

Title: Facilities Condition Database Maintenance and Update
Department: Engineering Services
Effective Date: December 18, 2017

PURPOSE

Facilities condition assessments provide the basis for determining capital needs for correcting current deficiencies and avoiding future facilities deterioration. The assessment process identifies short-term and long-term deficiencies. Continuing the process after the initial assessment is critical. Maintaining timely and accurate records of facility conditions allows for the prioritization of funding, the establishment of procedures and the building of timelines for program management and ensures that the current use of database resources is accurate, effective and efficient. When facility equipment is added, replaced or when any part of an asset is renewed, the information must be collected and updated in the ISES database.

The purpose of this document is to provide guidelines to PPM personnel for gathering update information and data on improvements or changes to facilities. Collection of information must be done in a timely manner after such improvements or changes are made. This procedure will provide the training and tools needed to collect pertinent data, navigate the system, update facility condition assessments and enter new equipment information into the facilities condition database (ISES) program.

RESPONSIBILITY

Project Managers, Inspectors of Record, Supervisors, Shop Supervisors, PPM Administration and other assigned personnel will fill out the Facilities Condition Update Form in Appendix A and forward it to the ISES Database Administrator for entry into the ISES system. The ISES Database Administrator will update the system as needed, but no less than monthly, and forward a copy of the form to the MetaBim Administration, CMMS Administrator or Other party.

PROCEDURES

1. Facilities Planning Design & Construction Project Managers and Inspectors of Record are responsible for filling out the Facilities Condition Update Form in Appendix A at either the conclusion of a significant installation, the end of a project phase or at the end of a project for their assigned projects. They will fill out the form as completely as possible and then route the form to the ISES Database Administrator.
2. Supervisors, Shop Supervisors, PPM Administrators and other assigned personnel will review all DM Work Orders prior to completing any DM work order for applicability toward updating campus Deferred Maintenance (DM) records. If the work order to be completed does not merit

any update of campus DM records, such shall be noted on the work order in the comments sections and the work order can then be completed. If an update of campus DM records is necessary, then the party completing the work order will fill out the form as completely as possible and then route the form to the ISES Database Administrator.

The purpose of the Facilities Condition Update form is to record all changes to campus facility assets that affect assessed condition, value or life cycle of a facility or any component on or within that facility. When equipment is added or replaced it is to be added/updated in the ISES database. Record as much information about the equipment as possible.

Forward the Facilities Condition Update form to the ISES Database Administrator.

The ISES database administrator will update the following in ISES:

Base Year- Current year

Quantity- number of HP, Amps, windows etc.

Life Expectancy Adj.- Always starts at 0

Complexity Factor- 1

Identifier- Unique ID for the equipment. AHU2, Panel AXU1, Pump 3 etc.

Original Cost- may or may not be known

The ISES Database Administrator can replace an entire component of a building if the database is “like for like”, as in the case of air handlers or electrical panels. If a renewal is partial as in the case of a roof, windows, case work or plumbing fixtures then an update to the existing data base and the creation of a new component will be required. Instructions for both are below.

1. Inputting the Information into ISES- Updating existing equipment “like for like”:

Log into ISES

Click on Life Cycle Model



-Select the desired building from the left

Code	NAME
0001	MANZANITA HALL
0002	CYPRESS HALL
0003	NORDHOFF HALL
0004A	LIVE OAK HALL
0005	UNIVERSITY HALL
0006	SIERRA HALL
0007	SIERRA TOWER
0008	JEROME RICHFIELD HALL
0009	BAYRAMIAN HALL
0010	JACARANDA HALL
0016	REDWOOD HALL
0021	POLICE SERVICES (PARKING/PUBLIC SAFETY)
0022	CITRUS HALL

-Select the desired compent to be replaced on the right

Component: AH05 Description: AIR HANDLING UNIT - INDOOR (3.25-6 HP)		
Uniformat: D3040	Life Expectancy: 25	System Code: HV
Unit: HP	Inflated Labor: \$422.71	Inflated Material: \$5,196.84
Annual OM: \$0.00	Asset Type: AL	
Base Year: 2006	Quantity: 5	
Life Expectancy Adj.:	Complexity Factor: 1.00	
Identifier:		
Actual OM Cost: \$0.00	Original Cost: \$0.00	Replacement Cost: \$27,911.75

Component: AH06 Description: AIR HANDLING UNIT - INDOOR (6-9 HP)		
Uniformat: D3040	Life Expectancy: 25	System Code: HV
Unit: HP	Inflated Labor: \$348.11	Inflated Material: \$4,359.71
Annual OM: \$0.00	Asset Type: AL	
Base Year: 2006	Quantity: 8	
Life Expectancy Adj.:	Complexity Factor: 1.00	
Identifier: AHU-1A		
Actual OM Cost: \$0.00	Original Cost: \$0.00	Replacement Cost: \$37,406.66

Component: AH07 Description: AIR HANDLING UNIT - INDOOR (6-12 HP)		
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-Select Edit LCM from the bottom options

ation: AIR HANDLING UNIT - INDOOR (3.25-6 HP)
 Add LCM Edit LCM Delete LCM

-The following window will pop-up

Update Life Cycle Model

Filter Components

All

Unifomat: D3040 : Heat Distribution Systems

System Code: HV : HVAC

Component Data

Component: AH04

Description: AIR HANDLING UNIT - INDOOR (2.75-3.25 HP)

Unifomat: D3040 Life Expectancy: 25 System Code: HV

Unit: HP Inflated Labor: \$559.47 Inflated Material: \$4,682.96

Annual OM: \$0.00 Asset Type: AL

Model Data

Base Year: 1960 Quantity: 3 Life Expectancy Adj.: 31 Complexity Factor: 1.00

Identifier: AHU 2

Actual OM Cost: \$0.00 Original Cost: \$0.00 Replacement Cost: \$15,691.54

Save Next Save Cancel

-Update base year to current year

-Update the quantity based on the description, 3Hp or 5 tons etc.

-Update life expectancy to 0

-Update complexity factor

-Complexity factor can be change if the actual cost was less than the replacement cost adjusted for inflation- run report Facilities Renewal Plan to compare.

-Update the identifier if it is missing or the old name will no longer be used to identify the component. This is needed to clearly identify equipment

-Original cost- the ISES administrator needs to determine and enter the cost of replacement and update the complexity factor as needed to adjust future estimates.

-Click the save button- the record is updated

2. Partial update of existing asset

When a component is partially replaced the ISES administrator will need to update the existing record and create a new one. This is a two part process.

a. Update the existing record

Log into ISES

Click on Life Cycle Model



-Select the desired building from the left

Code	NAME
0001	MANZANITA HALL
0002	CYPRESS HALL
0003	NORDHOFF HALL
0004A	LIVE OAK HALL
0005	UNIVERSITY HALL
0006	SIERRA HALL
0007	SIERRA TOWER
0008	JEROME RICHFIELD HALL
0009	BAYRAMIAN HALL
0010	JACARANDA HALL
0016	REDWOOD HALL
0021	POLICE SERVICES (PARKING/PUBLIC SAFETY)
0022	CITRUS HALL

-Select desired component on right

Uniformat: D2020	Life Expectancy: 35	System Code: PL
Unit: SF	Inflated Labor: \$3.75	Inflated Material: \$1.50
Annual OM: \$0.00	Asset Type: TH	
Base Year: 1960	Quantity: 73,208	
Life Expectancy Adj.: 25	Complexity Factor: 0.99	
Identifier:		
Actual OM Cost: \$0.00	Original Cost: \$0.00	Replacement Cost: \$411,845.21
Component: RR07 Description: ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TOR		
Uniformat: B3010	Life Expectancy: 20	System Code: ES
Unit: SF	Inflated Labor: \$3.05	Inflated Material: \$0.97
Annual OM: \$0.00	Asset Type: AL	
Base Year: 1987	Quantity: 47,500	
Life Expectancy Adj.: 6	Complexity Factor: 1.00	
Identifier: MAIN		
Actual OM Cost: \$0.00	Original Cost: \$0.00	Replacement Cost: \$207,766.73
Component: RR07 Description: ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TOR		

-Select Edit LCM from the bottom options

ation: AIR HANDLING UNIT - INDOOR (2.25 E HP)
 Add LCM Edit LCM Delete LCM

-The following window will pop-up

Update Life Cycle Model

88

Filter Components

All

Unifomat B3010 : Roof Coverings

System Code ES : EXTERIOR

Component Data

Component: RR07

Description: ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TORCH

Unifomat: B3010 Life Expectancy: 20 System Code: ES

Unit: SF Inflated Labor: \$3.05 Inflated Material: \$0.97

Annual OM: \$0.00 Asset Type: AL

Model Data

Base Year: 1987 Quantity: 47,500 Life Expectancy Adj.: 6 Complexity Factor: 1.00

Identifier: MAIN

Actual OM Cost: \$0.00 Original Cost: \$0.00 Replacement Cost: \$207,766.73

-Do not update base year

-Update the quantity to reflect the area not updated. Example 20,000 sq. ft. of roof was replaced, the quantity would be updated to 27,500 sq. ft. (47,500-20,000)

-Do not adjust any other items on the page

-Click the save button- the record is updated

Component: RR07	Description: ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TORCH		
Unifomat: B3010	Life Expectancy: 20	System Code: ES	
Unit: SF	Inflated Labor: \$3.05	Inflated Material: \$0.97	
Annual OM: \$0.00	Asset Type: AL		
Base Year: 1987	Quantity: 27,500		
Life Expectancy Adj.: 6	Complexity Factor: 1.00		
Identifier: MAIN			
Actual OM Cost: \$0.00	Original Cost: \$0.00	Replacement Cost: \$120,286.00	

The record now reflects the amount of roof left to be renewed under the old component entry

b. Add a new component for partial renewals

Log into ISES

Click on Life Cycle Model

-Select the desired building from the left

Code	NAME
0001	MANZANITA HALL
0002	CYPRESS HALL
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0004A	LIVE OAK HALL
0005	UNIVERSITY HALL
0006	SIERRA HALL
0007	SIERRA TOWER
0008	JEROME RICHFIELD HALL
0009	BAYRAMIAN HALL
0010	JACARANDA HALL
0016	REDWOOD HALL
0021	POLICE SERVICES (PARKING/PUBLIC SAFETY)
0022	CITRUS HALL

-Select Add LCM from the bottom options

Options: AIR HANDLING UNIT INDOOR (2.25 E HP)
Add LCM Edit LCM Delete LCM

-The following window will pop up

Update Life Cycle Model

Filter Components

All
 Uniformat
 System Code

Component Data

Component:

Description:

Uniformat: Life Expectancy: System Code:
Unit: Inflated Labor: \$0.00 Inflated Material: \$0.00
Annual OM: \$0.00 Asset Type:

Model Data

Base Year: Quantity: Life Expectancy Adj.: Complexity Factor:

Identifier:

Actual OM Cost: Original Cost: Replacement Cost:

-Click on Uniformat

-From the drop down menu select the code that matches the existing component uniformat

-Under component data use the drop down menu to select the same system description as the existing component. This is a critical field as it will be used to calculate future replacement costs and is linked to the ISES costing library. Once selected the information will auto-populate from the library.

Once the component data auto-populates insert the data from the Facilities Condition Update Form.

-Input base year to current year

-Input the quantity for example 20,000 sq. ft.

-Set life expectancy to 0

-Update complexity factor

-it is important that the ISES Database Administrator adjust the complexity factor to reflect the actual projected cost of replacing the equipment. This will allow for better forecasting when the component reaches the end of its useful life cycle.

-Enter a brief description of the area renewed

-Original cost- the actual cost of installation if known.

Update Life Cycle Model

Filter Components

All

Uniformat

System Code

Component Data

Component:

Description: ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TORCH

Uniformat: B3010	Life Expectancy: 20	System Code: ES
Unit: SF	Inflated Labor: \$3.05	Inflated Material: \$0.97
Annual OM: \$0.00	Asset Type: AL	

Model Data

Base Year: Quantity: Life Expectancy Adj.: Complexity Factor:

Identifier:

Actual OM Cost: Original Cost: Replacement Cost:

-Click the save button- the record has been added to the asset and the partial renewal is now included in lifecycle projections.

3. Inputting the Information into ISES- Updating existing asset with “new” component:

Log into ISES

Click on Life Cycle Model



-Select the desired building from the left

Code	NAME
0001	MANZANITA HALL
0002	CYPRESS HALL
0003	NORDHOFF HALL
0004A	LIVE OAK HALL
0005	UNIVERSITY HALL
0006	SIERRA HALL
0007	SIERRA TOWER
0008	JEROME RICHFIELD HALL
0009	BAYRAMIAN HALL
0010	JACARANDA HALL
0016	REDWOOD HALL
0021	POLICE SERVICES (PARKING/PUBLIC SAFETY)
0022	CITRUS HALL

-Select Add LCM from the bottom options

ation: AIR HANDLING UNIT - INDOOR (2.25 E UN)
 Add LCM Edit LCM Delete LCM

-The following window will pop up

Update Life Cycle Model

Filter Components

All

Uniformat

System Code

Component Data

Component:

Description:

Uniformat: Life Expectancy: System Code:

Unit: Inflated Labor: \$0.00 Inflated Material: \$0.00

Annual OM: \$0.00 Asset Type:

Model Data

Base Year: Quantity: Life Expectancy Adj.: Complexity Factor:

Identifier:

Actual OM Cost: Original Cost: Replacement Cost:

-Click on Uniformat

-From the drop down menu select the best code and general description for the component to be added. If you are unsure look at a similar component in the system for assistance.

-Under component data use the drop down menu to select the best system description, i.e. Air Handler (35-45hp) for a 40 horse power unit. This is a critical field as it will be used to calculate future replacement costs and is linked to the ISES costing library. Once selected the information will auto-populate from the library.

Once the component data auto-populates insert the equipment data from the FCU update form into the model data section.

-Input base year to current year

-Input the quantity based on the description, 3Hp or 5 tons etc.

-Set life expectancy to 0

-Update complexity factor

-it is important that the ISES Database Administrator adjusts the complexity factor to reflect the actual projected cost of replacing the equipment. This will allow for better forecasting when the component ends the end of its useful life cycle. If cost is unknown then enter a 1.

-Enter a unique name for the component. This is needed to clearly identify equipment

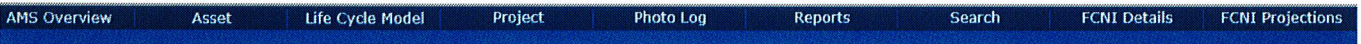
-Original cost- the actual cost of installation if known.

-Click the save button- the record has been added to the asset.

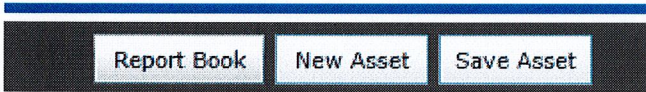
4. Creating a new Asset:

When a new building is constructed or purchased it will need to be added into the system.

To add new asset log onto ISES




-From the main menu click on asset.



-In the right and corner click on New Asset

The following window will open:

Details	Summary	Dwgs/Docs/Notes	Custom Labels	Carbon Footprint
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Add Image

Asset Code:

Asset Name:

Asset Locked

Site:

Facility Type:

Year Built:

Original Cost:

Soft Cost:

Floor

Add Floor

Inspection Date:

FRC:

FRC Base Year:

FRC Inflated:

Gross Sqft:

Net Sqft:

Useful Life:

Mail Date:

Fill in the following

- Asset Code: use the current month and year. Example May of 2015 =52015
- Asset Name: insert the name of the building
- Site can be selected from the drop down menu
- Facility type can be selected from the drop down menu
- Year Built
- Inspection Date- enter day of audit or current date if preferred
- FRC: enter the current year, i.e.2015
- Gross Sq. Ft.

Enter any additional information available. The Summary, Drawings, Labels and Carbon Footprint tabs can be used to add additional information. The more information entered the more complete the record will be.

When you have completed entering the information click on Save Asset in the right hand corner.

Report Book	New Asset	Save Asset
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The asset may now be found in the Life Cycle Model section and components can be added using section 2 of this procedure.

5. Updating Life Expectancy on Components

When the Life Cycle Model forecasts a component for replacement and there is a desire to extend the life of that component the Life Expectancy number should be updated. The Life Expectancy can be extended or reduced depending on the equipment condition.

The ISES Database Administrator should have the component inspected by a qualified person. The ISES Database Administrator should retain the Facility Condition Update Form as justification for the adjustment.

To update the life expectancy of a component log into ISES

Click on Life Cycle Model



-Select the desired building from the left

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0001	MANZANITA HALL
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0006	SIERRA HALL
0007	SIERRA TOWER
0008	JEROME RICHFIELD HALL
0009	BAYRAMIAN HALL
0010	JACARANDA HALL
0016	REDWOOD HALL
0021	POLICE SERVICES (PARKING/PUBLIC SAFETY)
0022	CITRUS HALL

-Select the desired component to be replaced on the right

Component: AH05 Description: AIR HANDLING UNIT - INDOOR (3.25-6 HP)		
Uniformat: D3040	Life Expectancy: 25	System Code: HV
Unit: HP	Inflated Labor: \$422.71	Inflated Material: \$5,196.84
Annual OM: \$0.00	Asset Type: AL	
Base Year: 2006	Quantity: 5	
Life Expectancy Adj.:	Complexity Factor: 1.00	
Identifier:		
Actual OM Cost: \$0.00	Original Cost: \$0.00	Replacement Cost: \$27,911.75

Component: AH06 Description: AIR HANDLING UNIT - INDOOR (6-9 HP)		
Uniformat: D3040	Life Expectancy: 25	System Code: HV
Unit: HP	Inflated Labor: \$348.11	Inflated Material: \$4,359.71
Annual OM: \$0.00	Asset Type: AL	
Base Year: 2006	Quantity: 8	
Life Expectancy Adj.:	Complexity Factor: 1.00	
Identifier: AHU-1A		
Actual OM Cost: \$0.00	Original Cost: \$0.00	Replacement Cost: \$37,406.66

Component: AH07 Description: AIR HANDLING UNIT - INDOOR (6-12 HP)		
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-Select Edit LCM from the bottom options

ation: AIR HANDLING UNIT - INDOOR (3.25-6 HP)
 Add LCM Edit LCM Delete LCM

-The following window will pop-up

Update Life Cycle Model 23

Filter Components

All

Uniformat D3040 : Heat Distribution Systems

System Code HV - HVAC

Component Data

Component: AH04

Description: AIR HANDLING UNIT - INDOOR (2.75-3.25 HP)

Uniformat: D3040 Life Expectancy: 25 System Code: HV

Unit: HP Inflated Labor: \$559.47 Inflated Material: \$4,682.96

Annual OM: \$0.00 Asset Type: AL

Model Data

Base Year: 1960 Quantity: 3 Life Expectancy Adj.: 31 Complexity Factor: 1.00

Identifier: AHU 2

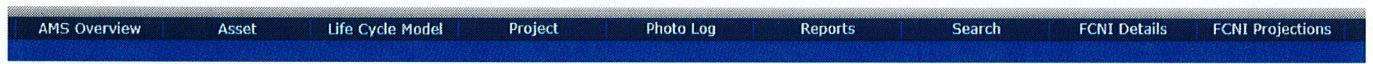
Actual OM Cost: \$0.00 Original Cost: \$0.00 Replacement Cost: \$15,691.54

- Adjust life expectancy: a positive number will add years to the life cycle and a negative number will remove years from the life cycle.
- Click save

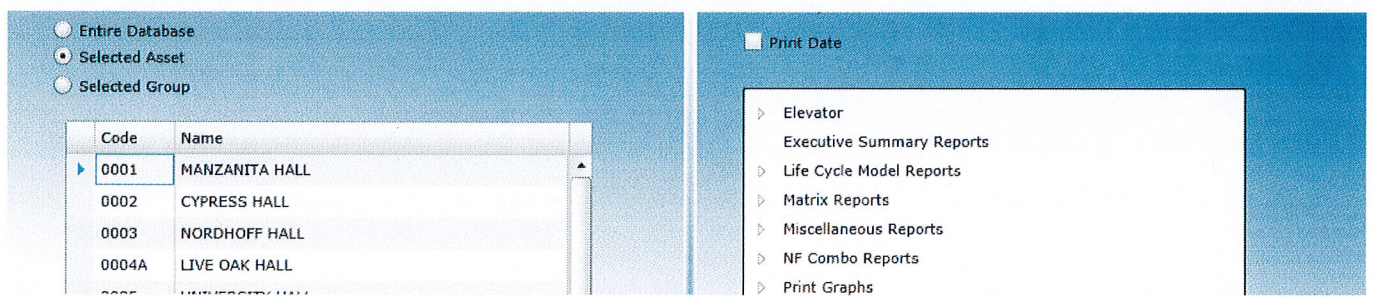
The life expectancy of the asset is now adjusted.

6. Reports:

- To run a report in ISES log onto the system.
- From the main tool bar click on reports



-Select the building on the left and NF Combo Reports on the right



-The menu will expand and give you the following choices

▲ NF Combo Reports

- 1.1 : Combo Bld Exec Sum
- 2.1 : FR Budget Pro-Forma
- 2.2 : FR Needs by System
- 2.3 : Facilities Renewal Plan
- 2.4 : Project Classification Summary Report
- 2.5 : Category Systems Code Report
- 3.1 : Project Detail Report
- 4.1 : Asset Component Inventory
- 4.2 : Recurring Cost by Year
- 4.3 : Recurring Component Projections Graph
- 6.1 : Photo Log

-Simply click the desired report to run.

REFERENCES

Definitions:

Asset: A building or area on campus.

Asset Component: A fixture within an asset, this can define an air handler, pump, fire alarm, electrical service, plumbing fixture, door, hardware, window, roof, etc.

Base year: The year of installation.

Life expectancy Adj.: A value in years added or subtracted to an asset component's expected life span.

Complexity Factor: An adjustment to the actual cost that can be used to adjust future replacement costs for asset components.

Component: The description of the component in ISES that is used to calculate replacement costs.

Identifier: A unique name given to an asset component to allow specific unit identification.

Life Cycle Model: Reoccurring or repeating costs over the life of a building- This would be considered deferred maintenance.

Original cost: The cost to install or replace an existing component.

Project: Areas of deficiency identified by ISES during an audit. These would be a onetime costs to update.

Qualified Person: A person with the background, experience and training to be considered a subject matter expert.

Quantity: Any number of fixtures, horsepower of air handler, tonnage of air conditioning, amperage of electrical service.

Replacement cost: An estimate based on standard costing and quantity information formulated from the ISES library.

Uniformat: A general description of an asset component in the ISES database.

APPROVED



Jason R. Wang, Senior Director

05-16-18

Date

APPENDIX A

Facilities Condition Update Form



CALIFORNIA
STATE UNIVERSITY
NORTHRIDGE

FACILITIES CONDITION UPDATE FORM

PHYSICAL PLANT MANAGEMENT (FACILITY CONDITION UPDATE)

Report all building renewal items. When a building system, fixture, finish, roof or component is replaced or updated, it must be reported to the ISES Database Administrator.

Type of renewal (check one):

Mechanical	Hardscape	
Electrical	Case Work	
Plumbing	Window	
Paint	Roof	

Date of renewal: _____

Asset Tag # (if applicable): _____

ISES TAG # (if applicable): _____

Identifier/Asset name _____

Project name **and/or** work order number: _____

Describe the renewal. Be as descriptive as possible. Examples: Replace air handler 2, Paint 1200 sq. ft. of wall space, made structural improvement, remodeled space, etc. Include your name and contact information.

ROUTING

Updated ISES DATABASE

Copy to:

MetaBim Administrator CMMS Administrator Other _____