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Metropolitan Transportation Authority

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**SYSTEM SAFETY & OPERATIONS COMMITTEE
APRIL 18, 2013**

SUBJECT: RAIL TECHNICAL TRAINING PROGRAM

ACTION: APPROVE PROGRAM AND AMEND FY13 BUDGET

RECOMMENDATION

- A. Authorize the Chief Executive Officer to execute a Memorandum of Understanding (MOU) with the Los Angeles Community College District (LACCD) and the Los Angeles Trade Technical College (LATTC) to work with Rail Operations' management to design, develop and deliver standardized training curriculum to support Rail Technical Training for Metro's incumbent workforce and to support the Rail Apprentice Program as defined in the ATU & LACMTA 2010-2013 Negotiations Tentative Agreement – Article 8 Section G (see Attachment C).
- B. Authorize as part of the MOU with LATTC to design, develop and deliver standardized training curriculum to support the Rail Technical Training Program.
- C. Authorize the Chief Executive Officer to approve access to Metro Rail facilities and equipment, and the donation of obsolete or surplus equipment and materials to be used as supplemental training aids (see Attachment D).

ISSUE

Trained technical personnel will be needed to operate Metro's new rail lines. It is essential to prepare for rail expansion and anticipated loss of personnel through retirements and attrition over the next several years.

DISCUSSION

Metro must ensure that we develop and retain the technical skills required to maintain Rail Fleet Services, Maintenance of Way, and Electronic Communications Equipment. The primary solution is development of a Rail Technical Training Program, focused on the positions listed below:

<u>Journey Level Job Title</u>	<u>Proposed Trainee Title w/Associate Degree</u>
Rail Vehicle Maintenance Specialist	Rail Vehicle Maintenance Trainee
Rail Signal Inspector	Rail Signal Inspector Trainee
Rail Traction Power Inspector	Rail Traction Power Inspector Trainee
Rail Track Inspector	Rail Track Inspector Trainee
Rail Electronic Communications Inspector	Rail Electronic Communications Trainee

In partnership with LACCD/LATTC, this program will be developed to ensure there is a pool of qualified candidates trained in various rail technical areas available to fill mission-critical and/or hard-to-fill rail positions over the next ten years. Upon completion of the training program, the participants will be awarded an Associate's Degree. These "job ready" candidates would support Metro's long-term rail expansion program and would meet Metro's technical rail hiring requirements generated by Measure R projects, and address normal requirements expected from attrition.

Anticipated program milestones, which will be firmed up as we receive concurrence from stakeholders and other interested parties, are summarized in Attachment A.

Metro management has discussed program requirements with Los Angeles Trade Technical College management and identified a preliminary outline of courses that would constitute the Rail Technical Training Program (see Attachment B). Once launched, the program would be offered to both incumbent workers as well as external candidates interested in pursuing a career in rail operations. When implemented, this program will help Metro meet a strategic threat associated with nearly doubling the size of rail operations over the next 10 to 15 years.

Metro's practice since opening rail operations over 20 years ago has been that of a start-up, incrementally expanding staff as new rail lines opened, and hiring only journey-level personnel for these technical jobs. We now have a mature rail system, with over 1,000 employees working in rail operations, and have the capacity to absorb technically prepared trainees in technical jobs, as has been the practice in our bus operation for decades.

DETERMINATION OF SAFETY IMPACT

Approval of this item will result in a positive impact on safety. Training rail operations personnel, whether incumbent or potential new hires, in the most up-to-date rail practices should result in a reduction of injuries to patrons and employees; a reduction in the level of deferred maintenance, and will improve the material condition of Metro's rail assets.

FINANCIAL IMPACT

The cost as identified in the MOU with LATTC for curriculum development (\$187,000) in cost center 2041 (OSWP), under project 300040 (Rail Operations Management & Administration).

Impact to Budget

Source of funds: Rail Operating and Capital Budget.

This action will increase funding and expenditure within the Enterprise Fund by approximately \$187,000.

ALTERNATIVES CONSIDERED

The Board could reject the proposed program and address the individual elements of the program on an ad hoc basis as issues are identified. However, not having a dedicated FTE to ensure the rail training curriculum and instructional design materials meet Metro's business requirements further widens the skills gap area for technical expertise. In addition, not having a program would be a lost opportunity for the residents of Los Angeles County in terms of job creation and careers in transportation. We do not recommend this approach.

NEXT STEPS

Metro staff will execute an MOU with LACCD to achieve the planned milestones.

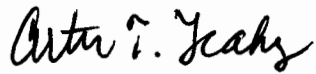
ATTACHMENTS

- A. Anticipated Rail Technical Training Program Milestones
- B. LATTC Metro Rail Operations Incumbent Worker Training Outline
- C. ATU and LACMTA 2010-2013 Negotiations Tentative Agreement – Article 8 Sections G
- D. Obsolete or Surplus Equipment and Materials to be used as Supplemental Training Aids

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Lonnie Mitchell, Executive Director
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Arthur T. Leahy
Chief Executive Officer

ATTACHMENT A

Anticipated Rail Technical Training Program Milestones

Action	Target Date	Parties Involved
1. Board approval of the project, including authorization to approve access to Metro Rail facilities and equipment, and the donation of obsolete or surplus equipment and materials to be used as supplemental training aids (see Attachment D).	April 2013	Board of Directors
2. Execute MOU LACCD and LATTC.	May 2013	CEO
3. Complete job assessment of the five targeted journey-level classifications to identify the essential job skills.	June 2013	Metro and LATTC staff
4. Define training courses to be included in an Associate's Degree program that prepares employees for job specific careers at Metro.	June 2013	Metro Rail Fleet Services and Wayside Systems and LATTC staff
5. Define career path and on-the-job training for Metro's incumbent workforce to progress to journey-level and/or a trainee job classification.	July 2013	Metro Rail Fleet Services and Rail Wayside Systems staff
6. Refine staffing forecasts for targeted positions.	Sept. 2013	Rail Operations Management and Office of Strategic Workforce Planning
7. Work with community-based organizations (CBO) to recruit qualified participants from communities in proximity to rail alignments and with high unemployment.	Oct. 2013	Metro, LACCD, LATTC and CBOs
8. Start first new rail career-specific classes.	Oct. 2013	Metro Rail Operations and LATTC



Metro Rail Operations Incumbent Worker Training Outline

Module I. General & Electrical Safety (16 hours)

1. General Safety Overview

1. Personal Protection Equipment
 - a. Head, Eye, and Hearing Protection
 - b. Fall Protection
2. Equipment Safety
 - a. Shop Cranes
 - b. Aerial Equipment and Scissor Lifts

2. Electrical Safety

1. AC/DC refresher
2. High Voltage Safety Training (Understanding)
3. Grounding/Lock out tag out/OSHA Standards
4. Arc Flash Hazards

Module II. Measuring Devices & Tools – Meter Usage (8 hours)

(Hands-on stress application and use)

1. Electrical Measuring Devices (**Note:** Focus and reinforce meter safety – Address working around high power – Understand the importance of safety)
 - a. Multi-meters
 - b. Hipot-tester
 - c. Mega-testers
 - d. Oscilloscope
 - e. Infrared meter
 - f. Sound meter
 - g. Light meter
2. Torque wrenches
 - a. Fasteners

Module III. Technical Writing (8 hours)

(LATTTC will develop assessment based on what workforce uses)

1. Significance of technical writing (legal, audits, warranty, safety)
2. Terminology and key technical words as related to rail tools, equipment, etc.
3. Corrective work order processing
 - a. What is the problem with the equipment?
 - b. How did you investigate/diagnose it?
 - c. How was the problem repaired?
 - d. What did you do to confirm the repair?

Module IV. Schematic Training (16 hours)

1. Symbols and Nomenclature (include IEC standards) as related to:
 - a. Communications
 - b. Signal
 - c. Traction Power
 - d. Vehicle
2. Overview of basic circuits and motor controls as related to:
 - a. Communications
 - b. Signal
 - c. Traction Power
 - d. Vehicle
3. Understand normally open and closed contacts

Module V. Logic Schematics (8 hours)

1. Relay logic
2. Boolean logic
3. Ladder logic

Module VI. Microprocessor Functions (8 hours) (general/basic since this area can become specialty)

1. CPU
 - a. E-PROM
 - b. RAM
 - c. Flash Memory
2. Hardware/software interface
3. Diagnostic interface
4. RS 232
 - a. Protocols
 - b. Interface
5. RS 485
6. HyperTerminal

Module VII. Computer Basic Functions (Provided by Metro)

1. Basic software functions (offered by Metro)
2. Familiarity with firmware (specialized)

**ARTICLE 8
VACANCIES AND NEW POSITIONS**

SECTION G – RAIL APPRENTICE PROGRAMS

This section replaces Side Letter #97-03 – Joint Apprenticeship Committee (JAC).

The Authority has established a rail training program for employees in the ATU bargaining unit who desire to avail themselves of possible advancement to a higher classification in rail.

Training opportunities will be offered as a vacancy occurs in the following classifications: Maintenance Specialist, Traction Power Inspector, Track Inspector and Signal Inspector. Other classifications covered by Article 43 may be added by mutual consent of the parties. The program will be offered to all employees qualified as agreed to by the Authority and ATU. The employee will be considered qualified for the training after he/she successfully completes twenty four (24) units of electrical or electronics at an accredited college or trade school for those rail maintenance position as listed in Article 43 that require electrical qualifications. Eligibility lists will be established by the JAC for each applicable classification. Vacancies will be filled from the appropriate eligibility list.

For the position of Track Inspector, employee must have at least two (2) year's experience as a Laborer/Service Attendant, be physically fit and prepared to work outside in adverse weather conditions. Track Inspector applicants must demonstrate the adequate ability to perform basic math, (including decimals and fractions), to read and follow work instructions, to comprehend mechanical systems and to lift and move objects up to one hundred (100) pounds.

Entrance into the program will be by seniority order among applicants who meet minimum program criteria established by the JAC for the particular training. The JAC will have sole authority to determine applicant qualifications for the program. All applicants that meet the qualifications for the rail positions covered above will be assigned to training in ATU seniority order. These positions will include substantial in the field training in the form of working with other qualified employees in the classification. Qualified applicants will be placed on a qualified candidate pool list for a period of twelve (12) months from the date of his/her acceptance. Applicants must have a good work record for the last one (1) year which will include good attendance and punctuality, and a good driving record as confirmed by the D.M.V. The JAC will determine the length of any training program.

Employees may be disqualified from the program if they are not demonstrating proficiency in the position during the training program. Such disqualification would be subject to the grievance procedure but not to the arbitration procedure. Trainees will receive a written evaluation by the Instructor or Supervisor, at least every two (2)

months. Evaluations are not subject to grievance or arbitration. Employees in a training program will be paid the rate of pay for the classification for which they are being trained.

The present Joint Apprenticeship Committee will continue. The JAC will be composed of three members appointed by the LACMTA Chief Executive Officer and three (3) members appointed by the ATU President. If any committee member is unable or unwilling to serve he will be replaced. As to the LACMTA appointees, the LACMTA CEO or designee will name their replacements. As to the ATU appointees, the President of ATU Local 1277 or designee will name their replacements.

**Obsolete/Surplus Rail Operations Equipment/Materials
To be utilized as Supplemental Training Aids**

COMMUNICATIONS:

- Samples of various communication systems and devices that can be deployed for training purposes

TRAIN CONTROL:

- Various built electronic train control systems utilized by Maintenance of Way, e.g., purpose built simulations and mock-ups of crossing gates and interlocking switches, etc.

TRACTION POWER:

- Portable sub-station
- High voltage and DC circuit breakers