SFMTA
Municipal
Transportation
Agency

CALIFORNIA REPUBLIC

Muni Forward: Get On Board!

Siemens S200 SF Light Rail Vehicle

07 | 15 | 2014

SAN FRANCISCO, CALIFORNIA

The Right Vehicle to Meet Increasing Demand for Rail Transit in the City

- Meets Central Subway time-table
- Addresses demand for more transit rail services
- Introduces new standard for performance
- Provides immediate economic stimulus for region

We Have Integrated Lessons Learned From Prior Procurements & Day-to-Day Service Issues

- Industry Outreach
  - regular and open communications with carbuilders
- Selection process
  - designed to ensure a qualified carbuilder
- Performance based specification
  - to allow carbuilder to provide proven designs
- Increased reliability requirements
  - Doors and steps 85,000 mdbf (LRV2 was 12,000)
  - Coupler 100,000 mdbf (LRV2 was 19,000)

    (MDBF – Mean Distance Between Failures)

The goal of the project was to procure a first class car, from a quality carbuilder, at a competitive price

The Evaluation is complete!
Recommendation for Award is ready for approval.

- RFQ / RFP Process was completed March 2014
- RFP Evaluations Completed April 2014
- Contract Negotiation Completed in May 2014
- **Recommending to Award the Contract July 2014**
- Contract Award Anticipated Fall 2014
- First cars for Central Subway will be delivered by end of 2016
- Last of the 24 Car order will be delivered by 2018
- Completion of Option car (40 cars) by end of 2019
- Phase 2 - 151 cars delivered from 2021 – 2028

Two Responsive Proposals Were Received

Evaluation Committee	Item	CAF	Siemens
Qualitative	LRV Experience	Strong	Strong
Qualitative	US Market Experience	6 projects	More than 14 projects in 5 yrs
Qualitative	On Time Delivery Record	Has had some delays	**Strong on time performance in US over 10 yrs.**
Qualitative	Financial Strength	Medium	**Supportive & Strong Parent Company**
Technical	Design	Similar to current LRV	Offering significant improvements over LRV2/3
Technical	Sub suppliers	All proven with US experience	All proven, some with no US exp. with chosen systems
Technical	Organization/Location	Multiple Locations (Design/prototype in Spain)	**Designed, built, tested, assembled - LOCAL**
Technical	Headquarters location	Spain	Sacramento, CA
Price	Base Price	Within Anticipated Range	**~ 20% lower than estimate**
Alternate	Alternate Approaches	1 Commercial 4 Technical alternatives	4 Commercial & 25 Technical alternatives


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Sunnydale
345

Siemens outscored CAF in every category and by a significant margin

	Weighting	CAF Proposal Score	Siemens Proposal Score
Qualitative Responsibility	10%	4	6
Technical Evaluation	65%	29	53
Price Evaluation	25%	20	25
Alternate Approaches	10 extra	1	7
TOTAL		54	91
Base Proposal Price		$817,145,015	$640,626,951

Evaluation Committee Validated Siemens Proposal - Exceeds Expectations!

Evaluation Committee of panelists with various backgrounds and experience had conducted multiple reviews and assessments of both technical and commercial terms of the proposal and determined that :

- Siemens has a proven record of providing reliable, safe, attractive and technically advanced LRVs
- S200 SF features provide above and beyond industry standard that give value and financial benefits to our Agency's operation, including but not limited to energy efficiency improvements and time/cost saving maintenance designs
- Siemens Price is nearly 20% below estimates.

Factors Which Contribute to Lower Cost & Higher Value on Siemens Vehicles

- Vehicles are to be manufactured locally (90 Miles from San Francisco)
- Assembly plant is solar-powered and has been up and running for a proven amount of time
- **Proven technology & design**
- Several major systems in the car provided by Siemens Corporation
- Design to meet our unique infrastructure constraints
- **Competitively priced to win!**

New LRV4 train on the lift at MUNI Metro East Facility

State of The Art Features in the New LRV To Improve Safety and Performance

- Lightweight car body features a crashworthy design – meeting CPUC requirements
- Meets stringent weight requirements
- Designed to allow easy access for inspections, maintenance and repairs to minimize time out of service

- Improved passenger amenities, fully ADA compliant
- Modern information system with crystal clear audio announcement and camera surveillance system

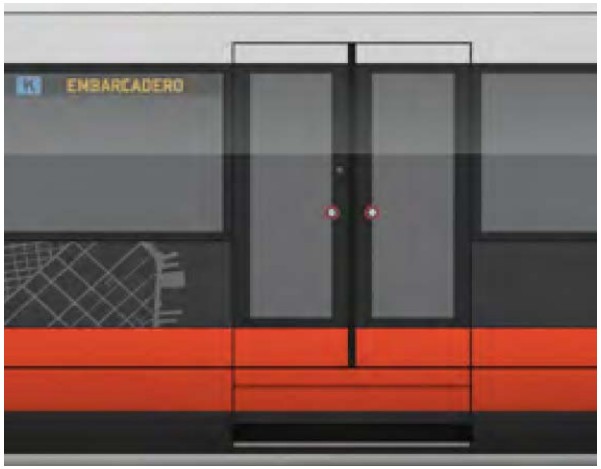
High Reliability / Low Maintenance Design

- Open interior reduces cleaning effort
- Advanced Monitoring & Diagnostics system – reduces diagnostic time, identifies service needs
- Streamlined door design, fewer parts than LRV2 (over 200 parts versus less than 20 parts)
- Full range electric braking reduces wear on friction brake components
- Modular design – serviceable components can be easily disconnected, removed, replaced, and reconnected
- Primary suspension reduces shock loads between truck frame and track
- Replaceable carbody elements facilitate repairs

New LRV4 near 3rd and King

Directly Address Component That Most Negatively Impacts Rail Service

- Improved passenger door system - higher reliability – fewer moving parts
- Dramatic Reduction in maintenance
- Improved passenger door obstruction detection system
- Electrically operated steps for higher reliability and smoother operation



Longitudinal Seating: Wide, Open Interior

Final layout will be determined via public process/vetting with stakeholders such as CAC and MAAC

Operator's Cab

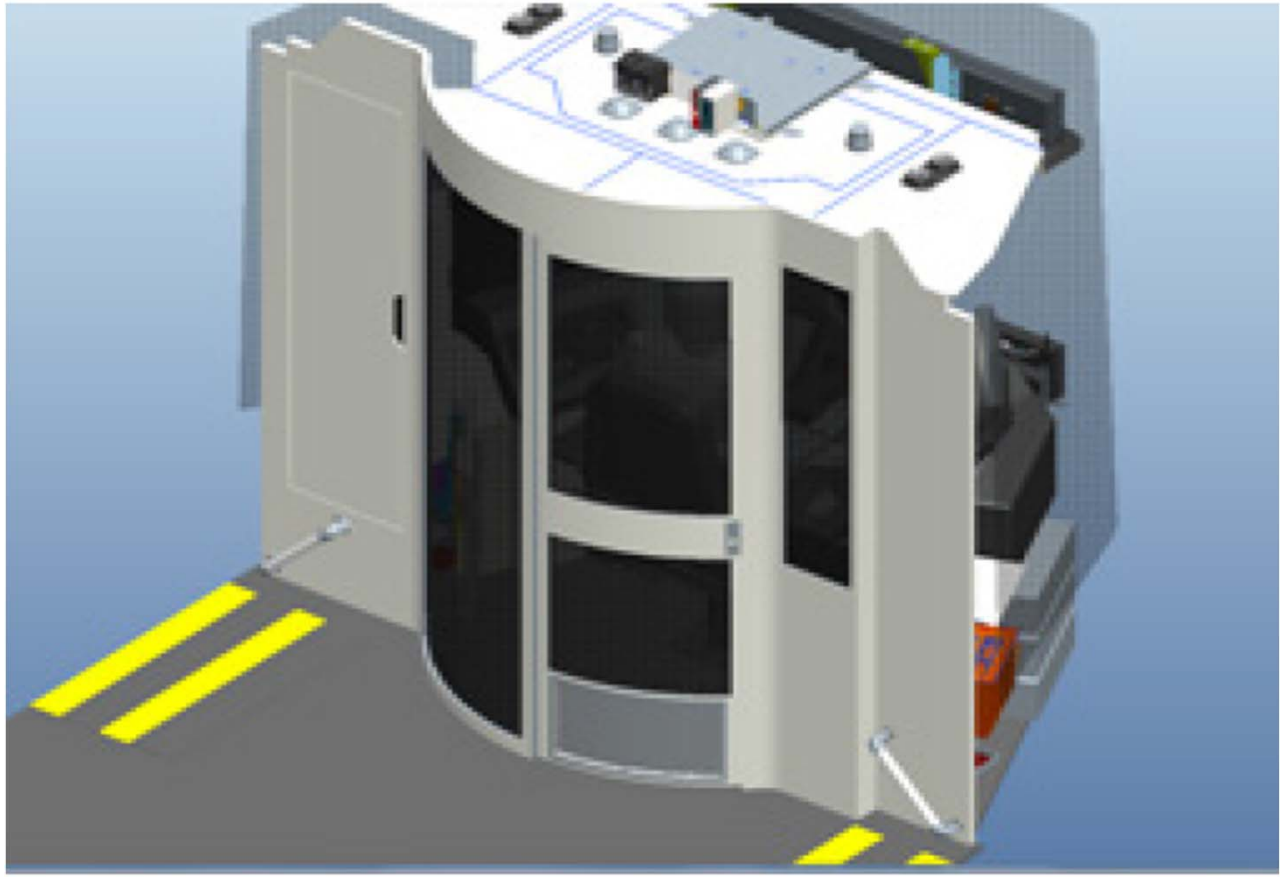
Left View

Center View

Right View

Ergonomic, High Visibility Design

Sliding Cab Door Offers Easier Access to Cab



Sliding Cab-Door increases speed, ease of ingress / egress for operators.
Provides benefit and value in safety and aesthetic comfort preference for operator.

Exceed All Our Procurement Objectives

- **ON TIME**: Car builder has solid history of delivering **Quality** cars on time
- **LOCAL** : The project to be delivered (including support) within 90 miles of San Francisco
- **EXTENDED LIFE:** Offering 30 year design life vs. 25 years required
- **EXCEED RELIABILITY REQUIREMENTS** : Offering safe, attractive vehicles with reliability more than twice specified values in the RFP
- **FASTER DELIVERY** :Committed to deliver vehicles earlier than required, and also offering expedited delivery rate
- **COMPETITIVE PRICE**: High value low cost cars provide the Agency the opportunity to get 215 cars with the original budget for 175 cars
- **FINANCIAL SOLUTION**: Offering financing solutions to address Muni cash flow challenge

Three trains at MUNI Metro East Facility

Meeting Transportation Goals of Current and Emerging San Francisco

Need	No. of Cars	Delivery
Central Subway Extension and near term service expansion	24	2017 – 2018
Fleet Replacement	151	2021 – 2027
Expansion Needs (Travel Demand Study)	85	
Short Term	40	2018 – 2021
Long Term	45	2027 – 2030

- Funding for the base order for CS and fleet replacement is in place
- Funding for the needed short term expansion is being determined

Alternative Approaches Offer Benefits

- **Inclusion of alternatives was designed to allow Carbuilders to:**
  - Suggest changes to the RFP if there is benefit to the SFMTA
  - Offer **creative solutions** to the gap in vehicle deliveries

- **Siemens alternate commercial proposals presents an opportunity to SFMTA**
  - Early arrival of vehicles
  - Reduced price for faster production with no gap in vehicle delivery
  - Financing in lieu of accelerated schedule and parent company guarantees

Siemens Proposed Commercial Alternatives Offer Faster Delivery and Cost Savings

1. Parent Company in lieu of Commercial Paper – savings of $3.4 M savings
2. Early delivery of 40 cars (to fill the production gap) - additional savings of $2.7 M savings, meeting service demand and improve service reliability
3. Three year financing for $150M for $5M cost – (savings from item 1 and 2 above neutralize this cost)
4. Faster delivery of 151 cars (four per month, instead of two per month) – potential savings $16M (quicker/cheaper)

Requesting approval from the MTA Board today for the following:

- Execute the Contract to provide up to 260 vehicles
- Recommend that the Board of Supervisor approve the contract
- Pursue vendor financing option for other or available funding to expedite delivery of option vehicles
- Action is required today to meet the project schedule

Recommended SFMTA Board Meeting Approval	- July 15, 2014
Recommended Board of Supervisors Approval	- September 2014
Notice to Proceed	- October 2014
First prototype car delivered	- December 2016

New LRV4 at 3rd and King