

PREVENTIVE MAINTENANCE

ATI-0010-2015



**PUERTO RICO INTEGRATED TRANSIT
AUTHORITY (PRITA)**

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Regulation Number or Procedure:		ATI-00010-2015	
DEPARTAMENTO DE TRANSPORTACIÓN Y OBRAS PÚBLICAS			
PUERTO RICO INTEGRATED TRANSIT AUTHORITY (PRITA)			
Title regulation or procedure: PREVENTIVE MAINTENANCE		Approved by: Alberto M. Figueroa Medina, PhD, PE, Executive Director 	Validate By: Juan A. Vázquez Acevedo, Chief Financial Officer
Date of Revision: 17th of December, 2015	Work Unit: Administration and Finance	Date of approval by the Board of Directors: 12-17-2015	Notes:

1 Purpose

The purpose of the procedures for Preventive Maintenance is to ensure adequate recordkeeping for repair, rebuilding and general preventive maintenance and that all maintenance activities are performed by qualified personnel in order to maintain existing warranties coverage, and assure that related accounting and payroll records are adequately supported.

Preventive Maintenance Procedures have three purposes:

- ❖ To ensure the safety of passengers and employees by maintaining the equipment at an optimum level of performance,
- ❖ To ensure that the Authority receives an adequate return of these assets by meeting or exceeding the expected useful life of the equipment, and
- ❖ To ensure adequate service to the equipment in order to maintain a functional operating fleet.

These procedures will assist the organization in maintaining a fiscally responsible process for managing the Authority's resources in order to provide adequate services. In addition, these procedures will encourage a timely transaction processing throughout the organization to ensure that preventive maintenance is recorded and tracked in a timely manner.

2 Scope and Applicability

The scope of these procedures is applicable to all of the Authority's Departments and Programs, and is intended as overall guidance for all Departments or Programs. These procedures will address the steps required to:

- provide the Authority with the tools to record and track labor activity related to Preventive Maintenance,
- provide the Authority with the processes to ensure only qualified personnel perform preventive maintenance activities so that the quality of the maintenance is of the highest standards and all warranties are safeguarded,
- provide guidance on how to prepare the Force Account Plan to include Preventive Maintenance, and
- Provide the Authority with assurance that the revenue fleet operates in a sound and safe manner and meets or exceeds useful life expectations. In addition, these procedures will provide remedies to findings included in various prior audits and reviews including the FMO reviews and A-133 audit reports. These findings relate to various discrepancies in the Preventive Maintenance procedures.

These procedures will also include guidance on adequacy of segregation of duties related to the budget closing processes.

3 Procedures

3.1 Tracking Labor Hours

- **How to Record Labor Hours Related to Maintenance Work:**

Whether using a manual or electronic work order system, maintenance workers must log in the specific time they incur in performing a maintenance job. It is important to consolidate the labor and related materials/parts to the specific job so the total cost of the job is identified and can be accurately priced for internal or external charge.

- **How to use labor hour information for costing and management purposes:**

The labor hours for similar maintenance jobs should be accumulated and compared to ensure a reasonable standard for level of effort is identified and subsequently monitored. Even in cases where the maintenance shop charges a standard labor charge based on a historical amount of time/effort for a specific job, the mechanic must log the time so these variances can be monitored and the standard charges can be periodically evaluated by management.

- **How Mechanics should adhere to the Authority Payroll Policies:**

Mechanics time must be tracked in the payroll system, so that the time worked, whether it is performing specific maintenance job or working in the general overhead of the maintenance shop (i.e. cleaning, stocking etc.) is properly recorded. This is important since the mechanic as a full time employee the Authority must account for their time.

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▪ **How all labor activities related to Preventive Maintenance must be included in the Current Force Account Plan:**

FTA Circular 5010.1D defines Force Account work as work performed by grantees using their own forces (employees/staff) to accomplish a capital account project. A force account plan must be prepared and submitted for approval by the FTA prior to incurring costs. One type of cost category for Capital Grant Funding is Preventive Maintenance.

To comply with the requirements of preparing and submitting a Force Account Plan for Preventive Maintenance, the Authority must adhere to the following steps from *FTA Circular 5010.1D, Section V.4.d*:

FORCE ACCOUNT. One of four conditions may warrant the use of a grantee's own labor forces. These are: (1) cost savings, (2) expertise in the area, (3) safety and efficiency of operations, and (4) union agreement. Force account is the use of a grantee's own labor force to carry out a capital grant project. Force account work may consist of design, construction, refurbishment, inspection, and construction management activities, if eligible for reimbursement under the grant. Incremental labor costs from improving protection, service diversifications, or other activities directly related to the capital grant may also be defined as force account work. Force account work does not include grant or project administration activities which are otherwise direct project costs. Force account can include major capital project work on rolling stock. An example of this is preventive maintenance activities.

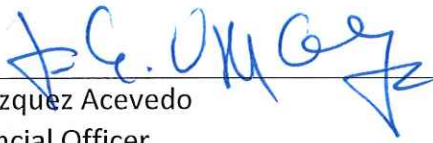
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FTA prior review of a force account plan and justification are required where the total estimated cost of force account work to be performed under the grant is greater than \$10,000,000. When work to be performed is less than \$10,000,000 but over \$100,000, a force account plan is required to be in the grantee's file, but does not require prior FTA approval. When work to be performed using force account is less than \$100,000, a detailed plan is not required.

BASIS FOR REIMBURSEMENT: To be eligible for reimbursement for force account work, the grantee must provide the following before incurring costs:

- ❖ Justification for using grantee forces;
- ❖ Preparation of a force account plan;
- ❖ A description of the Scope of Work;
- ❖ A copy of the construction plans and specifications which includes:
 - A detailed estimate of costs;
 - A detailed schedule and budget; and
 - A copy of the proposed Cooperative Agreement when another public agency is involved.

4 ADOPTED & VALIDATE BY:



Juan A. Vázquez Acevedo
Chief Financial Officer,
Puerto Rico Integrated Transit Authority (The Authority)

17th of December, 2015

DATE

5 EFFECTIVENESS, REPEAL AND APPROVAL

This procedure, shall be valid from the date of approval by the Board of Directors of the Puerto Rico Integrated Transit Authority.

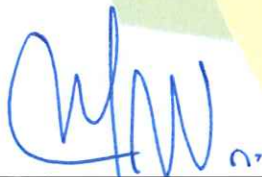


Alberto M. Figueroa Medina, PhD, PE
Executive Director
Puerto Rico Integrated Transit Authority

17th of December, 2015

DATE

Duly approved by the Board of Directors of the Puerto Rico Integrated Transit Authority, in regular meeting held on the 17th of December, 2015



Miguel A. Torres Díaz
Chairman of the Board
Puerto Rico Integrated Transit Authority

17th of December, 2015

DATE



- ❖ Submit documentation equivalent to a sole source justification stating the basis for a determination that no private sector contractor has the expertise to perform the work. In addition, the required documentation must provide the basis for the grantee.
- ❖ Provide the present worth of the estimated cash drawdown for both the force account and private sector contract options. In the analysis, use the current interest rate paid on one-year Treasury Bills as the discount rate;
- ❖ Include the cost of preparing documents; cost of administration and inspection; cost of labor, materials and specialized equipment; cost of overhead; and profit for private contract;
- ❖ Include the unit prices for labor; materials and equipment; overhead; and profit, if applicable for private contract;
- ❖ Provide certification that costs presented are fair and reasonable;
- ❖ Provide an analysis of force account labor availability, considering normal operations and maintenance activities as well as other programmed and existing capital projects. This must be consistent with costs of labor, material, and specialized equipment; and
- ❖ Provide relevant citations from labor union agreements and an analysis of how it pertains to the work in question.

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3.2 Qualifications of Mechanics

- **How do you determine whether a mechanic is qualified to perform a specific type of maintenance work?**
 - ❖ Mechanics must have their specific qualifications and training recorded in their personnel file, and with the Maintenance supervisor. Maintenance work varies greatly, from the routine oil change to engine adjustments and significant rebuilds that require specific training and experience. Ensuring that the mechanic is qualified for the specific task provides several benefits:
 - It ensures that the work will be done in a timely and efficient manner.
 - It ensures that the cost of the work will be within budget, as you won't have a highly trained (and highly compensated) mechanic performing more routine jobs.
 - It will ensure that when maintenance work that mandates specific training and/or experience to comply with warranty requirements is requested, the correct mechanic will be assigned.
 - It will ensure the safety of the operating fleet, and so the safety of the customers and employees.
 - ❖ The maintenance supervisor must assign all maintenance work. The supervisor will ensure that assignments are made based on the skill sets required for the work, and will also ensure that all rules related to work orders and timekeeping are followed.