



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90012-2952

213.922.2000  
metro.net

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**REVISED**  
**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE**  
**APRIL 16, 2015**

**SUBJECT: PROCURE 60 OPTION P3010 LIGHT RAIL VEHICLES**

**ACTION: INCREASE THE LIFE-OF-PROJECT BUDGET AND AMEND THE FY16 BUDGET FOR LIGHT RAIL VEHICLE PROCUREMENT**

**RECOMMENDATION**

- A. Increase the Life-of-Project (LOP) Budget for the Light Rail Vehicle (LRV) Procurement (P3010) by \$263,000,000, increasing the LOP budget from \$709,000,000 to \$972,000,000. This allows the Chief Executive Officer (CEO) to exercise Options 2 (39 Vehicles) and 3 (21 Vehicles) of the P3010 contract as previously authorized.
- B. Amend and increase the FY16 annual budget in Cost Center 3043 in the amount of ~~\$34,500,000~~ \$10,000,000 for the mobilization costs associated with exercising Options 2 and 3.
- C. ~~Reduce LOP for CP 206044 (P2000 Refurbishment) by \$30,000,000 and transfer funds to CP 206035 for the mobilization costs associated in recommendation A & B above.~~

**ISSUE**

On April 30, 2012 the Metro Board of Directors approved contract P3010 with Kinkisharyo, LLC (KI) to provide up to 235 LRV's including options with an initial LOP budget of \$342,350,000. In July 2013, the Metro Board of Directors approved an increase to the P3010 LRV Procurement LOP budget by \$396,650,000 from \$342,350,000 to \$739,000,000, (which was later reduced to \$709,000,000 and approved by the Board to segregate contractor oversight funding) to exercise Options 1 and 4 of the P3010 contract for an additional 97 LRV's. These options were successfully exercised with KI in August 2013.

As previously reported, the LRV's delivered under Options 1 and 4 will be assigned to the Crenshaw Line and used for replacement of the P865/P2020 fleet, which is approaching the end of its useful life.

However, the LRVs delivered under the Base Buy and Option 1 and 4 procurements will not be sufficient to support the growing operating requirements due to planned line and service expansions. If approved, this action will ensure that Metro Operations will have the LRV's necessary to effectively operate the expanded LRV system. Beginning FY20 Metro anticipates a shortfall of 42 LRV's if Options 2 and 3 are not exercised.

**Attachment C** lists the planned line and service expansions which are consistent with America Fast Forward and 30/10 initiatives. **Attachment D** provides a forecast of LRV needs and availability on a fiscal year basis.

## **DISCUSSION**

The Metro Board of Directors approved the P3010 LRV Contract on April 30, 2012. The Board approval included authorization for the CEO to negotiate and execute up to four contract options to Contract P3010, for a total delivery of 157 Option LRVs, in an aggregate amount of \$591,080,448 excluding escalation and contract modifications. Therefore, the contract value for the Base Order and all four Options total \$890,142,275, excluding escalation and contract modifications.

Given the forecasted need for additional LRV's beginning in FY20, staff has evaluated the merits of exercising the remaining option orders of the P3010 Contract. Based on this evaluation, staff has determined that there is a solid business case to exercise Options 2 and 3 for an additional 60 LRVs. Exercising Options 2 and 3 at this time will offer a number of benefits:

### **Ensure availability of LRVs to support Operating needs:**

**Attachment C** outlines the planned service expansion requirements consistent with the America Fast Forward, and 30/10 initiatives. These service expansions are consistent with the implementation of the new LRV lines and the Regional Connector.

### **Prevent Interruption to Manufacturing:**

By exercising Options 2 and 3 now will ensure that KI has sufficient time to plan and order materials to keep manufacturing and assembly activities flowing. Gaps in production may trigger associated costs such as re-tooling, training of new staff and higher component costs. As noted above, exercising Options 2 and 3 now will ensure there is minimal disruption to the existing manufacturing and assembly activities. This will provide KI with the opportunity to retain, and potentially augment its local FTEs and the FTEs hired nationally by its subcontractors to comply with the US Employment plan, as defined in the P3010 contract.

### **Ensure Better Pricing:**

The Option prices are subject to a single adjustment based on the United States Department of Labor, Bureau of Statistic's Producer Price Index (PPI). The estimated April 2015 PPI will increase from 179.4 to 191.5 from the date of Contract Award in August 2012. Based on the calculation specified in the contract, the increase in the PPI represents an estimated, 6.74% increase in total price for Contract Options 2 and 3. If we delay exercising Options 2 and 3, the PPI and associated contract cost escalation will continue to increase. Exercising Options 2 and 3 now will limit future escalation

risk. The LOP requested for Options 2 and 3 is adequate to account for the estimated contract cost escalation for these two Options. Moreover, escalation costs required for Options 1 and 4 will be applied from the LOP authorized by the Board in 2013, which is adequate to account for the estimated escalation for these two Options.

Metro and KI staff have calculated the current contract cost escalation to be \$15,159,317 and is estimated to grow at 0.7% (\$1.8 million) per month beyond April 2015.

As Metro expands its Rail network, the addition of the vehicles in Options 2 and 3 are necessary to provide the promised levels of service along both the expansion and existing rail lines. Foregoing the procurement of the vehicles in Options 2 and 3 would leave Metro with an 11% to 20% shortage of the vehicles necessary to provide the planned service between ~~from~~ FY20 and FY24. This vehicle shortage will produce more crowded trains, decrease fleet reliability as vehicles will be run longer and harder than they are designed to be and ultimately decrease the quality of the rider's experience across all Metro lines.

The exercise of these two options requires Metro to pay KI a mobilization cost to address long lead commitments KI and its subcontractors must make to meet their production schedule. KI has agreed to accept a partial mobilization fee of \$10 million in FY16 with a deferment of \$24.6 million until FY17. Additionally, Metro and KI have further agreed to re-evaluate existing Contract bonding requirements which could further reduce Metro's preproduction costs.

## **DETERMINATION OF SAFETY IMPACT**

The P3010 Option LRVs will be designed to current design criteria meeting all local, State and Federal safety standards. Exercising these Options will permit Metro to ensure that new line and service expansions are supported by vehicles equipped with the most current safety features.

## **FINANCIAL IMPACT**

This action was not included in the Proposed FY16 budget. The amendment request of \$34,500,000 ~~\$10,000,000~~ will be added to the FY16 budget for CP 206035 (~~Expo/Blue Line Light Rail Vehicle Procurement~~P3010 Light Rail Vehicle Procurement: Base and Options) in Cost Center 3043, Strategic Vehicle and Infrastructure Delivery. The amendment includes a LOP transfer of \$30,500,000 from ~~CP 206044 (P2000 Refurbishment)~~ to ~~CP 206035 (Expo/Blue Line Light Rail Vehicle Procurement Procurement)~~.

This action increases the LOP Budget for the LRV Procurement (P3010) by \$263,000,000, increasing the LOP budget from \$709,000,000 to \$972,000,000. This action raises the contract value to KI from \$670,757,389 to \$910,675,509. This amount includes the estimated one time escalation costs of \$15,159,317 for Options 2 and 3.

Impact to Budget:

This action will be funded with a combination of Proposition A 35% and State Regional Improvement Program funds advanced into the FY16 Budget. Future costs associated with this action in the amount of \$114 million were not previously planned in the Short Range Transportation Plan (SRTP). Funding for the out years will be a combination of Local, State and Federal funds as they become available. We believe a capital program deficit already exists in the amount of \$440 million through the end of the SRTP in FY24. In dollars terms the shortfall may seem large, but remains manageable at 1.6% of the \$33.9 billion forecasted Metro capital and operating program embedded within the SRTP. While projects already under construction are not yet put at risk by the 1.6% shortfall, any project not yet awarded for construction could be deferred to help resolve the forecasted shortfall in the future. At this juncture, the Board has not set specific priorities that would enable Metro to defer any projects. If the shortfall becomes unmanageable, we will return to the Board with recommendations on how to proceed.

**Attachment E** outlines the complete contract costs and identified a funding sources strategy. Project Contingency is moved to the final project year for planning purposes but shall be used to meet project requirements as the needs arise. The estimated LRV costs, Metro Administration, and Contingency bringing the total requested LOP increase to \$972,000,000. This amended LOP will include all contract modifications and escalations. Proposition A 35% is an eligible fund source for Rail Operations and may potentially impact FY16 funding for operations.

Since this is a multi-year contract, the cost center manager and General Manager, Strategic Vehicle and Infrastructure Delivery will ensure costs are budgeted in future years and will work with KI to match the delivery rate to funding availability.

**ALTERNATIVES CONSIDERED**

The Board may choose not to approve the recommended increase in LOP and then not move forward with exercising Options 2 and-3 and direct staff to initiate a new procurement for 60 LRVs. This alternative is not recommended as it would likely push out delivery of production vehicles past FY20 when a shortfall is anticipated. Another alternative may be exercising the option purchase at a later date and incur the increased costs for the LRVs. This alternative is not recommended as it adds unnecessary escalation costs that are avoidable should Metro choose to move forward with the exercise of the options at this time.

## **NEXT STEPS**

Upon Board approval Metro will issue a contract modification exercising Options 2 and 3 and issue the specified mobilization payment to KI. Metro staff will continue to keep the Board of Directors apprised of this KI contract and delivery schedule.

## **ATTACHMENTS**

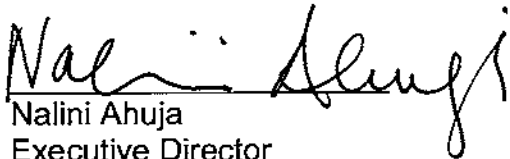
- A. Procurement Summary
- B. Contract Modification Authority (CMA)/Change Order Log
- C. Planned Lines and Service Expansions
- D. LRV Need and Surplus Projections
- E. Project Uses and Sources Table
- F. Board Report April 2012, Contract Award for P3010 Light Rail Vehicle

Prepared by: Richard Hunt, General Manager  
Jesus Montes, Deputy Executive Officer, Operations

Questions: Christopher Reyes, Senior Administrative Analyst, Operations  
(213) 922-4808



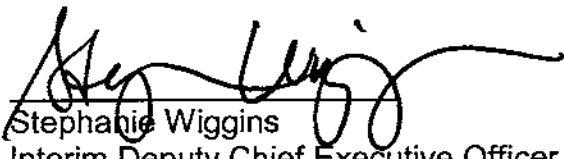
Ivan Page  
Interim Executive Director  
Vendor/Contract Management



Nalini Ahuja  
Executive Director  
Finance and Budget



Robert Holland  
Interim Chief Operations Officer



Stephanie Wiggins  
Interim Deputy Chief Executive Officer

PROCUREMENT SUMMARY

P3010 LIGHT RAIL VEHICLES

1.	<b>Contract Number:</b> P3010		
2.	<b>Contractor:</b> Kinkisharyo International, LLC		
3.	<b>Mod. Work Description:</b> See in Attachment D		
4.	<b>Contract Work Description:</b> P3010 Light Rail Vehicle		
5.	<b>The following data is current as of:</b> 3/20/15		
6.	<b>Contract Completion Status</b>		<b>Financial Status</b>
	<b>Contract Awarded:</b>	4/2012	<b>Contract Award Amount:</b> \$299,061,827
	<b>Notice to Proceed (NTP):</b>	8/2012	<b>Total of Modifications Approved:</b> \$371,695,562
	<b>Original Complete Date:</b>	1/2017	<b>Pending Modifications (including this action):</b> \$0
	<b>Current Est. Complete Date:</b>	1/2017	<b>Current Contract Value (with this action):</b> \$670,757,389
			<b>Current Contract Value with this action:</b> <u>\$910,615,509</u>
7.	<b>Contract Administrator:</b> Susan Dove		<b>Telephone Number:</b> (213) 922-7451
8.	<b>Project Manager:</b> Annie Yang		<b>Telephone Number:</b> (213) 922-3254

**A. Procurement Background**

This Board Action is to approve an increase in the Life-of-Project for the light rail vehicle procurement, Contract No. P3010

Any future contract modifications will be processed in accordance with Metro's Acquisition Policy, ~~and the contract type is a (firm fixed price, firm fixed unit price, time and material, cost plus fixed fee, etc.).~~

In April 2012, Contract No. P3010 was awarded to Kinkisharyo International LLC.; in the amount of \$299,061,827 for the manufacturing and delivery of 78 light rail vehicles (LRV) for the base contract buy. The Board also authorized the CEO to negotiate and award up to four Contract Options totaling \$591,080,448, exclusive of escalation costs for up to 157 additional LRVs. In July 2013, the Board approved additional LOP that allowed the CEO to exercise two of the four available Options for an additional 97 vehicles, in the amount of \$366,321,644.; bringing the total new vehicle order to 175. In April 2014, the Board approved contract modifications

totaling \$4,644,371, and authorized the CEO to negotiate and execute future change orders up to \$1,000,000 for each change order. Attachment B shows the list of pending and negotiated change orders.

## **B. Cost/Price Analysis**

The ~~firm-fixed~~ price for Options 2 and 3 is \$239,918,120 including the estimated escalation cost of \$15,159,317 is determined to be fair and reasonable based upon adequate price competition for the Base and Option quantities, and a price analysis that included both Base and Option prices, including escalation. The escalation costs for Options 2 and 3 are estimated based on the Producer Price Index (PPI). The estimated escalation percentage is 6.74%. The escalation costs will be adjusted to reflect the actual escalation percentage when the U.S. Department of Labor adjusts the PPI. It is anticipated that the adjustment will occur in May 2015.

## **C. Small Disadvantaged Business Participation**

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

## **D. Living Wage & Service Contract Worker Retention Policy**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this life-of-project increase request.



## Contract Modification Authority (CMA)/Change Order Log

Request for Change Order No.	Description	Status (Approved or Pending)	Contract Value	Change Orders/Contract Modifications	CMA
NA	Base Contract	Approved	\$299,061,827		\$29,906,182
N/A	Options 1 and 4	Approved		\$366,321,644	\$36,632,164
N/A	Options 2 and 3 excluding Escalation	Pending		\$224,758,804	
N/A	Options 2 and 3 Estimated Escalation	Pending		\$15,159,317	
N/A	Options 2 and 3 <sup>1</sup>	Pending			22,475,880
N/A	Options 1 and 4 Escalation	Pending		\$6,534,165	
1	The addition of backup Train Operator Display	Approved		\$861,695	
2	Exterior Signs with Color Route ID	Approved		\$1,206,792*	
3	The Addition of manual exterior rear view mirrors	Approved		\$677,317	
4	Automatic Passenger Counter Matrix Sensor System	Discussed/n of Applicable		Not Applicable	
5	Ground Vault Detection on the Auxiliary Power Supply System	Discussed/ Not Applicable		Not Applicable	
6	Addition of interior route information signs that provide indication of stations before and after current location	Approved		\$1,274,944	
7	Revise Sand Box Location	Approved		\$548,242	
8	Location for Emergency tool enclosures (Already included in K1 drawings)	Approved		\$0	
9	Adding LED light on the interior recording cameras	Approved		\$120,362	

<sup>1</sup> CMA 10% of Options 2 and 3 excluding escalation as delegated to CEO.

Request for Change Order No.	Description	Status (Approved or Pending)	Contract Value	Change Orders/Contract Modifications	Approved CMA
10	Alert Train Operator 15 seconds following door opening.	Approved		\$253,955	
11	Train Operator log-in for vehicle operation on "On-mode"	Approved		\$74,763	
12	Door Open Alert	Approved		Not Applicable	
13	Adding Graphic design on floor and seats at ADA and priority seating areas	<u>Pending</u> <u>Approved</u>		\$355,848	
14	Revise car numbers to four digits	Pending		\$0	
<b>Total –Approved Change Orders/Modifications (excluding Options)</b>				<b>\$5,373,918</b>	
<b>Total —All Approved Change Order/Modifications including – Exercise of Options 1 and 4</b>				<b>\$371,695,562</b>	
<b>Current Contract Value</b>				<b>\$670,757,389</b>	
<b>Total Amount - Options 2 and 3 (Pending Future Modifications)</b>				<b>\$224,758,804</b>	
<b>Total Estimated Escalation – Options 2 and 3 (Pending Future Modifications)</b>				<b>\$15,159,317</b>	
<b>Total Contract Value including Options 2 and 3 and Estimated Escalation</b>				<b>\$910,615,509</b>	
<b>Board Approved CMA - for Base, Options 1 and 4<sup>2</sup></b>					<b>\$66,538,346</b>

<sup>2</sup> CMA 10% of aggregate amount of original award plus Options 1 and 4.

# ATTACHMENT C

## Planned Line and Service Expansions

Project/ Alignment	FY15 (Current)		FY16-FY18		FY19		FY20-FY21		FY22-FY24		Future & Expanded	
	Level of Service	Vehicle Requirement	Level of Service	Vehicle Requirement	Level of Service	Vehicle Requirement	Level of Service	Vehicle Requirement	Level of Service	Vehicle Requirement	Level of Service	Vehicle Requirement
Blue Current	6min/3car	71	6min/3car	71	6min/3car	71	6/12min/3car	71	6/12min/3car	71	10/5min/3car	86
Blue; 7/M to Union (RC)							6/12min/3car	4	6/12min/3car	4	5min/3car	4
Expo 1	12min/3car	21	6min/3car	42	6min/3car	42	6min/3car	42	6min/3car	42	5min/3car	50
Expo 2			6min/3car	25	6min/3car	25	6min/3car	25	6min/3car	25	5min/3car	29
Expo; 7/M to LT (RC)							6min/3car	0	6min/3car	0	5min/3car	0
Expo; Atlantic to GLEE 2									6min/3car	25	5min/3car	32
Gold; Union to SMV	6min/2car	29	6min/2car	29	6min/2car	29	6min/3car	44	6min/3car	44	5min/3car	50
Gold; Union to Atlantic	6min/2car	21	6min/2car	21	6min/2car	21						
Gold/Expo; LT to Atlantic							6min/3car	34	6min/3car	34	5min/3car	40
Gold Foothill 2A	12min/2car	10	12min/2car	10	12min/2car	10	12min/3car	16	12min/3car	16	5min/3car	29
Gold Foothill 2B									12min/3car	12	5min/3car	29
Green; Norwalk to Aviation	7.5min/2car	22	7.5min/2car	22	6min/2car	26	6min/2car	26	6min/2car	26	6min/2car	26
Green; Aviation to RB	7.5min/2car	7	7.5min/2car	7	12min/2car	6	12min/2car	6	12min/2car	6	12min/2car	6
Green; Aviation to 96th Str.			12min/2car	4	12min/2car	4	12min/2car	4	12min/2car	4	12min/2car	4
Green; RB to Torrance (SB)							12min/2car	3	12min/2car	3	12min/2car	3
Crenshaw; Expo to RB			6min/2car	29	6min/2car	29	6min/2car	29	6min/2car	29	6min/3car	44
Crenshaw; RB to Torrance (SB)							6min/2car	7	6min/2car	7	6min/3car	10
<b>Subtotal Fleet Requirement</b>		<b>171</b>		<b>227</b>		<b>263</b>		<b>311</b>		<b>348</b>		<b>442</b>

LRV Need and Surplus Projections

P3010 Base Order and only Options 1 and 4 exercised

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	Future
P3010 <sup>1</sup>		42	90	138	175	175	175	175	175	175	175
P865/P2020 <sup>2</sup>	69	69	57	9	0	0	0	0	0	0	0
P2000 <sup>3</sup>	52	44	38	38	38	44	52	52	52	52	52
P2550	50	50	50	50	50	50	50	50	50	50	50
Total Cars	171	205	235	235	263	269	277	277	277	277	277
Need	171	171	227	227	263	311	311	311	348	348	442
Surplus	0	34	8	8	0	-42	-34	-34	-71	-71	-165

P3010 Base Order and all four Options are exercised

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	Future
P3010 <sup>1</sup>		42	90	138	186	234	235	235	235	235	235
P865/P2020 <sup>2</sup>	69	69	57	9	0	0	0	0	0	0	0
P2000 <sup>3</sup>	52	44	38	38	38	44	52	52	52	52	52
P2550	50	50	50	50	50	50	50	50	50	50	50
Total Cars	171	205	235	235	274	328	337	337	337	337	337
Need	171	171	227	227	263	311	311	311	348	348	442
Surplus	0	34	8	8	11	17	26	26	-11	-11	-105

Notes:

1. Following delivery of Base Order LRVs, Option 4 LRVs are delivered first, then Option 1 LRVs.
2. P865/P2020 LRV's are removed from service as the Option 4 LRVs are delivered: 12 in FY17, 48 more in FY18, final 9 in FY 19.
3. Numbers are adjusted to reflect LRV's out of service for scheduled overhaul: 8 in FY16 and FY20; 14 between FY17-FY19, inclusive.

Project Uses And Sources Tables

This table is replaced by the following table below.

Use of Funds	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	Total	% of Project
Veh Acq-Base Order		46,092,600	62,500,975	68,324,915	83,068,633	38,056,584									299,061,827	30.8%
Approved Modifications				137,293	1,396,000	3,445,600	10,704,981								5,373,918	0.6%
MFA Administration	256,472		370,300												5,896,472	0.6%
Contingency							10,704,981								10,704,981	1.1%
<b>Base Order Total</b>	<b>256,472</b>	<b>0</b>	<b>46,462,900</b>	<b>64,826,275</b>	<b>69,720,915</b>	<b>87,514,233</b>	<b>21,409,962</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>311,056,308</b>	
Veh Acq-Option-1				10,442,841			26,823,023	67,132,556							104,428,419	33.8%
Veh Acq-Option-4				26,189,332			26,823,023	95,648,552							261,892,215	27.0%
Contingency									20,999,665						20,999,665	2.2%
Veh Acq-Option-2					27,021,202						67,132,556				152,893,000	15.7%
Veh Acq-Option-3											67,132,556				67,132,556	7.1%
Contingency							13,135,445								13,135,445	1.4%
MTA Administration									1,546,864	1,503,270	1,541,068	1,500,300			9,596,723	3.1%
<b>Option Order Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26,692,172</b>	<b>0</b>	<b>24,256,648</b>	<b>26,823,023</b>	<b>167,781,108</b>	<b>161,054,006</b>	<b>1,503,270</b>	<b>64,200,121</b>	<b>69,004,044</b>	<b>69,004,044</b>	<b>69,709,428</b>	<b>650,031,485</b>	
<b>Project Total</b>	<b>256,472</b>	<b>0</b>	<b>46,462,900</b>	<b>101,168,648</b>	<b>69,720,915</b>	<b>111,770,881</b>	<b>28,232,986</b>	<b>167,781,108</b>	<b>162,054,006</b>	<b>1,503,270</b>	<b>64,200,121</b>	<b>69,004,044</b>	<b>69,709,428</b>	<b>69,709,428</b>	<b>971,057,803</b>	<b>100.0%</b>

Sources of Funds	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	Total Uses	%
Measure B-35%	1,202,590	5,374,835		9,319,416	21,974,216								64,500,000	6.5%
Measure B-35%-Greenhaw Proj		8,200,000			15,000,000	58,850,991							82,050,991	8.3%
Measure B-3%					2,000,000	2,000,000	2,000,000			400,000			10,000,000	1.0%
Prop C-25%	51,290												51,290	0.0%
Local Agency Funds	39,400												39,400	0.0%
Prop A-35%/CMAA				26,528,803	17,609,840	56,389,339	86,400,116		9,200,000	27,600,000	164,400,000		389,128,098	39.1%
STP				5,992,094									5,416,918	0.5%
RIP		45,400,000	74,407,114	39,907,906	28,935,967				9,800,000	6,100,000	25,900,000		139,032	0.0%
CMAA													34,300,000	3.4%
STP													49,303,270	5.0%
Prop A-35%													126,500,000	12.8%
<b>Total</b>	<b>1,202,590</b>	<b>13,574,835</b>	<b>74,407,114</b>	<b>89,548,219</b>	<b>85,530,183</b>	<b>167,240,240</b>	<b>164,900,116</b>	<b>0</b>	<b>19,000,000</b>	<b>24,100,000</b>	<b>169,900,000</b>	<b>169,900,000</b>	<b>962,000,000</b>	<b>100%</b>

Note: Funding sources are subject to change as future additional or replacement Federal, State and local funding is identified.

Note: These are estimated figures and the funds may not be available in the future.

**ATTACHMENT E**

**Project Uses And Sources Tables**

**Revised**

Use of Funds	ITD thru FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	Total	%
Veh Acq: Base Order	112,608,281	98,100,000	88,353,546								299,061,827	30.8%
Approved Modifications	0	3,307,026	2,066,892								5,373,918	0.6%
MTA Administration	3,220,641	1,298,048	1,367,783							10,704,091	5,886,472	0.6%
Contingency	0									10,704,091	10,704,091	1.1%
<b>Base Order total</b>	<b>115,828,922</b>	<b>102,705,074</b>	<b>91,788,221</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,704,091</b>	<b>321,026,308</b>	<b>33.0%</b>
Veh Acq: Option 1	14,575,809		26,853,022	62,999,588							104,428,419	10.7%
Veh Acq: Option 4	36,446,830			107,554,244	117,891,150						261,892,224	26.9%
Contingency Option 1 & 4										18,604,375	18,604,375	1.9%
MTA Admin Opt 1 & 4				1,501,810	1,546,864						3,048,674	0.3%
<b>Option Order 1 &amp; 4 Total</b>	<b>51,022,639</b>	<b>0</b>	<b>26,853,022</b>	<b>172,055,642</b>	<b>119,438,014</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,604,375</b>	<b>387,973,692</b>	<b>39.9%</b>
<b>Current LOP Total</b>	<b>166,851,561</b>	<b>102,705,074</b>	<b>118,641,243</b>	<b>172,055,642</b>	<b>119,438,014</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29,308,466</b>	<b>709,000,000</b>	<b>72.9%</b>
Veh Acq: Option 2			22,021,203				40,000,000	65,000,000	25,871,797		152,893,000	15.7%
Veh Acq: Option 3		10,000,000	2,135,445						38,500,000	36,389,675	87,025,120	9.0%
Contingency Option 2 & 3										15,869,912	15,869,912	1.6%
MTA Admin Option 2 & 3			0			500,000	1,641,068	1,690,300	1,690,300	1,690,300	7,211,968	0.7%
<b>Option Order 2 &amp; 3 Total</b>	<b>0</b>	<b>10,000,000</b>	<b>24,156,648</b>	<b>0</b>	<b>0</b>	<b>500,000</b>	<b>41,641,068</b>	<b>66,690,300</b>	<b>66,062,097</b>	<b>53,949,887</b>	<b>263,000,000</b>	<b>27.1%</b>
<b>Project Total</b>	<b>166,851,561</b>	<b>112,705,074</b>	<b>142,797,891</b>	<b>172,055,642</b>	<b>119,438,014</b>	<b>500,000</b>	<b>41,641,068</b>	<b>66,690,300</b>	<b>66,062,097</b>	<b>83,258,353</b>	<b>972,000,000</b>	<b>100.0%</b>

Sources of Funds	ITD thru FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	Total	%
Measure R 35%	33,206,208	9,319,416	21,974,376								64,500,000	6.6%
Meas R 35%: Crenshaw Proj	8,200,000		15,000,000	58,850,901							82,050,901	8.4%
Measure R 2%	2,000,000		2,000,000	2,000,000							8,000,000	0.8%
Prop C 25%	51,290										51,290	0.0%
Local Agency Funds	39,400										39,400	0.0%
Prop A 35%/CMAQ	0	20,528,803	26,609,840	39,542,976	40,938,014				0	29,308,465	156,928,098	16.1%
Prop 1B PTMISEA	324,824	5,092,094									5,416,918	0.6%
STIP	139,022										139,022	0.0%
RIP	67,087,447	60,064,761	53,057,027	21,861,765							201,871,000	20.8%
CMAQ	14,200,000										14,200,000	1.5%
RSTP	41,603,370	7,700,000									49,303,370	5.1%
Prop A Financing	0			50,000,000	76,500,000						126,500,000	13.0%
<b>Current Approved Sources</b>	<b>166,851,561</b>	<b>102,705,074</b>	<b>118,641,243</b>	<b>172,055,642</b>	<b>119,438,014</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29,308,465</b>	<b>709,000,000</b>	<b>72.9%</b>
Opt 2 & 3: Prop A 35%/STIP/RIP	0	10,000,000	24,156,648			500,000	41,641,068	66,690,300	66,062,097	53,949,887	34,156,648	3.5%
Opt 2 & 3: Local State Federal	0	10,000,000	24,156,648			500,000	41,641,068	66,690,300	66,062,097	53,949,887	263,000,000	27.1%
<b>Proposed New LOP Sources</b>	<b>0</b>	<b>10,000,000</b>	<b>24,156,648</b>	<b>0</b>	<b>0</b>	<b>500,000</b>	<b>41,641,068</b>	<b>66,690,300</b>	<b>66,062,097</b>	<b>83,258,352</b>	<b>972,000,000</b>	<b>100.0%</b>
<b>Total</b>	<b>166,851,561</b>	<b>112,705,074</b>	<b>142,797,891</b>	<b>172,055,642</b>	<b>119,438,014</b>	<b>500,000</b>	<b>41,641,068</b>	<b>66,690,300</b>	<b>66,062,097</b>	<b>83,258,352</b>	<b>972,000,000</b>	<b>100.0%</b>



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90001-4552

213.902.7000 Te  
metro.net

**1**

**SPECIAL BOARD MEETING  
APRIL 30, 2012**

**SUBJECT: LIGHT RAIL VEHICLE PROCUREMENT**

**ACTION: AWARD CONTRACT FOR PROCUREMENT OF LIGHT RAIL VEHICLES**

**RECOMMENDATION**

- A. Authorize the Chief Executive Officer to award a 53 month, firm fixed price contract under Request for Proposal No. P3010, to Kinkisharyo International, LLC for the manufacturing and delivery of 78 light rail vehicles (LRV), in the amount of \$299,061,827 for the base contract buy, exclusive of four contract options totaling 157 LRVs.
- B. Authorize the Chief Executive Officer to negotiate and execute up to four contract options to Contract P3010, for a total delivery of up to 157 LRVs, in an aggregate amount of \$591,080,448, for a total contract not-to-exceed amount of \$890,142,275, not including allowable contract escalation.
- C. Approve an increase of \$6,940,000 in the life-of-project budget for CP#206035 – Light Rail Vehicle Procurement (P3010) from \$335,410,000 to \$342,350,000.
- D. The Board finds that the award to Kinkisharyo International is made to the Proposer that provides the agency with the best value and is most advantageous to Metro. The recommended price addresses all contract requirements and represents the best overall value when all RFP evaluation factors are considered, including clear advantages in technical compliance, schedule risk and project management. The offer also commits to the sizable creation of new U.S. jobs to produce the P3010 LRV.

**ISSUE**

The Board authorized staff to issue a federally funded solicitation for a "Best Value" LRV procurement for additional vehicles as required for Measure R light rail projects including Exposition Phase 2, Foothill Phase 2B Extension, and Crenshaw lines, and for the eventual replacement of the Metro Blue Line fleet consisting of 69 LRVs that will have reached the end of their revenue service life by end of 2018.

Staff's recommendation presents the firm that is most advantageous to Metro in spite of the fact that Kinkisharyo International is not the lowest price offerer. Kinkisharyo

Award P3010 LRV Contract:

1

International's offer represents the Best Value to Metro when all technical and price factors presented to the Board on October 28, 2010 and further defined in RFP P3010 are carefully considered. The Procurement Summary of this report (Attachment A) further describes the evaluation results and detailed rankings for all Proposers, including the weighted scores associated with each evaluation criteria.

## **DISCUSSION**

The P3010 LRV procurement is essential to the success of Measure R initiatives, including providing the rolling stock for the on-time opening of the Expo Phase II, Foothill Extension, and Crenshaw rail lines. This procurement is also consistent with the Draft August 2011 Rail Fleet Management Plan submitted to the Federal Transit Administration (FTA) Project Management Oversight Team.

The LRV Contractor selection has progressed over a 16-month period from the date of Board approval of the solicitation and has followed a Best Value solicitation process. The primary objective of the source selection is to obtain safe, reliable, high quality LRVs delivered on time and within budget, and to create new manufacturing and assembly jobs in the United States that can be tied directly to the P3010 Contract.

To prevent a repeat of the problems experienced with the P2550 LRV procurement, which followed the low-bid procurement methodology and resulted in schedule delays, meager contractor project management and varying quality; the Metro Board approved a Best Value solicitation process to use other relevant factors, in addition to price, to identify the Best Value rail car manufacturer.

An integral part of the Best Value solicitation is the assembly of the Source Selection Committee (SSC) consisting of key Metro Operations staff to conduct a comprehensive evaluation of the proposals received. The committee reviewed the proposals and evaluated four key factors, weighted in descending levels of relative importance: 1) Experience and Past Performance, 2) Price, 3) Technical Compliance and 4) Project Management Experience. Metro also used its U.S. Employment Program as a Best Value trade-off analysis factor against the Price criterion. All three proposals were in compliance with RFP requirements and determined to be within the Competitive Range.

Upon Board approval and the completion of a Pre-Award Buy America compliance audit, a Notice-to-Proceed (NTP) is expected immediately after Board approval. Delivery of the 78 base contract LRVs is scheduled to be completed 53 months following NTP, approximately by August 2016. The Contract contains four options, which, if exercised, will extend the contract three years beyond the base order. The options will be awarded subject to adequate funding and Board approval. The delivery rate is an aggressive four LRVs per month. The required delivery dates have liquidated damage assessments that can be imposed for late deliveries.



Options 1 through 4 for 28, 39, 21 and up to 69 LRVs, respectively, may be exercised in any order as long as the Option expiration ordering dates are followed. The order for the first option may be placed not later than 34 months following NTP, the order for the second option may be placed not later than 42 months following NTP, the order for the third option may be placed not later than 48 months following NTP and the order for the fourth option may be placed not later than 59 months following NTP.

The options are priced in 2012 dollars and are subject to escalation based upon the Producer Price Index for Railroad Rolling Stock Manufacturing published by the United States Department of Labor.

Lessons-learned from experience with the P2550 LRV procurement has resulted in staffing this LRV project utilizing experienced Metro Project Management personnel to oversee and manage the commercial and technical program elements, augmented by experienced Technical and Project Management consulting staff. Staff has also adequately budgeted necessary travel expenses to ensure performance of the Contractor and their most important subcontractors remain on schedule and within specification requirements.

Lessons-learned also requires an increase of the LOP budget by \$6.94M to \$342.3M to enhance consultant services to focus primarily on program management oversight.

A program partnering approach will be implemented to further ensure program success:

1. Program leadership provided by Metro Project Management with experienced consultant staff to assist with the decision making.
2. Manage stakeholders to think, work, and act towards timely delivery of the LRVs to meet schedule, weight, safety, reliability, with high quality standards.
3. Ensure Operations and Maintenance ownership by including in decision-making.

#### **U.S. EMPLOYMENT PROGRAM**

In May 2011 the FTA approved the use of Metro's unique U.S. Employment Program. Staff employed the U.S. Employment Program to incentivize Proposers to create new jobs in the United States by incorporating new job creation as a function of the Best Value evaluation process. Staff's goal of creating meaningful new U.S. jobs was achieved, as evidenced by the fact that the recommended Awardee, Kinkisharyo, commits to creating new jobs in the U.S. totaling \$97.9 million in wages and benefits, with a full economic impact of \$138.8 million on the U.S. economy. The value for new jobs committed by Kinkisharyo equates to 554 Job Years for the base Contract, and 1,614 Job Years for the base and contract options.

The employment program allows Metro to perform a price trade-off analysis for the value of all new jobs created directly by LRV production, including the use of an economic multiplier to assess the full impact on the U.S. economy of all new jobs

proposed. The trade-off process consists of deriving the aggregate dollar value of the proposed new jobs' salaries and benefits, after applying an economic multiplier. That total jobs value was then traded off (subtracted), dollar for dollar, against each Proposer's price. This yielded a reduced proposal price for only evaluation purposes. That subsequent evaluation price was then scored using the evaluation scoring weight for the Price criterion.

#### **DETERMINATION OF SAFETY IMPACT**

- The P3010 LRVs will be designed to current design criteria meeting all local, State, and Federal safety standards.
- Exercising the options will allow Metro to replace light rail vehicles that have reached the end of their revenue service life.

#### **FINANCIAL IMPACT**

The funding of \$36,531,006 for this project is included in the FY12 budget in cost center 3940, Rail Fleet Services, under project 206035, Expo/Blue Line Light Rail Vehicle Procurement. Since this is a multi-year project, the Executive Officer, Rail Vehicle Maintenance, will be accountable for budgeting the cost in future years, including any options exercised.

#### **ALTERNATIVES CONSIDERED**

As the Measure R projects require a definite need for more LRVs, the primary alternative considered was in the method of procurement. On October 28, 2010, the Board approved a competitively negotiated Best Value procurement for new LRVs to evaluate the overall combination of past performance, technical capability, quality, price and other elements of a proposal, including a trade-off of U.S. job creation. This approach will provide the greatest overall procurement value and probability of vehicle delivery success.

As an alternative, the Board may choose not to move forward with the procurement. This alternative is not recommended as the Measure R light rail transit projects must have LRVs for testing and revenue operations.

#### **NEXT STEPS**


Within a month following contract award, Metro will meet with Kinkisharyo, LLC for the Contract required Specification Review Meeting. During same meeting, Metro will establish communication and reporting protocols. Key milestones and deliverables, through the shipment of the first two pilot cars and delivery of the first two production cars, will be discussed to ensure understanding and agreement of requirements to ensure expedient reviews and approvals.

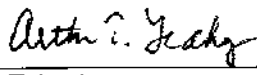
**ATTACHMENTS**

- A. Procurement Summary
- B. Funding/Expenditure Plan
- C. Metro Board Report. dated October 21, 2010
- D. Metro Board Report. dated January 21, 2010

Prepared by: Jesus Montes, Director, Rail Vehicle Acquisition and Maintenance  
Victor Ramirez, Director, Contract Administration

  
Michelle Lopes Caldwell  
Chief Administrative Services Officer

  
Frank Alejandro  
Chief Operations Officer

  
Arthur T. Leahy  
Chief Executive Officer

## PROCUREMENT SUMMARY

## P3010 LIGHT RAIL VEHICLE PROCUREMENT

1.	Contract Number: P3010, New Light Rail Vehicles	
2.	Recommended Vendor: Kinkisharyo International, LLC	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: November 1, 2010	
	B. Advertised/Publicized: October 31, 2010 and December 1, 2010	
	C. Pre-proposal/Pre-Bid Conference: November 19, 2010	
	D. Proposals/Bids Due: April 11, 2011	
	E. Pre-Qualification Completed: March 9, 2012	
	F. Conflict of Interest Form Submitted to Ethics: January 27, 2012	
	G. Protest Period End Date: March 27, 2012	
5.	Solicitations Picked up/Downloaded: 267	Bids/Proposals Received: 3
6.	Contract Administrator: Victor Ramirez	Telephone Number: 213-922-1059
7.	Project Manager: Jesus Montes	Telephone Number: 213-922-3293

**A. Procurement Background**

On January 28, 2010 the Board authorized the use of a "Best Value" procurement to solicit this rail car requirement in accordance with Public Utility Code 130238. The Board then approved the specific relative weighting of the evaluation criteria to be used for P3010 on October 28, 2010. This Board Action is for a "Best Value" Request for Proposals (RFP) solicitation issued to procure up to 235 New Light Rail Vehicles (LRV), including a base purchase of 78 LRVs.

The RFP was issued in accordance with Metro's Acquisition Policy and the contract type is Firm Fixed Price.

Twenty-three amendments were issued during the solicitation phase of this RFP; amendment Nos. 1, 6, 8 and 21 were issued to modify proposal due dates; amendment No. 2 was issued to provide information concerning the RFP Pre-

Proposal Conference; amendment Nos. 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 22 and 23 were issued to provide answers to questions posed by interested parties, and to modify RFP technical specification requirements and commercial terms; amendment 16 modified the Instructions to Proposers section of the RFP; and, amendment No. 20 invited Proposers in the Competitive Range to submit Best and Final Offers.

A total of three proposals were received on April 11, 2011, after staff responded to 349 technical and commercial questions from interested parties.

#### **B. Evaluation of Proposals/Bids**

A Source Selection Committee (SSC) consisting of staff from Rail Vehicle Acquisition and Maintenance, Rail Fleet Services, Wayside Systems, and Service Operations was convened and conducted a comprehensive evaluation of the proposals received. The SSC also held direct interviews with each Proposer and performed manufacturing and engineering site surveys to fully assess the Proposers' capabilities, capacities, strengths and weaknesses.

The proposals were evaluated based on the following evaluation criteria and weights:

- |                                   |            |
|-----------------------------------|------------|
| • Experience and Past Performance | 40 percent |
| • Price                           | 30 percent |
| • Technical Compliance            | 20 percent |
| • Project Management Experience   | 10 percent |

The evaluation criteria described above was presented to the Board in October 2010 and approved prior to the RFP issuance. The most important factors considered in developing the relative weighting of the evaluation criteria were based on lessons learned from Metro's previous LRV procurement. It was determined that the best approach to assess probability of on-time performance for delivery of the rail cars was to measure all Proposers' historical performance as a leading indicator of future success. This approach was applied not only to schedule adherence, but also to reliability, weight compliance, quality and change orders.

In May 2011, the FTA provided Metro with approval to use a U.S. Employment Program as a Best Value trade-off analysis factor against the Price criterion. This trade-off consisted of taking the dollar value of all new jobs proposed and applying an Economic Multiplier to assess the full impact of those jobs on the U.S. economy. This assessed U.S. jobs value was then used to reduce each Proposer's price on a dollar for dollar basis to establish an evaluation Price for scoring purposes.

All three Proposers who submitted proposals were determined to be within the Competitive Range. The three firms within the competitive range are listed below in alphabetical order:

1. CAF USA, Inc.
2. Kinkisharyo International, LLC
3. Siemens Industry, Inc.

The SSC interviewed all Proposers in Los Angeles from June 21 -29, 2011, and performed manufacturing site visits from July 18, 2011 through August 4, 2011. The firms' project managers and key team members had an opportunity to present each team's qualifications and respond to the evaluation committee's questions. In general each team's presentation addressed the requirements of the RFP, experience with all aspects of the required tasks, and stressed each firm's commitment to the success of the project. Also highlighted were staffing plans, manufacturing plans, schedules and perceived project issues. Each team was asked questions relative to each firm's proposed staff, capability, manufacturing capacity, facility development, new job training, job creation and previous experience implementing their proposed manufacturing plan.

**Qualifications Summary of Firms Within the Competitive Range:**

**CAF USA Inc.**

CAF has over 100 years of operational experience in the rolling stock industry supplying multiple types of rail transit vehicles world-wide. CAF USA's most recent clients include the Port Authority of Allegheny County (Pittsburgh PA), Sacramento Regional Transit, Bilbao, Spain, and Vitoria, Spain, where they provided LRVs.

CAF's proposal strengths include lowest price offer and a worldwide range of vehicle platforms that attest to deep engineering resources and capability. However, CAF's past performance in the U.S. market, their technical compliance and project management team proposed for P3010 were not as strong as the recommended Awardee.

**Kinkisharyo International, LLC.**

Kinkisharyo has provided urban transit vehicles world-wide since 1984. Kinkisharyo International's most recent clients include Dallas Area Rapid Transit, Washington Sound Transit (Seattle), and Valley Metro Rail (Phoenix). Kinkisharyo International has the unique distinction of having delivered every U.S. transit vehicle on time.

The SSC found Kinkisharyo's strengths to be in their past performance and experience, technical capability and project management. As the recommended Awardee, Kinkisharyo ranked highest in all evaluation categories except price. They also propose a U.S. Employment commitment that is within 2% of the highest offer

for new U.S. job creation. Kinkisharyo International's Project Manager has extensive rail car experience in the U.S., having led projects in Seattle, Dallas and Boston. He has over twenty years of experience in the project management of light and heavy rail transit vehicles.

**Siemens Industry, Inc.**

Siemens Industry has manufactured the highest quantity of LRVs in North America; having delivered more than 1100 LRVs. Their list of clients includes San Diego, St. Louis, Denver, Salt Lake City, and the P2000 car in Los Angeles. The P2000 car has been in operation at Metro since 2001.

Siemens's greatest strength is in their U.S. Employment plan. Siemens offered the highest new U.S. job commitment. Although Siemens was three years late in delivering the P2000 vehicle to Metro, Siemens has since improved their schedule performance record. However, the overall past performance, technical compliance and project management elements of their offer were deemed by the SSC to be not as strong as the recommended Awardee.

1	FIRM	Average Score	Factor Weight	Weighted Average Score	Rank
2	<b>CAF USA Inc.</b>				
3	Experience and Past Performance	73.00	40.00%	29.20	
4	Price (as evaluated with U.S. Jobs trade-off)	100.00	30.00%	30.00	
5	Technical Compliance	71.00	20.00%	14.20	
6	Project Management Experience	62.00	10.00%	6.20	
7	<b>Total</b>		<b>100.00%</b>	<b>79.60</b>	<b>2</b>
8	<b>Kinkisharyo International, LLC</b>				
9	Experience and Past Performance	82.50	40.00%	33.00	
10	Price (as evaluated with U.S. Jobs trade-off)	92.66	30.00%	27.80	
11	Technical Compliance	75.50	20.00%	15.10	
12	Project Management Experience	74.00	10.00%	7.40	
13	<b>Total</b>		<b>100.00%</b>	<b>83.30</b>	<b>1</b>
14	<b>Siemens Industry Inc.</b>				
15	Experience and Past Performance	77.25	40.00%	30.9	



16	Price (as evaluated with U.S. Jobs Trade-off)	87.00	30.00%	26.1	
17	Technical Compliance	72.50	20.00%	14.5	
18	Project Management Experience	68.00	10.00%	6.8	
19	<b>Total</b>		<b>100.00%</b>	<b>78.30</b>	<b>3</b>

**U.S. Employment Program – Price Trade off Analysis**

	CAF USA	Kinkisharyo Intl.	Siemens Industry
A. BAFO Price (Base & Options)	\$785,632,250	\$891,371,272	\$940,636,114
B. U.S. Employment Value*	\$62,402,503	\$97,889,293	\$99,155,651
C. U.S. Employment Value with Economic Multiplier of 1.4183	\$88,505,470	\$138,836,384	\$140,632,460
D. Proposed Price for Evaluation Purposes only (Row A – C)	\$697,126,780	\$752,534,888	\$800,003,654

\* Note: The U.S. Employment Value is derived from the work hours to be performed by new Contractor employees, on the P3010 project, times the wages and benefits paid to those new employees\*.

**C. Price Analysis**

The recommended price has been determined to be fair and reasonable based upon adequate price competition, fact finding, technical evaluation, independent cost estimate and negotiations. While the award is being recommended to a Proposer other than the lowest price offerer, the recommended price is 10% lower than the Independent Cost Estimate (ICE) and within 11.9% of the lowest price offer. Based on technical evaluation and economic analysis, the recommended price addresses all cost elements and presents the best overall value when all evaluation factors are considered, including clear advantages in technical compliance, schedule risk, project management and new U.S. job creation. The prices identified below are for the base Contract and all Options.

	Proposer	Initial Proposal Amount	Negotiated – BAFO
1.	CAF USA, Inc.	\$948,727,755	\$785,632,250
2.	Kinkisharyo International, Inc.	\$864,444,590	\$891,371,272
3.	Siemens Industry, Inc.	\$1,009,043,396	\$940,636,114

**D. Background on Recommended Contractor**

The recommended firm, Kinkisharyo International, L.L.C., located in Westwood, MA, is a wholly owned subsidiary of Kinki Sharyo Company, Ltd. (KSJ), headquartered in Osaka, Japan. KSJ has been manufacturing rail transit vehicles since 1920. Kinkisharyo International has been manufacturing rail cars in the U.S. since 1984. Kinkisharyo International has been awarded 15 rail car contracts in the U.S. and has delivered 684 cars during that time span. Kinkisharyo International has never been late in the delivery of any of its rail car contracts. Their most recent work was to provide LRVs to the transit agencies in Phoenix, Dallas and Seattle.

**E. Small Business Participation**

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

**F. All Subcontractors Included with Recommended Contractor's Proposal**

	<b>Subcontractor</b>	<b>Services Provided</b>
1.	Ansaldo STS USA, Inc.	Automatic Train Protection System
2.	Baultar Concept Inc.	Flooring
3.	Deilner Couplers, Inc.	Couplers
4.	IFE North America, LLC	Doors
5.	INIT, Inc.	Automatic Passenger Counter
6.	Knorr Brake Corporation	Friction Brake System
7.	Kustom Seating Unlimited, Inc.	Passenger Seating
8.	Penn Machine Company	Wheels and Axels
9.	Soft America	Batteries
10.	The Timkin Company	Journal Bearings
11.	Toyo Denki USA, Inc.	Propulsion System
12.	Trans-Lite, Inc.	Interior and Exterior Lighting
13.	TransTech	Pantograph
14.	Transtechnik	Auxiliary Electrical Equipment

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USSC, LLC

Operator Seat



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90012-2952

213-223-2000 Tel  
metro.net

**ATTACHMENT B**

**CP206035 - Expo Blue Line Light Rail Vehicle Procurement (FY12-17+)**

Uses of funds	FY12	FY13	FY14	FY15	FY16	FY17	Total	% of Total
Acquisition	46,227,468	46,946,730	39,345,056	74,408,070	90,134,502	2,076,320	298,061,827	87.4%
Pro Services	1,302,580	4,610,069	4,583,338	4,667,389	4,063,966	2,076,320	21,323,691	6.2%
MTA Administration		370,200	1,026,400	1,366,000	1,415,600	1,431,800	6,181,000	1.7%
Contingency						16,076,011	16,076,011	4.7%
<b>Total</b>	<b>47,530,048</b>	<b>53,926,999</b>	<b>44,954,794</b>	<b>80,481,469</b>	<b>95,614,088</b>	<b>19,586,131</b>	<b>342,350,000</b>	<b>100.0%</b>
<b>Sources of funds</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>Total</b>	<b>% of Total</b>
Measure R 35%	18,661,048	5,887,363	5,156,315	9,231,224	12,806,919	12,757,131	64,500,000	18.8%
Prop C 25%	51,290						51,290	0.0%
Local Agency Funds	39,400						39,400	0.0%
Prop A 35%						6,829,000	6,829,000	2.0%
Prop 1B PTMISEA	26,780				5,092,094		5,418,918	1.6%
STIP	139,022						139,022	0.0%
RIP	6,969,000	45,441,000	39,798,479	71,250,244	38,412,277		201,871,000	59.0%
CMAD	14,200,000						14,200,000	4.1%
RSTP	7,700,000	2,300,572					49,303,370	14.4%
<b>Total</b>	<b>47,530,048</b>	<b>53,926,999</b>	<b>44,954,794</b>	<b>80,481,469</b>	<b>95,614,088</b>	<b>19,586,131</b>	<b>342,350,000</b>	<b>100.0%</b>

Award P3010 LRV Contract

**Note: Funding sources and cashflow may change subject to funds availability and expenditure rates.**

Award P3010 LRV Contract

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**Metro**

Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90012-2952

213.922.1000 Toll  
metro.net

**EXECUTIVE MANAGEMENT AND AUDIT COMMITTEE  
OPERATIONS COMMITTEE  
OCTOBER 21, 2010**

**SUBJECT: LIGHT RAIL VEHICLE PROCUREMENT**

**ACTION: AUTHORIZE NEW PROCUREMENT OF LIGHT RAIL VEHICLES  
(LRVs)**

**RECOMMENDATION**

- A. Authorize staff to issue a federally funded solicitation for a "Best Value" LRV procurement. The procurement will include 78 vehicles in the base order and options for additional vehicles as required for Measure R light rail projects.
- B. Approve an increase in the life-of-project budget for CP#206035 – Light Rail Vehicle Procurement (P3010) of \$160,910,000, from \$174,500,000 to \$335,410,000.
- C. Approve the attached funding plan totaling \$336,410,000 for the first 78 LRVs that includes the reprogramming of \$21.9 million in federal funds which are anticipated savings from the procurement of P2550 light rail vehicles.
- D. Amend the FY11 budget to add one FTE to Transit Operations to provide dedicated project management support and one FTE to Administrative Services- Procurement to provide dedicated project and contract administration support for the life of the capital project.

**ISSUES**

At the September 2010 Board meeting, staff provided an update on the status of requests sent to the Federal Transit Administration (FTA) to include certain provisions in the P3010 procurement designed to create employment opportunities in Los Angeles County and to promote improved air quality in the vehicle manufacturing process.

On July 21, 2010, LACMTA sent a request to the Federal Transit Administration (FTA) to include certain provisions in the P3010 procurement designed to create employment opportunities in Los Angeles County and to promote improved air quality in the vehicle manufacturing process. Specifically, we have asked for approval to include the following requirements in the request for proposal and have received the following questions or initial responses from the FTA:

1. The creation of local jobs would be evaluated in the procurement. Proposers will be required to submit a detailed plan for creating employment opportunities in Los Angeles County in connection with production, delivery, acceptance testing, and warranty coverage requirements.

*FTA's initial response is that our request would be difficult to approve, primarily because they view a local hiring provision as "exclusionary and discriminatory" under applicable FTA procurement rules.*

LACMTA responded to the FTA's initial response with a follow-up letter to the FTA on September 30, 2010, restating our request for a timely response to our July 21<sup>st</sup> letter. LACMTA proposed in the alternative that incentive points be awarded for a local hiring program in the procurement scoring and argued that it would not constitute an impermissible geographic preference since it would be applied equally to all proposers, and as a result, would not conflict with FTA's prohibition on the use of "exclusionary and discriminatory specifications" in federally funded procurements.

2. Inclusion of a project specific Disadvantaged Business Enterprise (DBE) Goal for this procurement to create employment and business opportunities for DBE firms in the Los Angeles area.

*FTA's initial response is that they are open to this type of provision, but that LACMTA would need to provide a justification of the use of project specific goals (rather than the normal practice of reliance on the vehicle manufacturer's DBE goals). They have also requested a list of anticipated DBE contracting opportunities and prospective DBE firms.*

MTA contacted the FTA Office of Civil Rights to determine how the FTA instructs the transit vehicle manufacturers to set the DBE goals for vehicle manufacturing. Our current vendor, AnsaldoBreda, shared their federal DBE program plan with LACMTA which indicates that they have a 9% DBE goal for the P2550 Light Rail Vehicle procurement. We have also researched typical subcontracting opportunities for light rail vehicle manufacturing and assembly and have matched that list with certified DBE subcontractors. LACMTA identified over 1,700 potential DBE subcontractors who may be able to provide services to a light rail vehicle manufacturer. LACMTA provided this information to FTA in its September 30<sup>th</sup> follow-up letter. Based on this preliminary data we would anticipate setting a DBE goal greater than the current goal submission in the P2550 AnsaldoBreda contract.



3. A requirement that each proposer comply with and provide a certification that the manufacturing facilities that it will use to produce and manufacture LRVs for LACMTA will meet air quality and emissions standards established by the South Coast Air Quality Management District (SCAQMD) under the Clean Air Act.

*FTA's initial response is that they have no jurisdiction over the use of this type of environmental provision and that LACMTA would need to address it with the Environmental Protection Agency (EPA).*

Staff has identified the various LRV production processes and the specific applicable SCAQMD regulations that would apply to the manufacture of LRVs. We have created contract language and a certification that a responsible car-maker must adhere to during LRV production. We had a conference call with EPA officials and have submitted a copy of our proposed contract requirements and certification to the EPA. We will continue discussion with EPA officials on this matter to gain their support.

4. A requirement that the LRVs be manufactured in the United States and contain all U.S. components.

*FTA's initial response is that they may not have a problem with this type of provision, but they raised the issue of whether 100% U.S. components could be achieved as a practical matter by the rail car suppliers.*

In the September 30<sup>th</sup> follow-up letter to FTA, LACMTA reiterated its proposal to require all LRV components be of United States origin and that all of the manufacturing processes must take place in the United States. In effect, we are proposing to apply the Buy America requirements currently applicable to the "manufactured products" under the FTA and FTA Buy America regulations rather than the Buy America requirements applicable to rolling stock. We stated that it is our belief that our proposed approach supports Department of Transportation objectives recently described in public speeches on the need for domestically built rail vehicles, given the current economic state of our country.

#### **DISCUSSION**

Award of a contract to provide LRVs will take approximately one year from the date of Board approval of the solicitation. MTA has contacted a number of potential vehicle manufacturers to discuss schedule requirements. Based on their responses, it will take approximately 24-30 months to produce the first vehicle for our testing and acceptance. We will ask car makers to deliver four cars per month beginning in late 2013. This expedited schedule will result in complete delivery of the base order of 78 LRVs by end of 2015.

To assure timely delivery of the P3010 LRVs, the following procurement requirements will be included in the RFP:

#### LRV Contractor Selection Process and Evaluation Criteria

The Best Value RFP will use explicit factors to define the relative importance of the evaluation criteria. The criteria will be structured to obtain a reliable and cost effective vehicle from a proven car builder. The evaluation factors will consist of the following elements:

1. Experience and Past Performance
2. Cost
3. Technical Compliance
4. Project Management Experience

Evaluation criterion #1 will be defined to be most important. Criteria #1 and #2 collectively will be significantly more important than evaluation criteria #3 and #4 combined.

Additionally, the RFP will include a local hiring program and an enhanced Buy America program as a basis for providing proposers with incentive points in the overall review and scoring of proposals. The additional points earned would be used as part of the Best Value trade-off process.

The DBE goal, set by LACMTA according to California subcontracting opportunities will be included in the RFP and evaluated in the same manner that all other federally funded Metro contracts are evaluated. The applicable SCAQMD regulations for clean air and water will be treated as responsiveness and responsibility issues. The Best Value selection process, including negotiations with all proposers in the competitive range, allows us to review proposal responses in greater depth until we are satisfied that the selected contractor has sound technical competence and history of timely deliveries.

#### Contractor Financial Guarantees

To provide maximum performance protection and minimize risk to LACMTA, the RFP will require the following financial guarantees:

- Performance Bond – secures fulfillment of all contractor's obligations under the contract. The performance bond will be required for 100% of the contract price.
- Irrevocable Letter of Credit – requires the selected contractor to provide a letter of credit or escrow account equal to 6% of the total contract value to address delivery and production support of the vehicles.
- Liquidated Damages (LDs) – damages that the contractor agrees to pay when contractual milestones or deliverables have been missed. The LDs may be assessed up to an amount not to exceed 10% of the total contract price.

- Retention of Monies from Progress Payment – 5% from each progress payment will be withheld until the contract has been completed. This provides security that the contractor will continue to perform until contract completion. Additionally, we may increase the retention to 10% if significant milestones are not achieved within a reasonable time frame.

The financial guarantees identified above provide assurances that the contractor will perform according to the contract requirements and schedule.

#### Contract Data Deliverables and Milestones

We estimate that the contractor will generally take at least 24 months to design the LRV to meet our specifications and produce the first prototype LRV for testing. This will be followed by the manufacturing and assembly of production LRVs; commissioning of the LRVs; acceptance; and warranty monitoring. Throughout this duration, project staff will review key deliverables and monitor milestones, such as the following:

- Car design review packages consisting of drawings, analyses, etc
- Qualification tests for carbody, trucks, and subsystems equipment
- First Article Inspection (FAI) of the LRV and subsystems equipment
- Carshell and truck manufacturing
- Car and truck assembly, including factory tests
- Car delivery, acceptance, testing and commissioning
- Warranty monitoring

Such in-depth monitoring and oversight will provide internal controls needed to manufacture cars that comply with the contract requirements and are built with the highest quality and reliability.

#### Procurement Management

The new LRV contract will be long-term and technically complex. It will require dedicated and expert technical project management and contract administration support. Additional technical support for the LRV design, production and quality assurance phases will be provided by consulting firms who specialize in LRV procurements.

A Metro project manager will be assigned to the project to provide stronger review of the LRV design documents, increased in-plant inspections, and formal progress reports to the Chief Operations Officer and the Board for the life of the project. Monthly contract progress review meetings for design, schedule, and technical discussions will be held at the contractor's and suppliers' plants.

A dedicated contract administrator will support program reviews, assess contract performance through contract milestone adherence, assess payments and liquidated damages in relation to contract milestones, manage and negotiate change orders,

assure delivery of all requirements, including spares, tooling, test equipment, product documentation, manuals, spares, and will support warranty claims and contract close-out.

#### Risks

A risk to proceeding with releasing the RFP prior to FTA approval is that we will need to issue amendments to the RFP if the FTA denies any of our request(s). Depending upon the complexity of the amendment, additional time will be added to the proposal response, if necessary.

#### FINANCIAL IMPACT

The proposed funding plan (Attachment A) is a combination of federal, state, and local funds with \$265 million from federal sources for the base contract. The funding for the options will be identified through the 30/10 initiative implementation schedule and approved by the Board prior to exercise of any options. The funding required to prepare, issue and evaluate the RFP as well as manage and administer the contract has been included in the FY11 budget in CP#206035.

#### Impact on Bus and Rail Operating and Capital Budget

The funds identified are primarily federal and state capital grants and Measure R 35% Transit Capital, none of which are eligible for bus and rail operating expenses.

#### ALTERNATIVES CONSIDERED

The Board could choose not to move forward with the RFP to begin the procurement process for the LRVs until the FTA has issued its final decision on all of LACMTA's requests. This alternative is not recommended because LACMTA needs LRVs to satisfy service demands for our expanding network of light rail transit projects.

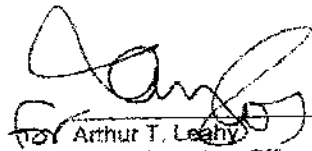
#### NEXT STEPS

After Board approval of the recommended RFP, staff will prepare and release a solicitation to provide consultant support evaluation of P3010 proposals and source selection of the P3010 contractor. Additionally, a RFP will be issued to obtain technical and inspection services during pre-production and production phases of the vehicle development.

#### ATTACHMENT A

A. Financial Plan for LRV Procurement Base Buy

  
\_\_\_\_\_  
Lonnie Mitchell  
Chief Operations Officer

  
\_\_\_\_\_  
for Arthur T. Leahy  
Chief Executive Officer

Federal/State/Local  
 Light Rail Vehicle Procurement (78) -- CP206035  
 Capital Project Funding and Expenditure Plan  
 (\$ in millions)

Worksheet: 100 - 030150

	Previous Years	FY11	FY12	FY13	FY14	FY15	FY16	FY17	TOTAL	%
<b>Uses of Funds</b>										
Acq of Revenue Vehicle (govt sup)		\$ 55.7	\$ 34.0	\$ 19.4	\$ 73.8	\$ 88.5	\$ 26.1	\$ 35.8	\$ 253.9	90%
Parts				\$ 1.0	\$ 2.3				\$ 3.3	1%
Special Tools				\$ 2.2		\$ 4.5			\$ 6.7	1%
Test Equipment				\$ 2.5		\$ 3.3			\$ 5.8	2%
Administration	\$ 0.3	\$ 0.5	\$ 3.0	\$ 3.0	\$ 3.0	\$ 3.0	\$ 3.0	\$ 3.0	\$ 21.0	8%
Contingency			\$ 1.1	\$ 2.2	\$ 3.4	\$ 6.8	\$ 6.6		\$ 22.2	10%
<b>Total Project Cost</b>	\$ 0.3	\$ 15.7	\$ 38.4	\$ 31.3	\$ 85.5	\$ 91.8	\$ 38.7	\$ 33.8	\$ 335.4	100%
<b>Sources of Funds</b>										
Measure R 2%								\$ 5.8	\$ 5.8	2%
Measure R 35%			\$ 4.4	\$ 3.8	\$ 3.8	\$ 10.8	\$ 4.4	\$ 27.8	\$ 60.1	18%
Prop 1B/TDNPASTP <sup>(a)</sup>	\$ 0.46	1.6		3.10					\$ 5.4	2%
RSTP (Federal) <sup>(b)</sup>					\$ 41.7		\$ 7.7		\$ 49.4	15%
CMAG (Federal) <sup>(c)</sup>		\$ 10.2	\$ 31.1						\$ 41.3	12%
Regional Imp Prog. (RIF-Federal)		\$ 3.7	\$ 2.6	\$ 24.2	\$ 34.0	\$ 21.3	\$ 26.8	\$ 0.8	\$ 113.8	34%
<b>Total Project Funding<sup>(d)</sup></b>	\$ 0.9	\$ 15.7	\$ 38.1	\$ 31.8	\$ 85.3	\$ 91.8	\$ 38.8	\$ 33.8	\$ 335.4	100%
<b>Surplus (Deficit)</b>	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	

<sup>(a)</sup> Includes RIF/Prop 1B/35% funds spent in other years.  
<sup>(b)</sup> Funds pending federal approval.  
<sup>(c)</sup> Funding source and schedule used may change subject to funds availability and final cost.  
<sup>(d)</sup> Numbers may not add up due to rounding.



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90012-2892

ATTACHMENT D

Agenda Item 60  
Resolution

**62**

**OPERATIONS COMMITTEE  
JANUARY 21, 2010**

**SUBJECT: ACQUISITION OF LIGHT RAIL VEHICLES**

**ACTION: AUTHORIZATION TO PROCURE BY COMPETITIVE  
NEGOTIATION (PUBLIC UTILITIES CODE 130238)**

**RECOMMENDATION**

A. Adopt the following motion: The Board finds that because the elements and scope of the purchase of light rail vehicles are of a highly specialized and unique nature, the procurement qualifies under Public Utilities Code (PUC) section 130238 for procurement by competitive negotiation.

Requires two-thirds vote of the Board

B. Authorize the Chief Executive Officer (CEO) to solicit light rail vehicles as a competitive negotiation pursuant to PUC 130238 and Metro's Procurement Policies.

**ISSUE**

The Metro Project Office and Procurement staff have reviewed the light rail vehicle technical requirements and has determined that the vehicles are specialized rail transit equipment. This determination renders the vehicles appropriate to be procured by a competitive negotiation process in accordance with PUC Section 130238. PUC Section 130238 states that the Board may, after finding by a two-thirds vote of all of its members that a particular procurement qualifies under this section, direct that the procurement be conducted through competitive negotiation under this section.

**POLICY IMPLICATIONS**

It is in the public's interest to utilize competitive negotiation rather than a sealed bid process to consider factors other than price in the award of contracts for these vehicles as is allowed under PUC section 130238. The competitive negotiation process allows consideration of factors other than price that could not be adequately quantified or considered in a strictly low bid procurement.

### ALTERNATIVES CONSIDERED

Procurement by a sealed low-bid process as prescribed by PUC Section 130232 was considered by staff but is not recommended. The sealed bid process does not adequately account for any technical superiority of performance, reliability, or system life cycle costs that one firm's equipment may have over another firm's equipment, since the process must award to the lowest responsive responsible bidder. For those reasons, staff does not recommend this alternative. The negotiated procurement process will provide for evaluation of critical non-price related factors in the selection process.

### FINANCIAL IMPACT

Funding of \$200,000 is included in the FY10 budget in capital project #206035 and cost center #3960. The total funding plan and sources for the LRVs will be presented to the Board as part of the LOP budget approval.

### Impacts to Bus and Rail Enterprise Fund Operating and Capital Budgets

The source of funds for this action/procurement is TORP, STIP, and PA35 bonds. These funds are eligible for bus and rail operating and capital expenditures. No other sources of funds were considered for this activity because this is a board adopted project with a funding plan.

### BACKGROUND

Metro needs to procure additional light rail vehicles to satisfy operating requirements over the next few years. Based on the above, a Request for Proposal (RFP) will be prepared for approximately 100 new cars (dependent upon available funding) plus options for additional cars to effect competition among the major car builders for a competitive negotiated procurement.

### NEXT STEPS

The current P2550 light rail vehicle specification has been revised to make sure it is current and to also assure that its technical content and requirements do not unduly hinder competition. In accordance with Board direction at the September 24, 2009 Board meeting to move forward with a new procurement as expeditiously as possible in the event the P2550 AnsaldoBreda options were not consummated, the specification was sent out on November 3, 2009 for Industry Review to the car building industry with draft contract terms and conditions. This Industry Review was to generate interest in our procurement and allow manufacturers to comment and point out any obvious discrepancies or cost-prohibitive requirements which can be addressed before we issue the formal Request for Proposal.

Industry review comments were received from five car builders on December 7, 2009 and are being reviewed. We plan to complete our review by February 1, 2010 and



based upon Board approval of this action, send out a formal competitive negotiation Request for Proposal by March 1, 2010. Staff anticipates submitting the procurement to the Board for award approval by October 31, 2010.

Prepared by: Tom Butler, Sr. Contract Administrator

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Michael J. Cannell  
General Manager, Rail Operations

*Arthur T. Leahy*

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Arthur T. Leahy  
Chief Executive Officer

Acquisition of Light Rail Vehicles

4