## West Santa Ana Branch Transit Corridor

Draft EIS/EIR Appendix Q
Final Operating and Maintenance Costs



## WEST SANTA ANA BRANCH TRANSIT CORRIDOR PROJECT

# Draft EIS/EIR Appendix Q Final Operating and Maintenance Costs

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## **Appendices**

APPENDIX A. O&M COST DETAILS FOR PROJECT ALTERNATIVES

### **ACRONYMS AND ABBREVIATIONS**

AA Study Pacific Electric Right-of-Way/West Santa Ana Branch Corridor

Alternatives Analysis Report

CEQA California Environmental Quality Act
CHSRA California High-Speed Rail Authority

CPI-U Consumer price index for all urban consumers

Environmental Study West Santa Ana Branch Transit Corridor Environmental Study

FRA Federal Railroad Administration
FTA Federal Transit Administration

FY Fiscal Year

GCCOG Gateway Cities Council of Governments

LA Los Angeles

LRT Light Rail Transit

LRTP Long Range Transportation Plan

Metro Los Angeles County Metropolitan Transportation Authority

MOS Minimum Operable Segment
MWD Metropolitan Water District

NEPA National Environmental Policy Act

NTD National Transit Database

O&M Operations and Maintenance

OCTA Orange County Transportation Authority

PEROW Pacific Electric Right-of-Way

ROW right-of-way

SCAG Southern California Association of Governments

TRS Technical Refinement Study

UPRR Union Pacific Railroad WSAB West Santa Ana Branch

## 1 INTRODUCTION

## 1.1 Study Background

The West Santa Ana Branch (WSAB) Transit Corridor (Project) is a proposed light rail transit (LRT) line that would extend from four possible northern termini in southeast Los Angeles (LA) County to a southern terminus in the City of Artesia, traversing densely populated, low-income, and heavily transit-dependent communities. The Project would provide reliable, fixed guideway transit service that would increase mobility and connectivity for historically underserved, transit-dependent, and environmental justice communities; reduce travel times on local and regional transportation networks; and accommodate substantial future employment and population growth.

## 1.2 Alternatives Evaluation, Screening and Selection Process

A wide range of potential alternatives have been considered and screened through the alternatives analysis processes. In March 2010, the Southern California Association of Governments (SCAG) initiated the Pacific Electric Right-of-Way (PEROW)/WSAB Alternatives Analysis (AA) Study (SCAG 2013) in coordination with the relevant cities, Orangeline Development Authority (now known as Eco-Rapid Transit), the Gateway Cities Council of Governments, the Los Angeles County Metropolitan Transportation Authority (Metro), the Orange County Transportation Authority, and the owners of the right-of-way (ROW)—Union Pacific Railroad (UPRR), BNSF Railway, and the Ports of Los Angeles and Long Beach. The AA Study evaluated a wide variety of transit connections and modes for a broader 34-mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana in Orange County. In February 2013, SCAG completed the PEROW/WSAB Corridor Alternatives Analysis Report<sup>1</sup> and recommended two LRT alternatives for further study: West Bank 3 and the East Bank.

Following completion of the AA, Metro completed the WSAB Technical Refinement Study in 2015 focusing on the design and feasibility of five key issue areas along the 19-mile portion of the WSAB Transit Corridor within LA County:

- Access to Union Station in downtown Los Angeles
- Northern Section Options
- Huntington Park Alignment and Stations
- New Metro C (Green) Line Station
- Southern Terminus at Pioneer Station in Artesia

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study with the goal of obtaining environmental clearance of the Project under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

West Santa Ana Branch Transit Corridor Project

<sup>&</sup>lt;sup>1</sup> Initial concepts evaluated in the SCAG report included transit connections and modes for the 34 mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana. Modes included low speed magnetic levitation (maglev) heavy rail, light rail, and bus rapid transit (BRT).

Metro issued a Notice of Preparation (NOP) on May 25, 2017, with a revised NOP issued on June 14, 2017, extending the comment period. In June 2017, Metro held public scoping meetings in the Cities of Bellflower, Los Angeles, South Gate, and Huntington Park. Metro provided Project updates and information to stakeholders with the intent to receive comments and questions through a comment period that ended in August 2017. A total of 1,122 comments were received during the public scoping period from May through August 2017. The comments focused on concerns regarding the Northern Alignment options, with specific concerns related to potential impacts to Alameda Street with an aerial alignment. Given potential visual and construction issues raised through public scoping, additional Northern Alignment concepts were evaluated.

In February 2018, the Metro Board of Directors approved further study of the alignment in the Northern Section due to community input during the 2017 scoping meetings. A second alternatives screening process was initiated to evaluate the original four Northern Alignment options and four new Northern Alignment concepts. The *Final Northern Alignment Alternatives and Concepts Updated Screening Report* was completed in May 2018 (Metro 2018a). The alternatives were further refined and, based on the findings of the second screening analysis and the input gathered from the public outreach meetings, the Metro Board of Directors approved Build Alternatives E and G for further evaluation (now referred to as Alternatives 1 and 2, respectively, in this report).

On July 11, 2018, Metro issued a revised and recirculated CEQA Notice of Preparation, thereby initiating a scoping comment period. The purpose of the revised Notice of Preparation was to inform the public of the Metro Board's decision to carry forward Alternatives 1 and 2 into the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). During the scoping period, one agency and three public scoping meetings were held in the Cities of Los Angeles, Cudahy, and Bellflower. The meetings provided Project updates and information to stakeholders with the intent to receive comments and questions to support the environmental process. The comment period for scoping ended in August 24, 2018; over 250 comments were received.

Following the July 2018 scoping period, a number of Project refinements were made to address comments received, including additional grade separations, removing certain stations with low ridership, and removing the Bloomfield extension option. The Metro Board adopted these refinements to the project description at their November 2018 meeting.

## 1.3 Project Description

This section describes the No Build Alternative and the four Build Alternatives studied in the WSAB Transit Corridor Draft EIS/EIR, including design options, station locations, and maintenance and storage facility (MSF) site options. The Build Alternatives were developed through a comprehensive alternatives analysis process and meet the purpose and need of the Project.

The No Build Alternative and four Build Alternatives are generally defined as follows:

No Build Alternative - Reflects the transportation network in the 2042 horizon year
without the proposed Build Alternatives. The No Build Alternative includes the existing
transportation network along with planned transportation improvements that have
been committed to and identified in the constrained Metro 2009 Long Range
Transportation Plan (2009 LRTP) (Metro 2009) and SCAG's 2016-2040 Regional

- Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2016), as well as additional projects funded by Measure M that would be completed by 2042.
- **Build Alternatives**: The Build Alternatives consist of a new LRT line that would extend from different termini in the north to the same terminus in the City of Artesia in the south. The Build Alternatives are referred to as:
  - Alternative 1: Los Angeles Union Station to Pioneer Station; the northern terminus would be located underground at Los Angeles Union Station (LAUS) Forecourt
  - Alternative 2: 7th Street/Metro Center to Pioneer Station; the northern terminus would be located underground at 8th Street between Figueroa Street and Flower Street near 7th Street/Metro Center Station
  - Alternative 3: Slauson/A (Blue) Line to Pioneer Station; the northern terminus would be located just north of the intersection of Long Beach Avenue and Slauson Avenue in the City of Los Angeles, connecting to the current A (Blue) Line Slauson Station
  - Alternative 4: I-105/C (Green) Line to Pioneer Station; the northern terminus would be located at I-105 in the city of South Gate, connecting to the C (Green) Line along the I-105

Two design options are under consideration for Alternative 1. Design Option 1 would locate the northern terminus station box at the LAUS Metropolitan Water District (MWD) east of LAUS and the MWD building, below the baggage area parking facility. Design Option 2 would add the Little Tokyo Station along the WSAB alignment.

Figure 1-1 presents the four Build Alternatives and the design options. In the north, Alternative 1 would terminate at LAUS and primarily follow Alameda Avenue south underground to the proposed Arts/Industrial District Station. Alternative 2 would terminate near the existing 7th Street/Metro Center Station in the Downtown Transit Core and would primarily follow 8th Street east underground to the proposed Arts/Industrial District Station.

From the Arts/Industrial District Station to the southern terminus at Pioneer Station, Alternatives 1 and 2 share a common alignment. South of Olympic Boulevard, the Alternatives 1 and 2 would transition from an underground configuration to an aerial configuration, cross over the Interstate (I-) 10 freeway and then parallel the existing Metro A (Blue) Line along the Wilmington Branch ROW as it proceeds south. South of Slauson Avenue, which would serve as the northern terminus for Alternative 3, Alternatives 1, 2, and 3 would turn east and transition to an at-grade configuration to follow the La Habra Branch ROW along Randolph Street. At the San Pedro Subdivision ROW, Alternatives 1, 2, and 3 would turn southeast to follow the San Pedro Subdivision ROW and then transition to the Pacific Electric Right-of-Way (PEROW), south of the I-105 freeway. The northern terminus for Alternative 4 would be located at the I-105/C Line Station. Alternatives 1, 2, 3, and 4 would then follow the PEROW to the southern terminus at the proposed Pioneer Station in Artesia. The Build Alternatives would be grade-separated where warranted, as indicated on Figure 1-2.

Figure 1-1. Project Alternatives



Source: Metro, 2020

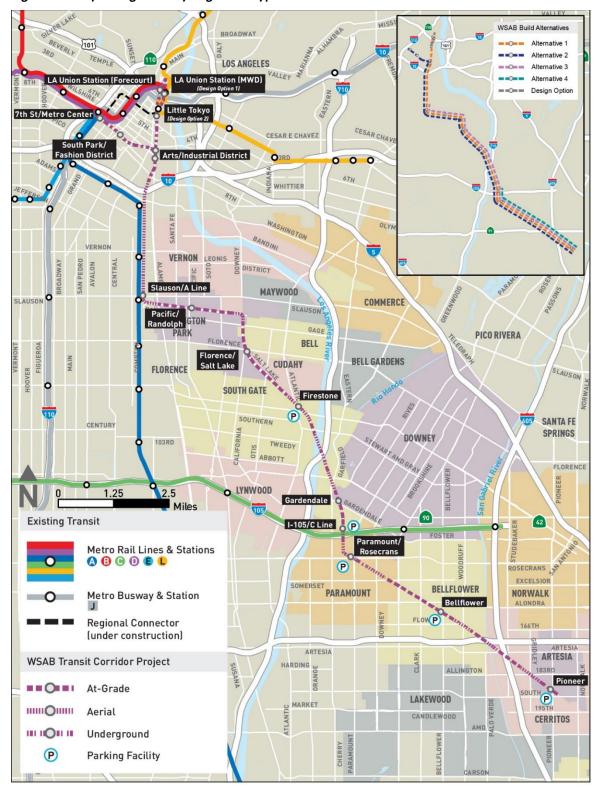


Figure 1-2. Project Alignment by Alignment Type

Source: Metro, 2020

The general characteristics of the four Build Alternatives are summarized in Table 1-1.

Table 1-1. Summary of Build Alternative Components

Component	Quantity						
Alternatives	Alternative 1	Alternative 2	Alternative 3	Alternative 4			
Alignment Length	19.3 miles	19.3 miles	14.8 miles	6.6 miles			
Stations Configurations	11 3 aerial; 6 at-grade; 2 underground <sup>3</sup>	12 3 aerial; 6 at- grade; 3 underground	9 3 aerial; 6 at-grade	4 1 aerial; 3 at- grade			
Parking Facilities	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	4 (approximately 2,180 spaces)			
Length of underground, at- grade, and aerial	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial <sup>1</sup>	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial <sup>1</sup>	12.2 miles atgrade; 2.6 miles aerial <sup>1</sup>	5.6 miles atgrade; 1.0 miles aerial <sup>1</sup>			
At-grade crossings	31	31	31	11			
Freight crossings	10	10	9	2			
Freeway Crossings	6 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	6 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR- 91)	4 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	3 (2 freeway undercrossings <sup>2</sup> at I-605, SR-91)			
Elevated Street Crossings	25	25	15	7			
River Crossings	3	3	3	1			
TPSS Facilities	223	23	17	7			
Maintenance and Storage Facility site options	2	2	2	2			

Source: WSP, 2020

Notes: <sup>1</sup> Alignment configuration measurements count retained fill embankments as at-grade.

 <sup>&</sup>lt;sup>2</sup> The light rail tracks crossing beneath freeway structures.
 <sup>3</sup> Under Design Option 2 – Add Little Tokyo Station, an additional underground station and TPSS site would be added under Alternative 1

## 1.4 Report Structure and Purpose

This document provides operations and maintenance (O&M) cost details for the four Build alternatives:

- Alternative 1: Los Angeles Union Station to Pioneer Station;
- Alternative 2: 7th Street/Metro Center to Pioneer Station;
- Alternative 3: Slauson/A (Blue) Line to Pioneer Station; and
- Alternative 4: I-105/C (Green) Line to Pioneer Station.

The following sections describe the methodology used to develop the light rail O&M costs, followed by the estimated annual O&M costs for each alternative.

## 2 OPERATIONS AND MAINTENANCE COST ESTIMATES

This section presents the estimated annual O&M costs for WSAB alternatives. There are two steps to this process. The first step is to develop O&M unit costs. The O&M methodology section discusses how this was accomplished. In the second step, the O&M unit cost is applied to the operating statistics to determine annual O&M costs for each alternative.

## 2.1 O&M Cost Methodology

Annual O&M costs have been estimated with spreadsheet models that tie costs to the level of service that is to be operated and facilities that are to be maintained. Specifically, the cost allocation models assume that each operating expense incurred is driven by a key supply variable such as revenue-hours, revenue-miles or number of vehicles operated during peak periods. Unit costs are developed and applied to future service statistics. The result is an estimated annual O&M cost that is specific for the test scenario.

Actual cost data from the Los Angeles Metropolitan Transportation Authority (Metro) was used to develop unit cost data for light rail alternatives. Metro reports actual costs and service statistics to the Federal Transit Administration (FTA) in the National Transit Database (NTD). Metro's FY 2015 NTD submittal was used. While Metro's FY 2016 NTD would be more recent, some distortion may result from the partial years of service on the Metro L (Gold) Line extension to Azusa and E (Expo) Line extension to Santa Monica.

Service statistics used in the development of unit costs are as follows:

- Annual Revenue Train-Hours The hours that trains (of any length) travel while in revenue service over the entire fiscal year. Revenue train-hours include layover and schedule recovery but exclude time for deadhead, operator training, and maintenance testing.
- Annual Revenue Car-Hours The hours that passenger vehicles travel while in revenue service over the entire fiscal year. Revenue car-hours include layover and schedule recovery but exclude time for deadhead, operator training, and maintenance testing.
- *Annual Revenue Car-Miles* The miles that passenger vehicles travel while in revenue service over the entire fiscal year. Revenue car-miles include layover and schedule recovery but exclude miles for deadhead, operator training, and maintenance testing.
- Peak Cars The maximum number of passenger service vehicles operated simultaneously on an average weekday. In some cases, peak cars may be used as a supply variable when the model needs to base a line item expense on overall rail system size.
- Stations Passenger boarding/alighting facilities with a platform and associated equipment and amenities such as stairs, elevators, canopies, lighting, ticket vending machines and signage. Unit costs have been defined based on station profile (atgrade, aerial and subway) to account for additional costs associated with vertical circulation requirements for aerial and subway stations and ventilation and lighting requirements for subway stations.
- *Maintenance and Storage Yards* The total number of yard facilities allocated.
- Revenue Track-Miles Miles of directional revenue track reported in NTD.

Key supply variables and values used to represent LA Metro's fiscal year (FY) 2015 calibration (base) year input are as follows:

- 290,617 annual revenue train-hours
- 680,077 annual revenue car-hours
- 13,702,192 annual revenue car-miles
- 144 peak rail cars
- 38 at-grade stations
- 24 aerial stations
- 4 subway stations
- 3 maintenance and storage yards
- 135.8 directional track miles

After selecting key supply variables, the next step to develop the light rail transit (LRT) O&M cost model was to record Metro's light rail operating expenses as a series of line items. The NTD report format categorizes operating expenses within the four functional areas of Vehicle Operations, Vehicle Maintenance, Non-Vehicle Maintenance, and General Administration. For each functional area, line item expenses are further classified as salaries/wages, fringe benefits, services, materials/supplies, utilities, casualty and liability, taxes/fees, and miscellaneous.

After the list of line items was established, each was assigned a key supply variable as its most relevant cost driver. Several line item expenses were deemed to be strongly influenced by more than one key supply variable, thus the LRT O&M cost model splits those specific expenses among two or more cost drivers. A portion of general administrative costs were also identified as fixed costs that would not be impacted by changes in levels of rail service or facilities, since Metro presently operates an extensive LRT system.

Costs were inflated to 2020 dollars by 13.48 percent, using the Bureau of Labor Statistics consumer price index for all urban consumers (CPI-U) for Los Angeles (March 2015 index compared to March 2020 index). Resulting aggregate unit costs for the calibration system in 2020 dollars are as follows:

- \$192.87 per annual revenue train-hour
- \$22.51 per annual revenue car-hour
- \$2.29 per annual revenue car-mile
- \$811,085 per peak rail car
- \$394,992 per at-grade rail station
- \$570,919 per aerial rail station
- \$746,846 per subway rail station
- \$7,519,620 per rail yard
- \$95,218 per directional track miles

An additional \$14,730,860 was identified as fixed costs. The LRT O&M cost spreadsheet that generates the aggregate unit costs noted above is provided in Appendix A, Table A-1 (FY 2015 Calibration).

#### 2.2 O&M Cost Estimates

Once unit costs are established for each of the identified cost drivers, unit costs are multiplied by operating statistics as calculated for each of the project alternatives.

Table 2-1 summarizes annual statistics for each of the WSAB alternatives. Service statistics are based on the following assumed service levels:

- Weekday service (21.5-hour span Mondays through Thursdays, 22-hour span Fridays): 5 minute peak, 10 minute midday, 10-20 minute evening/night headways.
- Weekend service (22-hour span Saturdays, 21.5-hour span Sundays): 10 minute all-day headways tapering to 15-20 minute evening/night headways.

More details regarding the assumed service plan are provided in a separate memorandum, *Operating Plans and Support Facilities with Northern Alignments*, October 26, 2018 (Task 5.5.2c).

Table 2-1. Operating Statistics Summary

Operating Statistic	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Revenue Train- Hours	66,500	66,500 Short line +1,000 to +2,500**	49,600	26,700
Revenue Car- Miles	5,214,400	5,239,400 Short line +43,800 to +175,200**	3,919,100	1,688,300
Revenue Car- Hours	178,600	178,600 Short line +3,000 to +7,700**	133,000	71,100
Peak Cars	51	51 Short line +6 to +15**	39	24
At-Grade Stations	6	6	6	3
Aerial Stations	3	3	3	1
Subway Stations	2*	3	0	0
Yards	1	1	1	1
Directional Track- Miles	37.7	37.9	28.3	12.2

Source: CTG, 2020

Notes \* Alternative 1 Design Option 2 adds a subway station at Little Tokyo for a total of 3 subway stations.

The operating statistics for the WSAB alternatives as presented in Table 2-1 are based on the basic service plan providing 5-minute peak headways on weekdays. Preliminary peak load analysis suggests that for Alternative 2, additional short-line trips between the 7th Street/Metro Center Station and Slauson/A Line Station may need to be scheduled during the peak hour, as discussed in a separate memorandum. A peak load analysis based on the year 2042 forecast suggests that a minimum of two to three extra short-line trips in the peak

<sup>\*\*</sup> Alternative 2 Slauson/A Line short-line incremental statistics expressed as range, based on adding minimal amount of trains to address capacity, versus ultimate amount of trains to maintain 2.5-minute headway consistently throughout peak hour.

hour would be needed to accommodate peak loads. Eventually, short-line trips can be scheduled between every other full-length trip to provide 2.5 minute trunk service for the peak hour between the 7th Street/Metro Center and Slauson/A Line Stations. Operating statistics related to extra short-line service are included in Table 2-1 as a range, based on the minimum short-line service providing a few trips during the peak hour, versus short-line service provided every five minutes during the peak hour.

Table 2-2 provides the estimated annual O&M cost to operate each of WSAB alternatives. The cost is presented in millions, in 2020 dollars.

Table 2-2. O&M Cost Results by Alternative

Alternative	O&M Costs (in FY20 \$, in millions)
Alternative 1: LA Union Station to Pioneer Station  Design Option 2 (adds Little Tokyo station)	\$86.9 \$87.6
Alternative 2: 7th Street/Metro Center to Pioneer Station Slauson short line service	\$87.7 +\$5.2 to \$13.2
Alternative 3: Slauson/A (Blue) Line to Pioneer Station	\$67.5
Alternative 4: I-105/C (Green) Line to Pioneer Station	\$40.5

Source: CTG, 2020

The results show that for the two full alternatives going to Union Station or 7th Street/Metro Center, basic annual operating costs are approximately \$87 to \$88 million. Additional short-line service associated with Alternative 2 adds anywhere from \$5 million to \$13 million, depending on the number of extra trips scheduled during the peak hour.

O&M costs for Alternatives 3 and 4 range from about \$40 million to \$67 million. These alternatives are both shorter in length, with Alternative 4 having the lowest operating cost due to its significantly shorter length and number of stations.

## APPENDIX A. O&M COST DETAILS FOR PROJECT ALTERNATIVES

Table A-1.	LA Metro LRT O&M Cost Model – FY 2015 Calibration
Table A-2.	Alternative 1: Los Angeles Union Station to Pioneer Station
Table A-3.	Alternative 1 Design Option 2 (with Little Tokyo Station)
Table A-4.	Alternative 2: 7 <sup>th</sup> Street/Metro Center to Pioneer Station
Table A-5.	Alternative 2 with Minimum Short-Line Service to Slauson/A Line Station
Table A-6.	Alternative 2 with Maximum Short-Line Service to Slauson/A Line Station
Table A-7.	Alternative 3: Slauson/A (Blue) Line to Pioneer Station
Table A-8.	Alternative 4: I-105/C (Green) Line to Pioneer Station

### Table A-1. LA Metro LRT O&M Cost Model - FY 2015 Calibration

## WEST SANTA ANA BRANCH

Ca	l	ib	r	a	ti	o	n
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	Data) 2015				Su	pply Variable L	Init Cost (\$201	5)				Inflate Factor	1.134 Estimate
	LA Metro LRT	Revenue	Revenue	Revenue	Peak	At-Grade	Aerial	Subway		Revenue		Inflation	Annual Co
xpense Line Item	2015 NTD Expenses	Train-Hours	Car-Miles	Car-Hours	Cars	Stations	Stations	Stations	Yards	Track-Miles	Fixed	Factor	(2020)
EHICLE OPERATIONS	\$134,616,338	Traili-riours	Cal-Willes	Cal-Hours	Cars	Stations	Julions	Stations	Taius	Track-Ivilles	FIXEU	ractor	\$152,759,9
	\$15,816,955	\$54.43	1					1				1.135	\$17,948,7
perators' Salaries and Wages			1			676.000	ć7C 020	676.000	64 673 057				
Other Salaries and Wages	\$20,074,280	\$34.54	-			\$76,039	\$76,039	\$76,039	\$1,672,857			1.135	\$22,779,8 \$28,129,4
ringe Benefits	\$24,788,461	\$61.44	-		¢204 40F 62	\$52,517	\$52,517	\$52,517	\$1,155,367			1.135	\$28,129,4
ervice Costs	\$55,354,411				\$384,405.63 \$270.52							1.135 1.135	\$44,205
uel and Lubricants	\$38,955				\$270.52								
ires and Tubes	\$0		-		62.02F.04			-				1.135	\$0
Other Materials and Supplies	\$552,357			\$19.84	\$3,835.81							1.135	\$626,804
Itilities	\$17,990,919			\$19.84	\$31,234.23							1.135	\$20,415,7
asualty and Liability Costs	\$0											1.135	\$0
axes	\$0	<b></b>										1.135	\$0
T Funds In Report	\$0											1.135	\$0
Aiscellaneous Expenses	\$0											1.135	\$0
EHICLE MAINTENANCE	\$42,616,431		I	l	I			I	l	l	I		\$48,360,2
perators' Salaries and Wages	\$0		41.01		\$32.015.94							1.135	\$0
Other Salaries and Wages	\$18,441,181		\$1.01									1.135	\$20,926,6
ringe Benefits	\$15,147,180		\$0.83		\$26,297.19			-				1.135	\$17,188,7
ervice Costs	\$270,345	<del></del>	\$0.01		\$469.35							1.135	\$306,782
uel and Lubricants	\$60,636	-	1		\$421.08			1				1.135	\$68,809
ires and Tubes	\$9,061		1		\$62.92			1				1.135	\$10,282
Other Materials and Supplies	\$8,688,028	<del></del>			\$60,333.53							1.135	\$9,859,00
Jtilities	\$0											1.135	\$0
Casualty and Liability Costs	\$0											1.135	\$0
axes	\$0											1.135	\$0
T Funds In Report	\$0											1.135	\$0
Miscellaneous Expenses	\$0											1.135	\$0
NON-VEHICLE MAINTENANCE	\$37,982,769										1		\$43,102,08
Operators' Salaries and Wages	\$0											1.135	\$0
Other Salaries and Wages	\$14,719,880					\$60,081	\$120,162	\$180,243	\$1,471,988	\$32,518		1.135	\$16,703,8
ringe Benefits	\$11,122,398					\$45,398	\$90,795	\$136,193	\$1,112,240	\$24,571		1.135	\$12,621,4
Service Costs	\$9,207,414					\$37,581	\$75,163	\$112,744	\$920,741	\$20,340		1.135	\$10,448,38
uel and Lubricants	\$0											1.135	\$0
Fires and Tubes	\$0											1.135	\$0
Other Materials and Supplies	\$2,933,077					\$11,972	\$23,943	\$35,915	\$293,308	\$6,480		1.135	\$3,328,39
Jtilities	\$0											1.135	\$0
Casualty and Liability Costs	\$0											1.135	\$0
Taxes	\$0											1.135	\$0
PT Funds In Report	\$0											1.135	\$0
Miscellaneous Expenses	\$0											1.135	\$0
SENERAL ADMINISTRATION	\$50,486,696								ı		T		\$57,291,29
Operators' Salaries and Wages	\$0											1.135	\$0
Operators' Salaries and Wages Other Salaries and Wages	\$0 \$7,078,452	\$4.87			\$24,577.96						\$2,123,536	1.135	\$8,032,48
Operators' Salaries and Wages Other Salaries and Wages Fringe Benefits	\$0 \$7,078,452 \$6,477,503	\$4.46			\$22,491.33						\$1,943,251	1.135 1.135	\$8,032,48 \$7,350,54
Operators' Salaries and Wages Other Salaries and Wages Iringe Benefits ervice Costs	\$0 \$7,078,452 \$6,477,503 \$12,298,277											1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,83
Operators' Salaries and Wages Other Salaries and Wages ringe Benefits ervice Costs ruel and Lubricants	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0	\$4.46			\$22,491.33						\$1,943,251	1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,83 \$0
Operators' Salaries and Wages Other Salaries and Wages rringe Benefits ervice Costs izuel and Lubricants Tires and Tubes	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0	\$4.46 \$8.46			\$22,491.33 \$42,702.35						\$1,943,251 \$3,689,483	1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,8 \$0 \$0
Operators' Salaries and Wages Wher Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes Wher Materials and Supplies	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124	\$4.46			\$22,491.33 \$42,702.35 \$8,910.15						\$1,943,251	1.135 1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,8: \$0 \$0 \$2,911,98
Operators' Salaries and Wages Ther Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes Other Materials and Supplies Utilities	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411	\$4.46 \$8.46	\$0.17		\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79						\$1,943,251 \$3,689,483 \$769,837	1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,8: \$0 \$0 \$2,911,98 \$5,235,20
Operators' Salaries and Wages ther Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes ther Materials and Supplies vilitites assualty and Liability Costs	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750	\$4.46 \$8.46	\$0.17		\$22,491.33 \$42,702.35 \$8,910.15	\$64,491	\$64,491	\$64,491			\$1,943,251 \$3,689,483 \$769,837 \$2,128,188	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,8: \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09
Operators' Salaries and Wages Ther Salaries and Wages Tringe Benefits Terringe Benef	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545	\$4.46 \$8.46	\$0.17		\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79	\$64,491	\$64,491	\$64,491			\$1,943,251 \$3,689,483 \$769,837	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,83 \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09 \$139,062
Operators' Salaries and Wages Ther Salaries and Wages Tringe Benefits ervice Costs uel and Lubricants Tires and Tubes Wher Materials and Supplies Vitilities assualty and Liability Costs axes T Funds in Report	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0	\$4.46 \$8.46	\$0.17		\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08	\$64,491	\$64,491	\$64,491			\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,8: \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09 \$139,062 \$0
Operators' Salaries and Wages Ther Salaries and Wages Tringe Benefits Firinge Benefits Fire and Tubricants Fires and Tubes Ther Materials and Supplies Julities Saualty and Liability Costs Faxes For Funds In Report  Miscellaneous Expenses	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634	\$4.46 \$8.46 \$1.77			\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18						\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,83 \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09 \$139,062 \$0 \$10,006,03
operators' Salaries and Wages wher Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes where Materials and Supplies where Materials and Supplies where Materials and Supplies where Materials and Liability Costs axes T Funds In Report fiscellaneous Expenses OTALS IN 2015 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$169.96	\$2.02	\$19.84	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751	\$348,078	\$503,110	\$658,141	\$6,626,500	\$83,909	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$8,032,48 \$7,350,54 \$13,955,8: \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09 \$13,906; \$0 \$10,006,0:
Operators' Salaries and Wages Wher Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes Wher Materials and Supplies Whilties asualty and Liability Costs axes T Funds in Report discellaneous Expenses OTALS IN 2015 DOLLARS OTALS IN 2020 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.137	\$8,032,48 \$7,350,54 \$13,955,8: \$0 \$0 \$2,911,98 \$5,235,20 \$139,06; \$0 \$10,006,0: \$301,513,5 290,617
Operators' Salaries and Wages Ther Salaries and Wages Tringe Benefits ervice Costs uel and Lubricants Tires and Tubes Wher Materials and Supplies Vitilities assualty and Liability Costs axes T Funds in Report	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$169.96	\$2.02		\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751	\$348,078	\$503,110	\$658,141			\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 Rev. Train Hrs. Rev. Car-Mi's.	\$8,032,48 \$7,350,54 \$13,955,8 \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09 \$139,06; \$0 \$10,006,0 \$301,513,5 290,617
Operators' Salaries and Wages Wher Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes Wher Materials and Supplies Whilties asualty and Liability Costs axes T Funds in Report discellaneous Expenses OTALS IN 2015 DOLLARS OTALS IN 2020 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.137	\$8,032,48 \$7,350,54 \$13,955,8 \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09 \$139,06; \$0 \$10,006,0 \$301,513,5 290,617
Operators' Salaries and Wages Wher Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes Wher Materials and Supplies Whilties asualty and Liability Costs axes T Funds in Report discellaneous Expenses OTALS IN 2015 DOLLARS OTALS IN 2020 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 Rev. Train Hrs. Rev. Car-Mi's. Rev. Car-Hrs. Rev. Car-Hrs. Peak Car-	\$8,032,48 \$7,350,54 \$13,955,8 \$0 \$0 \$2,911,98 \$5,235,20 \$139,061 \$10,006,0 \$301,513,1 290,617 13,702,15 680,077 144.00
perators' Salaries and Wages ther Salaries and Wages tringe Benefits ervice Costs uel and Lubricants ires and Tubes ther Materials and Supplies tilities asualty and Liability Costs axes T Funds in Report liscellaneous Expenses OTALS IN 2015 DOLLARS OTALS IN 2020 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 Rev. Train Hrs. Rev. Car-Mi's. Rev. Car-Hrs. Peak Cars	\$8,032,48 \$7,350,54 \$13,955,8 \$0 \$0 \$2,911,96 \$5,235,20 \$139,061 \$0 \$10,006,0 \$301,513,2 290,617 13,702,15 680,077 144.00 38.00
perators' Salaries and Wages ther Salaries and Wages tinge Benefits ervice Costs uel and Lubricants tres and Tubes ther Materials and Supplies tilities asualty and Liability Costs axes T Funds in Report liscellaneous Expenses DTALS IN 2015 DOLLARS DTALS IN 2015 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 Rev. Train Hrs. Rev. Car-Mi's. Rev. Car-Hrs. Rev. Car-Hrs. Peak Car-	\$8,032,48 \$7,350,54 \$13,955,8 \$0 \$0 \$2,911,98 \$5,235,22 \$9,660,09 \$139,062 \$0 \$10,006,0' \$301,513,5' 290,617 13,702,19 680,077 144.00
perators' Salaries and Wages ther Salaries and Wages tringe Benefits ervice Costs uel and Lubricants ires and Tubes ther Materials and Supplies tilities asualty and Liability Costs axes T Funds in Report liscellaneous Expenses OTALS IN 2015 DOLLARS OTALS IN 2020 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 Rev. Train Hrs. Rev. Car-Mi's. Rev. Car-Hrs. Peak Cars	\$8,032,48 \$7,350,54 \$13,955,81 \$0 \$0 \$2,911,98 \$5,235,20 \$139,062 \$0 \$10,006,01 \$301,513,52 290,617 13,702,19 680,077 144.00 38.00
perators' Salaries and Wages ther Salaries and Wages tinge Benefits ervice Costs uel and Lubricants tres and Tubes ther Materials and Supplies tilities asualty and Liability Costs axes T Funds in Report liscellaneous Expenses DTALS IN 2015 DOLLARS DTALS IN 2015 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.145 Rev. Car-Mi's. Rev. Car-Mi's. Rev. Car-Mi's. At-Grade Stat. Aerial Stat.	\$8,032,48 \$7,350,54 \$13,955,8 \$0 \$0 \$2,911,98 \$5,235,20 \$9,660,09 \$13,906; \$0 \$10,006,0' \$301,513,5 29,617 13,702,19 680,077 144.00 38.00 24.00
perators' Salaries and Wages ther Salaries and Wages tringe Benefits ervice Costs uel and Lubricants ires and Tubes ther Materials and Supplies tilities asualty and Liability Costs axes T Funds in Report liscellaneous Expenses OTALS IN 2015 DOLLARS OTALS IN 2020 DOLLARS	\$0 \$7,078,452 \$6,477,503 \$12,298,277 \$0 \$0 \$2,566,124 \$4,613,411 \$8,512,750 \$122,545 \$0 \$8,817,634 \$265,702,234	\$4.46 \$8.46 \$1.77 \$1.77 \$169.96 \$192.87	\$2.02 \$2.29	\$22.51	\$22,491.33 \$42,702.35 \$8,910.15 \$16,018.79 \$14,779.08 \$45,925.18 \$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$7,519,620	\$95,218	\$1,943,251 \$3,689,483 \$769,837 \$2,128,188 \$122,545 \$2,204,409 \$12,981,248 \$14,730,860	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 A.Gar-Mi's. Rev. Car-Mi's. Rev. Car-Mi's. At-Grade Stat. Aerial Stat. Subway Stat.	\$8,032,48 \$7,350,54 \$13,955,8: \$0 \$0 \$2,911,98 \$0,252,00 \$9,660,09 \$139,062 \$10,006,0: \$301,513,5 290,617 144.00 38.00 24.00 4.00

## Table A-2. O&M Cost Detail for Alternative 1: Los Angeles Union Station to Pioneer Station

Expense Line Item VEHICLE OPERATIONS  Operators' Salaries and Wages Other Salaries and Wages Oringe Benefits Service Costs Fruel and Lubricants Tires and Tubes Other Materials and Supplies Utilities Casualty and Liability Costs Taxes OPE Funds In Report Miscellaneous Expenses VEHICLE MAINTENANCE Operators' Salaries and Wages Other Salaries and Wages Fringe Benefits Service Costs Fruel and Lubricants Tires and Tubes Other Materials and Supplies Utilities Casualty and Liability Costs Tires and Tubes Other Materials and Supplies Utilities Casualty and Liability Costs Taxes OFF Funds In Report Miscellaneous Expenses OFF Funds In Report Miscellaneous Expenses	2015 LA Metro LRT 2015 NTD Expenses \$134,616,338 \$115,816,955 \$20,074,280 \$524,788,461 \$553,354,411 \$38,955 \$0 \$552,357 \$17,990,919 \$0 \$0 \$0 \$50 \$50 \$42,616,431 \$0 \$18,441,181 \$151,417,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Revenue Train-Hours \$54.43 \$334.54 \$61.44	\$1.01 \$0.83 \$0.01	Revenue Car-Hours	\$384,405.63 \$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$66.92 \$66,333.53	ariable Unit Co At-Grade Stations \$76,039 \$52,517	\$t (\$2015) Aerial Stations \$76,039 \$52,517	Subway Stations \$76,039 \$52,517	Yards  \$1,672,857 \$1,155,367	Revenue Track-Miles	Inflation Factor  1.135	Estimated Annual Cost (2020) \$44,477,580 \$4,107,099 \$54,43,774 \$5,603,264 \$22,247,006 \$15,656 \$0 \$2221,993 \$5,828,787 \$0 \$0 \$0 \$7,825,656 \$0 \$7,825,656 \$5,427,821 \$114,723
VEHICLE OPERATIONS  Operators' Salaries and Wages  Other Salaries and Wages  Fringe Benefits  Service Costs  Fuel and Lubricants  Tires and Tubes  Other Materials and Supplies  Utilities  Casualty and Liability Costs  Taxes  PT Funds In Report  Miscellaneous Expenses  VEHICLE MAINTENANCE  Operators' Salaries and Wages  Other Salaries and Wages  Fringe Benefits  Service Costs  Fuel and Lubricants  Fires and Tubes  Other Materials and Supplies  Utilities  Casualty and Liability Costs  For the Maintenance  Operator's Cost of the Mages  Other Materials and Supplies  Utilities  Casualty and Liability Costs  Taxes  PT Funds In Report	2015 NTD Expenses \$134,616,338 \$15,816,955 \$20,074,280 \$24,788,461 \$55,354,411 \$38,955 \$0 \$552,357 \$17,990,919 \$0 \$0 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$	\$54.43 \$34.54	\$1.01 \$0.83	Car-Hours	\$384,405.63 \$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92	\$76,039	\$76,039	\$76,039	\$1,672,857		1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	(2020) \$44,477,580 \$4,107,099 \$5,453,774 \$6,603,264 \$22,247,006 \$15,656 \$0 \$221,993 \$5,828,787 \$0 \$0 \$0 \$0 \$1,782,940 \$0 \$0 \$1,782,940 \$0 \$0 \$1,782,940 \$0 \$1,782,940 \$0 \$1,782,940 \$0 \$0 \$1,782,940 \$0 \$0 \$1,782,940 \$0 \$0 \$1,782,940 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
Derators' Salaries and Wages Diperators' Salaries and Wages Dither Salaries and Wages Fringe Benefits Fringe B	\$134,616,338 \$15,816,955 \$20,074,280 \$24,788,461 \$55,354,411 \$38,955 \$0 \$55,354,411 \$38,955 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$54.43 \$34.54	\$1.01		\$384,405.63 \$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92	\$76,039	\$76,039	\$76,039	\$1,672,857	Track-Miles	1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$44,477,580 \$4,107,099 \$5,453,774 \$6,603,264 \$22,247,006 \$15,656 \$0 \$221,993 \$5,828,787 \$0 \$0 \$0 \$1,7887,940 \$0 \$7,825,656 \$6,427,821
Operators' Salaries and Wages Ther Salaries and Wages Tringe Benefits Service Costs Service Costs Service And Lubricants Service Costs Service And Lubricants Service Costs Service And Service Costs Service And Service Costs Service And Service Costs Service Costs Service Costs Service Costs Service And Service Costs Servic	\$15,816,955 \$20,074,280 \$24,788,461 \$55,354,411 \$38,955 \$0 \$55,354,411 \$38,955 \$0 \$55,357 \$17,990,919 \$0 \$0 \$0 \$50 \$50 \$50 \$51 \$42,616,431 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$34.54	\$0.83	\$19.84	\$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$4,107,099 \$5,453,774 \$6,603,264 \$15,656 \$0 \$22,247,006 \$15,656 \$0 \$221,993 \$5,828,787 \$0 \$0 \$0 \$0 \$17,887,940 \$0 \$7,825,656 \$6,427,821
Other Salaries and Wages ringe Benefits service Costs suel and Lubricants suel and Lubricants suel and Lubricants suel and Tubes Other Materials and Supplies Utilities Lasualty and Liability Costs saves Suel Salaries and Wages Suel Salaries and Wages Other Salaries and Wages Suel Salaries and Wages Suel Salaries and Wages Suel and Lubricants suel and Lubricants suel and Lubricants suel and Supplies Utilities Lasualty and Liability Costs saves Suel Salaries and Supplies Suel Salaries Suel Supplies Suel Suel Suel Suel Suel Suel Suel Suel	\$20,074,280 \$24,788,461 \$38,955 \$0 \$55,334,411 \$38,955 \$0 \$50 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,0 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$34.54	\$0.83	\$19.84	\$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$5,453,774 \$6,603,264 \$22,247,006 \$15,656 \$0 \$212,1993 \$5,828,787 \$0 \$0 \$0 \$5,828,787 \$0 \$5,828,787 \$5,90 \$5,90 \$5,828,787 \$5,90 \$5,90 \$5,828,787
other Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes other Materials and Supplies titlities asualty and Liability Costs asxes T Funds in Report discellaneous Expenses FEHICLE MAINTENANCE Operators' Salaries and Wages other Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes other Materials and Supplies titlities asualty and Liability Costs assualty and Liability Costs assualty and Liability Costs asxes T Funds in Report	\$20,074,280 \$24,788,461 \$38,955 \$0 \$55,334,411 \$38,955 \$0 \$50 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,0 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$34.54	\$0.83	\$19.84	\$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$5,453,774 \$6,603,264 \$22,247,006 \$15,656 \$0 \$212,193 \$5,828,787 \$0 \$0 \$0 \$1,887,940 \$0 \$7,825,656 \$6,427,821
vervice Costs  uel and Lubricants irres and Tubes  ther Materials and Supplies  Jitlities  Jasualty and Liability Costs  axes  T Funds In Report  Jitlities  Jitlitie	\$55,354,411 \$38,955 \$0 \$552,357 \$17,990,919 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$61.44	\$0.83	\$19.84	\$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92	\$52,517	\$52,517	\$52,517	\$1,155,367		1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$22,247,006 \$15,656 \$0 \$221,993 \$5,828,787 \$0 \$0 \$0 \$0 \$7,825,656 \$6,427,821
iervice Costs  fuel and Lubricants  fires and Tubes  Dther Materials and Supplies  Littles  Lasualty and Liability Costs  Taves  PT Funds In Report  Miscellaneous Expenses  Deperators' Salaries and Wages  Dther Salaries and Wages  Costs  Little Lasualty and Liability Costs  Little Lasualty Lasualty Costs  Little Lasualty Lasualty Lasualty Lasualty  Little Lasualty Lasualty  Lasualty Lasualty Lasualty  Little Lasualty Lasualty  Lasualty Lasualty  Little Lasualty Lasualty  Little Lasualty Lasualty  Little Lasualty  Lasual	\$55,354,411 \$38,955 \$0 \$552,357 \$17,990,919 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0		\$0.83	\$19.84	\$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$22,247,006 \$15,656 \$0 \$221,993 \$5,828,787 \$0 \$0 \$0 \$0 \$17,887,940 \$0 \$7,825,656 \$6,427,821
ruel and Lubricants irres and Tubes Dither Materials and Supplies Utilities Lasualty and Liability Costs Taxes FF Funds In Report Miscellaneous Expenses  VFEHICLE MAINTENANCE Departors' Salaries and Wages Other Salaries and Wages Fringe Benefits Friese and Tubes Dither Materials and Supplies Utilities Lasualty and Liability Costs Taxes TF Funds In Report	\$38,955 \$0 \$552,257 \$17,990,919 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,0 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0		\$0.83	\$19.84	\$270.52 \$3,835.81 \$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$15,656 \$0 \$221,993 \$5,828,787 \$0 \$0 \$0 \$0 \$17,887,940 \$0 \$7,825,656 \$6,427,821
Other Materials and Supplies  Itilities  Sasualty and Liability Costs  axes  T Funds in Report  Miscellaneous Expenses  VEHICLE MAINTENANCE  Opensory Salaries and Wages  Other Salaries and Wages  ringe Benefits  ervice Costs  uel and Lubricants  ires and Tubes  Other Materials and Supplies  Itilities  Sasualty and Liability Costs  assualty and Liability Costs  assualty  T Funds in Report	\$552,357 \$17,990,919 \$0 \$0 \$0 \$0 \$50 \$50 \$50 \$50 \$5		\$0.83	\$19.84	\$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$221,993 \$5,828,787 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
Utilities  asualty and Liability Costs  awes  PT Funds In Report  Miscellaneous Expenses  //EHICLE MAINTENANCE  //EPICLE MAINTENANCE	\$17,990,919 \$0 \$0 \$0 \$0 \$0 \$50 \$50 \$42,616,431 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0		\$0.83	\$19.84	\$31,234.23 \$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$5,828,787 \$0 \$0 \$0 \$0 \$0 <b>\$17,887,940</b> \$0 \$7,825,656 \$6,427,821
Casualty and Liability Costs  axes  TF Funds In Report  Wiscellaneous Expenses  VEHICLE MAINTENANCE  Operators' Salaries and Wages  Other Salaries and Wages  Other Salaries and Wages  Other Salaries and Wages  Unique Benefits  Furely Costs  Full and Lubricants  Fires and Tubes  Other Materials and Supplies  Utilities  Sasualty and Liability Costs  Faxes  TF Funds In Report	\$0 \$0 \$0 \$0 \$2,2616,431 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$688,028 \$0 \$0 \$0 \$0		\$0.83	\$19.84	\$32,015.94 \$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$0 \$0 \$0 \$0 \$0 \$17,887,940 \$0 \$7,825,656 \$6,427,821
Treunds In Report Miscellaneous Expenses VEHICLE MAINTENANCE Diperators' Salaries and Wages Other Salaries and Wages Tringe Benefits ervice Costs uel and Lubricants Tires and Tubes Other Materials and Supplies Utilities Lasualty and Liability Costs Taxes Treunds In Report	\$0 \$0 \$0 \$2,616,431 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$6,688,028 \$0 \$0 \$0 \$0 \$0		\$0.83		\$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135 1.135 1.135	\$0 \$0 \$0 \$0 \$0 \$17,887,940 \$0 \$7,825,656 \$6,427,821
PT Funds in Report Miscellaneous Expenses  // Expenses	\$0 \$0 \$24,616,431 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0		\$0.83		\$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135	\$0 \$0 <b>\$17,887,940</b> \$0 \$7,825,656 \$6,427,821
PT Funds in Report discellaneous Expenses  FEHICLE MAINTENANCE Operators' Salaries and Wages Other Salaries and Wages ringe Benefits ervice Costs uel and Lubricants irres and Tubes Other Materials and Supplies Utilities	\$0 \$0 \$24,616,431 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0		\$0.83		\$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135 1.135 1.135	\$0 \$0 <b>\$17,887,940</b> \$0 \$7,825,656 \$6,427,821
VEHICLE MAINTENANCE  Diperators' Salaries and Wages  Dither Salaries and Wages  ringe Benefits  ervice Costs  uel and Lubricants  iries and Tubes  Dither Materials and Supplies  Utilities  Casualty and Liability Costs  axes  T Funds in Report	\$0 \$42,616,431 \$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0 \$0		\$0.83		\$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135 1.135	\$17,887,940 \$0 \$7,825,656 \$6,427,821
Operators' Salaries and Wages Ther Salaries and Wages Tringe Benefits Fervice Costs Fires and Lubricants Fires and Tubes Ther Materials and Supplies Utilities Lasualty and Liability Costs Faxes T Funds in Report	\$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0		\$0.83		\$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135	\$0 \$7,825,656 \$6,427,821
Operators' Salaries and Wages Ther Salaries and Wages Tringe Benefits Fervice Costs Fires and Lubricants Fires and Tubes Ther Materials and Supplies Utilities Lasualty and Liability Costs Faxes T Funds in Report	\$0 \$18,441,181 \$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0		\$0.83		\$26,297.19 \$469.35 \$421.08 \$62.92						1.135 1.135	\$0 \$7,825,656 \$6,427,821
other Salaries and Wages ringe Benefits ervice Costs uel and Lubricants ires and Tubes other Materials and Supplies titilities assualty and Liability Costs axes T Funds in Report	\$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0		\$0.83		\$26,297.19 \$469.35 \$421.08 \$62.92						1.135	\$6,427,821
ringe Benefits erevice Costs uel and Lubricants ires and Tubes Other Materials and Supplies Utilities Casualty and Liability Costs axes IT Funds In Report	\$15,147,180 \$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0				\$26,297.19 \$469.35 \$421.08 \$62.92						1.135	\$6,427,821
ervice Costs uel and Lubricants ires and Tubes by the Materials and Supplies Utilities Casualty and Liability Costs axes T Funds in Report	\$270,345 \$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0				\$469.35 \$421.08 \$62.92							
uel and Lubricants ires and Tubes bther Materials and Supplies Utilities assualty and Liability Costs axes T Funds in Report	\$60,636 \$9,061 \$8,688,028 \$0 \$0 \$0 \$0				\$421.08 \$62.92							2114,743
ires and Tubes  Other Materials and Supplies  Utilities  Easualty and Liability Costs  Eaxes  OT Funds In Report	\$9,061 \$8,688,028 \$0 \$0 \$0 \$0				\$62.92		I				1.135	\$24,370
Other Materials and Supplies Utilities Casualty and Liability Costs Taxes PT Funds In Report	\$8,688,028 \$0 \$0 \$0 \$0 \$0					1				İ	1.135	\$3,642
Utilities Casualty and Liability Costs Caxes PT Funds In Report	\$0 \$0 \$0 \$0 \$0				1 200,333.53						1.135	\$3,491,729
Casualty and Liability Costs  Taxes  T Funds In Report	\$0 \$0 \$0							1		İ	1.135	\$0
Taxes PT Funds In Report	\$0 \$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
											1.135	\$0
											1.135	\$0
NON-VEHICLE MAINTENANCE	\$37,982,769					l						\$11,064,712
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$14,719,880					\$60,081	\$120,162	\$180,243	\$1,471,988	\$32,518	1.135	\$4,288,030
ringe Benefits	\$11,122,398					\$45,398	\$90,795	\$136,193	\$1,112,240	\$24,571	1.135	\$3,240,052
Service Costs	\$9,207,414					\$37,581	\$75,163	\$112,744	\$920,741	\$20,340	1.135	\$2,682,200
uel and Lubricants	\$0					701/002	4.0,200	<del>+</del> ,	40-0): :-	¥==,= :=	1.135	\$0
Fires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$2,933,077					\$11,972	\$23,943	\$35,915	\$293,308	\$6,480	1.135	\$854,431
Jtilities	\$0					7-2,012	7-0,0.0	700,000	7-00,000	7-7.00	1.135	\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Viscellaneous Expenses	\$0										1.135	\$0
GENERAL ADMINISTRATION	\$50,486,696	-		l						•	1.155	\$13,428,434
Operators' Salaries and Wages	\$0							I			1.135	\$0
Other Salaries and Wages	\$7,078,452	\$4.87			\$24,577.96			1		1	1.135	\$1,790,024
Fringe Benefits	\$6,477,503	\$4.46			\$22,491.33			1			1.135	\$1,638,054
Service Costs	\$12.298.277	\$8.46			\$42,702.35						1.135	\$3,110,031
uel and Lubricants	\$12,238,277	Ç5.40			y .2,, 02.33					1	1.135	\$0
Fires and Tubes	\$0							1		1	1.135	\$0
Other Materials and Supplies	\$2,566,124	\$1.77			\$8,910.15						1.135	\$648,930
Jtilities	\$4,613,411	y1.//	\$0.17		\$16,018.79						1.135	\$1,923,203
Casualty and Liability Costs	\$8,512,750		/		\$14,779.08	\$64,491	\$64,491	\$64,491		1	1.135	\$1,660,329
Taxes	\$122,545				+11,773.00	701,131	901,131	yo 1,132		1	1.135	\$0
PT Funds In Report	\$122,343				1						1.135	\$0
Viscellaneous Expenses	\$8,817,634				\$45,925.18					1	1.135	\$2,657,864
TOTALS IN 2015 DOLLARS	\$265,702,234	\$169.96	\$2.02	\$19.84	\$714,751	\$348,078	\$503,110	\$658,141	\$6,626,500	\$83,909	2.255	\$86,858,667
TOTALS IN 2015 DOLLARS	\$301,513,573	\$192.87	\$2.02	\$22.51	\$811,085	\$394,992	\$570,919	\$746,846	\$7,519,620	\$95,218	Rev. Train Hrs.	66,500
2015 Resource Variable Values	QJ01,313,373	290,617	13,702,192	680,077	144	38	24	4	37,513,020	135.8	Rev. Car-Mi's.	5,214,400
		230,027	-5,, 02,252	000,0				-		200.0	Rev. Car-Hrs.	178,600
											Peak Cars	51
											At-Grade Stat.	6
											Aerial Stat.	3
											Subway Stat.	2
											Total Stat.	11
											Yards	1
											Track-Mi's.	37.7

## Table A-3. O&M Cost Detail for Alternative 1 Design Option 2 (with Little Tokyo Station)

(Reflects LA Metro Light Rail Cos			Supply Variable Unit Cost (\$2015)									
	2015											Estimate
	LA Metro LRT	Revenue	Revenue	Revenue	Peak	At-Grade	Aerial	Subway		Revenue	Inflation	Annual Co
xpense Line Item	2015 NTD Expenses	Train-Hours	Car-Miles	Car-Hours	Cars	Stations	Stations	Stations	Yards	Track-Miles	Factor	(2020)
Perators' Salaries and Wages	\$134,616,338 \$15,816,955	\$54.43						I	ı	ı	1.135	\$44,623,4 \$4,107,09
Other Salaries and Wages  Other Salaries and Wages	\$20,074,280	\$34.43				\$76,039	\$76,039	\$76,039	\$1,672,857		1.135	\$5,540,06
Fringe Benefits	\$24,788,461	\$61.44				\$52,517	\$52,517	\$52,517	\$1,072,837		1.135	\$6,662,85
Service Costs	\$55,354,411	301.44			\$384,405.63	332,317	JJ2,J17	332,317	31,133,307		1.135	\$22,247,0
Fuel and Lubricants	\$38,955				\$270.52			<b>†</b>			1.135	\$15,656
Tires and Tubes	\$0				3270.32						1.135	\$13,030
Other Materials and Supplies	\$552,357				\$3,835.81						1.135	\$221,993
Jtilities	\$17,990,919			\$19.84	\$31,234.23						1.135	\$5,828,78
Casualty and Liability Costs	\$0			Ş13.6 <del>4</del>	Ç31,234.23						1.135	\$0
Faxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
/EHICLE MAINTENANCE	\$42,616,431									l	1.133	\$17,887,94
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$18,441,181		\$1.01		\$32,015.94						1.135	\$7,825,650
ringe Benefits	\$15,147,180	<b> </b>	\$0.83		\$26,297.19					l	1.135	\$6,427,821
Service Costs	\$270,345		\$0.01		\$469.35						1.135	\$114,723
Fuel and Lubricants	\$60,636		Ş0.01		\$421.08						1.135	\$24,370
Tires and Tubes	\$9,061				\$62.92						1.135	\$3,642
Other Materials and Supplies	\$8,688,028	1	1		\$60,333.53			1	1	1	1.135	\$3,491,729
Jtilities	\$0				\$00,555.55						1.135	\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
NON-VEHICLE MAINTENANCE	\$37,982,769									l		\$11,592,49
Operators' Salaries and Wages	\$0									I	1.135	\$0
Other Salaries and Wages	\$14,719,880					\$60,081	\$120,162	\$180,243	\$1,471,988	\$32,518	1.135	\$4,492,566
Fringe Benefits	\$11,122,398					\$45,398	\$90,795	\$136,193	\$1,112,240	\$24,571	1.135	\$3,394,600
Service Costs	\$9,207,414					\$37,581	\$75,163	\$112,744	\$920,741	\$20,340	1.135	\$2,810,140
Fuel and Lubricants	\$0										1.135	\$0
Tires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$2,933,077					\$11,972	\$23,943	\$35,915	\$293,308	\$6,480	1.135	\$895,187
Utilities	\$0							1,		1 . 7	1.135	\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	ŚO
Miscellaneous Expenses	\$0										1.135	\$0
GENERAL ADMINISTRATION	\$50,486,696									'		\$13,501,617
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$7,078,452	\$4.87			\$24,577.96						1.135	\$1,790,024
Fringe Benefits	\$6,477,503	\$4.46			\$22,491.33						1.135	\$1,638,054
Service Costs	\$12,298,277	\$8.46			\$42,702.35						1.135	\$3,110,031
Fuel and Lubricants	\$0										1.135	\$0
Tires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$2,566,124	\$1.77			\$8,910.15						1.135	\$648,930
Utilities	\$4,613,411		\$0.17		\$16,018.79					1	1.135	\$1,923,203
Casualty and Liability Costs	\$8,512,750				\$14,779.08	\$64,491	\$64,491	\$64,491			1.135	\$1,733,512
Taxes	\$122,545										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$8,817,634				\$45,925.18						1.135	\$2,657,864
TOTALS IN 2015 DOLLARS	\$265,702,234	\$169.96	\$2.02	\$19.84	\$714,751	\$348,078	\$503,110	\$658,141	\$6,626,500	\$83,909		\$87,605,51
TOTALS IN 2020 DOLLARS	\$301,513,573	\$192.87	\$2.29	\$22.51	\$811,085	\$394,992	\$570,919	\$746,846	\$7,519,620	\$95,218	Rev. Train Hrs.	66,500
2015 Resource Variable Values		290,617	13,702,192	680,077	144	38	24	4	3	135.8	Rev. Car-Mi's.	5,214,400
											Rev. Car-Hrs.	178,600
											Peak Cars	51
											At-Grade Stat.	6
											Aerial Stat.	3
											Subway Stat.	3
												12
											l lotal Stat.	17
											Total Stat. Yards	1

## Table A-4. O&M Cost Detail for Alternative 2: 7th Street/Metro Center to Pioneer Station

(Reflects LA Metro Light Rail Cost											Inflate Factor	1.1348
	2015					riable Unit Co						Estimated
	LA Metro LRT	Revenue	Revenue	Revenue	Peak	At-Grade	Aerial	Subway		Revenue	Inflation	Annual Cos
Expense Line Item	2015 NTD Expenses	Train-Hours	Car-Miles	Car-Hours	Cars	Stations	Stations	Stations	Yards	Track-Miles	Factor	(2020)
/EHICLE OPERATIONS	\$134,616,338											\$44,623,462
Operators' Salaries and Wages	\$15,816,955	\$54.43									1.135	\$4,107,099
Other Salaries and Wages	\$20,074,280	\$34.54				\$76,039	\$76,039	\$76,039	\$1,672,857		1.135	\$5,540,061
ringe Benefits	\$24,788,461	\$61.44				\$52,517	\$52,517	\$52,517	\$1,155,367		1.135	\$6,662,859
Service Costs	\$55,354,411				\$384,405.63						1.135	\$22,247,006
uel and Lubricants	\$38,955				\$270.52						1.135	\$15,656
Tires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$552,357				\$3,835.81						1.135	\$221,993
Utilities	\$17,990,919			\$19.84	\$31,234.23						1.135	\$5,828,787
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
VEHICLE MAINTENANCE	\$42,616,431											\$17,940,517
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$18,441,181		\$1.01		\$32,015.94						1.135	\$7,854,291
ringe Benefits	\$15,147,180		\$0.83		\$26,297.19						1.135	\$6,451,342
Service Costs	\$270,345		\$0.01		\$469.35						1.135	\$115,143
uel and Lubricants	\$60,636				\$421.08						1.135	\$24,370
Tires and Tubes	\$9,061				\$62.92						1.135	\$3,642
Other Materials and Supplies	\$8,688,028				\$60,333.53						1.135	\$3,491,729
Utilities	\$0										1.135	\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
NON-VEHICLE MAINTENANCE	\$37,982,769											\$11,609,632
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$14,719,880					\$60,081	\$120,162	\$180,243	\$1,471,988	\$32,518	1.135	\$4,499,208
Fringe Benefits	\$11,122,398					\$45,398	\$90,795	\$136,193	\$1,112,240	\$24,571	1.135	\$3,399,619
Service Costs	\$9,207,414					\$37,581	\$75,163	\$112,744	\$920,741	\$20,340	1.135	\$2,814,294
Fuel and Lubricants	\$0										1.135	\$0
Tires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$2,933,077					\$11,972	\$23,943	\$35,915	\$293,308	\$6,480	1.135	\$896,510
Utilities	\$0										1.135	\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
GENERAL ADMINISTRATION	\$50,486,696											\$13,506,393
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$7,078,452	\$4.87			\$24,577.96						1.135	\$1,790,024
Fringe Benefits	\$6,477,503	\$4.46			\$22,491.33						1.135	\$1,638,054
Service Costs	\$12,298,277	\$8.46			\$42,702.35						1.135	\$3,110,031
Fuel and Lubricants	\$0										1.135	\$0
Tires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$2,566,124	\$1.77			\$8,910.15						1.135	\$648,930
Utilities	\$4,613,411		\$0.17		\$16,018.79						1.135	\$1,927,978
Casualty and Liability Costs	\$8,512,750				\$14,779.08	\$64,491	\$64,491	\$64,491			1.135	\$1,733,512
Taxes	\$122,545										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$8,817,634				\$45,925.18						1.135	\$2,657,864
TOTALS IN 2015 DOLLARS	\$265,702,234	\$169.96	\$2.02	\$19.84	\$714,751	\$348,078	\$503,110	\$658,141	\$6,626,500	\$83,909		\$87,680,004
TOTALS IN 2020 DOLLARS	\$301,513,573	\$192.87	\$2.29	\$22.51	\$811,085	\$394,992	\$570,919	\$746,846	\$7,519,620	\$95,218	Rev. Train Hrs.	66,500
2015 Resource Variable Values		290,617	13,702,192	680,077	144	38	24	4	3	135.8	Rev. Car-Mi's.	5,239,400
								-			Rev. Car-Hrs.	178,600
											Peak Cars	51
											At-Grade Stat.	6
											Aerial Stat.	3
											Subway Stat.	3
											Total Stat.	12
											Yards	1
											Track-Mi's.	37.9

## Table A-5. O&M Cost Detail for Alternative 2 with Minimum Short-Line Service to Slauson/A Line Station

(Reflects LA Metro Light Rail Cost											Inflate Factor	1.1348
	2015					riable Unit Cos						Estimated
	LA Metro LRT	Revenue	Revenue	Revenue	Peak	At-Grade	Aerial	Subway		Revenue	Inflation	Annual Cost
Expense Line Item	2015 NTD Expenses	Train-Hours	Car-Miles	Car-Hours	Cars	Stations	Stations	Stations	Yards	Track-Miles	Factor	(2020)
VEHICLE OPERATIONS	\$134,616,338											\$47,719,601
Operators' Salaries and Wages	\$15,816,955	\$54.43									1.135	\$4,168,860
Other Salaries and Wages	\$20,074,280	\$34.54				\$76,039	\$76,039	\$76,039	\$1,672,857		1.135	\$5,579,253
Fringe Benefits	\$24,788,461	\$61.44				\$52,517	\$52,517	\$52,517	\$1,155,367		1.135	\$6,732,583
Service Costs	\$55,354,411				\$384,405.63						1.135	\$24,864,301
Fuel and Lubricants	\$38,955				\$270.52						1.135	\$17,498
Tires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$552,357				\$3,835.81						1.135	\$248,110
Utilities	\$17,990,919			\$19.84	\$31,234.23						1.135	\$6,108,996
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
VEHICLE MAINTENANCE	\$42,616,431											\$18,846,949
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$18,441,181		\$1.01		\$32,015.94						1.135	\$8,122,448
Fringe Benefits	\$15,147,180		\$0.83		\$26,297.19						1.135	\$6,671,600
Service Costs	\$270,345		\$0.01		\$469.35						1.135	\$119,074
Fuel and Lubricants	\$60,636				\$421.08						1.135	\$27,237
Tires and Tubes	\$9,061				\$62.92						1.135	\$4,070
Other Materials and Supplies	\$8,688,028				\$60,333.53						1.135	\$3,902,521
Utilities	\$0				7 ,						1.135	\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
NON-VEHICLE MAINTENANCE	\$37,982,769										1.133	\$11,609,632
Operators' Salaries and Wages	\$0		I	I	T T	ı	1	T T	T T	ı	1.135	\$11,609,632
Other Salaries and Wages	\$14,719,880			1		\$60,081	\$120,162	\$180,243	\$1,471,988	\$32,518	1.135	\$4,499,208
	\$11,122,398			-		\$45,398	\$90,795	\$136,193	\$1,471,988	\$24,571	1.135	\$3,399,619
Fringe Benefits Service Costs	\$9,207,414					\$37,581	\$75,163	\$136,193	\$920,741	\$20,340	1.135	\$2,814,294
Fuel and Lubricants	\$9,207,414			-		\$37,361	\$75,105	\$112,744	\$920,741	\$20,540	1.135	\$2,814,294
Tires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$2,933,077			-		\$11,972	\$23,943	\$35,915	\$293,308	\$6,480	1.135	\$896,510
						\$11,972	\$23,943	\$35,915	\$293,308	\$6,480	1.135	
Utilities	\$0			-								\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0			L							1.135	\$0
GENERAL ADMINISTRATION	\$50,486,696		1		1			_	1	_	1	\$14,731,230
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$7,078,452	\$4.87		1	\$24,577.96		<b></b>		1		1.135	\$1,962,895
Fringe Benefits	\$6,477,503	\$4.46			\$22,491.33		<b>_</b>				1.135	\$1,796,248
Service Costs	\$12,298,277	\$8.46			\$42,702.35						1.135	\$3,410,382
Fuel and Lubricants	\$0						1				1.135	\$0
Tires and Tubes	\$0						1				1.135	\$0
Other Materials and Supplies	\$2,566,124	\$1.77			\$8,910.15		1			ļ	1.135	\$711,601
Utilities	\$4,613,411		\$0.17		\$16,018.79						1.135	\$2,045,413
Casualty and Liability Costs	\$8,512,750				\$14,779.08	\$64,491	\$64,491	\$64,491			1.135	\$1,834,138
Taxes	\$122,545										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$8,817,634				\$45,925.18						1.135	\$2,970,553
TOTALS IN 2015 DOLLARS	\$265,702,234	\$169.96	\$2.02	\$19.84	\$714,751	\$348,078	\$503,110	\$658,141	\$6,626,500	\$83,909		\$92,907,413
TOTALS IN 2020 DOLLARS	\$301,513,573	\$192.87	\$2.29	\$22.51	\$811,085	\$394,992	\$570,919	\$746,846	\$7,519,620	\$95,218	Rev. Train Hrs.	67,500
2015 Resource Variable Values		290,617	13,702,192	680,077	144	38	24	4	3	135.8	Rev. Car-Mi's.	5,283,200
											Rev. Car-Hrs.	181,600
											Peak Cars	57
											At-Grade Stat.	6
											Aerial Stat.	3
											Subway Stat.	3
											Total Stat.	12
												12
											Yards	
											Track-Mi's.	37.9

## Table A-6. O&M Cost Detail for Alternative 2 with Maximum Short-Line to Slauson/A Line Station

(Reflects LA Metro Light Rail Cost											Inflate Factor	1.134
	2015	_				riable Unit Cos						Estimated
Expense Line Item	LA Metro LRT 2015 NTD Expenses	Revenue Train-Hours	Revenue Car-Miles	Revenue Car-Hours	Peak Cars	At-Grade Stations	Aerial Stations	Subway Stations	Yards	Revenue Track-Miles	Inflation Factor	Annual Co (2020)
EHICLE OPERATIONS	\$134,616,338	Train-110urs	Car-ivilles	Car-riours	Cars	Stations	Stations	Stations	raius	Track-Ivilles	ractor	\$52,368,31
Operators' Salaries and Wages	\$15,816,955	\$54.43							I		1.135	\$4,261,50
Other Salaries and Wages	\$20,074,280	\$34.54				\$76,039	\$76,039	\$76,039	\$1,672,857		1.135	\$5,638,04
ringe Benefits	\$24,788,461	\$61.44				\$52,517	\$52,517	\$52,517	\$1,155,367		1.135	\$6,837,16
ervice Costs	\$55,354,411				\$384,405.63						1.135	\$28,790,2
uel and Lubricants	\$38,955				\$270.52						1.135	\$20,261
ires and Tubes	\$0										1.135	\$0
Other Materials and Supplies	\$552,357				\$3,835.81						1.135	\$287,285
Jtilities	\$17,990,919			\$19.84	\$31,234.23						1.135	\$6,533,81
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
/EHICLE MAINTENANCE	\$42,616,431											\$20,344,77
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$18,441,181		\$1.01		\$32,015.94						1.135	\$8,599,93
ringe Benefits	\$15,147,180		\$0.83	1	\$26,297.19						1.135	\$7,063,80
Service Costs	\$270,345		\$0.01		\$469.35				1		1.135	\$126,074
Fuel and Lubricants	\$60,636				\$421.08						1.135	\$31,537
Tires and Tubes	\$9,061			<b></b>	\$62.92			<b></b>	1	-	1.135	\$4,713
Other Materials and Supplies	\$8,688,028				\$60,333.53						1.135	\$4,518,70
Jtilities	\$0										1.135	\$0
Casualty and Liability Costs	\$0										1.135	\$0
Taxes	\$0										1.135	\$0
PT Funds In Report	\$0										1.135	\$0
Miscellaneous Expenses	\$0										1.135	\$0
NON-VEHICLE MAINTENANCE	\$37,982,769										1	\$11,609,63
Operators' Salaries and Wages	\$0										1.135	\$0
Other Salaries and Wages	\$14,719,880					\$60,081	\$120,162	\$180,243	\$1,471,988	\$32,518	1.135	\$4,499,20
ringe Benefits	\$11,122,398					\$45,398	\$90,795	\$136,193	\$1,112,240	\$24,571	1.135	\$3,399,61
Service Costs	\$9,207,414					\$37,581	\$75,163	\$112,744	\$920,741	\$20,340	1.135	\$2,814,29
uel and Lubricants	\$0										1.135	\$0
Fires and Tubes	\$0					4			4	4	1.135	\$0
Other Materials and Supplies Utilities	\$2,933,077 \$0					\$11,972	\$23,943	\$35,915	\$293,308	\$6,480	1.135 1.135	\$896,510
Casualty and Liability Costs	\$0										1.135	\$0 \$0
Taxes	\$0								-		1.135	\$0
PT Funds In Report	\$0										1.135	\$0 \$0
	\$0										1.135	\$0 \$0
Miscellaneous Expenses SENERAL ADMINISTRATION	\$50,486,696								1		1.155	\$16,581,03
Operators' Salaries and Wages	\$0										1.135	\$10,381,03
Other Salaries and Wages	\$7,078,452	\$4.87			\$24,577.96						1.135	\$2,222,20
Fringe Benefits	\$6,477,503	\$4.46			\$22,491.33						1.135	\$2,033,54
Fringe Benefits Service Costs	\$12,298,277	\$4.46		<b> </b>	\$42,702.35			<b> </b>	<u> </u>	<b> </b>	1.135	\$2,033,54
Fuel and Lubricants	\$12,298,277	90.40		<b> </b>	242,7U2.33			<u> </u>	<u> </u>	<u> </u>	1.135	\$3,860,90
Fires and Tubes	\$0			<b>†</b>					1		1.135	\$0 \$0
Other Materials and Supplies	\$2,566,124	\$1.77		<b>†</b>	\$8,910.15			<u> </u>	1		1.135	\$805,606
Jtilities	\$4,613,411	91.77	\$0.17	<del> </del>	\$16,018.79			<del> </del>	1		1.135	\$2,234,11
Casualty and Liability Costs	\$8,512,750		QU.17	<b>†</b>	\$14,779.08	\$64,491	\$64,491	\$64,491	<b>†</b>	<b>-</b>	1.135	\$1,985,07
Faxes	\$122,545			<b>†</b>	717,773.00	70 <del>7</del> ,431	, 70 <del>-1</del> , <del>43</del> 1	70-1,4-3±	<b>†</b>	<b> </b>	1.135	\$1,985,07
PT Funds In Report	\$122,543			<del>                                     </del>			<b> </b>	<u> </u>	<del> </del>	<u> </u>	1.135	\$0
Miscellaneous Expenses	\$8,817,634			<u> </u>	\$45,925.18			1	1		1.135	\$3,439,58
TOTALS IN 2015 DOLLARS	\$265,702,234	\$169.96	\$2.02	\$19.84	\$714,751	\$348,078	\$503.110	\$658.141	\$6,626,500	\$83.909	1.155	\$100,903,7
TOTALS IN 2020 DOLLARS	\$301,513,573	\$192.87	\$2.29	\$22.51	\$811,085	\$394,992	\$570,919	\$746,846	\$7,519,620	\$95,218	Rev. Train Hrs.	69,000
015 Resource Variable Values	, ,	290,617	13,702,192	680,077	144	38	24	4	3	135.8	Rev. Car-Mi's.	5,414,600
		250,027	_3,, 02,232	000,077		- 50		-		200.0	Rev. Car-Hrs.	186,300
											Peak Cars	66
											At-Grade Stat.	6
											Aerial Stat.	3
											Subway Stat.	3
											Total Stat.	12
											Yards	1

## Table A-7. O&M Cost Detail for Alternative 3: Slauson/A (Blue) Line to Pioneer Station

(Reflects LA Metro Light Rail Cost				lota) Supply Variable Unit Cost (\$2015)											
			_	_								Estimated			
	LA Metro LRT	Revenue	Revenue	Revenue	Peak	At-Grade	Aerial	Subway		Revenue	Inflation	Annual Cos			
Expense Line Item	2015 NTD Expenses	Train-Hours	Car-Miles	Car-Hours	Cars	Stations	Stations	Stations	Yards	Track-Miles	Factor	(2020)			
/EHICLE OPERATIONS	\$134,616,338	\$54.43	ı	T	T	I	1	T	T	T	1.135	\$21,382,489			
Operators' Salaries and Wages Other Salaries and Wages	\$15,816,955 \$20,074,280	\$34.43				\$76,039	\$76,039	\$76,039	\$1,672,857		1.135	\$1,649,016 \$3,289,908			
Fringe Benefits	\$24,788,461	\$61.44				\$52,517	\$52,517	\$52,517	\$1,072,837		1.135	\$3,289,908			
Service Costs	\$55,354,411	\$61.44			\$384,405.63	\$52,517	\$52,517	\$52,517	\$1,155,567		1.135	\$10,469,179			
Fuel and Lubricants	\$38,955				\$270.52						1.135	\$7,368			
Tires and Tubes	\$0				ψ270.32						1.135	\$0			
Other Materials and Supplies	\$552,357				\$3,835.81						1.135	\$104,467			
Utilities	\$17,990,919			\$19.84	\$31,234.23						1.135	\$2,451,458			
Casualty and Liability Costs	\$0										1.135	\$0			
Taxes	\$0										1.135	\$0			
PT Funds In Report	\$0										1.135	\$0			
Miscellaneous Expenses	\$0										1.135	\$0			
VEHICLE MAINTENANCE	\$42,616,431											\$6,807,882			
Operators' Salaries and Wages	\$0										1.135	\$0			
Other Salaries and Wages	\$18,441,181		\$1.01		\$32,015.94						1.135	\$2,805,788			
Fringe Benefits	\$15,147,180		\$0.83		\$26,297.19						1.135	\$2,304,613			
Service Costs	\$270,345		\$0.01	ļ	\$469.35						1.135	\$41,132			
Fuel and Lubricants	\$60,636			ļ	\$421.08					ļ	1.135	\$11,468			
Tires and Tubes	\$9,061			<b></b>	\$62.92			1		ļ	1.135	\$1,714			
Other Materials and Supplies	\$8,688,028				\$60,333.53						1.135	\$1,643,167			
Utilities	\$0										1.135	\$0			
Casualty and Liability Costs	\$0										1.135	\$0			
Taxes	\$0										1.135	\$0			
PT Funds In Report	\$0 \$0										1.135	\$0 \$0			
Miscellaneous Expenses NON-VEHICLE MAINTENANCE	\$37,982,769										1.135	\$6,351,504			
Operators' Salaries and Wages	\$37,982,769										1.135	\$0,351,504			
Other Salaries and Wages	\$14,719,880					\$60,081	\$120,162	\$180,243	\$1,471,988	\$32,518	1.135	\$2,461,468			
Fringe Benefits	\$11,122,398					\$45,398	\$90,795	\$136,193	\$1,112,240	\$24,571	1.135	\$1,859,895			
Service Costs	\$9,207,414					\$37,581	\$75,163	\$112,744	\$920,741	\$20,340	1.135	\$1,539,670			
Fuel and Lubricants	\$0					Ç37,301	\$75,105	ÿ112,/44	7520,741	\$20,540	1.135	\$0			
Tires and Tubes	\$0										1.135	\$0			
Other Materials and Supplies	\$2,933,077					\$11,972	\$23,943	\$35,915	\$293,308	\$6,480	1.135	\$490,471			
Utilities	\$0						,.			1.7	1.135	\$0			
Casualty and Liability Costs	\$0										1.135	\$0			
Taxes	\$0										1.135	\$0			
PT Funds In Report	\$0										1.135	\$0			
Miscellaneous Expenses	\$0										1.135	\$0			
GENERAL ADMINISTRATION	\$50,486,696											\$5,984,956			
Operators' Salaries and Wages	\$0										1.135	\$0			
Other Salaries and Wages	\$7,078,452	\$4.87			\$24,577.96						1.135	\$816,968			
Fringe Benefits	\$6,477,503	\$4.46			\$22,491.33						1.135	\$747,609			
Service Costs	\$12,298,277	\$8.46		ļ	\$42,702.35						1.135	\$1,419,421			
Fuel and Lubricants	\$0			ļ						ļ	1.135	\$0			
Tires and Tubes	\$0	ļ		<b></b>	<u> </u>			1	1	ļ	1.135	\$0			
Other Materials and Supplies	\$2,566,124	\$1.77		-	\$8,910.15			1	1	-	1.135	\$296,172			
Utilities	\$4,613,411		\$0.17	<del></del>	\$16,018.79	454	454 :-:	464		<b></b>	1.135	\$758,792			
Casualty and Liability Costs	\$8,512,750			<b>—</b>	\$14,779.08	\$64,491	\$64,491	\$64,491		<b> </b>	1.135	\$695,234			
Taxes	\$122,545			<del>                                     </del>				-	-	<del>                                     </del>	1.135	\$0			
PT Funds In Report	\$0	+		<del>                                     </del>	\$45,925.18			1	1	<del>                                     </del>	1.135 1.135	\$0			
Miscellaneous Expenses	\$8,817,634	\$160.06	62.02	\$19.84		\$249.070	¢E02 110	\$6E9 141	\$6.636.F00	¢92.000	1.135	\$1,250,759			
TOTALS IN 2015 DOLLARS TOTALS IN 2020 DOLLARS	\$265,702,234 \$301,513,573	\$169.96 \$192.87	\$2.02 \$2.29	\$19.84	\$714,751 \$811,085	\$348,078 \$394,992	\$503,110 \$570,919	\$658,141 \$746,846	\$6,626,500 \$7,519,620	\$83,909 \$95,218	Rev. Train Hrs.	\$40,526,831 26,700			
2015 Resource Variable Values	\$301,313,373	290,617	13,702,192	680,077	\$811,085 144	38	\$570,919 24	3/40,046	37,513,020	135.8	Rev. Car-Mi's.	1,688,300			
2013 Resource variable values		230,017	13,702,132	080,077	144	36	24	-	3	133.0	Rev. Car-IVII's.	71,100			
											Peak Cars	24			
											At-Grade Stat.	3			
											Aerial Stat.	1			
											Subway Stat.	0			
											Total Stat.	4			
											Yards	1			

## Table A-8. O&M Cost Detail for Alternative 4: I-105/C (Green) Line to Pioneer Station

Part   Part	(Reflects LA Metro Light Rail Cost											Inflate Factor	1.1348
2015 ATIC Expenses   Fall-Hollan   Scale Miles   Station   Stati		2015											Estimated
SALESTAND   STATE   SALESTAND   SALESTAN	Evnense Line Item									Vards			Annual Cos
generary Carlos and Wages			Train-Hours	Car-ivilles	Car-fiours	Cars	Stations	Stations	Stations	Tarus	Track-Willes	ractor	
Procedure   Proc			\$54.43	I	I	1		1	T	T	Γ	1 135	
THE PROPERTY OF THE PROPERTY O							\$76,020	¢76.020	\$76,020	¢1 672 957			
ERROR CORDS  \$53,584-512  IN SAMPLE AND LINES  \$53,875    \$72,775   \$1,000   \$1,135   \$11,072													
Section   Sect			\$61.44			\$394 40E 63	\$52,517	\$52,517	\$52,517	\$1,155,567			
The and Tubes  10													
March Marterials and Supplex   \$533,287   \$   \$3,888.81   \$   \$1138   \$5196,799   \$   \$1084   \$12,242   \$   \$   \$   \$1135   \$51,056   \$   \$   \$   \$   \$   \$   \$   \$   \$						3270.32							
State   State						¢2 925 91							
Search and Labelly Cores  90  1 1,135  90  1					\$10.94								
Section   Sect					\$19.64	\$51,254.25							
Trends in Report   50													
1.15   55.00   1.15													
### STATE   ST													
persons Salaries and Wages   50												1.133	
Her Staters and Wages    518,441,181								1				1 125	
Internal Emerits				ć1 O1		¢22.01E.04							
and cubricants			1		<del>                                     </del>			1	1	1	<del>                                     </del>		
Second Contents   Second Sec			1		<del> </del>			1	1		<del> </del>		
res and Tubes feet And Tubes feet Materials and Supplies feet Robes (1988) fulliles			1	\$0.01	<del>                                     </del>			<del> </del>	1		<del>                                     </del>		
### WHEN PROPERTY SERVICES   \$6,0333.33			1	<del> </del>	<del>                                     </del>			<del> </del>	1	<del> </del>	<del>                                     </del>		
Sandy and Liability Costs 50					<del>                                     </del>			-	-	1	-		
Sease  So					<del>                                     </del>	\$50,333.53		1	1	1	<del>                                     </del>		
Second September   Second September   Second September   Second September   Second Second September   Second Sec					-			-					
Finds Report   S0   S0   S0   S1335   S0   S0   S0   S0   S0   S0   S0   S													
1.139   50													
S9,117,000   S9,													
perators' Salaries and Wages   \$0												1.135	
Ther Salaries and Wages						1	l	1					
Section   Sect							4	4	4	4	4		
Personal Continues													
Led and Lubricants   SO													
Interest of Universe   So							\$37,581	\$75,163	\$112,744	\$920,741	\$20,340		
ther Materials and Supplies \$2,933,077   \$1,1372 \$23,943 \$35,915 \$293,308 \$6,480 \$1.135 \$704,096 \$1.135 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0													
Solid   Soli							4	4		4	4		
Social Content							\$11,972	\$23,943	\$35,915	\$293,308	\$6,480		
Second   S													
Trunds In Report   S0													
SEC   SERENT AL ADMINISTRATION   SS0,486,696   SERENT AL ADMINISTRATION   SERENT AL													
S10,270,97   Perator's Salaries and Wages   S0													
Perators   Salaries and Wages   \$0   \$1.135   \$0   \$1.135   \$1,361,915   \$1,361,9												1.135	
ther Salaries and Wages						1						T.	
Fringe Benefits													
Envice Costs													
Section   Sect	Fringe Benefits				ļ			1		1			
ires and Tubes \$0			\$8.46		ļ	\$42,702.35							
ther Materials and Supplies \$2,566,124 \$1.77 \$8,910.15 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$16,018.79 \$11.35 \$1,457,621 \$11.35 \$													
tilities \$4,613,411 \$0.17 \$16,018.79 \$14,779.08 \$64,491 \$64,491 \$64,491 \$1.135 \$1,135,7621 \$14,779.08 \$64,491 \$64,491 \$64,491 \$1.135 \$1,312,712 \$1,479.08 \$1,479.08 \$1,479.08 \$1,479.08 \$1,491 \$1,135 \$1,312,712 \$1,479.08 \$1,491 \$1,135 \$1,312,712 \$1,491 \$1,135 \$1,312,712 \$1,491 \$1,135 \$1,312,712 \$1,491 \$1,135 \$1,312,712 \$1,491 \$1,135 \$1,312,712 \$1,491 \$1,135 \$1,312,712 \$1,491 \$1,135 \$1,491 \$1,4	Tires and Tubes				<b></b>	ļ .			ļ		<u> </u>		
Section   Sect			\$1.77		-						-		
axes \$122,545	Utilities			\$0.17					ļ				\$1,457,621
T Funds in Report \$0   \$1.135   \$0   \$0   \$1.135   \$0   \$0   \$1.135   \$0   \$0   \$0   \$0   \$0   \$0   \$0   \$	Casualty and Liability Costs					\$14,779.08	\$64,491	\$64,491	\$64,491				\$1,312,712
Second   S	Taxes												
OTALS IN 2015 DOLLARS \$265,702,234 \$169.96 \$2.02 \$19.84 \$714,751 \$348,078 \$503,110 \$658,141 \$6,626,500 \$83,909 \$67,482,95 OTALS IN 2020 DOLLARS \$301,513,573 \$192.87 \$2.29 \$22.51 \$811,085 \$394,992 \$570,919 \$746,846 \$7,519,620 \$98,218 Rev. Train Hrs. 49,600 D15 Resource Variable Values 290,617 13,702,192 680,077 144 38 24 4 3 135.8 Rev. Carr-Mirs. 3,919,100 Rev. Carr-Mirs. 133,000 Peak Cars 39 At-Grade Stat. 6 Aerial Stat. 3 Subway Stat. 0 Total Stat. 9 Yards 1	PT Funds In Report												
OTALS IN 2020 DOLLARS \$301,513,573 \$192.87 \$2.29 \$22.51 \$811,085 \$394,992 \$570,919 \$746,846 \$7,519,620 \$95,218 Rev. Train Hrs. 49,600 D15 Resource Variable Values 290,617 13,702,192 680,077 144 38 24 4 3 135.8 Rev. Car-Mi's. 3,919,100 Rev. Car-Mi's. 133,000 Peak Cars 39 At-Grade Stat. 6 Aerial Stat. 3 Subway Stat. 0 Total Stat. 9 Yards 1	Miscellaneous Expenses											1.135	
13,702,192   680,077   144   38   24   4   3   135.8   Rev. Car-Mi's.   3,919,100	TOTALS IN 2015 DOLLARS									1 - 7 7	1 /		\$67,482,952
Rev. Car-Hrs.     133,000       Peak Cars     39       At-Grade Stat.     6       Aerial Stat.     3       Subway Stat.     0       Total Stat.     9       Yards.     1	TOTALS IN 2020 DOLLARS	\$301,513,573											
Peak Cars         39           At-Grade Stat.         6           Aerial Stat.         3           Subway Stat.         0           Total Stat.         9           Yards         1	2015 Resource Variable Values		290,617	13,702,192	680,077	144	38	24	4	3	135.8		
At-Grade Stat.         6           Aerial Stat.         3           Subway Stat.         0           Total Stat.         9           Yards         1													
Aerial Stat.         3           Subway Stat.         0           Total Stat.         9           Yards.         1													
Subway Stat.         0           Total Stat.         9           Yards         1													6
Total Stat.         9           Yards         1												Aerial Stat.	3
Total Stat.         9           Yards         1												Subway Stat.	0
Yards 1												Total Stat.	9
Track-Mi's. 28.3													1
												Track-Mi's.	28.3