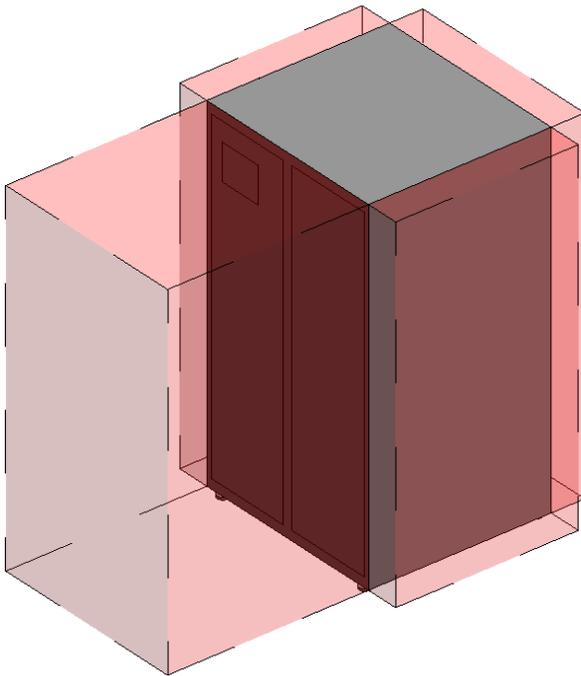


# PDI Revit® Model Instructions

**Power Distribution Units**  
**Remote Power Panels**  
**Static Transfer Switches**  
**Floor Stands**  
**PowerWave™ 2 Bus Systems**



Ctrl Nr: PM375127

Revision: 000

If you have questions regarding the use of PDI Revit® Models, please contact your local or regional sales representative.

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### **PDI Revit® Model Instructions**

**Power Distribution Units, Remote Power Panels, Static Transfer Switches, Floor Stands, PowerWave 2™ Bus Systems**

**Ctrl Nr: PM375127 Rev 000**

Release Date: July 2017

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### **Power Distribution, Inc. (PDI)**

Power Distribution, Inc. (PDI) designs, manufactures, and services mission critical power distribution, static switching, and power monitoring equipment for corporate data centers, alternative energy, industrial and commercial customers around the world. For over 35 years, PDI has served the data center and alternative energy markets providing flexible solutions with the widest range of products in the industry.

## Contents

<b>1</b>	<b>Introduction .....</b>	<b>4</b>
<b>2</b>	<b>Space Requirements for PDUs, RPPs, and STSs .....</b>	<b>5</b>
<b>3</b>	<b>Selecting Floor Stand Height in PDI Revit Models .....</b>	<b>8</b>
3.1	Selecting Floor Stand Height in a Revit Family Window .....	8
3.2	Changing the Floor Stand Height in a Revit Project.....	10
<b>4</b>	<b>PowerWave™ 2 Bus System Models in Revit Project .....</b>	<b>11</b>
4.1	Standard End Feed.....	12
4.2	Starter Rail .....	13
4.3	Standard Rail .....	15
4.4	End Cap.....	16
4.5	Hangers (Vertical).....	16
4.6	Tap-Off Boxes .....	17
4.7	Assembled Bus System Views.....	19

## 1 Introduction

PDI models for Autodesk Revit® are available for the following PDI products:

- Power Distribution Units (PDUs)
- Remote Power Panels (RPPs)
- Static Transfer Switches (STTs)
- Floor Stands (optional features for many PDI products)
- PowerWave 2 Bus Systems

PDI Revit models can be downloaded from the PDI website for a specific product category or as a complete PDI Revit library.

<http://www.pdicorp.com/>

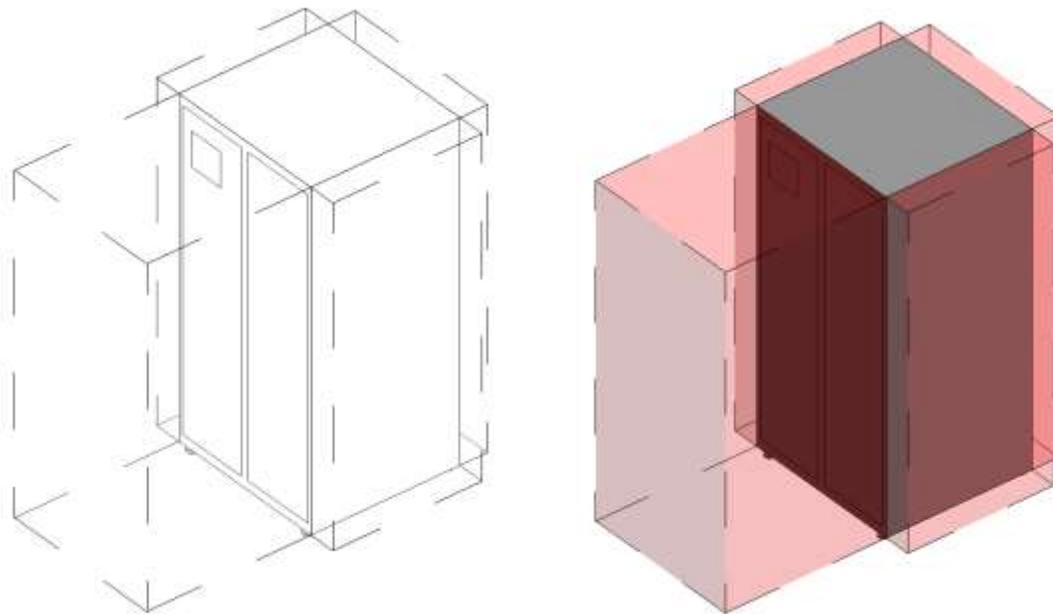
Consult with your local or regional sales representatives for help in selecting the correct Revit models for your installation.

This document provides instructions on using these models. These instructions are intended for knowledgeable Revit users.

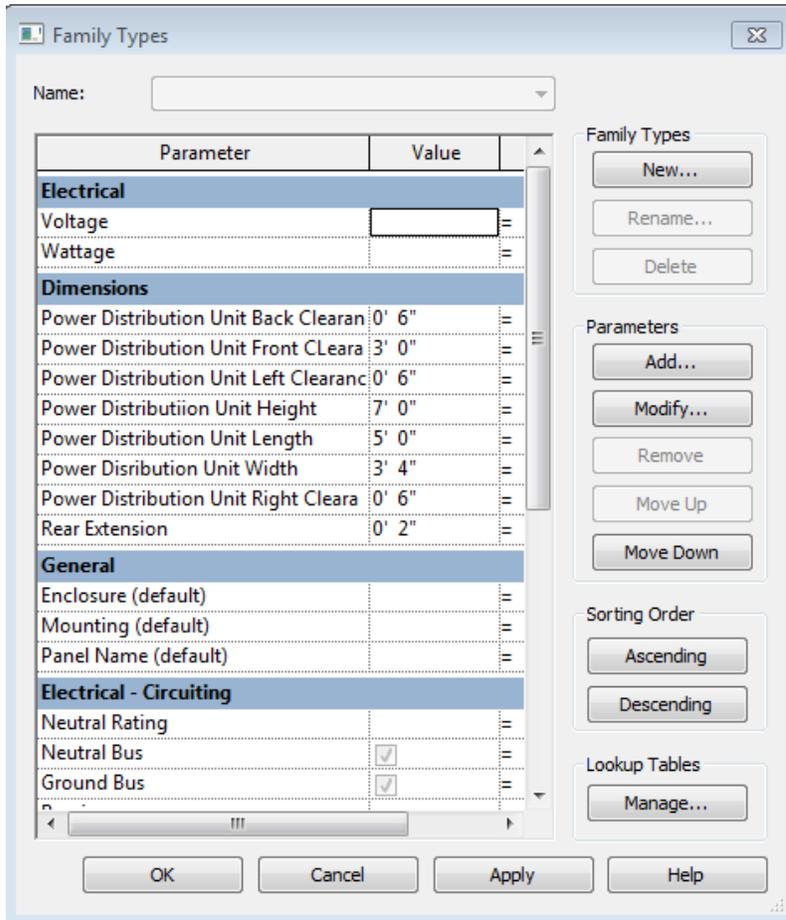
## 2 Space Requirements for PDUs, RPPs, and STSs

PDI Revit models allow you to plan and layout space requirements for PDI equipment. Many PDU, RPP, and STS configurations are available. You should consult with your local or regional sales representatives for help in selecting the correct Revit model(s) for your configuration.

1. The dimensions of the unit's Enclosure are shown in models by solid lines only or by solid lines with a gray shaded area. The unit's front, back, left and right clearances are shown with dashed lines only or by dashed lines with transparent red shading.



- The unit’s height, length, width, and clearances are indicated under the **Properties** tab **Family Types** key.



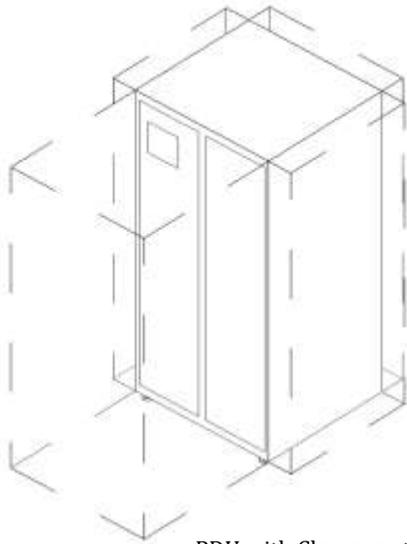
These values can also be determined by using the Dimension tool and checking the dimension of the drawing.

- After you highlight the Revit model in the Revit Project work space, clearance requirements are listed in the **Properties** tab.

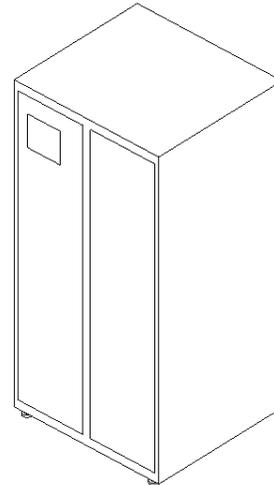
Dimensions	
Power Distribution Unit Back Clearance	0' 6"
Power Distribution Unit Front Clearance	3' 0"
Power Distribution Unit Left Clearance	3' 0"
Power Distribution Unit Right Clearance	3' 0"

Clearances may also be turned on or off for display purposes only by toggling the corresponding box in the **Properties** tab. The clearance remains in effect whether or not it is displayed.

Other	
Back Clearance	<input checked="" type="checkbox"/>
Front Clearance	<input checked="" type="checkbox"/>
Left Clearance	<input checked="" type="checkbox"/>
Right Clearance	<input checked="" type="checkbox"/>

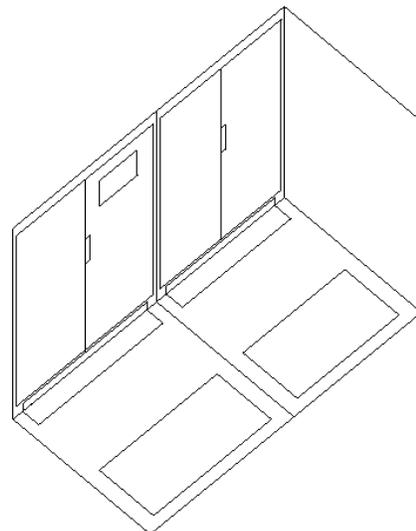
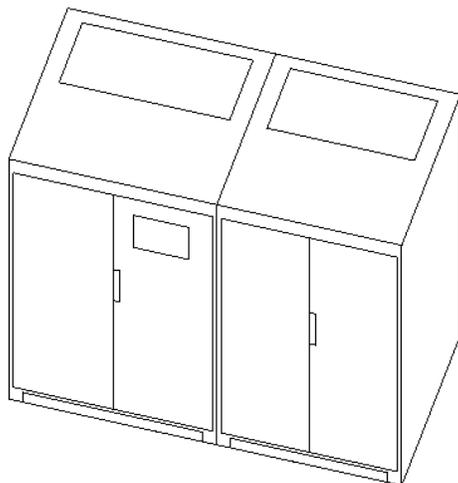


PDU with Clearance turned on



PDU with Clearance turned off

4. If the unit has conduit landing areas, they are automatically displayed in the model. The Static Transfer Switch model shown below has conduit landing areas on both the top and bottom of the enclosure.

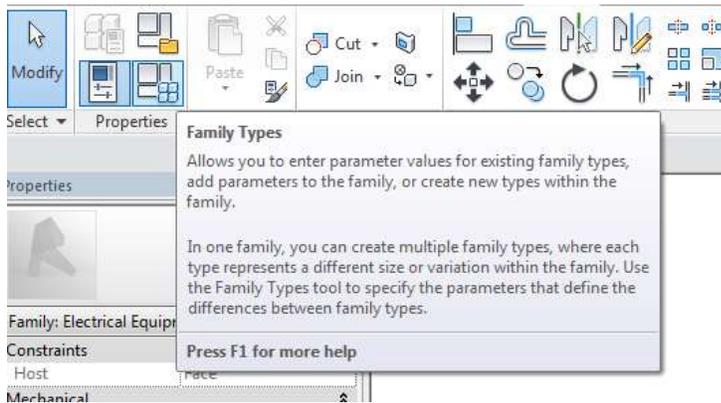


### 3 Selecting Floor Stand Height in PDI Revit Models

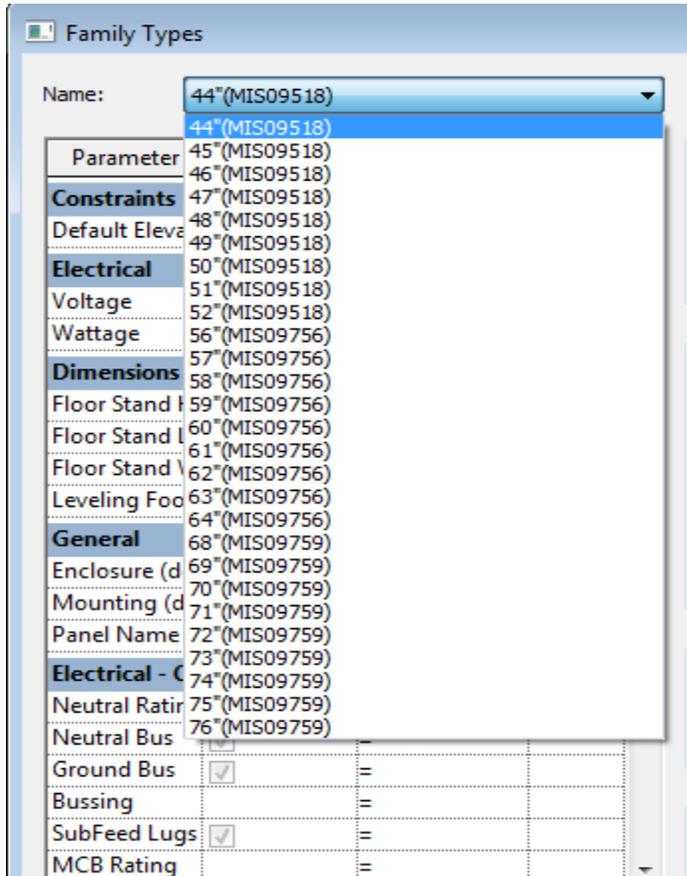
Most PDI PDUs, STSs, and RPPs have optional floor stands, which have a range of available heights. The height of the floor stand can be selected or changed in either a Revit Family Window or in a Revit Project.

#### 3.1 Selecting Floor Stand Height in a Revit Family Window

- 1 Open the Revit Family Floor Stand model.
- 2 In the **Properties** window, click on **Family Types**.



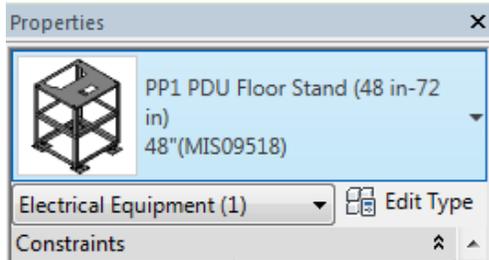
- This will bring up a **Family Types** table. Within the table, click the drop down list next to **Name** and select the Floor Stand height that you want. (Floor Stands are identified by height and part number. A specific part number can have a range of heights.)



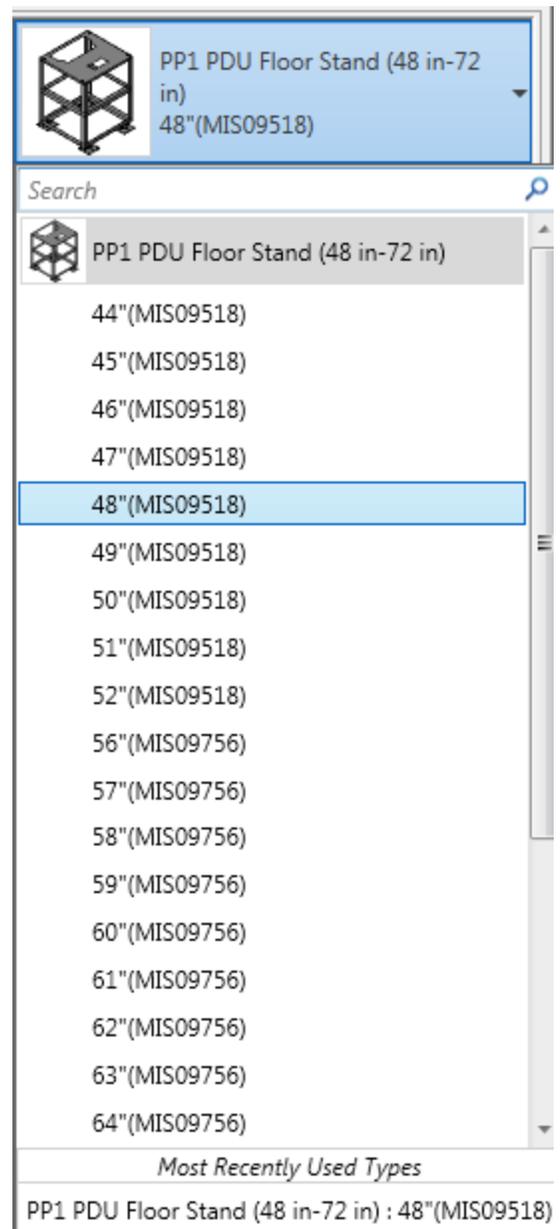
- Click **Apply** and the Floor Stand model will automatically adjust to the selected height.

### 3.2 Changing the Floor Stand Height in a Revit Project

1. Import the Floor Stand model into a Project.
2. Highlight the Floor Stand model and click on **Properties**.
3. In the **Properties** tool bar, select the Floor Stand drop down.



4. The drop down list displays all of the available heights of the Floor Stand model within Revit. Select a height and the Floor Stand model will automatically adjust to that height.



## 4 PowerWave™ 2 Bus System Models in Revit Project

You can create PowerWave™ 2 Bus System models in Revit Project for any vertical straight bus run. The following instructions provide a quick guide to assembling models from PowerWave™ 2 Bus System component models.

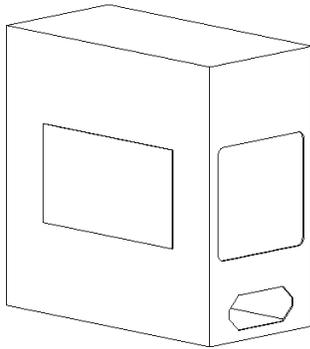
The methodology for assembling bus runs in Revit is the same for all amperages, but parts must be matched by amperage. PowerWave™ 2 Bus Systems are available in 250A, 400A, and 800A systems. Part models are listed by part name and amperage. Choose the part model corresponding to your bus run's amperage. For example, when "Standard End Feed" is specified, choose "Standard End Feed (250A)" or other amperage choice from the model list, as appropriate for your bus run.

-  Standard End Feed Vertical (250 AMP) with monitoring
-  Standard End Feed Vertical (250 AMP)
-  Standard End Feed Vertical (400 AMP) with monitoring
-  Standard End Feed Vertical (400 AMP)
-  Standard End Feed Vertical (800 AMP) With Monitoring
-  Standard End Feed Vertical (800 AMP)
-  Standard Rail (250 AMP)
-  Standard Rail (400 AMP)
-  Standard Rail (800 AMP)
-  Starter Rail (250 AMP)
-  Starter Rail (400 AMP)
-  Starter Rail (800 AMP)

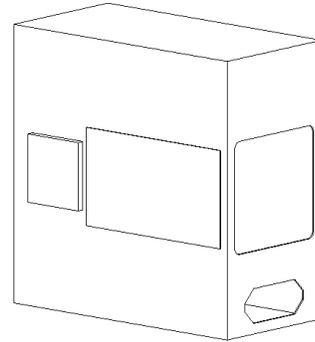
**Select models with the correct amperage and features for your Bus System.**

## 4.1 Standard End Feed

1. Begin by importing the Standard End Feed model for your bus run's amperage. There are two model choices: Standard End Feed with Monitoring and Standard End Feed without Monitoring.

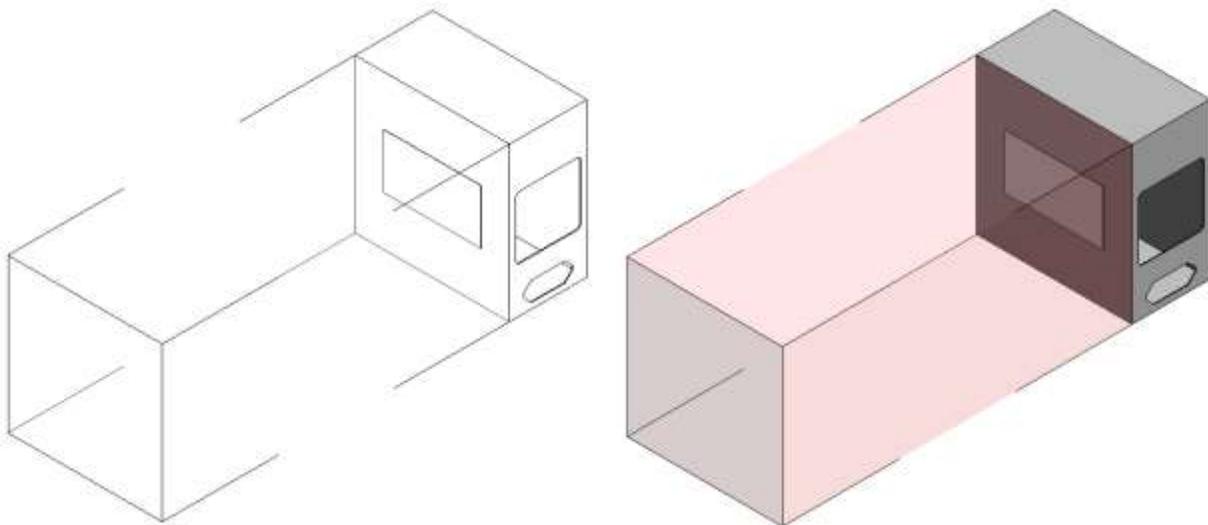


Standard End Feed without Monitoring



Standard End Feed with Monitoring

2. Place the Standard End Feed anywhere in the project space.
3. Clearances:
  - a. The Standard End Feed's front clearance is shown by dashed lines or by dashed lines with transparent red shading.



- b. While in the project, the clearance requirement is listed under **Properties**.



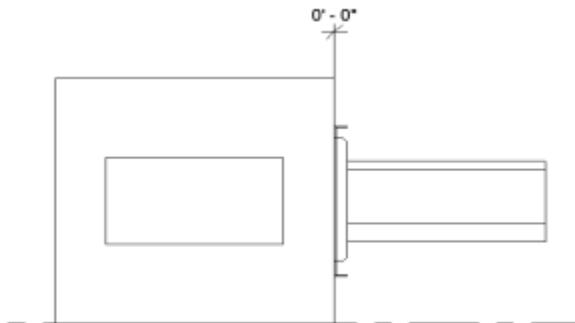
- c. Clearances can be turned on or off for display purposes only by toggling the corresponding box in the **Properties** tab. When a clearance box is unchecked, the clearance requirement is still in effect, but is not displayed.



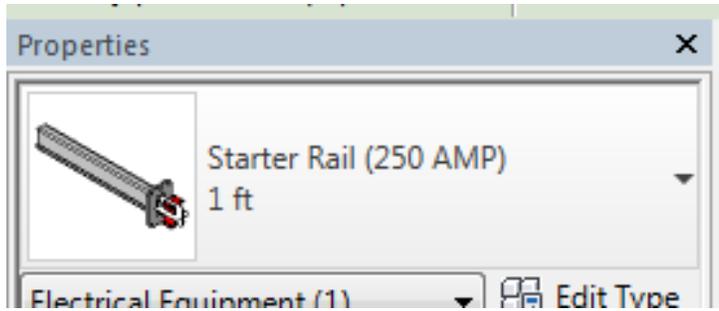
## 4.2 Starter Rail

Next add a Starter Rail to the bus run. The first bus rail connected to a Standard End Feed must be a Starter Rail and cannot be a Standard Rail. There can be only one Starter Rail per bus run.

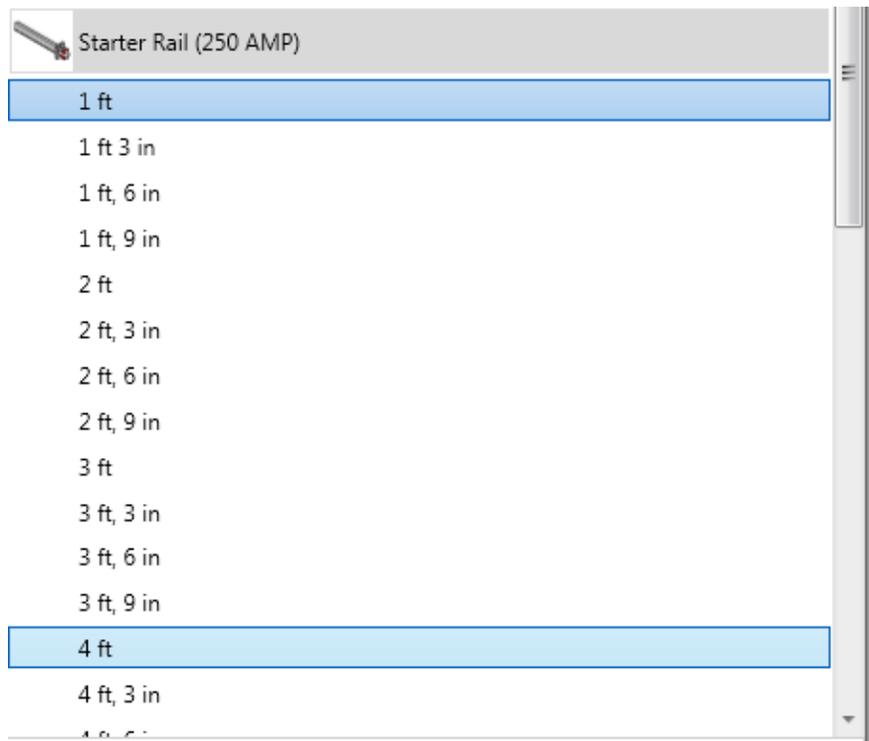
1. Import the Starter Rail model.
  - a. Align the middle axis of the Starter Rail with the middle axis of the Standard End Feed.
  - b. To assure proper alignment, you should place a 0-inch dimensional constraint between the Standard End Feed and the Starter Rail.



2. The length of the Starter Rail can be adjusted in Revit to fit your needs, as follows:
  - a. Highlight the Starter Rail.
  - b. Select the **Properties** tab.
  - c. Click on the Starter Rail drop down menu located at the top of the **Properties** tab.



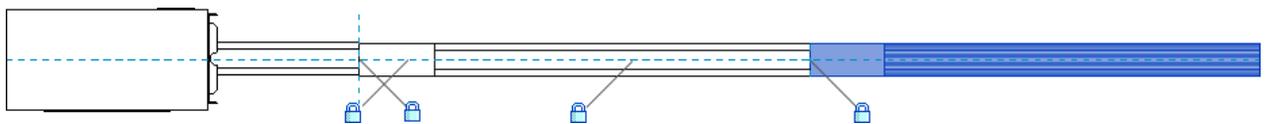
- d. The drop down list will show all available lengths of the Starter Rail. Select the length that you need.



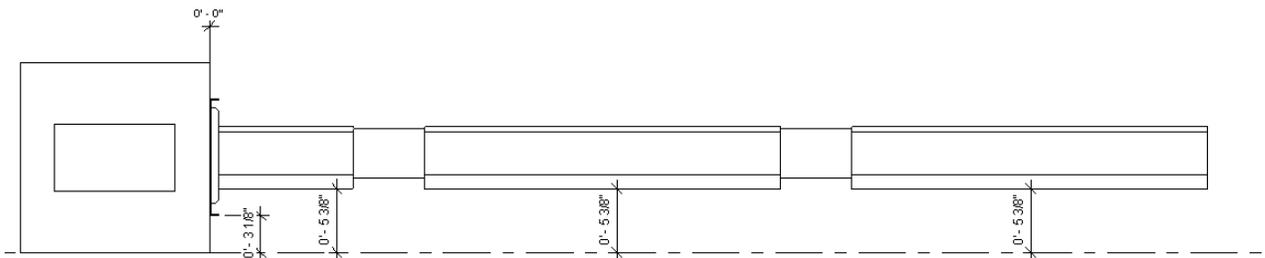
### 4.3 Standard Rail

All bus rails added to the bus run after the first rail are Standard Rails.

1. Import the Standard Rail model into the project.
2. Click to place as many Standard Rails as you need. (Rails are joined by Couplers. While Couplers are essential parts of the bus run, a Coupler does not change the length of the bus run and is automatically included with each Standard Rail.)
3. Align the middle axis of the Standard Rail with the middle axis of the Starter Rail and constrain the end of the Starter Rail with the end of the Standard Rail. (If multiple Standard Rails are used, constrain the end of one with the end of the other).



4. Be sure to align the rails on the same plane in the South elevation view. This can be done by placing a dimensional constraint from the bottom reference line to the rails (dimensions under each rail must be the same).



5. The length of the Standard Rail can be adjusted in Revit to fit your needs (adapt the steps in **4.2 Starter Rail**, 2a – 2d. for Standard Rail.)

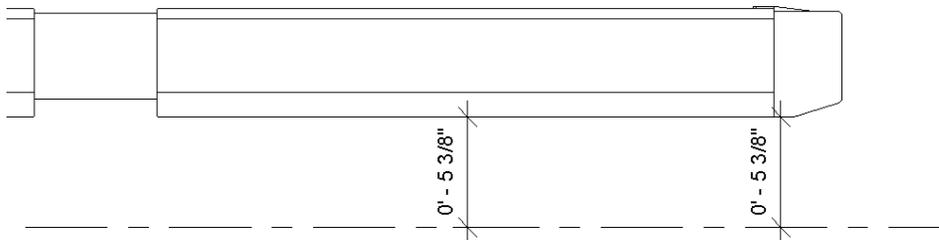
## 4.4 End Cap

Every bus run must be terminated by an End Cap.

1. Import the End Cap model.
2. Align the middle axis of the End Cap with the middle axis of the Standard Rail and constrain the end of the Standard Rail with the end of the End Cap (use Starter Rail in a 1-rail system).



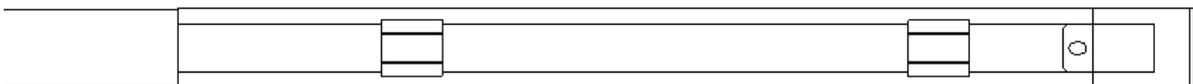
3. In the South elevation, dimensionally constrain the End Cap to make sure that it is in the same plane as the Standard Rail by using the same dimensional constraint as for **4.3 Standard Rail**, step 4.



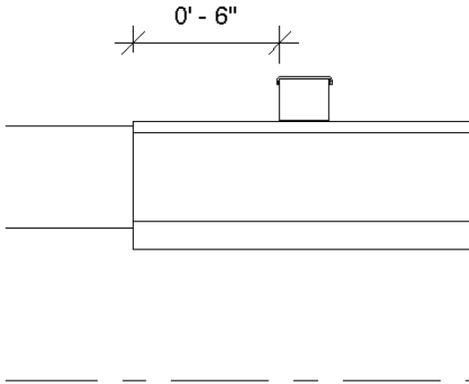
## 4.5 Hangers (Vertical)

For hanging the bus run, attach the Hanger Brackets to rails.

1. Make sure that the project is in **Floor Plans Level 1** view. (This makes it easier to place the Hanger on the top faces of the rails).
2. Import the Hanger model.
3. Click to place as many Hangers as needed on the top face of the rails.



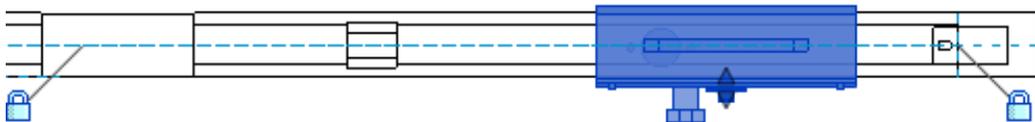
4. Align the Hangers from the ends of the rails by either sliding them into place, or by placing a dimensional constraint.



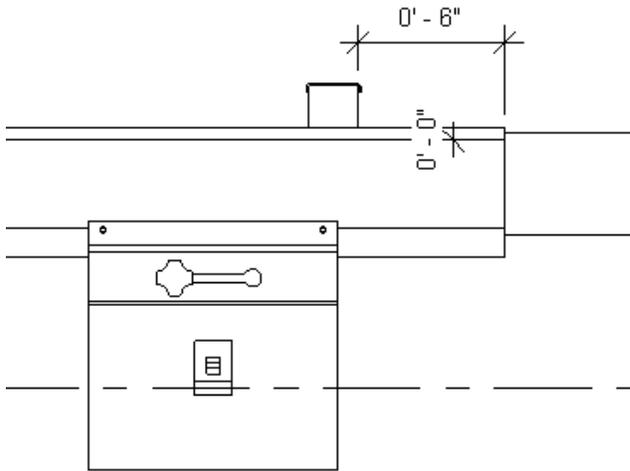
## 4.6 Tap-Off Boxes

Finally, attach Tap-Off Boxes to rails.

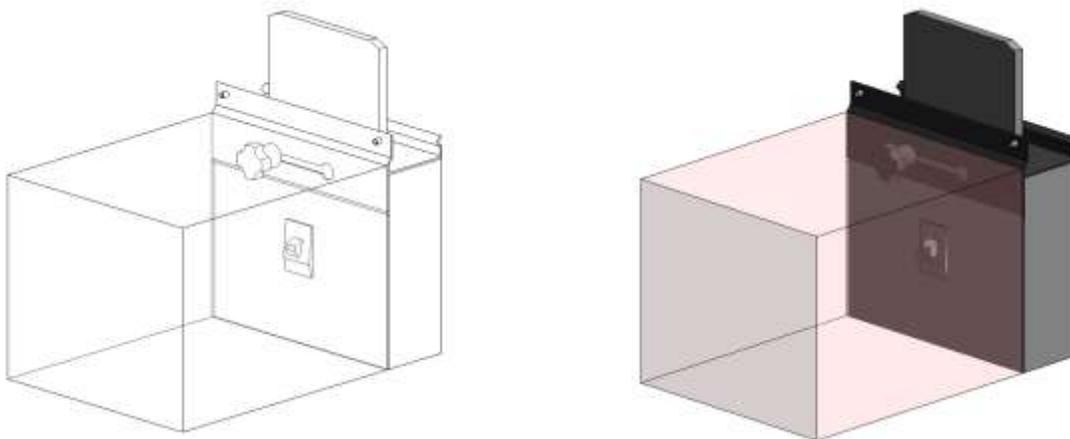
1. Import the Tap-Off Box model(s). Tap-Off Boxes have different dimensions and there are several models available. More than one type of Tap-Off Box may be used on the same rail.
2. Click to place as many Tap-Off Boxes as you need on the rail.
3. Align the middle plane of each Tap-Off Box with the middle plane of the rail.



- In the Elevations South view, dimensionally constrain each Tap-Off Box to fit on its rail as shown in the illustration below.



- Each Tap-Off Box has a clearance that is displayed in the same way as for the Standard End Feed.



- The display of a Tap-Off Box's clearance can be turned on or off by highlighting the Tap-Off Box and toggling its **Clearance** box under **Properties**.



## 4.7 Assembled Bus System Views

Your fully assembled PowerWave™ 2 Bus System model should look similar to the images below.

1. PowerWave™ 2 Bus System with **Clearances** turned off.



2. PowerWave™ 2 Bus System with **Clearances** turned on.

