

# Roadway RM-204

## Asset Inventory Record Functions

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Asset Inventory Record Functions

# 1 Introduction

## 1.1 Objective

This document explains the methods for working with the asset inventory records in the Roadway module of the Enterprise Information Management System (EIMS). It also explains how to generate the Preventive Maintenance (PM) scheduling from those lists.

Having asset inventory available in EIMS means that work can be recorded to a specific asset inventory item. This also means that work efforts (Work Orders) may be associated with an asset inventory item.


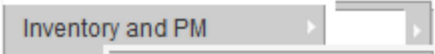
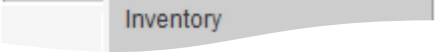
The intended users of this manual are designated members of the Roadway business area.

## 1.2 Key Concepts

The Roadway module includes the representation of asset inventory for the Ohio Department of Transportation (ODOT)'s transportation network. Some of the displayed asset inventories reside in external systems, and some are managed entirely within the EIMS Roadway module. An overview of the asset inventory and the applicable system of record is listed in Table 1-1.

**TIP!** Additional Asset Inventories will be added later once EIMS is implemented.

Table 1-1. Overview of Roadway Inventory Databases

	Inventory	Roadway	Example
	Road Sections	Represented – from LRS	Figure 2-1
	Signs <sup>1</sup>	EIMS Managed asset	Figure 2-2
	Bridges	Represented – from SRS	Figure 2-4
	Guardrail	EIMS Managed asset	Not available at time of printing.

**TIP!** <sup>1</sup> Refers to ground-mounted signs only.

Asset inventories managed by the Roadway module allow an **Insert / Insert Like** function. For Asset inventories from external systems, these menu functions are not available, because they are managed by other systems. The Transportation Manager/County Manager may also deactivate/retire existing asset inventories; however, this is only possible for EIMS managed asset inventories.

Certain asset types allow PM schedules to be defined and applied. This means that routine activities are created at pre-defined intervals, without the need for manually creating Work Orders. Specifying the PM against an asset type, asset class, or individual asset ID means the Road Maintenance > Issue > Work Orders from ... > Periodic Maintenance (PM) window will have the Work Order(s) ready to be activated when due.

## 2 EIMS Asset Inventory Screens

### 2.1 Section Inventory

- Road Sections are imported from the source Linear Referencing System (LRS) database.
- The Current Conditions field is for future possible expansion, should Pavement conditions and/or Inspections be added/imported in the future.
- The route segment data for a Section appears in the lower pane.

Road Maintenance > Inventory > Inventory and PM > Sections > Inventory

**Section Inventory**

Section Class Code	NHS	Federal Aid Number		Date Update	11/6/2013
Section (name)	BUT-CR00607	City		Record History	<a href="#">No</a>
Section status	ROAD Active	MPO		Maint. History	<a href="#">No</a>
County	Butler	Oneway?	<input type="checkbox"/>		
Centerline Miles		Population			
Total Lane Miles		System Short Name			
Administrative Unit		Urban Area			
Analysis Class		Functional Class			
Section Current Condition		Comments	CR		
Owner Located		Att.	↕		
Inspection Date		User Update	LRSImport		

<< 1 2 3 4 5 6 7 8 9 10 >> Row 1 of 150229 total rows

County	Route Segment	Direction	Lane	Begin Measure	Ending Measure	Comments	Att.	User Update	Date Update	Maint. Section
BUT	CR00607	Both	All	0	1.26			LRSImport	11/6/2013	BUT-CR00607

<< 1 >> Rows 1-1 of 1 total rows

Figure 2-1. Section Inventory

## 2.2 Sign Inventory Overview

- Roadside Sign Inventory in EIMS is not complete statewide data for initial Go-Live. However, EIMS now provides an enterprise repository for Districts to record and update this data.
- The Current Conditions field accepts a value of 1 (poor) to 10 (excellent).

The screenshot displays the 'Sign Inventory' form within the EIMS system. The breadcrumb trail at the top reads: 'Road Maintenance > Inventory > Inventory and PM > Signs & Supports > Signs > Inventory'. The form is organized into several sections:

- Maint. History:** Shows 'No'.
- Sign Class Code:** 'Interstate Signs' (dropdown).
- \* Sign ID:** '5A5596656566A56C1F910B7'.
- \* Sign status:** 'Active' (dropdown).
- \* Administrative Unit:** '0005 6300 - Guernsey Cou' (dropdown).
- Original Key:** (empty field).
- Record History:** Shows 'No'.
- Legend:** (empty field).
- Catalog No.:** (dropdown).
- Owner Located:** (dropdown).
- Sign Current Condition:** (empty field).
- Agreement Contact Info:** (empty field).
- Easting:** '2241924.392'.
- Fabrication Agreement:** (empty field).
- Sign Assembly Code:** (dropdown).
- Sign Backing Material:** (dropdown).
- Sign Lane Served:** (dropdown).
- Sign Orientation:** (dropdown).
- Sign Sheeting Material:** (dropdown).
- Traffic Served:** (dropdown).
- Sign Type:** (dropdown).
- Installation Agreement:** (empty field).
- Is Breakaway:**
- Jurisdiction:** (empty field).
- Latitude:** '41.4645932640724'.
- County:** (dropdown).
- Route Segment:** (dropdown).
- Direction:** (dropdown).
- Lane:** (dropdown).
- Begin Measure:** (empty field).
- Ending Measure:** (empty field).
- Offset:** (empty field).
- Northing:** '656599.579'.
- Notes:** (empty field).
- Origin Date:** (calendar icon).
- Position Name:** (empty field).
- Readable Travel Direction:** (empty field).
- Replaced Date:** (calendar icon).
- Retired Date:** (calendar icon).
- Size Height:** (empty field).
- Size Height Unit:** 'Inch' (dropdown).
- Size Width:** (empty field).
- Size Width Unit:** 'Inch' (dropdown).
- Symbol:** (empty field).
- Travel Direction:** (empty field).
- Variable Sign Height:**
- Variable Sign Width:**
- Att.:** (empty field).
- Comments:** 'BREAKAWAY TUBULAR STEE'.
- User Update:** 'CHIDI'.
- Date Update:** '10/30/2013'.
- Longitude:** '-81.5023'.
- Periodic maint id:** (empty field).

At the bottom of the form, a navigation bar shows '<< < 1 2 3 4 > >>' and 'Row 1 of 4 total rows'.

Figure 2-2. Signs Inventory – Inventory Tab

The other tabs for Roadside Sign Inventory are shown in Figure 2-3.

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The figure displays three screenshots of a software interface for managing sign inventory records. Each screenshot shows a different tab selected in the 'Signs & Sup' section of the 'Inventory and PM' menu.

**SIGN LOCATION Tab:** This tab displays the following fields and values for a sign with ID 5A5596656566A56C1F910...:

* Sign ID	5A5596656566A56C1F910...
Administrative Unit	0005 6300 - Guernsey Cou...
Sign Support	5A5596656566A56C1F910...
Latitude	41.4645932640724
County	
Route Segment	
Direction	
Lane	
Begin Measure	
Ending Measure	
Offset	
Northing	656599.579
Origin Date	

**SIGN FEATURES Tab:** This tab displays the following fields and values for the same sign:

Sign ID	5A5596656566A56C1F910...
Sign Assembly Code	
Sign Backing Material	
Sign Lane Served	
Sign Orientation	
Sign Sheeting Material	
Traffic Served	
Sign Type	

**AGREEMENTS Tab:** This tab displays the following fields and values for the same sign:

* Sign ID	5A5596656566A56C1F910...
Agreement Contact Info	
Fabrication Agreement	
Installation Agreement	
Jurisdiction	

Figure 2-3. Signs Inventory – Other Tabs

### 2.3 Bridge Inventory Overview

As shown for Bridge Inventory in Figure 2-4:

- Bridges are displayed from the Structure Management System (SMS) database.
- Bridge characteristics include Structure File Number (SFN), Type, Location, and Material.
- If the Bridge is a County Route, it shows a 14-digit ID in the Network Linear Feature Identifier (NLFID) field.

Road Maintenance > Inventory > Inventory and PM > Bridges > Inventory			
Bridge Inventory			
SFN	1403753	Bridge Type	SLAB
Bridges Class Code	Bridges	Bridge Type Description	SIMPLE
Bridges Status	Active	Comments	
County		Att.	
Route Segment		User Update	INTERFACE
Direction		Date Update	2/13/2014
Lane			
Begin Measure			
Ending Measure			
Offset			
Administrative Unit			
Owner Located			
NLF ID	SCLISR00729**C		
Latitude		39.461187	
Longitude		-83.618214	
Bridge Material	CONCRETE		

<< < 1 2 3 4 5 6 7 8 9 10 >> Row 1 of 48043 total rows

Figure 2-4. Bridge Inventory Record



### 3 Additional Asset Inventory Functions

#### 3.1 Share Inventory

By default, the asset inventory will display the assets of the Division/Cost Center selected at login. However, another Division/Cost Center's inventory may also appear in the list, depending on whether it has been shared via the Inventory > Short List...> Share Inventory option (Figure 3-1).

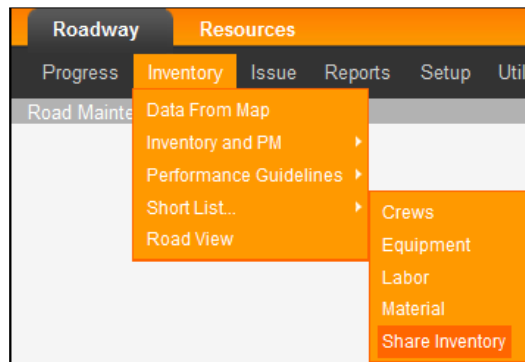


Figure 3-1. Share Asset Inventory Menu Option

This function allows assets outside of the home Division/Cost Center to be selected on a Work Order as needed, and/or edited in the Inventory list as needed.

#### 3.2 Map Information

Each asset inventory record has location information stored as part of its record, such as Route, Direction, Begin Measure, Ending Measure, and Offset, or as a pair of Latitude and Longitude coordinates.

The assets configured with location information can be displayed on a map by pointing to the record(s) and selecting the **Show on Map** function. The system responds by displaying a new map window that shows the inventory element in red (Figure 3-2).

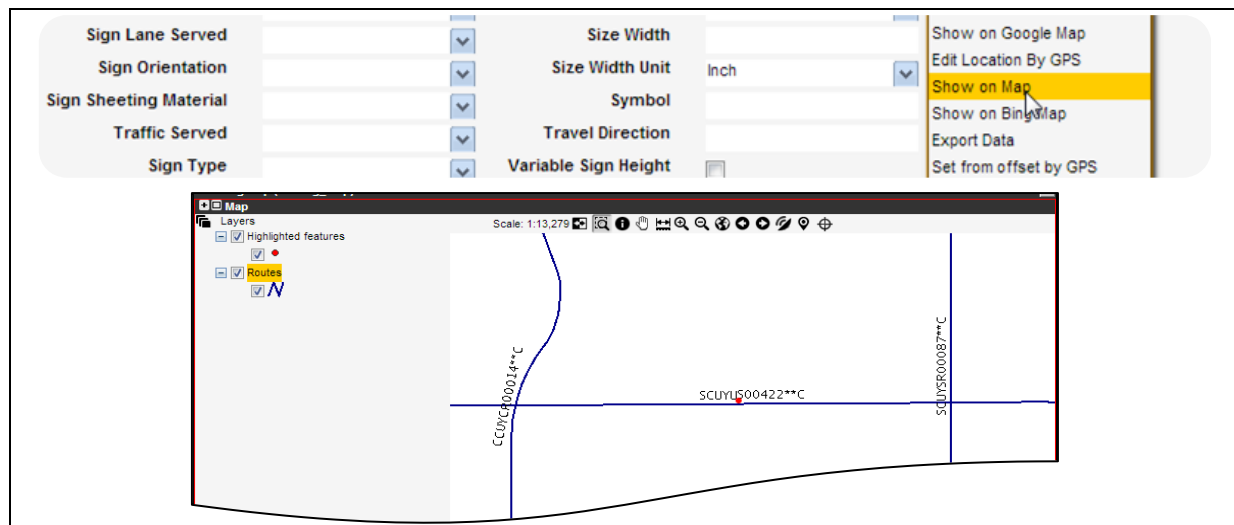


Figure 3-2. Show on Map

### 3.3 Asset Inventory History Logs

An asset inventory's **Maint. History** field (Figure 3-3) provides system generated tracking to Work Orders that have been issued against the selected asset. The hyperlink states "Yes" if tracking of related Work Orders is available for viewing in a Maintenance History dialog box (Figure 3-3, bottom), or "No" if Work Orders do not exist for that asset inventory item.

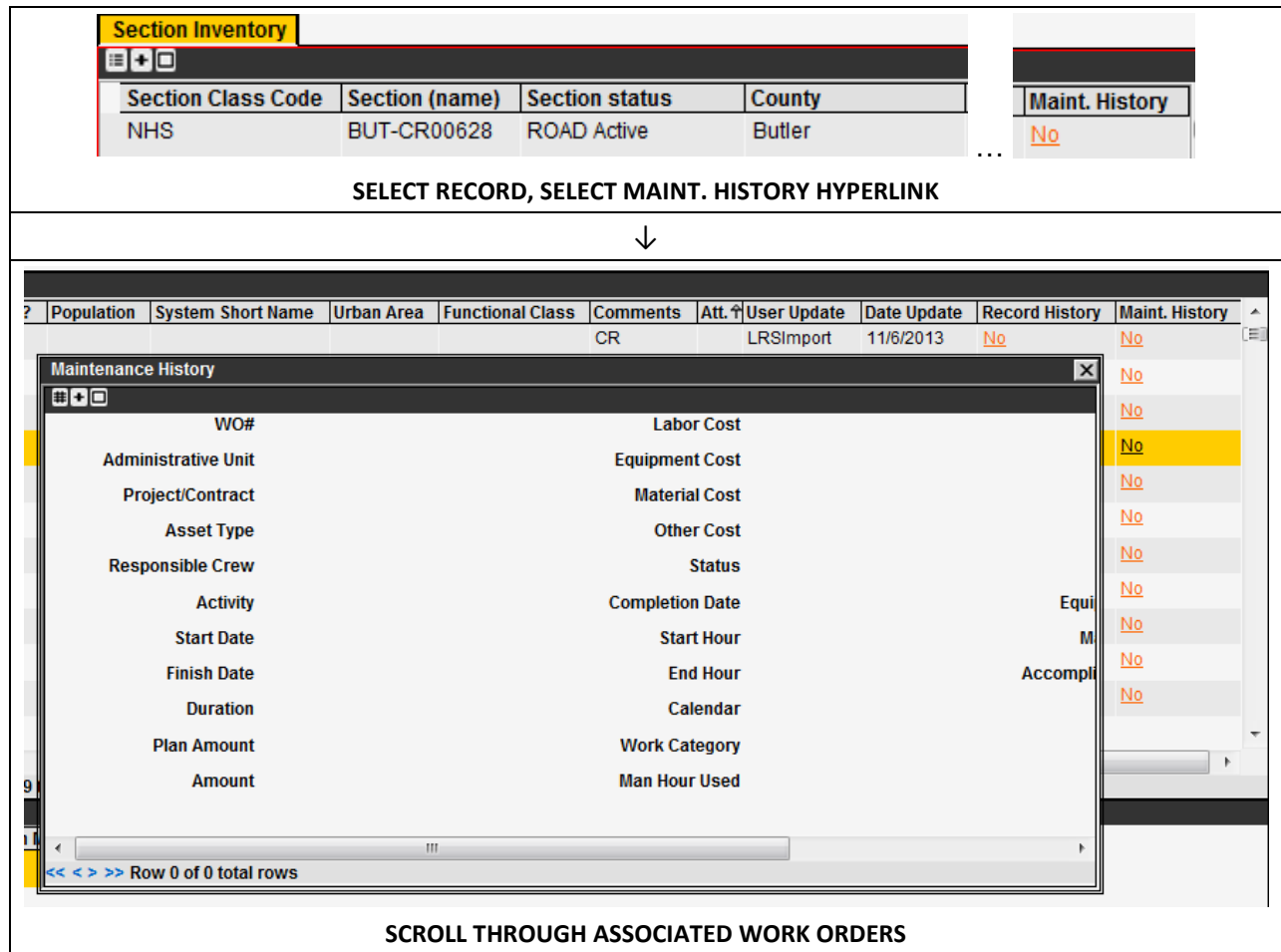


Figure 3-3. Inventory Window Field for Associated Work Orders

Likewise, each asset inventory has an audit trail for changes made to it. Selecting the "Yes" in the **Record History** field opens a Record Change History dialog box (not shown).

## 4 Setting a PM Schedule

### 4.1 Introduction

Certain Security Roles permit configuring of preventive maintenance (PM) schedules. The system provides two levels at which PM may be defined for asset inventory, as follows:

- ❖ Class Code level. Setting a PM schedule at a Class Code level means the PM schedule will apply to all assets within that Class Code.
  - The use of the Setup PM by Class Code window is explained in paragraph 4.2.

**TIP!** The setting of a PM schedule by Class Code applies to the Division/Cost Center selected at login.
- ❖ Individual item level. Setting a PM schedule for an asset inventory item means the PM schedule will only apply to the selected asset(s).
  - The use of the Setup PM by Inventory window is explained in Section 4.3.

### 4.2 Set PM by Class Code

1. Navigate to Road Maintenance > Inventory > Inventory and PM > [ select the applicable asset inventory ] > Setup PM by Class Code, as required.

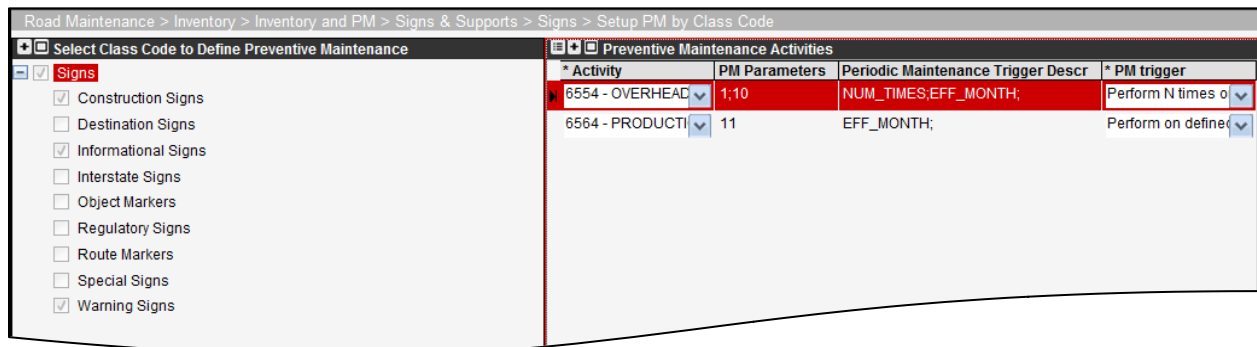


Figure 4-1. Setup PM by Class Code Window

Steps for setting PM by **Inheriting From Parent** asset type or **Define Its Own** are listed below, definitions for each of these functions are also provided in Table 4-1

2. For the Asset Class code you wish to define a PM schedule for either:
  - a. To inherit from the parent asset type. Right-click on the asset class code and select **Inherit from Parent**.
  - b. To define an individual PM schedule for the asset class. If no checkbox is next to the asset class it is inheriting, right click and select **Define its Own PM Setup**. If the asset class has a checkbox simply go to the right Preventive Maintenance Activities pane and right click to insert. (Figure 4-2)

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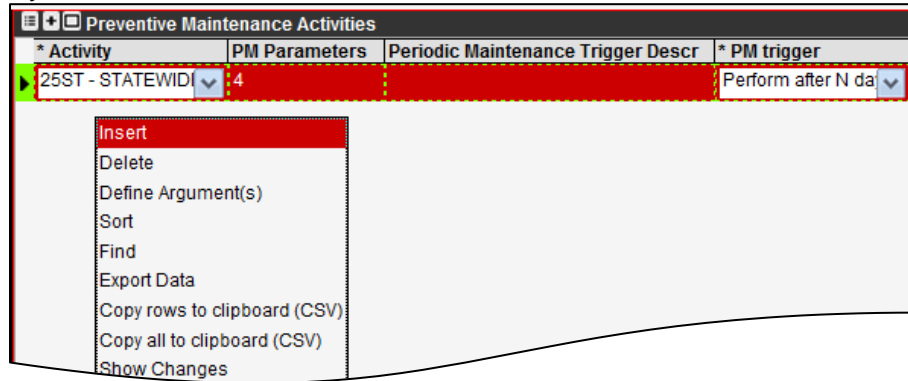


Figure 4-2. New PM Activity

- c. Select **Activity** from the drop list, as required.
- d. Select **PM Trigger** from the drop list, as required.
- e. Populate the **PM Parameters** field as follows:
  - a. Upon selecting the PM Trigger type, enter the “Delta Days” and any other parameters required, as prompted.
  - b. For editing the field, as required, perform a **Define Argument(s)** function, and enter the “Delta Days” and any other parameters, as prompted.
- f. Perform a **Save**.

**TIPS!**

- The setting of a PM schedule by Class Code applies to the Division/Cost Center selected at login.
- The asset type and corresponding class codes beneath it display as follows: No checkmark next to the asset class means it is inheriting from the parent type. A checkmark means the asset class may have its own PM set by performing a right-click in the Preventive Maintenance pane at right (figure 4-4)
- There is an additional level at which PM can be set. That is the individual asset inventory level. Covered in Section 4.3

Table 4-1. Available PM Commands (Left Pane)

Command	Description
Inherit Parent PM Setup	This function makes the PM that is defined for the type of Asset (i.e., Signs) applicable to all asset class codes items within that Asset type, when this setting is in place the asset class checkbox is unchecked.
Define Its Own PM Setup	This function allows Preventive Maintenance Activities to be specified or edited for an individual asset class. This means the asset type setting will be overridden.

### 4.3 Set PM by Asset Inventory Item

An example of the Setup PM by Inventory window appears in Figure 4-3.

Sign ID	Sign Class Code	Sign status	Own PM	Record History	Maint. History	Comments	Att.	User Update	Date Upd
5A5596656566A56C1F910B73F9045FA6	Interstate Signs	Active	<input checked="" type="checkbox"/>	No	No	BREAKAWAY TUBULAR STEEL		CHIDI	10/30/201
5A5596656A65955C1F910B73FA046047	Special Signs	Active	<input type="checkbox"/>	No	Yes	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A55966555569AB1F910B73FA046327	Special Signs	Active	<input checked="" type="checkbox"/>	No	Yes	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A5596656969566C1F910B73FA0465AB	Special Signs	Active	<input type="checkbox"/>	No	Yes	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A5596656699596C1F910B73FA046697	Special Signs	Active	<input type="checkbox"/>	No	No	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A55966A9A656AA71F910B73FA047C31	Special Signs	Active	<input checked="" type="checkbox"/>	No	Yes	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A5596959556A9C01F910B73FA0481E8	Special Signs	Active	<input type="checkbox"/>	No	Yes	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A559695A55A9A5C1F910B73FA0482CF	Special Signs	Active	<input type="checkbox"/>	No	Yes	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A55969659A5A5B01F910B73FA048698	Special Signs	Active	<input type="checkbox"/>	No	No	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201
5A559699A56559C1F910B73FA048E6E	Special Signs	Active	<input type="checkbox"/>	No	No	BREAKAWAY TUBULAR STEEL		IMPORT	12/19/201

* Activity	* PM trigger	PM Parameters	Periodic Maintenance Trigger Descr
6554 - OVERHEAD MTD. FLATSHEET SIGN MAINT. (Labor Hrs)	Perform N times on M-th month	1;10	NUM. TIMES
6564 - PRODUCTION SUPPORT & DESIGN (Labor Hrs)	Perform on defined month	11	

Figure 4-3. Setup PM by Inventory Window

To configure PM for an individual asset inventory:

1. Navigate to Road Maintenance > Inventory > Inventory and PM > [ ~ ~ ] > Setup PM by Inventory, as required.
2. Select an asset ID record in the Inventory pane (Figure 4-4).

Sign ID	Sign Class Code	Sign status	Own PM	R
9045FA6	Interstate Signs	Active	<input checked="" type="checkbox"/>	N
A046047	Special Signs	Active	<input type="checkbox"/>	N
A046327	Special Signs	Active	<input checked="" type="checkbox"/>	N
A0465AB	Special Signs	Active	<input type="checkbox"/>	N
A046697	Special Signs	Active	<input type="checkbox"/>	N
A047C31	Special Signs	Active	<input checked="" type="checkbox"/>	N
A0481E8	Special Signs	Active	<input type="checkbox"/>	N
A0482CF	Special Signs	Active	<input type="checkbox"/>	N
A048698	Special Signs	Active	<input type="checkbox"/>	N
A048E6E	Special Signs	Active	<input type="checkbox"/>	N
C049D5E	Special Signs	Active	<input type="checkbox"/>	N

Figure 4-4. Setup PM By Inventory

3. Right click and select **Define its Own PM setup** from the shortcut menu.

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**TIP!** Any item shown with a green box in the **Own PM** field has already has its own PM schedule set up.

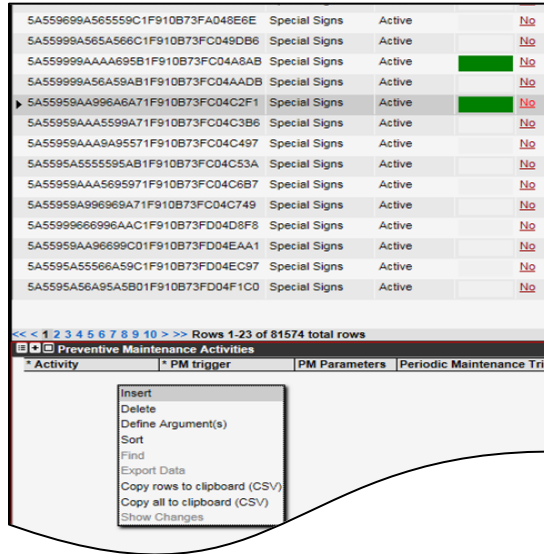


Figure 4-5. Insert PM Activity

4. Proceed to the bottom pane, right click and select **Insert**.
5. This inserts a new Preventive Maintenance Activity row for that asset inventory item.
6. Edit the row as needed to reflect the PM activity to be performed and the interval (PM Trigger).
7. Perform a **Save**.

## 5 Notes

### 5.1 Acronyms and Abbreviations

Class	Classification
EIMS	Enterprise Information Management System
ID	Identifier
LRS	Linear Referencing System
NLFID	Network Linear Feature Identifier
PM	Preventive Maintenance
SFN	Structure File Number
SMS	Structure Management System
WO#	Work Order identifier

### 5.2 Applicable Documents

<i>EIMS Security Roles</i>	Matrix of security roles and applicable functions, grouped by module
<i>EIMS Activity Codes</i>	Matrix of program activity codes, names, and attributes
<i>EIMS Business Rules</i>	Document of EIMS business rules