Archibus User Guide

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Navigating ARCHIBUS

Logging In

https://somt.thebuildingpeople.cloud/archibus/

Need Account Access? Contact Steve Faherty at 406-422-2080 or sfaherty@mt.gov for assistance.

Using the Process Navigator

The Process Navigator organizes functions in a hierarchical structure:

1. **Applications** - Major system modules (select "Condition Assessment")
2. **Roles** – Tasks may be grouped into Roles (Assessment Administrator, Assessment Manager, Assessment Worker")
3. **Tasks** - Specific functions you can perform
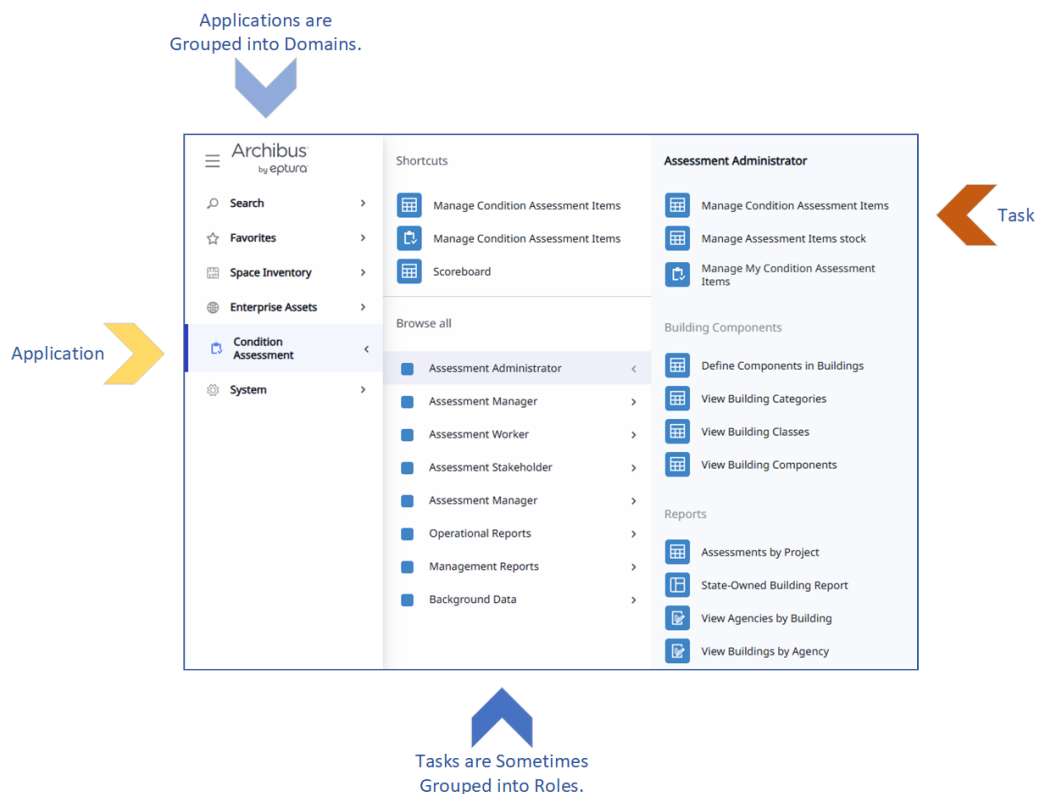
Generating Building Components

Building Components are the items that make up a building's structure such as Footings/Foundation Walls, Insulation, Ceilings, Wall Finishes, etc.

Each building must have the building components defined before assessment projects can be created. This is a one-time process.

1. Navigate to: **Condition Assessment > Assessment Administrator > Define Components in Building**
2. Find your building using filter boxes. Archibus uses fuzzy search logic here. For example, if you enter **johnson** in the **Building Name** filter field, you will get all buildings with "johnson" in the name:

	Site Code	Building Code	Building Name
			johnson
Edit	HOSPITAL	M3679	Johnson House Group Home
Edit	MSU	M4030	AJM Johnson Hall
Edit	MSU	M4109	Leon Johnson Hall
Edit	MAES-BART	M4215	Johnson Family Livestock (Bls2)
Edit	MSU	M4413	Leon Johnson Hall

3. Click **Edit** to the left of your building.
4. Choose **Building Category** from the available list.
5. Set the **Building Age Code** to "D".
6. Click **Save.**
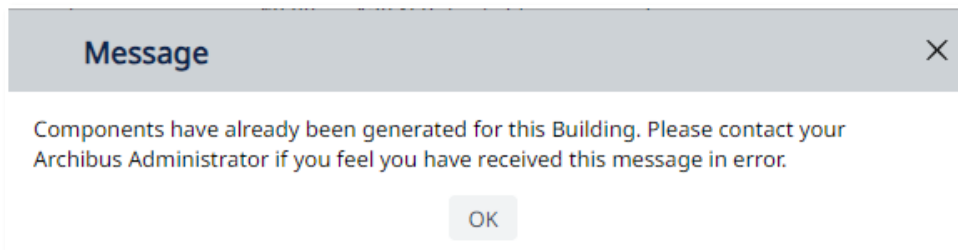7. Click **Generate Components**

When components have been generated, you will get a confirmation message. Click OK and close the building information box
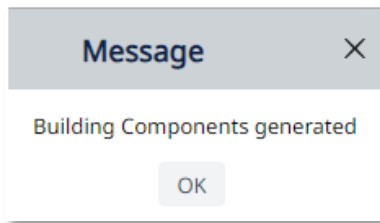
NOTE: If components have already been generated you will get a message that the components have already been generated. If you need to redefine a building, contact Steve Faherty to clear the building components:

Now when you click on the building name, you will see the list of components that have been generated for this building.
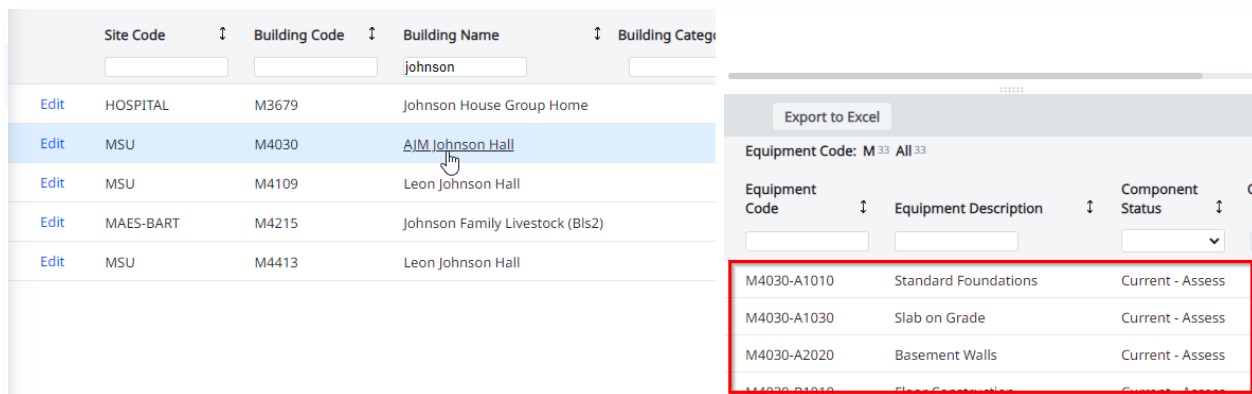
Creating an Assessment Project

An assessment project is created for each new assessment of the building. Make sure you have noted the building code (e.g. M0053) before starting. You can always search for it, but it is easier if you have it on hand.

Create a New Assessment Project

1. Navigate to: **Condition Assessment > Assessment Administrator > Manage Condition Assessment Items** You will see a list of projects that have been created. A new project must be created for each assessment.

2. In the **Projects** pane (left side of screen), click the **+** icon to create a new project.

3. Enter the required project information:

- **Project Code***: Use format YYYY-AGENCY-BUILDING NAME (e.g., 2025-DOA-FWP HQ).
- **Project Name**: Descriptive name (e.g., 2025 FWP Headquarters Assessment).
- **Project Status**: Set to "Issued-In Process" for active projects.
- **Start/End Dates**: Assessment timeframe.
- **Project Contact***: Select N/A (only option)
- **Site Code***: Will auto-populate when **Building Code** is selected
- **Building Code***: Enter the building to be assessed (use search button if needed)
- **Project Description**: Additional notes about project scope

*Required Fields

4. Click **Save** to create the project, then **Close**.

Generate Assessment Records

Once you've created a project, you need to generate the specific building component records to be assessed.

1. Select your project in the **Projects** pane by clicking on the **Project Code.**
2. Click the **Generate Assessment Records** button.


3. Enter the required project information in the form:
   a. **Building Code**: Select the building by typing in the code or searching for it.
   b. **Site Code**: Auto-populated from selected **Building Code**.
   c. Select the **Equipment With** radio button.
   d. Click the 3 dots in the Equipment Standard box and choose **BLDG COMPONENT**

4. Click the **Generate Assessment Records** button. The system will generate assessment records for all building components based on the building profile. If you repeat this process when records already exist, you will generate duplicate records. Select all components then click **Delete Selected**. You can then repeat the process to generate the records again.
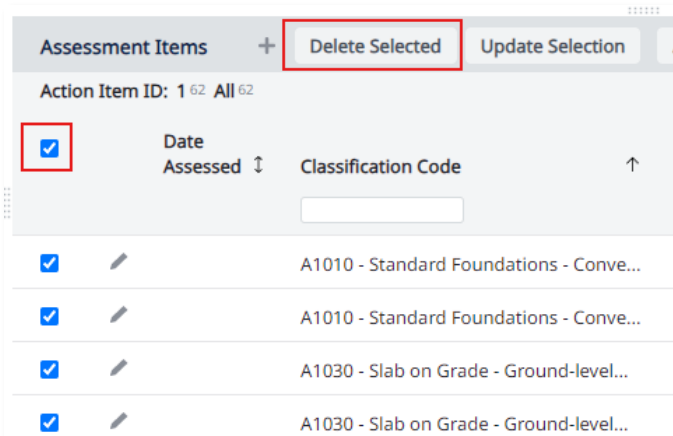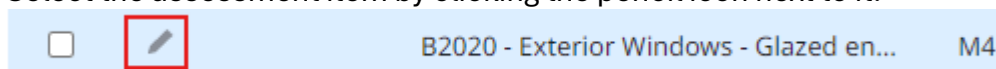

Entering Assessment Data in Archibus

Navigate to: **Condition Assessment > Assessment Administrator > Manage Condition Assessment Items.**

Find your assessment project using filter boxes or by scrolling the list of projects. Click on the project code or project name.
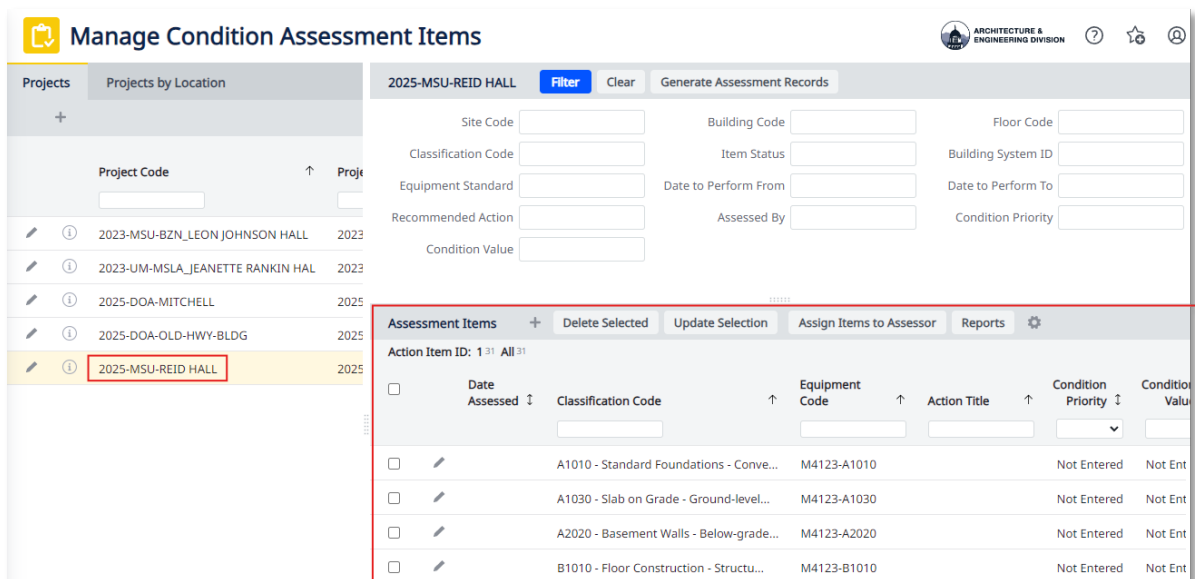
Recording Assessment Data in Web Central

1. Select the assessment item by clicking the pencil icon next to it.

2. Complete the assessment form with the following information:
   - **Action Title:** A short, descriptive label for a specific recommended corrective action associated with the building component deficiency. (e.g., "Replace Roof Membrane", "Repair HVAC Controls").
   - **Condition Priority:**

1. Immediate Life Safety	Situations or conditions that pose an immediate danger to life, limb or property, if the deficiency is not corrected.
2. Damage / Wear-out	Potential for serious damage to the building or the building components if the deficiency is not corrected.
3. Codes / Standards/ Energy	(1) Building codes and/or institutional construction standards that were not met during construction or renovation. Excludes grandfathered deficiencies that result from changes in codes enacted after the original construction. (2) Operating systems that require upgrading to reduce energy consumption.
4. Future Enhancements	Renovation/Adaptive, Life Safety/Code upgrades, i.e., ADA. These items are not calculated as part of the building's total deferred maintenance but can be used to note other building needs.

- **Condition Value**
  - New
  - Routine Maintenance
  - Minor Repair
  - Major Repair
  - Replacement

  The **CSI Rating Description List** is customized for each **Classification Code**. This ensures assessors are using the same criteria to set the condition value. The formatting of the list may make it difficult to read. Simply roll over the list and a popup box will show the list in a more readable format.
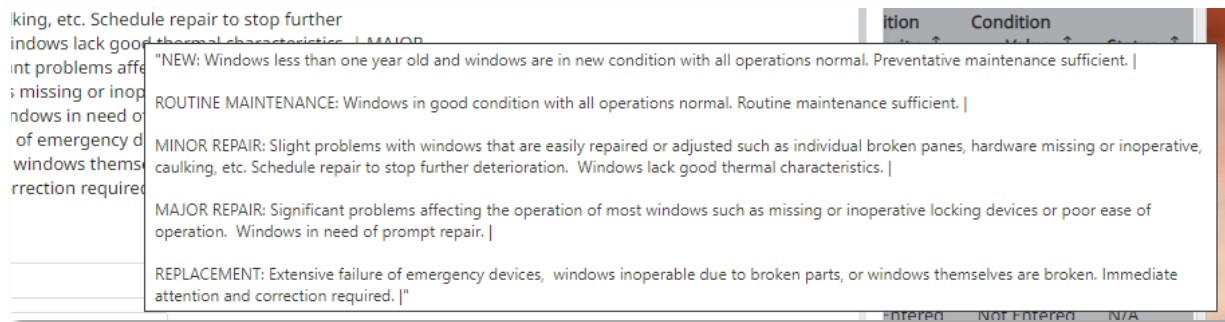
- **% Component is Deficient**: What percentage of the component is affected.
- **Recommended Action**: Repair, Replace, Monitor, etc.
- **Problem Location**: Specific area within the building.
- **Description**: Detailed notes about observed conditions. Make sure you enter notes here. This information shows up on the FCA report.
- **Date to Perform**: When remediation should occur
- **Date Required**: Final deadline for remediation

3. At the bottom of the form, expand the **Documents** section to add photos or other documents to the assessment item.

4. Click **Save** to record your assessment data.

Recording Multiple Deficiencies for the Same Component

In many cases, assessors may identify more than one deficiency for a single building component. Each deficiency must be recorded as a separate entry.

To do this, you must duplicate the component record. Duplicating allows you to create multiple entries under the same classification code, each representing a unique deficiency. When a component is duplicated, it retains its assigned percentage of the building. For example, if B3010 Roof Coverings accounts for 1.6% of the building, each duplicate will also represent 1.6%.

How Archibus Assigns Building Percentages

- Each existing component in the building profile carries a set percentage of the overall structure (e.g., D3040 – Distribution Systems might represent 2.64% of the building).
- If a component is duplicated to record multiple deficiencies, Archibus assigns the same percentage to each duplicate.
- If a component is changed to another classification, its original percentage is assigned to the new classification. For instance, if D3040 Distribution Systems (2.64% of entire building) is changed to D3090 Other HVAC Systems, D3090 represents 2.64% of the overall building.
- If a new component is created that does not exist in the building profile, Archibus assigns it a value of 0% of the building. This is appropriate for documenting informational notes, missing systems, or future enhancements, since they can be tracked in FCA reports without impacting the FCI.

If you create five B3010 records to represent five distinct deficiencies, the total of all assigned "% Component is Deficient" values must not exceed 100%. This ensures the Facility Condition Index (FCI) accurately reflects the extent of deterioration for that component and does not become artificially inflated.

Example:
An assessor identifies three separate issues with the roof covering (B3010):

- Blistering on membrane
- Damaged flashing at mechanical curb
- Ponding & drainage issues.

To enter this into Archibus:

1. Locate the existing B3010 Roof Coverings component in the project.

2. Click the **+** icon. You may receive an error message. Just click OK to dismiss. If you just click the **+** icon without selecting a component, a new blank component will be created.

3. Retain the **Classification Code** (B3010) for each new record.
4. Enter distinct **Action Titles** and **Descriptions** for each deficiency.
5. Assign a percentage to each record under **% Component is Deficient**. Ensure that all records do not exceed 100% for all components with the same **Classification Code**.
6. Click **Save** to record the assessment data.

Example of Incorrect assignment of *% of Component that is Deficient*

The *% of Component that is Deficient* field does not ask whether a deficiency exists. It asks:

What percentage of this component is affected by the specific deficiency?

If multiple deficiencies exist under one component, allocate percentages across them so that the combined total does not exceed 100% of the component.

Example – B2020 Exterior Windows (2.38% of building):

An assessor identifies:

- Broken seals = 6% of B2020
- Damaged frames in one wing = 25% of B2020
- Inoperable latches in several classrooms = 1% of B2020

Correct entry:

- Broken seals: *% of Component that is Deficient* → 6%
- Damaged frames*: % of Component that is Deficient* → 25%
- Inoperable latches: *% of Component that is Deficient* → 1%
- **Total = 32% of B2020 = 0.76% of the entire building (32% × 2.38%).**

Incorrect entry:

- Each deficiency marked as 100% under *% of Component that is Deficient*
- The total deficiency for B2020 is now 300% or 7.14% of the entire building.
- **This overstates the deficiency by 839% and inflates the FCI.**

Determining a Deficiency Percentage

The % of Component that is Deficient field represents the extent to which a building component is deteriorated or not functioning as intended. This percentage is used in FCI calculations and must be estimated based on both objective asset data and field observations.

Factors to Consider

- **Asset Age vs. Expected Useful Life**
  Use industry or manufacturer standards to estimate the expected life of the component.
    - Roof: 20–30 years (depending on material)
    - Plumbing: 50 years
    - Electrical: 50 years
    - HVAC: 50 years (unless otherwise noted)
    - Other systems: per specifications or commissioning records
- **Maintenance History**
    - Number and type of work orders since the last FCA
    - Completed projects addressing the component
    - Partial replacements or upgrades
- **On-Site Observations and Trade Input**
    - Physical deterioration (e.g., corrosion, wear, leaks, failures)
    - Input from facility staff or tradespeople
    - Insights from previous FCA reports

Calculating Deficiency Based on Age (Useful Life)

To estimate how much of a component's useful life has been consumed and how that translates to a deficiency percentage use the following calculation:

Formula

(Age of Component ÷ Expected Useful Life) × 50 = Age-Based Deficiency %

The result represents **up to 50%** of the total deficiency score. The remaining 50% is based on field observations and maintenance history.

Examples

Example 1: 12-Year-Old Roof with 20-Year Life

(12 ÷ 20) × 50 = 30%

Age-Based Deficiency = 30%

Example 2: 25-Year-Old Plumbing System with 50-Year Life

(25 ÷ 50) × 50 = 25%

Age-Based Deficiency = 25%

Example 3: 18-Year-Old HVAC Unit with 30-Year Life

(18 ÷ 30) × 50 = 30%

Age-Based Deficiency = 30%

Notes:

- If the component is **older than its expected life**, cap the age-based deficiency at **50%**.
- The remaining portion of the total deficiency (up to another 50%) should be based on FCA team observations: visible damage, work orders, operational failures, etc.
- Final Total Deficiency = **Age-Based Deficiency + Observed Deficiency** (max 100%).

Deficiency Assessment Examples

The following examples demonstrate how to apply the age-based deficiency formula combined with field observations to determine accurate deficiency percentages.

Example 1: Roof Assessment - End of Useful Life

Component Details:

- **System:** Roof
- **Classification Code:** B3010 Roof Covering
- **Age:** 20+ years
- **Expected Useful Life:** 20 years

Calculation:

- **Age-Based Deficiency:** Component exceeds expected life = 50% (maximum)
- **Field Observations:** Multiple roof leaks and membrane cracking = 25% additional deficiency
- **Total Deficiency:** 50% (age) + 25% (observed) = **75%**

Example 2: Plumbing System Assessment

Component Details:

- **System:** Plumbing
- **Classification Code:** D3020 Sanitary Waste
- **Age:** 30 years
- **Expected Useful Life:** 50 years

Calculation:

- **Age-Based Deficiency:** (30 ÷ 50) × 50 = 30%
- **Field Observations:** Several maintenance calls for slow drainage and corrosion on exposed lines = 15% additional deficiency
- **Total Deficiency:** 30% (age) + 15% (observed) = **45%**

Example 3: Electrical System Assessment

Component Details:

- **System:** Electrical
- **Classification Code:** D5010 Electrical Distribution
- **Age:** 40 years

- **Expected Useful Life:** 50 years

Calculation:

- **Age-Based Deficiency:** (40 ÷ 50) × 50 = 40%
- **Field Observations:** Inconsistent voltage reports and non-code-compliant panel labeling = 10% additional deficiency
- **Total Deficiency:** 40% (age) + 10% (observed) = **50%**

Example 4: HVAC System Assessment

Component Details:

- **System:** HVAC
- **Classification Code:** D3020 Heat Generating Systems
- **Age:** 20 years
- **Expected Useful Life:** 30 years

Calculation:

- **Age-Based Deficiency:** (20 ÷ 30) × 50 = 33%
- **Field Observations:** Combustion odors reported; signs of burner wear and control failure = 20% additional deficiency
- **Total Deficiency:** 33% (age) + 20% (observed) = **53%**

Key Reminders

- **Maximum age-based deficiency:** 50% (even if component exceeds expected life)
- **Total deficiency cap:** 100% maximum
- **Documentation:** Always record both age calculations and field observations in the **Description** field
- **Consistency:** Use the same evaluation criteria across similar components for accurate comparisons

Entering Data Without Affecting the Facility Condition Index (FCI)

In some cases, it's important to document observations or recommendations that **should not impact the Facility Condition Index (FCI)**. These entries provide valuable context for future planning or historical reference but are not considered current deficiencies.

When to Record Informational Notes

Use informational notes to capture observations such as:

- **Completed upgrades**
  Example: "Membrane replaced in summer 2020"
- **Recommendations for future improvements**
  Example: "Add and upgrade all building signage"
- **Preventative maintenance suggestions**
  Example: "Preventative inspection recommended for waste piping system"
- **Partial work completed during other projects**
  Example: "Some insulation replaced during roof project in 2020"

How to Record Informational Notes:

- Set **Condition Priority** = *Not Entered*
- Set **Condition Value** = *Not Entered*
- Set **% of Component that is Deficient = 0%**
- **Problem Location**: Optional (can be filled in or left blank)
- Enter a clear note in the **Description** field, such as:
  "Preventative inspection recommended for waste piping system"

This will appear in the FCA report but will not affect the FCI.

Documenting Missing Systems as Future Enhancements

Sometimes, a system may be **absent** from the building but still worth noting for future consideration. In these cases, record the observation under an **existing component** using the following method:

Example:

- **Component:** D3040 – Distribution Systems (2.64% of building)
- **Condition:** No mechanical ventilation system installed (building relies on operable windows)

How to Record:

- Set **% of Component that is Deficient = 0%**
- Set **Condition Priority** = **4. Future Enhancement**
- Enter a clear note in the **Description** field, such as:
  "Building lacks a mechanical ventilation system. Condition met code at construction but would be required by current standards. Not included in FCI."

This ensures the observation is included in reports without affecting the FCI calculation.

Summary Guidelines for Informational Notes or Future Enhancements

- **Do not duplicate components** unless splitting real deficiencies across parts of an existing system. Combined deficiency percentages must not exceed 100%.
- Use **existing components** with:
  - **% Deficient = 0**
  - **Condition Priority = Future Enhancement**
    ...to document **missing systems** or **non-critical upgrades**.
- Create **new components (with 0% of building)** only when:
  - The system **does not fit under any existing component**, or
  - The observation relates to a **future upgrade unrelated to current systems**

Creating a New Component

Click the **+** icon. Do not check any of the boxes next to existing components.

1. Enter the **Building Code**.
2. In the **Action Title**, begin with **"Note:"** (e.g., "Note: Roof Replaced in 2020").
3. Choose the Classification Code. You can find the code you want to record the note under by starting to type (typing A will show the Substructure elements, B will show Shell components, etc.)

or you can drill down to the component by clicking the 3 dots in the field.

1. Set the **Condition Priority**, **Condition Value**, **Recommended Action** and **% Component is Deficient** fields. These can be left blank or unchanged, or you can set any of them if you find it helpful. For example, you could set Condition Priority to **Codes/Standards/Energy** if you are noting an accessibility issue such as an ADA ramp needed at an entry. No matter what you set these fields to, it will not affect the FCI but it will be in the report.

2. Add full details in the **Description** field.

This "Note" component can be duplicated to add additional notes or observations.

Creating new components for notes ensures the information is visible in reports without skewing deferred maintenance totals or inflating the FCI.
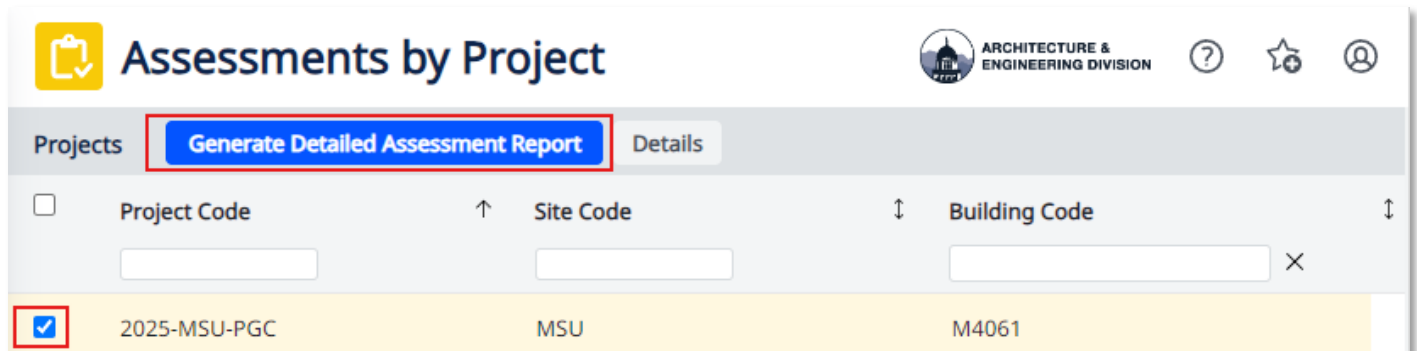
Generating the FCA Report

Navigate to: **Condition Assessment > Assessment Administrator > Deficiency Detail by Project – PDF**

1. Select the checkbox for your project and click "**Generate Detailed Assessment Report**"

The report will be created and displayed on the screen. Click the printer icon to print the report.