Roadway RM-101

EIMS Principles for the Roadway Module

Ohio Department of Transportation

Table of Contents

List of Figures

List of Tables

Ohio Department of Transportation

1 Introduction

1.1 Objective

This document highlights the types of information and workflows available in the Roadway module of the Enterprise Information Management System (EIMS).

This document explains the basics of navigating the system and how the system is configured to support Roadway business functions, for the Ohio Department of Transportation (ODOT).

The intended users of this manual are the designated members of the Roadway offices for EIMS usage. Many concepts covered are explained in more detail in upcoming manuals.

Screenshots provided herein may be more legible in color, as provided in the soft copy, than in a black and white printout.

1.2 Key Concepts

EIMS is a comprehensive software platform that provides a suite of modules designed specifically by the vendor, AgileAssets$^©$, for Department of Transportation business processes. The core aims of this software platform are:

- Consolidate workflows

- Streamline infrastructure management

- Apply consistent accounting methods

- Track and report progress

- Inform decisions for work planning and execution

- Easy sharing of data across multiple systems

EIMS has been configured to replace the existing Equipment Management System/ Transportation Management System (EMS/TMS). All business areas that previously used EMS/TMS will use EIMS.

1.3 System Hierarchy

Modules in EIMS are categorized in Figure 1-1 by those that address a business area, and those that serve a general support function. From the point of view of a logged in user, the module names appear across the uppermost row of the system, as tabs.

TIP! Access to EIMS modules is based on the user's Security Profile, which is selected at logon.

Ohio Department of Transportation

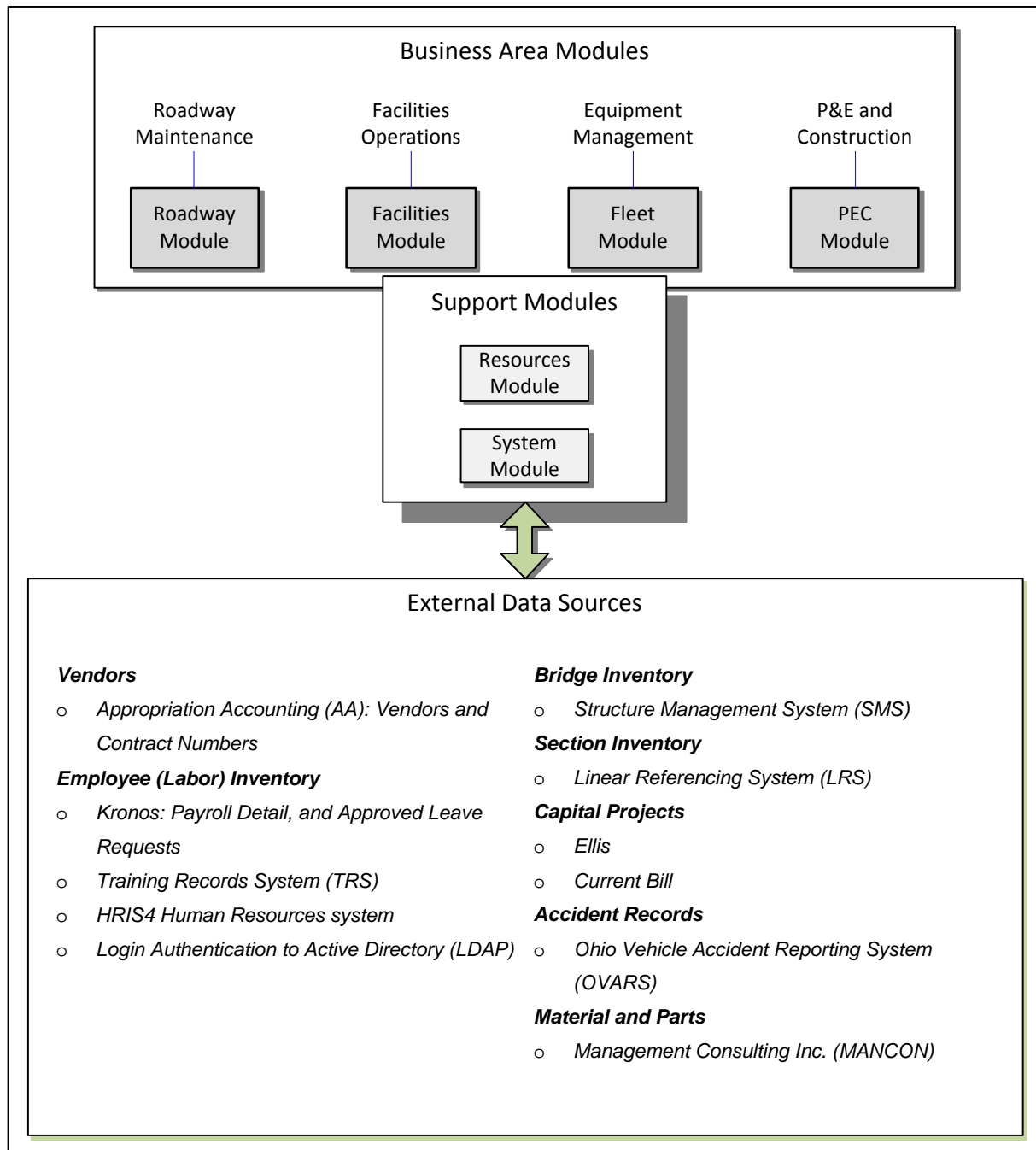Figure 1-1. Overview of EIMS Modules and Interfaces

1.3.1   Business Area Module Descriptions

Each business areas module identified above will be made available for statewide use on the EIMS "Go Live" date. At that time, EMS/TMS will also be retired. Each module includes the ability to enter labor Activities, which can include an associated asset, and track costs to that Activity and asset.

Below is a summary of each business area module:

❖ The Roadway module provides the tools to manage work performed on highway assets; namely, the road sections, bridges and signs. Other assets will be added in the future. The Roadway module also supports the use of mobile devices, so Crew Leaders may perform entries from field locations. This mobile device capability will be a future enhancement and will not be available for initial Go Live.

❖ The Facilities module provides the framework to manage work performed on facilities inventory.

❖ The Fleet module supports the upkeep and management of the ODOT fleet. The same equipment managed within the Fleet module may be available to the Roadway and Facilities modules for use as a resource.

❖ The Planning, Engineering, and Construction (PEC) module supports the recording of labor activities for the various Planning and Engineering (P&E) and Construction business units who previously entered into TMS.

1.3.1.1 Distinctive Conventions

In general, because business area modules were developed according to individual ODOT business area functions, each module is unique. For example:

❖ The conventions and activity codes used in work assignments are individualized.

❖ Resource categories, known generically as labor, equipment, and materials (LEM), may be different per module. These variations are represented according to business area in Table 1-1.

Table 1-1. Resource Categories by Business Area/Module

Category	Roadway User	Facilities User	Fleet User	PEC User
Labor (employee)	✓ Short List ✓ Resources menu	✓ Short List ✓ Resources menu	✓ Short List ✓ Resources menu	✓ Resources menu
Equipment (vehicle)	✓ Short List ✓ Resources menu	✓ Short List ✓ Resources menu	*Represented* ✓ Resources menu	✗ not present
Material and parts	✓ Short List ✓ Resources menu	✓ Short List ✓ Resources menu	✓ Short List ✓ Resources menu	✗ not present

1.3.2 Support Module Descriptions

❖ The Resources module provides the following major functions.

➢ It contains the Sharing menu functions, allowing resources to be shared between Division/Cost Centers.

➢ It provides a Labor Summary by Pay Period window, which displays effort from Work Orders in a per pay period format. It also is where Statewide Overhead activities may be directly entered.

> TIP! All business areas have the ability to enter Overhead activities by way of the Labor Summary.

- ➢ Employee data including Supervisor and Home Location details are imported from the Human Resource Information System 4 (HRIS4) application.
  - ▪ This ensures the staff members displayed in the Labor Summary option includes one's self, for labor entries, and subordinates, for approvals.
- ❖ The System module is primarily accessible by a system administrator.
  - ➢ System configuration tasks are performed by the System Administrator in the System module.
  - ➢ Data that specifically affects the Roadway module, and is managed by the System module on a recurring basis, is listed in Table 1-2.

Table 1-2. Special Interfaces for Roadway Functions

Direction	Source	Purpose	Overview
Input	Appropriations Accounting (AA)	Selection of vendors	EIMS allows a vendor and cost to be recorded to a Work Order, from a drop list of vendors. AA is the system of record for ODOT vendors and contract activities.
Input	Structure Management System (SMS)	Management of bridges	Allows the full list of currently active or valid Bridges to be represented in EIMS and available for work assignments. SMS is the system of record for bridge inventory.

TIP! Linear Referencing System (LRS) is used for defining highway locations in reference to defined points. LRS is the system of record for Road Section inventory. For "Go Live," EIMS will contain static data (one time load) from LRS that will be loaded as part of the "production" data load. In the future, EIMS will have a direct interface with LRS, for keeping its data model current in EIMS.

2 Session Basics

2.1 Introduction

EIMS is a web-browser based application. No client installation is required.

The recommended screen resolution is 1280 x 1024 pixels. When this resolution is not used, features of the screen may appear distorted.

ODOT Network login and password are accepted by the application, by way of a Lightweight Directory Access Protocol (LDAP) interface.

Screenshots provided herein are based on EIMS Version 6.9. Release of a new version will affect the screenshots.

2.2 Logging In

2.2.1 Location

The Internet Shortcut (URL) is as follows: http://eims.dot.state.oh.us

For convenience, a shortcut will be added to the user's Desktop when EIMS goes live.

2.2.2 Sequence

TIP! If sharing an ODOT network computer, the individual network login must be applied first.

When accessing EIMS via ODOT virtual private network (VPN) on a non-ODOT computer, a prompt appears requiring network login (Figure 2-1, top). Otherwise, the network provides and validates the credentials.

Next, selection of a Division/Cost Center affects what data will be available (Figure 2-1, middle), if multiple selections are available.

The user may have multiple Security Profiles available, in which case a selection needs to be made (Figure 2-1, bottom).
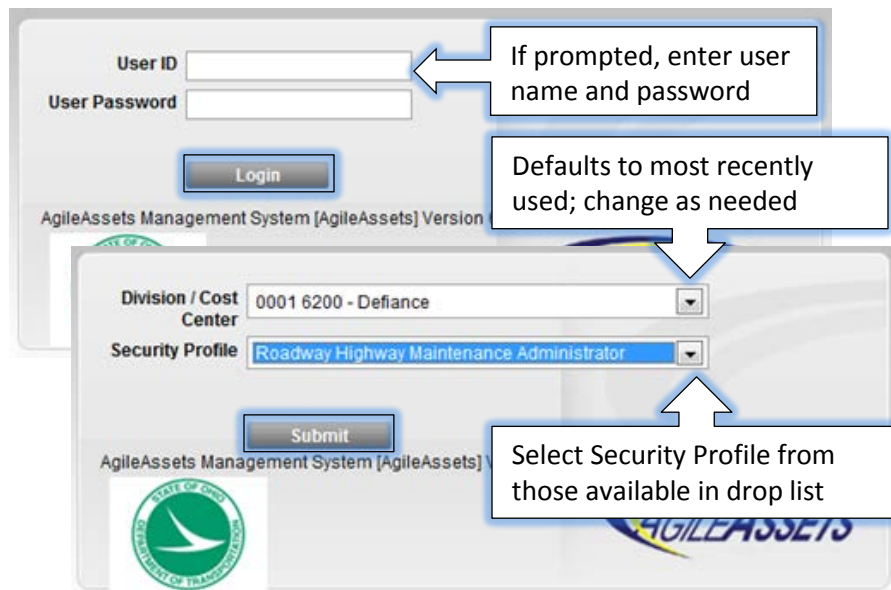
Figure 2-1. Login Prompts (If Applicable)

TIP! If a user has only one division/cost center and one Security Profile, then EIMS completes login without the prompts (Figure 2-1).

2.3 Window Features

2.3.1 Layout

Upon login, the window displays the home window (Figure 2-2), where the available modules are displayed according to the selected Security Profile. The home module of that profile is active (tab-selected) by default.
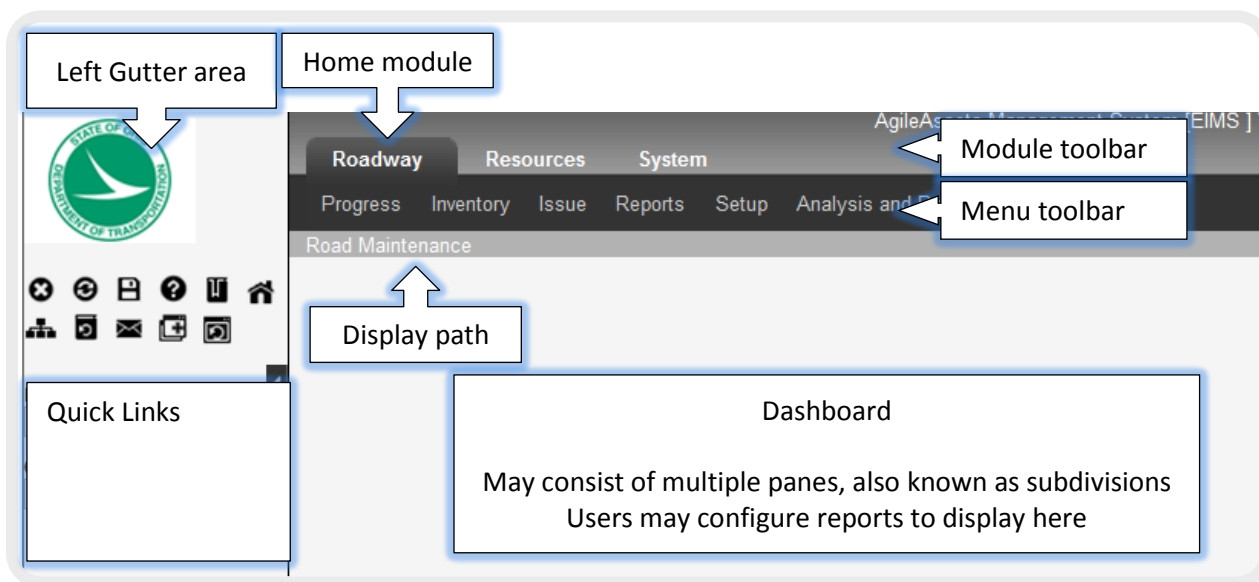

Figure 2-2. Home Window Features

The Menu toolbar refreshes when the user switches modules. The availability of modules and menu options are based on the user's Security Profile.

When a menu button is selected from the toolbar, the corresponding menu options appear in a drop list, and submenus branch to the right.

An overview of the menus available to Roadway users is provided in paragraph 4.3.

2.3.2 Scrolling Features

When the browser window is scaled down in size, it provides vertical and horizontal scroll bars to manage what is viewable.

Within the window, a view of results may present more columns (attributes) than its pane provides display area. In that case, a horizontal scroll bar appears with the pane for moving information left and right.

Hierarchical items may be expanded or compressed using the Expand + or compress – sign directly next to the item name.

Often, a list of results returns more records than the window can display. In that case, the results are divided to fit the screen, for showing a page at a time. Arrow buttons appear in the bottom toolbar (Figure 2-3) to provide a method of navigating among the pages.
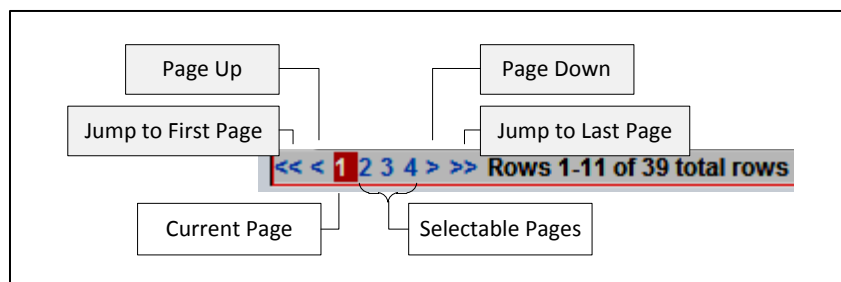
Ohio Department of Transportation

Figure 2-3. Navigation Toolbar for Result Pages

The user may select a page number displayed in the toolbar (Figure 2-3), to move among pages. As a third method, the vertical scroll bar allows page progression.

2.3.3 Sorting and Filtering

To assist with viewing records, the right-click menu offers **Sort** and **Filter** options, selectable anywhere in the results area.

The **Sort** function serves to alphabetize text by columns.

An efficient method of applying a Sort is explained in Figure 2-4, by clicking on a column label. To remove the criteria, the user could either refresh the window or reset the Sort option.
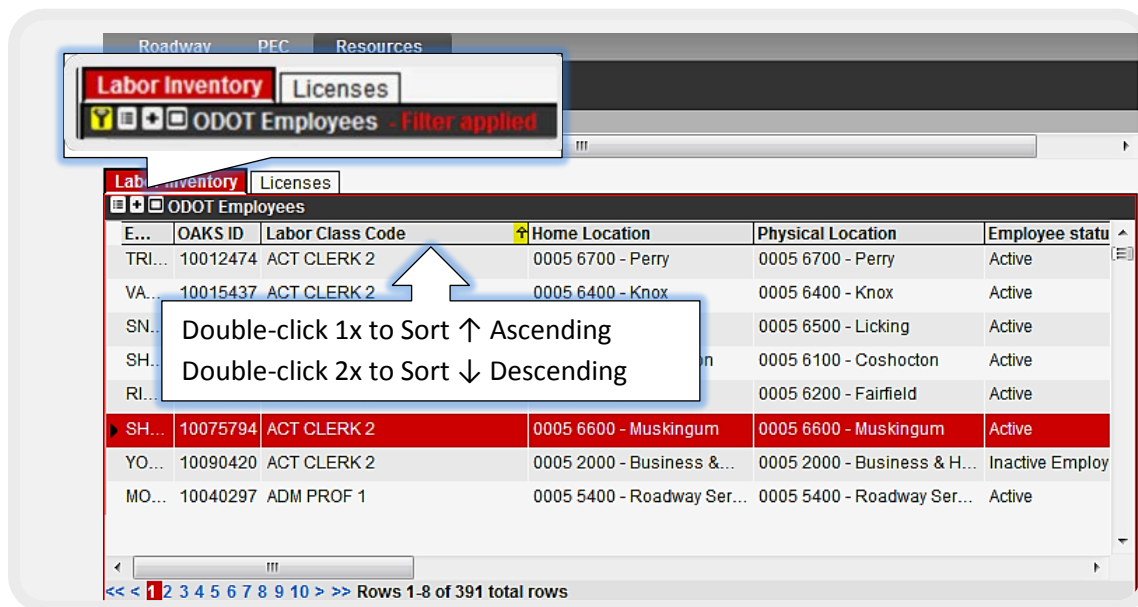

Figure 2-4. Sorting or Filtering in Result Pages

Once a **Filter** operation has been selected, a yellow funnel 🔽 icon appears in the title bar, as shown in Figure 2-4 (at top), and the results of the data pane are constrained to match the criteria. To clear a filter operation, the user could either refresh the window or reset the Filter option. Double-clicking the yellow icon will also display the Filter window.

TIPS!

- Not all columns allow filtering.
- The filter 🔽 icon also appears when the server is busy returning content.

2.3.4 Results Layout Options

A list of results may be displayed in the grid layout, or alternatively as a record view, by way of the ⊞ / ☰ button in the upper left-hand corner (Figure 2-5). For example, to switch to the record (form) view, select the ☰ button (or CTRL+G), which refreshes to offer the grid ⊞ button in the title bar. The same number of records remains available in the navigation toolbar.
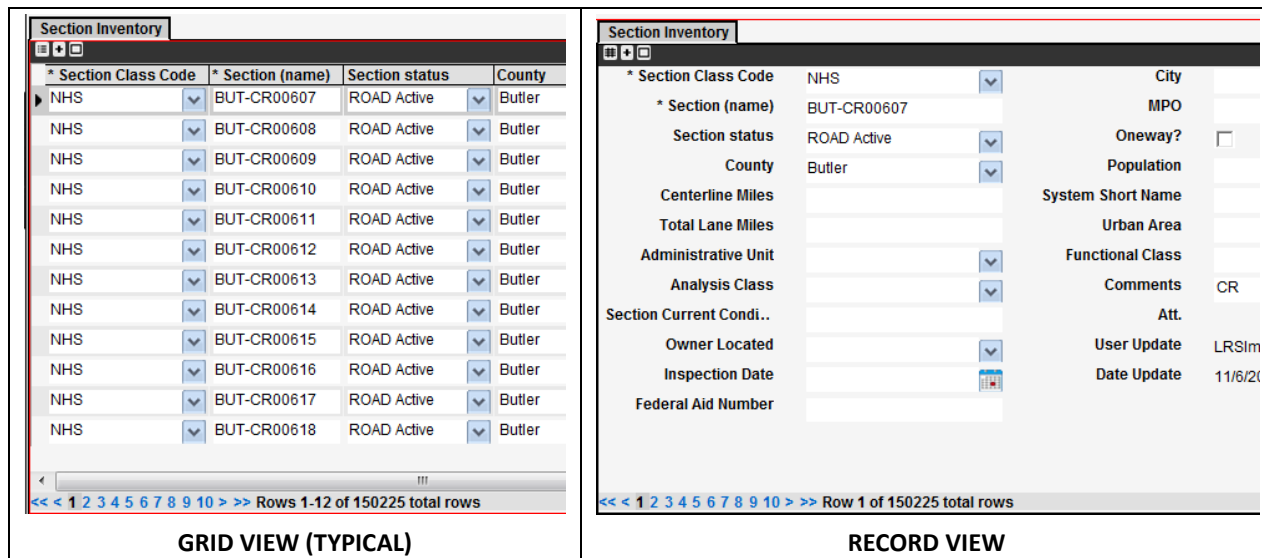

Figure 2-5. Display Option Examples

To display results with a potentially larger area of the window, the title bar offers a Maximize ▣ / Minimize ▣ button, allowing associated panes to be hidden or restored, respectively.

2.3.5 Status of Input Data Fields

New or modified data inputs from the user appear with a dashed green outline until data is saved. If it remains unsaved when another screen is selected, the user must either allow the save function (select OK) or to abandon the data (select Cancel), as prompted (Figure 2-6).
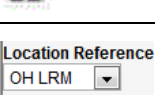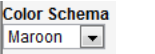
Figure 2-6. Unsaved Data Example

Ohio Department of Transportation

2.3.6 Left Gutter

The left "gutter" area of the screen may be displayed or retracted, depending on user preference. Normally, it contains two rows of shortcuts for performing common tasks. It may also include a Quick L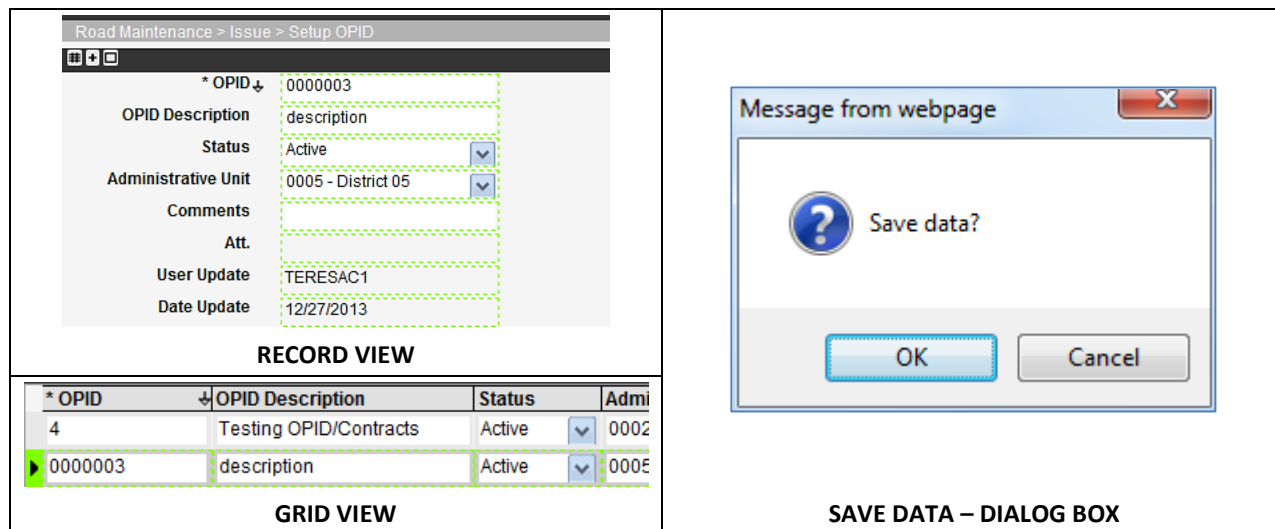inks area for storing links to commonly used windows. When the gutter collapses, the icons appear in a single column. The available options are listed in Table 2-1.

Table 2-1. Left Gutter Options

Option		Description
⊗	Logout	Returns the window to the login sequence.
⟳	Retrieve Data	Refreshes the display area to match the database. Caution: This option will overwrite any unsaved data.
💾	Save Data	Stores all unsaved data shown in the window.
❓	Help	Opens a pop-up screen containing Help information for the selected window, such as term definitions.
📖	Add Quick Link	Places a bookmark of the displayed window into the Quick Links area, below the two rows of icons.
🏠	Home	Returns to the home window of the security role's login.
⬡	Division/Cost Center Selection	Allows the user to change the logged-in Division/Cost center and/or Security Profile without fully exiting the session.
↺	Manage Window Links	Opens a second window, to configure how Quick Links are grouped for display and what text appears when hovering.
✉	Send Email	Places a shortcut of the displayed window into a new email that can be sent to others.
⊞	Create New Session	Duplicates the current window while bypassing the login sequence. This is a handy feature for multitasking.
↻	Reset User Window Settings	Resets any customized window settings for the current window to default settings.
⊠	Remove Quick Link	This icon appears in the Quick Links area for each bookmark added by the user, for the displayed module.
Location Reference OH LRM ▼	Location Reference	This field allows Location Reference Method (LRM) of Basic LRM (default) or **OH LRM (recommended for Roadway)**.
Color Schema Maroon ▼	Color Schema	A field allows the background colors of the screen to be changed based on user preference.

TIP! An example of usage for the Administrative Unit Selection ⬡ option is as follows: When the user needs to perform approvals of activities in the Progress > Day Cards window, s/he may interrupt the session with the icon, and update the Security Profile selection to "Roadway Transportation/County Manager." All settings of the session otherwise remain unchanged.

Ohio Department of Transportation

2.3.6.1 Quick Links Area

Quick Links are used to store bookmarks configured by the user. When viewing another module, the user will observe a different list of Quick Links.

The example in Figure 2-7 shows a Quick Link created within the Resources module. It will only appear in the Resources module of the logged in user.
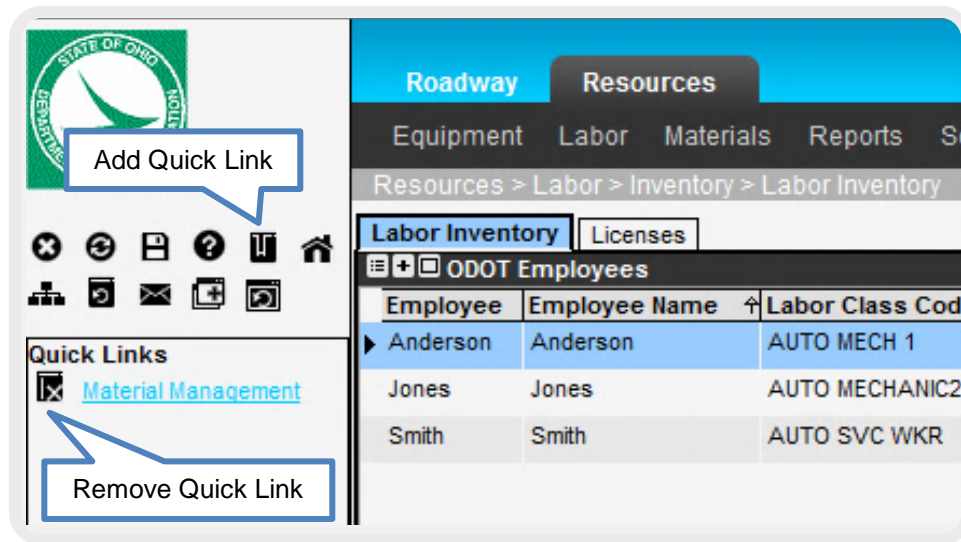
Figure 2-7. Quick Link Controls

2.3.7 Shortcut Menu

To access the shortcut menu for the selected window area, the user will typically perform a right-click. An alternate method is the Menu ⊞ button in the title bar (or CTRL+M). Whereas a basic list of commands is shown in the example (Figure 2-8), some windows include specialized commands. To close the shortcut menu, the ESC key may be used.
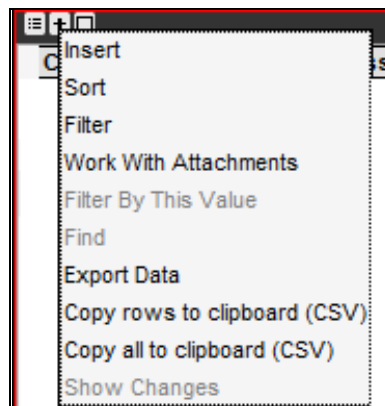
Figure 2-8. Right-Click Shortcut Menu (Example)

2.3.8 Inserting Records

Most users will have a right-click option of **Insert**, and sometimes an **Insert Like** option where a record may be copied and then modified. The shortcut menu listing of options depends on the pane selected.

2.3.9 Working with Attachments

Record lists generally include an **Att.** column (Figure 2-9), for including additional information with a record.

Use of the right-click **Work With Attachments** function, as a common function for the Roadway user, allows a file to be attached to a record within any business area module. The user may upload an attachment associated with the record, such as a Work Request, from a local computer drive or from a network server drive. A red square appears in the **Att.** column to denote that an attachment is associated with the record. Multiple files may be added from the specified source at once.

To view the attachment, double-clicking the red square causes thumbnail images of all attachments to appear. From there, double-clicking on the desired thumbnail fully opens the attachment. The user may still add or modify attachments for the selected record, with a right-click selection of options. The thumbnails of the records will automatically update to match the modified files.
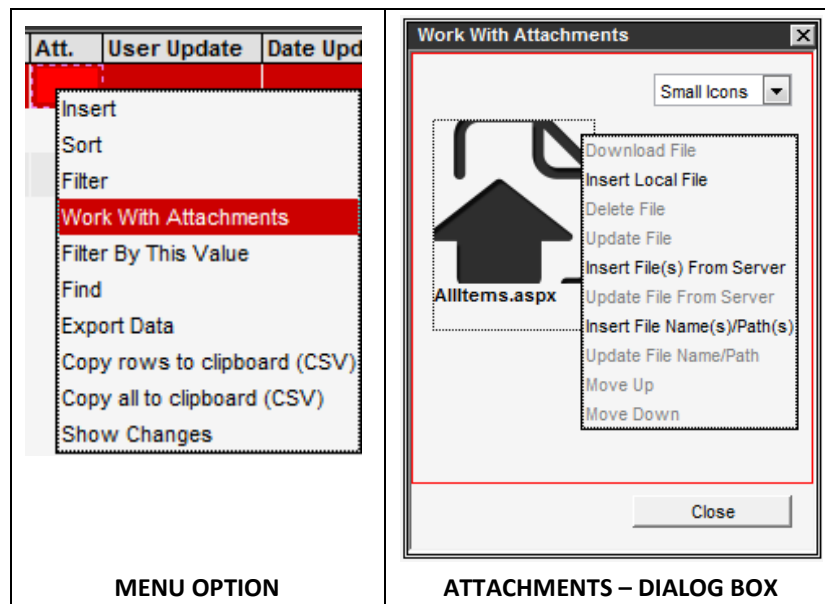
Figure 2-9. Access/Edit File Attachments

2.3.10 Smart Search

Drop lists are enabled with a smart search feature, in which the user may key a few digits to see results in the drop-down menu (Figure 2-10).
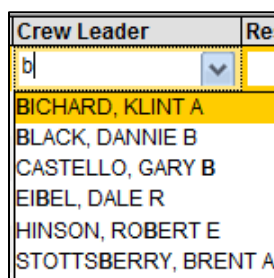
Figure 2-10. Smart Search Example

Ohio Department of Transportation

2.3.11 Session Timeout

The session will idle for 60 minutes (1 hour), at which time it will return to the login sequence.

2.3.12 Browser Optimization

To manage new windows opened from the **Create New Session** or the **Help** button, the pop-ups may be made to create tabs rather than separate windows (Figure 2-11).
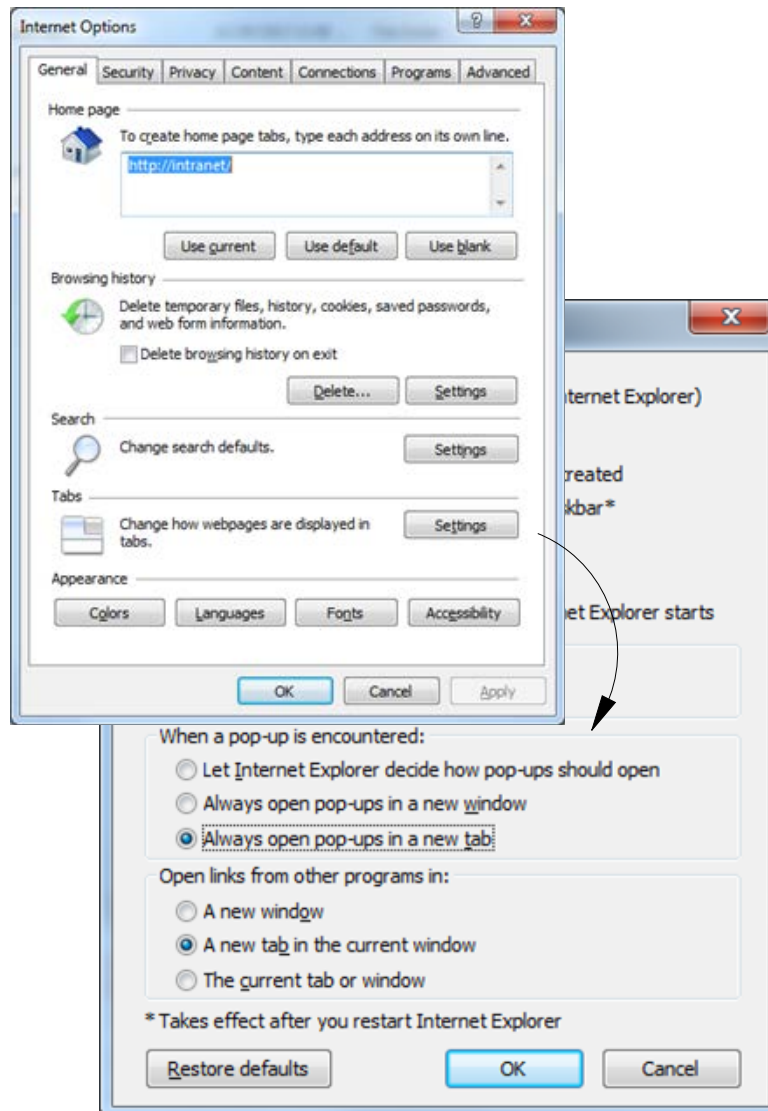
Figure 2-11. Optional Browser Setting – Windows© Internet Explorer

With the aforementioned setting in place, the user may launch more EIMS sessions in separate windows, by opening more instances of the browser. Sometimes placing screens in separate displays makes it more convenient for working with multiple datasets simultaneously.

A quick tip for browsing through multiple browser windows is to use the ALT+TAB function of Windows. Keep the ALT key pressed while selecting TAB until the desired window is selected.

The CTRL+TAB function works in Internet Explorer, to scroll among tabs of the window, provided that the window is active.

3 EIMS Terminology

Table 3-1 introduces EIMS terminology and compares it to terminology previously used by Roadway staff when using EMS/TMS.

<p align="center">Table 3-1. EIMS Terminology</p>

EIMS Term	*Legacy*	Description
Project	*Similar to Work Order*	A project is an system object that: 1) tracks progress and costs to a business area and particular objective, 2) links activity types to asset types, 3) controls what Division/Cost centers are authorized, and 4) isolates costs that need reimbursement, such as Weather Emergencies, as separate from routine operations. Projects are module-specific, which means that a Project created in the Roadway module is not available to Facilities module. Projects intended for on-demand usage may be closed once the objectives are fulfilled. Standing projects are generally available for indefinite use. They are named generically for the work category and are defined in the *EIMS Business Rules* document. Projects are located in the Issue > In House Project window.
OPID		OPID stands for Operational project Identifier. These are Projects set up in the Roadway Module that are intended to be shared with the PEC Module. See the EIMS Business Rules document for more detail on OPID's.
Activity	*Program Activity Code (PGAC)*	Activities are purpose-based tasks that define and categorize the type of work being performed. Each module in EIMS has its own standard Activity list. The activity codes in the Roadway module are either: • Prefixed with "M" (i.e., M100-001) for Maintenance activities. • Four digits for Traffic activities (i.e., 6512), from EMS/TMS. Each code displays with a brief description. When viewing a Project, a detail pane shows the list of Activities associated with each Project. This list is then available when creating a Work Order from a Project.
Work Order		Work Orders are the Roadway maintenance activities charged to a Project. A Work Order may be promoted from any of the following, or it may be created ad-hoc (on demand): • Work Request(s) • Preventive Maintenance (PM) schedule • Estimate / Force Account A Work Order states the nature of the work to be performed, and adds one or more Work Locations. As the work is fulfilled, LEM utilization is tracked to the Work Order by use of Day Cards or Daily Logs, as specified by calendar day. Attributes of a Work Order record include: • Unique number (WO#) • Parent project name • Asset Type • Activity • Associated Work Request (WR#), if applicable

EIMS Term	*Legacy*	Description
Work Request	*Work Request*	A Work Request represents a request to perform work which originates from an external source. A Work Request may be promoted to a Work Order. It may also be linked to an existing related Work Request that then links to a Work Order.
Day Card		The Day Cards feature provides a resource management tool. Resources can be allocated according to work assignment and anticipated date. If a resource is over-allocated, EIMS will provide a pop-up notification of scheduling conflicts being detected. Work amounts or the dates planned can be edited as needed.When a Work Order is executed, the actual LEM usage is generally entered in the Day Cards. It may be entered into the Daily Log, as an alternative method.An area for creating Day Cards is displayed in the Progress > Day Cards window, beneath the selected Work Order. Types of Day Cards, available to be created in the Roadway module, are as follows: • Labor (employee) • Equipment • Material TIP! If the Work Order is being assigned to a Vendor, use the Costs, Accomp. & Contracts tab. The window also allows the following data elements to be recorded against the Work Order • Location/Asset (work location and/or assets on which work is performed) • Additional Costs o Can be rental equipment, toll, etc. o Can be rolling stock TIP! Use the Attachment function, to attach a scanned receipt. • Accomplishments o The measurement unit is based on the Activity specified in the Work Order, so for Bridge replacement (square feet), the accomplishment would be the quantity of square feet. • Contracts o List of invoices by selected contract number, Vendor ID, cost, and date TIP! Use the Attachment function, to attach an invoice.

EIMS Term	*Legacy*	Description
Daily Log		The Daily Log is similar to the Day Card, with key differences as follows: • It displays a list of Work Orders corresponding to a selected date. This list appears in the top half of the screen. • LEM resources may be recorded to a selected Work Order as "actuals," regardless of whether a Day Card for that resource exists. The areas for entry are similar to Day Cards, along the bottom of the screen. In summary, the Daily Log feature provides a more flexible method of entering "actuals" than the Day Card for LEM feature. An example of where a Daily Log could be used is for recording a material, where the material was not defined in a Day Card of the Work Order. The Daily Log may also be used for recording Overhead activity.
Labor Summary by Pay Period		In EIMS, authorized Roadway users record work accomplishments in the Day Card or Daily Log of the Roadway module. The Labor Summary by Pay Period, available in the Resources module, offers the following benefits to the Roadway user recording activities in EIMS: • Overhead activities may be entered in the Labor Summary, provided the staff member is an EIMS user. • Charges to Roadway Module Work Orders and Kronos leave requests are represented, allowing a view of the full summary of labor activity hours per pay period.
Statewide Overhead Activities		The prefix for Statewide Overhead Activity codes is 00, and these activities may be recorded through the Daily Log window or the Resources module Labor Summary By Pay Period window. If the staff member uses EIMS, s/he may record the activity in their Labor Summary. This category includes: Supervisory duties, Quality Assessment Reviews (QAR), Training, and Standards, Policies, and Procedures etc.
Division/Cost Center		A Division/Cost Center is an organizational unit, such as County, bearing an accounting code within ODOT's operational structure of 12 Districts, 88 Counties, several Outposts, Central Office, and divisions within Central Office.

Ohio Department of Transportation

4 Roadway Module Overview

4.1 Basic System Flow

From a high level perspective, the process of planning and recording Roadway activities is shown in Figure 4-1.
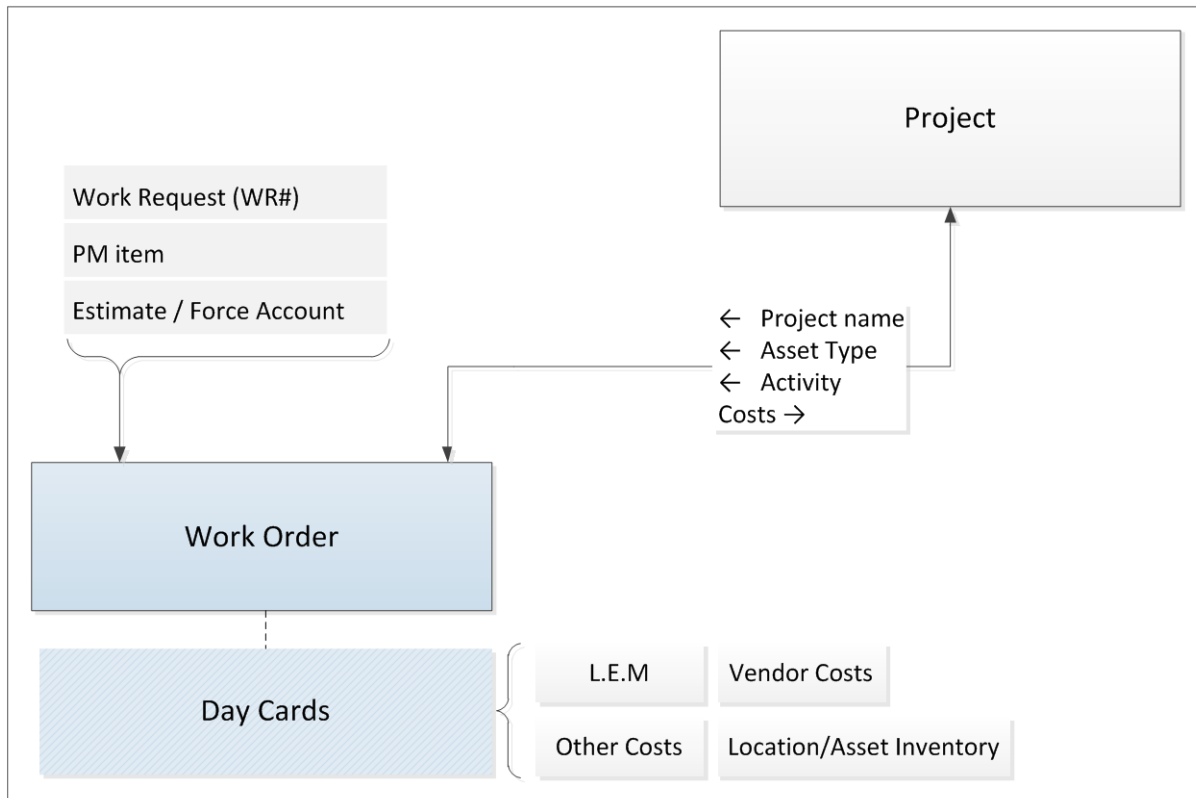
Figure 4-1. Planning & Recording Activities

All users may browse the list of Work Orders of the logged-in cost center. The ability to create, modify, and assign the Work Orders is restricted to specific Security Profiles.

Tracking of progress to a Work Order achieves multiple objectives:

❖ The LEM and other costs of the effort can be rolled up to the Project level, from which the Work Order originated.

❖ Any improvement activity performed on a particular asset inventory item is recorded in the inventory table.

❖ Estimations for performing a particular Activity may improve based on completed Work Orders (creating performance metrics).

The general cycle of a Work Order, once activated, is as follows.

In the assignment preparation stage:

❖ An authorized user prioritizes the Work Order(s) and reserves resources in the Day Cards tabs labeled Labor, Equipment, and Materials, for the coming day(s).

❖ An authorized user generates a worksheet with the basic information of the Work Order and fill-in areas, in hardcopy. (This step will change when the Mobile Device is rolled out to Crew Leaders later as a future enhancement)

An overview of the Day Cards pane is provided in Figure 4-2.
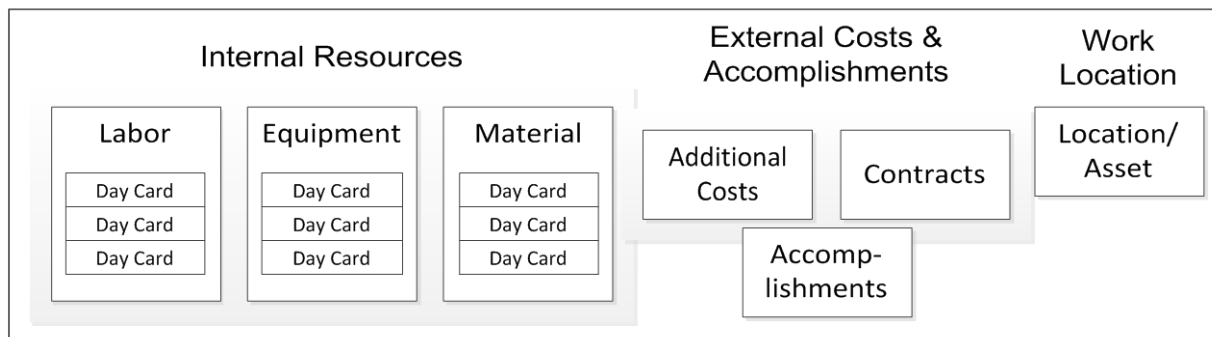
Figure 4-2. Day Cards Pane

While completing work:

❖ The Crew Leader uses the worksheet as the "actuals" summary, for updating the Day Cards, as follows:

  ➢ The number of hours worked are marked next to the employee's name, for the given date.

  ➢ All equipment resources, material resources, and external costs are itemized and quantified.

❖ The worksheet is returned to the designated data entry person, who then enters information into the Day Cards window in EIMS.

❖ The Roadway Transportation/County Manager reviews and approves the Day Card(s).

TIP! A checkmark appears in the **Approved** column of approved Day Cards. Once approved, the Day Card may not be edited.

The process of recording labor activity hours is provided in Roadway manual RM-201, titled "Recording Work Activities and Labor Hours."

4.2 Reports

Each business area module has special reports, as requested by steering committee members, and those reports for the Roadway functions are listed in the Roadway manual RM-205, titled "Reporting Functions." They include:

- ❖ Graph reports
- ❖ Standard (tabular) reports
- ❖ Custom reports may also be created by the user
- ❖ Jasper reports

TIP! Jasper reports are more advanced reports capable of collecting data from multiple sources, there creation requires advanced scripting skills.

4.3 Menu Overview

Some combination of the menu options herein will be available to the Roadway user. This is determined by Security Profile selected at login, and configured by the System module's settings for that Security Profile.

To ensure legibility of these examples, the pages have been rotated to a landscaped view, starting on the next page. The examples are only for reference.

Not all menu options are represented here, only those that are most commonly used by the average user have been included.

Ohio Department of Transportation

Road Maintenance > Progress > Day Cards

Road Maintenance > Progress > Day Cards

| Insert | Insert Like | Assign Crew Members | Make Daycards | Show Schedule | Edit Group Schedule |

Work Orders

WR#	WO#	Project/Contract	Activity	* Plan Amount	Comments	Crew Leader	Responsible C
	757320	Todd Test 2	M100-105 - Truck roadeo (Labor Hrs)	50			
211	720672	Pavement	M252-001 - Full depth rigid pavement removal and flexi...	5	TESTComments		Kim's Crew C
	757359	Culvert replaceme...	M611-004 - Pipe culverts per Force Account (Feet)	60	LOR SR58 0.99	RADER, BRIAN C	My Big Crew
	757367	Snow and Ice	M690-001 - Snow and Ice (Treated Miles)	250		AVERY, TRAVIS J	Snow and Ice
	757313	VRC testing	M251-001 - Partial depth pavement repair (Cu. Yd.)	50			
	757317	darcy sme test	M606-001 - Guardrail (Feet)	250			Utility Crew

Activity Code Standards

No QG

<< < 1 2 3 4 5 6 7 8 9 10 > >> Rows 1-6 of 92 total rows

Labor | Equipment | Material | Costs, Accomp. & Contracts | Location/Asset

Employees Short List

Select	Employee Name	Labor Class Code	Administra
☐	BICHARD, KLINT A	HIGHWAY TECH 1	0005 6300
☐	BLACK, DANNIE B	HIGHWAY TECH 2	0005 6300
☑	CASTELLO, GARY B	HIGHWAY TECH 2	0005 6300
☐	CLARK, PHILIP C	AUTO TECH	0005 5430
☐	EIBEL, DALE R	HIGHWAY TECH 2	0005 6300

Assigned Employees

* Employee
CASTELLO, GARY B

Employee Day Cards

Approved	* Employee	* Work Date	* TRC	* Total Hrs	Tota
☐	CASTELLO, GARY B	10/2/2013	OT - Overtime a	5	
☐	CASTELLO, GARY B	10/1/2013	RG- Regular Ti	8	
☐	CASTELLO, GARY B	10/2/2013	RG- Regular Ti	8	
☐	CASTELLO, GARY B	10/3/2013	RG- Regular Ti	4	
☐	DOUGLAS, JAY B	10/1/2013	RG- Regular Ti	8	

The Day Cards window shows a list of open (Active) Work Orders for the logged-in cost center, in its upper half.

The lower half of the window is for scheduling LEM resources by date, for the Work Order selected in the top half. Each LEM category has its own tab, and the Day Cards created within that LEM category appear in the far right pane, upon being manually created (**Make Daycards**). The Day Cards area also provides a place to record other costs on the Costs, Accomp. & Contracts tab, as well as identify a Work Location and/or Asset Inventory item via the Location/Asset tab.

When a Work Order is executed, the actual LEM usage is generally entered using Day Cards options in the lower half of this screen. They may be entered into the Daily Log, as an alternative method.

In the example shown, an employee has been assigned to a Work Order and has one day of effort scheduled. The Day Cards recordings of actual hours await approval, until a checkmark is added in the Approved column.

19

Road Maintenance > Progress > Daily Log

Road Maintenance > Progress > Daily Log

Effective Date: 1/6/2014

Work orders

WO#	Valid Acct	Activity	Comments	Administrative Unit	Start Date	Start Hour	Duration	Finish Date
712358	✓	0008 - PERSONAL LEAVE (Labor Hrs)		0005 6300 - Guernsey	8/22/2013	0		
758931	✓	M606-001 - Guardrail (Feet)		0005 6300 - Guernsey	1/2/2014	0	32	1/7/2014

<< < 1 > >> Rows 1-2 of 2 total rows

Labor | Equipment | Material | Costs, Accomp, & Contracts | Location/Asset

Employees Hours

Employee Name	TRC	712358 Hours	758931 Hours	Hours Shown	Other Hours
ASH, SCOTT A	REGLR Regular Pay				0
BLACK, DANNIE B	REGLR Regular Pay				0
BUCHTEL, AMY J	REGLR Regular Pay				0
CALDWELL, JAY D	OVTHR Overtime Hours				0
CALDWELL, JAY D	REGLR Regular Pay				0

Similar to the Progress > Day Cards window, the upper half of the Daily Log window shows open (Active) Work Orders for the logged-in cost center. However, only Work Orders scheduled to include the Effective Date (selectable at top) are listed. Work Orders not previously scheduled for that date may also be selected to bring into view using the Edit Selection command in the Shortcut Menu.

LEM resources may be recorded to a selected Work Order as "actuals," regardless of whether a Day Card for that resource exists. The areas for entry are similar to Day Cards, along the bottom of the screen. The same LEM category Short Lists are available as in the Day Cards window.

An example of where a Daily Log could be used is for recording a material, where the material was not defined in a Day Card of the Work Order.

In the lower half, any cells with green background signify the Day Card was approved.

Road Maintenance > Progress > Completion

Road Maintenance > Progress > Completion

Show completed from: 1/17/2014

Work orders

WR#	Completed ↓	WO#	Project/Contract	Asset Type	Activity	Start Date	Start Hour	Duration	Fin
	☐	748639	Regression Test	Guardrail	M606-002 - Guardrail - End Treatment (Each)	11/11/2013	0	8	11,
	☐	720680	Bridge	Bridges	M501-001 - Bridge Replacement per Force Account (Sq....	8/26/2013	0	8	8/2
	☐	757372	Snow and Ice	Section	M100-001 - Administration (Labor Hrs)	11/1/2013	0	864	4/1
	☐	757358	Snow and Ice	Section	M690-001 - Snow and Ice (Treated Miles)	11/1/2013	0	816	3/2

<< < 1 2 3 4 5 6 7 8 9 10 > >> Rows 6-9 of 63 total rows

Detail | Location

Costs and Accomplishments

Description	MIN DATE WORK	MAX DATE WORK	NOT APPROVED	Total Cost	Quantity	Man Hour Used
▶ Labor Day Cards	11/22/13	11/22/13	1	$0.00		8
Equipment Day Cards			0	$0.00		
Material Day Cards			0	$0.00		

Similar to the Progress > Day Cards window, the Completion window lists open (Active) Work Orders in the upper half. Whereas the Day Cards window allows a Work Order to be changed by its **Status** attribute, the Completion window provides a checkbox column for promoting the status of the Work Order to Completed.

An advantage of this window is that Work Orders of Completed status may be made visible, by entering an effective date at least as early as the historic Work Order's Completion Date. Upon performing a Retrieve command in the left gutter, all Completed Work Orders since the date specified are shown among the list of records, with those rows bearing a checkmark for Completed.

Work Orders of Completed status, once unhidden in this manner, may be re-activated by way of clearing the row's checkmark and performing a Save command. New sets of Day Cards may be created in the Progress > Day Cards window.

Road Maintenance > Inventory > Data From Map
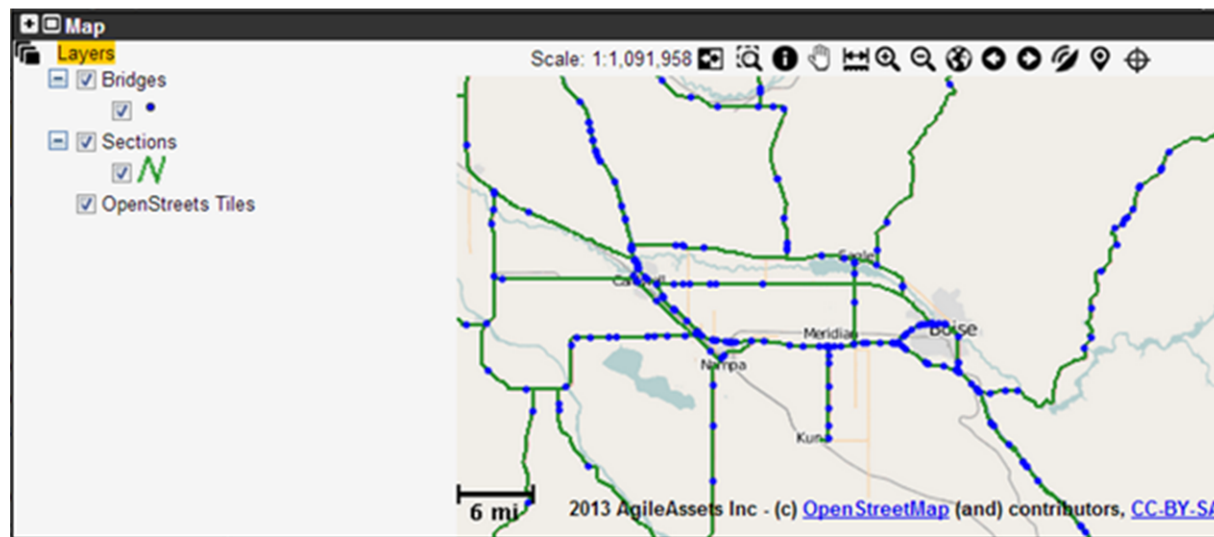
This opens a Geographic Information System (GIS) explorer window. The underlying layer is blank, and the user may add GIS layers from a library by using the Open Map or Add Layer functions. The window retains the selected scheme when reopened.

Ohio Department of Transportation

Road Maintenance > Inventory > Inventory and PM > {sections/signs/supports/bridges} > Inventory

This snapshot uses the Supports selection.

Road Maintenance > Inventory > Inventory and PM > Signs & Supports > Supports > Inventory

Supports Inventory | Support Poles

Supports Inventory

* Supports	* Supports Class Code	Status	Sign Exists	Record History	Maint. History	Comments	Att.	User Update	Date Update	Coupling Mo
5A5956AAA555559B1F910B75663B12AF	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AAA565596B1F910B75663B1361	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA9AAA969B1F910B75663B14D7	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA9699A69B1F910B75663B1517	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA969A96AB1F910B75663B16F7	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA969A96AB1F910B75663B17E7	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA969A96AB1F910B75663B18D7	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA969A96AB1F910B75663B19C7	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA96955A5B1F910B75673B1AC0	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA96955A5B1F910B75673B1BB0	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA9559995C1F910B75673B1C70	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	
5A5956AA6596A6701F910B75673B1D7C	ODOT Support	Activ	Yes	No	No			IMPORT	12/19/2012	

This is the table of asset inventory categories as filtered to the logged-in cost center. Secondary tabs to the right of the "Inventory" tab allow additional information to be provided.

If the Inventory > Short List... option of "Share Inventory" has been selected, the selected cost centers will also appear in this list, as available in a drop list for the Day Card window – Location/Asset tab.

There are several other menu options within Road Maintenance > Inventory > Inventory & PM menu however, they will not be covered here as they are configuration menu items that are not used by the average user. See later manuals for more detail on the sub-menus.

Road Maintenance > Inventory > Short List... > {short list types}

Inventory
- Data From Map
- Inventory and PM ▸
- Performance Guidelines ▸
- Short List... ▸
- Road View

Crews
Equipment
Labor
Material
Share Inventory

This snapshot uses the Material selection.

Road Maintenance > Inventory > Short List... > Material

Material Short List

Select	WareHouse ID	Primary Bin	Rt MP	Material Master Code	Administrative Unit	Current QTY	Capacity	Mat. Class Code
☐		MECH BAY	Rt - BA MP - Y	01010036 - BATTERY, BCI# 31, 12 VOLT, TOP STUD TERM...	0006 6300 - Franklin	6	4	0101 - BATTERIES/ MISC
☐		C-01	Rt - MP -	01020004 - PIGTAIL, 2-WIRE, PLUG-IN & SCREW	0006 6300 - Franklin	4	6	0102 - WIRE/RECEPTACL
☐		D-04	Rt - MP -	01020023 - HARNESS, ELECTRICAL FUSE BLOCK	0006 6300 - Franklin	1	2	0102 - WIRE/RECEPTACL
☐		B-TOP	Rt - MP -	01020050 - WIRE, 3 SHIELDED CABLE FOR STROBE LIG...	0006 6300 - Franklin	900	578	0102 - WIRE/RECEPTACL
☐		D-01	Rt - MP -	01020128 - PIGTAIL, 44LED SURE SEAL, F/4" LED STOP L...	0006 6300 - Franklin	2	6	0102 - WIRE/RECEPTACL
☐			Rt - MP -	01020227 - SEAL,DARK RED, 16-18 AWG	0006 6300 - Franklin	35	0	0102 - WIRE/RECEPTACL
☐			Rt - MP -	01021392 - TERMINAL, FEMALE, 14 GAUGE, F740 LIGHT...	0006 6300 - Franklin	35	0	0102 - WIRE/RECEPTACL
☐		B-01	Rt - MP -	01025015 - HARNESS, WIRE, LICENSE-PLATE WITH LED...	0006 6300 - Franklin	3	5	0102 - WIRE/RECEPTACL
☐		E-04	Rt - MP -	01030013 - ASSEMBLY, HEADLIGHT	0006 6300 - Franklin	3	2	0103 - LIGHTS
☐		A-TOP	Rt - MP -	01030041 - KIT, HEADLIGHT, ASSY., L.H./R.H. H4666 BULB	0006 6300 - Franklin	2	2	0103 - LIGHTS
☐		B-TOP	Rt - MP -	01030051 - HEADLIGHT, ASSY., R.H., H4666 BULB	0006 6300 - Franklin	1	1	0103 - LIGHTS
☐		A-01	Rt - MP -	01030100 - HOUSING, RUBBER F/ PAR36 (4" ROUND) LI...	0006 6300 - Franklin	2	4	0103 - LIGHTS
☐		B-03	Rt - MP -	01030144 - BULB, STROBE	0006 6300 - Franklin	3	4	0103 - LIGHTS

In the example, the list for Material Day Card creation (Short List) is already filtered by logged-in cost center, plus any cost centers "shared" for its benefit for Materials, by the System module > Resource Sharing function.

Rows selected by checkmark, in the Short List window, are made available in a drop list, accessible during creation of an LEM category Day Card.

The Crews option allows a group of employees, and even associated equipment, to be identified as regularly working together for a type of assignment. This option streamlines the process of assigning LEM to Work Orders.

Road Maintenance > Inventory > Road View

The Road View window allows a linear diagram to be created based on selected columns, which may involve several types of data. In the example, a road segment code from a Work Request is selected, and Bing Map is selected.

Road Maintenance > Issue > In House Project

The top half displays a list of projects that correspond to the logged-in Division/Cost center. When a Work Order is created using a project, the user selects one Asset Type and one Activity from those data elements noted in the lower-left and lower-right panes above. The LEM and Other Costs associated with the Work Order(s) roll up to the project.

Road Maintenance > Issue > Estimates / Force Accounts

Road Maintenance > Issue > Estimates / Force Accounts

Work Orders

Estimate	WO#	Asset Type	Activity	Project Type	Work Category	Re
$	720671	Section	M251-001 - Partial depth pavement repair	0		
$	720672	Section	M252-001 - Full depth rigid pavement removal and flexible replacement	0		
$	7589	Gua				
$	762473	Gua				
$	762474	Sec				

Work Target

County	Route Segment	Direction	Lane

Estimated Cost

Labor Estimate

Approved	* Class Code	Hours	Cost	Comments	Att.	User Update	Date Update

<< < > >> Rows 0-0 of 0 total rows

Equipment Estimate

Approved	Class Code	Hours/Miles	Cost	Comments	Date Update	User Update

<< < > >> Rows 0-0 of 0 total rows

Material Estimate

Approved	Material Master Code	Amount	Cost	Comments	User Update	Date Update

<< < > >> Rows 0-0 of 0 total rows

OK

This window is used to prepare a Work Order that involves Estimated Labor, Equipment, and/or Materials, for which some activities have Force Accounts rules (refer to *EIMS Business Rules* document). Once the estimate is completed, the Work Order is promoted from Pending to Active status, and only appears in the Progress > Day Cards window.

Road Maintenance > Issue > Work Orders from...

Using the **Issue > Work Orders from…** menu option, the user may promote a Periodic Maintenance (PM) schedule item or Work Request into a Work Order. The creation process specifies a parent Project. In addition, from the Estimates / Force Accounts window, if an estimate is changed to "Active," it moves (promotes) into the Work Orders area. To view active Work Orders, refer to the **Progress > Day Cards** window for a matrix of Work Orders. The approach for promoting a Work Request to a Work Order may also be handled from the opposite direction, by right-clicking the Work Order record, and selecting **Attach to WR**.

Road Maintenance > Issue > Work Request

Road Maintenance > Issue > Work Request

		uest Name	* Assigned Admin Unit		Public?	Start Date	End Date	WR Status	
Insert			0005 6300 - Guernsey	v	☐			02 - Sent for Initial Inspection	v
Delete									
Link To Another		n 70	0005 6300 - Guernsey	v	☐	2/19/20		03 - Closed - Not Valid	v
Remove Link			0005 6300 - Guernsey	v	☐	10/14/20	10/30/	03 - Closed - Not Valid	v
Insert Single WO			0005 6300 - Guernsey	v	☐				v
Sort			0005 6300 - Guernsey	v	☐	10/30/20	10/30/	03 - Closed - Not Valid	v
Find									
Work With Attachments		ata	0005 6300 - Guernsey	v	☐	10/30/20		05 - Routine	v
Export Data		est	0005 5400 - Roadway Services	v	☐				v
Copy rows to clipboard (CSV)			0005 6300 - Guernsey	v	☐	10/31/20	10/31/		v
Copy all to clipboard (CSV)									
Show Changes		313	0005 2110 - Accounting	v	☐	11/25/20	11/26/	05 - Routine	v
☐	225	UAT Test 2	0005 6300 - Guernsey	v	☐	10/30/20			v
☐	226	TESTING DARCY	0005 - District 05	v	☐	10/31/20		05 - Routine	v

<< < **1** 2 3 > >> **Rows 1-11 of 25 total rows**

This window is used to prepare a Work Request within the logged-in cost center. It creates a record of an asset needing attention. The Work Request is then linked into another Work Request that is already handling the issue, or promoted into a Work Order.

Road Maintenance > Issue > Setup OPID

Road Maintenance > Issue > Setup OPID

* OPID	OPID Description	Status		Administrative Unit		SFN	County	Route Segment	Direction	Lane	Begin Measure	Ending Measure	Comments
0000001	Test OPID created in District 05	Active	⌄	0005 - Division 0	⌄	⌄	⌄		⌄	⌄	⌄			Test
0000002	Test OPID 0005 6300	Active	⌄	0005 6300 - Gue	⌄	⌄	⌄		⌄	⌄	⌄			Test
0000003	Test OPID for Guernsey County	Active	⌄	0005 6300 - Gue	⌄	⌄	⌄		⌄	⌄	⌄			Test
000000333	OPID Testing	Active	⌄	0005 - Division 0	⌄	⌄	⌄		⌄	⌄	⌄			

This window is for viewing or adding to the list of Operational Project Identifier (OPID) numbers, and the corresponding cost centers and descriptions, and work location (geographic location, road section, or asset identifier).

Road Maintenance > Reports > Reports

Reports				
Report	**On Dashboard**	**Public?**	**Shared**	
New GIS Report from GIS_BRIDGE_INVENTORY	☐	☑		
New GIS Report from GIS_SUPPORT_INVENTORY	☐	☑		
GIS Rpt on BRIDGE_INVENTORY - 3172 Bonners Ferry Foreman	☑	☑		
New Graph Report from REPORT_LABOR_TIME	☐	☑		
D3 Material Cost by Foreman	☐	☑	3	
Graph Rpt on BRIDGE_INVENTORY - - 3172 Bonners Ferry Foreman	☑	☑	39	
Maintenance QC Field Data Collection Report	☐	☑		
Gantt Report for Work Orders	☐	☑		
Gantt Report for Work Requests with scheduled Work Orders	☐	☑		
Work Order Summary Report	☐	☑		
Journal Entry Report (by Work Order #)	☐	☑		
Journal Entry Report (by Admin Unit)	☐	☑		
Journal Entry Report (By Admin Unit and Work Dates)	☐	☑		
Jasper Report on Work Order Summary	☑	☑		
Employee approved time - current payperiod	☐	☑		
PM Due Report	☐	☑		

Left panel tree:

- **Reports**
  - **Reports**
    - **My Reports**
      - **My Test Reports**
        - GIS Rpt on BRIDGE_INVENTORY -
        - Graph Rpt on BRIDGE_INVENTORY
        - Jasper Report on Work Order Summ
        - Std Rpt on BRIDGE_INVENTORY -
        - New GIS Map
      - New Graph Report from REPORT_LAB
    - **Public**
      - Equipment PM Due (put filter for admin
      - Gantt Reports for Maintenance Work
      - Journal Entry Reports
      - Public Test Reports
      - Employee approved time - current payp
      - Maintenance QC Field Data Collection
      - New GIS Report from GIS_BRIDGE_IN
      - New GIS Report from GIS_SUPPORT_
      - New Graph Report from REPORT_LAB
      - Work Order Summary Report
    - Shared

In the left half, perform a right-click on the desired report, and select the Setup/Show command corresponding to the desired output. A browser opens for selecting the report. Note that most reports will not be available for pre-go live training but they are being developed to be available for go-live.

Resources > Labor > Inventory > Labor Inventory

Restricted role

Roadway	Resources

Labor

Resources > Labor > Inventory > Labor Inventory

Labor Inventory	Licenses

ODOT Employees

Employee Name	OAKS ID	Labor Class Code	Home Location	Physical Location	Employee status	Star
ANDREWS, MICHAEL K	10014410	AUTO MECHANIC2	0005 6100 - Coshocton	0005 6100 - Coshocton	Active	5/24
ZIGAN, CURTIS L	10014366	TRANS ENGR 4	0005 3500 - Planning & E...	0005 3500 - Planning & E...	Active	6/17
YARGER, FAITH A	10044626	HIGHWAY TECH 2	0005 6400 - Knox	0005 6400 - Knox	Active	3/26
PILLSBURY, ROBERT A	10014147	MANAGE ANAL	0005 2310 - Facilities Op...	0005 2310 - Facilities Ope...	Active	9/16
DUNLAP, TROY D	10014118	TRANS ENGR 4	0005 3500 - Planning & E...	0005 3500 - Planning & E...	Active	6/20
OLDHAM, APRIL	10013971	REALTY SPEC 3	0005 3500 - Planning & E...	0005 3500 - Planning & E...	Inactive Employee	12/3
MCQUAIN, JERRY R	10013857	HIGHWAY TECH 3	0005 6300 - Guernsey	0005 6300 - Guernsey	Active	9/23
ARTER, STEVEN P	10013818	SURVEYOR	0005 3500 - Planning & E...	0005 3500 - Planning & E...	Active	3/2/
ARTER, JEFFREY A	10013817	TRANS TECH SPC	0005 3500 - Planning & E...	0005 3500 - Planning & E...	Active	11/2

<< < 1 2 3 4 5 6 7 8 9 10 > >> Rows 1-9 of 391 total rows

This menu provides the list of employees who report to the logged-in cost center, and any licenses held by a selected employee. Using this window, an employee's physical location may be changed by a business subject matter expert (SME).

Resources > Utilities > Set Substitutes for Notifications

Resources > Utilities > Set Substitutes For Notifications

Notification Type	Substitute user
General	
Material Out of Admin Unit	
Material Transfer	
▶ Set Backup for Supervisor	
System Job	

ROBERT -
ROBERTD1 - Denman, Robert L
ROBERTM1 - Montgomery, Robe
ROBERTS1 - Shirey, Robert V
SAM -
SAMB1 - Bynum, Samuel L
SAMG1 - Grier, Samuel
SAMM - Morrison, Samuel
SAMO1 - Oiler, Samuel D
SARITHAM1 - Mallala, Saritha
SCOTTK1 - Kraus, Scott R
SHAUNB1 - Bennett, Shaun E
SIAMAK -
SONYAR1 - Riley, Sonya L.
SSINE1 - Sine, Samuel T

<< < **1** > >> Rows 1-5 of 5 total rows

This menu provides the logged-in employee the capability of designating a substitute for performing labor approvals on his/her behalf during a planned absence, using the "Set Backup for Supervisor" notification type. Only a Supervisor (as defined by HRIS4) may set a substitute notification for themselves.

Resources > Labor > Labor Summary by Pay Period

Window summarizing labor activity entries, as displayed for an employee, and for entering Overhead activities.

Resources > Materials > Inventory > Material Inventory

This window lists all Material Inventory for the logged-in Division/Cost Center, the same as the Material Short List window in the Roadway module. Only certain Security Roles may edit the Capacity and threshold to purchase values.

Ohio Department of Transportation

Resources > Materials > Inventory > Material Management

Restricted role

This window allows searching for stocked materials among multiple Division/Cost Centers, and it serves as a central point for performing material transactions.

Ohio Department of Transportation

Resources > Materials > Inventory > Material Reconciliation

Restricted role

The Material Reconciliation window facilitates the correction of one or both of the following: **Current QTY**, **Unit Price**. This windows is restricted to only certain Security Roles.

5 Notes

5.1 Acronyms and Abbreviations

AA	Appropriation Accounting
EIMS	Enterprise Information Management System
EMS/TMS	Equipment Management System/Transportation Management System
FTE	full-time equivalent
GIS	Geographic Information System (appears in graphic)
HRIS4	Human Resource Information System 4
LDAP	Lightweight Directory Access Protocol
LEM	labor, equipment, and materials
LRM	Location Reference Method
LRS	Linear Referencing System
MANCON	Management Consulting Inc. (appears in graphic)
OPID	Operational Project Identifier
OVARS	Ohio Vehicle Accident Reporting System (appears in graphic)
P&E	Planning and Engineering
PEC	Planning, Engineering, and Construction
PGAC	Program Activity Code (legacy term)
PM	Preventive Maintenance
QAR	Quality Assessment Reviews
SME	Subject matter expert (appears in graphic)
SMS	Structure Management System
TRS	Training Records System (appears in graphic)
URL	Internet Shortcut
VPN	virtual private network

5.2 Applicable Documents

EIMS Security Roles   Matrix of security roles and applicable functions, grouped by module

EIMS Activity Codes   Matrix of program activity codes, names, and attributes

EIMS Business Rules   Document of EIMS business rules