



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

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**23**

**REVISED**  
**REGULAR BOARD MEETING**  
**MAY 26, 2011**

**SUBJECT: ELEVATOR/ESCALATOR MAINTENANCE AND REPAIR SERVICES**

**ACTION: APPROVE NEW CONTRACT AWARD**

**RECOMMENDATION**

Authorize the Chief Executive Officer to award a five year, firm fixed unit rate contract, Contract No. OP85102554 to Mitsubishi Electric & Electronics USA, Inc. for Metro transit facilities elevator and escalator maintenance and repair services, in an amount not to exceed \$44,377,356 inclusive of two one-year options, effective June 1, 2011.

**ISSUE**

This action is in response to the LACMTA January Board Item No. 23 which was approved and amended by substitute motion for reconsideration of award of contract for Metro transit facilities elevator and escalator maintenance and repair services. The approved substitute motion directed staff to report back to the Board following an independent review of the procurement process. The approved substitute motion also authorized a three-month extension (on a month-to-month basis) for Metro transit facilities elevator and escalator maintenance and repair services. This subsequent action requests authority to award the subject contract based on the outcome of the Inspector General's (I.G.) review and findings. The I.G.'s Receive and File report was heard at the Operations committee on April 21, 2011. Their findings confirmed that the procurement procedures had been followed and that re-procuring the services, would not guarantee additional proposers.

At the April 21, 2011 Operations committee, discussion occurred regarding response time by the existing service contractor, Mitsubishi, to return escalators and elevators to service after they had been notified of the units being out of service. For the timeframe of April 14 through May 12, 2011 Mitsubishi received 85 incident reports, which is their notification that the units are out of service. The average response time for the service contractor was 36 minutes, which is considered acceptable. Mitsubishi's main functions, with 16 dedicated technicians, are: preventative maintenance of 265 units to satisfy daily, weekly, monthly, quarterly, semi-annual and annual inspections; vandalism (sometimes severe) repairs in a timely manner; compliance with State Code

requirements and violations; sweep the entire system once a day to identify problems, re-start units and rectify problems encountered; and respond to incident notifications, with elevator problems taking precedence for ADA compliance.

The committee also requested information on the number of outages reported. Metro's SCADA (Supervisory Control and Data Acquisition) system reports a tremendous volume of escalator alarms, approximately 1100 are generated weekly. This includes "trips" that last less than 5 seconds to total unit stoppages, with one occurring every 8.75 minutes. The vast majority of these alarms are false. In lieu of the alarm volume issue, Rail Operations Control Center (ROC) has been using field reports (patrons, employees, etc.) to identify and respond to elevator stoppages per Rail Operations Control Center Standard Operating Procedure (SOP) #38.

Metro has been working to improve internal communications when units are out of service; Metro personnel are the initial responders to try to re-start the units. Specific actions are: 1) SCADA reporting, overseen by Rail Communications (RailCom), will continue to be modified to be more useful to both ROC and vertical transportation management by reducing the amount of false alarms; 2) RailCom is now issuing three "point-in-time" SCADA stoppage reports per day to increase awareness and response to non-operating units; 3) SOP #38 has been revised to implement faster response time to out-of-service units; 4) Since April 27, 2011, more operations and maintenance personnel have been trained to re-start escalators and dispatched to roam the system to try to re-start units that are out of service and call in units that require a technician to trouble shoot.

## **DISCUSSION**

Contract No. OP85102554 provides maintenance and repair services to 132 elevators and 133 escalators in the Metro transit system. The current Contract No. OP33440667 with Mitsubishi Electric expired February 28, 2011, but at the direction of the Board of Directors it was extended on a month to month basis, up to three months. A new replacement contract was solicited under an RFP process in accordance with Metro's Acquisition Policy and Procedures Manual, Chapter 8, Competitively Negotiated Contracts. The new contract will cover all monthly maintenance costs plus approximately \$4,600,000 for as needed services such as escalator step tread repair and corrosion repair on elevators.

A systematic preventive maintenance program and timely repair of the equipment is necessary in order to meet State code requirements and to provide a safe and reliable vertical transportation system to transit riders. The elevators and escalators at transit stations play a vital role in transporting riders through Metro's transit system and provide access to mobility impaired patrons. To sustain high levels of equipment availability and reliability, and to minimize equipment downtime and its impact on riders, a high level of service is required. More demands are placed on the maintenance contractor as we strive to improve our service levels, as we add stations and attract more patrons, while trying to reduce customer inconvenience.

The cost of the contract has been affected by higher contractual obligations and other factors such as:

**1. The addition of third shift work.**

**New Contract:** Under the new contract, major maintenance and repairs on “extra critical” units will be performed after 7:00 PM. These increased service hours will allow for the performance of more maintenance during non-peak commuter hours for improved customer service.

**Existing Contract:** Current regular service hours under the existing contract are from 6:00 AM to 9:00 PM, seven days a week. Currently no maintenance is performed beyond these hours except for callback service to respond to essential equipment troubles.

More repairs and major preventive maintenance work will be performed after hours and on weekends for better customer convenience. The new requirement for major repairs and maintenance to be performed at night on certain units will serve to keep units more available to the public during regular business hours. Keeping other elements of equipment maintenance such as annual escalator/elevator inspections on weekends or after-hours will also lessen the impact on the public during regular business hours and minimize complaints.

**2. An increased level of dedicated technical personnel.** In order to meet the higher maintenance and response demands that an aging and heavily utilized transit system requires, the technician staffing level under the new contract has been increased from 16 to 18 dedicated technicians that will be exclusively assigned to this Metro elevator/escalator maintenance contract. The additional manpower will give needed flexibility to the maintenance program and continue onsite service coverage during evenings, weekends and holidays.

**3. Increased liquidated damages for excessive equipment downtime.** The new contract increases the number of “extra critical” units to 54 from the previous 13 which raises the incentive level to keep units available to the public during operating hours. For “extra critical” units, only 12 hours of downtime is allowed before liquidated damages begin to be assessed instead of 24 hours as on other units.

**4. Monthly escalator brake torque testing.** In the interest of patron safety, Metro now requires all escalator brakes to be tested monthly instead of annually as mandated by the state.

**5. Additional elevators and escalators.** The number of units in the contract will increase from 265 by 10% or more as new stations are opened over the next five years. Immediately, 15 units on the Metro Gold Line Eastside Extension (MGLEE) will be added to the contract as the MGLEE contractual maintenance period ends April 1,

2011. Those units will be included in the negotiated award amount of this contract. During the term of the contract, the new units on the Expo Line, and the Bauchet Street facility will be added to the contract at pre-negotiated rates. Others that will be added are El Monte Transportation Center and Division 13 at rates of units of similar rise and type that are already in the scope of this contract.

**6. Increased cost of labor.** A significant factor driving the cost higher in the new contract is the elevator/escalator trade's labor cost according to the International Union of Elevator Constructors agreement, which has increased substantially since the award of the existing contract in February 2006. All work on Sunday as well as evening and nighttime repair work is considered double time according to the elevator union agreement.

**7. Vandalism and abuse continue to be a major cost element in Metro's vertical transportation systems.** We continue to see the following: Escalator handrails are frequently getting slashed; objects dropped on escalator steps cause extremely expensive damage as many step treads are damaged within seconds; patrons maliciously press the emergency stop button on escalators resulting in nuisance calls which take valuable mechanic time away from other necessary repairs; wheeled vehicles and luggage cause damage to escalators and elevators and frequently trigger safety switches causing the units to shut down and people camp in elevators overnight, many times vandalizing interiors and jamming doors. Corrosion and deterioration due to the effects of constant exposure to urine take a heavy toll on Metro's elevators. Per contract, the contractor is required to respond to and resolve these issues promptly in order to restore service to the public.

**8. The State of California has raised its standards to a more stringent enforcement position.** In some cases, upon inspection, the State will require units to be shut off rather than allowed to operate while awaiting repair or adjustments. For example, at the discretion of the inspector, an escalator handrail with a ¼ inch cut from vandalism might be red tagged upon inspection. Formerly, seven weeks would have been allowed to resolve the problem. This creates an increase in upfront costs as the spare parts for these issues must be in stock and ready to install. If units are shut down by the inspector, the liquidated assessment period begins and the contractor must disrupt the planned manpower schedule or bring in additional help to fix the deficiency.

## **FINANCIAL IMPACT**

The funding of \$639,945 for one month of service is included in the FY11 budget in cost center 8510, Construction Contracts Procurement under project 306002 (Bus Operations), 300022 (Blue Line Operations), 300033 (Green Line Operations), 300044 (Red Line Operations), and 300055 (Gold Line Operations). In FY11, a total of \$7,470,000 was budgeted for these services. Since this is a multi-year contract, the

cost center manager and Executive Director will be accountable for budgeting the cost in future years, including any options exercised.

In FY10, \$6,933,091 was expended on this service.

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

The current year funding for this action will come from the Enterprise bus and rail operating fund for \$639,945. No other sources of funds were considered for this activity because it supports bus and rail operations. This activity is part of the on-going maintenance costs of Metro facilities.

### ALTERNATIVES CONSIDERED

Alternative one that was considered was to provide the service in-house. This would require the hiring of state certified technical personnel and the purchase of parts, equipment, vehicles and supplies. Establishing an in-house maintenance capability that is independent of the union labor pool would require years to develop and it is unlikely that Metro would be able to consistently attract, train, and retain a sufficient number of certified employees to perform the work in this industry's competitive market. Metro would need to acquire warehouse space to house large parts inventory. This is not a preferred option.

Alternative two that was considered was to reduce the level of service and hours of coverage required of the Contractor. This would result in increased levels of equipment downtime and customer complaints and is not a preferred option.

Alternative three that was considered was the idea of breaking up the contract into "regions" or smaller contracts as was brought up by the Metro Board of Directors in January. Staff evaluated this suggestion and the following detrimental or limiting issues were discussed:

#### Cost Impact to Contract(s):

- One contractor might win several or all contracts and be required to have multiple project managers, superintendents and clerical support resulting in increased, duplicative labor costs.
- Multiple contracts would likely increase the total labor necessary to fulfill overall maintenance and repair requirements due to loss of efficiency in the distribution of manpower. For example, one elevator mechanic currently performs most of the routine maintenance on the Blue Line, Green Line and Harbor Transitway elevators. He has easy access to parts for all brands and can move from one line to the other for emergency calls as necessary because it is all under the same contract. This is the preferred way to manage mechanics, under one contract.

- Contractors will not cross contractual boundaries to respond to emergency calls for liability reasons; therefore adding labor costs.
- More mechanics require more trucks, tools and equipment increasing the overall cost.
- Duplicate spare parts inventory by multiple contractors would lead to higher costs passed on to Metro.
- If territory is divided up according to equipment manufacturer, a contractor might only have to acquire parts for one or two manufacturers. This would be a big challenge since all lines have multiple brands of units. However, the manufacturer would have a pricing advantage due to proprietary parts acquisition.
- Economies of scale for all costs elements would be lost resulting in a significant increase in the overall contracts costs.

#### Cost Impact to Metro:

Multiple contracts require more in-house (Metro) oversight personnel due to:

- Multiple contracts require multiple procurements, multiple negotiations, etc. requiring more Metro employees.
- Processing of invoices, task orders, assessing Liquidated Damages, etc., will be multiplied.
- Metro's staff time necessary to analyze the reports and combine the data would increase exponentially, as we receive multiple reports daily from the contractor.
- Dividing territory into multiple contracts doesn't necessarily mean the risk factors are equitably divided; therefore, contractors would probably continue to include the highest risk factors in their proposals.
- ROC / BOC would have multiple contractors to call for problems resulting in confusion, inefficiencies and increased response time.

Therefore, Alternate three would not be the most efficient or feasible way to manage Metro's vertical transportation and is not recommended for this agency at this time. Ultimately, dividing the territory does not guarantee more proposers.

#### **NEXT STEPS**

Execute the contract to be effective June 1, 2011.

#### **ATTACHMENTS**

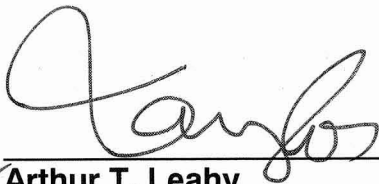
- A Procurement Summary
- B Supplemental Report (January Board Item 23.1)

Prepared by: Denise Longley, DEO Capital Proj Mgmt., Transit Project Delivery  
Victor Ramirez, Contract Administration Manager



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**Krishniah N. Murthy**  
Executive Director, Transit Project Delivery



for **Arthur T. Leahy**  
Chief Executive Officer

**PROCUREMENT SUMMARY**

**Elevator/Escalator Maintenance and Repair Services**

1.	Contract Number: OP85102554	
2.	Recommended Vendor: Mitsubishi Electric USA Inc.	
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	
3.	Procurement Dates:	
	A. Issued: June 7, 2010	
	B. Advertised/Publicized: June 7, 2010	
	C. Pre-proposal/Pre-Bid Conference: June 22, 2010	
	D. Proposals/Bids Due: August 6, 2010	
	E. Pre-Qualification Completed: August 16, 2010	
	F. Conflict of Interest Form Submitted to Ethics: December 13, 2010	
	G. Protest Period End Date: January 26, 2011	
	H. Small Business Commitment: 1.08% DALP	
4.	Solicitations Picked up/Downloaded: 8	Bids/Proposals Received: 1
5.	Contract Administrator: Samira Baghdikian	Telephone Number: (213) 922-1033
6.	Project Manager: Vance Gilless	Telephone Number: (213) 922-8828

**A. Procurement Background**

This is a competitively negotiated procurement issued as an RFP using explicit evaluation factors. The evaluation criteria consisted of work plan, experience and price. The base contract period is three (3) years, with two (2), one-year options for a total contract term of five (5) years. This contract will replace Contract No. OP33440667. The period of performance for this contract is anticipated to begin on June 1, 2011.

A pre-proposal conference/job walk was held with six companies in attendance. One proposal was received. A survey was conducted to determine why the other companies did not submit proposals. Reasons for declining to propose included: cannot provide a competitive proposal, not ready to propose at this time due to unknown factors such as vandalism, and risks and liability exposure.

The scope of this Contract consists of the furnishing of all labor, personnel, material, replacement parts and components, tools, equipment, lubricants and supplies to provide and perform full and complete preventative maintenance, service, repair, inspection and testing of every type and description on Metro's elevators and



escalators such that they shall operate in a safe and reliable condition at all times. The Contractor will dedicate staff to Metro and will only allow a pass through of materials plus a reasonable mark-up for as needed services. This as-needed work will be managed using task orders.

This RFP included a base statement of work and two alternate statements of work, one and two. The differences between the statements of work are the distribution of manpower over two or three work shifts. The two alternate statements of work include more stringent requirements for keeping units in service during daytime hours by scheduling routine maintenance work during late evenings, overnight and weekends rather than weekday, daytime hours. Each of the three statements of work requires different combinations of International Union of Elevator Constructors (I.U.E.C.) mechanics and apprentices. Metro has selected Alternate Statement of Work Two which provides Metro with the broadest manpower support and improves customer service.

The recommended total Contract Not-To-Exceed amount is made up of firm fixed unit rates for each escalator and elevator for a five year period, credit for units that will be taken out of service during the contract period and units that will be added during the contract period. Staff also included a budgeted value for as-needed materials and material mark-ups. The recommended awardee proposed offer of \$50,251,788 is made up of firm fixed unit rates for maintenance and repair that equals \$44,755,010, a credit for \$314,161 for units that will be taken out of service during the contract period, \$1,050,939 for units that will be added during the contract period and \$4,760,000 for as needed services of which \$4,000,000 is a budget for materials.

## **B. Background on Contractor**

Mitsubishi Electric & Electronics USA, Inc. Elevator/Escalator Division (Mitsubishi) is headquartered in Cypress, CA. Mitsubishi's elevator division was established in 1931 in Japan and now has expanded to over sixty-five countries worldwide. Mitsubishi specializes in the maintenance and repair of various manufacturers' makes of elevators and escalators. They are also a large source for new construction projects in the Western United States.

Mitsubishi performs maintenance and repair services for Universal Studios, North Hollywood, CA, Westfield, Cedar Sinai Medical Center, Los Angeles, Camp Pendleton, Orange County, Los Angeles Police Department Headquarters, Emergency Operations Center, Los Angeles and the Century Hotel. Their current construction projects include the L.A. Live Residences and Towers, Terranea Resort, Rancho Palos Verdes, and the Exposition Light Rail in Los Angeles. Mitsubishi is the incumbent contractor under Contract OP33440667, awarded in January 2006. Mitsubishi's performance has been satisfactory to date.

**C. Evaluation of Proposals**

This procurement was conducted in accordance to Metro’s Procurement Policies and Procedures for competitively negotiated procurements. Mitsubishi was the only proposer and is considered a responsive, responsible single proposer in a competitive solicitation. Mitsubishi is qualified to perform the required services based on the RFP’s minimum requirements and technical evaluation.

	<b>Bidder/Proposer Name</b>	<b>Bid/Proposal Amount</b>	<b>Best and Final Offer Amount</b>	<b>Note those that were disqualified as explained above:</b>
1.	Mitsubishi Electric USA Inc.	\$50,251,788	\$44,377,356	N/A

**D. Cost/Price Analysis Explanation of Variances**

The recommended price has been determined to be fair and reasonable based upon an audit performed by Metro’s Management and Audit Services Department, cost analysis, and negotiation of all cost factors. The recommended firm fixed price of \$44,377,356 is an 11.7% price reduction to Mitsubishi’s proposal offer. Staff has concluded that many factors of this new Contract make a comparison of the existing contract price ineffective. Those factors include higher labor costs for the addition of third shift work, as more maintenance and repair work is required to be performed during non-peak hours and at night time or weekends; increased level of dedicated technical personnel, greater part replacement costs because the elevators and escalators are in many cases, now past the midpoint of their expected life; shortened liquidated damages assessment periods, and additional elevators and escalators to be added and removed during the contract period.

**E. Small Business Participation (Completed by DEOD)**

The Diversity and Economic Opportunity Department (DEOD) recommended a Disadvantaged Business Enterprise Anticipated Level of Participation (DALP) of 5% for this procurement. Mitsubishi made a 1.08% DALP commitment. The DALP is not a condition of award or responsiveness. The Contractor is encouraged to outreach to DBE firms to further maximize small business participation during the performance of the Contract.

<b>Small Business Goal</b>	5% DALP	<b>Small Business Commitment</b>	1.08% DALP
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	<b>Subcontractor</b>	<b>% Committed</b>
1.	Elite Escalator Inc.	1.08%
	<b>Total Commitment</b>	<b>1.08%</b>



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**ATTACHMENT B**

**SUPPLEMENTAL REPORT (Original signed)  
Item 23.1**

**JANUARY 27, 2011  
BOARD MEETING**

**TO: BOARD OF DIRECTORS**

**THROUGH: ARTHUR T. LEAHY  
CHIEF EXECUTIVE OFFICER**

**FROM: MICHELLE LOPES CALDWELL  
CHIEF ADMINISTRATIVE SERVICES OFFICER**

**SUBJECT: ESCALATOR/ELEVATOR MAINTENANCE AND REPAIR  
SERVICES CONTRACT – SUPPLEMENTAL INFORMATION**

## **ISSUE**

After a competitive procurement process, MTA received only one proposal for maintenance of the system-wide elevators and escalators. At the Operations Committee on January 20, 2011, the Board requested additional information to understand what efforts staff took to encourage competition and other clarifications on the procurement.

## **DISCUSSION**

The procurement process to hire a firm to maintain the 265 elevators and escalators for the Metro Rail and all Metro Bus facilities began in September 2009 and concluded in December 2010 after a thorough audit and negotiations with the only responsive and responsible Proposer, Mitsubishi Electric and Electronics, USA. Mitsubishi is the incumbent contractor for the 2006-2011 elevator and escalator maintenance contract.

### **Outreach to Vendors Prior to and During the RFP Process**

Metro hosted several meetings to provide information about our escalator/elevator systems and to encourage proposers to participate in the solicitation as follows:

Sept. 17, 2009                      ThyssenKrupp, Otis, Schindler, Kone, Excelsior Elevator and Fujitec were contacted by phone and email to verify contact information.

Sept. 22, 2009	Issued letter for Industry Review/Annual Inspections of the State of Metro's Vertical Transportation Equipment to take place October 5, 2009 through January 31, 2010. The letter included a list of the elevator/escalator annual inspections and locations. A notice was also posted on Metro's website.
	ThyssenKrupp, Otis, Schindler, Kone, Excelsior Elevator, Mitsubishi and Fujitec were notified via phone and email.
Oct. 23, 2009	ThyssenKrupp requested to attend elevator inspection at Universal City station but did not show up.
Oct. 24, 2009	ThyssenKrupp attended escalator inspection at Chinatown.
Dec. 11, 2009	Reminder email sent out to vendors.
Jan. 31, 2010	Conclusion of Industry Review/Annual Inspections. The only vendor to attend inspections was ThyssenKrupp, who attended one station inspection.
June 4, 2010	ThyssenKrupp, Otis, Schindler, Kone, Excelsior Elevator, Mitsubishi and Fujitec were notified by phone and email of upcoming solicitation release on June 7, 2010.
June 7, 2010	<b><u>Issued RFP No. OP85102554 Elevator/Escalator Maintenance and Repair Services</u></b>
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June 22, 2010	Pre-Proposal conference held, followed by job walk. Six companies were in attendance (ThyssenKrupp, Kone, Otis, Mitsubishi, Elite Escalator and Plummer's Elevator). All companies except Thyssen and Mitsubishi declined to attend job walk. Mitsubishi attended the Gold Line Eastside extension job walk where Thyssen is the maintenance provider while under warranty.
June 28, 2010	Amendment No. 1 issued to address 9 questions.
July 15, 2010	Amendment No. 2 issued to address 1 question.
July 19, 2010	Amendment No. 3 issued to address 1 question.
July 21, 2010	Amendment No. 4 issued to address 1 question.
July 28, 2010	Amendment No. 5 issued to address 5 questions. (17 total questions)
Aug. 6, 2010	Proposal due date

Aug. 11, 2010

Survey conducted to determine why companies did not submit proposals. Responses were received from five companies.

### **Survey Results from Non-Proposers**

The RFP was issued on June 7, 2010, and proposals were due on August 6, 2010. In spite of the outreach efforts of staff, only one proposal was received. On August 11, 2010, Procurement staff contacted each of the potential vendors to determine why other contractors did not submit proposals. Following is a summary of their responses:

1. This is a long-term large contract and the potential Proposer does not know how to allocate the necessary resources and work force to adequately perform the job.
2. Potential Proposer cannot provide a competitive proposal based on the following: the size of the contract, level of service required, penalties for equipment out of service for normal breakdowns, the inclusion of critical and extra critical units, liquidated damages application, liability exposure, manpower allocation, risk exposure to vandalism, water damage, equipment failures and parts availability. Potential Proposer would be interested in a maintenance and service contract that is a partnership between the agency and the service company. In this RFP, the service company is expected to own the equipment, the liability, the unforeseen cost of outside forces on the equipment and the penalties.
3. Potential Proposer had other business priorities.
4. The biggest challenge in pricing this RFP is the unknown factors. The inclusion of vandalism combined with the penalties for elevator issues out of potential proposer's control is difficult to quantify. Potential proposer is not prepared to provide a competitive proposal at this time.
5. Potential proposer's decision not to propose was based on the risks and liability exposure associated with the contract terms and conditions.

### **History of Improved Contract Requirements**

The Board has expressed repeated concerns since 2003, during the performance of Elevator/Escalator Maintenance Contract OP33443130 (November 2000 – February 2006) over the escalator and elevator performance. In order to improve the services, five major changes to the Elevator/Escalator Contract were developed with the intent to reduce the amount and duration of equipment not in service, hold the Contractor accountable for performance, and to ensure service availability during peak commuter periods. These changes were introduced in new Contract OP33440667 (February 2006

– February 2011). The changes made to the Contract requirements were developed and incorporated into the existing Contract in response to Board Concerns:

1. **Extended hours of regular maintenance service.**

**Old Contract Requirements** - Regular service hours under this contract were from 6:00 AM to 6:00 PM, Monday through Friday only. No maintenance was performed beyond these hours except for callback service to respond to emergency equipment troubles.

**New Contract Requirements** - Regular service hours were extended from 6:00 AM to 9:00 PM, seven days per week, including holidays. These increased service hours allowed for the performance of more maintenance during non-peak commuter hours. Having technicians on site for fifteen hours a day, seven days per week, **resulted in** improved response to equipment malfunction and reductions in equipment downtime.

2. **Increased level of dedicated technical personnel.** In order to meet the higher maintenance and response demands that an aging and heavily utilized transit system requires, the technician staffing level under the new contract increased from 10-13 to 16 dedicated technicians. These technicians were exclusively assigned to the Metro elevator/escalator maintenance contract. **Result:** The additional dedicated labor gave needed flexibility to the maintenance program and provided onsite service coverage during after-hours, weekends and holidays.

3. **Major preventive maintenance work moved to weekends and after-hours.** The new contract extended regular service hours, major elements of equipment maintenance such as annual escalator/elevator inspections was moved from regular business hours to weekends or after-hours. This lessened the impact of the preventive maintenance work on the availability of equipment. **Result:** This had a positive impact to the public during regular business hours and reduced complaints.

4. **Incorporating liquidated damages for excessive equipment downtime and increased levels of spare parts on hand.** The new contract imposed liquidated damages on the Contractor for excessive equipment downtime. **Result:** In an effort to avoid monetary fines the maintenance provider has increasingly applied improved maintenance to avoid incurring liquidated damages. They also improved the level of spare parts to return equipment back into service sooner after a unit has become inoperable.

5. **Required the Contractor to provide labor for all repairs, including abuse and vandalism** of equipment. The new contract required the Contractor to adequately staff the Contract to address repairs caused by abuse and vandalism. **Result:** This eliminated disputes between the agency and the Contractor over responsibility of repair.

Even though Metro experienced much better customer service under the last contract, 2006-2011, further increases in customer satisfaction on an aging vertical transportation

system were sought in response to the Board and staff concerns. The current RFP for 2011-2016 included the following higher contractual obligations:

- 1) The addition of third shift work,
- 2) The level of dedicated technical personnel has increased from 16 to 18;
- 3) More repairs and major PM work to be performed after hours and on weekends for better customer service;
- 4) Liquidated damages have increased as we have more "extra critical" units.
- 5) Required monthly testing of escalator brake torque testing is now in contract
- 6) Additional elevators and escalators in maintenance schedule with the opening of more lines like Eastside and Expo.
- 7) Increased cost of labor per the new International Union of Elevator Constructors agreement;
- 8) Vandalism and abuse continues to be a cost element on our units with corrosion issues, slashed handrails, step tread damage, etc
- 9) Also, the State of CA has become stringent in their enforcement of standards, shutting down units that previously would have been able to operate until repairs could get scheduled and completed.

### **Elevator/Escalator Service Improvements**

Below are some significant results from the more stringent 2006 contract:

#### **Major Repairs**

The current contract requirement for spare parts inventory coupled with the incentive of liquidated damages has made a dramatic difference in the length of downtime for repairs such as step chain replacements and handrail replacements.

Under the previous contract, an escalator step chain replacement averaged **36 days** (up to 71 days) due to the long lead time for parts procurement, compared to only **48 hours**, currently, step chain replacement has effectively become a part of the preventive maintenance program rather than an emergency repair due to a failure.

Also, escalator handrail replacement used to take up to two weeks, but now due to the inventory requirement, the average time to replace a handrail is **28 hours**.

#### **Trouble Calls and Preventive Maintenance**

In 2005, during the previous contract there was an average of **266** trouble calls per month. The current contract added manpower to perform preventive maintenance at a much higher level. Consequently trouble calls in 2010 averaged only **67** per month.

Spending more hours performing preventive maintenance also reduced the number of hours spent performing repair work due to fewer equipment breakdowns. Hours performing repair work in 2005 were **718** per month as compared to **523** in 2009. (See Attachment)

### **Liquidated Damages**

As the vertical transportation system experienced less downtime, the monthly liquidated damages assessed for excessive downtime has trended downward from **\$181,172** in 2006 to **\$28,805** in 2010.

### **Customer Complaints**

In 2005, Metro received 75 complaints regarding elevators and escalators. That number decreased to a low of 6 in 2009 and remained at an acceptable level in 2010.

### **Terms and Conditions**

As seen in statistics from years 2005-2010, customer complaints, emergency repairs and trouble calls were reduced significantly with the implementation of the contractual terms and conditions to make the contractor more accountable. Relaxing these would be a backwards step and we would certainly see an increase in customer complaints.

## **ALTERNATIVES TO CONSIDER**

The Board could choose to adopt the staff recommendation and award the contract to Mitsubishi. The negotiated price has been found to be fair and reasonable based upon an audit performed by Metro's Management and Audit Services Department, cost analysis, and negotiation of all cost factors.

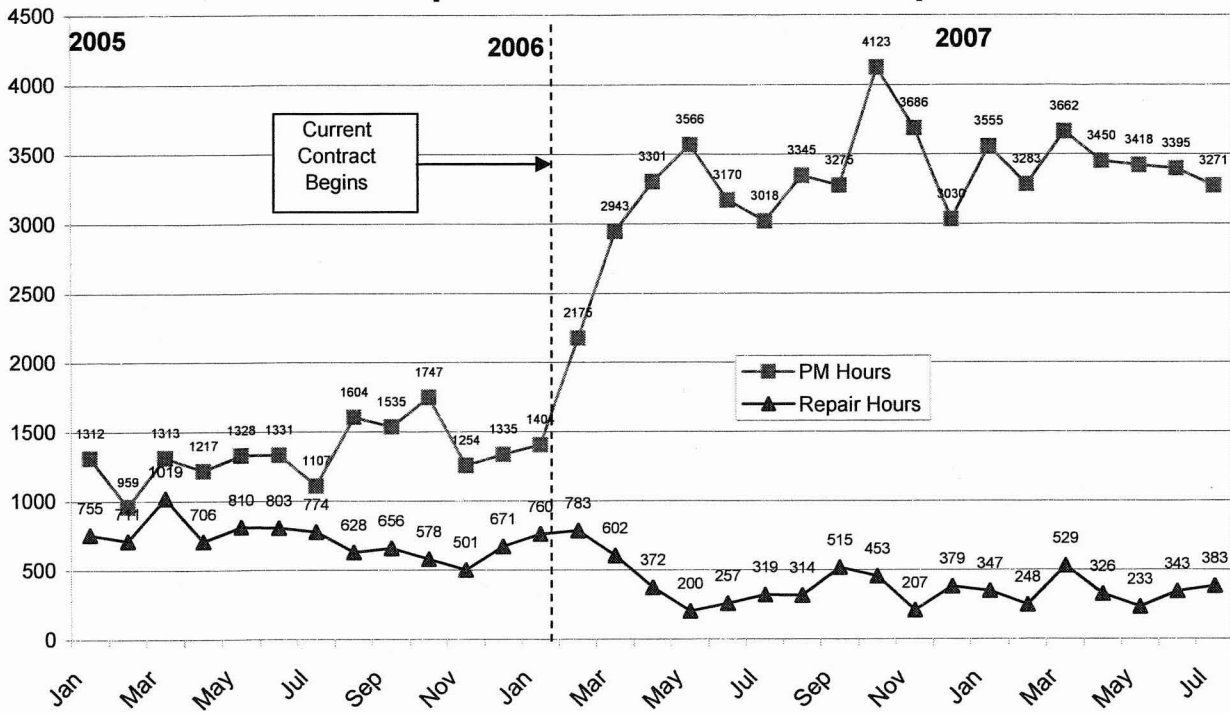
The Board could request that staff re-procure the contract in an effort to generate interest among other proposers. According to the feedback received from the non-proposing contractors, it may be necessary to reduce some of the newly implemented standards and requirements to reduce contractor risk on the project. This option is not recommended because it will not achieve the performance standards expected by Metro patrons and the Metro Board. If re-procurement were to take place without reduced standards, Mitsubishi may assume they are the only proposer, thereby, creating a potential for an increased price on their revised proposal.

If the Board chooses to re-procure the contract, approval of increased contract authority for the existing Mitsubishi contract will be required to continue the present level of service for a minimum period of eight months. A negotiation will have to occur as union wages have increased this year and it is unknown if Mitsubishi would accept a long-term extension at the current price. A re-procurement would also require further analysis of any contractual changes defined by the Board. That assessment and re-procurement could take eight months to a year to return to the Board with a recommendation for award. Staff would require \$9 million in Contract Modification Authority to extend the current contract during the re-procurement period.

Attachment: Elevator/Escalator Service Performance Trend Charts



## Vertical Transportation PM Hours vs. Repair Hours



## Vertical Transportation Trouble Calls 2005-2010

