

Design Master Electrical RT Tutorial

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Design Master Electrical RT Tutorial

You are reading the tutorial for Design Master Electrical RT 2.0+.

These tutorials teach you the basics of using the software. The [Where to Learn More](#) section at the end of the tutorial points you to the other resources we have available.

The tutorials are sequential and build on each other. It is simplest to follow them from start to finish.

Tutorial Resources

Download the tutorial ZIP file from our website that corresponds to your Revit version:

- [Revit 2018](#)
- [Revit 2019](#)
- [Revit 2020](#)
- [Revit 2021](#)
- [Revit 2022](#)

The instructions in these tutorials are based upon the Revit project contained in this ZIP file. The ZIP file also contains a PDF copy of the tutorial. Extract the ZIP file to a folder where you can easily find it again.

You can also [watch the video tutorial](#), which follows these tutorials.

Getting Help

Contact us if you need any help while working through the tutorials.

Our support hours are Monday through Friday, 9am to 5pm Eastern time.

Call 866-516-9497 x2, email support@designmaster.biz, or [contact us via live chat](#).

Definitions: Distribution Equipment and Branch Circuit Device

We have two definitions that are unique to our software: distribution equipment and branch circuit device. Revit does not have categories that exactly match these terms. The electrical industry as a whole does not have words that match these terms. We use these terms in our software because they help explain how our calculations use the Revit model.

Distribution Equipment

Distribution equipment refers to the equipment in the project that provides power to other equipment or devices.

In real-world terms, distribution equipment includes panels, transformers, switchboards, bus ducts, and other similar equipment. They are fed by feeders. Arc-flash calculations only happen at distribution equipment.

In Revit, distribution equipment includes all of the equipment that have their *Part Type* set to **Panelboard**, **Other Panel**, **Transformer**, or **Switchboard**.

These tutorials only use panels and transformers, but the concepts work the same for other types of distribution equipment.

Branch Circuit Device

Branch circuit device refers to electrical devices that are connected to distribution equipment and do not have anything else connected to them.

In real-world terms, branch circuit devices include receptacles, light fixtures, switches, mechanical equipment, kitchen equipment, and other similar devices. They are fed by branch circuits.

In Revit, branch circuit devices are either electrical fixtures, or electrical equipment with their *Part Type* set to **Equipment Switch**.

Making Changes: Don't Modify the Shared Parameters

While using Design Master Electrical RT, you should make changes to the model using the `Panel Edit`, `Circuit Edit`, and `Instance Edit` commands.

Do not make changes to the shared parameters that are used by the software, either through the **Properties** window, **Schedules**, or **Panel Schedules**. Those values are used only for output purposes. They are not used for input. Design Master Electrical RT will overwrite any changes you make to those values the next time an update happens.

The built-in circuit *Rating* value for electrical systems is also controlled by Design Master Electrical RT. Previously, to change a breaker size, you would set it in the panel schedule. That will no longer work. Instead, you need to change the value that controls the breaker size using Design Master Electrical RT commands.

The built-in circuit description value for electrical systems can also be controlled by Design Master Electrical RT. The [Modifying Branch Circuit Devices](#) section describes how to enable this feature and how to change the description using Design Master commands.

Creating a One-Line Diagram

This section teaches you how to create a one-line diagram based upon the Revit model.

Inserting Distribution Equipment

This section teaches you how to insert distribution equipment from the Revit model onto the one-line diagram.

Start in the **ONE-LINE DIAGRAM** drafting view.

Insert UTIL from the Model

1. Run the **Insert Link** command. The **Insert Distribution Equipment** dialog box will open.

DM One-Line->  Insert Link

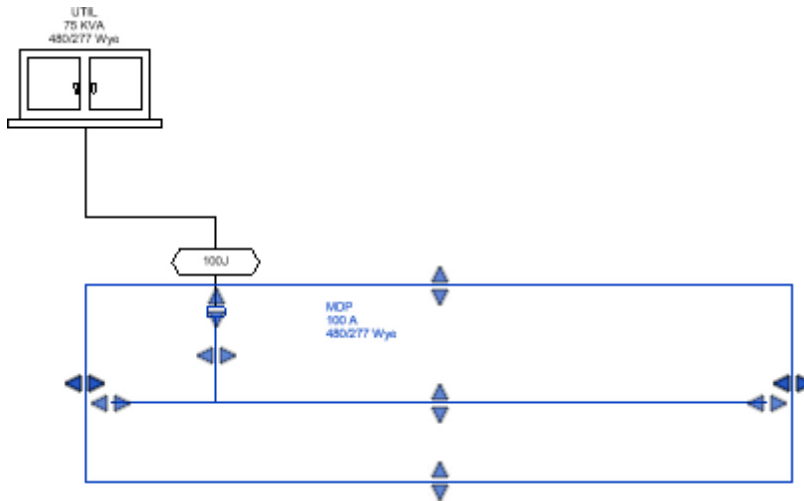
2. Set *Tree* to **UTIL**.
3. Set *One-Line Diagram Graphic* to **Utility Transformer**.
4. Press the **OK** button to close the dialog box.
5. Insert the transformer on the drafting view.

Insert MDP from the Model

1. Run the **Insert Link** command. The **Insert Distribution Equipment** dialog box will open.

DM One-Line->  Insert Link

2. Set *Tree* to **MDP**.
3. Set *One-Line Diagram Graphic* to **Switchboard, Horizontal, Fed from Top**.
4. Press the **OK** button to close the dialog box.
5. Insert the panel below UTIL on the drafting view.
6. Select panel MDP and use the grips provided to extend the right side of the graphic.



Insert P and E from the Model

1. Run the `Insert Link` command. The **Insert Distribution Equipment** dialog box will open.

DM One-Line->  `Insert Link`

2. Set *Tree* to **P**.
3. Press the **OK** button to close the dialog box.
4. Insert the panel below panel MDP on the drafting view.
5. Run the `Copy Link` command.

DM One-Line->  `Copy Link`

6. Select panel P on the drafting view. The **Select Distribution Equipment to Link** dialog box will open.
7. Set *Tree* to **E**.
8. Press the **OK** button to close the dialog box.
9. Insert the panel to the right of panel P on the drafting view.

Insert Branch Circuit Devices and Additional Distribution Equipment from the Model

1. Open the **FIRST FLOOR POWER** floor plan.
2. Run the `Insert Link` command. You will be prompted to select a device from the model.

DM One-Line->  `Insert Link`

Start in the **ONE-LINE DIAGRAM** drafting view.

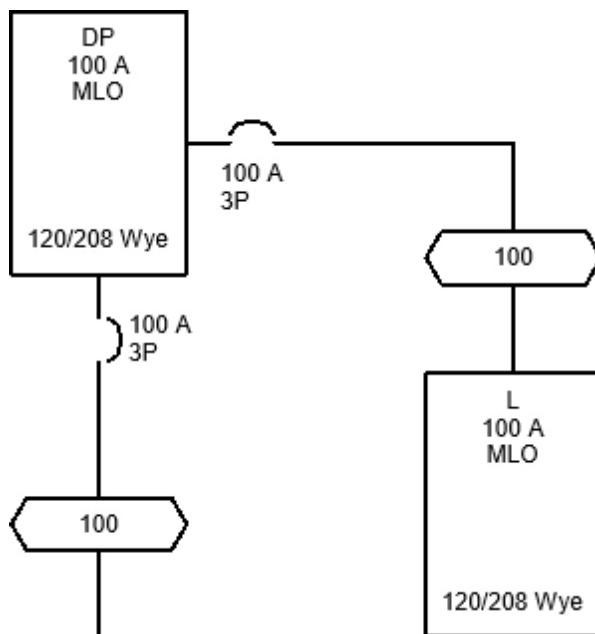
Create and Power Panel L

1. Run the `Insert Create` command. The **Create Equipment** dialog box will open.

DM One-Line->  Insert Create

2. Set *Callout* to **L**.
3. Set *Level* to **FIRST FLOOR**.
4. Set *Distribution System* to **120/208 Wye**.
5. Set *Model Family* to **Lighting and Appliance Panelboard - 208V MLO - Surface**.
6. Press the **OK** button to close the dialog box.
7. Insert the panel on the drafting view. You will be prompted to select a distribution equipment to power the panel.
8. Select panel DP.

A feeder will be drawn between panel DP and panel L.




Find and Move Panel L in the Model


1. Run the `Highlight Device` command.

DM One-Line->  Highlight Device

2. Select panel L. The **FIRST FLOOR POWER** floor plan will open with panel L highlighted.
3. Select panel L and go to the Revit **Electrical Circuits** tab. The *Panel* and *Distribution System* fields reflect the settings configured in the steps above.
4. Run the Revit **Pick New** command.

Modify | Electrical Equipment->  Pick New

5. Move panel L beside panel B inside the building.

Optionally, you can use the Revit  **Tag by Category** command to label panel L on the floor plan.

Moving Distribution Equipment and Feeders

This section teaches you how to move distribution equipment and feeders on the one-line diagram.

Start in the **ONE-LINE DIAGRAM** drafting view.

Move Distribution Equipment and Feeders

1. Select panel A.
2. Run the Revit **Move** command.

Modify->  **Move (MV)**

3. Move panel A to a new location.
4. Run the **Feeder Draw** command.

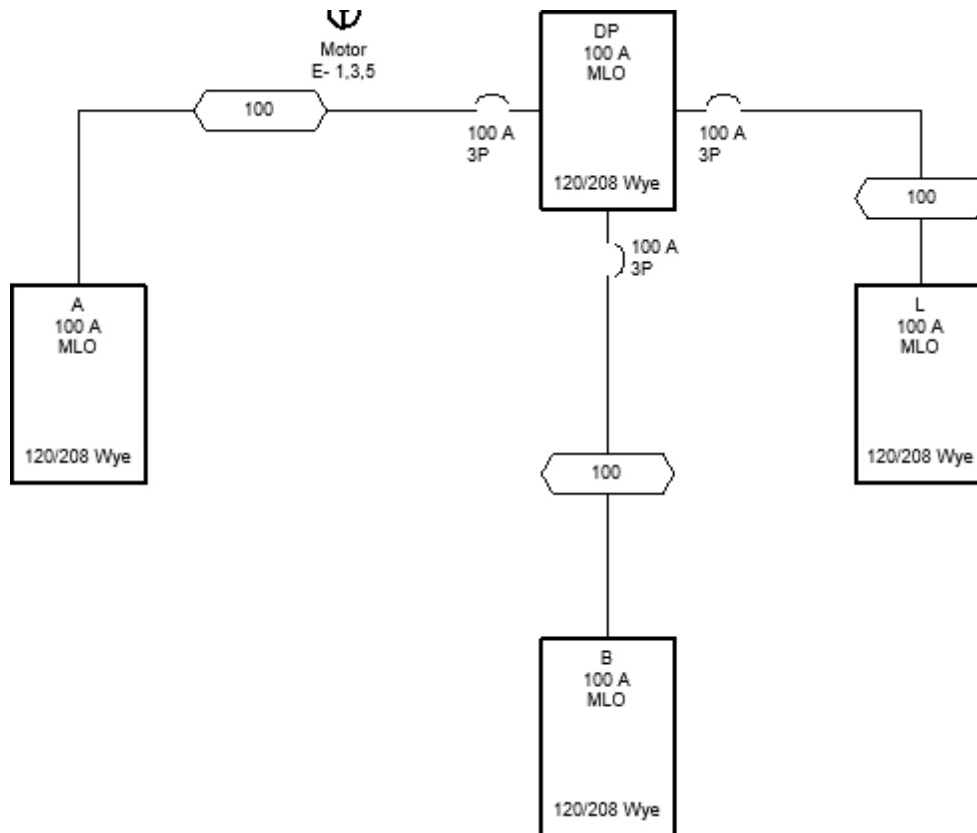
DM One-Line->  Feeder Draw

5. Select panel A. The upstream feeder will disappear and you will be prompted to specify the starting location of the new feeder.
6. Follow the prompts to draw a new feeder between panel DP and panel A.
7. Press **Esc** to finish the command.
8. Repeat steps 1-3 for panel B.
9. Run the **Feeder Reset** command.

DM One-Line->  Feeder Reset

10. Select the feeder between panel DP and panel B. The feeder will disappear and you will be prompted to specify the starting location of the new feeder.

11. Press **Esc** to insert the feeder using the default connection points.



Modifying Graphics

This section teaches you how to modify distribution equipment and feeder graphics on the one-line diagram.

Start in the **ONE-LINE DIAGRAM** drafting view.

Modify Distribution Equipment Graphics

1. Run the **Add/Modify Graphic** command.

DM One-Line->  Add/Modify Graphic

2. Select panel P. The **Modify Graphic** dialog box will open.

3. Set *One-Line Diagram Graphic* to **Panel with Bus, Fed from Top**.

4. Set *One-Line Diagram Type* to **Dashed**.

5. Press the **OK** button to close the dialog box.

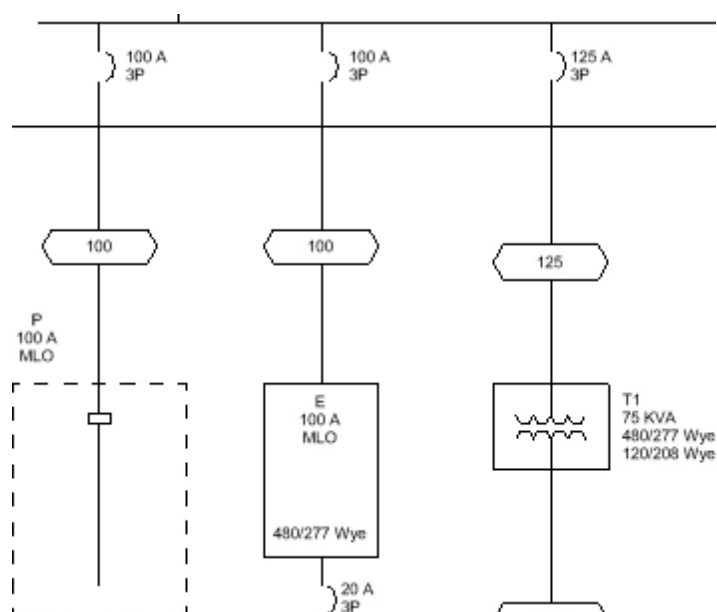
The graphic for panel P will be updated.

6. Select **Update labels** to use the default tags and tag locations for the graphic.

7. Select the **P** label.

8. Using the **Properties** panel, set the tag to **DME-TAG-Panel-Name_Bus Size_Disconnect-C**.

9. Use the grip provided to move the label.



Modify Feeder Graphics

1. Run the **Add/Modify Graphic** command.

DM One-Line->  Add/Modify Graphic

2. On the feeder between panel MDP and panel P, select a point between the OCP graphic and feeder ID graphic.

3. Select **Add an additional graphic**. The **Select Feeder Graphic** dialog box will open.

4. Set *Group* to **Meter**.

5. Press the **OK** button to close the dialog box. A meter graphic will be added to the feeder at the point you specified.

6. Run the **Graphic Move** command.

DM One-Line->  **Graphic Move**

7. Select the meter graphic, then the OCP graphic. The graphics will change places along the feeder.

8. Run the **Add/Modify Graphic** command.

DM One-Line->  **Add/Modify Graphic**

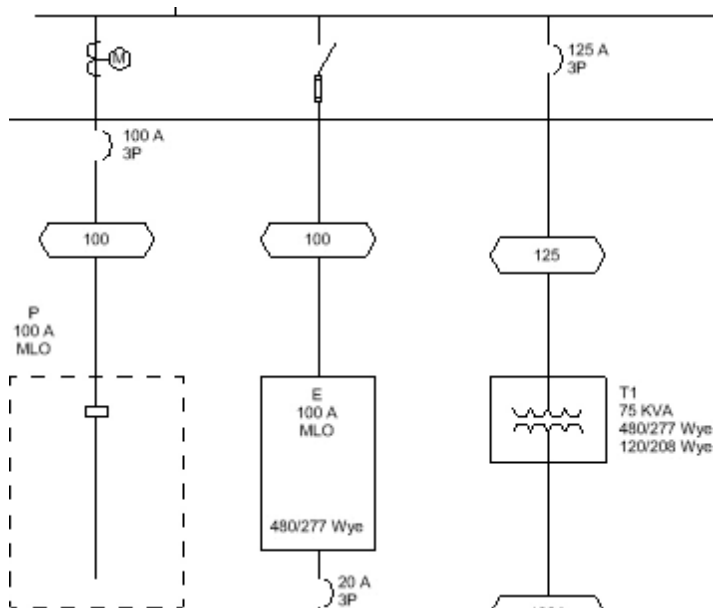
9. On the feeder between panel MDP and panel E, select the OCP graphic.

10. Select **Replace existing OCP graphic**. The **Select OCP Graphic** dialog box will open.

11. Set *Group* to **Switch**.

12. Press the **OK** button to close the dialog box.

The OCP graphic on the feeder will be updated.



Inserting the Feeder Schedule

This section teaches you how to insert and update the feeder schedule on the one-line diagram.

Start in the **ONE-LINE DIAGRAM** drafting view.

Insert the Feeder Schedule


1. Run the **Schedule Insert** command.

DM One-Line->  Schedule Insert

- Follow the prompts to insert the feeder schedule on the drafting view.

Update the Feeder Schedule

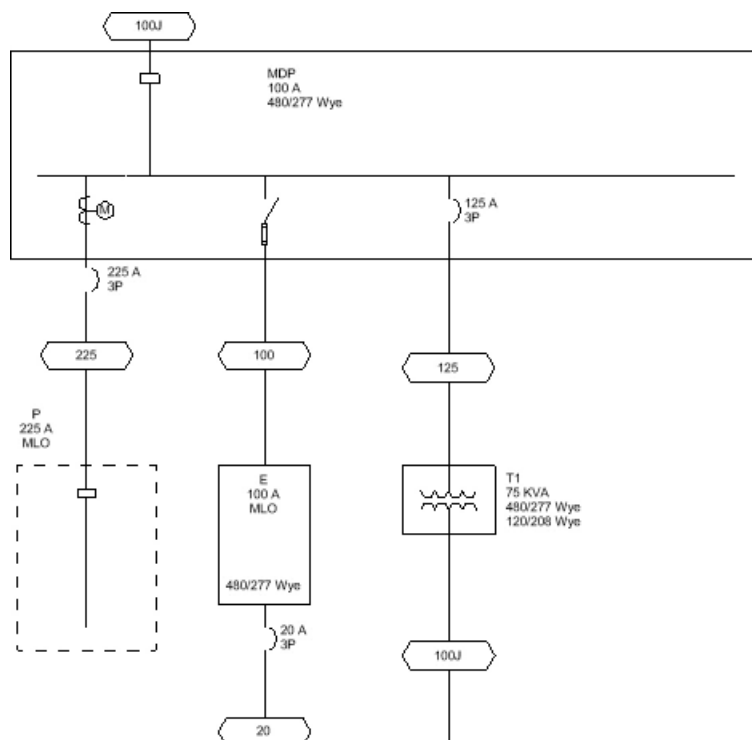
- Run the **Edit** command.


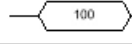
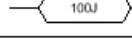
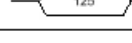

DM One-Line->  Edit

- Select panel P. The **Panel Edit** dialog box will open.
- Set *Bus Size / Mains* to **225**.
- Press the **Exit** button to close the dialog box. The labels on panel P, the feeder ID, and the OCP graphic will update to reflect the changes.
- Run the **Schedule Insert** command.

DM One-Line->  Schedule Insert

- The feeder schedule will be updated in its current location to include the new feeder ID and callout.



| FEEDER SCHEDULE | |
|---|---------------------------|
|  | 1/2"C, 3#12, #12N, #12G |
|  | 1-1/2"C, 3#1, #1N, #8G |
|  | 1-1/2"C, 3#1, #1N, #8G |
|  | 1-1/2"C, 3-1/0, 1/0N, #6G |
|  | 2-1/2"C, 3-4/0, 4/0N, #4G |


Modifying Distribution Equipment

This section teaches you how to work with distribution equipment.

Start in the **FIRST FLOOR POWER** floor plan.

Modify Distribution Equipment

1. Select transformer UTIL and run the `Panel Edit` command. The **Panel Edit** dialog box will open with UTIL active.

DM Electrical->  `Panel Edit`

2. Make the following changes to UTIL:
 - a. Set *Size* to **200**.
 - b. In the **Fault Calculations** section, set *Utility Fault at Device* to **Fixed** and enter **55000** for the value. The fault must be set for the topmost distribution equipment in your model; if not, an infinite fault from the utility is assumed.
3. Select panel **MDP** from the list. If the list is not visible, press the **Load Panels** button. Make the following changes to MDP:
 - a. Set *Bus Size / Mains* to **400**.
 - b. Set *Main Disconnect Type* to **Breaker**.
 - c. In the **Upstream Connection** section, set *OCP Frame* to **500**.
4. Select panel **DP** from the list and make the following changes:
 - a. Set *Bus Size / Mains* to **300**.
 - b. Set *Main Disconnect Type* to **Breaker**.
5. Press the **Exit** button to close the dialog box.
6. Open the **ONE-LINE DIAGRAM** drafting view.

The one-line diagram has been updated to reflect the changes made to the distribution equipment. Any further changes made to the electrical model will be updated automatically.


Modifying a Distribution Equipment Family

This section teaches you how to work with distribution equipment families.


Start in the **FIRST FLOOR POWER** floor plan.

Modify the Family for UTIL

1. Select transformer UTIL and run the Revit **Edit Family** command. The family file will open.

Modify | Electrical Equipment->  **Edit Family**

2. Run the **Family Edit** command. The **Family Edit** dialog box will open.

DM Electrical->  **Family Edit**



3. Make the following changes to the family:

- a. In the **Family Settings** section, set *Device Type* to **Distribution equipment: Transformer**.
- b. In the **200 kVA** section, set *Override Family Values* to **Yes**.
- c. Set *Size* to **200**.
- d. In the **1000 kVA** section, set *Override Family Values* to **Yes**.
- e. Set *Size* to **1000**.


4. Press the **OK** button to close the dialog box.

5. Run the Revit **Load into Project** command or **Load into Project and Close** command to update the family and its parameter values in the project.

You do not need to save the family file, but the parameters will only be used for this project if you do not save.

Create / DM Electrical->  **Load into Project** /  **Load into Project and Close**


1. Select UTIL and use the Revit **Properties** panel to change the *Type* to **1000 kVA**.
2. Run the **Panel Edit** command. The **Panel Edit** dialog box will open with UTIL active.

DM Electrical->  **Panel Edit**

The *Size* value has been updated to reflect the changes made to the family.

3. Press the **Exit** button to close the dialog box.

4. Set the *Type* to **200 kVA** and run the `Panel Edit` command again to see how the *Size* changes.

DM Electrical->  Panel Edit

Modifying Branch Circuit Devices

This section teaches you how to work with branch circuit devices.

Start in the **FIRST FLOOR POWER** floor plan.

Enable Circuit Descriptions with Design Master

With Design Master Electrical RT, circuit descriptions can be changed in several different places to give you greater control over the values displayed in the panel schedule. By default, this functionality is bypassed so you can continue to set circuit descriptions through typical Revit methods if you prefer.

To control your circuit descriptions using Design Master Electrical RT:

1. Run the `Project Options` command. The **Options** dialog box will open.

DM Electrical->  Customization->Project Options

2. Set *Circuit description method* to **Use Design Master circuit descriptions**.
3. Press the **OK** button to close the dialog box.

Modify the Elevator Motor with Circuit Edit

1. Select the elevator motor and run the `Circuit Edit` command. The **Circuit Edit** dialog box will open, displaying the circuit to which the elevator motor is connected.

DM Electrical->  Circuit Edit

2. Make the following changes to the circuit:
 - a. Erase the *Description Replacement* value.
 - b. Set *OCP Trip* to **Size automatically**.
 - c. Set *OCP Frame* to **Same as trip**.
3. Press the **Exit** button to close the dialog box.

When using Design Master Electrical RT on existing projects, these fields are populated based upon the parameters for the device. New devices inserted in the model are shown in the [Modifying a Branch Circuit Family](#) section.

Modify the Elevator Motor with Instance Edit

1. Select the elevator motor and run the `Instance Edit` command. The **Instance Edit** dialog box will open.

DM Electrical->  Instance Edit

2. Make the following changes to the elevator motor:
 - a. Set *Circuit Description* to **Set circuit description in instance** and, for the *Custom Circuit Description*, enter **Elev Motor**.
 - b. Set *OCB Trip* to **100**.
 - c. Set *Conductor* to **Size based upon breaker**.
3. Press the **OK** button to close the dialog box.
4. Select the elevator motor and run the *Circuit Edit* command to see how the values change.

DM Electrical->  Circuit Edit


Modifying a Branch Circuit Family

This section teaches you how to work with branch circuit device families.


Start in the **FIRST FLOOR POWER** floor plan.

Modify the Family for the Elevator Motor

1. Select the elevator motor and run the Revit **Edit Family** command. The family file will open.

Modify | Electrical Equipment->  Edit Family

2. Run the **Family Edit** command. The **Family Edit** dialog box will open.

DM Electrical->  Family Edit



3. Make the following changes to the family:

- a. In the **Family Settings** section, set *Device Type* to **Branch circuit device: Equipment connection**.
- b. Set *MOCP* to **40**.
- c. Set *OCP Trip* to **Motor-compressor, <= MOCP**.
- d. Set *Conductor* to **Size based upon loads**.

4. Press the **OK** button to close the dialog box.

5. Run the Revit **Load into Project** command or **Load into Project and Close** command to update the family and its parameter values in the project.

You do not need to save the family file, but the parameters will only be used for this project if you do not save.

Create / DM Electrical->  Load into Project /  Load into Project and Close

Modify the Elevator Motor with Instance Edit

1. Select the elevator motor and run the **Instance Edit** command. The **Instance Edit** dialog box will open.

DM Electrical->  Instance Edit

2. Set *OCP Trip* to **70**.

3. Press the **OK** button to close the dialog box.

4. Select the elevator motor and run the **Circuit Edit** command to see how the values set in the family are overridden by the values set in the instance.

DM Electrical->  Circuit Edit

Modifying a Branch Circuit

This section teaches you how to work with branch circuits.

Start in the **FIRST FLOOR POWER** floor plan.

Modify Circuits with Circuit Edit

1. Select panel A and run the **Circuit Edit** command. The **Circuit Edit** dialog box will open with panel A active.

DM Electrical->  **Circuit Edit**

2. Select circuit 2 using the middle grid and make the following changes:
 - a. In the **Circuit Details** section, erase the *Description Replacement* value.
 - b. Set *OCP Trip* to **30**.
 - c. In the middle grid, select the *Description* and add "Existing " to the beginning of the value. In the **Circuit Details** section, the *Description* and *Description Prefix* values will update to reflect the change.
You can also use the *Description Prefix* field to make this change.
3. Select circuit 8 using the middle grid and make the following changes:
 - a. In the middle grid, set *Description* to **REC**. In the **Circuit Details** section, the *Description* and *Description Replacement* values will update to reflect the change.
You can also use the *Description Replacement* field to make this change.
 - b. In the **Circuit Details** section, set *Circuit Length* to **Fixed** and enter **150** for the value. The *Voltage Drop* value will update to 3%.
 - c. Set *Conductor* to **30A**. The *Voltage Drop* value will update to a lower value.
4. Press the **Exit** button to close the dialog box.


Modifying Panel Schedules

This section teaches you how to work with panel schedules.


Start in the **Panel Schedule** for panel A. The values have been updated to reflect the changes made in the [Modifying a Branch Circuit](#) section.

Modify the Panel Schedule Template

1. Run the Revit **Edit a Template** command. The **Edit a Template** dialog box will open.

Manage->  **Panel Schedule Templates->Edit a Template**


2. Press the **Open** button. The **Branch Panel** template will open.
3. Select the **Wire Size** column.
4. Change the parameter from **Wire Size** to **DMET_Circuit_WireCalloutCompact**.
Design Master shared parameters always begin with **DMEN** for number types or **DMET** for text types.
5. Set the column heading to **Wire Callout**.
6. Select the **<MCB Rating>** field.
7. Run the Revit **Calculated Value** command. The **Calculated Value** dialog box will open.

Modify Panel Schedule Template->  **Calculated Value**

8. Use the following settings:
 - a. Set *Name* to **DM Main Disconnect Formula**.
 - b. Set *Discipline* to **Common**.
 - c. Set *Type* to **Text**.
 - d. Copy and paste the following into the *Formula* field: **if(DMEN_Panel_MainDisconnectType = 0, DMET_Panel_BusAmps, DMET_Panel_MainDisconnectTripSize)**
See the [Writing Revit Formulas Based Upon Main Disconnect Type](#) article in the knowledge base for more information.
9. Press the **OK** button to close the dialog box.
10. Run the Revit **Finish Template** command to save and close the template.


Modify Panel Schedule Template->  **Finish Template**

11. Run the Revit **change Template** command.

Modify Panel Schedule->  Change Template

12. Press the **OK** button to close the dialog box. The panel schedule will update to reflect the changes.

13. Run the `Panel Edit` command. The **Panel Edit** dialog box will open with panel A active.

DM Electrical->  Panel Edit

14. Make the following changes:

- a. Set *Main Disconnect Type* to **Breaker**.
- b. Set *Main Disconnect Trip* to **90**.
- c. Press the **Exit** button to close the dialog box.

The panel schedule will update to reflect the changes.

(Don't) Modify the Circuit in the Panel Schedule

As pointed out in the [Making Changes: Don't Modify the Shared Parameters](#) section, you should not use panel schedules to modify circuits and devices while using Design Master Electrical RT. Changes made to panel schedules will be overwritten by Design Master. Follow the steps below to see an example of this:

1. Select circuit 2 and make the following changes:

- a. Set *Circuit Description* to **Ex Rec**.
- b. Set *Trip* to **20 A**.

2. Run the `Circuit Edit` command. The **Circuit Edit** dialog box will open with panel A active.

DM Electrical->  Circuit Edit


The circuit description and breaker size will still show their previous values. If you look at the circuit in the panel schedule, the circuit description and breaker size will have reverted to their previous values.

Creating Calculation Schedules

This section teaches you how to perform calculations on your electrical system and create fault and voltage drop schedules.

Calculate the Project

Run the `Calculate Whole Project` command.

DM Electrical->  Calculate Whole Project


This will perform fault, voltage drop, wire sizing, and other calculations on your entire electrical model. It will also update the labels, graphics, and feeder schedule on the one-line diagram. This process takes a moment.

Create and Modify the Fault Schedule

1. Run the `Fault Schedule` command. The **FAULT CURRENT SCHEDULE** will open.

DM Electrical->  Schedules->Fault

2. Run the Revit `Insert` command. The **Select Fields** dialog box will open.

Modify Schedule/Quantities->  Insert

3. Make the following changes to the fault schedule:

- a. Remove the **Short Circuit Rating** field from the *Scheduled fields* list.
- b. Add the **DMET_Panel_BusAmps** and **DMET_Panel_Distribution_System** fields to the *Scheduled fields* list.
Design Master shared parameters always begin with **DMEN** for number types or **DMET** for text types.

4. Press the **OK** button to close the dialog box.

The fault schedule will be updated. You can make further changes to the schedule title, field headings, and column order the same way as any other schedule in Revit.


Create and Update the Voltage Drop Schedule

1. Run the `Voltage Drop Schedule` command. The **VOLTAGE DROP SCHEDULE** will open.


DM Electrical->  Schedules->Voltage Drop

The voltage drop at transformer T1 and its downstream panels is probably a little high. That is partly because the voltage drop through transformers is being included by default. This setting can be changed depending upon how you want to calculate voltage drop through a transformer.

2. Run the `Project Options` command. The **Options** dialog box will open.

DM Electrical->  Customization->Project Options


3. Set *Transformer voltage drop calculation method* to **Ignore transformers**.
4. Press the **OK** button to close the dialog box.
5. Run the `Calculate Whole Project` command.

DM Electrical->  Calculate Whole Project

The voltage drop schedule will update to show the new values.

Calculate Part of the Project


1. Run the `Panel Edit` command. The **Panel Edit** dialog box will open.

DM Electrical->  Panel Edit

2. Select panel **A** from the list and set *Bus Size / Mains* to **60**.
3. Select panel **B** from the list and set *Bus Size / Mains* to **60**.
4. Press the **Exit** button to close the dialog box.
5. Run the `Fault Schedule` command. The **FAULT CURRENT SCHEDULE** will open.
This step is optional, but will make it easier to see the changes.

DM Electrical->  Schedules->Fault

6. Run the `Calculate Part of Project` command. The **Calculate Part of Project** dialog box will open.

DM Electrical->  Calculate Part of Project

7. Select panel **DP** from the list and press the **Calculate** button.

Calculations will be performed only on the selected distribution equipment and downstream devices. When the calculation finishes, the fault schedule will update to show the new values.


Performing Selective Coordination

This section teaches you how to perform selective coordination.

Start in the **SELECTIVE COORDINATION** drafting view.

Set Breaker Curves for Transformer T1 and Panel L

1. Run the **Panel Edit** command. If prompted to select a distribution equipment to edit, press **ESC**. The **Panel Edit** dialog box will open.

DM Electrical->  **Panel Edit**

2. Select transformer **T1** from the list.
3. Beside *OCP Trip*, press the **Select Breaker Curve** button. The **OCP Device Settings** dialog box will open.
4. Make the following changes:
 - a. Set *Manufacturer* to **GE**.
 - b. Set *Group* to **Insulated Case Circuit Breaker > Type SH > MicroVersaTrip PM > 800A Frame**.
5. Press the **OK** button to close the dialog box.
6. Select panel **L** from the list and, beside *OCP Trip*, press the **Select Breaker Curve** button. The **OCP Device Settings** dialog box will open.
7. Make the following changes:
 - a. Set *Manufacturer* to **Square D**.
 - b. Set *Group* to **Low Voltage Power Circuit Breakers > MasterPact NW > MicroLogic 2.0**.
8. Press the **OK** button to close the dialog box.
9. Press the **Exit** button to close the dialog box.

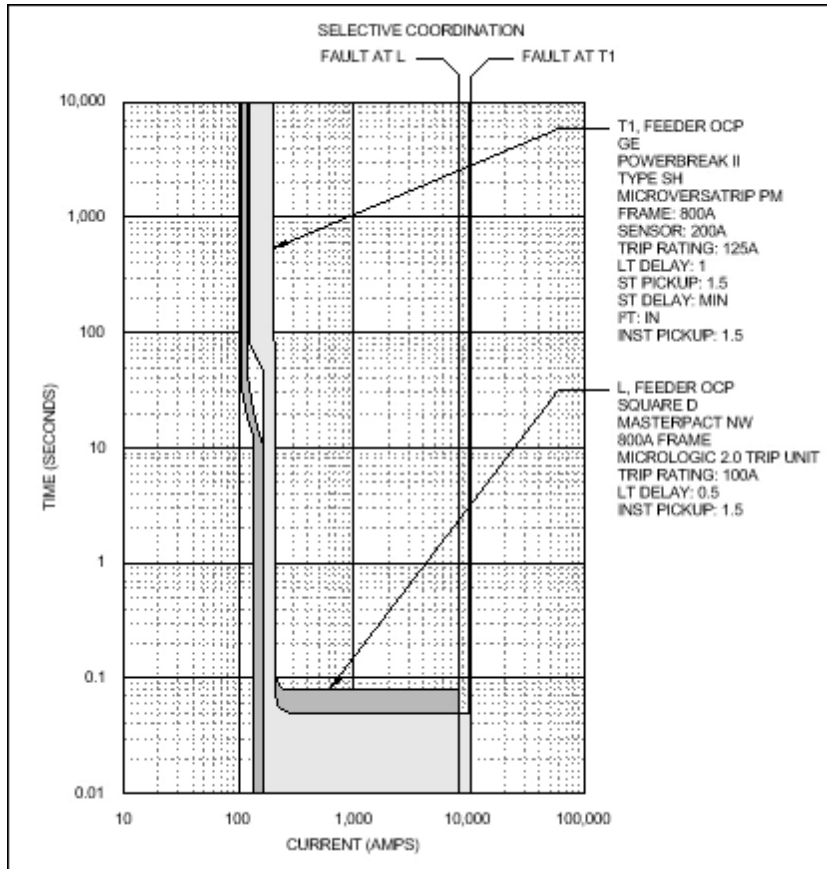
Create the Selective Coordination Graph

1. Run the **Graph Insert** command. The **Insert Selective Coordination Graph** dialog box will open.

DM Electrical->  **Graph Insert**


2. Press the **Add Distribution Equipment Curve** button. The **Select Distribution Equipment** dialog box will open.
3. Select transformer **T1** from the list and press the **OK** button to close the dialog box.

4. Repeat steps 2-3 for panel L.
5. Press the **OK** button to close the dialog box.
6. Follow the prompts to insert the graph on the drafting view.



Modify the Breaker Curve

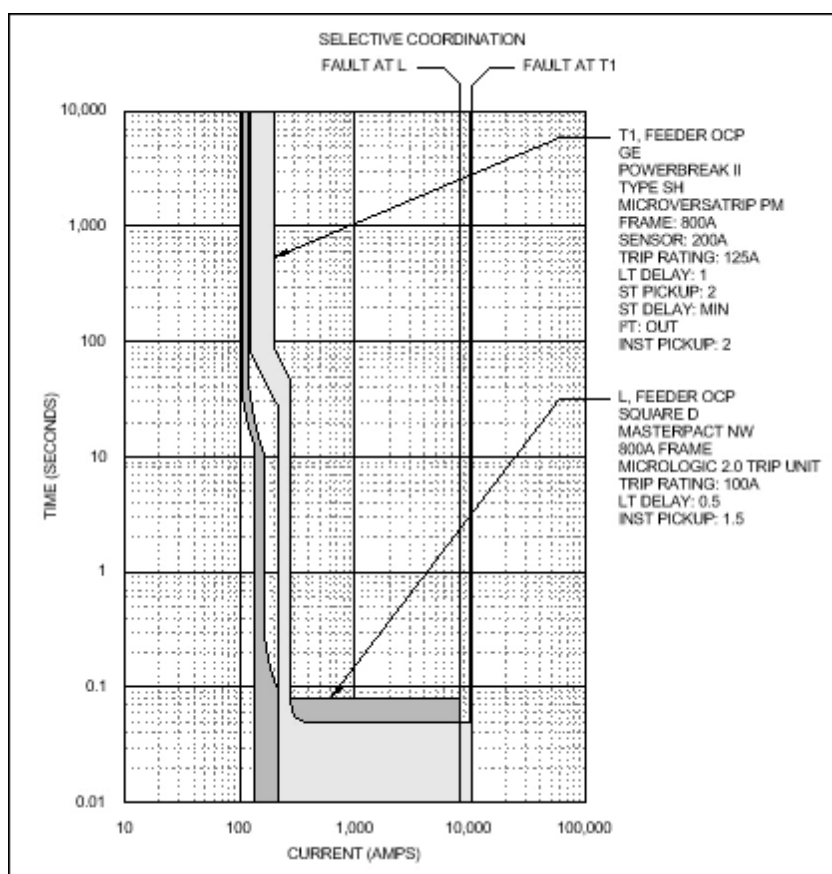
1. Run the `Curve Edit` command.

DM Electrical->  Curve Edit

2. On the graph, select the curve or label for transformer T1. The **OCB Device Settings** dialog box will open.
3. Make the following changes:
 - a. Set *Short-time Pickup* to **2**.
 - b. Set *I²T* to **Out**.
 - c. Set *Instantaneous Pickup* to **2**.

4. Press the **OK** button to close the dialog box.

The graph will update to reflect the changes.




Customizing Wire Ampacities

This section teaches you how to customize your wire ampacities and use your customization in future projects.

Modify the Wire Ampacities


1. Run the `Wire Ampacities` command. The **Wire Ampacities** dialog box will open.

DM Electrical->  Customization->Wire Ampacities

2. Make the following changes to the **400** breaker ampacity row:

- a. Set *Wire Size* to **3/0**.
- b. Set *Ground Wire Size: Service* to **#4**.
- c. Set *Ground Wire Size: Equipment* to **#6**.
- d. Set *Parallel Runs* to **2**.
- e. Set *X* to **0.042**.
- f. Set *R* to **0.077**.

3. Press the **Exit** button to close the dialog box.
4. Run the `Panel Edit` command. The **Panel Edit** dialog box will open.


DM Electrical->  Panel Edit

5. Select panel **MDP** from the list to see how the wire sizes have changed.

Use Customization in Other Projects

There are two ways you can use your customization in future projects:

1. Use the customization commands in a project template file. Any projects created using the template will use your customization.
2. Use the `Export` and `Import` commands:
 - a. Use the customization commands in a project.
 - b. Run the `Export` command. The **Save As** dialog box will open.

DM Electrical->  Customization->Export

- c. Enter a filename and save the **.dmc** file.


d. On your next project, run the `Import` command and open the `.dmc` file to load your customization.

DM Electrical->  Customization->Import

Starting a New Project




These tutorials show how you can use Design Master Electrical RT in a project that is in progress. This section briefly describes the workflow for designing new projects.

Configure Families and Customization for Future Projects

Before starting a new project, use the  **Family Edit** command to configure your electrical families as described in the [Modifying a Distribution Equipment Family](#) and [Modifying a Branch Circuit Family](#) sections. Doing this once at the family level will save you from having to do it for every instance in the project later.

Follow the steps described in the [Customizing Wire Ampacities](#) section under **Use Customization in Other Projects** to apply your customization to future projects.

Draft and Design Your Electrical Distribution

After loading your equipment families into the project, use the  **Insert Create**,  **Copy Create**,  **Edit**, and other commands on the **DM One-Line** tab to design your electrical distribution and draft your one-line diagram at the same time. When you're ready, use standard Revit functionality to move your distribution equipment into place.

Where to Learn More

These tutorials cover the basics of Design Master Electrical RT. They do not cover all of the features and functionality you might use on a project. Here are a few ways you can learn more about the software.

Visit the Knowledge Base

The [Knowledge Base](#) on our website features in-depth articles covering more features of Design Master Electrical RT.

Send Us Your Project

For specific questions, sending us a copy of the project is usually the fastest way to get help.

Use the `DM Electrical->Help->Send Project` command to send us a copy of your project.

Running the `Send Project` command will open your browser to <http://www.designmaster.biz/send/>. Fill out the form and attach your project.

Once we receive your project, we will take a look at it and get back to you with an answer.

Our official support hours are Monday through Friday, 9am to 5pm Eastern time.

Limited support is available evenings and weekends if you send a project or an email.

Call or Chat With Us

You can call us for support at 866-516-9497 x2 or [contact us via live chat](#).

Our official support hours are Monday through Friday, 9am to 5pm Eastern time.

Phone support is only available during our official support hours.

For evening and weekend support, send us a project or an email.

Attend Online Training

We offer online training for Design Master Electrical RT. Visit the [Online Training](#) page on our website for recordings of previous trainings and the current training schedule.

Visit the User Manual

The [User Manual](#) on our website contains information about all of the commands in Design Master Electrical RT.

