043	San Fernando-Lankershim RB: NB Sylmar ML-NH RL	NA				
	24044	San Fernando-Lankershim RB: SB Sylmar ML-NH RL	NA				
728	24065	W. Olympic RB: EB Union Stn-Ave of the Stars/SM Blvd	NA				
	24066	W. Olympic RB: WB Union Stn-Ave of the Stars/SM Blvd	NA				
734	24049	N. Sepulveda RB: NB Sylmar ML-Sepulveda/Ventura	10, 20 NB				
	24050	N. Sepulveda RB: SB Sylmar ML-Sepulveda/Ventura	10, 20 SB				
740	24031	Hawthorne RB: NB SBTC-Union Stn	10, 20 NB				
	24032	Hawthorne RB: SB SBTC-Union Stn	10, 20 SB				
741	24041	Reseda RB: NB Reseda/Devonshire-Reseda/Ventura	10, 20 NB				
	24042	Reseda RB: SB Reseda/Devonshire-Reseda/Ventura	10, 20 SB				
745	24019	S. Broadway RB: NB I110/I105-Union Stn	4, 15 NB				
	24020	S. Broadway RB: SB I110/I105-Union Stn	8, 15 SB				
750	24059	Ventura RB: EB Univ City Stn-Warner Center	10, 15 EB				
	24060	Ventura RB: WB Univ City Stn-Warner Center	5, 15 WB				

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

			LRT-5		LRT-6	
Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 Build (LRT on ROW & Colorado) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	2030 Build (LRT on Venice-Sepulveda & Colorado) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
RAPID BUS ROUTES (Line numbers for future routes based on model coding convention)							
751	24053	Soto RB: NB Long Beach GL-Ave 26/Fig	10, 14 NB				
	24054	Soto RB: SB Long Beach GL-Ave 26/Fig	10, 14 SB				
753	24021	Central RB: NB 5th/Grand-Imperial/Wilmington GL	NA				
	24022	Central RB: SB 5th/Grand-Imperial/Wilmington GL	NA				
754	24061	Vermont RB: NB Vermont/120th-Vermont/Hollywood	6, 9 NB				
	24062	Vermont RB: SB Vermont/120th-Vermont/Hollywood	6, 9 SB				
757	24067	Western RB: NB Crenshaw GL-Western/Hollywood	10, 15 NB				
	24068	Western RB: SB Crenshaw GL-Western/Hollywood	10, 15 SB				
760	24035	Long Beach RB: NB Artesia BL-Union Stn	NA				
	24036	Long Beach RB: SB Artesia BL-Union Stn	NA				
761	24057	Van Nuys Bl RB: NB Fthill/Van Nuys-Wilsh/Vet	14, 15 NB				
	24058	Van Nuys Bl RB: SB Fthill/Van Nuys-Wilsh/Vet	9, 15 SB				
762	24015	Atlantic RB: SB Artesia BL Stn-Fair Oaks	NA				
	24016	Atlantic RB: NB Artesia BL Stn-Fair Oaks	NA				
770	24029	Garvey-Chavez RB: EB El Monte-Spring/Pico	NA				
	24030	Garvey-Chavez RB: WB El Monte-Spring/Pico	NA				
780	24025	Hollywood-Pasadena RB: EB West LA TC-Union/Hill	10, 15 EB				
	24026	Hollywood-Pasadena RB: WB West LA TC-Union/Hill	12, 15 WB				
794	24045	San Fernando RB: NB Spring/Pico-Olive/San Fernando	NA				
	24046	San Fernando RB: SB Spring/Pico-Olive/San Fernando	NA				
MTA LOCAL, LIMITED, AND EXPRESS BUS ROUTES							
2/302	11002	Sunset Bl, Sunset/PCH-Hill/Venice	15, 30				
	11004	Sunset Bl, Westwood/Le Conte-Hill/Venice	12, 30				
	11254	Sunset Bl, Sunset/Fairfax-Hill/Venice	24, 30				
	11611	Sunset Bl, WB Sunset/Fairfax-Hill/Venice	20, 0 WB				
4/304	11007	4: Santa Monica Bl, Santa Monica/Westwood-Hill/Venice	7, 14				
	11193	304: Santa Monica Bl Ltd, Santa Monica/2nd-Union Station	7, 14				
16/316	11020	16: Third St, George Burns/Alden-6th/Central	6, 12				
	11021	16: Third St, EB 3rd/Western-6th/Central	8, 0 EB				
	11162	316: Third St, WB Constellation/Century Park-6th/Central	12, 24 WB				
20	11249	Wilshire Bl, Ocean/Colorado-7th/Maple	20, 30				
	11292	Wilshire Bl, WB Wilshire/Westwood-7th/Maple	20, 30				
	11026	Wilshire Bl, EB Westwood/UCLA-7th/Maple	15, 30				
28/328	11036	28: Olympic Bl, Olympic/Fairfax-Temple/Spring	6, 7.5				
	11037	328: Olympic Bl, Century City-Temple/Spring	9, 15				
30/330	11041	330: Pico Bl, Pico/Rimpau-Dozir/Rowan	7, 30				
	11042	30: Pico Bl, Pico/Rimpau-Atlantic/Riggin	15, 30				
	11047	330: Pico Bl, Pico/Rimpau-1st/Main	0, 30				
31	11043	Pico Bl, Pico/Rimpau-Atlantic/Riggin	15, 30				
33/333	11045	33: Venice Bl, Main/Sunset-Union Stn	7.5, 15			connect to Venice Bl stns	
	11194	333: Venice Blvd Ltd, 2nd/Santa Monica-6th/Main	7.5, 15			connect to Venice Bl stns	
37	11017	Adams Bl, 1st/Fig-WLATC	10, 12				
	11018	Adams Bl, 1st/Fig-Adams/La Brea	30, 0				
38/71	11046	Jefferson Bl, WLATC-CSULA Busway	7.5, 18				
40	11049	Hawthorne-MLK, Union Stn-SBTC	15, 15				
	11050	Hawthorne-MLK, Hawthorne/111th-Union Stn	20, 60				
42	11054	MLK-Stocker-La Tijera, Union Stn-LAX	20, 30				
	11052	MLK-Stocker-La Tijera, Union Stn-King/Western	30, 0				
68/368	11072	Washington Bl, Wash/La Brea-Riggin/Atlantic	60, 0 EB				
	11073	Washington Bl, Montebello-WLA TC	25, 30 both directions				
	11074	Washington Bl, WLATC-Riggin/Atlantic	15, 15				
	11075	Washington Bl, WLATC-Chavez/Rowan	20, 0				
81/381	11081	Figueroa St, SB Colorado/Eagledale-Figueroa/117th	10, 20 SB				
	11086	Figueroa St, NB Colorado/Eagledale-Figueroa/117th	10, 20 NB				
	11092	Figueroa St, SB Figueroa/York-Figueroa/117th	15, 0 both directions				
	11082	Figueroa St, SB Figueroa/York-Figueroa/Florence	0, 20 SB				
	11093	Figueroa St, SB Colorado/Eagle-Flower/8th	20, 0 SB				

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

				LRT-5		LRT-6	
Line No.	Model ID	Description	June 2007 Existing peak headway, base headway (min)	2030 Build (LRT on ROW & Colorado) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	2030 Build (LRT on Venice-Sepulveda & Colorado) Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
MTA LOCAL, LIMITED, AND EXPRESS BUS ROUTES							
102	11091	Florence-Jefferson-Exposition-Coliseum/La Brea	30, 30				
105	11094	Vernon Ave-La Cienega, Pacific/Santa Fe-San Vicente/SM	30, 20				
	11095	Vernon Ave-La Cienega, EB WLA TC-Pacific/Santa Fe	30, 60				
	NA	Vernon Ave-La Cienega, San Vicente/SM-Cudahy/53rd	45, 0				
108	11099	Slauson, Slauson/Paramount-Mesmer	11, 20				
	11208	Slauson, Slauson/Paramount-Palawan	25, 20				
	11213	Slauson, Slauson/Paramount-Slauson/Western	22.5, 0 EB				
110	11100	Centinela-Gage, Florence/Garfield-Jefferson/Alla	60, 20				
	NA	Centinela-Gage, Gage/Alamo-Jefferson/Alla	30, 0				
	NA	Centinela-Gage, Florence/Garfield-Florence BL	45, 0				
	11125	Centinela-Gage, Florence/Garfield-Centinela/La Brea	45, 0				
200	11141	Alvarado St	7.5, 10				
204	11145	Vermont Ave, 120th-Hollywood	14, 12				
	11610	Vermont Ave, Manchester-Hollywood	14, 0				
206	11148	Normandie Ave, Hollywood/Vermont-Vermont/Imperial	10, 15				
207	11150	Western Ave, Manchester-Franklin	12, 17				
	11149	Western Ave, Western/Imperial-Western/Franklin	12, 17				
209	11152	Van Ness-Arlington, Vermont/120th-Wilshire/Western	45, 60				
210	11056	Crenshaw Bl, SBTC-Hollywood/Highland	15, 20				
	11154	Crenshaw Bl, Crenshaw/Redondo Bch-Hwood/Highland	NA				
	11237	Crenshaw Bl, Crenshaw/Artesia-Hollywood/Highland	60, 0				
212/312	11157	312: La Brea Ave, Hawthorne GL-Hollywood/Vine	12, 30				
	11223	212: La Brea Ave, Hillcrest/Nutwood-Hollywood/Vine	12, 30				
217	11014	Fairfax Ave, Vermont/Sunset-WLA TC	12, 20				
	11001	Fairfax Ave, Hollywood/Argyle-WLA TC	0, 20				
220	11158	Robertson Bl, Santa Monica/San Vicente-Venice/Robertson	40, 40				
305	11230	UCLA-Imperial/Wilmington	30, 45				
439	12020	LA - LAX Express, EB Aviation GL - Union Station	NA				
	12021	LA - LAX Express, WB Aviation GL - Union Station	NA				
	NA	LA - LAX Express, Union Stn - Aviation GL	40, 0				
	NA	LA - LAX Express, Union Stn - LAX	0, 60				
442	25075	Hawthorne-Manchester Express	30, 0 NB				
534	12017	Malibu Express, EB Trancas Canyon-WLA TC	30, 30 EB	divert to Colorado/Main stn		divert to Colorado/Main stn	
	12019	Malibu Express, WB Trancas Canyon-WLA TC	15, 30 WB	divert to Colorado/Main stn		divert to Colorado/Main stn	
	12047	Malibu Express, WB Malibu Canyon/Civic Ctr-WLA TC	22.5, 0 WB	divert to Colorado/Main stn		divert to Colorado/Main stn	
550	25065	San Pedro - W. Hollywood Express NB	50, 45 NB				
	25066	San Pedro - W. Hollywood Express SB	50, 45 SB				
	25082	San Pedro - W. Hollywood Express, Vermt/Carson-SMSV	50, 0				
603	11214	Rampart-Hoover-Colorado, Wash/Olive-Orange/Colorado	10, 12				
608	11231	Crenshaw Connection, Normandie/48th-La Brea/Rodeo	60, 60 CW				
CITY OF LOS ANGELES DEPARTMENT OF TRANSPORTATION (LADOT)							
430	21040	Sunset/PCH - Union Station EB	2 EB trp AM, 2 WB trp PM				
431	21093	Sepulveda/Montana - Union Station EB	4 EB trp AM, 4 WB trp PM	connect to Westwood/Overland stn			
437	21042	Venice (Wash/Pac) - Marina del Rey - LACBD (Temple) EB	6 EB trp AM, 6 WB trp PM				
534	15091	Union Station - Wilshire/Veteran WB	4 WB trp AM, 4 EB trp PM				
574	21047	Sylmar ML - Encino - LAX - Aviation/Space Park	5 SB trp AM, 5 NB trp PM				
DASH F	15011	DASH LACBD-USC	10, 10				
DASH K-E	15061	DASH King-East	20, 20				
DASH SE	15015	DASH South East	20, 20				
DASH LIS	15040	DASH Lemert/Slauson	25, 25				
DASH MID	15020	DASH Midtown	30, 30				
DASH CRN	15021	DASH Crenshaw	30, 30				

EXPOSITION CORRIDOR PHASE II EIS/EIR
BUS AND RAIL OPERATING PLANS

				LRT-5		LRT-6	
Line No.	Model ID	Description	**June 2007 Existing** peak headway, base headway (min)	**2030 Build (LRT on ROW & Colorado)** Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways	**2030 Build (LRT on Venice-Sepulveda & Colorado)** Changes to 2030 Baseline/TSM equilibrated service original peak headway, base headway (min)	equilibrated headways
CULVER CITY MUNICIPAL BUS LINES							
1	17010	Washington Bl	12, 15				
2	17011	Sunkist Park	60, 60				
3	17012	Crosstown (Century City - Fox Hills)	20, 20	connect to Westwood/Overland stn		connect to Overland/Venice stn	
4	17013	Fox Hills Mall - Jefferson Blvd - WLA TC	60, 60				
5	17014	Braddock Dr	1 WB AM, 2 EB PM				
6	17015	LAX - Sepulveda Bl - UCLA	12, 15	connect to Pico/Sepulveda stn		connect to Pico/Sepulveda, Sepulveda/Natl, Sep/Ven stns	
7	17109	Culver Bl	40, 40				
8	17111	Playa Vista - LAX Limited	NA				
SANTA MONICA MUNICIPAL BUS LINES							
1	17107	UCLA - Santa Monica Bl - Venice	10, 10	connect to Colorado/Main stn		connect to Colorado/Main stn	
	17112	UCLA - Santa Monica Bl - 20th - SMC	NA	connect to Colorado/Main stn		connect to Colorado/Main stn	
2	17106	UCLA - Wilshire Bl - Venice - Walgrove Ave	15, 20				
3	17081	LAX - Lincoln Bl - UCLA	15, 30				
	17083	LAX - 4th/Santa Monica Bl, SB	20, 0 SB				
	17110	LAX - 4th/Santa Monica Bl	0, 30				
4	17086	SM Civic Ctr - San Vicente Bl - Olympic/Westwood	30, 30	extend to Colorado/Main, connect to Pico/Sepulveda stn		extend to Colorado/Main, connect to Pico/Sepulveda stn	
5	17084	6th/Wilshire - Olympic Bl - Pico/Rimpau	20, 30	connect to Colorado/14th & Olympic Bl stns		connect to Colorado/14th & Olympic Bl stns	
	17080	Olympic/Sawtelle - Pico/Rimpau, WB	60, 0 WB				
6	17113	SMC - Palms - Venice/Robertson WB (formerly SMC)	60, 0 WB	extend to Colorado/14th, National/Palms stns		extend to Colorado/14th, National/Palms stns	
	17114	SMC - Palms - Venice/Robertson (formerly SMC)	NA	extend to Colorado/14th, National/Palms stns		extend to Colorado/14th, National/Palms stns	
7	17085	Pico Bl, SM to Pico/Rimpau	10, 10	connect to Colorado/Main, Pico/Sepulveda stns		connect to Colorado/Main, Pico/Sepulveda stns	6, 10
	17082	Pico Bl Limited	20, 0 both directions				
8	17087	4th/Wilshire - Ocean Park Bl - Westwood Bl - UCLA	15, 15	connect to Colorado/Main, Wesbwd/Overland stns		connect to Colorado/Main, Sepulveda/Natl stns	
9	17088	SM - Temescal Canyon - Sunset Bl	30, 30	extend to Colorado/Main stn		extend to Colorado/Main stn	
10	21056	Santa Monica - Union Stn, EB	15, 30 EB	connect to Colorado/Main, Olympic/Bundy stn		connect to Colorado/Main, Olympic/Bundy stn	
	21057	Union Stn - Santa Monica, WB	15, 30 WB	connect to Colorado/Main, Olympic/Bundy stn		connect to Colorado/Main, Olympic/Bundy stn	
	21058	Marine/Main - Union Stn, EB	60, 0 EB	connect to Colorado/Main, Olympic/Bundy stn		connect to Colorado/Main, Olympic/Bundy stn	
12	17090	Pico/Rimpau - Palms - UCLA	36, 0	connect to Westwood/Overland, National/Palms stns		connect to Sepulveda/National stn	
	17108	Pico/Robertson - Palms - UCLA	26, 15	connect to Westwood/Overland, National/Palms stns		connect to Sepulveda/National stn	
	17105	Super 12: Westwood & Palms Limited, NB	15, 0 NB	connect to Westwood/Overland, National/Palms stns	10, 30		
	17116	Super 12: Westwood & Palms Limited, SB	NA	connect to Westwood/Overland, National/Palms stns			
13	17091	Westside Pavilion-Pico/Rimpau	30, 0 WB				
14	17092	Culver City - Brentwood Village - Sepulveda/Moraga	12-15, 30	connect to Olympic/Bundy stn		connect to Olympic/Bundy stn	
Crosstown	17089	miniBlue Crosstown: 14th/20th St Loop (formerly SM11)	15, 15 CW	connect to Colorado/14th stn		connect to Colorado/14th stn	
Sunset	17115	miniBlue Sunset: SMC Campus Connector	NA	connect to Olympic/Cloverfield stn		connect to Olympic/Cloverfield stn	

NOTES:
1. All MetroRail, BRT, and Rapid Bus patterns included (though underlying local and express routes limited to study area). Some Westside bus routes may be excluded due to no change.
2. **No Build concept:** Long Range Plan plus operator updates to "existing + committed" definition
(includes existing Metrorail service updates, Expo Phase 1 LRT, Eastside Gold Line, LAX Green
3. **Baseline/TSM concept:** No Build plus Rapid Bus emulator from Culver City to Santa Monica and selected improvements as needed to support emulator.
4. **Build concept:** BRT or LRT from Culver City to Santa Monica and selected improvements as needed to support project.

Appendix B

Expo Phase II Corridor Build Alternative Travel Times

EXPOSITION CORRIDOR LRT PHASE 2 DEIS/EIR
LIGHT RAIL TRANSIT TRAVEL TIME ESTIMATES

ALIGNMENT 1: EXPOSITION ROW

Station	Max.Speed (mph)	Stationing		Distance (feet)	Distance (miles) Increment	Stn-Stn	Cumulative	Run Time (minutes)	Xing Delay (min)	ROW Delay (min)	Dwell Time (minutes)	Time (minutes) Increment	Stn-Stn	Cumulative
Venice/Robertson						**0.00**	0.00						**0.00**	0.00
Bagley crossing	55	50200	55000	4800	0.91			1.39	0.08	0.15				
National/Palms						**0.91**	0.91				0.33	1.96	**1.96**	1.96
	50	55000	57000	2000	0.38			0.65	0.00	0.06				
Motor (NO STOP)							1.29				0.00	0.71		2.68
Curve 1	15	57000	58000	1000	0.19			0.53	0.00	0.03				
							1.48					0.56		3.24
Curve 2	20	58000	58300	300	0.06			0.17	0.00	0.01				
							1.53					0.18		3.42
Curve 3, Overland crossing	35	58300	61600	3300	0.63			1.00	0.45	0.10				
Overland-Westwood (OPTIONAL STOP)							2.16				0.00	1.55		4.97
Westwood crossing	50	61600	62500	900	0.17			0.34	0.45	0.03				
Westwood						**1.42**	2.33				0.33	1.16	**4.16**	6.12
Military Ave, Sepulveda crossing	55	62500	65400	2900	0.55			0.99	0.25	0.09				
Sepulveda						**0.55**	2.88				0.33	1.67	**1.67**	7.79
Barrington crossing	55	65400	71000	5600	1.06			1.56	0.22	0.18				
Bundy						**1.06**	3.94				0.33	2.29	**2.29**	10.08
Centinela crossing	55	71000	74700	3700	0.70			1.02	0.17	0.12				
							4.64					1.31		11.39
Stewart crossing	35	74700	76000	1300	0.25			0.39	0.17	0.04				
							4.89					0.60		11.99
26th crossing	50	76000	77000	1000	0.19			0.37	0.23	0.03				
Cloverfield						**1.14**	5.08				0.33	0.96	**2.87**	12.95
Curve onto Olympic Bl, 20th St crossing	25	77000	78600	1600	0.30			0.80	0.21	0.10				
							5.38					1.11		14.06
17th St crossing	35	78600	80800	2200	0.42			0.82	0.17	0.14				
Santa Monica College						**0.72**	5.80				0.33	1.47	**2.57**	15.52
14th St crossing	35	80800	84000	3200	0.61			1.17	0.17	0.20				
							6.40					1.55		17.07
Curve	15	84000	85000	1000	0.19			0.72	0.00	0.03				
Santa Monica						**0.80**	6.59				0.33	1.09	**2.63**	18.16
TOTAL - Venice/Robertson to Santa Monica via Exposition ROW					*6.59*		**6.59**	*11.93*	*2.58*	*1.32*	2.33		*18.16*	**18.16**
					Ave station spacing		0.9				**21.8**	**mph**		

NOTES:
1. Maximum speeds are based on vehicle performace criteria.
2. Distances and locations based on preliminary plan and profile provided by DMJM Harris, June 2007.
3. Intersection delay calculated on an individual intersection basis, based on expected "green" time and expected priority. (See separate Intersection Crossing Worksheet)
4. Right-of-way delay of 10 secs/mile (ROW) and 20 secs/mile (street) assumed.

EXPOSITION CORRIDOR LRT PHASE 2 DEIS/EIR
LIGHT RAIL TRANSIT TRAVEL TIME ESTIMATES

ALIGNMENT 1A: EXPOSITION ROW WITH CITY OF SANTA MONICA VARIATION VIA COLORADO

Station	Max.Speed (mph)	Stationing	Distance (feet)	Distance (miles) Increment	Stn-Stn	Cumulative	Run Time (minutes)	Xing Delay (min)	ROW Delay (min)	Dwell Time (minutes)	Time (minutes) Increment	Stn-Stn	Cumulative
Venice/Robertson					**0.00**	0.00						**0.00**	0.00
Bagley crossing	55	50200 55000	4800	0.91			1.39	0.08	0.15				
National/Palms					**0.91**	0.91				0.33	1.96	**1.96**	1.96
	50	55000 57000	2000	0.38			0.65	0.00	0.06				
Motor (NO STOP)						1.29				0.00	0.71		2.68
Curve 1	15	57000 58000	1000	0.19			0.53	0.00	0.03				
						1.48					0.56		3.24
Curve 2	20	58000 58300	300	0.06			0.17	0.00	0.01				
						1.53					0.18		3.42
Curve 3, Overland crossing	35	58300 61600	3300	0.63			1.00	0.45	0.10				
Overland-Westwood (OPTIONAL STOP)						2.16				0.00	1.55		4.97
Westwood crossing	50	61600 62500	900	0.17			0.34	0.45	0.03				
Westwood					**1.42**	2.33				0.33	1.16	**4.16**	6.12
Military Ave, Sepulveda crossing	55	62500 65400	2900	0.55			0.99	0.25	0.09				
Sepulveda					**0.55**	2.88				0.33	1.67	**1.67**	7.79
Barrington crossing	55	65400 71000	5600	1.06			1.56	0.22	0.18				
Bundy					**1.06**	3.94				0.33	2.29	**2.29**	10.08
Centinela crossing	55	71000 74700	3700	0.70			1.02	0.17	0.12				
						4.64					1.31		11.39
Stewart crossing	35	74700 76000	1300	0.25			0.39	0.17	0.04				
						4.89					0.60		11.99
26th crossing	50	76000 77000	1000	0.19			0.37	0.23	0.03				
Cloverfield					**1.14**	5.08				0.33	0.96	**2.87**	12.95
20th crossing	35			0.46			0.94	0.22	0.08				
						5.54					1.24		14.19
Jog onto 17th St and onto Colorado	10			0.10			0.60	0.35	0.03				
						5.64					0.98		15.17
14th crossing	35			0.20			0.50	0.13	0.07				
Santa Monica College (represented at 14th St)					**0.76**	5.84				0.33	1.03	**3.25**	16.20
11th, Lincoln, 7th, 6th, 5th, 4th St crossi	35			0.87			1.69	0.98	0.29				
Santa Monica (Colorado @ Main St centerline)					**0.87**	6.71				0.33	3.30	**3.30**	19.49
TOTAL - Venice/Robertson to Santa Monica via Exposition ROW and Colorado					6.71	**6.71**	*12.14*	*3.71*	*1.31*	2.33		*19.49*	**19.49**
				Ave station spacing		1.0				**20.6 mph**			

NOTES:
1. Maximum speeds are based on vehicle performace criteria.
2. Distances and locations based on preliminary plan and profile provided by DMJM Harris, June 2007 for segment east of Cloverfield Station; segment west of Cloverfield measured using Google Earth.
3. Intersection delay calculated on an individual intersection basis, based on expected "green" time and expected priority. (See separate Intersection Crossing Worksheet)
4. Right-of-way delay of 10 secs/mile (ROW) and 20 secs/mile (street) assumed.

EXPOSITION CORRIDOR LRT PHASE 2 DEIS/EIR
LIGHT RAIL TRANSIT TRAVEL TIME ESTIMATES

ALIGNMENT 2: VENICE/SEPULVEDA

Station	Max.Speed (mph)	Stationing		Distance (feet)	Distance (miles) Increment	Stn-Stn	Cumulative	Run Time (minutes)	Xing Delay (min)	ROW Delay (min)	Dwell Time (minutes)	Time (minutes) Increment	Stn-Stn	Cumulative
Venice/Robertson						**0.00**	0.00						**0.00**	0.00
Curve	20	50200	51000	800	0.15			0.51	0.00	0.05				
Bagley/Main, Hughes, Clarington,							0.15					0.56		0.56
Motor crossings	35	51000	56800	5800	1.10			2.00	0.53	0.37				
Overland						**1.25**	1.25				0.33	3.23	**3.79**	3.79
Girard/Midvale crossing	35	56800	60000	3200	0.61			1.24	0.34	0.20				
Venice/Sepulveda						**0.61**	1.86				0.33	2.11	**2.11**	5.91
Curve	15	60000	60800	800	0.15			0.65	0.00	0.05				
							2.01					0.70		6.61
Charnock crossing	35	60800	66600	5800	1.10			2.02	0.00	0.37				
National						**1.25**	3.11				0.33	2.72	**3.41**	9.32
	25	66600	67700	1100	0.21			0.57	0.00	0.07				
							3.31					0.64		9.96
Sepulveda/Expo crossing	35	67700	69800	2100	0.40			0.70	0.06	0.13				
							3.71					0.89		10.85
Curve, Sepulveda/ROW crossing	15	69800	70300	500	0.09			0.34	0.17	0.03				
Sepulveda						**0.70**	3.81				0.33	0.88	**2.41**	11.73
Barrington crossing	55	65500	71000	5500	1.04			1.54	0.22	0.17				
Bundy						**1.04**	4.85				0.33	2.27	**2.27**	14.00
Centinela crossing	55	71000	74700	3700	0.70			1.02	0.17	0.12				
							5.55					1.31		15.30
Stewart crossing	35	74700	76000	1300	0.25			0.39	0.17	0.04				
							5.80					0.60		15.90
26th crossing	50	76000	77000	1000	0.19			0.37	0.23	0.03				
Cloverfield						**1.14**	5.98				0.33	0.96	**2.87**	16.87
Curve onto Olympic Bl, 20th St crossing	25	77000	78600	1600	0.30			0.80	0.21	0.10				
							6.29					1.11		17.97
17th St crossing	35	78600	80800	2200	0.42			0.82	0.17	0.14				
Santa Monica College						**0.72**	6.70				0.33	1.47	**2.57**	19.44
14th St crossing	35	80800	84000	3200	0.61			1.17	0.17	0.20				
							7.31					1.55		20.99
Curve	15	84000	85000	1000	0.19			0.72	0.00	0.03				
Santa Monica						**0.80**	7.50				0.33	1.09	**2.63**	22.07
TOTAL - Venice/Robertson to Santa Monica via Venice/Sepulveda					*7.50*	*7.50*	**7.50**	*14.86*	*2.44*	*2.11*	*2.67*			**22.07**
						Ave station spacing	0.9				**20.4 mph**			

NOTES:
1. Maximum speeds are based on vehicle performace criteria.
2. Distances and locations based on preliminary plan and profile provided by DMJM Harris, June 2007.
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4. Right-of-way delay of 10 secs/mile (ROW) and 20 secs/mile (street) assumed.

EXPOSITION CORRIDOR LRT PHASE 2 DEIS/EIR
LIGHT RAIL TRANSIT TRAVEL TIME ESTIMATES

ALIGNMENT 2A: VENICE/SEPULVEDA WITH CITY OF SANTA MONICA VARIATION VIA COLORADO

Station	Max.Speed (mph)	Stationing		Distance (feet)	Distance (miles) Increment	Stn-Stn	Cumulative	Run Time (minutes)	Xing Delay (min)	ROW Delay (min)	Dwell Time (minutes)	Time (minutes) Increment	Stn-Stn	Cumulative
Venice/Robertson						**0.00**	0.00						**0.00**	0.00
Curve	20	50200	51000	800	0.15			0.51	0.00	0.05				
Bagley/Main, Hughes, Clarington, Motor crossings	35	51000	56800	5800	1.10		0.15	2.00	0.53	0.37		0.56		0.56
Overland						**1.25**	1.25				0.33	3.23	**3.79**	3.79
Grand/Midvale crossing	35	56800	60000	3200	0.61			1.24	0.34	0.20				
Venice/Sepulveda						**0.61**	1.86				0.33	2.11	**2.11**	5.91
Curve	15	60000	60800	800	0.15			0.65	0.00	0.05				
Charnock crossing	35	60800	66600	5800	1.10		2.01	2.02	0.00	0.37		0.70		6.61
National						**1.25**	3.11				0.33	2.72	**3.41**	9.32
	25	66600	67700	1100	0.21			0.57	0.00	0.07				
Sepulveda/Expo crossing	35	67700	69800	2100	0.40		3.31	0.70	0.06	0.13		0.64		9.96
Curve, Sepulveda/ROW crossing	15	69800	70300	500	0.09		3.71	0.34	0.17	0.03		0.89		10.85
Sepulveda						**0.70**	3.81				0.33	0.88	**2.41**	11.73
Barrington crossing	55	65500	71000	5500	1.04			1.54	0.22	0.17				
Bundy						**1.04**	4.85				0.33	2.27	**2.27**	14.00
Centinela crossing	55	71000	74700	3700	0.70			1.02	0.17	0.12				
Stewart crossing	35	74700	76000	1300	0.25		5.55	0.39	0.17	0.04		1.31		15.30
26th crossing	50	76000	77000	1000	0.19		5.80	0.37	0.23	0.03		0.60		15.90
Cloverfield						**1.14**	5.98				0.33	0.96	**2.87**	16.87
20th crossing	35				0.46			0.94	0.22	0.08				
Jog onto 17th St and onto Colorado	10				0.10		6.44	0.60	0.35	0.03		1.24		18.10
14th crossing	35				0.20		6.54	0.50	0.13	0.07		0.98		19.09
Santa Monica College (represented at 14th St)						**0.76**	6.74				0.33	1.03	**3.25**	20.11
11th, Lincoln, 7th, 6th, 5th, 4th St crossi	35				0.87			1.69	0.98	0.29				
Santa Monica (Colorado @ Main St centerline)						**0.87**	7.61				0.33	3.30	**3.30**	23.41
TOTAL - Venice/Robertson to Santa Monica via Venice/Sepulveda					*7.61*	*7.61*	**7.61**	*15.07*	*3.57*	*2.10*	*2.67*			**23.41**
						Ave station spacing	1.0					**19.5 mph**		

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