Reference Guide

# Resource Planning (ADF)

By CMiC

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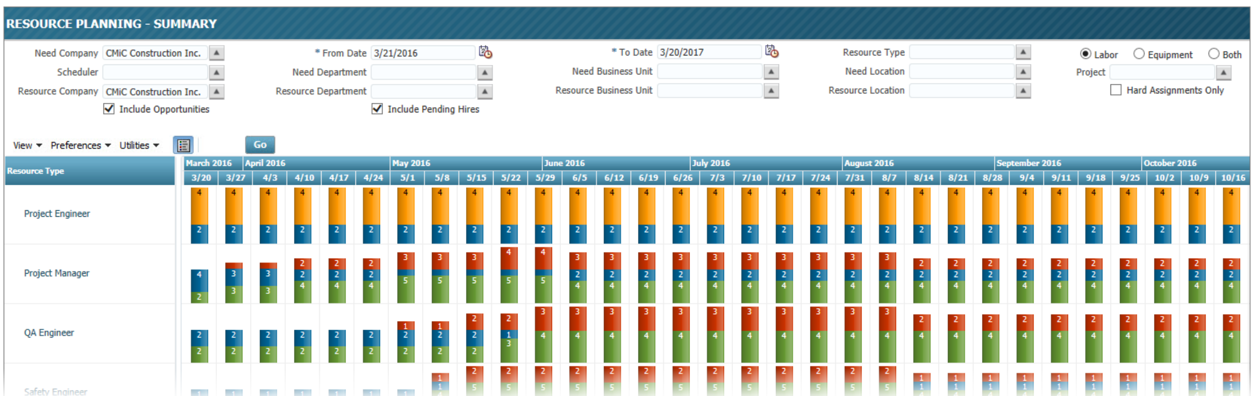
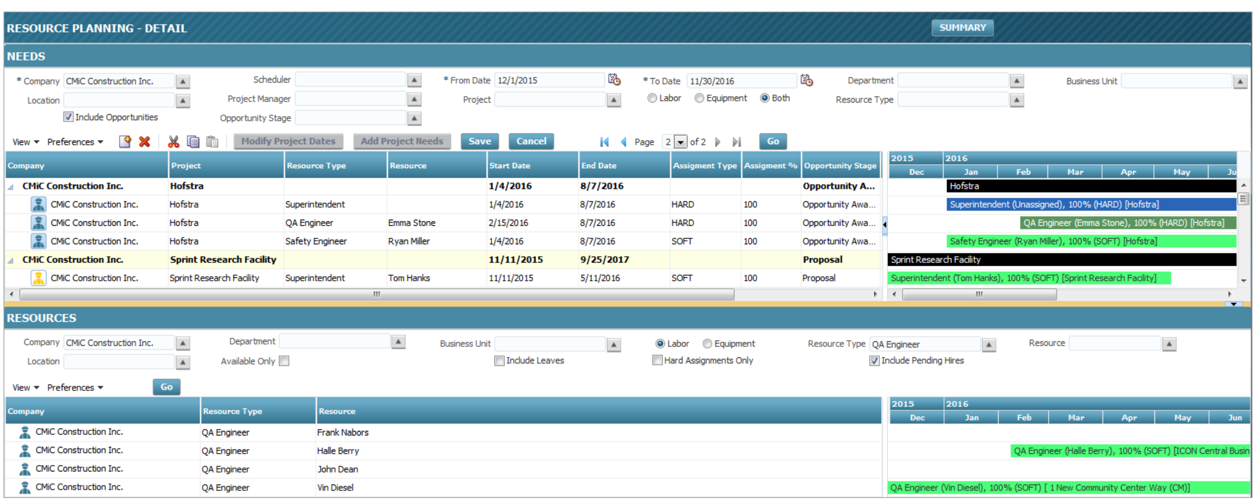
# Resource Planning – ADF

## Overview – Resource Planning




*Sample of Resource Planning's Summary screen, providing an overview of resource usage over a range of dates.*




*Sample of Resource Planning's Detail screen, showing details about project needs and resources.*

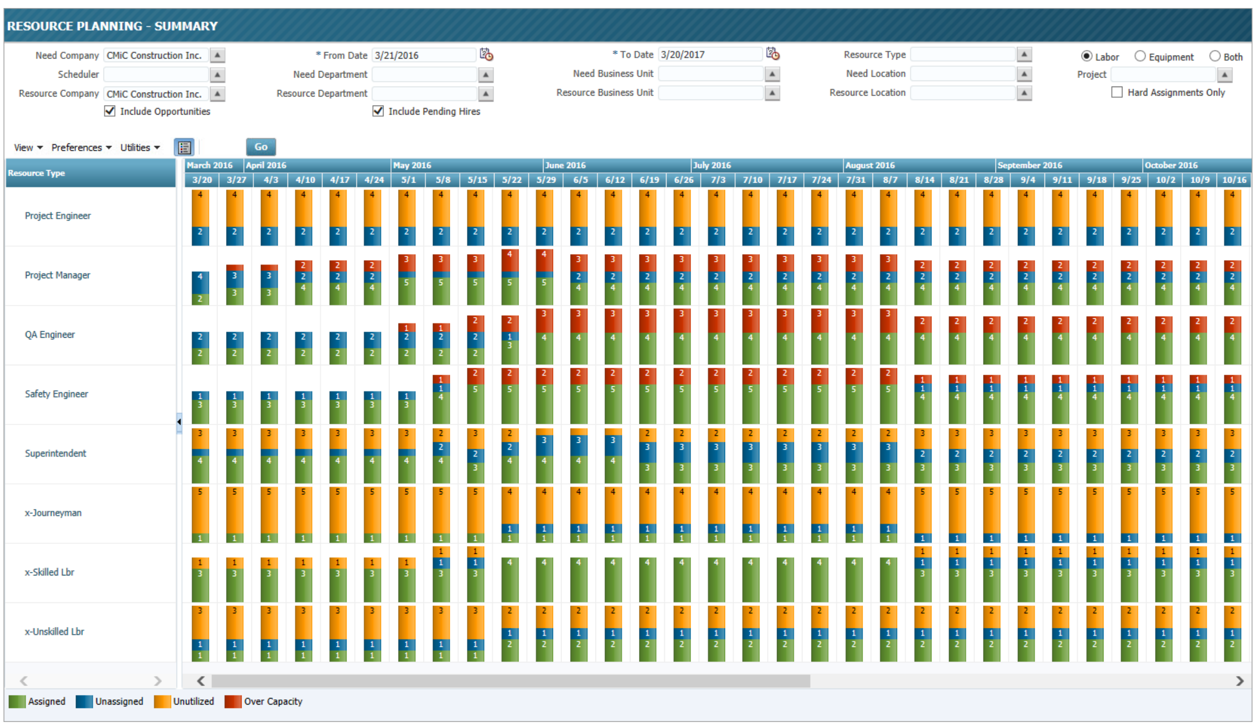
CM*i*C Resource Planning is a visual resource management tool, thoughtfully designed with input from our customers, to help schedulers and project managers more efficiently and optimally review and manage the resource needs of projects. It can also be used to identify overutilization and underutilization of resources, in order to manage their availability.  This is achieved by providing visual overviews of project needs and of resource usage; and by providing tools to search for and display relevantly skilled personnel or suitable equipment, in order to drag-and-drop them to needy projects.

# Prerequisites

Resource Planning requires CMiC Resource Planning licensing, and an Oracle 12c Mobile server configured by CMiC database administrators.  Please contact your account or project manager for more information.

# **Summary** – Screen

## Overview – Summary Screen




The Summary screen provides a graphical summary about a Company's resource needs and usage, for all or a selected Project, over a range of dates.

For each resource type, a daily, weekly, or monthly breakdown about how many Resources are assigned, unassigned, unutilized, and over capacity (deficient) is provided, in the form of a vertical bar, which aids in the identification of excess and deficient resources.  Clicking a vertical bar, or a resource type under the **Resource Type** pane (left of graphical summary) launches the Detail screen to display details and for scheduling purposes.

# Labor & Equipment Resource Types

Initially, no Labor or Equipment resource types are available in Resource Planning.  They must be made available through the Trade Codes Maintenance and Equipment Classes Maintenance screens.

For details, please refer to the following subsections: *Select Trades for Resource Planning* and *Select Equipment Classes for Resource Planning* subsections, under *Set Up Resource Planning*.

### Labor

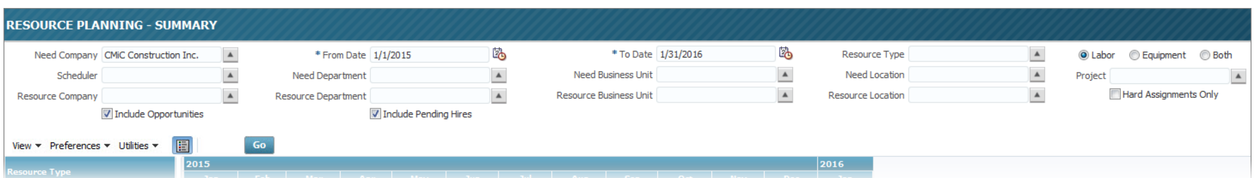
A Labor resource is a particular Payroll employee that is assigned to a trade.

Please refer to the following subsection in this reference guide for details: *Set Up & Maintenance > Assign Employees to Trades.*

### Equipment

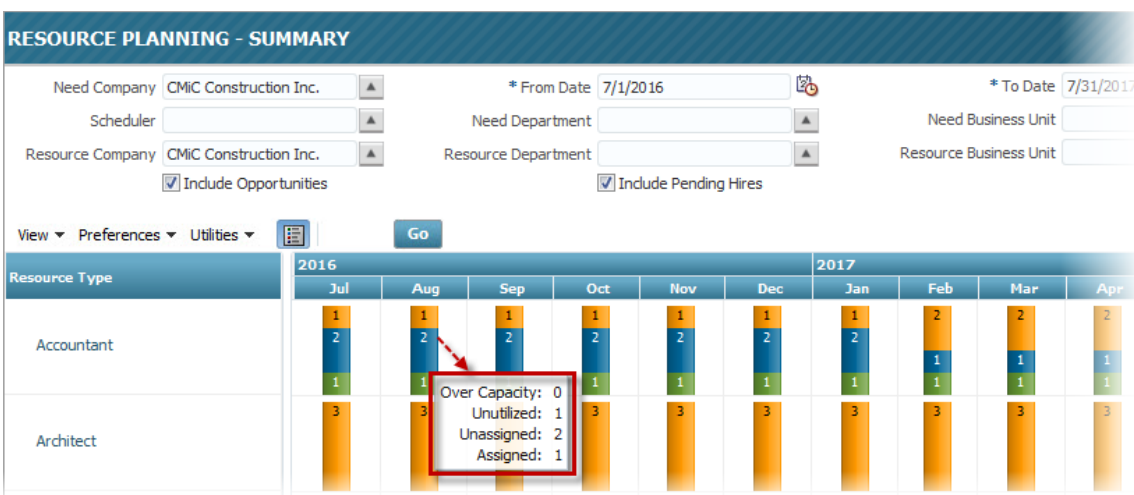
An Equipment resource is a particular Equipment Class, as defined through the Equipment Classes screen of the Equipment Costing module (standard Treeview path: *Equipment Costing > Setup > Local Tables > Equipment Classes*).

# Filter Section




The Filter section, shown above, is used to control what is displayed by the graphical summary.  This allows users to set up the summary for review purposes, or for the purpose of assigning Resources to Projects that need them.

## Summary Types: Resource Needs & Resource Usage




Controlling which Projects and Resources are included allows for a mix of two basic types of summaries, at various levels (Company, Department, and Business Unit).

### NOTE: Project Filter

To figure out the availability of a Resource type, we need to know the total number of assignments for that Resource type, for all Projects. Thus, when filtering the summary by a Project, the **Assigned** value for a Resource type (framed above) is not affected by the **Project** filter. So, even when the **Project** filter is used, the **Assigned** value is the total number of assignments for all Projects.

The **Project** filter, however, does affect the Quantity of Needs value, which affects the **Unutilized** and **Unassigned** values (framed above). So, if the **Project** filter is used, the Quantity of Needs value is for the selected Project, and so are the **Unutilized** and **Unassigned** values.

For details about calculating the Quantity of Needs, **Unutilized** and **Unassigned** values, please refer to the following section: Calculation of Resource Usage Breakdown.

## Summary of Resource Needs

Users can create a summary of Needs for Projects that belong to a particular Company, scheduler, Department, or Business Units, or for just a single Project (using **Project** field). The fields used to control a Needs summary are: **Need Company**, **Scheduler**, **Need Department**, **Need Business Unit**, **Need Location**, and **Project**.

**NOTE**: As per the preceding note about the **Project** filter, the **Assigned** value (framed in preceding screenshot) is not affected by the **Project** filter.

## Summary of Resource Usage

Users can also create a summary about the availability of Resources for a particular Company, and if required, for a Company's Department, Business Unit, or location. The fields used to control a Resource Usage summary are: **Resource Company**, **Resource Department**, **Resource Business Unit**, **Resource Type**, and **Resource Location**.

## Filter Fields

**NOTE**: If a filter field is changed, the [**Go**] button must be clicked to refresh the display. Also, if you are getting unexpected results in the table, it may be due to forgotten or unnoticed filter field settings.

The following are descriptions for the filter fields in this section:

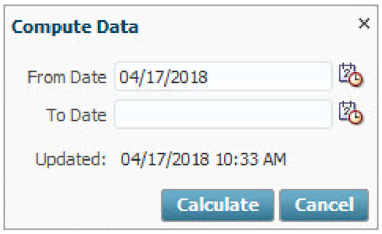
| Field | Description |
|---|---|
| **Need Company** | Filter Projects by Company. Only Projects belonging to specified Company will be included in the summary.<br><br>The Companies available in this LOV are the Companies in the system for which the user has security access. For further details, please refer to the *Access to Companies in Resource Planning* subsection under the following sections: *Set Up & Maintenance > Security*. |
| **Scheduler** | Filter Projects by their scheduler. Only Projects with the selected scheduler assigned to them will be displayed in the summary. If blank, not filtered by this field.<br><br>The Schedulers available in this LOV are all of the Key Players for Projects that have the **SCHEDULER** Project Management Role code. Please refer to the *Scheduler* subsection under the *Set Up & Maintenance* section for details. |
| **Resource Company** | Filter Resources by Company. Only Resources belonging to the specified Company will be included in the summary. If blank, not filtered by this field.<br><br>The Companies available in this LOV are the Companies in the system for which the user has security access. For further details, please refer to the *Access to Companies in Resource Planning* subsection under the following sections: *Set Up & Maintenance > Security*. |
| **Include Opportunities** (checkbox) | Controls whether or not Opportunities are included in the graphical summary and in lists of Projects. |
| **From Date**, **To Date** | Range of dates to be displayed by graphical summary.<br><br>**NOTE**: To improve the performance of the Summary screen, there is an Oracle Job that automatically runs nightly to calculate the utilization of Resources. These calculations are performed from the system's current date onwards, so, if you need to set the **From Date** field to an earlier date, you need to run the **Recalculate Data** utility. The **Recalculate Data** utility is found in the Utilities ▾ drop-down menu.<br><br>For details about the Oracle Job, please refer to this guide's *System's Oracle Job for Summary Screen's Calculations* section. |
| **Need Department** | Filter Projects included in summary by department. Only Projects with their **Job Department** field matching this selected department will be displayed. If blank, not filtered by this field.<br><br>A Company must be selected via the **Need Company** field to populate this field's LOVs. Departments available in this LOV belong to the Company selected via the **Need Company** field. |

| Field | Description |
|---|---|
| **Resource Department** | Filter Resources included in the summary by department. Only Resources belonging to the selected department (of selected **Resource Company**) will be included in the summary. If blank, not filtered by this field.<br><br>A Company must be selected via the **Resource Company** field to populate this field's LOVs. Departments available in this LOV belong to the Company selected via the **Resource Company** field. |
| **Include Pending Hires** (checkbox) | Controls whether or not pending hires are included in lists of labor resources. |
| **Need Business Unit** | Business Units are used if Projects/Opportunities at your company are grouped by Business Units instead of Departments.<br><br>This field is used to filter Projects/Opportunities included in the summary by a Business Unit. Only Projects/Opportunities handled by the selected Business Unit will be included in the summary.<br><br>Specifically, since Business Units are indirectly associated to Projects/Opportunities through Departments, as each Business Unit is linked to only one Department, Projects and Opportunities are filtered by the Department associated to the selected Business Unit.<br><br>For Opportunities, the **Job Dept.** field on the **Accounting** tab of the Opportunity screen is used by this filter. For Projects, their associated Job's **Default Department** field on the **Job Detail** tab of the Enter Job screen is used by this filter.<br><br>Leave this field blank to not filter by Business Units.<br><br>Business Units Maintenance: *GL > Setup > Global Tables > Business Units*<br>Department Maintenance: *GL > Setup > Local Tables > Maintain Departments* |
| **Resource Business Unit** | Filter Resources included in summary by Business Units. Only Resources belonging to the selected Business Unit will be included in the summary. If blank, not filtered by this field.<br><br>For further details, please refer to the above details for the **Need Business Unit** field. |
| **Resource Type** | Used to select which particular resource types are displayed by the summary, for the general resource type(s) selected via the **Labor**, **Equipment** or **Both** radio buttons. If blank, not filtered by this field. |
| **Need Location** | Filter Projects by their location. Only Projects at the specified location will be included in the summary. If blank, not filtered by this field.<br><br>This field's LOVs are maintained by the Region Codes screen, reached by the following standard Treeview path: *System > Global Tables > Region Codes*. |
| **Resource Location** | Filter Resources included in summary by location. Only Resources at the specified location will be included in the summary. If blank, not filtered by this field.<br><br>This field's LOVs are maintained by the Region Codes screen, reached by the following standard Treeview path: *System > Global Tables > Region Codes*. |

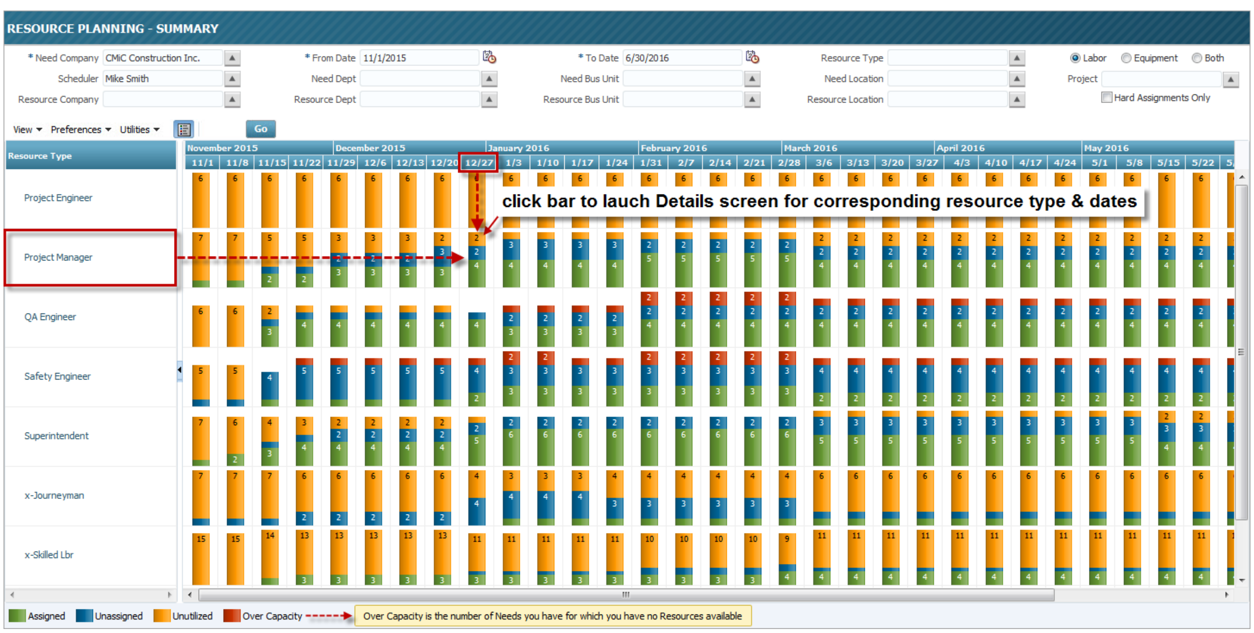
| Field | Description |
|---|---|
| **Labor**, **Equipment**, **Both** (radio buttons) | Used to select which resource types to include in the graphical summary. |
| **Project** | Used to filter Projects and Opportunities; only selected Project or Opportunity will be included in table; if blank, not filtered by this field and all Projects and Opportunities User has rights to are shown.<br><br>A Company must be selected via the **Need Company** field to populate this field's list.<br><br>**NOTE**:<br>**1.** Only Projects and Opportunities the User has rights to are available in this field's LOV. Please refer to this guide's following section for details: *Project Security*.<br>**2.** When filtering the summary by a Project, the **Assigned** value for a Resource type is <u>not</u> affected by the **Project** filter, as per the following section: *Summary Types: Resource Needs & Resource Usage*.<br>**3.** Also, for simplification's sake, <u>only</u> Projects with defined Needs show up in this LOV. |
| **Hard Assignments Only** (checkbox) | Set whether or not only Hard assignments are shown. |

# Menus & Buttons

| Menus/Button | Description |
|---|---|
| View ▾ | Settings for the display of the **Resource Type** pane, the Legend along bottom of screen, and a **Go to Date** option. |
| Preferences ▾ | **Time Scale**: settings for the summary's time scale. For each resource type, a vertical bar provides information about the number of Resources assigned, unassigned (needed), unutilized, and over-assigned for a particular range of dates. The length of each range (block of dates) is set by this setting. Date ranges can be a day, a week, or a month long. |

| | |
|---|---|
| Utilities ▾ | **Recalculate Data**: To improve the performance of the Summary screen, an Oracle Job automatically runs nightly to calculate the utilization of Resources. These calculations are performed from the system's current date onwards, so, if you need to set the **From Date** filter to an earlier date, you need to run this utility (shown below) to perform the calculations for the earlier dates. This utility can also be used if you believe the calculations need to be redone due to recent changes. In the popup, leave the **To Date** field empty to have the calculations performed up to the last end date of all Needs.<br><br><br>For details about the Oracle Job, please refer to this guide's *System's Oracle Job for Summary Screen's Calculations* section. |
|  | **Show/Hide Legend**: show or hide the legend.<br>Legend: Assigned Unassigned Unutilized Over Capacity |
| Go | Refresh the graphical summary according to the filter fields. If a filter field is changed, this button must be used to refresh the display. |

# Graphical Resource Usage Summary




The graphical resource usage summary is a grid with rows for each resource type, and columns of date ranges (size of date ranges determined by **Time Scale** setting: day, week, or month, under **Preference** drop-down menu).

With respect to the parameters entered in the Filter section, including the selected range of dates, this section provides a graphical summary about the usage of a Company's labor and equipment resources, and a summary about the needs of Projects. It also provides an interface to access the Details screen for a particular resource type and range of dates, in order to assign a Resource of that type to a Project that needs it, or to view details.

For each resource type and date block, a vertical bar displays the number of Resources of that type that are assigned, unassigned (needed), unutilized, and over assigned. Using the **Preferences** drop-down menu, under the Filter section, the length of each block of dates can be set to a day, a week, or a month.

## **Usage Categories**: Assigned, Unassigned, Unutilized, Over Capacity


For each resource type and period of time, a breakdown about the usage of Resources of that type is provided. Hovering over a usage category on the legend, shown above, provides its definition.

The following are the definitions for the 4 resource usage categories.

### Assigned

The number of Resources you have that have been assigned to Needs.

### Unassigned

The number of Resources you have for which there are Needs available, but they are not yet assigned.

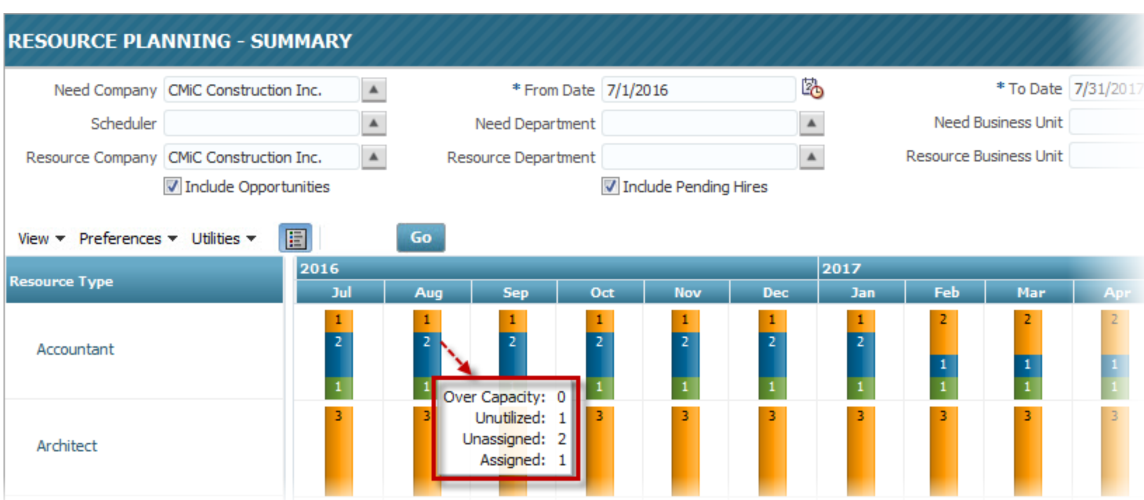
### Unutilized

The number of Resources you have for which you have no Needs.

### Over Capacity

The number of Needs you have for which you have no Resources available.

## Calculation of Resource Usage Breakdown




The following is the rounding rule used by the calculations, and details about how the **Over Capacity**, **Unutilized**, **Unassigned**, and **Assigned** values are calculated for a particular resource type and date range, with respect to factors like an Opportunity's chance of closing and the percentage of a Resource's assignment to a Need.

### Rounding Rule

For each of the following calculations, the final amount is rounded up for any decimal amount.

**Example**: If the final calculated amount equals 3.1, it is rounded up to 4.

### Quantity of Needs (*not displayed, but used in following calculations*)

This quantity represents the number of Needs for Opportunities and Projects of a particular resource type, and its calculation is affected by the Scheduler's project security setup. Only Projects and Opportunities to which the Scheduler has rights are considered in determining this value. To calculate the Quantity of Needs company wide, the Scheduler must have security access to all Projects and Opportunities.

This calculation also takes into consideration the **Chance of Closing %** for Opportunities, and the **Assignment %** value entered for an Opportunity or a Project Need.

**NOTE**: An Opportunity's **Chance of Closing %** (its **Get (%)** field) must be kept updated to keep all dependent calculations updated.

In counting the number of Needs for Opportunities, each Opportunity Need is counted using the decimal representation of the Opportunity's **Chance of Closing %**, until a Need's **Assignment %** value is entered. At this point, the Need is counted using the **Chance of Closing %** value multiplied by the **Assignment %** value.

**Example**: **<u>Before</u> Entering Need's Assignment %**

If an Opportunity's **Chance of Closing %** = 50%, and it has 4 Needs for the same resource type:

è Each of these Needs is counted as 0.5, so total number of its Needs for that type = 2.

**Example**: **<u>After</u> Entering Need's Assignment %**

If the **Assignment %** value of an Opportunity's Need is set to 75%, and its Opportunity's **Chance of Closing %** = 60%, the Need's count-value = 0.75 x 0.6 = 0.45.

In counting the number of Needs for Projects, each Project Need is counted as 1, until a Need's **Assignment %** value is entered, at which point the Need is counted using the decimal representation of the **Assignment %** value.

**Example**: If the **Assignment %** value of a Project's Need is set to 10%, the Project Need is then counted as 0.1.

### Total Resources (*not displayed, but used in following calculations*)

This value equals the total number of Resources, regardless of assignments, for the resource type.

### Quantity of Assigned Needs (*not displayed, but used in following calculations*)

This quantity takes into consideration the **Assignment %** value entered for the assignment of a particular resource type to a Need. In counting the number of assigned Needs, each assignment equals the decimal representation of the **Assignment %** value.

**Example**: If there are 4 assigned Needs, each with an **Assignment %** value of 25%, the number of assigned Needs = 1.

## **ASSIGNED**: Quantity of Assigned Resources

This quantity represents the number of Resources you have that have been assigned to Needs. It takes into consideration the **Assignment %** value entered for the assignment of a Resource to a Need. In counting the number of assignments for a resource type, each assignment equals the decimal representation of the **Assignment %** value.

> **Example**: If there are 4 assignments for a particular resource type, each with an **Assignment %** value of 25%, the number of its assignments = 1.

**NOTE**: **Project Filter**

When filtering the summary by a Project, the **Assigned** value for a Resource type (framed above) is not affected by the **Project** filter; since, to figure out the availability of a Resource type, we need to know the total number of assignments for that Resource type, for all Projects. So, even when the **Project** filter is used, the **Assigned** value is the total number of assignments for all Projects.

The **Project** filter, however, does affect the Quantity of Needs value, which affects the **Unutilized** and **Unassigned** values (framed above). So, if the **Project** filter is used, the Quantity of Needs value is for the selected Project, and so are the **Unutilized** and **Unassigned** values.

## **UNASSIGNED**: Quantity of Available Resources to Fill Unassigned Needs (Quantity of Assignable Needs)

This quantity represents the number of Resources you have for which there are Needs available, but they are not yet assigned. From the perspective of Needs, this value represents the number of Needs that can be assigned available Resources.

> **Example 1**: If you have 10 unassigned Resources and 4 unassigned Needs, this value would be 4, as there are 4 unassigned Resources available to fill the 4 unassigned Needs.

> **Example 2**: If you have 3 unassigned Resources and 4 unassigned Needs, this value would be 3, as there are only 3 unassigned Resources available to fill the 4 unassigned Needs.

The method used to calculate this value depends on whether or not this breakdown is for a case of overcapacity.

### Case: Not Over Capacity

It is not a case of overcapacity if the value calculated for **Quantity of Needs** (detailed previously, which considers an Opportunity's Chance of Closing %) is equal to or less than the total number of Resources (**Total Resources**, detailed previously).

This calculation also uses the value calculated for **Quantity of Assigned Needs** (detailed previously).

For this case, the following equation is used:

**UNASSIGNED = Quantity of Needs - Quantity of Assigned Needs**

### Case: Over Capacity

It is a case of overcapacity if the value calculated for **Quantity of Needs** (detailed previously, which takes into consideration an Opportunity's Chance of Closing %) is greater than the total number of Resources.

This calculation uses the value calculated for **ASSIGNED** (quantity of assigned Resource, detailed previously), and the total amount of Resources for the resource type, represented by **Total Resources** (detailed previously).

If it is a case of overcapacity, the following formula is used:

**UNASSIGNED = Total Resources - ASSIGNED**

## **UNUTILIZED**: Quantity of Resources Available in Excess

This quantity represents the number of Resources you have for which there are no Needs.

The method used to calculate this value depends on whether or not this breakdown is for a case of overcapacity.

### Case: Not Over Capacity

It is not a case of overcapacity if the value calculated for **Quantity of Needs** (detailed previously) is equal to or less than the total number of Resources (**Total Resources**, detailed previously).

For this case, the following equation is used:

**UNUTILIZED = Total Resources - Quantity of Needs**

### Case: Over Capacity

It is a case of overcapacity if the value calculated for **Quantity of Needs** (detailed previously) is greater than the total number of Resources (**Total Resources**).

If it is a case of overcapacity, **UNUTILIZED** simply equals 0, as all Resources are utilized.

## **OVER CAPACITY**: Quantity of Needs Over Capacity

This quantity represents the number of Needs you have for which you have no Resources available. From the perspective of resources, this value indicates how many new Resources are required to fill the Needs.

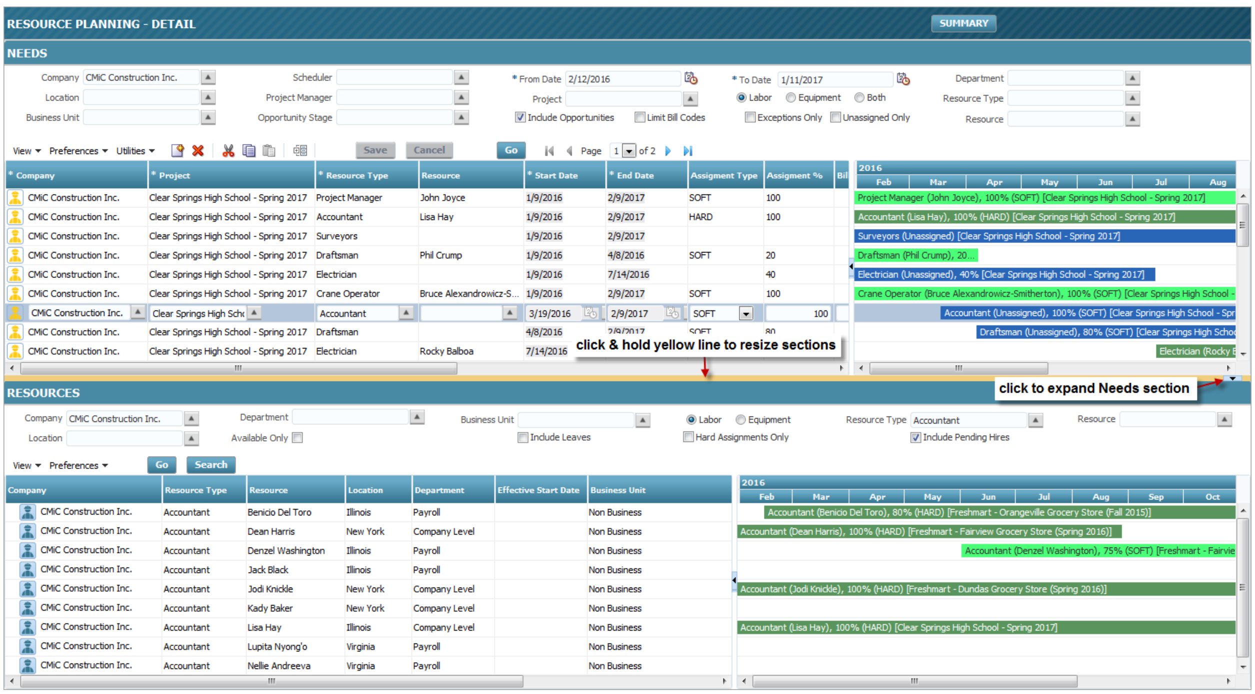
This calculation uses the value calculated for **Quantity of Needs** and the total number of Resources (**Total Resources**), both of which were detailed previously.

For this value, the following equation is used:

**OVER CAPACITY** = **Quantity of Needs - Total Resources**

# **Detail** – Screen

## Overview – Detail Screen




The Details screen is used to assign Resources to Needs of Projects, and to view assignment details of Needs over a range of dates.

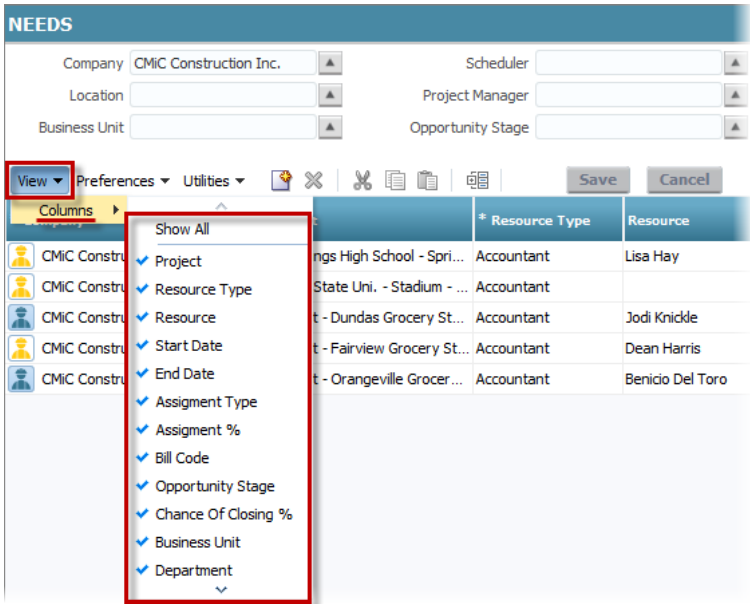
The screen is composed of two sections: **Needs** and **Resources**, with each section having its own filter fields and drop-down menus. The **Needs** section is used to assign Resources to Needs, and the **Resources** section is used to find and list relevant Resources for assignment.

The yellow line between the two sections, shown in the above screenshot, can be used to control their height. Also, the down-arrow at the right-most end of the yellow line, shown in the above screenshot, can be used to expand the **Needs** section.

# Customizing Table's Columns

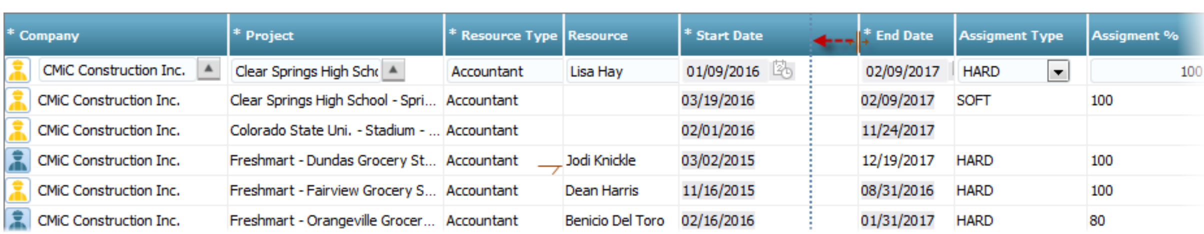
The columns of the tables under the **Needs** and **Resources** sections can be made visible or invisible, resized, and rearranged.  Then, the new table layouts can be saved for the user.

## Set Column Visibility



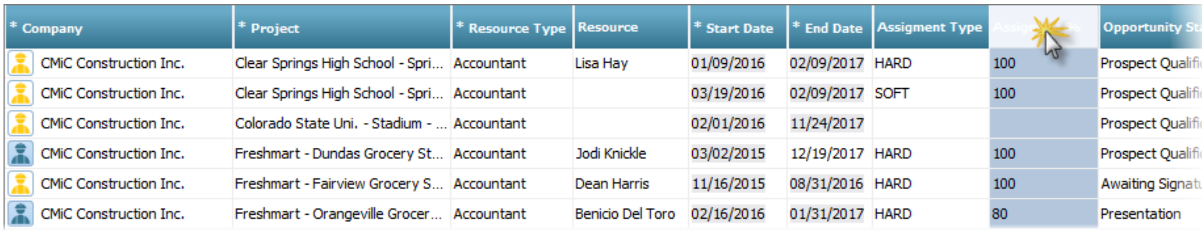

To set which columns are visible, click the table's corresponding **View** drop-down menu, hover over the **Columns** setting to reveal its settings, then check a column to make it visible, or uncheck a column to make it invisible.

## Resize Column

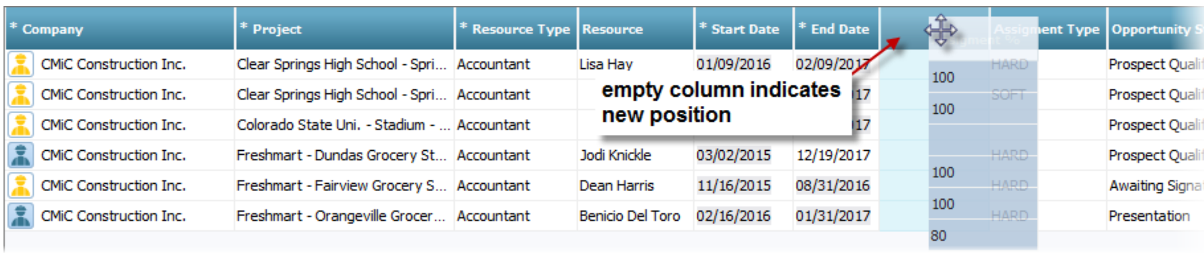



To resize columns, hover between column headers to display the following 'Resize' icon , then click and drag the column border to its new position.

## Reorder Columns

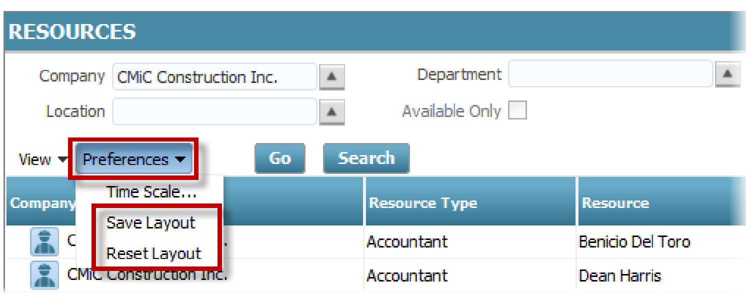



To reorder columns, select the column you wish to move by clicking its column header, as shown above (**NOTE**: Do not click and hold, just click).



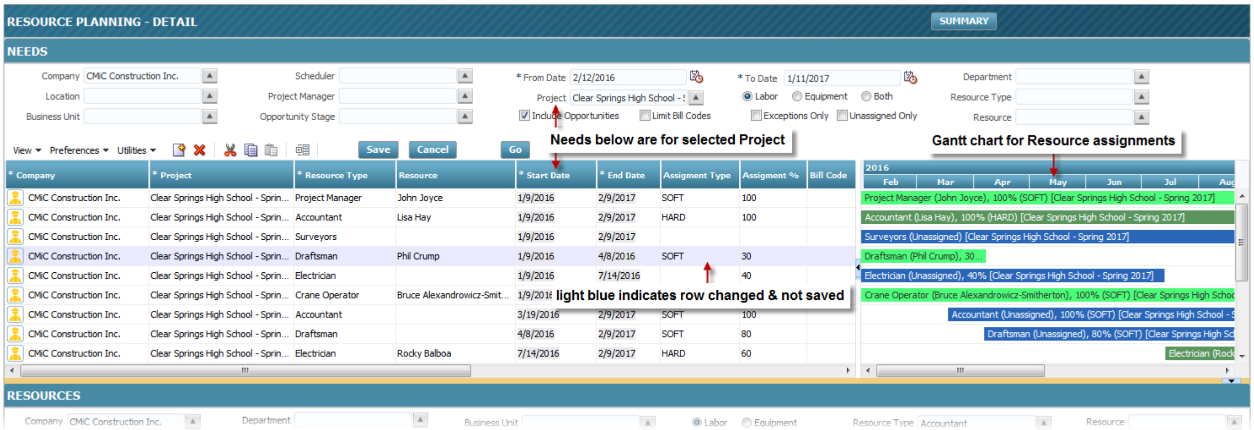

Then, slightly move the cursor to reveal the 'Move' icon, then click and drag the column to its new position. As you drag the column around, an empty column will be shown to indicate where it will go when you release the column.

## Save or Reset Table's Layout

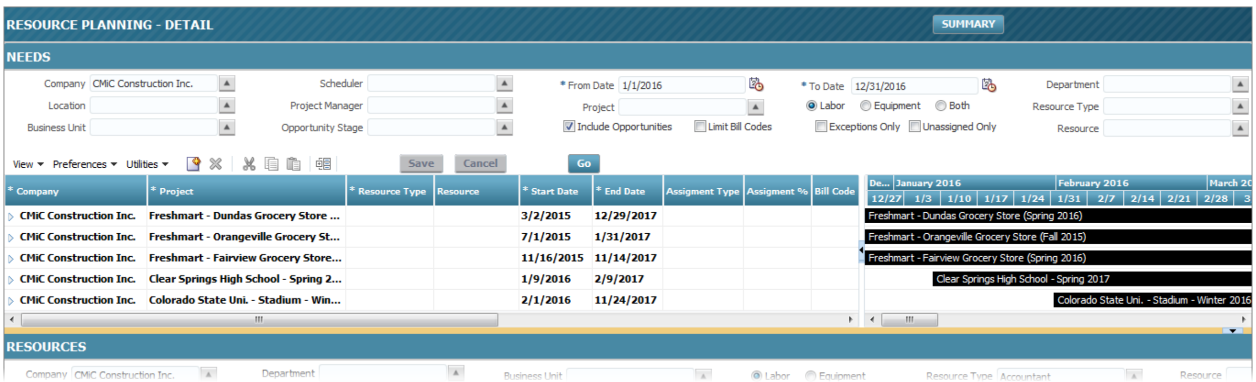



To save or reset a table's layout, click the table's corresponding **Preferences** drop-down menu, then click **Save Layout** or **Reset Layout**.

# **Needs** – Section




*Sample of **Needs** section, displaying Needs for selected Opportunity and date range.*




*Sample of **Needs** section, displaying all Projects and Opportunities with Needs in selected date range.*

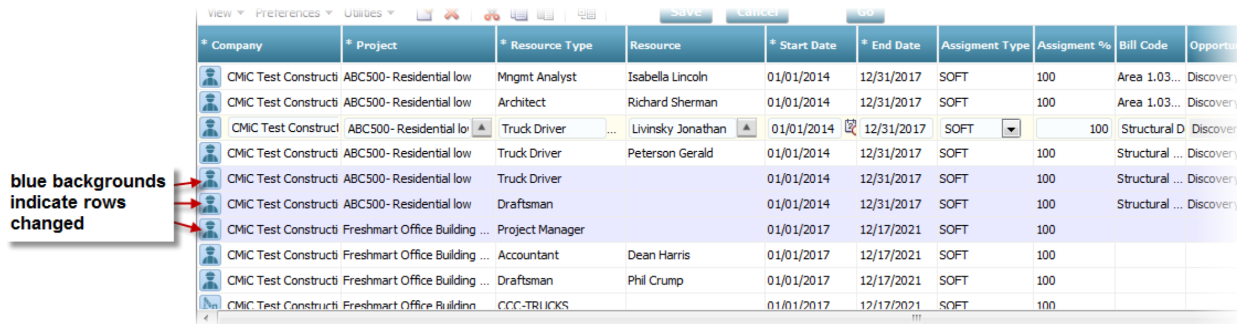
The **Needs** section is used to assign Resources to the Needs of Projects or Opportunities.

This section's table displays Needs (1st screenshot) or Project/Opportunity summary rows (2nd screenshot) that can be expanded and collapsed to reveal and hide their Needs.

To the right of the table is a Gantt chart with rows that correspond to the rows of the table, and with a date range that spans over the dates specified by the **From Date** and **To Date** fields. When the table displays Needs, the Gantt chart uses colored bars to span the dates for which the Needs exists. When the table displays Projects and Opportunities, the Gantt chart uses black bars to span over their start and end dates.

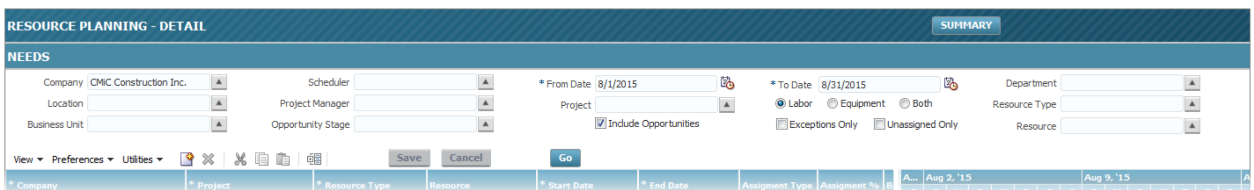
The Filter section above the table controls what Projects/Opportunities and Needs are listed, and the options in the **View** and **Preferences** drop-down menus control various display options.

As shown below, when a field in a Need row is changed, the row's background color is set to light blue until it is saved:




This **Needs** section can be resized by clicking and holding the yellow line between the two sections, then moving it up or down.

# Filter Fields



The Filter section controls which Projects and resource types are included in the section's table, among other filters.

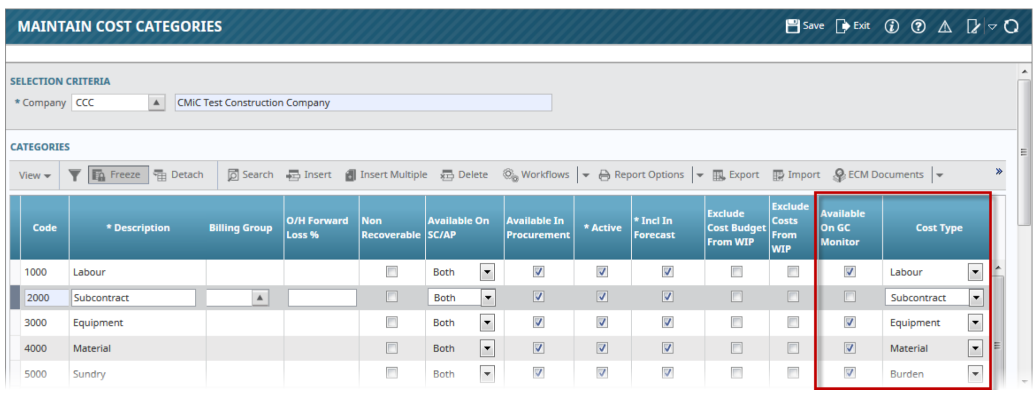
When the filters are applied, via the [**Go**] button, the entered parameters are saved, and they are reloaded the next time the screen is launched.

**NOTE**: If a filter field is changed, the [**Go**] button must be clicked to refresh the display. Also, if you are getting unexpected results in the table, it may be due to forgotten or unnoticed filter field settings.

The following are descriptions for this section's filter fields:

| Field | Description |
|---|---|
| **Company** | Filter Projects/Opportunities by their Company. Only those belonging to specified Company will be included in the table.<br><br>The Companies available in this LOV are the Companies in the system for which the user has security access. For further details, please refer to the *Access to Companies in Resource Planning* subsection under the following sections: *Set Up & Maintenance* > *Security*. |
| **Location** | Filter Projects/Opportunities by their location. Only those in the specified location (state/province) will be included in the table. If blank, not filtered by this field.<br><br>This field's LOVs are maintained by the Region Codes screen, reached by the following standard Treeview path: *System* > *Global Tables* > *Region Codes*. |

<table>
<tr><td>Business Unit</td><td>Business Units are used if Projects/Opportunities at your company are grouped by Business Units instead of Departments.<br><br>This field is used to filter Projects/Opportunities by a Business Unit. Only Projects/Opportunities handled by the selected Business Unit will be included.<br><br>Specifically, since Business Units are indirectly associated to Projects/Opportunities through Departments, as each Business Unit is linked to only one Department, Projects and Opportunities are filtered by the Department associated to the selected Business Unit.<br><br>For Opportunities, the Job Dept. field on the Accounting tab of the Opportunity screen is used by this filter. For Projects, their associated Job’s Default Department field on the Job Detail tab of the Enter Job screen is used by this filter.<br><br>Business Units Maintenance: GL > Setup > Global Tables > Business Units<br>Department Maintenance: GL > Setup > Local Tables > Maintain Departments</td></tr>
<tr><td>Scheduler</td><td>Filter Projects/Opportunities by their scheduler. Only those with the selected scheduler assigned to them will be displayed in the table. If blank, not filtered by this field.<br><br>The Schedulers available in this LOV are all of the Key Players for Opportunities/Projects that have the SCHEDULER Project Management Role code. Please refer to this reference guide’s Scheduler subsection under Set Up & Maintenance for details.</td></tr>
<tr><td>Project Manager</td><td>Filter Projects/Opportunities by their Project Manager. Only those with the selected Project Manager assigned to them will be displayed in the table. If blank, not filtered by this field.<br><br>The Project Managers available in this LOV are all of the Key Players for Opportunities/Projects that have the MNGR Project Management Role code.</td></tr>
<tr><td>Opportunity Stage<br>(Sales Stage)</td><td>Filter Projects/Opportunities by their Opportunity Stage (Sales Stage). Only those at the selected stage will be displayed by the table. If blank, not filtered by this field.<br><br>Maintenance screen’s standard Treeview path: Opportunity Management > Setup > Sales Stages; refer to the OM-ADF reference guide’s Sales Stages subsection under Set Up OM Module for details about setting up Sales Stages.</td></tr>
<tr><td>From Date, To Date</td><td>These fields are used to set the range of dates to consider for scheduling (filter Needs by dates). Also, the table’s corresponding Gantt chart, to the right of the table, will range over these dates.<br><br>There are limits to the date range that depend on the selected Time Scale (set via the Preferences drop-down menu), as follows:
<table>
<tr><th>Time Scale</th><th>Date Range Limit</th></tr>
<tr><td>Days</td><td>2 months</td></tr>
<tr><td>Weeks</td><td>1 year</td></tr>
<tr><td>Months</td><td>2 years</td></tr>
</table>
If a user has selected the “Days” Time Scale, and the user specifies a date range using these fields that is greater than the range allowed for the selected Time Scale, a message will pop up to notify you of the violation.</td></tr>
</table>

| | |
|---|---|
| **Project** | Used to filter Projects and Opportunities; only selected Project or Opportunity will be included in table; if blank, not filtered by this field and all Projects and Opportunities User has rights to are shown.<br><br>A Company must be selected via the **Company** field to populate this field's list.<br><br>**NOTE**: Only Projects and Opportunities the User has rights to are available in this field's LOV. Please refer to this guide's following section for details: *Project Security*. Also, for simplification's sake, only Projects with defined Needs show up in this LOV. |
| **Include Opportunities** (checkbox) | Controls whether or not Opportunities are included in the table and in lists of Projects and Opportunities. |
| **Limit Bill Codes** (checkbox) | If checked, only Needs with Bill Codes having Categories flagged as "**Available On GC Monitor**" and having their **Cost Type** set to "**Labor**" or "**Equipment**" in the Maintain Categories screen (shown below) are listed. The **Bill Code** LOV in the Needs table will also be filtered in the same way. Note, however, Needs with no assigned Bill Codes will also be listed.<br><br><br>*Maintain Cost Categories; standard Treeview path: JC > Setup > Local Tables > Enter Category* |
| **Labor**, **Equipment**, **Both** (radio buttons) | Filter Projects by Labor and Equipment resource types. Only Projects with resource Needs that are of the selected type(s) will be included in the table. |
| **Exceptions Only** (checkbox) | Used to identify Need rows (assignments) with at least one of the following issues:<br><br>1. Over-Assignment: Resource is Hard assigned more than 100% on overlapping Need lines.<br>2. Dates Issue: assignments where end date is before start date (this situation can happen when one of the dates is synched with a Project and later changed outside of Resource Planning). |
| **Unassigned Only** (checkbox) | If checked, only unassigned Needs are displayed. |

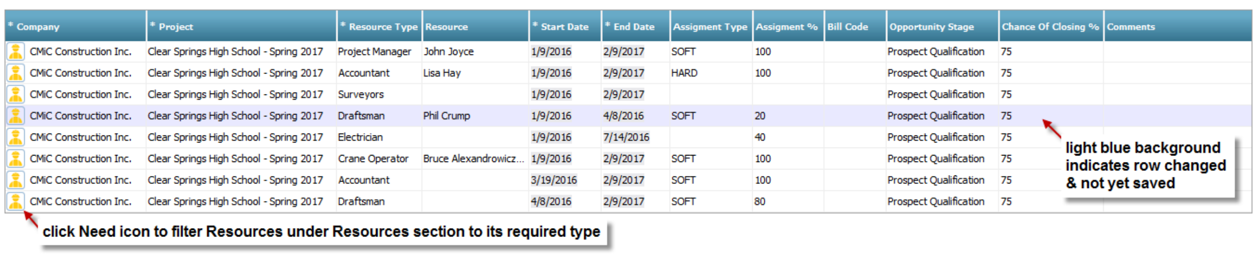
| | |
|---|---|
| **Department** | Filter Projects by their department. Only Projects handled by the selected department will be included. If blank, not filtered by this field.<br><br>A Company must be selected via the **Company** field to populate this field's LOVs. Departments available in this LOV belong to the Company selected via the **Company** field.<br><br>**NOTE**: LOV <u>only</u> lists Departments actually used on a Project. |
| **Resource Type** | Filter Needs by their required resource type. Only Needs requiring the selected resource type will be included in the table. If blank, not filtered by this field. |
| **Resource** | Filter Needs by assigned Resources. Only Needs assigned the selected Resource will be listed. |

## Menus & Buttons

<table>
<tr><th>Menu/Button</th><th>Description</th></tr>
<tr><td>View ▾</td><td>Contains the Columns option, used to set which of the table's columns are visible.</td></tr>
<tr><td>Preferences ▾</td><td>This drop-down menu has the following options:
<ol>
<li>Default Assignment Type: set the default assignment type: Hard or Soft.</li>
<li>Display Project Summary Rows: set whether or not Project summary rows are used, which are expandable and collapsible to reveal and hide their Needs; if not used, only Needs satisfying the filter settings are displayed, for the filter settings.</li>
<li>Time Scale: set Gantt chart's time scale - blocks of time can be a day, a week, or a month long</li>
<li>Save Layout: save table's current layout for user</li>
<li>Reset Layout: reset table's layout to default layout</li>
</ol></td></tr>
<tr><td>Utilities ▾</td><td>This drop-down menu has the following options, with one being a submenu:
<ol>
<li>Modify Project Dates: modify the start and end dates for a selected Project.</li>
<li>Add Project Needs: add Needs to a selected Project using a Needs Template.</li>
<li>Remove Project Needs: remove all Needs from a selected Project/Opportunity.</li>
<li>Maintenance (submenu):</li>
</ol>
<table>
<tr><th>Menu Option</th><th>Description</th></tr>
<tr><td>Projects</td><td>launches Project screen, of Opportunity Management module</td></tr>
<tr><td>Opportunities</td><td>launches Opportunity screen, of Opportunity Management module</td></tr>
<tr><td>Trades</td><td>launches Trade Codes Maintenance screen, of Payroll module, which is used to select which labor resource types are available in RP</td></tr>
<tr><td>Equipment Classes</td><td>launches Equipment Classes Maintenance screen, of Equipment Costing module, which is used to select which equipment classes are available in RP</td></tr>
</table></td></tr>
</table>

| | |
|---|---|
| | Create Need: creates a new row in the table for the entry of a new Need. If a Project/Opportunity is selected via the **Project** filter, the **Project** field will be populated for the Need. |
| | Delete Need: delete a selected Need from a Project/Opportunity. |
| | Cut: cut selected Need from Project in order to paste it to a different Project/Opportunity. |
| | Copy: copy selected Need in order to paste it to a different Project/Opportunity. |
| | Paste: paste copied or cut Need to selected Project/Opportunity. If required, edit pasted Need. |
| | Group and Go: group Needs by Projects/Opportunities in the same way the **Display Project Summary Rows** setting under the **Preference** dropdown menu does, except only temporarily, until the [**Go**] button is clicked; this button does not change the **Display Project Summary Rows** setting. |
| Save | Save entered data; only enabled when data has been changed; note, when a Need row's field is changed, the row's background color is set to light blue. |
| Cancel | Undo unsaved changes. |
| Go | Refresh the section according to the filter fields. If a filter field is changed, this button must be used to refresh the display. |

## Needs Table



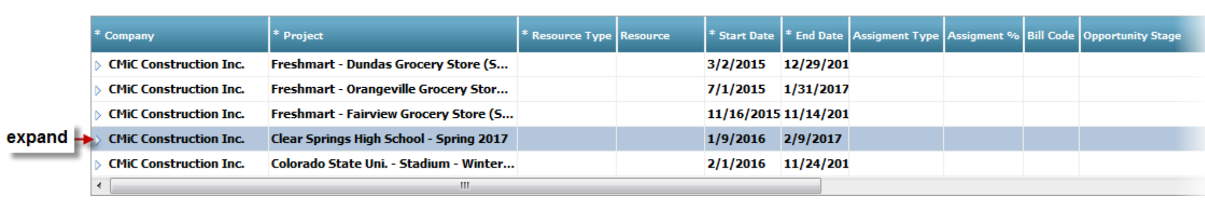
| * Company | * Project | * Resource Type | Resource | * Start Date | * End Date | Assigment Type | Assigment % | Bill Code | Opportunity Stage | Chance Of Closing % | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Project Manager | John Joyce | 1/9/2016 | 2/9/2017 | SOFT | 100 | | Prospect Qualification | 75 | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Accountant | Lisa Hay | 1/9/2016 | 2/9/2017 | HARD | 100 | | Prospect Qualification | 75 | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Surveyors | | 1/9/2016 | 2/9/2017 | | | | Prospect Qualification | 75 | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Draftsman | Phil Crump | 1/9/2016 | 4/8/2016 | SOFT | 20 | | Prospect Qualification | 75 | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Electrician | | 1/9/2016 | 7/14/2016 | | 40 | | Prospect Qualification | 75 | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Crane Operator | Bruce Alexandrowicz... | 1/9/2016 | 2/9/2017 | SOFT | 100 | | Prospect Qualification | 75 | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Accountant | | 3/19/2016 | 2/9/2017 | SOFT | 100 | | Prospect Qualification | 75 | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Draftsman | | 4/8/2016 | 2/9/2017 | SOFT | 80 | | Prospect Qualification | 75 | |



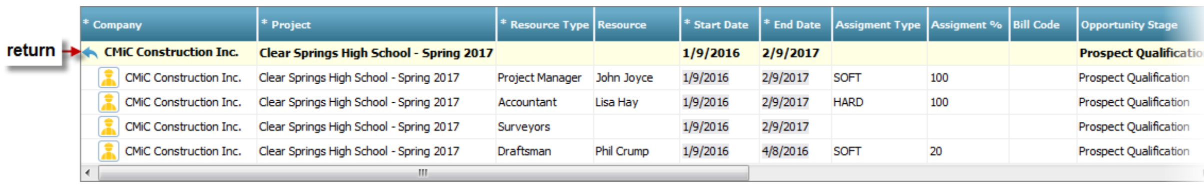
The Needs table is used to assign Resources to Needs, and to review details about a Need's assigned Resources.

As shown above, if any field in a Need row is changed, the row's background color will change to light blue to indicate that its data has been altered and not yet saved. Also, clicking a Need icon filters the Resources under the **Resources** section to the type required by the Need, which is handy when looking for a Resource to assign to it.

The Needs table has 2 display modes, controlled by the **Display Project Summary Rows** setting, which is in the **Preferences** drop-down menu. If the **Display Project Summary Rows** setting is not checked, the table displays Need rows according to the filter settings, as shown in the previous screenshot. If the setting is checked, the table displays Project/Opportunity summary rows (1st screenshot below) according to the filter settings, which can be expanded to reveal their Needs (2nd screenshot below), then collapsed to return to the list of Projects and Opportunities.



| * Company | * Project | * Resource Type | Resource | * Start Date | * End Date | Assigment Type | Assigment % | Bill Code | Opportunity Stage |
|---|---|---|---|---|---|---|---|---|---|
| CMiC Construction Inc. | Freshmart - Dundas Grocery Store (S... | | | 3/2/2015 | 12/29/201 | | | | |
| CMiC Construction Inc. | Freshmart - Orangeville Grocery Stor... | | | 7/1/2015 | 1/31/2017 | | | | |
| CMiC Construction Inc. | Freshmart - Fairview Grocery Store (S... | | | 11/16/2015 | 11/14/201 | | | | |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | | | 1/9/2016 | 2/9/2017 | | | | |
| CMiC Construction Inc. | Colorado State Uni. - Stadium - Winter... | | | 2/1/2016 | 11/24/201 | | | | |




| * Company | * Project | * Resource Type | Resource | * Start Date | * End Date | Assigment Type | Assigment % | Bill Code | Opportunity Stage |
|---|---|---|---|---|---|---|---|---|---|
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | | | 1/9/2016 | 2/9/2017 | | | | Prospect Qualification |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Project Manager | John Joyce | 1/9/2016 | 2/9/2017 | SOFT | 100 | | Prospect Qualification |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Accountant | Lisa Hay | 1/9/2016 | 2/9/2017 | HARD | 100 | | Prospect Qualification |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Surveyors | | 1/9/2016 | 2/9/2017 | | | | Prospect Qualification |
| CMiC Construction Inc. | Clear Springs High School - Spring 2017 | Draftsman | Phil Crump | 1/9/2016 | 4/8/2016 | SOFT | 20 | | Prospect Qualification |

The following provides details about the columns of the Needs table.

**NOTE**: The **Columns** setting, under the **View** drop-down menu, is used to set the visibility of columns; if a column is not visible, check the **Columns** settings.

| Field | Description |
|---|---|
| **Company** | Company handling Project/Opportunity. |
| **Project** | Project/Opportunity with resource Need.<br><br>**NOTE**: Only Projects and Opportunities the User has rights to are available in this field's LOV. Please refer to this guide's following section for details: *Project Security*. |
| **Resource Type** | Trade or Equipment Class required for Need. Only types made available for Resource Planning are listed. Please refer to the following sections for details:<br>I) Select Trades for Resource Planning<br>II) Select Equipment Classes for Resource Planning |
| **Resource** | Employee or equipment assigned to Need. Note, a selection must first be made for the **Resource Type** field in order for this field's LOV to be populated appropriately. |
| **Start Date** | Start date of resource assignment. |
| **End Date** | End date of resource assignment. |
| **Assignment Type** | Soft or Hard assignment types. Refer to the details below, for the **Assignment %** field, for details. |
| **Assignment %** | Percentage of time a Resource is assigned to this particular Need. If **Assignment Type** is Soft, no verification is done, but if **Assignment Type** is Hard, the system checks to ensure the Resource is not assigned to Needs more than 100% of its total available time.<br><br>For the Summary screen's resource usage breakdown, this value is factored into the counting of the number of assignments of a particular resource type; and it is factored into the calculation of the quantity of Needs for a particular resource type. Hence, this value must be kept updated to keep all dependent calculations updated. For further details, please refer to the *Calculation of Resource Usage Breakdown* subsection in this reference guide. |
| **Bill Code** | Bill Code for the cost of using the Resource, required for Job Costing. The Bill Codes available in this LOV are those entered for the Project's associated Job Billing Contract. |
| **Opportunity Stage** | Display-only field, displaying the **Current Sales Stage** field on an Opportunity's **General** tab. |

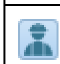
| | |
|---|---|
| **Chance of Closing %** | Relevant to Opportunities only; display-only field, displaying the **Get (%)** field on an Opportunity's **General** tab.<br><br>For Opportunity Needs, this percentage is taken into consideration by the Summary screen when counting the number of Needs for a particular resource type, which is used in its breakdown of resource usage. Therefore, the **Get (%)** field for Opportunities must be kept up-to-date to keep the Summary screen's resource usage breakdowns updated. See the *Calculation of Resource Usage Breakdown* subsection in this reference guide for details. |
| **Business Unit** | Business Unit handling Project/Opportunity.<br><br>Business Units are used if Projects/Opportunities are grouped by Business Units instead of Departments. Also, Business Units are indirectly associated to Projects/Opportunities through Departments, as each Business Unit is linked to only one Department.<br><br>For an Opportunity, the **Job Dept.** field on the **Accounting** tab of the Opportunity screen associates it to its Business Unit. For a Project, its corresponding Job's **Default Department** field on the **Job Detail** tab of the Enter Job screen associates it to its Business Unit.<br><br>**Non Business** indicates that a Business Unit is not applicable.<br><br>Business Units maintenance: *GL > Setup > Global Tables > Business Units*<br>Department Maintenance: *GL > Setup > Local Tables > Maintain Departments* |
| **Department** | Job Department handling Project/Opportunity: for a Project, it is the Department entered in the **Default Department** field on the **Job Detail** tab of the Project's corresponding Job; for an Opportunity, it is the Department entered in the **Job Dept.** field of its **Accounting** tab (note, Bid Job Departments are not used). |
| **Comments** | Comments about the resource assignment. |

## Project Needs vs Opportunity Needs

The Needs for both Projects and Opportunities are included in the table. Needs for Projects have blue Need icons, and Needs for Opportunities have yellow Need icons (see following section).

Needs can be entered for an Opportunity while it is in the opportunity management stage, and behind the scene, the system adds the Needs to the corresponding Project record. This allows for an early start to the entry of a Project's Needs. When the corresponding bid is won, and a corresponding Job record is created, the Needs in Resource Planning will no longer be for an Opportunity, but for a Project.

## Need Icons

| Icons | Description |
|---|---|
|  /  | **Labor Need**: blue indicates Need is for a Project, yellow indicates Need is for an Opportunity |
|  /  | **Equipment Need**: blue indicates Need is for a Project, yellow indicates Need is for an Opportunity |

Clicking a row's Need icon causes the Resources under the **Resources** section to be filtered to just the type required by the Need.

# Resource Assignments

There are 2 Resource assignment types, Hard and Soft, and assignments can be made for a percentage of a Resource's total available time. The **Assignment Type** field is used to select the assignment type, and the **Assignment %** field is used to specify how much of the Resource's time is to be devoted to the Need.

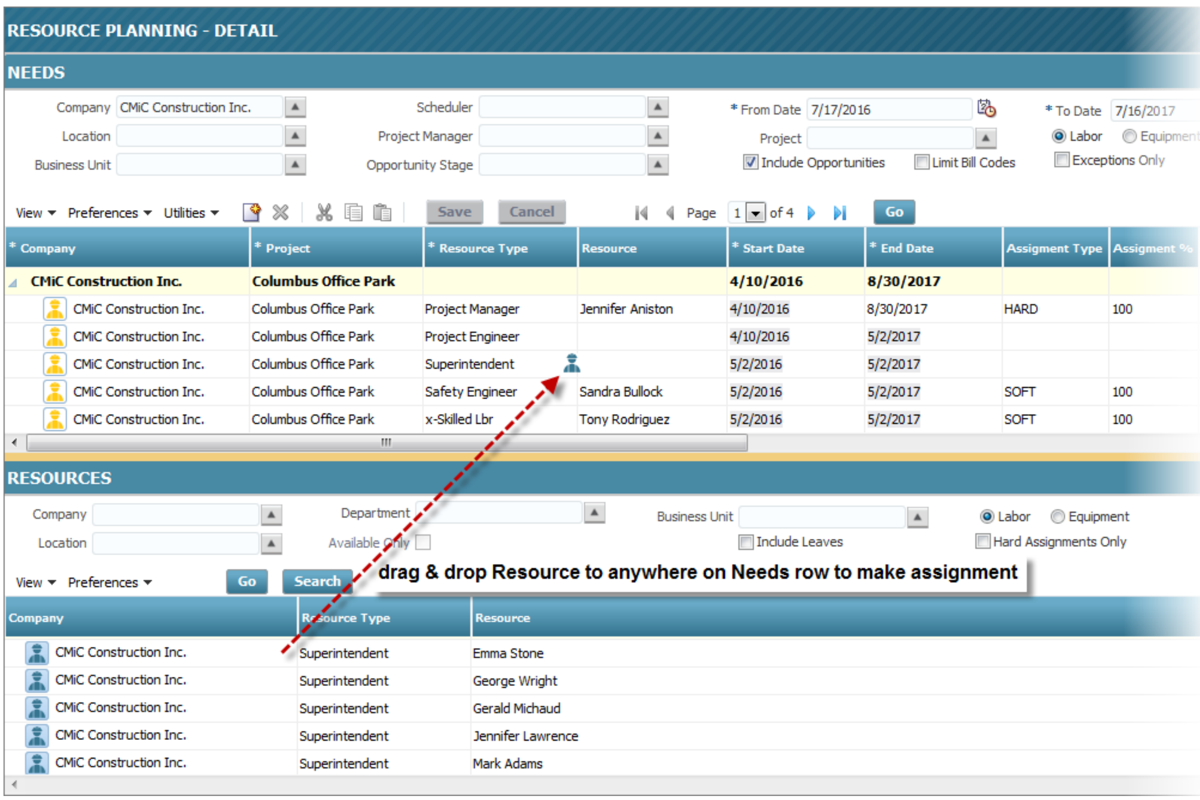
### Hard Assignments vs Soft Assignments

Hard assignments are checked by the system to ensure that no scheduling conflicts exist for the Resource. In contrast, Soft assignments are not checked by the system for conflicts, as they are typically used for preliminary scheduling.

### Multiple Assignments of Resource for Same Project/Opportunity

If a single Resource is assigned to more than one Need within a time period, without its **Assignment %** exceeding 100%, there will be one line per assignment.

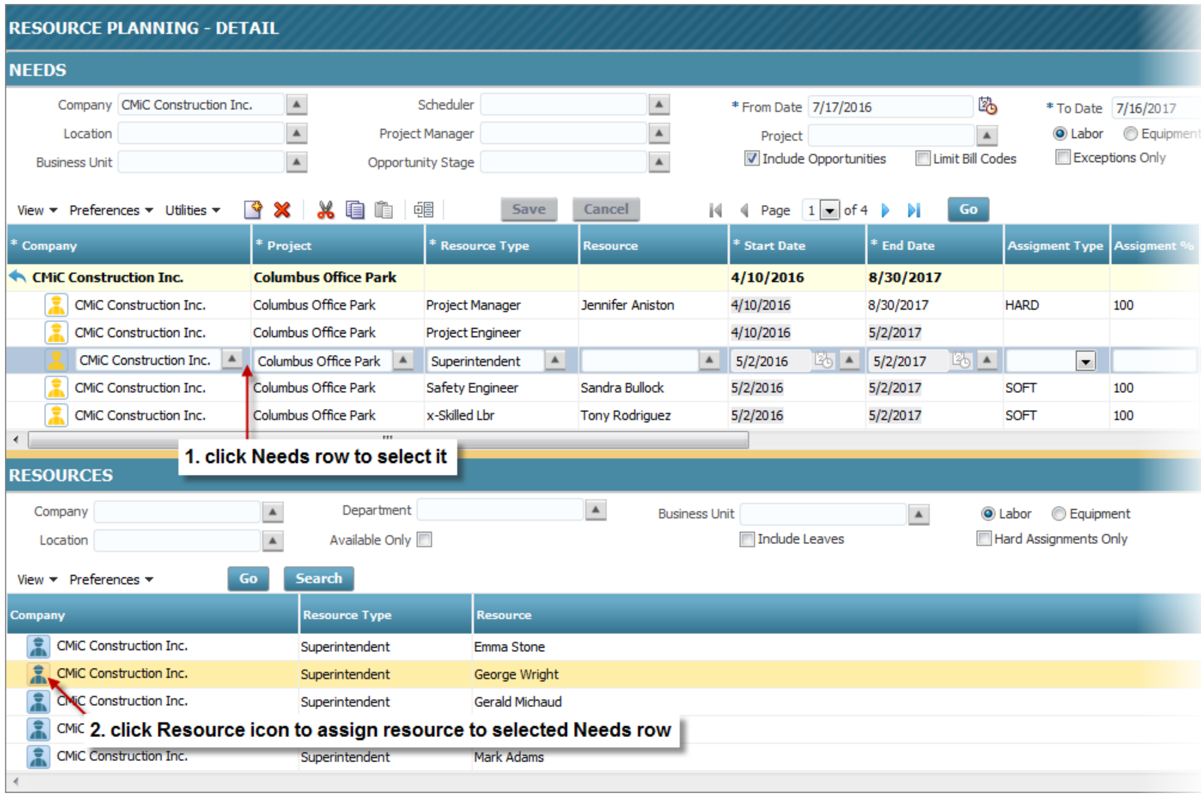
### Drag & Drop Resource for Assignment




From anywhere on a Resource row, except on the Resource icon, Resources may be dragged and dropped to anywhere on a Need row to make a resource assignment.

If a Resource is dropped onto a Need row that already has an assigned Resource, a prompt will ask you if you are sure you want to make a reassignment.

## Click Resource Icon for Assignment




Resource icons can also be used to make assignments. First, click anywhere on a Need row to select it. Second, click a Resource icon to assign the Resource to the selected Need.

# Gantt Chart – Needs

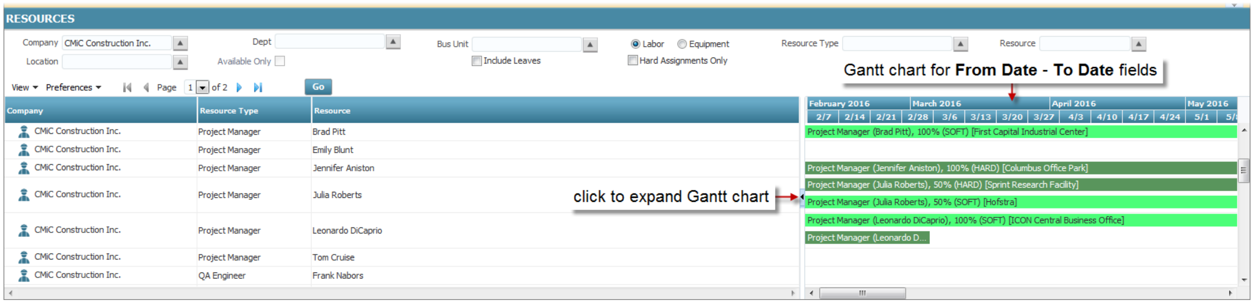
To the right of the Needs table is a pane containing a Gantt chart, with rows that correspond to the rows of the Needs table. To quickly provide an overview of the Needs with respect to dates, the rows of the Gantt chart use colored bars to span the dates for which the Need exists for the Project. The color of the bars indicates the type of assignment, such as if it is unassigned, assigned using a *Soft* assignment, or assigned using a *Hard* assignment. The range of dates for which Needs are displayed by the Gantt chart is specified by the **From Date** and **To Date** fields.

This pane can be expanded by clicking the Collapse Pane control: , as shown in the previous screenshot.

The following table declares what the colors used by the bars of the Gantt chart represent:

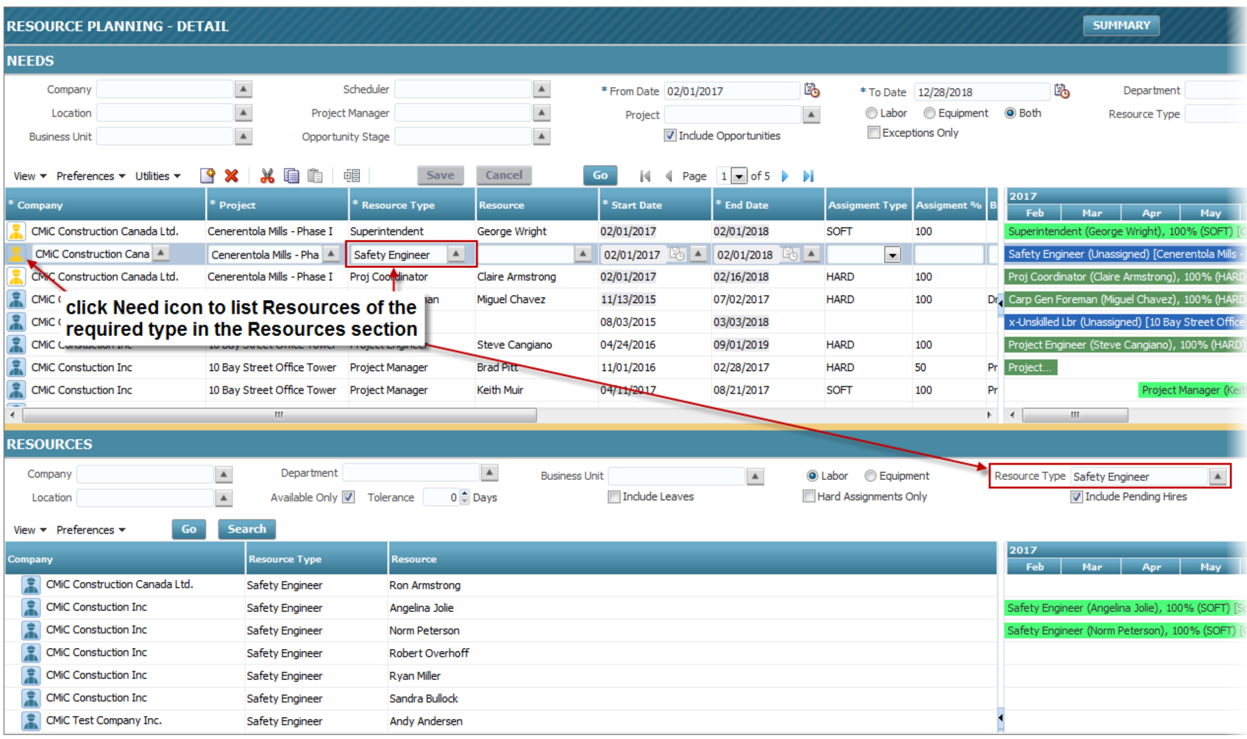
| Color | Representation |
|---|---|
| black | Project detail line |
| blue | Unassigned (needed) Resource |
| light green | Soft assignment of Resource |
| dark green | Hard assignment of Resource |
| *no color* | Resource is not needed for the corresponding date(s) |

# **Resources** – Section

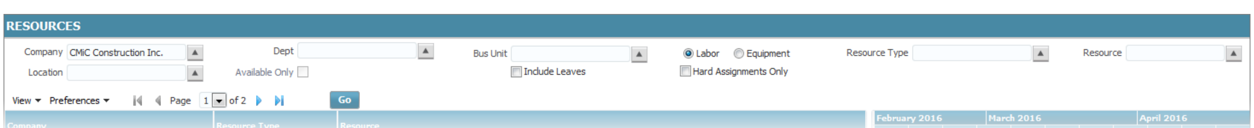



The **Resources** section is used to list and find relevant Resources to fill the Needs in the **Needs** section.

As shown below, you can click a Need icon in the **Needs** section to have Resources of the required type to fulfill the need listed in the **Resources** section:




## Filter Fields




The Filter section is used to control which Resources are included in this section's table, for the purpose of assigning them to needy Projects.

**NOTE**: If a filter field is changed, the [**Go**] button must be clicked to refresh the display.

The following are descriptions for this section's filter fields:

| Field | Description |
|---|---|
| **Company** | Filter Resources by their Company. For Employees, the Home Company (not Payroll Company) is used by this filter.<br><br>Only Resources belonging to specified Company will be listed. If blank, not filtered by this field (list Resources for all Companies). |
| **Location** | Filter Resources by their location. Only Resources in the specified location (state/province) will be listed. If blank, not filtered by this field. |
| **Department** | Filter Resources by their Department. Only Projects handled by the selected Department will be included. If blank, not filtered by this field.<br><br>**NOTE**: LOV only lists Departments associated with equipment and Departments used as Home Departments for employees. |
| **Available Only** (checkbox) | Only enabled if a Need is selected in the **Needs** section, as this option is used to find available Resources for a selected Need, based on the start and end date of the Need and the availability of Resources during that date range.<br><br>If checked, Resources that have Hard assignments during the specified range of dates are filtered out. Note, the **Assignment %** value of a resource assignment is not taken into consideration; so, if a Resource has a Hard assignment of any percentage during the Need's start and end date, it is filtered out.<br><br>If required, the **Tolerance** field that becomes available can be used to select the number of days away from when the Resource will be available, and for new hires, the number of days away from their start date. If Resources will be available given the specified tolerance value, they will be included in the **Resource** section's table. |
| **Business Unit** | Business Units are used here if Resources at your company are grouped by Business Units instead of Departments.<br><br>This field is used to filter Resources by a Business Unit. Only Resources handled by the selected Business Unit will be included.<br><br>Specifically, since Business Units are indirectly associated to Resources through Departments, as each Business Unit is linked to only one Department, Resources are filtered by the Department associated to the selected Business Unit.<br><br>For Employees, the **Home Dept.** field on the **Company** tab of the Employee Profile screen is used by this filter. For Equipment, their associated Home Location's **Department Code** field on the Home Locations screen is used by this filter (*Equipment Costing > Setup > Local Tables > Home Locations*). |
| **Include Leaves** | Set whether or not employees on leave are included; only enabled if **Labor** resource type is selected.<br><br>When checked, if an employee has approved leaves, the corresponding Gantt chart will display a black bar for the range of days the employee is on leave.<br><br>**NOTE**: Display of employee leaves is for informational purposes only; since an Employee on a leave can be assigned to a Need if necessary, leaves do not affect availability. |

| | |
|---|---|
| **Labor**, **Equipment** **(**radio buttons) | Filter Projects by Labor and Equipment resource types. Only Projects with resource Needs that are of the selected type will be included in the table. |
| **Hard Assignments Only** (checkbox) | Set whether or not only Hard assignments are shown. |
| **Resource Type** | Filter Projects by resource type. Only Projects with a Need for the selected resource type will be included in the table. If blank, not filtered by this field. |
| **Include Pending Hires** | Controls whether or not pending hires (hire date is after current date) are included in lists of labor resources. |
| **Resource** | Search for and select a particular Resource in the table. |

## Menus & Buttons

| Menu/Button | Description |
|---|---|
| View ▾ | Settings for the visibility of columns. |
| Preferences ▾ | This drop-down menu has the following options:<br>1. **Time Scale**: set Gantt chart's time scale **-** blocks of time can be a day, a week, or a month long<br>2. **Save Layout**: save table's current layout for user<br>3. **Reset Layout**: reset table's layout to default layout |
| Go | Refresh the table according to the filter fields. If a filter field is changed, this button must be used to refresh the display. |
| Search | Launches Resource Search screen, to broadly search for qualified personnel, including employees of Organizations/Business Partners that were Key Players for past Projects. Personnel can be searched against the following: Skills, Training, Licenses and Certifications, Education, and Memberships. Refer to the *Resource Search – Screen* section for details. |

## Resources Table

| Company | Resource Type | Resource | Business Unit | Effective Start Date | Location | Department |
|---|---|---|---|---|---|---|
| CMiC Construction Inc. | x-Journeyman | Al Hanesworth | Field Operations | | Connecticut | New York Operations |
| CMiC Construction Inc. | x-Journeyman | Fredric Thomas | Field Operations | | Pennsylvania | Pittsburgh Operations |
| CMiC Construction Inc. | x-Journeyman | Hales Alex | Company Level | | Pennsylvania | Company Level |
| CMiC Construction Inc. | x-Journeyman | Kholi Virat | Company Level | | Pennsylvania | Company Level |
| CMiC Construction Inc. | x-Journeyman | Ralph Johnson | Field Operations | | Pennsylvania | Pittsburgh Operations |
| CMiC Construction Inc. | x-Journeyman | Tina Anderson | Field Operations | | Pennsylvania | Pittsburgh Operations |

The following provides details about the columns of the Resources table.

**NOTE**: The **Columns** option, of under the **View** drop-down menu, can be used to control which columns are visible; if a column is not visible, check the option's settings.

| Field | Description |
|---|---|

| | |
|---|---|
| **Company** | Company to which Resource belongs. |
| **Resource Type** | Subtypes of Labor or Resource types. |
| **Resource** | Employee or equipment assigned to Need. |
| **Business Unit** | Business Unit handling Resource.<br><br>Business Units are used here if Resources at your company are grouped by Business Units instead of Departments.<br><br>Business Units are indirectly associated to Resources through Departments, as each Business Unit is linked to only one Department. For an Employee, the **Home Dept.** field on the **Company** tab of the Employee Profile screen is used link the Employee to a Business Unit. For Equipment, its associated Home Location's **Department Code** field on the Home Locations screen is used link it to a Business Unit (*Equipment Costing > Setup > Local Tables > Home Locations*). |
| **Effective Start Date** | For Labor resource types, if an employee is a new hire, this is the date the employee will be available. |
| **Location** | Location of Resource (state/province). |
| **Department** | Department handling Resource, if applicable. |

## Resource Icons

| Icons | Description |
|---|---|
|  /  | **Labor Resource**: blue indicates Labor Resource is not a pending hire, yellow indicates Labor Resource is a pending hire (hire date is after current date)<br>**NOTE**: If the **Include Pending Hires** checkbox is not checked, pending hires will not be displayed. |
|  | **Equipment Resource**: all equipment Resources are blue |

## Gantt Chart – Resource Availability

To the right of the Resource table is a pane containing a Gantt chart, with rows that correspond to the rows of the Resource table. To quickly provide an overview of the availability of Resources with respect to dates, the rows of the Gantt chart use colored bars to span the dates for which the Resources have either a Soft or Hard assignment. The color of these bars indicates the type of assignment: Soft or Hard, and the absence of a bar indicates that the Resource is unassigned and available. The range of dates displayed by this Gantt chart is also specified by the **From Date** and **To Date** fields of the Needs section.

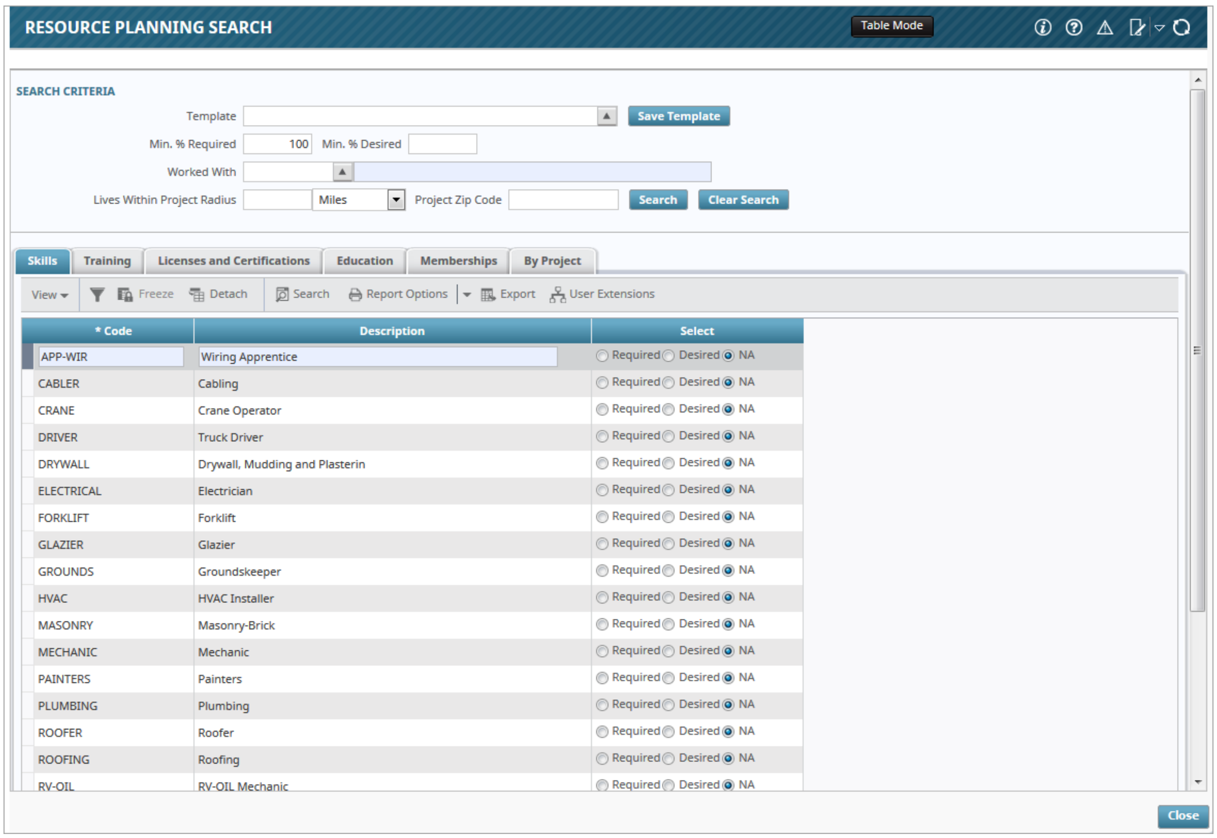
This pane can be expanded by clicking the Collapse Pane control: , as shown in the previous screenshot.

The following table declares what the colors used by the bars of the Gantt chart represent:

| Color | Representation |
|---|---|
| light green | Soft assignment of Resource. |
| dark green | Hard assignment of Resource. |
| black | For labor resources only; indicates Employee is on leave for bar's range of days. |
| *no color* | Resource has no assignment for corresponding dates. |

# **Resource Search** – Screen

## Overview – Resource Search




*Sample of Resource Planning Search screen (program: RPRESOURCESEARCH)*

Resource Planning Search is used to search for qualified Employees from the list of Employees displayed under the **Resources** section on the Detail screen, which can include Employees from all of the Companies to which the user has security rights.  Only the Employees listed under the Detail screen's **Resources** section, when the [**Search**] button was clicked, are searched.

In searching for qualified Employees, this screen is capable of searching against a broad range of qualifications and criteria through the use of a composite search, detailed in the following subsection.

# **Search Criteria** – Section

### **Template** – Drop-Down Field

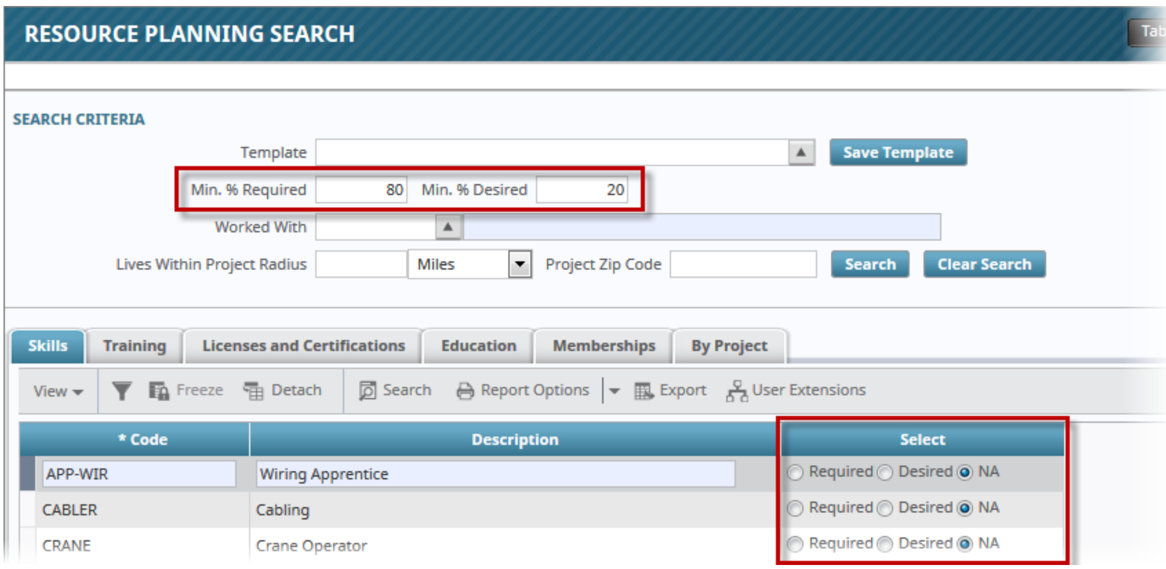
This drop-down field is used to load a saved search, saved via the [**Save Template**] button.

### [**Save Template**] – Button

This button is used to save the composite search, as entered via the fields under the **Search Criteria** section and via the tabs. This is done by providing a name for the search using the **Template** field, then saving it via this button.

To load the saved search, use the **Template** field to select it.

### **Min. % Required, Min. % Desired**




*Sample of Resource Planning Search screen, with the **Skills** tab selected.*

Resource Planning Search can perform two types of searches for qualifications, both of which allow partial matches. It can perform searches for **Required** and **Desired** qualifications, and search results are returned and broken down for both types.

As shown above, when selecting the qualifications to search for, either the **Required** or **Desired** radio button is selected.

When search results are returned, as shown below, **Required %** and **Desired %** values are displayed for each returned Employee to indicate what percentage of required and desired HR qualifications were met.

The **Min. % Required** and **Min. % Desired** fields are used to filter out the returned results, by specifying minimums for these **Required %** and **Desired %** values. As an example, if the **Min. % Required** and **Min. % Desired** fields are set to 100%, only full matches will be returned.


*Sample of the Search Result pop-up, listing personnel that satisfied the search parameters.*

### Worked With

This field is used to search for employees that worked with the selected Company or Business Partner.

### Lives Within Project Radius, Project Zip Code

These fields are used to search for employees that live within a maximum radius from the Project's location.

For both the employee's and Project's location, their zip codes (postal code) are used. The **Lives Within Project Radius** field is used to enter a maximum distance, in miles or kilometers, that an employee can live from the Project's location, in order to be returned by the search.

# Composite Search

Resource Planning Search uses a composite search to search for suitable Employees, from the list of Employees under the Resources section of the Details screen, based on various criteria. The composite search is composed of 4 main components.

## Composite Search Components & Search Results

After all of the search parameters have been entered and selected, the [**Search**] button is used to initiate the search.

For an employee to be returned by the search, at least one of the search parameters entered for at least one of the components must be satisfied.

**Example**:

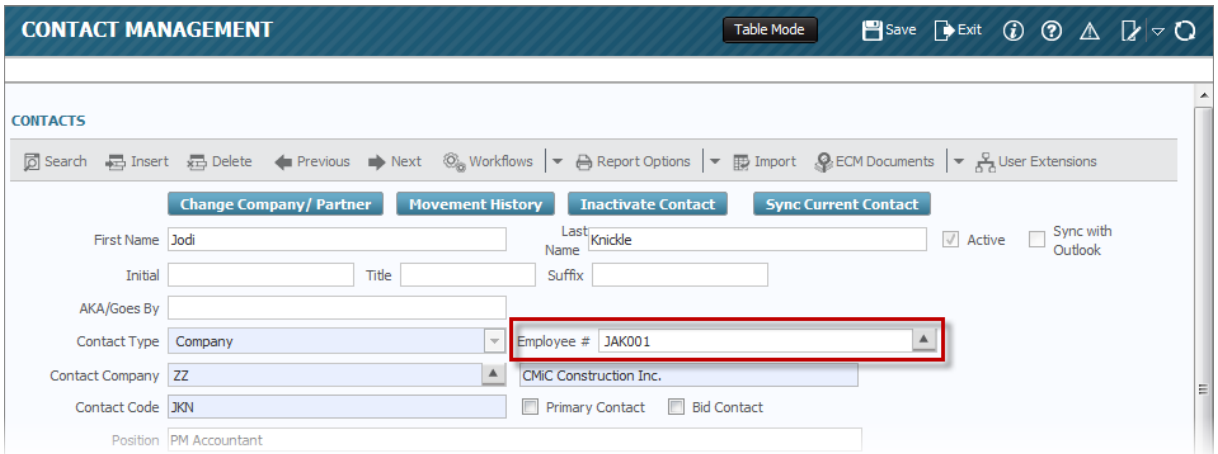
If a Business Partner is selected via the **Worked With** field, some skills are selected on the **Skills** tab, and some certifications are selected on the **Licenses and Certifications** tab, if an employee has just one of the selected skills, or just one of the selected licenses and certifications, or just satisfies the **Worked With** field, the employee will be returned by the composite search.

## Search 1: **Worked With Key Players of Company/Partner**

This search component uses the **Worked With** field, under the **Search Criteria** section.

This search is used to find all of the Employees, from those listed under the **Resources** section of the Details screen, that were Key Players who worked with Key Players belonging to the Company/Partner selected via the **Worked With** field, as members of the same project management team (Key Players Team). Only those Employees who were Key Players that worked with Key Players belonging to the selected Company/Partner will be returned, assuming the following requirement is met.

### Requirement: Contact Record Linked to Employee Record




*Sample of Contact screen.* ***Employee #*** *field must contain Employee's number, linking Contact record to Employee record.*

Since members of a Key Players Team can belong to either a Company or Partner, they are associated to Contact records, not Employee records. Thus, behind the scenes, this search first returns Contact records; then, only those Employee records, from those listed under the **Resources** section of the Details screen, associated to the returned Contact records are returned by this search.

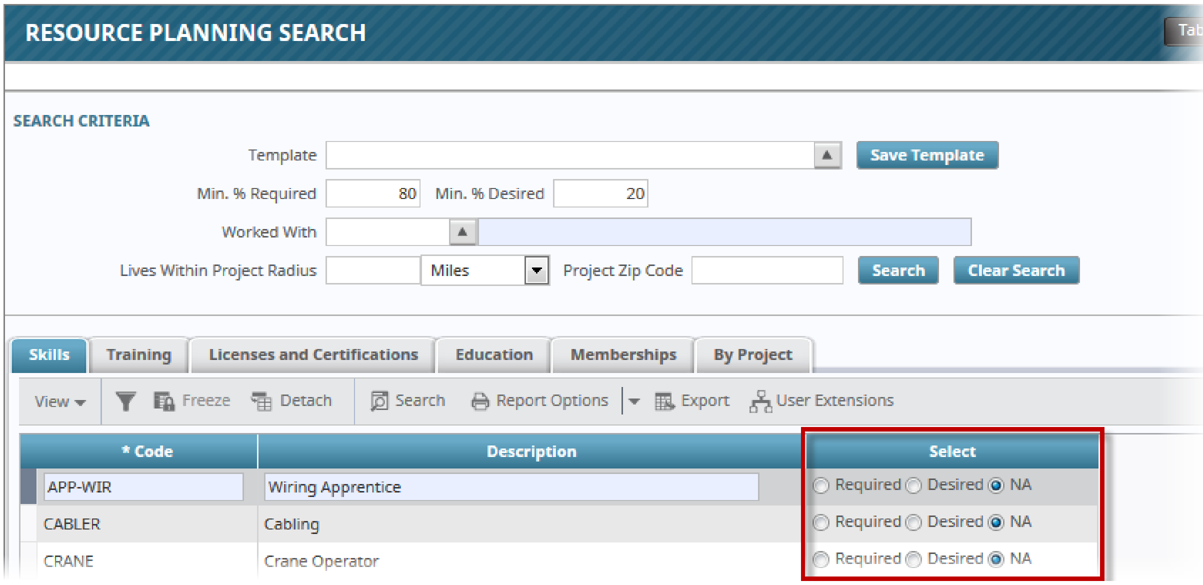
## Search 2: **Lives Within Project Radius**

This search component uses the **Lives Within Project Radius** field, the corresponding drop-down filed to select the distance unit, and the **Project Zip Code** fields under the **Search Criteria** section. These fields are used to search for Employees that work within the specified distance from the Project's zip code.

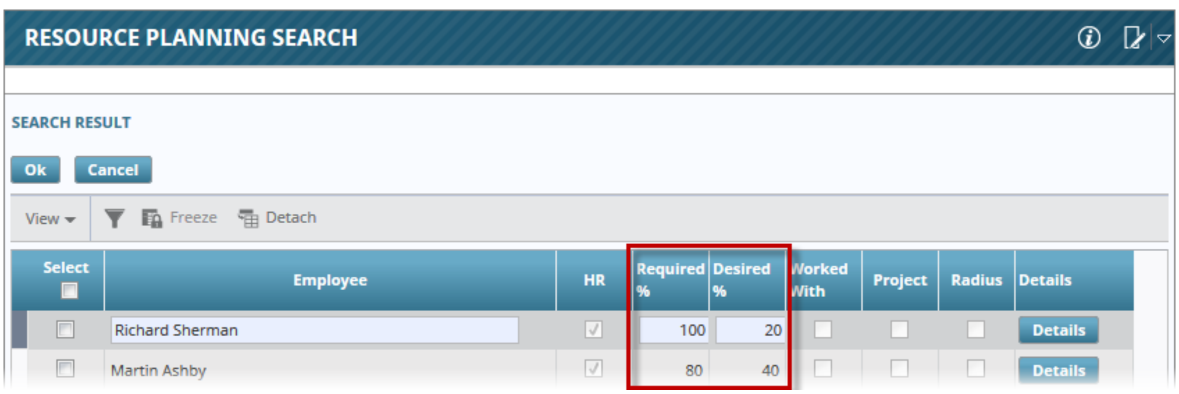
## Search 3: **Meets HR Qualifications**

This search component is used to search for Employees with necessary HR qualifications. It is comprised of 5 parts that correspond to the 5 different HR qualification types. The **Skills**, **Training**, **Licenses and Certifications**, **Education**, and **Memberships** tabs are used to search for these necessary HR qualifications.

As described under the section *Search Criteria – Section*, about the **Min. % Required** and **Min. % Desired** fields, there are two types of searches for HR qualifications, both of which allow partial matches. Searches can be performed for **Required** and **Desired** qualifications at the same time, and search results are returned and broken down for both types, for each returned Employee.




Via the 5 tabs for each HR qualification type, qualifications to search for are selected by using either the **Required** or **Desired** radio buttons, as shown above. **NA** indicates that the qualification is not searched for.




When search results are returned, as shown above, **Required %** and **Desired %** values are displayed for each returned Employee to indicate what percentage of required and desired HR qualifications were met.

The **Min. % Required** and **Min. % Desired** fields under the **Search Criteria** section are used to filter out the returned results, by specifying minimums for these **Required %** and **Desired %** values.

## Method for Calculating Required % & Desired % Values

These **Required %** and **Desired %** values are only calculated for HR qualifications.

### Part 1

In calculating the **Required %** and **Desired %** values for each Employee, first, the percentage of required and desired qualifications met is calculated for each of the 5 HR qualifications (Skills, Training, Licenses and Certifications, Education, and Memberships), including those without any selections (rule for this case below).

**No Selection Rule (NSR)**

On an HR qualification tab, if no required qualification is selected, then the percentage of required qualifications met for that qualification type is considered to be a 100%, for all Employees (none required for that HR qualification type, thus all Employees fully meet this requirement). This applies in the same way for desired qualifications. If no desired qualifications are selected for an HR qualification type, all Employees fully meet the desire.

**Examples**:

**Ex. 1**) On the **Skills** tab, 4 required skills are selected and 2 desired skills are selected.

For an Employee with 2 of the required skills and with 0 of the desired skills, the percentage of required skills met is 50%, and the percentage of desired skills met is 0%, for this HR qualification type.

These values are used in the second part, when adding up all 5 of the required met percentages, and all 5 of the desired met percentages, to calculate the averages for each.

**Ex. 2**) No Selection Rule case: on the **Memberships** tab, no required membership is selected, and 3 desired memberships are selected.

For all Employees, the percentage of required memberships met is 100%, since none was selected; and for an Employee with 1 of the 3 desired memberships met, the percentage of desired memberships met is 33%.

### Part 2

For each Employee, after the percentages of required and desired qualifications met have been calculated for each of the 5 HR qualification types, the averages of the required and desired qualifications met is calculated. These averages are the final **Required %** and **Desired %** values for each Employee, displayed by the search results screen**.**

**Example**:

The number of required and desired qualifications selected on each HR qualification tab for this example is provided by the following table, which are used to demonstrate how the final **Required %** and **Desired %** values are calculated for each Employee. Note, NSR means it is a case in which the No Selection Rule applies.

| | Skills | | Training | | Lic./Cert. | | Education | | Memberships | |
|---|---|---|---|---|---|---|---|---|---|---|
| **# Selected** | 2 req. | 1 des. | 0 req. | 0 des. | 1 req. | 1 des. | 2 req. | 1 des. | 0 reg. | 1 des. |
| **Employee A** | 1/2 met **50%** | 0/1 met **0%** | NSR **100%** | NSR **100%** | 1/1 met **100%** | 0/1 met **0%** | 1/2 met **50%** | 1/1 met **100%** | NSR **100%** | 0/1 met **0%** |

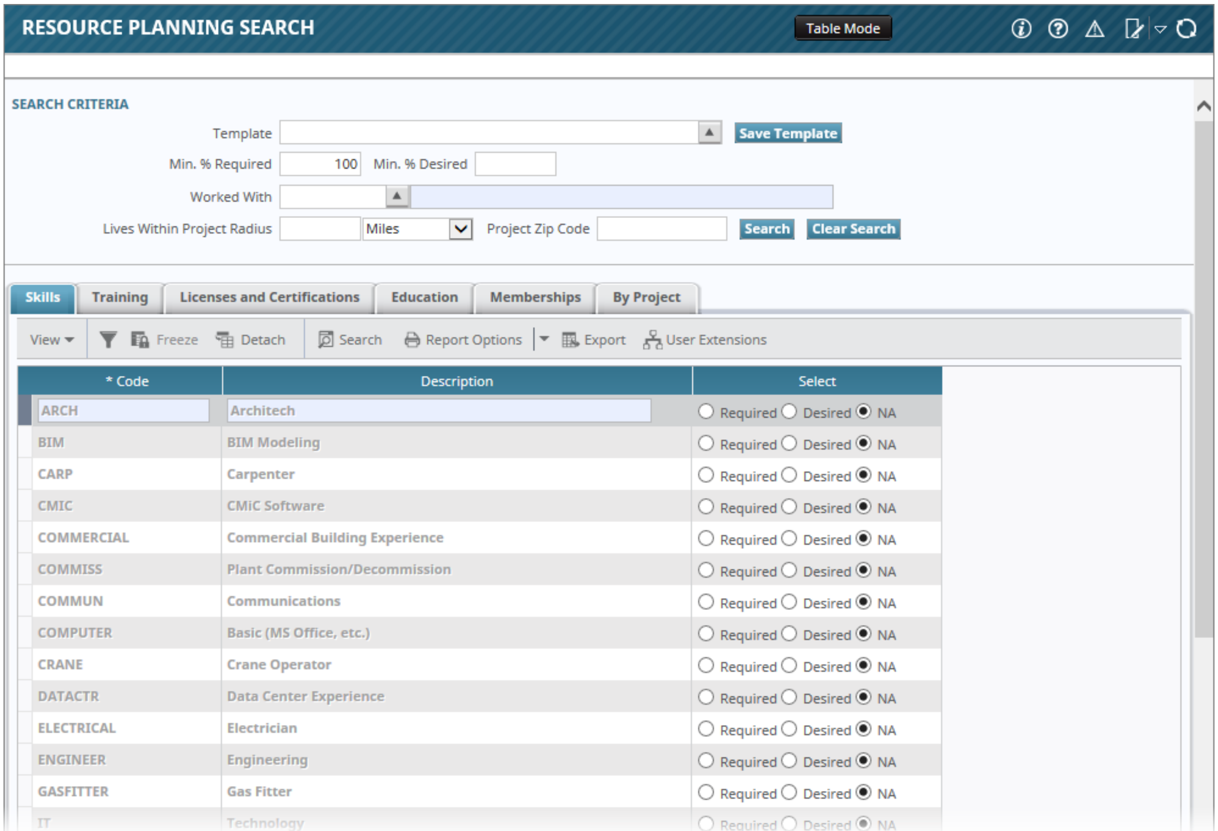
For Employee A, the final **Required %** and **Desired %** values, which are averages, are as follows:

**Required % =** 50 + 100 + 100 + 50 + 100 = 400, with the average being 400/500 = 80%

**Desired %** = 0 + 100 + 0 + 100 + 0 = 200, with the average being 200/500 = 40%

The following subsections provide more details about the 5 HR qualification tabs used by this composite search component.

## **Skills** – Tab

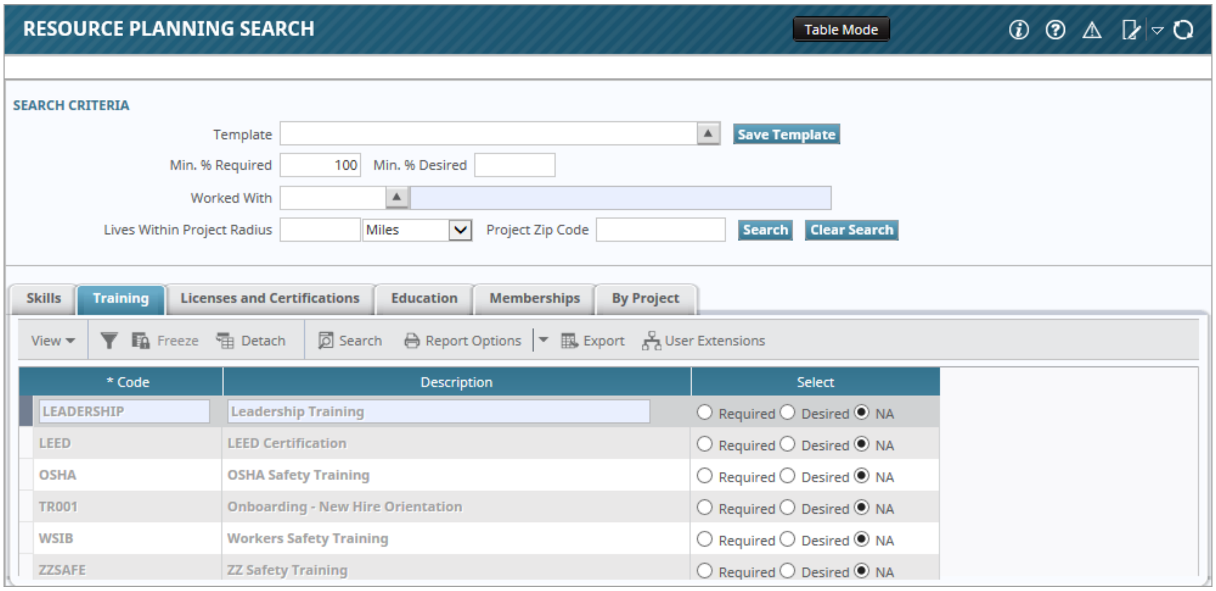



*Sample of **Skills** tab on Resource Planning Search screen.*

The **Skills** tab is used to search for employees with particular skills. The selected skills to search for will be added to the composite search. If the skill is required, click the **Required** radio button, if it is just desired, click the **Desired** radio button.

The entries to choose from, on this tab, are maintained by the Skills screen in the HR module (standard Treeview path: *Human Resources > Setup > Local Tables > Skill Definitions > Skills*).

## **Training** – Tab

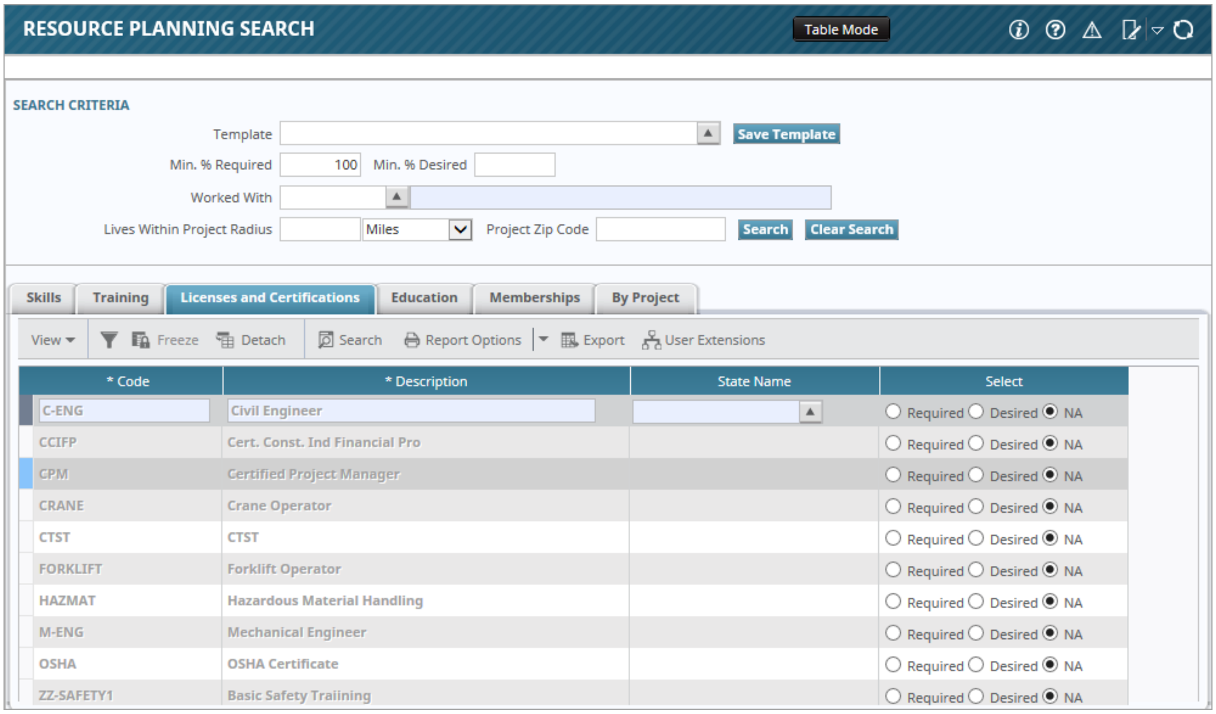



*Sample of **Training** tab on Resource Planning Search screen.*

The **Training** tab is used to search for employees with particular training. The selected training to search for will be added to the composite search. If the training is required, click the **Required** radio button, if it is just desired, click the **Desired** radio button.

The entries to choose from, on this tab, are maintained by the Training Courses and Modules screen in the HR module, which is currently only available as a Forms screen (Enterprise Classic); the standard Treeview path is as follows: *Human Resources > Training/Certification > Training Courses and Modules*).

## **Licenses and Certifications** – Tab

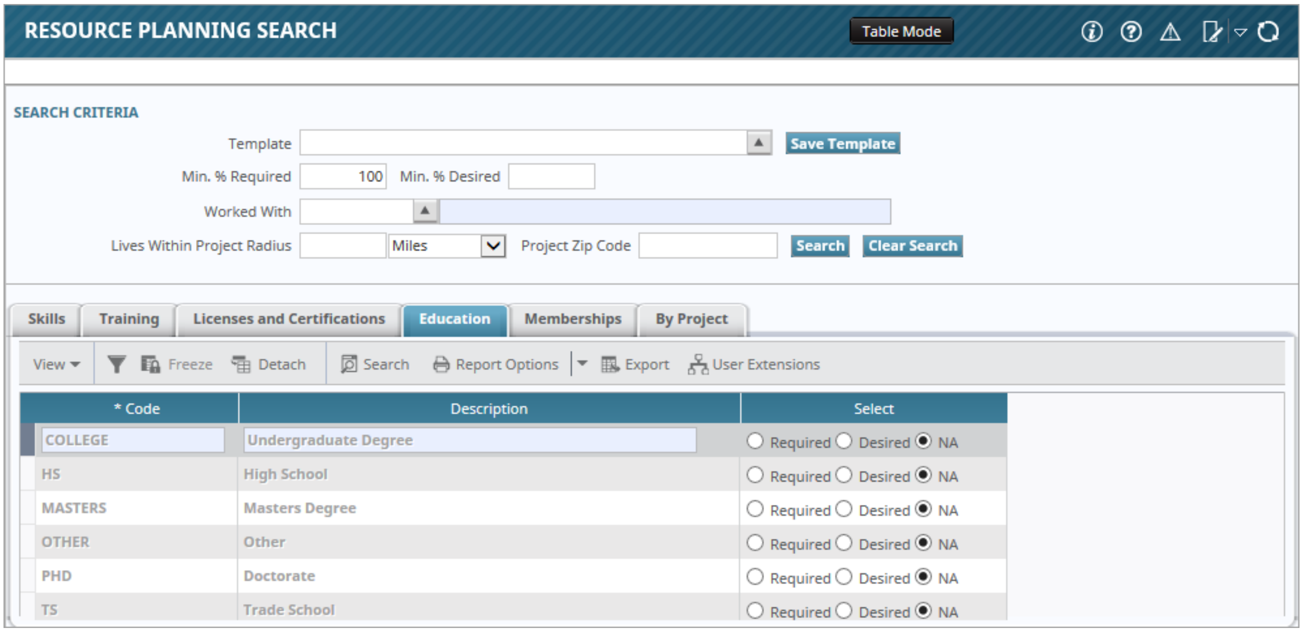



*Sample of **Licenses and Certifications** tab on Resource Planning Search screen.*

The **Licenses and Certifications** tab is used to search for employees with particular licenses and certifications. The selected licenses and certifications to search for will be added to the composite search. If the license or certification is required, click the **Required** radio button, if it is just desired, click the **Desired** radio button.

The entries to choose from, on this tab, are maintained by the Types of Certification/Licenses screen in the HR module, which is currently only available as a Forms screen (Enterprise Classic); the standard Treeview path is as follows: *Human Resources > Training/Certification > Types of Certification/Licenses*).

## **Education** – Tab

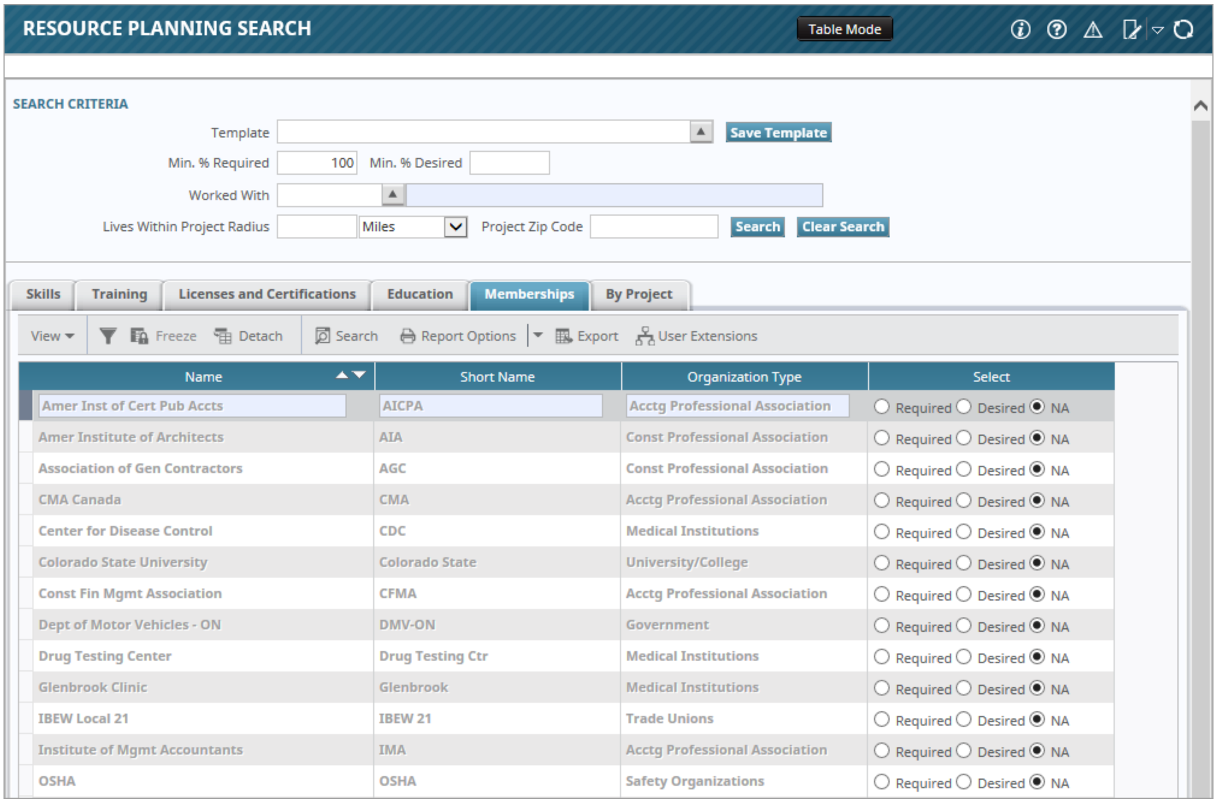



*Sample of **Education** tab on Resource Planning Search screen.*

The **Education** tab is used to search for employees with a particular education. The selected education to search for will be added to the composite search. If the education is required, click the **Required** radio button, if it is just desired, click the **Desired** radio button.

The entries to choose from, on this tab, are maintained by the Education Course Codes screen in the HR module (standard Treeview path: *Human Resources > Setup > Codes > Education Course Codes*).

## **Memberships** – Tab




*Sample of **Memberships** tab on Resource Planning Search screen.*

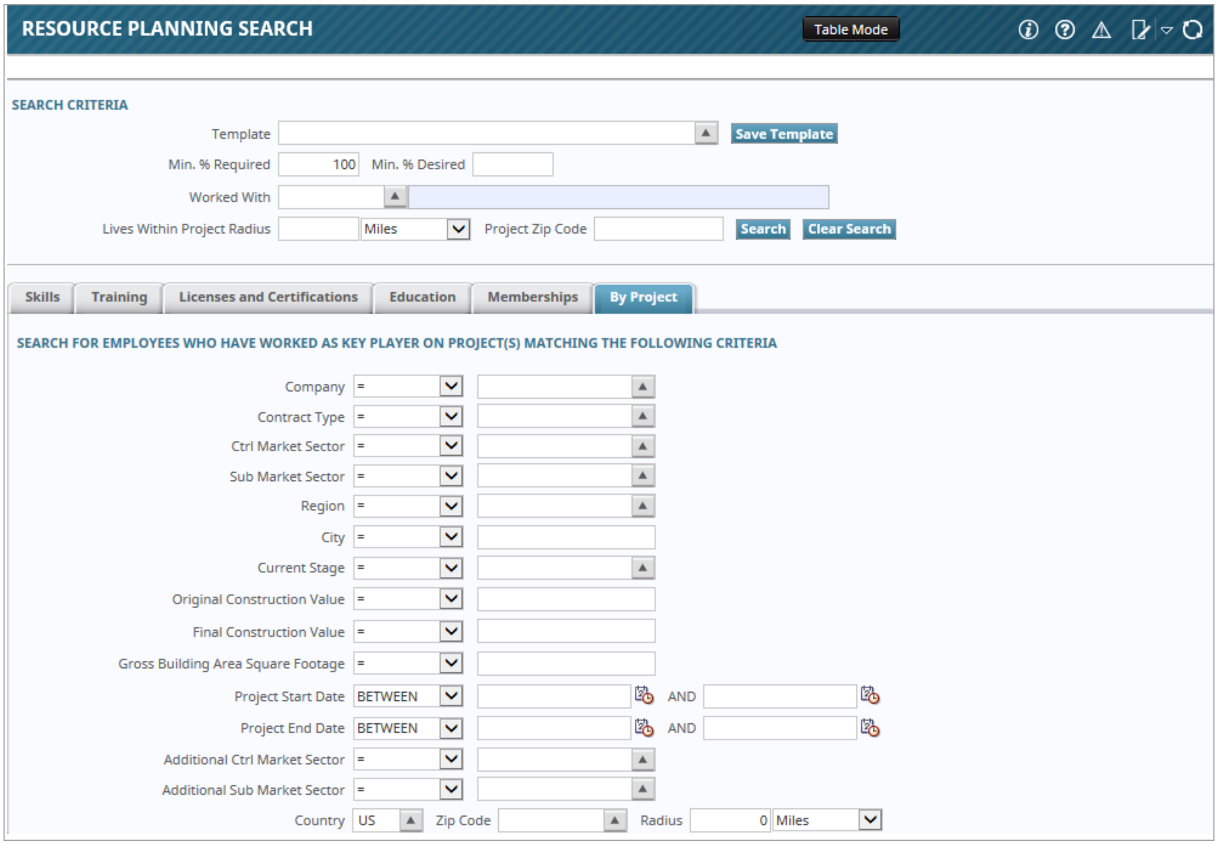
The **Memberships** tab is used to search for Employees that belong to particular professional organizations/associations. The selected entries to search for will be added to the composite search. If membership is required, click the **Required** radio button, if it is just desired, click the **Desired** radio button.

The entries to choose from, on this tab, are maintained by the Organizations screen in the HR module (standard Treeview path: *Human Resources* > *Setup* > *Local Tables* > *Organizations*).

## Search 4: **By Project**

This search component is used to search for Employees who have worked as Key Players on Projects matching the criteria selected on the **By Project** tab.

### **By Project** – Tab



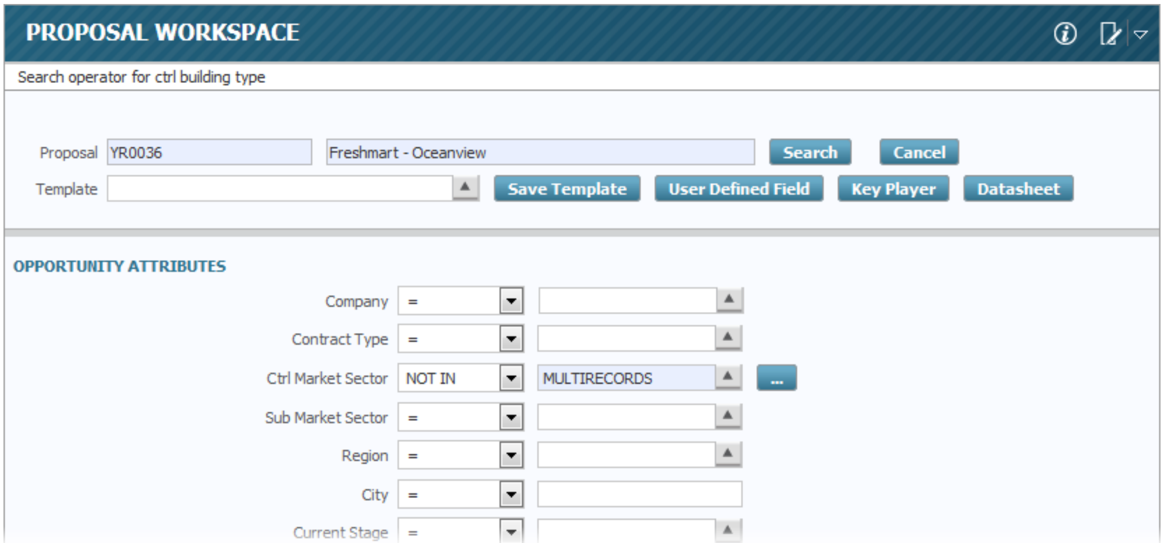

*Sample of **By Project** tab on Resource Planning Search screen.*

The **By Project** tab is used to search for Employees that have experience, as Key Players, working on particular types of projects, such as projects belonging to a particular market sector.

This is done by entering a search criteria for a particular type of project, using the fields on this screen, which correspond to fields of Project records. Then, when the search is run, all Employees that have been Key Players for Projects matching the entered criteria are returned by the search.

For details about using the comparison operators and matching conditions (=, **IN**, **NOT IN**, **BETWEEN**) on this screen, please refer to the following subsection.

## Using Comparison Operators & Matching Conditions

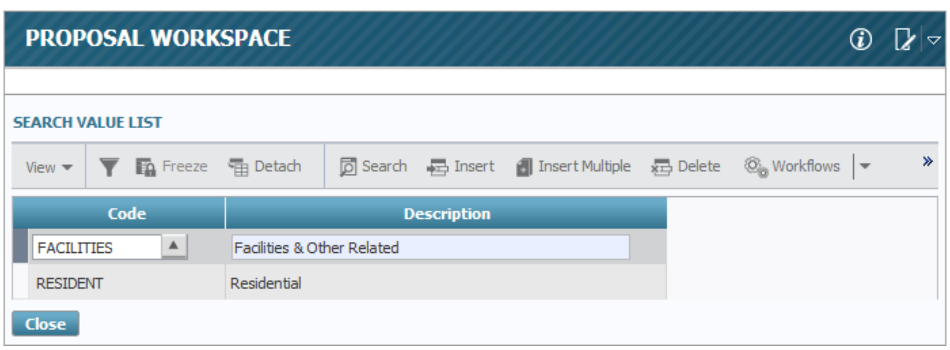



On screens that have search parameters using comparison operators and matching conditions (=, **IN**, **NOT IN**, **BETWEEN**), the first drop-down list is used to select a comparison operator or matching condition, and the second field is used to provide a value for the operator or condition.

**Example**:

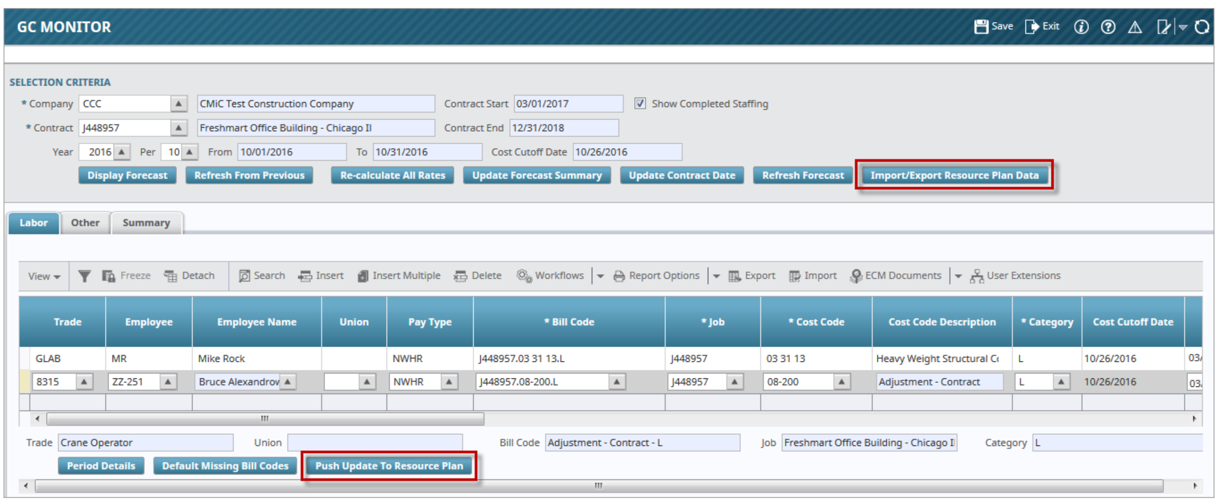
Consider the following search parameter, which uses the **NOT IN** condition (first parameter) and a list of values to compare against (second parameter):


An Opportunity will be returned by this search if its controlling market sector does not match any of the specified values contained in the second drop-down list, which is displayed by the pop-up (shown below) launched by clicking the corresponding  button.



# GC Monitor & Resource Planning Integration

## Importing & Exporting Need Lines via GC Monitor



*Pgm: RPFCAST; sample of GC Monitor screen, with buttons to import and export data to and from Resource Planning framed in red.*

All importing and exporting of data between Resource Planning and GC Monitor is done through GC Monitor, using its [**Import/Export Resource Plan Data**] and [**Push Update to Resource Plan**] buttons (framed in above screenshot). For details about these buttons, please refer to the GC Monitor user guide.

Via GC Monitor:

1. A Project's Need Lines from Resource Planning can be imported into GC Monitor as Forecast Lines for the Project's corresponding Job.

2. A Job's Forecast Lines from GC Monitor can be exported into Resource Planning as Need Lines for the Job's corresponding Project.

There is no logical necessity dictating which application is to be used first, so the manner in which they are used together depends on your company's practices. However, it is recommended that a protocol is established in order to keep both applications properly synchronized, taking the following into consideration.

### Exporting from GC Monitor to Resource Planning

From GC Monitor, Forecast Lines can be exported to Resource Planning as Need Lines, where scheduling details can be filled out.

For each Project, if a Forecast Line in GC Monitor matches a Need Line in Resource Planning, matched by Trade/Equipment Code and Bill Code, the Need Line in Resource Planning will be replaced by the corresponding line in GC Monitor.

### Importing from Resource Planning to GC Monitor

From GC Monitor, Need Lines can be imported from Resource Planning into GC Monitor as Forecast Lines.

For each Project, if Need Lines in Resource Planning match Forecast Lines in GC Monitor, matched by Trade/Equipment Code and Bill Code, the corresponding Forecast Lines in GC Monitor will be updated with any changes and Resource assignments made in Resource Planning.

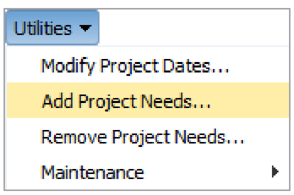
# Set Up & Maintenance

## Needs Templates

### Overview – Needs Templates

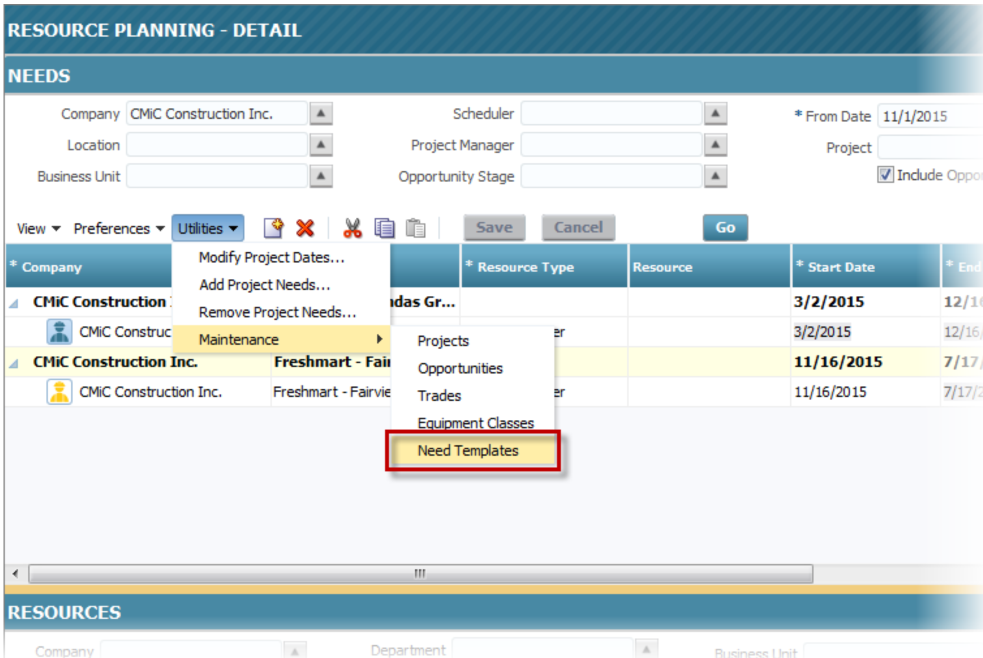
A Needs Template is a template of related Needs, which can be a mixture of labor and equipment resource needs, for a general type of work, such as foundation construction.  Once created, a Needs Template can then be used to add all of its Needs to Projects that require that general type of work or need.

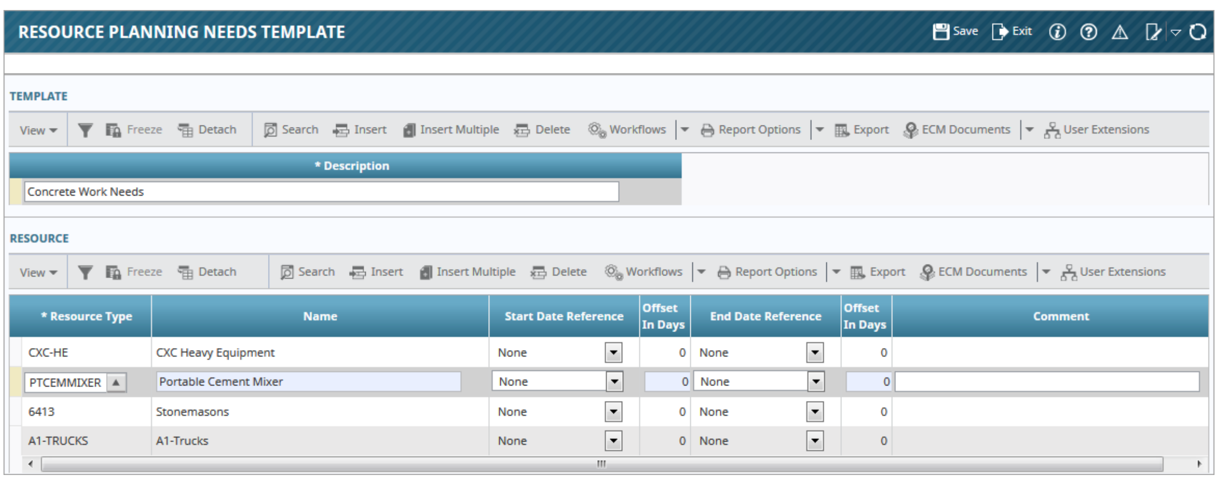
For instance, a Needs Template can be created for general foundation work, containing various labor and equipment resource Needs required for that type of work.  Then, to add all of these Needs to a Project that requires foundation work, users can use the **Add Project Needs** utility to select and apply the Needs Template for foundation work to the Project.  The **Add Project Needs** utility is found under the **Utilities** drop-down menu, shown below, which is under the **Needs** section of the Detail screen.



# Create Needs Templates

To create a Needs Template, launch the Resource Planning Needs Template screen by selecting the **Need Templates** option of the **Maintenance** submenu, under the **Utilities** drop-down menu on the **Needs** section of the Detail screen (shown below).



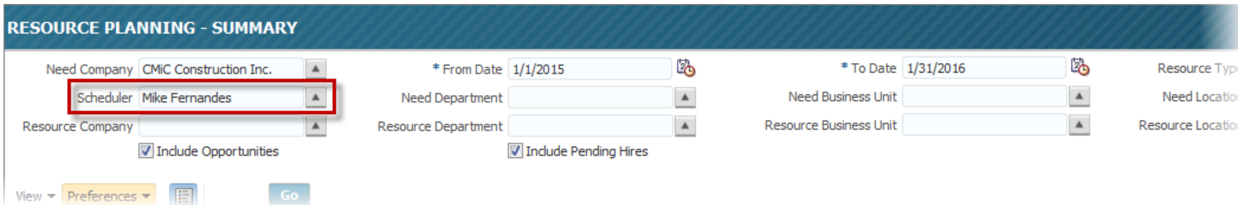




*Sample of Resource Planning Needs Template screen (program: RPNEEDTEMP)*

To create a new Needs Template, click [**Insert**] on the **Template** section's Block Toolbar, then enter a name for the template via the new **Description** field. The Needs under the **Resource** section correspond to the selected template in the **Template** section.

Next, click [**Insert**] on the **Resource** section's Block Toolbar, and use the new row to detail a Need.

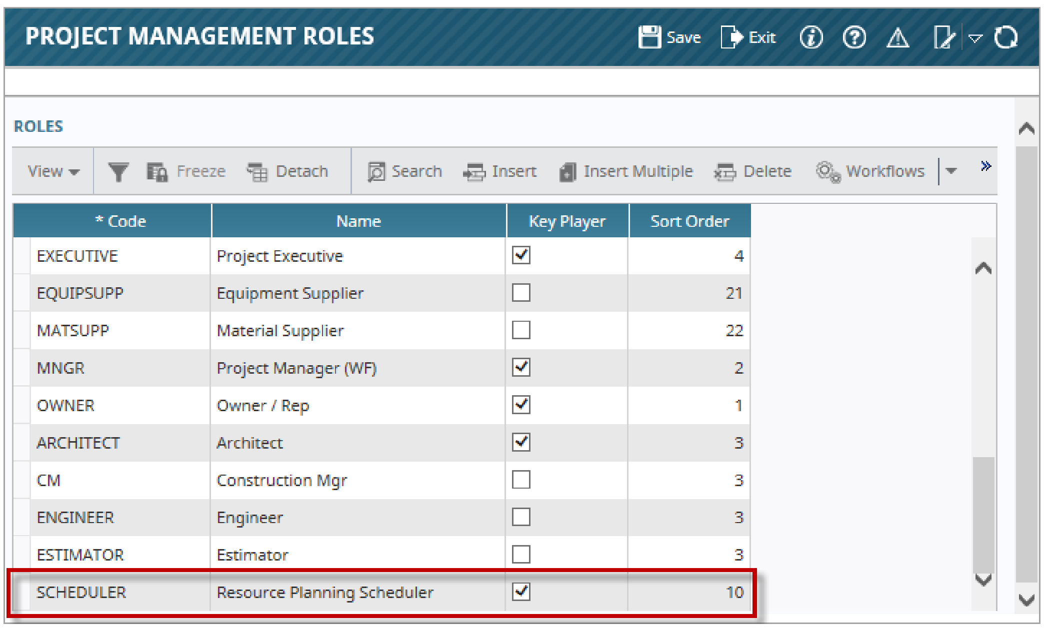
# Schedulers




*Sample of **Scheduler** field, which is in the Filter section of the Summary and Details screens.*

Optionally, to help with organization and to assign responsibility, a PM Scheduler role can be used in Resource Planning to group needy Projects by PM Schedulers, and to assign Employees to resource scheduling tasks. This allows the Opportunities and Projects listed by the Summary and Details screens to be filtered by Schedulers, via the **Scheduler** field (sample shown above).

## Add Scheduler Role in System




The Scheduler role used by RP is added via the Project Management Roles screen (*Job Costing* > *Setup* > *Local Tables* > *Project Management Roles*). The code for the Resource Scheduler role in RP must be entered as "**SCHEDULER**", and the **Key Player** checkbox must be checked, as shown above.

## Assign Employee to Scheduler Role

PM Schedulers are Key Players for Opportunities and Projects.

For Projects, an Employee is assigned to the PM Scheduler role via the Key Players tab on the Projects screen.

For Opportunities, an Employee is assigned to the PM Scheduler role via the Team tab on the Opportunities screen.

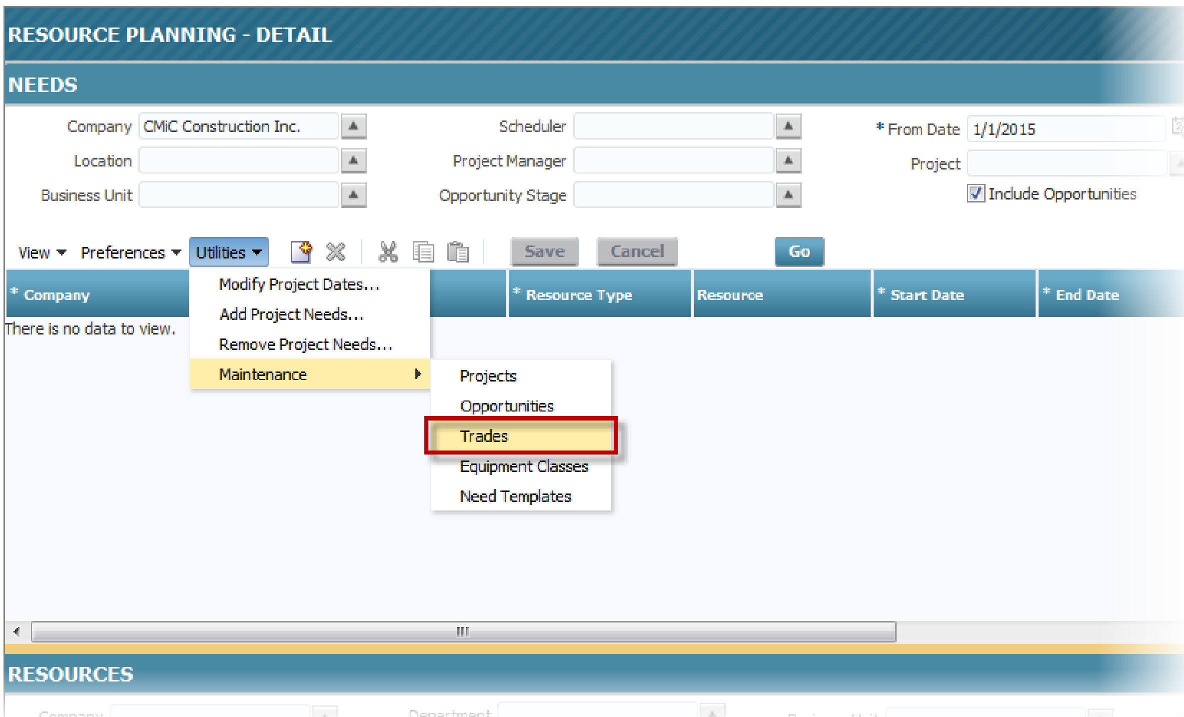
# Assign Employees to Trades

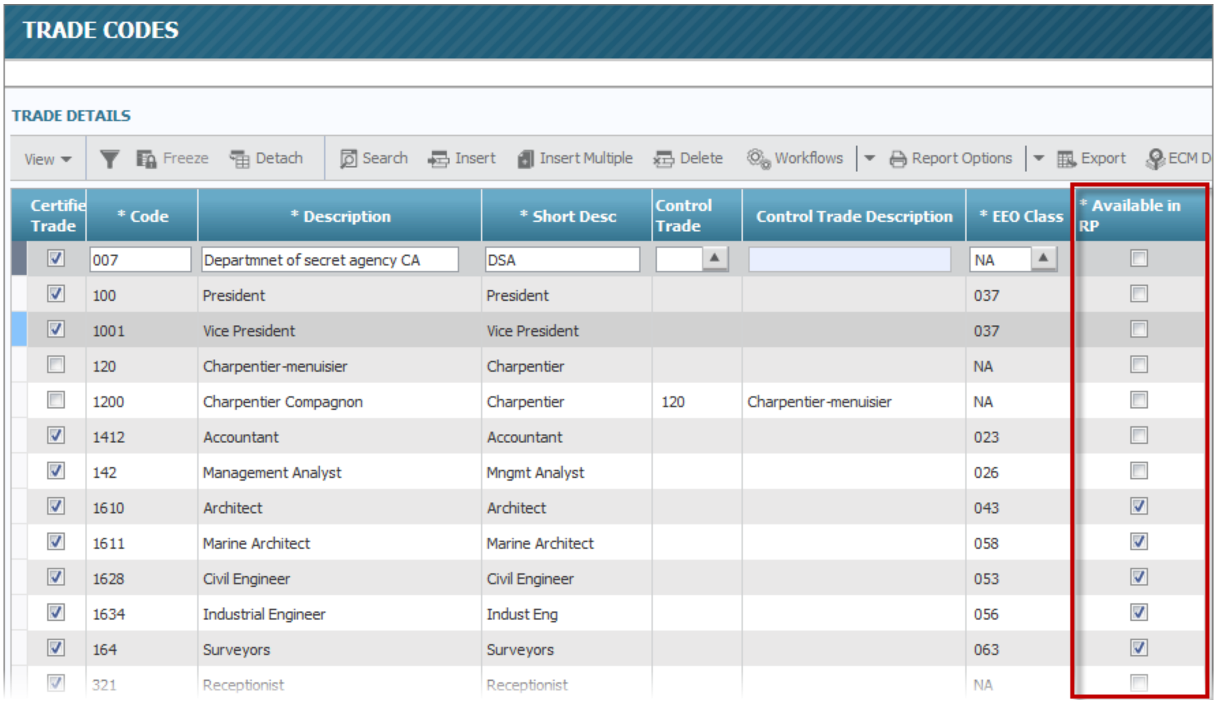
For current Employees, they are assigned to Trades via the Employee History screen, using the **Trade** field on the **Company** tab.  For new Employees, this is done via the same tab and field on the Employee screen.

# Select Trades for Resource Planning

Initially, no labor resource types (trades) and instances of these types (employees) are be available in Resource Planning, as not all trades may be relevant in this module.

The Trade Codes Maintenance screen (program: PYTRADES, in Payroll module) is used to select which labor resource types, and instances of them, are available in Resource Planning.  It can be conveniently launched via the **Trades** menu option under the **Utilities** drop-down menu on the Detail screen, shown below:






| Certifie Trade | * Code | * Description | * Short Desc | Control Trade | Control Trade Description | * EEO Class | * Available in RP |
|---|---|---|---|---|---|---|---|
| ☑ | 007 | Departmnet of secret agency CA | DSA | | | NA | ☐ |
| ☑ | 100 | President | President | | | 037 | ☐ |
| ☑ | 1001 | Vice President | Vice President | | | 037 | ☐ |
| ☐ | 120 | Charpentier-menuisier | Charpentier | | | NA | ☐ |
| ☐ | 1200 | Charpentier Compagnon | Charpentier | 120 | Charpentier-menuisier | NA | ☐ |
| ☑ | 1412 | Accountant | Accountant | | | 023 | ☐ |
| ☑ | 142 | Management Analyst | Mngmt Analyst | | | 026 | ☐ |
| ☑ | 1610 | Architect | Architect | | | 043 | ☑ |
| ☑ | 1611 | Marine Architect | Marine Architect | | | 058 | ☑ |
| ☑ | 1628 | Civil Engineer | Civil Engineer | | | 053 | ☑ |
| ☑ | 1634 | Industrial Engineer | Indust Eng | | | 056 | ☑ |
| ☑ | 164 | Surveyors | Surveyors | | | 063 | ☑ |
| ☑ | 321 | Receptionist | Receptionist | | | NA | ☐ |

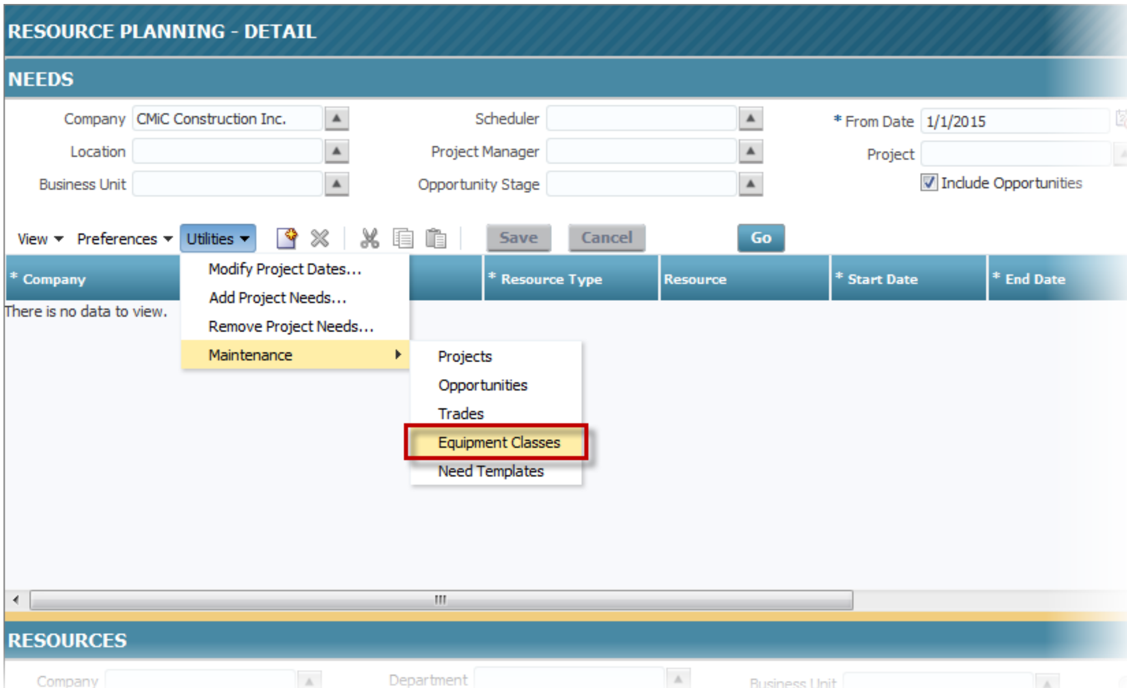
*Sample of Trade Codes Maintenance screen (program: PYTRADES)*

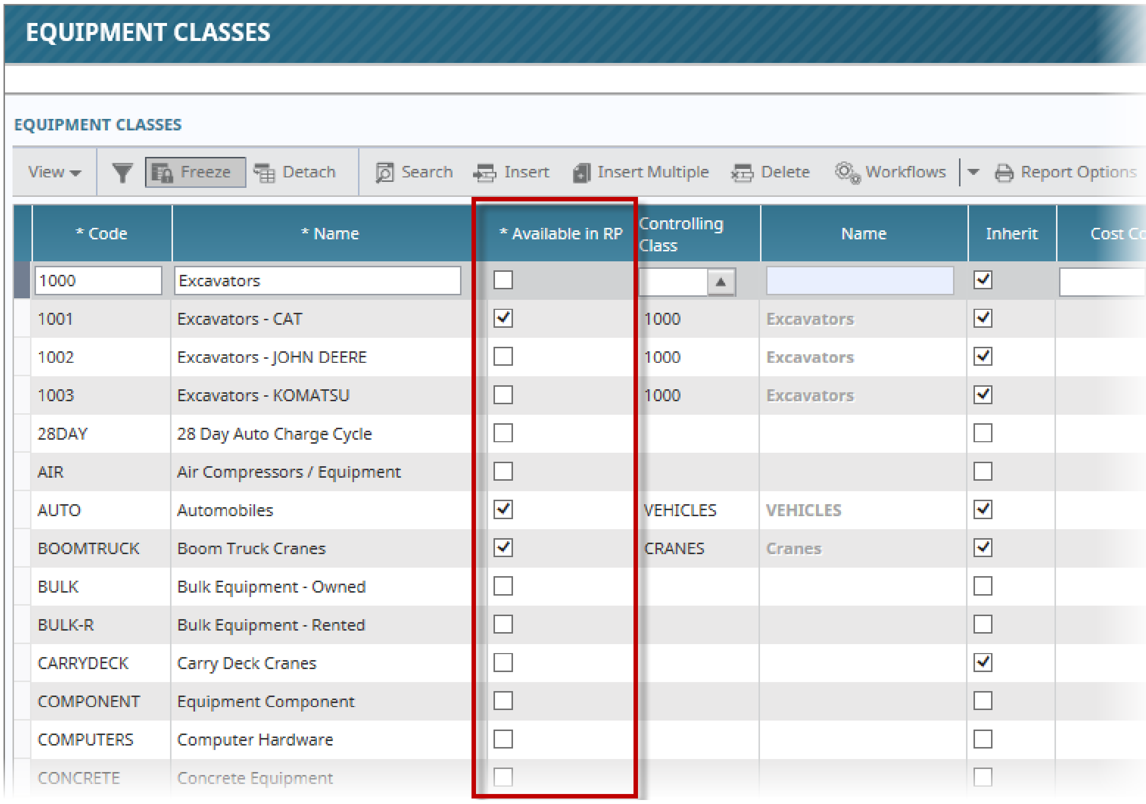
To make a particular trade available in Resource Planning, click its **Available in RP** checkbox, shown above.

# Select Equipment Classes for Resource Planning

Initially, no equipment classes and instances of them are available in Resource Planning, as not all equipment classes may be relevant in this module.

The Equipment Classes Maintenance screen (program: EMCLASS, in Equipment Costing module) is used to select which equipment classes, and instances of them, are available in Resource Planning. It can be conveniently launched via the **Equipment Classes** menu option under the **Utilities** drop-down menu on the Detail screen, shown below:




EQUIPMENT CLASSES

EQUIPMENT CLASSES

View | Freeze | Detach | Search | Insert | Insert Multiple | Delete | Workflows | Report Options

| * Code | * Name | * Available in RP | Controlling Class | Name | Inherit | Cost Co |
|---|---|---|---|---|---|---|
| 1000 | Excavators | ☐ | | | ☑ | |
| 1001 | Excavators - CAT | ☑ | 1000 | Excavators | ☑ | |
| 1002 | Excavators - JOHN DEERE | ☐ | 1000 | Excavators | ☑ | |
| 1003 | Excavators - KOMATSU | ☐ | 1000 | Excavators | ☑ | |
| 28DAY | 28 Day Auto Charge Cycle | ☐ | | | ☐ | |
| AIR | Air Compressors / Equipment | ☐ | | | ☐ | |
| AUTO | Automobiles | ☑ | VEHICLES | VEHICLES | ☑ | |
| BOOMTRUCK | Boom Truck Cranes | ☑ | CRANES | Cranes | ☑ | |
| BULK | Bulk Equipment - Owned | ☐ | | | ☐ | |
| BULK-R | Bulk Equipment - Rented | ☐ | | | ☐ | |
| CARRYDECK | Carry Deck Cranes | ☐ | | | ☑ | |
| COMPONENT | Equipment Component | ☐ | | | ☐ | |
| COMPUTERS | Computer Hardware | ☐ | | | ☐ | |
| CONCRETE | Concrete Equipment | ☐ | | | ☐ | |

*Sample of Equipment Classes Maintenance screen (program: EMCLASS; standard Treeview path: Equipment Costing > Setup > Local Tables > Equipment Classes)*

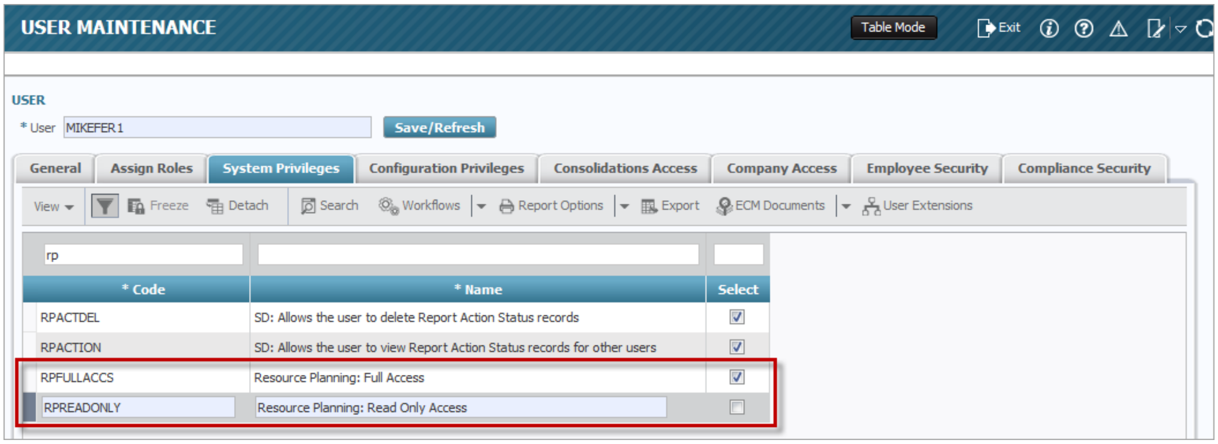
To make a particular equipment class available in Resource Planning, click its **Available in RP** checkbox, shown above.

# Security

## System Privileges for Resource Planning

To use Resource Planning, a user must be given the appropriate system privileges. This is done through the **System Privileges** tab on the User Maintenance screen (standard Treeview path: *System > Security > Users > User Maintenance*), detailed in the following subsections.

## Option 1: Add System Privileges for RP to User ID

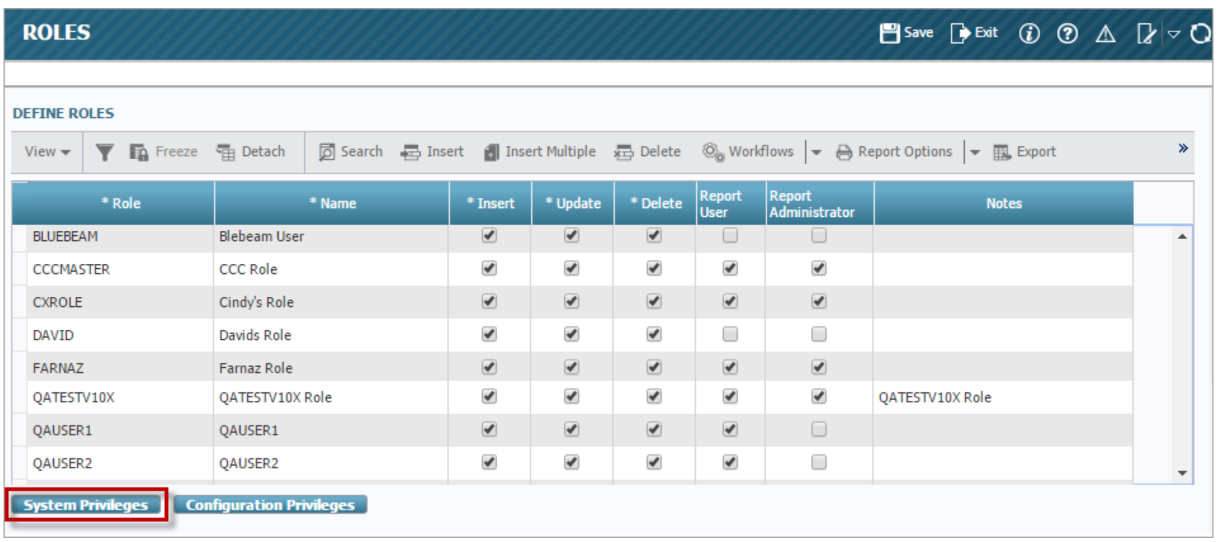



*Program: SDUSRMNT; User Maintenance screen – **System Privileges** tab*

For Resource Planning, a user can be granted either full access or read-only access. This is done on the **System Privileges** tab of the User Maintenance screen (shown above).

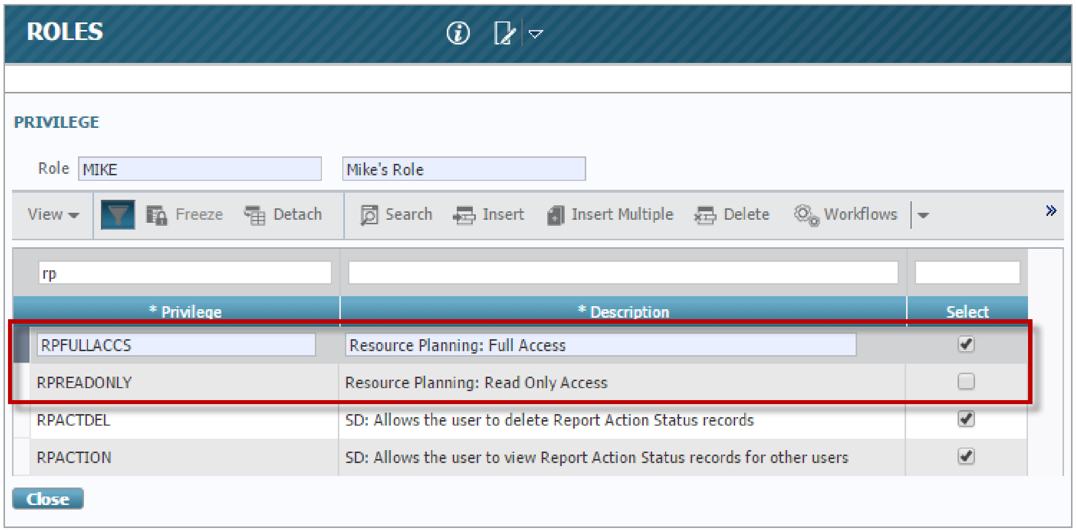
To grant full access, select the **RPFULLACCS** code, and to grant read-only access, select the **RPREADONLY** code.

## Option 2: Add System Privileges for RP to Security Role




*Sample of Define Roles screen.*

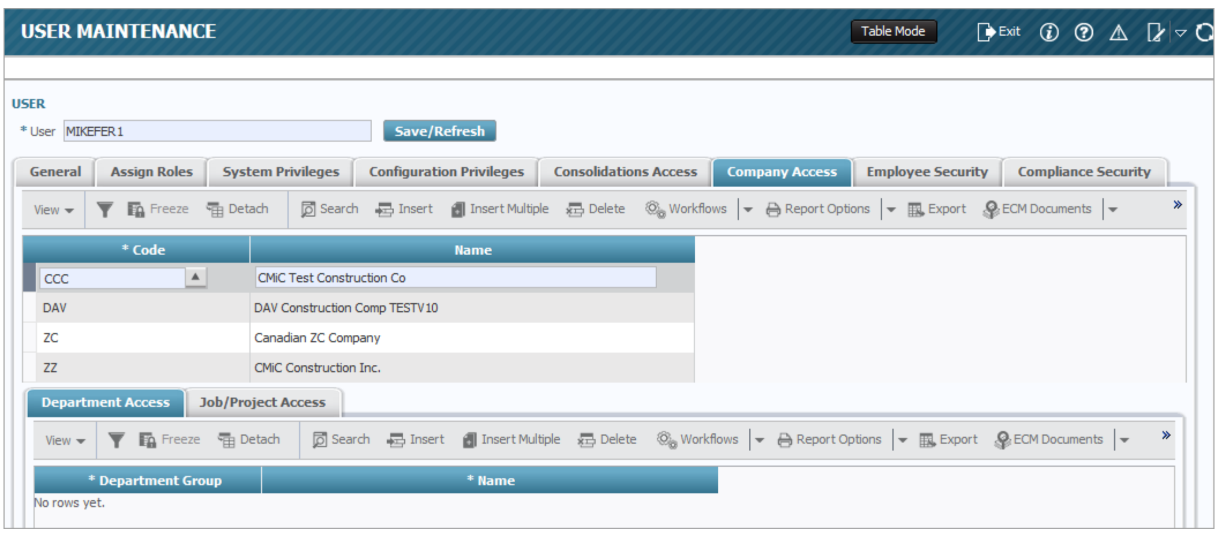
To add system privileges for Resource Planning to a Security Role, launch the Define Roles screen (standard Treeview path: *System* > *Security* > *Roles* > *Define Roles*), select the relevant Role, then scroll to the bottom of the screen and click the [**System Privileges**] button, framed above.



The above screenshot shows the two privileges for Resource Planning in the System Privileges popup.

To grant full access, select the **RPFULLACCS** code, and to grant read-only access, select the **RPREADONLY** code.

## Access to Companies in Resource Planning

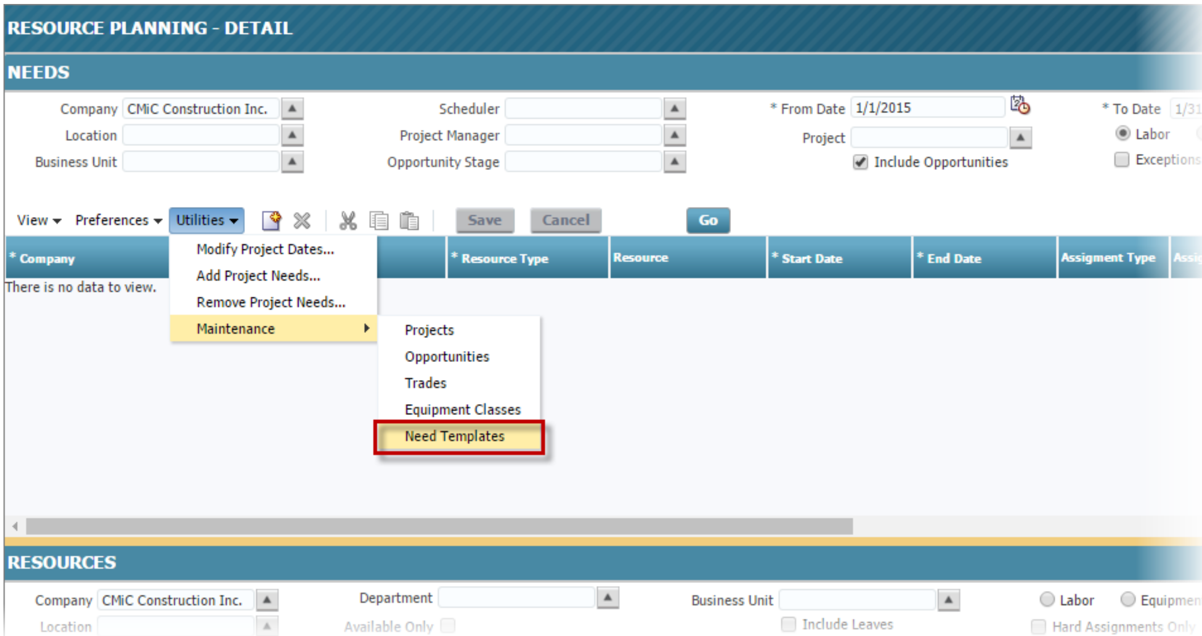


*Program: SDUSRMNT; User Maintenance screen – **Company Access** tab*

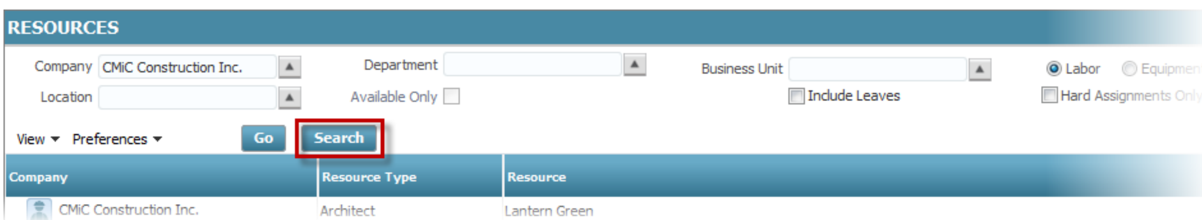
To access data from a Company in Resource Planning, a user must have security access to the Company. This is done on the **Company Access** tab of the User Maintenance screen (standard Treeview path: *System > Security > Users > User Maintenance*).

To grant a user security access to a Company, click [**Insert**] on the upper Block Toolbar to insert the required Company. To remove a user's access to a Company, select it and click [**Delete**] on the upper Block Toolbar.

# Access to Needs Template Maintenance & Resource Planning Search Screens



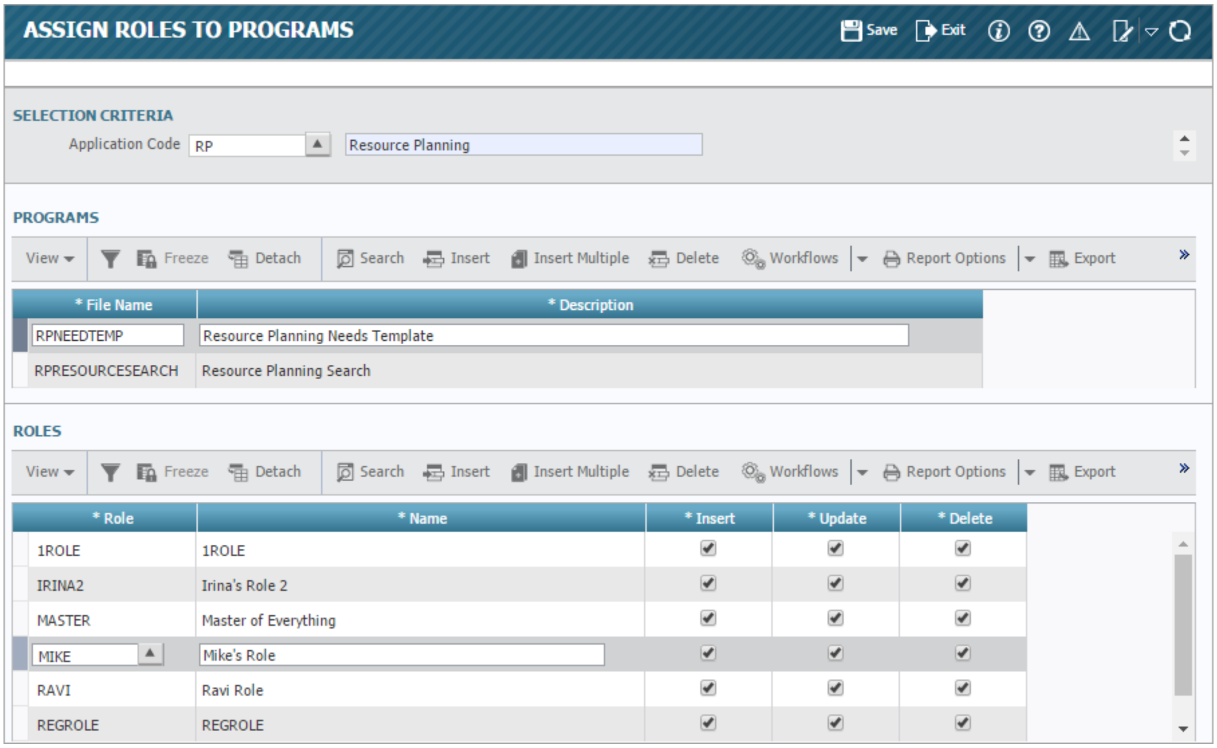

*Sample of **Need Templates** menu option, under **Needs** section of Detail screen, to launch Needs Template Maintenance screen.*




*Sample of [**Search**] button, under **Resources** section of Detail screen, to launch Resource Planning Search screen.*

In the Detail screen, to access the Needs Template Maintenance and Resource Planning Search screens, shown above, Insert, Update, and Delete privileges for the programs must be granted. This is done using either of the following two options.

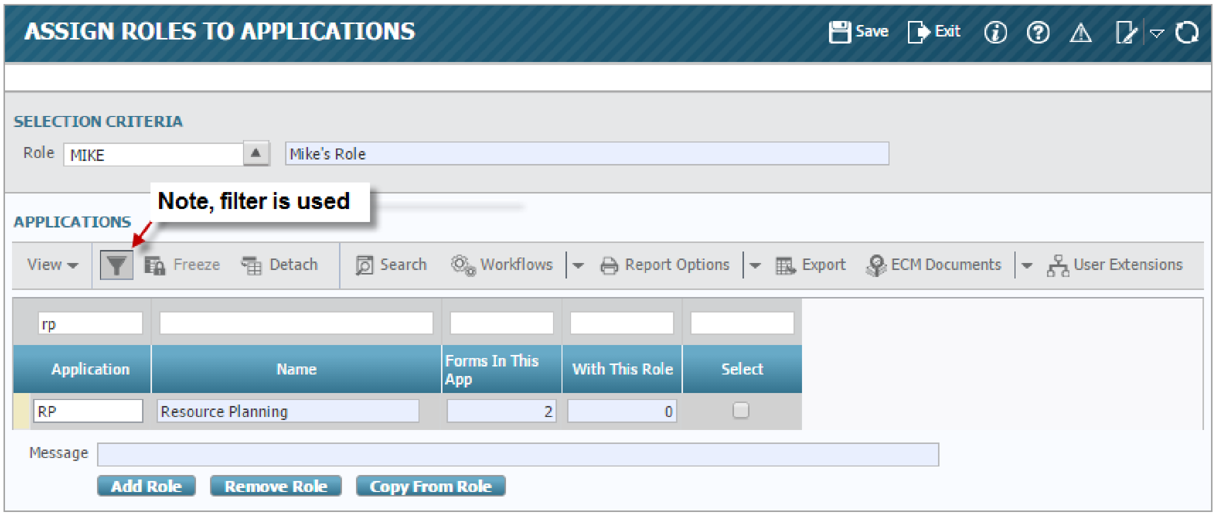
## Option 1: Grant Security Role Access to Screens Individually




To grant a Role access to the Needs Template Maintenance and Resource Planning Search screens individually, launch the Assign Roles to Programs screen (standard Treeview path: *System* > *Security* > *Roles* > *Assign Roles to Programs*), and select or enter **RP** via the **Application Code** field, under the **Selection Criteria** section.

Under the **Programs** section, the **Resource Planning Needs Template (RPNEEDTEMP)** and **Resource Planning Search** (**RPRESOURCESEARCH**) security settings become available. When one of these options is selected, the Roles that have access to it are displayed under the **Roles** section. To grant a Roll access to the option, insert the Role in the table under the **Roles** section, then configure the **Insert**, **Update**, and **Delete** privileges for the Role.

## Option 2: Grant Security Role Full Access to Screens in Bulk



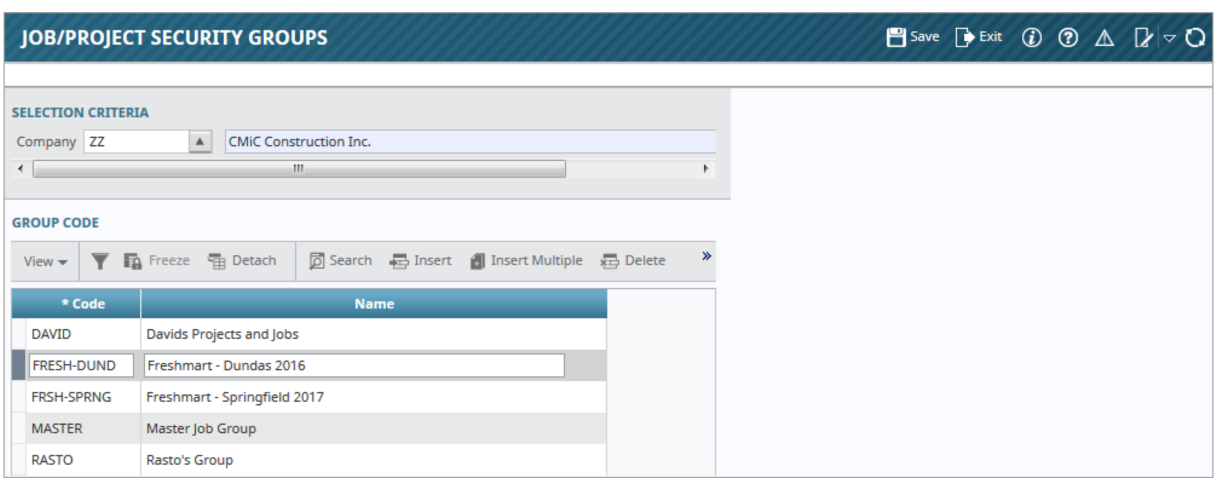

To grant a Role full access (insert, update & delete privileges) to the Needs Template Maintenance and Resource Planning Search screens in bulk, launch the Assign Roles to Applications screen (standard Treeview path: *System > Security > Roles > Assign Roles to Applications*), and select or enter the Role via the **Role** field, under the **Selection Criteria** section.

Under the **Applications** section, select the Resource Planning application, check the row's **Select** checkbox, then click the [**Add Role**] button, along the bottom of the screen. This grants insert, update, and delete privileges for the Role, for both the **RPNEEDTEMP** (Needs Template Maintenance**)** and **RPRESOURCESEARCH** (Resource Planning Search) security settings for the screens.

# Project Security

A user's access to Projects is controlled by the System module's Jobs/Projects Security functionality, as documented below (standard Treeview path: *System > Security > Job/Project Security*).

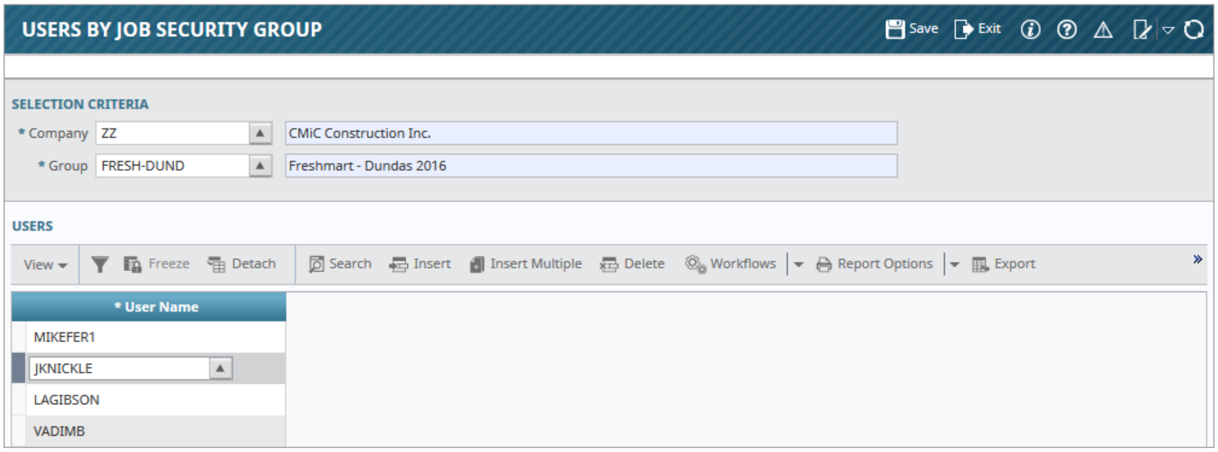
## Step 1: **Create Job/Project Security Group**




*Pgm: JCSECGRP – Job/Project Security Groups maintenance screen*

This screen is used to create Job/Project Security Groups, which are associated to Jobs and Projects, and to Users that are to have access to the associated Jobs and Projects.

## Step 2: **Assign Users to Job/Project Security Groups**

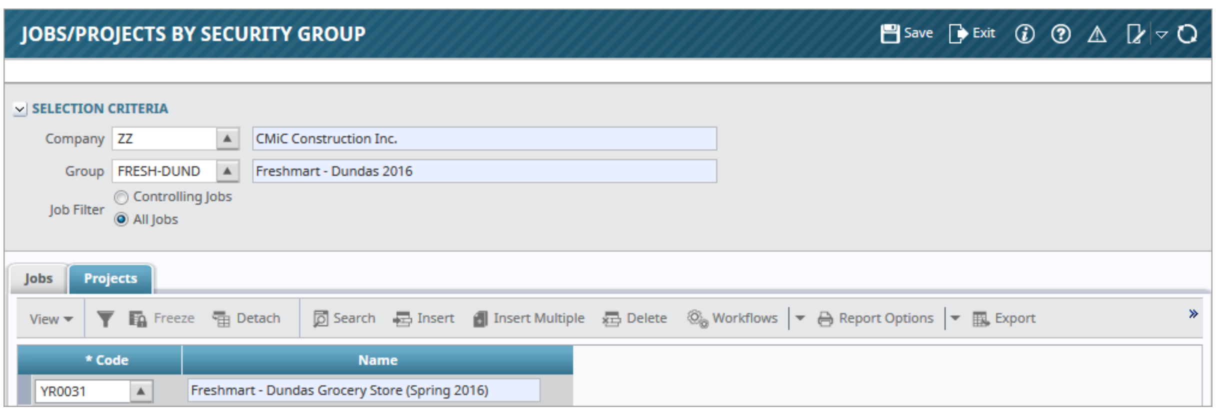



*Pgm: JCSECUSR – Assign Users to Security Groups*

This screen is used to associate Users to a Job/Project Security Group, to grant them access to the Jobs and Projects associated to the security group.

To add users to a Job/Project Security Group, select the relevant Company via the **Company** field and group via the **Group** field, then insert the Users in the table under the **Users** section.

## Step 3: **Assign Jobs & Projects to Job/Project Security Groups**



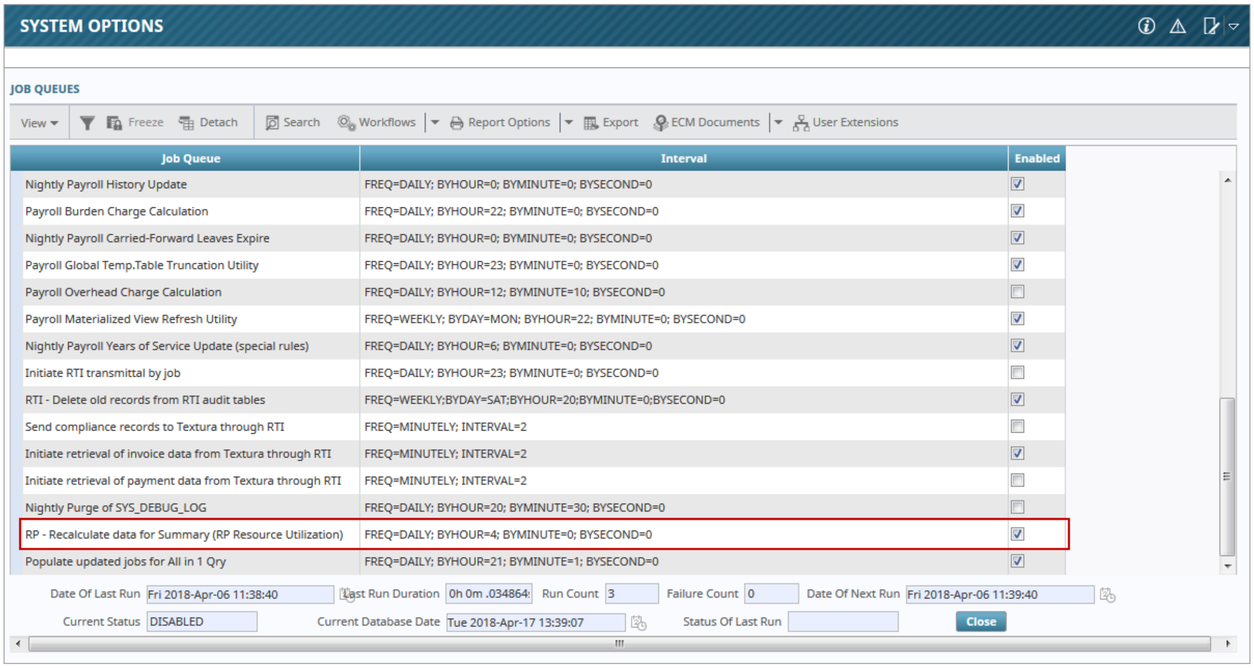

*Pgm: JCSECJOB – Assign Jobs/Projects to Security Groups*

This screen is used to associate Jobs and Projects to a Job/Project Security Group, so that Users assigned to the group have access to them.

To add Jobs and Projects to a Job/Project Security Group, select the relevant Company via the **Company** field and group via the **Group** field. Then, using the **Job Filter** radio buttons, select whether you want only Controlling Jobs or all Jobs available in the **Jobs** tab.

Use the **Jobs** tab to insert Jobs the group may access, and use the **Projects** tab to insert Projects the group may access.

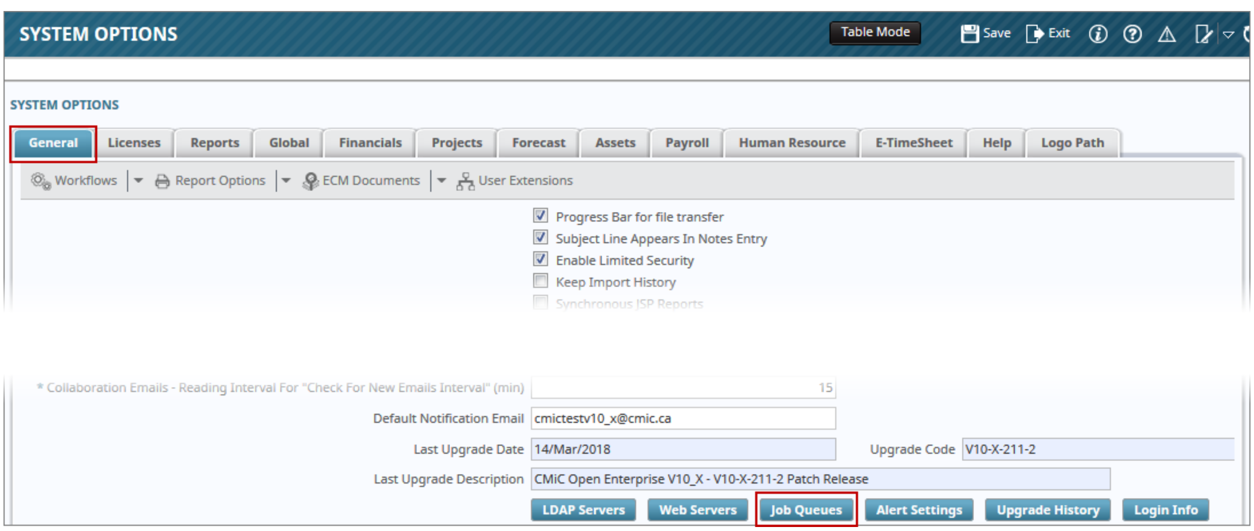
# System's Oracle Job for Summary Screen's Calculations




*Pgm: SYSOPT; sample of Job Queues popup launched from* ***General*** *tab of the System Options screen.*

To improve the performance of the Summary screen, there is an Oracle Job that automatically runs nightly to calculate the utilization of Resources.

If you would like to re-configure this nightly Oracle Job, use the Job Queues screen (shown above), which is launched using the [**Job Queues**] button on the **General** tab of the System Options screen:




*Pgm: SYSOPT; sample of System Options screen; standard path: System > Setup > System Options.*

The following are details about the clauses used by this Nightly Job from the following webpage about Oracle's DBMS Scheduler: https://docs.oracle.com/database/121/ARPLS/d_sched.htm#ARPLS72235.

| Clause | Description |
|---|---|
| **FREQ** | This specifies the type of recurrence. It must be specified. The possible predefined frequency values are **YEARLY**, **MONTHLY**, **WEEKLY**, **DAILY**, **HOURLY**, **MINUTELY**, and **SECONDLY**. Alternatively, specifies an existing schedule to use as a user-defined frequency. |
| **BYHOUR** | This specifies the hour on which the job is to run. Valid values are **0** to **23**. As an example, 10 means 10 a.m. |
| **BYMINUTE** | This specifies the minute on which the job is to run. Valid values are **0** to **59**. As an example, 45 means 45 minutes past the chosen hour. |
| **BYSECOND** | This specifies the second on which the job is to run. Valid values are **0** to **59**. As an example, 30 means 30 seconds past the chosen minute. |

# Deep Linking: URLs with Parameters to Launch RP

This section provides details about how to format URLs to launch the Summary and Details screens of Resource Planning using filters.

**NOTE**: When a Project ORASEQ is passed as a parameter, the **From Date** filter field will be populated with Project's Start Date, and the **To Date** filter field will be populated with maximum date available for the current Time Scale. This is implemented to query a time frame that is relevant for the specified Project.

## Filtered by Project

The Summary and Details screens can be loaded for a particular Project. To identify the Project to filter a screen by, a Project's ORASEQ number is used, as it is unique across all Companies.

| Replacement Field | Description |
|---|---|
| ***<Environment URL>*** | URL location of database |
| ***<Project ORASEQ>*** | identifying ORASEQ number of Project |

### Summary Screen Filtered by Project

***<Environment URL>***/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&project-oraseq=***<Project ORASEQ >***

**Example** (using above screenshot):

**prodv10x.SomeCompany.com:7785/SomeCompanyProd**/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&project-oraseq=**448957755**

### Details Screen Filtered by Project

***<Environment URL>***/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&project-oraseq= ***<Project ORASEQ>***

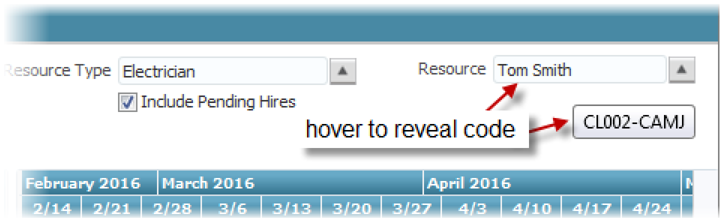
## Filtered by Resource

The Details screen can be loaded for a particular Resource, in which case the **Needs** section's **Resource Type** field is set to the Resource's type, and the **Resources** section's **Resource Type** and **Resource** fields are set to the Resource's type and name respectively.

To load the Details screens for a particular Resource, the URL must specify the following:

1. Whether Resource is of the Labor or Equipment variety, using keyword “**TRADE**” for Labor, and keyword “**EQP**” for Equipment.
2. Code identifying the Resource

As shown below, hover over the **Resource** field (in **Resources** section) to reveal the code, or click the field’s up-arrow to launch the popup to view the list of Resources and their codes.




| Replacement Field | Description |
|---|---|
| ***<Environment URL>*** | URL location of database |
| **{TRADE/EQP}** | • “**TRADE**” keyword indicates Resource Type is Labor<br>• “**EQP**” keyword indicates Resource Type is Equipment |
| ***<Resource Code>*** | code identifying particular Resource |

### Detail Screen Filtered by Resource

<***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&type=**{TRADE/EQP}**&resource-code=**<*Resource Code*>**

**Example**:

**prodv10x.SomeCompany.com:7785**/**SomeCompanyProd**/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&type=**EQP**&resource-code=**EXC473**

## Filter by Resource Type

The Summary and Details screens can be loaded for a particular Resource Type (e.g., Carpenter, Electrician, Crane, Front Loader…). To do so, the URL must specify:

1. Whether Resource Type is of the Labor or Equipment variety, using keyword “**TRADE**” for Labor, and keyword “**EQP**” for Equipment.
2. Code of Resource Type

To view the codes for Resource Types, click the **Resource Type** field’s up-arrow to launch its popup, which lists Resource Types and their codes.

| Replacement Field | Description |
|---|---|
| ***<Environment URL>*** | URL location of database |
| **{TRADE/EQP}** | • “**TRADE**” keyword indicates type is Labor<br>• “**EQP**” keyword indicates type is Equipment |
| ***<Resource Type Code>*** | code identifying particular Resource Type |

### Summary Screen Filtered by Resource Type

<***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&type=**{TRADE/EQP}**&resource-type-code=**<*Resource Type Code*>**

**Example**:

**prodv10x.SomeCompany.com:7785**/**SomeCompanyProd**/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&type=**TRADE**&resource-type-code=**GLAB**

### Detail Screen Filtered by Resource Type

<***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&type=**{TRADE/EQP}**&resource-type-code=**<*Resource Type Code*>**

## Filter by Needs Company

The Summary and Details screens can be loaded for a particular Needs Company.

Hover over the **Company** field to reveal the code, or click the field's up-arrow to launch the popup to view the list of Companies and their codes.

| Replacement Field | Description |
|---|---|
| **<*Environment URL*>** | URL location of database |
| <***Company Code***> | code identifying Needs Company |

### Summary Screen Filtered by Needs Company

<***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&ncc=**<*Company Code*>**

**Example**:

**prodv10x.SomeCompany.com:7785**/**SomeCompanyProd**/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&ncc=**CCC**

### Detail Screen Filtered by Needs Company

<***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&ncc=**<*Company Code*>**

## Filter by Resources Company

The Summary and Details screens can be loaded for a particular Resources Company.

Hover over the **Company** field to reveal the code, or click the field's up-arrow to launch the popup to view the list of Companies and their codes.

| Replacement Field | Description |
|---|---|
| **<*Environment URL*>** | URL location of database |
| <***Company Code***> | code identifying Resources Company |

### Summary Screen Filtered by Resource Company

<***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&rcc=**<*Company Code*>**

**Example**:

**prodv10x.SomeCompany.com:7785**/**SomeCompanyProd**/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&rcc=**CCC**

### Detail Screen Filtered by Resource Company

<***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&rcc=***<Company Code>***

## Filter by Scheduler

The Summary and Details screens can be loaded for a particular Scheduler. To do so, the code for either the Need Company or the Project is required.

Click the **Scheduler** field's up-arrow to launch the popup to view the list of Schedulers.

| Replacement Field | Description |
|---|---|
| ***<Environment URL>*** | URL location of database |
| ***<Scheduler Name>*** | first and last name of Scheduler; format: first name, space, last name (e.g. "Joe Smith") |
| ***<Needs Company Code>*** | code identifying Needs Company |
| ***<Project ORASEQ>*** | identifying ORASEQ number of Project |

### Summary Screen Filtered by Scheduler

1. **Using Needs Company Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&ncc=***<Needs Company Code>***&sclr=<***Scheduler Name***>

   **Example**:
   **prodv10x.SomeCompany.com:7785/SomeCompanyProd**/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&ncc=**ZZ**&sclr=**Kan Reeve**

2. **Using Project ORASEQ:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&project-oraseq=***<Project ORASEQ>***&sclr=<***Scheduler Name***>

### Detail Screen Filtered by Scheduler

1. **Using Needs Company Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&ncc=***<Needs Company Code>***&sclr=<***Scheduler Name***>

   **Example**:
   **prodv10x.SomeCompany.com:7785/SomeCompanyProd**/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&ncc=**ZZ**&sclr=**Kan Reeve**

2. **Using Project ORASEQ:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&project-oraseq=***<Project ORASEQ>***&sclr=<***Scheduler Name***>

## Filter by Department

The Summary and Details screens can be loaded for a particular Needs or Resources Department.

| Replacement Field | Description |
|---|---|

| | |
|---|---|
| ***<Environment URL>*** | URL location of database |
| ***<Needs Company Code>*** | code identifying Needs Company |
| ***<Needs Department Code>*** | code identifying Needs Department |
| ***<Resources Company Code>*** | code identifying Resources Company |
| ***<Resources Department Code>*** | code identifying Resources Department |
| ***<Project ORASEQ>*** | code identifying Project |

## Summary Screen Filtered by Department

### Needs Department Filtering

1. **Using Needs Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&ndc=***<Needs Department Code>***

2. **Using Project ORASEQ & Needs Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&project-oraseq=***<Project ORASEQ>***&ndc=***<Needs Department Code>***

3. **Using Needs Company Code & Needs Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&ncc=<***Needs Company Code***>&ndc=***<Needs Department Code>***

### Resources Department Filtering

1. **Using Resources Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&rdc=***<Resources Department Code>***

2. **Using Needs Company Code & Resources Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=summaryPage&ncc=<***Needs Company Code***>&rdc=***<Resources Department Code>***

## Detail Screen Filtered by Scheduler

### Needs Department Filtering – Needs Section

1. **Using Needs Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&ndc=***<Needs Department Code>***

2. **Using Project ORASEQ & Needs Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&project-oraseq=***<Project ORASEQ>***&ndc=***<Needs Department Code>***

3. **Using Needs Company Code & Needs Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&ncc=<***Needs Company Code***>&ndc=***<Needs Department Code>***

4. **Using Project ORASEQ & Multiple Needs Department Codes:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&project-oraseq=***<Project ORASEQ>***&ndc=***<Needs Department Code 1>***&ndc=***<Needs Department Code 2>*** &ndc=***<Needs Department Code 3>***

5. **Using Needs Company Code & Multiple Needs Department Codes:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&ncc=<***Needs Company Code***>&ndc=***<Needs Department Code 1>***&ndc=***<Needs Department Code 2>*** &ndc=***<Needs Department Code 3>***

### Resources Department Filtering – Resources Section

1. **Using Resources Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&rdc=***<Resources Department Code>***

2. **Using Resources Company Code & Resources Department Code:**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&rcc=<***Resources Company Code***>&rdc=***<Resources Department Code>***

3. **Using Resources Company Code & Multiple Resources Department Codes**

   <***Environment URL***>/RpResourcePlanner/faces/forwarder.jsf?initialPage=detailsPage&rcc=<***Resources Company Code***>&rdc=***<Resources Department Code 1>***&rdc=***<Resources Department Code 2>***&rdc=***<Resources Department Code 3>***

# Make RP Accessible In Enterprise

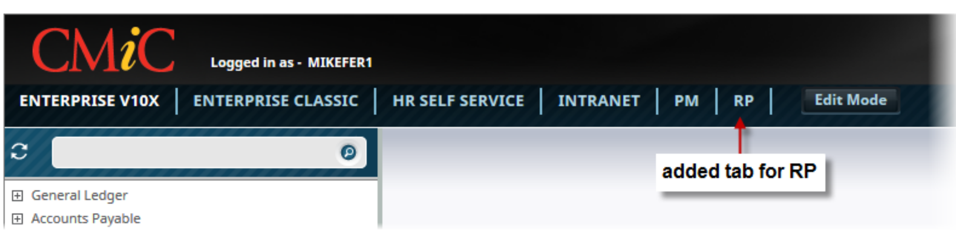
## Add RP Link to Treeview

To add a Resource Planning link to a Treeview, please refer to the *V10xTOOLS ADF - UI Treeview Builder* reference guide in conjunction with the following instructions.

In the UI Treeview Builder tool, after a new menu item has been added to the relevant Treeview for Resource Planning, use the **Item Properties** section to set the **Target Type** field to "**External URL**".

Next, create a new Target of the "**External URL**" type and format the URL according to the details under this reference guide's *Deep Linking: URLs with Parameters to Launch RP* section. Finally, select the created Target via the **Target Name** field.

## Create New UI Console Tab for RP




To create a new tab on the UI Console to launch the screens of RP, as shown above, please refer to the *V10xTOOLS – Console* reference guide in conjunction with the following instructions.

With the UI Console in Edit mode, add a new tab, then edit the **Region Content** so that the **Content Type** field is set to "**Menu**" and the **Menu Type** field is set to "**v10x Menu**". After the **Menu Description** drop-down field becomes available, select "**Resource Planning Menu**". To finish, save the UI Console.

Now, when the new tab is clicked, the Treeview region contains links to launch the screens of RP.

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