

BUILDER™ Inventory Guide

Version 3.5.5

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Table of Contents

Welcome to BUILDER™	4
Using this Guide	5
What's New in BUILDER	6
Introduction to Inventory	10
Planning Inventory	10
Inventory Rollup	13
Working with Organizations	16
Add an Organization	17
Edit Organization Inventory Data	20
Delete an Organization	28
Working with Sites	31
Site-Level Properties	31
Add a Site	32
Edit Site Inventory Data	36
Generate Site Reports	52
Delete a Site	54
Working with Complexes	56
About Grouping Buildings into Complexes	56
Add a Complex	57
Edit Complex Inventory Data	61
Generate Complex Reports	76
Delete a Complex	78
Working with Buildings	80
Add a Building	82
Assign Buildings to a Complex	86
Edit Building General Information	88
Edit Additional Building Inventory Data	95
Generate Building Reports	110
Delete a Building	112

About the Mission Dependency Index	115
About the Building Current Status Property	115
Use Current Status to Track Non-Current Inventory	118
Systems, Components, and Component-Sections	121
About Identifying Systems, Components and Sections	121
BUILDER Systems and Components	126
Working with Systems	129
Add a System	129
Edit System Data	131
Generate System Reports	142
Delete a System	145
Working with Components	147
Add a Component	147
Edit Component Data	149
Generate Component Reports	160
Delete a Component	162
Working with Component-Sections	164
Sampling	164
Add a Component-Section	165
Edit a Component-Section	168
Add, Edit, or Delete Section Details	183
Generate Component-Section Reports	191
Delete a Component-Section	193
The Effect of the "Estimated" Checkbox for a Component-Section	194
Remote Inspection and Inventory Entry Using BuilderRED	197
What is BuilderRED?	197
Collecting Inventory Data	197
Performing Inspections	197
Export Data to BuilderRED	197
Unlock Inventory Files	207
Import Data from BuilderRED to BUILDER	210

Working with Rapid Inventory Methods	214
Method Availability	214
List of Rapid Inventory Methods	215
Copy Inventory to Another Building	216
Copy Sections	218
Building Templates	220
Working with Building Templates	221
About Creating a Template	222
About Managing the Template Library	223
About Using a Template to Create Inventory	223
Building Template Tasks	223
Add Building Inventory Using a Template	224
Import a Building Template	231
Copy Building Inventory to a Template	234
Add a Building Template	236
Edit Building Template Data	244
Delete a Building Template	250
Manage the Template Library	252
Export a Building Template	253
Reports	256
Generate a Report	256
Export a Report	258
Appendix A: About Rollup	260
Automated Rollup	260
Appendix B: BUILDER Systems and Components	262
Appendix C: Facility Condition Index	265
Definition of \$current repair needs	265
Glossary	267
Index	275

Welcome to BUILDER™

BUILDER, part of the Sustainment Management System, provides facility managers with the tools needed to generate the greatest impact from maintenance and rehabilitation activities, and to plan and defend maintenance budgets.

The primary measure used in BUILDER is the *condition index* (CI) rating, using a 0 to 100 point scale. After real property inventory has been subdivided into hierarchical levels of increasing fineness, down to the Component-Section level, the condition index for each Component-Section is computed from inspection data that records the type, severity, and density of each distress found.

Deterioration curves, developed from experience over time, show the optimal point at which work should be done to avoid more costly rehabilitation projects later.

Another measure available in BUILDER is the *functionality index* (FI), also on a 0 to 100 point scale in keeping with the SMS design philosophy. It is computed from assessment data that records the functionality issues present in a building. Based on the severity and density of those issues, building modernization requirements can be identified.

Based on condition index and/or functionality index scores, BUILDER can generate recommended work items automatically. Using cost books associated with BUILDER, cost estimates are attached to the work items. Managers can then choose which work items to fund. The cost of *not* funding work items can be determined using Scenarios.

With the assistance of the Scenarios simulation engine included as part of BUILDER, managers can develop long-range work plans based on a sound investment strategy. By providing an objective description of condition (a core BUILDER functionality) and an automated means of exploring various options under different budget scenarios (Scenarios), BUILDER and Scenarios together make multi-year work plans easier to formulate and funding requests easier to justify. The goal is optimal facility performance for the dollars invested.

For information, announcements, links to documents, and discussion forums, visit the SMS community user's group website at <https://support.sms.erdcdren.mil>.



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2/10/2022

Using this Guide

This guide explains how to create and maintain real property inventory in the Sustainment Management System with BUILDER™.

Prerequisite

This guide assumes that you are already familiar with the material in the *BUILDER™ Getting Started Guide*, which can be downloaded from the user support site.

What's New in BUILDER

This topic describes changes made in BUILDER Version 3.5.

Version 3.5.5 Changes

In BUILDER Version 3.5.5., the ability to add customized attributes for describing assets has been added at each level of inventory.

In the user documentation, descriptions of the following have been added for each level of inventory:

- How to generate reports
- How to apply cost modifiers
- How to add customized attributes

Version 3.5.4 Changes

Inventory Events in Scenarios

The **Inventory Events** tab has been restored to Scenarios ("New Management" option). This allows future changes in a Building's status to be simulated in Scenarios. It also allows entire new Buildings to be created in future years of a Scenario.

Version 3.5.3 Changes

reCAPTCHA Verification Available for Web Login

reCAPTCHA verification has been added to the Web login page. reCAPTCHA is a verification tool used to determine if an agent attempting to access a system is a robot. This feature significantly hampers unauthorized users from gaining access to the site through automated login attempts.

reCAPTCHA is disabled by default to accommodate customers who do not have Internet access, because the verification requires an Internet connection.

To enable the reCAPTCHA verification feature, the table **dbo.Configuration** must have an entry where ConfigName="ReCaptchaAPI" and ConfigValue="True"

Version 3.5.2 Documentation Change

In the inventory topic "BUILDER Systems and Components," the table showing UNIFORMAT II Levels 2 and 3 (corresponding to BUILDER Systems and Com-

ponents) has been expanded and revised to reflect BUILDER's conformance with the NAVFAC version of UNIFORMAT II.

The new table can be viewed at Appendix B in the *BUILDER™ Inventory Guide 3.5.5* PDF available at <https://support.sms.erd.c.dren.mil/downloads/builder/help-documentation>.

New Features Introduced in BUILDER 3.5.0

Inventory Improvement

- **Component-Section Status Tracking.** Users can assign a status to individual Component-Sections. Note: In this release, business processes such as work generation, rollups, and inclusion in the navigation tree are unaffected by Component-Section status; however, the design implemented allows for expanding this capability to alter business processes at a later date.
- **Custom Configuration of Building Templates.** BUILDER Administrators can configure the allowable maximum percent difference in square footage between a building template and the building it is to be applied to. Previously the percentage was fixed at 10%.
- **Building Summary Screen Additions and Alterations.** New to the Building summary screen:
 1. Building renovation year (last year renovated)
 2. A series of checkboxes to indicate that the Building does not contain one or more of the following Systems: Plumbing; Fire Suppression; HVAC; Electrical
 3. A checklist to indicate that the Building cannot be inspected for one or more of the following reasons: not accessible; locked; secure building (escort required); under renovation.
 4. Building Status now allows some simultaneous selections through use of a second, auxiliary field.
- **Local / Selective Inventory Unlock.** This feature allows users to select particular facilities or systems to be unlocked, instead of the former "all or nothing" approach. This granular "unlocking" ability is located under **Tools > Unlock My Buildings**.

Scenarios

- **Multi-Year Scenario Work Item Tracking.** As BUILDER customers begin to incorporate Scenarios and work plans into their standard practices, there are year-to-year overlaps in planning and execution that require additional functionality in the application. The process and construction time that can be associated with a BUILDER work item often drags a work item execution

year out from the generation year. The Scenarios module now provides the option to not re-generate Work Items with statuses indicating that funds have been allocated. This will simplify the work and budget projections as Scenarios will no longer be counting work items that have been addressed via previous funding streams.

- **POM Scenarios.** Scenarios Work Generation in Support of Program Objectives Memorandum (POM) is a new feature that allows BUILDER users to set FCI targets for their facilities as a part of their Scenario configuration. This allows Scenarios to output the funding required to meet those FCI targets, in addition to the recommended work actions. To do this, FCI targets can be established alongside work configuration Policy settings. BUILDER Scenarios generates the recommended work candidates based on the user's work configuration settings (Policy Sequences / Prioritization) and then begins "funding" work items for each facility in priority order until the FCI target is achieved. The output is a list of work items that need to be accomplished in order to meet the target FCI.
- **BUILDER Scenarios Screen Refresh.** The Microsoft Silverlight technology used to refresh BUILDER's Scenario module a few years ago is no longer supported by multiple browsers. In order to ensure continued support and access to BUILDER Scenarios, Silverlight has been replaced using Angular technology allowing for cross-browser functionality.
- **API Coverage for Scenarios.** The BUILDER web-service API has been expanded to allow privileged users to create, configure, edit, and delete Scenarios through web-based API calls.

Cost Modifiers

Users can create custom cost modifiers (adders and multipliers) that can be specified for a given BUILDER hierarchy level (Site, Building, Component-Section, etc.), and users can apply those modifiers to the specific instances that they apply to. This gives increased granularity to apply cost modifiers where they are required without over-applying them.

Functionality Assessment

- Assessors can now select the image button for a question, take a picture with their tablet camera, and immediately attach a photo to the question.
- Users now have the ability to crop and cancel pictures.

Catalog Improvement Package (Reference Books, etc.)

- **Service Life Book Improvements** – Data fields have been added to the BUILDER database for tracking BUILDER component section service life performance; average, max, min, standard deviation, etc. This will allow easier tracking of performance trends and ultimately refined life-cycle models.

- **Revised Data Structure for Cost Storage** – Data fields have been added to the BUILDER database to allow for seamless integration with third party cost data sources. This includes the ability to name the source of a given cost book as well as link the cost record entries to a third party reference identification number.
- **Reference Book Import/Export capability** – This addition allows BUILDER users to export custom cost books to an excel sheet that can then be edited and re-imported to BUILDER for more rapid cost record updating.
- **Editable Component Importance Indexes (CII) Values** – The data storage method utilized by BUILDER's cost and service life books has been applied to the Component Importance Indexes, allowing users to create custom CII Books in the same way as cost and service life books.

BUILDER Auditing Expansion

BUILDER's auditing capability has been expanded, allowing database administrators to track critical additions, edits or deletions made during users' work planning and work configuration tasks. For details, see the BUILDER 3.5.0 release notes.

BUILDER API Expansion

- **Electronic Acceptance of Cost Data.** The BUILDER web-service API has been expanded to allow privileged users to modify BUILDER cost book information and records via web-based API calls. This allows for more seamless integration with third-party cost sources as updates can be configured to be an automated back-end process.
- **Scenario API Additions.** The BUILDER web-service API has been expanded to allow privileged users to create, configure, edit, and delete Scenarios through web-based API calls.

BUILDER 3.5.0 Bug Fixes

For a list of bug fixes, please see the release notes.

Introduction to Inventory

Planning Inventory

This topic

- Provides valuable advice about how to plan the organizational structure of your inventory.
 - Provides links to features that can potentially help streamline the inventory process.
-

Your BUILDER™ inventory serves as the foundation for all that you will do with the BUILDER application. The first steps in using BUILDER are (1) to plan the hierarchical asset "tree" describing the physical inventory you manage (the subject of this topic) and (2) to construct the upper levels of that tree. The next step is to perform inventory to fill the database represented by that hierarchical tree.

The process of putting initial data into BUILDER will probably be your single most intensive effort in working with the program, but it is a one-time effort that can be aided by features described in the section on [Rapid Inventory Methods](#).

Tip: Crucial to the planning process for a new implementation of BUILDER is the issue of who decides the scope and organization of the hierarchical asset tree. It is recommended that this high-level planning step—determining the scope and organization of the tree—not be contracted out, even if "filling in" the asset tree at the lower levels (Buildings or Complexes and below) will be performed by contractors. A useful planning guidance document for government agencies and their contractors is ERDC/CERL Special Report 16-3, *BUILDER™ Sustainment Management System Implementation Planning Guide*. This guide can be found at <https://support.sms.erdcdren.mil/downloads/erdcdcerl-technical-publications>.

Planning the Organizational Structure

Organization Level

Because the most convenient approach is to build out the BUILDER asset tree from the top down, if you are introducing BUILDER for the first time and creating the tree structure for your real property data, it is preferable to analyze in advance the final scope anticipated for entry and management of properties, and to create the Organization levels that will be needed in the long run even if they will not be filled with content in the short run.

Organizations are unique in the BUILDER hierarchy in that they can be nested multiple levels deep if desired. Note, however, that this flexibility brings with it the responsibility for careful planning.

Site Level

Begin by grouping your Buildings into logical management units, typically by their geographic regions, which are represented by [Site records](#) in the BUILDER database. The Site provides a natural way to group Buildings and to apply properties that are regional in nature, such as the cost of operations and maintenance (O&M) work and the heating, ventilation and cooling (HVAC) climate.

Building Level

Next, [create Building records](#) for the Buildings at one of your Sites. A Building record includes critical information such as how the Building is used, its size, age, and number of floors. You will find that BUILDER also allows you to store, at your option, a variety of other information about a Building, such as whether it is a historical structure or a whether it is a child-occupied facility. You will also have the option to establish a [Mission Dependency Index](#) to measure quantitatively how critical the Building is to the mission for which it is used.

Complex Level

Conceptually, the Complex level in the BUILDER hierarchy comes between the Site level and the Building level. However, unlike a Site, a Complex for organizing Buildings is *optional*, and a Complex is often not created until after its constituent Buildings (or at least some of them) have been added to BUILDER.

System Level

After establishing the Building level, you begin working down toward the end level of Component-Sections hierarchically, starting with the major Systems of a Building. The Systems in BUILDER are specified by the UNIFORMAT II Classification for Building Elements (Level 2), as shown in ["BUILDER Systems and Components" on page 126](#).

You will create the Building's Systems by selecting each applicable System from a dropdown pick list. See ["BUILDER Systems and Components" on page 126](#) for a list of available Systems.

For advice on how best to allocate inventory into Systems, Components, and Sections, see ["About Identifying Systems, Components and Sections" on page 121](#).

Component Level

Each System is further decomposed into Components (UNIFORMAT Level 3 elements). Again, you will create the Component records by selecting from a pick list of Components applicable to a given System. ["BUILDER Systems and Components" on page 126](#) shows a selection of typical Components for some of the BUILDER Systems.

Component-Section Level

Creating the Component-Section ("Section") records is the most difficult and time-consuming aspect of creating the BUILDER inventory

After creating records for at least one System and at least one Component in a System, you are ready to add records that describe the individual physical items in the Building: the doors, walls, windows, plumbing fixtures, heating units, etc. These items are called Component-Sections, or simply Sections.

Component-Sections are the management unit in BUILDER. You inspect them and plan work for them, and BUILDER applies its condition assessment algorithms to them in calculating their condition index.

BUILDER uses embedded data and automated processes to determine a wealth of information about each Component-Section: its expected service life, its likely subcomponents and how its condition affects the Section as a whole, and the cost of replacing, painting, repairing, and removing it. As you might imagine, for an automated system to be able to do all of this, there are some strict rules about how you define Component-Sections.

A Component-Section consists of items that meet all of these criteria:

- All belong to the same Component.
- All are of the same Component type.
- All are of the same material/equipment category.

For example, in the Component "Exterior Doors," glass personnel doors and metal overhead doors belong in different Sections.

As long as the requirement for not mingling (a) types or (b) material/equipment category in the same Component-Section is met, you will have considerable flexibility in how you group similar items together to form a Component-Section. For example, wood doors on different sides of the Building could be grouped together. Alternatively, if weather degradation based on compass orientation is a significant factor, then west doors, north doors, etc. might be assigned to separate Component-Sections.

Once a Component-Section has been identified by (1) Component type and (2) material/equipment category, BUILDER will have sufficient information to establish a clear link between the Section (Component-Section) and the embedded data and computations that BUILDER brings to the process in order to help you with your management tasks.

Additional Guidance

Details, examples, and some suggestions about how to undertake the process of completing your BUILDER inventory are contained in the topic ["About Identifying Systems, Components and Sections" on page 121](#).

Inventory Rollup

Plant replacement value and remaining service life are inventory-related pieces of information that are aggregated upwards through the inventory tree by use of a "rollup." This topic introduces both automated and manual rollups in BUILDER.

Only inventory-related processes performed by a rollup are explained here. Condition and functionality information aggregated by a rollup are explained elsewhere in the documentation.

What does a Rollup Do?

Inventory-related processes accomplished by a rollup are as follows:

- The current remaining service life (RSL) is estimated for all Sections.
- RSL information is reflected upwards through the inventory tree.
- Plant Replacement Value (PRV) is updated at all levels. For example, if new Sections, Components, or Systems have been added to a Building, its PRV will increase.

To see a full list of all rollup processes, not just those pertaining to inventory, see ["Appendix A: About Rollup" on page 260](#)

Automated Rollup

BUILDER automatically "rolls up" inventory, condition, and functionality information nightly. (For installations with U.S. Army Corps of Engineers support service, this begins at about 6:00 p.m.). Starting at the Section level, aggregated Section-level information in each Component is recorded for the Component; aggregated Component-level information is recorded for each System; aggregated System-level information is recorded for each Building, and so forth up the entire inventory tree.

Manual Rollup

You can manually initiate a rollup if you wish. It's a good idea to do so when:

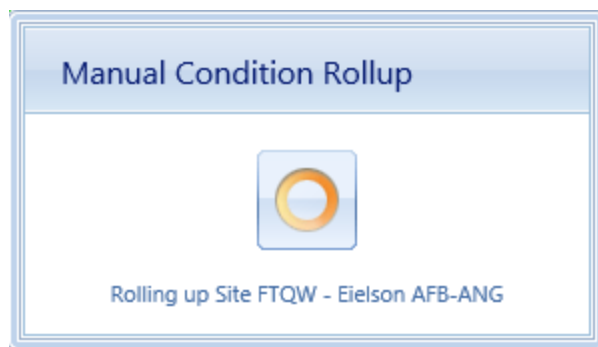
- You have entered a large quantity of inventory into BUILDER; or
- You believe that PRV or RSL information has changed since the last automated rollup and you wish to see the latest values.

Roll Up a Building

To roll up a Building,

1. Navigate to the Building in the inventory tree.
2. Right-click.
3. Select "Rollup Building" from the list of options.

While the rollup is being performed, a popup window similar to the one below will be displayed onscreen:

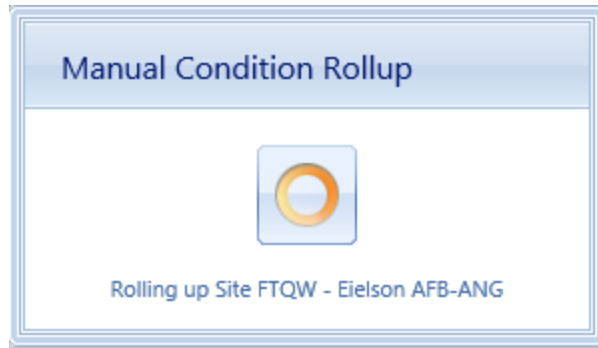


Roll Up a Complex

To roll up a Complex,

1. Navigate to the Complex in the inventory tree.
2. Right-click.
3. Select "Rollup Complex" from the list of options.

While the rollup is being performed, a popup window similar to the one below will be displayed onscreen:



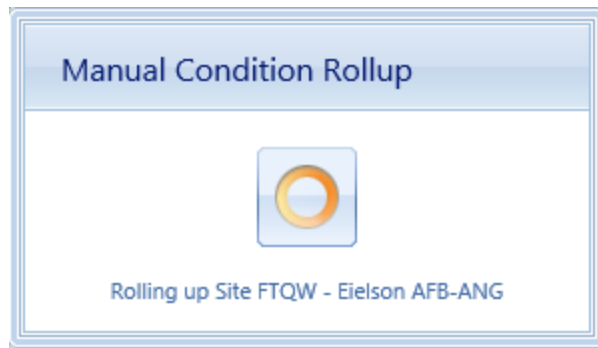
Roll Up a Site

Caution: Rolling up an entire Site can take an extremely long time (sometimes hours). If you initiate this rollup and want to cancel it, the only way to do this is to activate the "X" at the upper right of your browser window to close the window. Then log back into BUILDER from another browser window.

To roll up a Site,

1. Navigate to the Site in the inventory tree.
2. Right-click.
3. Select "Rollup Site" from the list of options.

While the rollup is being performed, a popup window similar to the one below will be displayed onscreen:



Full Rollup

If you have Administrator permission in BUILDER, you can initiate a manual rollup of the entire asset tree by selecting **Tools > Administration > Manual Condition Rollup** from the main menu. See the BUILDER Administration section of the documentation for instructions and screen shots.

Working with Organizations

An Organization is the highest level possible in the hierarchical asset tree. This topic briefly introduces the features of an Organization, and how to use it in organizing real property inventory. It also provides links to the operations that can be performed at the Organization level.

Organization is the highest level in the asset tree. (The tree may be referred to generically as the asset tree, or specifically as the inventory tree, condition tree, or functionality tree when performing tasks in one of those areas.) Tasks performed at the Organization level are generally prioritization, planning, and budgeting, rather than day-to-day management.

The Organization level in the BUILDER hierarchy is an optional level above the Site level, enabling progressive aggregation of information up the inventory tree. Progressive aggregation is possible because unlike other levels in the BUILDER hierarchy, Organizations can be nested multiple levels deep if desired. This allows the hierarchical structure of the inventory tree to be made as deep as it needs to be to reflect the structure of your company or organization.

The usefulness of an Organization is that if multiple Sites are to be managed, or if it is desired to aggregate BUILDER information across a region or network comprising more than one Site, then Sites can be grouped into one or more Organizations. Even though Organization is the highest level available, however, it is not a required level in the hierarchy. An individual inventory tree may start with either one (and only one) Organization, or one (and only one) Site at the topmost level of that tree.

Note: Preferably, Organizations should be established before Sites. This task is best assigned to a BUILDER Administrator, once the initial planning stage has been performed.

Organization Tasks

Tasks that can be performed on Organizations are:

["Add an Organization" on the facing page](#)

["Edit Organization Inventory Data" on page 20](#)

["Delete an Organization" on page 28](#)

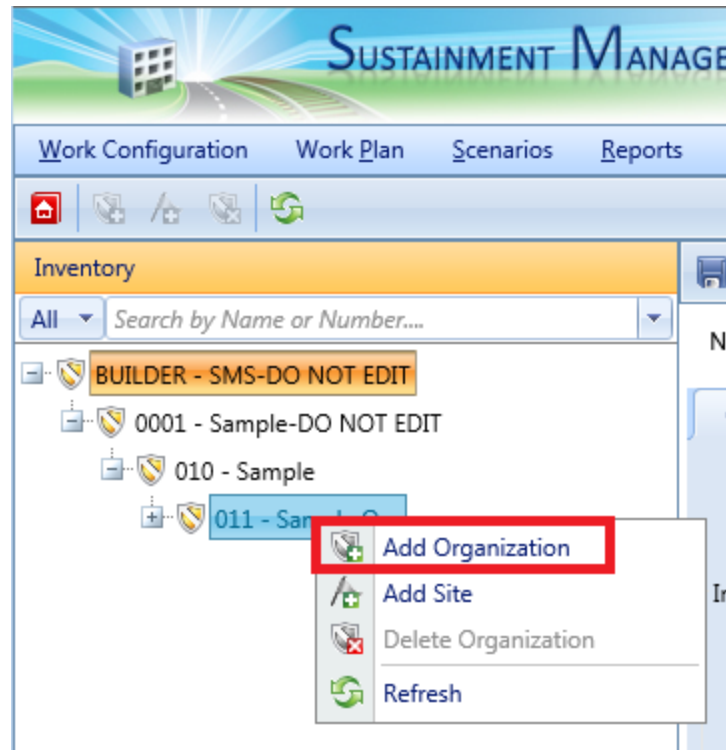
Add an Organization

This topic shows how to add an Organization and describes the required information to be entered. Additional information that can be entered is described in the topic "Edit Organization Inventory Data."

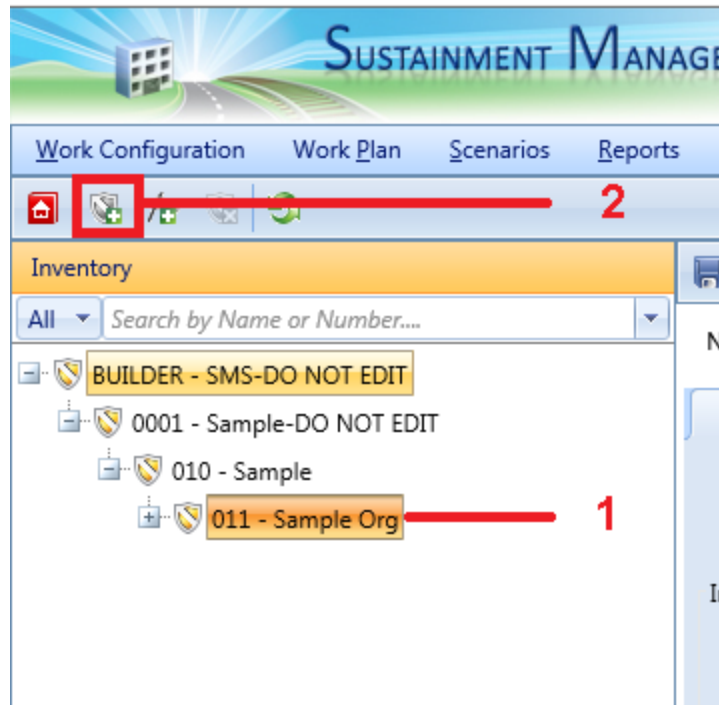
Permissions Note: This action requires Master Planner or Administrator permission for the relevant asset.

To add a new Organization,

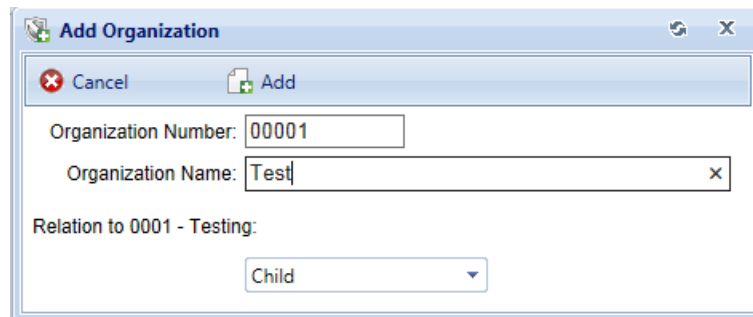
1. Navigate in the inventory tree to the Organization you wish to add the new Organization under. this will be referred to as the "parent" Organization.
2. Do one of the following:
 - a. Right-click the parent Organization. Then select "Add Organization" from the options.



- b. Alternatively, select the parent Organization. Then activate the **Add Organization** icon on the main toolbar, above the navigation tree.



The "Add Organization" popup window will appear.



3. Enter required data, as described in the section below.

Enter Required Organization Data

This documentation segment describes the minimum data to be entered when creating a new Organization. Other data that can be entered is described in the topic "Edit Organization Inventory Data."

In the "Add Organization" popup window, enter the following required data:

1. **Organization ID Number.** Enter the identifying number for the Organization. Organization Number may be left blank if you wish to supply only a name. You must enter at least Organization name or an Organization number, and

the combination of the two must be unique among the Organizations in the navigation tree.

Specifications: The ID Number is limited to 12 alphanumeric characters.

2. **Organization Name.** Enter the identifying name for this Organization, limited to 50 alphanumeric characters. Organization Name may be left blank if you wish to supply only a number. You must enter at least a Organization name or an Organization number, and the combination of the two must be unique among the Organizations in the navigation tree.

Specifications: The name is limited to 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

3. **Relation.** Specify the relation of the Organization being created to the selected existing Organization or Site on the inventory tree. There are three options for the relation:
 - a. **Child** - The Organization will be placed under the selected Organization. A child Organization can only be created when an Organization is selected in the inventory tree; an Organization cannot be the child of a Site.
 - b. **Parent** - The Organization will be placed above the selected Organization or Site.

WARNING: Do NOT use the parent relation option without engaging in close *advance* coordination with a BUILDER support representative.

- c. **Sibling** - The Organization will be placed at the same level as the selected Organization.

Note: The top ("root") level Organization is not allowed to have a sibling Organization.

Confirm or Cancel

Once the required minimum Organization data is entered,

- a. Activate the **Add** button on the popup toolbar to create the Organization.
- b. Alternatively, to close the window without creating the Organization, activate the **Cancel** button.

Login Again to View

To see the new Organization appear in the inventory tree, log out of the program and then log back in again.

Note: This action is needed only for newly created Organizations. Other levels of newly-created inventory will appear immediately in the tree.

Next Steps

For information about entering additional information concerning the Organization, see the topic "Edit Organization Inventory Data."

Edit Organization Inventory Data

This topic describes the information that can be viewed and edited at the Organization data screen. The data will be in the content area of the screen.

To edit data in an Organization, select the Organization in the inventory tree.

The screenshot shows the Sustainment Management Systems WITH BUILDER interface. The top navigation bar includes 'Work Configuration', 'Work Plan', 'Scenarios', 'Reports', and 'Tools'. The main content area is divided into a left sidebar for the 'Inventory' tree and a right pane for the selected organization's data. The 'Inventory' tree shows a hierarchy: Sample > Sustainment Management System > 010 - Sample Site > 011 - Sample Org (selected). The right pane has tabs for 'General Info.', 'Contact Info.', and 'Assessment History'. The 'General Info.' tab is active, showing 'Number: 011' and 'Name: Sample Org'. Below this is a 'Calculated Data' section with 'PRV: \$11,099,570'. An 'Index Data' table is displayed with the following data:

Metric	Value
CI	56
FI	99
PI	68
FCI	81.516

Reference Settings include dropdown menus for 'Cost Book: Sample', 'Inflation Book: Reference', 'Service Life Book: Sample', 'Policy Sequence: Sample Sequence', and 'Prioritization Scheme: Sample Scheme'.




Information about the Organization will be presented on an ID line and at several tabs. You can use the content area toolbar to perform actions such as saving changes, or adding or editing comments.


- ["Toolbar" on the facing page](#)
- ["ID Line" on the facing page](#)

- ["General Information Tab" below](#)
- ["Contact Information Tab" on page 23](#)
- ["Assessment History Tab" on page 24](#)
- ["Organization Attributes Tab" on page 25](#)

Toolbar

The toolbar at the top of the content area provides you with these options:

-  **Save**. Saves changes made to the asset's data.
-  **Comment**. Allows you to add, edit, and view comments about the selected asset.
-  **Reports**. Launches the Report Selection tool, which gives you access to a list of standard reports relevant to the asset's inventory. See ["Generate a Report" on page 256](#) or the report generation topic associated with the inventory level of the asset.

NOTE: At the Organization level, no Standard reports are provided; but if Custom reports have been created, they can be accessed using the  **Reports** button on the content area toolbar.

ID Line

On the ID line, you can edit the following:

- **Organization ID Number**. The ID Number is limited to 12 alphanumeric characters.
- **Organization Name**. Organization Name is allowed 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

General Information Tab

Initially after an Organization is selected in the inventory tree, the General Information (**General Info.**) tab is shown and the following information can be edited there:

Index Data

The following index data is shown under Index Data; the metric shown is for the Organization as a whole.

Note: The information at this fieldset is read-only.

- **Condition Index (Organization CI).** The Organization CI displays the average CI of the Buildings in the Organization, weighted by replacement cost. This metric provides an overall sense of the condition of the group as a whole.
- **Functionality Index (Organization FI).** The Organization FI displays the average FI of the Buildings in the Organization, weighted by replacement cost. This metric provides an overall sense of the functionality of the Organization as a whole.
- **Performance Index (Organization PI).** The Organization PI displays the average PI of the Buildings in the Organization, weighted by replacement cost. This metric provides an overall sense of the performance of the Organization as a whole.
- **Facility Condition Index (Organization FCI).** The Organization FCI displays the average FCI of the Buildings in the Organization, weighted by replacement cost.

Calculated Data

Note: The information at this fieldset is read-only.

- **Plant Replacement Value (PRV).** The aggregate Plant Replacement Value of the Buildings in the Organization.

Reference Settings

Each reference setting provides a dropdown list of options to select from:

- **Cost Book.** From the dropdown list, select either the Reference cost book or a custom cost book to be used for the entire inventory of the Site. The cost book selected will provide inventory replacement and defect repair costs for inventory.
- **Inflation Book.** From the dropdown list, select either the Reference inflation book or a custom inflation book to be used for the entire inventory of the Site. The inflation book selected provides inflation multipliers per year for the projected replacement costs and defect repair costs for the inventory.
- **Service Life Book.** From the dropdown list, select either the Reference service life book or a custom service life book to be used for the entire inventory of the Site. The service life book selected will estimate the remaining service life of Component-Sections in the inventory on the basis of its life expectancy and condition. Also, the service life is used in estimating a rate of deterioration in the condition index of a Component-Section when no more than one inspection has been recorded.
- **Policy Sequence.** From the dropdown list, select either the Reference policy sequence or a custom policy sequence to be used for the entire inventory of

the Site. The policy sequence selected will establish the order of precedence for applying policies so that only one standard is chosen for the inventory in the Building.

- **Prioritization Scheme.** From the dropdown list, select the prioritization scheme to be used for the entire inventory of the Site. The prioritization scheme selected will prioritize and rank your work plan in a quick, objective, repeatable, and representative method with the touch of a button.
- **CII Set.** Select either the Reference (default) CII set, or a custom CII set if available.
- **FCI Goal.** Select an FCI goal from the dropdown list.
- **Cost Modifier Library.** Select the cost modifier library you wish to use for the entire inventory of the Site. The active library selected determines the cost modifiers available for assignment at the Site, Complex, Building, System, Component, or Section levels within the Organization.

CAUTION: Reference data can be set at the Organization level and at the Site level. If this data is set at both levels, the reference settings at the Site level will override the reference settings at the Organization level.

Contact Information Tab

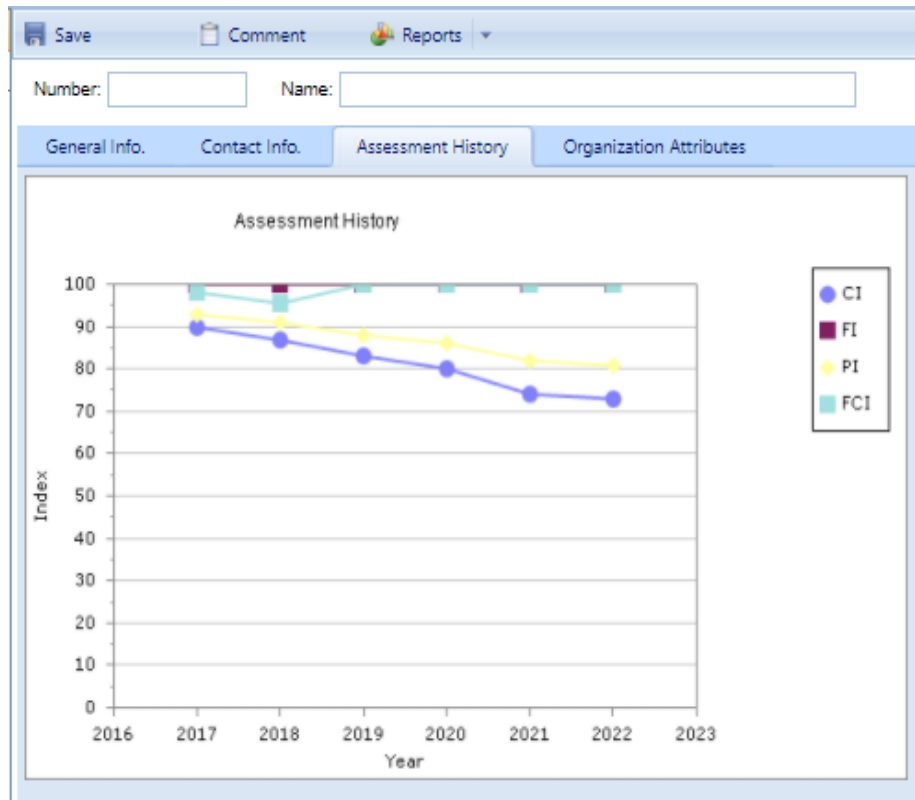
The contact information for the Organization can be viewed and edited by selecting the Contact Information (**Contact Info.**) tab.

The screenshot displays the SUSTAINMENT MANAGEMENT SYSTEMS WITH BUILDER interface. The top navigation bar includes 'Work Configuration', 'Work Plan', 'Scenarios', 'Reports', and 'Tools'. A status message indicates the system is approved for UNCLASSIFIED//FOUO data. The left sidebar shows an 'Inventory' tree with a selected item '012 - Sample Site 01'. The main content area features a 'Contact Info.' tab, highlighted with a red box, containing input fields for Name, Address, City, State, Zip Code, Phone #, Fax #, Email, and WWW. The 'Number' field is pre-filled with '012' and the 'Name' field with 'Sample Site 01'.

All of the additional Organization information is optional. It includes data regarding the official point of contact (POC) for the Organization:

- **Name.** Enter the name of the Organization point of contact. Limit: 30 alphanumeric characters.
- **Address.** Enter the official street address of the Organization. Limit: 30 alphanumeric characters).
- **City.** Enter the city of the Organization. Limit: 15 alphanumeric characters.
- **State.** Enter the state of the Organization. Limit: 2 alphanumeric characters.
- **Zip Code.** Enter the zip code of the Organization. Limit: 10 alphanumeric characters.
- **Phone Number.** Enter the phone number of the Organization POC. Limit: 20 alphanumeric characters.
- **FAX Number.** Enter the FAX number of the Organization POC. Limit: 20 alphanumeric characters.
- **Email Address.** Enter the email address of the Organization POC. Limit: 75 alphanumeric characters.
- **WWW.** Enter the URL (Web address) for the Organization. Limit: 75 alphanumeric characters.

Assessment History Tab



The **Assessment History** tab provides a graph of the condition, functionality, performance, and FCI history of the Organization, displaying the Organization CI, Organization FI, Organization PI, and Organization FCI over time.

Note: The information at this tab is read-only.

Organization Attributes Tab

Custom asset attributes can be added at each inventory level—from Organization down through Section—in two different ways: by using "active attributes" or by using "Admin managed attributes."

"Unassigned" *Admin managed attributes* are a collection of pre-named attributes that have been determined by the BUILDER instance's owner (for example, a corporation, or the Air Force, or the Army). They are templated or common attributes that are seen as likely to be used often. Although these attributes are made available from the outset after installing BUILDER, they still need to be assigned before they can be used to help describe an asset.

Additional Admin managed attributes can be created, but only by a BUILDER Administrator or a user with Master Planner Role.

Active attributes are very flexible and can be created and assigned by any user with inventory privileges.

CAUTION: Unless a standardized procedure for assigning active attributes is implemented and enforced, the flexibility of active attributes can make incorporating them into reports more difficult and time consuming, because multiple people can create them and there is no built-in consistency.

With respect to creating reports, Admin managed attributes will be easier to report on in a consistent fashion, because they are managed by a BUILDER Administrator (or a user with Master Planner Role). Also, Admin managed attributes are available to all assets that are at the same inventory level. Active attributes, on the other hand, would be prone to being named inconsistently and make reporting more difficult.

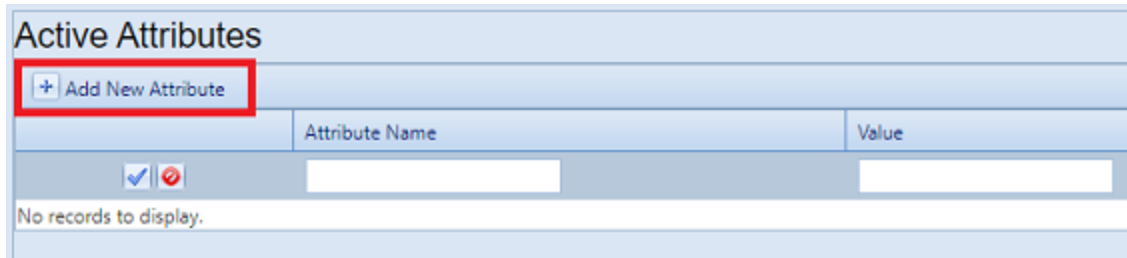
Active Attributes

Under **Active Attributes** at the top half of the Attributes screen, you can add, edit, or delete custom attributes for this level of inventory.

Add an Active Attribute

To add a custom inventory attribute,

1. Directly under the **Active Attributes** header, activate **Add New Attribute**. This will generate a new row in the **Active Attributes** table.



Active Attributes	
+ Add New Attribute	
Attribute Name	Value
<input type="text"/>	<input type="text"/>

No records to display.

2. Enter a name and value for your attribute into the table.
3. If you want to apply an architect name, press the **Enter** key on your keyboard at this point . The popup "Add Architect" will appear. Enter the name of the architect, then select **OK**.
4. When finished with the entry, **activate the blue checkmark icon at the left side of the row** to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with a slash icon (located to the right of the blue checkmark).

CAUTION: Your new attribute will not be saved if you (a) exit without activating the blue checkmark or (b) initiate adding a new custom inventory attribute (by activating the **Add New Attribute** button) before saving with the blue checkmark.

5. Repeat steps 1 through 4 for each custom inventory attribute you wish to add.

Edit an Active Attribute

To edit an attribute,

1. Activate the pencil icon in the attribute's table row
2. Make the desired changes.
3. Finally, activate the blue checkmark icon at the left to save the changes.

Delete an Active Attribute

To delete an attribute,

1. In the table of active attributes, locate the row containing the attribute you wish to delete.
2. To the right of the **Value** field, activate the Delete icon (red "X"). *A confirmation popup will appear, asking "Delete record?"*
3. Select **OK** to delete, or **Cancel** to stop the process.

Admin Managed Attributes

Under **Unassigned Admin Managed Attributes** at the bottom left of the Attributes screen, you can choose to assign an existing Admin managed attribute to the asset whose data screen you have open. You can also change the value of an attribute after it has been assigned.

Note: Attributes that are in the table under the header **Admin Managed Attributes** are already assigned to the asset whose data screen you are in.


Only a BUILDER Administrator or a user with the Master Planner Role can create, edit (other than changing the value), or delete/unassign custom Admin managed attributes for the selected asset. Also, once an Admin managed attribute has been moved from the **Unassigned Admin Managed Attributes** column into **Admin Managed Attributes**, this action cannot be reversed except by a BUILDER Administrator or a user with Master Planner Role. More detail about Administrator-specific inventory attribute tasks can be found in the *BUILDER Support Administrator Guide*.

Assign an Unassigned Attribute to Admin Management

You may see one or more items listed under the header **Unassigned Admin Managed Attributes** at the lower left of the Attributes screen. These are attributes that are available at this inventory level but that have not been assigned to the selected asset. If no items are listed under the header **Unassigned Admin Managed Attributes**, there are none available to be assigned. (They may have already been assigned and thus transferred to the **Admin Managed Attributes** table.)

To assign an unassigned asset to Admin management,

In the **Unassigned Admin Managed Attributes** column, activate **Assign to Asset**.

Unassigned Admin Managed Attributes	Admin Managed Attributes	
new managed attribute	 Assign to Asset	Attribute Name
		Value
No records to display.		

*This will immediately populate the inventory item in that row under **Admin Managed Attributes** instead.*

Unassigned Admin Managed Attributes		Admin Managed Attributes	
		Refresh	
	Attribute Name	Value	
	new managed attribute	Auto Generated	

Note: The assignment action is not reversible, except by a BUILDER Administrator or a user with the Master Planner Role.

Change the Value of an Admin Managed Attribute

To change the value of an asset under Admin management,

1. Under **Admin Managed Attributes**, activate the pencil icon in the attribute's table row, and wait for the row to change appearance.

Admin Managed Attributes		
Refresh		
	Attribute Name	Value
	High insurance due to claim	Auto Generated

2. Make the desired change in the **Value** column.

Admin Managed Attributes		
Refresh		
	Attribute Name	Value
	High insurance due to claim	Yes <input type="text"/>

3. Finally, activate the blue checkmark icon at the left to save the changes (or the red Cancel icon to cancel the change).

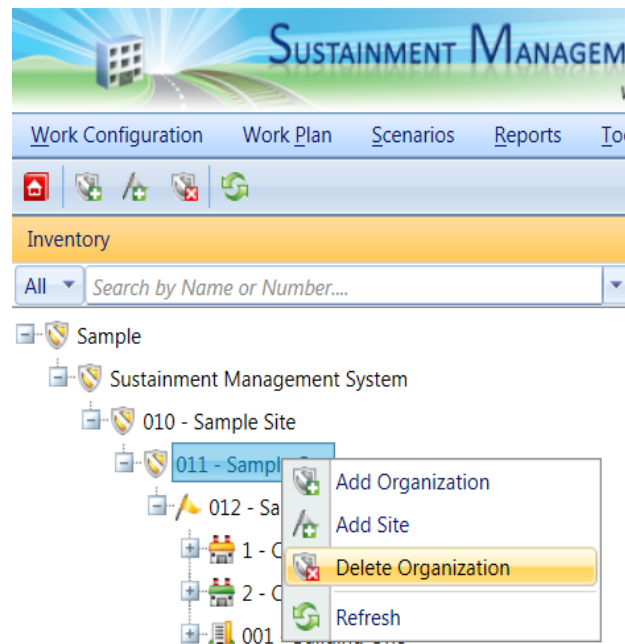
Delete an Organization

This topic shows how to delete an Organization, which also deletes all other records (Sites, Buildings, etc.) contained in the Organization.

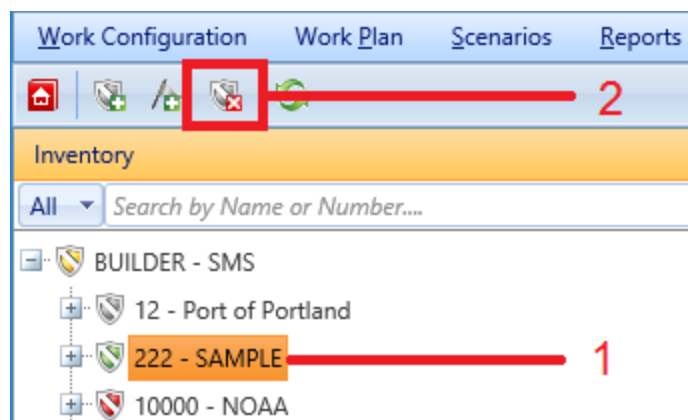
Permissions Note: This action requires Administrator permission. If the inventory item is empty of any contents, then the deletion may also be performed by a Master Planner with permission for the relevant location in inventory.

To delete an Organization, navigate to it in the inventory tree and do one of the following:

- a. Right-click the Organization. Then select "Delete Organization" from the options, as shown below.



- b. Alternatively, select the Organization, then activate the **Delete Organization** icon on the menu toolbar.



WARNING: Deleting an Organization will also delete all inventory (Complexes, Buildings, Systems, Components, and Sections) in that Organization. This is a significant step to take and should only be done when you are certain that you wish to clear the entire inventory of the Organization you have selected.

Best Practice Recommendation: Making frequent backups of your inventory database will protect you from significant data losses if mistakes in deleting are made.

Working with Sites

A Site is the level in the asset tree that ties your real property inventory to a physical location. This topic briefly introduces the features of a Site and how to use it in organizing your real property inventory. It also provides links to the operations that can be performed at the Site level.

Your BUILDER inventory can contain Buildings or facilities at a number of different geographic locations (Sites). If this is the case, then multiple Sites will be needed in your inventory tree structure, one for each geographic location. Alternatively, if all Buildings or facilities to be managed (or to be gleaned for information) are in the same geographic location, one Site will usually suffice.

The Importance of Geography to the Site Level

Knowing the geographic location of a Building is extremely important; therefore it is necessary to create a Site record for each geographic location before you can add Buildings to the database.

When creating a Site, keep in mind that the Site level in the hierarchy is not simply a method for subdividing inventory. It is the level where geographic factors are incorporated into BUILDER calculations, and therefore a Site needs to be confined to a relatively limited geographic area. A larger area can be covered by an [Organization](#) made up of multiple Sites.

Site-Level Properties

Several properties of Buildings are determined or affected by the Building's geographic location (Site), most critically the Area Cost Factor, a multiplier that adjusts national average labor/material/equipment costs to local costs.

In addition to the Area Cost Factor, the following properties are also affected by geographic location:

- HVAC zone
- seismic zone

Other factors that can be set at the Site level are:

- selections for reference books such as cost book, inflation book, service life book, and/or component importance index (CII) set
- policy sequence
- prioritization scheme

- FCI goal (for POM Scenarios)
- selection of cost modifier library

Property Inheritance

Unlike Area Cost Factor, HVAC zone, and seismic zone (which are set only at the Site level), the policy sequence, prioritization scheme, FCI goal and selections for the cost book, inflation book, service life book, CII set, and cost modifier library can also be set at the Organization level.

If the Site and Organization values differ, then the Site level settings take priority.

Site Tasks

Tasks that can be performed on Sites are:

["Add a Site" below](#)

["Edit Site Inventory Data" on page 36](#)

["Generate Site Reports" on page 52](#)

["Delete a Site" on page 54](#)

Add a Site

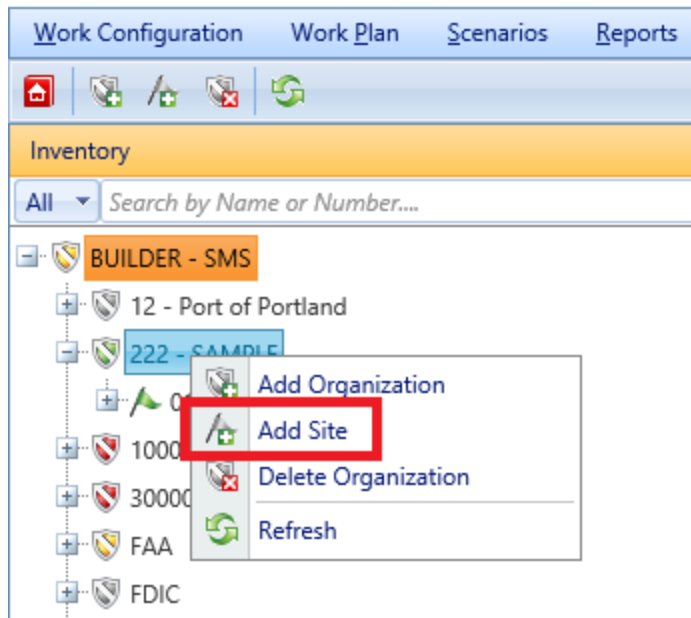
This topic shows how to add a Site and describes the initial information to be entered. The topic ["Edit Site Inventory Data" on page 36](#) describes additional information that can be entered for the Site.

A type of data unique to Sites is a set of location factors including (1) Area Cost Factor, (2) seismic zone, and (3) HVAC zone. During the process of adding a Site you will have the option to auto-apply factors from an existing geographic location. This same auto-apply option will be available from the Site's data screen toolbar after the Site is added to the inventory tree, or you can choose to manually edit the factors later.

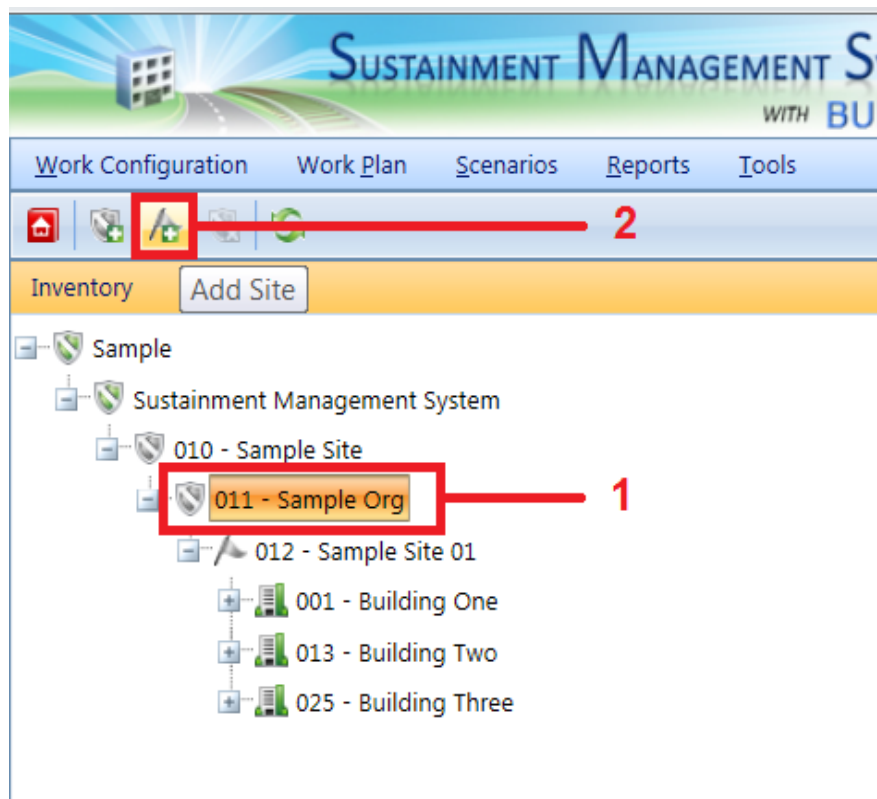
Permissions Note: This action requires Master Planner or Administrator permission for the relevant asset.

To add a new Site to an Organization, navigate to that Organization in the inventory tree and do one of the following:

- a. Right-click the Organization where the Site is to be located. Then select "Add Site" from the options.



- b. Alternatively, select the Organization. Then activate the **Add Site** icon on the main toolbar, as shown below.



The "Add Site" popup window will appear.

The "Add Site" popup window contains the following elements:

- Buttons: Cancel, Add
- Text Input Fields: Site Number, Site Name
- Checkbox: Use factors from following location:
- Dropdowns: State (Alabama), Location (81st RSC Birmingham)
- Data for this location:
 - Area Cost Factor: 0.82
 - Seismic Zone: 1
 - HVAC Zone: 3
- Checkbox: Use Location Code and Name for Site Information

Enter Initial Site Information

This documentation segment describes the initial data to be entered when creating a new Site. Other data that can be entered is described in ["Edit Site Inventory Data" on page 36](#).

In the "Add Site" popup window, enter the following data:

1. **Site Number (Required)**. Enter the identifying number for the Site. Site Number may be left blank if you wish to supply only a name. You must enter at least a Site name or a Site number, and the combination of the two must be unique in the navigation tree.

Specifications: The ID Number is limited to 12 alphanumeric characters.

2. **Site Name (Required)**. Enter the identifying name for this Site. Site Name may be left blank if you wish to supply only a number. You must enter at least a Site name or a Site number, and the combination of the two must be unique in the navigation tree.

Specifications: The name is limited to 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

3. **Location Factors (Optional).** In the "Add Site" popup, you can choose to use the location factors from a selected geographical location; this is described below. If you choose not to do this, each of these factors will be initially set to the default value of 1.00.

If you want to manually designate Area Cost Factor, seismic zone, and/or HVAC zone, you will need to do that by editing the Site after it has been added.

Copy Factors from a Listed Location (Optional)

In the "Add Site" popup window, you are given the opportunity to copy and auto-apply Site location factors (Area Cost Factor, seismic zone, and HVAC zone) from an existing location. The BUILDER database contains this data for most major cities in the United States as well as for Department of Defense installations.

To copy an existing location's factors into your Site, mark the **Use factors from following location** checkbox and select a location from the dropdown lists.

Copying factors from an existing location can also be done later by selecting **Lookup Location** from the Site toolbar.

Note: Until you set location factors either by copying from a location or manually editing them at the Site data page, they will all be set by default to 1.00.

Confirm or Cancel

Once you have entered the initial Site data in the popup,

- a. Activate the **Add** button on the popup toolbar to create the Site. Additional Site details can then be added as described in ["Edit Site Inventory Data" on the next page](#).
- b. Alternatively, to close the window without creating the Site, activate the **Cancel** button.

Next Steps

For information about entering additional information concerning the Site, see ["Edit Site Inventory Data" on the next page](#).

Edit Site Inventory Data

This topic describes the information that can be viewed and edited at the Site data screen. The data will be in the content area of the screen.

A type of data unique to Sites is a set of location factors including (1) Area Cost Factor, (2) seismic zone, and (3) HVAC zone. These factors can be assigned manually, or you can take advantage of the option to auto-apply factors from an existing geographic location.




To edit the inventory data for a specific Site, first select the Site in the inventory tree.

Information about the Site will be presented on an ID line and at several tabs. You can use the content area toolbar to perform actions such as saving changes, or adding or editing comments.

If you want to change the lookup location for the Site, that is also done at the content area toolbar at the Site level.

- ["Toolbar" below](#)
- ["ID Line" on the facing page](#)
- ["General Information Tab" on the facing page](#)
- ["Contact Information Tab" on page 40](#)
- ["Assessment History Tab" on page 41](#)
- ["Facility Summary Tab" on page 42](#)
- ["Cost Modifiers Tab" on page 43](#)
- ["Attachments Tab" on page 44](#)
- ["Site Attributes Tab" on page 48](#)

Toolbar

-  **Save.** Saves changes made to the Site data.
-  **Comment.** Allows you to add, edit, and view comments about the Site.
-  **Reports.** Launches the Report Selection tool, which gives you access to a list of standard reports relevant to Site inventory. See ["Generate Site Reports" on page 52](#).
- **Lookup Location.** Launches the site selection window, where you can adopt location factors (Area Cost Factor, seismic zone, and HVAC zone) from an existing location. See ["How to Use the Lookup Location Button to Set Site Location Factors" on page 38](#).

ID Line

On the ID line, you can edit the following:

- **Site ID Number.** The ID Number is limited to 12 alphanumeric characters.
- **Site Name.** Site Name is allowed 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

General Information Tab

After a Site is selected in inventory tree, the **General Information** tab (abbreviated **General Info.**) is the first information shown, containing the following:

Location Factors

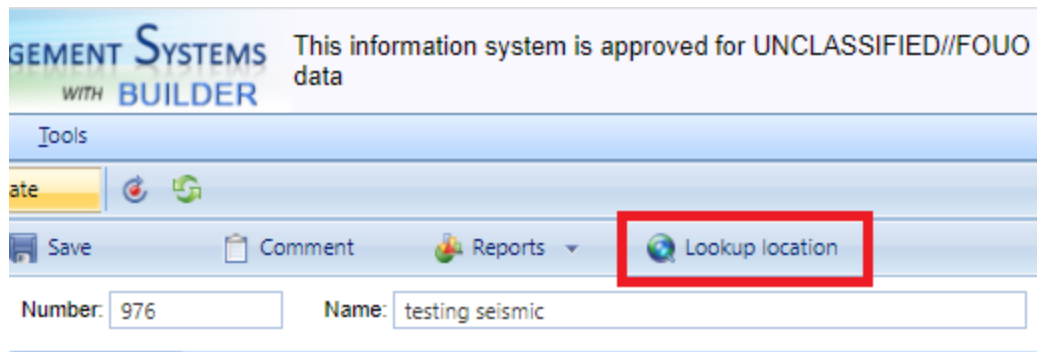
Location factors are introduced at the Site level, and specifying these factors is unique to the Site level in the inventory tree. You can change these location factors manually in the fields listed in the "Location Factors" fieldset (refer to the information in the list below), or by auto-applying information using the **Lookup Location** button on the toolbar (see ["How to Use the Lookup Location Button to Set Site Location Factors" on the next page](#)).

- **Area Cost Factor.** The Area Cost Factor is a multiplier used to adjust national average cost for labor/materials/equipment to local costs. It is generally a number between 0.8 and 1.2 for continental U.S. locations, but it can be even greater than 2.0 in high-cost geographic locations. The Area Cost Factor is set at the Site level.
- **Seismic Zone.** The seismic zone is an integer from 1 to 7 following the Federal Emergency Management Agency's (FEMA's) U.S. seismic zoning. Determine your Site's seismic zone by consulting the seismic map of the U.S. seismic zones, which can be accessed by clicking the **Map** button next to the **Seismic Zone** dropdown selection box. The seismic zone is set at the Site level.
- **HVAC Zone.** The HVAC zone is an integer from 1 to 11. You can set your Site's HVAC zone by clicking the **Lookup Location** button on the toolbar, then selecting "State" and "Location" from the dropdown lists in the popup window, and finally clicking the **Select** button on the toolbar in the popup. Alternatively, you can determine your Site's HVAC zone by consulting the map of the U.S. HVAC zones, which can be accessed by activating the **Map** button next to the HVAC Zone text box. The HVAC zone is set at the Site level.

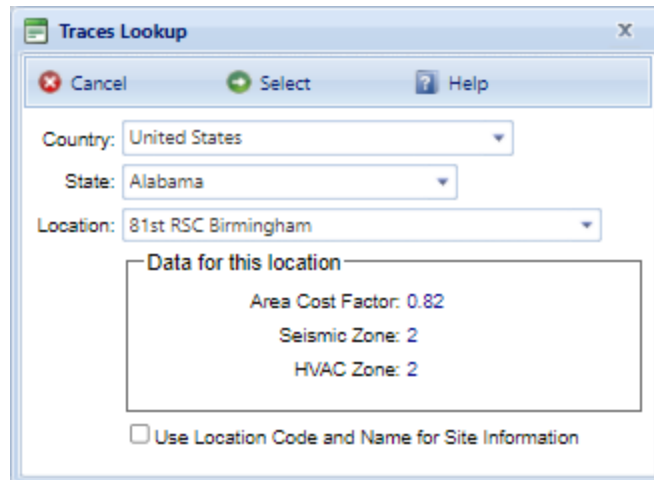
How to Use the Lookup Location Button to Set Site Location Factors

Site location factors can be set or changed after you add the Site to the inventory tree. To manually set values for the location factors, see ["Location Factors " on the previous page](#). Or, to take advantage of data stored in BUILDER for many locations worldwide, follow these instructions:

1. In the content area toolbar, activate the **Lookup Location** button.



A popup will appear:



2. In the popup, select a country.
3. If the Site is in the United States, select the state; otherwise, skip this step.
4. Select the location within the country or state where your Site is. The location list includes Department of Defense installations and most major cities in the United States.
5. If the location of your particular Site is not listed, you can choose a location close to your Site.
6. Activate the **Select** (Proceed) button to automatically fill in the Location Factors data fields at your Site's **General Information** tab.

Note: If instead you activate the **Cancel** button, you will return to the Site content screen without making changes.

If you mark the **Use Location Code and Name for Site Information** checkbox, the location from the lookup list will be used as the name of your Site. If you leave that checkbox unmarked, your designated Site Number and Site Name will be preserved.

CAUTION: Once you activate the **Use Location Code and Name for Site Information** checkbox, this will overwrite your Site information with that of the location you are copying factors from. If you mark the **Use Location Code and Name for Site Information** checkbox unintentionally, then you can rename your Site at the ID line in the Site content pane.

Index Data

Note: The information at this fieldset is read-only.

- **Site Condition Index (Site CI).** The Site CI displays the average CI of the Buildings in the Site, weighted by replacement cost. This metric provides an overall sense of the condition of the Site as a whole.
- **Site Functionality Index (Site FI).** The Site FI displays the average FI of the Buildings in the Site, weighted by replacement cost. This metric provides an overall sense of the functionality of the Site as a whole.
- **Site Performance Index (Site PI).** The Site PI displays the average PI of the Buildings in the Site, weighted by replacement cost. This metric provides an overall sense of the performance of the Site as a whole.
- **Site Facility Condition Index (Site FCI).** The Site FCI metric provides an overall sense of deferred repair work at the Site level. It differs from the Site CI in that it is a monetary based metric. The formula is: $FCI = (1 - \text{\$current repair needs} / \text{\$PRV}) \times 100$, where the dollar amount of repair needs is obtained from BUILDER work items. More information about the FCI is available at ["Appendix C: Facility Condition Index" on page 265](#).

Calculated Data

Note: The information at this fieldset is read-only.

- **Number of Facilities.** Displays the number of Buildings included in the Site inventory.
- **PRV.** Displays the aggregate Plant Replacement Value of the Buildings at the Site, computed by adding the individual Building replacement costs.

Reference Settings

- **Cost Book.** From the dropdown list, select the cost book to be used for the entire inventory of the Site. The cost book selected will provide inventory replacement and defect repair costs for inventory.
- **Inflation Book.** From the dropdown list, select the inflation book to be used for the entire inventory of the Site. The inflation book selected provides inflation multipliers per year for the projected replacement costs and defect repair costs for the inventory.
- **Service Life Book.** From the dropdown list, select the service life book to be used for the entire inventory of the Site. The service life book selected will estimate the remaining service life of Component-Sections in the inventory on the basis of its life expectancy and condition. Also, the service life is used in estimating a rate of deterioration in the condition index of a Component-Section when no more than one inspection has been recorded.
- **Policy Sequence.** From the dropdown list, select the policy sequence to be used for the entire inventory of the Site. The policy sequence selected will establish the order of precedence for applying policies so that only one standard is chosen for the inventory in the Building.
- **Prioritization Scheme.** From the dropdown list, select the prioritization scheme to be used for the entire inventory of the Site. The prioritization scheme selected will prioritize and rank your work plan in a quick, objective, repeatable, and representative method with the touch of a button.
- **CII Set.** Select either the Reference (default) CII set, or a custom CII set if available.
- **FCI Goal.** Select an FCI goal from the dropdown list.
- **Cost Modifier Library.** Select the cost modifier library you wish to use for the entire inventory of the Site. The active library selected determines the cost modifiers available for assignment at the Complex, Building, System, Component, or Section levels within the Site.

CAUTION: Reference data can be set at the Organization level and at the Site level. If this data is set at both levels, the reference settings at the Site level will override the reference settings at the Organization level.

Contact Information Tab

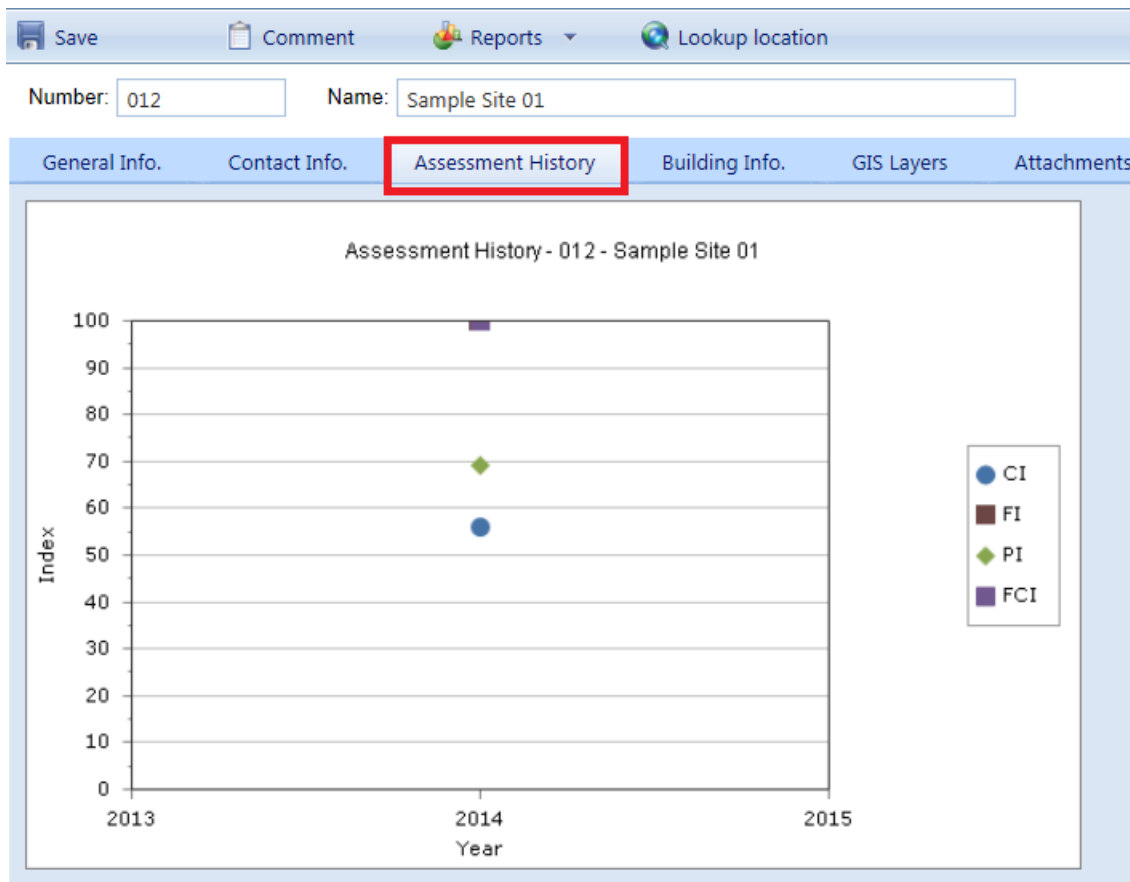
Point of contact (POC) information for the Site may be viewed and edited by selecting the Contact Information (**Contact Info.**) tab. The available fields are as follows:

- **Name.** Enter the name of the Site point of contact. Limit: 30 alphanumeric characters.

- **Address.** Enter the official street address of the Site. Limit: 30 alphanumeric characters.
- **City.** Enter the city where the Site is located. Limit: 15 alphanumeric characters.
- **State.** Enter the state where the Site is located. Limit: 2 alphanumeric characters.
- **Zip Code.** Enter the zip code of the Site. Limit: 10 alphanumeric characters.
- **Phone Number.** Enter the phone number of the Site POC. Limit: 20 alphanumeric characters.
- **FAX Number.** Enter the FAX number of the Site POC. Limit: 20 alphanumeric characters.
- **Email Address.** Enter the email address of the Site POC. Limit: 75 alphanumeric characters.
- **WWW.** Enter the URL (Web address) for this Site. Limit: 75 alphanumeric characters.

Assessment History Tab

Note: The information at this tab is read-only.



The Assessment History tab provides a graph of the condition, functionality, and performance history of the Site, displaying the Site CI, Site FI Site PI, and Site FCI over time.

Facility Summary Tab

Basic information regarding Buildings at the Site is available under the **Facility Summary** tab. All of the data shown at this tab is read-only; however, which information is displayed can be influenced using the search filters provided. Each column shown at the **Facility Summary** tab is described below.

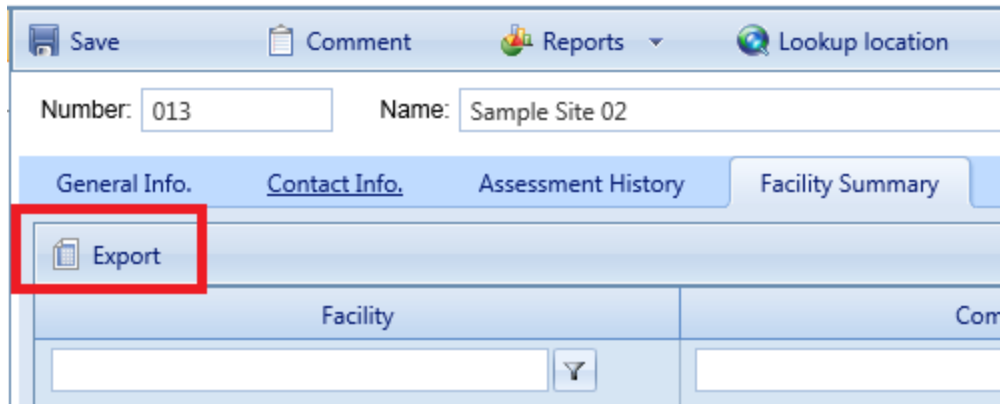
Facility	Complex	Quantity	UM	PRV	BCI	BFI	BPI	FCI
100 - Std CI greater than Section, Std RSL LT Asset	Unassigned	10,000	SF	\$2,133,360	60	100	72	100,000
200 - Std CI less than Section, Std RSL LT Asset	Unassigned	10,000	SF	\$2,133,360	60	100	72	100,000

- **Facility.** Displays the Building number and name of each Building at the Site.
- **Complex.** Displays the Complex that the Building is part of, if applicable.
- **Quantity.** This is the primary measure of the size of the facility. For buildings, it will usually be square feet, if the unit of measure (UM) selected at User Preferences is "English."
- **Unit of Measure (UM).** Displays the unit of measure in use.
- **Plant Replacement Value (PRV).** Displays the aggregate Plant Replacement Value of the Buildings at the Site.
- **Building Condition Index (BCI).** Displays the current CI of each Building at the Site.
- **Building Functionality Index (BFI).** Displays the current FI of each Building at the Site.
- **Building Performance Index (BPI).** Displays the current PI of each Building at the Site.
- **Facility Condition Index (FCI).** Displays the current FCI of each Building at the Site. For more information about the Facility Condition Index, see ["Appendix C: Facility Condition Index" on page 265.](#)

Additionally, the Site CI, Site FI, Site PI and Site FCI are shown at the top of the tab, which are the average of each index of the Buildings at the Site, weighted by replacement cost.

Export Information from the Facility Summary Tab

All the information at the **Facility Summary** tab can be exported to a Microsoft Excel spreadsheet by activating the **Export** button, located below "Number" on the ID line.



Cost Modifiers Tab

The **Cost Modifiers** tab displays a table showing assigned cost modifiers, and allows you to view and assign cost multipliers or adders.

Note: Existing cost modifiers that affect the Site level may have been assigned at different inventory levels, but from a Site data page you can only assign a Site-level cost modifier.

Modifier Scope

At the Site level, the Assigned Cost Modifiers table will show you all modifiers assigned to that Site.

Assign a Modifier

To assign a modifier to your Site from available options,

1. Activate the **Assign Cost Modifier** button.

Number: Name:

General Info. Contact Info. Assessment History Facility Summary **Cost Modifiers** Attachments (0) Site Attributes

Assigned Cost Modifiers

Assign Cost Modifier

Modifier Scope	Modifier Type	Modifier Name	Modifier Value	Est. Modifier Impact	Modifier Description	Assignment Comment
No records to display.						

2. In the "New Site Modifier Assignment" popup, select a cost modifier from the dropdown list.
3. Add a comment if desired
4. Activate **Add** on the popup toolbar. *You should see your selected modifier added to the table of cost modifiers.*

Unassign a Modifier

To unassign a modifier, first navigate to where the modifier was assigned, then activate the **Unassign** button in the rightmost column of the Assigned Cost Modifiers table.

Modifier Description	Assignment Comment	
	testing	<input type="button" value="Unassign"/>
	testing	<input type="button" value="Unassign"/>

A Site-level cost modifier can be unassigned only at the Site level, a Building-level cost modifier can be unassigned only at the Building level, etc.

More about Cost Modifiers

For more about cost modifiers, see the **Cost Modifiers** chapter in the *BUILDER Reference Data Guide*.

Attachments Tab

At the **Attachments** tab, you have the option to view or change the asset's attachments.

View Attachment(s)

The **Attachments** tab will show whether any files have been attached to the asset's record. The number in parentheses after the word "Attachments" shows how many of them have been attached.

To view one or more attachments,

1. Activate the **Attachments** tab. *If attachments are present, a table will display their type, title, and description.*
2. Activate the link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. When finished viewing, activate the **Close** button on the popup window toolbar. and you will be returned to the table of attachments.
4. Repeat the two steps immediately above for additional attachments as desired.

Add an Attachment

At the **Attachments** tab on the asset's data page, you have the option to attach files (images and other documents) to the asset's record. An attached file might be a photograph, an electronic image of written notes or diagrams made during inventory, or a file generated on a computer.

Acceptable Attachment Formats

The attachment may be in any of the following formats:

- .jpg
- .jpeg
- .png
- .zip
- .doc
- .pdf

Note: As of January 31, 2022, .doc format is allowed, but not .docx.

Attach

To attach a file,

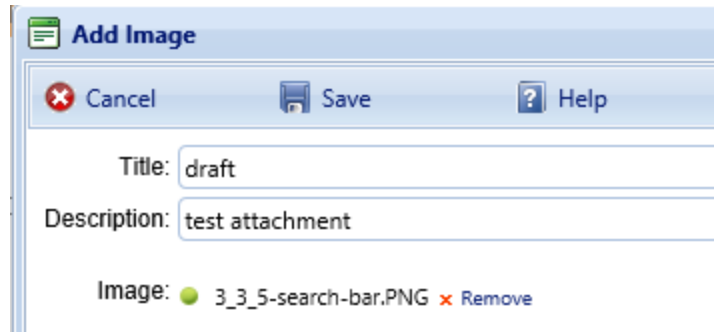
1. At the **Attachments** tab, activate the  **Add** button in the toolbar below the row of tabs.

This will open the "Add Image" popup window:

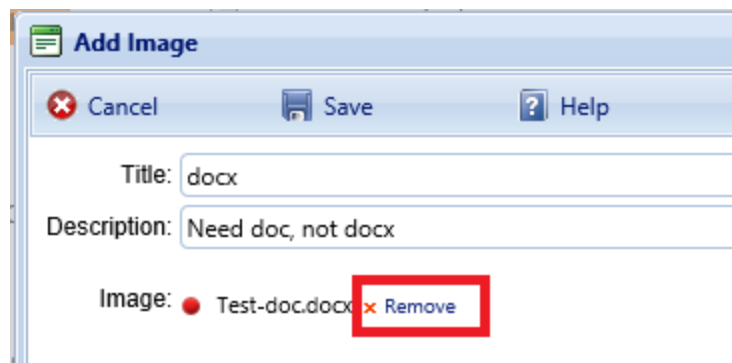
2. Enter Title and Description information for the attachment.
3. Activate the **Select** button to the right of the "Image" field.
4. Browse to the desired image or other file and select it for attachment. *If a red dot appears next to your file name in the "Add Image" popup, see ["Attachment Troubleshooting" below](#).*
5. If you are adding an attachment at the Building level, use the "Image Type" radio buttons to indicate whether the attachment is a Key Plan, a Section Plan, or "Other."
6. Once the required attachment data is entered, activate the **Save** button on the popup toolbar. Alternatively, to close the popup window without attaching the selected file or image, activate the **Cancel** button.

Attachment Troubleshooting

If the selected attachment is in an acceptable format, the "Image" field will be replaced with a green dot (plus a label that gives you the option to remove the attachment).



However, if it is not in an acceptable format, the "Image" field will be replaced with a red dot. Activate "Remove" and select an attachment file in one of the formats listed at the header ["Acceptable Attachment Formats" on page 45](#).



Edit Attachment Metadata

You can edit the title and/or description of an attachment as follows:

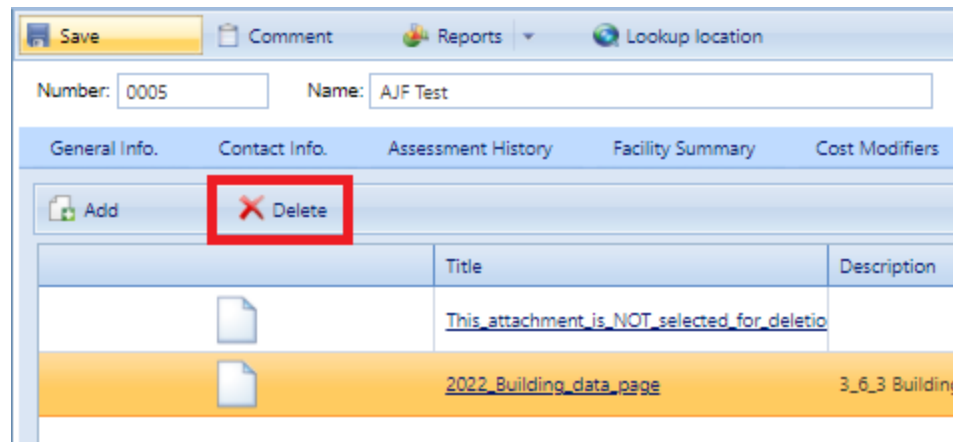
1. Navigate to the **Attachments** tab to view the attachments table.
2. Activate a link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. In the header section above the attachment, make the desired changes in the **Title** and/or **Description** field(s).
4. Activate **Save** on the popup toolbar to store your changes and return to the table of attachments.
5. Alternatively, if you want to cancel the change, activate **Close** on the popup toolbar. *You will be returned to the table of attachments.*

If you wish to change the contents of the attachment, you will need to delete the existing attachment file and add a new one.

Delete an Attachment

To delete an attachment,

1. Navigate to the **Attachments** tab to view the attachments table.
2. Select the attachment you wish to delete (do *not* activate the link in the **Title** column). *When properly selected, that record in the table will change background color as illustrated below, and only then will the **X Delete** icon be selectable:*



3. Activate the **Delete** button above the table.
4. Activate **Yes** in the confirmation box to delete the attachment, or **No** to cancel.

Site Attributes Tab

This tab concerns custom attributes that have been or can be created for the Site.

Custom asset attributes can be added at each inventory level—from Organization down through Section—in two different ways: by using "active attributes" or by using "Admin managed attributes."

"Unassigned" *Admin managed attributes* are a collection of pre-named attributes that have been determined by the BUILDER instance's owner (for example, a corporation, or the Air Force, or the Army). They are templated or common attributes that are seen as likely to be used often. Although these attributes are made available from the outset after installing BUILDER, they still need to be assigned before they can be used to help describe an asset.

Additional Admin managed attributes can be created, but only by a BUILDER Administrator or a user with Master Planner Role.

Active attributes are very flexible and can be created and assigned by any user with inventory privileges.

CAUTION: Unless a standardized procedure for assigning active attributes is implemented and enforced, the flexibility of active

attributes can make incorporating them into reports more difficult and time consuming, because multiple people can create them and there is no built-in consistency.

With respect to creating reports, Admin managed attributes will be easier to report on in a consistent fashion, because they are managed by a BUILDER Administrator (or a user with Master Planner Role). Also, Admin managed attributes are available to all assets that are at the same inventory level. Active attributes, on the other hand, would be prone to being named inconsistently and make reporting more difficult.

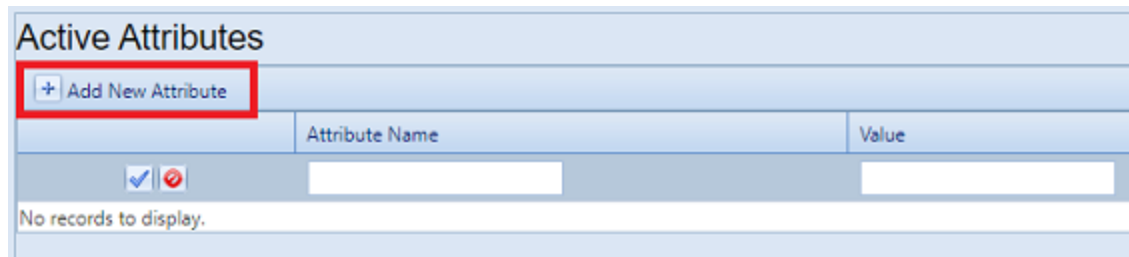
Active Attributes

Under **Active Attributes** at the top half of the Attributes screen, you can add, edit, or delete custom attributes for this level of inventory.

Add an Active Attribute

To add a custom inventory attribute,

1. Directly under the **Active Attributes** header, activate **Add New Attribute**. This will generate a new row in the **Active Attributes** table.



Active Attributes	
+ Add New Attribute	
Attribute Name	Value
<input type="text"/>	<input type="text"/>

No records to display.

2. Enter a name and value for your attribute into the table.
3. If you want to apply an architect name, press the **Enter** key on your keyboard at this point . The popup "Add Architect" will appear. Enter the name of the architect, then select **OK**.
4. When finished with the entry, **activate the blue checkmark icon at the left side of the row** to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with a slash icon (located to the right of the blue checkmark).

CAUTION: Your new attribute will not be saved if you (a) exit without activating the blue checkmark or (b) initiate adding a new custom inventory attribute (by activating the **Add New Attribute** button) before saving with the blue checkmark.

5. Repeat steps 1 through 4 for each custom inventory attribute you wish to add.

Edit an Active Attribute

To edit an attribute,

1. Activate the pencil icon in the attribute's table row
2. Make the desired changes.
3. Finally, activate the blue checkmark icon at the left to save the changes.

Delete an Active Attribute

To delete an attribute,

1. In the table of active attributes, locate the row containing the attribute you wish to delete.
2. To the right of the **Value** field, activate the Delete icon (red "X"). *A confirmation popup will appear, asking "Delete record?"*
3. Select **OK** to delete, or **Cancel** to stop the process.

Admin Managed Attributes

Under **Unassigned Admin Managed Attributes** at the bottom left of the Attributes screen, you can choose to assign an existing Admin managed attribute to the asset whose data screen you have open. You can also change the value of an attribute after it has been assigned.

Note: Attributes that are in the table under the header **Admin Managed Attributes** are already assigned to the asset whose data screen you are in.

Only a BUILDER Administrator or a user with the Master Planner Role can create, edit (other than changing the value), or delete/unassign custom Admin managed attributes for the selected asset. Also, once an Admin managed attribute has been moved from the **Unassigned Admin Managed Attributes** column into **Admin Managed Attributes**, this action cannot be reversed except by a BUILDER Administrator or a user with Master Planner Role. More detail about Administrator-specific inventory attribute tasks can be found in the *BUILDER Support Administrator Guide*.

Assign an Unassigned Attribute to Admin Management

You may see one or more items listed under the header **Unassigned Admin Managed Attributes** at the lower left of the Attributes screen. These are attributes that are available at this inventory level but that have not been assigned to the selected

asset. If no items are listed under the header **Unassigned Admin Managed Attributes**, there are none available to be assigned. (They may have already been assigned and thus transferred to the **Admin Managed Attributes** table.)

To assign an unassigned asset to Admin management,

In the **Unassigned Admin Managed Attributes** column, activate **Assign to Asset**.

Unassigned Admin Managed Attributes		Admin Managed Attributes	
new managed attribute		Refresh	
		Attribute Name	Value
No records to display.			

*This will immediately populate the inventory item in that row under **Admin Managed Attributes** instead.*

Unassigned Admin Managed Attributes		Admin Managed Attributes	
		Refresh	
		Attribute Name	Value
		new managed attribute	Auto Generated

Note: The assignment action is not reversible, except by a BUILDER Administrator or a user with the Master Planner Role.




Change the Value of an Admin Managed Attribute

To change the value of an asset under Admin management,

1. Under **Admin Managed Attributes**, activate the pencil icon in the attribute's table row, and wait for the row to change appearance.

Admin Managed Attributes		
Refresh		
	Attribute Name	Value
	High insurance due to claim	Auto Generated

2. Make the desired change in the **Value** column.

Admin Managed Attributes		
		 Refresh
	Attribute Name	Value
 	High insurance due to claim	Yes <input type="text"/>

3. Finally, activate the blue checkmark icon at the left to save the changes (or the red Cancel icon to cancel the change).

Generate Site Reports

This topic shows how to locate, select, and generate Site-level reports.

There are two locations where you can generate reports:

1. At the main menu bar. The selection of reports listed here is divided into categories: Inventory, Condition Assessment, Functionality Assessment, and Work Planning
2. At the content area toolbar

The first section below provides instructions for generating Site-level reports from the Site's content area toolbar. Reports generated here will be restricted in scope to the selected Site.

The next section after that one provides instructions for generating a report starting at the main menu.


Generate Report at Building Data Screen

Scope of Report

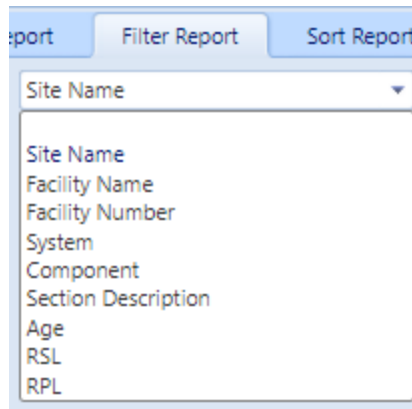
When you generate a report while you are at the Site level of the inventory tree, the report will contain only data that applies to Buildings in the currently selected Site.


How to Generate

To generate a report from a Site's inventory data screen,

1. Activate the  **Reports** button on the content area toolbar. (The content area toolbar is directly above the ID line.) *The "Reports" popup will open.*
2. From the dropdown, select **Standard** reports.

3. At the **Select a Report** field, activate the dropdown arrow. *A multi-page list of reports will be made available.*
4. In the list, select a report. For example, select "Remaining Service Life (RSL) Detail". (To find the RSL report, you will probably need to scroll down the list.)
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, using the Age filter, you can have the RSL report show only items that are 10 years old or more. This is the list of filters available for the RSL report:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.

Generate Report from Main Menu

Scope of Report

Reports are not made available at the Organization level. By default, unless you have used filters to further restrict what is included in the report, the scope of the report will be the Site, Building, System, Component, or Component-Section where you are located in the Inventory tree when you activate the **Reports** button.

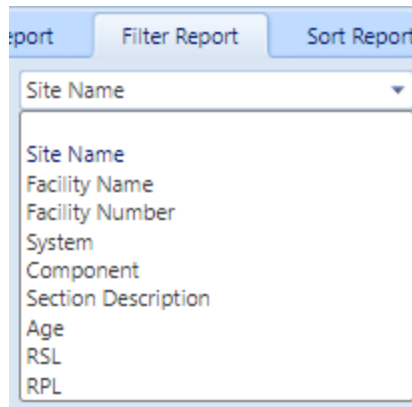
How to Generate


To generate a report from the main menu,

1. Activate the **Reports** button at the main menu.
2. In the "Reports" popup, open the BUILDER entry by clicking on the plus button.
3. Next, open the desired category: Inventory, Condition Assessment, Functionality Assessment, or Work Planning. For this example, open Inventory.

4. In the expanded list of reports, scroll down to the desired report and click on it to select it.
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, you can select the "Age" filter and direct the RSL report to show only items that are 10 years old or more.

This is the list of filters available for the RSL report at the Site level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.

Export Report


To export a report, see instructions at ["Export a Report" on page 258](#).

Delete a Site

This topic shows how to delete a Site, which also deletes all other records (Buildings, Systems, etc.) contained in the Site.

Permissions Note: This action requires Administrator permission. If the inventory item is empty of any contents, then the deletion may also be performed by a Master Planner with permission for the relevant location in inventory.

To delete a Site, navigate to it in the inventory tree and do one of the following:

- a. Right-click the Site. Then select "Delete Site" from the options.
- b. Alternatively, select the Site, then activate the **Delete Site** icon  on the menu toolbar.

WARNING: Deleting a Site deletes all inventory (Complexes, Buildings, Systems, Components, and Sections) in that Site. This is a significant step to take and should only be done when certain that you wish to clear the entire inventory of the selected Site.

Best Practice Recommendation: Making frequent backups of the inventory database will protect you from significant data losses if an unintended deletion is performed.

Working with Complexes

A Complex is an optional level in the asset tree, used to group Buildings/facilities together into one management unit. This topic briefly introduces the features of a Complex and how to use it in organizing your real property inventory. It also provides links to the operations that can be performed at the Complex level.

About Grouping Buildings into Complexes

BUILDER allows you to group multiple Buildings at a Site into an optional organizational level between Sites and Buildings, called a Complex. This is especially useful if your inventory has a large number of Buildings at a single location.

The grouping may be based on a similarity between the Buildings, or it may have a different basis such as who manages the group, or who the Buildings are leased from or to.

Each Building may belong to at most one Complex, but it is not required for a Building to be in a Complex at all. Three alternative strategies are possible:

- a. You may choose not to use Complexes at all, in which case Buildings will be listed directly under their Site in the inventory tree.
- b. You can group all of your Buildings into Complexes.
- c. You can create Complexes, but you may also have Buildings at your Site that are not assigned to any Complex. In this case, you may choose either to list unassigned Buildings directly under their Site, or to create a Complex named "Unassigned" which will have all such Buildings listed under it in the inventory tree.

Complex Tasks

Tasks that can be performed on Complexes are:

["Add a Complex" on the facing page](#)

["Edit Complex Inventory Data" on page 61](#)

["Delete a Complex" on page 78](#)

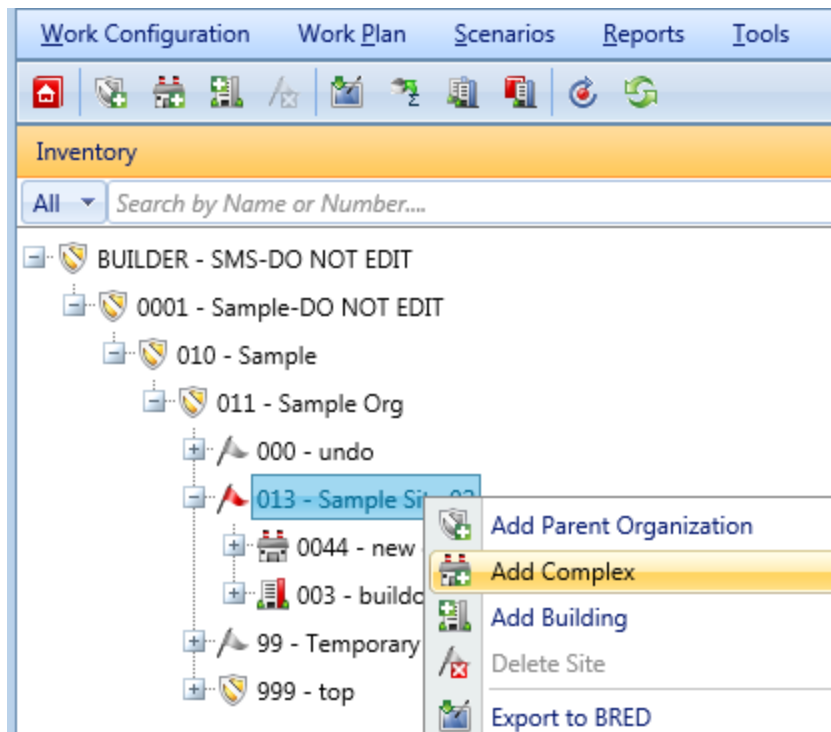
Add a Complex

This topic shows how to add a Complex and describes the required information to be entered. Additional information that can be entered is described in "[Edit Complex Inventory Data](#)" on page 61.

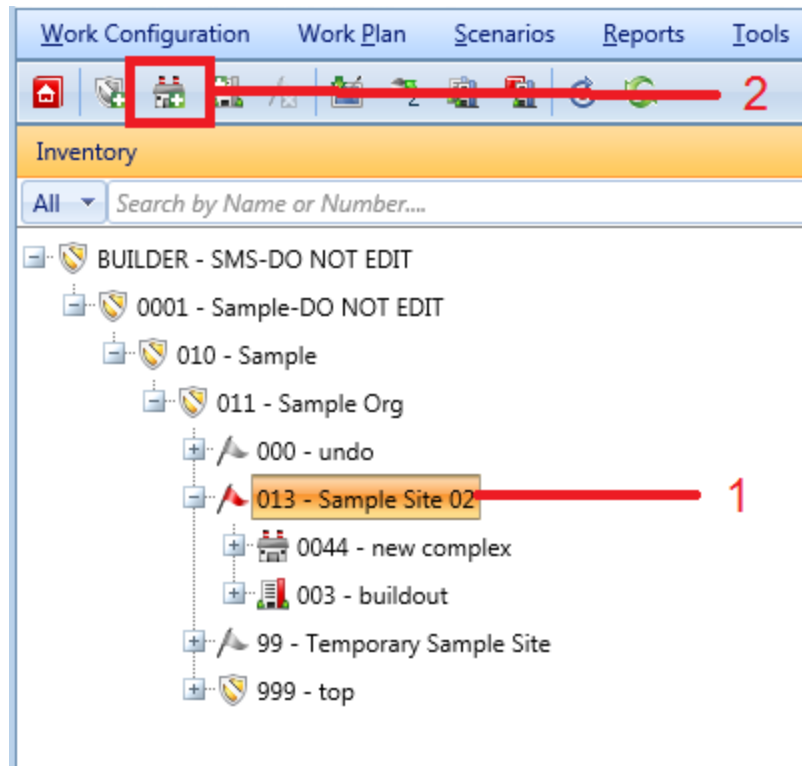
Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

To add a new Complex to a Site, navigate to that Site in the inventory tree and do one of the following:

- a. Right-click the Site. Then select "Add Complex" from the options.



- b. Alternatively, select the Site, then activate the **Add Complex** icon on the main toolbar, as shown below.



The "Add Complex" popup window will appear.



Enter Required Complex Data

This documentation segment describes the minimum data to be entered when creating a new Complex. Other data that can be entered is described in "[Edit Complex Inventory Data](#)" on page 61

In the "Add Complex" popup window, enter the following required data:

1. **Complex Number.** Enter the identifying number for the Complex. The Complex Number field may be left blank if you wish to supply only a name. You must enter at least a Complex name or a Complex number, and the combination of the two must be unique within the Site.

Specifications: The Complex The ID Number is limited to 12 alphanumeric characters.

2. **Complex Name.** Enter the identifying name for this Complex. The Complex Name field may be left blank if you wish to supply only a number. You must enter at least a Complex name or a Complex number, and the combination of the two must be unique within the Site.

Specifications: The name is limited to 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

Confirm or Cancel

Once the required minimum Complex data is entered,

- a. Activate the **Add** button on the popup toolbar to create the Complex. Additional Complex details can then be added as described in "[Edit Complex Inventory Data](#)" on page 61
- b. Alternatively, to close the window without creating the Complex, activate the **Cancel** button.

Assign One or More Buildings to a Complex

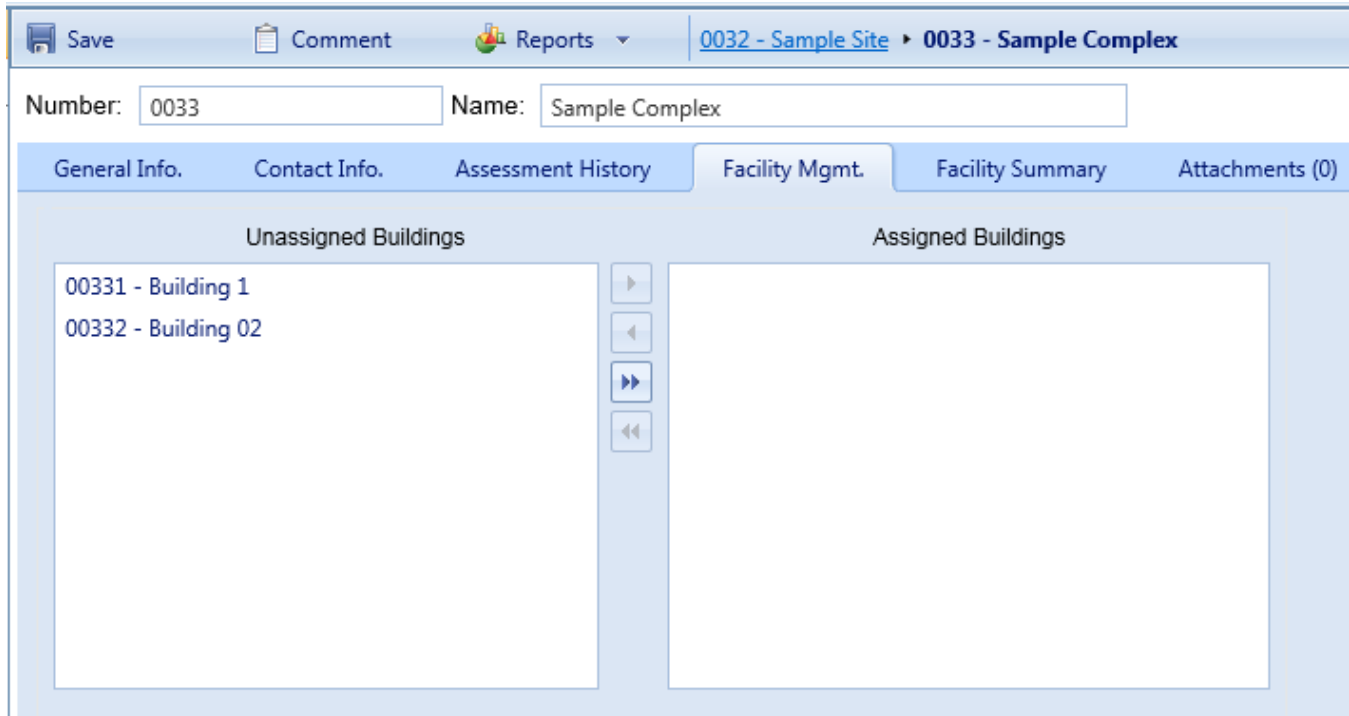
Complexes can be used to group similar Buildings, but assigning a Building to a Complex is optional. The steps below outline how to assign (move) or unassign (remove) a Building to/from a Complex.

To prepare for assigning Buildings to a Complex, first navigate to the Complex in the inventory tree and select it.

In the content area (illustrated below), select the **Facility Mgmt.** tab. This will bring up two columns:

- **Unassigned Buildings** (the column on the left) lists Buildings available to be assigned to a Complex.
- **Assigned Buildings** (the column on the right) lists Buildings already assigned to the selected Complex.

Note: The Buildings and the Complex must be in the same Site.



Move Buildings into a Complex

To move one or more Buildings from the **Unassigned Buildings** column into the Complex, use the arrow keys located between the two columns as described below.

To move all of the Buildings into the Complex,

1. Activate the button with double right-pointing arrows.
2. Use the **Save** button on the content area toolbar to lock in your change.

To move one Building into the Complex,

1. Select the Building in the **Unassigned Buildings** column.
2. Activate the single right-pointing arrow.
3. Use the **Save** button on the content area toolbar to lock in your change.

To move multiple Buildings into the Complex,

1. Select the Buildings in the **Unassigned Buildings** column, using the **Shift** and/or **Ctrl** keys as needed.
2. Activate the single right-pointing arrow.

Note: In the Assigned Buildings column, newly assigned Buildings will show on a green background until you save.

3. Use the **Save** button on the content area toolbar to lock in your change.

Remove Buildings from a Complex

To move one or more Buildings from the Complex back into the **Unassigned Buildings** column, use the arrow keys located between the two columns as described below.

To move all of the Buildings,

1. Activate the button with double left-pointing arrows.
2. Use the **Save** button on the content area toolbar to lock in your change.

To move one Building,

1. Select the Building in the **Assigned Buildings** column.
2. Activate the single left-pointing arrow.
3. Use the **Save** button on the content area toolbar to lock in your change.

To move multiple Buildings,

1. Select the Buildings in the **Assigned Buildings** column, using the **Shift** and **Ctrl** keys as needed.
2. Activate the single left-pointing arrow.
3. Use the **Save** button on the content area toolbar to lock in your change.

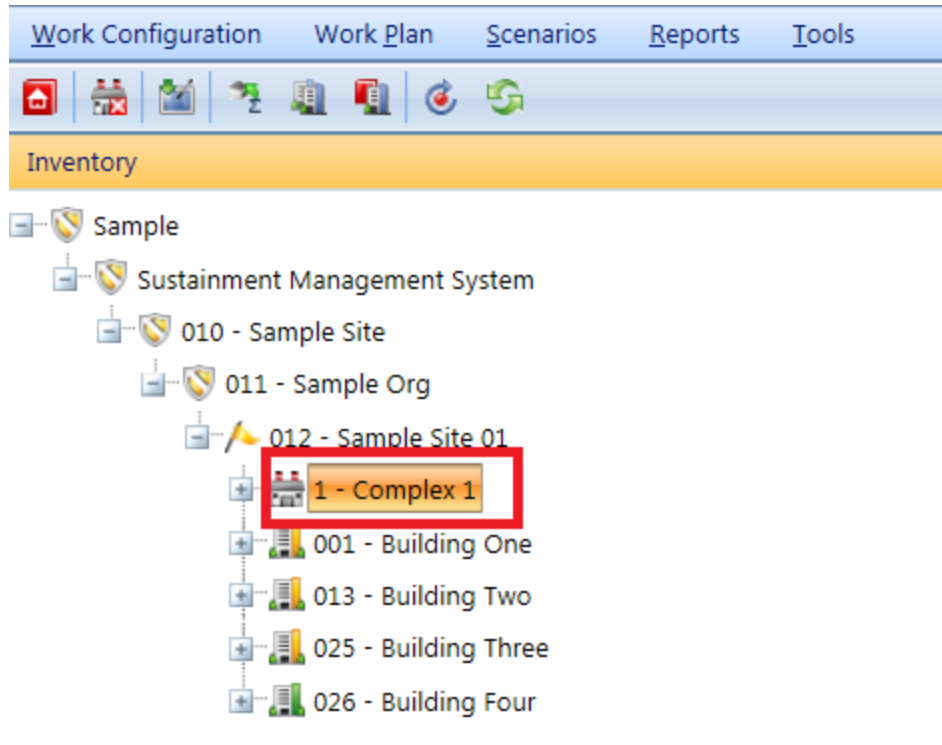
Move Buildings from one Complex to Another

To move a Building from one Complex to a different one, you must first navigate to the Complex it is assigned to and unassign it (see *Remove Buildings from a Complex*, immediately above). Then navigate to the destination Complex and follow the instructions in *Move Buildings into a Complex*, above).

Edit Complex Inventory Data

This topic describes the information that can be viewed and edited at the Complex data screen.

To edit the inventory data for a specific Complex, first select the Complex in the inventory tree.






The following sections describe information that can be obtained and actions that can be performed on the Complex.

Information about the Site will be presented on an ID line and at several tabs. You can use the content area toolbar to perform actions such as saving changes, or adding or editing comments.

- ["Toolbar" on the facing page](#)
- ["ID Line" on the facing page](#)
- ["General Information Tab" on the facing page](#)
- ["Contact Information Tab" on page 64](#)
- ["Assessment History Tab" on page 64](#)
- ["Facility Management Tab" on page 65](#)
- ["Facility Summary Tab" on page 66](#)
- ["Cost Modifiers Tab" on page 67](#)
- ["Attachments Tab" on page 68](#)
- ["Complex Attributes Tab" on page 72](#)

Toolbar

The following options are available at the content area toolbar:

-  **Save**. Saves changes made to the Complex data.
-  **Comment**. Allows you to add, edit, and view comments about the Complex.
-  **Reports**. Launches the Report Selection tool, which gives you access to a list of standard reports relevant to Complex inventory. See "[Generate Complex Reports](#)" on page 76.

ID Line

On the ID line, you can edit the following:

- **Complex ID Number**. The ID Number is limited to 12 alphanumeric characters.
- **Complex Name**. Complex Name is allowed 50 alphanumeric characters.
Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

General Information Tab

Initially, after a Complex is selected in the inventory tree, the **General Information** tab (abbreviated **General Info.**) is shown with the following information:

- **Index Data (Read-Only)**.
 - **Complex Condition Index (Complex CI)**. The Complex CI displays the average CI of the buildings in the Complex, weighted by replacement cost. This metric provides an overall sense of the condition of the Complex as a whole.
 - **Complex Functionality Index (Complex FI)**. The Complex FI displays the average FI of the buildings in the Complex, weighted by replacement cost. This metric provides an overall sense of the functionality of the Complex as a whole.
 - **Complex Performance Index (Complex PI)**. The Complex PI displays the average PI of the buildings in the Complex, weighted by replacement cost. This metric provides an overall sense of the performance of the Complex as a whole.
 - **Complex Facility Condition Index (Complex FCI)**. The Complex FCI metric provides an overall sense of deferred repair work at the Complex level. It differs from the Complex CI in that it is a monetary based metric. The formula is: $FCI = (1 - \text{\$current repair needs}/\text{\$PRV}) \times$

100, where the dollar amount of repair needs is obtained from BUILDER work items. More information about the FCI is available at ["Appendix C: Facility Condition Index" on page 265](#).

- **Calculated Data (Read-Only).**
 - **Number of Facilities.** Displays the number of Buildings included in the Complex inventory.
 - **PRV.** Displays the aggregate Plant Replacement Value of the Buildings at the Complex, computed by adding the individual Building replacement costs.

Contact Information Tab

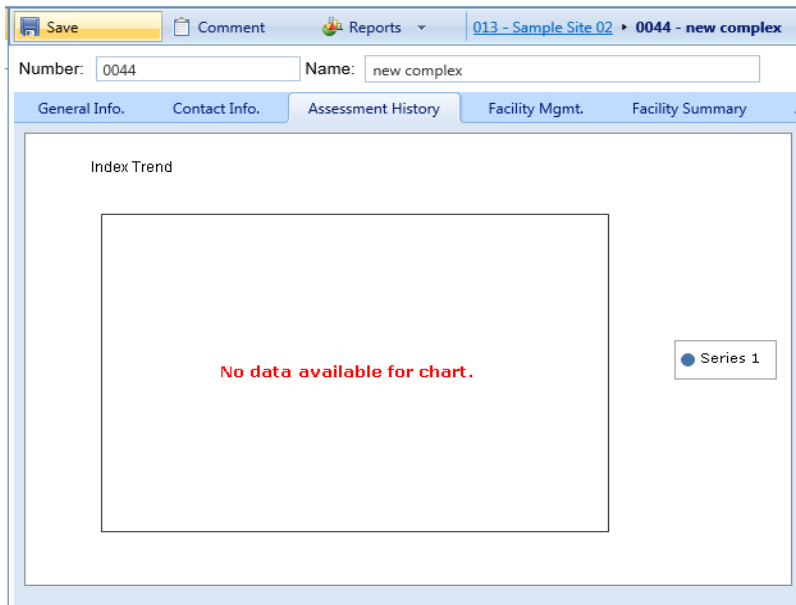
Point of contact (POC) information for the Complex may be viewed and edited by selecting the Contact Information (**Contact Info.**) tab. The available fields are as follows:

- **Name.** Enter the name of the Complex point of contact. Limit: 30 alphanumeric characters.
- **Address.** Enter the official street address of the Complex. Limit: 30 alphanumeric characters.
- **City.** Enter the city where the Complex is located. Limit: 15 alphanumeric characters.
- **State.** Enter the state where the Complex is located. Limit: 2 alphanumeric characters.
- **Zip Code.** Enter the zip code of the Complex. Limit: 10 alphanumeric characters.
- **Phone Number.** Enter the phone number of the Complex POC. Limit: 20 alphanumeric characters.
- **FAX Number.** Enter the FAX number of the Complex POC. Limit: 20 alphanumeric characters.
- **Email Address.** Enter the email address of the Complex POC. Limit: 75 alphanumeric characters.
- **WWW.** Enter the World Wide Web (WWW) URL address for this Complex. Limit: 75 alphanumeric characters.

Assessment History Tab

Note: The information at this tab is read-only.

The Assessment History tab provides a graph of the condition, functionality, performance and FCI history of the Complex, displaying the Complex CI, Complex FI, Complex PI and Complex FCI over time.



Facility Management Tab

The Facility Management (**Facility Mgmt.**) tab lists the Buildings currently assigned to the Complex. Buildings can be assigned to or removed from the Complex at this tab. The Buildings are separated into two columns:

- **Unassigned Buildings.** Lists the Buildings at the Site that are not assigned to a Complex.
- **Assigned Buildings.** Lists the Buildings assigned to the current Complex.

The topic "[Assign Buildings to a Complex](#)" on page 86 shows instructions for moving Buildings in and out of a Complex.

Facility Summary Tab

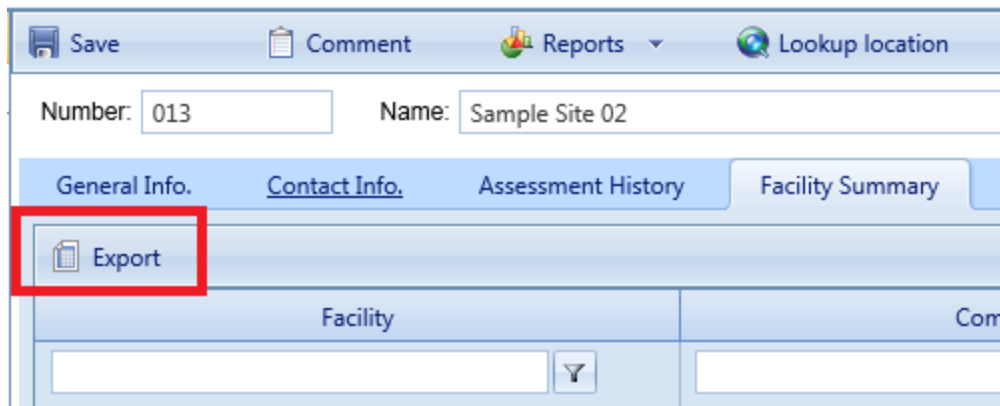
Basic information regarding Buildings at the Complex is available under the **Facility Summary** tab. All of the data shown at this tab is read-only; however, which information is displayed can be influenced using the search filters provided. Each column shown at the **Facility Summary** tab is described below.

- **Facility**. Displays the number and name of each Building in the Complex.
- **Quantity**. This is the primary measure of the size of the facility. For buildings, it will usually be square feet, if the User Preferences (UM) selected at User Preferences is "English." (User preferences are explained in the *BUILDER Getting Started Guide*)
- **Unit of Measure (UM)**. Displays the unit of measure in use.
- **Plant Replacement Value (PRV)**. Displays the aggregate Plant Replacement Value of the Buildings in the Complex.
- **Building Condition Index (BCI)** . Displays the current Building Condition Index of each Building in the Complex.
- **Building Functionality Index (BFI)**. Displays the current Building Functionality Index of each Building in the Complex.
- **Building Performance Index (BPI)**. Displays the current Building Performance Index of each Building in the Complex.
- **Facility Condition Index (FCI)**. Displays the current Facility Condition Index of each Building in the Complex. For more information about the Facility Condition Index, see ["Appendix C: Facility Condition Index" on page 265](#).

Additionally, the Complex CI, Complex FI Complex PI and Complex FCI are shown at the top of the tab, which are the average of each index of the Buildings in the Complex weighted by replacement cost.

Export Information from the Facility Summary Tab

All the information at the **Facility Summary** tab can be exported to a Microsoft Excel spreadsheet by activating the **Export** button, located below "Number" on the ID line.



Cost Modifiers Tab

The **Cost Modifiers** tab displays a table showing assigned cost modifiers, and allows you to view and assign cost multipliers or adders.

Note: Existing cost modifiers that affect the Complex level may have been assigned either at the Site or the Complex level, but from a Complex data page you can only assign a Complex-level cost modifier.

Modifier Scope

At the Complex level, the Assigned Cost Modifiers table will show you all of the following:

- all modifiers assigned to that Complex
- all modifiers assigned to the Site the Complex is in

The scope of each modifier is shown in the **Modifier Scope** column.

Assign a Modifier

To assign a modifier to your Complex from available options,

1. Activate the **Assign Cost Modifier** button.

Number: Name:

General Info. Contact Info. Assessment History Facility Mgmt. Facility Summary **Cost Modifiers** Attachments (0) Con

Assigned Cost Modifiers

Assign Cost Modifier

Modifier Scope	Modifier Type	Modifier Name	Modifier Value	Est. Modifier Impact	Modifier Description	Assignment Comment
Site	Adder	Test Site Adder	2000.0000			testing
Site	Multiplier	Test Site Mult	1.2500			testing

2. In the "New Complex Modifier Assignment" popup, select a cost modifier from the dropdown list.
3. Add a comment if desired
4. Activate **Add** on the popup toolbar. *You should see your selected modifier added to the table of cost modifiers.*

Unassign a Modifier

To unassign a modifier, first navigate to where the modifier was assigned, then activate the **Unassign** button in the rightmost column of the Assigned Cost Modifiers table.

Modifier Description	Assignment Comment	
	testing	<input type="button" value="Unassign"/>
	testing	<input type="button" value="Unassign"/>

A Site-level cost modifier can be unassigned only at the Site level, a Building-level cost modifier can be unassigned only at the Building level, etc.

More about Cost Modifiers

For more about cost modifiers, see the **Cost Modifiers** chapter in the *BUILDER Reference Data Guide*.

Attachments Tab

At the **Attachments** tab, you have the option to view or change the asset's attachments.

View Attachment(s)

The **Attachments** tab will show whether any files have been attached to the asset's record. The number in parentheses after the word "Attachments" shows how many of them have been attached.

To view one or more attachments,

1. Activate the **Attachments** tab. *If attachments are present, a table will display their type, title, and description.*
2. Activate the link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. When finished viewing, activate the **Close** button on the popup window toolbar. and you will be returned to the table of attachments.
4. Repeat the two steps immediately above for additional attachments as desired.

Add an Attachment

At the **Attachments** tab on the asset's data page, you have the option to attach files (images and other documents) to the asset's record. An attached file might be a photograph, an electronic image of written notes or diagrams made during inventory, or a file generated on a computer.

Acceptable Attachment Formats


The attachment may be in any of the following formats:

- .jpg
- .jpeg
- .png
- .zip
- .doc
- .pdf

Note: As of January 31, 2022, .doc format is allowed, but not .docx.

Attach

To attach a file,

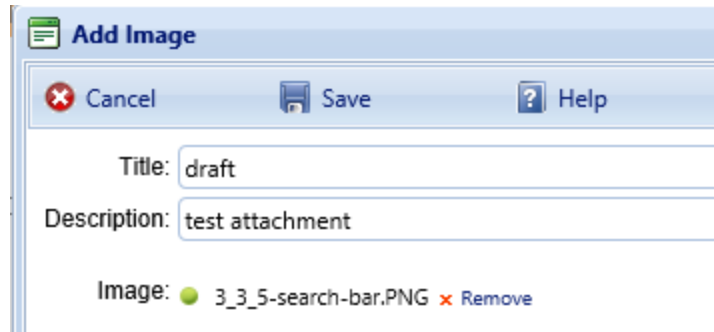
1. At the **Attachments** tab, activate the  **Add** button in the toolbar below the row of tabs.

This will open the "Add Image" popup window:

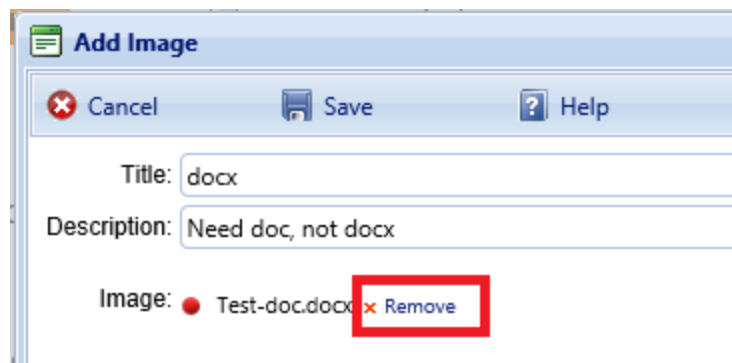
2. Enter Title and Description information for the attachment.
3. Activate the **Select** button to the right of the "Image" field.
4. Browse to the desired image or other file and select it for attachment. *If a red dot appears next to your file name in the "Add Image" popup, see ["Attachment Troubleshooting" below](#).*
5. If you are adding an attachment at the Building level, use the "Image Type" radio buttons to indicate whether the attachment is a Key Plan, a Section Plan, or "Other."
6. Once the required attachment data is entered, activate the **Save** button on the popup toolbar. Alternatively, to close the popup window without attaching the selected file or image, activate the **Cancel** button.

Attachment Troubleshooting

If the selected attachment is in an acceptable format, the "Image" field will be replaced with a green dot (plus a label that gives you the option to remove the attachment).



However, if it is not in an acceptable format, the "Image" field will be replaced with a red dot. Activate "Remove" and select an attachment file in one of the formats listed at the header ["Acceptable Attachment Formats" on page 69](#).



Edit Attachment Metadata

You can edit the title and/or description of an attachment as follows:

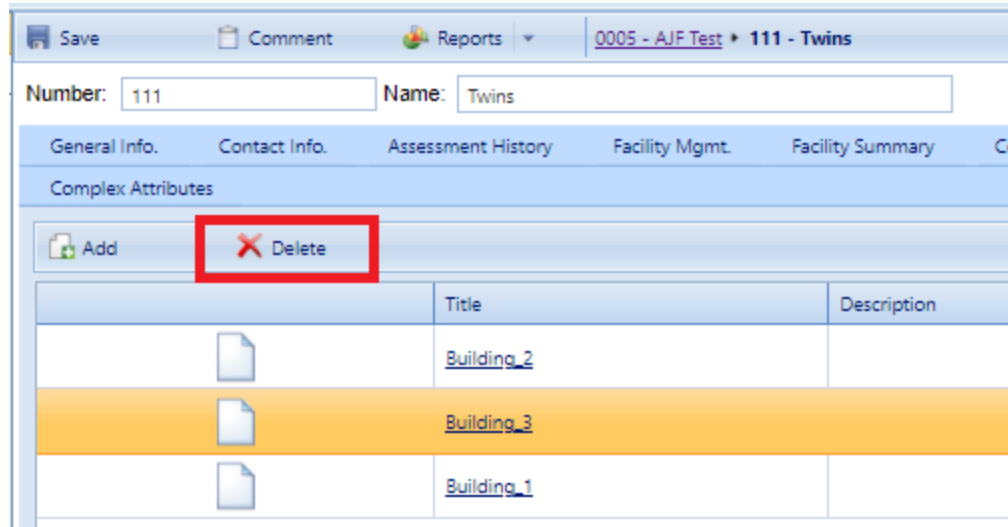
1. Navigate to the **Attachments** tab to view the attachments table.
2. Activate a link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. In the header section above the attachment, make the desired changes in the **Title** and/or **Description** field(s).
4. Activate **Save** on the popup toolbar to store your changes and return to the table of attachments.
5. Alternatively, if you want to cancel the change, activate **Close** on the popup toolbar. *You will be returned to the table of attachments.*

If you wish to change the contents of the attachment, you will need to delete the existing attachment file and add a new one.

Delete an Attachment

To delete an attachment,

1. Navigate to the **Attachments** tab to view the attachments table.
2. Select the attachment you wish to delete (do *not* activate the link in the **Title** column). *When properly selected, that record in the table will change background color as illustrated below, and only then will the **X Delete** icon be selectable:*



3. Activate the **Delete** button above the table.
4. Activate **Yes** in the confirmation box to delete the attachment, or **No** to cancel.

Complex Attributes Tab

Custom asset attributes can be added at each inventory level—from Organization down through Section—in two different ways: by using "active attributes" or by using "Admin managed attributes."

"Unassigned" *Admin managed attributes* are a collection of pre-named attributes that have been determined by the BUILDER instance's owner (for example, a corporation, or the Air Force, or the Army). They are templated or common attributes that are seen as likely to be used often. Although these attributes are made available from the outset after installing BUILDER, they still need to be assigned before they can be used to help describe an asset.

Additional Admin managed attributes can be created, but only by a BUILDER Administrator or a user with Master Planner Role.

Active attributes are very flexible and can be created and assigned by any user with inventory privileges.

CAUTION: Unless a standardized procedure for assigning active attributes is implemented and enforced, the flexibility of active

attributes can make incorporating them into reports more difficult and time consuming, because multiple people can create them and there is no built-in consistency.

With respect to creating reports, Admin managed attributes will be easier to report on in a consistent fashion, because they are managed by a BUILDER Administrator (or a user with Master Planner Role). Also, Admin managed attributes are available to all assets that are at the same inventory level. Active attributes, on the other hand, would be prone to being named inconsistently and make reporting more difficult.

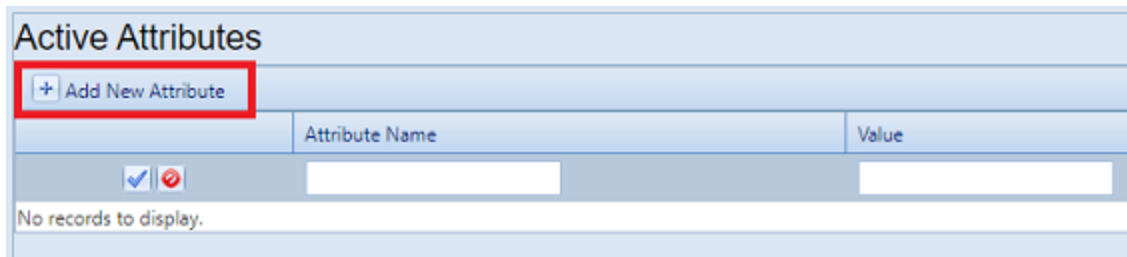
Active Attributes

Under **Active Attributes** at the top half of the Attributes screen, you can add, edit, or delete custom attributes for this level of inventory.

Add an Active Attribute

To add a custom inventory attribute,

1. Directly under the **Active Attributes** header, activate **Add New Attribute**. This will generate a new row in the **Active Attributes** table.



Active Attributes	
Attribute Name	Value
<input type="text"/>	<input type="text"/>

2. Enter a name and value for your attribute into the table.
3. If you want to apply an architect name, press the **Enter** key on your keyboard at this point . The popup "Add Architect" will appear. Enter the name of the architect, then select **OK**.
4. When finished with the entry, **activate the blue checkmark icon at the left side of the row** to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with a slash icon (located to the right of the blue checkmark).

CAUTION: Your new attribute will not be saved if you (a) exit without activating the blue checkmark or (b) initiate adding a new custom inventory attribute (by activating the **Add New Attribute** button) before saving with the blue checkmark.

5. Repeat steps 1 through 4 for each custom inventory attribute you wish to add.

Edit an Active Attribute

To edit an attribute,

1. Activate the pencil icon in the attribute's table row
2. Make the desired changes.
3. Finally, activate the blue checkmark icon at the left to save the changes.

Delete an Active Attribute

To delete an attribute,

1. In the table of active attributes, locate the row containing the attribute you wish to delete.
2. To the right of the **Value** field, activate the Delete icon (red "X"). *A confirmation popup will appear, asking "Delete record?"*
3. Select **OK** to delete, or **Cancel** to stop the process.

Admin Managed Attributes

Under **Unassigned Admin Managed Attributes** at the bottom left of the Attributes screen, you can choose to assign an existing Admin managed attribute to the asset whose data screen you have open. You can also change the value of an attribute after it has been assigned.

Note: Attributes that are in the table under the header **Admin Managed Attributes** are already assigned to the asset whose data screen you are in.

Only a BUILDER Administrator or a user with the Master Planner Role can create, edit (other than changing the value), or delete/unassign custom Admin managed attributes for the selected asset. Also, once an Admin managed attribute has been moved from the **Unassigned Admin Managed Attributes** column into **Admin Managed Attributes**, this action cannot be reversed except by a BUILDER Administrator or a user with Master Planner Role. More detail about Administrator-specific inventory attribute tasks can be found in the *BUILDER Support Administrator Guide*.

Assign an Unassigned Attribute to Admin Management

You may see one or more items listed under the header **Unassigned Admin Managed Attributes** at the lower left of the Attributes screen. These are attributes that are available at this inventory level but that have not been assigned to the selected

asset. If no items are listed under the header **Unassigned Admin Managed Attributes**, there are none available to be assigned. (They may have already been assigned and thus transferred to the **Admin Managed Attributes** table.)

To assign an unassigned asset to Admin management,

In the **Unassigned Admin Managed Attributes** column, activate **Assign to Asset**.

Unassigned Admin Managed Attributes		Admin Managed Attributes	
new managed attribute		Refresh	
		Attribute Name	Value
No records to display.			

*This will immediately populate the inventory item in that row under **Admin Managed Attributes** instead.*

Unassigned Admin Managed Attributes		Admin Managed Attributes	
		Refresh	
		Attribute Name	Value
		new managed attribute	Auto Generated

Note: The assignment action is not reversible, except by a BUILDER Administrator or a user with the Master Planner Role.




Change the Value of an Admin Managed Attribute

To change the value of an asset under Admin management,

1. Under **Admin Managed Attributes**, activate the pencil icon in the attribute's table row, and wait for the row to change appearance.

Admin Managed Attributes		
Refresh		
	Attribute Name	Value
	High insurance due to claim	Auto Generated

2. Make the desired change in the **Value** column.

Admin Managed Attributes		
		 Refresh
	Attribute Name	Value
 	High insurance due to claim	Yes <input type="text"/>

3. Finally, activate the blue checkmark icon at the left to save the changes (or the red Cancel icon to cancel the change).

Generate Complex Reports

This topic shows how to locate, select, and generate Complex-level reports.

There are two locations where you can generate reports:

1. At the main menu bar. The selection of reports listed here is divided into categories: Inventory, Condition Assessment, Functionality Assessment, and Work Planning
2. At the content area toolbar

The first section below provides instructions for generating Complex-level reports from the Complex's content area toolbar. Reports generated here will be restricted in scope to the selected Complex.

The next section after that one provides instructions for generating a report starting at the main menu.


Generate Report at Complex Data Screen

Scope of Report

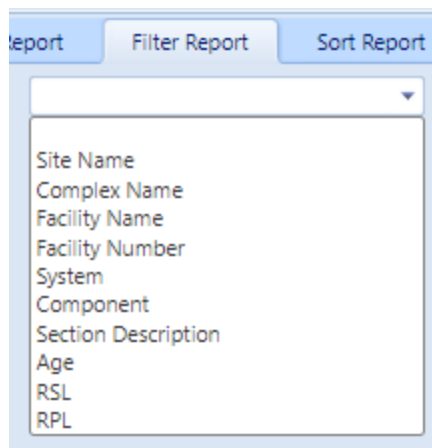
When you generate a report while you are at the Complex level of the inventory tree, the report will contain data only for the currently selected Complex.


How to Generate

To generate a report,

1. Activate the  **Reports** button on the content area toolbar. (The content area toolbar is directly above the ID line.) *The "Reports" popup will open.*
2. From the dropdown, select **Standard** reports.

3. At the **Select a Report** field, activate the dropdown arrow. *A multi-page list of reports will be made available.*
4. In the list, select a report. For example, "Remaining Service Life (RSL) Detail". (To find the RSL report, you will probably need to scroll down the list.)
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, by selecting the "Age" filter, you can have the RSL report show only items that are 10 years old or more. This is the list of filters available for the RSL report at the Complex level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.

Generate Report from Main Menu

Scope of Report

Reports are not made available at the Organization level. By default, unless you have used filters to further restrict what is included in the report, the scope of the report will be the Site, Building, System, Component, or Component-Section where you are located in the Inventory tree when you activate the **Reports** button.

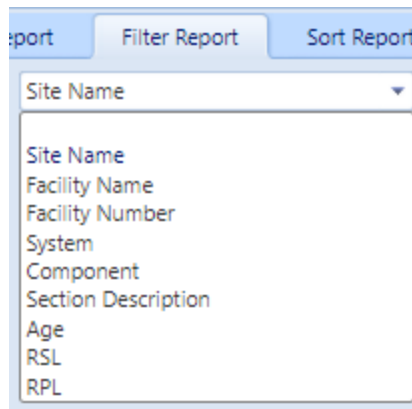
How to Generate


To generate a report from the main menu,

1. Activate the **Reports** button at the main menu.
2. In the "Reports" popup, open the BUILDER entry by clicking on the plus button.

3. Next, open the desired category: Inventory, Condition Assessment, Functionality Assessment, or Work Planning. For this example, open Inventory.
4. In the expanded list of reports, scroll down to the desired report and click on it to select it.
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, you can select the "Age" filter and direct the RSL report to show only items that are 10 years old or more.

This is the list of filters available for the RSL report at the Site level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.

Export Report


To export a report, see instructions at ["Export a Report" on page 258](#).

Delete a Complex

This topic shows how to delete a Complex, which also deletes all other records (Buildings, Systems, etc.) contained in the Complex.

Permissions Note: This action requires Administrator permission. If the inventory item is empty of any contents, then the deletion may also be performed by a Master Planner with permission for the relevant location in inventory.

To delete a Complex, navigate to it in the inventory tree and do one of the following:

- a. Right-click the Complex. Then select "Delete Complex" from the options.
- b. Alternatively, select the Complex, then activate the  **Delete Complex** icon on the main toolbar.

WARNING: Deleting a Complex deletes all inventory (Buildings, Systems, Components, and Sections) in the Complex. This is a significant step to take and should only be done when you are certain that you wish to clear the entire inventory of the Complex you have selected.

Best Practice Recommendation: Making frequent backups of your inventory database will protect you from significant data losses if mistakes in deleting are made.

Working with Buildings

A large amount of information is stored at the Building level of the asset tree. This topic describes what a Building is and how to use it in organizing your real property inventory. It also provides links to the operations that can be performed at the Building level.

The Building level is a pivotal level in BUILDER. Levels above the Building level give the organizational and geographic context of the Building. Levels below the Building exist to conceptually subdivide the Building to create an organization for the Component-Sections that represent the physical parts of the Building.

The Building level is the lowest level in the SMS hierarchy that is shared by both BUILDER and ROOFER. (Below the Building level, ROOFER has just one more hierarchical level, the roof section.)

Note: Because a Building record is almost always larger and more complex than any other hierarchical record in BUILDER, it will take longer for a Building record to process and appear on the screen than it will for records at other levels in the hierarchy.

Building Information




Main Toolbar

When you select a Building in the inventory tree, icons corresponding to actions you can take at that level of inventory will display in the main toolbar.

Content Area Toolbar

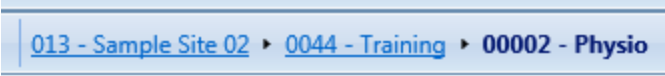
Buttons

Buttons on the content area toolbar allow you to do the following:

-  **Save.** Save changes made to the Building data.
-  **Comment.** View, add, or edit comments about the Building.
-  **Reports.** Launch the Report Selection tool, which gives you access to a list of standard reports relevant to Building inventory. See ["Generate Building Reports" on page 110](#).

Breadcrumbs

The breadcrumbs shown on the content area toolbar provide both orientation and an alternative method of navigation.



[013 - Sample Site 02](#) > [0044 - Training](#) > [00002 - Physio](#)

Building Identification

On the ID line, below the content area toolbar, you can edit the following:

- **Building ID Number.** The ID Number is limited to 12 alphanumeric characters.
- **Building Name.** Building Name is allowed 50 alphanumeric characters.
Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

Information Tabs

At the information tabs is where you will view or enter specific details about the Building. By default, the **General Information** tab (abbreviated General Info) will appear when you navigate to a Building in the inventory tree.

Information at these tabs is described in ["Edit Building General Information" on page 88](#) and ["Edit Additional Building Inventory Data" on page 95](#).

Building Tasks

Tasks that can be performed on Buildings are:

- ["Add a Building" on the next page](#)
- ["Edit Building General Information" on page 88](#)
- ["Edit Additional Building Inventory Data" on page 95](#)
- ["Assign Buildings to a Complex" on page 86](#)
- ["Generate Building Reports" on page 110](#)
- ["Delete a Building" on page 112](#)

Additional useful information can be found here:

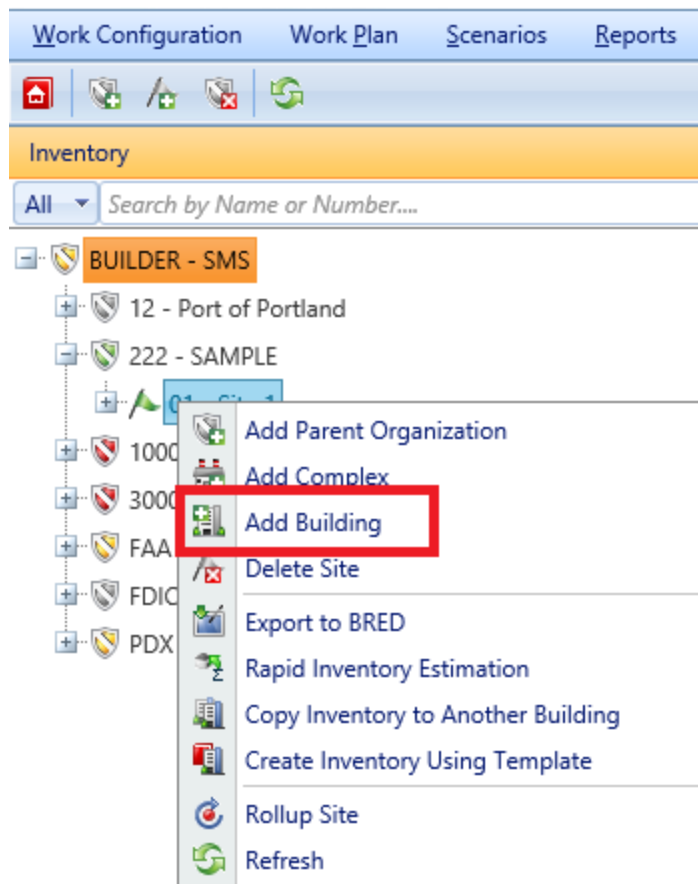
- ["About the Building Current Status Property" on page 115](#)
- ["Use Current Status to Track Non-Current Inventory" on page 118](#)

Add a Building

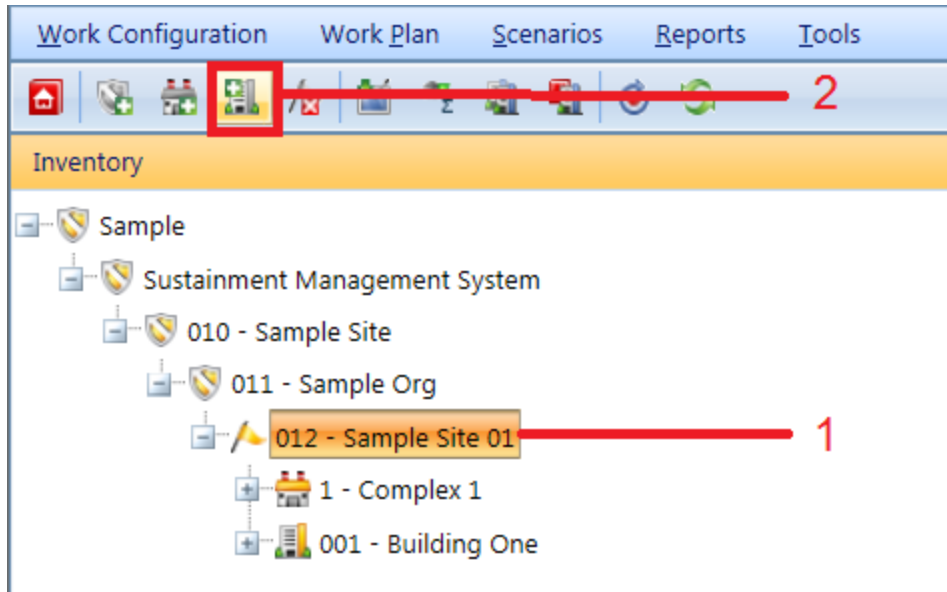
This topic shows how to add a Building and describes the required information to be entered. The topics ["Edit Building General Information" on page 88](#) and ["Edit Additional Building Inventory Data" on page 95](#) describe additional information that can be entered.

After you ["Add a Site" on page 32](#), you can add Buildings to your inventory. To add a new Building to a Site, navigate to that Site in the inventory tree and do *one* of the following:

- a. Right-click the Site. Then select "Add Building" from the options.



- b. Alternatively, select the Site, then activate the **Add Building** icon on the main toolbar, as shown below.



Enter Required Building Information

In the "Add Building" popup window, enter the following required data:

1. **Building Number.** Enter the identifying number for the Building. For DoD applications, the RPUID is helpful here. The Building Number field may be left blank if you wish to supply only a name. You must enter at least a Building name or a Building number, and the combination of the two must be unique within the Site.

Specifications: The Building The ID Number is limited to 12 alphanumeric characters.

Best Practice Recommendation: Because the Building number is alphanumeric instead of numeric, the alphabetic ordering of Buildings in a list will follow character order rather than number order: for example, Building number 10 will be listed before Building number 2. To avoid this situation, use the correct number of leading zeros (for example, use 02 or 002 or 0002 instead of 2), depending on the maximum number of digits used in numbering Buildings.

2. **Building Name.** Enter the identifying name for this Building. The Building Name field may be left blank if you wish to supply only a number. You must enter at least a Building name or a Building number, and the combination of the two must be unique within the Site.

Specifications: The name is limited to 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

3. **Building Use.** Select the Building Use category from the dropdown list that most closely matches the Building's use. If you are a Department of Defense activity, BUILDER should display familiar category codes for your service.
4. **Construction Type.** Select the construction type from the dropdown list that matches the Building. Construction type options include:
 - Permanent
 - Leased
 - Semi-Permanent
 - Temporary
5. **Status (Current Status).** Select the appropriate status of the Building from the dropdown list. See ["About the Building Current Status Property" on page 115](#) for more information. Status type options include:
 - Active
 - Demolished
 - To be acquired
 - To be built
 - To be demolished
 - To be transferred
 - Transferred
 - Vacant

The default Building status is "Active." The last four of these values indicate that the designated Building is not currently part of the inventory, and two others indicate that the Building will be removed from the inventory in the future.

The options "To be acquired" and "To be built" allow you to enter future Buildings into the inventory and to plan for their maintenance in Scenarios even though they are not presently owned. Along with Transferred and Demolished, these options allow you to keep information about the Building in your database without the data on these Buildings affecting your current condition indices.

The options "Transferred" and "Demolished" allow you to keep records for Buildings that are no longer in the physical inventory. Such records are ignored in processes that should only consider current Buildings, such as condition rollups and work planning.

In essence, the [Current Status property](#) allows you to enter future Buildings into the inventory and to plan for their maintenance even though they are not presently owned. In addition, the Current Status property allows you to keep records for Buildings that are no longer in the physical inventory.

Some of the Status options have suboptions available, but the suboptions are not required information. They are described in more detail in ["Edit Building General Information" on page 88](#).

6. **Does Not Contain (New as of Version 3.4.0)**. If there are Systems that the Building does not contain, you can indicate this by selecting from the drop-down list.
7. **Year Built**. Enter the year construction of the Building was completed. This data element determines the age of the Building, which is a critical factor in BUILDER's decision-making processes.
8. **Year Renovated (New as of Version 3.4.0)**. If the Building has been renovated, enter the year that the renovation was completed.
9. **Number of Floors**. Enter the number of floors of the Building. This data element is used to estimate the size of the Building's footprint by dividing the area by the number of floors.
10. **Area**. Enter the gross area of the Building.

This data is required because BUILDER's internal algorithms generally have parameters determined by the Building's Building Use, size, age, number of floors, status, and construction type, so it is essential that the information be provided as a part of creating the Building record.

The screenshot shows a software dialog box titled "Add Building". At the top, there are "Cancel" and "Add" buttons. The form contains the following fields:

- Building No:
- Building Name:
- Building Use:
- Const. Type:
- Status:
- Year Built:
- No. of Floors:
- Area: SF

Confirm or Cancel

Once the required minimum Building data is entered,

- a. Activate the **Add** button on the popup toolbar to create the Building. *The Building Summary window will open to allow you to immediately add to and edit the Building data at the various tabs. These tabs are described in ["Edit Building General Information" on page 88](#) and ["Edit Additional Building Inventory Data" on page 95](#).*
- b. Alternatively, to close the window without creating the new Building, activate the **Cancel** button.

Next Steps

For information about entering additional information concerning the Building, see the topics ["Edit Building General Information" on page 88](#) and ["Edit Additional Building Inventory Data" on page 95](#).

Assign Buildings to a Complex

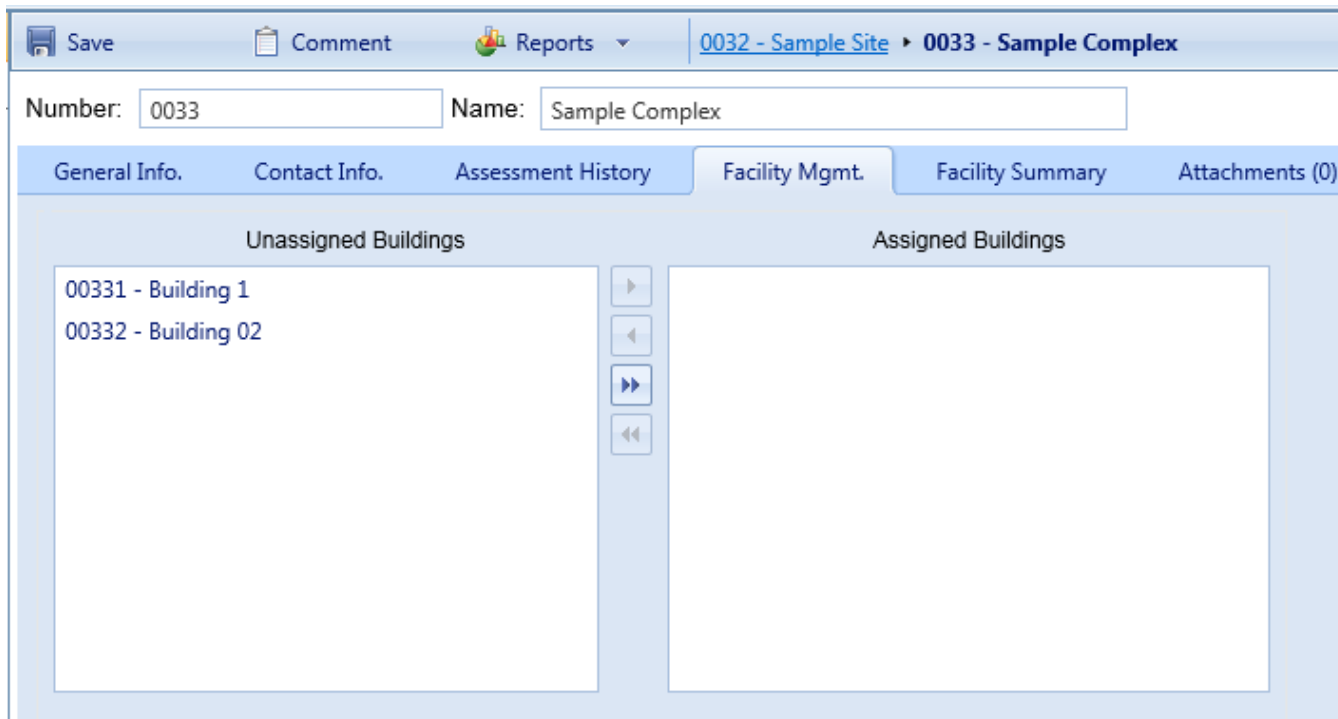
Complexes can be used to group similar Buildings, but assigning a Building to a Complex is optional. The steps below outline how to assign (move) or unassign (remove) a Building to/from a Complex.

To prepare for assigning Buildings to a Complex, first navigate to the Complex in the inventory tree and select it.

In the content area (illustrated below), select the **Facility Mgmt.** tab. This will bring up two columns:

- **Unassigned Buildings** (the column on the left) lists Buildings available to be assigned to a Complex.
- **Assigned Buildings** (the column on the right) lists Buildings already assigned to the selected Complex.

Note: The Buildings and the Complex must be in the same Site.



Move Buildings into a Complex

To move one or more Buildings from the **Unassigned Buildings** column into the Complex, use the arrow keys located between the two columns as described below.

To move all of the Buildings into the Complex,

1. Activate the button with double right-pointing arrows.
2. Use the **Save** button on the content area toolbar to lock in your change.

To move one Building into the Complex,

1. Select the Building in the **Unassigned Buildings** column.
2. Activate the single right-pointing arrow.
3. Use the **Save** button on the content area toolbar to lock in your change.

To move multiple Buildings into the Complex,

1. Select the Buildings in the **Unassigned Buildings** column, using the **Shift** and/or **Ctrl** keys as needed.
2. Activate the single right-pointing arrow.

Note: In the Assigned Buildings column, newly assigned Buildings will show on a green background until you save.

3. Use the **Save** button on the content area toolbar to lock in your change.

Remove Buildings from a Complex

To move one or more Buildings from the Complex back into the **Unassigned Buildings** column, use the arrow keys located between the two columns as described below.

To move all of the Buildings,

1. Activate the button with double left-pointing arrows.
2. Use the **Save** button on the content area toolbar to lock in your change.

To move one Building,

1. Select the Building in the **Assigned Buildings** column.
2. Activate the single left-pointing arrow.
3. Use the **Save** button on the content area toolbar to lock in your change.

To move multiple Buildings,

1. Select the Buildings in the **Assigned Buildings** column, using the **Shift** and **Ctrl** keys as needed.
2. Activate the single left-pointing arrow.
3. Use the **Save** button on the content area toolbar to lock in your change.

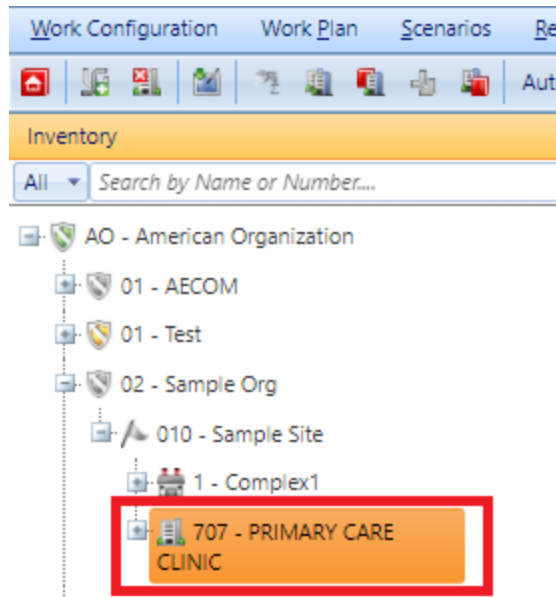
Move Buildings from one Complex to Another

To move a Building from one Complex to a different one, you must first navigate to the Complex it is assigned to and unassign it (see *Remove Buildings from a Complex*, immediately above). Then navigate to the destination Complex and follow the instructions in *Move Buildings into a Complex*, above).

Edit Building General Information

This topic describes the information that can be viewed and edited at the **General Information** tab at the Building level in the inventory tree. Additional Building information is described in the topic ["Edit Additional Building Inventory Data" on page 95](#). The data will be in the content area of the screen.

To view and edit Building inventory data, select the Building in the navigation pane:



By default, the **General Information** tab (abbreviated **General Info**) will appear:

Building No: Building Name:

General Info | Additional Info | Assess. History | Work Item History | Systems at a Glance | Attachments (1)

Building Use:

Building Type:

Current Status:

Unable to Inspect:

Construction Type:

Area: SF

Year Constructed:

Year Renovated:

Number of Floors:

Replacement Cost:

Check box to override automated updates and manually enter replacement cost:

Building Does Not Contain:

Mission Dependency Index

MDI:

Check box to override automated updates and manually enter MDI:

Status

- Historic
- Child-Occupied Facility
- High Security
- Additional Access

Condition

Metric	Value
BCI	68
BFI	95
BPI	77
FCI	100

Functionality

Issue	Rating
DHA Location	N/A
Aesthetics	100
Missing Components - Wizard	100
Maintainability	100
Seismic - Wizard	100

Initially after a Building is selected in the inventory tree, the **General Information** tab is shown with the following information:

- **Building Use (Required).** From the dropdown list, select the Building Use category that most closely matches the Building's use. For a Department of Defense activity, BUILDER should display familiar category codes for your service.
- **Current Status (Required).** From the dropdown list, select the appropriate Building status.

The screenshot shows a software interface with three tabs: 'General Info', 'Additional Info', and 'Assess. History'. The 'Additional Info' tab is active. Below the tabs are several fields:

- Building Use: 55010 - PRIMARY CARE CLINIC
- Building Type: (empty)
- Current Status: Active (dropdown menu is open)
- Unable to Inspect: (empty)
- Construction Type: (empty)
- Area: (empty)
- Year Constructed: (empty)
- Year Renovated: (empty)
- Number of Floors: (empty)

 The expanded dropdown menu for 'Current Status' contains the following options: Active, Demolished, To be acquired, To be built, To be demolished (highlighted in yellow), To be transferred, Transferred, and Vacant.

See ["About the Building Current Status Property" on page 115](#) for more information.

The options "To be acquired" and "To be built" allow you to enter future Buildings into the inventory and to plan for their maintenance in Scenarios even though they are not presently owned. Along with Transferred and Demolished, these options allow you to keep information about the Building in your database without the data on these Buildings affecting your current condition indices.

The options "Transferred" and "Demolished" allow you to keep records for Buildings that are no longer in the physical inventory. Such records are ignored in processes that should only consider current Buildings, such as condition rollups and work planning.

- **Current Status, Suboptions (Optional).** Some Current Status options (currently "Active," "Vacant," or "Transferred") allow a suboption to be selected. Selecting a suboption is optional, and suboptions will vary depending on the primary status selected. When suboptions are available, an additional blank dropdown field will appear to the right the "Current Status" field. The image below shows the expanded dropdown list for "Active" status.

- Effective Year of Status (Required for Current Status Not "Active").**
 When you choose a Building status other than the default "Active" status, you must also provide a year in which the permanent status will take effect. For vacant, demolished, and transferred Buildings, the effective year is the year the action occurred. For future ("To be") status options, the effective year is the year the future event is expected to occur.

- Unable to Inspect (Optional).** The dropdown list for "Unable to Inspect" allows a reason to be recorded for not being able to inspect a Building.

- Building Does Not Contain (Optional).** This dropdown allows you to specify Systems that are not present in the Building. More than one option may be selected.

Building Does Not Contain: Electrical
 Fire Suppression
 HVAC
 Plumbing
 Additional Access

on Dependency Index
 MDI:
 Check box to override automated updates and manually enter MDI:

- **Construction Type (Required).** Select the construction type from the drop-down list that matches the Building.

Unable to Inspect:

Construction Type:

Area:

Year Constructed:

Year Renovated:

Number of Floors:

- **Area (Required).** Enter the gross area of the Building.
- **Year Constructed (Required).** Enter the year that construction of the Building was completed. This data element determines the age of the Building, which is a critical factor in BUILDER's decision-making processes.
- **Year Renovated.** If the Building has been renovated, enter the year that renovation of the Building was completed.
- **Number of Floors.** Enter the number of floors of the Building. This data element is used to estimate the size of the Building's footprint by dividing the area by the number of floors.

Calculated Data

Data calculated by BUILDER is usually read-only. However, **Replacement Cost**, **Applied FCI Goal**, and **Mission Dependency Index (MDI)** each have a check-box that allows manual entry or manual override of the system-calculated figure.

Building Replacement Cost

This shows the current replacement cost for a building of the current Building's use and size under current construction standards. BUILDER provides a cost module to estimate the replacement cost. Unless you check the manual override check-box, the cost module will update the replacement cost using the default cost book and adjusting for (1) any cost modifiers that have been established; (2) inflation

using the Inflation book; and (3) geographic location using the Site's Area Cost Factor property.

IMPORTANT: If you check the manual override checkbox, the cost module will not affect this Building's replacement cost, and you will have to periodically update its replacement cost manually to account for inflation.

Note: For further Information about cost books and inflation books, see **BUILDER > Data Libraries > Cost Books** and **BUILDER > Data Libraries > Inflation Books** in the online documentation, or the *Build-erTM Reference Data Guide* PDF.

Applied FCI Goal

The FCI goal is explained under the [Scenarios header in the list of BUILDER 3.5.0 features](#) (see **POM Scenarios**).

IMPORTANT: If you check the manual override checkbox, you will have to periodically update the FCI goal manually.

Mission Dependency Index

The availability of the Mission Dependency Index (MDI) is the result of ongoing U.S. Navy research to develop a process for computing a 0-100 index that measures how critical the facility is to the overall mission of its owner. This measure allows user input to shape an automated planning process that uses metrics and rules to identify and prioritize budget allocations and work plans. See ["About the Mission Dependency Index" on page 115](#) for more information about the MDI.

MDI Not Currently Calculated in BUILDER

As of July 2016, the MDI is currently not calculated within BUILDER. See the following section, ["How To Enter or Change the Mission Dependency Index \(MDI\)" below](#).

How To Enter or Change the Mission Dependency Index (MDI)

To enter or change the MDI,

1. First check the override box at the Building's **General Information** tab:

The screenshot shows the 'General Info' tab of a building's information page. The 'Mission Dependency Index' section is highlighted with a red box. It contains an 'MDI' input field with a vertical line, and a checked checkbox labeled 'Check box to override automated updates and manually enter MDI'. Other fields include 'Building Use: 13310 - FLT CONT TOWER', 'Current Status: Active', 'Construction Type: Permanent', 'Area: 46 SM', 'Year Constructed: 1985', and 'Number of Floors: 1'.

2. Next, enter the desired MDI score in the entry box above the checkbox.
3. Finally, activate the **Save** icon in the content area toolbar.

Index Data

Note: The information at this fieldset is read-only.

Status

- **Historic Building (Read-Only).** This checkbox indicates whether or not the Building is historic. It is automatically marked if a functionality assessment has been performed in the Building and it has been determined that the Building is historic or has cultural resources in the Building.

Note: This feature is not selectable. It is calculated by BUILDER.

- **Child-Occupied Facility.** This checkbox indicates whether or not the facility is child-occupied. Mark or un-mark this box as appropriate.
- **High Security.** This checkbox indicates whether or not the facility is deemed High Security. Mark or un-mark this box as appropriate. Because working at a high security location generally increases labor time and other costs, this feature will apply higher security-related cost factors if the cost books have been set up for this in advance.

Note: This feature will have no effect unless the cost books have been appropriately modified.

- **Additional Access.** This checkbox indicates whether the facility has access issues, such as radioactivity or remote location. Mark or un-mark this box as appropriate. Because working at a location with access issues generally increases labor time and other costs, this feature will apply higher access-related cost factors if the cost books have been set up for this in advance.

Note: This feature will have no effect unless the cost books have been appropriately modified.

Condition

All of the indices below are updated every time a rollup is performed.

Building Condition Index (BCI). The BCI measures the condition of the Building as a whole. It is computed by averaging the condition indices of the Building's Systems, weighted by the replacement costs of the systems.

- **Building Functionality Index (BFI).** The BFI measures the functionality of the Building as a whole. It is computed from the results of a functionality assessment of the Building as a whole.
- **Building Performance Index (BPI).** The BPI measures the overall performance of the Building as a whole. It is computed using a weighted combination of the BCI and BFI.
- **Facility Condition Index (FCI).** The FCI metric provides an overall sense of deferred repair work. It differs from the BCI in that it is a monetary based metric. The formula is: $FCI = (1 - \text{\$current repair needs} / \text{\$PRV}) \times 100$, where the dollar amount of repair needs is obtained from BUILDER work items. More information about the FCI is available at ["Appendix C: Facility Condition Index" on page 265](#).

Functionality

All functionality indices are updated every time a rollup is performed. The list of functionality issues listed may vary according to the needs of the organization.

Additional Information Tabs

See ["Edit Additional Building Inventory Data" below](#) for details available at additional information tabs in the Building level.

Edit Additional Building Inventory Data

This topic describes information that can be viewed and edited at all of the Building data screen tabs except the **General Information** tab. Information at the General Information tab is described in the topic ["Edit Building General Information" on page 88](#).




Additional Building data is displayed and can be edited at the **Additional Information, Assessment History, Work Item History, Systems at a Glance, Cost Modifiers**, and **Attachments** tabs when a Building is selected in the inventory tree

Information about the Building will be presented on an ID line and at several tabs. You can use the content area toolbar to perform actions such as saving changes, or adding or editing comments.

- ["Toolbar" below](#)
- ["ID Line" below](#)
- ["General Information Tab" below](#)
- ["Additional Information Tab" on the facing page](#)
- ["Assessment History Tab" on page 99](#)
- ["Work Item History Tab" on page 99](#)
- ["Systems at a Glance Tab" on page 100](#)
- ["Cost Modifiers Tab" on page 101](#)
- ["Attachments Tab" on page 102](#)
- ["Building Attributes Tab" on page 106](#)

Toolbar

The toolbar at the top of the content area provides you with these options:

-  **Save.** Saves changes made to the asset's data.
-  **Comment.** Allows you to add, edit, and view comments about the selected asset.
-  **Reports.** Launches the Report Selection tool, which gives you access to a list of standard reports relevant to the asset's inventory. See ["Generate Building Reports" on page 110](#)

ID Line

On the ID line, you can edit the following:

- **Complex ID Number.** The ID Number is limited to 12 alphanumeric characters.
- **Complex Name.** Complex Name is allowed 50 alphanumeric characters.
- **Best Practice Recommendation:** Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

General Information Tab

General information for the Building is explained in detail in the topic ["Edit Building General Information" on page 88](#).

Additional Information Tab

Additional information shown at this tab includes address, point of contact, architect, contractor, and documents information for the Building, plus various Building dimensions, if they have been entered.

To view or edit this information, select the **Additional Info** tab on the Building screen:

The screenshot shows the 'Additional Info' tab for '001 - Building One'. The form includes the following fields:

- Building No.: 001
- Building Name: Building One
- POC Name: [Text Field]
- Phone: [Text Field]
- E-Mail: [Text Field]
- Street: [Text Field]
- City: [Text Field]
- State: [Text Field]
- Zip: [Text Field]
- Architect: [Dropdown Menu]
- Contractor: [Dropdown Menu]
- Documents: [Dropdown Menu]

The 'Building Dimensions' section features a table with the following structure:

Description	Length	Width
No records to display.		

All of the additional Building information is optional and includes:

Point of Contact

- **POC Name.** The name of the point of contact for the Building. Limit: 30 characters.
- **Phone.** The Building POC's phone number. Limit: 20 characters.
- **Email.** The Building POC's Email address. Limit: 75 characters.

Address

- **Street.** The Building's street address. Limit: 30 characters.
- **City.** The city portion of the Building's address. Limit: 15 characters.
- **State.** The state portion of the Building's address. Limit: 2 characters.
- **Zip.** The zip code of the Building's address. Limit: 10 characters.

Building Design

- **Architect.** Lists the architects of the Building. Add and delete names by using the adjacent buttons. Each architect's name is limited to 30 characters.

- **Contractor.** Lists the contractors of the Building. Add and delete names by using the adjacent buttons. Each contractor's name is limited to 30 characters.
- **Documents.** Lists the documents related to the Building. Add and delete document names by using the adjacent buttons. Each document's name is limited to 24 characters.

Dimensions

Building Dimensions

Building Perimeter: LF

Add

	Description	Length	Width	
	New Dimension	0	0	

The "Building Dimensions" area contains information about perimeter, description, length, and width. The Building perimeter can be entered directly in the form field; however, for Description, Length, or Width, see instructions below about adding or editing an entry.

Add an Entry

If there are no entries in the Description/Length/Width table, activate the **Add** button above the table, then select the pencil icon in the leftmost column of the table to enable data entry. When finished with entry, make sure to activate the blue check mark to the left of the entry, then **Save** at the content area toolbar.

Alternatively, if you wish to cancel the entry, select the red no-entry button below the blue check mark. This will erase any data you have entered into the table, but that row of the table will persist unless you fail to activate **Save** at the content area toolbar.

Edit an Entry

If there is an entry you wish to edit in the Description/Length/Width table, select the pencil icon of that entry to enable editing. When you are finished editing, make sure to activate the blue check mark to the left of the entry, then **Save** at the toolbar.

Alternatively, if you wish to cancel the edit, activate the red no-entry button below the blue check mark.

The following information can be added or edited here:

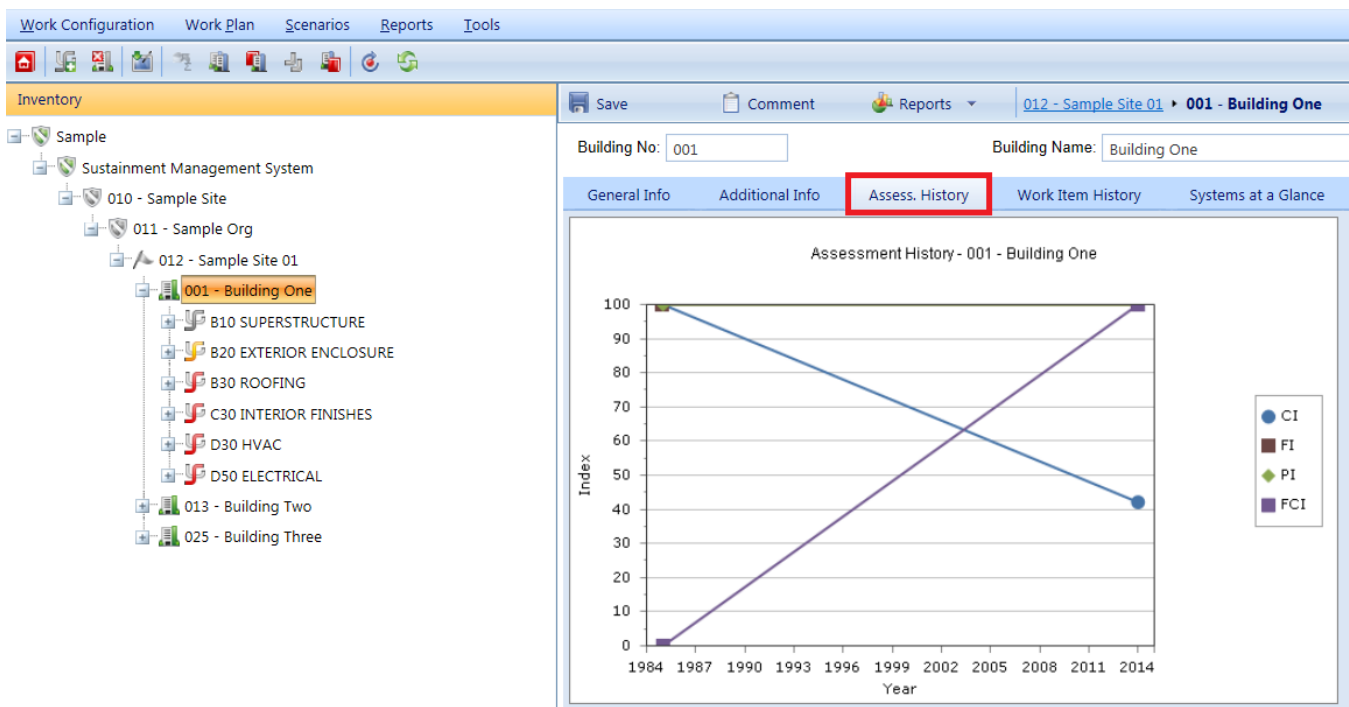
- **Perimeter.** Enter the linear measure of the perimeter of the Building.
- **Description.** Enter a description of the distinct areas of the Building you wish to add dimensions for. For example, you may list "East Wing/West Wing," or "Offices/Library/Warehouse," or "Public Areas/Secure Areas." Each description is limited to 50 characters.
- **Length.** Enter the length of the area identified in the description.
- **Width.** Enter the width of the area identified in the description.

Note: The unit of measure is indicated just after the Building Perimeter field above the table.

Assessment History Tab

Note: The information at this tab is read-only.

The **Assess. History** tab displays a graph showing how different metrics in the Building have changed over time.



Work Item History Tab

This tab shows a list of the work items that have been performed and/or are scheduled to be performed in the Building. The work items can be filtered by FY, status, System, Component, or Section using the dropdown lists on the screen.

For more information on work items, see the Work Planning Overview in the *Work Planning and Scenarios Guide*, or consult the online help documentation.

General Info	Additional Info	Assess. History	Work Item History	Systems at a Glance	Cost Modifiers	Attachments (1)
Building Attributes						
Export						
FY: <input type="text" value="- All -"/>		System: <input type="text" value="- All -"/>				
Status: <input type="text" value="- All -"/>		Component: <input type="text"/>				
		Section: <input type="text"/>				
Description	Activity	Cost	Status			
Paint C1010 PARTITIONS C101001 FIXED PARTITIONS Wall - Concrete Block	Paint	\$720.00	Awaiting Funds			
Paint C1010 PARTITIONS C101001 FIXED PARTITIONS Wall - Concrete Block	Paint	\$3,000.00	Awaiting Funds			
Paint B2010 EXTERIOR WALLS B201001 EXTERIOR CLOSURE Concrete Block	Paint	\$620.00	Awaiting Funds			
Paint B2010 EXTERIOR WALLS B201001 EXTERIOR CLOSURE Concrete Block	Paint	\$670.00	Awaiting Funds			
Paint C1010 PARTITIONS C101001 FIXED PARTITIONS Wall - Concrete Block	Paint	\$2,500.00	Awaiting Funds			
Paint C1020 INTERIOR DOORS 3068 HOLLOW METAL C102001 STANDARD INTERIOR DOORS Metal Door	Paint	\$500.00	Awaiting Funds			
Replace B2030 EXTERIOR DOORS 3070 Hollow Metal B203001 SOLID DOORS Steel	Replace	\$35,500.00	Awaiting Funds			
Replace D5020 LIGHTING & BRANCH WIRING D502002 LIGHTING EQUIPMENT Exit Lighting	Replace	\$1,400.00	Awaiting Funds			
Repair D3050 TERMINAL & PACKAGE UNITS Split Unit 9,000 BTUH D305006 PACKAGE UNITS A/C Unit, Split Systems w/ Air Cooled Condenser	Repair	\$57,000.00	Awaiting Funds			
Repair D3050 TERMINAL & PACKAGE UNITS Split Unit 9,000 BTUH D305006 PACKAGE UNITS A/C Unit, Split Systems w/ Air Cooled Condenser	Repair	\$15,000.00	Awaiting Funds			
Page size: <input type="text" value="10"/>		13 items in 2 pages				

Systems at a Glance Tab

Note: All of the data shown at this tab is read-only.

Basic information regarding the Systems in the Building can be viewed by selecting the **Systems at a Glance** tab. The **Systems at a Glance** tab shows the systems inventoried in the Building, each system's condition index (SCI), and the replacement cost of each system. If the Building file is checked out for BuilderRED use, the **User Checkout** column shows who has the Building file checked out.

Save				Comment				Reports				002 - Main Headquarters Philadelphia				0009 - Lodgings				00091 - C			
Building No: 00091								Building Name: Committee Lodging A															
General Info				Additional Info				Assess. History				Work Item History				Systems at a Glance				Attachments (0)			
Description								SCI				Replacement Cost				User Checkout							
A10 FOUNDATIONS								-															
A20 BASEMENT CONSTRUCTION								-															
B20 EXTERIOR ENCLOSURE								-															
B30 ROOFING								-															
D20 PLUMBING								-															
D30 HVAC								-															
D40 FIRE PROTECTION								38				\$1,700											
D50 ELECTRICAL								-															

Cost Modifiers Tab

The **Cost Modifiers** tab displays a table showing assigned cost modifiers, and allows you to view and assign cost multipliers or adders.

Note Existing cost modifiers that affect the Building level may have been assigned at different inventory levels, but from a Building data page you can only assign a Building-level cost modifier.

Modifier Scope

At the Building level, the Assigned Cost Modifiers table will show you all of the following:

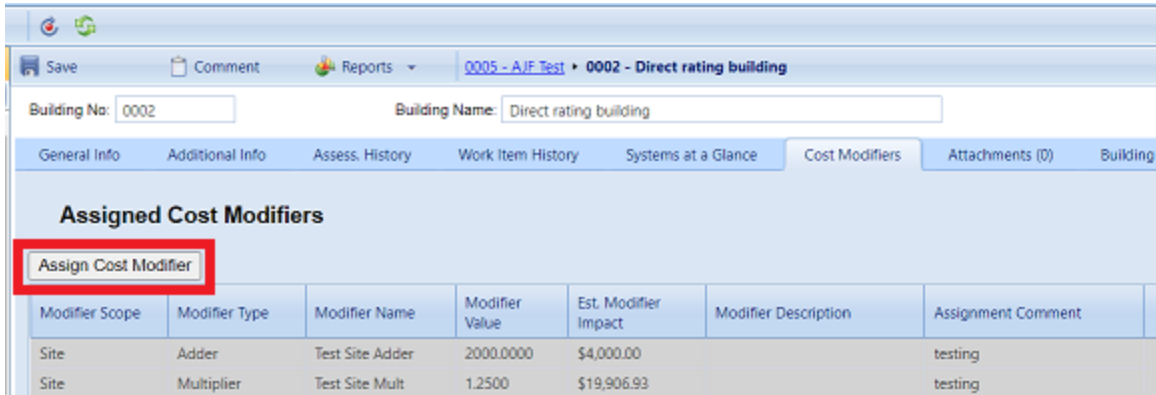
- all modifiers assigned to that Building
- if applicable, all modifiers assigned to the Complex the Building is in
- all modifiers assigned to the Site the Building is in

The scope of each modifier is shown in the **Modifier Scope** column.

Assign a Modifier

To assign a modifier to your Building from available options,

1. Activate the **Assign Cost Modifier** button.



2. In the "New Facility Modifier Assignment" popup, select a cost modifier from the dropdown list.
3. Add a comment if desired
4. Activate **Add** on the popup toolbar. *You should see your selected modifier added to the table of cost modifiers.*

Unassign a Modifier

To unassign a modifier, first navigate to where the modifier was assigned, then activate the **Unassign** button in the rightmost column of the Assigned Cost Modifiers table.

Modifier Description	Assignment Comment	
	testing	<input type="button" value="Unassign"/>
	testing	<input type="button" value="Unassign"/>

A Site-level cost modifier can be unassigned only at the Site level, a Building-level cost modifier can be unassigned only at the Building level, etc.

More about Cost Modifiers

For more about cost modifiers, see the **Cost Modifiers** chapter in the *BUILDER Reference Data Guide*.

Attachments Tab

At the **Attachments** tab, you have the option to view or change the asset's attachments.

View Attachment(s)

The **Attachments** tab will show whether any files have been attached to the asset's record. The number in parentheses after the word "Attachments" shows how many of them have been attached.

To view one or more attachments,

1. Activate the **Attachments** tab. *If attachments are present, a table will display their type, title, and description.*
2. Activate the link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. When finished viewing, activate the **Close** button on the popup window toolbar. and you will be returned to the table of attachments.
4. Repeat the two steps immediately above for additional attachments as desired.

Add an Attachment

At the **Attachments** tab on the asset's data page, you have the option to attach files (images and other documents) to the asset's record. An attached file might be a photograph, an electronic image of written notes or diagrams made during inventory, or a file generated on a computer.

Acceptable Attachment Formats

The attachment may be in any of the following formats:

- .jpg
- .jpeg
- .png
- .zip
- .doc
- .pdf

Note: As of January 31, 2022, .doc format is allowed, but not .docx.

Attach

To attach a file,

1. At the **Attachments** tab, activate the  **Add** button in the toolbar below the row of tabs.

Save Comment Reports 5678 - insufficient for work items 55555 - High Five

Building No: 55555 Building Name: High Five

General Info Additional Info Assess. History Work Item History Systems at a Glance Attachments (0)

Add Delete

Title	Description
No records to display.	

This will open the "Add Image" popup window:

Add Image

Cancel Save Help

Title:

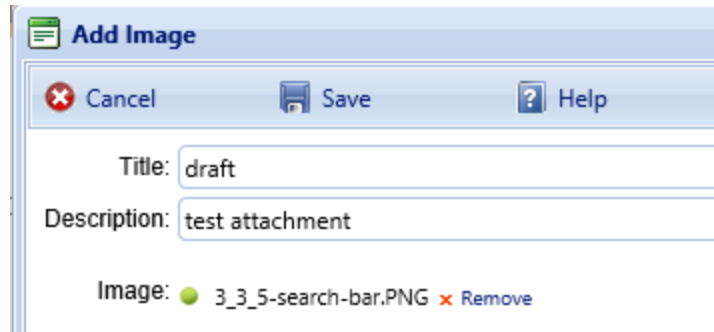
Description:

Image: **Select**

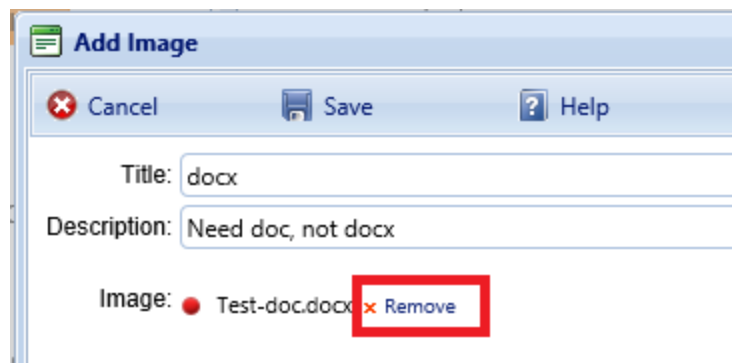
2. Enter Title and Description information for the attachment.
3. Activate the **Select** button to the right of the "Image" field to browse to the desired image or other file.
4. If you are adding an attachment at the Building level, use the "Image Type" radio buttons to indicate whether the attachment is a Key Plan, a Section Plan, or "Other."
5. Once the required attachment data is entered,
 - a. Activate the **Save** button on the popup toolbar.
 - b. Alternatively, to close the popup window without attaching the selected file or image, activate the **Cancel** button.

Attachment Troubleshooting

If the selected attachment is in an acceptable format, the "Image" field will be replaced with a green dot (plus a label that gives you the option to remove the attachment).



However, if it is not in an acceptable format, the "Image" field will be replaced with a red dot. Activate "Remove" and select an attachment file in one of the formats listed at the header ["Acceptable Attachment Formats" on page 103](#).



Edit Attachment Metadata

You can edit the title and/or description of an attachment as follows:

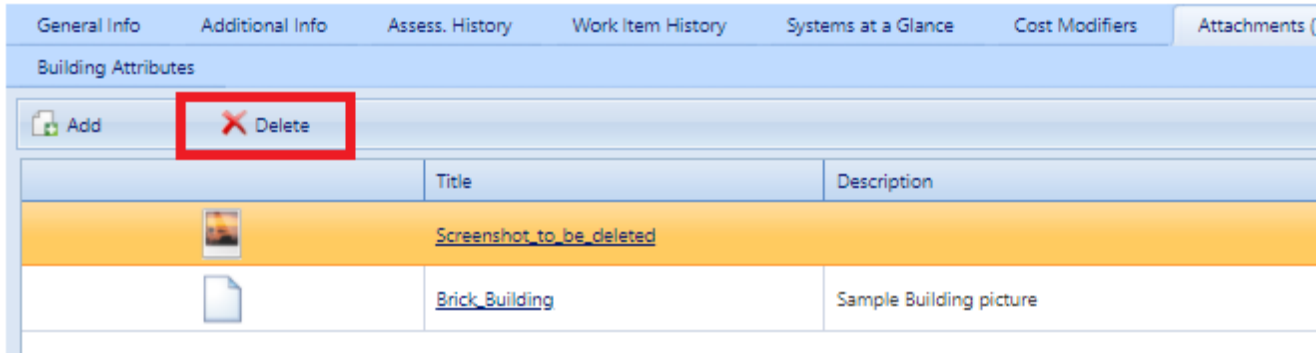
1. Navigate to the **Attachments** tab to view the attachments table.
2. Activate a link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. In the header section above the attachment, make the desired changes in the **Title** and/or **Description** field(s).
4. Activate **Save** on the popup toolbar to store your changes and return to the table of attachments.
5. Alternatively, if you want to cancel the change, activate **Close** on the popup toolbar. *You will be returned to the table of attachments.*

If you wish to change the contents of the attachment, you will need to delete the existing attachment file and add a new one.

Delete an Attachment

To delete an attachment,

1. Navigate to the **Attachments** tab to view the attachments table.
2. Select the attachment you wish to delete (do *not* activate the link in the **Title** column). *When properly selected, that record in the table will change background color as illustrated below, and only then will the **X Delete** icon be selectable:*



3. Activate the **Delete** button above the table.
4. Activate **Yes** in the confirmation box to delete the attachment, or **No** to cancel.

Building Attributes Tab

This tab concerns custom attributes that have been or can be created for the Building.

Custom asset attributes can be added at each inventory level—from Organization down through Section—in two different ways: by using "active attributes" or by using "Admin managed attributes."

"Unassigned" *Admin managed attributes* are a collection of pre-named attributes that have been determined by the BUILDER instance's owner (for example, a corporation, or the Air Force, or the Army). They are templated or common attributes that are seen as likely to be used often. Although these attributes are made available from the outset after installing BUILDER, they still need to be assigned before they can be used to help describe an asset.

Additional Admin managed attributes can be created, but only by a BUILDER Administrator or a user with Master Planner Role.

Active attributes are very flexible and can be created and assigned by any user with inventory privileges.

CAUTION: Unless a standardized procedure for assigning active attributes is implemented and enforced, the flexibility of active attributes can make incorporating them into reports more difficult and time

consuming, because multiple people can create them and there is no built-in consistency.

With respect to creating reports, Admin managed attributes will be easier to report on in a consistent fashion, because they are managed by a BUILDER Administrator (or a user with Master Planner Role). Also, Admin managed attributes are available to all assets that are at the same inventory level. Active attributes, on the other hand, would be prone to being named inconsistently and make reporting more difficult.

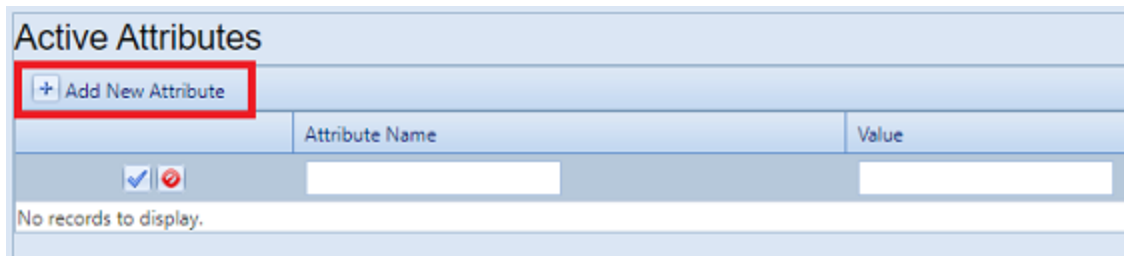
Active Attributes

Under **Active Attributes** at the top half of the Attributes screen, you can add, edit, or delete custom attributes for this level of inventory.

Add an Active Attribute

To add a custom inventory attribute,

1. Directly under the **Active Attributes** header, activate **Add New Attribute**. This will generate a new row in the **Active Attributes** table.



Active Attributes		
+ Add New Attribute		
	Attribute Name	Value
<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="text"/>	<input type="text"/>
No records to display.		

2. Enter a name and value for your attribute into the table.
3. If you want to apply an architect name, press the **Enter** key on your keyboard at this point . The popup "Add Architect" will appear. Enter the name of the architect, then select **OK**.
4. When finished with the entry, **activate the blue checkmark icon at the left side of the row** to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with a slash icon (located to the right of the blue checkmark).

CAUTION: Your new attribute will not be saved if you (a) exit without activating the blue checkmark or (b) initiate adding a new custom inventory attribute (by activating the **Add New Attribute** button) before saving with the blue checkmark.

5. Repeat steps 1 through 4 for each custom inventory attribute you wish to add.

Edit an Active Attribute

To edit an attribute,

1. Activate the pencil icon in the attribute's table row
2. Make the desired changes.
3. Finally, activate the blue checkmark icon at the left to save the changes.

Delete an Active Attribute

To delete an attribute,

1. In the table of active attributes, locate the row containing the attribute you wish to delete.
2. To the right of the **Value** field, activate the Delete icon (red "X"). *A confirmation popup will appear, asking "Delete record?"*
3. Select **OK** to delete, or **Cancel** to stop the process.

Admin Managed Attributes

Under **Unassigned Admin Managed Attributes** at the bottom left of the Attributes screen, you can choose to assign an existing Admin managed attribute to the asset whose data screen you have open. You can also change the value of an attribute after it has been assigned.

Note: Attributes that are in the table under the header **Admin Managed Attributes** are already assigned to the asset whose data screen you are in.


Only a BUILDER Administrator or a user with the Master Planner Role can create, edit (other than changing the value), or delete/unassign custom Admin managed attributes for the selected asset. Also, once an Admin managed attribute has been moved from the **Unassigned Admin Managed Attributes** column into **Admin Managed Attributes**, this action cannot be reversed except by a BUILDER Administrator or a user with Master Planner Role. More detail about Administrator-specific inventory attribute tasks can be found in the *BUILDER Support Administrator Guide*.

Assign an Unassigned Attribute to Admin Management


You may see one or more items listed under the header **Unassigned Admin Managed Attributes** at the lower left of the Attributes screen. These are attributes that are available at this inventory level but that have not been assigned to the selected asset. If no items are listed under the header **Unassigned Admin Managed Attributes**, there are none available to be assigned. (They may have already been assigned and thus transferred to the **Admin Managed Attributes** table.)

To assign an unassigned asset to Admin management,

In the **Unassigned Admin Managed Attributes** column, activate **Assign to Asset**.

Unassigned Admin Managed Attributes		Admin Managed Attributes	
new managed attribute			
		Attribute Name	Value
No records to display.			

*This will immediately populate the inventory item in that row under **Admin Managed Attributes** instead.*


Unassigned Admin Managed Attributes		Admin Managed Attributes	
		Attribute Name	Value
		new managed attribute	Auto Generated

Note: The assignment action is not reversible, except by a BUILDER Administrator or a user with the Master Planner Role.




Change the Value of an Admin Managed Attribute

To change the value of an asset under Admin management,

1. Under **Admin Managed Attributes**, activate the pencil icon in the attribute's table row, and wait for the row to change appearance.

Admin Managed Attributes		
	Attribute Name	Value
	High insurance due to claim	Auto Generated

2. Make the desired change in the **Value** column.

Admin Managed Attributes		
		 Refresh
	Attribute Name	Value
 	High insurance due to claim	Yes <input type="text"/>

3. Finally, activate the blue checkmark icon at the left to save the changes (or the red Cancel icon to cancel the change).

Generate Building Reports

This topic shows how to locate, select, and generate Building-level reports.

There are two locations where you can generate reports:

1. At the main menu bar. The selection of reports listed here is divided into categories: Inventory, Condition Assessment, Functionality Assessment, and Work Planning
2. At the content area toolbar

The first section below provides instructions for generating Building-level reports from the Building's content area toolbar. Reports generated here will be restricted in scope to the selected Building .

The next section after that one provides instructions for generating a report starting at the main menu.


Generate Report at Building Data Screen

Scope of Report

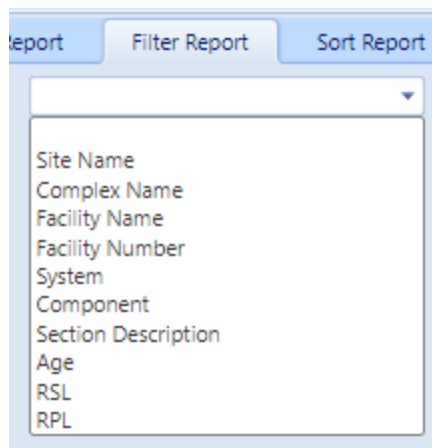
When you generate a report while you are at the Building level of the inventory tree, the report will contain data only for the currently selected Building.


How to Generate

To generate a report,

1. Activate the  **Reports** button on the content area toolbar. (The content area toolbar is directly above the ID line.) *The "Reports" popup will open.*
2. From the dropdown, select **Standard** reports.

3. At the **Select a Report** field, activate the dropdown arrow. *A multi-page list of reports will be made available.*
4. In the list, select a report. For example, "Remaining Service Life (RSL) Detail". (To find the RSL report, you will probably need to scroll down the list.)
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, by selecting the "Age" filter, you can have the RSL report show only items that are 10 years old or more. This is the list of filters available for the RSL report at the Building level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.

Generate Report from Main Menu

Scope of Report

Reports are not made available at the Organization level. By default, unless you have used filters to further restrict what is included in the report, the scope of the report will be the Site, Building, System, Component, or Component-Section where you are located in the Inventory tree when you activate the **Reports** button.

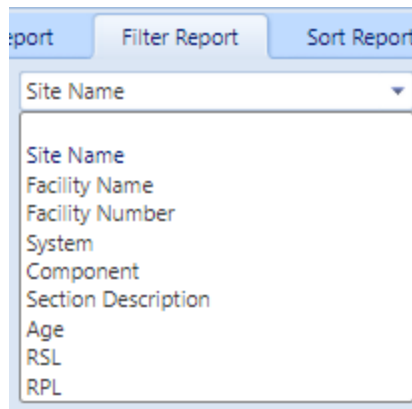
How to Generate


To generate a report from the main menu,

1. Activate the **Reports** button at the main menu.
2. In the "Reports" popup, open the BUILDER entry by clicking on the plus button.

3. Next, open the desired category: Inventory, Condition Assessment, Functionality Assessment, or Work Planning. For this example, open Inventory.
4. In the expanded list of reports, scroll down to the desired report and click on it to select it.
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, you can select the "Age" filter and direct the RSL report to show only items that are 10 years old or more.

This is the list of filters available for the RSL report at the Site level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.

Export Report

To export a report, see instructions at ["Export a Report" on page 258](#).

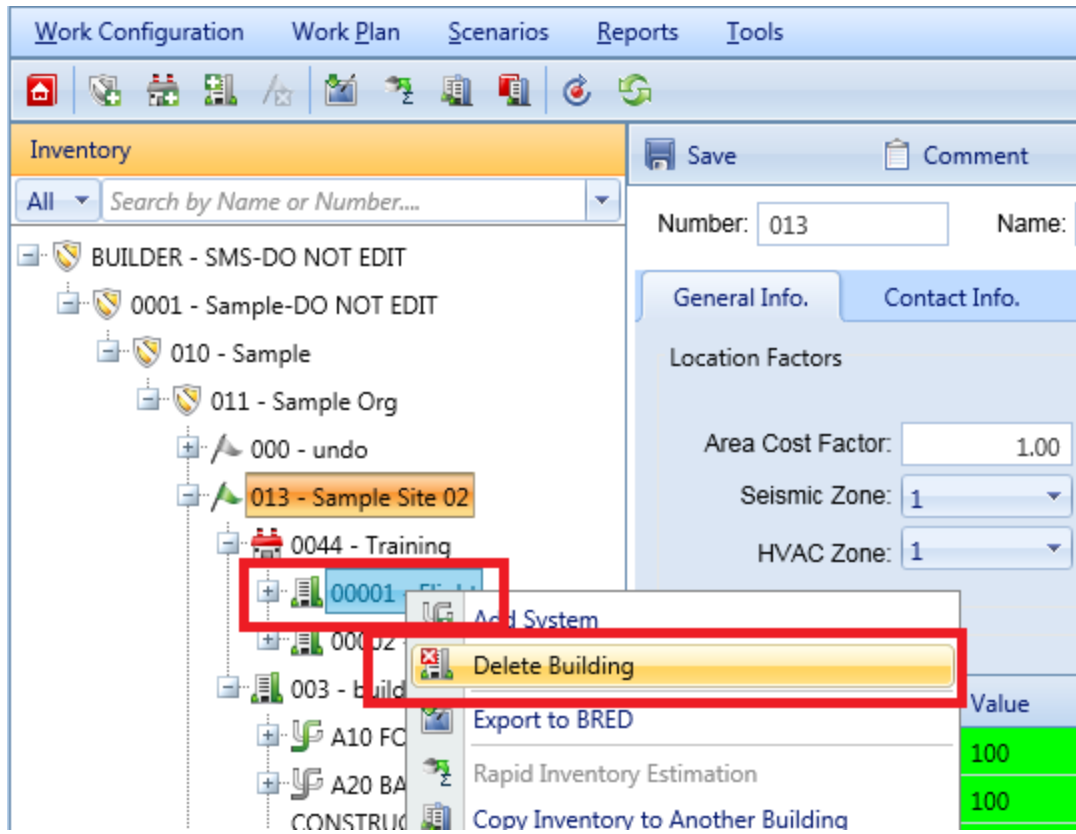
Delete a Building


This topic shows how to delete a Building. It also recommends an alternative to deletion that preserves Building records without allowing them to affect the calculation of indices.

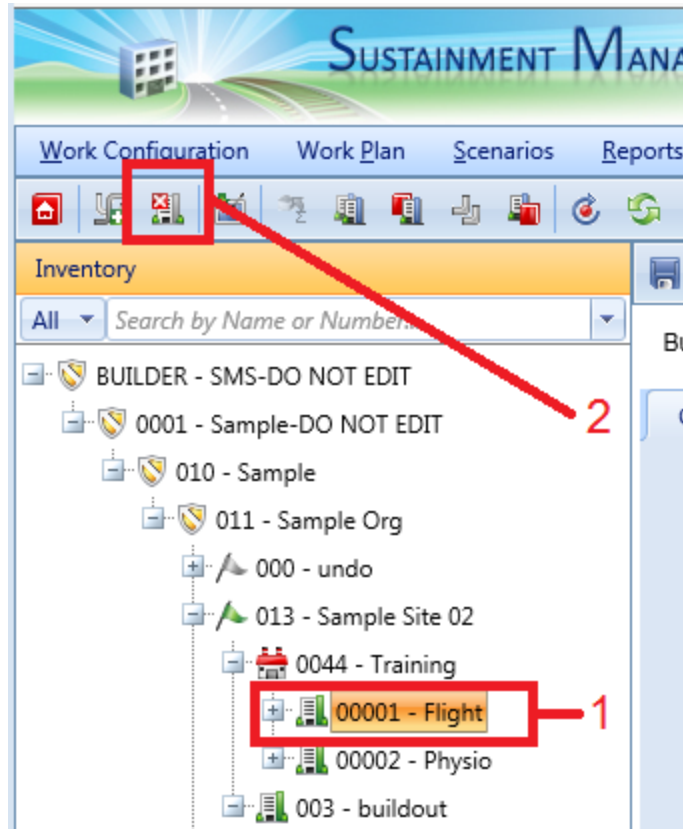
Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

To delete a Building, navigate to it in the inventory tree and do one of the following:

- a. Right-click the Building. Then select "Delete Building" from the options, as shown here:



- b. Alternatively, select the Building, then activate the **Delete Building** icon  on the menu toolbar:



WARNING: Deleting a Building deletes all the inventory (Systems, Components, and Sections) in the Building. This is a significant step to take and should only be done when you are certain that you wish to clear the entire inventory of the Building you have selected. Making frequent backups of your inventory database will protect you from significant data losses if mistakes in deleting are made.

Best Practice Recommendation: Instead of deleting a Building, you can use the [Current Status](#) property to mark buildings that have been demolished or transferred to another owner. With this method, the Building's records remain in the database, but the Building is ignored in processes that should only consider current buildings. See "[Use Current Status to Track Non-Current Inventory](#)" on page 118.

About the Mission Dependency Index

The Mission Dependency Index (MDI) is a risk-based metric to link facilities to specific mission elements, and it measures how important a particular Building or facility is to the mission.

Each Building can have an MDI score in the 0-100 range, where 100 is most critical and 0 is least critical. With such a score available, the most critical Buildings can be easily identified, especially by the automated computer decision processes used by BUILDER.

The Mission Dependency Index is typically obtained from an organization's real property database of record. For those organizations where the MDI is not a real property data element, the score can be entered directly on the Building Summary screen, as shown in "[How To Enter or Change the Mission Dependency Index \(MDI\)](#)" on page 93.

For more information about determining the score for the Mission Dependency Index, users can refer to the following links:

<http://ascelibrary.org/doi/pdf/10.1061/9780784409589#page=152>

http://www.assetinsights.net/Glossary/G_Mission_Dependency_Index.html

<http://www.dtic.mil/dtic/tr/fulltext/u2/a552791.pdf>

The MDI was developed by the Naval Facilities Engineering Command Engineering Service Center (Antelman and Miller 2002) and the U.S. Coast Guard Office of Civil Engineering. MDI scores identify the severity of loss of mission-enabling facilities and infrastructure.

About the Building Current Status Property

The Current Status property of a Building allows you to maintain database records for Buildings not currently in your physical inventory, whether for historical purposes or future planning. A Building's current status is used in the decision processes of both BUILDER and Scenarios, and it is the basis for a number of useful capabilities, including allowing you to:

- Define policies so that Buildings scheduled for demolition are maintained at a lower standards than might generally apply. Simply use the Current Status as one of the attributes used to define a policy and assign standards as appropriate to each status type.
- Define work prioritization schemes that consider future changes in a Building's status in prioritizing work items. This can be done by using the Current Status property as an initial split in your prioritization scheme and assigning

weights appropriate for each status type (probably using 0 weight for non-current status types).

- Plan for the maintenance load of Buildings to be added to your inventory in the future by analyzing a Scenario.
- Change the status of a Building dynamically during a Scenario simulation to study the effects of a changing inventory on the budget and the work load.

The Current Status property is set on the Building data screen at the **General Information** tab (see "[Edit Building General Information](#)" on page 88). Local variation (which is typically in the form of an added option) is possible due to database customization, but generally the Current Status property has one of the following values:

- **Active.** This is the default status. Use this status for Buildings that are currently in use. This status is the end status for Buildings with status "To be built" or "To be acquired."
- **Demolished.** Use this status to remove a Building from BUILDER's automated processes for condition/service life assessment and work planning but leave the inventory and inspection records intact. *The effective year for this status is the year in which the Building is demolished.* This status is the end status of the "To be demolished" status.
- **To be acquired.** Use this status to enter inventory records for an existing Building prior to its acquisition. *The effective year of this status is the year in which the Building is expected to be acquired.* You will be able to edit the Building and inspection data for this type of Building, and BUILDER's

condition and remaining service life predictions will be applied based on the inspection data entered. In this way, you will be able to estimate the maintenance requirements of such a Building prior to its acquisition. In a Scenarios simulation, this feature allows you to acquire Buildings as the simulation progresses.

- **To be built.** Use this status to enter inventory records for a new Building prior to its commissioning for occupancy. *The effective year of this status is the year in which the Building is expected to be recognized as part of your physical inventory.* In BUILDER, you will be able to edit the Building data on the Building Summary screen but will not be able to add inspection records until the status changes to "Active." In a Scenarios simulation, this feature allows you to add new Buildings dynamically as the simulation progresses.
- **To be demolished.** Use this status for Buildings that will be demolished in the future. *The effective year of this status is the year in which the Building is to be demolished.* In a Scenarios simulation, a Building-level work item to demolish the Building will be generated, including a cost estimate for the work. In addition, maintenance policies may be associated with this status that lower the standards usually required for this type of Building.
- **To be transferred.** Use this status for Buildings that will be transferred to another owner in the future. *The effective year of this status is the year in which the transfer will take place.* No BUILDER or Scenarios cost is associated with such a transfer. However, maintenance policies may be associated with this status that yield different standards than would ordinarily be in effect.
- **Transferred.** Use this status to force BUILDER's automated processes for condition/service life assessment and work planning to skip the Building but leave the inventory and inspection records intact. *The effective year for this status is the year in which the transfer takes place.* This status is the end status of the "To be transferred" status.
- **Vacant.** This status replaces the **Vacant** checkbox property used in earlier versions of BUILDER. Use this status for Buildings that are currently in your physical inventory but not in use.

Four of these values indicate that the designated Building is not currently part of the inventory: **To be acquired**, **To be built**, **Transferred**, and **Demolished**.

Two other status values (**To be transferred** and **To be demolished**) indicate that the Building will be removed from the inventory in the future.

At the current time, **Active** and **Vacant** are treated the same by BUILDER.

The Current Status property allows you to enter future Buildings into the inventory and to plan for their maintenance in Scenarios even though they are not presently

owned. In addition, the Current Status property allows you to keep records for Buildings that are no longer in the physical inventory. Such records are ignored in processes that should only consider current Buildings, such as condition rollups and work planning.

Best Practice Recommendation: When you delete a Building, you actually remove all database records associated with that Building. If you wish to keep the records, whether for historical purposes, analysis, or possible transfer to another BUILDER database (perhaps the Building is being transferred from one property book to another), you should simply set the Current Status property to an appropriate value.

Use Current Status to Track Non-Current Inventory

This topic shows how the Current Status property can be used to keep historical records of demolished or transferred Buildings, or to anticipate short-term and long-term needs for Buildings about to be built or otherwise acquired.

The Building-level Current Status property allows you to have records in your BUILDER database for Buildings that are not currently in your physical inventory. This is useful for Buildings at both ends of the lifecycle. You may keep records for Buildings that have been demolished or transferred, and you may add Buildings planned for future construction or acquisition.

Add Future Buildings

Using the Current Status property, it is possible to enter Buildings into the database before they are actually in the physical inventory. This includes Buildings under construction (designated with status "To be built") and existing Buildings being considered for acquisition from another owner (designated with status "To be acquired").

"To Be Acquired"

By setting the Current Status property to "To be acquired" and entering data in advance, you will be able to anticipate short-term work requirements for existing Buildings about to be acquired. In BUILDER, the "To be acquired" status can also be used to plan long-term maintenance requirements for future Buildings using Scenarios.

Enter Inventory Records

Use this status to enter inventory records for a new Building prior to its acquisition.

Record Inspection Results

Once you have entered inventory records for a Building with status "To be acquired," you may record inspection results prior to acquisition. The BUILDER processes that determine remaining service life and condition prediction will track the condition of the Building after it is first entered and prior to its acquisition.

Generate a Work Plan

With inspection results, BUILDER will be able to generate a work plan for the Building to upgrade it (or its roofing, in the case of ROOFER) to your established standards. Such information could be invaluable in planning for the load such a Building will place on both short and long term budgets.

"To Be Built"

Enter Inventory Records

Use this status to enter inventory records for a new Building prior to its commissioning for occupancy.

No Recording of Inspection Results

If you enter a Building with status "To be built," you may not record new inspections until the status changes to "Active." The BUILDER processes that determine remaining service life and condition prediction will skip such a Building under the assumption that quality assurance during the construction process will force all Systems to a condition index of 100 prior to commissioning.

Use Scenarios to Simulate "Active" Status (BUILDER Only)

The advantage of entering the Building before it is built is that you may include it in Scenarios to measure its long-term effects on work plans and budgets. That is, the Scenario can change the status of a new Building to "Active" at a scheduled time and begin treating it as a normal Building with predictable deterioration rates and work requirements.

Keep Records of Past Buildings (Demolished, Transferred)

In earlier versions of BUILDER, the only way to exclude a Building from automated assessment and planning processes was to [delete the Building](#). With this approach, all records related to the Building were actually deleted from the database.

Now the Current Status property gives you another option.

If you have records in the BUILDER database for a Building which is to be demolished or transferred to another owner, you can keep the inventory, inspection, and work history records in the database, while at the same time making the Building invisible to BUILDER's automated processes, simply by changing the Building's status to "Demolished" or "Transferred."

Best Practice Recommendation: When you delete a Building, you actually remove all database records associated with that Building. If you wish to keep the records, whether for historical purposes, analysis, or possible transfer to another BUILDER database (perhaps the Building is being transferred from one property book to another), then you should simply set the Current Status property to the appropriate value, either "Demolished" or "Transferred."

Below is a summary of what happens when a Building has the status of either "Demolished" or "Transferred":

- **Inventory records are locked.** You will be unable to change the Building's data properties or its composition.
- **Condition and Functionality Assessment records are locked.** You will be unable to change existing records or to add new records.
- **Functionality Assessment records are locked (BUILDER only).** You will be unable to change existing records or to add new records.
- **Work Planning records are locked.** You will be unable to change existing records or to add new records.
- **Cost data is not updated.** The Building's cost data will not be affected by annual cost updates at the beginning of the calendar year.
- **The RSL and CI or RCI values will not be updated** for the Building.
- **The Building will not be considered during automatic work generation.**
- **The Building will not appear in Scenarios simulations (applies to BUILDER only).** If the Building's status is changed to "Demolished" or "Transferred" during a Scenarios simulation, it will have records for the years prior to its status change and then after that date in the Scenario, it will be treated as above. That is, there will be no further updates of data, no new inspections, no changes in condition or service life, etc.

Systems, Components, and Component-Sections

Systems, Components, and Component-Sections are used to divide a Building into different levels of functional units. BUILDER Systems and Components align with the [Naval Facilities Engineering Command \(NAVFAC\) UNIFORMAT II classification](#) for building elements (Level 2 and 3).

After this introduction to the lower three inventory levels, each level (System, Component, and Component-Section) will be addressed separately in the documentation.

About Identifying Systems, Components and Sections

This topic provides valuable advice to assist in the process of dividing Buildings into their constituent Systems, Component, and Component-Sections.

After you ["Add a Building" on page 82](#) and have entered its required data elements, you should identify the Systems, Components and Component-Sections in the Building. Your decomposition of a Building into its Systems and the decomposition of those Systems into Components will be very straightforward. The formation of Component-Sections, however, will require some thought on your part. BUILDER manages Buildings at the Component-Section level, and you will inspect Component-Sections and plan work for Component-Sections.

BUILDER's representation of Building Component-Sections has been designed for flexibility. With flexibility comes choices; choices that add complexity to the process. Pay particular attention to the subsection ["Defining Component-Sections" on the next page](#) .

As an alternative option to adding all Systems, Components, and Component-Sections manually, BUILDER provides several mechanisms to speed the inventory process. For example, you can ["Copy Inventory to Another Building" on page 216](#) or ["Add Building Inventory Using a Template" on page 224](#).

Defining Systems

Systems are used to help you organize the records for the actual physical items in your Building. You may create only one System of each System type for any given Building. When you add a new System to a Building, the dropdown list of choices for which kind of System to add will include only those Systems that have not already been added to the Building. See ["Add a System" on page 129](#) for details.

Defining Components

Like Systems, Components are used to help organize the records of the actual physical items in the Building. The Components that can be added to a System will depend on the System representation you have chosen for the Building. You may create only one Component of each type for each System. When you add a Component, the list of choices will include only those Components that have not already been created for that System. See ["Add a Component" on page 147](#) for details.

If you have a Component that is not in the list of available Component options, please contact your SMS support agent. BUILDER does not have a feature for user-defined Components. Each Component has a number of data elements associated with it (varieties of types and materials, costs, service lives, standard units of measure, inspectable subcomponents, etc.) which must be researched before the Component can be added.

Defining Component-Sections

Component-Sections (also called Sections) of a Building are the key structures in a BUILDER inventory. The System and Component structures are organizational in nature, serving to categorize what is in a Building into manageable groups. Component-Sections actually represent the physical items of a Building, belong to a particular Component, and have the following properties:

- Component Type
- Material/Equipment Type
- Quantity
- Age
- Whether or not it is painted, and, if so, when it was last painted and paint type

BUILDER has been designed to be flexible in allowing you to represent your Building's Component-Sections in a number of ways to support how you intend to manage them. Some examples may be helpful:

- Building A has 5 exterior doors (System: Exterior Closure, Component: Exterior Door). Four of the doors are metal personnel doors and the fifth is a metal overhead door. Because there are two different types of doors (personnel, overhead), you will have to create at least two Component-Sections. In this situation, you should create a Component-Section for the metal overhead door and enter the appropriate data about it. You don't need to create a Component-Section name for this door since there is only one. For the four metal personnel doors, if you intend to manage them as a unit, create one more Component-Section and enter the appropriate data about the doors. Again,

you don't need to enter a Component-Section name because you are only creating one Section of this material and type.

- Building A has 5 exterior doors (System: Exterior Closure, Component: Exterior Door). You lease Building A to two tenants X and Y. Two metal personnel doors and a metal overhead door are in the tenant X area, and the other two metal personnel doors are in the tenant Y area. Because you plan to inspect and maintain the doors by tenant, you create three Component-Sections:
 - Tenant X Metal Personnel with quantity 2
 - Tenant X Metal Overhead with quantity 1
 - Tenant Y Metal Personnel with quantity 2.

When you create each Component-Section for Tenant X, you use "Tenant X" as the name of the Section. Do the same for Tenant Y. In fact, you may want to name every Section (especially Interior Construction Sections) in the Tenant X area "Tenant X." When you inspect the Building, you can use the Component-Section name to distinguish Component-Sections belonging to each of the tenants.

- Building A has two reciprocating 20-ton chillers (System: HVAC, Component: Cooling Unit/Plant). If they are the same age and you plan to manage them as a unit, then create one Component-Section with quantity 2. However, if you want to manage them individually, or if they were installed at different times and may therefore have different maintenance requirements, then create two Component-Sections of quantity 1 each. Since both Component-Sections have the same equipment type (Reciprocating 20-30 Ton) and component type (Chillers), you will have to have distinct Component-Section names for the two Component-Sections. You may use their barcode IDs as the Component-Section names if you wish.
- Building B has 50 interior wood personnel doors, all alike and all installed when the Building was built. You originally create one Component-Section with quantity 50 for these doors. You may have several years of inspection data regarding the doors, which have deteriorated uniformly over time. With the current inspection, however, two of the doors are found to be severely damaged and will have to be replaced. If the two doors remain in their original Component-Section, inspection samples for these two doors will have to be marked as "non-representative." When the condition index is calculated, the condition of the two doors, which are only 4% of the Component-Section, will have only a small impact on the overall Section CI. Since you will be replacing the two doors, perhaps with a different quality of door since they may be subject to higher user abuse, you should use component sectioning to isolate the two doors. To do this, reduce the original Component-Section quantity to 48. Then create a new Component-Section for the two damaged

doors and enter the current inspection data for this new Component-Section, which will then have a low CI.

From these examples you can see that some thought will have to be given to how you decompose a Building into Component-Sections. Hopefully, you can also see that BUILDER is flexible enough to allow you to manage at the level of detail that you choose. See ["Working with Component-Sections" on page 164](#) for details.

Inventory Suggestions

It is not necessary to do a complete inventory initially. Implementation funds and/or time may be limited, so it is possible and permissible to begin with only some of the Component-Sections and expand the inventory on an as-needed basis. If the desire is to begin with a limited set, the following suggestions are made:

- Focus on the Components that are most critical to Building function
- Focus on the Components that traditionally dominate Maintenance and Rehabilitation (M&R) needs.

When sectioning, a few rules of thumb are offered:

- To avoid a data burden, use the smallest number of Sections possible to meet managerial needs. For example, it is usually not necessary to individually Section every room, each exterior wall, etc.
- Since material differences (e.g. wood vs. masonry) are criteria for sectioning, only create Sections for material differences when the quantity is significant enough to warrant individual management attention. For example, an exterior wall may be made of wood, but a few square feet of wall is made of masonry, essentially for decoration. The wood wall is clearly a Section, but what about the masonry? Should it be its own Section? If the masonry quantity is a mere fraction of the wood and work would be accomplished on the masonry at the same time as the wood (in other words, the entire wall is being managed as a unit), then there is no need to create a Section just for the masonry. However, if the quantities of both the wood and masonry are significant, then create Sections for both.
- Equipment sectioning should be thought out carefully when multiple units of the same equipment are present. For example, there may be three air handling units of the same type, age, etc. In this case, there could be one Section with the quantity of three, or three Sections with the quantity of one. Which approach should be taken? If the desire is to manage them as essentially one unit as far as planning repair and replacement, then one Section will suffice. However, if it is expected that over time, they will be replaced individually, etc, then each should be its own Section.

- Obtaining accurate an accurate quantity can be difficult, and often times there are many sources for obtaining quantity. These include drawings, actual measurement or count, or other records. It must be understood that the more detailed or accurate the count or measurement, the more costly it is to collect the data. Extracting information from records, including drawings, and doing a field validation is the most costly. Reasonable estimates within reasonable error are very acceptable as it will result in reasonable error in BUILDER's analyses. For example, the wall finish may truly be 10,634 SF. An estimate of 11,000 SF will suffice for planning purposes especially if the cost to get the true value is twice that for an estimate. Component-Sections that cover an area (SF or SM) are the most difficult to obtain with precision whereas those that are "each" are the easiest. Generally, field count the "each" Component-Sections and estimate the others. The estimates can be refined in the future when projects are developed for M&R work.
- *Care should be taken when establishing Year Built/Renewed.* Error here will result in erroneous remaining service lives and add error to the projected year when M&R should be performed. Experience has shown, however, that sometimes the year in which Component-Sections were replaced, rehabilitated, or initially installed/constructed is truly unknown as the records are no longer available. In those cases, make a reasonable estimate and mark the **Estimated** checkbox. Often, there are people who will remember when that work was done, at least in a generalized way (e.g. early 1990's). Fortunately, through subsequent inspections and condition assessments, the Year Installed/Built becomes less important, as BUILDER's prediction models will use the condition assessment information to adjust the remaining service life and to predict when M&R will be required in the future.

BUILDER Systems and Components

This topic presents the identifying numbers and names of the Systems and Components used in BUILDER.

To divide a Building into Systems and Components, BUILDER follows the [Naval Facilities Engineering Command \(NAVFAC\) UNIFORMAT II classification](#) for building elements (Level 2 and 3).

Level 2	Level 3
A10 Foundations	A1010 Standard Foundations A1020 Special Foundations A1030 Slab on Grade
A20 Basement Construction	A2010 Basement Excavation A2020 Basement Walls
B10 Superstructure	B1010 Floor Construction B1020 Roof Construction
B20 Exterior Closure	B2010 Exterior Walls B2020 Exterior Windows B2030 Exterior Doors
B30 Roofing	B3010 Roof Coverings (Note: Roof openings are a subcategory of Roof Coverings)
C10 Interior Construction	C1010 Partitions C1020 Interior Doors C1030 Specialties
C20 Stairs	C2010 Stair Construction
C30 Interior Finishes	C3010 Wall Finishes C3020 Floor Finishes C3030 Ceiling Finishes C3040 Interior Coatings and Special Finishes
D10 Conveying	D1010 Elevators and Lifts D1020 Weight Handling Equipment D1030 Escalators and Moving Walks D1090 Other Conveying Systems

D20 Plumbing	D2010 Plumbing Fixtures D2020 Domestic Water Distribution D2030 Sanitary Waste D2040 Rain Water Drainage D2090 Other Plumbing Systems
D30 HVAC	D3010 Energy Supply D3020 Heat Generating Systems D3030 Cooling Generating Systems D3040 Distribution Systems D3050 Terminal & Package Units D3060 Controls & Instrumentation D3070 Systems Testing & Balancing D3080 HVAC Valves D3090 Other HVAC Systems & Equipment
D40 Fire Protection	D4010 Fire Alarm and Detection Systems D4020 Fire Suppression Water Supply and Equipment D4030 Standpipe Systems D4040 Sprinklers D4050 Fire Protection Specialties D4090 Other Fire Protection Systems
D50 Electrical	D5010 Electrical Service & Distribution D5020 Lighting & Branch Wiring D5030 Communication & Security D5090 Other Electrical Services
E10 Equipment	E1010 Commercial Equipment E1020 Institutional Equipment E1030 Vehicular Equipment E1090 Other Equipment
E20 Furnishings	E2010 Fixed Furnishings E2020 Movable Furnishings
F10 Special Construction	F1010 Special Structures F1020 Integrated Construction F1030 Special Construction Systems F1040 Special Facilities F1050 Special Controls and Instrumentation
F20 Selective Building Demolition	F2010 Building Elements Demolition F2020 Hazardous Components Abatement

G10 Site Preparations	G1010 Site Clearing G1020 Site Demolition & Relocations G1030 Site Earthwork G1040 Hazardous Waste Remediation
G20 Site Improvements	G2010 Roadways G2020 Parking Lots G2030 Pedestrian Paving G2040 Site Development G2050 Landscaping G2060 Airfield Paving
G30 Site Civil/Mechanical Utilities	G3010 Water Supply G3020 Sanitary Sewer G3030 Storm Sewer G3040 Heating Distribution G3050 Cooling Distribution G3060 Fuel Distribution G3090 Other Site Mechanical Utilities
G40 Site Electrical Utilities	G4010 Electrical Distribution G4020 Site Lighting G4030 Site Communication and Security G4090 Other Site Electrical Utilities

Working with Systems

The System level in the BUILDER hierarchy is what allows your real property inventory to conform to Level 2 of the UNIFORMAT II system shown in ["BUILDER Systems and Components" on page 126](#). This topic briefly introduces the features of a System and how to use it in organizing real property inventory. It also provides links to the operations that can be performed at the System level.

The System level in BUILDER is designed to match the UNIFORMAT II building classification system. Because of this, there are a limited number of Systems that you can select from. However, you are not required to have one of each and every possible kind of System from the list in the Building.

Things you can do at the System level:

- View condition history
- View a table of the Components contained in the System
- Assign or unassign System-level cost modifiers. These modifiers are values to multiply by or to add to the cost of an asset to account for factors such as remote site location or local market anomalies in cost of materials
- View, add, or delete attachments
- Add, edit, or delete custom System attributes
- Generate reports.

System Tasks

Tasks that can be performed on Systems are:

["Add a System" below](#)

["Edit System Data" on page 131](#)

["Generate System Reports" on page 142](#)

["Delete a System" on page 145](#)

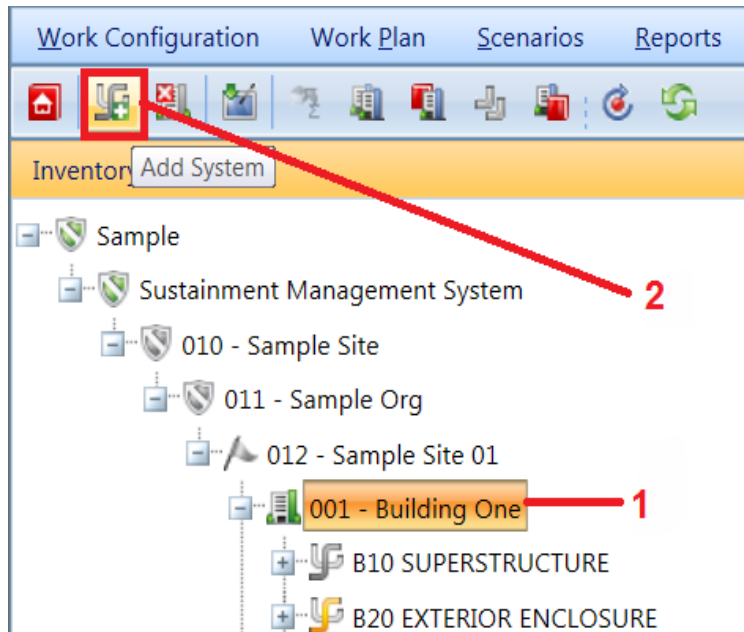
Add a System

This topic shows how to add a System and describes the required minimum information to be entered. The topic ["Edit System Data" on page 131](#) describes additional information that can be entered for the System.

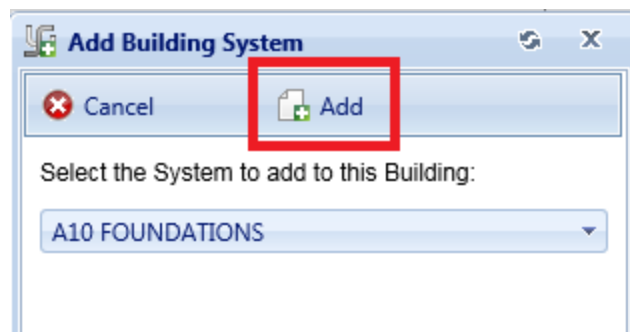
Tip: Please be familiar with the topic ["About Identifying Systems, Components and Sections" on page 121](#) before proceeding with this topic.

To add a new System to an existing Building, navigate to the Building in the inventory tree and do one of the following:

- a. Right-click the Building. Then select "Add System" from the options.
- b. Alternatively, as shown below, select the Building (1). Then activate the **Add System** icon (2) on the main toolbar:



The "Add Building System" popup window will appear.



Activate the dropdown list and select the System you wish to add to the Building. Then activate the **Add** button on the popup toolbar to add the System. (If you do not wish to add a System to the Building, activate the **Cancel** button instead.)

Note: Each Building can contain only one System of each type. The dropdown list for adding a System will display only the System types that don't already exist in the Building.

Once the System is added, you can select it in the inventory tree to view or edit its data, or to add Components within it (see ["Add a Component" on page 147](#) or ["Working with Components" on page 147](#)).

For information about adding or editing System-level data, see ["Edit System Data" below](#). This includes how to view condition analysis or data on Components in the System, or to view or edit cost modifiers, attachments, or custom System attributes.

Edit System Data


This topic describes the information that can be viewed and edited at the System data screen.

Information about the System selected in the inventory tree is presented on an ID line and at several tabs. The content area toolbar gives you access to generating System-level reports.

- ["Toolbar" below](#)
- ["ID Line" below](#)
- ["Condition Analysis Tab" on the next page](#)
- ["Components at a Glance Tab " on the next page](#)
- ["Cost Modifiers Tab" on page 133](#)
- ["Attachments Tab" on page 134](#)
- ["System Attributes Tab" on page 138](#)

Toolbar

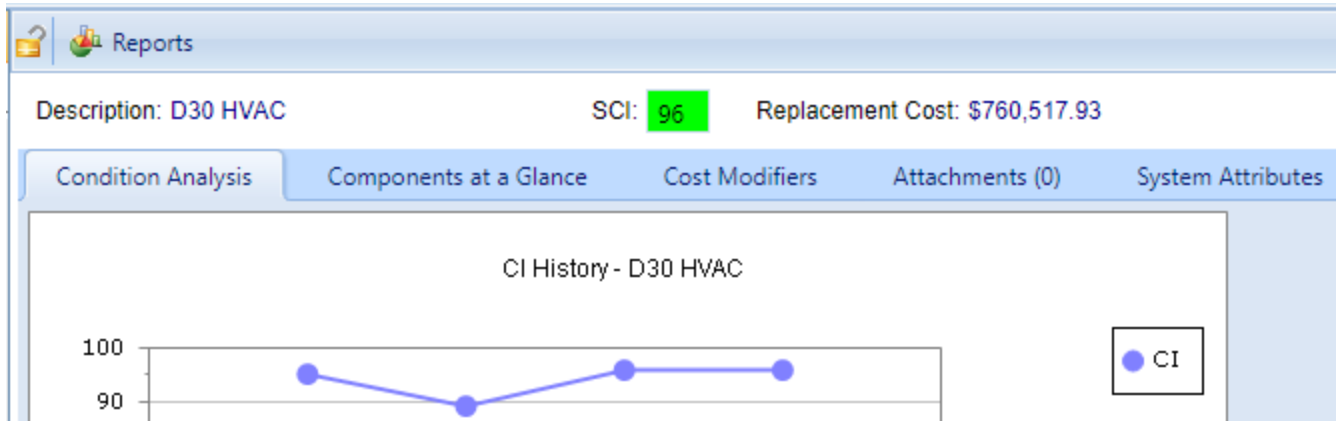
The toolbar at the top of the content area provides you with this option:

-  **Reports.** Launches the Report Selection tool, which gives you access to a list of standard reports relevant to the asset's inventory. See ["Generate System Reports" on page 142](#).

ID Line

At the top of the System data page you will see the System description in the ID line at the top of the System's content area. On the ID line, the System Condition Index (SCI) and System replacement cost field will be blank until (1) underlying

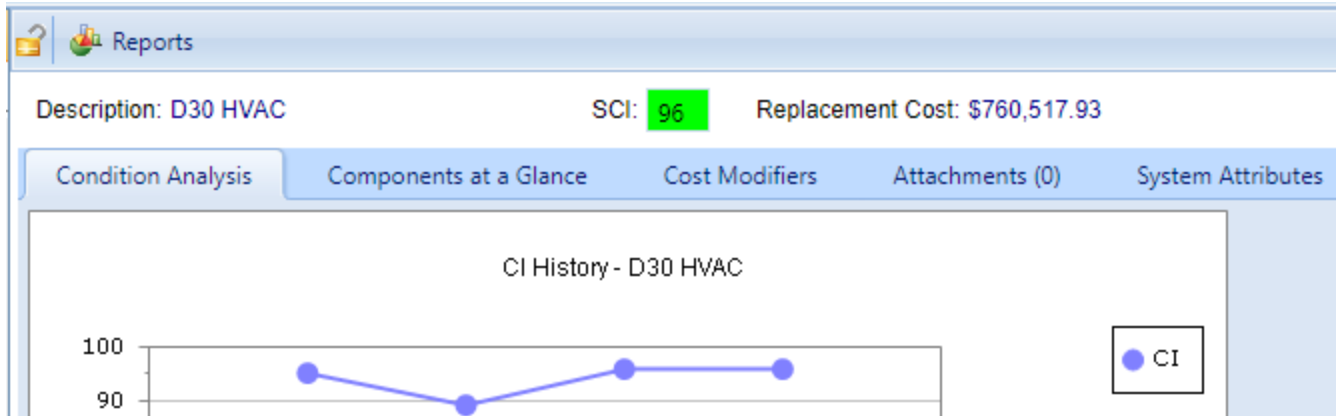
inventory has been entered and (2) a rollup has been performed. The replacement cost is calculated via rollup from the underlying Sections. To do the rollup, navigate to the Building the System is contained in, then activate the **Rollup Building** icon, on the Building's toolbar.



Condition Analysis Tab

Note: The information at this tab is read-only.

The Condition Analysis tab displays a graph of the CI history of the System over time. The graph is not editable.



Components at a Glance Tab

Note: The information at this tab is read-only.

Basic information regarding the Components in the System can be viewed by selecting the "Components at a Glance" tab. The table at this tab shows:

- The Components inventoried in the System,
- Each Building Component's condition index (BCCI), and
- The replacement cost of each Component.

The replacement cost is computed from BUILDER's cost models based on Component type and quantity, and the BCCI is computed based on condition assessment data for the Sections contained in the Component.

Description: B20 EXTERIOR ENCLOSURE		SCI: 69	Replacement Cost: \$411,493.90
Condition Analysis	Components at a Glance	Cost Modifiers	Attachments (0) System Attributes
Description	BCCI	Replacement Cost	
B2010 EXTERIOR WALLS	79		
B2030 EXTERIOR DOORS	47		
B2020 EXTERIOR WINDOWS	62		

Cost Modifiers Tab

The **Cost Modifiers** tab displays a table showing assigned cost modifiers, and allows you to view and assign cost multipliers or adders.

Note: Existing cost modifiers may have been assigned at different inventory levels, but from a System data page you can only assign a System level cost modifier.

Modifier Scope

At the System level, the Assigned Cost Modifiers table will show you all of the following:

- all modifiers assigned to that System
- all modifiers assigned to the Building the System is in
- if applicable, all modifiers assigned to the Complex the System is in
- all modifiers assigned to the Site the System is in.

The scope of each modifier is shown in the **Modifier Scope** column.

Assign a Modifier

To assign a modifier to your System from available options,

1. Activate the **Assign Cost Modifier** button.

Description: D30 HVAC SCI: 96 Replacement Cost: \$775,517.93

Condition Analysis Components at a Glance **Cost Modifiers** Attachments (0) System Attributes

Assigned Cost Modifiers

Assign Cost Modifier

Modifier Scope	Modifier Type	Modifier Name	Modifier Value	Est. Modifier Impact	Modifier Description
Site	Adder	Test Site Adder	2000.0000	\$6,000.00	

2. In the "New System Modifier Assignment" popup, select a cost modifier from the dropdown list.
3. Add a comment if desired
4. Activate **Add** on the popup toolbar. *You should see your selected modifier added to the table of cost modifiers.*

Unassign a Modifier

To unassign a modifier, activate the **Unassign** button in the rightmost column of the Assigned Cost Modifiers table.

More about Cost Modifiers

For more about cost modifiers, see the **Cost Modifiers** chapter in the *BUILDER Reference Data Guide*.

Attachments Tab

At the **Attachments** tab, you have the option to view or change the asset's attachments. You can ["Add an Attachment" on the facing page](#), ["Edit Attachment Metadata" on page 137](#), ["Delete an Attachment" on page 137](#), or delete and replace an attachment to change its contents. For troubleshooting while adding an attachment, see ["Attachment Troubleshooting" on page 136](#).

View Attachment(s)

The **Attachments** tab will show whether any files have been attached to the asset's record. The number in parentheses after the word "Attachments" shows how many of them have been attached.

To view one or more attachments,

1. Activate the **Attachments** tab. *If attachments are present, a table will display their type, title, and description.*
2. Activate the link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. When finished viewing, activate the **Close** button on the popup window toolbar. and you will be returned to the table of attachments.
4. Repeat the two steps immediately above for additional attachments as desired.

Add an Attachment

At the **Attachments** tab on the asset's data page, you have the option to attach files (images and other documents) to the asset's record. An attached file might be a photograph, an electronic image of written notes or diagrams made during inventory, or a file generated on a computer.

Acceptable Attachment Formats


The attachment may be in any of the following formats:

- .jpg
- .jpeg
- .png
- .zip
- .doc
- .pdf

Note: As of January 31, 2022, .doc format is allowed, but not .docx.

Attach

To attach a file,

1. At the **Attachments** tab, activate the  **Add** button in the toolbar below the row of tabs.

Reports

Description: D30 HVAC SCI: 99 Replacement Cost: \$104,000.00

Condition Analysis Components at a Glance Attachments (0)

Add Delete

Title

No records to display.

This will open the "Add Image" popup window:

Add Image

Cancel Save Help

Title:

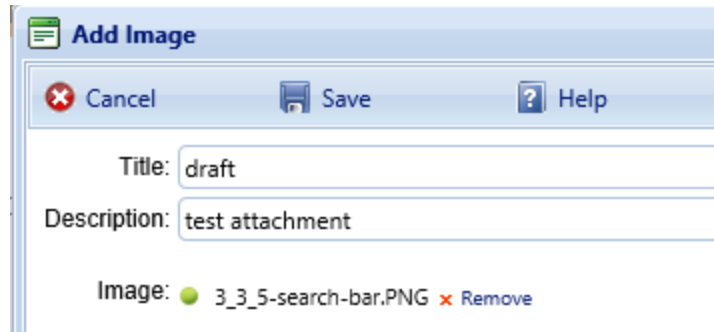
Description:

Image: **Select**

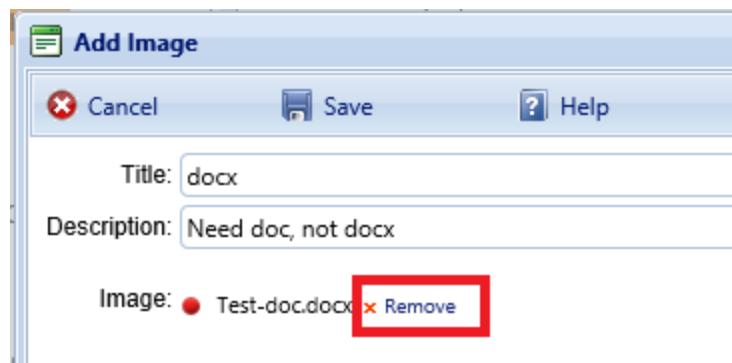
2. Enter Title and Description information for the attachment.
3. Activate the **Select** button to the right of the "Image" field to browse to the desired image or other file.
4. If you are adding an attachment at the Building level, use the "Image Type" radio buttons to indicate whether the attachment is a Key Plan, a Section Plan, or "Other."
5. Once the required attachment data is entered,
 - a. Activate **Save** on the popup toolbar.
 - b. Alternatively, to close the popup window without attaching the selected file or image, activate the **Cancel** button.

Attachment Troubleshooting

If the selected attachment is in an acceptable format, the "Image" field will be replaced with a green dot (plus a label that gives you the option to remove the attachment).



However, if it is not in an acceptable format, the "Image" field will be replaced with a red dot. Activate "Remove" and select an attachment file in one of the formats listed at the header ["Acceptable Attachment Formats" on page 135](#).



Edit Attachment Metadata

You can edit the title and/or description of an attachment as follows:

1. Navigate to the **Attachments** tab to view the attachments table.
2. Activate a link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. In the header section above the attachment, make the desired changes in the **Title** and/or **Description** field(s).
4. Activate **Save** on the popup toolbar to store your changes and return to the table of attachments.
5. Alternatively, if you want to cancel the change, activate **Close** on the popup toolbar. *You will be returned to the table of attachments.*

If you wish to change the contents of the attachment, you will need to delete the existing attachment file and add a new one.

Delete an Attachment



To delete an attachment,

1. Navigate to the **Attachments** tab to view the attachments table.
2. Select the attachment you wish to delete (do *not* activate the link in the **Title** column). *When properly selected, that record in the table will change background color as illustrated below:*

Description: B20 EXTERIOR ENCLOSURE SCI: 75 Replacement Cost: \$82,250.00

Condition Analysis Components at a Glance Attachments (2)

Add Delete

	Title	Description
	attach1	screenshot
	attach2	delete this one

3. Activate the **Delete** button above the table.
4. Activate **Yes** in the confirmation box to delete the attachment, or **No** to cancel.

System Attributes Tab

This tab concerns custom attributes that have been or can be created for the System.

Custom asset attributes can be added at each inventory level—from Organization down through Section—in two different ways: by using "active attributes" or by using "Admin managed attributes."

"Unassigned" *Admin managed attributes* are a collection of pre-named attributes that have been determined by the BUILDER instance's owner (for example, a corporation, or the Air Force, or the Army). They are templated or common attributes that are seen as likely to be used often. Although these attributes are made available from the outset after installing BUILDER, they still need to be assigned before they can be used to help describe an asset.

Additional Admin managed attributes can be created, but only by a BUILDER Administrator or a user with Master Planner Role.

Active attributes are very flexible and can be created and assigned by any user with inventory privileges.

CAUTION: Unless a standardized procedure for assigning active attributes is implemented and enforced, the flexibility of active

attributes can make incorporating them into reports more difficult and time consuming, because multiple people can create them and there is no built-in consistency.

With respect to creating reports, Admin managed attributes will be easier to report on in a consistent fashion, because they are managed by a BUILDER Administrator (or a user with Master Planner Role). Also, Admin managed attributes are available to all assets that are at the same inventory level. Active attributes, on the other hand, would be prone to being named inconsistently and make reporting more difficult.

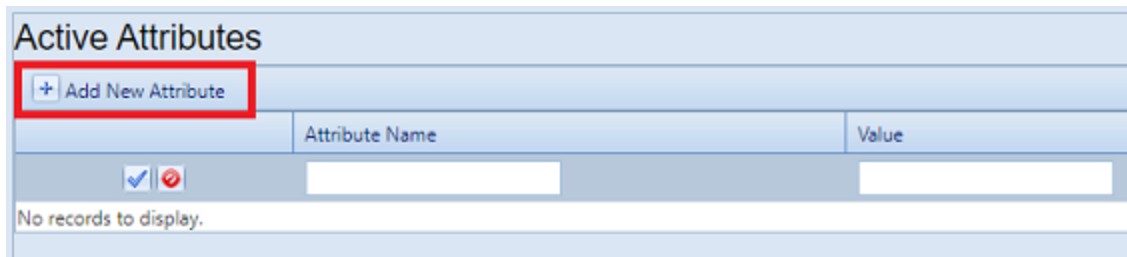
Active Attributes

Under **Active Attributes** at the top half of the Attributes screen, you can add, edit, or delete custom attributes for this level of inventory.

Add an Active Attribute

To add a custom inventory attribute,

1. Directly under the **Active Attributes** header, activate **Add New Attribute**. This will generate a new row in the **Active Attributes** table.



Active Attributes	
Attribute Name	Value
<input type="text"/>	<input type="text"/>

No records to display.

2. Enter a name and value for your attribute into the table.
3. If you want to apply an architect name, press the **Enter** key on your keyboard at this point . The popup "Add Architect" will appear. Enter the name of the architect, then select **OK**.
4. When finished with the entry, **activate the blue checkmark icon at the left side of the row** to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with a slash icon (located to the right of the blue checkmark).

CAUTION: Your new attribute will not be saved if you (a) exit without activating the blue checkmark or (b) initiate adding a new custom inventory attribute (by activating the **Add New Attribute** button) before saving with the blue checkmark.

5. Repeat steps 1 through 4 for each custom inventory attribute you wish to add.

Edit an Active Attribute

To edit an attribute,

1. Activate the pencil icon in the attribute's table row
2. Make the desired changes.
3. Finally, activate the blue checkmark icon at the left to save the changes.

Delete an Active Attribute

To delete an attribute,

1. In the table of active attributes, locate the row containing the attribute you wish to delete.
2. To the right of the **Value** field, activate the Delete icon (red "X"). *A confirmation popup will appear, asking "Delete record?"*
3. Select **OK** to delete, or **Cancel** to stop the process.

Admin Managed Attributes

Under **Unassigned Admin Managed Attributes** at the bottom left of the Attributes screen, you can choose to assign an existing Admin managed attribute to the asset whose data screen you have open. You can also change the value of an attribute after it has been assigned.

Note: Attributes that are in the table under the header **Admin Managed Attributes** are already assigned to the asset whose data screen you are in.

Only a BUILDER Administrator or a user with the Master Planner Role can create, edit (other than changing the value), or delete/unassign custom Admin managed attributes for the selected asset. Also, once an Admin managed attribute has been moved from the **Unassigned Admin Managed Attributes** column into **Admin Managed Attributes**, this action cannot be reversed except by a BUILDER Administrator or a user with Master Planner Role. More detail about Administrator-specific inventory attribute tasks can be found in the *BUILDER Support Administrator Guide*.


Assign an Unassigned Attribute to Admin Management

You may see one or more items listed under the header **Unassigned Admin Managed Attributes** at the lower left of the Attributes screen. These are attributes that are available at this inventory level but that have not been assigned to the selected


asset. If no items are listed under the header **Unassigned Admin Managed Attributes**, there are none available to be assigned. (They may have already been assigned and thus transferred to the **Admin Managed Attributes** table.)

To assign an unassigned asset to Admin management,

In the **Unassigned Admin Managed Attributes** column, activate **Assign to Asset**.

Unassigned Admin Managed Attributes		Admin Managed Attributes	
new managed attribute			
		Attribute Name	Value
No records to display.			

*This will immediately populate the inventory item in that row under **Admin Managed Attributes** instead.*



Unassigned Admin Managed Attributes		Admin Managed Attributes	
		Attribute Name	Value
		new managed attribute	Auto Generated

Note: The assignment action is not reversible, except by a BUILDER Administrator or a user with the Master Planner Role.


Change the Value of an Admin Managed Attribute

To change the value of an asset under Admin management,

1. Under **Admin Managed Attributes**, activate the pencil icon in the attribute's table row, and wait for the row to change appearance.

Admin Managed Attributes		
 Refresh		
	Attribute Name	Value
	High insurance due to claim	Auto Generated

2. Make the desired change in the **Value** column.

Admin Managed Attributes		
		 Refresh
	Attribute Name	Value
<input checked="" type="checkbox"/> <input type="checkbox"/>	High insurance due to claim	Yes <input type="text"/>

3. Finally, activate the blue checkmark icon at the left to save the changes (or the red Cancel icon to cancel the change).

Generate System Reports

This topic shows how to locate, select, and generate System-level reports.

There are two locations where you can generate reports:

1. At the main menu bar. The selection of reports listed here is divided into categories: Inventory, Condition Assessment, Functionality Assessment, and Work Planning
2. At the content area toolbar

The first section below provides instructions for generating System-level reports from the System's content area toolbar. Reports generated here will be restricted in scope to the selected System. There is also a section showing specifically how to generate a list of System inventory.

A later section provides instructions for generating a report starting at the main menu.


Generate Report at System Data Screen

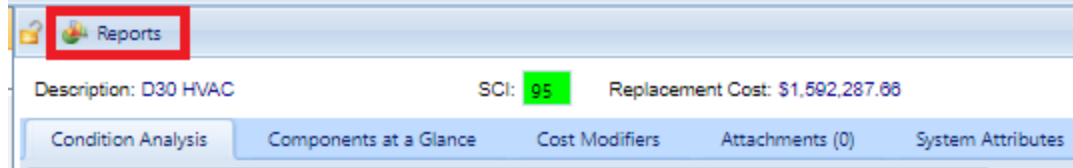
Scope of Report

When you generate a report while you are at the System level of the inventory tree, the report will contain data only for Components and Sections in the currently selected System.

How To Generate

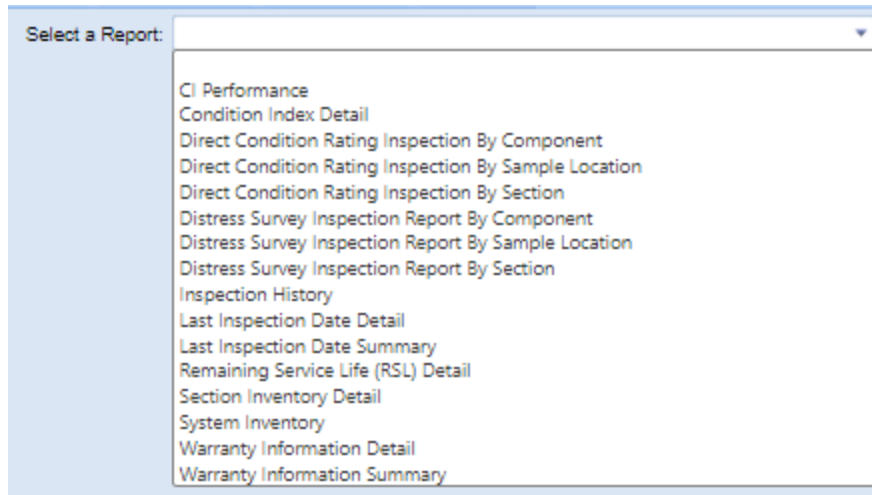
To generate a report,


1. Activate the  **Reports** button on the content area toolbar (above the System's Description).



The Reports popup will appear.


2. At the **Select a Report** field, activate the dropdown arrow. The following selection of reports shown in the screenshot will be displayed.



3. In the list, select a report (for example, "Remaining Service Life (RSL) Detail").
4. Activate  **View Report** on the popup's toolbar. The report will be displayed in a popup titled "Report Viewer."
5. From the "Report Viewer" popup, you can choose to download or print the report.


Generate List of System Inventory

To generate a list of Components and Sections in the currently selected System,

1. Activate the  **Reports** button on the toolbar at the top of the System's content area. The "Reports" popup will open.

Note: If you select the **Reports** button on the menu bar instead, you will also be able to generate the System Inventory report, but the available reports will be organized differently; Step 2 will not work.

2. At the **Select a Report** field, activate the dropdown arrow to see the list of available reports.
3. In the list, select "System Inventory."

4. Activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
5. From the "Report Viewer" popup, you can choose to download or print the report.

Generate Report from Main Menu

Scope of Report

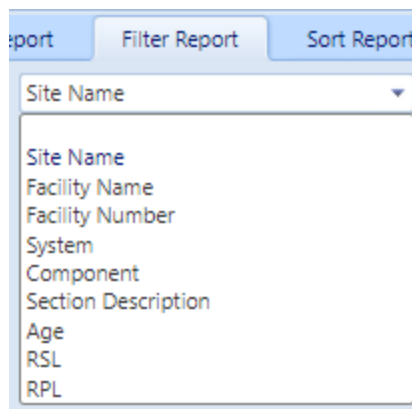
Reports are not made available at the Organization level. By default, unless you have used filters to further restrict what is included in the report, the scope of the report will be the Site, Building, System, Component, or Component-Section where you are located in the Inventory tree when you activate the **Reports** button.


How to Generate

To generate a report from the main menu,

1. Activate the **Reports** button at the main menu.
2. In the "Reports" popup, open the BUILDER entry by clicking on the plus button.
3. Next, open the desired category: Inventory, Condition Assessment, Functionality Assessment, or Work Planning. For this example, open Inventory.
4. In the expanded list of reports, scroll down to the desired report and click on it to select it.
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, you can select the "Age" filter and direct the RSL report to show only items that are 10 years old or more.

This is the list of filters available for the RSL report at the Site level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.


Export Report

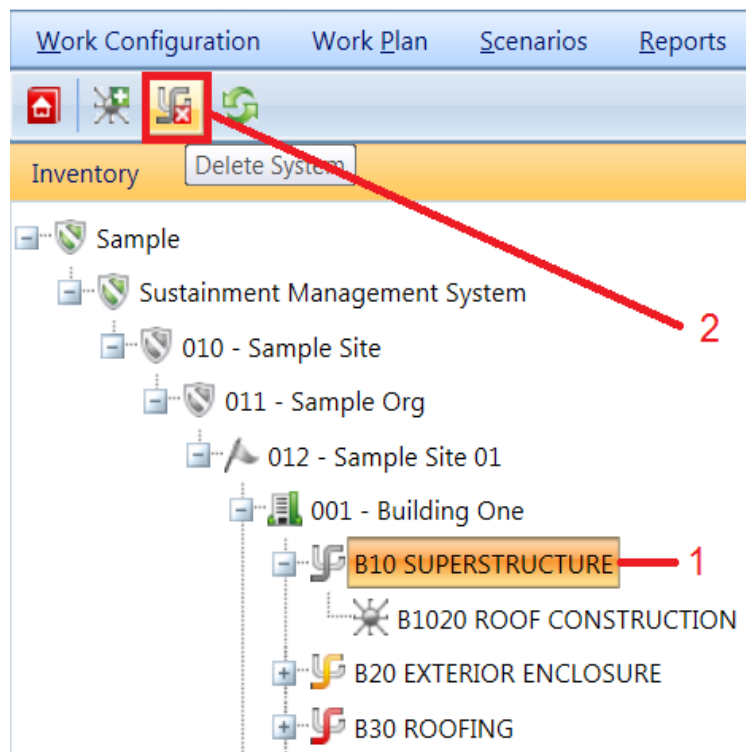
To export a report, see instructions at ["Export a Report" on page 258](#).

Delete a System

This topic describes how to delete a System from a Building.

To delete a System from a Building, navigate to the System in the inventory tree and do *one* of the following:

- a. Right-click the System. Then select "Delete System" from the options.
- b. Alternatively, select the System. Then activate the **Delete System** icon  in the menu toolbar.



WARNING: Deleting a System will delete all inventory (Components and Sections) in the System. This is a significant step to

take and should only be done when you are certain that you wish to clear the entire inventory of the System you have selected.

Best Practice Recommendation: Making frequent backups of your inventory database will protect you from significant data losses if mistakes in deleting are made.

Working with Components

The Component level in the BUILDER hierarchy is what allows your real property inventory to conform to Level 3 of the UNIFORMAT II system shown in ["BUILDER Systems and Components" on page 126](#). This topic describes the operations that can be performed at the Component level.

Things you can do at the Component level:

- View condition history
- View a table of the Sections contained in the Component
- Assign or unassign Component-level cost modifiers. These modifiers are values to multiply by or to add to the cost of an asset, to account for factors such as remote site location or local market anomalies in cost of materials (jump to section)
- View, add, or delete attachments
- Add, edit, or delete custom Component attributes
- Generate reports.

Component Tasks

Tasks that can be performed on Components are:

["Add a Component" below](#)

["Edit Component Data" on page 149](#)

["Generate Component Reports" on page 160](#)

["Delete a Component" on page 162](#)

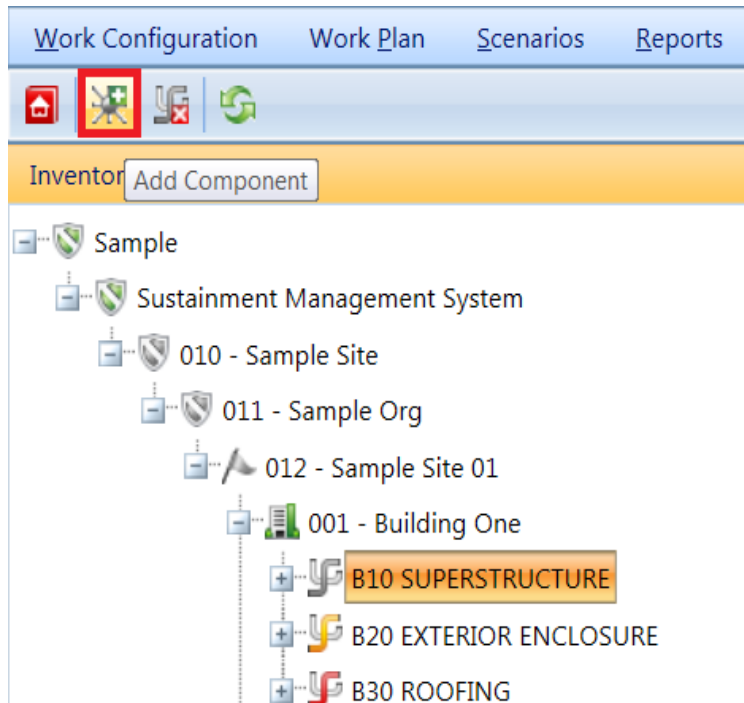
Add a Component

This topic shows how to add a Component and describes the minimum required information to be entered. The topic ["Edit Component Data" on page 149](#) describes additional information that can be entered for the Component.

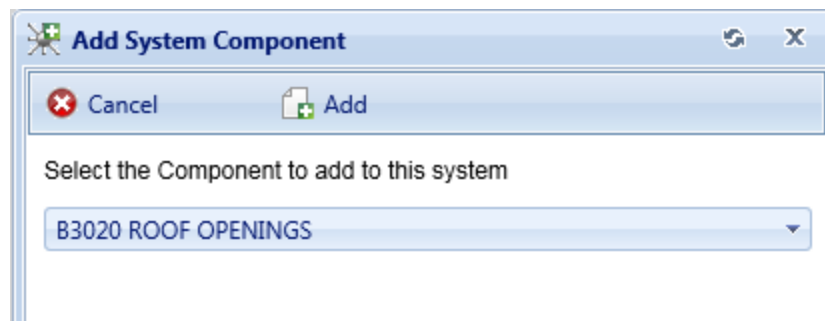
Note: Please be familiar with the topic ["About Identifying Systems, Components and Sections" on page 121](#) before proceeding with this topic.

To add a new Component to an existing System, navigate to the System in the inventory tree and do one of the following:

- a. Right-click the System. Then select "Add Component" from the options.
- b. Alternatively, as shown below, select the System in the inventory tree. Then activate the **Add Component** icon on the main toolbar:



The "Add System Component" popup window will appear.

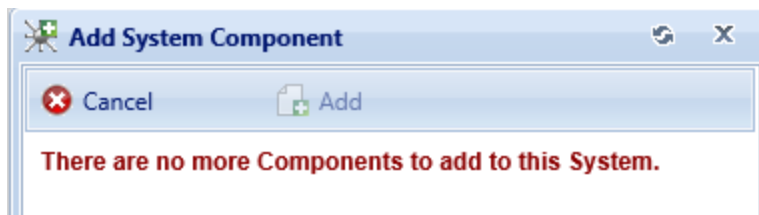


From the dropdown list, select the Component you wish to add. Then activate the **Add** button on the popup toolbar to add the Component.

Alternatively, if you do not wish to add a Component to the System, activate the **Cancel** button instead.

Note: Each System can contain at most one Component of each type. The dropdown list for adding a Component will display only the

component types that don't already exist for the System. If the System already contains all permissible Component types, you will see this message:



Once the System is added, you can navigate to it in the tree and activate it to view or edit its data, view or edit cost modifiers, add attachments, or view or edit custom System inventory attributes.

Edit Component Data

The Component level in the BUILDER hierarchy is what allows your real property inventory to conform to Level 3 of the UNIFORMAT II system shown in ["BUILDER Systems and Components" on page 126](#). This topic describes the information that can be viewed and edited at the Component data screen.

After you add a component, you can navigate to it in the tree and activate it to view or edit its data, view or edit cost modifiers, add attachments, or view or edit custom System inventory attributes. You can also view a condition analysis and see a table of the Sections it contains.

Information about the Component selected in the inventory tree is presented on an ID line and at several tabs. The content area toolbar gives you access to generating Component-level reports.

- ["Toolbar" on page 160](#)
- ["ID Line" on the next page](#)
- ["Condition Analysis Tab" on the next page](#)
- ["Sections at a Glance Tab" on the next page](#)
- ["Cost Modifiers Tab" on page 151](#)
- ["Attachments Tab " on page 152](#)
- ["Component Attributes Tab" on page 156](#)

ID Line

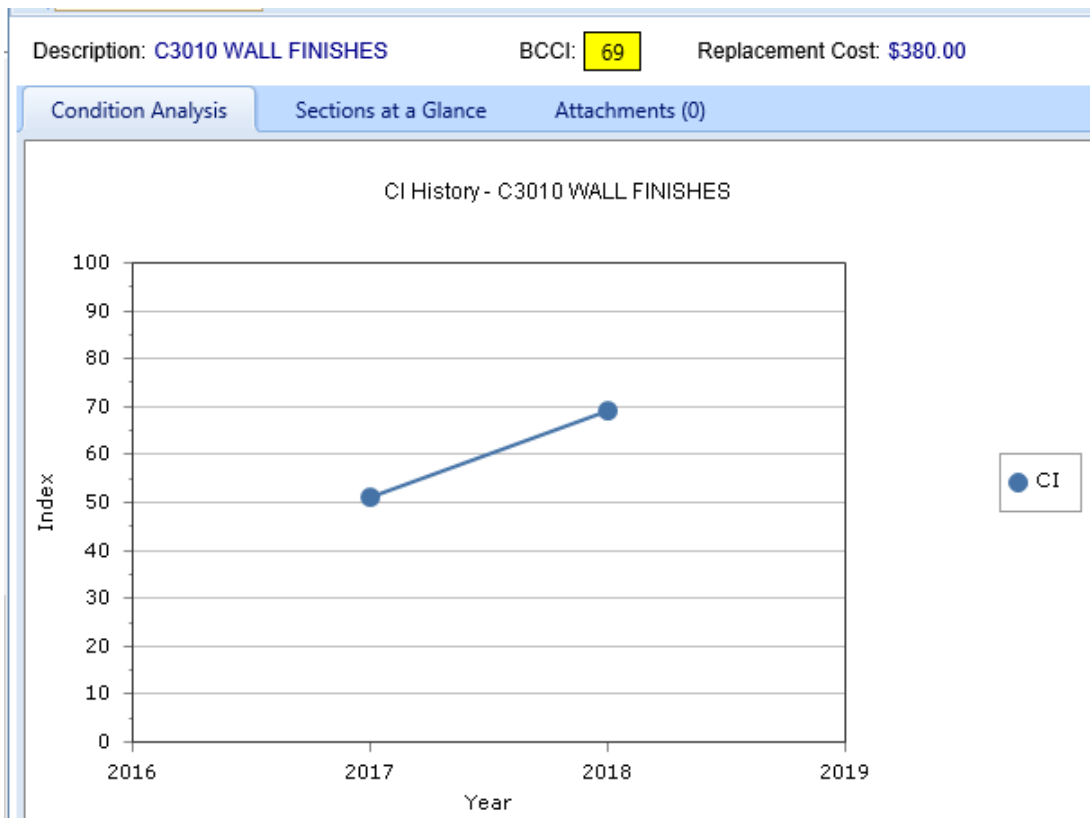
At the top of the data page you will see the Component name and description. The (Building) Component Condition Index (BCCI) and Component replacement cost fields will be blank until underlying inventory has been entered and a rollup has been performed. The replacement cost is calculated via rollup from the underlying Sections.

Additional information regarding the component is found in the different tabs and is described below.

Condition Analysis Tab

Note: The information at this tab is read-only.

The Condition History tab displays a graph of the CI history of the Component over time.



Sections at a Glance Tab

Note: The information at this tab is read-only.

Basic information regarding the Sections in the Component can be viewed by selecting the "Sections at a Glance" tab. The table at this tab shows:

- The Sections inventoried in the Component,
- Each Component-Section's condition index (CSCI), and
- The replacement cost of each Section. All of the data shown at this tab is read-only.

Description	CSCI	Replacement Cost
North windows B202001 WINDOWS Aluminum Windows	88	\$19,500
South windows B202001 WINDOWS Aluminum Windows	61	\$19,500
West windows B202001 WINDOWS Aluminum Windows	100	\$19,500
East windows B202001 WINDOWS Aluminum Windows	50	\$19,500

Cost Modifiers Tab

The **Cost Modifiers** tab displays a table showing assigned cost modifiers, and allows you to view and assign cost multipliers or adders.

Note: Existing cost modifiers that affect the Component level may have been assigned at different inventory levels, but from a Component data page you can only assign a Component-level cost modifier.

Modifier Scope

At the Component level, the Assigned Cost Modifiers table will show you all of the following:

- all modifiers assigned to that Component
- all modifiers assigned to the System the Component is in
- all modifiers assigned to the Building the Component is in
- if applicable, all modifiers assigned to the Complex the Component is in
- all modifiers assigned to the Site the Component is in.

The scope of each modifier is shown in the **Modifier Scope** column.

Assign a Modifier

To assign a modifier to your Component from available options,

1. Activate the **Assign Cost Modifier** button.

Description: B3010 ROOF COVERINGS BCCI: 46 Replacement Cost: \$818,779.69

Condition Analysis Sections at a Glance **Cost Modifiers** Attachments (0) Component Attributes

Assigned Cost Modifiers

Assign Cost Modifier

Modifier Scope	Modifier Type	Modifier Name	Modifier Value	Est. Modifier Impact	Modifier Description	Assignment Comment
Site	Adder	Test Site Adder	2000.0000	\$2,000.00		testing
Site	Multiplier	Test Site Mult	1.2500	\$36,301.31		testing
Building	Multiplier	Test Bldg Mult	1.8000	\$116,164.22		

2. In the "New Component Modifier Assignment" popup, select a cost modifier from the dropdown list.
3. Add a comment if desired
4. Activate **Add** on the popup toolbar. *You should see your selected modifier added to the table of cost modifiers.*

Unassign a Modifier

To unassign a modifier, first navigate to where the modifier was assigned, then activate the **Unassign** button in the rightmost column of the Assigned Cost Modifiers table.

Modifier Description	Assignment Comment	
	testing	Unassign
	testing	Unassign

A Site-level cost modifier can be unassigned only at the Site level, a Building-level cost modifier can be unassigned only at the Building level, etc.

More about Cost Modifiers

For more about cost modifiers, see the **Cost Modifiers** chapter in the *BUILDER Reference Data Guide*.

Attachments Tab

At the **Attachments** tab, you have the option to view or change the asset's attachments.

In addition to attaching files, you can also view attachments, [delete attachments](#), or [edit the data](#) associated with them.

View Attachment(s)

The **Attachments** tab will show whether any files have been attached to the asset's record. The number in parentheses after the word "Attachments" shows how many of them have been attached.

To view one or more attachments,

1. Activate the **Attachments** tab. *If attachments are present, a table will display their type, title, and description.*
2. Activate the link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. When finished viewing, activate the **Close** button on the popup window toolbar. and you will be returned to the table of attachments.
4. Repeat the two steps immediately above for additional attachments as desired.

Add an Attachment

At the **Attachments** tab on the asset's data page, you have the option to attach files (images and other documents) to the Component's record. An attached file might be a photograph, an electronic image of written notes or diagrams made during inventory, or a file generated on a computer.

Acceptable Attachment Formats


The attachment may be in any of the following formats:

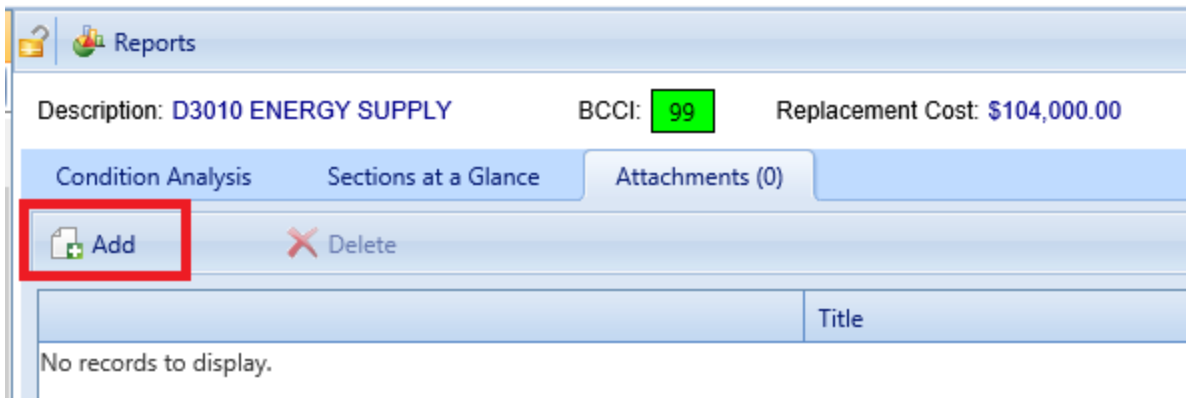
- .jpg
- .jpeg
- .png
- .zip
- .doc
- .pdf

Note: As of January 31, 2022, .doc format is allowed, but not .docx.

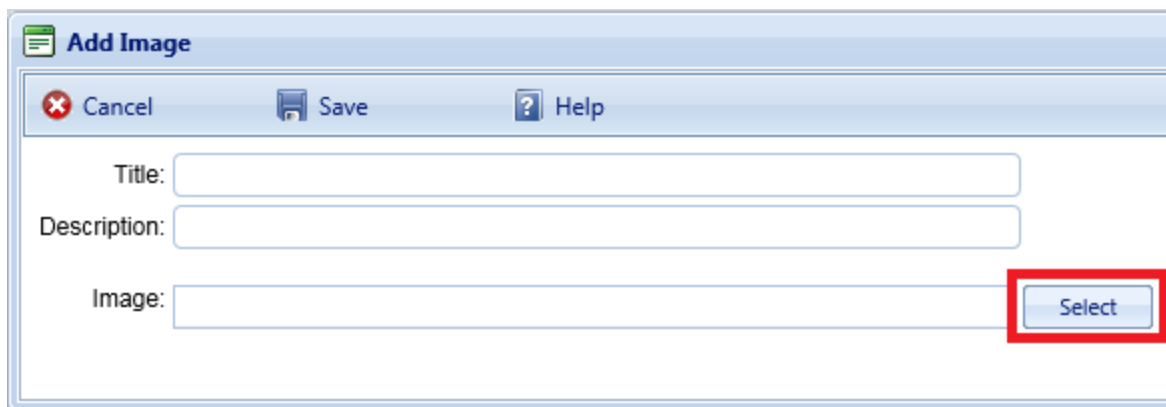
Attach

To attach a file,

1. At the **Attachments** tab, activate the  **Add** button in the toolbar below the row of tabs.



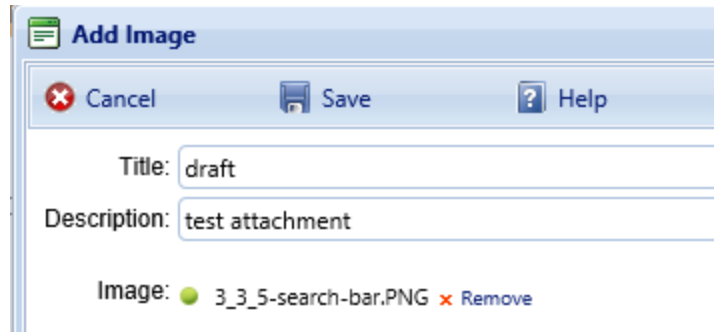
This will open the "Add Image" popup window:



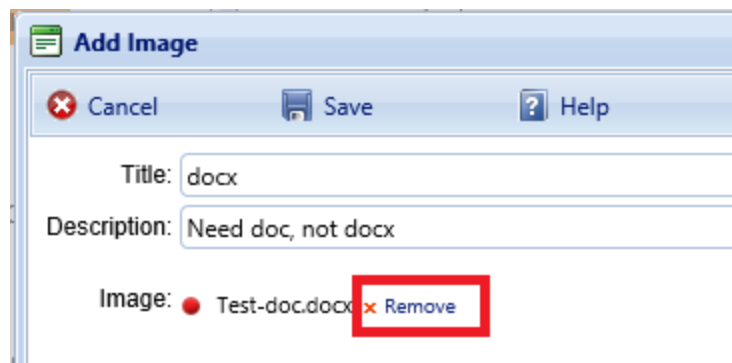
2. Enter Title and Description information for the attachment.
3. Activate the **Select** button to the right of the "Image" field to browse to the desired image or other type of file.
4. If adding an attachment at the Building level, use the "Image Type" radio buttons to indicate whether the attachment is a Key Plan, a Section Plan, or "Other."
5. Once the required attachment data is entered, activate **Save** on the popup toolbar. (Alternatively, to close the popup window without attaching the selected file or image, activate the **Cancel** button.)

Attachment Troubleshooting

If the selected attachment is in an acceptable format, the "Image" field will be replaced with a green dot (plus a label that gives you the option to remove the attachment).



If it is not in an acceptable format, the "Image" field will be replaced with a red dot. Activate "Remove" and select an attachment file in one of the formats listed at the header ["Acceptable Attachment Formats" on page 153](#).



Edit Attachment Metadata

You can edit the title and/or description of an attachment as follows:

1. Navigate to the **Attachments** tab to view the attachments table.
2. Activate a link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. In the header section above the attachment, make the desired changes in the **Title** and/or **Description** field(s).
4. Activate **Save** on the popup toolbar to store your changes and return to the table of attachments.
5. Alternatively, if you want to cancel the change, activate **Close** on the popup toolbar. *You will be returned to the table of attachments.*

If you wish to change the contents of the attachment, you will need to delete the existing attachment file and add a new one.



Delete Attachment



1. Navigate to the **Attachments** tab to view the attachments table. Select the attachment you wish to delete (do *not* activate the link in the **Title** column).

When properly selected, that record in the table will change background color as illustrated below:

Description: B2020 EXTERIOR WINDOWS BCCI: 75 Replacement Cost: \$78,000.00

Condition Analysis Sections at a Glance Attachments (0)

 Add  Delete

	Title	Description
	attach2	delete this one
	attach1	screenshot

2. Activate the **Delete** button above the table.
3. Activate **Yes** in the confirmation box to delete the attachment, or **No** to cancel.

Component Attributes Tab

Custom asset attributes can be added at each inventory level—from Organization down through Section—in two different ways: by using "active attributes" or by using "Admin managed attributes."

"Unassigned" *Admin managed attributes* are a collection of pre-named attributes that have been determined by the BUILDER instance's owner (for example, a corporation, or the Air Force, or the Army). They are templated or common attributes that are seen as likely to be used often. Although these attributes are made available from the outset after installing BUILDER, they still need to be assigned before they can be used to help describe an asset.

Additional Admin managed attributes can be created, but only by a BUILDER Administrator or a user with Master Planner Role.

Active attributes are very flexible and can be created and assigned by any user with inventory privileges.

CAUTION: Unless a standardized procedure for assigning active attributes is implemented and enforced, the flexibility of active attributes can make incorporating them into reports more difficult and time consuming, because multiple people can create them and there is no built-in consistency.

With respect to creating reports, Admin managed attributes will be easier to report on in a consistent fashion, because they are managed by a BUILDER

Administrator (or a user with Master Planner Role). Also, Admin managed attributes are available to all assets that are at the same inventory level. Active attributes, on the other hand, would be prone to being named inconsistently and make reporting more difficult.

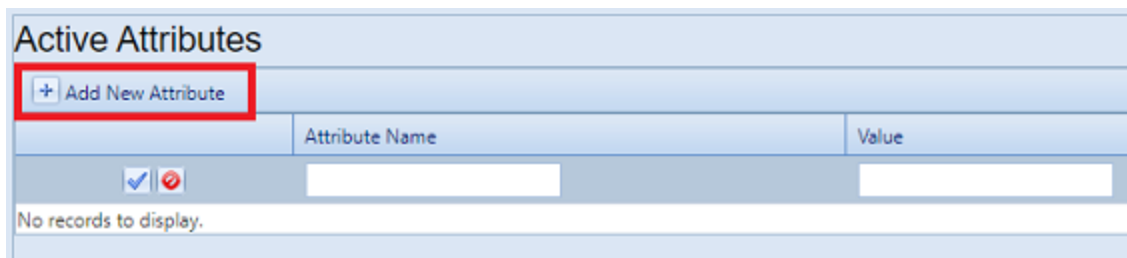
Active Attributes

Under **Active Attributes** at the top half of the Attributes screen, you can add, edit, or delete custom attributes for this level of inventory.

Add an Active Attribute

To add a custom inventory attribute,

1. Directly under the **Active Attributes** header, activate **Add New Attribute**. This will generate a new row in the **Active Attributes** table.



Active Attributes	
+ Add New Attribute	
Attribute Name	Value
<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

No records to display.

2. Enter a name and value for your attribute into the table.
3. If you want to apply an architect name, press the **Enter** key on your keyboard at this point. The popup "Add Architect" will appear. Enter the name of the architect, then select **OK**.
4. When finished with the entry, **activate the blue checkmark icon at the left side of the row** to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with a slash icon (located to the right of the blue checkmark).

CAUTION: Your new attribute will not be saved if you (a) exit without activating the blue checkmark or (b) initiate adding a new custom inventory attribute (by activating the **Add New Attribute** button) before saving with the blue checkmark.

5. Repeat steps 1 through 4 for each custom inventory attribute you wish to add.

Edit an Active Attribute

To edit an attribute,

1. Activate the pencil icon in the attribute's table row
2. Make the desired changes.
3. Finally, activate the blue checkmark icon at the left to save the changes.

Delete an Active Attribute

To delete an attribute,

1. In the table of active attributes, locate the row containing the attribute you wish to delete.
2. To the right of the **Value** field, activate the Delete icon (red "X"). *A confirmation popup will appear, asking "Delete record?"*
3. Select **OK** to delete, or **Cancel** to stop the process.

Admin Managed Attributes

Under **Unassigned Admin Managed Attributes** at the bottom left of the Attributes screen, you can choose to assign an existing Admin managed attribute to the asset whose data screen you have open. You can also change the value of an attribute after it has been assigned.

Note: Attributes that are in the table under the header **Admin Managed Attributes** are already assigned to the asset whose data screen you are in.

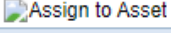
Only a BUILDER Administrator or a user with the Master Planner Role can create, edit (other than changing the value), or delete/unassign custom Admin managed attributes for the selected asset. Also, once an Admin managed attribute has been moved from the **Unassigned Admin Managed Attributes** column into **Admin Managed Attributes**, this action cannot be reversed except by a BUILDER Administrator or a user with Master Planner Role. More detail about Administrator-specific inventory attribute tasks can be found in the *BUILDER Support Administrator Guide*.

Assign an Unassigned Attribute to Admin Management


You may see one or more items listed under the header **Unassigned Admin Managed Attributes** at the lower left of the Attributes screen. These are attributes that are available at this inventory level but that have not been assigned to the selected asset. If no items are listed under the header **Unassigned Admin Managed Attributes**, there are none available to be assigned. (They may have already been assigned and thus transferred to the **Admin Managed Attributes** table.)

To assign an unassigned asset to Admin management,

In the **Unassigned Admin Managed Attributes** column, activate **Assign to Asset**.

Unassigned Admin Managed Attributes		Admin Managed Attributes	
new managed attribute			
		Attribute Name	Value
No records to display.			

*This will immediately populate the inventory item in that row under **Admin Managed Attributes** instead.*



Unassigned Admin Managed Attributes		Admin Managed Attributes	
		Attribute Name	Value
		new managed attribute	Auto Generated

Note: The assignment action is not reversible, except by a BUILDER Administrator or a user with the Master Planner Role.




Change the Value of an Admin Managed Attribute

To change the value of an asset under Admin management,

1. Under **Admin Managed Attributes**, activate the pencil icon in the attribute's table row, and wait for the row to change appearance.

Admin Managed Attributes		
 Refresh		
	Attribute Name	Value
	High insurance due to claim	Auto Generated


2. Make the desired change in the **Value** column.

Admin Managed Attributes		
		 Refresh
	Attribute Name	Value
 	High insurance due to claim	Yes <input type="text"/>

3. Finally, activate the blue checkmark icon at the left to save the changes (or the red Cancel icon to cancel the change).

Toolbar

The toolbar at the top of the content area provides you with this option:

-  **Reports**. Launches the Report Selection tool, which gives you access to a list of standard reports relevant to the asset's inventory. See "[Generate Component Reports](#)" below.

Generate Component Reports

This topic shows how to locate, select, and generate Component-level reports.

There are two locations where you can generate reports:

1. At the main menu bar. The selection of reports listed here is divided into categories: Inventory, Condition Assessment, Functionality Assessment, and Work Planning
2. At the content area toolbar

The first section below provides instructions for generating Component-level reports from the Component's content area toolbar. Reports generated here will be restricted in scope to the selected Component.

The next section after that one provides instructions for generating a report starting at the main menu.


Generate Report at Component Data Screen

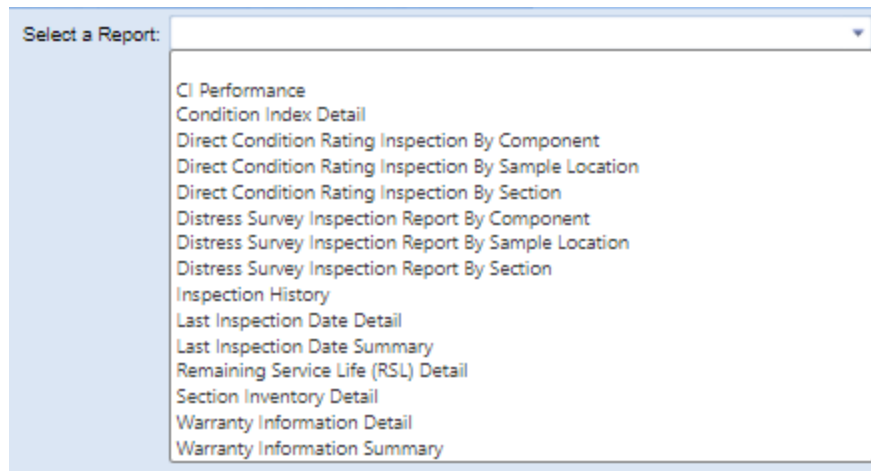
Scope of Report


When you generate a report while you are at the Component level of the inventory tree, the report will contain data only for Sections in the currently selected Component.

How To Generate

To generate a report,

1. Activate the  **Reports** button on the content area toolbar. (The content area toolbar is directly above the ID line.) *The "Reports" popup will open.*
2. At the **Select a Report** field, activate the dropdown arrow. *The following selection of reports shown in the screenshot will be displayed.*



3. In the list, select a report (for example, "Remaining Service Life (RSL) Detail").
4. Activate the  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
5. From the "Report Viewer" popup, you can choose to download or print the report.

Generate Report from Main Menu

Scope of Report

Reports are not made available at the Organization level. By default, unless you have used filters to further restrict what is included in the report, the scope of the report will be the Site, Building, System, Component, or Component-Section where you are located in the Inventory tree when you activate the **Reports** button.

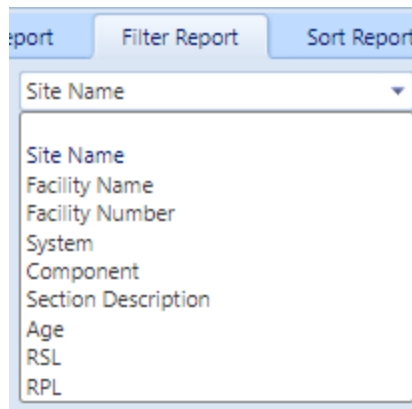
How to Generate


To generate a report from the main menu,

1. Activate the **Reports** button at the main menu.
2. In the "Reports" popup, open the BUILDER entry by clicking on the plus button.

3. Next, open the desired category: Inventory, Condition Assessment, Functionality Assessment, or Work Planning. For this example, open Inventory.
4. In the expanded list of reports, scroll down to the desired report and click on it to select it.
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, you can select the "Age" filter and direct the RSL report to show only items that are 10 years old or more.

This is the list of filters available for the RSL report at the Site level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.


Export Report

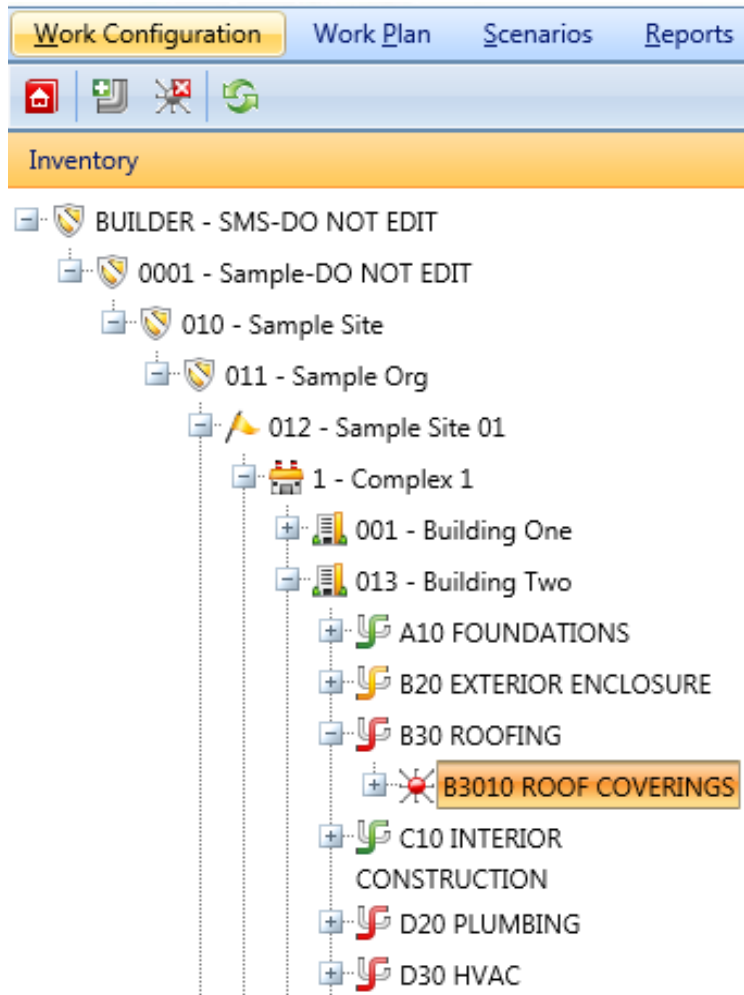
To export a report, see instructions at ["Export a Report" on page 258](#).

Delete a Component

This topic describes how to delete a Component from a System.

To delete a Component, navigate to it in the inventory tree and do *one* of the following:

- a. Right-click the Component. Then select "Delete Component" from the options.
- b. Alternatively, select the Component, then activate the **Delete Component** icon  on the menu toolbar.



WARNING: Deleting a Component will delete all Sections in the Component. Be sure that you wish to take this action. This is a significant step to take and should only be done when you are certain that you wish to clear the entire inventory of the Component you have selected.

Best Practice Recommendation: Making frequent backups of your inventory database will protect you from significant data losses if mistakes in deleting are made.

Working with Component-Sections

The Component-Section level in the BUILDER hierarchy is where inspections actually take place. This topic describes operations that can be performed at the Component-Section level.

Note: Please be familiar with the topic ["About Identifying Systems, Components and Sections" on page 121](#) before proceeding with this topic.

Section Name, Equipment Type, Subtype

A Component-Section (also called Section) is described by its name, its material/equipment category, and its Component subtype. You may have multiple Component-Sections of the same material/equipment category and Component subtype, but if so, then each such Section must have a unique name. Or, you may have multiple Sections of the same name as long as they are located in different Systems and Components.

Tips for Working with Component-Sections

A given Component-Section name may be re-used where Sections are located in different Systems and Components. This allows the Component-Section name to be used in organizing your inventory and condition assessment procedures. For example, you may use the Section name "Room 101" for the Sections representing the floor, walls, doors, plumbing, HVAC etc. in Room 101. When inspecting Room 101, all of the Building Sections with the name "Room 101" can be easily selected.

Sampling

A method that can save time on inspections is to do *sampling*; that is, to inspect representative Section-Components rather than all Section-Components. Information about sampling in BUILDER's Condition Assessment documentation can help with determining if sampling is an approach you will want to use.

If you will want to inspect samples, it's wise to plan in advance a strategy for dividing Components into Component-Sections in a way that will facilitate easier sampling. An example is to designate one location or a small set of locations, such as "Room 101" described in ["Tips for Working with Component-Sections" above](#) above, where a sampling inspection can be conveniently performed on multiple Component-Section types at the same location.

Section Tasks

Tasks that can be performed on Component-Sections are:

["Add a Component-Section" below](#)

["Edit a Component-Section" on page 168](#)

["Generate Component-Section Reports" on page 191](#)


["Delete a Component-Section" on page 193](#)

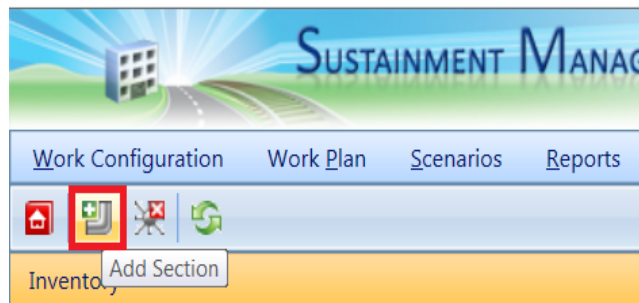
Add a Component-Section

This topic shows how to add a Component-Section (also called Section) and describes the required information to be entered. Additional information that can be entered for the Section is described in ["Edit a Component-Section" on page 168](#).

Note: Please be familiar with the topic ["About Identifying Systems, Components and Sections" on page 121](#) before proceeding with this topic.

To add a new Section to an existing Component,

1. Navigate to the Component in the inventory tree.
2. Do *one* of the following:
 - a. Right-click on the Component. Then select "Add Section" from the drop-down options.
 - b. Alternatively, select the Component in the inventory tree. Then activate the  **Add Section** icon on the main toolbar:



At this point, the "Add Component Section" popup screen will appear. Instructions for filling in the fields follow.

3. In the "Add Component Section" popup, record the following data:
- **Section Name.** Enter the name of the Component-Section. You may either type in a new Component-Section name or choose a name from the dropdown list.

A Section is described by its name, its material/equipment category, and its Component subtype. You may have multiple Sections of the same material/equipment category and Component subtype, but each such Section must have a unique name. A given Section name may be re-used, however, where Sections are located in different Systems and Components. This allows the Section name to be used in organizing your inventory and condition assessment procedures. For example, you may use the Section name "Room 101" for the Sections representing the floor, walls, doors, plumbing, HVAC etc. in Room 101. When inspecting Room 101, all of the Building Sections with the name "Room 101" can be easily selected.

To simplify the process of creating multiple types of Sections with the same Section name, the Section Name property includes a dropdown list of current Section names for the building. You may either type in a new Section name or choose a name from the dropdown list.

- **Material/Equipment Category.** Select the material/equipment category of the Section from the dropdown list. Each Component has a set

of distinct material/equipment categories. For example, a "Door" Component has material categories "Wood," "Metal," "Glass," etc.

- **Component Subtype.** Select the Component subtype of the Section from the dropdown list. Each Component type and material/equipment category has a set of distinct Component subtypes. For example, a "Door" Component with material category "Wood" has Component subtypes of "Personnel," "Overhead," etc.
- **Quantity.** Enter the quantity of the Section.
- **Year Install/Renewed.** Enter the four-digit year the Section was either (a) built or installed or (b) renewed.
- **"Estimated" checkbox.** If you have no record of the year the Component-Section was installed or last replaced, you can enter an estimated year and mark the **Estimated** checkbox. Initially, BUILDER algorithms estimate the year the Component-Section was last replaced. The default value is the Building's year of construction if the age of the building is less than 1.5 times the expected service life of the Section. If the estimating algorithm is used or you are unsure of when the Component-Section was built or renewed, make sure you mark the **Estimated** checkbox.
- **Section Status** (also displayed as **Current Status**, but which is *not* the same as Current Status at the Building inventory level). A status field has been added to the Component-Section data page. The default value is "Active." Here you can assign a status to the Section. Options are shown in the dropdown list.

The screenshot displays a software interface with three tabs: "General Info.", "Section Details", and "Condition Trend". The "Section Details" tab is active. It contains the following fields and controls:

- Quantity:** 4,855 SF
- Year Install/Renewed:** 1961 Estimated
- Age:** 57
- RSL:** 0
- Current Status:** A dropdown menu is open, showing the following options: Active, Archived, De-Activated, De-Commissioned, Missing, and Replaced.

- **Painted/Coated.** Mark this checkbox if the Component-Section is painted or has a surface coating. *Additional fields will appear below when this checkbox is marked, including BUILDER's estimate of remaining paint life (RPL).*
- **Year Painted/Coated.** If the Component-Section is marked as painted, enter the four-digit year it was last painted or coated. If you have no record of the year, you can enter an estimated year and mark the **Estimated** checkbox. Initially, BUILDER algorithms estimate the year in which the Component-Section was last painted or coated. The default value is the Building's year of construction if the age of the Building is less than 1.5 times the expected paint life of the Component-Section.

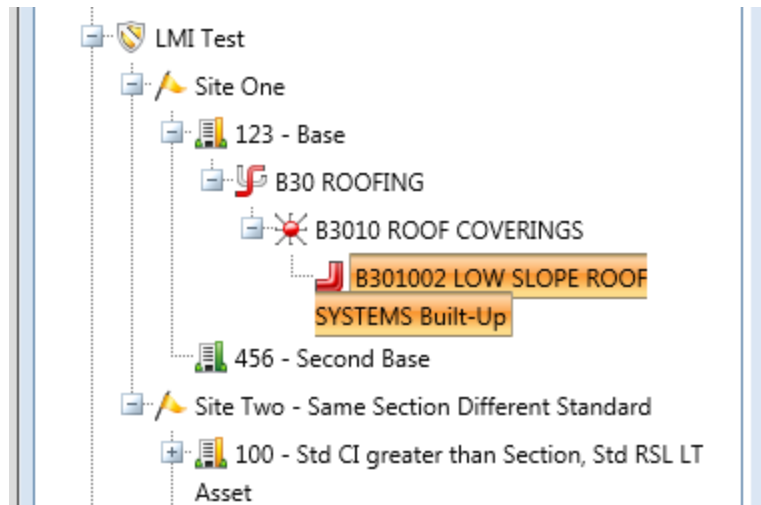
Best Practice: If the estimating algorithm is being used, or if you are unsure of when the Component-Section was last painted or coated, make sure you mark the **Estimated** checkbox.

- **Paint Type.** If the Component-Section is marked as painted/coated, select the paint/coating type from the dropdown list.
4. After entering the data described above, activate the **Add** button on the popup toolbar to add the Component-Section to your inventory. Alternatively, if you do not wish to add it, activate the **Cancel** button to close the popup.

Edit a Component-Section

The Component-Section level in the BUILDER hierarchy is where inspections actually take place. This topic describes information that can be viewed and edited at the Section data screen.




Data for a given Component-Section can be viewed and edited by selecting the Component-Section in the inventory tree:



Information about the Component-Section selected in the inventory tree will be presented on an ID line and at several tabs. You can use the content area toolbar to perform actions such as saving changes, or adding or editing comments.

- ["Toolbar" below](#)
- ["ID Line" on the next page](#)
- ["General Information Tab" on the next page](#)
- ["Section Details Tab" on page 171](#)
- ["Condition Trend Tab" on page 171](#)
- ["Inspection History Tab" on page 172](#)
- ["Cost Modifiers Tab" on page 173](#)
- ["Attachments Tab" on page 175](#)
- ["Section Attributes Tab" on page 179](#)

Toolbar

-  **Save**. Saves changes made to the Section.
-  **Comment**. Allows you to add, edit, and view comments about the Section.
- *Deleted: Images*. Note that this toolbar option has been removed; it has been replaced with the **Attachments** tab in the content area.
-  **Reports**. Launches the Report Selection tool, which gives you access to a list of standard reports relevant to Section inventory. See ["Generate Component-Section Reports" on page 191](#) for details about how to select and generate a report.

ID Line

The Section ID line shows you the Section name, equipment category, and component subtype.

Section Name: PM-tester	Equipment Category: C201001 INTERIOR AND EXTERIOR STAIRS
	Component Subtype: Exterior Stairs - Concrete (24 Riser Flight)

General Information Tab

When you select a Component-Section in the inventory navigation tree, the **General Information** (abbreviated **General Info.**) tab is shown first by default. This is where all of the Component-Section data described in the ["Add a Component-Section" on page 165](#) topic, and more, can be edited.

CAUTION: Be sure to save your edits using the **Save** icon in the content area toolbar. content area toolbar.

General Info.	Section Details (0)	Condition Trend	Inspection History	Cost Modifiers	Attachments (0)	Section Attributes
Alternate ID: <input type="text"/>	Quantity: 6 EA		Latest Inspection Date: 09/21/2017 CSCI: 88 Type: Direct Rating		Southern Command: MEDIUM Standard	Minimum CI for Repair: 75 Minimum CCI for Paint: 30 Maximum RPL for Paint: 4 Maximum RSL for Replacement: 2
Display rounded units: <input type="checkbox"/>	Year Install/Renewed: 2015		Current Estimated Condition CSCI: 82			
Estimated: <input type="checkbox"/>	Age: 7 RSL: 25					
Current Status: Active	Painted: <input type="checkbox"/>					

Additional data at this tab includes:

- **Alternate ID.** This is where you can enter an ID number corresponding to standards internal to your organization.
- **Age (Read-Only).** Displays the age of the Component-Section, calculated from the Year Installed.
- **RSL (Read-Only).** Displays the remaining service life, in years, of the Section. The remaining service life is calculated during the [rollup process](#) using age, Section service life, and Section condition index trend.
- **Latest Inspection (Read-Only).** Displays the date that the last condition assessment was performed on the Section. Also displayed is the Component-Section Condition Index (CSCI) computed on the inspection date based on the assessment results. If the Component-Section is painted, the

Coating Condition Index (CCI) computed at the last inspection date will also be shown.

- **Current Estimated Condition (Read-Only)** . Displays the estimated CSCI based on service life and condition index trend. The estimated CSCI is computed during the [rollup process](#). If the Component-Section is painted, both of the following will be shown: the CCI computed at the last inspection date, and the current estimated CCI.

The following fields show numbers that have been set using BUILDER's "Standards" capability to generate work items, if this procedure has been done. For more information about applying standards, see the Work Configuration Guide.

- **Minimum CI for Repair (Read-Only)**. This field shows what threshold Condition Index value will trigger a work item. For Component-Sections with a CI above this value, no work item is triggered. For Component-Sections with a CI at or below this value, a work item is triggered.
- **Minimum CCI for Paint (Read-Only)**. This field shows the threshold value for the Coating Condition Index. For painted Component-Sections with a CCI above this value, no paint work item is triggered. For painted Component-Sections with a CCI at or below this value, a paint work item is triggered.
- **Maximum RPL for Paint (Read-Only)**. This field shows the threshold value for remaining paint life. For painted Component-Sections with a RPL greater than this value, no paint work item is triggered. For painted Component-Sections with a CCI at or less than this value, a paint work item is triggered.
- **Maximum RSL for Replacement (Read-Only)**. This field shows the threshold value for remaining service life. For Component-Sections with a RSL above this value, replacement would not be considered as an option unless it is more cost effective to replace than to repair.

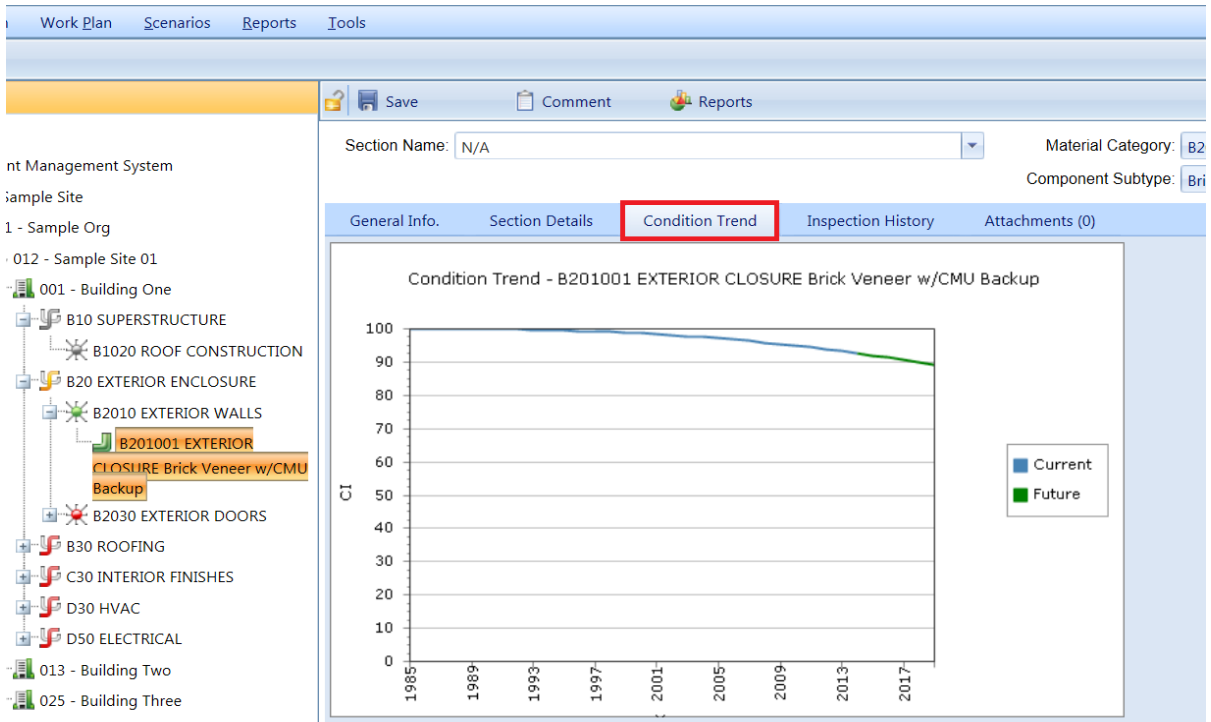
Section Details Tab

As a supplement to information shown at the **General Information** tab, details regarding individual pieces of equipment that are part of the Component-Section can be stored at the **Section Details** tab. For information how to add, edit, or delete Section Details, see the ["Add, Edit, or Delete Section Details" on page 183](#) topic.

Condition Trend Tab

Note: The information at this tab is read-only.

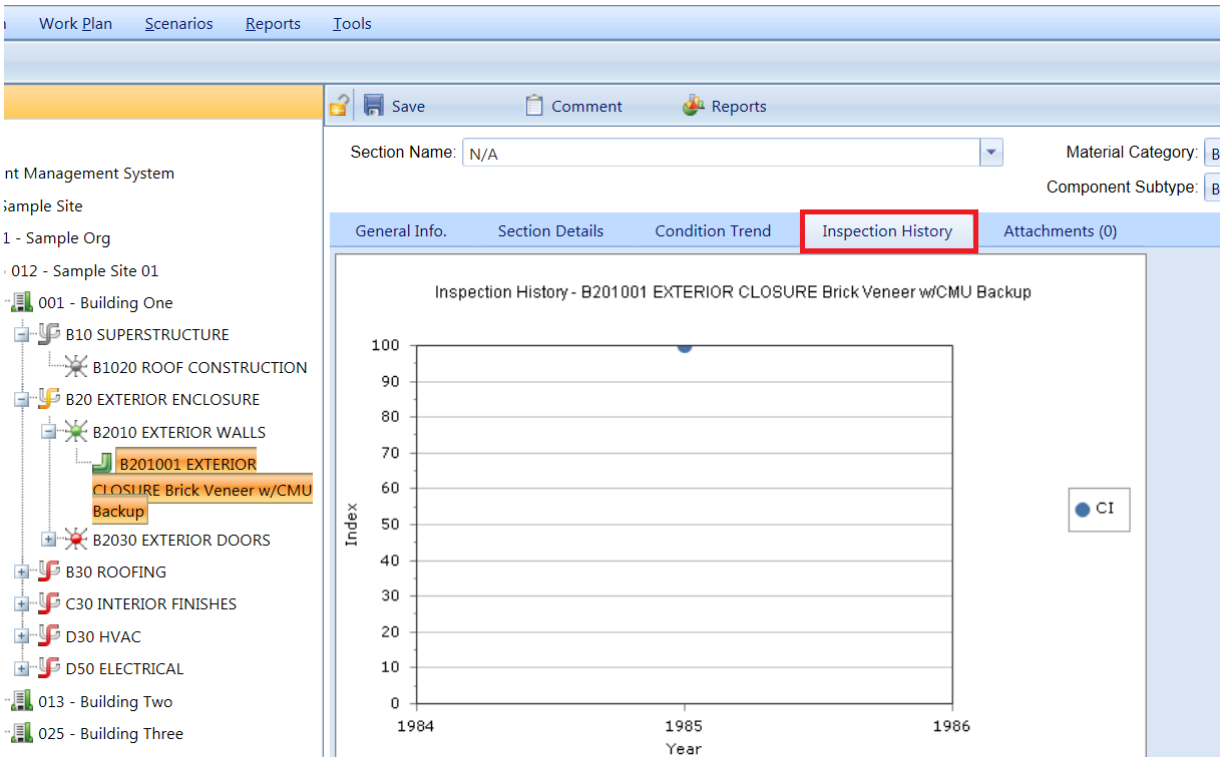
The **Condition Trend** tab shows the trend of the CSCI based on inspection information, as well as the projected CSCI trend into the future based on observed deterioration rates and expected service life.



Inspection History Tab

Note: The information at this tab is read-only.

The **Inspection History tab** displays a graph of the CSCI history of the Component-Section over time, based on inspection information.



Cost Modifiers Tab

The **Cost Modifiers** tab displays a table showing assigned cost modifiers, and allows you to view and assign cost multipliers or adders.

Note Existing cost modifiers that affect the Section level may have been assigned at different inventory levels, but from a Section data page you can only assign a Section-level cost modifier.

Modifier Scope

At the Section level, the Assigned Cost Modifiers table will show you all of the following:

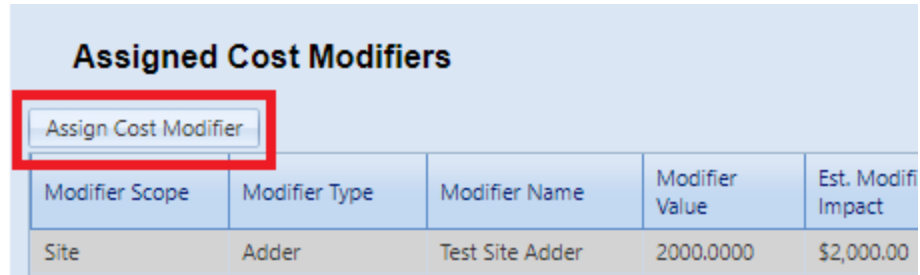
- all modifiers assigned to that Section
- all modifiers assigned to the Component the Section is in
- all modifiers assigned to the System the Section is in
- all modifiers assigned to the Building the Section is in
- if applicable, all modifiers assigned to the Complex the Section is in
- all modifiers assigned to the Site the Section is in.

The scope of each modifier is shown in the **Modifier Scope** column.

Assign a Modifier

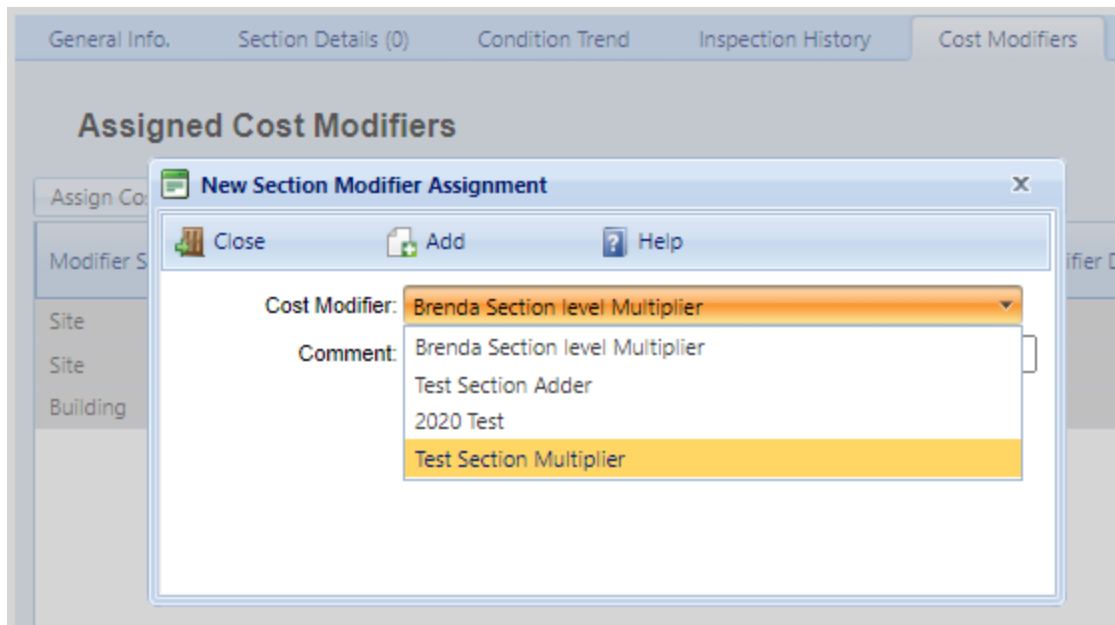
To assign a modifier to your Section from available options,

1. Activate the **Assign Cost Modifier** button.



Assigned Cost Modifiers				
Modifier Scope	Modifier Type	Modifier Name	Modifier Value	Est. Modifi Impact
Site	Adder	Test Site Adder	2000.0000	\$2,000.00

2. In the "New Section Modifier Assignment" popup, select a cost modifier from the dropdown list.



3. Add a comment if desired
4. Activate **Add** on the popup toolbar. *You should see your selected modifier added to the table of cost modifiers.*

Unassign a Modifier

To unassign a modifier, first navigate to where the modifier was assigned, then activate the **Unassign** button in the rightmost column of the Assigned Cost Modifiers table.

Modifier Description	Assignment Comment	
	testing	Unassign
	testing	Unassign

A Site-level cost modifier can be unassigned only at the Site level, a Building-level cost modifier can be unassigned only at the Building level, etc.

More about Cost Modifiers

For more about cost modifiers, see the **Cost Modifiers** chapter in the *BUILDER Reference Data Guide*.

Attachments Tab

At the **Attachments** tab, you have the option to view or change the asset's attachments. At the Component-Section level, you can choose to view just the Section attachments, just the Section Details attachments, or both.

View Attachment(s)

The **Attachments** tab will show whether any files have been attached to the asset's record. The number in parentheses after the word "Attachments" shows how many of them have been attached.

To view one or more attachments,

1. Activate the **Attachments** tab. *If attachments are present, a table will display their type, title, and description.*
2. Activate the link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. When finished viewing, activate the **Close** button on the popup window toolbar. and you will be returned to the table of attachments.
4. Repeat the two steps immediately above for additional attachments as desired.

At the Component-Section level, you can choose to view just the Section attachments, just the Section Details attachments, or both.

Add an Attachment

At the **Attachments** tab on the asset's data page, you have the option to attach files (images and other documents) to the asset's record. An attached file might be

a photograph, an electronic image of written notes or diagrams made during inventory, or a file generated on a computer.

Acceptable Attachment Formats

The attachment may be in any of the following formats:

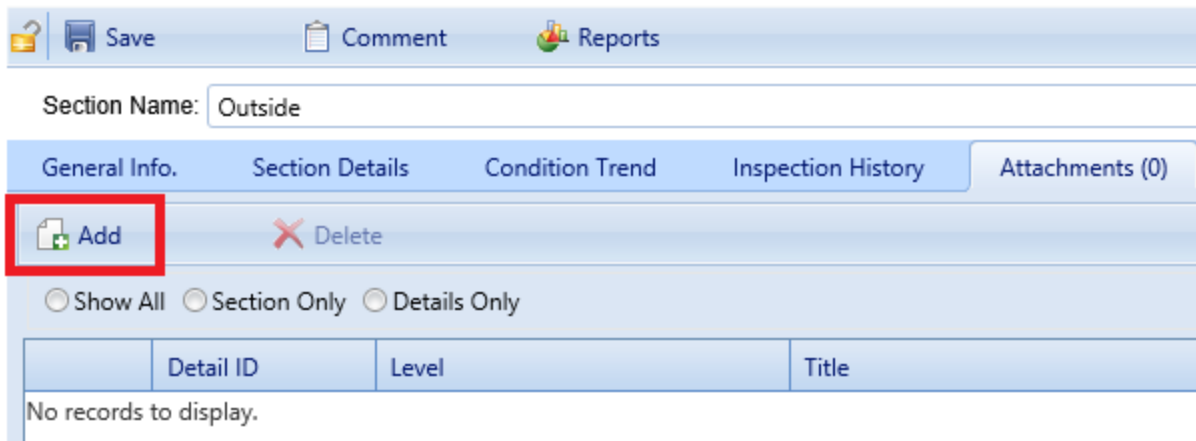
- .jpg
- .jpeg
- .png
- .zip
- .doc
- .pdf

Note: As of January 31, 2022, .doc format is allowed, but not .docx.

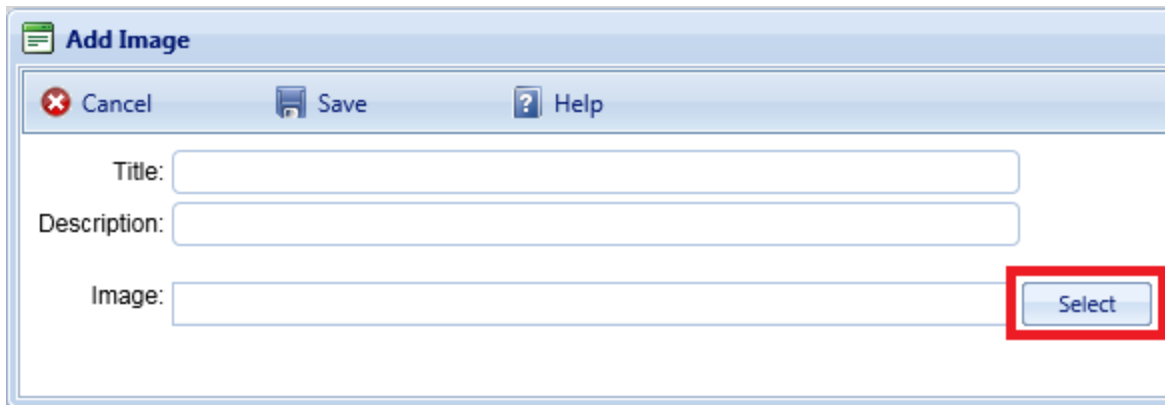
Attach

To attach a file,

1. At the **Attachments** tab, activate the  **Add** button in the toolbar below the row of tabs.



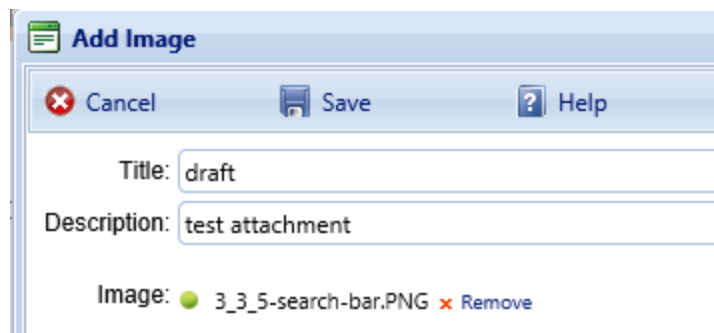
This will open the "Add Image" popup window:



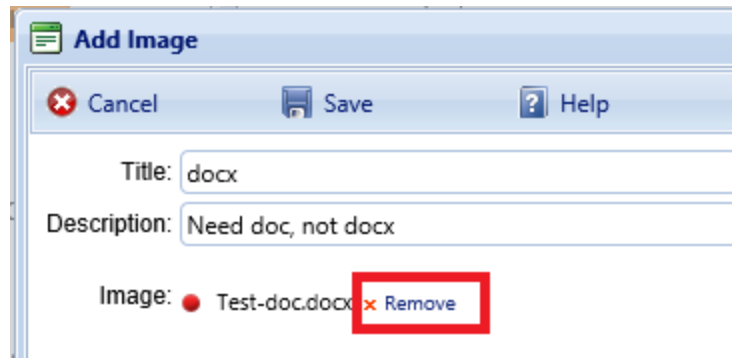
2. In the popup, enter Title and Description information for the attachment.
3. Activate the **Select** button to the right of the "Image" field.
4. Browse to the desired image or other file and select it for attachment. *If a red dot appears next to your file name in the "Add Image" popup, see ["Attachment Troubleshooting" below](#).*
5. If you are adding an attachment at the Building level, use the "Image Type" radio buttons to indicate whether the attachment is a Key Plan, a Section Plan, or "Other."
6. Once the required attachment data is entered,
 - a. Activate **Save** on the popup toolbar.
 - b. Alternatively, to close the popup window without attaching the selected file or image, activate the **Cancel** button.

Attachment Troubleshooting

If the selected attachment is in an acceptable format, the "Image" field will be replaced with a green dot (plus a label that gives you the option to remove the attachment).



However, if it is not in an acceptable format, the "Image" field will be replaced with a red dot. Activate "Remove" and select an attachment file in one of the formats listed at the header ["Acceptable Attachment Formats" on page 176](#).



Edit Attachment Metadata

You can edit the title and/or description of an attachment as follows:

1. Navigate to the **Attachments** tab to view the attachments table.
2. Activate a link in the **Title** column. *The attachment will appear in the "Image Viewer" popup window.*
3. In the header section above the attachment, make the desired changes in the **Title** and/or **Description** field(s).
4. Activate **Save** on the popup toolbar to store your changes and return to the table of attachments.
5. Alternatively, if you want to cancel the change, activate **Close** on the popup toolbar. *You will be returned to the table of attachments.*

If you wish to change the contents of the attachment, you will need to delete the existing attachment file and add a new one.

Delete an Attachment

To delete an attachment,

1. Navigate to the **Attachments** tab to view the attachments table.
2. Select the attachment you wish to delete (do *not* activate the link in the **Title** column). *When properly selected, that record in the table will change background color as illustrated below:*

The screenshot shows the 'Attachments (2)' tab in a software interface. At the top, there are tabs for 'General Info.', 'Section Details', 'Condition Trend', 'Inspection History', and 'Attachments (2)'. Below the tabs, there are two buttons: 'Add' and 'Delete'. The 'Delete' button is highlighted with a red box. Below the buttons, there are three radio buttons: 'Show All', 'Section Only', and 'Details Only'. Below the radio buttons is a table with the following data:

	Detail ID	Level	Title	Description
		Component_Section	attach1	screenshot
		Component_Section	attach2	delete this one

3. Activate the **Delete** button above the table.
4. Activate **Yes** in the confirmation box to delete the attachment, or **No** to cancel.

Section Attributes Tab

Custom asset attributes can be added at each inventory level—from Organization down through Section—in two different ways: by using "active attributes" or by using "Admin managed attributes."

"Unassigned" *Admin managed attributes* are a collection of pre-named attributes that have been determined by the BUILDER instance's owner (for example, a corporation, or the Air Force, or the Army). They are templated or common attributes that are seen as likely to be used often. Although these attributes are made available from the outset after installing BUILDER, they still need to be assigned before they can be used to help describe an asset.

Additional Admin managed attributes can be created, but only by a BUILDER Administrator or a user with Master Planner Role.

Active attributes are very flexible and can be created and assigned by any user with inventory privileges.

CAUTION: Unless a standardized procedure for assigning active attributes is implemented and enforced, the flexibility of active attributes can make incorporating them into reports more difficult and time consuming, because multiple people can create them and there is no built-in consistency.

With respect to creating reports, Admin managed attributes will be easier to report on in a consistent fashion, because they are managed by a BUILDER Administrator (or a user with Master Planner Role). Also, Admin managed attributes are available to all assets that are at the same inventory level. Active attributes, on the

other hand, would be prone to being named inconsistently and make reporting more difficult.

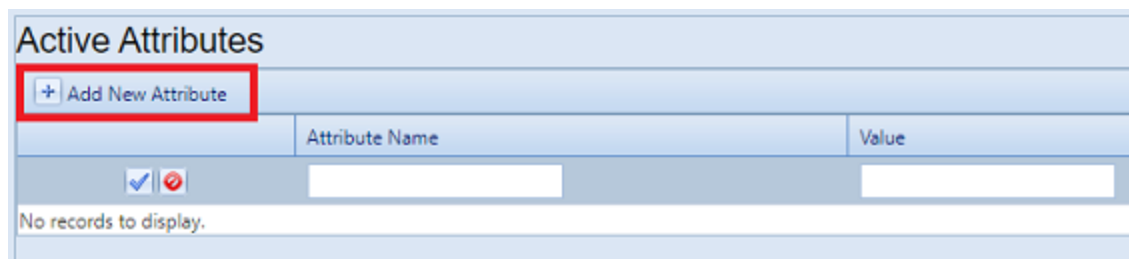
Active Attributes

Under **Active Attributes** at the top half of the Attributes screen, you can add, edit, or delete custom attributes for this level of inventory.

Add an Active Attribute

To add a custom inventory attribute,

1. Directly under the **Active Attributes** header, activate **Add New Attribute**. This will generate a new row in the **Active Attributes** table.



Active Attributes		
+ Add New Attribute		
	Attribute Name	Value
<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="text"/>	<input type="text"/>
No records to display.		

2. Enter a name and value for your attribute into the table.
3. If you want to apply an architect name, press the **Enter** key on your keyboard at this point . The popup "Add Architect" will appear. Enter the name of the architect, then select **OK**.
4. When finished with the entry, **activate the blue checkmark icon at the left side of the row** to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with a slash icon (located to the right of the blue checkmark).

CAUTION: Your new attribute will not be saved if you (a) exit without activating the blue checkmark or (b) initiate adding a new custom inventory attribute (by activating the **Add New Attribute** button) before saving with the blue checkmark.

5. Repeat steps 1 through 4 for each custom inventory attribute you wish to add.

Edit an Active Attribute

To edit an attribute,

1. Activate the pencil icon in the attribute's table row
2. Make the desired changes.
3. Finally, activate the blue checkmark icon at the left to save the changes.

Delete an Active Attribute

To delete an attribute,

1. In the table of active attributes, locate the row containing the attribute you wish to delete.
2. To the right of the **Value** field, activate the Delete icon (red "X"). *A confirmation popup will appear, asking "Delete record?"*
3. Select **OK** to delete, or **Cancel** to stop the process.

Admin Managed Attributes

Under **Unassigned Admin Managed Attributes** at the bottom left of the Attributes screen, you can choose to assign an existing Admin managed attribute to the asset whose data screen you have open. You can also change the value of an attribute after it has been assigned.

Note: Attributes that are in the table under the header **Admin Managed Attributes** are already assigned to the asset whose data screen you are in.

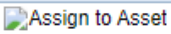
Only a BUILDER Administrator or a user with the Master Planner Role can create, edit (other than changing the value), or delete/unassign custom Admin managed attributes for the selected asset. Also, once an Admin managed attribute has been moved from the **Unassigned Admin Managed Attributes** column into **Admin Managed Attributes**, this action cannot be reversed except by a BUILDER Administrator or a user with Master Planner Role. More detail about Administrator-specific inventory attribute tasks can be found in the *BUILDER Support Administrator Guide*.

Assign an Unassigned Attribute to Admin Management


You may see one or more items listed under the header **Unassigned Admin Managed Attributes** at the lower left of the Attributes screen. These are attributes that are available at this inventory level but that have not been assigned to the selected asset. If no items are listed under the header **Unassigned Admin Managed Attributes**, there are none available to be assigned. (They may have already been assigned and thus transferred to the **Admin Managed Attributes** table.)

To assign an unassigned asset to Admin management,

In the **Unassigned Admin Managed Attributes** column, activate **Assign to Asset**.

Unassigned Admin Managed Attributes		Admin Managed Attributes	
new managed attribute			
		Attribute Name	Value
No records to display.			

*This will immediately populate the inventory item in that row under **Admin Managed Attributes** instead.*



Unassigned Admin Managed Attributes		Admin Managed Attributes	
			
		Attribute Name	Value
		new managed attribute	Auto Generated

Note: The assignment action is not reversible, except by a BUILDER Administrator or a user with the Master Planner Role.




Change the Value of an Admin Managed Attribute

To change the value of an asset under Admin management,

1. Under **Admin Managed Attributes**, activate the pencil icon in the attribute's table row, and wait for the row to change appearance.

Admin Managed Attributes		
 Refresh		
	Attribute Name	Value
	High insurance due to claim	Auto Generated

2. Make the desired change in the **Value** column.

Admin Managed Attributes		
 Refresh		
 	Attribute Name	Value
	High insurance due to claim	Yes <input type="text"/>

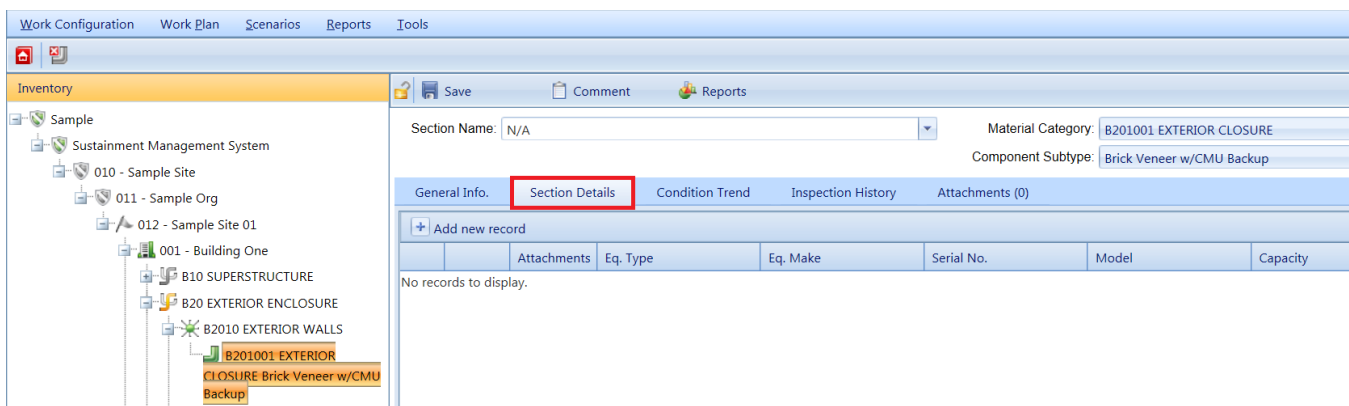
3. Finally, activate the blue checkmark icon at the left to save the changes (or the red Cancel icon to cancel the change).

Add, Edit, or Delete Section Details

The Section Details tab at the Section data screen is where you can record detailed information, such as serial number and warranty date, for equipment that constitutes a Section or is part of one. This topic describes how to add, edit, or delete Section Details.

Section Details include critical information regarding warranties, model number, manufacturer, equipment serial numbers and property identifiers, and location.

After defining a Section, you may add details regarding individual items of equipment or constructed elements (materials) at the **Section Details** tab, as shown below.

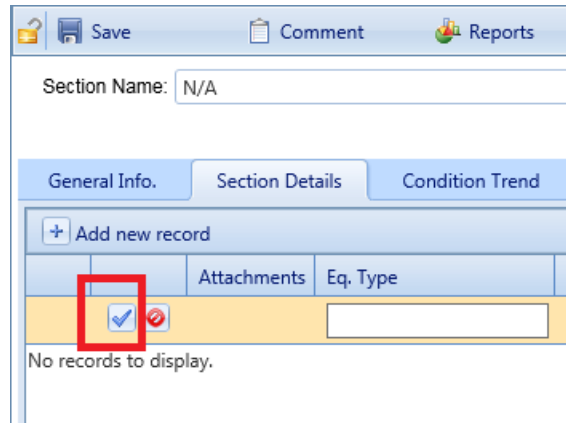


Add Section Details

To add Section Details,

1. Activate the **Add new record** button (located just above the Section Details table column headers).
2. Enter information; each of the fields is described in ["Edit Section Detail Data" on page 187](#). You can use the **Tab** key to proceed left to right, from one entry field to another, or **Shift-Tab** to move from right to left.
3. **IMPORTANT:** After entering the information, activate the checkmark icon, as shown below.

Note: You may need to scroll back to the left side of the table to see the checkmark icon.



Alternately, to exit the record without saving the data, activate the red **Cancel** icon next to the checkmark icon.

4. When finished with entries, or intermittently, activate **Save** on the toolbar.

Attach a File

From the **Attachments** column of the Section Details table, you have the option to attach files to the Section Detail's record. An attached file might be a photograph, an electronic image of written notes or diagrams made during inventory, or a file generated on a computer.

Acceptable Attachment Formats

The attachment may be in any of the following formats:

- .jpg
- .jpeg
- .png
- .zip
- .doc
- .pdf

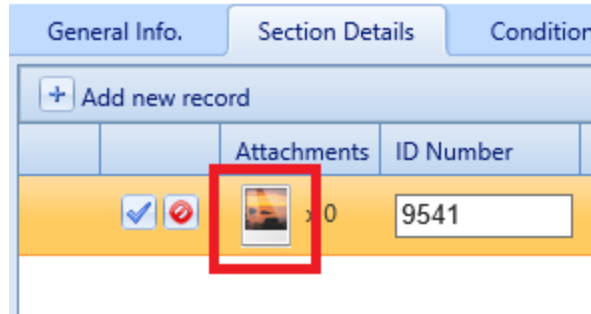
Note: As of January 31, 2022, .doc format is allowed, but not .docx.

You have the option to attach one or more files to the Section Detail's record.

Attach

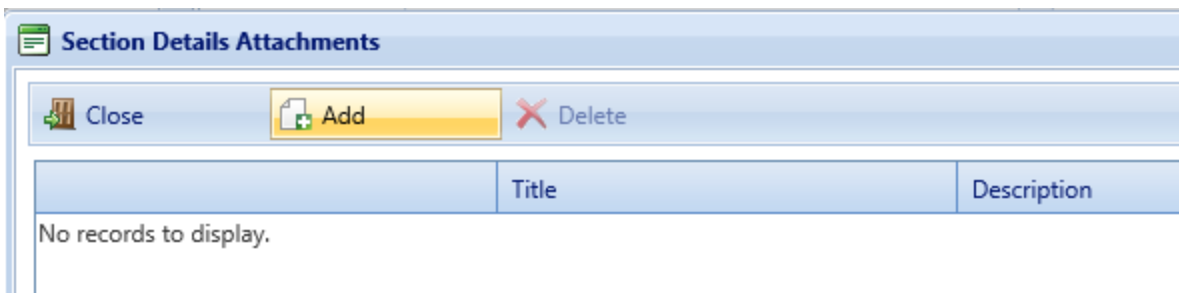
To attach a file,

1. Activate the image in the **Attachments** column of the desired row in the Section Details table.

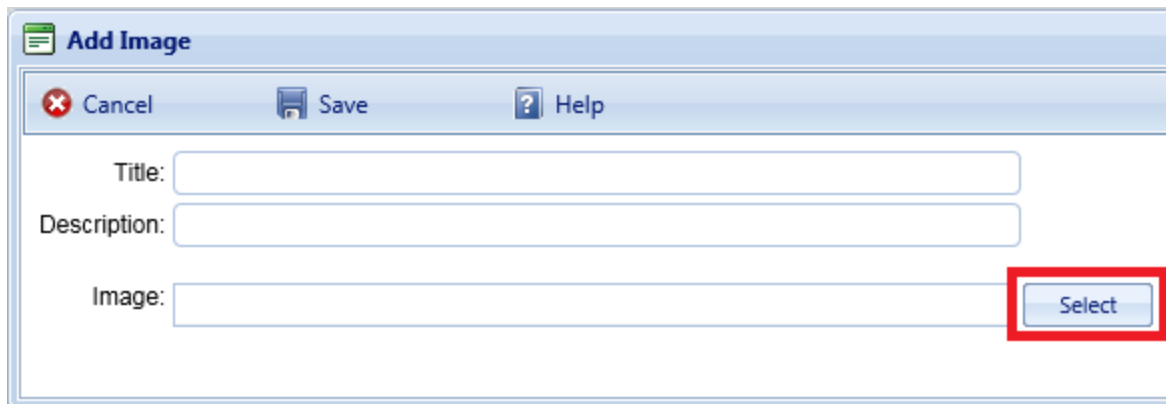


The "Section Details Attachments" popup window will appear.

2. In the "Section Details Attachments" popup window, activate the **Add** button on the toolbar.



This will open the "Add Image" popup window:



1. Enter Title and Description information for the attachment.
2. Activate the **Select** button to the right of the "Image" field to browse to the desired image or other file.
3. If you are adding an attachment at the Building level, use the "Image Type" radio buttons to indicate whether the attachment is a Key Plan, a Section Plan, or "Other."

4. Once the required attachment data is entered,
 - a. Activate **Save** on the popup toolbar.
 - b. Alternatively, to close the popup window without attaching the selected file or image, activate the **Cancel** button.

After you activate **Save** on the popup toolbar, an entry for the attachment will appear in the "Section Details Attachments" table in the popup.

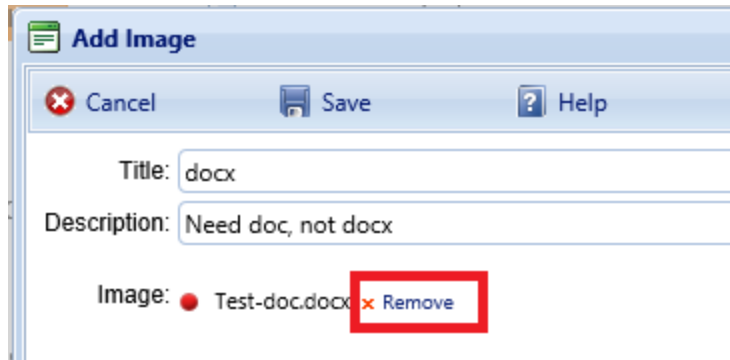
	Title	Description
	<u>One</u>	sample attach 1

Section Detail attachments can also be accessed from the **Attachments** tab at the Section data screen by selecting either the "Show All" or "Details Only" radio button above the Section Attachments table.

Troubleshooting

If the selected attachment is in an acceptable format, the "Image" field will be replaced with a green dot (plus a label that gives you the option to remove the attachment).

If it is not in an acceptable format, the "Image" field will be replaced with a red dot. Activate "Remove" and select an attachment file in one of the formats listed at ["Acceptable Attachment Formats" on page 184](#).



Toolbar Options

- **Save**. Saves changes made to the Section Detail.
- **Comment**. Allows you to add, edit, and view comments about the Section Details.
- *Deleted: Images*. Note that this toolbar option has been removed. Images and other attachments are now initiated or accessed via the **Attachments** column of the Section Details table, or from the **Attachments** tab in the Section data page.
- **Reports**. Allows you to run standard BUILDER reports appropriate to the current inventory level.

Edit Section Detail Data

General Info.		Section Details	Condition Trend	Inspection History	Attachments (0)	
+ Add new record						
		Attachments	ID Number	Eq. Type	Eq. Make	Serial No.
		x 0	9541	Single Pole	K-270-SPO	0005-43258J

Because Section Detail data can be recorded for both equipment and non-equipment Section Detail items, some of the data elements (columns in the table of items at the **Section Details** tab) might not apply to a particular Section. Simply fill in the applicable data fields and leave the non-applicable fields blank. Section Detail data that can be entered includes:

- **ID Number** (Required for individual items of equipment; not used for non-equipment types of Section Detail items). Enter the identifier for the individual equipment. Limit: 20 alphanumeric characters.
- **Equipment Type**. Enter the equipment type. Limit: 50 alphanumeric characters.

- **Equipment Make.** Enter the equipment make. Limit: 30 alphanumeric characters.
- **Serial Number.** Enter the serial number. Limit: 30 alphanumeric characters.
- **Model.** Enter the model. Limit: 20 alphanumeric characters.
- **Capacity.** Enter the capacity (such as gallons, horsepower, or MBH, depending on equipment type). Limited to 70 alphanumeric characters.
- **Manufacturer.** Enter the manufacturer. Limit: 40 alphanumeric characters.
- **Warranty Company.** If the item has a warranty, enter each warranty company, which is limited to 50 alphanumeric characters each. For each item, up to two warranty companies may be listed.
- **Warranty Date.** If the item has a warranty, select each warranty date using the dropdown calendar. For each item, up to two warranty dates may be listed, numbered to match the warranty company.
- **Location.** Enter where the time is located. Limit: 40 alphanumeric characters.
- **Date Manufactured.** Select the date the item was manufactured, using the dropdown calendar.
- **Control Type/Make.** Enter the Section control type or make. Limit: 50 alphanumeric characters.
- **Year Installed.** Enter the 4-digit year in which the item was installed.
- **Comment.** Enter comments about the Section Detail.

View Section Detail Attachments

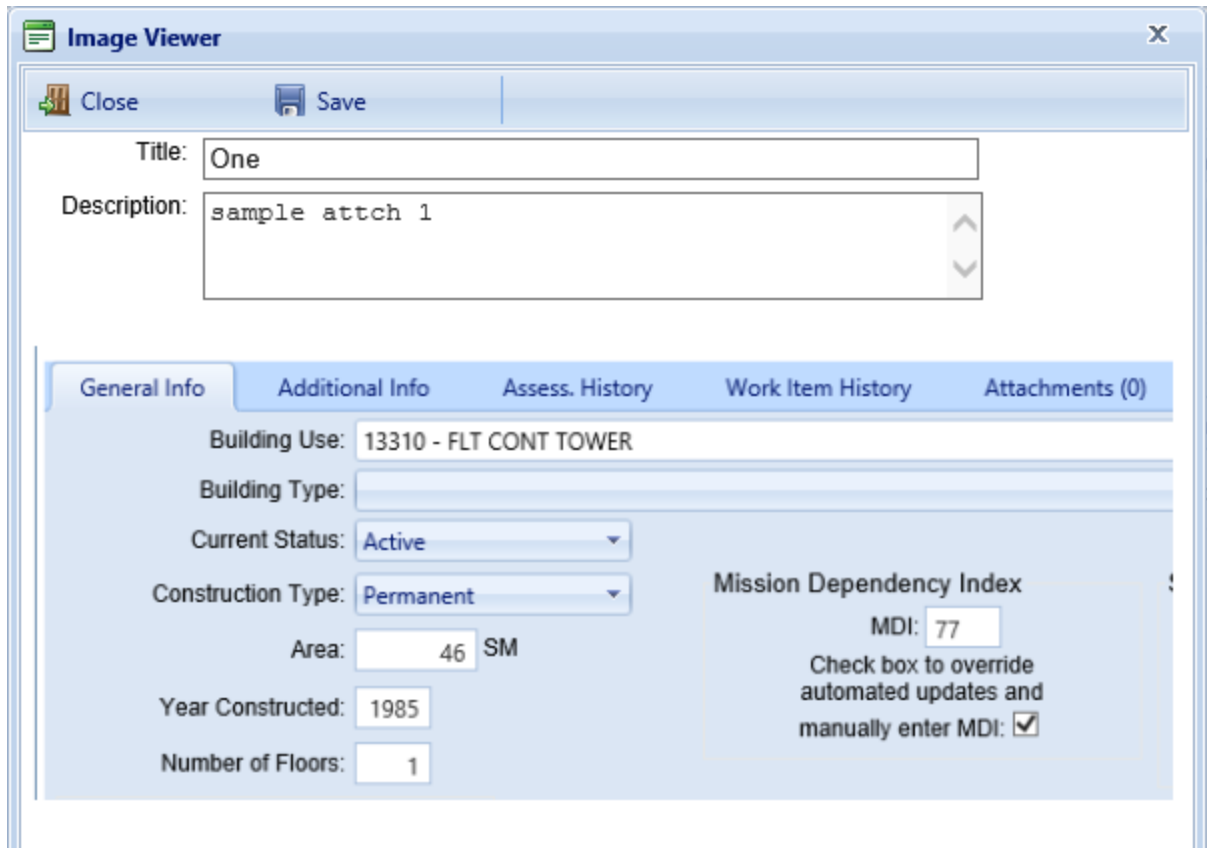
Two methods are available to view Section Detail attachments: They can be accessed from either the **Attachments** or **Section Details** tab of the Section data page.

A. To view Section Details at the **Attachments** tab,

1. Select either the "Show All" or "Details Only" radio button.

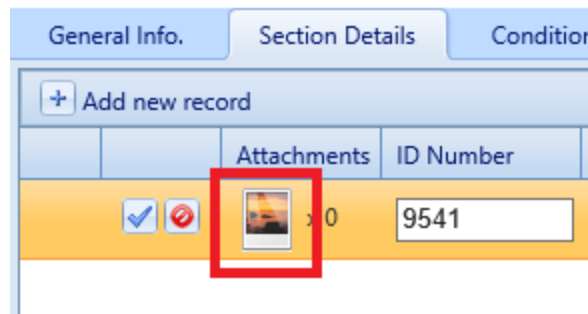
	Detail ID	Level	Title	Description
	9541	Section_Detail	One	sample attach 1

2. Next, activate the attachment's link, located in the **Title** column of the table.
The attachment will show in the "Image Viewer" popup window:



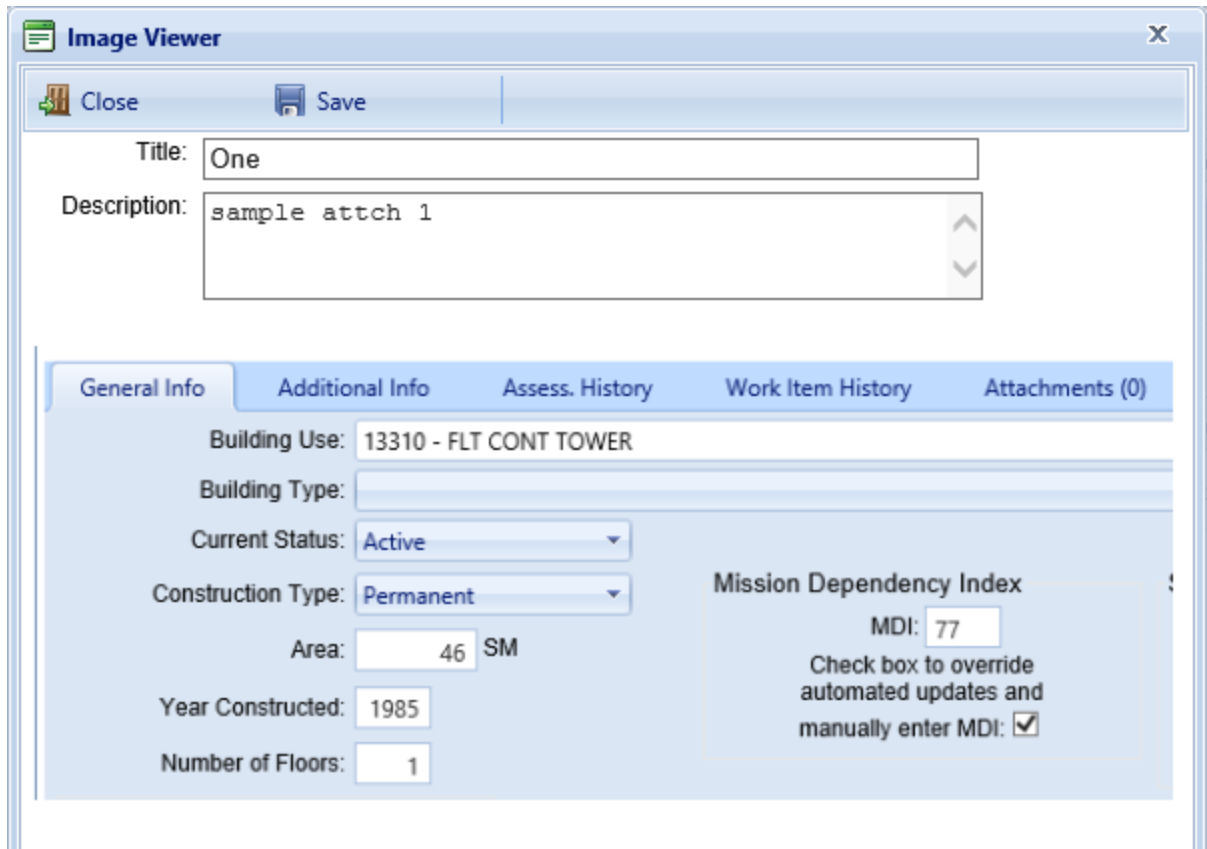
B. To view Section Details via the Section Details table,

1. Activate the image in the **Attachments** column of the desired row in the Section Details table.



2. Next, activate the attachment's link, located in the **Title** column of the table.

The attachment will show in the "Image Viewer" popup window:





Delete a Section Detail

To delete a Section Detail,

1. Open the **Section Details** tab at the data page for the relevant Section.
2. In the row containing the Section Detail to be deleted, activate the red "X" in the first column by double-clicking:

The screenshot shows the "Section Details" tab of a data page. At the top, there are tabs for "General Info.", "Section Details", "Condition Trend", "Inspection History", and "Attachments (0)". Below the tabs is a "+ Add new record" button. The main area contains a table with the following columns: Attachments, ID Number, Eq. Type, Eq. Make, Serial No., and Mod. The first row of the table has a red "X" icon in the first column, a pencil icon in the second, an image icon with "x 0" in the third, "9541" in the fourth, "Single Pole" in the fifth, "K-270-SPO" in the sixth, "0005-43258J" in the seventh, and "270" in the eighth. The red "X" icon is highlighted with a red box.

Attachments	ID Number	Eq. Type	Eq. Make	Serial No.	Mod
 	9541	Single Pole	K-270-SPO	0005-43258J	270

3. Activate **Yes** in the "Confirm Action" confirmation popup.

Generate Component-Section Reports

This topic shows how to locate, select, and generate Component-Section level reports.

There are two locations where you can generate reports:

1. At the main menu bar. The selection of reports listed here is divided into categories: Inventory, Condition Assessment, Functionality Assessment, and Work Planning
2. At the content area toolbar

The first documentation section below provides instructions for generating Section-level reports from the Section's content area toolbar. Reports generated here will be restricted in scope to the selected Component-Section.

The next documentation section after that one provides instructions for generating a report starting at the main menu.


Generate Component-Section Level Report

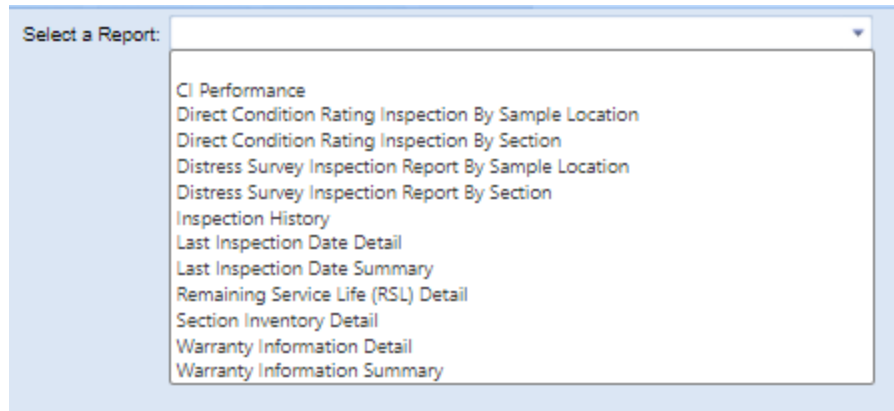
Scope of Report

When you generate a report while you are at the Component-Section level of the inventory tree, the report will contain data only for the currently selected Section.

How To Generate

To generate a report,

1. Activate the  **Reports** button on the content area toolbar. (The content area toolbar is directly above the ID line.) *The "Reports" popup will open.*
2. At the **Select a Report** field, activate the dropdown arrow. *The following selection of reports shown in the screenshot will be displayed.*



3. In the list, select a report (for example, "Remaining Service Life (RSL) Detail").
4. Activate 🖨️ **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
5. From the "Report Viewer" popup, you can choose to download or print the report.

Generate Report from Main Menu

Scope of Report

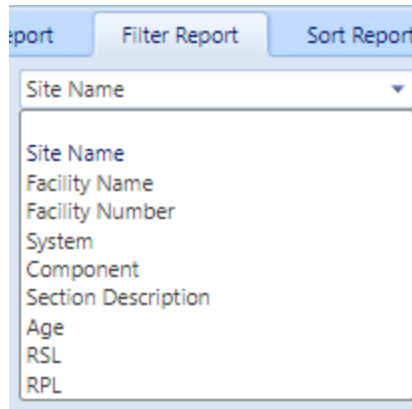
Reports are not made available at the Organization level. By default, unless you have used filters to further restrict what is included in the report, the scope of the report will be the Site, Building, System, Component, or Component-Section where you are located in the Inventory tree when you activate the **Reports** button.


How to Generate

To generate a report from the main menu,

1. Activate the **Reports** button at the main menu.
2. In the "Reports" popup, open the BUILDER entry by clicking on the plus button.
3. Next, open the desired category: Inventory, Condition Assessment, Functionality Assessment, or Work Planning. For this example, open Inventory.
4. In the expanded list of reports, scroll down to the desired report and click on it to select it.
5. Optionally, you can then select one or more filters at locations and inventory levels where the **Filter Report** option is active. For example, you can select the "Age" filter and direct the RSL report to show only items that are 10 years old or more.

This is the list of filters available for the RSL report at the Site level:



6. After setting any desired filters, and selecting a Sort order if desired, activate  **View Report** on the popup's toolbar. *The report will be displayed in a popup titled "Report Viewer."*
7. From the "Report Viewer" popup, you can choose to download or print the report.


Export Report

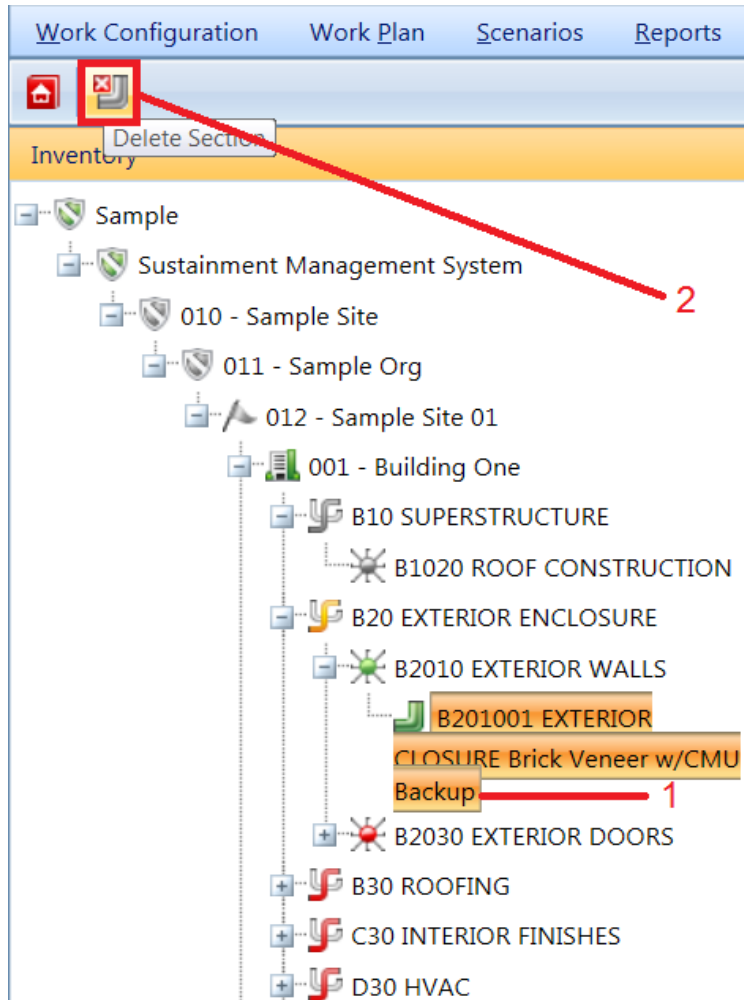
To export a report, see instructions at ["Export a Report" on page 258](#).

Delete a Component-Section

This topic describes how to delete a Component-Section from a Component .

To delete a Component-Section, navigate to it in the inventory tree and do *one* of the following:

- a. Right-click the Section, then select "Delete Section" from the options.
- b. Alternatively, select the Section, then activate the **Delete Section** icon  on the menu toolbar, as shown in steps 1 and 2 below.



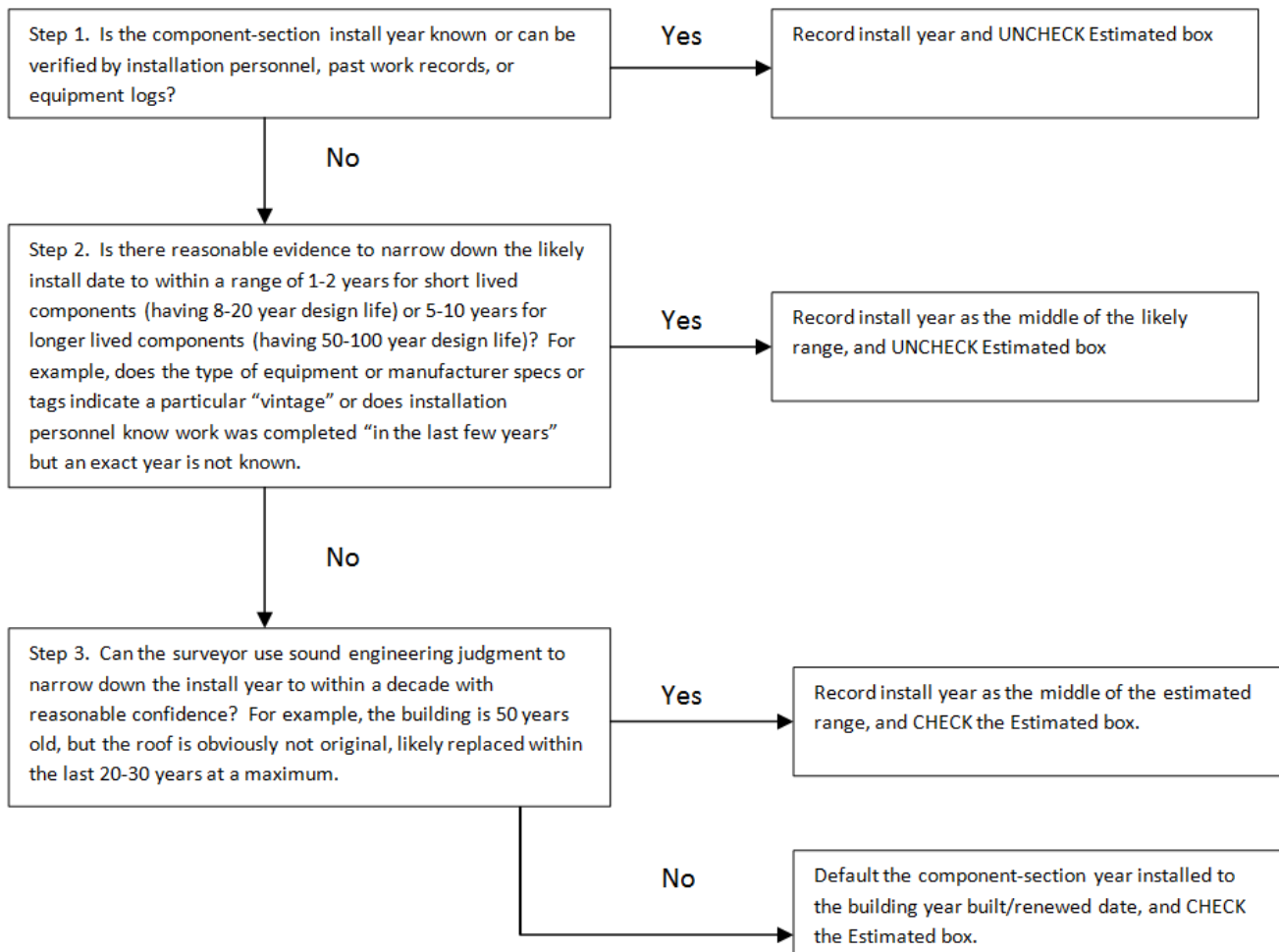
Note: This is a significant step to take and should only be done when you are certain that you wish to clear the Component-Section you have selected from the inventory in the Building.

Best Practice Recommendation: Making frequent backups of your inventory database will protect you from significant data losses if mistakes in deleting are made.

The Effect of the "Estimated" Checkbox for a Component-Section

When entering the inventory for a Component-Section in BUILDER, one of the primary data elements that gets recorded is the year that Component-Section was installed or constructed. This denotes the time that the Component-Section was put in service, and is used by BUILDER to determine the Component-Section age and its projected life-cycle condition. It is a fundamental data element in the determination of a component's condition index.

There are cases where the Component-Section install date is explicitly known, such as if the component is original to the Building, or if the component was replaced recently and work records exist. There are also many cases where obtaining the exact install year for a Component-Section is difficult. This may be the case, for example, if the Component-Section is very old but not original to the Building, and the year when it was installed or replaced is not known. In these situations, the surveyor collecting and entering the data for that Component-Section should enter a year installed that best reflects the observed age based on professional judgment, and the year estimated check box shall be checked in BUILDER to reflect that. As a guide to determine the year installed for a Component-Section, the following flow diagram should be considered.

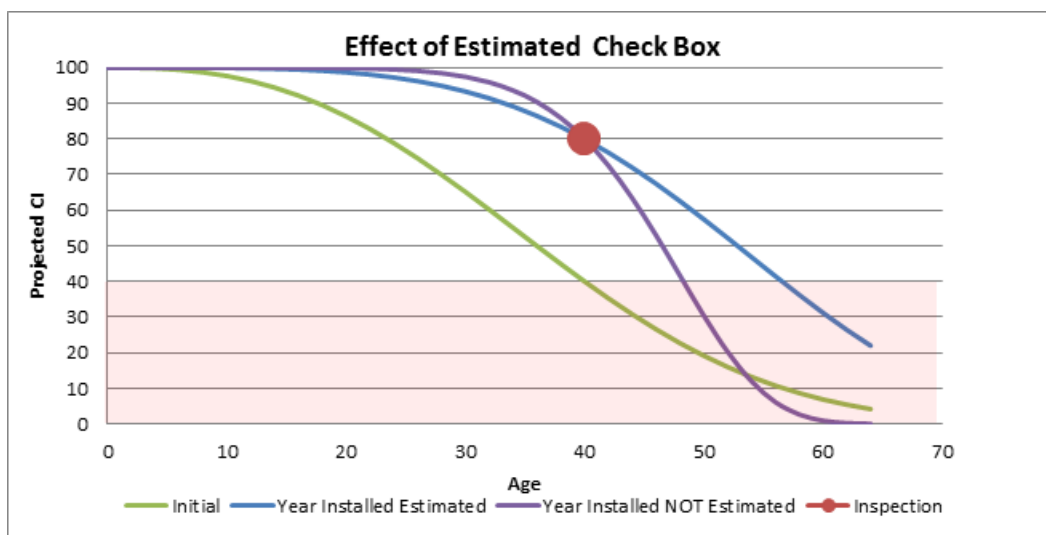


If a Component-Section's install year is estimated, as denoted by the check box, BUILDER will factor that into account when projecting the current condition index. The condition index reflects the expected condition state, based on life cycle

information such as its age in relation to its expected service life, as well as inspection based observations against that component. When no inspection are recorded against the Component-Section, the projection of current Component-Section CI (CSCI) is solely based on age of the component calculated from the year installed value, whether it is estimated or not. However, if an inspection is performed, the expected value gets adjusted based on the condition based observations that are observed.

Basically, what BUILDER is doing is reconciling any differences between the expected CI based on age, and the observed condition at a point in time based on the inspection. If the expected age based CI projection and observation-based inspected CI are not significantly different, the adjustments to the projected CI curve over time are relatively minor and the projected CI tends to be close to the last inspected CI in the time frame immediately after that inspection.

However, if the difference between the age-based expected CI and observation based inspected CI are drastically different, as may be the case where a component receives a high condition rating when its age is past its expected service life, the adjustment will be more significant. In these situations, BUILDER has to determine whether to place more emphasis on the age of the component, or the observed condition. If the estimated year installed box is checked, BUILDER places less emphasis on the age-based CI, and the latest observation-based inspected CI controls the projected CI calculation. If the year installed check box is not checked, we have a higher confidence in the age of the Component-Section, and the age-based CI projection has more emphasis on the current CI calculation, limiting the amount that the expected service life is allowed to be adjusted.



Remote Inspection and Inventory Entry Using BuilderRED

This topic

- Introduces the BUILDER Remote Entry Database (BuilderRED) tool.
 - Provides the download location.
 - Explains briefly what the tool can do.
 - Links to topics giving detailed instructions for exporting to and importing from BuilderRED.
-

What is BuilderRED?

The BUILDER™ Remote Entry Database (BuilderRED, or BRED) is an optional tool designed for use with BUILDER. It allows you to (1) capture and collect inventory and inspection data using a Windows tablet or laptop as you walk through a Building, and then (2) later, load that data into the BUILDER database. The inspection data collected can be either for condition assessment or for functionality assessment.

You can download BRED from the SMS community user's group website at <https://support.sms.erd.c.dren.mil/downloads/bred-versions>.

Collecting Inventory Data

When performing inventory, Buildings and their subparts can be created in BuilderRED, then imported into BUILDER. If the Buildings have already been created in BUILDER, they can be exported to BuilderRED, where inventory details can be entered on-site, then imported back into BUILDER.

Performing Inspections

Inspectors can use BuilderRED to enter condition assessment data in BUILDER format and then import it into BUILDER. Standard functionality assessments are also built into BuilderRED. These assessments can be initiated and filled out in the field, then imported into BUILDER.

Export Data to BuilderRED

You can choose to export database items to BuilderRED (aka BRED) either (a) with or (b) without the images that are linked to these items.

Below are some recommendations for best practices to follow to help ensure successful and less time-consuming export of files to BuilderRED:

Best Practice Recommendation #1: Be sure to observe the 30-day [time limit on editing inspections](#) and re-importing them into BUILDER, or the time limit in effect for your implementation of BUILDER if it differs from 30 days.

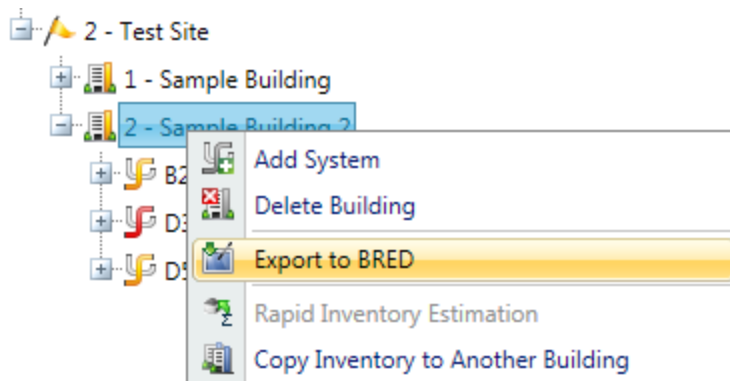
Best Practice Recommendation #2: Some Facilities (Buildings) within your Site can already contain several hundred photos. If you know beforehand that you will not need to view or edit these existing photos in BuilderRED, the best practice is to just download the BRED file without images.

Best Practice Recommendation #3: 800 pixels is the recommended maximum width and maximum height for images to be used in BuilderRED.

The next section describes how to export both database information and images to BuilderRED. For instructions on exporting database information without images, see [Export Database Information Alone to BuilderRED](#).

Export Database Information and Images to BuilderRED

1. In the BUILDER navigation tree, right-click the lowest level node (Site, Complex, or Building) that contains the items you wish to export.
2. Select the "Export to BRED" option:

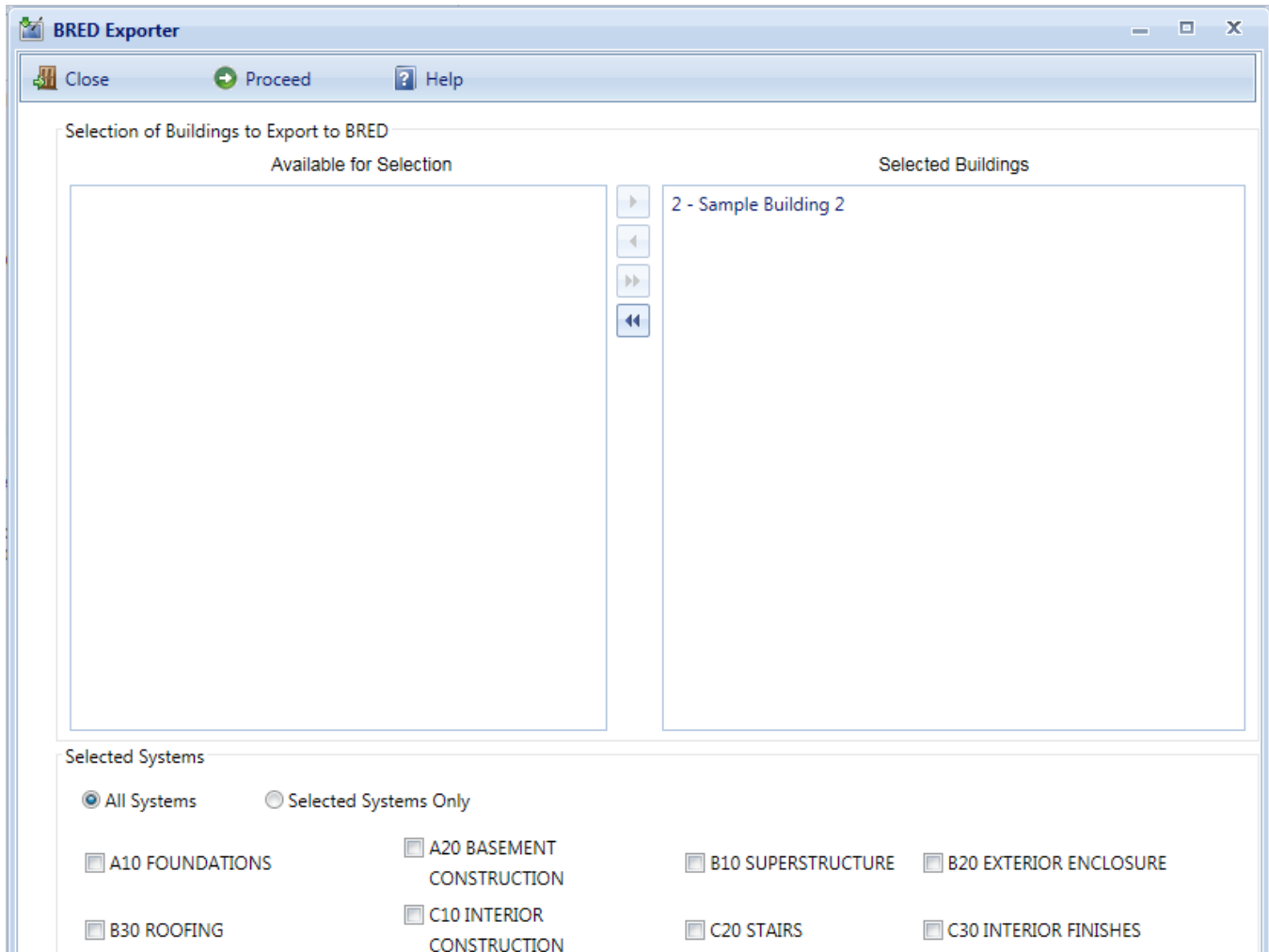


3. In the "BRED Exporter" popup window, highlight the Building(s) you want to export, using the arrows to move Buildings in or out of the Selected Buildings list. Click the arrow box (in the online documentation) or consult the footnote

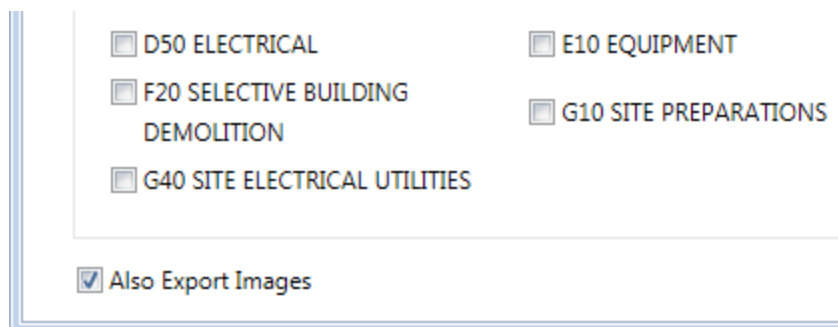
table (in PDF user documentation) to see different ways you can select Buildings.¹

1

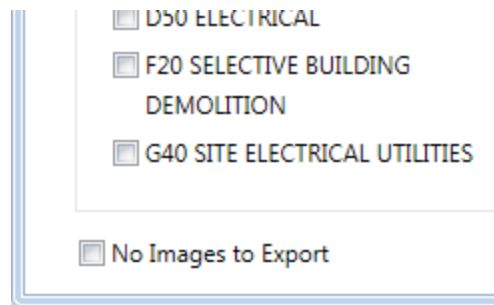
All Buildings:	Activate the double arrow.
One Building:	<ol style="list-style-type: none"> 1. Select the Building. 2. Activate the single arrow.
Multiple Buildings, contiguous in the list:	<ol style="list-style-type: none"> 1. Select the first Building. 2. Press and hold SHIFT, then select the last Building. 3. Release SHIFT. 4. Activate the single arrow.
Multiple Buildings, not contiguous in the list:	<ol style="list-style-type: none"> 1. Select the first Building. 2. Press and hold CTRL, then select each subsequent Building desired. 3. Release CTRL. 4. Activate the single arrow.
To deselect a highlighted Building from the list:	<ol style="list-style-type: none"> a. Press and hold CTRL, then select the Building. b. Alternatively, you can wait until the Building has been moved to the right-hand column under "Selected Buildings", then select the Building, and activate the single arrow pointing to the left. This will move the Building back into the "Available for Selection" column.



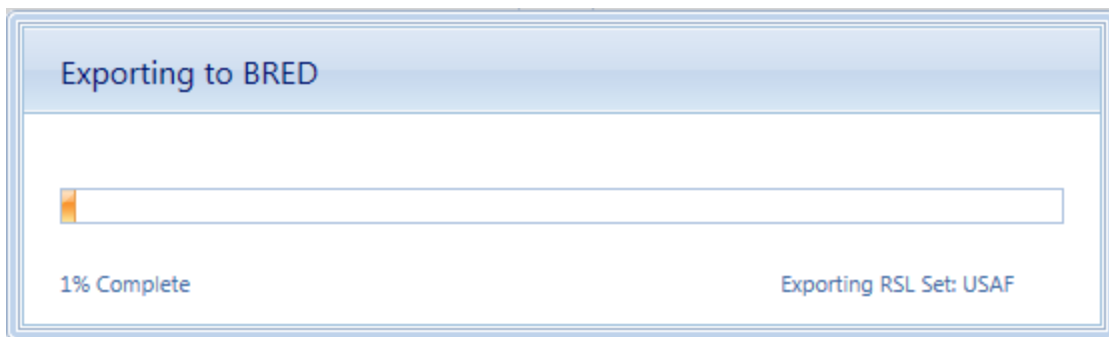
4. Once the desired Buildings are in the Selected Buildings column, do one of the following in the lower section of the "BRED Exporter" window:
 - a. Choose "All Systems" (radio button; this is the default), or
 - b. Select specific systems (using radio button and checkboxes).
5. (Optional) In order to download images with the BRED file, you must select "Also Export Images" at the bottom of BRED Exporter Window, as shown below:



Note: If instead of “Also Export Images” you see “No Images to Export” it means that the Building(s) you have selected to export do(es) not currently have any images:



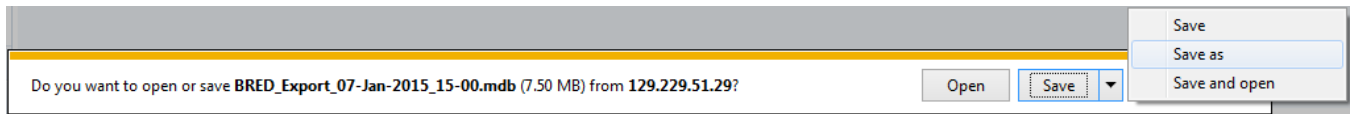
6. To start the export, click the **Proceed** button near the top of the window. A progress bar will display as the BRED database file is downloaded:



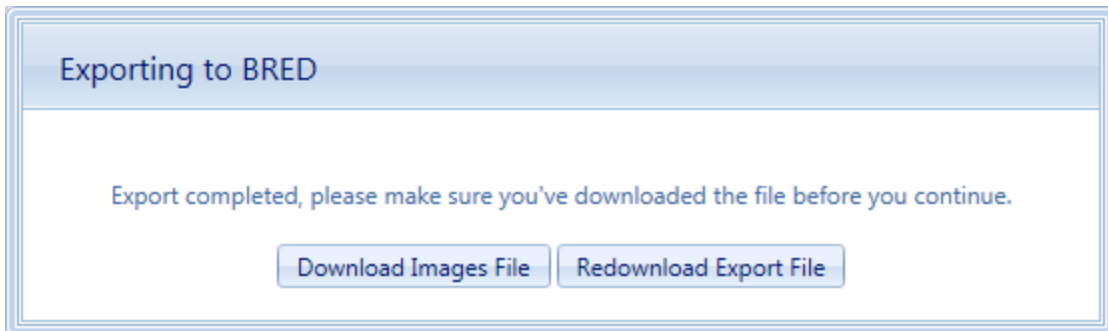
By clicking the **Proceed** button, the following tasks area accomplished:

- A Microsoft Access database is created, which will be identified by the path and name you choose after the export has completed. The database will contain the inventory and condition assessment data for the selected Systems in the Buildings in the Selected Buildings list. This database is accessible to a computer with the BRED software, where inventory and/or condition assessment data can be recorded. Once complete, this file can be imported into BUILDER to add the new data is added to the database.
- The Building inventory records of the selected Systems that were exported are locked so changes cannot be made to them in BUILDER while being edited with BRED. The records are unlocked when the BRED data is imported back into the database.

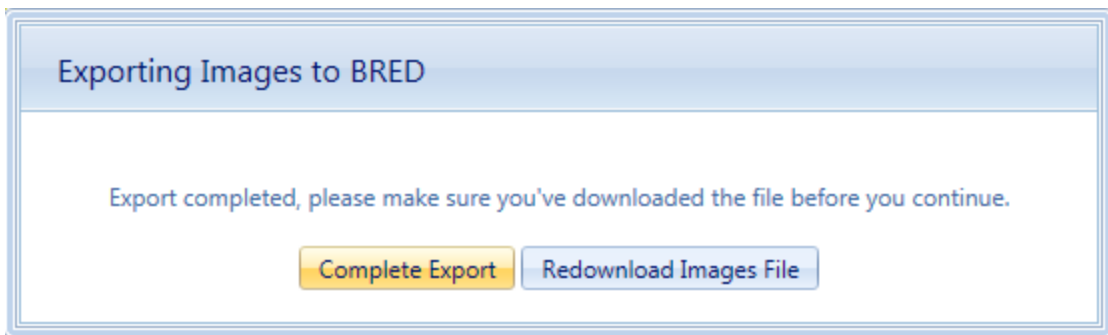
7. After the database file has successfully downloaded, select the “Save As” option to choose a file location for it:



8. If the BRED file did not download correctly, select “Redownload Export File.” Otherwise, select “Download Images File” to start the second download (the download of the images file into BRED):



9. After the second download completes, click “Save As” and choose the **same file location** as your BRED database file.
10. Lastly, select “Complete Export” to finish the export process:

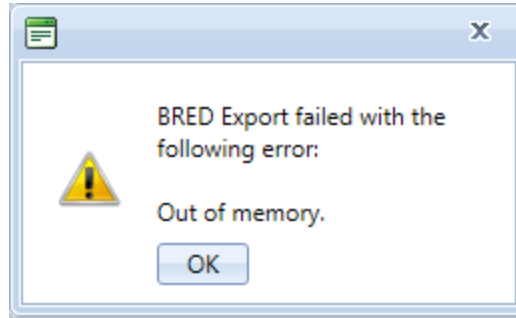


Time Limit on Editing Inspections

Once the export is complete, you can use BuilderRED to collect Inventory data or perform Inspections.

Note: It is a common standard to have a 30-day time limit from the date of an Inspection to edit the Inspection or the comments in it. This time limit applies both in BuilderRED and after the data has been imported back into BUILDER.

Known Issue with Image Export from Builder



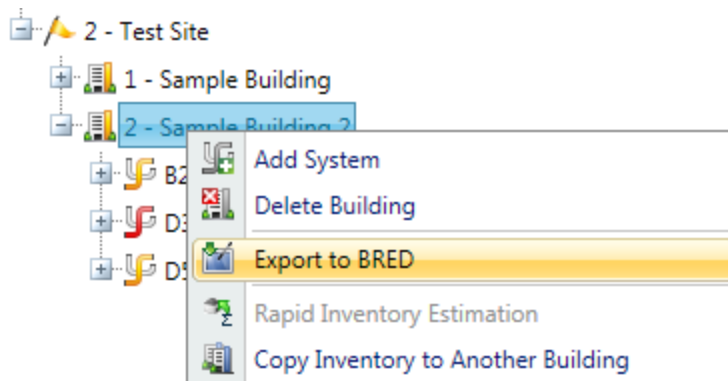
This issue applies to versions of BUILDER 3.3.9 and older.

If the BRED Export error message shown above displays after you try to download the image file from BUILDER, that indicates that somewhere in the exported files there is an attachment (such as a PDF, an Excel file, etc.) that is not an image. The workaround is to export the Building(s) without images.

Export Database Information Alone to BuilderRED

This section outlines the procedure to export data from BUILDER to BuilderRED without any of the associated image files.

1. In the BUILDER navigation tree, right-click the lowest level node (Site, Complex, or Building) that contains the items you wish to export.
2. Select the "Export to BRED" option:

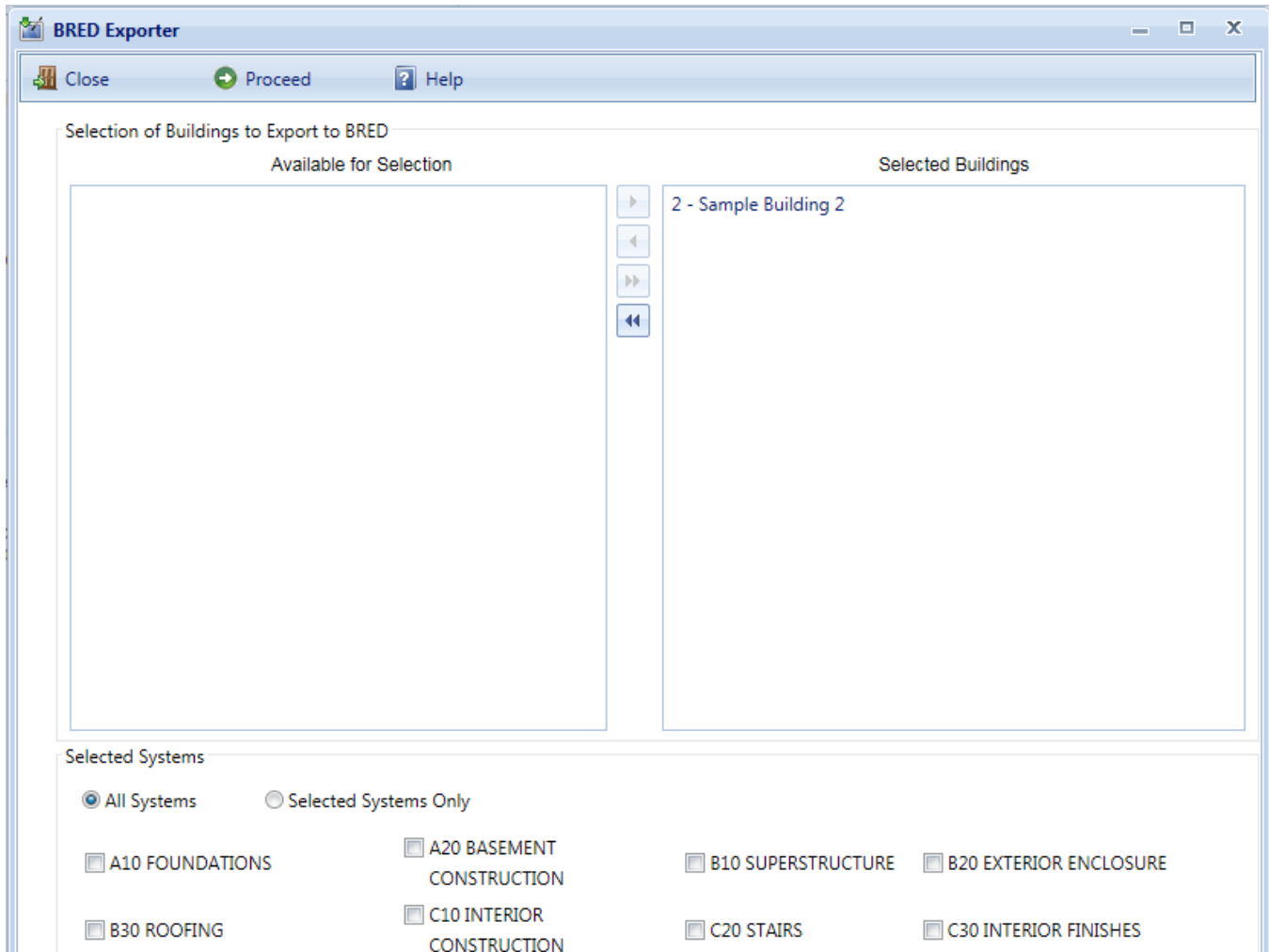


3. In the "BRED Exporter" popup window, highlight the Building(s) you want to export, using the arrows to move Buildings in or out of the Selected Buildings list. Click the arrow box (in the online documentation) or consult the footnote

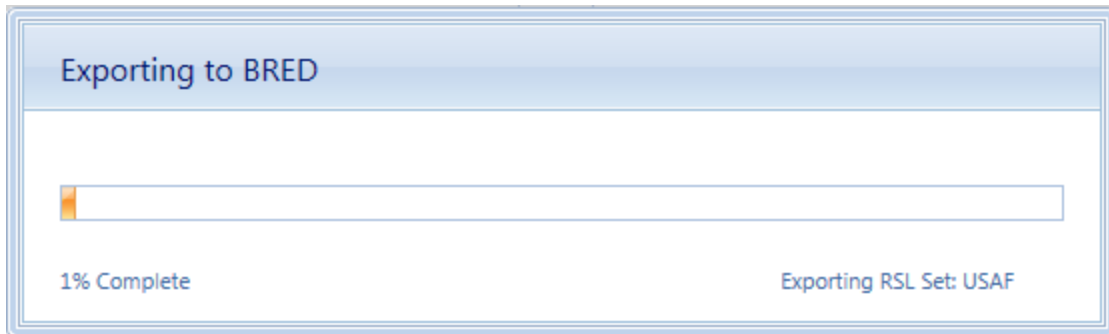
table (in PDF user documentation) to see different ways you can select Buildings.¹

1

All Buildings:	Activate the double arrow.
One Building:	<ol style="list-style-type: none"> 1. Select the Building. 2. Activate the single arrow.
Multiple Buildings, contiguous in the list:	<ol style="list-style-type: none"> 1. Select the first Building. 2. Press and hold SHIFT, then select the last Building. 3. Release SHIFT. 4. Activate the single arrow.
Multiple Buildings, not contiguous in the list:	<ol style="list-style-type: none"> 1. Select the first Building. 2. Press and hold CTRL, then select each subsequent Building desired. 3. Release CTRL. 4. Activate the single arrow.
To deselect a highlighted Building from the list:	<ol style="list-style-type: none"> a. Press and hold CTRL, then select the Building. b. Alternatively, you can wait until the Building has been moved to the right-hand column under "Selected Buildings", then select the Building, and activate the single arrow pointing to the left. This will move the Building back into the "Available for Selection" column.

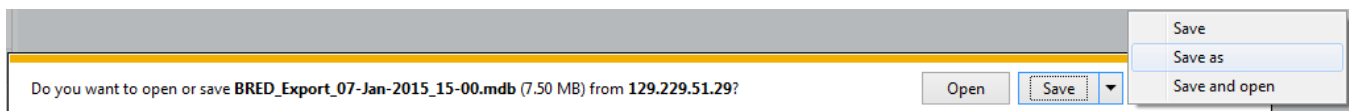


4. Once the desired Buildings are in the Selected Buildings column, do one of the following in the lower section of the "BRED Exporter" window:
 - a. Choose "All Systems" (radio button; this is the default), or
 - b. Select specific systems (using radio button and checkboxes).
5. In order to download the BRED file without downloading the associated images, make sure that the **Also Export Images** checkbox at the bottom of the BRED Exporter Window is *not* checked.
6. To start the export, click the **Proceed** button near the top of the window. *A progress bar will display as the BRED database file is downloaded:*

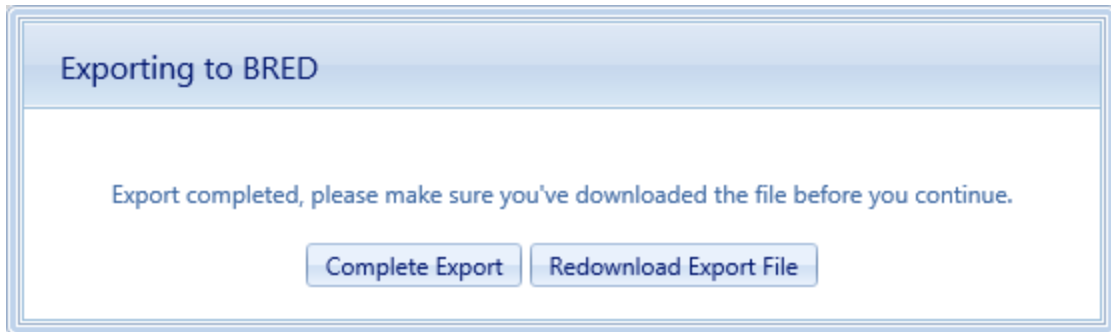


By clicking the **Proceed** button, the following tasks area accomplished:

- A Microsoft Access database is created, which will be identified by the path and name you choose after the export has completed. The database will contain the inventory and condition assessment data for the selected Systems in the Buildings in the Selected Buildings list. This database is accessible to a computer with the BRED software, where inventory and/or condition assessment data can be recorded. Once complete, this file can be imported into BUILDER to add the new data is added to the database.
 - The Building inventory records of the selected Systems that were exported are locked so changes cannot be made to them in BUILDER while being edited with BRED. The records are unlocked when the BRED data is imported back into the database.
7. After the database file has successfully downloaded, select the “Save As” option to choose a file location for it:



8. If the BRED file did not download correctly, select “Redownload Export File.” Otherwise, select “Complete Export” to finish the export process:



Time Limit on Editing Inspections

Once the export is complete, you can use BuilderRED to collect Inventory data or perform Inspections.

Note: It is a common standard to have a 30-day time limit from the date of an Inspection to edit the Inspection or the comments in it. This time limit applies both in BuilderRED and after the data has been imported back into BUILDER.

Unlock Inventory Files

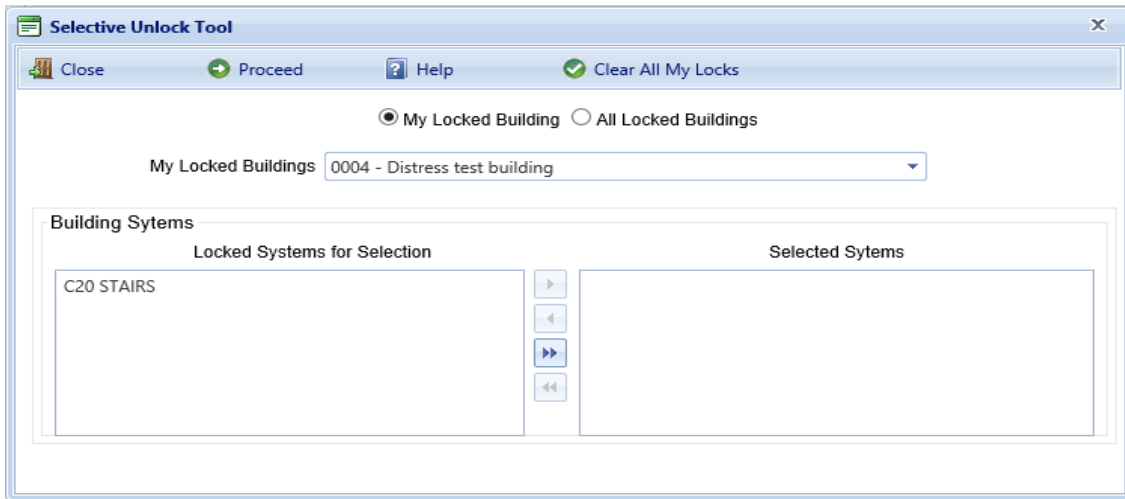
When an inventory file is exported to BuilderRED, it is locked in BUILDER. If you need to unlock your or another user's file, use the tool provided from the main menu bar at **Tools > Unlock My Buildings**. This topic explains how.

Unlock File(s) Locked by You

Unlock All Files You Locked

To unlock all of your locked files in a given Building,

1. At the main menu, navigate to **Tools > Unlock My Buildings**. (Location in the navigation tree doesn't matter.) *The "Selective Unlock Tool" popup window will appear.*



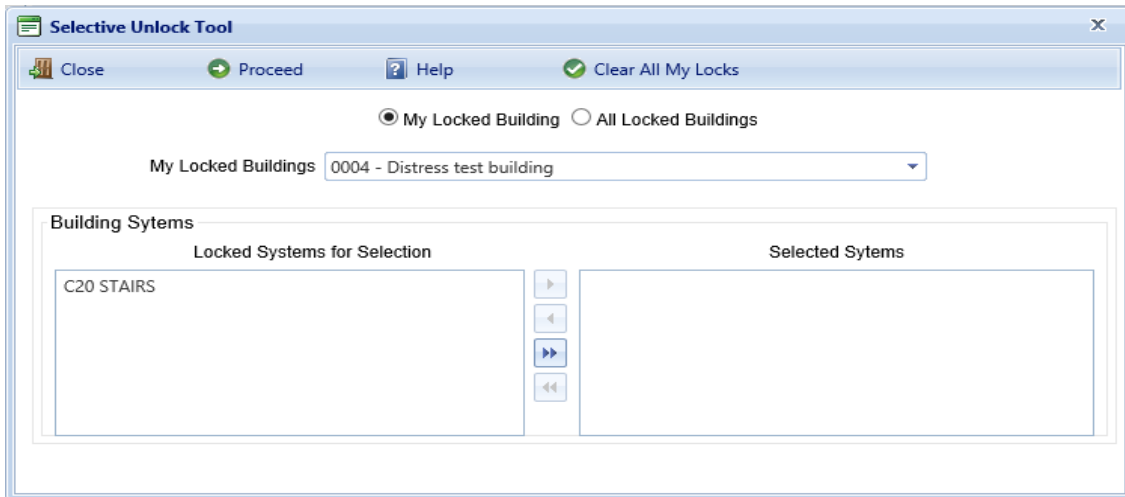
2. In the popup window, make sure the **My Locked Building** radio button is selected.
3. Select the desired Building from the dropdown list in the **My Locked Buildings** field. *The locked Systems in that Building will appear under **Locked Systems for Selection**.*
4. Activate **Clear All My Locks** on the toolbar.

After the procedure is finished, you should see a message "System locks have been cleared" at the lower left of the popup window. Alternatively, there may be a message such as "Current user does not have any locked buildings or systems."

Unlock Selected File(s) You Locked

Files are unlocked System by System. To unlock one or more selected files that you locked,

1. At the main menu, navigate to **Tools > Unlock My Buildings**. (Location in the navigation tree doesn't matter.) *The "Selective Unlock Tool" popup window will appear.*



2. In the popup window, make sure the **My Locked Building** radio button is selected.
3. Select the desired Building from the dropdown list in the **My Locked Buildings** field. *The locked Systems in that Building will appear under **Locked Systems for Selection**.*
4. In the **Locked Systems for Selection** column, select the desired System(s) and use the right arrow button to move it or them to the **Selected Systems** column. The double right arrow button will move all Systems shown to the **Selected Systems** column.
5. Activate **Proceed** on the toolbar.

After the procedure is finished, you should see a message "System locks have been cleared" at the lower left of the popup window. Alternatively, there may be a message such as "Current user does not have any locked buildings or systems."

To unlock files locked by others, see ["Unlock Files Locked by Other Users" below](#).

Unlock Files Locked by Other Users

Unlock All Files Locked by Other Users

To unlock all files locked by other users, follow the instructions under "Unlock All Files You Locked" above, but select the radio button **All Locked Buildings** instead of **My Locked Building**.

Unlock Selected File(s) Locked by Other Users

To unlock one or more selected files locked by other users, follow the instructions under "Unlock Selected File(s) You Locked" above, but select the radio button **All Locked Buildings** instead of **My Locked Building**.

Import Data from BuilderRED to BUILDER

Overview of the Import Process

In order to load data collected using BRED into the BUILDER database, you will need to import the database from BRED into BUILDER. It is important to note that the database file containing your new data must be loaded so that the BUILDER program has access to its path and can complete the importing process.

If you added new images during Inventory or Inspections, then importing your information back into BUILDER will be done in two steps: (1) importing the BRED database into BUILDER, and (2) importing the image archive file.

These two steps may be followed by an optional third step: (3) performing a manual condition rollup. This step is optional because the system performs automated rollups nightly.

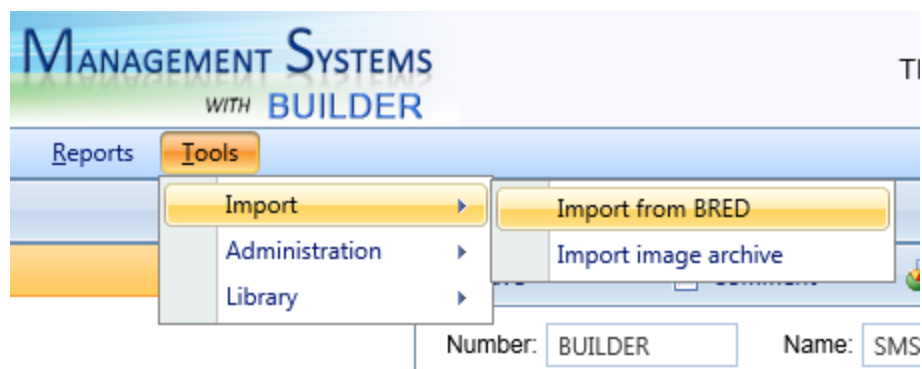
If you have no images to import, then you can go straight from importing the BRED database information into BUILDER to [performing a rollup](#).

How To Import Database Information

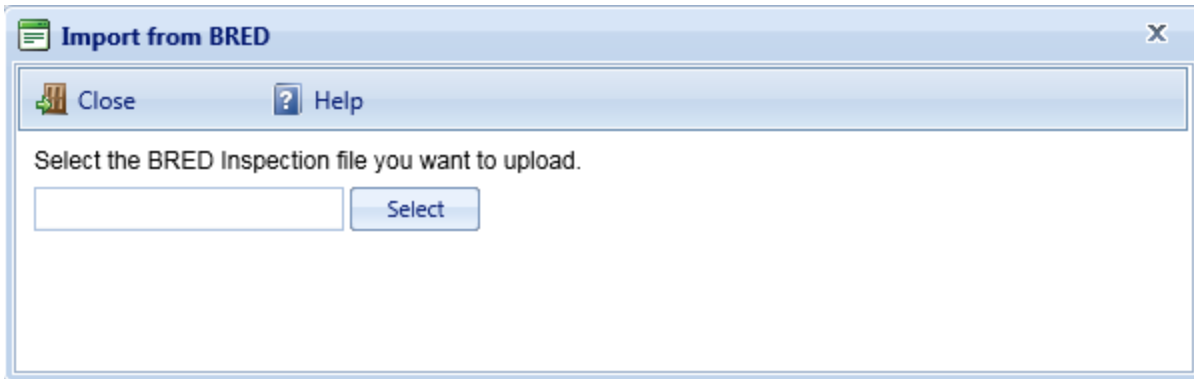
After you have finished adding, editing, and deleting Inventory and/or Inspections data, the updated database must be imported back into BUILDER, to assess the condition of the installation and to plan maintenance and repair.

To import database information into BUILDER from BuilderRED:

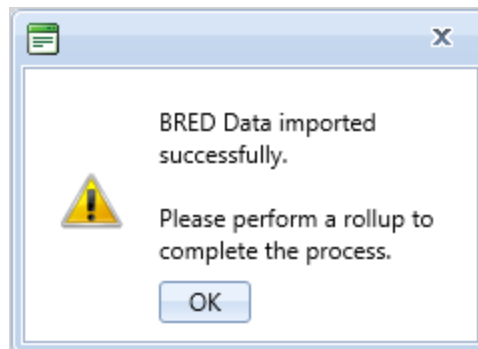
1. Save all changes to the database in BuilderRED.
2. Open BUILDER.
3. Select **Tools > Import > Import from BRED** starting at the main menu.



The "Import from BRED" popup window will appear:



4. Locate the database you wish to import, by either (a) entering the full path and file name in the text box or (b) clicking the **Select** button, navigating to the database file, and selecting it.
5. All changes to the database will be imported into BUILDER and you will see a popup window with the following message:



6. If you don't have any images to be imported into BUILDER, activate **OK**. You are finished with the import, and can [perform a rollup](#) if you wish.
7. **IMPORTANT:** If you have images to import from BuilderRED, it is recommended that you NOT click **OK** to perform a manual condition rollup at this point. Instead, close the popup box by activating the "x," then follow the instructions in the next section:

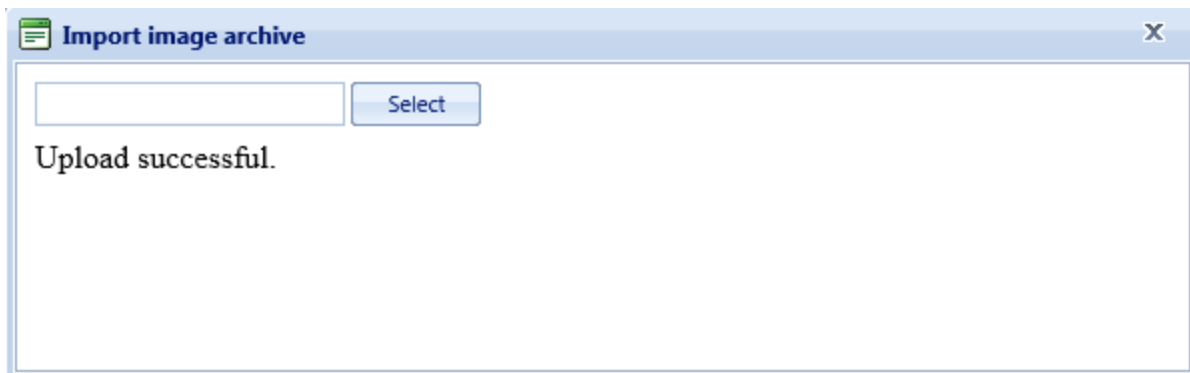
How To Import Images

The process of importing images makes use of an image archive file that has the extension `.bredpackage`. By default, the image archive file has the same name as the `.mdb` BRED data file containing the imported data, except for the extension.

WARNING: It is very important that the name of the image archive file match the name of the `.mdb` data file. If you rename one of these files, be sure to rename the other one identically (except for the extension). Images will not be found by the BRED (`.mdb`) file if the `.bredpackage` file name doesn't match.

To import images into BUILDER from BuilderRED:

1. If you have new images that need to be imported from BRED, this procedure needs to be done *after* importing the database information (see section above).
2. Select **Tools > Import > Import image archive** starting at the main menu. (*The "Import image archive" popup window will appear.*)
3. Locate the image ("bredpackage") file corresponding to the database you just imported, by either (a) entering the full path and file name in the text box or (b) clicking **Select**, navigating to the database file, and selecting it. The image archive will be in the same location as the database file, and similarly named except that the extension is .bredpackage instead of .mdb.
4. When you see the message "Upload successful," close the "Import image archive" window. Follow with a manual condition rollup as warranted (see next section).



Should I Perform a Rollup after Import?

The items you import from BuilderRED are unlocked as soon as the import is complete, whether you do a manual condition rollup or not. However, the condition and Functionality Indexes will not yet have been updated.

If you only performed inventory with BuilderRED, you need to do a rollup only if

- one or more cost books or other reference books have changed, or
- you wish to see updated PRVs or RSLs immediately instead of waiting on BUILDER's automated rollup (performed overnight)

If you entered inspection data in BuilderRED, performing a rollup after the import is completed allows you to see the changes in the following indexes right away:

- condition indexes
- functionality indexes

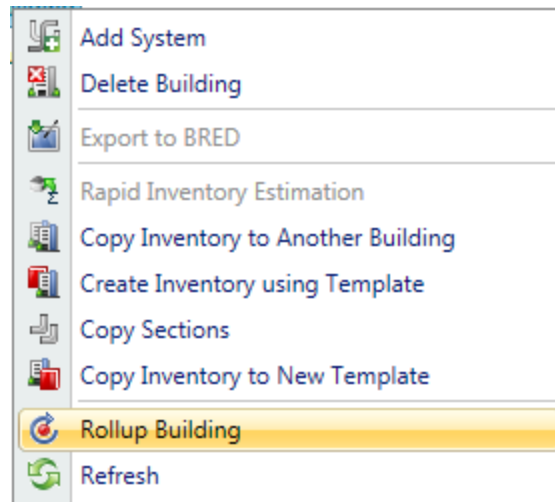
- performance indexes


If you do not perform a rollup at this time, the SMS will do the rollup automatically overnight, and the updated index figures will be available the next day.

How To Perform a Manual Rollup after Importing from BuilderRED

To perform a manual rollup, do one of the following:

- a. Right-click on the affected Building (or Complex, if multiple Buildings were exported from the same Complex). Then select **Rollup Building** or **Rollup Complex**.



- b. Alternatively, select the Building (or Complex, if multiple Buildings were exported from the same Complex) and click the Rollup icon  on the toolbar.




You have the option to roll up the entire Site in similar fashion, but be aware that a Site rollup can take an extremely long time. It would typically be less time consuming to sequentially select the applicable Complexes and Buildings for manual rollup.

Working with Rapid Inventory Methods

This topic gives an overview of three ways that the BUILDER inventory creation process can be made faster. These methods depend on a level of similarity between Sections or Buildings.

Note: A previously available method, Embedded Building Models, has been discontinued.

One of the most time-consuming aspects of inventory is the decomposition of a Building into its Systems, Components, and Sections. To help with this Building decomposition, BUILDER™ has multiple alternative methods designed to help you quickly establish an inventory database for your Buildings. The main toolbar icon for each is shown in the listing below.

1.  Copy the inventory of one Building into another Building ("Copy Inventory to Another Building")
2.  Copy Sections using the Copy Sections tool (within the same Building only).
3.  Create and use Building templates

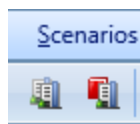
Method Availability

Site and Complex Level

At the Site and Complex level, these methods are available:

- Copy the inventory of one Building into another Building
- Create and use Building templates

The icons for these methods sit side by side on the BUILDER toolbar at the inventory levels where they are available for use.



Building Level

At the Building level, the Copy Sections tool also becomes available:



List of Rapid Inventory Methods

Method 1: Copy the Inventory of One Building into Another

One method that can ease the data input process is to copy the existing inventory of one Building into another Building. This provides a starter set of Systems, Components, and Sections that can then be refined, instead of all entered from scratch. The amount of refinement needed will depend on the amount of similarity between the structures.

This inventory creation method is especially useful if you have a number of Buildings in your inventory that were all built at the same time using the same plans and specifications.

Tip: If you have more than two or three Buildings or facilities that are very similar to each other, you should consider creating a Building template instead of copying from another Building. If one of the applicable Buildings is already created and populated, it can be used to create that template.

For instructions on copying inventory from another Building, see ["Copy Inventory to Another Building" on the next page](#).

Method 2: Copy Sections

Within a Building, the process of adding inventory can be accelerated by using the Copy Sections tool, which allows you to copy pre-existing Sections from one area of a Building to another area of the same Building. An example of when to use this tool is in a multistory building with similar or identical inventory on multiple floors. The first floor can be inventoried and then copied to other floors, saving time and reducing inventory costs.

For instructions, see ["Copy Sections" on page 218](#).

Method 3: Create and Use Building Templates

Building templates are "cookie cutter" models that can be used to create Buildings with identical features. These template-generated Buildings can be used to get your inventory task off to a fast start, because their contents only need editing and adapting instead of each inventory item and sub-item being entered from scratch.

For an overview and a jumping-off location for instructions, see ["Working with Building Templates" on page 221](#).

Copy Inventory to Another Building

BUILDER has been designed to help you quickly establish an inventory database for your Buildings. One of the most time-consuming aspects is the decomposition of a Building into its Systems, Components, and Sections. One method that eases the data input process is copying a Building's inventory from one Building (the source Building) to another (the target Building). This feature is very useful if you have a number of Buildings in your inventory that were all built at the same time using the same plans and specifications.


Follow the steps below to copy Building inventory.

Prepare the Source Building

Before you can copy a Building's inventory from one Building to another, you must first [create the source Building](#) and complete its inventory as fully as possible, including all of the related Building data.

Activate "Copy Inventory to Another Building"

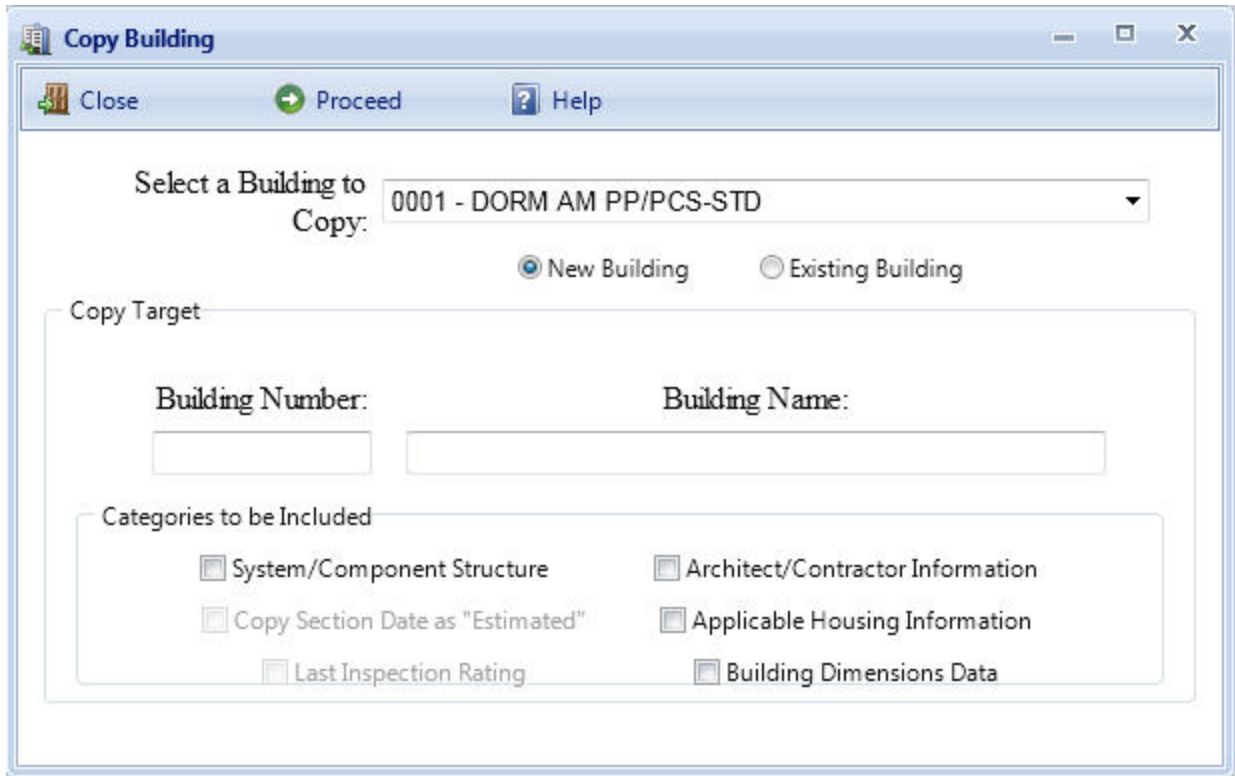
Once the source Building has been created, navigate to it in the inventory tree and do one of the following:

- a. Right-click on the source Building in the inventory tree. Then select "Copy Inventory to Another Building" from the options.
- b. Alternatively, select the source Building in the inventory tree. Then activate the  **Copy Inventory to Another Building** icon on the toolbar.

The "Copy Building" popup window will appear. The number and/or name of the source Building whose inventory you wish to copy, should appear in the "Select Building to Copy" dropdown list.

Enter Required Data

In the "Copy Building" popup, enter the data listed below.





1. Just above the "Copy Target" area of the window, use the radio buttons to select whether you want to copy that Building's inventory to a New Building or into an Existing Building:
 - a. If you select a **New Building**, you must supply Building Number and Building Name in the "Copy Target" area of the window. Building summary information such as year constructed will automatically be transferred into the new Building when you later activate **Proceed**.
 - b. If you select an **Existing Building**, a dropdown list of Buildings currently in the inventory will be provided. Do the following:
 1. From the list, select the Building you wish to copy the source Building's inventory to.
 2. If you wish to use the Inventory Summary Information (such as year constructed, number of floors) of the source Building into the target Building, mark the **Copy Inventory Summary Information** checkbox. Otherwise, leave the checkbox blank.
2. In the "Categories to be Included" area of the window, check all of the categories you wish to have copied to the target Building. The following record categories can be copied to the target Building:
 - **System/Component Structure**. Marking this checkbox will copy all of the Systems, Components, and Sections to the target Building.

- **Copy Section Date as "Estimated."** Marking this checkbox will mark all of the Section install dates in the target Building as estimated. This checkbox can only be marked if the **System/Component Structure** checkbox is marked.
- **Last Inspection Rating.** Marking this checkbox will copy the last condition assessment rating for each Section to the target Building. This checkbox can only be marked if the **System/Component Structure** checkbox is marked.
- **Architect/Contractor Information.** Marking this checkbox will copy all of the [architect and contractor information](#) to the target Building.
- **Building Dimension Data.** Marking this checkbox will copy all of the [dimension data](#) to the target Building.

Confirm or Cancel

Once the required data is entered, do one of the following:

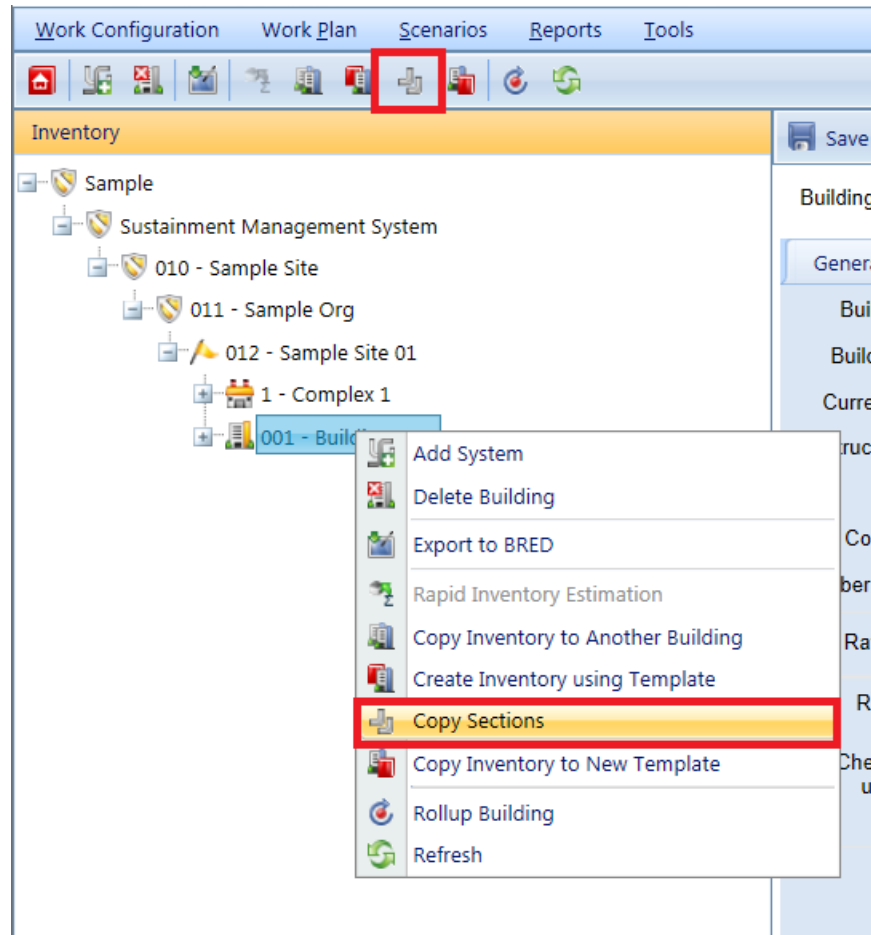
- a. Activate the  **Proceed** button on the popup window's toolbar to start the copy process. After the copy process is complete, you can edit any of the copied Building's records if adjustments are necessary.
- b. Alternatively, if you do not wish to copy the Building, activate the  **Close** button on the popup window's toolbar.

Copy Sections

BUILDER has been designed to help you quickly establish an inventory database for your Buildings. One of the most time-consuming aspects is the decomposition of a Building into its Systems, Components, and Sections. One method that eases the data input process is the Copy Sections tool, which allows you to copy pre-existing Sections from one area of a Building to another area of the same Building. An example of when to use this tool is in a multistory building with similar or identical inventory on multiple floors. The first floor can be inventoried and then copied to other floors, saving time and reducing inventory costs.

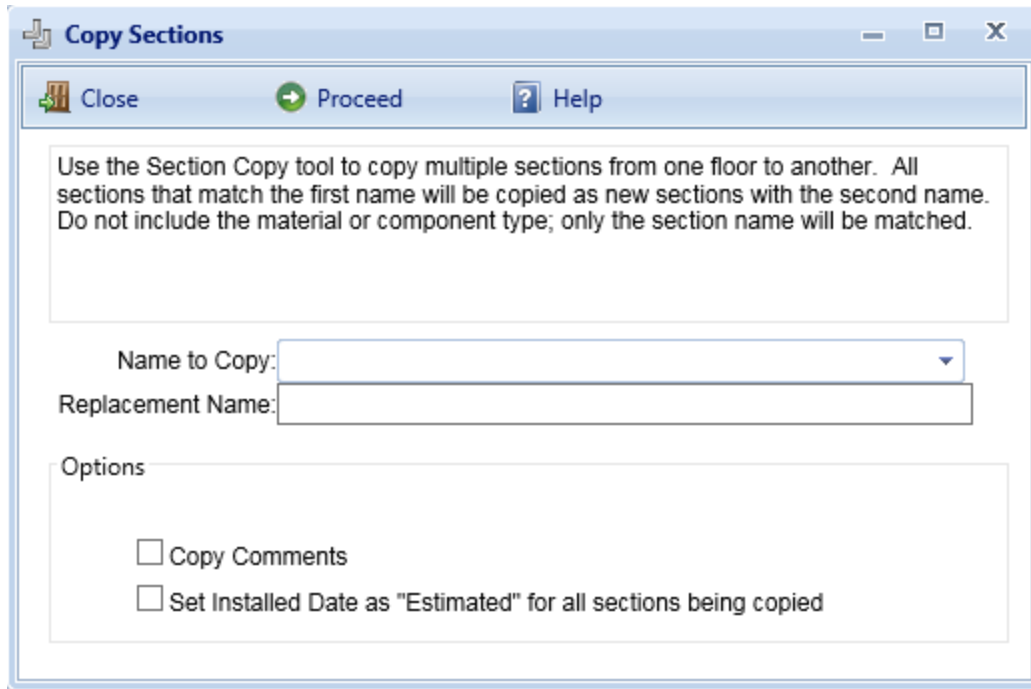
To use the Copy Sections tool,

1. Navigate in the inventory tree to Building into which you wish to copy the Section, then do one of the following:
 - a. Right-click the Building. Then select "Copy Sections" from the options. (This is illustrated in the lower half of the screen shot below).



- b. Alternatively, select the Building, then activate the **Copy Sections** icon in the toolbar as shown above.

After your selection, the "Copy Sections" popup window will appear.



2. In the "Copy Sections" window, enter the following data:
 - **Name to Copy** (Required). Choose the existing Section name to copy from the dropdown list. All Sections that match the selected name will be copied as new Sections.
 - **Replacement Name** (Required). Enter the replacement name for the copied Sections. The replacement name will appear as the Section name for the copied Sections.
 - **Copy Comment** (Optional). Mark the **Copy Comments** checkbox if you wish to copy the comments associated with the copied Sections and associate them with the replacement Sections also.
 - **Set Installed Date as "Estimated" for all Sections being copied** (Optional). Mark this checkbox if you want all of the replacement Sections' year installed to be marked as estimated.
3. After all of the data has been entered, activate the **Proceed** button in the popup window toolbar to copy the Sections. The copied Sections will be added to the database and appear on the inventory tree. Alternatively, if you do not wish to copy the Sections, activate the **Cancel** button instead.

Building Templates

Building Templates are explained in detail in the next section, starting with ["Working with Building Templates" on the facing page](#).

Working with Building Templates

Building templates are one of BUILDER's methods for speeding up the process of initial inventory. They provide a convenient way to rapidly create Building inventory when:

- You have multiple Buildings with the same design and composition; or
- An existing template can be obtained that is similar to the Building you wish to create and populate with inventory.

A template stores the basic data about a generic Building that can be used to create many Buildings at one time using an automated process that copies the structure of the template to each desired Building.

Recommendation: The template feature is designed to be used as an initial step in the construction of your inventory database. However, in order to achieve the greatest benefit from using templates, you must be very familiar with BUILDER's approach to inventorying a Building. See ["Add a Building" on page 82](#) and ["About Identifying Systems, Components and Sections" on page 121](#) for important information regarding how Buildings and their template counterparts are structured in the database.

One of the most time-consuming aspects of inventory is the decomposition of a Building into its Systems, Components, and Sections. The Building Template feature is designed to ease the inventory development process in BUILDER.

If your physical inventory contains a number of Buildings that are essentially of the same design and composition, you can establish a template for that design to use as a "cookie cutter" and then apply an automated process with the template to create the matching Buildings in your BUILDER inventory with little additional effort. These matching Buildings can then be edited to reflect any individual features that differ from the template used to create them.

Additionally, due to the ability to import and export Building templates, you may be able to save time by either importing or finding in your template library an existing template that is similar to the Building you wish to create and populate with inventory.

What Is a Building Template?

A Building template looks very much like a Building in BUILDER. Every data element belonging to a template or one of its substructures has a corresponding data element in a Building. A template has general Building data such as use, size, and number of floors as well as a decomposition into Systems, Components, Sections (including Section Details). If the template is designated as family housing, then you may specify data about each dwelling unit regarding number of rooms and types and makes of appliances. A template does *not* contain data that is only known for each specific Building, such as its year of construction, its condition ratings, its costs, its location, etc.

Successful use of Building templates consists of three tasks:

1. Creating or importing a template;
2. Managing the template library; and
3. Using a template to create one or more new Buildings.

About Creating a Template

BUILDER offers multiple options for creating a template:

Option A: Import

You can [import templates](#) from another user's template library for use in your own library. This import capability is especially useful for military installations, which may have many Buildings constructed from a few standard service-wide designs.

For instructions, see ["Import Procedure" on page 232](#) under ["Import a Building Template" on page 231](#).

Option B: Use the Inventory of an Existing Building

Each Building in your inventory database is equipped with data elements comparable to those of a Building template. Therefore, you can use BUILDER's feature of copying a Building's inventory into a template to create a template quickly.

For instructions, see ["Copy Building Inventory to a Template" on page 234](#).

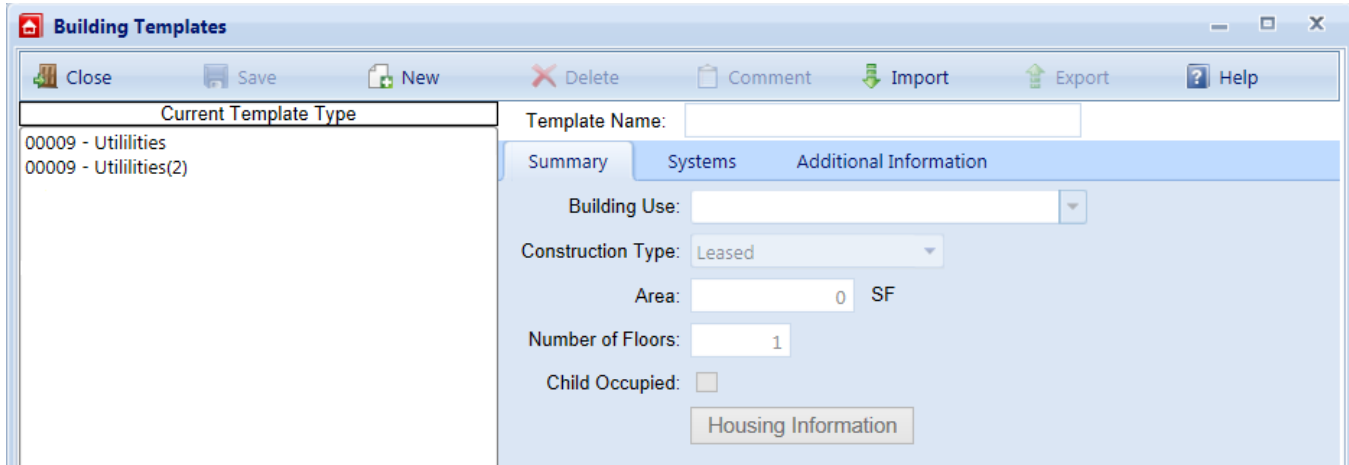
Option C: Enter Template Inventory

You can create a template by inputting each data element in much the same way that you create a Building.

For instructions, see ["Add a Building Template" on page 236](#).

About Managing the Template Library

The "Building Templates" window serves as a dashboard for most of the tasks you can do with respect to Building templates.



An exception is creating a template by [copying the inventory of an existing Building](#). This is done from the inventory tree.

Using the "Building Templates" window, you can add, edit, delete, import, or export a template. The topic titled ["Manage the Template Library" on page 252](#) gathers together in one place a collection of links to these tasks.

About Using a Template to Create Inventory

Once a template is established, a Building with the same design can be created in an automated fashion by copying the template data into the appropriate Building data elements. This process can save hours of manual input if you have multiple Buildings for which the template applies.

To learn how to use a template to create or expand the data either for one Building at a time, or for multiple Buildings at the same time, see ["Add Building Inventory Using a Template" on the next page](#).

You can also share your template with others using the feature ["Export a Building Template" on page 253](#).

Building Template Tasks

Building template tasks that can be performed are:

- [Add Building Inventory Using a Template](#)
- [Import a Building Template](#)

[Copy Building Inventory to a Template](#)

[Add a Building Template](#)

[Edit Building Template Data](#)

[Delete a Building Template](#)

[Manage the Template Library](#)

[Export a Building Template](#)

Add Building Inventory Using a Template

This topic describes how you can use an existing Building template to create new Buildings in your inventory. If there is no appropriately useful template in your template library, you can do one of the following:

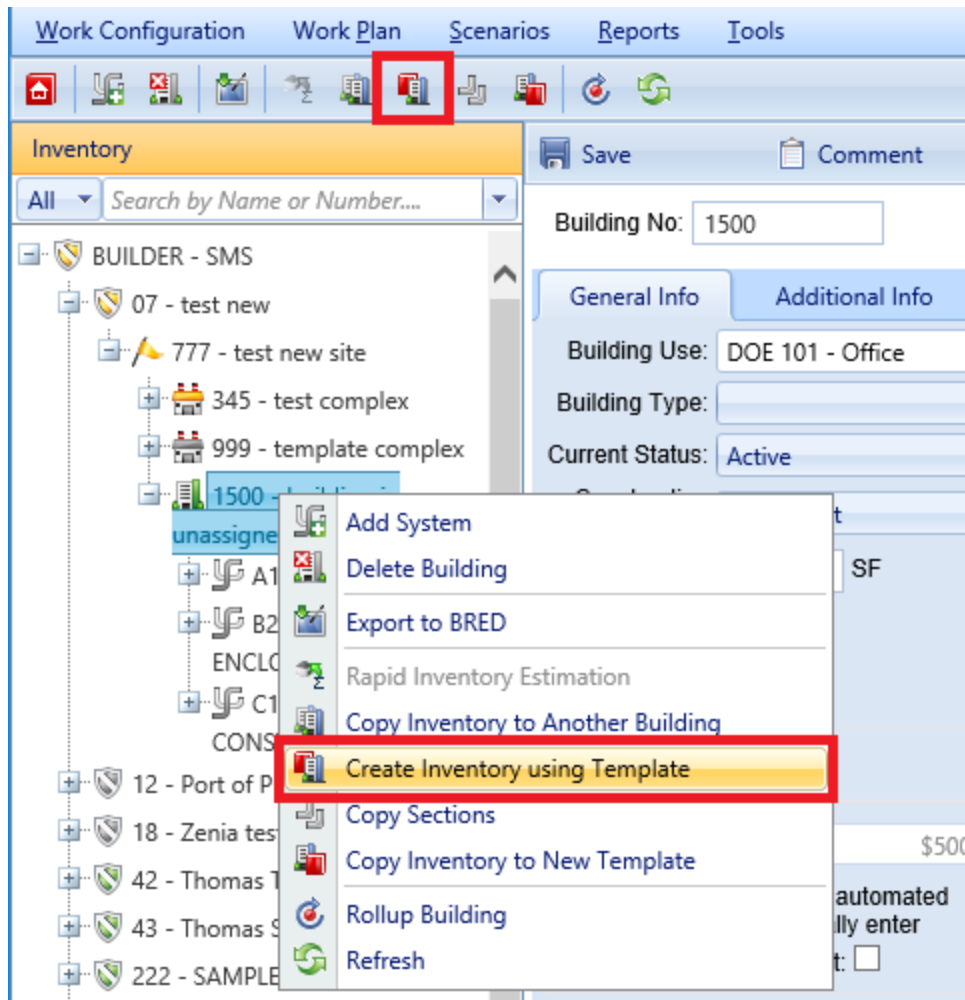
- Copy and [edit](#) an existing template
 - [Import a template](#)
 - [Create a new template from an existing Building](#), or
 - [Create a new template](#) "from scratch" and enter inventory into it.
-

Building templates provide a convenient method for rapidly creating your Building inventory when you have multiple Buildings with the same design and composition. A template stores the basic data about a generic Building and can be used to create many Buildings at one time using an automated process that copies the structure of the template to each desired Building. For more information about templates, see ["Working with Building Templates" on page 221](#).

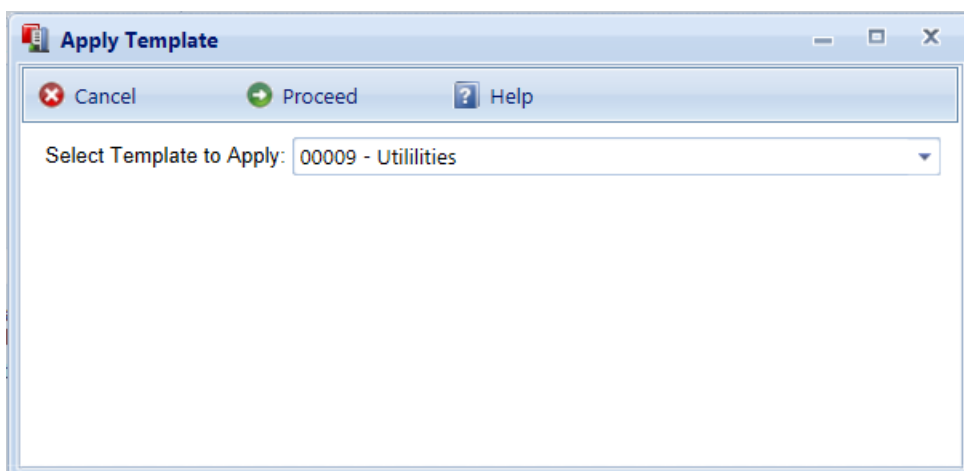
Add Building Template Inventory to One Existing Building

Once you have created a template, you can use it to create Building inventory. If you have an single existing Building and wish to expand its inventory using the template,

1. Select the Building in the inventory tree.
2. Take a look at the general information for the Building to make sure that the data for important properties such as Building Use, Area, and number of floors is correct.
3. If you still wish to expand its inventory using the template, do one of the following:
 - a. Right-click the Building whose inventory you wish to copy, and select the "Create Inventory Using Template" option.
 - b. Alternatively, activate the **Create Inventory Using Template** icon in the main toolbar, as shown below:



The "Apply Template" popup window will appear.



4. Select from the dropdown list the template you wish to apply to the Building, then activate **Proceed**. Alternatively, if you do not wish to apply the template

to the Building, activate the **Close** button.

WARNING: When you activate **Proceed**, existing general information for the Building *may or may not be replaced with the template data*:

- a. If no Systems have been created for a Building, the template's Systems, Components, Sections, and Section Details will be copied to it.
- b. However, if a Building already has Systems, the template's Systems structure will not be copied to it.

This same pattern applies to building dimensions, architects, contractors, and family housing records. That is, each of these template lists will be copied to a Building if and only if the Building's corresponding list is empty. Otherwise, the Building's existing list will be left unchanged.

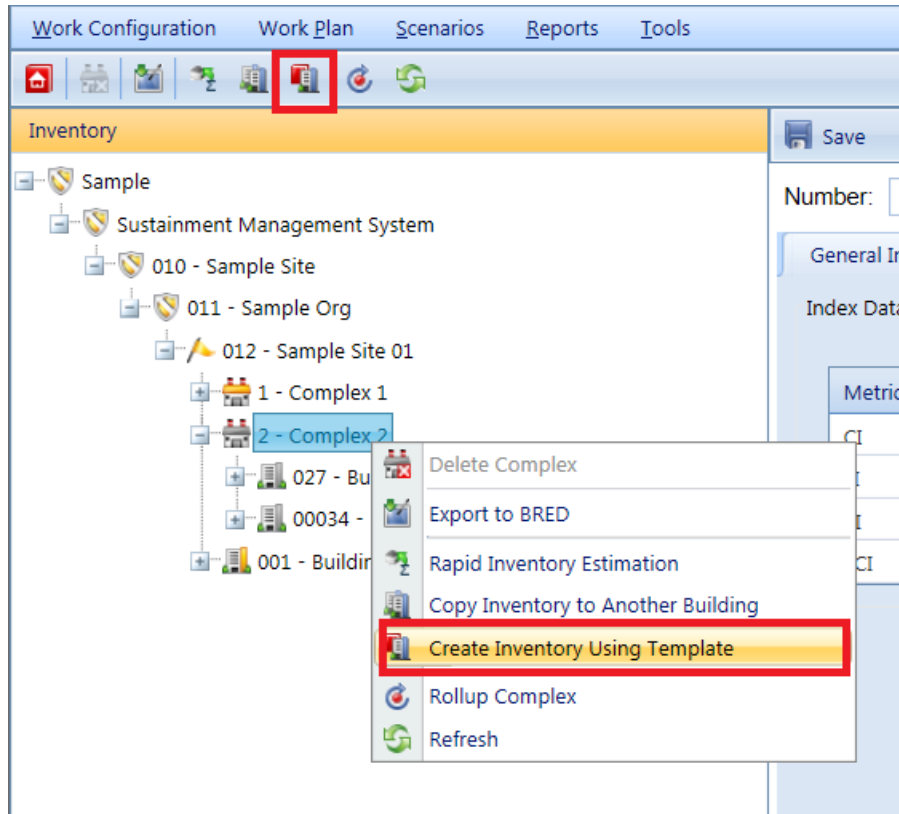
Tip: If you are adding inventory to an existing Building, and Building Dimensions (**Additional Info** tab) have been populated by the template, double check these dimensions against the Area (**General Info** tab) that presumably was entered during Building creation, to see if they match.

When the template process is complete, a small popup window will announce "Application of template completed." You will be able to select each of the newly created Systems, Components, and Sections in the inventory tree and to edit the new data if adjustments need to be made. This same pattern applies to building dimensions, architects, contractors, and family housing records.

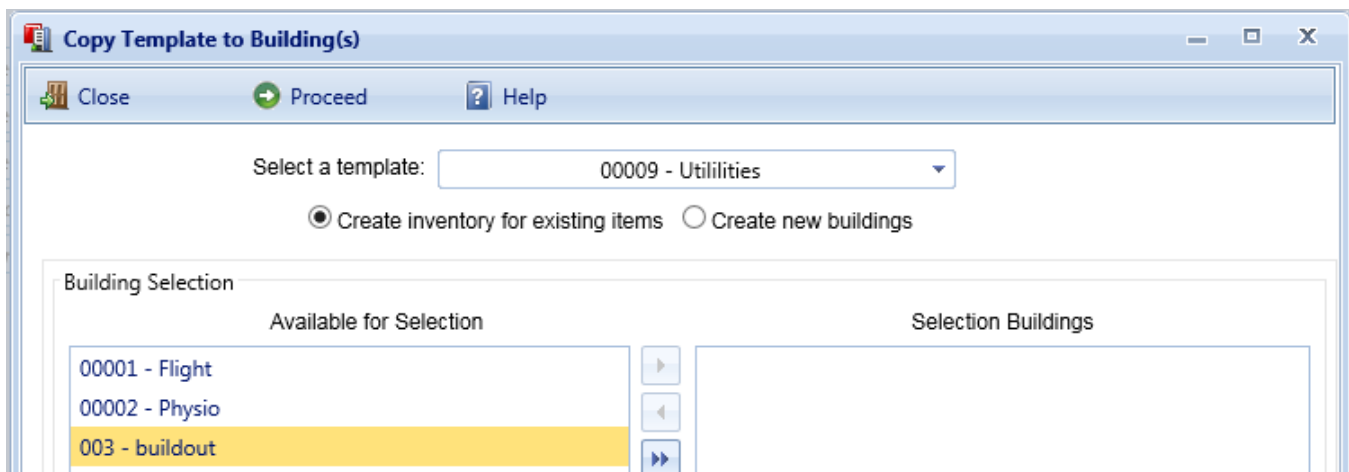
Add Building Template Inventory to Multiple Buildings

The most efficient way to use templates is to create the inventory for multiple similar Buildings at one time. To initiate the process of creating inventory for multiple Buildings using a template, follow these steps:

1. Navigate to the smallest organizational item (node) in the inventory tree that contains all of the Buildings that will have inventory created from the template. Then do one of the following:
 - a. Right-click on the node. Then select **Create Inventory Using Template** from the list of options.
 - b. Alternatively, select the node and then activate the **Create Inventory Using Template** button in the main toolbar.



The "Copy Template to Building(s)" popup window will appear.



2. In the **Select a template** field, activate the dropdown and select a template from the list.
3. When applying a template to multiple Buildings, you have two options to choose from:
 - a. Create new Buildings along with the template (continue reading at ["Option 1: Create New Buildings" on the next page](#)).

- b. Alternatively, apply the template to multiple existing Buildings (continue reading at ["Option 2: Create Inventory for Existing Buildings" on page 230](#)).

Each option is described at a heading below.

The screenshot shows a dialog box titled "Copy Template to Building(s)". At the top, there are buttons for "Close", "Proceed", and "Help". Below these is a "Select a template:" dropdown menu currently showing "00009 - Utilities". There are two radio buttons: "Create inventory for existing item" (unselected) and "Create new buildings" (selected and highlighted with a red box). Below the radio buttons is a section titled "Add information below to create new buildings from the template." This section contains a table with a header row and a body. The header row has columns for "Number", "Name", and "Year Built". The body of the table is empty and contains the text "No records to display." There are also "Add new building" and "Refresh" buttons at the top of the table area.

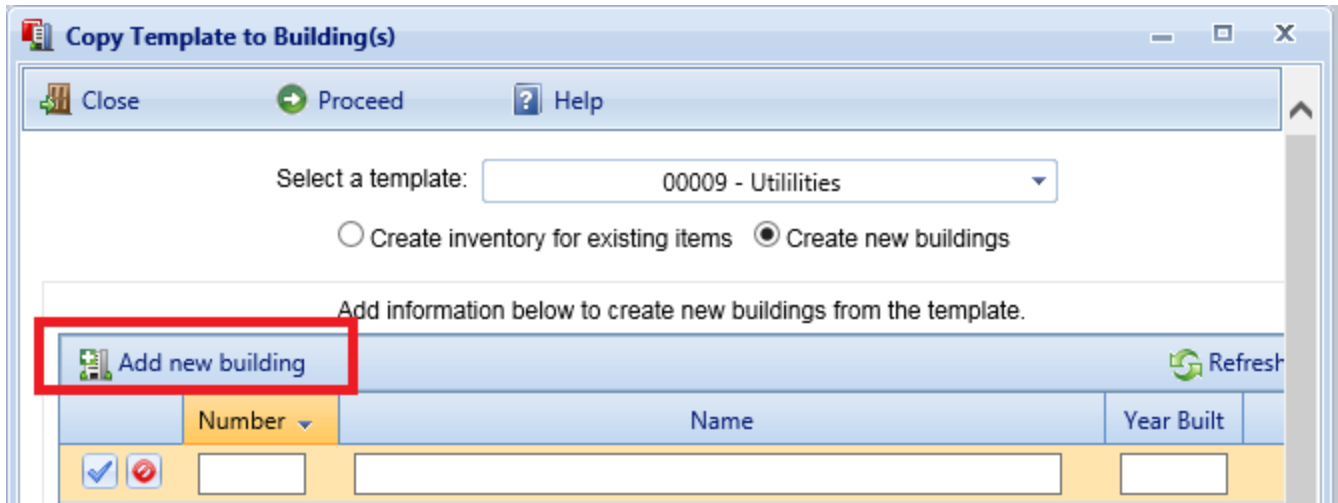
Number	Name	Year Built
No records to display.		

Option 1: Create New Buildings

The window shown above illustrates what happens when the **Create new buildings** radio button is activated. An information table, initially empty, will be created. Its headers are [Building] **Number**, [Building] **Name**, and **Year Built**. Year Built information may be entered later.

How to Add a Building to the Table

1. To add a new Building to receive template inventory, activate the **Add Building** button to add a new Building to the table. A new row in the table will be created and expanded to receive information.



2. For each new Building, you need to assign a Building number and/or name, and put this information in the table.
3. When you are finished with the entry, activate the blue checkmark icon at the left side of the row, to save the entry. Alternatively, to cancel and delete the entry before saving, activate the red circle with slash at the left side of the row.

Note: Activating **Add new building** during the entry process will also clear an unsaved entry.

4. Repeat Steps 2 and 3 for each Building you wish to add and populate with template inventory.

Making Changes

5. To edit an entry, activate the pencil icon, make the changes, then activate the checkmark at the left to save the changes.
6. If you wish to delete any of the Buildings from the list, click the red "X" at the right side of its row.

Finalizing the Table of New Buildings

7. Review the list of Buildings; make changes as needed until the table accurately lists all of the new Buildings you wish to create using the template.
8. Activate the **Proceed** button near the top of the popup window. This starts the process that will create each Building and copy the template data to it.

Note: The Building creation process may take a minute or so for each Building, depending upon the complexity of the template's data structure.

Refining the Template-Installed Inventory (Important!)

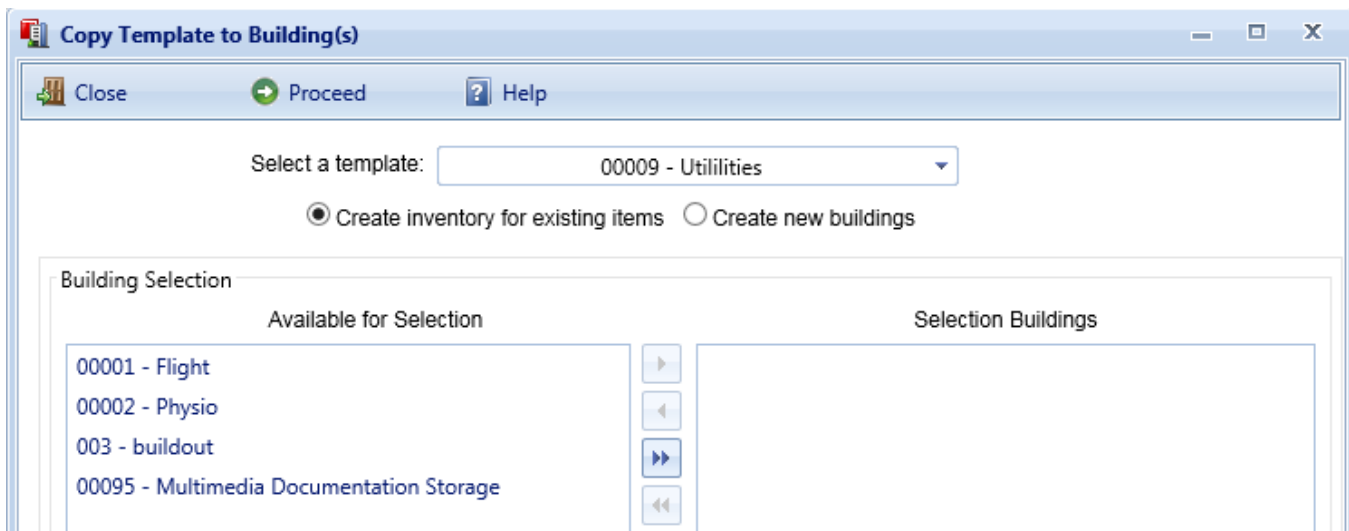
9. When the process is complete, the new Buildings with their template-installed inventory will be available for editing. In particular, critical information that applies to each specific Building should be added immediately, especially the year of construction and dates associated with Sections because these data elements are used extensively in BUILDER's algorithms.
10. Finally, when you have completed your inventory input, you should use BUILDER's cost estimating tool (cost book) to establish current costs for all Buildings and their substructures.

Option 2: Create Inventory for Existing Buildings

If you choose to create inventory for existing Buildings (called "existing items" in the selection list),

1. Activate this option by selecting the **Create inventory for existing items** radio button at the "Copy Template to Building(s)" popup window.

The appearance of the "Copy Template to Building(s)" popup window will remain as shown below:



In this window, the complete list of Buildings "Available for Selection" at the selected inventory level will be displayed on the left.

2. Select the Buildings you want to expand using the selected template, and use the arrow buttons to move these Buildings to the "Selected Buildings" list on the right.
3. When the "Selected Buildings" list is complete, activate the **Proceed** button. Alternatively, if you wish to cancel, activate the **Close** button.

WARNING: When you activate **Proceed**, existing general information for each Building *may or may not be replaced with the template data*:

- a. If no Systems have been created for a Building, the template's Systems, Components, Sections, and Section Details will be copied to it.
- b. However, if a Building already has Systems, the template's Systems structure will not be copied to it.

This same pattern applies to building dimensions, architects, contractors, and family housing records. That is, each of these template lists will be copied to a Building if and only if the Building's corresponding list is empty. Otherwise, the Building's existing list will be left unchanged.

Tip: If you are adding inventory to an existing Building, and Building Dimensions (**Additional Info** tab) have been populated by the template, double check these dimensions against the Area (**General Info** tab) that presumably was entered during Building creation, to see if they match.

4. When the process is complete, edit each Building to add or verify critical data elements such as the year of construction, dates associated with Sections, and all quantities since these data elements are used extensively in BUILDER's algorithms.
5. Finally, when you have completed your inventory input, you should use BUILDER's cost estimating tool (cost book) to establish current costs for all Buildings and their substructures.

Import a Building Template

BUILDER provides three methods for creating a Building template: (1) importing; (2) [creating a template from an existing Building](#); or (3) [creating a template](#) from scratch and filling it with inventory. This topic explains the first method, importing a template.

About Importing Building Templates

Building templates provide a convenient method for rapidly creating your Building inventory when you have multiple Buildings with the same design and composition. A template stores the basic data about a generic Building and can be used to create many Buildings at one time using an automated process that copies the

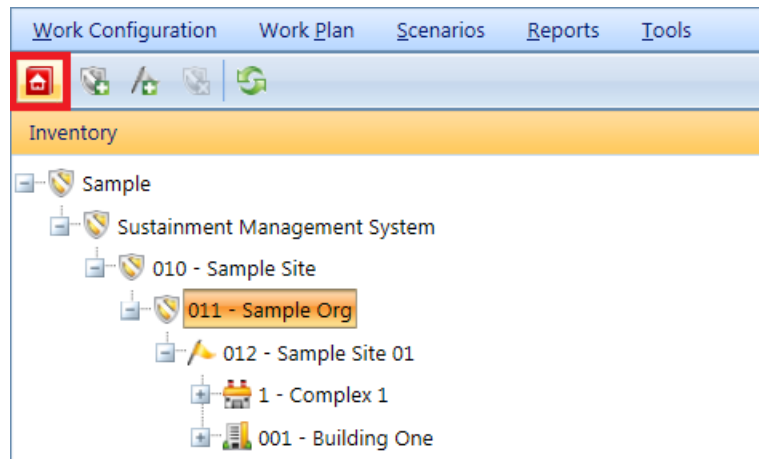
structure of the template to each desired Building. For more information about templates, see ["Working with Building Templates" on page 221](#).

BUILDER allows for different users to share Building templates by importing and exporting individual templates. This capability is especially useful for military installations, which may have many Buildings constructed from a few standard service-wide designs.

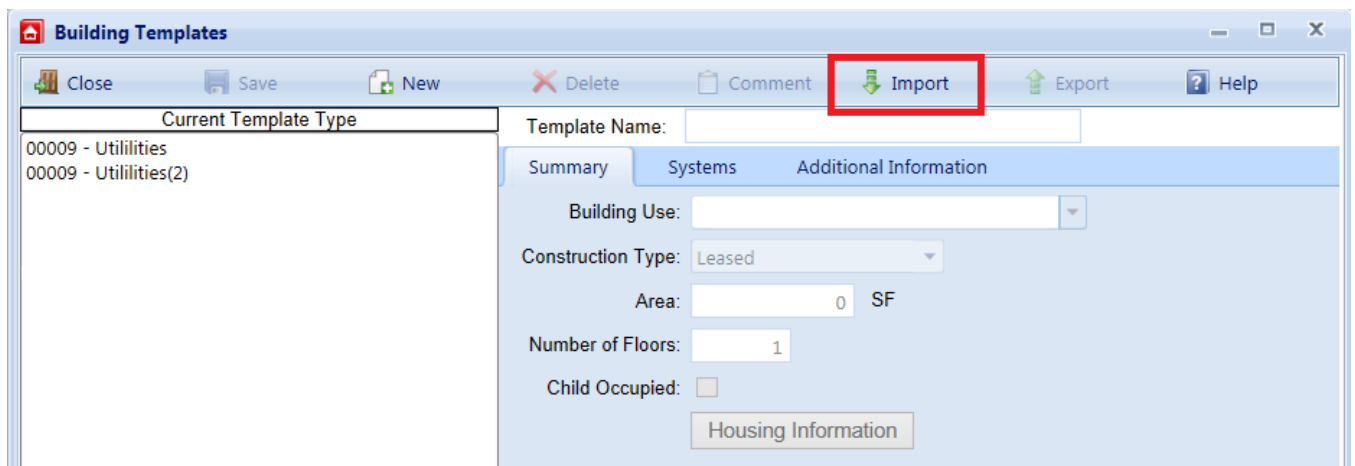
Import Procedure

To import a template,

1. Open the template library from anywhere in the navigation tree by activating the **Building Templates** button on the main toolbar.

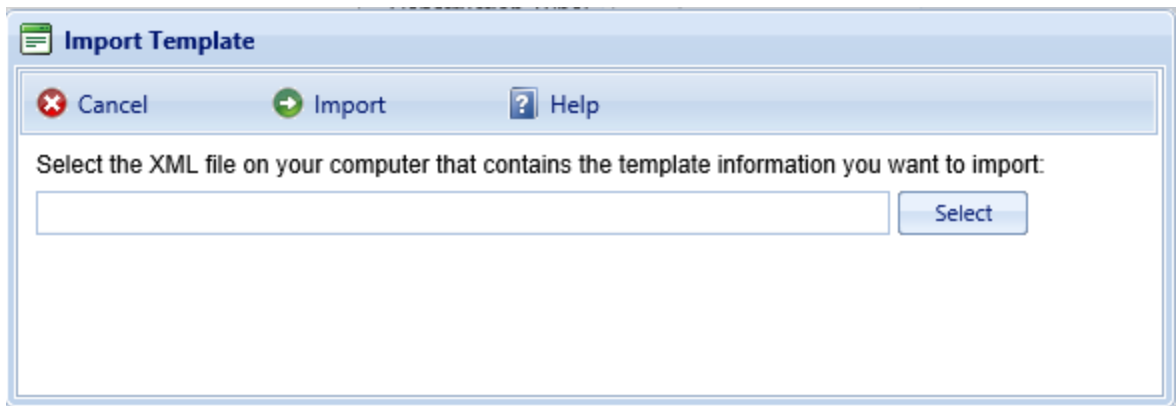


The "Building Templates" popup window will appear.



2. Select **Import** from the toolbar (see red box above).

The "Import Template" popup window will appear.



3. Activate the **Select** button in the "Import Template" popup, then browse to and select the template you wish to import into your template library. The name of the template will appear in the text box to the left of the **Select** button.
4. Finally, do one of the following:
 - a. Activate the **Import** button on the toolbar to import the template.
 - b. Alternatively, select the **Cancel** button to cancel the operation and return to the "Building Templates" window.

Before BUILDER imports your selections, checks of unique identifiers (internal data hidden from view) and template names are performed to avoid conflicts between your current template library and the template(s) being imported. Possible results are as follows:

1. If duplicate identifiers are found, the selected template will not be imported because it already exists in your library.
2. If you are attempting to import a template with the same name but a different unique identifier as an existing template in your library, then the importing process will stop with an error message indicating the problem templates. If you still wish to import the problem templates, change the names of the corresponding templates in your library so that they are distinct from the templates you wish to import. See ["Manage the Template Library" on page 252](#) for instructions regarding changing the name of a template in your library.

Note: The Building Use property of a template is dependent on the user category (Army, Navy, Air Force, Civilian, etc.). If you are managing an installation from one user category but importing Building templates from a different user category, then the template Building Use properties will not match any of the

Building Use categories in your list. When you view each imported template, the Building Use property will be blank. You will have to select an appropriate Building Use property from your list of uses for each imported template. The template name can be used help choose an appropriate use.

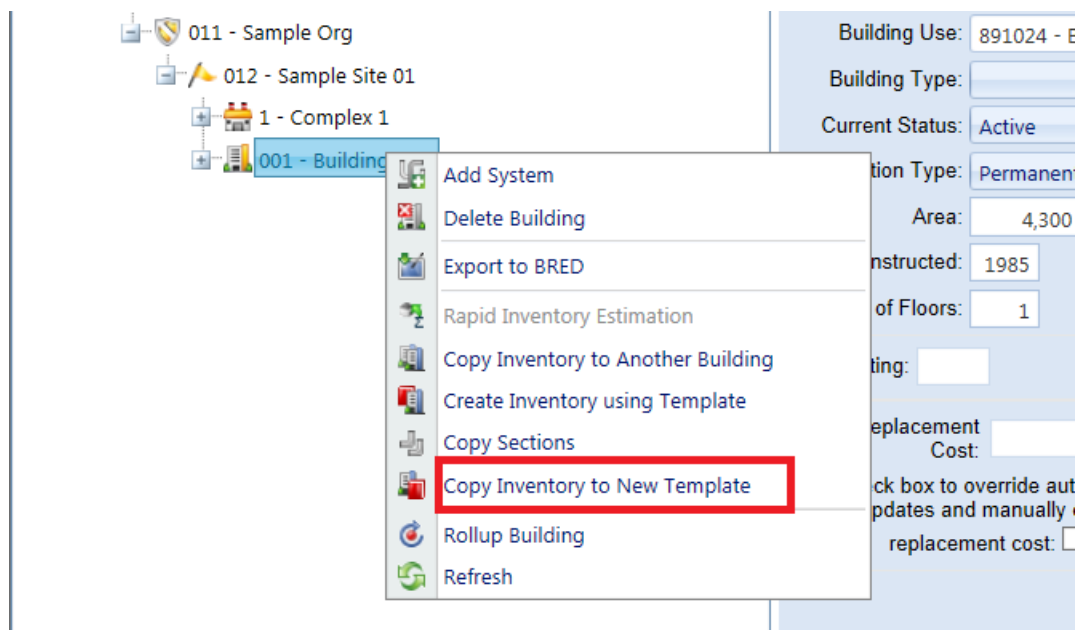
Copy Building Inventory to a Template

BUILDER provides three methods for creating a Building template: (1) importing; (2) creating a template from an existing Building; or (3) creating a template from scratch and filling it with inventory. This topic explains the second method, creating a template from an existing Building in your inventory.

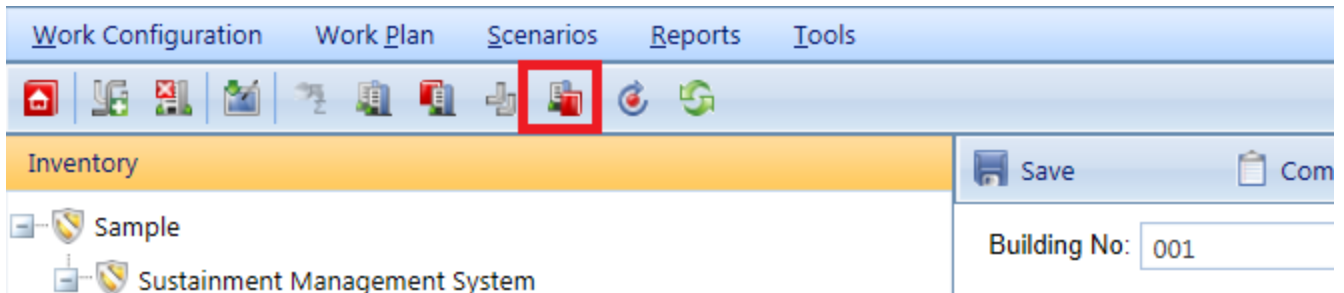
Building templates provide a convenient method for rapidly creating your Building inventory when you have multiple Buildings with the same design and composition. A template stores the basic data about a generic Building and can be used to create many Buildings at one time using an automated process that copies the structure of the template to each desired Building. For more information about templates, see ["Working with Building Templates" on page 221](#).

To create a template by copying a Building in your inventory,

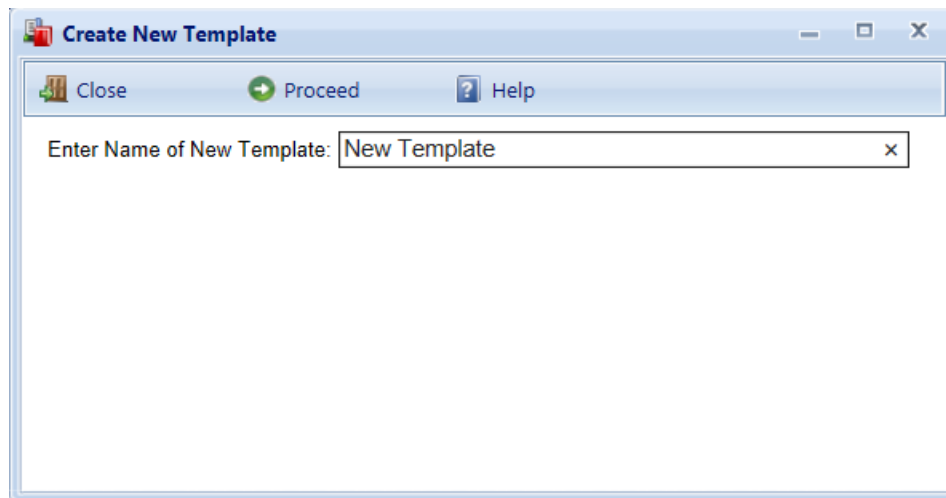
1. Navigate to that Building in the inventory tree and do one of the following:
 - a. Right-click the Building, then select "Copy Inventory to New Template" from the options.



- b. Alternatively, select the Building in the inventory tree. Then activate the **Copy Inventory to New Template** button on the main menu, above the navigation tree.



The "Create New Template" popup window will appear.



2. Enter the name of new template, which must be unique among the templates in your library.

Specifications: The name is limited to 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

Tip: If you expect to create a large template library, especially if you anticipate sharing your library with others or importing other user's templates, then the template name you choose should be sufficiently descriptive of the Building type to allow it to be safely and efficiently selected for use.

3. Finally, do one of the following:
 - a. Activate the **Proceed** button on the popup toolbar to create the new template.
 - b. Alternatively, activate **Close** if you wish to cancel the operation and close the popup.

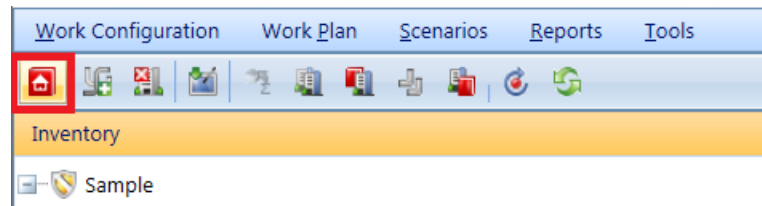
Add a Building Template

BUILDER provides three methods for creating a Building template: (1) importing; (2) creating a template from an existing Building; or (3) creating a template from scratch and filling it with inventory. This topic explains the third method, creating a template from scratch and filling it with inventory.

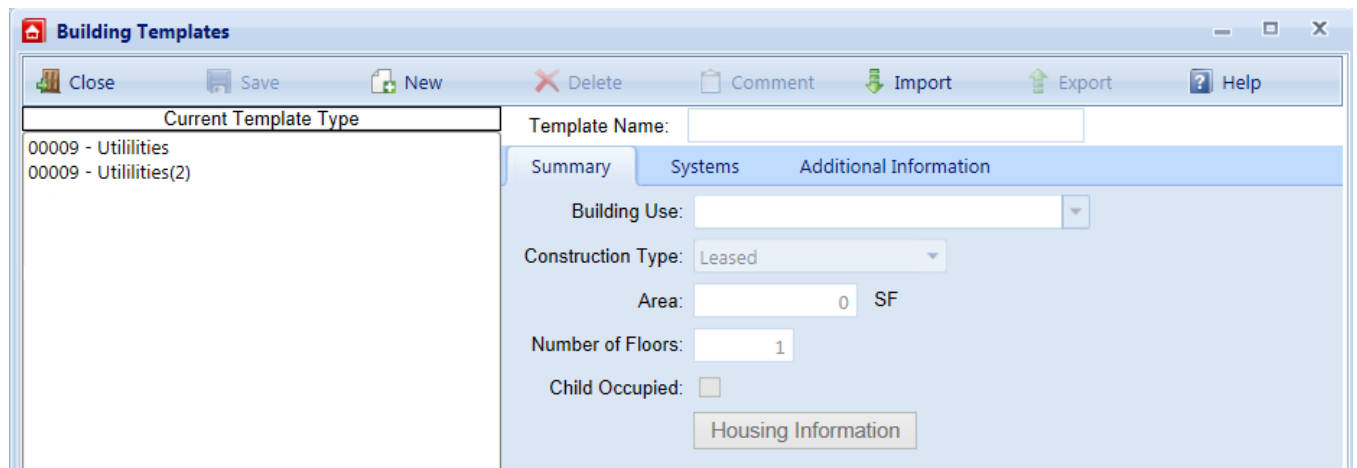
To create a new Building template and add it to the template library, perform the following steps:

Initiate and Name a New Template

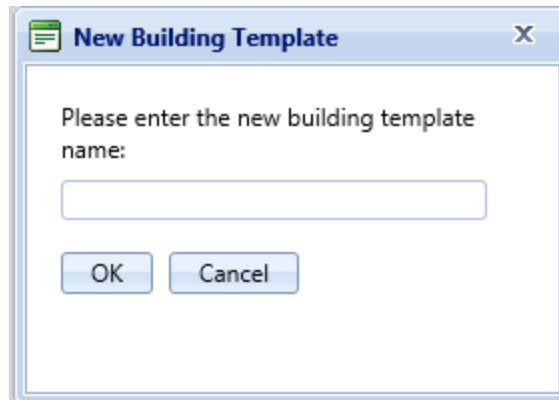
1. From anywhere in the inventory tree, activate the **Building Templates** icon on the main toolbar.



The "Building Templates" popup window will appear.



2. Activate the **New** button on the toolbar of the "Building Templates" popup window shown above. *The "New Building Template" popup window will appear.*



3. Enter a name for the new Building template. This is the name that will appear in the template list and must be unique among the templates in your library.

Specifications: The name is limited to 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

Tip: If you expect to create a large template library, especially if you anticipate sharing your library with others or importing other user's templates, then the name you choose here should be sufficiently descriptive of the Building type to allow it to be safely and efficiently selected for use.

4. Activate the **OK** button on the popup. (Alternatively, activate the Cancel button to exit the operation without creating a new template.)

Enter Summary Tab Data

Enter the following template data at the Summary tab:

- **Building Use.** From the dropdown list, select the Building Use that most closely matches the Building's use.
- **Construction Type.** Select from the dropdown list.
- **Construction Type.** Select from the dropdown list the construction type that matches the Building. Construction type options include:
 - Permanent
 - Semi-Permanent

- Temporary
- Leased
- **Area (Required)**. Enter the gross area of the Building; this will be square feet (SF) or square meters (SM), depending on the unit of measure selected in the User Preferences.
- **Number of Floors (Required)**. Enter the number of floors in the Building.
- **Child Occupied**. Mark this checkbox if the Building is child-occupied.

Save Summary Tab Data

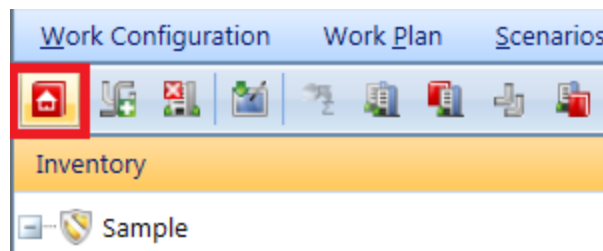
Activate **Save** on the popup toolbar to save your changes.

Enter Systems Tab Data

At the Systems tab is where you will enter the Systems, Components, Sections, and (as applicable) Section Details of your template. You will do this starting at the Systems level because the data at the Systems tab is arranged hierarchically, with Systems containing Components which contain Sections. Once a System is added, you may define Components for that System. Once a Component is added, you may define Sections for that Component. Decomposition follows the same pattern used for Buildings. However, Building-specific data (e.g. condition, age, year installed or built, year painted, and warranty dates and companies) is not used for templates.

Troubleshooting Tip: If the **Systems** tab is grayed out even though you saved all the required Summary information,

1. Activate **Save** on the popup toolbar.
2. Exit the popup (using the **Close** button or else the "X" in the upper right corner).
3. Re-activate the Building Templates icon.



4. Select your newly created and named template from the list. *All of the tabs should now display properly.*

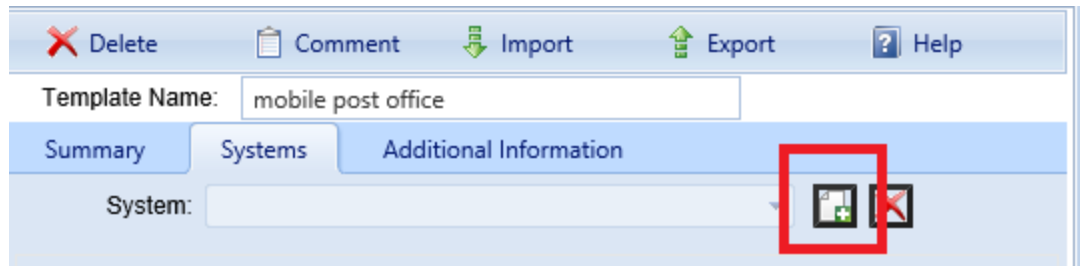
You will be using the buttons to the right of each respective field to add or delete inventory to the template.

Add a System

See "[About Identifying Systems, Components and Sections](#)" on page 121 for a description of how Buildings are decomposed by System.

To add a System to the template,

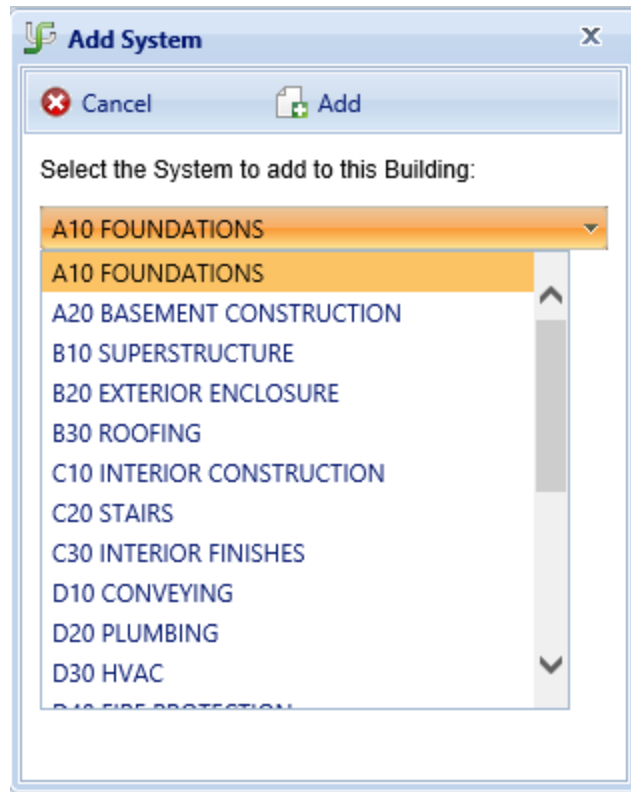
1. Activate the **New** icon on the System line.



The "Add System" popup window will appear.

2. In the "Add System" popup, activate the dropdown list.
3. In the list, activate the desired System.

Note: Only one System at a time can be added to the template at a time using the "Add System" popup.



4. Activate the **Add** button on the popup toolbar. The popup will disappear, and the selected System will be displayed on the System line at the **Systems** tab.

Repeat the steps above for all desired Systems. Alternatively, you can leave the newly added System displayed in the "System:" field and proceed to entering one or more of its Components.

Tip: Once you have added all the Systems you wish, if you choose to enter each of them at this point, it's a good idea to activate **Save** on the "Building Templates" popup toolbar to lock in your changes.

Add a Component

See "[About Identifying Systems, Components and Sections](#)" on page 121 for a description of how Systems are decomposed by Component.

To add a Component to the template,

1. Make sure the appropriate System is displayed in the "System:" field.
2. Activate the **New** icon on the Component line. *The "Add Component" popup window will appear.*
3. In the "Add Component " popup, activate the dropdown list.
4. In the list, activate the desired Component .
5. Activate the **Add** button on the popup toolbar. The popup will disappear, and the selected Component will be displayed on the Component line at the **Systems** tab.

Note: The number of Sections contained in the component will be displayed beneath the "Component :" field.

Repeat the steps above for all desired Components. Alternatively, you can leave the newly added Component displayed in the "Component:" field and proceed to entering one or more of its Sections.

Add a Section

At the Section level, you will be entering the following data for each Section in your Building template:

- **Section Name.** Enter a name that will distinguish this Section from others in the same Component.
- **Material Category.** Selected from the relevant dropdown list.

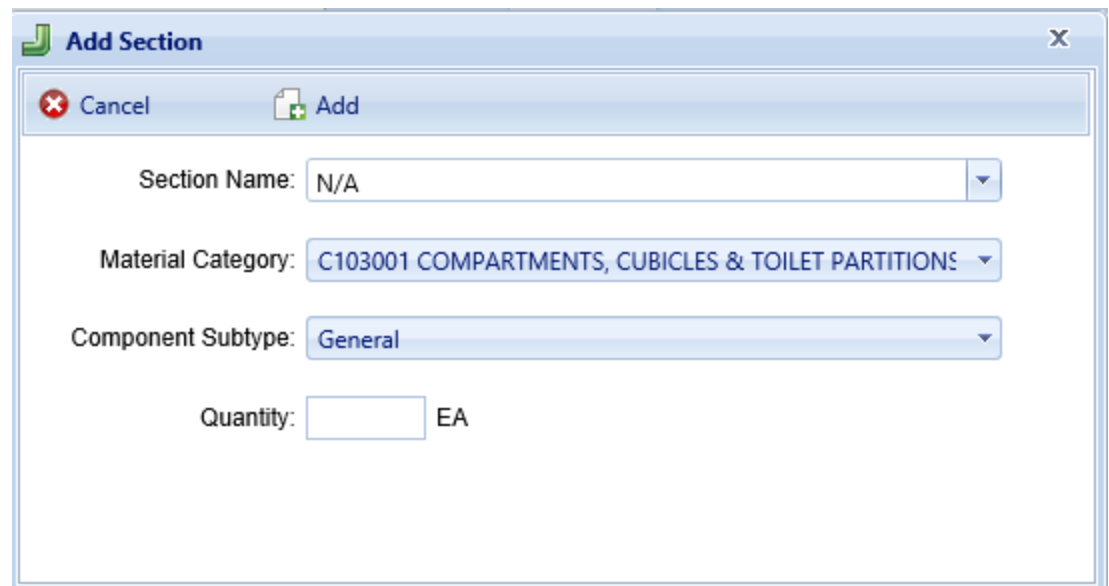
- **Component Subtype.** Selected from the dropdown list. This will be a material (wood, concrete, etc.), or in the case of equipment it will be equipment type.
- **Quantity.** Enter the number of items with the same specification that are contained in this Section.

See ["About Identifying Systems, Components and Sections" on page 121](#) for a description of how Components are decomposed by Section.

To add a Section to the template,

1. Make sure the appropriate Component is displayed in the "Component:" field.
2. Activate the **New** icon on the Section line.

The "Add Section" popup window will appear.



3. In the "Add Section" popup, enter the Section name; select the equipment or material category from the dropdown; select the Component subtype from the dropdown; and enter the Quantity. The unit of measure for the Quantity will vary depending on the type of Section.
4. Activate the **Add** button on the popup toolbar. The popup will disappear, and the Section will be displayed on the Section line at the **Systems** tab.

Tip: When you've finished entering the Sections in a Component (or, alternatively, after entering each Section) it's a good idea to activate **Save** on the "Building Templates" toolbar to save your changes.

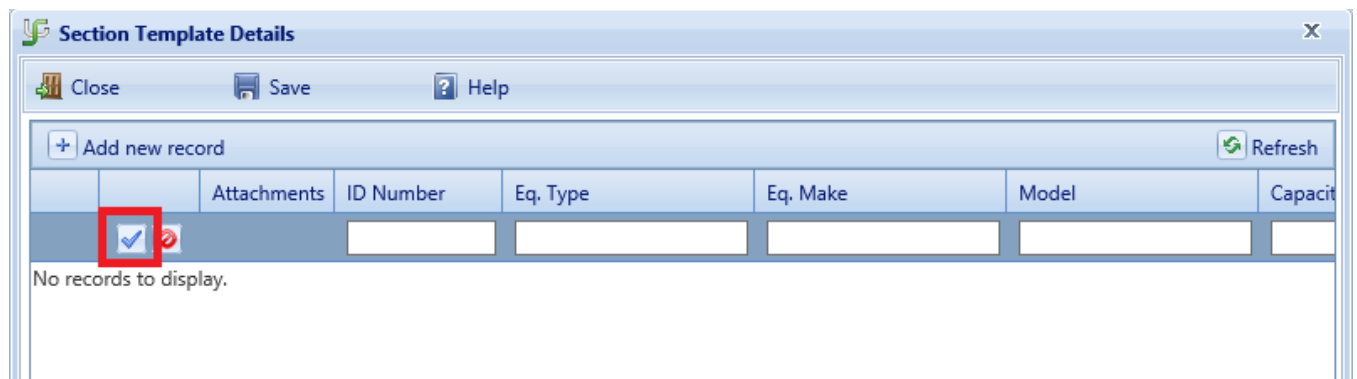
Enter Section Details

Additional data for the Section can be added by activating the **Details** button, which will launch the "Section Template Details" window.

To add Section Details,

1. Activate the **Add new record** button (located just above the Section Details table column headers).
2. Enter information. Each of the fields is described in [Edit Section Detail Data](#) in the inventory entry documentation. You can proceed left to right from one entry field to another using the **Tab** key, or right to left using **Shift-Tab**.
3. **IMPORTANT:** After entering the information, activate the checkmark icon, as shown below.

Note: You may need to scroll back to the left side of the table to see the checkmark icon.

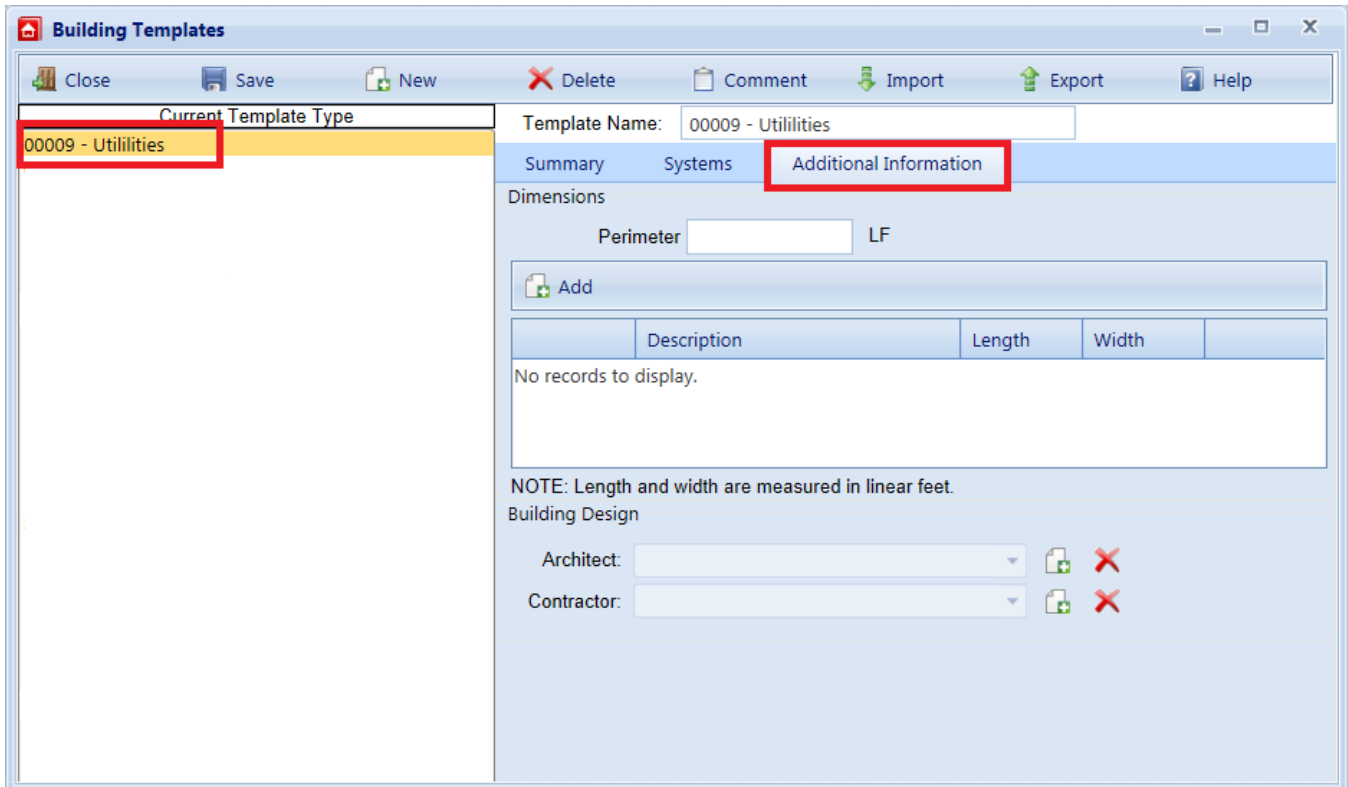


Alternately, to exit the record without saving the data, activate the red **Cancel** icon next to the checkmark icon.

4. When finished with entries, or intermittently, activate **Save** on the "Building Templates" toolbar.

Enter "Additional Information" Tab Data

Use the **Additional Information** tab to store additional Building data.



The data that can be recorded on this tab includes:

Dimensions

- **Perimeter.** Enter the linear measure of the perimeter of the Building.
- **Description.** Enter a description of the distinct areas of the Building you wish to add dimensions for. For example, you may list "East Wing/West Wing," or "Offices/Library/Warehouse," or "Public Areas/Secure Areas." Each description is limited to 50 alphanumeric characters. Use the **Add Dimension** and **Delete Dimension** buttons to add and delete items from the list.
- **Length.** Enter the length of the area identified in the description.
- **Width.** Enter the width of the area identified in the description.

Building Design

- **Architect.** Lists the architects of the Building. Add and delete names by using the adjacent buttons. Each architect's name is limited to 30 characters.
- **Contractor.** Lists the contractors of the Building. Add and delete names by using the adjacent buttons. Each contractor's name is limited to 30 characters.

Save *Building Template Data*

Before closing the "Building Templates" popup window, be sure to activate **Save** on the toolbar.

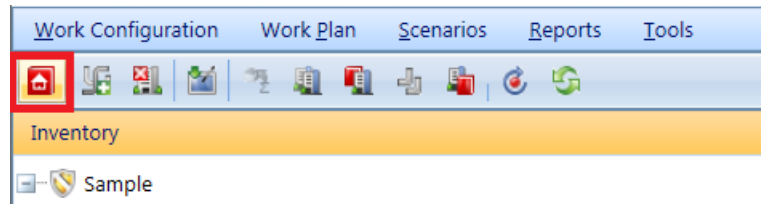
Edit Building Template Data

After a template has been added to the Building Templates library, it can be edited. It can also be enlarged by adding additional Systems, Components, or Sections. This topic explains how to edit the information in a Building template.

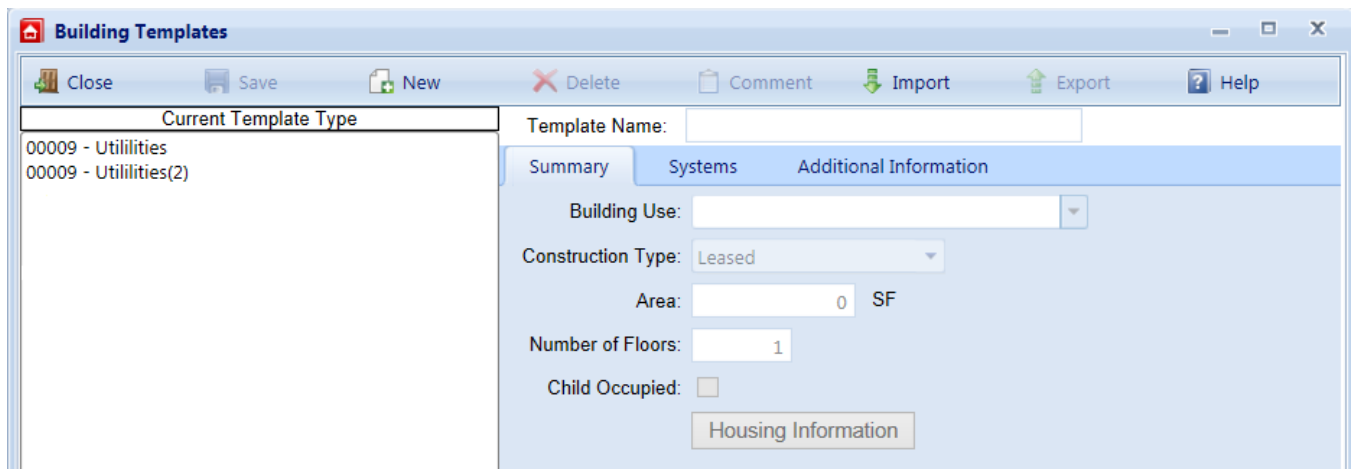
To edit a new Building template, perform the following steps:

Open a Template

1. From anywhere in the inventory tree, activate the **Building Templates** icon on the main toolbar.



The "Building Templates" popup window will appear.



2. Select a template from the list at the left.

The screenshot shows the 'Building Templates' application window. The left pane lists various template types, with 'mobile post office' selected. The right pane displays the 'Summary' tab for the selected template, showing fields for Template Name, Building Use, Construction Type, Area, Number of Floors, and Child Occupied. A 'Housing Information' button is also visible.

Edit Summary Tab Data

The following data appears at the **Summary** tab, and can be edited.

- **Name** (Required). The name that will appear in the template list and must be unique among the templates in your library. If you expect to create a large template library, especially if you anticipate sharing your library with others or importing other user's templates, then the name you choose here should be sufficiently descriptive of the Building type to allow it to be safely and efficiently selected for use.

Specifications: The name is limited to 50 alphanumeric characters.

Best Practice Recommendation: Avoid using single quotes, double quotes, and ampersands. These characters can interfere with query formation.

- **Building Use.** Select the Building Use from the dropdown list that most closely matches the Building's use.
- **Construction Type.** Select the construction type from the dropdown list that matches the Building. Construction type options include:
 - Permanent
 - Semi-Permanent
 - Temporary
 - Leased
- **Area** (Required). The gross area of the Building.
- **Number of Floors** (Required). The number of floors in the Building.

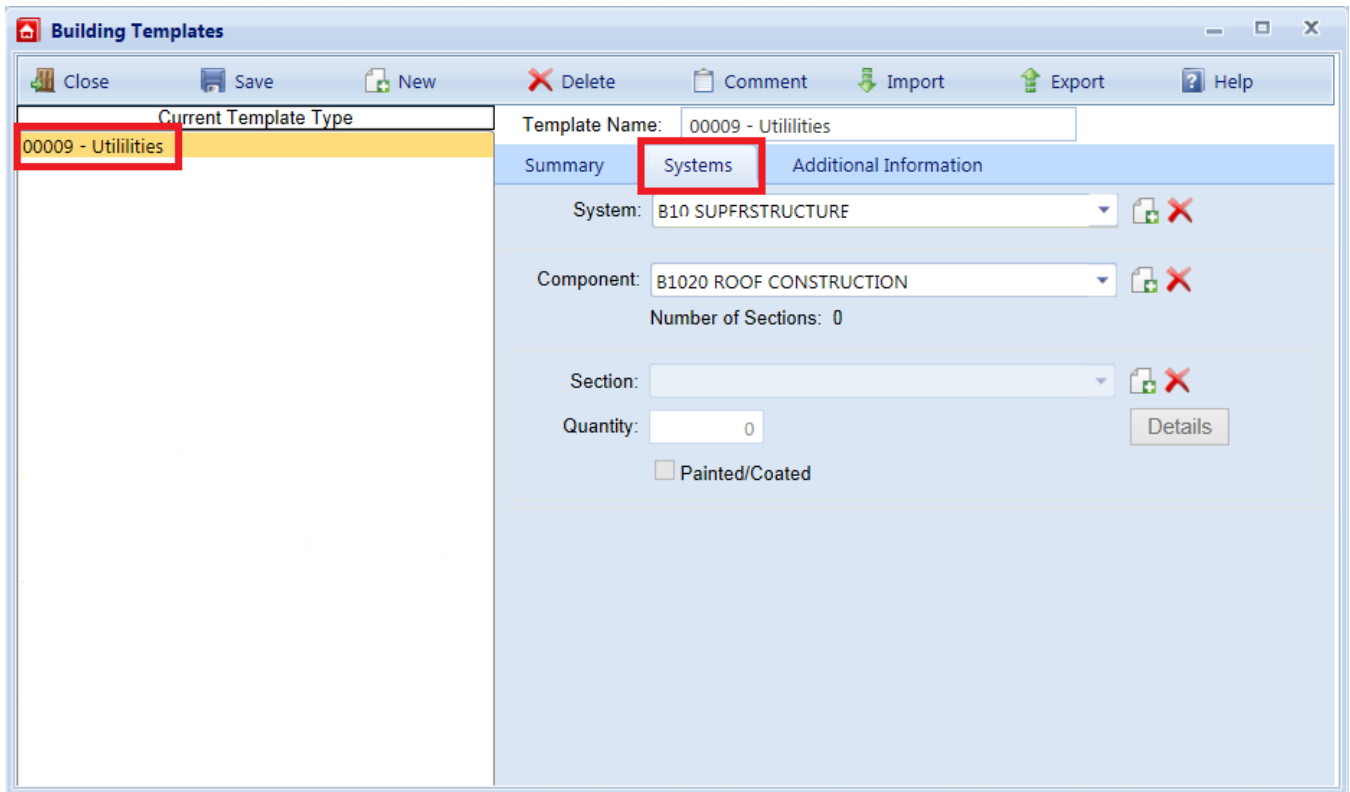
- **Child-Occupied.** Mark this checkbox if the facility is child-occupied.

Save Summary Tab Data

Activate **Save** on the "Building Templates" toolbar if you make changes at the **Summary** tab.

Edit Systems Tab Data

The **Systems** tab gives you access to the data regarding the decomposition of the Building into Systems, Components, and Sections.



At the **Systems** tab is where you will enter or edit information about the Systems, Components, Sections, and (as applicable) Section Details of your template. You will do this starting at the System level because the data at the **Systems** tab is arranged hierarchically, with Systems containing Components which contain Sections.

Use the buttons to the right of each respective dropdown list to add or delete inventory to the template. Once a System is added, you may define Components for that System. Once a Component is added, you may define Sections for that Component. This follows the same pattern used for Buildings, except that Building-specific data (e.g., condition, age, year installed or built, year painted, and warranty

dates and companies) is not used for templates. See ["About Identifying Systems, Components and Sections" on page 121](#) for a description of how Buildings are decomposed by System.

System Level

Add a System

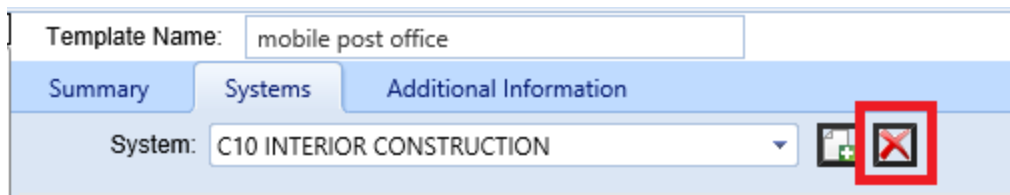
To add another System to the Building template, follow the instructions at ["Add a System" on page 239](#) in the topic ["Add a Building Template" on page 236](#).

Edit System Contents

To change the contents of a System that already exists in the template, you will need to select that System at the System line; then select or add the appropriate Component on the Component line; then proceed as necessary through the levels to the Section line and (if applicable), the **Details** button to make the appropriate additions or changes.

Delete a System

To delete a System, select it from the dropdown list at the System line; then activate the **Delete** icon at the right of the System line.



Component Level

Add a Component

To add another Component to the Building template, follow the instructions at ["Add a Component" on page 240](#) in the topic ["Add a Building Template" on page 236](#).

Edit Component Contents

To change the contents of a Component that already exists in the template, you will need to select that Component at the Component line; then select or add the appropriate Section on the Section line; and (if applicable), activate the **Details** button to make the appropriate additions or changes.

Delete a Component

To delete a Component , select it from the dropdown list at the Component line; then activate the **Delete** icon at the right of the Component line.



Section Level

Add a Section

To add another Section to the Building template, navigate to the Component it will be contained in; then follow the instructions at ["Add a Section " on page 240](#) in the topic ["Add a Building Template" on page 236](#).

Edit Section Contents

Change Quantity

To change the quantity of a Section,

1. Highlight the quantity in the Quantity box;
2. Make the desired change; then
3. Activate **Save** on the "Building Templates" menu bar.

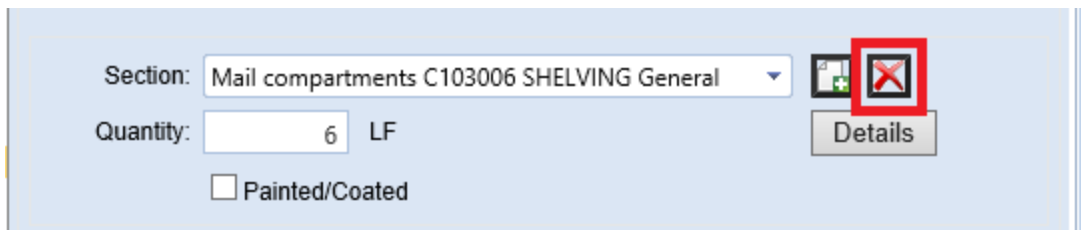
Change Section Details

To change the Section's Section Details,

1. Activate the **Details** button; then
2. Make the desired additions or changes. For more detailed instruction, see ["Add, Edit, or Delete Section Details" on page 183](#).

Delete a Section

To delete a Section, select it from the dropdown list at the Section line; then activate the **Delete** icon at the right of the Section line.



Save Systems Tab Data

Activate **Save** on the "Building Templates" toolbar to save the changes made at the **Systems** tab.

Edit "Additional Information" Tab Data

The **Additional Information** tab provides a location to store additional Building data.

The screenshot shows the 'Building Templates' application window. The 'Current Template Type' list on the left contains '00009 - Utilities', which is highlighted. The main panel displays the 'Additional Information' tab for this template. The 'Template Name' is '00009 - Utilities'. Below this, there are tabs for 'Summary', 'Systems', and 'Additional Information'. The 'Dimensions' section includes a 'Perimeter' input field followed by 'LF'. An 'Add' button is present below the dimensions. A table with columns 'Description', 'Length', and 'Width' is shown, currently containing no records. A note states: 'NOTE: Length and width are measured in linear feet.' Under the 'Building Design' section, there are dropdown menus for 'Architect' and 'Contractor', each with an 'Add' (+) and 'Delete' (X) button.

The data that can be recorded and edited at this tab includes:

Dimensions

- **Perimeter.** Enter the linear measure of the perimeter of the Building.
- **Description.** Enter a description of the distinct areas of the Building you wish to add dimensions for. For example, you may list "East Wing/West Wing," or "Offices/Library/Warehouse," or "Public Areas/Secure Areas." Each description is limited to 50 alphanumeric characters. Use the **Add Dimension** and **Delete Dimension** buttons to add and delete items from the list.

- **Length.** Enter the length of the area identified in the description.
- **Width.** Enter the width of the area identified in the description.

Building Design

- **Architect.** Lists the architects of the Building. Add and delete names by using the adjacent buttons. Each architect's name is limited to 30 characters.
- **Contractor.** Lists the contractors of the Building. Add and delete names by using the adjacent buttons. Each contractor's name is limited to 30 characters.

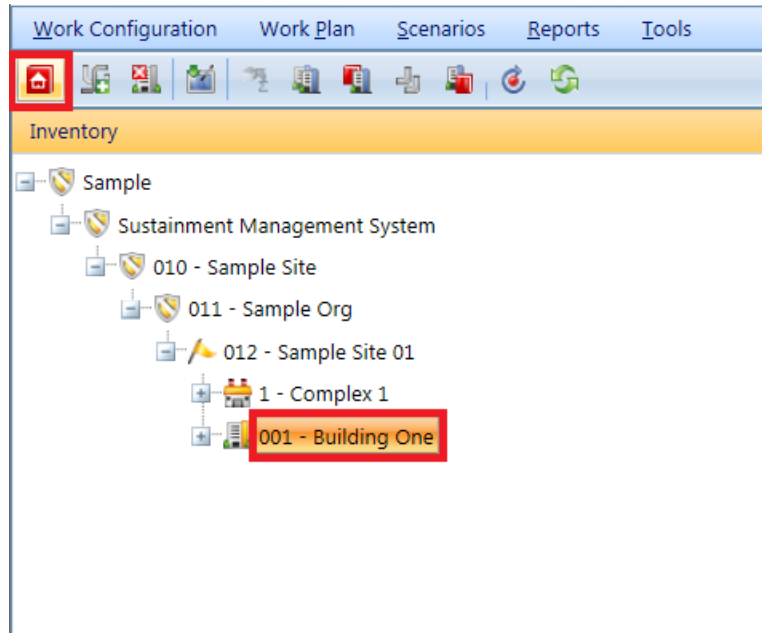
Save Additional Information Tab Data

Activate **Save** on the "Building Templates" toolbar if you make changes at the **Additional Information** tab.

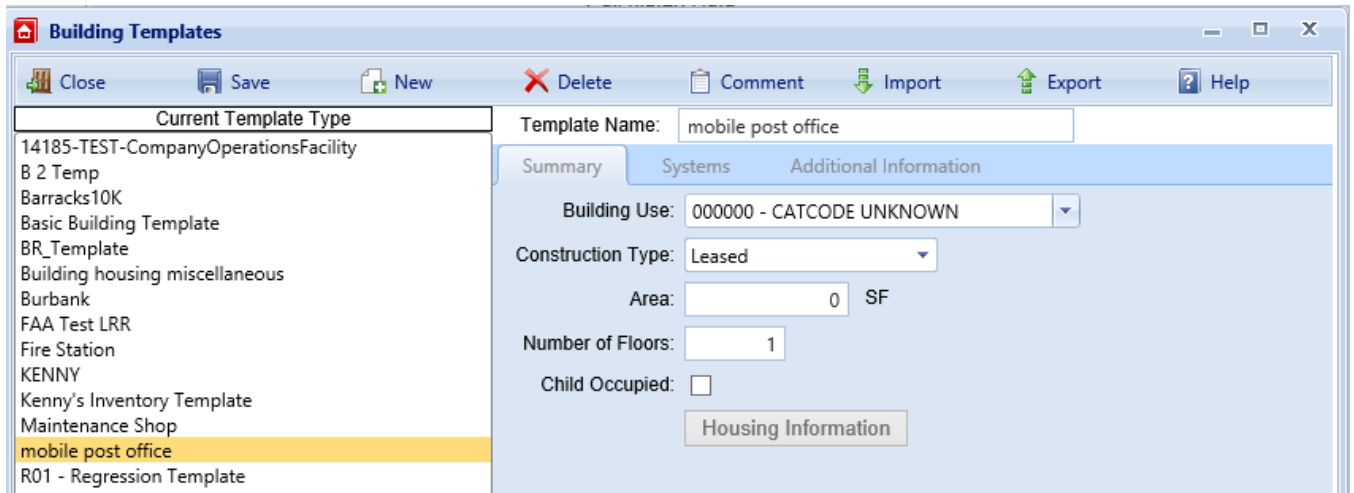
Delete a Building Template

To delete a Building template,

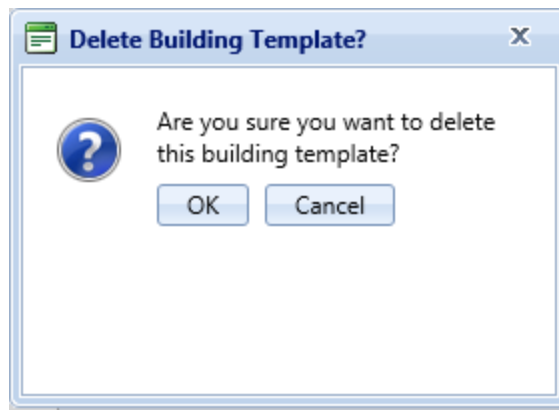
1. From any location in the inventory tree, activate the **Building Templates** icon on the main toolbar.



The "Building Templates" popup window will appear.



2. Select from the list of templates the one you wish to delete.
3. While that template is highlighted, activate the **Delete** button in the popup toolbar. *A confirmation popup will appear.*



4. Do one of the following:
 - a. Activate the **OK** button in the confirmation popup to delete the template. The list of templates on the left side of the "Building Templates" window will refresh after the deletion.
 - b. Alternatively, activate **Cancel** in the confirmation popup to cancel the operation and return to the "Building Templates" window.

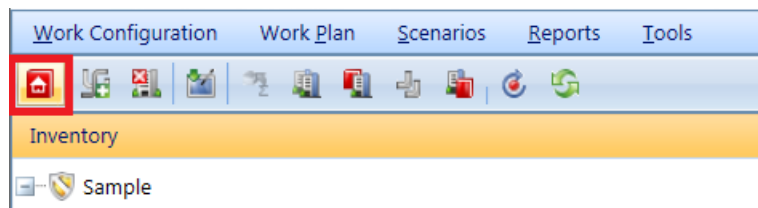
Manage the Template Library

This topic provides an overview of capabilities you can initiate at the "Building Templates" window in order to add to, manage, import to, and export from your library of Building Templates held in BUILDER.

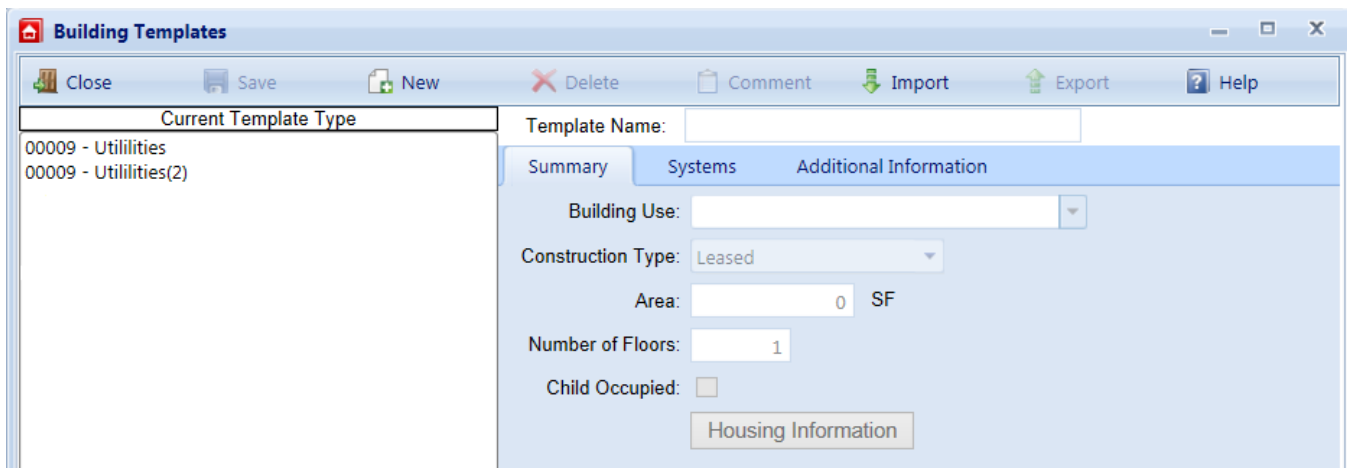
BUILDER stores all of the Building templates in your database in a template library. From the template library, you are able to manually add, edit, and delete templates in your database, as well as import and export templates.

Open the Templates Window

To manage the template library, activate the **Building Templates** icon on the main toolbar. This can be done from any location in the inventory tree.











The "Building Templates" popup window will appear.



On the left side, the Building Templates window lists the current templates in the library. On the right side, it shows the data for the selected template. The data shown at the different tabs are described in the topics ["Add a Building Template" on page 236](#) and ["Edit Building Template Data" on page 244](#).

Toolbar Options

Options on the "Building Templates" toolbar are:

-  **Close**. Closes the "Building Template" popup window.
-  **Save**. Saves changes made to the Building templates.
-  **New**. Initiates creating a new template "from scratch" where you can enter inventory detail. (See "[Add a Building Template](#)" on page 236.)
-  **Delete**. Deletes the currently selected template.
-  **Comment**. Allows you to add, edit, and view comments for the template.
-  **Import**. Allows you to [import templates](#) from other sources.
-  **Export**. Allows you to [export templates](#) to other sources.
-  **Help**. Displays context-sensitive location in the online Help documentation.

Building Template Tasks

Operations that can be performed on Building templates are:

["Import a Building Template" on page 231](#)

["Copy Building Inventory to a Template" on page 234](#)

["Add a Building Template" on page 236](#)

["Edit Building Template Data" on page 244](#)

["Export a Building Template" below](#)

["Delete a Building Template" on page 250](#)

["Add Building Inventory Using a Template" on page 224](#)

Additional useful information can be found here:

["Working with Building Templates" on page 221](#)

Export a Building Template

This topic explains how to export a template in order to be able to share it with others or to use it in a different instantiation of BUILDER.

About Exporting Building Templates

Building templates provide a convenient method for rapidly creating your Building inventory when you have multiple Buildings with the same design and composition. A template stores the basic data about a generic Building and can be used to create many Buildings at one time using an automated process that copies the struc-

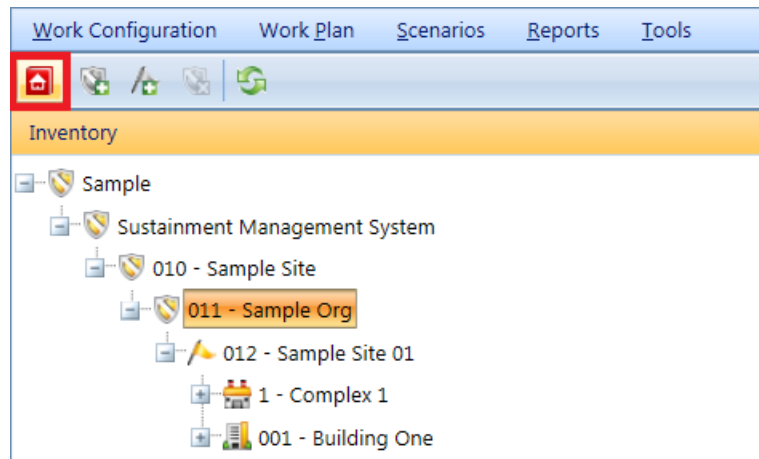
ture of the template to each desired Building. For more information about templates, see ["Working with Building Templates" on page 221](#).

BUILDER allows for different users to share Building templates by importing and exporting individual templates. This capability is especially useful for military installations, which may have many Buildings constructed from a few standard service-wide designs.

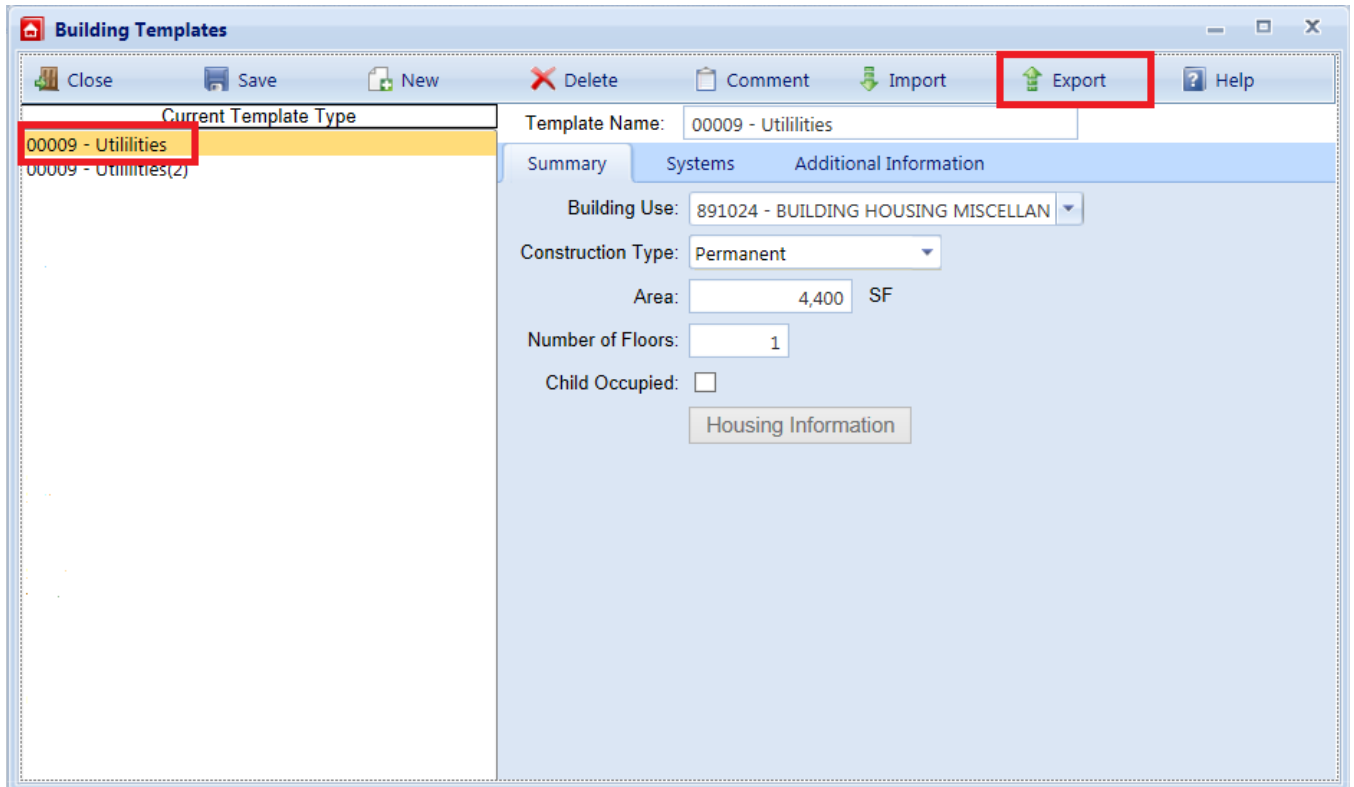
Export Procedure

To export a template,

1. From anywhere in the inventory tree, activate the **Building Templates** button on the main toolbar.



The "Building Templates" popup window will appear.



2. To export a template, highlight a template name in the listing on the left side of the Building Template window.
3. Select **Export** from the toolbar.
4. After the template has been successfully exported, you will be asked if you want to (a) save or (b) open the exported template.
 - a. If you choose to save the template, you will be prompted for a path and file name for the exported template. The saved exported template can then be sent to other BUILDER users to be utilized in their template libraries.
 - b. If you choose to open the exported template after the export is complete, the template will open as a XML document.

Reports


Generate a Report

BUILDER™ offers a number of standard reports. These reports can be viewed, printed, or exported to electronic files of several formats.

How To Generate and View a Report

Note: This topic explains how to access reports from the toolbar at the top of the Content Area, not from the main toolbar.

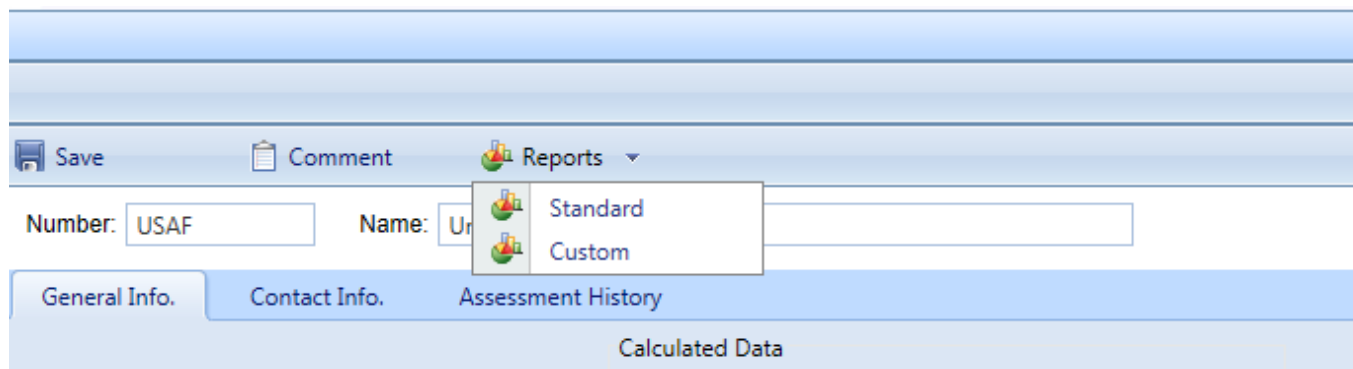
To view a report,

1. In the navigation tree in the left window pane, navigate to and select the node for which you want to generate a report.
2. Click the **Reports** button  in the local toolbar.

Note: The **Reports** button is available if you are in the inventory tree or condition tree, but not when you are in the functionality navigation tree.

Note: Selected Standard reports are also available from the **Reports** button on the main menu bar.

3. *For Inventory only:* Select either **Standard** or **Custom** (where available) reports:



The "Reports," "Standard Reports," or "Custom Reports" window will appear. This window contains a dropdown list of reports, which includes only reports applicable to that level. Additionally, the report will only show data for the current mode you are in. For example, if you activate the Reports button while in inspection mode, only inspection related reports will be displayed.

4. Activate the dropdown arrow in the bar, and select the desired report from the dropdown list.
5. After you have a report selected, click the **View Report** button in the popup window toolbar; or, if you have selected a Custom Report, click on the **Run Report** button in the popup window toolbar.

The selected report will launch in the Report Viewer window or in the Custom Reports window. The image below shows a sample report in the Report Viewer:

Report Viewer

Close | Export Type: PDF | Export Report | Help

1 / 1 | 50.7% | Fill & Sign | Comment

SMS *Direct Condition Rating Inspection Report by Component*

Sample Site 02 (013)

00001 - Flight Training (0044)

System	Component	Section Description	Quantity (UM)
A10 FOUNDATIONS	A1010 STANDARD FOUNDATIONS	Beam A101001 WALL FOUNDATIONS Grade Beams	600 (LF)
Last Inspection Date: 01-Feb-2016 Condition Rating: R- Used Sampling?: No Inspector: Sample User Inspection Source: Inspection Inspection Comments: Degraded foundation. AJF.			
B10 SUPERSTRUCTURE	B1010 FLOOR CONSTRUCTION	Auditorium floor B101004 INCLINED AND STEPPED FLOORS	600 (EA)
Last Inspection Date: 01-Feb-2016 Condition Rating: G- Used Sampling?: No Inspector: Sample User Inspection Source: Inspection Inspection Comments:			

February 01, 2016 Page 1 of 1

Export a Report

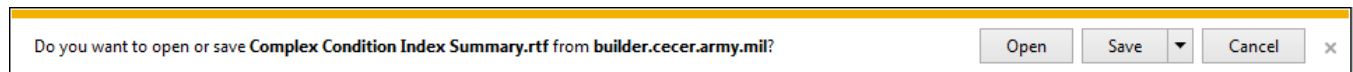
Export a Standard Report

To export a standard report, first follow the steps in ["Generate a Report" on page 256](#). Then

1. In the Report Viewer toolbar, select the Export Type: **PDF**, **Excel**, or **Word (RTF)**.

CAUTION: Not all reports have been adapted to the Excel format.

2. In the Report Viewer toolbar, click **Export Report**.
3. At the bottom of the screen, you will be queried whether you want to save the report:

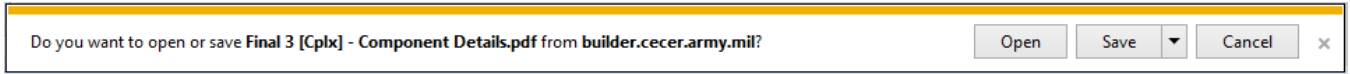


4. Click the down arrow to the right of the **Save** button.
5. Select **Save as**.
6. In the Save As popup window, browse to the desired location where you wish to save the report.
7. Name the report in the File name: bar; then activate **Save** (lower right).
8. After the download is complete, the bar at the bottom of the screen will give you the option to open the report you just saved, to open the folder, or view downloads. If none of these are needed, click the "x" at the right side of the query bar.
9. If you want to open the report to view it, select **Open**. When you close the viewing window, you will be back at the Report Viewer window.
10. Click **Close** to close the Report Viewer window.

Export a Custom Report

To export a custom report, first follow the steps in ["Generate a Report" on page 256](#). Then

1. With the desired report showing in the Custom Reports popup window, activate the **Save** icon.
2. Select the desired export format from the options in the dropdown list.
3. At the bottom of the screen, you will be queried whether you want to save the report:



4. Click the down arrow to the right of the **Save** button.
5. Select **Save as** (or **Save and open**).
6. In the Save As popup window, browse to the desired location where you wish to save the report.
7. Click the **Save** button.

Appendix A: About Rollup

Automated Rollup

BUILDER automatically "rolls up" inventory, condition, and functionality information nightly. (For installations with U.S. Army Corps of Engineers support service, this begins at about 6:00 p.m.). Starting at the Section level, aggregated Section-level information in each Component is recorded for the Component; aggregated Component-level information is recorded for each System; aggregated System-level information is recorded for each Building, and so forth up the entire inventory tree.

Manual Rollup

Users can perform a manual rollup at the Building, Complex, or Site level (subject to permissions). A user-initiated manual rollup is limited in scope to the Building, Complex, or Site where the rollup is run, including all of its sublevels of inventory. A manually initiated rollup of the entire navigation tree can only be performed by a BUILDER Administrator.

What does a Rollup Do?

The following (subcategorized) processes will occur during the rollup:

Inventory

Inventory-related processes accomplished by a rollup are as follows:

- The current remaining service life (RSL) is estimated for all Sections.
- RSL information is reflected upwards through the Inventory tree.
- Plant Replacement Value (PRV) is updated at all levels. For example, if new Sections, Components, or Systems have been added to a Building, its PRV will increase.

Condition Assessment

Condition assessment-related processes accomplished by a rollup are as follows:

- **Components:** The current CI for each Component (BCCI) is estimated by calculating the average of its Component-Sections' condition indices, weighted by replacement cost.
- **Systems:** The current CI for each System (SCI) is estimated by calculating the average of its Components' condition indices, weighted by replacement cost.

- **Buildings:** The current condition index for each Building (BCI) is estimated by calculating the average of its Systems' condition indices, weighted by replacement cost.
- **Complexes, Sites, and Organizations:** The current condition index for all Complexes, Sites, and Organizations is estimated by calculating the average of their Buildings' condition indices, weighted by replacement cost.

FCI

In addition to calculating and rolling up BUILDER condition indexes, rollup also calculates the financially oriented Facility Condition Index (FCI):

- The FCI is estimated for all Buildings using the formula $FCI = (1 - \text{\$current repair needs}/\text{\$PRV}) \times 100$, obtaining the dollar amount of repair needs from BUILDER work items.
- The FCI is estimated for all Complexes, Sites, and Organizations, using the formula $FCI = (1 - \text{\$current repair needs}/\text{\$PRV}) \times 100$, obtaining the dollar amount of repair needs from BUILDER work items for the Complex, Site, or Organization.

Functionality and Performance

Processes accomplished by a rollup related to functionality and performance are:

- The latest functionality assessment records are retrieved. Based on the results of the assessments, the FI is determined for each Functional Area and applicable Building.
- The current FI is estimated for all Complexes, Sites, and Organizations by calculating the average of their Buildings' FIs, weighted by replacement cost.
- The current PI is estimated for each Building, using a weighted combination of the Building's CI and FI.
- The current PI is estimated for all Complexes, Sites, and Organizations by calculating the average of their Buildings' PIs, weighted by replacement cost.

After the rollup process completes, the "Manual Condition Rollup" popup window (or the "Progress" window, in case of a full-tree rollup performed by a BUILDER administrator) will close. You will be returned to the originating BUILDER screen. Updated condition colors (red, amber, green) will be displayed for all elements in the inventory, condition, and functionality trees, and recalculated current condition indices will be shown in the relevant information screens.

Appendix B: BUILDER Systems and Components

This topic presents the identifying numbers and names of the Systems and Components used in BUILDER.

To divide a Building into Systems and Components, BUILDER follows the [Naval Facilities Engineering Command \(NAVFAC\) UNIFORMAT II classification](#) for building elements (Level 2 and 3).

Level 2	Level 3
A10 Foundations	A1010 Standard Foundations A1020 Special Foundations A1030 Slab on Grade
A20 Basement Construction	A2010 Basement Excavation A2020 Basement Walls
B10 Superstructure	B1010 Floor Construction B1020 Roof Construction
B20 Exterior Closure	B2010 Exterior Walls B2020 Exterior Windows B2030 Exterior Doors
B30 Roofing	B3010 Roof Coverings (Note: Roof openings are a subcategory of Roof Coverings)
C10 Interior Construction	C1010 Partitions C1020 Interior Doors C1030 Specialties
C20 Stairs	C2010 Stair Construction
C30 Interior Finishes	C3010 Wall Finishes C3020 Floor Finishes C3030 Ceiling Finishes C3040 Interior Coatings and Special Finishes
D10 Conveying	D1010 Elevators and Lifts D1020 Weight Handling Equipment D1030 Escalators and Moving Walks D1090 Other Conveying Systems

D20 Plumbing	D2010 Plumbing Fixtures D2020 Domestic Water Distribution D2030 Sanitary Waste D2040 Rain Water Drainage D2090 Other Plumbing Systems
D30 HVAC	D3010 Energy Supply D3020 Heat Generating Systems D3030 Cooling Generating Systems D3040 Distribution Systems D3050 Terminal & Package Units D3060 Controls & Instrumentation D3070 Systems Testing & Balancing D3080 HVAC Valves D3090 Other HVAC Systems & Equipment
D40 Fire Protection	D4010 Fire Alarm and Detection Systems D4020 Fire Suppression Water Supply and Equipment D4030 Standpipe Systems D4040 Sprinklers D4050 Fire Protection Specialties D4090 Other Fire Protection Systems
D50 Electrical	D5010 Electrical Service & Distribution D5020 Lighting & Branch Wiring D5030 Communication & Security D5090 Other Electrical Services
E10 Equipment	E1010 Commercial Equipment E1020 Institutional Equipment E1030 Vehicular Equipment E1090 Other Equipment
E20 Furnishings	E2010 Fixed Furnishings E2020 Movable Furnishings
F10 Special Construction	F1010 Special Structures F1020 Integrated Construction F1030 Special Construction Systems F1040 Special Facilities F1050 Special Controls and Instrumentation
F20 Selective Building Demolition	F2010 Building Elements Demolition F2020 Hazardous Components Abatement

G10 Site Preparations	G1010 Site Clearing G1020 Site Demolition & Relocations G1030 Site Earthwork G1040 Hazardous Waste Remediation
G20 Site Improvements	G2010 Roadways G2020 Parking Lots G2030 Pedestrian Paving G2040 Site Development G2050 Landscaping G2060 Airfield Paving
G30 Site Civil/Mechanical Utilities	G3010 Water Supply G3020 Sanitary Sewer G3030 Storm Sewer G3040 Heating Distribution G3050 Cooling Distribution G3060 Fuel Distribution G3090 Other Site Mechanical Utilities
G40 Site Electrical Utilities	G4010 Electrical Distribution G4020 Site Lighting G4030 Site Communication and Security G4090 Other Site Electrical Utilities

Appendix C: Facility Condition Index

This topic defines and discusses the BUILDER term "Facility Condition Index." The definition of this term changed starting with BUILDER Version 3.3.10, from the definition used by the Federal Real Property Council to a formula compatible with other BUILDER indexes by producing a value on a 0-100 scale where a higher number indicates better condition.

Note: In ROOFER, "FCI" stands for Flashing Condition Index, not Facility Condition Index.

The *Facility Condition Index* (FCI) is a financially based index showing the relationship between the cost of deferred M&R work and the Plant Replacement Value (PRV). BUILDER uses the following formula for FCI, which produces a value between 0 and 100. A higher value indicates better condition:

$$FCI = [1 - (\$current\ repair\ needs / \$PRV)] \times 100,$$

where *\$current repair needs* represents the total cost of [current repair needs](#) and \$PRV is the Plant Replacement Value. See the Definition section below for an explanation of what is and is not included in *\$current repair needs*.

IMPORTANT: Some organizations define FCI differently, as [\$cost of all deferred M&R work] / \$PRV, which should yield a result less than or equal to 1.0 if policy dictates that repair costs for an asset must not exceed the asset's replacement value.

Best Practice Recommendation: Regenerating the work plan before calculating the dollar amount of current repair needs will give you the most accurate result.

Definition of *\$current repair needs*

\$current repair needs includes:

- Work that became a requirement in the current fiscal year (work items of the current fiscal year).
- Work that became a requirement in a past fiscal year, but has not yet been performed and is still a requirement.

\$current repair needs does not include:

- Work that is currently funded for completion.
- Work scheduled for future years.

Glossary

Administrator

A user with BUILDER or ROOFER Administrator Role can administer users, assign users to Roles, and change software configuration settings.

Area Cost Factor

A multiplier that adjusts national average labor/material/equipment costs to better reflect local costs. For example, in a remote area with high shipping costs and a tight labor market, the Area Cost Factor might be 1.3. The Area Cost Factor is generally a number between 0.8 and 1.2 for continental U.S. locations, but it can be even greater than 2.0 in high-cost geographic locations.

ATFP

Antiterrorism Force Protection

BCCI

Building Component Condition Index - a condition rating for the target Building Component. For each Component, the BCCI is computed by taking the average of its Sections' CIs, weighted by replacement cost

BCI

Building Condition Index - a condition rating for the overall Building. For each Building, the BCI is computed by taking the average of its Systems' CIs (SCIs), weighted by replacement cost.

BFI

Building Functionality Index - computed from the results of a functionality assessment.

BPI

Building Performance Index - a measure of a Building's overall performance, derived from a weighted combination of the BCI and BFI, where the lower of the two values is given two-thirds of the weight and the higher of the two values is given one-third of the weight. If no functional assessment has been performed, the BFI is assigned a value of 100.

BRED

BUILDER Remote Entry Database (BuilderRED)

BUR

Built-up Roofing

CCI

Coating Condition Index

CI

Condition Index

CII

Component Importance Index. This index may be used to rank the relative importance of components against one another. An example of its use is in Work Configuration to hold different Component-Sections to different thresholds, or to prioritize them differently based on relative importance.

CM

Corrective Maintenance

CMC

Component material category

Complex CI

Complex Condition Index - a condition rating for the target Complex. The Complex CI is computed by taking the average of the BCIs of each Building in the Complex, weighted by replacement cost.

CSCCI

Component Section Coating Condition Index

CSCI

Component-Section Condition Index - a condition rating for the target Component-Section. The CSCI is computed by using the assessment data to calculate a deduct value, then subtracting that deduct value from the maximum possible rating of 100. The deduct value computation differs for each condition assessment method.

Equipment Make

The series, collection or line that the equipment is included in, if applicable. For example, a Trane® gas furnace might be designated as S9V2, XC95, or XV95.

ERDC-CERL

U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory

ESC

Emergency Service Call

FAFI

Functional Area Functionality Index

FCA

Facility Condition Assessment

FCI (ROOFER)

Flashing Condition Index. In ROOFER the FCI, as determined by inspection and/or algorithm, is used in the calculation of the Roof Condition Index (RCI).

FEMA

Federal Emergency Management Agency

FI

Functionality Index

HABS

Historic American Buildings Survey

HAER

Historic American Engineering Record

HPSB

High Performance and Sustainable Building

IAQ

Indoor air quality

ICI (ROOFER)

Insulation Condition Index

Icon Color

Icon color designates the condition of an SMS element, or whether it has yet been inspected at all. If the icon is gray, no inspection has been performed. Red, amber, and green icons indicate a red-, amber-, or green-level average condition of all sublevels below the designated icon, assuming that a rollup has been performed.

Inspection Supervisor

A user with Inspection Supervisor Role has all the rights of an Inspector, and can also create inspection schedules

Inspector

Person who performs inspections to be input into BUILDER or ROOFER. As a permissions Role, Inspectors can input and edit inventory information in Inventory mode, and can input and edit inspection information from the Condition Assessment screen.

Inventorior

A user with Inventorior Role can add and edit records below the Building level.

KBI

Knowledge-Based Inspection

M&R

Maintenance and Rehabilitation

Master Planner

A user with Master Planner Role has all the rights of a Work Planners, and can also generate multi-year work plan scenarios, and edit any and all data saved by other users of the program. Master Planner is the highest level of user privileges.

MBH

1,000 BTU/hour

MCI (ROOFER)

Membrane Condition Index

MDI

Mission Dependency Index - measures the relative importance of a Building

MOA

Memorandum of Agreement

MOU

Memorandum of Understanding

NAGPRA

Native American Graves Protection and Repatriation Act

PCBs

Polychlorinated biphenyls

PCI (ROOFER)

Panel Condition Index. The PCI is one component making up the Roof Condition Index (RCI) for a metal panel roof, along with the Insulation Condition index (ICI) if applicable, and the Flashing Condition Index (FCI).

PI

Performance Index. See also: BPI. The Performance Index is a weighted combination of the CI value and the FI value, with the lower of the two values being given two-thirds of the weight and the higher of the two values being given one-third of the weight.

PM

Preventative Maintenance

PM inspection

Preventative maintenance inspection

POM

Program Objectives Memorandum

PRV

Plant Replacement Value. For an inventory item above the Building level, this number will be the aggregate of the PRV of all Buildings included in that item.

RCI (ROOFER)

Roof Condition Index

RML

Remaining Maintenance Life

RPIE

Real property installed equipment

RSL

Remaining Service Life

SCCI

Subcomponent condition index, produced when using direct rating in a preventative maintenance (PM) inspection

SCI

System Condition Index - a condition rating for a Building System. For each System, the SCI is computed by taking the average of its Components' CIs,

weighted by replacement cost.

SCI (ROOFER)

Substrate Condition Index

Site CI

Site Condition Index - a condition rating for the target Site. The Site CI is computed by taking the average of the BCIs of each Building at the Site, weighted by replacement cost.

SMS

Sustainment Management System

SOW

Statement of Work

SP

Single Ply

SR

Shingle Roofing

SRM

Sustainment, Restoration, and Modernization

STIG

Security Technical Implementation Guide (DoD)

Stop gap repair

Repair that will keep the CI at its current level for one year, without further deterioration.

SUCI

Sample Unit Condition Index

UM

Unit of Measure. Examples: Each; LF (linear feet)

Work item

A discrete work activity applied to a single managed object such as a Component-Section, intended to improve its life cycle performance.

Work plan

A collection of work items and/or work projects planned for a Building, Site, Complex, or Organization.

Work planner

A user with Work Planner Role has all the rights of an Inspection Supervisors, and can also create and edit work plans, standards, policies, prioritization schemes, and RSL and cost books.

Work project

A grouping of work items to be managed, prioritized, funded, and executed as a single work effort. The work items selected for the work project need not be in the same System or even in the same Building. An example of a work project would be a renovation effort that affects multiple Systems in a Building.

Index

A

Add

- Building 82
- Building inventory using Building template 224
- Building template 236
- Complex 57
- Component 147
- Organization 17
- Section 165
- Section Detail 183
- Site 32
- System 129

Add an attachment

- to a Component 153

Additional Access

- Building properties checkbox 94

Area

- Building 92

Area Cost Factor 37

Attach a file

- to a Building 103
- to a Complex 68
- to a Section 175
- to a Section Detail 184
- to a Site 44
- to a System 135

B

BCI 95

BFI 95

BPI 95

BRED See **BuilderRED**

BUILDER Remote Entry Database (BRED) See **BuilderRED**

BuilderRED

- capabilities 197

- export data to 197

- import data from 210

- import images from 211

- rollup after import 212

- unlock files locked by BuilderRED 207

Building 115

- about 11, 80

- add 82

- Assign a Building to a Complex 86

- copy 216

- current status 115

- delete 112

- edit additional data 95

- edit General Information 88

- generate Building reports 110

- Mission Dependency Index (MDI) 115

- Move into a Complex 86

- name 83

- number 83

- status 115

- Use category 84

Building inventory

- add using templates 224

Building properties

- Additional Access 94

area 92
Building Use 90
Child-occupied 94
condition index 95
construction type 92
current status 90
Does Not Contain 91
effective year of status 91
FCI 95
functionality index 95
high security 94
historic building 94
Mission Dependency Index (MDI) 93
number of floors 92
performance index 95
replacement cost 92
Systems not present in Building 91
Unable to Inspect 91
year constructed 92
year renovated 92

Building status
 using to track non-current Buildings 118

Building status property 84

Building template
 add 236
 add Building inventory using 224
 copy Building inventory to 234
 definition 222
 delete 250
 edit 244
 export 253

- import 231
- manage the template library 252
- overview 221

Building templates 224, 234

Building use 90

Building Use category

- assign to Building 84

C

Child-occupied facility

- Building properties checkbox 94

Classification of building subparts 126, 262

Complex

- about 11, 56
- add 57
- Assign a Building to Complex 86
- delete 78
- edit 61
- generate Complex reports 76

Component

- about 12, 122, 147
- add 147
- delete 162
- edit 149
- generate Component report 160
- table of Systems and Components 126

Component-Section See **Section**

Component subtype 166

Copy 218

- Building 216
- Building inventory to template 234

- inventory to another Building 216
- location factors 35
- Sections 218
- Copyright 2
- CSCI
 - current estimated 171
 - latest inspection 170
- Current status
 - Building 90
- Current status (Building) 115, 118

D

- Delete
 - Building 112
 - Building template 250
 - Complex 78
 - Component 162
 - Organization 28
 - Section 193
 - Section Detail 190
 - Site 54
 - System 145
- Disclaimer 2
- Does Not Contain
 - Building Systems not present 91

E

- Edit
 - additional Building inventory data 95
 - Building General Information 88
 - Building template 244

Complex 61
Component 149
Organization 20
Section 168
Section Detail 187
Site 36
System 131
Effective year of status
 Building 91
Embedded Building Models 214
'Estimated' checkbox 167
Estimating Building Inventory 214
Export
 BuilderRED data 197
 Building template 253
 report 258

F

Facility Condition Index (FCI) 265
FCI 95, 265
Floors
 Building 92

H

High security
 Building properties checkbox 94
Historic building
 Building properties checkbox 94

I

Import

- BuilderRED data 210
- Building template 231
- images from BuilderRED 211

Inheritance 32

Inspection tools *See also* **BuilderRED**

Inventory

- copy 216
- planning 10
- rollup 13
- suggestions 124
- unlock inventory files 207

Inventory files

- unlock 207

L

Location factors 37

- copy 35
- lookup location 35-36

M

Material/equipment category 166

MDI 93

Mission Dependency Index (MDI) 115

Move Building into a Complex 86

N

NAVFAC UNIFORMAT 126, 262

Number of floors

- Building 92

O

Organization

about 10, 16

add 17

delete 28

edit 20

P

Planning inventory 10

Property inheritance 32

PRV 22, 39

R

Reference settings 23, 40

Replacement cost

Building 92

Report

export 258

generate 256

select 256

view 256

Rollup

inventory 13

S

Section

about 12, 122, 164

add 165

delete 193

edit 168

generate Section report 191

Section Detail 183

add 183

delete 190

edit 187

view attachments 188

Site

about 11, 31

add 32

delete 54

edit 36

generate Site reports 52

number of Sites to establish 31

Subcomponent 12

System

about 11, 121, 129

add 129

delete 145

edit 131

generate System reports 142

table of Systems and Components 126

T

Template library 252

Toolbar

Building content area toolbar 80

Building templates popup toolbar 253

Complex content area toolbar 63

Section content area toolbar 169

Section Detail content area toolbar 187

Track non-current Buildings 118

U

Unable to Inspect

 Building 91

UNIFORMAT 11, 126, 262

Unlock inventory files 207

V

View

 report 256

 Section Detail 188

W

Welcome 3

Y

Year constructed

 Building 92

Year renovated

 Building 92