
Asteel 3D Operation Reference



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Introduction

About This Guide

This guide will describe all aspects of Asteel 3D.

For information on installing Asteel 2 and Asteel 3D, see the Asteel Installation Guide.

An example of creating an Asteel 3D model is provided in the Asteel 3D Tutorial.

CHAPTER 1

Asteel 3D Concepts

This chapter describes several key concepts of Asteel 3D. These concepts are described here to make the rest of the documentation more easily understandable.

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Models and Jobs.....	3
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Models and Jobs

Models

A model is an AutoCAD drawing file created by Asteel 3D that contains objects that define the structure you are detailing. All work done within Asteel 3D must be associated with a model.

Jobs

A job is a collection of drawings, connection types, options and other data that are used to create a variety of output such as detail drawings, detail summaries and CNC data. All work done within Asteel 3D and Asteel 2 must be associated with a job.

Models And Jobs

Each model has an underlying job associated with it. When you create a new model in Asteel 3D, the job for that model is automatically created.

The model and the job for that model both share a unique job number. The job number consists of a two-digit year number and a three-digit sequence number, separated by a dash. For example, 07-100 would be job 100 in 2007.

When reading this guide and using Asteel 3D, the terms "model" and "job" are interchangeable.

Single User Mode and Multiple User Mode

A model can be worked on by multiple users at a time or by just a single user. This topic explains multiple user mode and single user mode.

Multiple User Mode

In multiple user mode, each user works on their own copy of the model called the secondary model. A master copy of the model called the primary model exists on a shared network drive that all of the users can access. This shared network drive can be located on a stand alone server or on one of the user's machines.

When a user wants to share the changes she made to her secondary model with the other users, she checks in her changes into the primary model. When a user wants to get the changes that other users have made, she checks out the primary model. While a user is checking in or checking out, the primary model is locked and unavailable to the other users.

Single User Mode

Single user mode is identical in concept to multiple user mode. The user still works on a copy of the model called the secondary model. A master copy of the model called the primary model exists either locally or on a shared network drive. But since there are no other users, there is no need to perform check ins or check outs except when Asteel 3D forces it.

For more information on checking in and checking out, see the ***Check In Model*** and ***Check Out Model*** topics. For more information on primary and secondary models, see the ***Primary Models and Secondary Models*** topic.

Primary Models and Secondary Models

Secondary Models

The secondary model is your working copy of the model. All work is done in the secondary model. Each individual working on a job will have their own secondary model that they can work in.

The secondary model is stored on the local machine in the "\\Asteel\\Modeler\\##-###\\Secondary" folder where ##-### is the job number of the model. The filename of the secondary model is "Model_S_##-###.DWG" where ##-### is the job number of the model.

When you open a model using the **Open Model** button of the Asteel 3D toolbar, you are opening the secondary model.

Primary Models

The primary model is the master copy of the model. When users check in changes, they are applying the changes they made in their secondary models to the primary model. In effect, the primary model is a repository for all model changes for all users on a job.

While the primary model exists in both a single user and a multiple user environment, its role is less important in the single user environment since check ins and check outs are seldom used.

The primary model is stored on either the local machine or on a shared network drive depending on the model configuration. It is located in the "\\Asteel\\Modeler\\##-###" folder where ##-### is the job number of the model. The primary model file can either be zipped or unzipped. If it is zipped then the filename is "Model_##-###.ZIP" where ##-### is the job number of the model. If it is unzipped then the filename is "Model_##-###.DWG" where ##-### is the job number of the model.

For more information on checking in and checking out, see the **Check In Model** and **Check Out Model** topics. For more information on working in single and multiple user environments, see the **Single User Mode and Multiple User Mode** topic.

Archives

An archive is a backup of a model and the job associated with that model.

Archives are stored as zip files in a dated subfolder of the "\\Asteel\\Modeler\\##-###\\Archives" folder where ##-### is the job number of the model. The dated subfolder will have the date and time the model was archived.

Since archives can take up a considerable amount of disk space, there is an option to limit the maximum number of archives. This option can be found on the *Options* screen.

Automatic Archiving

Asteel 3D automatically archives a model before certain tasks such as check ins and check outs as a safeguard. Since archiving is sometimes time consuming, you can disable automatic archiving on the *Options* screen.

Manual Archiving

You can manually create archives at any time by clicking the *Archive Model* button on the Asteel 3D toolbar. It is highly recommended that you take the time to archive your models at regular intervals.

Unarchiving

You can unarchive an archive at any time by clicking the *Unarchive Model* button on the Asteel 3D toolbar. Unarchiving reverts the model and the job associated with that model back to the state they were in at the time the archive was done. Changes made since the time of the archive are lost.

For information on archiving models, see the *Archive Model* topic.

For information on unarchiving models, see the *Unarchive Model* topic.

Server Drives

A server drive is a drive that contains the primary model and the underlying job associated with that model. You define the server drive for models on the *New Model* screen and on the *Options* screen. The server drive for a model could be your local drive or a mapped network drive depending on the situation. The two most common situations are explained below.

The Multiple User Situation (Mapped Network Drive)

If you are working on a model with other people on your network, then the server drive will be a mapped network drive that everyone on the network can access. When a user makes a change, that change is written to the mapped network drive so that everyone can see the change. This situation is referred to as Multiple User Mode in this documentation.

The Single User Situation (Local Drive)

If you are working on a model by yourself, then the server drive will be your local drive where Asteel is installed. When you make a change, that change is written to your local drive. This situation is referred to as Single User Mode in this documentation.

For more information, see the topic *Single User Mode and Multiple User Mode*. For more information on mapping network drives, see the Windows documentation.

Checking In and Checking Out

When working in Multiple User Mode, you will want to share your model changes with other users on the network. This process is called "checking in". You will also want to refresh your model with the changes that other users have made. This process is called "checking out". Both of these processes are described below.

Checking In

The process of "checking in" involves applying the changes that you have made to your secondary model to the primary model that exists on the server drive. There are two methods of checking in: checking in selected changes or checking in all changes. Both methods are described below.

When you check in selected changes, you pick the changes that you want to make to the primary model. The primary model is then opened in AutoCAD and the changes you selected are applied to the primary model. The primary model is not overwritten with this method. This is the preferred method when working in Multiple User Mode since changes that other users have made to the primary model remain intact.

When you check in all changes, your secondary model completely overwrites the primary model. If any other users have checked in changes since your last check out, then the changes they made are lost. This is the preferred method when working in Single User Mode since you don't have to worry about changes that other users make.

Checking Out

The process of "checking out" involves applying the changes that all users have made to your local model. This is done by overwriting your secondary model with the primary model. Because your secondary model is overwritten, it is important that you check in any changes that you want to keep before you check out.

CHAPTER 2

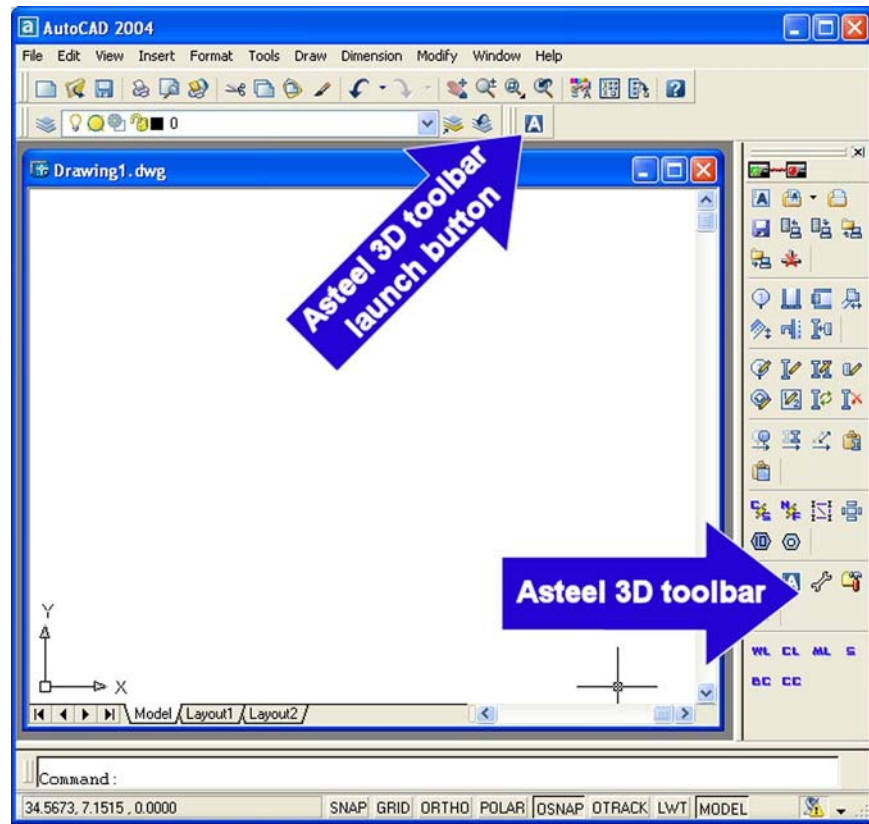
Common Characteristics of the User Interface

This chapter describes some of the common themes you will see in Asteel 3D. This chapter also describes screens that are accessible from multiple areas in Asteel 3D.

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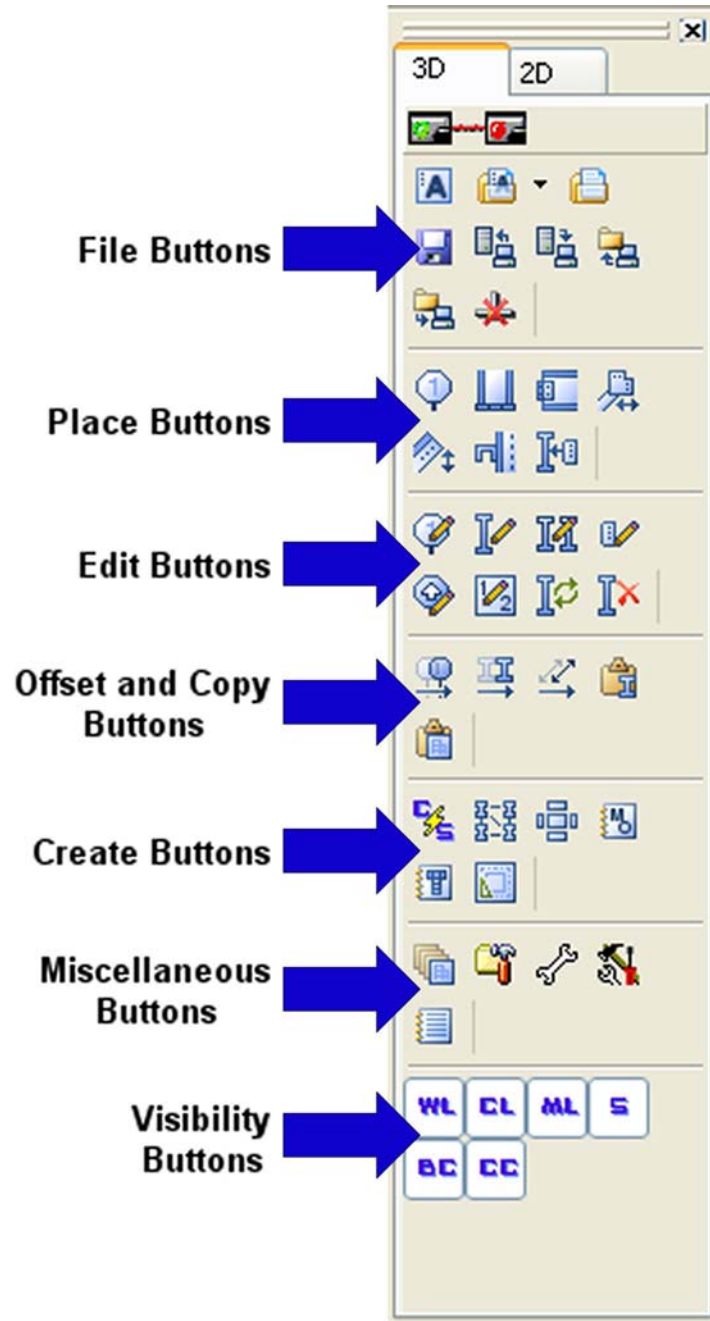
The Toolbar Launch Button and the Toolbar



The Asteel 3D toolbar and the Asteel 3D toolbar launch button are both pictured above. If the Asteel 3D toolbar is not visible, then click the Asteel 3D toolbar launch button. If the Asteel 3D toolbar launch button is not visible, then see the Asteel Installation Guide for instructions on installing it.

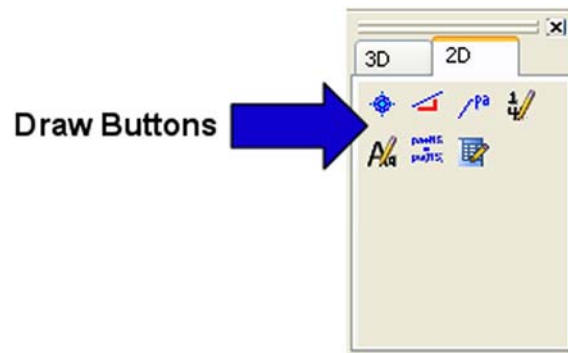
The Asteel 3D toolbar is divided into two tabs: the 3D tab and the 2D tab.

Below is a screenshot of the 3D tab. The 3D tab contains buttons which are used mainly for modeling. It is divided into seven panels which are devoted their own chapters in this guide: ***File Buttons*** , ***Place Buttons*** , ***Edit Buttons*** , ***Offset and Copy Buttons*** , ***Create Buttons*** , ***Miscellaneous Buttons*** and ***Visibility Buttons*** .



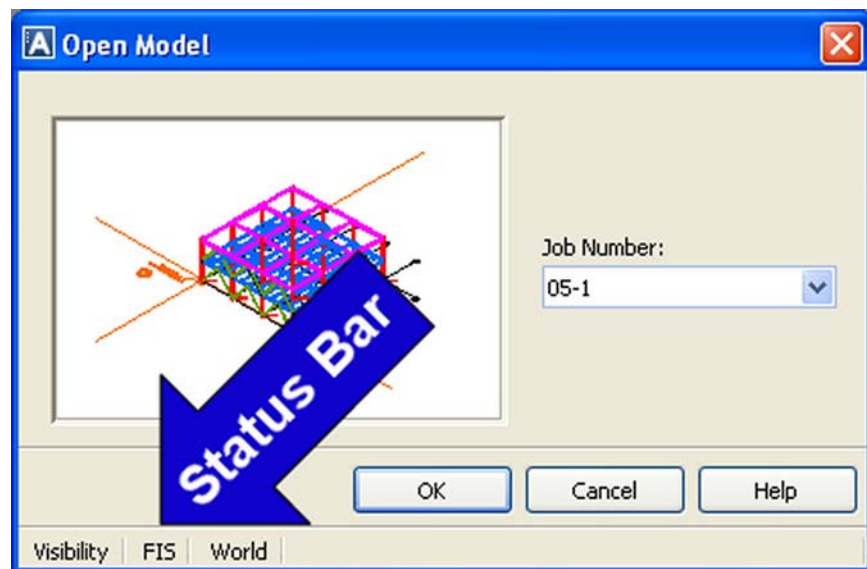
Note that many of the 3D tab buttons will not work unless you have a model drawing open in AutoCAD.

Below is a screenshot of the 2D tab. The 2D tab contains buttons which are used to help you in the 2D output drawings. It currently only has a single panel - **Draw Buttons**. This panel is discussed in a later chapter.

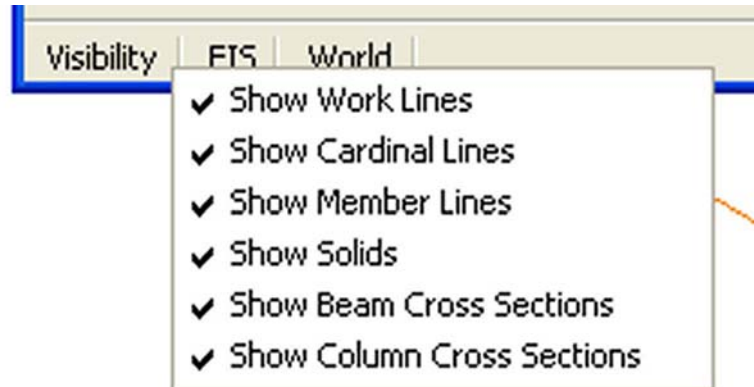


The Status Bar

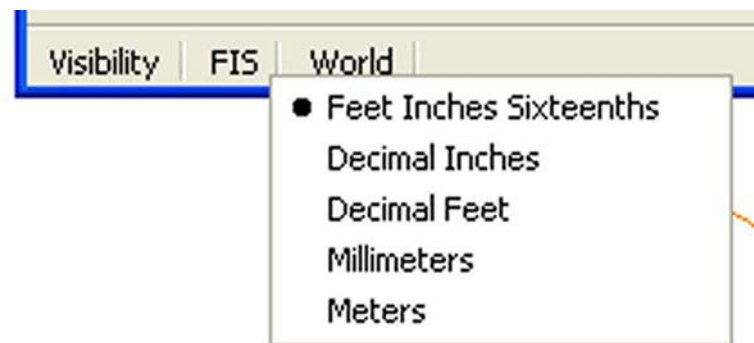
The status bar is available on nearly all Asteel 3D screens. It is located at the bottom left corner of the screen as shown below. The status bar is divided into three panels: the Visibility pane, the Unit panel and the UCS panel.



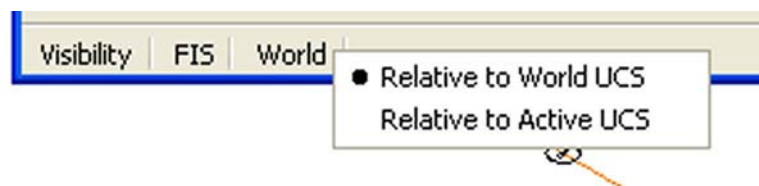
The Visibility panel allows you to toggle the visibility of various objects in the model on and off. The Visibility panel menu is shown below.



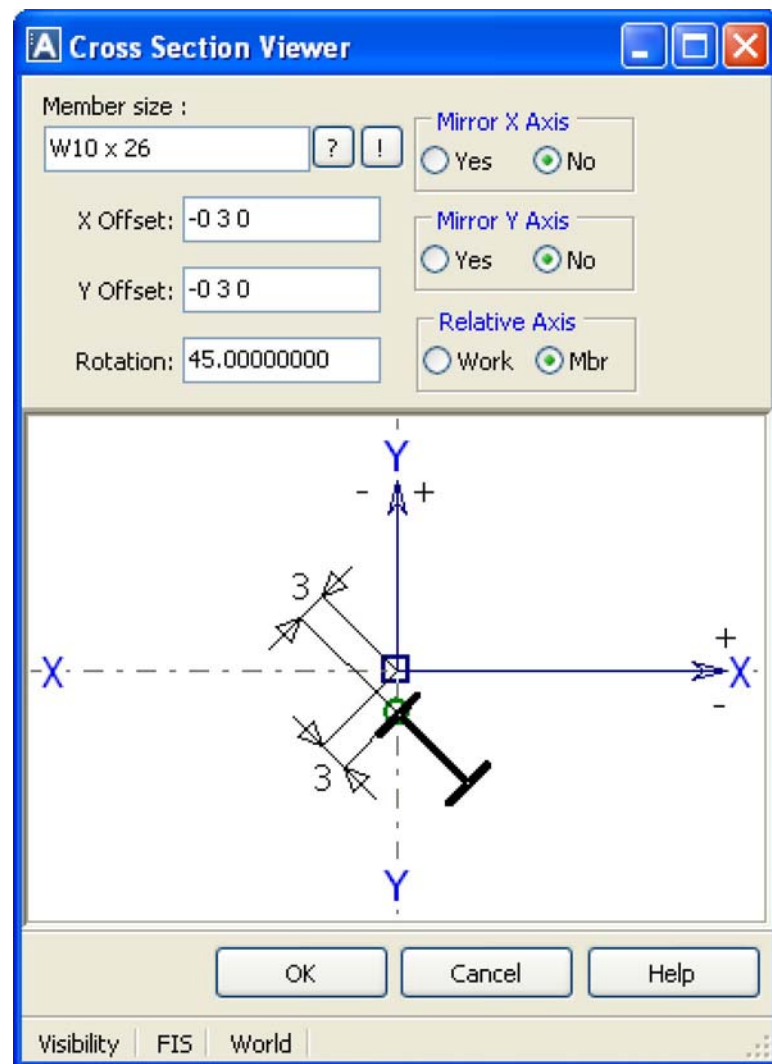
The Unit panel allows you to change the unit input format. Dimension fields in Asteel 3D will expect the dimensions you input to match the unit input format selected here. For example, if Feet Inches Sixteenths is selected on the Unit panel then Asteel 3D will validate all dimension fields to Feet Inches Sixteenths format. The Unit panel menu is shown below.



The UCS panel allows you to change the UCS. UCS options are relative to world and relative to active. The UCS panel menu is shown below.



The Cross Section Viewer



This screen allows you to rotate and offset members while giving you instant visual feedback.

Member Size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6

Size	Input
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

The question mark button ("?",) displays the *Member Size Input Examples* screen.

The exclamation mark button ("!",) displays the *Member Properties* screen.

X Offset

The member's offset from the X axis.

Y Offset

The member's offset from the Y axis.

Rotation

The member's rotation.

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

Relative Axis

If the relative axis is the member, then the X and Y offsets will take the rotation into account. If the relative axis is the work point, then the X and Y offsets will not take the rotation into account.

OK

Applies the changes you made to the member.

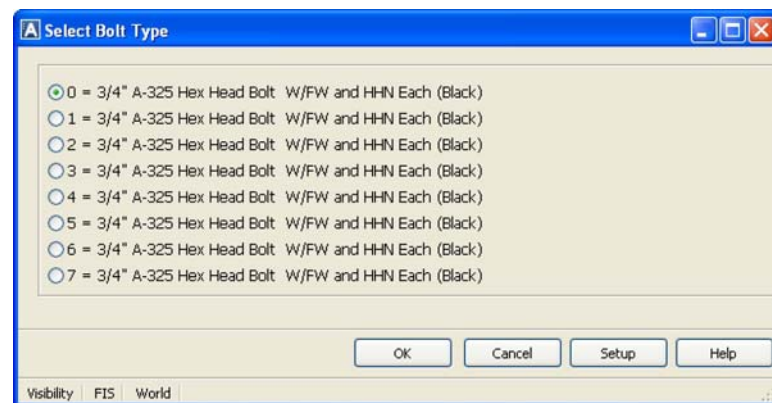
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

The Select Bolt Type Screen



This screen allows you to select a bolt type.

Bolt types are configured on both the *Options (Current Model) - Bolts* screen and the *Default Bolts* screen.

OK

Applies the bolt type you select.

Cancel

Closes the screen. No action is taken.

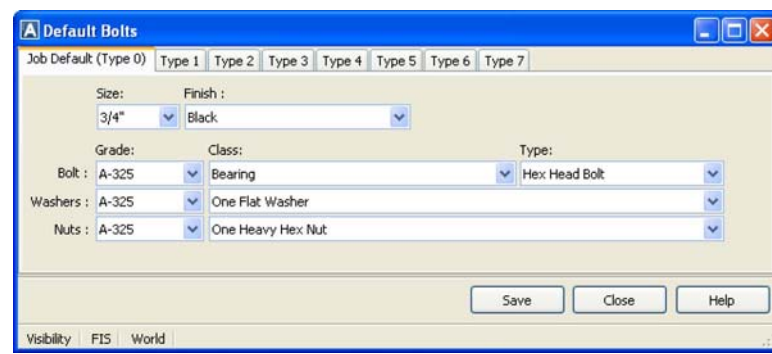
Setup

Displays the *Default Bolts* screen.

Help

Displays help for this screen.

The Default Bolts Screen



This screen allows you to modify the settings of bolt types in the model. There are eight (types 0 - 7) possible bolt types that you can configure.

Bolt settings can also be modified from the *Options (Current Model) - Bolts* screen.

Save

Applies the bolt type modifications.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

The Member Size Input Examples Screen

Member Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
Round HSS7 1/2 x 3/8	HSS7.5 6
TS3 1/2 x 3 1/2 x 1/4	TS3.5 3.5 4
5 inch Standard Pipe	P55
5 inch Extra Strong Pipe	PX5
5 inch Double Extra Strong Pipe	PXX5
L4 x 3 1/2 x 5/16	L4 3.5 5
G36 x 20 x 1 1/2 x 2 3/4	G36X20X1.5X2.75

OK Cancel

Visibility FIS World

This screen explains how to input the various member sizes in Asteel 3D.

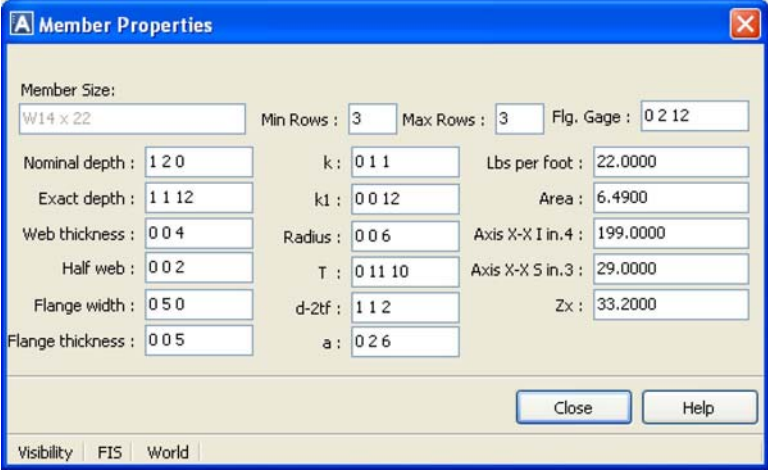
OK

Closes the screen. No action is taken.

Cancel

Closes the screen. No action is taken.

The Member Properties Screen



The image shows a software dialog box titled "Member Properties". It contains various input fields for defining member characteristics. The fields are organized into several rows and columns. At the bottom right are "Close" and "Help" buttons. At the bottom left is a tab bar with "Visibility", "FIS", and "World" tabs, where "FIS" is currently selected.

Member Properties			
Member Size:	W14 x 22	Min Rows :	3
		Max Rows :	3
		Flg. Gage :	0 2 12
Nominal depth :	1 2 0	k :	0 1 1
		Lbs per foot :	22.0000
Exact depth :	1 1 12	k1 :	0 0 12
		Area :	6.4900
Web thickness :	0 0 4	Radius :	0 0 6
		Axis X-X I in.4 :	199.0000
Half web :	0 0 2	T :	0 11 10
		Axis X-X S in.3 :	29.0000
Flange width :	0 5 0	d-2tf :	1 1 2
		Zx :	33.2000
Flange thickness :	0 0 5	a :	0 2 6
Close Help			
Visibility FIS World			

This screen displays the properties of a member.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

CHAPTER 3

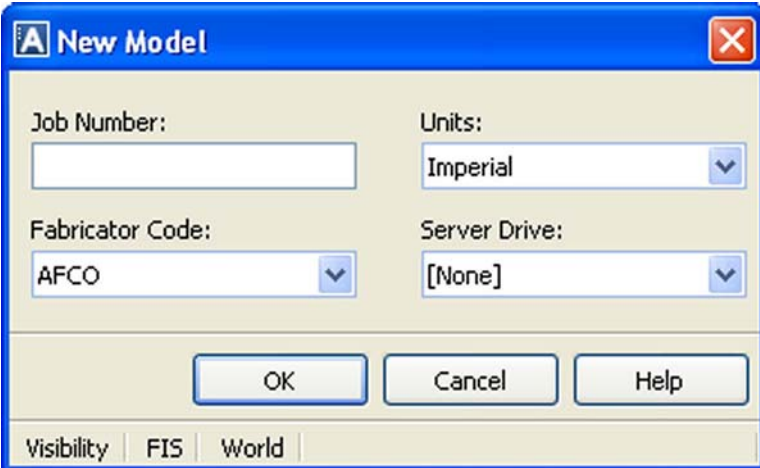
File Buttons

This chapter describes the File buttons on the Asteel 3D toolbar.

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New Model



This screen allows you to create a new Asteel 3D model.

Job Number

The job number for a model uses the format YY-NNN where YY is the last two digits of the year and NNN is a number from 1 to 999. For example, you could enter 05-1 for the first job in 2005.

Fabricator Code

The fabricator code determines certain aspects of how drawings are produced, such as where items go in the title block and what marking system is used.

Asteel 3D ships with a few default fabricator codes, but you will most likely have to create your own. Currently the only way to create new fabricator codes is to do so in Asteel 2 at the Fabricator Setup screen. For more information on creating new fabricator codes, see the Asteel 2 Operation Reference.

After a model is created, you can change the fabricator code on the *Options* screen.

Units

The units for the model can be either imperial or metric. This option affects how dimensions are output on the detail drawings. If imperial is selected, then all dimensions will be imperial on the detail drawings. If metric is selected, then all dimensions will be metric on the detail drawings.

After a model is created, you can change the units on the *Options* screen.

Server Drive

If you are working on a model by yourself then this should be set to "[None]". If multiple users across the network are working on the same model, then the server drive should be set to a mapped drive that all of those users access for model data.

After a model is created, you can change the server drive on the *Options* screen.

Additional information on server drives can be found in the *Server Drives* topic, the *Single User Mode and Multiple User Mode* topic, and the *Primary Models and Secondary Models* topic.

OK

Creates a new model.

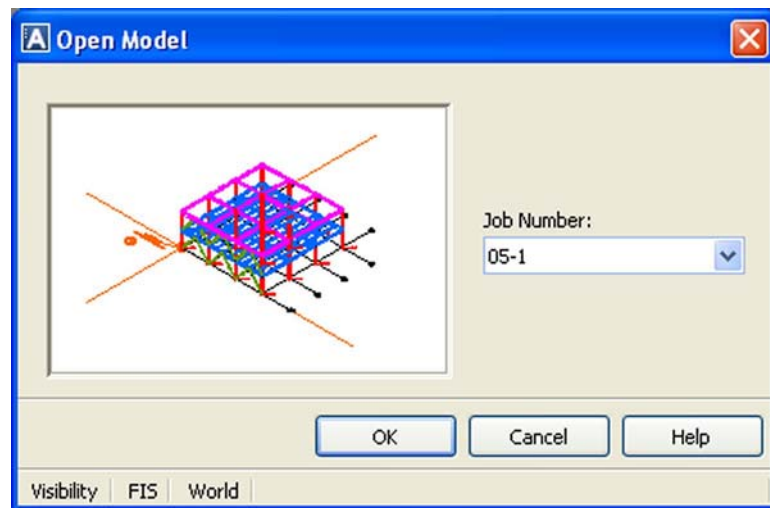
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Open Model



This screen allows you to open Asteel 3D models that exist on your system.

Job Number

The job number listbox displays all of the models that exist on your system. Select the model you want to open and click the OK button to open it.

When you select a job number, a thumbnail preview of the model associated with that job number will be displayed. If the model drawing does not have a thumbnail preview available or if it is already open, then the thumbnail preview will not be displayed.

OK

Opens the model specified in the Job Number field.

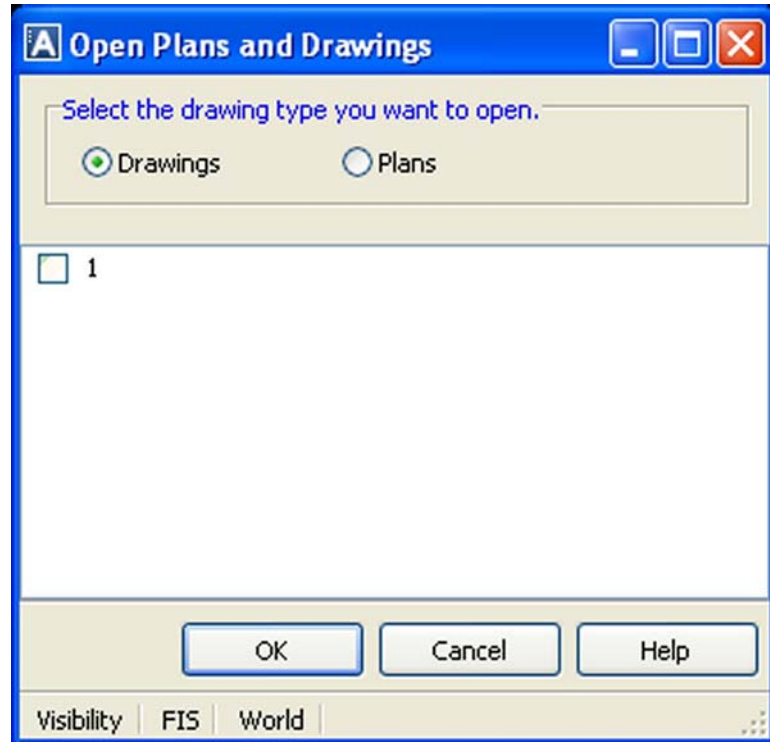
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Open Plans and Drawings



This screen allows you to open drawings and plans created from Asteel 3D models. Select either the Drawings or the Plans radio button, then check the drawing you wish to open and click OK. The drawing will be opened in AutoCAD.

Select the drawing type you want to open.

Clicking the Drawings radio button will display all of the drawings associated with the model. Drawings are stored as AutoCAD DXF files in a folder specified by the DXF output path option on the **Options** screen. By default, the DXF output path is your "\Asteel\dxr" folder.

Clicking the Plans radio button will display all of the plans associated with the model. Plans are stored as AutoCAD DWG files in the "\Asteel\Modeler\##-###\Plan Drawings" folder where ##-### is the job number of the model.

OK

Opens the checked drawings or plans in AutoCAD.

Cancel

Closes the screen. No action is taken.

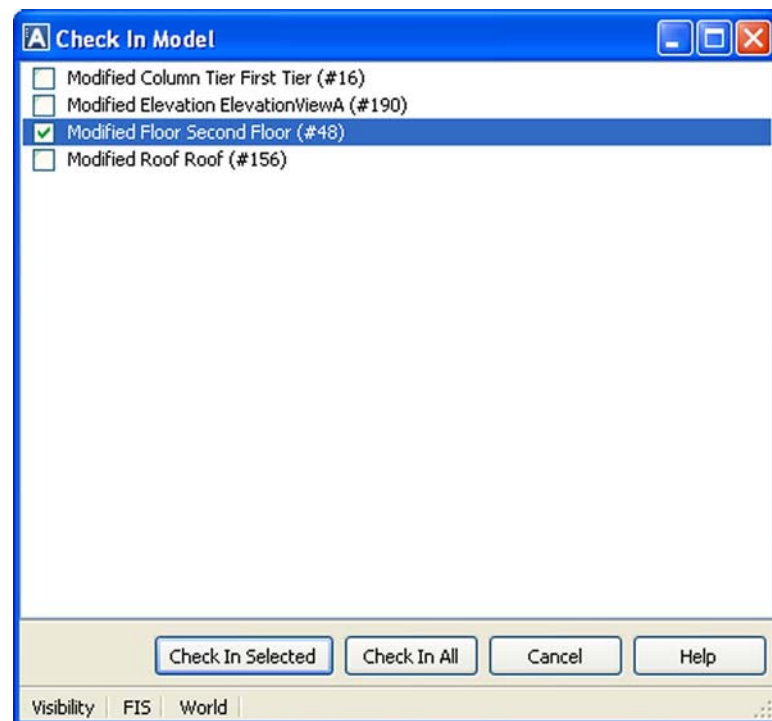
Help

Displays help for this screen.

Save Model

The Save Model button on the Asteel 3D toolbar saves the currently loaded model.

Check In Model



This screen allows you to check in secondary model changes into the primary model. For more information, see the *Checking In and Checking Out* topic.

Check In Selected

This method of checking in involves clicking the checkboxes next to the changes that you want to check in, then clicking the Check In Selected button. The primary model is then opened in AutoCAD and the changes you selected are made to the primary model. The primary model is not overwritten with this method.

Check In All

This method of checking in involves clicking the Check In All button. The secondary model completely overwrites the primary model. If any other users have checked in changes since your last check out, then the changes they made are lost. Typically the Check In All method is useful for single user models.

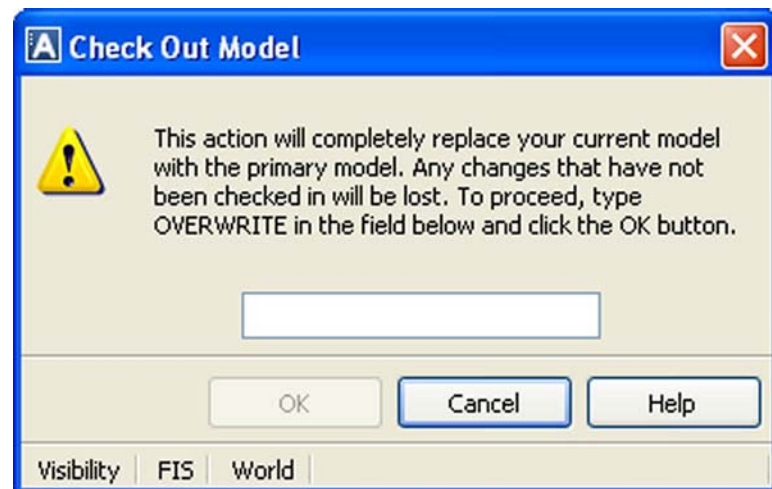
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Check Out Model



This screen allows you to check out the model. When you perform a check out, your secondary model is overwritten by the primary model. Any changes you have made to the secondary model are lost. For more information, see the ***Checking In and Checking Out*** topic.

OK

This button will be grayed out and unclickable until the word OVERWRITE is typed into the field. This is a precaution to avoid overwriting your secondary model unless you really want to do so. Once OVERWRITE is typed into the field, you can click the OK button to check out the primary model.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Archive Model

The Archive Model button on the Asteel 3D toolbar archives the currently loaded model.

For more information on Archives, see the *Archives* topic.

Unarchive Model



This screen allows you to unarchive the model. You must select an archive that matches the job number of the currently opened model in order to unarchive. Unarchiving a model reverts the model back to the state that it was in when you archived it. Any changes made since the date of the archive are lost. For more information on Archives, see the *Archives* topic.

OK

This button will be grayed out and unclickable until the word UNARCHIVE is typed into the field. This is a precaution to avoid unarchiving unless you really want to do so. Once UNARCHIVE is typed into the field, you can click the OK button to unarchive the model.

Cancel

Closes the screen. No action is taken.

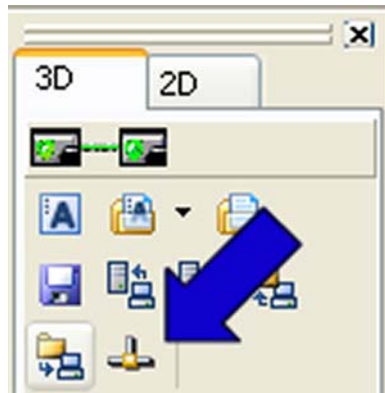
Help

Displays help for this screen.

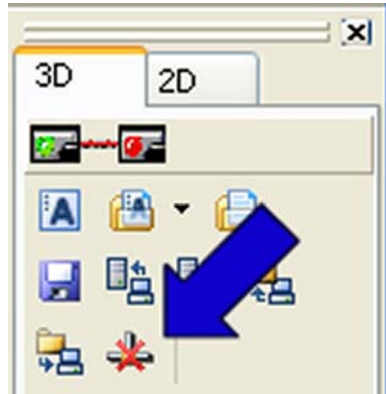
Connection Status

The Connection Status button on the Asteel 3D toolbar serves two purposes. First, it shows the network connection status for server drive models. Second, it shows the *Model Information Log* screen if clicked.

If the model you are working on is a server drive model and you are connected to the server drive, then the Connection Status button will show a connected graphic as shown below. If you are working on a local drive model, then this graphic will also be shown.



If the model you are working on is a server drive model and you are not connected to the server drive, then the Connection Status button will show a disconnected graphic as shown below. This is meant to let you know that the connection to the server isn't established.



For more information on server drives, see the *Server Drives* topic.

CHAPTER 4

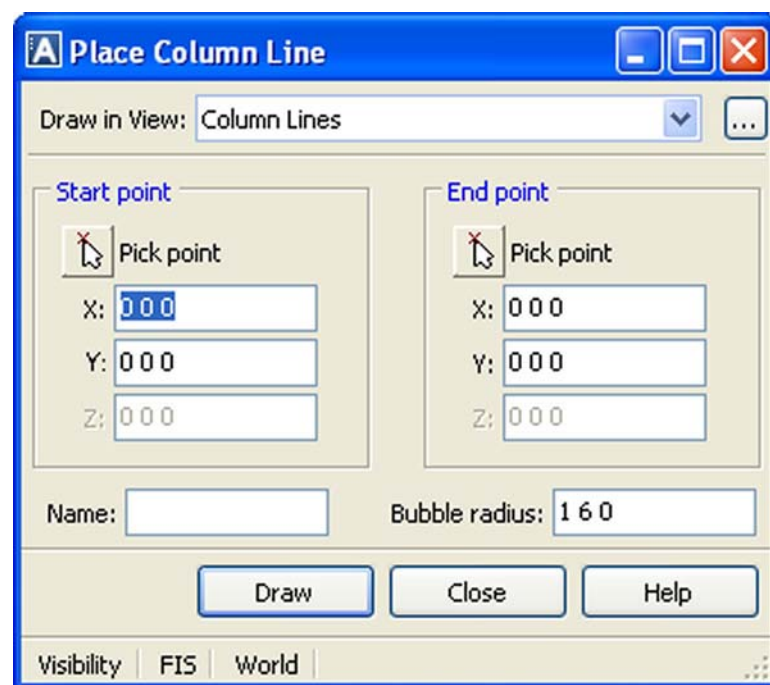
Place Buttons

This chapter describes the Place buttons on the Asteel 3D toolbar.

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Place Column Line	31
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Place Column Line



This screen allows you to place column lines in a model.

Draw in View

The Draw in View listbox displays all of the column line views that are currently defined in the model. The column line will be drawn in the view specified in this listbox when the Draw button is clicked. The ellipses button to the right of the listbox takes you to the ***Model Views*** screen where you can create, modify or delete existing views.

Start Point

The Start Point box allows you to select the start point for the item you are drawing. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

The start point of a column line is the point on the opposite end of the bubble.

End Point

The End Point box allows you to select the end point for the item you are drawing. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

The end point of a column line is the point with the bubble.

Name

Input the name of the column line in the Name field. The name appears in the column line bubble.

Bubble Radius

Input the radius of the bubble in the Bubble Radius field. If the column line name is more than two characters, then consider increasing the bubble radius.

Draw

Draws the column line in the model.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Place Column

This screen allows you to place columns in a model. For more information on this screen, see the following topics.

Place Column - General Column Information

This area of the Place Column screen allows you to specify general information about the column such as the member size, steel type and orientation of the column.

Draw In View

The Draw in View listbox displays all of the column tier views that are currently defined in the model. The column will be drawn in the view specified in this listbox when the Draw button is clicked. The ellipses button to the right of the listbox takes you to the **Model Views** screen where you can create, modify or delete existing views.

Member Size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

The question mark button ("?") displays the **Member Size Input Examples** screen.

The exclamation mark button ("!") displays the **Member Properties** screen.

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece Mark

Enter the piece mark for the member.

Seq

Enter the sequence for the member.

Orientation Face

Enter the face of the column.

Mark

Enter the plan orientation. You can specify any cardinal direction by entering the character "N", "S", "E", "W" or any combination thereof. Otherwise any phrase may be used to describe the columns mark. Combinations may also be used for multiple piece marks. For example, you can enter "SW@C1, E@C2".

Misc

To change the size of the column for drawing purposes, use the following codes:

Input	Description
Y1=2	Raise the bottom of the column 2 inches.
Y2=-3	Lower the top of the column 3 inches.
Y4=1	Raise the base plate 1 inch.
Y1=2;Y2=-3	Top and bottom combination.
X=.5 (1/2 inch)	Increase the distance between column faces A-B and B-C by 1/2 inch.
X2=.5	Increase the distance between column faces A-B by 1/2 inch.
X3=.75	Increase the distance between column faces B-C by 3/4 inch.

To get a section view for use by the detailer, enter SECT.

To specify the end cut notation for the column base or cap, input the column end (BASE or CAP) followed by one of the following codes:

Code	Result
1	cut square
2	mill

Code	Result
3	finish

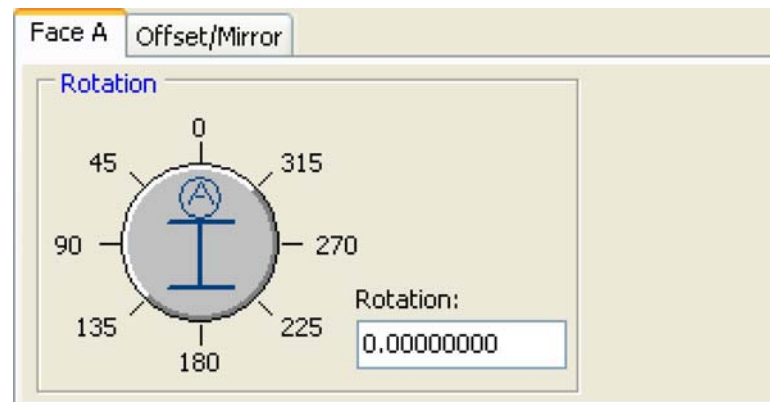
For example, BASE=1;CAP=2 would cut the bottom end square and mill the top end.

When you input multiple codes, separate them with a semicolon (;).

The ellipses button to the right of this field will display Column Miscellaneous screen. For more information, see the *Column Miscellaneous* topic.

Remarks

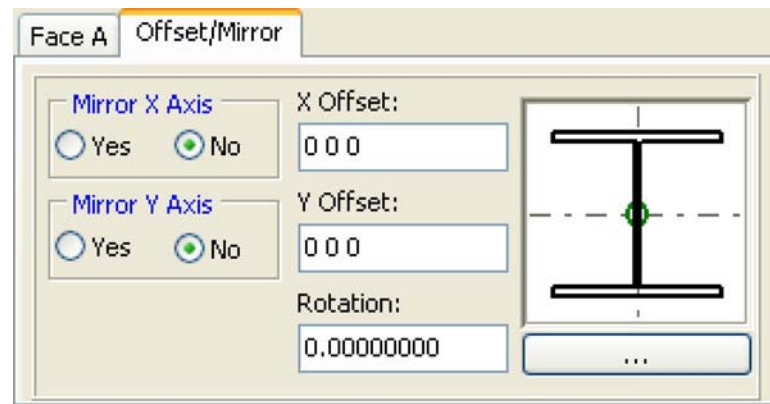
Enter any remarks about the detail. Remarks will be placed next to the column size on the detail and in the remarks column in the shop bill. For example, you could enter "NO PAINT" here.



This area of the Place Column screen allows you to rotate the column.

Rotation

The member's rotation.



This area of the Place Column screen allows you to rotate and offset the column. A picture on the right side shows you how the column will be oriented based on the data. The ellipses button takes you to the ***Cross Section Viewer*** screen which gives you a better visual picture of how the column will be oriented.

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

X Offset

The member's offset from the X axis.

Y Offset

The member's offset from the Y axis.

Rotation

The member's rotation. The ellipses button to the right of this field displays the ***Cross Section Viewer*** screen.

The buttons on this form are described below.

Draw

Draws the column in the model.

Update

Recalculates various properties of the member.

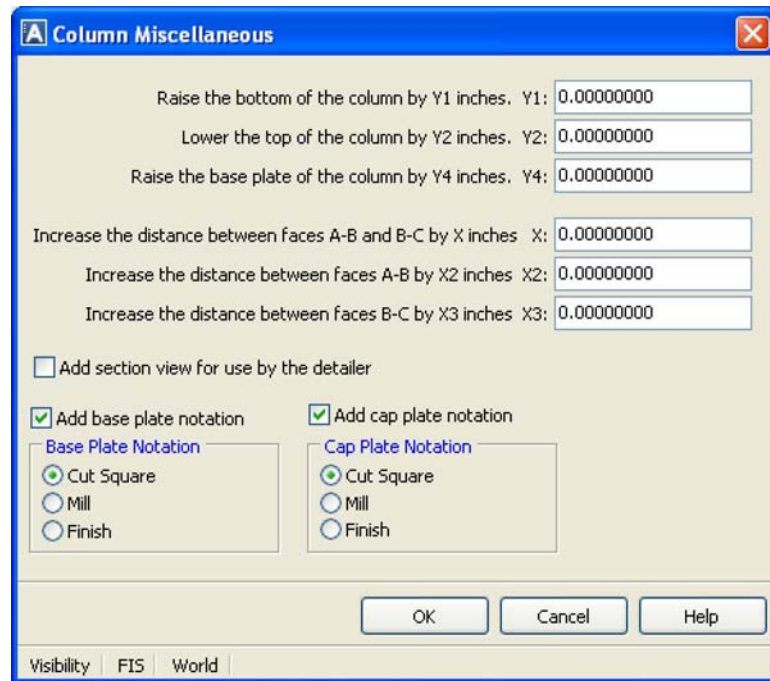
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Place Column - Column Miscellaneous



The Column Miscellaneous screen gives you access to the options described below.

Y1

Raise the bottom of the column by this amount.

Y2

Raise the top of the column by this amount.

Y4

Raise the base plate by this amount.

X

Increase the distance between column faces A-B and B-C by this amount.

X2

Increase the distance between column faces A-B by this amount.

X3

Increase the distance between column faces B-C by this amount.

Add section view for use by the detailer

If checked, then a section of the column will be added to the drawing output.

Add base plate notation

If checked, then the cut notation for the column base plate will be Cut Square, Mill or Finish based on the radio button you select.

Add cap plate notation

If checked, then the cut notation for the column cap plate will be Cut Square, Mill or Finish based on the radio button you select.

OK

Applies the changes made on this screen to the column.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Place Column - Location

This area of the Place Column screen allows you to specify the starting and ending coordinates for the column(s). It also allows you to specify the connection types used at the column ends.

Insertion Point

The Insertion Point box allows you to select the point where the column will be placed in the model. You can type the coordinate in the X and Y fields or you can click the Pick Point button and select the point in AutoCAD.

An alternative way to select the point is to use the Column Line listboxes. Simply select two column lines that intersect each other and the column will be placed at that intersection.

There is also a way to specify multiple points at a time. Do this by clicking the Pick Multiple button. You will be allowed to pick multiple points in AutoCAD. When the Draw button is clicked, a column will be drawn on each point you select.

The following fields apply to the bottom and top ends of the column.

Elevation

Enter the elevation for this end of the column. The button to the right of this field allows you to select an elevation in AutoCAD.

Adjust elevation

Enter a distance value to adjust the elevation by.

End type

Enter the column end type in this field. If no type is entered, then that end of the column will be blank (square end). The ellipses button to the right of this field will display the *Connection Setup* screen. From there, you can select a column end type.

Framing type

The framing type that this end of the column frames into. The ellipses button to the right of this field will display the *Connection Setup* screen. From there, you can select a framing type.

Member Number

The member number of the member that this end of the column frames into.

Frame to Member size

The member size of the member that this end of the column frames into.

The exclamation mark button ("!") displays the *Member Properties* screen.

Bolt Type

For bottom ends, you can select either an anchor bolt type or a bolt type. For top ends, you can only select a bolt type.

If you are selecting a bolt type, the ellipses button displays the **Select Bolt Type** screen. If you are selecting an anchor bolt type, the ellipses button displays the **Connection Setup** screen.

Place Column - Ends

This area of the Place Column screen allows you to make adjustments to the column ends.

Clear

This button clears this end of the column.

Elevation

Enter the elevation for this end of the column.

Adjust

Enter a distance value to adjust the elevation by.

Actual

The elevation taking any adjustments into account.

End type

Enter the column end type in this field. If no type is entered, then that end of the column will be blank (square end). The ellipses button to the right of this field will display the **Connection Setup** screen. From there, you can select a column end type.

Framing type

The framing type that this end of the column frames into. The ellipses button to the right of this field will display the **Connection Setup** screen. From there, you can select a framing type.

Mbr #

The member number of the member that this end of the column frames into.

Mbr size

The member size of the member that this end of the column frames into.

The exclamation mark button ("!") displays the **Member Properties** screen.

Size A

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Size B

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Hole C

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Hole D

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Hole size

Enter the plate hole size. This field defaults to the hole size from the **Options** screen.

Thickness

Enter the endplate thickness. This field is mandatory for type 1.

Bevel

Base plates and cap plates may be skewed relative to the column shaft. Enter the rise in inches relative to 12. See the column end type 1 example in OnlineDocs for more information. The below Face field indicates the face that is beveled.

Face

Enter the face (A, B, C, or D) that is beveled. This field is used with the Bevel field.

Exception

The exception field allows for several options. Separate options with a semicolon (;).

Input	Description
LAYOUT	If a layout of the cap plate is required, enter the word LAYOUT in the Exception field under the cap plate heading.
MK=	A standard mark can be given for a BASE and/or CAP plate in the Exception field. Prefix the mark with an "MK=". For example: "MK=stdmk".
AB=	Anchor bolt connection reference. To reference an anchor bolt connection type, prefix the type with "AB=". For example: "AB=1A".

For more information, see the *Column End Exception* topic.

Place Column - Column End Exception

Column End Exception

☐ Check this option if a layout of the base or cap plate is required.

A standard mark can be given for a base plate or cap plate by entering the mark in this field

Anchor bolt connection reference
To reference an anchor bolt connection enter the type in the field below

OK Cancel Help

Visibility FIS World

The Column End Exception screen gives you access to the options described below.

Check this option if a layout of the base or cap plate is required.

If this option is checked, then a layout of the base or cap plates will be provided in the drawing output for this column.

A standard mark can be given for a base plate or cap plate by entering the mark in this field

Enter a standard mark for the base or cap plate.

Anchor bolt connection reference To reference an anchor bolt connection enter the type in the field below

Enter the anchor bolt type to use for this column.

OK

Applies the changes made on this screen to the column.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Place Column - Framing

Location		Ends		Framing													
Member Number	Loc	Face	Bm Sz or Pc Mk	Elevation	Type	Gage	Rows	Sp'g	Holes	C/C	ADim	Rows	Sp'g	BDim	Rows	Sp'g	

Edit Connections

Edit Member

The Framing tab displays information on the connections framing into the column. Although most of the data on this screen is read only, you can still edit the connections using the Edit Connections button and the Edit Member button.

Member Number

The member number of the object framing into the column. Note that connections that you place manually will have their own unique member numbers. A small graphic next to the member number displays the type of connection.

Loc

The type of connection. Possible connection types are described below.

Connection Type	Description
Base	Column base plate.
Cap	Column cap plate.
Start	Left end of a member.
End	Right end of a member.
Conn	User placed connection.

Face

The column face that the connection is framing into.

Bm Sz or Pc Mk

The beam size or the piece mark that is framing in.

Elevation

The elevation of the connection. The framing elevation must be less than the cap elevation and greater than the base elevation.

Type

The connection type.

Gage

The dimension down from the elevation to the first row of holes.

Rows

The number of rows below the elevation line.

Spc'g

The spacing between the rows (defaults to 3 inches).

Holes

The hole size in sixteenths. For example, a hole size of $1 \frac{5}{16}$ would be input as "21".

C/C

The horizontal dimension between the rows.

ADim

The dimension above the elevation line to the first row of holes going up.

Rows

The number of rows above the elevation line.

Spc'g

The spacing of rows above the elevation line (defaults to 3 inches).

BDim

The dimension from the last row at the current connection to the first row below this connection.

Rows

The number of rows below the connection.

Spc'g

The spacing between the rows below the connection.

Edit Connections

If this button is clicked, then the Place Column Connection screen is displayed with all of the user defined connections for the column. For more information, see the ***Place Column Connection*** topic.

Edit Member

If this button is clicked, then the edit screen for the member associated with the selected connection is displayed. You can then edit that member.

Place Beam

This screen allows you to place beams in a model. For more information on this screen, see the following topics.

Place Beam - General Beam Information

This area of the Place Beam screen allows you to specify general information about the beam such as the member size, steel type and orientation of the beam.

Draw in View

The Draw in View listbox displays all of the floor views that are currently defined in the model. The beam will be drawn in the view specified in this listbox when the Draw button is clicked. The ellipses button to the right of the listbox takes you to the **Model Views** screen where you can create, modify or delete existing views.

Member size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

The question mark button ("?") displays the **Member Size Input Examples** screen.

The exclamation mark button ("!") displays the **Member Properties** screen.

C/NC

This option allows you to make the beam either Composite or Non Composite. This information is used when calculating end capacities.

Camber

Specify a camber here if necessary. The camber will be noted both on the detail next to the member size and in the shop bill under the remarks column.

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece Mark

Enter the piece mark for the member.

Seq

Enter the sequence for the member.

Det len.

These fields allow you to specify the drawn length of the member as well as adjust the horizontal placement of that member.

The first field specifies the actual length in inches that the beam detail will occupy on the drawing. The length must be long enough to accept the web/flange framing connections. Each framing connection requires 1.5 inches, so a 9-inch detail would accommodate up to 5 framing connections and 14 framing connections would require at least 22.5 inches detail length.

The second field allows you to move the beam horizontally on the drawing. For example, entering "1" in this field would move the beam detail to the right by one inch. Entering "-2" would move the beam detail to the left by two inches.

Remarks

Remarks entered here will be noted both on the detail next to the member size and in the shop bill under the remarks column.

You may also add a location reference for each piece mark in this field. You must prefix the location reference with the piece mark number.

For example, if you enter "1=E-4, F-4" in this field, "[E-4, F-4]" will appear beside the piece mark on the detail. If you enter "1=E-4, F-4; 2=G-5, H-5" in this field, "[E-4, F-4]" will appear beside the first piece mark and "[G-5, H-5]" will appear next to the second piece mark.

Make sure you separate each location reference with a semi-colon. You can combine remarks and location references by separating them with a semi-colon.

W.P. to W.P.

The work point to work point of the beam.

Misc.

This space is used to specify beam miscellaneous types as well as the following options. The **Connection Setup** screen for beam miscellaneous types can be accessed by clicking the ellipses button to the right of this field.

Option	Description
NAIL	Shows nailer hole punching in the top flange of a beam. For example, "NAIL=2 6 0" specifies holes every 2'-6 inches for the length of the beam. You can also specify the distance from the left end at which the holes are to start. For example, "NAIL=2 6 0,6 0 0" places holes every 2'-6 inches beginning 6' from the left end of the beam.
SPA	The SPA is similar to the NAIL option, except that it does not draw holes. It can be used to layout items that occur at regular intervals. An additional option allows you to specify the number of spaces by entering the number and an @ symbol before the dimensions. For example, "SPA=4@2 0 0, 4 0 0" would specify 4 spaces at 2'-0 intervals starting at 4'-0 from the left end.
SECT	Draws a section of the beam to be used by the detailer.
GIRT	Causes beams to be treated as girts (i.e. pull dimensions from the bottom flange).
TYPES	Refer to the Beam Miscellaneous section in OnlineDocs for a description of the different types available and the format to enter.
TOEUP	Channel option to detail looking at the toes of the flanges. This is useful if you want to override the channel option on the Options screen.
TOEDOWN	Channel option to detail looking at the back of the channel. This is useful if you want to override the channel option on the Options screen.
P-1	This code is used with bracing beam midspan types. It informs Asteel 3D that there is only one work point (one brace). See the Bracing Beam Midspan Types section of OnlineDocs for more information.

Option	Description
P-2	This code is used with bracing beam midspan types. It informs Asteel 3D that there are two work point (and two plates). See the Bracing Beam Midspan Types section of OnlineDocs for more information.
LF	This code is used to set the UDL/2 factor on an individual basis. The default UDL/2 factor is set on the Options screen. Example input: "LF=2.0".

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

Relative Axis

If the relative axis is the member, then the X and Y offsets will take the rotation into account. If the relative axis is the work point, then the X and Y offsets will not take the rotation into account.

X Offset

The member's offset from the X axis.

Y Offset

The member's offset from the Y axis.

Rotation

The member's rotation. The ellipses button to the right of this field displays the **Cross Section Viewer** screen.

The buttons on this form are described below.

Draw

Draws the beam in the model.

Close

Closes the screen. No action is taken.

Update

Recalculates various properties of the member.

Help

Displays help for this screen.

Place Beam - Ends

The Location tab allows you to edit the locations and connection types for the beam ends.

Clear

This button clears the data on this screen.

Pick Point

Select the point where this end of the beam will be in the model. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

For the right end of the beam, a checkbox labeled "Cont" is available. If checked, then the right end's coordinate will be copied to the left end when the Draw button is clicked. This is useful when you want to draw multiple beams in a row since you only have to select the right end coordinate for each beam.

Len +/-

The minus dimension on this end of the beam.

Elev. +/-

Use this field to adjust the elevation of this end's work point by a certain amount. When you make a change to this field, the "Actual W.P. Elevation" field is adjusted.

Actual W.P. Elevation.

Use this field to specify the exact elevation of this end's work point. When you make a change to this field, the "Elev. +/-" field is adjusted.

End type

The type field defines what end connection to use, such as a clip angle connection, a moment connection with prepared flanges, or a butt-plate connection. The **Connection Setup** screen for beam end types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Condition

This field specifies what the end of the beam is framing to. The following conditions are available:

Condition	Description
1	Framing to a beam web
2	Framing to a column flange
3	Framing to a column web
5	Minus dimension

Not all conditions are appropriate for all types. Additional information on the conditions that are valid for each type is provided in OnlineDocs.

Note that a beam framing to the web of a channel on the toes side is considered condition 1.

The condition for beam end types 1 through 6 is understood and does not need to be entered.

Framing type

The framing type associated with the beam end type. The **Connection Setup** screen for beam framing types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Bolt type

Enter the bolt type if desired. The ellipses button displays the **Select Bolt Type** screen.

Mbr

There are two fields here. The first displays the member number that this end of the beam is connecting to. The second field is the member size of the member that this end of the beam is connecting to. The exclamation mark button ("!") displays the **Member Properties** screen.

The Details tab allows you to make further adjustments to the beam ends.

Clear

This button clears the data on this screen.

End type

The type field defines what end connection to use, such as a clip angle connection, a moment connection with prepared flanges, or a butt-plate connection. The **Connection Setup** screen for beam end types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Condition

This field specifies what the end of the beam is framing to. The following conditions are available:

Condition	Description
1	Framing to a beam web
2	Framing to a column flange
3	Framing to a column web
5	Minus dimension

Not all conditions are appropriate for all types. Additional information on the conditions that are valid for each type is provided in OnlineDocs.

Note that a beam framing to the web of a channel on the toes side is considered condition 1.

The condition for beam end types 1 through 6 is understood and does not need to be entered.

Size

This field is the member size of the member that this end of the beam is connecting to. The exclamation mark button ("!") displays the **Member Properties** screen.

Len +/-

The minus dimension on this end of the beam.

Edge dist

The edge distance field is used to specify the distance from the edge of the beam to the nearest hole in the web or flange, depending on the end type. If no edge distance is specified, it defaults to 1 1/2 inches for 3/4 inch bolts and 1 3/4 inches for 7/8 inch bolts.

Add. row spa

Enter the spacing between the rows (defaults to 3 inches).

Gage

This is the dimension from the top of steel to the first row of the end connection. The default value is 3 inches for beams with a "k" dimension of 1 3/4 inches or less, while 4 1/2 inches is used for larger beams.

At beam to beam connections, Asteel 3D will adjust the gage to match the nearest gage line of the beam you are framing to. For example, if an elevation difference of "0 2 8" is specified in the elevation difference field, Asteel 3D would use a gage of 3 1/2 inches matching up with the 6 inch gage line of the other beam. You may override the calculated gage by specifying the gage desired.

Rows

Enter the number of rows in the connection. If you leave this field blank, the number of rows based on the connection type is automatically calculated.

For clip angle connections, the program uses the maximum, minimum or a specified number of rows based on the data specified on the **Options** screen. Shear tab connections always use the maximum number of rows. You may override these default values by specifying the number of rows here.

FS

Enter the number of rows in the far side of the connection. If this is blank, then the number of far side rows will default to the value of "Rows".

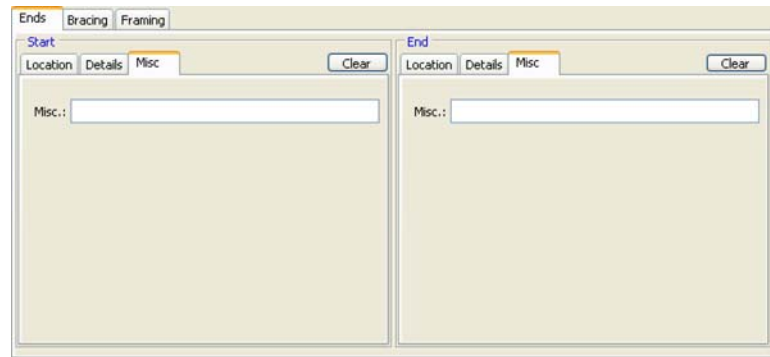
Spa.

Enter the spacing between the rows (defaults to 3 inches).

Block, Length and Depth

The following options are available when specifying a top or bottom block option. The purpose of the length and depth options vary depending on the selected block option.

Option	Length	Depth
None	Not used.	Not used.
Standard Block	Length of the block.	Depth of the block.
Standard Block x Beam k Dimension	Length of the block.	Not used. Defaults to k dimension.
Strip N.S. Flange	Length of the strip.	Not used.
Strip F.S. Flange	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges	Length of the strip.	Not used.
Strip N.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip F.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges (Cut Not Chip)	Length of the strip.	Not used.
Cut N.S. Flange To Width	Length of the cut.	Width of the cut.
Cut F.S. Flange To Width	Length of the cut.	Width of the cut.
Cut N.S. and F.S. Flange To Width	Length of the cut.	Width of the cut.
Block Length At Moment Connection W/Prepared Flanges (used with beam end types M1-M8 or M11-M14)	Length of the block.	Not used.



The Miscellaneous tab allows you to make further adjustments to the beam ends.

Clear

This button clears the data on this screen.

Misc.

This space allows the detailer to specify a variety of different end connection options. Note that multiple options are separated by commas (example: "2=0 3 8,3=0"). Specify end connection options as follows:

Option	Description	Input
1	Cut bottom flange only. When framing to a column web, the beam flanges will be cut to fit between the column flanges. Useful when only the bottom flange needs to be cut, at the roof for example. You can disable cutting both flanges entirely by inputting "1=NA".	1=B
2	Change c/c distance on clip angles. Asteel 3D uses a standard center-to-center on clip angles as specified by the fabricator. If a special case requires a different c/c, you can specify it using option 2.	2=0 2 8
3	Change clip angle setback. The clip angle setback is the distance from the face of the clip angles to the end of the beam. Asteel 3D normally sets this distance to 1/2 inch. Option 3 allows you to change the setback as necessary.	3=0 0 6
5	Bolt clip angle at specified gage. Option 5 allows you to bolt clip angle connections instead of welding them. The length of the angle leg will be increased if required.	5=0 1 12
6	Change vertical edge distance on clip angles.	6=0 1 8

Option	Description	Input
8	Sloping beam cut. Beam ends on sloping beams may be cut square or beveled depending on the type and amount of slope. This option is used to specify the type of cut for sloping beams. Enter "8=S" for a square cut or "8=B" for a bevel cut.	8=S
9	Code "9" is used for blocks on architecturally exposed steel. This code allows you to set a constant clearance for blocks. This value is applied to the length and the depth of the block. For example, a code of "9=0 0 2" will block the beam 1/8" BEYOND the flange of the beam being framed to and it will block the beam 1/8" BELOW the flange of the beam being framed to. It will also cut the block square.	9=0 0 2
10	Code "10" allows you to have a lift hole in the beam end. The value entered after the code is the distance from the end of the beam to the hole. The distance from the top of the flange down to the lift hole is always at the first row in the end connection. For example, a code of "10=0 6 0" will put a lift hole 6 inches from the beam end and down at the first row in the end connection.	10=0 6 0
R	Specifies an end reaction in kips.	R=75
NOTCH	Asteel 3D will notch instead of block (only available at top block when framing to a beam at a lower elevation).	NOTCH

Place Beam - Bracing

The screenshot shows the 'Place Beam - Bracing' dialog box. It has three main tabs: 'Ends', 'Bracing', and 'Framing'. The 'Bracing' tab is selected. Inside the 'Bracing' tab, there are two main sections: 'Start' and 'End'. Each section has two sub-tabs: 'Above' and 'Below'. The 'Above' sub-tab is selected for both the 'Start' and 'End' sections. Each sub-tab contains the following fields: 'Brace end type' (a dropdown menu), 'Rows' (a text input followed by '@' and 'Spa.'), 'Base' (a text input), 'Rise' (a text input), 'A Dim' (a text input), and 'A Rows' (a text input followed by '@' and 'Spa.').

The Above and Below tabs allow you to specify bracing connections above and below the ends of the beam. The fields for the Above and Below tabs are identical except the "A Dim" and "A Rows" fields on the Above tab are named "B Dim" and "B Rows" on the Below tab.

Most of the fields on this screen cannot be edited. Asteel 3D calculates these fields.

Brace end type

The bracing connection type number of the bracing connection at this end of the beam.

Rows

The number of rows on the brace.

Spa.

The spacing between the rows on the brace.

Base

The horizontal component of the slope. This field is used in conjunction with the rise field to determine the bevel of the bracing connection.

For sloping beams, the Base and Rise dimensions are always the beam's left or right end work points. At midspan bracing, the Left/Right end work points are used to determine the Rise (not the midpoint).

Rise

The vertical component of the slope. This field is used in conjunction with the base field to determine the bevel of the bracing connection.

For sloping beams, the Base and Rise dimensions are always the beam's left or right end work points. At midspan bracing, the Left/Right end work point are used to determine the Rise (not the midpoint).

A Dim / B Dim

"A Dim" is the distance from the top of the beam to the first hole of the beam end connection that is above the beam.

"B Dim" is the distance from the last hole of the beam end connection to the first hole below the beam.

A Rows / B Rows

"A Rows" is the number of rows above the beam. "B Rows" is the number of rows below the beam.

Spa.

The spacing of the rows above or below the beam.

Place Beam - Framing

Ends Bracing Framing												
Member Number	Loc /	Dim Above	Spacing	Distance from end	Type	Gage	Rows	Spc'g	C/C	Thick	Misc	
166	End	<input type="checkbox"/>	2 5 0	2 5 0	20AF	0 4 4	3	0 3 0			0 0 2	
198	Conn	<input type="checkbox"/>	0 0 0	2 5 0	SN					0 0 4		
167	End	<input type="checkbox"/>	6 0 0	8 5 0	20AF	0 4 4	3	0 3 0			0 0 2	
197	Conn	<input type="checkbox"/>	0 0 0	8 5 0	SN					0 0 4		
75	Cap	<input type="checkbox"/>	4 8 0	13 1 0	66A							
196	Conn	<input type="checkbox"/>	0 0 0	13 1 0	S					0 0 4		
168	End	<input type="checkbox"/>	1 4 0	14 5 0	20AF	0 4 4	3	0 3 0			0 0 2	
195	Conn	<input type="checkbox"/>	0 0 0	14 5 0	SN					0 0 4		
74	Cap	<input type="checkbox"/>	6 7 0	21 0 0	66A							
194	Conn	<input type="checkbox"/>	0 0 0	21 0 0	S					0 0 4		

The Framing tab displays information on the connections framing into the beam. Although most of the data on this screen is read only, you can still edit the connections using the Edit Connections button and the Edit Member button.

Member Number

The member number of the object framing into the beam. Note that connections that you place manually will have their own unique member numbers. A small graphic next to the member number displays the type of connection.

Loc

The type of connection. Possible connection types are described below.

Connection Type	Description
Base	Column base plate.
Cap	Column cap plate.
Start	Left end of a member.
End	Right end of a member.
Conn	User placed connection.

Dim Above

If checked, then the stub dimension lines for this connection will be drawn above the beam in the drawing output.

Spacing

If this is the first connection on the beam, then this value is the dimension from the work point at the left end of the beam to this connection. If this is not the first connection on the beam, then this value is the dimension from the previous connection on the beam to this connection.

Distance from end

This value is the dimension from the work point at the left end of the beam to this connection.

Type

The framing connection type. Refer to OnlineDocs for a description of the types available.

Gage

The function of the gage field varies, but for most types this is the dimension from the top of the beam to the first row of holes in the connection. It may also be the dimension between the holes when using flange hole connections (type T and B). Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Rows

The number of rows for the connection. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Spc'g

The spacing between the rows (defaults to 3 inches).

C/C

The center to center of the framing connection. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Thick

This field is normally used to specify the stiffener plate or tab plate thickness. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Misc

The miscellaneous field is normally used to enter the offset dimension for types which use tab plates (types 20, 21, 22, 23, 40, 41, and 42). Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Edit Connections

If this button is clicked, then the Place Beam Connection screen is displayed with all of the user defined connections for the beam. For more information, see the ***Place Beam Connection*** topic.

Edit Member

If this button is clicked, then the edit screen for the member associated with the selected connection is displayed. You can then edit that member.

Place Floor Brace

This screen allows you to place floor braces in a model. For more information on this screen, see the following topics.

Place Floor Brace - General Floor Brace Information

This area of the Place Floor Brace screen allows you to specify general information about the floor brace such as the member size, steel type and orientation of the floor brace.

Draw in View

The Draw in View listbox displays all of the floor views that are currently defined in the model. The brace will be drawn in the view specified in this listbox when the Draw button is clicked. The ellipses button to the right of the listbox takes you to the **Model Views** screen where you can create, modify or delete existing views.

Member size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

The question mark button ("?") displays the **Member Size Input Examples** screen.

The exclamation mark button ("!") displays the **Member Properties** screen.

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece mark

Enter the piece mark for the member.

Seq.

Enter the sequence for the member.

Load

Enter the load on the brace in kips (example: "15"). This will produce a load symbol at each end of the brace with the reaction in each direction.

Start / End Rows

Enter the number of rows for both ends of the brace.

Start / End Spacing

Enter the spacing between rows at each end of the brace (defaults to 3").

Gage 1

For WT or double angle ("DL") braces, the gage is the C/C between holes.

For angle braces ("L"), the gage is the distance from the back of the angle to the holes.

Gage 2

This field is used only when detailing angle bracing. The value entered here specifies another gage from "Gage 1" to an additional row of holes.

Base

The horizontal dimension of the brace bay from the left work point to the right work point. This dimension should always be greater than or equal to the rise dimension, so that the brace does not exceed a 45 degree angle.

Rise

The vertical dimension of the brace bay from the left work point to the right work point. This dimension should never exceed the base dimension, so that the brace does not exceed a 45 degree angle.

Misc

This space is used to specify the following options. These codes can be combined by separating them with a semi-colon (;).

Option	Description
1	The detail length can be increased by using the code "1=" followed by the number of inches to increase the base. For example, entering "1=2" in this field would increase the base length by 2 inches.
2	The bolt size can be changed by adding the code "2=" followed by the size of the bolt. This will change the plate and brace edge distances on this particular brace, if necessary. For example, entering "2=0 1 0" will set the bolt size to 1 inch for this brace.
3	The gusset plate thickness can be changed by adding the code "3=" followed by the thickness required. This will change the thickness on this particular detail (both left and right end). For example, entering "3=0 0 8" will set the gusset plate thickness to 1/2 inch for this brace.
9 or STITCH	The number of stitch plates used on double angle braces ("DLV " or "DL") can be input by using the code "9=" followed by the number of plates you want. For example, "9=1" in this field would add only one stitch plate to the brace. You may also use the code "STITCH=" instead of "9=". Asteel 2 will use 2 plates as a default, when they are necessary.
FILL	The type of filler (spacer) plate can be changed or added in this space. Do this by using the code "FILL=" followed by the type you want to use (see variable "J" on the Floor Bracing Job Setup Sheet in OnlineDocs). For example, "FILL=5" will use the tack welded filler plate for this particular brace.
STEEL	The steel type can be changed by entering "STEEL=50" for ASTM A572 high strength steel or "STEEL=A992" for ASTM A992 specific steel.
CLIPL	The edge distance for the left end gusset plate, if it is clipped (see variable "H" on the Floor Bracing Job Setup Sheet in OnlineDocs). For example, entering "CLIPL=0 1 8" will clip the left end gusset plate at 1-1/2".
CLIPR	The edge distance for the right end gusset plate, if it is clipped (see variable "H" on the Floor Bracing Job Setup Sheet in OnlineDocs). For example, entering "CLIPR=0 1 8" will clip the right end gusset plate at 1-1/2".

The ellipses button to the right of this field will display Floor Bracing Miscellaneous screen. For more information, see the ***Floor Bracing Miscellaneous*** topic.

Remarks.

Enter any remark that you want to be noted in the shop bill under the remarks column. You may also add a location reference for each piece mark in this field. You must prefix what you want the reference to show with the number of the mark. For example, entering "1=E-4,F-4" in this field will label the first mark "[E-4,F-4]" beside the piece mark on the detail. You can combine multiple remarks and location references with a semi-colon (;).

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

X Offset

The member's offset from the X axis.

Y Offset

The member's offset from the Y axis.

Rotation

The member's rotation. The ellipses button to the right of this field displays the *Cross Section Viewer* screen.

The buttons on this form are described below.

Draw

Draws the floor brace in the model.

Close

Closes the screen. No action is taken.

Recalculate

Recalculates various properties of the member.

Help

Displays help for this screen.

Place Floor Brace - Floor Bracing Miscellaneous

Floor Bracing Miscellaneous

Increase detail length: 0.0000

Change brace bolt size to: 000

Change gusset plate thickness to: 000

Filler Plates at Double Angles

☐ 1) Angle leg plus 1 inch

☒ 2) Angle leg minus

☐ 3) Filler plate not required

☐ 4) No plates just holes

☐ 5) Tack welded

Hole size: 000

Quantity required:

Left end gusset plate edge distance: 000

Right end gusset plate edge distance: 000

Left end type 21 option:

Right end type 21 option:

OK Cancel Help

Visibility FIS World

The Floor Bracing Miscellaneous screen gives you access to the options described below.

Increase detail length

Enter the number of inches to increase the detail length by.

Change brace bolt size to

Enter the brace bolt size. This will change the plate and brace edge distances on this particular brace, if necessary.

Change gusset plate thickness to

Enter the gusset plate thickness. This will change the thickness on this particular detail (both left and right end).

Fill Plates at Double Angles

Select a filler plate option. A picture on the right side of the screen will show an example of the selected option.

Hole size

Enter the hole size used with the filler plates.

Quantity required

Enter the number of filler plates.

Left end gusset plate edge distance

Enter the edge distance for the left end gusset plate, if it is clipped (see variable "H" on the Floor Bracing Job Setup Sheet in OnlineDocs).

Right end gusset plate edge distance

Enter the edge distance for the right end gusset plate, if it is clipped (see variable "H" on the Floor Bracing Job Setup Sheet in OnlineDocs).

Left end type 21 option

For future use.

Right end type 21 option

For future use.

OK

Applies the changes made on this screen to the model.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Place Floor Brace - Ends

The screenshot shows the 'Ends' dialog box with two main sections: 'Start' and 'End'. Each section has a 'Location' tab and a 'Connection' tab. The 'Start' section has a 'Pick point' button and input fields for X (0 0 0), Y (0 0 0), and Z (10 0 0). There is an 'Adjust' field set to 0 0 0. Below these are 'Brace end type' and 'Bolt type' dropdown menus. At the bottom, there are checkboxes for 'End Cond', 'Framing Type', and 'Mbr #', with 'Conn' and 'Primary' options. The 'End' section is similar but includes a 'Cont' checkbox next to the 'Pick point' button. The 'Z' coordinate is also set to 10 0 0. The 'Conn' and 'Primary' checkboxes are also present at the bottom of the 'End' section.

The Location tab allows you to edit the locations and end types for the brace ends.

Clear

This button clears the data on this screen.

Pick Point

Select the point where this end of the brace will be in the model. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

For the right end of the brace, a checkbox labeled "Cont" is available. If checked, then the right end's coordinate will be copied to the left end when the Draw button is clicked. This is useful when you want to draw multiple braces in a row since you only have to select the right end coordinate for each brace.

Adjust

Use this field to adjust the elevation of this end's work point by a certain amount.

Brace end type

The type field defines what brace end connection to use. The **Connection Setup** screen can be accessed by clicking the ellipses button to the right of this field.

When using types 2 and 3, the size of the column being framed around must be input after the type. For example, if type 2 was framed around a W12 x 26 column, the input would be "2,12 26". A comma is required between the type and the column size and only a space between the column dimensions.

Additional information on the available connection types is provided in OnlineDocs.

Bolt type

Enter the bolt type if desired. The ellipses button displays the *Select Bolt Type* screen.

End Cond

Enter the end condition. There is a horizontal and vertical condition for each end of the brace. The *Connection Setup* screen can be accessed by clicking the ellipses button to the right of this field.

All framing types require conditions except type 4, which has no plate.

Refer to the Floor Bracing Conditions section of OnlineDocs for more information.

Framing Type

The framing type that this end of the brace frames into. You can specify a framing type for both the horizontal and vertical end of the brace. If "Conn" is unchecked for an end, then the brace will not connect to any connection on that end of the brace. The *Connection Setup* screen can be accessed by clicking the ellipses button to the right of this field.

Mbr #

The member number that this end of the brace frames into. You can specify a member number for both the horizontal and vertical end of the brace. If "Primary" is checked for an end, then that end will be used to calculate the base and the rise of the brace.

The Connection tab allows you to edit the connections for the brace ends.

Clear

This button clears the data on this screen.

Minus

The minus dimension is the offset of the brace from the work point to the first hole in the brace or the offset from the work point to the edge of the brace (refer to the Floor Bracing Job Setup Sheet in the Floor Bracing section of OnlineDocs).

For types 11,12 and 13, no minus dimension is necessary because they are standard connections.

Cond

Enter the end condition. There is a horizontal and vertical condition for each end of the brace. The **Connection Setup** screen can be accessed by clicking the ellipses button to the right of this field.

All framing types require conditions except type 4, which has no plate.

Refer to the Floor Bracing Conditions section of OnlineDocs for more information.

Clear

Enter the clearance between the brace and the work line. The horizontal clearance is from the horizontal work line and the vertical clearance is from the vertical work line. These dimensions are used to find the minus dimension if it was not already entered.

Dim X

Enter the dimension from the work point to the first hole of the connection (vertical or horizontal). This dimension is not needed when using end type 4.

Rows

Enter the number of rows in the connection being used (vertical and horizontal).

Spacing

Enter the spacing between the rows.

Edge

Enter the edge distance.

Offset

Enter the dimension from the work line to the connection at both the horizontal and vertical connections.

Angle

Enter the angle required for the brace if necessary. The angle is input just like the brace. For example, if an angle with dimensions 3 x 3 x 1/4 is used, the input would be L3 3 4. There is an angle option for types 11, 12, and 13. Refer to the Floor Bracing Ends section of OnlineDocs for more information.

For condition 1 (open holes), the thickness of a shim may be entered in the Angle field (see "Floor Bracing Type 1" documentation).

Gage

Enter the gage of the angle used above. If there is no angle at this connection, this dimension may be left blank.

Place Floor Brace - Intersections

	Base, Rise or Center	Distance	Gage	Shim Thickness
	000	000	000	000
	000	000	000	000
	000	000	000	000
	000	000	000	000
	000	000	000	000
	000	000	000	000
	000	000	000	000
	000	000	000	000
	000	000	000	000
	000	000	000	000

The Intersections tab allows you to edit intersections for the brace.

Intersection type

Enter the intersection type. The **Connection Setup** screen can be accessed by clicking the ellipses button to the right of this field.

Base, Rise or Center

Specify the position of the intersection.

Distance

Specify the distance from the end where the intersection occurs.

Gage

Enter the gage of the intersection.

Shim Thickness

Enter the shim thickness used at the intersection.

Place Vertical Brace

This screen allows you to place vertical braces in a model. For more information on this screen, see the following topics.

Place Vertical Brace - General Vertical Brace Information

This area of the Place Vertical Brace screen allows you to specify general information about the floor brace such as the member size, steel type and orientation of the floor brace.

Draw in View

The Draw in View listbox displays all of the elevation views that are currently defined in the model. The brace will be drawn in the view specified in this listbox when the Draw button is clicked. The ellipses button to the right of the listbox takes you to the **Model Views** screen where you can create, modify or delete existing views.

Member size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

The question mark button ("?",) displays the **Member Size Input Examples** screen.

The exclamation mark button ("!",) displays the **Member Properties** screen.

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece mark

Enter the piece mark for the member.

Seq.

Enter the sequence for the member.

Start / End Rows

Enter the number of rows for both ends of the brace.

Start / End Spacing

Enter the spacing between rows at each end of the brace (defaults to 3").

Gage 1

For WT or double angle ("DL") braces, the gage is the C/C between holes.

For angle braces ("L"), the gage is the distance from the back of the angle to the holes.

Gage 2

This field is used only when detailing angle bracing. The value entered here specifies another gage from "Gage 1" to an additional row of holes.

Base

The horizontal dimension of the brace bay from the left work point to the right work point.

Rise

The vertical dimension of the brace bay from the left work point to the right work point.

Misc

This space is used to specify the following options. These codes can be combined by separating them with a semi-colon (;).

Option	Description
LEN	The detail length can be set using the code "LEN=" followed by the drawn length of the base in inches. For example, entering "LEN=10" in this field will make the drawn length 10 inches.

Option	Description
FILL	The type of filler or stitch plate can be changed or added by using the code "FILL=" followed by the type you want to use. For example, "FILL=7" will use the tack welded filler plate for this particular brace. See the Vertical Bracing Job Setup sheet "K" variable for a description of the filler plate types.
CP	To get a closure plate on the end of a tube brace (TS or HSS), use the code "CP=" followed by the thickness of the closure plate. For example, "CP=0 0 4" will use a 1/4 inch closure plate at each end of the brace.
9	The number of filler or stitch plates used on double angle braces ("DLV" or "DL") can be input by using the code "9=" followed by the number of plates needed. For example, "9=4" in this field would use 4 filler plates. The default is two plates.

The ellipses button to the right of this field will display Vertical Bracing Miscellaneous screen. For more information, see the ***Vertical Bracing Miscellaneous*** topic.

Remarks.

Enter any remark that you want to be noted in the shop bill under the remarks column. You may also add a location reference for each piece mark in this field. You must prefix what you want the reference to show with the number of the mark. For example, entering "1=E-4,F-4" in this field will label the first mark "[E-4,F-4]" beside the piece mark on the detail. You can combine multiple remarks and location references with a semi-colon (;).

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

X Offset

The member's offset from the X axis.

Y Offset

The member's offset from the Y axis.

Rotation

The member's rotation. The ellipses button to the right of this field displays the ***Cross Section Viewer*** screen.

The buttons on this form are described below.

Draw

Draws the vertical brace in the model.

Close

Closes the screen. No action is taken.

Recalculate

Recalculates various properties of the member.

Help

Displays help for this screen.

Place Vertical Brace - Vertical Bracing Miscellaneous

Vertical Bracing Miscellaneous

Increase detail length: 0.0000

Filler Plates at Double Angles

- ☐ 1) Angle leg plus 1 inch
- ☒ 2) Angle leg minus
- ☐ 3) Round
- ☐ 4) Angle leg plus 1 inch (no hole)
- ☐ 5) Not required
- ☐ 6) Only show holes
- ☐ 7) Tack welded

Hole size: 0 0 0

Quantity required:

Closure Plate at Ends of TS or HSS

- ☒ None
- ☐ Each end

Thickness: 0 0 0

OK Cancel Help

Visibility FIS World

The Vertical Bracing Miscellaneous screen gives you access to the options described below.

Increase detail length

Enter the number of inches to increase the detail length by.

Filler Plates at Double Angles

Select a filler plate option. A picture on the right side of the screen will show an example of the selected option.

Hole size

Enter the hole size used with the filler plates.

Quantity required

Enter the number of filler plates.

Closure plate at Ends of TS or HSS

Specify if closure plates are needed at tube ends.

Thickness

Specify the thickness of closure plates.

OK

Applies the changes made on this screen to the model.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Place Vertical Brace - Ends

The screenshot shows the 'Ends' dialog box with the 'Intersection' tab selected. It contains two main sections: 'Start' and 'End'. Each section has a 'Location' tab and a 'Connection' tab. The 'Location' tab is active for both sections. In the 'Start' section, the 'X', 'Y', and 'Z' coordinates are all set to '0 0 0'. There is a 'Pick point' button with a cursor icon. Below the coordinates, there are fields for 'Vert WP location' and 'Horiz WP location', each with a dropdown menu set to 'Actual location in model' and an 'Adjust by' field set to '0 0 0'. There is also a 'Brace end type' field with an ellipsis button. At the bottom, there are fields for 'Framing condition' (set to 'Column End'), 'Framing type' (with an ellipsis button), 'Member Number' (with a dropdown), 'Frame to Member size' (with a text field), and 'Bolt type' (with an ellipsis button). The 'End' section has identical fields and values.

The Location tab allows you to edit the locations and end types for the brace ends.

Clear

This button clears the data on this screen.

Pick Point

Select the point where this end of the brace will be in the model. You can type the coordinate in the X, Y and Y fields or you can click the Pick Point button and select the point in AutoCAD.

Vert WP location

Specify the vertical work point location in the model.

Horiz WP location

Specify the horizontal work point location in the model.

Adjust by

Use these fields to adjust the vertical or horizontal work point locations by a certain amount.

Brace end type

The type field defines what brace end connection to use. The **Connection Setup** screen can be accessed by clicking the ellipses button to the right of this field.

Additional information on the available connection types is provided in OnlineDocs.

Framing condition

Specify the framing condition.

Framing type

Enter the framing type that this end of the brace connects to. The **Connection Setup** screen can be accessed by clicking the ellipses button to the right of this field.

Member Number

The member number that this end of the brace connects to.

Frame to Member size

The size of the member that this end of the brace connects to. The exclamation mark button ("!") displays the **Member Properties** screen.

Bolt type

Enter the bolt type if desired. The ellipses button displays the **Select Bolt Type** screen.

The screenshot shows the 'Ends' dialog box with the 'Intersection' tab selected. It contains two main sections: 'Start' and 'End'. Each section has a 'Location' and 'Connection' tab, and a 'Clear' button. The 'Start' section includes fields for 'Minus' (0 0 0), 'Web Holes' (Rows: @ 0 0 0, Spacing Gage: 0 0 0), 'Flange Holes' (Rows: @ 0 0 0, Spacing Gage: 0 0 0), 'Elevations' (Top: 0 0 0, Bottom: 0 0 0), 'Piece Marks' (Top: , Bottom:), 'Horizontal Clearance' (Top: 0 0 0, Bottom: 0 0 0), and 'Vertical Clearance' (Top: 0 0 0, Bottom: 0 0 0). The 'End' section has identical fields.

The Connection tab allows you to edit the end types for the brace ends.

Clear

This button clears the data on this screen.

Minus

The minus dimension is the offset from the work point to the first hole in the end of the brace. This dimension is input with a minus sign preceding it. For example, a minus dimension of 8 inches is input as "-0 8 0".

Web Rows

Enter the number of rows in the web.

Web Spacing

Enter the spacing of the rows in the web.

Web Gage

The distance between holes on a WT brace or the distance from the edge to the holes on an angle (L) brace.

Flange Rows

Enter the number of rows in the flange.

Flange Spacing

Enter the spacing of the rows in the flange.

Flange Gage

The distance between holes on a WT brace or the distance from the edge of an angle to the holes on an angle (L) brace.

Elevations Top

The elevation for the upper work point of the brace.

Elevations Bottom

The elevation for the lower work point of the brace.

Piece Marks Top

Not applicable at this time.

Piece Marks Bottom

Not applicable at this time.

Horizontal Clearance Top

Enter the top horizontal clearance dimension.

Horizontal Clearance Bottom

Enter the bottom horizontal clearance dimension.

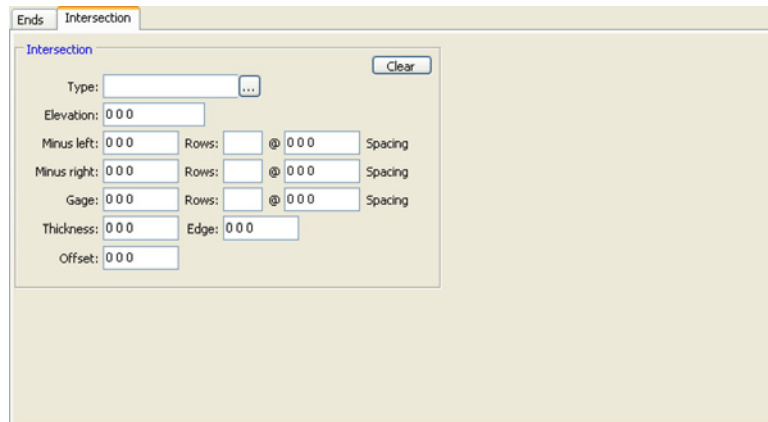
Vertical Clearance Top

Enter the top vertical clearance dimension.

Vertical Clearance Bottom

Enter the bottom vertical clearance dimension.

Place Vertical Brace - Intersections



The Intersections tab allows you to edit the intersections on the brace.

Clear

This button clears the data on this screen.

Type

The type field defines what intersection to use. The *Connection Setup* screen can be accessed by clicking the ellipses button to the right of this field.

Additional information on the available intersection types is provided in OnlineDocs.

Elevation

Enter the elevation where the intersection occurs in this field.

Minus left

The dimension from the work point of the intersection to the first hole in the left plate.

Rows

The number of vertical rows in the left plate.

Spacing

The spacing of the rows.

Minus right

The dimension from the work point of the intersection to the first hole in the right plate.

Rows

The number of vertical rows in the right plate.

Spacing

The spacing of the rows.

Gage

The distance from the work point down to the first hole in the plates.

Rows

The number of rows in the beam web framing to intersection type.

Spacing

The spacing of the rows.

Thickness

The thickness of the plates.

Edge

The edge distance required on the plates.

Offset

The offset is the distance the plate is offset from the center line (beam half-web thickness).

Place Girt

The screenshot shows the 'Place Girt' dialog box with the following fields and options:

- Draw in View:** [Dropdown menu]
- Member size:** W14 x 22
- C/N/C:** Non Composite
- Steel:** A36
- Seq:** [Text field]
- Remarks:** [Text area]
- Misc.:** [Text field]
- Ends:** Bracing, Framing
- Start:**
 - Location:** Pick point, X: 0.00, Y: 0.00, Z: 0.00
 - Details:** Len +/-: 0.00, NS/FS: 0.00, Elev.: 0.00
 - Misc:** End type, Condition, Framing type, Bolt type, Mbr, Mbr face
- End:**
 - Location:** Pick point, X: 0.00, Y: 0.00, Z: 0.00
 - Details:** Len +/-: 0.00, NS/FS: 0.00, Elev.: 0.00
 - Misc:** End type, Condition, Framing type, Bolt type, Mbr, Mbr face
- Buttons:** Draw, Close, Update, Help
- Visibility:** FIS, World

This screen allows you to place girts in a model. For more information on this screen, see the following topics.

Place Girt - General Girt Information

This screenshot shows the top portion of the 'Place Girt' dialog box, focusing on general information:

- Draw in View:** [Dropdown menu]
- Member size:** W14 x 22
- C/N/C:** Non Composite
- Steel:** A36
- Seq:** [Text field]
- Remarks:** [Text area]
- Misc.:** [Text field]
- Ends:** Bracing, Framing
- Mirror X Axis:** Yes, No
- Mirror Y Axis:** Yes, No
- X Offset:** 0.00
- Y Offset:** 0.00
- Rotation:** 0.00000000

This area of the Place Girt screen allows you to specify general information about the girt such as the member size, steel type and orientation of the girt.

Draw in View

The Draw in View listbox displays all of the girt views that are currently defined in the model. The girt will be drawn in the view specified in this listbox when the Draw button is clicked. The ellipses button to the right of the listbox takes you to the **Model Views** screen where you can create, modify or delete existing views.

Member size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

The question mark button ("?",) displays the **Member Size Input Examples** screen.

The exclamation mark button ("!",) displays the **Member Properties** screen.

C/NC

This option allows you to make the girt either Composite or Non Composite. This information is used when calculating end capacities.

Camber

Specify a camber here if necessary. The camber will be noted both on the detail next to the member size and in the shop bill under the remarks column.

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece mark

Enter the piece mark for the member.

Seq

Enter the sequence for the member.

Det len.

These fields allow you to specify the drawn length of the member as well as adjust the horizontal placement of that member.

The first field specifies the actual length in inches that the girt detail will occupy on the drawing. The length must be long enough to accept the web/flange framing connections. Each framing connection requires 1.5 inches, so a 9-inch detail would accommodate up to 5 framing connections and 14 framing connections would require at least 22.5 inches detail length.

The second field allows you to move the girt horizontally on the drawing. For example, entering "1" in this field would move the girt detail to the right by one inch. Entering "-2" would move the girt detail to the left by two inches.

Remarks

Remarks entered here will be noted both on the detail next to the member size and in the shop bill under the remarks column.

You may also add a location reference for each piece mark in this field. You must prefix the location reference with the piece mark number.

For example, if you enter "1=E-4, F-4" in this field, "[E-4, F-4]" will appear beside the piece mark on the detail. If you enter "1=E-4, F-4; 2=G-5, H-5" in this field, "[E-4, F-4]" will appear beside the first piece mark and "[G-5, H-5]" will appear next to the second piece mark.

Make sure you separate each location reference with a semi-colon. You can combine remarks and location references by separating them with a semi-colon.

Misc.

This space is used to specify beam miscellaneous types as well as the following options. The **Connection Setup** screen for beam miscellaneous types can be accessed by clicking the ellipses button to the right of this field.

Option	Description
NAIL	Shows nailer hole punching in the top flange of a girt. For example, "NAIL=2 6 0" specifies holes every 2'-6 inches for the length of the girt. You can also specify the distance from the left end at which the holes are to start. For example, "NAIL=2 6 0,6 0 0" places holes every 2'-6 inches beginning 6' from the left end of the girt.
SPA	The SPA is similar to the NAIL option, except that it does not draw holes. It can be used to layout items that occur at regular intervals. An additional option allows you to specify the number of spaces by entering the number and an @ symbol before the dimensions. For example, "SPA=4@2 0 0, 4 0 0" would specify 4 spaces at 2'-0 intervals starting at 4'-0 from the left end.
SECT	Draws a section of the girt to be used by the detailer.
TYPES	Refer to the Beam Miscellaneous section in OnlineDocs for a description of the different types available and the format to enter.
TOEUP	Channel option to detail looking at the toes of the flanges. This is useful if you want to override the channel option on the Options screen.
TOEDOWN	Channel option to detail looking at the back of the channel. This is useful if you want to override the channel option on the Options screen.
P-1	This code is used with bracing beam midspan types. It informs Asteel 3D that there is only one work point (one brace). See the Bracing Beam Midspan Types section of OnlineDocs for more information.
P-2	This code is used with bracing beam midspan types. It informs Asteel 3D that there are two work point (and two plates). See the Bracing Beam Midspan Types section of OnlineDocs for more information.
LF	This code is used to set the UDL/2 factor on an individual basis. The default UDL/2 factor is set on the Options screen. Example input: "LF=2.0".

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

X Offset

The member's offset from the X axis.

Y Offset

The member's offset from the Y axis.

Rotation

The member's rotation. The ellipses button to the right of this field displays the *Cross Section Viewer* screen.

The buttons on this form are described below.

Draw

Draws the girt in the model.

Close

Closes the screen. No action is taken.

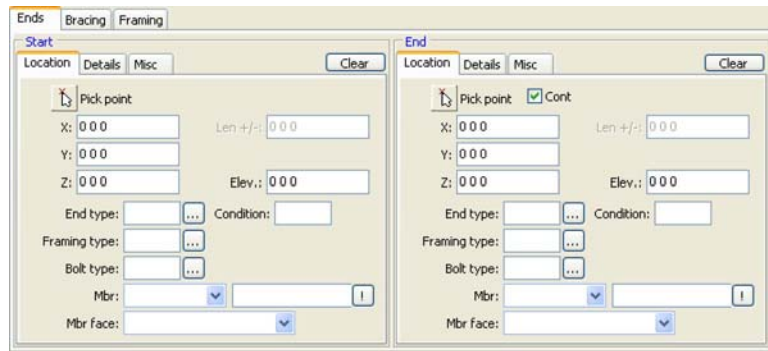
Update

Recalculates various properties of the member.

Help

Displays help for this screen.

Place Girt - Ends



The Location tab allows you to edit the locations and connection types for the girt ends.

Clear

This button clears the data on this screen.

Pick Point

Select the point where this end of the girt will be in the model. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

For the right end of the girt, a checkbox labeled "Cont" is available. If checked, then the right end's coordinate will be copied to the left end when the Draw button is clicked. This is useful when you want to draw multiple girts in a row since you only have to select the right end coordinate for each girt.

Len +/-

The minus dimension on this end of the girt.

Elev.

Use this field to adjust the elevation of this end's work point by a certain amount.

End type

The type field defines what end connection to use, such as a clip angle connection, a moment connection with prepared flanges, or a butt-plate connection. The **Connection Setup** screen for end types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Condition

This field specifies what the end of the girt is framing to. The following conditions are available:

Condition	Description
1	Framing to a beam web
2	Framing to a column flange
3	Framing to a column web
5	Minus dimension

Not all conditions are appropriate for all types. Additional information on the conditions that are valid for each type is provided in OnlineDocs.

Note that a girt framing to the web of a channel on the toes side is considered condition 1.

The condition for end types 1 through 6 is understood and does not need to be entered.

Framing type

The framing type associated with the end type. The **Connection Setup** screen for framing types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Bolt type

Enter the bolt type if desired. The ellipses button displays the **Select Bolt Type** screen.

Mbr

There are two fields here. The first displays the member number that this end of the girt is connecting to. The second field is the member size of the member that this end of the girt is connecting to. The exclamation mark button ("!") displays the **Member Properties** screen.

Mbr face

The face of the member we are connecting to.

The Details tab allows you to make further adjustments to the girt ends.

Clear

This button clears the data on this screen.

End type

The type field defines what end connection to use, such as a clip angle connection, a moment connection with prepared flanges, or a butt-plate connection. The **Connection Setup** screen for end types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Condition

This field specifies what the end of the girt is framing to. The following conditions are available:

Condition	Description
1	Framing to a beam web
2	Framing to a column flange
3	Framing to a column web
5	Minus dimension

Not all conditions are appropriate for all types. Additional information on the conditions that are valid for each type is provided in OnlineDocs.

Note that a girt framing to the web of a channel on the toes side is considered condition 1.

The condition for end types 1 through 6 is understood and does not need to be entered.

Size

This field is the member size of the member that this end of the girt is connecting to. The exclamation mark button ("!") displays the **Member Properties** screen.

Len +/-

The minus dimension on this end of the girt.

Edge dist

The edge distance field is used to specify the distance from the edge of the girt to the nearest hole in the web or flange, depending on the end type. If no edge distance is specified, it defaults to 1 1/2 inches for 3/4 inch bolts and 1 3/4 inches for 7/8 inch bolts.

Add. row spa

Enter the spacing between the rows (defaults to 3 inches).

Gage

This is the dimension from the top of steel to the first row of the end connection. The default value is 3 inches for girts with a "k" dimension of 1 3/4 inches or less, while 4 1/2 inches is used for larger girts.

Rows

Enter the number of rows in the connection. If you leave this field blank, the number of rows based on the connection type is automatically calculated.

For clip angle connections, the program uses the maximum, minimum or a specified number of rows based on the data specified on the **Options** screen. Shear tab connections always use the maximum number of rows. You may override these default values by specifying the number of rows here.

FS

Enter the number of rows in the far side of the connection. If this is blank, then the number of far side rows will default to the value of "Rows".

Spa.

Enter the spacing between the rows (defaults to 3 inches).

Block, Length and Depth

The following options are available when specifying a top or bottom block option. The purpose of the length and depth options vary depending on the selected block option.

Option	Length	Depth
None	Not used.	Not used.
Standard Block	Length of the block.	Depth of the block.
Standard Block x Girt k Dimension	Length of the block.	Not used. Defaults to k dimension.
Strip N.S. Flange	Length of the strip.	Not used.
Strip F.S. Flange	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges	Length of the strip.	Not used.
Strip N.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip F.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges (Cut Not Chip)	Length of the strip.	Not used.
Cut N.S. Flange To Width	Length of the cut.	Width of the cut.
Cut F.S. Flange To Width	Length of the cut.	Width of the cut.
Cut N.S. and F.S. Flange To Width	Length of the cut.	Width of the cut.
Block Length At Moment Connection W/Prepared Flanges (used with end types M1-M8 or M11-M14)	Length of the block.	Not used.

The screenshot shows the 'Ends' dialog box in the Asteel 3D software. It has two main sections: 'Start' and 'End'. Each section has tabs for 'Location', 'Details', and 'Misc.'. The 'Misc.' tab is selected in both sections. In the 'Start' section, there is a text input field labeled 'Misc.:'. A 'Clear' button is located to the right of the input field. The 'End' section has a similar layout with a 'Misc.: ' input field and a 'Clear' button.

The Miscellaneous tab allows you to make further adjustments to the girt ends.

Clear

This button clears the data on this screen.

Misc.

This space allows the detailer to specify a variety of different end connection options. Note that multiple options are separated by commas (example: "2=0 3 8,3=0"). Specify end connection options as follows:

Option	Description	Input
1	Cut bottom flange only. When framing to a column web, the girt flanges will be cut to fit between the column flanges. Useful when only the bottom flange needs to be cut, at the roof for example. You can disable cutting both flanges entirely by inputting "1=NA".	1=B
2	Change c/c distance on clip angles. Asteel 3D uses a standard center-to-center on clip angles as specified by the fabricator. If a special case requires a different c/c, you can specify it using option 2.	2=0 2 8
3	Change clip angle setback. The clip angle setback is the distance from the face of the clip angles to the end of the girt. Asteel 3D normally sets this distance to 1/2 inch. Option 3 allows you to change the setback as necessary.	3=0 0 6
5	Bolt clip angle at specified gage. Option 5 allows you to bolt clip angle connections instead of welding them. The length of the angle leg will be increased if required.	5=0 1 12
6	Change vertical edge distance on clip angles.	6=0 1 8
8	Sloping girt cut. Girt ends sloping girts may be cut square or beveled depending on the type and amount of slope. This option is used to specify the type of cut for sloping girts. Enter "8=S" for a square cut or "8=B" for a bevel cut.	8=S
9	Code "9" is used for blocks on architecturally exposed steel. This code allows you to set a constant clearance for blocks. This value is applied to the length and the depth of the block. For example, a code of "9=0 0 2" will block the girt 1/8" BEYOND the flange of the girt being framed to and it will block the girt 1/8" BELOW the flange of the girt being framed to. It will also cut the block square.	9=0 0 2
10	Code "10" allows you to have a lift hole in the girt end. The value entered after the code is the distance from the end of the girt to the hole. The distance from the top of the flange down to the lift hole is always at the first row in the end connection. For example, a code of "10=0 6 0" will put a lift hole 6 inches from the girt end and down at the first row in the end connection.	10=0 6 0

Option	Description	Input
R	Specifies an end reaction in kips.	R=75
NOTCH	Asteel 3D will notch instead of block (only available at top block when framing to a member at a lower elevation).	NOTCH

Place Girt - Bracing

The screenshot shows the 'Place Girt - Bracing' dialog box. It has three main tabs: 'Ends', 'Bracing', and 'Framing'. The 'Bracing' tab is active. Inside, there are two sub-tabs: 'Start' and 'End'. The 'Above' sub-tab is selected for both 'Start' and 'End'. Each sub-tab contains the following fields: 'Brace end type:', 'Rows:', 'Base:', 'Rise:', 'A Dim:', and 'A Rows:'. Each of these fields is followed by a spacing indicator '@' and a unit 'Spa.'. The 'End' sub-tab also includes a 'B Dim:' and 'B Rows:' field.

The Above and Below tabs allow you to specify bracing connections above and below the ends of the girt. The fields for the Above and Below tabs are identical except "A Dim" and "A Rows" are "B Dim" and "B Rows" on the Below tab.

Most of the fields on this screen cannot be edited. Asteel 3D calculates these fields.

Brace end type

The bracing connection type number of the bracing connection at this end of the girt.

Rows

The number of rows on the brace.

Spa.

The spacing between the rows on the brace.

Base

The horizontal component of the slope. This field is used in conjunction with the rise field to determine the bevel of the bracing connection.

For sloping girts, the Base and Rise dimensions are always the girt's left or right end work points. At midspan bracing, the Left/Right end work points are used to determine the Rise (not the midpoint).

Rise

The vertical component of the slope. This field is used in conjunction with the base field to determine the bevel of the bracing connection.

For sloping girts, the Base and Rise dimensions are always the girt's left or right end work points. At midspan bracing, the Left/Right end work point are used to determine the Rise (not the midpoint).

A Dim / B Dim

"A Dim" is the distance from the top of the girt to the first hole of the girt end connection that is above the girt.

"B Dim" is the distance from the last hole of the girt end connection to the first hole below the girt.

A Rows / B Rows

"A Rows" is the number of rows above the girt. "B Rows" is the number of rows below the girt.

Spa.

The spacing of the rows above or below the girt.

Place Girt - Framing

Line	Spacing	Type	Gage	Rows	Spc'g	C/C	Thick	Misc

The Framing tab displays information on the connections framing into the girt. The data on this screen is read only at this time.

Line

The member number of the object framing into the girt. Note that connections that you place manually will have their own unique member numbers.

Spacing

If this is the first connection on the girt, then this value is the dimension from the work point at the left end of the girt to this connection. If this is not the first connection on the girt, then this value is the dimension from the previous connection on the beam to this connection.

Type

The framing connection type. Refer to OnlineDocs for a description of the types available.

Gage

The function of the gage field varies, but for most types this is the dimension from the top of the girt to the first row of holes in the connection. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Rows

The number of rows for the connection. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Spc'g

The spacing between the rows (defaults to 3 inches).

C/C

The center to center of the framing connection. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

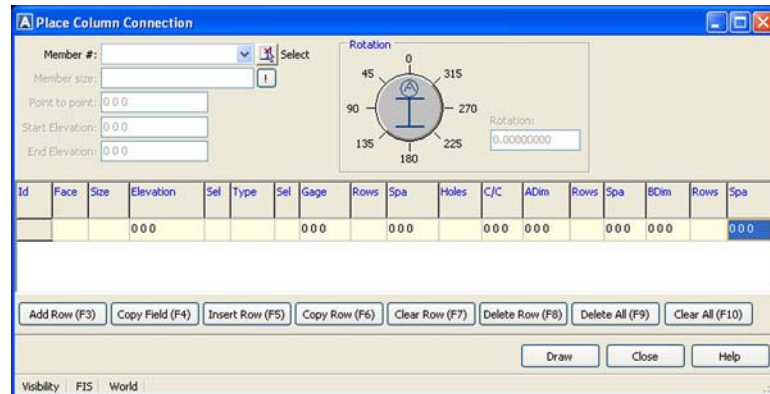
Thick

This field is normally used to specify the stiffener plate or tab plate thickness. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Misc

The miscellaneous field is normally used to enter the offset dimension for types which use tab plates (types 20, 21, 22, 23, 40, 41, and 42). Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Place Column Connection



This screen allows you to place and edit column connections.

Member

There are two ways to select a member. You can select a member from the listbox or you can click the "Select" button and select a member in AutoCAD. The connections of the member you select will be loaded into the grid.

Member size

The size of the selected member. The exclamation mark button ("!") displays the *Member Properties* screen.

Point to point

The point to point of the selected member.

Start Elevation

The start elevation of the selected member.

End Elevation

The end elevation of the selected member.

Rotation

The rotation of the selected member.

Id

The member number of the connection.

Face

The column face that the connection is framing into.

Size

The size of the member that is framing in.

Elevation

The elevation of the connection. The framing elevation must be less than the cap elevation and greater than the base elevation.

Sel

Clicking this button allows you to select the connection's elevation in AutoCAD.

Type

The connection type.

Sel

Clicking this button displays the *Connection Setup* screen where you can select a framing connection type.

Gage

The dimension down from the elevation to the first row of holes.

Rows

The number of rows below the elevation line.

Spc'g

The spacing between the rows (defaults to 3 inches).

Holes

The hole size in sixteenths. For example, a hole size of 1 5/16 would be input as "21".

C/C

The horizontal dimension between the rows.

ADim

The dimension above the elevation line to the first row of holes going up.

Rows

The number of rows above the elevation line.

Spc'g

The spacing of rows above the elevation line (defaults to 3 inches).

BDim

The dimension from the last row at the current connection to the first row below this connection.

Rows

The number of rows below the connection.

Spc'g

The spacing between the rows below the connection.

Add Row (F3)

Adds a row to the end of the grid.

Copy Field (F4)

Copies the field above the current field to the current field.

Insert Row (F5)

Inserts a blank row above the selected row.

Copy Row (F6)

Copies the entire row above the selected row to the selected row.

Clear Row (F7)

Clears the selected row.

Delete Row (F8)

Deletes the selected row from the grid.

Delete All (F9)

Deletes all rows from the grid.

Clear All (F10)

Clears all rows. This does not remove the rows from the grid.

OK

Draws the connection(s).

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Place Beam Connection

Place Beam Connection

Member #: Member size: 1 Point to point: 0 0 0

Id	Spacing	Distance from end	Sel	Type	Sel	Gage	Rows	Spa	CC	Thk	Misc
0 0 0	0 0 0	0 0 0				0 0 0		0 0 0		0 0 0	

Visibility | FIS | World

This screen allows you to place and edit beam connections.

Member #

There are two ways to select a member. You can select a member from the listbox or you can click the "Select" button and select a member in AutoCAD. The connections of the member you select will be loaded into the grid.

Member size

The size of the selected member. The exclamation mark button ("!") displays the *Member Properties* screen.

Point to point

The point to point of the selected member.

Id

The member number of the connection.

Spacing

If this is the first connection on the beam, then this value is the dimension from the work point at the left end of the beam to this connection. If this is not the first connection on the beam, then this value is the dimension from the previous connection on the beam to this connection.

Distance from end

This value is the dimension from the work point at the left end of the beam to this connection.

Sel

Clicking this button allows you to select the distance from the end in AutoCAD.

Type

The framing connection type. Refer to OnlineDocs for a description of the types available.

Sel

Clicking this button displays the **Connection Setup** screen where you can select a framing connection type.

Gage

The function of the gage field varies, but for most types this is the dimension from the top of the beam to the first row of holes in the connection. It may also be the dimension between the holes when using flange hole connections (type T and B). Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Rows

The number of rows for the connection. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Spa

The spacing between the rows (defaults to 3 inches).

CC

The center to center of the framing connection. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Thk

This field is normally used to specify the stiffener plate or tab plate thickness. Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Misc

The miscellaneous field is normally used to enter the offset dimension for types which use tab plates (types 20, 21, 22, 23, 40, 41, and 42). Refer to OnlineDocs for descriptions of the available types and how this field is used for each.

Add Row (F3)

Adds a row to the end of the grid.

Copy Field (F4)

Copies the field above the current field to the current field.

Insert Row (F5)

Inserts a blank row above the selected row.

Copy Row (F6)

Copies the entire row above the selected row to the selected row.

Clear Row (F7)

Clears the selected row.

Delete Row (F8)

Deletes the selected row from the grid.

Delete All (F9)

Deletes all rows from the grid.

Clear All (F10)

Clears all rows. This does not remove the rows from the grid.

OK

Draws the connection(s).

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

CHAPTER 5

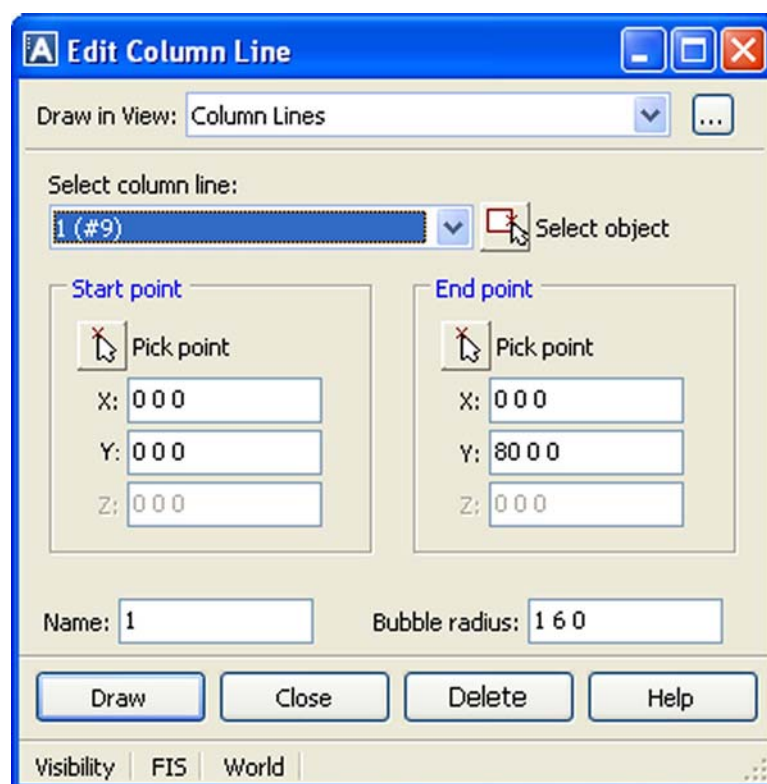
Edit Buttons

This chapter describes the Edit buttons on the Asteel 3D toolbar.

In This Chapter

Edit Column Line.....	111
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Edit Column Line



This screen allows you to edit column lines in a model. You can also delete existing column lines by selecting a column line using "Select Column Line" on this screen and then clicking the Delete button.

Draw in View

The Draw in View listbox displays all of the column line views that are currently defined in the model. The column line will be drawn in the view specified in this listbox when the Draw button is clicked. The ellipses button to the right of the listbox takes you to the ***Model Views*** screen where you can create, modify or delete existing views.

Select column line

There are two ways to select a column line to offset from. You can select a column line from the listbox or you can click the "Select object" button and select a column line in AutoCAD.

Start Point

The Start Point box allows you to select the start point for the item you are drawing. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

The start point of a column line is the point on the opposite end of the bubble.

End Point

The End Point box allows you to select the end point for the item you are drawing. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

The end point of a column line is the point with the bubble.

Name

Input the name of the column line in the Name field. The name appears in the column line bubble.

Bubble Radius

Input the radius of the bubble in the Bubble Radius field. If the column line name is more than two characters, then consider increasing the bubble radius.

Draw

Applies the changes made to the currently selected column line.

Close

Closes the screen. No action is taken.

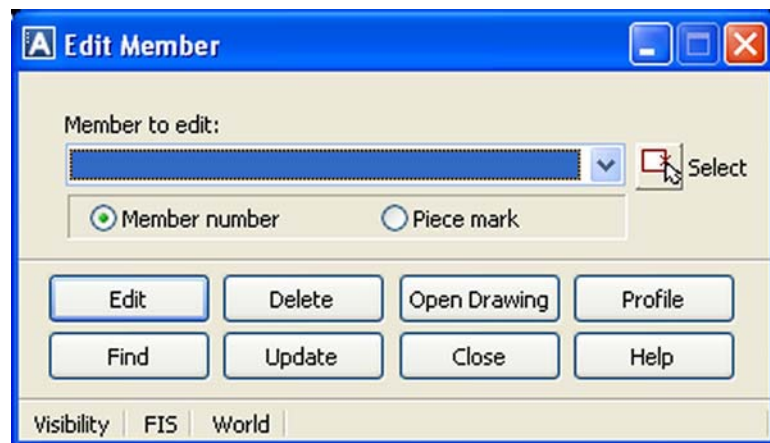
Delete

Deletes the currently selected column line.

Help

Displays help for this screen.

Edit Member



This screen allows you to edit a member in a model.

Member to edit

There are two ways to select a member to edit. You can select a member from the listbox or you can click the "Select" button and select a member in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Edit

Clicking the Edit button will display the edit screen for the selected member.

Delete

Clicking the Delete button will delete the selected member.

Open Drawing

Clicking the Open Drawing button will display the member's drawing output if it is available.

Profile

Clicking the Profile button will create a profile for the selected member.

Find

Clicking the Find button will locate the selected member in AutoCAD.

Update

Recalculates various properties of the currently selected member.

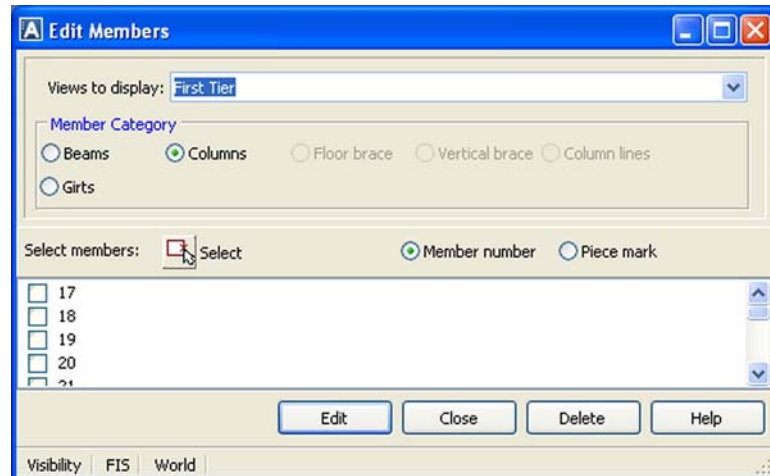
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Members



This screen allows you to edit multiple members at a time in a model.

Views to display

This listbox shows all of the views in the model. When a view is checked from the listbox, all members from that view are displayed at the bottom of the screen. You can select one or more views at a time.

Member Category

By selecting a member category, you can filter the member type that is displayed at the bottom of the screen. For example if you clicked Columns, then only column members would be displayed. Currently you can only use this screen to edit beams, columns and girts.

Select members

There are two ways to select a member to edit. You can check off members from the listbox at the bottom of the screen or you can click the "Select" button and select members in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Edit

Clicking the Edit button will display the edit screen for the selected members.

Close

Closes the screen. No action is taken.

Delete

Deletes the selected members from the model.

Help

Displays help for this screen.

Multiple Beam Edit

This screen allows you to edit multiple beams at a time in a model.

Member Size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

C/NC

This option allows you to make the beam either Composite or Non Composite. This information is used when calculating end capacities.

Camber

Specify a camber here if necessary. The camber will be noted both on the detail next to the member size and in the shop bill under the remarks column.

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece mark

Enter the piece mark for the member.

Seq

Enter the sequence for the member.

MO#

These fields represent the page number and mill order number of the member. The first field is the page number and the second field is the mill order number.

Det len.

These fields allow you to specify the drawn length of the member as well as adjust the horizontal placement of that member.

The first field specifies the actual length in inches that the beam detail will occupy on the drawing. The length must be long enough to accept the web/flange framing connections. Each framing connection requires 1.5 inches, so a 9-inch detail would accommodate up to 5 framing connections and 14 framing connections would require at least 22.5 inches detail length.

The second field allows you to move the beam horizontally on the drawing. For example, entering "1" in this field would move the beam detail to the right by one inch. Entering "-2" would move the beam detail to the left by two inches.

Miscellaneous

This space is used to specify beam miscellaneous types as well as the following options. The **Connection Setup** screen for beam miscellaneous types can be accessed by clicking the ellipses button to the right of this field.

Option	Description
NAIL	Shows nailer hole punching in the top flange of a beam. For example, "NAIL=2 6 0" specifies holes every 2'-6 inches for the length of the beam. You can also specify the distance from the left end at which the holes are to start. For example, "NAIL=2 6 0,6 0 0" places holes every 2'-6 inches beginning 6' from the left end of the beam.
SPA	The SPA is similar to the NAIL option, except that it does not draw holes. It can be used to layout items that occur at regular intervals. An additional option allows you to specify the number of spaces by entering the number and an @ symbol before the dimensions. For example, "SPA=4@2 0 0, 4 0 0" would specify 4 spaces at 2'-0 intervals starting at 4'-0 from the left end.
SECT	Draws a section of the beam to be used by the detailer.

Option	Description
GIRT	Causes beams to be treated as girts (i.e. pull dimensions from the bottom flange).
TYPES	Refer to the Beam Miscellaneous section in OnlineDocs for a description of the different types available and the format to enter.
TOEUP	Channel option to detail looking at the toes of the flanges. This is useful if you want to override the channel option on the <i>Options</i> screen.
TOEDOWN	Channel option to detail looking at the back of the channel. This is useful if you want to override the channel option on the <i>Options</i> screen.
P-1	This code is used with bracing beam midspan types. It informs Asteel 3D that there is only one work point (one brace). See the Bracing Beam Midspan Types section of OnlineDocs for more information.
P-2	This code is used with bracing beam midspan types. It informs Asteel 3D that there are two work point (and two plates). See the Bracing Beam Midspan Types section of OnlineDocs for more information.
LF	This code is used to set the UDL/2 factor on an individual basis. The default UDL/2 factor is set on the <i>Options</i> screen. Example input: "LF=2.0".

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

Relative Axis

If the relative axis is the member, then the X and Y offsets will take the rotation into account. If the relative axis is the work point, then the X and Y offsets will not take the rotation into account.

X Offset

The member's offset from the X axis.

Y Offset

The member's offset from the Y axis.

Rotation

The member's rotation. The ellipses button to the right of this field displays the *Cross Section Viewer* screen.

Beam End Fields

There are identical sets of fields for the start and end points of a beam. These fields are described below.

Adjust

Adjusts the elevation of the end of the beam.

End type

The type field defines what end connection to use, such as a clip angle connection, a moment connection with prepared flanges, or a butt-plate connection. The *Connection Setup* screen for beam end types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Condition

This field specifies what the end of the beam is framing to. The following conditions are available:

Condition	Description
1	Framing to a beam web
2	Framing to a column flange
3	Framing to a column web
5	Minus dimension

Not all conditions are appropriate for all types. Additional information on the conditions that are valid for each type is provided in OnlineDocs.

Note that a beam framing to the web of a channel on the toes side is considered condition 1.

The condition for beam end types 1 through 6 is understood and does not need to be entered.

Minus

A minus dimension can be entered here. For condition 5, a minus dimension is required. Beam end types 4 through 6 require a minus dimension.

Framing type

The framing type associated with the beam end type.

Bolt Type

Enter the bolt type if desired. The ellipses button displays the *Select Bolt Type* screen.

Edge Dist

The edge distance field is used to specify the distance from the edge of the beam to the nearest hole in the web or flange, depending on the end type. If no edge distance is specified, it defaults to 1 1/2 inches for 3/4 inch bolts and 1 3/4 inches for 7/8 inch bolts.

Spa

Enter the spacing between the rows (defaults to 3 inches).

Gage

This is the dimension from the top of steel to the first row of the end connection. The default value is 3 inches for beams with a "k" dimension of 1 3/4 inches or less, while 4 1/2 inches is used for larger beams.

At beam to beam connections, Asteel 3D will adjust the gage to match the nearest gage line of the beam you are framing to. For example, if an elevation difference of "0 2 8" is specified in the elevation difference field, Asteel 3D would use a gage of 3 1/2 inches matching up with the 6 inch gage line of the other beam. You may override the calculated gage by specifying the gage desired.

Rows

Enter the number of rows in the connection. If you leave this field blank, the number of rows based on the connection type is automatically calculated.

For clip angle connections, the program uses the maximum, minimum or a specified number of rows based on the data specified on the *Options* screen. Shear tab connections always use the maximum number of rows. You may override these default values by specifying the number of rows here.

Spacing

Enter the spacing between the rows (defaults to 3 inches).

Block, Length and Depth

The following options are available when specifying a top or bottom block option. The purpose of the length and depth options vary depending on the selected block option.

Option	Length	Depth
None	Not used.	Not used.
Standard Block	Length of the block.	Depth of the block.
Standard Block x Beam k Dimension	Length of the block.	Not used. Defaults to k dimension.
Strip N.S. Flange	Length of the strip.	Not used.
Strip F.S. Flange	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges	Length of the strip.	Not used.
Strip N.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip F.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges (Cut Not Chip)	Length of the strip.	Not used.
Cut N.S. Flange To Width	Length of the cut.	Width of the cut.
Cut F.S. Flange To Width	Length of the cut.	Width of the cut.
Cut N.S. and F.S. Flange To Width	Length of the cut.	Width of the cut.
Block Length At Moment Connection W/Prepared Flanges (used with beam end types M1-M8 or M11-M14)	Length of the block.	Not used.

Misc.

This space allows the detailer to specify a variety of different end connection options. Note that multiple options are separated by commas (example: "2=0 3 8,3=0"). Specify end connection options as follows:

Option	Description	Input
1	Cut bottom flange only. When framing to a column web, the beam flanges will be cut to fit between the column flanges. Useful when only the bottom flange needs to be cut, at the roof for example. You can disable cutting both flanges entirely by inputting "1=NA".	1=B

Option	Description	Input
2	Change c/c distance on clip angles. Asteel 3D uses a standard center-to-center on clip angles as specified by the fabricator. If a special case requires a different c/c, you can specify it using option 2.	2=0 2 8
3	Change clip angle setback. The clip angle setback is the distance from the face of the clip angles to the end of the beam. Asteel 3D normally sets this distance to 1/2 inch. Option 3 allows you to change the setback as necessary.	3=0 0 6
5	Bolt clip angle at specified gage. Option 5 allows you to bolt clip angle connections instead of welding them. The length of the angle leg will be increased if required.	5=0 1 12
6	Change vertical edge distance on clip angles.	6=0 1 8
8	Sloping beam cut. Beam ends on sloping beams may be cut square or beveled depending on the type and amount of slope. This option is used to specify the type of cut for sloping beams. Enter "8=S" for a square cut or "8=B" for a bevel cut.	8=S
9	Code "9" is used for blocks on architecturally exposed steel. This code allows you to set a constant clearance for blocks. This value is applied to the length and the depth of the block. For example, a code of "9=0 0 2" will block the beam 1/8" BEYOND the flange of the beam being framed to and it will block the beam 1/8" BELOW the flange of the beam being framed to. It will also cut the block square.	9=0 0 2
10	Code "10" allows you to have a lift hole in the beam end. The value entered after the code is the distance from the end of the beam to the hole. The distance from the top of the flange down to the lift hole is always at the first row in the end connection. For example, a code of "10=0 6 0" will put a lift hole 6 inches from the beam end and down at the first row in the end connection.	10=0 6 0
R	Specifies an end reaction in kips.	R=75
NOTCH	Asteel 3D will notch instead of block (only available at top block when framing to a beam at a lower elevation).	NOTCH

Draw

Applies the changes made on this screen to the beams that are being edited.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Multiple Column Edit

This screen allows you to edit multiple columns at a time in a model.

Member size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9

Size	Input
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece mark

Enter the piece mark for the member.

Sequence

Enter the sequence for the member.

MO#

These fields represent the page number and mill order number of the member. The first field is the page number and the second field is the mill order number.

Grid

Enter a grid designation. It will be placed on the line with the size near the bottom of the shaft.

Misc.

To change the size of the column for drawing purposes, use the following codes:

Input	Description
Y1=2	Raise the bottom of the column 2 inches.
Y2=-3	Lower the top of the column 3 inches.
Y4=1	Raise the base plate 1 inch.
Y1=2;Y2=-3	Top and bottom combination.
X=.5 (1/2 inch)	Increase the distance between column faces A-B and B-C by 1/2 inch.
X2=.5	Increase the distance between column faces A-B by 1/2 inch.
X3=.75	Increase the distance between column faces B-C by 3/4 inch.

To get a section view for use by the detailer, enter SECT.

To specify the end cut notation for the column base or cap, input the column end (BASE or CAP) followed by one of the following codes:

Code	Result
1	cut square
2	mill
3	finish

For example, BASE=1;CAP=2 would cut the bottom end square and mill the top end.

When you input multiple codes, separate them with a semicolon (;).

Mirror X Axis

If enabled, then the member will be rotated 180 degrees along its X axis.

Mirror Y Axis

If enabled, then the member will be rotated 180 degrees along its Y axis.

Face

Enter the face of the column.

Mark

Enter the plan orientation. You can specify any cardinal direction by entering the character "N", "S", "E", "W" or any combination thereof. Otherwise any phrase may be used to describe the columns mark. Combinations may also be used for multiple piece marks. For example, you can enter "SW@C1, E@C2".

Rotation

The member's rotation.

Column End Fields

There are identical sets of fields for the ends of a column. These fields are described below.

Elevation

Enter the elevation for this end of the column.

Adjust by

Enter a distance value to adjust the elevation by.

End type

Enter the column end type in this field. If no type is entered, then that end of the column will be blank (square end). If column end type 1 is entered and a plate is required, then you need to supply the dimensions of the plate using the letter fields (A, B, C, D) located below. If nothing is input in these fields, then no plate will be shown.

The ellipses button to the right of this field will display the *Connection Setup* screen. From there, you can select a column end type.

Member size

Enter the size of the member above or below this end.

Framing type

The framing type associated with the end type. The ellipses button displays the *Connection Setup* screen.

Bolt Type

For bottom ends, you can select either an anchor bolt type or a bolt type. For top ends, you can only select a bolt type.

If you are selecting a bolt type, the ellipses button displays the *Select Bolt Type* screen. If you are selecting an anchor bolt type, the ellipses button displays the *Connection Setup* screen.

Size A

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Size B

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Hole C

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Hole D

See the column end type 1 documentation in OnlineDocs under Column End Types for information on these fields.

Hole size

Enter the plate hole size. This field defaults to the hole size from the *Options* screen.

Bevel

Base plates and cap plates may be skewed relative to the column shaft. Enter the rise in inches relative to 12. See the column end type 1 example in OnlineDocs for more information. The below Face field indicates the face that is beveled.

Face

Enter the face (A, B, C, or D) that is beveled. This field is used with the Bevel field.

Thickness

Enter the endplate thickness. This field is mandatory for type 1.

Exception.

The exception field allows for several options. Separate options with a semicolon (;).

<u>Input</u>	<u>Description</u>
--------------	--------------------

Input	Description
LAYOUT	If a layout of the cap plate is required, enter the word LAYOUT in the Exception field under the cap plate heading.
MK=	A standard mark can be given for a BASE and/or CAP plate in the Exception field. Prefix the mark with an "MK=". For example: "MK=stdmk".
AB=	Anchor bolt connection reference. To reference an anchor bolt connection type, prefix the type with "AB=". For example: "AB=1A".

Draw

Applies the changes made on this screen to the columns that are being edited.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Multiple Girt Edit

This screen allows you to edit multiple girts at a time in a model.

Member Size

Enter the shape followed by the size of the member. W, C, MC, M, HP, TM, S, TS, P, L, HSS and G (plate girder) are valid shapes. If you enter a size without the shape, a W shape is assumed. Here are some examples of shapes and sizes:

Size	Input
W14 x 22	14 22
WT7 x 13	WT7 13
C8 x 11.5	C8 11.5
MC12 x 10.6	MC12 10.6
M5 x 18.9	M5 18.9
HP14 x 117	HP14 117
TM40 x 480	TM40 480
S12 x 35	S12 35
HSS10 x 8 x 1/2	HSS10 8 8
HSS7.5 x .375 (Round HSS size)	HSS7.5 6
TS6 x 6 x .25	TS6 6 4

Size	Input
5 inch standard pipe	PS5
5 inch extra strong	PX5
5 inch double extra strong	PXX5
Angle 4 x 3.5 x .3125	L4 3.5 5
G36 x 20 x 1.5 x 2.75	G36X20X1.5X2.75

The size can be entered with or without an 'x' between the nominal depth and the pound-per-foot. For example, "W14 22" will be interpreted as "W14x22".

C/NC

This option allows you to make the girt either Composite or Non Composite. This information is used when calculating end capacities.

Camber

Specify a camber here if necessary. The camber will be noted both on the detail next to the member size and in the shop bill under the remarks column.

Steel

You can change the steel type for the member by selecting one from the drop-down list here.

Piece mark

Enter the piece mark for the member.

Seq

Enter the sequence for the member.

MO#

These fields represent the page number and mill order number of the member. The first field is the page number and the second field is the mill order number.

Det len.

These fields allow you to specify the drawn length of the member as well as adjust the horizontal placement of that member.

The first field specifies the actual length in inches that the girt detail will occupy on the drawing. The length must be long enough to accept the web/flange framing connections. Each framing connection requires 1.5 inches, so a 9-inch detail would accommodate up to 5 framing connections and 14 framing connections would require at least 22.5 inches detail length.

The second field allows you to move the girt horizontally on the drawing. For example, entering "1" in this field would move the girt detail to the right by one inch. Entering "-2" would move the girt detail to the left by two inches.

Miscellaneous

This space is used to specify beam miscellaneous types as well as the following options. The **Connection Setup** screen for beam miscellaneous types can be accessed by clicking the ellipses button to the right of this field.

Option	Description
NAIL	Shows nailer hole punching in the top flange of a girt. For example, "NAIL=2 6 0" specifies holes every 2'-6 inches for the length of the girt. You can also specify the distance from the left end at which the holes are to start. For example, "NAIL=2 6 0,6 0 0" places holes every 2'-6 inches beginning 6' from the left end of the girt.
SPA	The SPA is similar to the NAIL option, except that it does not draw holes. It can be used to layout items that occur at regular intervals. An additional option allows you to specify the number of spaces by entering the number and an @ symbol before the dimensions. For example, "SPA=4@2 0 0, 4 0 0" would specify 4 spaces at 2'-0 intervals starting at 4'-0 from the left end.
SECT	Draws a section of the girt to be used by the detailer.
TYPES	Refer to the Beam Miscellaneous section in OnlineDocs for a description of the different types available and the format to enter.
TOEUP	Channel option to detail looking at the toes of the flanges. This is useful if you want to override the channel option on the Options screen.
TOEDOWN	Channel option to detail looking at the back of the channel. This is useful if you want to override the channel option on the Options screen.
P-1	This code is used with bracing beam midspan types. It informs Asteel 3D that there is only one work point (one brace). See the Bracing Beam Midspan Types section of OnlineDocs for more information.

Option	Description
P-2	This code is used with bracing beam midspan types. It informs Asteel 3D that there are two work point (and two plates). See the Bracing Beam Midspan Types section of OnlineDocs for more information.
LF	This code is used to set the UDL/2 factor on an individual basis. The default UDL/2 factor is set on the Options screen. Example input: "LF=2.0".

End Fields

There are identical sets of fields for the start and end points of a girt. These fields are described below.

Adjust

Adjusts the elevation of the end of the girt.

Minus

A minus dimension can be entered here. For condition 5, a minus dimension is required. End types 4 through 6 require a minus dimension.

End type

The type field defines what end connection to use, such as a clip angle connection, a moment connection with prepared flanges, or a butt-plate connection. The **Connection Setup** screen for end types can be accessed by clicking the ellipses button to the right of this field. Additional information on the available connection types is provided in OnlineDocs.

Condition

This field specifies what the end of the girt is framing to. The following conditions are available:

Condition	Description
1	Framing to a beam web
2	Framing to a column flange
3	Framing to a column web
5	Minus dimension

Not all conditions are appropriate for all types. Additional information on the conditions that are valid for each type is provided in OnlineDocs.

Note that a beam framing to the web of a channel on the toes side is considered condition 1.

The condition for end types 1 through 6 is understood and does not need to be entered.

Framing type

The framing type associated with the end type.

Bolt Type

Enter the bolt type if desired. The ellipses button displays the *Select Bolt Type* screen.

Edge Dist

The edge distance field is used to specify the distance from the edge of the girt to the nearest hole in the web or flange, depending on the end type. If no edge distance is specified, it defaults to 1 1/2 inches for 3/4 inch bolts and 1 3/4 inches for 7/8 inch bolts.

Spa

Enter the spacing between the rows (defaults to 3 inches).

Gage

This is the dimension from the top of steel to the first row of the end connection. The default value is 3 inches for girts with a "k" dimension of 1 3/4 inches or less, while 4 1/2 inches is used for larger girts.

At beam to beam connections, Asteel 3D will adjust the gage to match the nearest gage line of the beam you are framing to. For example, if an elevation difference of "0 2 8" is specified in the elevation difference field, Asteel 3D would use a gage of 3 1/2 inches matching up with the 6 inch gage line of the other beam. You may override the calculated gage by specifying the gage desired.

Rows

Enter the number of rows in the connection. If you leave this field blank, the number of rows based on the connection type is automatically calculated.

For clip angle connections, the program uses the maximum, minimum or a specified number of rows based on the data specified on the *Options* screen. Shear tab connections always use the maximum number of rows. You may override these default values by specifying the number of rows here.

Spacing

Enter the spacing between the rows (defaults to 3 inches).

Block, Length and Depth

The following options are available when specifying a top or bottom block option. The purpose of the length and depth options vary depending on the selected block option.

Option	Length	Depth
None	Not used.	Not used.
Standard Block	Length of the block.	Depth of the block.
Standard Block x Girt k Dimension	Length of the block.	Not used. Defaults to k dimension.
Strip N.S. Flange	Length of the strip.	Not used.
Strip F.S. Flange	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges	Length of the strip.	Not used.
Strip N.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip F.S. Flange (Cut Not Chip)	Length of the strip.	Not used.
Strip N.S. and F.S. Flanges (Cut Not Chip)	Length of the strip.	Not used.
Cut N.S. Flange To Width	Length of the cut.	Width of the cut.
Cut F.S. Flange To Width	Length of the cut.	Width of the cut.
Cut N.S. and F.S. Flange To Width	Length of the cut.	Width of the cut.
Block Length At Moment Connection W/Prepared Flanges (used with beam end types M1-M8 or M11-M14)	Length of the block.	Not used.

Misc.

This space allows the detailer to specify a variety of different end connection options. Note that multiple options are separated by commas (example: "2=0 3 8,3=0"). Specify end connection options as follows:

Option	Description	Input
--------	-------------	-------

Option	Description	Input
1	Cut bottom flange only. When framing to a column web, the girt flanges will be cut to fit between the column flanges. Useful when only the bottom flange needs to be cut, at the roof for example. You can disable cutting both flanges entirely by inputting "1=NA".	1=B
2	Change c/c distance on clip angles. Asteel 3D uses a standard center-to-center on clip angles as specified by the fabricator. If a special case requires a different c/c, you can specify it using option 2.	2=0 2 8
3	Change clip angle setback. The clip angle setback is the distance from the face of the clip angles to the end of the girt. Asteel 3D normally sets this distance to 1/2 inch. Option 3 allows you to change the setback as necessary.	3=0 0 6
5	Bolt clip angle at specified gage. Option 5 allows you to bolt clip angle connections instead of welding them. The length of the angle leg will be increased if required.	5=0 1 12
6	Change vertical edge distance on clip angles.	6=0 1 8
8	Sloping girt cut. Girt ends on sloping girts may be cut square or beveled depending on the type and amount of slope. This option is used to specify the type of cut for sloping girts. Enter "8=S" for a square cut or "8=B" for a bevel cut.	8=S
9	Code "9" is used for blocks on architecturally exposed steel. This code allows you to set a constant clearance for blocks. This value is applied to the length and the depth of the block. For example, a code of "9=0 0 2" will block the girt 1/8" BEYOND the flange of the girt being framed to and it will block the girt 1/8" BELOW the flange of the girt being framed to. It will also cut the block square.	9=0 0 2
10	Code "10" allows you to have a lift hole in the girt end. The value entered after the code is the distance from the end of the girt to the hole. The distance from the top of the flange down to the lift hole is always at the first row in the end connection. For example, a code of "10=0 6 0" will put a lift hole 6 inches from the girt end and down at the first row in the end connection.	10=0 6 0
R	Specifies an end reaction in kips.	R=75
NOTCH	Asteel 3D will notch instead of block (only available at top block when framing to a girt at a lower elevation).	NOTCH

Draw

Applies the changes made on this screen to the girts that are being edited.

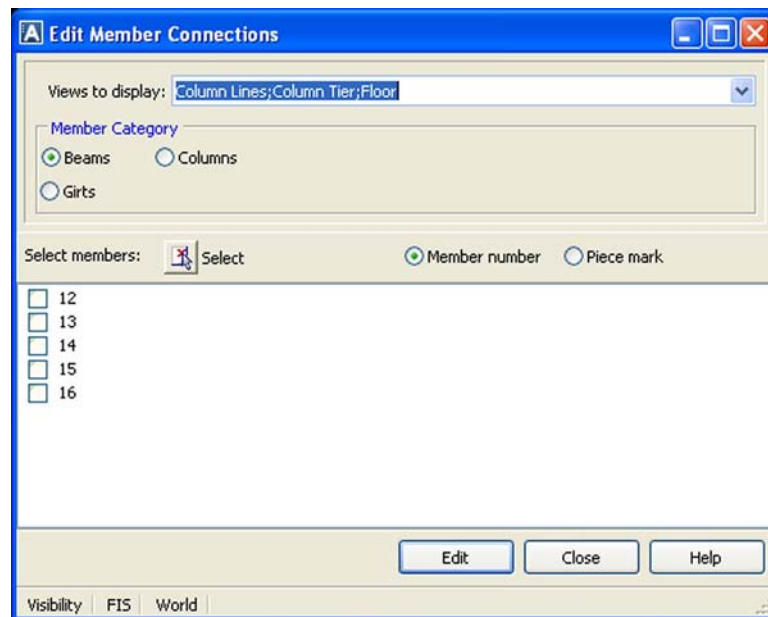
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Member Connections



This screen allows you to edit multiple connections at a time in a model.

Views to display

This listbox shows all of the views in the model. When a view is checked from the listbox, all members from that view are displayed at the bottom of the screen. You can select one or more views at a time.

Member Category

By selecting a member category, you can filter the member type that is displayed at the bottom of the screen. For example if you clicked Columns, then only column members would be displayed.

Select members

There are two ways to select a connection to edit. You can check off members from the listbox at the bottom of the screen or you can click the "Select" button and select members in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Edit

Clicking the Edit button will display the edit screen for the selected member connections.

Close

Closes the screen. No action is taken.

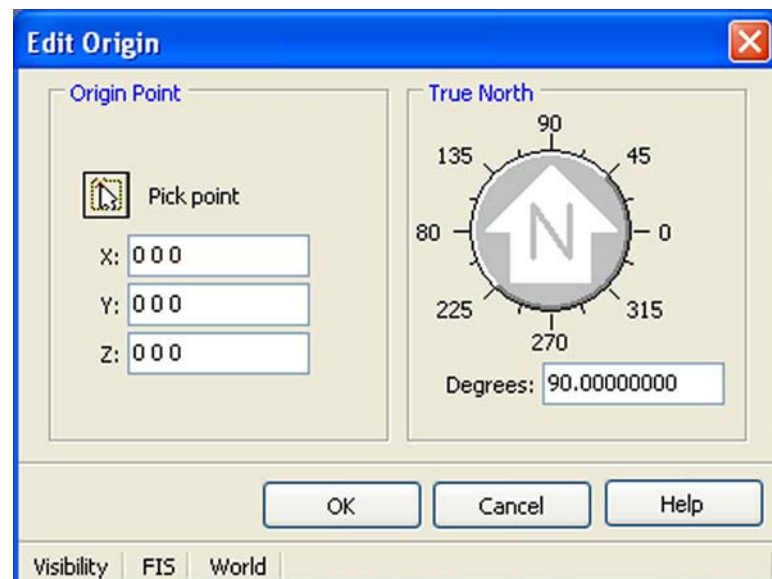
Delete

Deletes the selected members from the model.

Help

Displays help for this screen.

Edit Origin



This screen allows you to edit the origin point in a model.

Origin Point

The Origin Point box allows you to select the origin point for the model. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

True North

The True North box allows you to select the direction of true north. You can either type in the true north degree in the Degrees field or you can click the north arrow and adjust degrees that way.

OK

Applies the changes made on this screen to the origin.

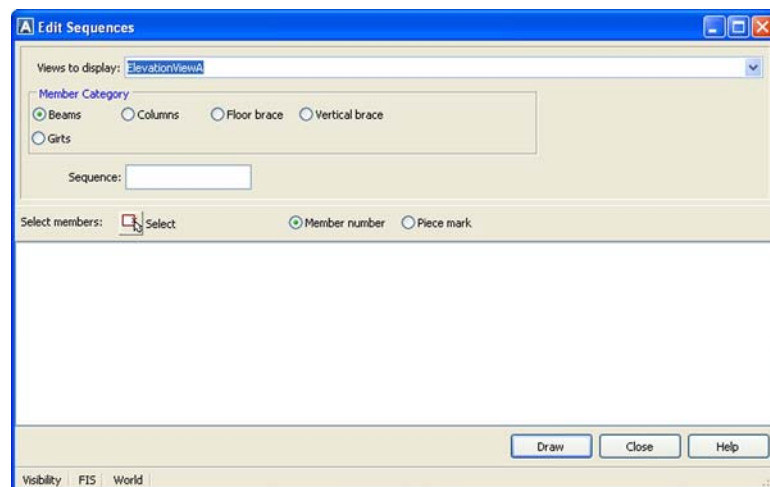
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Sequences



This screen allows you to change the sequence of multiple members at a time in a model.

Views to display

This listbox shows all of the views in the model. When a view is checked from the listbox, all members from that view are displayed at the bottom of the screen. You can select one or more views at a time.

Member Category

By selecting a member category, you can filter the member type that is displayed at the bottom of the screen. For example if you clicked Columns, then only column members would be displayed.

Sequence

Enter the sequence for the checked members in this field. When the Draw button is clicked, then the sequence of the checked members will be changed to this value.

Select members

There are two ways to select members. You can check off members from the listbox at the bottom of the screen or you can click the "Select" button and select members in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Draw

When the Draw button is clicked, then the sequence of the checked members will be changed to the value in the Sequence field.

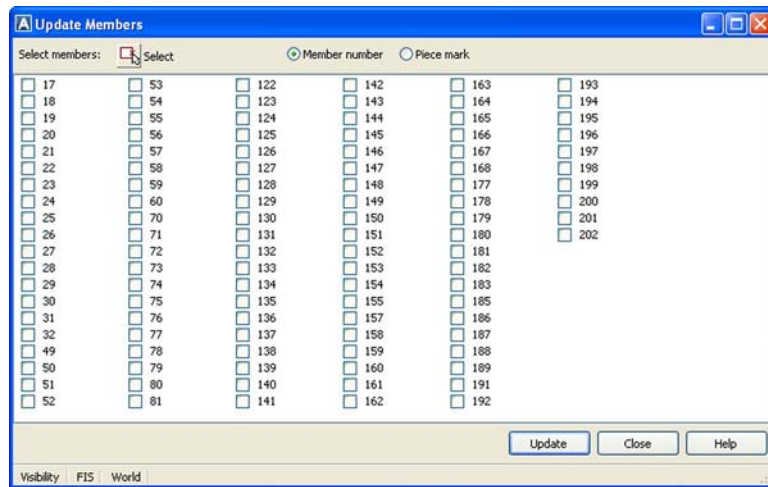
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Update Members



This screen allows you to update members in a model. When you update a member, various properties of the member are recalculated based on model options and the members connecting to that member.

Select members

There are two ways to select a member to update. You can check off members from the listbox at the bottom of the screen or you can click the "Select" button and select members in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Update

Recalculates various properties of the selected members.

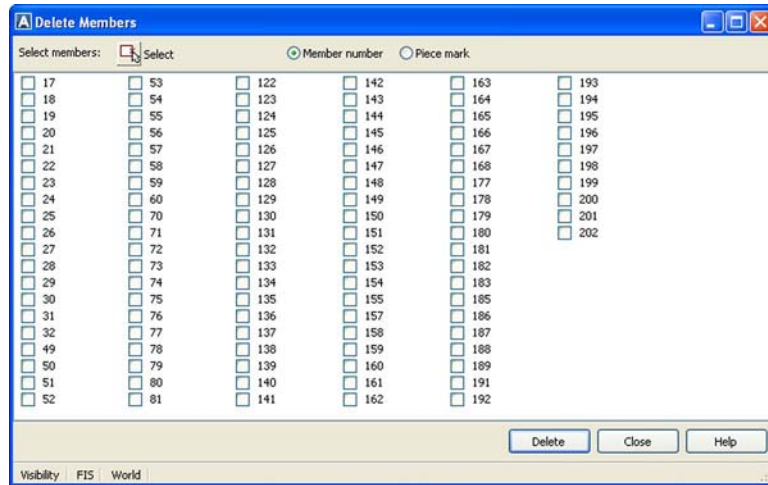
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Delete Members



This screen allows you to delete members from a model.

Select members

There are two ways to select a member to delete. You can check off members from the listbox at the bottom of the screen or you can click the "Select" button and select members in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Delete

Deletes the selected members from the model.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

CHAPTER 6

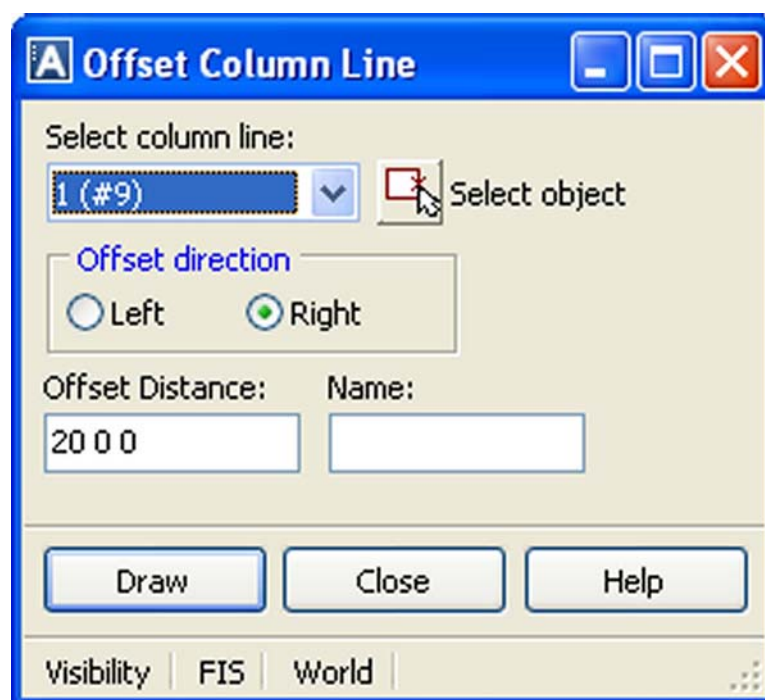
Offset and Copy Buttons

This chapter describes the Offset and Copy buttons on the Asteel 3D toolbar.

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Offset Column Line



This screen allows you to create new column lines by offsetting from existing column lines. This involves selecting a column line to offset from, entering an offset distance and a column line name, and finally clicking the Draw button.

Select column line

There are two ways to select a column line to offset from. You can select a column line from the listbox or you can click the "Select object" button and select a column line in AutoCAD.

Offset direction

There are four possible options for offset direction depending on the orientation of the currently selected column line. These values are Left, Right, Above and Below. If a vertical column line is selected, then the possible values are Left and Right. If a horizontal column line is selected, then the possible values are Above and Below.

Offset Distance

The distance from the selected column line to the column line that will be drawn.

Name

The name of the column line that will be drawn. This name will appear in the column line's bubble.

Draw

Draws the column line in the model.

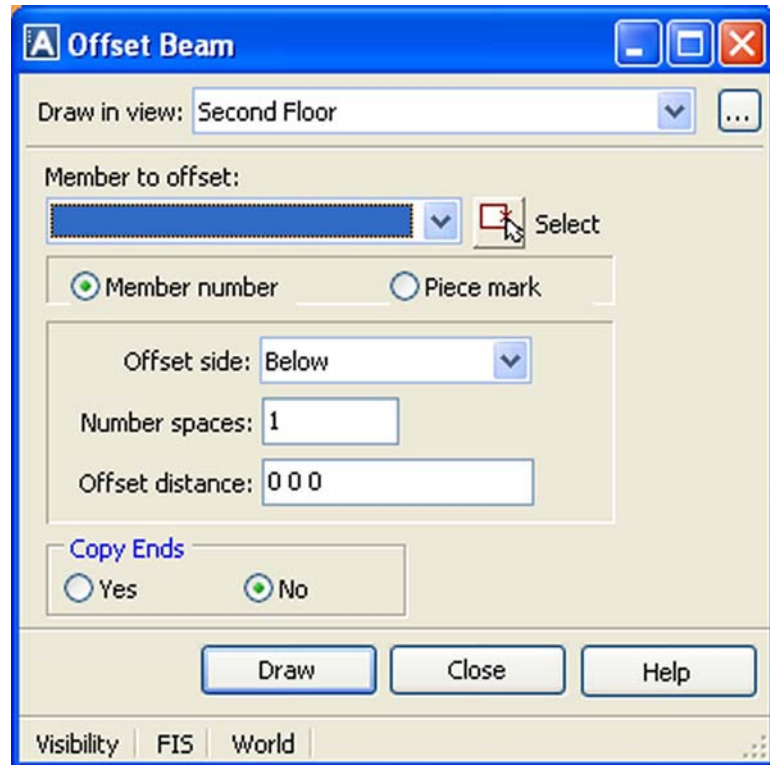
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Offset Beam



This screen allows you to create new beams by offsetting from existing beams.

Draw in view

This listbox shows all of the floor views in the model. When you select a beam, this listbox is automatically loaded with the selected beam's floor view.

The ellipses button takes you to the *Model Views* screen.

Member to offset

There are two ways to select a beam to offset from. You can select a beam from the listbox or you can click the "Select" button and select a beam in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Offset side

There are two possible options for offset side. These values are Above and Below.

Number spaces

Enter the number of beams that will be created. For example, if the value input here is 2 then two beams will be created when the Draw button is clicked.

Offset distance

The distance from the selected beam to the beam that will be drawn.

Copy Ends

If Copy Ends is "Yes", then the new beams that are created will have the same ends as the selected beam. If Copy Ends is "No", then the beam ends for the offset beams will be recalculated when they are created.

Draw

Draws the beam in the model.

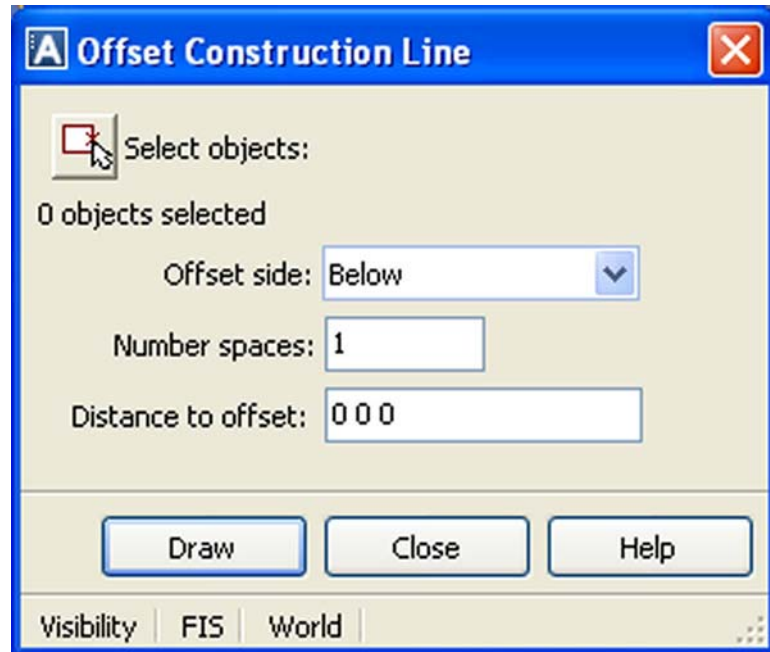
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Offset Construction Line



This screen allows you to create construction lines in a model by offsetting from existing model objects. A construction line is a line that stretches infinitely in both directions. Construction lines are used as drawing aids.

Select objects

Select the object(s) that you want to offset from. One or more construction lines will be offset from each selected object.

Offset side

There are two possible options for offset side. These values are Above and Below.

Number spaces

Enter the number of construction lines that will be created. For example, if the value input here is 2 then two construction lines will be created per selected object when the Draw button is clicked.

Distance to offset

The distance from the selected object to the construction line that will be drawn.

Draw

Draws the construction lines in the model.

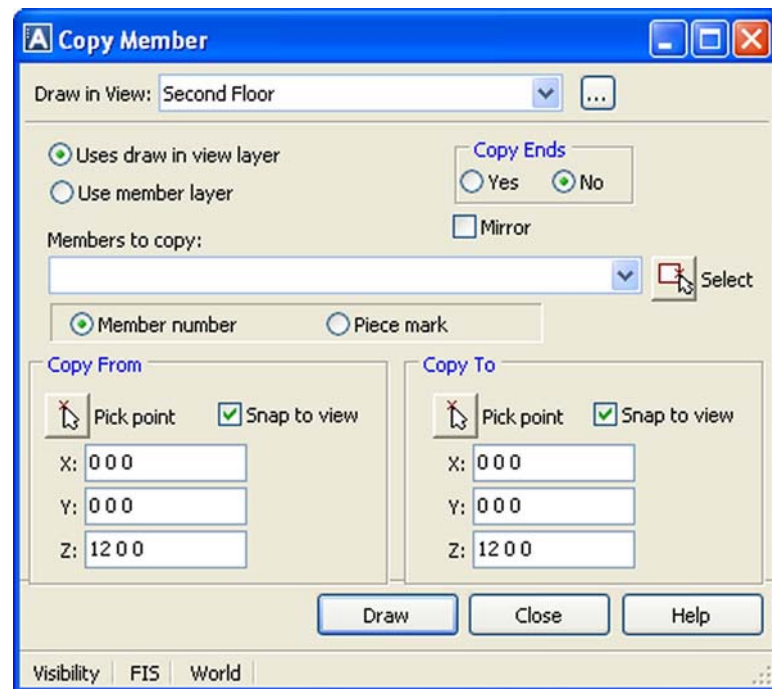
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Copy Member



This screen allows you to copy members in a model.

Draw in View

This listbox shows all of the views in the model.

The ellipses button takes you to the *Model Views* screen.

Uses draw in view layer

If this option is selected, then copied members will be copied to the layer selected in the "Draw in View" listbox.

Use member layer

If this option is selected, then copied members will be copied to the layer of the member they were copied from. For example, if you copy a member from floor view 1 and another member from floor view 2, the new members would be created on floor view 1 and floor view 2 respectively.

Copy Ends

If Copy Ends is "Yes", then the copied members will have the same ends as the selected members. If Copy Ends is "No", then the member ends for the copied members will be recalculated when they are created.

Mirror

If this is checked, then the copied members will be mirrored.

Members to copy

There are two ways to members to copy. You can check off members in the listbox or you can click the "Select" button and select members in AutoCAD.

You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Copy From

The Copy From box allows you to select the base point for the members you are going to copy. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

If "Snap to view" is checked, then the point you select will be snapped to the plane of the view selected in the "Draw in View" listbox.

Copy To

The Copy To box allows you to select the point of displacement for the members you are going to copy. You can type the coordinate in the X, Y and Z fields or you can click the Pick Point button and select the point in AutoCAD.

If "Snap to view" is checked, then the point you select will be snapped to the plane of the view selected in the "Draw in View" listbox.

Draw

Copies the members in the model.

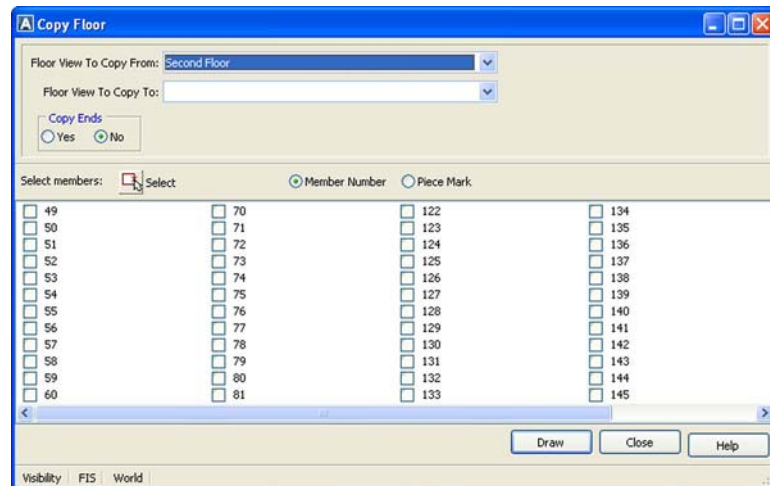
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Copy Floor



This screen allows you to copy selected members from a floor view to another floor view in a model.

Floor View To Copy From

Select the floor view to copy members from. The member list at the bottom of the screen will only display members from the selected floor view.

Floor View To Copy To

Select the floor view to copy members to.

Copy Ends

If Copy Ends is "Yes", then the new members that are created will have the same ends as the selected members. If Copy Ends is "No", then the ends for the copied members will be recalculated when they are created.

Select Members

There are two ways to select members to copy. You can check off members from the member list at the bottom of the screen or you can click the "Select" button and select members in AutoCAD.

You can show either the member number or the piece mark of the model's members in the member list by clicking the "Member Number" and "Piece Mark" radio buttons respectively.

Draw

Copies the floor in the model.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

CHAPTER 7

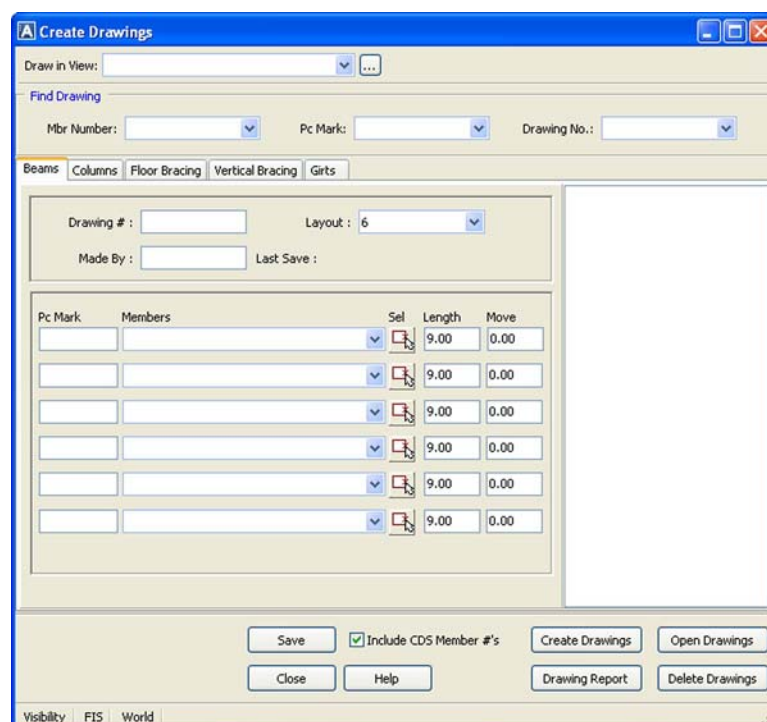
Create Buttons

This chapter describes the Create buttons on the Asteel 3D toolbar.

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Create Mill Order	161
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Create Drawings



This screen allows you create drawings. This involves adding members to a drawing, saving that drawing, then creating the drawing which makes an AutoCAD DXF file. You cannot combine members of different types onto a single drawing.

Mbr Number

This field allows you to automatically load a drawing's data based on a member number. For example, if you wanted to load the drawing that contained member number 44 then you would type 44 in this field. The drawing that contained member number 44 would then be loaded into this screen.

Pc Mark

This field allows you to automatically load a drawing's data based on a piece mark. For example, if you wanted to load the drawing that contained piece mark 4C3 then you would type 4C3 in this field. The drawing that contained piece mark 4C3 would then be loaded into this screen.

Drawing No.

This field allows you to automatically load a drawing's data based on a drawing number. For example, if you wanted to load the drawing whose drawing number was 4 then you would type 4 in this field. The drawing whose drawing number was 4 would then be loaded into this screen.

Drawing #

Enter the drawing number of the drawing you want to create or edit in this field.

If you enter a drawing number that already exists, then the data for that drawing will be loaded into this screen. If you enter a drawing number that does not exist, then Asteel 3D will automatically fill out the Pc Mark fields in preparation for creating a new drawing.

Drawing numbers may be up to four characters long and must begin with a number. For example, 100, 14A, and 1A1 are all valid drawing numbers, but M12 is not.

Layout

Enter the drawing layout to be used with this drawing. The drawing layout usually corresponds to the number of details on the drawing. For example, entering 6 in this field will allow you to input six details.

Made By

Enter the detailer's initials in this field.

Last Save

The last time this drawing was saved is shown here.

Pc Mark

Enter the piece mark of the member to detail in this field. This field is automatically filled out with a default value when a value is input into the Drawing # field.

Members

Select the member number of the member you want to include in the drawing. You can type in the member number or select the member number from the drop down listbox.

Sel

Clicking this button allows you to select a member in AutoCAD. The selected member's member number will be entered into the Members field.

Length (beam drawings only)

This field allows you to specify the actual length in inches that the beam detail will occupy on the drawing. The length must be long enough to accept the web/flange framing connections. Each framing connection requires 1.5 inches, so a 9-inch detail would accommodate up to 5 framing connections and 14 framing connections would require at least 22.5 inches detail length.

This field is only available for beam drawings.

Move (beam drawings only)

This field allows you to adjust the beam detail horizontally on the drawing. For example, entering "1" in this field would move the beam detail to the right by one inch. Entering "-2" would move the beam detail to the left by two inches.

This field is only available for beam drawings.

Include CDS Member #'s

If checked, then member numbers will be drawn beneath the main marks on the details.

Save

Saves the current drawing data. Saved drawings appear in the listbox on the right side of this screen.

Create Drawings

Creates drawing output for the checked drawings. You can check drawings in the listbox on the right side of this screen.

Open Drawings

Displays the Open Plans and Drawings screen. More information on this screen can be found in the *Open Plans and Drawings* topic.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Drawing Report

Displays the Drawing Report screen. See the *Drawing Report* topic for more information.

Delete Drawings

Deletes the checked drawings. You can check drawings in the listbox on the right side of this screen. This does not delete the drawing output of those drawings if they were created.

Create Plans

This screen allows you to create plan drawings.

Select the plan drawing type you want to create.

Available plan drawing types are floor plans, elevation views, anchor bolt plans and girt views. Once a plan drawing type is selected, the View listbox is refreshed with views that correspond to the plan drawing type.

View

Select the view that the plan drawing will be created from.

Create all of the plan drawings for the selected plan drawing type.

If this option is checked, then plan drawings are created for all of the views in the View listbox. This is an easy way to create all views for a plan drawing type.

Bubbles

Enter the column line bubble scale here.

Layouts

Enter the layout scale here.

Sections

Enter the section scale here.

Text

Enter the text scale here.

Title Text

Enter the title text scale here.

Title

The title appears underneath the plan drawing. This defaults to the name of the view.

Analyze members.

If this is checked, then all members are analyzed prior to drawing the plan drawing. This is recommended but can be time consuming.

Break column grid lines.

If this is checked, then column grid lines are broken to avoid overwriting member lines. This is recommended but can be time consuming.

Show sequence numbers.

If this is checked, then sequence numbers will be output for each member.

Units

The units for the plan drawing can be either imperial or metric. This option affects how dimensions are output on the plan drawing. If imperial is selected, then all dimensions will be imperial. If metric is selected, then all dimensions will be metric.

OK

Creates the plan drawings.

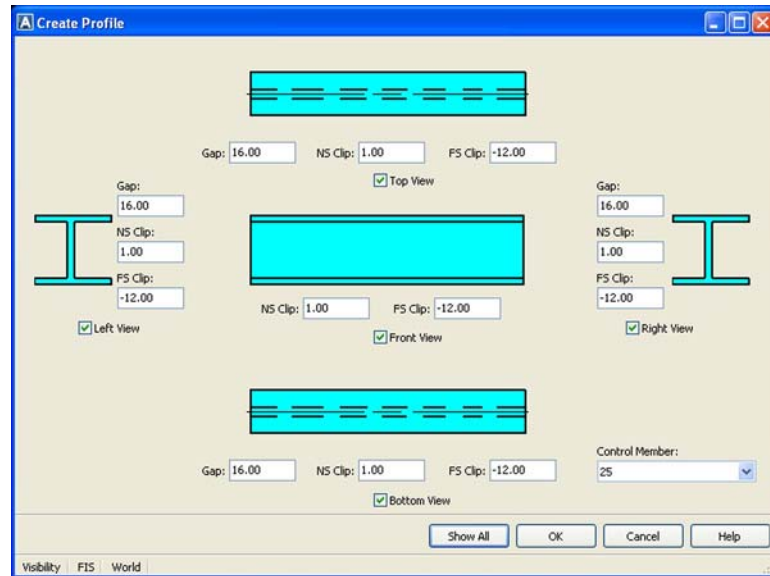
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Create Profile



This screen allows you create profiles of members. A profile is a 2D representation of a member that is drawn to exact scale. Profiles can be used to create plan drawings such as elevation views or for other detailing purposes.

A profile can include multiple views of a member. For example, if you were profiling a beam then the profile could include the front, left, right, top and bottom views of that beam. You can disable a view from being drawn by unchecking that view's checkbox. For example, if you wanted to disable the top and bottom views then you would uncheck the Top View and Bottom View checkboxes.

A profile can include one or more members.

Gap

Each view has a gap that spaces it out from the other views. In the example above, the gap between the Top View and the Front View is 16.00.

NS Clip

All near side objects within this distance will be drawn in the profile.

FS Clip

All far side objects within this distance will be drawn in the profile.

View Checkboxes

A profile can include multiple views of a member. For example, if you were profiling a beam then the profile could include the front, left, right, top and bottom views of that beam. You can disable a view from being drawn by unchecking that view's checkbox. For example, if you wanted to disable the top and bottom views then you would uncheck the Top View and Bottom View checkboxes.

Control Member

The control member is the member that defines the plane of the Front View.

Show All

Enables all views of the member. Checking all of the view checkboxes has the same effect as clicking this button.

OK

Creates the profile.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Create Mill Order

The Create Mill Order button on the Asteel 3D toolbar displays a menu with two options: "Full Mill Order Create and Edit" and "View/Edit Mill Order". Both of these options display the Mill Order screen shown below with minor differences. Both options are explained below.

Full Mill Order Create and Edit

This option displays the Mill Order screen shown below. This screen allows you to create, edit, and print mill orders. You can also clear mill order data from the model.

When you use this option, the primary model is locked so that mill order data in the primary model can be modified. If you have already created the mill order and you just need to print or edit it, then use the "View/Edit Mill Order" option instead since it does not require the primary model to be locked. This can save time on larger models.

View/Edit Mill Order

This option displays the Mill Order screen shown below except the buttons and checkboxes allowing you to create and clear mill orders are not shown. This screen allows you to edit and print mill orders only. You cannot create mill orders or clear mill order data using this option.

Use this option when you have already created the mill order and you just need to print or edit it. You can print or edit with "Full Mill Order Create and Edit", but by using the "View/Edit Mill Order" option you save time because the primary model does not need to be locked.

Mill Order

Customer: Customer job #:
 Customer address: Job description:
 Customer address: Description:
 Made by: Sequence: Chk'd By: ☒ Imperial output
 Starting line number: Starting page number: ☐ Overwrite existing
☐ Sort by sequence

<input type="checkbox"/> 17	<input type="checkbox"/> 28	<input type="checkbox"/> 55	<input type="checkbox"/> 75	<input type="checkbox"/> 126	<input type="checkbox"/> 137	<input type="checkbox"/> 148
<input type="checkbox"/> 18	<input type="checkbox"/> 29	<input type="checkbox"/> 56	<input type="checkbox"/> 76	<input type="checkbox"/> 127	<input type="checkbox"/> 138	<input type="checkbox"/> 149
<input type="checkbox"/> 19	<input type="checkbox"/> 30	<input type="checkbox"/> 57	<input type="checkbox"/> 77	<input type="checkbox"/> 128	<input type="checkbox"/> 139	<input type="checkbox"/> 150
<input type="checkbox"/> 20	<input type="checkbox"/> 31	<input type="checkbox"/> 58	<input type="checkbox"/> 78	<input type="checkbox"/> 129	<input type="checkbox"/> 140	<input type="checkbox"/> 151
<input type="checkbox"/> 21	<input type="checkbox"/> 32	<input type="checkbox"/> 59	<input type="checkbox"/> 79	<input type="checkbox"/> 130	<input type="checkbox"/> 141	<input type="checkbox"/> 152
<input type="checkbox"/> 22	<input type="checkbox"/> 49	<input type="checkbox"/> 60	<input type="checkbox"/> 80	<input type="checkbox"/> 131	<input type="checkbox"/> 142	<input type="checkbox"/> 153
<input type="checkbox"/> 23	<input type="checkbox"/> 50	<input type="checkbox"/> 70	<input type="checkbox"/> 81	<input type="checkbox"/> 132	<input type="checkbox"/> 143	<input type="checkbox"/> 154
<input type="checkbox"/> 24	<input type="checkbox"/> 51	<input type="checkbox"/> 71	<input type="checkbox"/> 122	<input type="checkbox"/> 133	<input type="checkbox"/> 144	<input type="checkbox"/> 155
<input type="checkbox"/> 25	<input type="checkbox"/> 52	<input type="checkbox"/> 72	<input type="checkbox"/> 123	<input type="checkbox"/> 134	<input type="checkbox"/> 145	<input type="checkbox"/> 157
<input type="checkbox"/> 26	<input type="checkbox"/> 53	<input type="checkbox"/> 73	<input type="checkbox"/> 124	<input type="checkbox"/> 135	<input type="checkbox"/> 146	<input type="checkbox"/> 158
<input type="checkbox"/> 27	<input type="checkbox"/> 54	<input type="checkbox"/> 74	<input type="checkbox"/> 125	<input type="checkbox"/> 136	<input type="checkbox"/> 147	<input type="checkbox"/> 159

Clear Create Close Print Summary Print Members Edit Members Edit Summary Help

Visibility FIS World

Customer

The customer for the mill order.

Customer job #

The job number for the mill order.

Customer address

The customer address for the mill order.

Job description

The job description for the mill order.

Description

The description for the mill order.

Made by

The initials of the detailer who made the mill order.

Sequence

If the "Sort by sequence" option is not checked, then the value input into this field is simply saved to the mill order when it is created. All checked members are added to the mill order regardless of their sequence.

If the "Sort by sequence" option is checked, then the value in this field is checked against all checked members. Only the checked members with a sequence number equal to the value in this field will be included in the mill order. For example, if every member was checked and "2" was in the Sequence field, then only the sequence 2 members would be added to the mill order. Checked members that were not sequence 2 would be ignored in the mill order. You can add multiple sequences to a mill order by separating them with a comma ("1,2,3" for example).

Chk'd By

The initials of the detailer who checked the mill order.

Starting line number

The starting line number for the mill order.

Starting page number

The starting page number for the mill order.

Imperial output

If checked, then the mill order will be output with imperial dimensions. If unchecked, then the mill order will be output with metric dimensions.

Overwrite existing

Once a member has been added to a mill order, the checkbox for that member will be grayed out to prevent you from including that member in another mill order. If you want to override this behavior, check this option.

This option is only available when using the "Full Mill Order Create and Edit" option.

Sort by sequence

For details on this option, see the Sequence topic above.

This option is only available when using the "Full Mill Order Create and Edit" option.

Clear

Clicking this button clears all mill order data from the model. It also deletes all files in the "\\Asteel\\Modeler\\##-###\\MILLORDER" folder where ##-### is the job number of the model.

This option is only available when using the "Full Mill Order Create and Edit" option.

Create

After filling out all necessary fields and checking the members to include in the mill order, clicking this button will create the mill order. You will be prompted for an output filename for the mill order file.

This option is only available when using the "Full Mill Order Create and Edit" option.

Close

Closes the screen. No action is taken.

Print Summary

Clicking this button will display the mill order summary report. Before the report is displayed, you will be prompted for a mill order file to create the report from and a printer to format the report.

Print Members

Clicking this button will display the mill order member report. Before the report is displayed, you will be prompted for a mill order file to create the report from and a printer to format the report.

Edit Members

Clicking this button will display the Edit Mill Order screen for mill order members. You will be prompted for a mill order file to edit. For more information, see the *Edit Mill Order (Members)* topic.

Edit Summary

Clicking this button will display the Edit Mill Order screen for the mill order summary. You will be prompted for a mill order file to edit. For more information, see the *Edit Mill Order (Summary)* topic.

Help

Displays help for this screen.

Edit Mill Order (Members)

The screenshot shows the 'Edit Mill Order' window. It contains several input fields for customer information and a table of mill order items.

Customer Information Fields:

- Customer: []
- Customer Job #: []
- Customer Address: []
- Job Description: []
- Customer Address: []
- Description: []
- Made By: []
- Sequence: []
- Chk'd By: []
- Starting Line Number: 1 []
- Starting Page Number: 1 []

Table of Mill Order Items:

Line #	Mbr #	Qty	Description	Grade	Cut Length	Remarks
1	51	1	TS3.5 3.5 5	A500-GRB	8 11 0	
1	52	1	TS3.5 3.5 5	A500-GRB	8 11 0	
1	58	1	TS3.5 3.5 5	A500-GRB	8 11 0	
1	59	1	TS3.5 3.5 5	A500-GRB	8 11 0	
2	54	1	TS3.5 3.5 5	A500-GRB	9 3 0	
2	50	1	TS3.5 3.5 5	A500-GRB	9 3 0	
2	53	1	TS3.5 3.5 5	A500-GRB	9 3 0	

Buttons: Save, Close, Add Row, Delete Row, Help

Visibility: FIS World

There are two files associated with a mill order: the member file and the summary file. This screen allows you to edit the member file of a mill order.

Customer

The customer for the mill order.

Customer job #

The job number for the mill order.

Customer address

The customer address for the mill order.

Job description

The job description for the mill order.

Description

The description for the mill order.

Made by

The initials of the detailer who made the mill order.

Sequence

The sequence for the members in the mill order.

Chk'd By

The initials of the detailer who checked the mill order.

Starting line number

The starting line number for the mill order.

Starting page number

The starting page number for the mill order.

Line #

The line number of the member. Read only.

Mbr #

The member number. Read only.

Qty

The quantity of the member.

Description

The member size.

Grade

The steel grade of the member.

Cut Length

The cut length of the member.

Remarks

Input any remarks necessary for the member.

Save

Saves the mill order data.

Close

Closes the screen. No action is taken.

Add Row

Adds a row at the bottom of the grid.

Delete Row

Deletes the selected row.

Help

Displays help for this screen.

Edit Mill Order (Summary)

Line #	Qty	Description	Grade	Cut Length	Remarks
1	4	TS3.5 3.5 5	A500-GRB	8 11 0	
2	6	TS3.5 3.5 5	A500-GRB	9 3 0	
3	2	TS6 4 3	A500-GRB	7 6 0	Exact Length + 1/2
4	2	TS6 4 4	A500-GRB	7 6 0	Exact Length + 1/2
5	8	TS6 6 8	A500-GRB	41 3 0	

There are two files associated with a mill order: the member file and the summary file. This screen allows you to edit the summary file of a mill order.

Customer

The customer for the mill order.

Customer job

The job number for the mill order.

Customer address

The customer address for the mill order.

Job description

The job description for the mill order.

Description

The description for the mill order.

Made by

The initials of the detailer who made the mill order.

Sequence

The sequence for the members in the mill order.

Chk'd By

The initials of the detailer who checked the mill order.

Starting line number

The starting line number for the mill order.

Starting page number

The starting page number for the mill order.

Line #

The line number of the member.

Quantity

The member quantity.

Description

The member size.

Grade

The steel grade of the member.

Cut Length

The cut length of the member.

Remarks

Input any remarks necessary for the member.

Save

Saves the mill order data.

Close

Closes the screen. No action is taken.

Add Row

Adds a row at the bottom of the grid.

Delete Row

Deletes the selected row.

Help

Displays help for this screen.

Create Field Bolt List

The Create Field Bolt List button on the Asteel 3D toolbar displays a menu with two options: "Full Bolt List Create and Edit" and "View/Edit Bolt List". Both of these options display the Field Bolts screen shown below with minor differences. Both options are explained below.

Full Bolt List Create and Edit

This option displays the Field Bolts screen shown below. This screen allows you to create, edit, and print bolt lists.

When you use this option, the primary model is locked so that bolt list data in the primary model can be modified. If you have already created the bolt list and you just need to print or edit it, then use the "View/Edit Bolt List" option instead since it does not require the primary model to be locked. This can save time on larger models.

View/Edit Bolt List

This option displays the Field Bolts screen shown below except the Create button is not shown. This screen allows you to edit and print bolt lists only. You cannot create bolt lists using this option.

Use this option when you have already created the bolt list and you just need to print or edit it. You can print or edit with "Full Bolt List Create and Edit", but by using the "View/Edit Bolt List" option you save time because the primary model does not need to be locked.

Customer

The customer for the bolt list.

Customer job

The job number for the bolt list.

Customer address

The customer address for the bolt list.

Job description

The job description for the bolt list.

Description

The description for the bolt list.

Made by

The initials of the detailer who made the bolt list.

Sequence

The sequence for the bolt list.

Sheets

Enter any sheet data for the bolt list.

Point to Point Starting Line Number

The starting line number for the point to point.

Point to Point Starting Page Number

The starting page number for the point to point.

Summary Starting Line Number

The starting line number for the summary.

Summary Starting Page Number

The starting page number for the summary.

Create

After filling out all necessary fields and checking the drawings to include in the bolt list, clicking this button will create the bolt list. You will be prompted for an output filename for the bolt list file.

This option is only available when using the "Full Bolt List Create and Edit" option.

Edit

Clicking this button will display the Edit Bolt List Point to Point screen. You will be prompted for a bolt list file to edit. For more information, see the ***Edit Bolt List Point to Point*** topic.

Close

Closes the screen. No action is taken.

Print Summary

Clicking this button will display the bolt list summary report. Before the report is displayed, you will be prompted for a bolt list file to create the report from and a printer to format the report.

Print Pt to Pt

Clicking this button will display the bolt list point to point report. Before the report is displayed, you will be prompted for a bolt list file to create the report from and a printer to format the report.

Help

Displays help for this screen.

Edit Bolt List Point to Point

This screen allows you to edit a bolt list. The screen is divided into three areas: the Bolt List description fields, the Point To Point tab and the Summary Tab. First we will discuss the Bolt List description fields and the Point To Point tab, then we will discuss the Summary tab.

Customer: Customer Job #:

Customer Address: Job Description:

Customer Address: Description:

Made By: Sequence: Sheets:

Point to Point Starting Line Number: Point to Point Starting Page Number:

Summary Starting Line Number: Summary Starting Page Number:

Point To Point Summary

Line #	Location	Qty	Dia.	Material Thickness	Grip	Wash & Nuts	Grade	Class	Type	Length	Finish

Save Close Add Row Delete Row Insert Row Load

Customer

The customer for the bolt list.

Customer job #

The job number for the bolt list.

Customer address

The customer address for the bolt list.

Job description

The job description for the bolt list.

Description

The description for the bolt list.

Made by

The initials of the detailer who made the bolt list.

Sequence

The sequence for the bolt list.

Sheets

Enter any sheet data for the bolt list.

Point to Point Starting Line Number

The starting line number for the point to point.

Point to Point Starting Page Number

The starting page number for the point to point.

Summary Starting Line Number

The starting line number for the summary.

Summary Starting Page Number

The starting page number for the summary.

Line #

The line number of the bolts.

Location

The location where the bolts are used.

Qty

The number of bolts used.

Dia.

The bolt diameter.

Material Thickness

The material thickness of the bolts.

Grip

The grip for the bolts.

Wash & Nuts

The washers and nuts used with the bolts.

Grade

The steel grade of the bolts.

Class

The bolt class.

Type

The type of bolts.

Length

The length of the bolts.

Finish

The finish of the bolts.

Edit Bolt List Point to Point

Customer: Customer Job #:
Customer Address: Job Description:
Customer Address: Description:
Made By: Sequence: Sheets:
Point to Point Starting Line Number: Point to Point Starting Page Number:
Summary Starting Line Number: Summary Starting Page Number:
Point To Point **Summary**

Line #	Finish	Qty	Dia.	Grade	Description	Length	Notes

Save Close Add Row Delete Row Insert Row Load

Line #

The line number of the bolts.

Finish

The finish of the bolts.

Qty

The number of bolts used.

Dia.

The bolt diameter.

Grade

The steel grade of the bolts.

Description

The bolt description.

Length

The length of the bolts.

Notes

Additional notes on the bolts.

The buttons on this form are described below.

Save

Click this button to save the bolt list file.

Close

Closes the screen. No action is taken.

Add Row

Click this button to add a row at the end of the grid.

Delete Row

Click this button to delete the selected row.

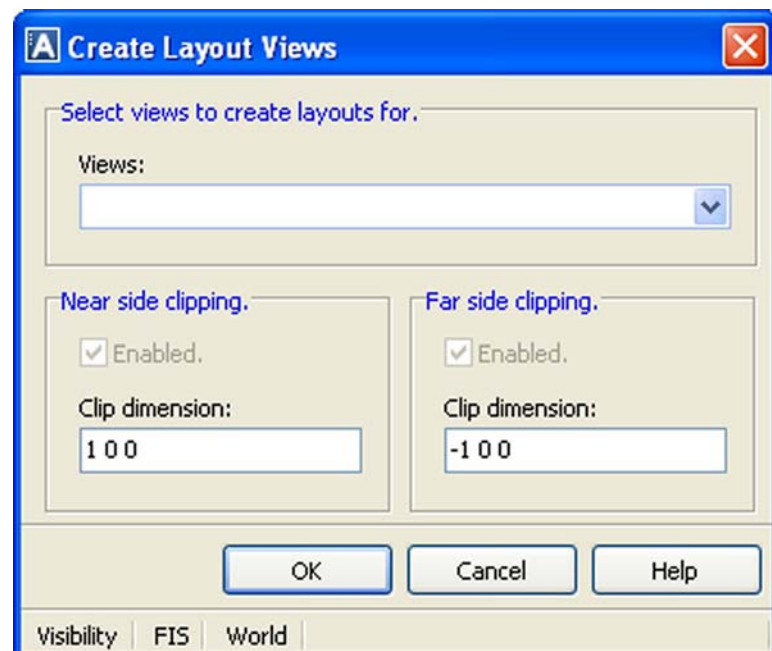
Insert Row

Click this button to insert a row into the grid.

Load

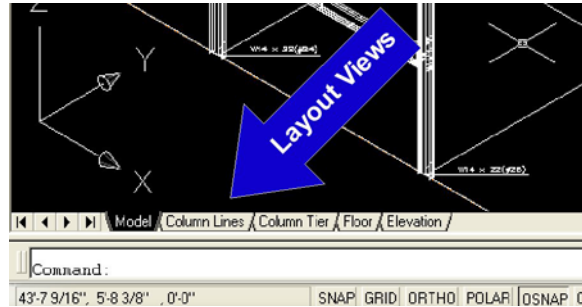
Click this button to load a bolt list file.

Create Layout Views



This screen allows you to create layout views in the model. Layout views allow you to quickly display certain areas of the model.

Layout views are accessible via tabs at the bottom of the drawing in AutoCAD as shown in the screenshot below. The layout views in the below example include Column Lines, Column Tier, Floor and Elevation.



Select views to create layouts for.

Select a model view for the layout view. The layout view will only display the members in the plane of the model view you select.

Near side clipping.

These options control clipping on the near side of the model view you select. There are two options for clipping: to enable clipping and to specify the clip dimension. The option to enable or disable clipping is not supported at this time - clipping is always enabled. The clip dimension option allows you to only show objects that are within the clip dimension.

Far side clipping.

These options control clipping on the far side of the model view you select. There are two options for clipping: to enable clipping and to specify the clip dimension. The option to enable or disable clipping is not supported at this time - clipping is always enabled. The clip dimension option allows you to only show objects that are within the clip dimension.

OK

Creates the layout views.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

CHAPTER 8

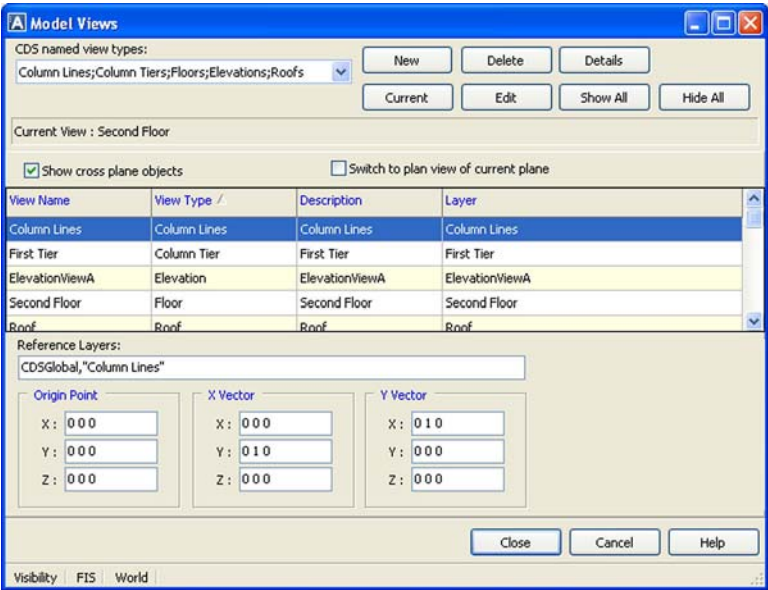
Miscellaneous and Visibility Buttons

This chapter describes the Miscellaneous and Visibility buttons on the Asteel 3D toolbar.

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Model Views



This screen allows you to create, modify and delete model views.

A model view is a user defined plane in a model where certain model objects should be drawn. Below is a list of the model view types and descriptions of each.

Model View Type	Description
Column Lines	A horizontal plane used for placing column lines.
Column Tiers	A horizontal plane used for placing columns.
Floors	A horizontal plane used for placing beams and floor bracing.
Elevations	A vertical plane used for placing vertical bracing.
Roofs	A sloping plane used for placing beams and floor bracing. A roof plane cannot be a flat plane.
Girts	A vertical plane used for placing girts.

CDS named view types

This listbox shows all of the possible model view types. Views that have their view types checked in this listbox will be displayed in the grid on the dialog. For example, if the only view type checked was "Floors", then only floor view types would be displayed in the grid on the dialog.

New

Clicking this button opens the *Select A New View Type dialog* . This dialog allows you to create new views in the model.

Delete

Clicking this button deletes the selected view in the grid from the model.

Details

Clicking this button toggles the display of the details panel at the bottom of the dialog.

Current

Clicking this button makes the selected view in the grid the current view.

When a view is current, only members from that view and that view's reference layers are visible in the model. If the "Show cross plane objects" option is checked when a view is made current, then members that cross the plane of the view will also be visible.

Edit

Clicking this button displays the edit dialog for the selected view in the grid.

Show All

Clicking this button shows all members in all views.

Hide All

Clicking this button hides all members in all views.

Show cross plane objects

If this option is checked when a view is made current, then members that cross the plane of the view will be visible in addition to members associated with the view.

Switch to plan view of current plane

If this option is checked when the Current button is clicked, then AutoCAD will display the plan view of the view selected in the grid. If this option is not checked when the Current button is clicked, then AutoCAD will not change the display.

Reference Layers

This field lists all of the reference layers that are associated with the view selected in the grid.

When a view is current, only members from that view and that view's reference layers are visible in the model. If the "Show cross plane objects" option is checked when a view is made current, then members that cross the plane of the view will also be visible.

This field is only displayed when the details panel is shown. The details panel can be displayed by clicking the Details button.

Origin Point

These fields display the coordinates of the origin point for the view selected in the grid.

These fields are only displayed when the details panel is shown. The details panel can be displayed by clicking the Details button.

X Vector

These fields display the coordinates of the X Vector for the view selected in the grid.

These fields are only displayed when the details panel is shown. The details panel can be displayed by clicking the Details button.

Y Vector

These fields display the coordinates of the Y Vector for the view selected in the grid.

These fields are only displayed when the details panel is shown. The details panel can be displayed by clicking the Details button.

Close

Applies the model view changes to the model.

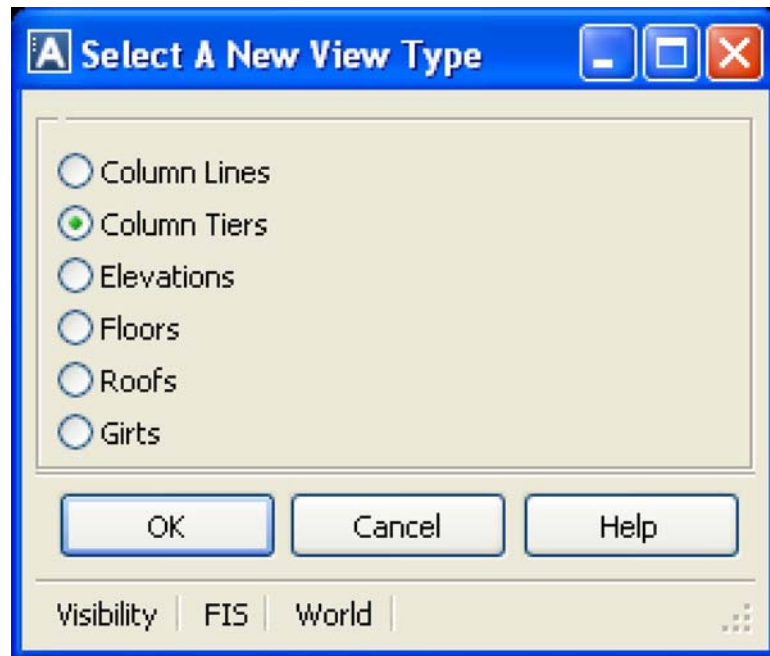
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Select A New View Type



This screen allows you to select new model view types to create.

To create a model view, click the radio button next to the view type you wish to create and click the OK button. A screen will be displayed allowing you to customize your new model view.

OK

Displays the screen allowing you to customize a model view.

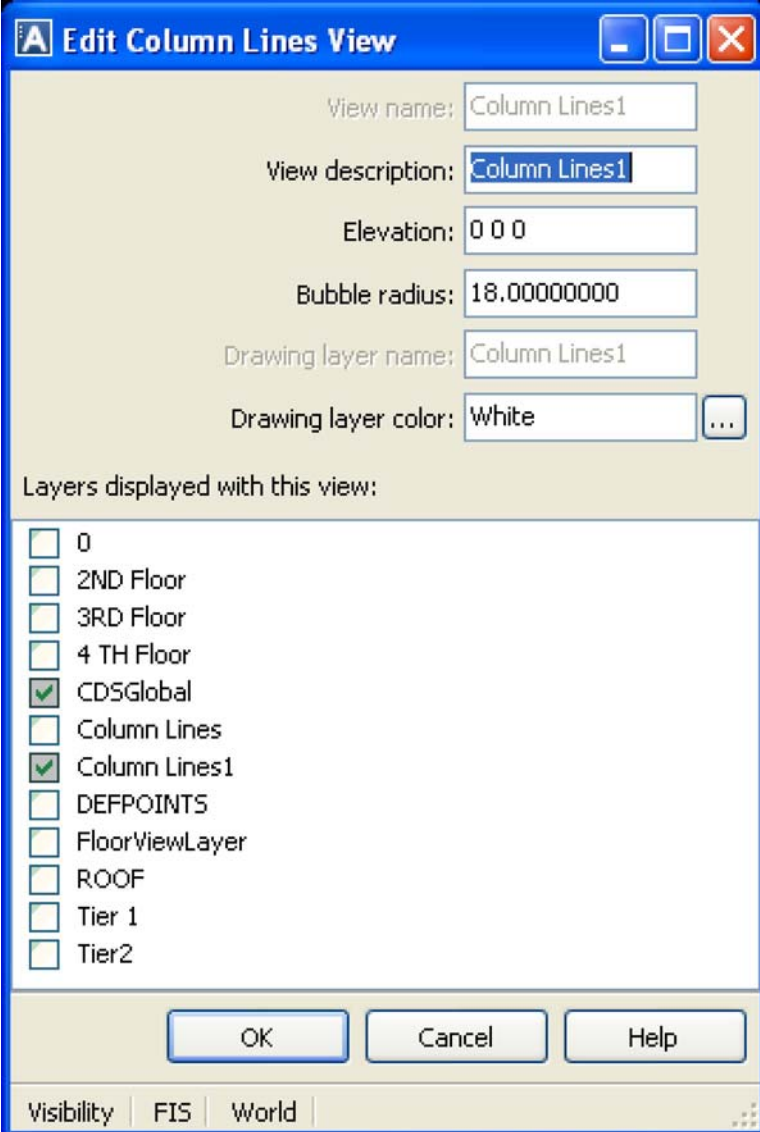
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Column Lines View



The dialog box titled "Edit Column Lines View" contains the following fields and controls:

- View name:** Column Lines1
- View description:** Column Lines1
- Elevation:** 0 0 0
- Bubble radius:** 18.00000000
- Drawing layer name:** Column Lines1
- Drawing layer color:** White (with a color selection button)

Layers displayed with this view:

Layer Name	Checked
0	<input type="checkbox"/>
2ND Floor	<input type="checkbox"/>
3RD Floor	<input type="checkbox"/>
4 TH Floor	<input type="checkbox"/>
CDSGlobal	<input checked="" type="checkbox"/>
Column Lines	<input type="checkbox"/>
Column Lines1	<input checked="" type="checkbox"/>
DEFPOINTS	<input type="checkbox"/>
FloorViewLayer	<input type="checkbox"/>
ROOF	<input type="checkbox"/>
Tier 1	<input type="checkbox"/>
Tier2	<input type="checkbox"/>

Buttons: OK, Cancel, Help

Footer: Visibility | FIS | World

This screen allows you to create and modify column line views. A column line view is a horizontal plane used for placing column lines.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Elevation

The elevation of the view.

Bubble radius

The default bubble radius for the column lines that are drawn on the view.

Drawing layer name

The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.

OK

Creates or edits the column lines view.

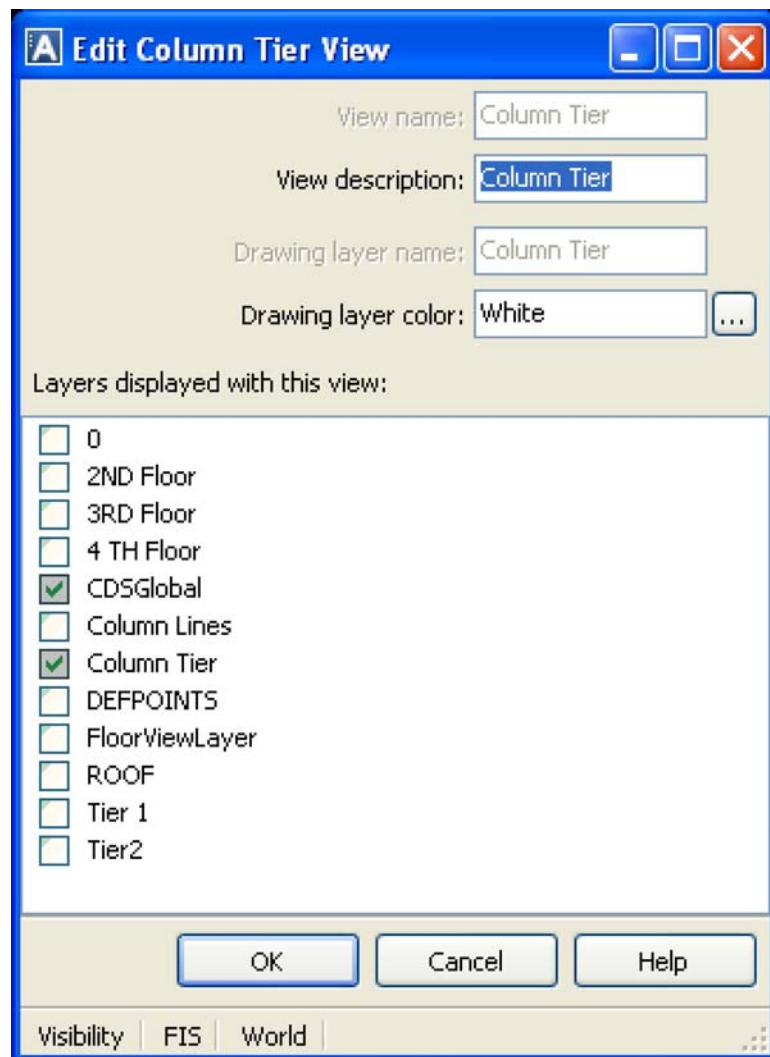
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Column Tier View



This screen allows you to create and modify column tier views. A column tier view is a horizontal plane used for placing columns.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Drawing layer name

The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.

OK

Creates or edits the column tier view.

Close

Closes the screen. No action is taken.

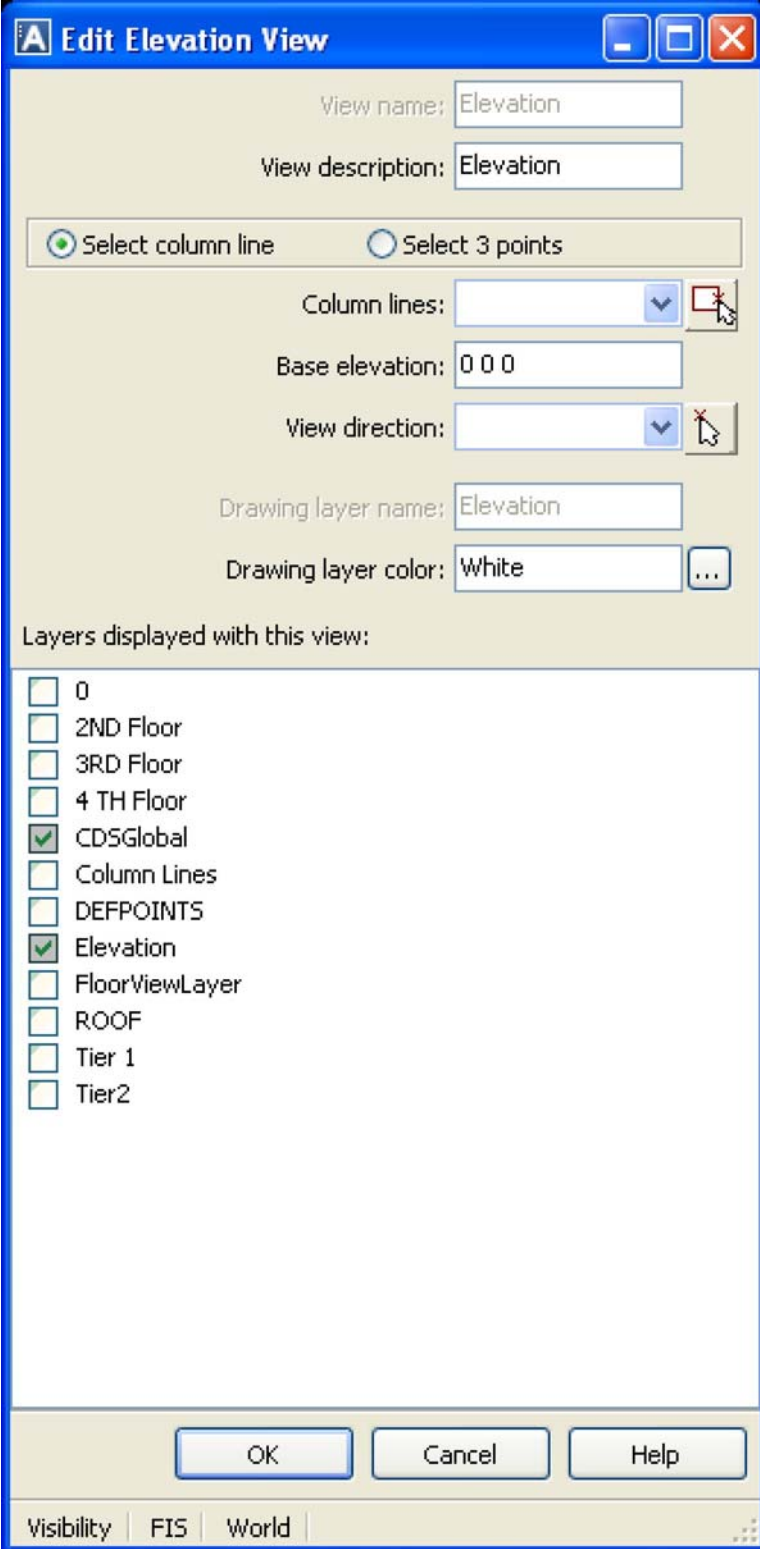
Help

Displays help for this screen.

Edit Elevation View

This screen allows you to create and modify elevation views. An elevation view is a vertical plane used for placing vertical bracing.

There are two ways to create an elevation view: by selecting a column line or by selecting three points. To create an elevation view by selecting a column line, click the "Select column line" option. To create an elevation view by selecting three points, click the "Select 3 points" option. This screen will be displayed differently based on your selection. We will first describe the screen when the "Select column line" option is selected, then we will describe the screen when the "Select 3 points" is selected.





The "Edit Elevation View" dialog box is shown with a blue title bar and standard window controls. It contains several input fields and a list of layers. The "Select column line" radio button is selected. The "Column lines" field has a dropdown arrow and a small red square icon with a crosshair. The "Base elevation" field contains "0 0 0". The "View direction" field has a dropdown arrow and a small red square icon with a crosshair. The "Drawing layer name" field contains "Elevation". The "Drawing layer color" field contains "White" and a color selection button. Below these fields is a section titled "Layers displayed with this view:" containing a list of layers with checkboxes. The "Elevation" layer is checked. At the bottom are "OK", "Cancel", and "Help" buttons. A status bar at the very bottom shows "Visibility", "FIS", and "World" tabs.

Edit Elevation View



View name:

View description:


☒ Select column line ☐ Select 3 points

Column lines:  

Base elevation:

View direction:  

Drawing layer name:

Drawing layer color: 

Layers displayed with this view:

- ☐ 0
- ☐ 2ND Floor
- ☐ 3RD Floor
- ☐ 4 TH Floor
- ☒ CDSGlobal
- ☐ Column Lines
- ☐ DEFPOINTS
- ☒ Elevation
- ☐ FloorViewLayer
- ☐ ROOF
- ☐ Tier 1
- ☐ Tier2

Visibility | FIS | World

This screen will be displayed when the "Select column line" option is selected.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Column lines

This listbox contains all of the column lines in the model. The column line you select will be used as a basis of the vertical plane of the elevation view. You can choose a column line from the listbox or you can select a column line in AutoCAD by clicking the button adjacent to the listbox.

Base elevation

The base elevation of the elevation view.

View direction

The direction of the elevation view. You can choose a view direction from the listbox or you can select a view direction in AutoCAD by clicking the button adjacent to the listbox.

Drawing layer name

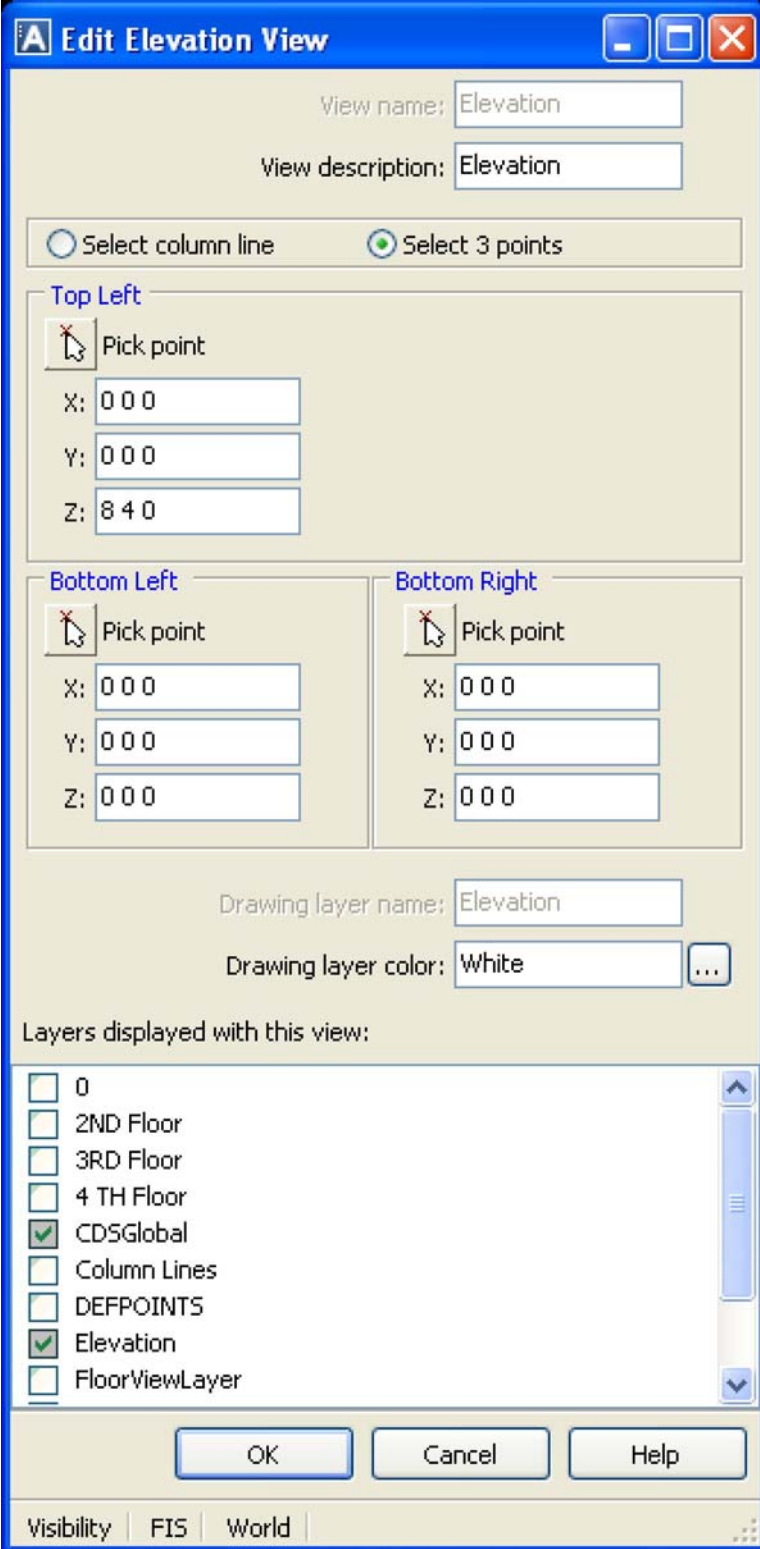
The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.



The "Edit Elevation View" dialog box is shown with a blue title bar and standard window controls. It contains fields for "View name" and "View description", both set to "Elevation". Two radio buttons are present: "Select column line" (unselected) and "Select 3 points" (selected). Below these are three sections for point selection: "Top Left", "Bottom Left", and "Bottom Right". Each section has a "Pick point" button with a cursor icon and three input fields for X, Y, and Z coordinates. The "Top Left" section has X: 0 0 0, Y: 0 0 0, and Z: 8 4 0. The "Bottom Left" and "Bottom Right" sections have X: 0 0 0, Y: 0 0 0, and Z: 0 0 0. At the bottom of the dialog are fields for "Drawing layer name" (Elevation) and "Drawing layer color" (White), followed by a list of layers displayed with this view. The list includes "0", "2ND Floor", "3RD Floor", "4 TH Floor", "CDSGlobal" (checked), "Column Lines", "DEFPOINTS", "Elevation" (checked), and "FloorViewLayer". At the very bottom are "OK", "Cancel", and "Help" buttons, and a tab bar with "Visibility", "FIS", and "World" tabs.


Edit Elevation View

View name:

View description:

☐ Select column line ☒ Select 3 points

Top Left


 Pick point

X:

Y:

Z:

Bottom Left


 Pick point

X:

Y:

Z:

Bottom Right

 Pick point

X:

Y:

Z:

Drawing layer name:

Drawing layer color: ...

Layers displayed with this view:

- ☐ 0
- ☐ 2ND Floor
- ☐ 3RD Floor
- ☐ 4 TH Floor
- ☒ CDSGlobal
- ☐ Column Lines
- ☐ DEFPOINTS
- ☒ Elevation
- ☐ FloorViewLayer

OK Cancel Help

Visibility FIS World

This screen will be displayed when the "Select 3 points" option is selected.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Top left

The top left coordinate of the elevation view.

Bottom left

The bottom left coordinate of the elevation view.

Bottom right

The bottom right coordinate of the elevation view.

Drawing layer name

The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.

The buttons on this form are described below.

OK

Creates or edits the elevation view.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Floor View

Edit Floor View

View name: Floor

View description: Floor

Top of floor elevation: 0 0 0

Top of steel adjustment: 0 0 0

Top of steel elevation: 0 0 0

Drawing layer name: Floor

Drawing layer color: White

Layers displayed with this view:

- ☐ 0
- ☐ 2ND Floor
- ☐ 3RD Floor
- ☐ 4 TH Floor
- ☒ **CDSGlobal**
- ☐ Column Lines
- ☐ DEFPOINTS
- ☒ **Floor**

OK Cancel Help

Visibility FIS World

This screen allows you to create and modify floor views. A floor view is a horizontal plane used for placing beams and floor bracing.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Top of floor elevation

The elevation of the top of the floor. This is usually the finished floor elevation that is referenced by the design drawings.

Top of steel adjustment

The top of steel adjustment. For example, this can be -1-1/4" when drawings are referenced to the top of grating and the grating is 1-1/4" thick.

Top of steel elevation

The elevation of the top of steel. This can be entered instead of entering a value in the top of steel adjustment.

Drawing layer name

The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.

OK

Creates or edits the floor view.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Roof View

This screen allows you to create and modify roof views. A roof view is a sloping plane used for placing beams and floor bracing. A roof plane cannot be a flat plane.

There are two ways to create a roof view: by selecting column lines or by selecting three points. To create a roof view by selecting column lines, click the "Select column line" option. To create a roof view by selecting three points, click the "Select 3 points" option. This screen will be displayed differently based on your selection. We will first describe the screen when the "Select column line" option is selected, then we will describe the screen when the "Select 3 points" is selected.



Edit Roof View

View name:



View description:

☒ Select column line ☐ Select 3 points


First Column Line

 Elevation: 

Second Column Line

 Elevation: 

Base Point


 Pick point

X:

Y:

Z:

Drawing layer name:

Drawing layer color: 

Layers displayed with this view:

- ☐ 0
- ☐ 2ND Floor
- ☐ 3RD Floor
- ☐ 4 TH Floor
- ☒ CDSGlobal
- ☐ Column Lines
- ☐ DEFPOINTS
- ☐ FloorViewLayer
- ☐ ROOF
- ☒ Roof1
- ☐ Tier 1
- ☐ Tier2

OK Cancel Help

Visibility FIS World

This screen will be displayed when the "Select column line" option is selected.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

First Column Line

Select the first column line and elevation. The first and second column line must be parallel to each other. The elevations for the first and second column line should NOT be equal.

Second Column Line

Select the second column line and elevation. The first and second column line must be parallel to each other. The elevations for the first and second column line should NOT be equal.

Base Point

The coordinate of the lower left corner of the roof view.

Drawing layer name

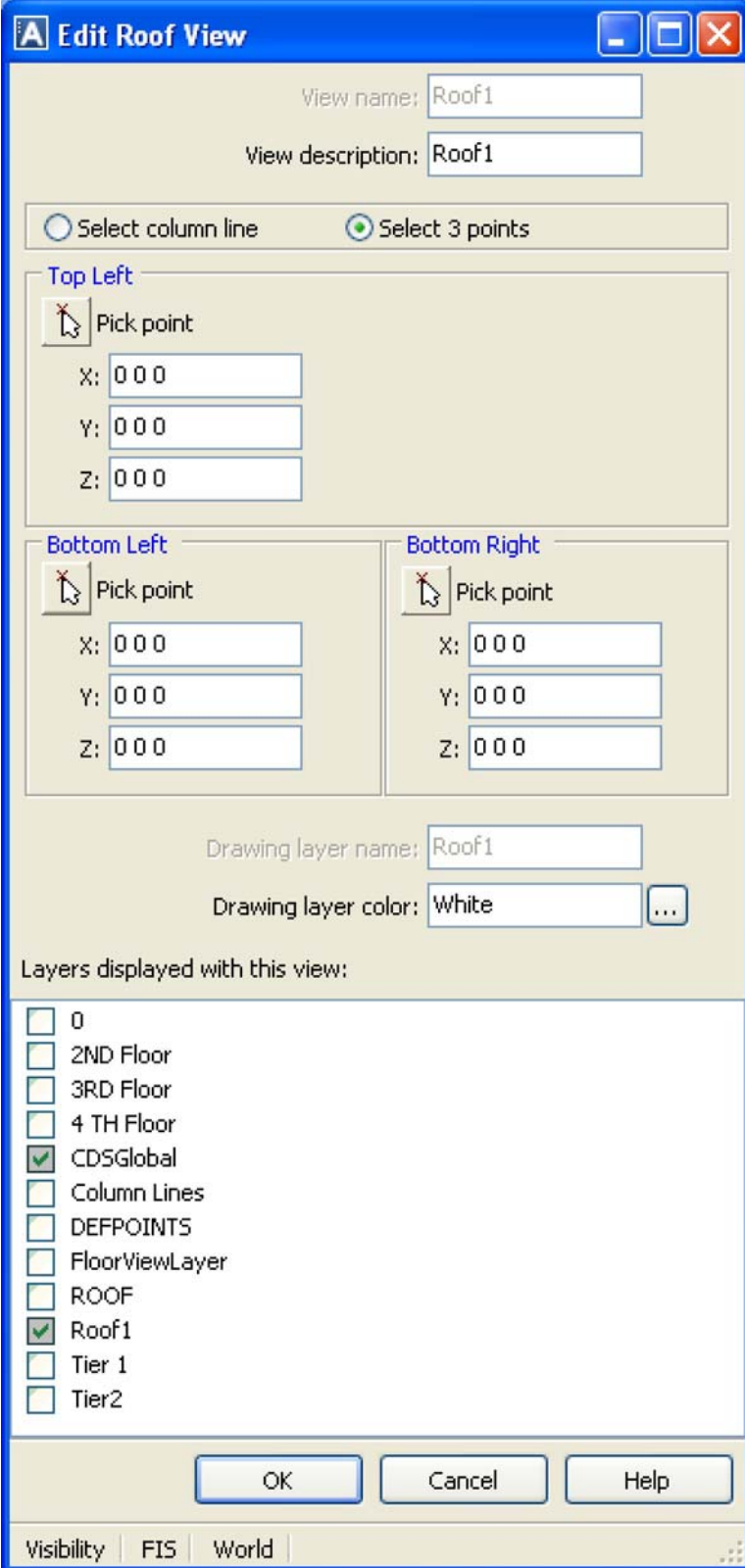
The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.



The "Edit Roof View" dialog box is used to configure a roof view. It includes fields for "View name" and "View description", both set to "Roof1". Two radio buttons allow selecting "Select column line" or "Select 3 points". The "Select 3 points" option is active, showing three "Pick point" sections: "Top Left", "Bottom Left", and "Bottom Right". Each section has X, Y, and Z coordinate input fields, all currently set to "0 0 0". Below these is a "Drawing layer name" field (set to "Roof1") and a "Drawing layer color" dropdown (set to "White"). A list of layers to be displayed with this view is shown at the bottom, with "Roof1" and "CDSGlobal" checked. The dialog has "OK", "Cancel", and "Help" buttons, and a status bar at the bottom showing "Visibility", "FIS", and "World" tabs.

Edit Roof View

View name:

View description:

☐ Select column line ☒ Select 3 points

Top Left

X:

Y:

Z:

Bottom Left

X:

Y:

Z:

Bottom Right

X:

Y:

Z:

Drawing layer name:

Drawing layer color: ...

Layers displayed with this view:

- ☐ 0
- ☐ 2ND Floor
- ☐ 3RD Floor
- ☐ 4 TH Floor
- ☒ CDSGlobal
- ☐ Column Lines
- ☐ DEFPOINTS
- ☐ FloorViewLayer
- ☐ ROOF
- ☒ Roof1
- ☐ Tier 1
- ☐ Tier2

OK Cancel Help

Visibility FIS World

This screen will be displayed when the "Select 3 points" option is selected.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Top left

The top left coordinate of the roof view.

Bottom left

The bottom left coordinate of the roof view.

Bottom right

The bottom right coordinate of the roof view.

Drawing layer name

The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.

The buttons on this form are described below.

OK

Creates or edits the roof view.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Girt View

This screen allows you to create and modify girt views. A girt view is a vertical plane used for placing girts.

There are two ways to create a girt view: by selecting a column line or by selecting three points. To create a view by selecting a column line, click the "Select column line" option. To create a view by selecting three points, click the "Select 3 points" option. This screen will be displayed differently based on your selection. We will first describe the screen when the "Select column line" option is selected, then we will describe the screen when the "Select 3 points" is selected.

Edit Girt View

View name:

View description:

☒ Select column line
 ☐ Select 3 points

Column lines:

Base elevation:

View direction:

Drawing layer name:

Drawing layer color:

Hide

☐ Beams
☐ Columns
☐ Bracing

Girt Line Offset

☒ Near side
 ☐ Far side

Default offset:

Layers displayed with this view:

☐ 0
☒ CDSGlobal
☒ Girt

OK Cancel Help

Visibility FIS World

This screen will be displayed when the "Select column line" option is selected.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Column lines

This listbox contains all of the column lines in the model. The column line you select will be used as a basis of the vertical plane of the girt view. You can choose a column line from the listbox or you can select a column line in AutoCAD by clicking the button adjacent to the listbox.

Base elevation

The base elevation of the girt view.

View direction

The direction of the girt view. You can choose a view direction from the listbox or you can select a view direction in AutoCAD by clicking the button adjacent to the listbox.

Drawing layer name

The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Hide

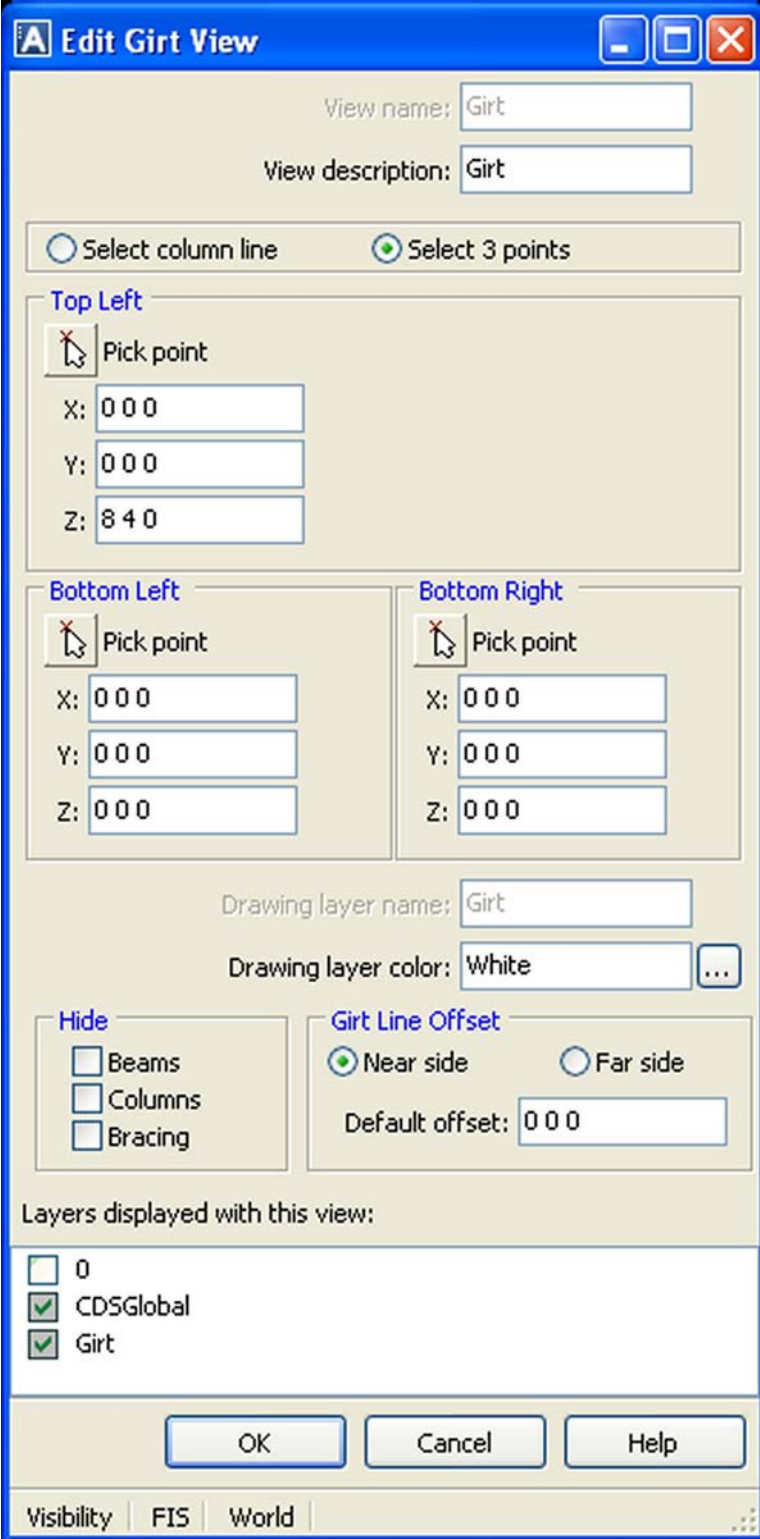
This option allows you to hide certain member types when this view is current. Checked member types will be hidden.

Girt Line Offset

This option allows you to offset girts a certain distance away from the vertical plane of the girt view. You can specify the offset distance as well as the offside side.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.




Edit Girt View

View name:

View description:

☐ Select column line ☒ Select 3 points

Top Left


 Pick point

X:

Y:

Z:

Bottom Left


 Pick point

X:

Y:

Z:

Bottom Right

 Pick point

X:

Y:

Z:

Drawing layer name:

Drawing layer color: ...

Hide

☐ Beams

☐ Columns

☐ Bracing

Girt Line Offset

☒ Near side ☐ Far side

Default offset:

Layers displayed with this view:

☐ 0

☒ CDSGlobal

☒ Girt

Visibility | FIS | World

This screen will be displayed when the "Select 3 points" option is selected.

View name

The name of the view. View names are created by Asteel 3D. You cannot modify view names.

View description

The description of the view.

Top left

The top left coordinate of the girt view.

Bottom left

The bottom left coordinate of the girt view.

Bottom right

The bottom right coordinate of the girt view.

Drawing layer name

The layer name that will be associated with the view. Layer names are created by Asteel 3D. You cannot modify layer names.

Drawing layer color

The layer color for the view. Clicking the ellipses button brings up the AutoCAD color selection dialog where you can select a color more effectively.

Hide

This option allows you to hide certain member types when this view is current. Checked member types will be hidden.

Girt Line Offset

This option allows you to offset girts a certain distance away from the vertical plane of the girt view. You can specify the offset distance as well as the offside side.

Layers displayed with this view

Views that are checked in this listbox will be displayed when this view is the current view.

The buttons on this form are described below.

OK

Creates or edits the girt view.

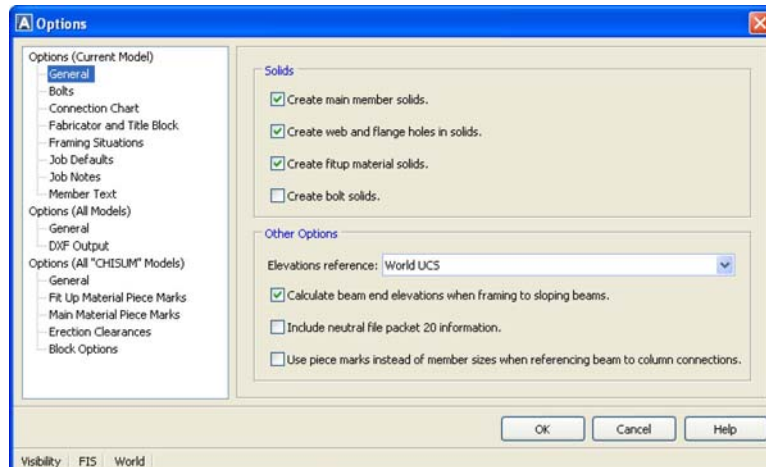
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options



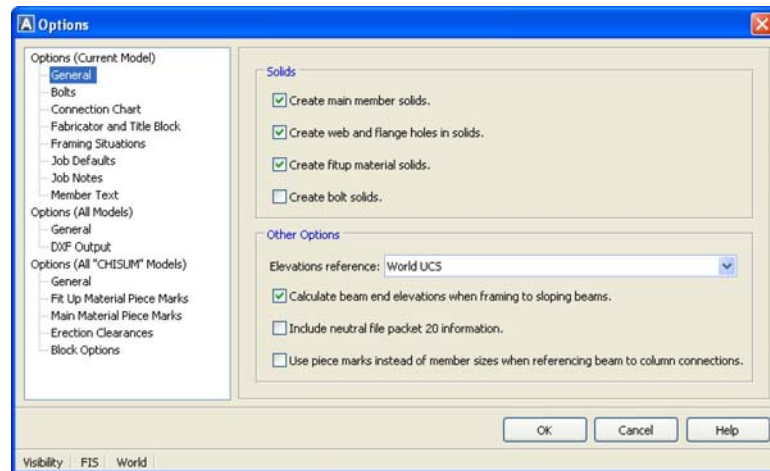
This screen allows you to change various options in Asteel 3D. There are three option categories in the treeview on the left side of the screen: Options (Current Model), Options (All Models) and Options (All "Fabricator" Models).

Options under "Options (Current Model)" are options that apply only to the current model. Other models on your system are not affected by these options.

Options under "Options (All Models)" are options that apply to all models on your system.

Options under "Options (All "Fabricator" Models)" are options that apply to all models that use the current fabricator.

Options (Current Model) - General



Create main member solids.

If this option is checked, then main material solids will be created for a member when that member is drawn.

Create web and flange holes in solids.

If this option is checked, then holes will be shown in the solids when those solids are drawn.

Create fitup material solids.

If this option is checked, then fitup material solids will be created for a member when that member is drawn.

Create bolt solids.

If this option is checked, then bolt solids will be created for a member when that member is drawn.

Elevations reference

Elevations can reference either the active origin point or the World UCS. This affects elevations in plan drawings and detail drawings.

Calculate beam end elevation when framing to sloping beams.

If this option is checked, then beam elevations are calculated when those beams frame to sloping beams.

Include neutral file packet 20 information.

Check to include neutral file information.

Use piece marks instead of member sizes when referencing beam to column connections.

Check to use piece marks instead of member sizes when referencing beam to column connections.

OK

Applies the options changes you made to the model.

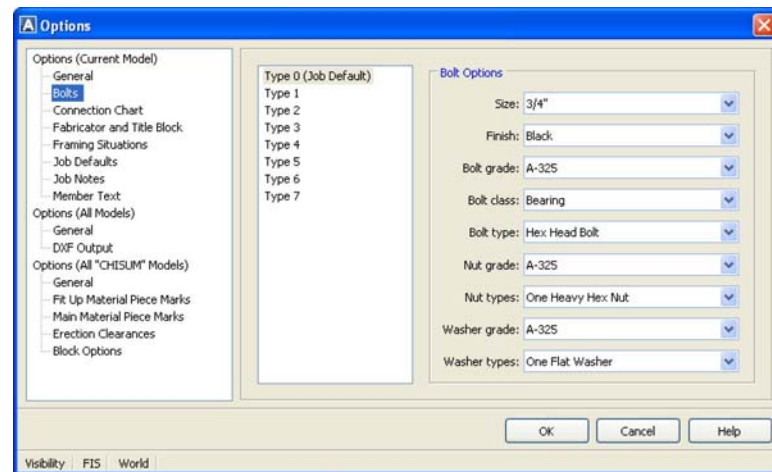
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (Current Model) - Bolts



This screen allows you to modify the settings of bolt types in the model. All of the bolt types that can be modified will be displayed in a box to the left of the option fields. When you select a bolt type, the options for that bolt type will be displayed in the option fields. For example, when you click on "Type 1", the options for "Type 1" will be displayed.

The bolt options can also be accessed from the **Default Bolts** screen.

OK

Applies the options changes you made to the model.

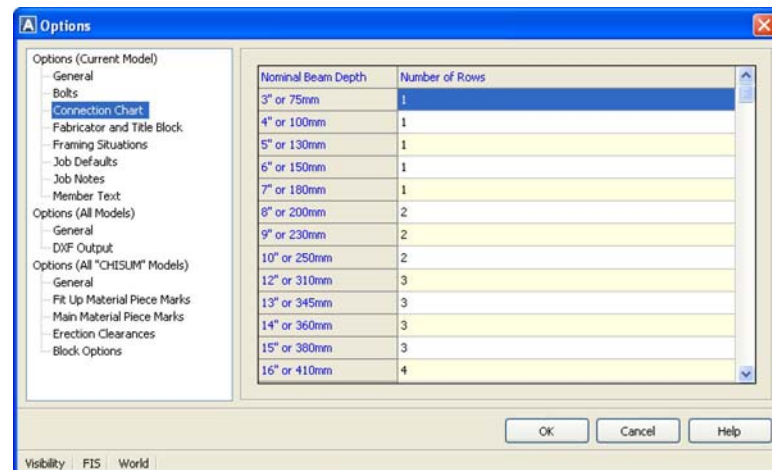
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (Current Model) - Connection Chart



This screen allows you to define the default number of rows of holes for each nominal beam depth.

The connection chart is used to determine the number of rows of holes for a connection only in cases where BOTH of the following conditions are true:

- the number of rows is not specified in the data entry for the connection
- the Number of rows option on the ***Job Defaults tab of the Options screen*** is set to indicate that the connection chart should be used

OK

Applies the options changes you made to the model.

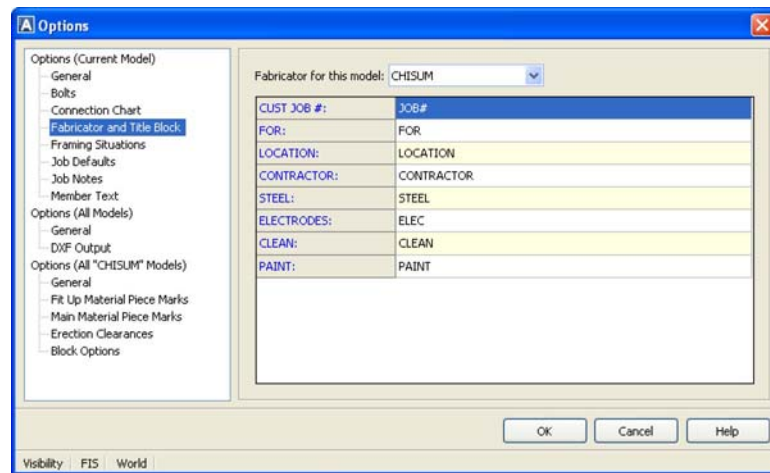
Cancel

Closes the screen. No action is taken.

Help

- Displays help for this screen.

Options (Current Model) - Fabricator and Title Block



This screen allows you to specify the fabricator that this model is for. It also allows you to enter data for each of the custom title block fields for this fabricator. You can enter data for each field and that data will be displayed at in the titleblock of the detail drawings you process. For more information on custom titleblock fields and how to modify them, see the Asteel 2 Operation Reference.

OK

Applies the options changes you made to the model.

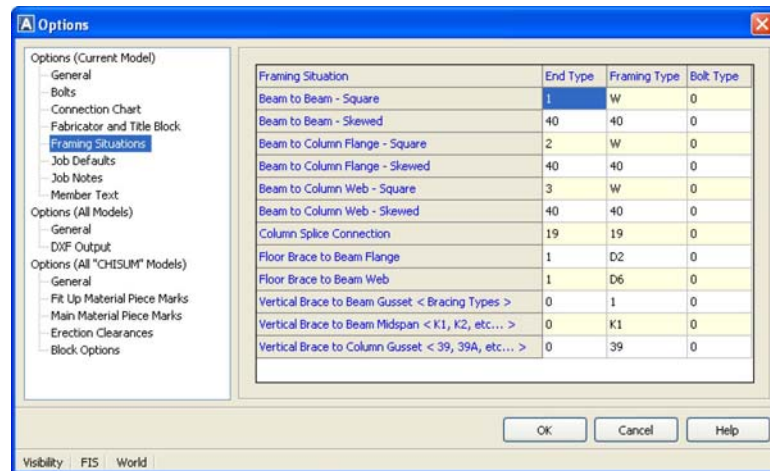
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (Current Model) - Framing Situations



This screen allows you to specify the connection types and bolt type that Asteel 3D will automatically apply to members when specific framing situations are encountered in a model. For more information on connection types or bolt types, see the **Connection Setup** topic or the **Options (Current Model) - Bolts** topic.

OK

Applies the options changes you made to the model.

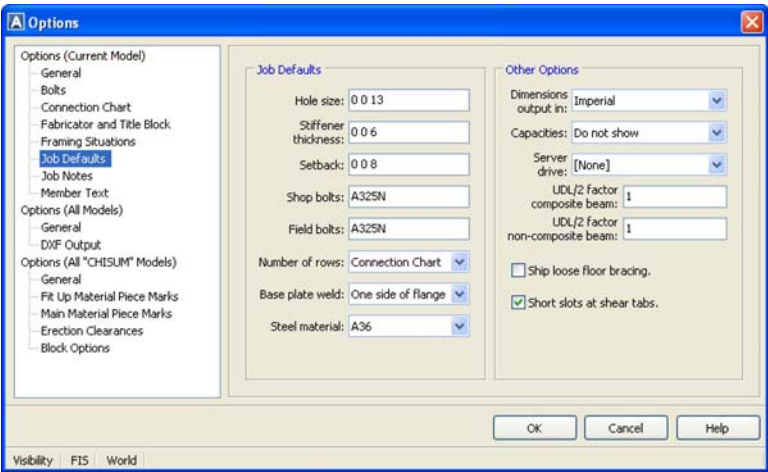
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (Current Model) - Job Defaults



Hole size

This option defines the default hole size.

Stiffener thickness

This option defines the default stiffener thickness.

Setback

This option defines the setback distance for beams from the face of clip angles to the end of the beam. The setback distance is normally 1/2 inch. You may want to make the setback distance 1/4 inch for galvanized jobs.

Shop bolts

This option defines the type of bolt to use for shop bolts (defaults to "A325N").

Field bolts

This option defines the type of bolt to use for field bolts (defaults to "A325N").

Number of rows

This option defines how the default number of rows of holes for a clip angle will be calculated if the number of rows isn't specified for a connection. The possible values are:

Option	Result
Maximum	use the maximum number of rows possible

Option	Result
Minimum	use the minimum number of rows possible
Connection Chart	use the values specified on the <i>Connection Chart</i>

Base plate weld

This option defines the default weld type to be used for column base plates. Note that tubes and pipes always weld all around.

Steel material

This option defines the default steel type. Note that this applies to fitup material as well as main material.

Dimensions output in

This option specifies which format that dimensions will be output in on the detail drawings.

Capacities

This option defines whether connection capacities will be shown on the details. Weak connections will be flagged with an asterisk. You can show capacities, not show capacities, or only show capacities for weak connections.

Server drive

This option allows you to select the server drive that will be used for the model. All local mapped drives that contain an Asteel installation will be in this listbox as well as the "[None]" option. If "[None]" is selected, then the local drive where Asteel exists will be used as the server drive for the model. If a mapped drive is selected, then the mapped drive will be used as the server drive for the model.

If the server drive is changed, Asteel 3D will copy all of the necessary files to the new server drive.

Additional information on server drives can be found in the *Server Drives* topic, the *Single User Mode and Multiple User Mode* topic, and the *Primary Models and Secondary Models* topic.

UDL/2 factor composite beam

This option defines the loading factors to be used in engineering calculations for composite beams.

UDL/2 factor non-composite beam

This option defines the loading factors to be used in engineering calculations for non-composite beams.

Ship loose floor bracing.

If this option is checked, then Asteel 3D will assign separate shipping marks for floor bracing gusset plate assemblies. If not checked, then Asteel 3D will ship the brace and the gusset plate assembly under a single shipping mark.

Short slots at shear tabs.

If this option is checked, then short slots will be used at shear tabs.

OK

Applies the options changes you made to the model.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (Current Model) - Job Notes

The screenshot shows a software dialog box titled "Options (Current Model)". On the left is a tree view with categories: "Options (Current Model)", "Options (All Models)", and "Options (All 'CHISUM' Models)". Under "Options (Current Model)", "Job Notes" is selected. The main panel on the right contains six text input fields labeled "Line 1:" through "Line 6:". Below these is a "Text size:" dropdown menu currently set to "Normal". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help". The status bar at the very bottom of the window displays "Visibility: FIS World".

This screen allows you to specify note text to be printed on detail drawings for the job. Up to six lines of note text that can be specified. These notes will appear on every drawing.

See the Asteel 2 Operation Reference for details on how to change the output coordinate for the note text.

Line 1-6

These lines are the lines of the note text.

Text size

This option controls the text size of the note text.

OK

Applies the options changes you made to the model.

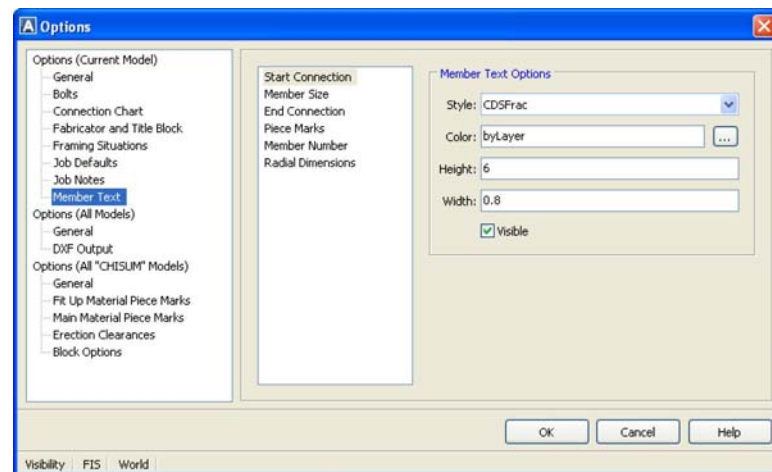
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (Current Model) - Member Text



This screen allows you to modify the settings of the various member text objects in the model. All of the member text objects that can be modified will be displayed in a box to the left of the option fields. When you select a member text object, the options for that object will be displayed in the option fields. For example, when you click on "Start Connection", the member text options for "Start Connection" will be displayed.

Style

This option allows you to change the text style of a member text object. All styles available in the model DWG will be available in the Style listbox.

Color

This option allows you to change the color of a member text object. An ellipses button allows you to select a color using the AutoCAD color dialog.

Height

This option allows you to change the height of a member text object.

Width

This option allows you to change the width of a member text object.

Visible

This option allows you to display or hide a member text object.

OK

Applies the options changes you made to the model.

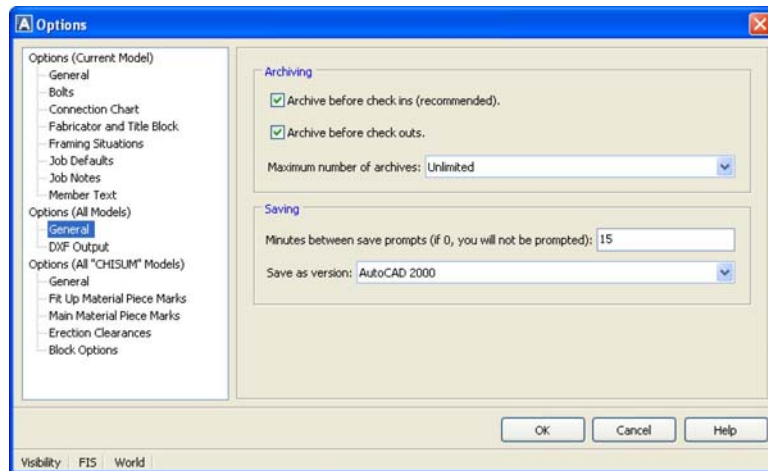
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (All Models) - General



Archive before check ins (recommended).

If checked, then an automatic archive will occur before every check in.

Archive before check outs.

If checked, then an automatic archive will occur before every check out.

Maximum number of archives

Since archives take up a large amount of disk space, Asteel 3D allows you to limit the maximum number of archives that will be stored on your machine. If disk space is an issue, then you can set the maximum number of archives to 5, 10, 15 or 20. This option defaults to Unlimited and it is recommended that you leave it on this setting.

Minutes between save prompts (if 0, you will not be prompted)

Asteel 3D will automatically prompt you to save your model at certain intervals. You can specify the interval with this option. Set this option to 0 to never be prompted to save.

Save as version

This option allows you to specify the drawing format that models will be saved in. All DWG output created from Asteel 3D will also be saved in this format.

OK

Applies the options changes you made to the model.

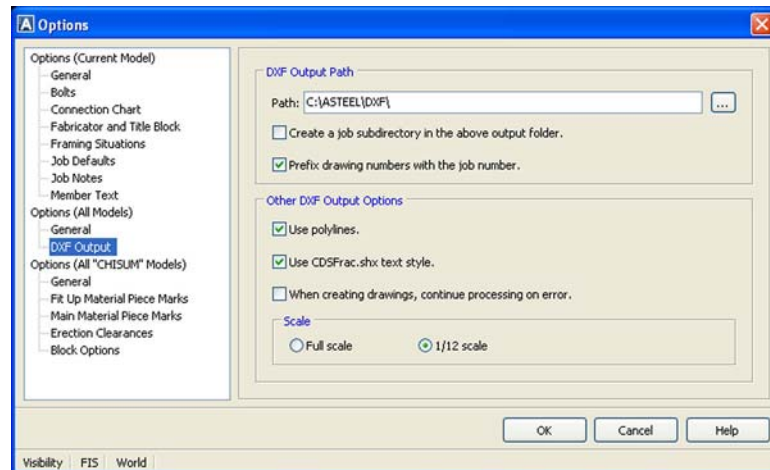
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (All Models) - DXF Output



Path

When you create detail drawings, the DXF output will be created in the path specified by this option.

Create a job subdirectory in the above output folder.

If this option is checked, then a subdirectory will be created in the output folder specified by the above Path option. This subdirectory will be named after the job number of the model. All DXF output will be stored in the job subdirectory. This is useful when working on multiple models since the DXF output for each model will be sorted into job subdirectories.

If this option is not checked, then DXF files go into the directory specified by the above Path option.

Prefix drawing numbers with the job number.

If this option is checked, then the DXF filenames will be constructed from the last three digits of the job number of the model plus the drawing number. For example, job number 00-11, drawing number 222 would be written to a file named 011-222.dxf. If the checkbox is not checked, the same drawing would be written to a file named 222.dxf. Note that if you do not include the job number in the DXF file names, you should generally use separate subdirectories for each job. Otherwise, the DXF file for drawing 1 of job 1 will be overwritten by the DXF file for drawing 1 from job 2.

Use polylines.

If this option is checked, then polylines will be used in the DXF output.

Use CDSFrac.shx text style.

If this option is checked, then the dimension text will use the CDSFrac font. This font allows you to edit fractions as one entity instead of separate entities.

If you want to use this option you must copy the file "cdsfrac.shx" from the \asteel\system\ folder into your AutoCAD fonts folder.

The following table shows the fraction codes used in CDSFrac.

Fraction	Code
1/16	%%201
1/8	%%202
3/16	%%203
1/4	%%204
5/16	%%205
3/8	%%206
7/16	%%207
1/2	%%208
9/16	%%209
5/8	%%210
11/16	%%211
3/4	%%212
13/16	%%213
7/8	%%214
15/16	%%215

In addition to the above fraction codes, there are several additional codes available in cdsfrac.shx. The following table shows these codes.

Symbol	Code
Degree symbol	%%127
+/-	%%128
Round hole symbol	%%129
Back to back angles of unequal legs (LLV)	%%146
Back to back angles of unequal legs (LLH)	%%147
Plate symbol	%%148

When creating drawings, continue processing on error.

This option applies when processing multiple drawings at a time. If this option is checked, then you will not be notified of a processing error until after all of the drawings have been processed in batch. If this option is unchecked, then batch processing of drawings will halt if an error occurs.

Scale

Change the Scale option to draw details to scale or at 1/12 scale.

OK

Applies the options changes you made to the model.

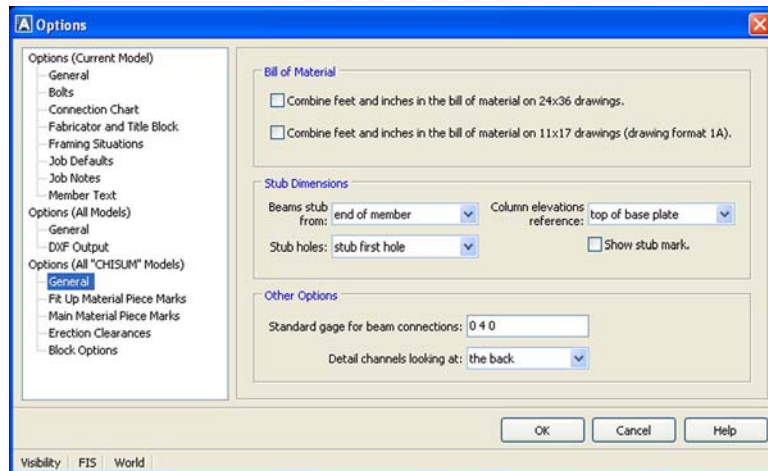
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (All "Fabricator" Models) - General



Combine feet and inches in the bill of material on 24x36 drawings.

If this option is checked, then feet and inches will be combined into a single column in the shopbill output on 24x36 detail drawings. If this option is not checked, then feet and inches will both have their own columns in the shopbill output on 24x36 detail drawings.

Combine feet and inches in the bill of material on 11x17 drawings (drawing format 1A).

If this option is checked, then feet and inches will be combined into a single column in the shopbill output on 11x17 detail drawings. If this option is not checked, then feet and inches will both have their own columns in the shopbill output on 11x17 detail drawings.

Beams stub from

This option defines where stub dimensions will be drawn from.

Stub holes

This option defines what holes in a group will be stubbed.

Column elevations reference

This option defines where the column elevations will be referenced.

Show stub mark.

If this option is checked, then a stub mark will be displayed on detail drawings showing where stub dimensions are referenced from.

Standard gage for beam connections

This option defines the standard center-to-center for framed beam connections.

Detail channels looking at

This option defines the channel option this fabricator uses.

OK

Applies the options changes you made to the model.

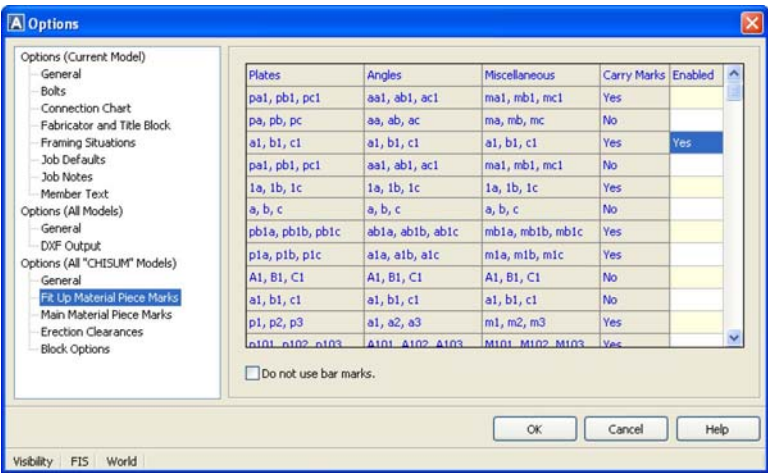
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (All "Fabricator" Models) - Fit Up Material Piece Marks



This screen allows you to specify the piece mark style the fabricator uses for fit up material.

There is a check box at the bottom that allows you to disable the use of bar marks.

OK

Applies the options changes you made to the model.

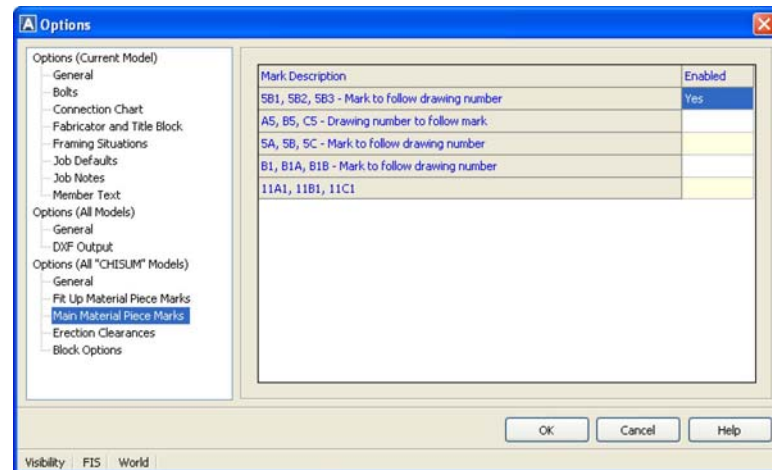
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (All "Fabricator" Models) - Fit Up Material Piece Marks



This screen allows you to specify the piece mark style the fabricator uses for main material.

OK

Applies the options changes you made to the model.

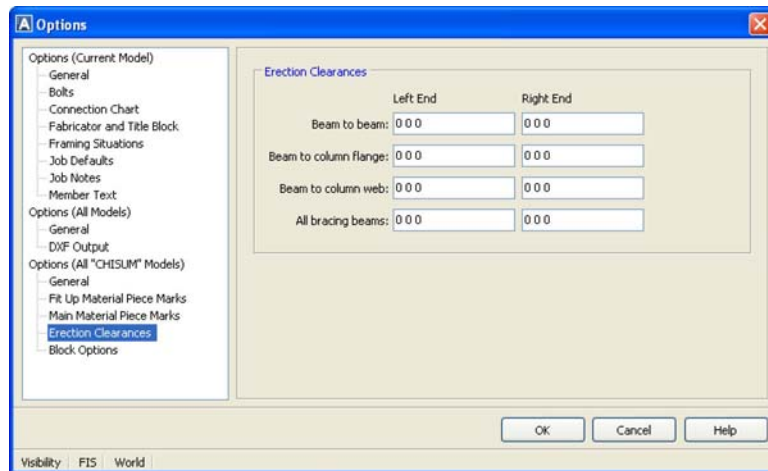
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (All "Fabricator" Models) - Erection Clearance



This screen allows you to specify the default erection clearances to use in various situations.

Enter the default erection clearances to use in various situations. If no value is specified, then Asteel 3D will use a 1/16th clearance on the right end only. Erection clearances can also be set for a job using the BECC job setup option sheet. Additional information on the BECC option sheet is provided in OnlineDocs.

OK

Applies the options changes you made to the model.

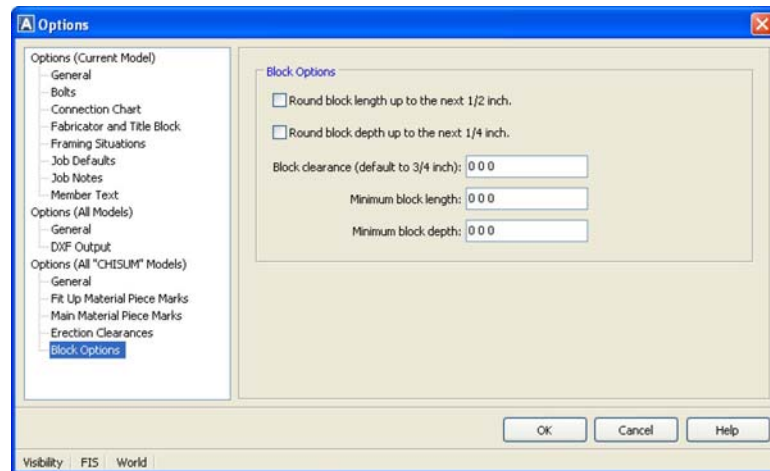
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Options (All "Fabricator" Models) - Block Options



This screen allows you to specify fabricator specific defaults for blocks.

OK

Applies the options changes you made to the model.

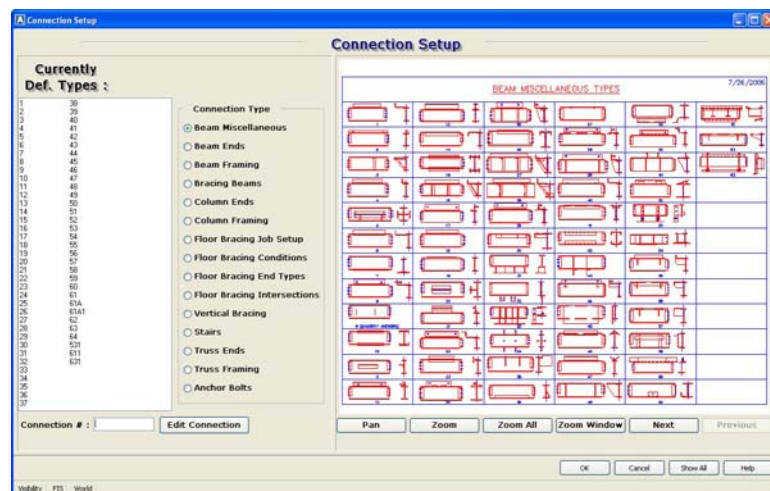
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Connection Setup



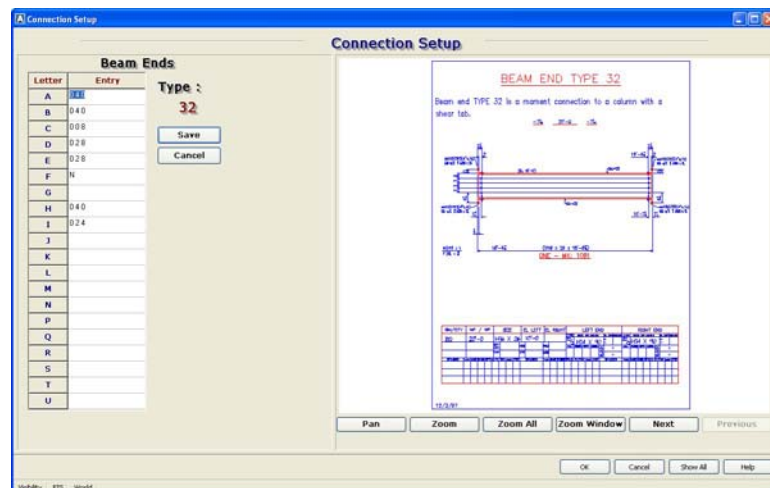
This screen allows you to create or edit the connections for a model. You can see all the defined connections by type (beam ends, etc) and then examine individual connection setups along with the documentation for the connection type.

This screen is divided into two panels, where the panel on the left is used to specify the connection to be created or edited, and the panel on the right is used to view the documentation for the type of connection being edited or created.

The Connection Type radio buttons are used to select the overall category of connections you want to work with, such as beam ends. Once you select a category, the Currently Defined Types box on the far left will be loaded with any connections of that type that have already been set up for the job, and the documentation window on the far right will be loaded with the wall chart for that category.

The documentation window can be panned and zoomed by using the scrollbars on the sides of the window and the zoom buttons at the bottom of the window. If there is more than one page of documentation for the current type, the next and previous buttons can be used to move forward and backward through those pages.

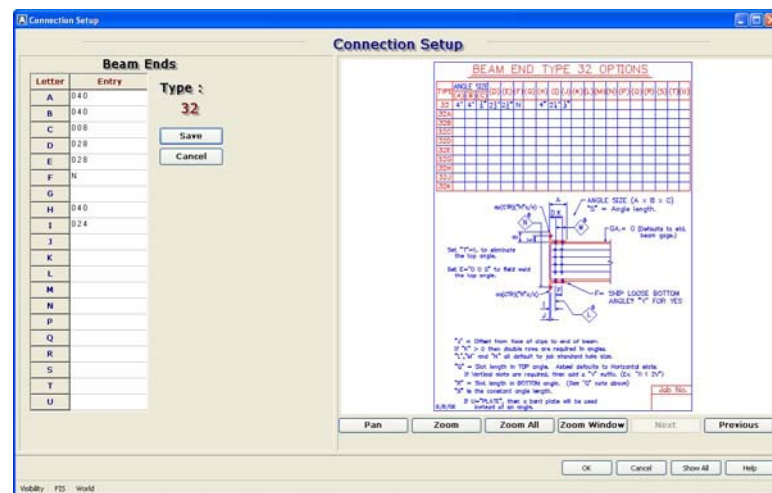
To edit an existing connection, you can type the connection number into the Connection # box and click the Edit Connection button, or you can double-click the connection number in the list. To add a new connection, type the number into the box and click the Edit Connection button. Any of these methods will cause the option data entry screen to be displayed. This screen is shown below:



This screen allows you to specify the values for the configurable options associated with the connection type. The options are identified by the option letters A-U as shown above. Connections generally use only a portion of the available option letters. The options used by a given connection are defined in the documentation for that type. The documentation is displayed when the connection is edited.

The first page of the documentation for a connection generally shows an example detail drawing of the connection. Subsequent pages generally define the available options for the connection.

Clicking the Next button will display the option sheet documentation:



In this example, the documentation shows that options A, B, and C are used to specify the angle size. Looking at the option values specified in the left-hand panel of the screen, we see that the current connection is set up to use a 4x4x1/2 angle.

The meaning of a given option varies from type to type. For example, in another connection type, option A may be used to indicate a weld radius or a plate thickness rather than an angle leg size.

Steel Tools

The screenshot shows the 'Steel Tools' application window with the 'Shapes' tab selected. The interface includes a menu bar (File, Unit Display, Help) and a series of tabs (Shapes, Min Max Rows, Triangles, Arcs, Hip and Valley, Welds, Bolts, Holes, Decimal Feet). The main area contains input fields for shape details. The 'Type' is set to 'W' and 'Nom Depth' is empty. The 'Size' is 'W4x13'. Other fields include 'Min Rows' (1), 'Max Rows' (1), 'Flg. Gage' (0.24), 'Nominal depth' (0.40), 'Exact depth' (0.43), 'Web thickness' (0.04), 'Half web' (0.02), 'Flange width' (0.41), 'Flange thickness' (0.06), 'k' (0.012), 'k1' (0.08), 'Radius' (0.04), 'T' (0.210), 'd-2tf' (0.38), 'a' (0.114), 'Lbs per foot' (13), 'Area' (3.83), 'Axis X-X I in.4' (11.3), 'Axis X-X S in.3' (5.46), and 'Zx' (6.28). At the bottom, there are 'Exit' and 'Help' buttons, and a unit/precision section with 'FIS', 'DI', 'DF', 'mm', and a 'Precision' dropdown.

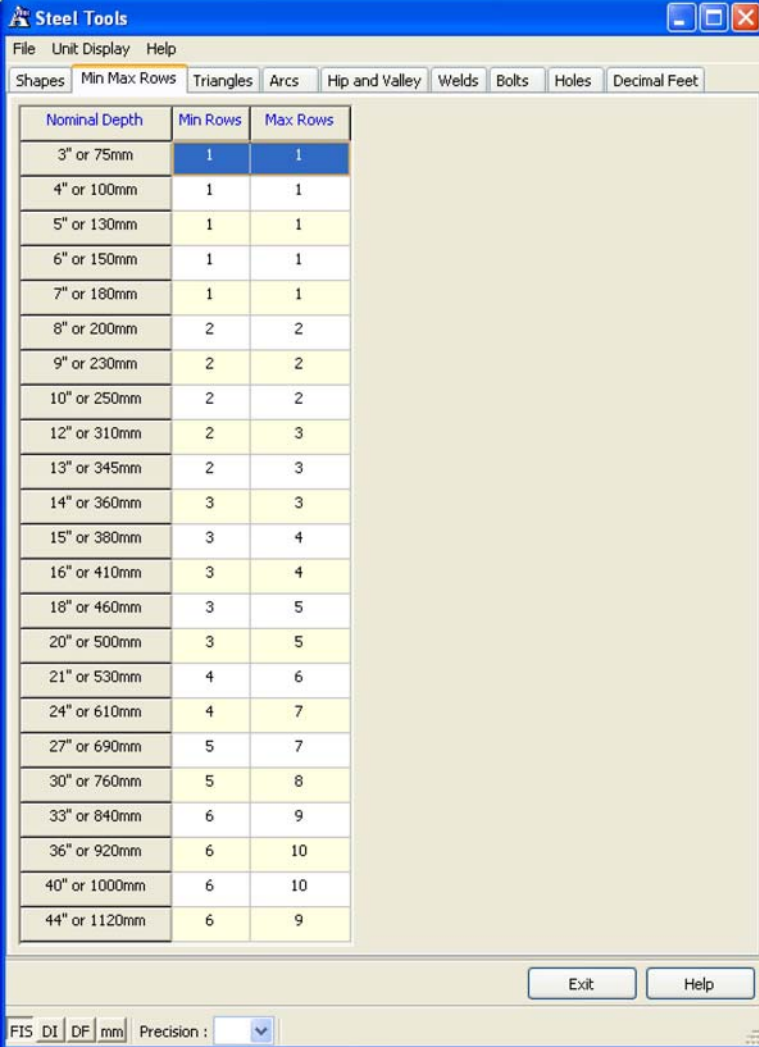
The Steel Tools screen displays a variety of detailing information and also provides several calculation tabs.

Steel Tools - Shapes

This screenshot is identical to the one above, showing the 'Steel Tools' application window with the 'Shapes' tab selected. It displays the same set of input fields and tabs, providing a detailed view of the software's interface for steel shape calculations.

The Shapes tab allows you to view a variety of information on steel shapes. To view information on a shape, select the shape using the Type, Nom Depth and Size fields. The remaining fields will display information on that shape.

Steel Tools - Min Max Rows



Nominal Depth	Min Rows	Max Rows
3" or 75mm	1	1
4" or 100mm	1	1
5" or 130mm	1	1
6" or 150mm	1	1
7" or 180mm	1	1
8" or 200mm	2	2
9" or 230mm	2	2
10" or 250mm	2	2
12" or 310mm	2	3
13" or 345mm	2	3
14" or 360mm	3	3
15" or 380mm	3	4
16" or 410mm	3	4
18" or 460mm	3	5
20" or 500mm	3	5
21" or 530mm	4	6
24" or 610mm	4	7
27" or 690mm	5	7
30" or 760mm	5	8
33" or 840mm	6	9
36" or 920mm	6	10
40" or 1000mm	6	10
44" or 1120mm	6	9

The Min Max Rows tab displays the minimum and maximum number of rows of holes for each nominal beam depth.

Steel Tools - Triangles

The Triangles tab has two tabs of its own: the Right tab and the Oblique tab. Both of these tabs are described below.

The screenshot shows the 'Steel Tools' application window. The 'Triangles' tab is selected, and the 'Right' sub-tab is active. The interface includes a menu bar (File, Unit Display, Help) and a toolbar with various calculation tabs. The main area is divided into two sections: 'Enter two known values' and 'Solve For'. The 'Enter two known values' section has input fields for Base (b), Rise (a), Slope (c), Degree (A), and Bevel, along with a 'Clear' button. The 'Solve For' section has input fields for Base, Rise, and Slope. Below these sections is a diagram of a right triangle with vertices labeled A, B, and C, and sides labeled a, b, and c. The bottom of the window features a status bar with units (FIS, DI, DF, mm) and a precision dropdown menu. 'Exit' and 'Help' buttons are located at the bottom right.

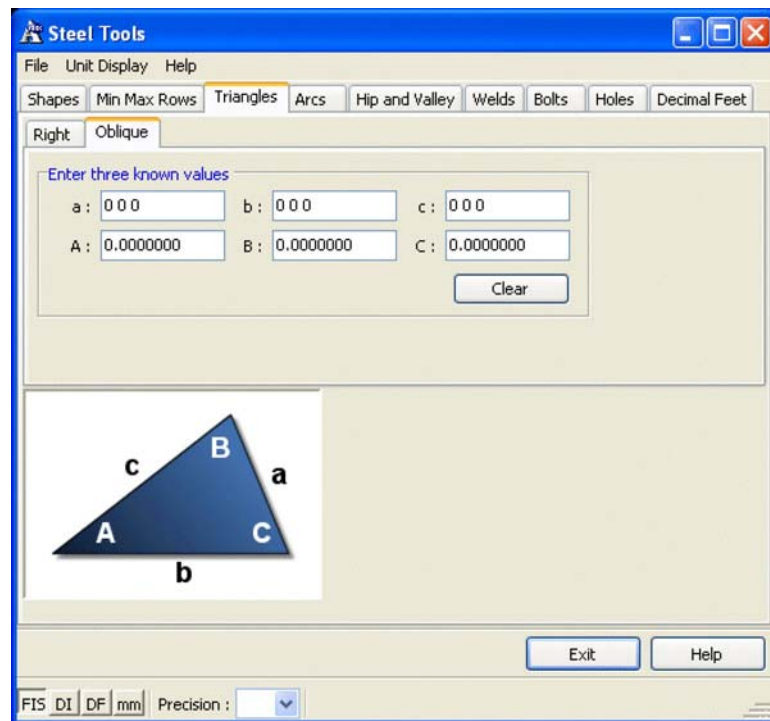
The Right tab calculates the various properties of a right triangle.

Enter two known values

In the "Enter two known values" box, enter any two values of the right triangle and the other three values will be automatically calculated. The Clear button clears all of the fields in preparation for a new calculation.

Solve For

The "Solve For" fields use the angle in the "Degree (A)" field to help calculate the length of the sides of a right triangle. Enter the length of any side (Base, Rise or Slope) and the other two lengths will be automatically calculated.



The Oblique tab calculates the various properties of an oblique triangle.

Enter three known values

In the "Enter three known values" box, enter three values of the oblique triangle and the other three values will be automatically calculated. One of the three values you enter must be a side. The Clear button clears all of the fields in preparation for a new calculation.

Steel Tools - Arcs

Steel Tools

File Unit Display Help

Shapes Min Max Rows Triangles **Arcs** Hip and Valley Welds Bolts Holes Decimal Feet

Arc Information

Enter two known values

Radius (r) : 0 0 0 Arc Length (a) : 0 0 0 Chord Length (d) : 0 0 0

Rise (b) : 0 0 0 Degree (A) : 0 Bevel : 0 0 0

Distance per degree : 0 0 0

ID	Dist from CL	Rise

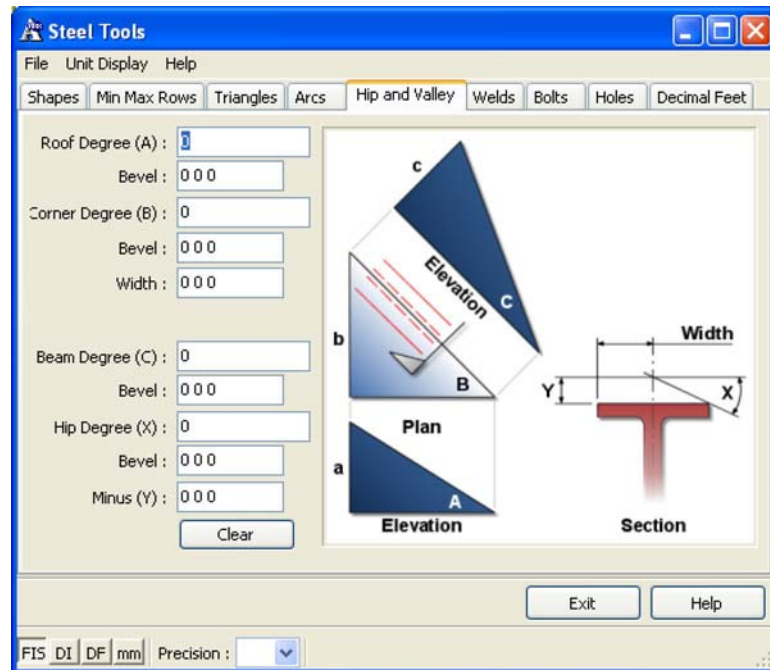
FIS DI DF mm Precision :

The Arcs tab calculates the various properties of an arc.

Enter two known values

In the "Enter two known values" box, enter any two values of the arc and the other values will be automatically calculated. In addition, the grid at the bottom will show rise information at 1'-0 intervals from the centerline of the arc.

Steel Tools - Hip and Valley

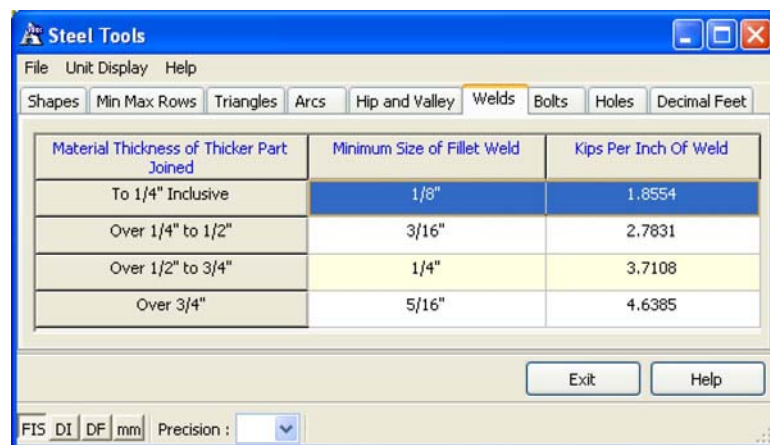


The Hip and Valley tab calculates the various properties of a beam that is at the intersection of two sloping planes.

The input fields are Roof Degree (A), Bevel, Corner Degree (B), Bevel and Width. Once you enter data into these fields, the output fields are automatically calculated.

The output fields are Beam Degree (C), Bevel, Hip Degree (X), Bevel and Minus (Y). These are read only fields that are automatically calculated once you enter data into the input fields.

Steel Tools - Welds



The Welds tab allows you to view a variety of information on welds such as the minimum size of welds based on material thickness and the kips per inch.

Steel Tools - Bolts

The screenshot shows the 'Steel Tools' application window with the 'Bolts' tab selected. The interface includes a menu bar (File, Unit Display, Help) and a tab bar (Shapes, Min Max Rows, Triangles, Arcs, Hip and Valley, Welds, Bolts, Holes, Decimal Feet). The main area contains several input fields: 'Bolt Size' (dropdown menu showing 3/4"), 'Bolt Grade' (dropdown menu showing A-325), 'Bolt Type' (dropdown menu showing Hex Head Bolt), 'Washer' (dropdown menu showing One Flat Washer), 'Nut' (dropdown menu showing One Hex Nut), 'Grip' (text input field showing 0 0 6), and 'Bolt Length' (text input field showing 0 1 12). At the bottom, there are 'Exit' and 'Help' buttons, and a status bar showing 'F15 DI DF mm' and 'Precision :'. The window title is 'Steel Tools'.

The Bolts tab calculates the length of a bolt.

Bolt Size

Select the bolt size.

Bolt Grade

Select the bolt grade.

Bolt Type

Select the bolt type.

Washer

Check any washers the bolt may have.

Nut

Check any nuts the bolt may have.

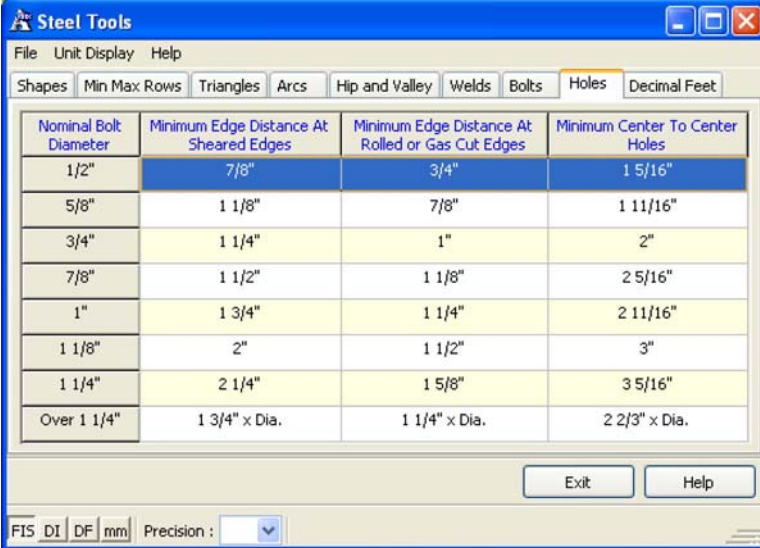
Grip

Enter a grip value for the bolt.

Bolt Length

The calculated length of the bolt is shown here.

Steel Tools - Holes



Nominal Bolt Diameter	Minimum Edge Distance At Sheared Edges	Minimum Edge Distance At Rolled or Gas Cut Edges	Minimum Center To Center Holes
1/2"	7/8"	3/4"	1 5/16"
5/8"	1 1/8"	7/8"	1 11/16"
3/4"	1 1/4"	1"	2"
7/8"	1 1/2"	1 1/8"	2 5/16"
1"	1 3/4"	1 1/4"	2 11/16"
1 1/8"	2"	1 1/2"	3"
1 1/4"	2 1/4"	1 5/8"	3 5/16"
Over 1 1/4"	1 3/4" x Dia.	1 1/4" x Dia.	2 2/3" x Dia.

The Holes tab allows you to view a variety of information on holes such as edge distances and minimum center to center.

Steel Tools - Decimal Feet

Steel Tools

File Unit Display Help

Shapes Min Max Rows Triangles Arcs Hip and Valley Welds Bolts Holes **Decimal Feet**

1/32= Decimal feet: 0.00260417 Decimal inches: 0.03125000 Millimeters: 1

Inch	0	1	2	3	4	5	6	7	8	9	10	11	Dec Inch
0	0.0000	0.0833	0.1667	0.2500	0.3333	0.4167	0.5000	0.5833	0.6667	0.7500	0.8333	0.9167	0.000000
1/32	0.0026	0.0859	0.1693	0.2526	0.3359	0.4193	0.5026	0.5859	0.6693	0.7526	0.8359	0.9193	0.031250
1/16	0.0052	0.0885	0.1719	0.2552	0.3385	0.4219	0.5052	0.5885	0.6719	0.7552	0.8385	0.9219	0.062500
3/32	0.0078	0.0911	0.1745	0.2578	0.3411	0.4245	0.5078	0.5911	0.6745	0.7578	0.8411	0.9245	0.093750
1/8	0.0104	0.0938	0.1771	0.2604	0.3438	0.4271	0.5104	0.5938	0.6771	0.7604	0.8438	0.9271	0.125000
5/32	0.0130	0.0964	0.1797	0.2630	0.3464	0.4297	0.5130	0.5964	0.6797	0.7630	0.8464	0.9297	0.156250
3/16	0.0156	0.0990	0.1823	0.2656	0.3490	0.4323	0.5156	0.5990	0.6823	0.7656	0.8490	0.9323	0.187500
7/32	0.0182	0.1016	0.1849	0.2682	0.3516	0.4349	0.5182	0.6016	0.6849	0.7682	0.8516	0.9349	0.218750
1/4	0.0208	0.1042	0.1875	0.2708	0.3542	0.4375	0.5208	0.6042	0.6875	0.7708	0.8542	0.9375	0.250000
9/32	0.0234	0.1068	0.1901	0.2734	0.3568	0.4401	0.5234	0.6068	0.6901	0.7734	0.8568	0.9401	0.281250
5/16	0.0260	0.1094	0.1927	0.2760	0.3594	0.4427	0.5260	0.6094	0.6927	0.7760	0.8594	0.9427	0.312500
11/32	0.0286	0.1120	0.1953	0.2786	0.3620	0.4453	0.5286	0.6120	0.6953	0.7786	0.8620	0.9453	0.343750
3/8	0.0313	0.1146	0.1979	0.2813	0.3646	0.4479	0.5313	0.6146	0.6979	0.7813	0.8646	0.9479	0.375000
13/32	0.0339	0.1172	0.2005	0.2839	0.3672	0.4505	0.5339	0.6172	0.7005	0.7839	0.8672	0.9505	0.406250
7/16	0.0365	0.1198	0.2031	0.2865	0.3698	0.4531	0.5365	0.6198	0.7031	0.7865	0.8698	0.9531	0.437500
15/32	0.0391	0.1224	0.2057	0.2891	0.3724	0.4557	0.5391	0.6224	0.7057	0.7891	0.8724	0.9557	0.468750
1/2	0.0417	0.1250	0.2083	0.2917	0.3750	0.4583	0.5417	0.6250	0.7083	0.7917	0.8750	0.9583	0.500000
17/32	0.0443	0.1276	0.2109	0.2943	0.3776	0.4609	0.5443	0.6276	0.7109	0.7943	0.8776	0.9609	0.531250
9/16	0.0469	0.1302	0.2135	0.2969	0.3802	0.4635	0.5469	0.6302	0.7135	0.7969	0.8802	0.9635	0.562500
19/32	0.0495	0.1328	0.2161	0.2995	0.3828	0.4661	0.5495	0.6328	0.7161	0.7995	0.8828	0.9661	0.593750
5/8	0.0521	0.1354	0.2188	0.3021	0.3854	0.4688	0.5521	0.6354	0.7188	0.8021	0.8854	0.9688	0.625000
21/32	0.0547	0.1380	0.2214	0.3047	0.3880	0.4714	0.5547	0.6380	0.7214	0.8047	0.8880	0.9714	0.656250
11/16	0.0573	0.1406	0.2240	0.3073	0.3906	0.4740	0.5573	0.6406	0.7240	0.8073	0.8906	0.9740	0.687500
23/32	0.0599	0.1432	0.2266	0.3099	0.3932	0.4766	0.5599	0.6432	0.7266	0.8099	0.8932	0.9766	0.718750
3/4	0.0625	0.1458	0.2292	0.3125	0.3958	0.4792	0.5625	0.6458	0.7292	0.8125	0.8958	0.9792	0.750000
25/32	0.0651	0.1484	0.2318	0.3151	0.3984	0.4818	0.5651	0.6484	0.7318	0.8151	0.8984	0.9818	0.781250
13/16	0.0677	0.1510	0.2344	0.3177	0.4010	0.4844	0.5677	0.6510	0.7344	0.8177	0.9010	0.9844	0.812500
27/32	0.0703	0.1536	0.2370	0.3203	0.4036	0.4870	0.5703	0.6536	0.7370	0.8203	0.9036	0.9870	0.843750
7/8	0.0729	0.1563	0.2396	0.3229	0.4063	0.4896	0.5729	0.6563	0.7396	0.8229	0.9063	0.9896	0.875000
26/32	0.0755	0.1589	0.2422	0.3255	0.4089	0.4922	0.5755	0.6589	0.7422	0.8255	0.9089	0.9922	0.906250
15/16	0.0781	0.1615	0.2448	0.3281	0.4115	0.4948	0.5781	0.6615	0.7448	0.8281	0.9115	0.9948	0.937500
31/32	0.0807	0.1641	0.2474	0.3307	0.4141	0.4974	0.5807	0.6641	0.7474	0.8307	0.9141	0.9974	0.968750

Exit Help

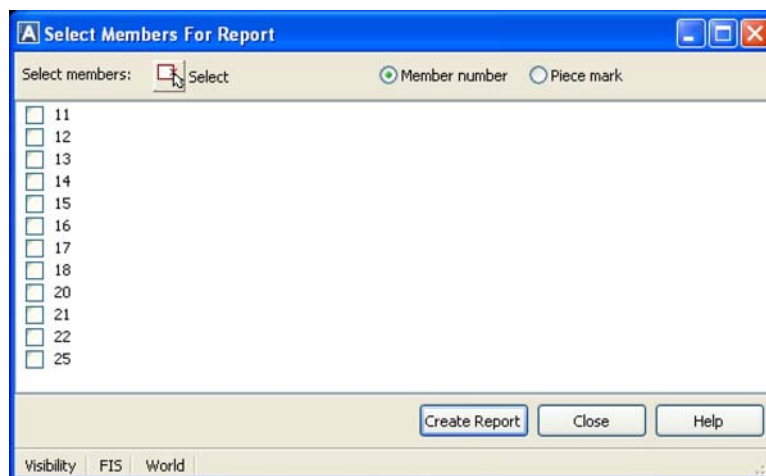
FIS DI DF mm Precision: ▾

The Decimal Feet tab displays the decimals of a foot chart as well as the decimals of an inch.

Reports and Logs

The Reports and Logs button on the Asteel 3D toolbar gives a user access to a variety of information on a model.

Member Data Report



The Select Members for Report screen allows you to select members and create a data report on those members.

Select members

There are two ways to select members. You can check members in the listbox or you can click the "Select" button and select members in AutoCAD. You can show either the member number or the piece mark of the model's members in the listbox by clicking the "Member number" and "Piece mark" radio buttons respectively.

Create Report

Creates and displays the member data report with the checked members.

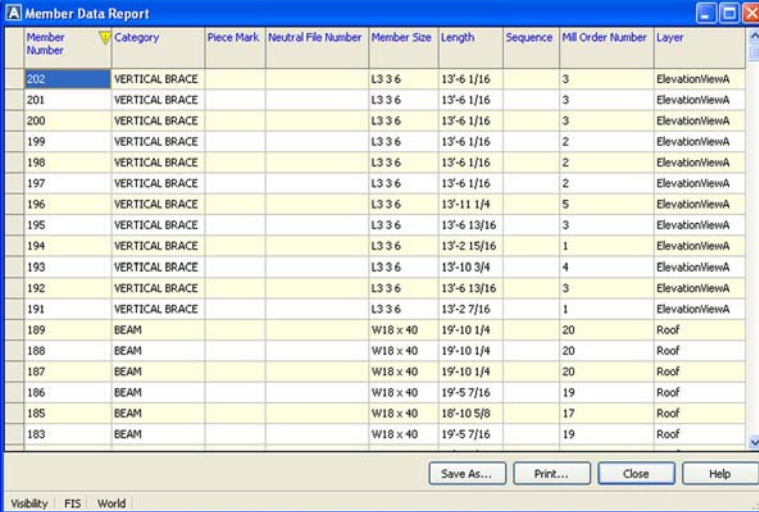
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Once you have selected members, you click Create Report to take you to the Member Data Report screen shown below.



The screenshot shows a window titled "Member Data Report" with a table containing the following data:

Member Number	Category	Piece Mark	Neutral File Number	Member Size	Length	Sequence	Mill Order Number	Layer
202	VERTICAL BRACE			L3 3 6	13'-6 1/16	3		ElevationViewA
201	VERTICAL BRACE			L3 3 6	13'-6 1/16	3		ElevationViewA
200	VERTICAL BRACE			L3 3 6	13'-6 1/16	3		ElevationViewA
199	VERTICAL BRACE			L3 3 6	13'-6 1/16	2		ElevationViewA
198	VERTICAL BRACE			L3 3 6	13'-6 1/16	2		ElevationViewA
197	VERTICAL BRACE			L3 3 6	13'-6 1/16	2		ElevationViewA
196	VERTICAL BRACE			L3 3 6	13'-11 1/4	5		ElevationViewA
195	VERTICAL BRACE			L3 3 6	13'-6 13/16	3		ElevationViewA
194	VERTICAL BRACE			L3 3 6	13'-2 15/16	1		ElevationViewA
193	VERTICAL BRACE			L3 3 6	13'-10 3/4	4		ElevationViewA
192	VERTICAL BRACE			L3 3 6	13'-6 13/16	3		ElevationViewA
191	VERTICAL BRACE			L3 3 6	13'-2 7/16	1		ElevationViewA
189	BEAM			W18 x 40	19'-10 1/4	20		Roof
188	BEAM			W18 x 40	19'-10 1/4	20		Roof
187	BEAM			W18 x 40	19'-10 1/4	20		Roof
186	BEAM			W18 x 40	19'-5 7/16	19		Roof
185	BEAM			W18 x 40	18'-10 5/8	17		Roof
183	BEAM			W18 x 40	19'-5 7/16	19		Roof

At the bottom of the window are buttons for "Save As...", "Print...", "Close", and "Help". The status bar at the very bottom shows "Visibility | FIS | World".

The Member Data Report screen displays data on members. This data can be saved to file or printed.

Save As...

Saves the member data report to a file.

Print...

Prints the member data report.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Drawing Report

Drawing Report							
Drawing Number /	Category	Made By	Modified By	Last Modified	Processed By	Last Processed	
1	Column		MAIN	2/18/2007 9:38:30 AM	MAIN	2/18/2007 11:51:34 AM	
2	Column		MAIN	2/18/2007 12:53:36 PM	MAIN	2/18/2007 1:12:40 PM	
3	Column		MAIN	2/18/2007 9:50:25 AM	MAIN	2/18/2007 11:52:01 AM	
4	Column		MAIN	2/18/2007 9:51:18 AM	JEFFCXP	4/5/2007 3:23:56 PM	
5	Column		MAIN	2/18/2007 9:51:48 AM	JEFFCXP	4/5/2007 3:23:57 PM	
6	Column		MAIN	2/18/2007 9:54:12 AM	MAIN	2/21/2007 7:38:38 AM	
7	Column		MAIN	2/18/2007 9:58:36 AM	MAIN	2/18/2007 11:52:48 AM	
8	Column		MAIN	2/18/2007 10:09:05 AM	MAIN	2/18/2007 11:53:00 AM	
9	Column		MAIN	2/18/2007 10:26:37 AM	MAIN	2/18/2007 11:53:12 AM	
10	Column		MAIN	2/18/2007 11:23:55 AM	MAIN	2/18/2007 11:53:23 AM	
11	Beam		MAIN	2/18/2007 10:29:03 AM	JEFFCXP	4/4/2007 11:00:10 AM	
12	Beam		MAIN	2/18/2007 10:29:58 AM	JEFFCXP	4/4/2007 11:00:13 AM	
13	Beam		MAIN	2/18/2007 10:36:07 AM	JEFFCXP	4/4/2007 11:00:17 AM	

Save As...

Print...

Close

Help

Visibility | FIS | World

The Drawing Report screen displays information on drawings that have been processed from a model. This data can be saved to file or printed.

Save As...

Saves the drawing report to a file.

Print...

Prints the drawing report.

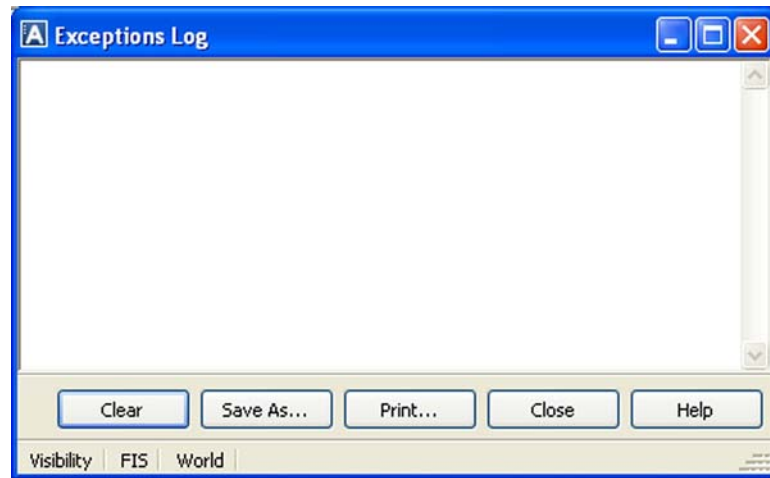
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Exceptions Log



The Exceptions Log screen displays information on exceptions or errors that might occur while working in Asteel 3D. It is sometimes useful to see this information to debug the software. This data can be saved to file or printed.

Clear

Clears the exceptions log.

Save As...

Saves the exceptions log to a file.

Print...

Prints the exceptions log.

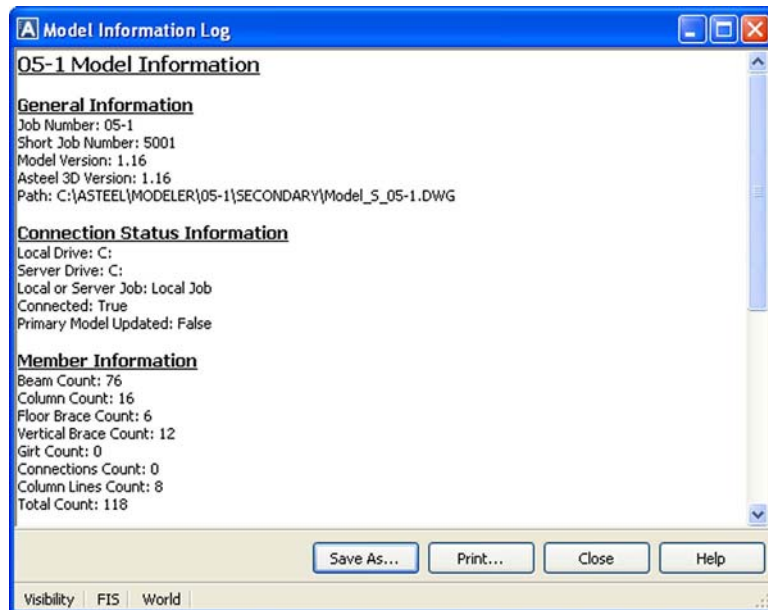
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Model Information Log



The Model Information Log screen displays information on the model itself. This data can be saved to file or printed.

Save As...

Saves the model information log to a file.

Print...

Prints the model information log.

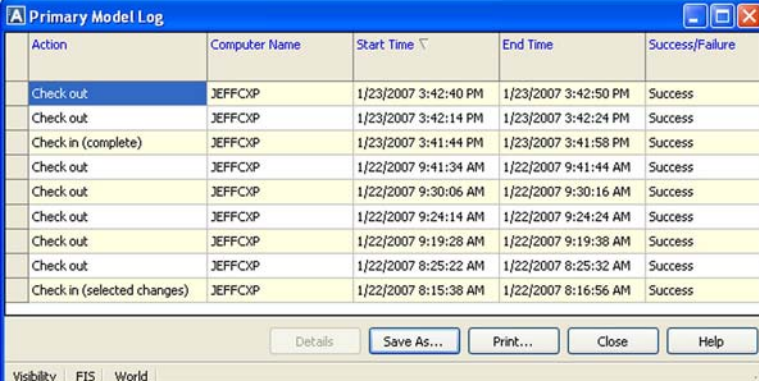
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Primary Model Log



Action	Computer Name	Start Time	End Time	Success/Failure
Check out	JEFFCXP	1/23/2007 3:42:40 PM	1/23/2007 3:42:50 PM	Success
Check out	JEFFCXP	1/23/2007 3:42:14 PM	1/23/2007 3:42:24 PM	Success
Check in (complete)	JEFFCXP	1/23/2007 3:41:44 PM	1/23/2007 3:41:58 PM	Success
Check out	JEFFCXP	1/22/2007 9:41:34 AM	1/22/2007 9:41:44 AM	Success
Check out	JEFFCXP	1/22/2007 9:30:06 AM	1/22/2007 9:30:16 AM	Success
Check out	JEFFCXP	1/22/2007 9:24:14 AM	1/22/2007 9:24:24 AM	Success
Check out	JEFFCXP	1/22/2007 9:19:28 AM	1/22/2007 9:19:38 AM	Success
Check out	JEFFCXP	1/22/2007 8:25:22 AM	1/22/2007 8:25:32 AM	Success
Check in (selected changes)	JEFFCXP	1/22/2007 8:15:38 AM	1/22/2007 8:16:56 AM	Success

The Primary Model Log screen displays information that is logged during the *check in* and *check out* process. This data can be saved to file or printed.

Details

When a "check in" log entry is selected in the grid, then the Details button will be enabled. When the Details button is clicked, a log screen will appear showing more information on the selected check in.

Save As...

Saves the primary model log to a file.

Print...

Prints the primary model log.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Help

The Help button on the Asteel 3D toolbar invokes the help document for Asteel 3D.

Visibility Buttons

This topic describes the Visibility buttons on the Asteel 3D toolbar.

Toggle Work Lines

This button toggles work lines on and off in the model. Work lines are the lines you draw when placing members.

Toggle Cardinal Lines

This button toggles cardinal lines on and off in the model. Cardinal lines are the work lines with offsets taken into account.

Toggle Member Lines

This button toggles member lines on and off in the model. Member lines are lines that span the length of the member. This line represents the member itself and can be seen if solids are turned off.

Toggle Solids

This button toggles solids on and off in the model.

Toggle Beam Cross Sections

This button toggles beam cross sections on and off in the model.

Toggle Column Cross Sections

This button toggles column cross sections on and off in the model.

CHAPTER 9

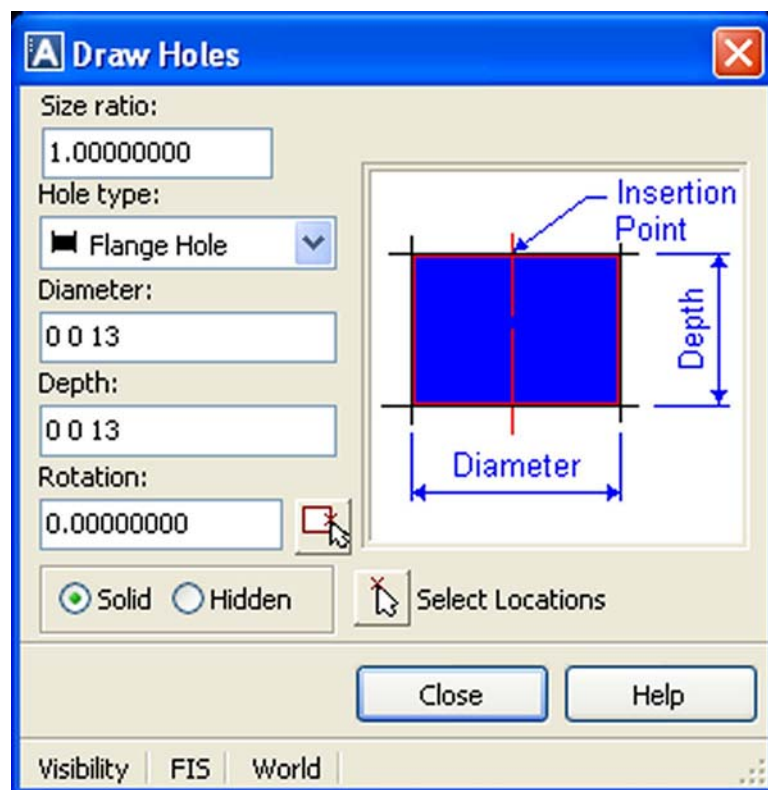
Draw Buttons

This chapter describes the Draw buttons on the Asteel 3D toolbar.

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Draw Bevel Symbol	250
Draw Leader Symbol	252
Edit Distance	253
Edit Text.....	254
Combine Text.....	255
Edit Shop Bill.....	255

Draw Holes



The Draw Holes screen allows you to draw a variety of hole types in any of your drawings.

Size Ratio

Enter the size ratio of the hole.

Hole type

Select the hole type that you want to draw. Possible hole types are hole, slot and flange hole.

Diameter

Enter the diameter of the hole. Refer to the picture on the right side of the screen for more information.

Depth/Length

The purpose of this field varies based on the selected hole type. Refer to the picture on the right side of the screen for more information.

Rotation

Enter the rotation of the hole. If you click the button to the right of the Rotation field, then you can select a line in AutoCAD to specify the rotation.

Solid/Hidden

Specify if the hole will be solid or hidden.

Select Locations

Click this button to select one or more locations where the hole will be drawn.

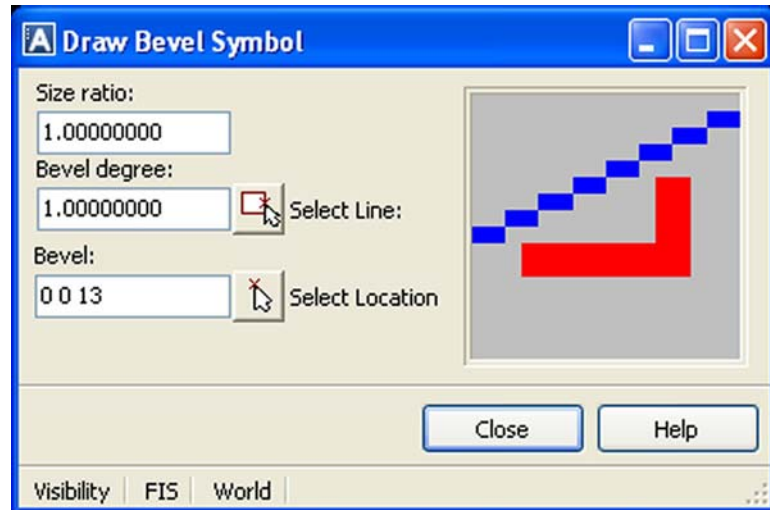
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Draw Bevel Symbol



The Draw Bevel Symbol screen allows you to draw a bevel symbol in any of your drawings.

Size ratio

Enter the size ratio of the bevel symbol.

Bevel degree

Enter the rotation of the bevel.

If you click the button to the right of the field, then you can select a line in AutoCAD and the rotation will be calculated from that line's rotation. The selected line will also be used to determine the orientation of the bevel symbol when it is drawn.

Bevel

Enter the rotation of the bevel.

Select Location

Click this button to select the location where the hole will be drawn.

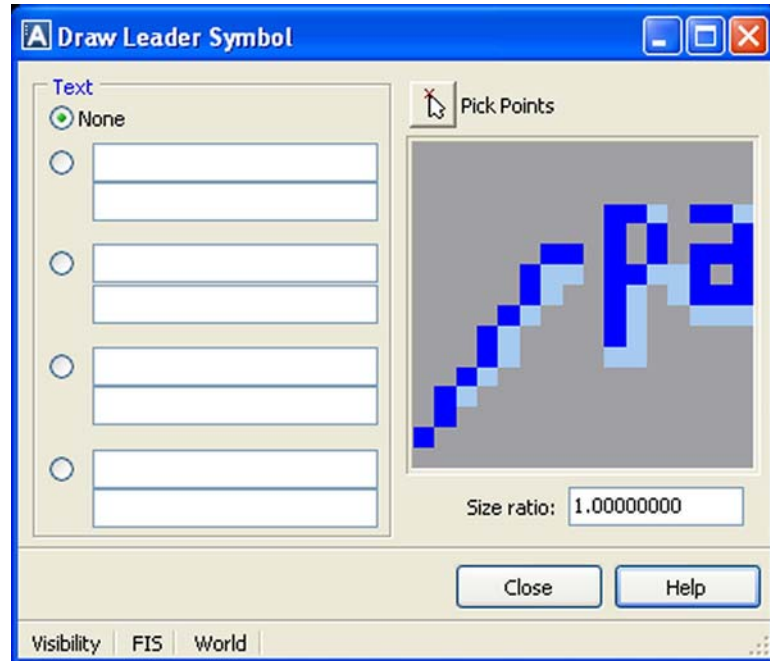
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Draw Leader Symbol



The Draw Leader Symbol screen allows you to draw leaders in any of your drawings.

Text

There are five radio buttons available under Text.

The first radio button is "None". If you select this radio button and draw leaders then those leaders will have no text.

The remaining four radio buttons have fields where you can enter custom text. If you select one of these radio buttons and draw leaders then those leaders will have text matching the selected radio button's text fields.

Size ratio

Enter the size ratio of the leader.

Pick Points

Click this button to select locations where the leaders will be drawn.

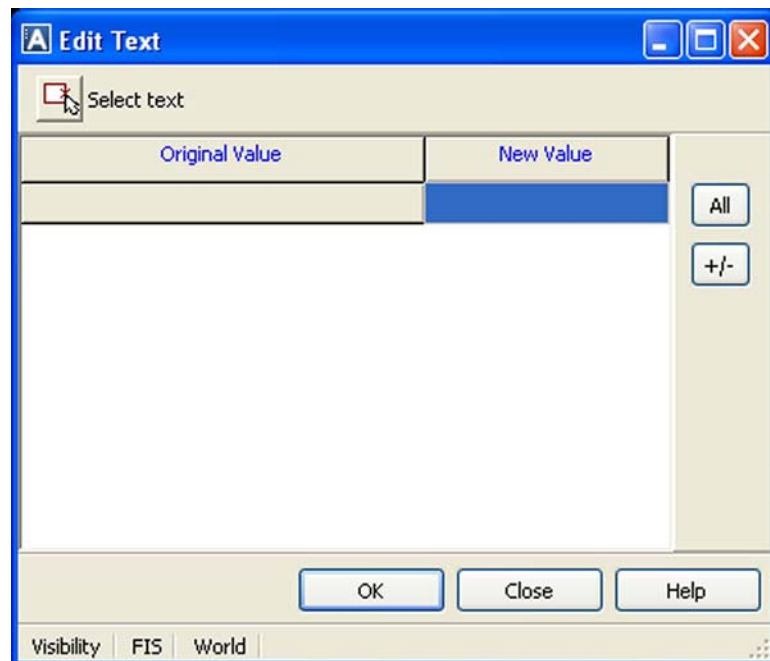
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Distance



This screen allows you to edit multiple dimensions at a time.

Select Text

Clicking this button allows you to select the dimensions that you want to edit in AutoCAD. Once all of the dimensions are selected, right click to return to this screen. The dimensions you selected will be loaded into the grid.

Original Value

This grid column displays the original value for the selected text.

New Value

This grid column displays the updated value for the selected text.

All

Displays a screen allowing you to enter a dimension value for all of the cells in the grid.

+/-

Displays a screen allowing you to enter a dimension value to add to or subtract from all of the cells in the grid.

OK

Applies the changes.

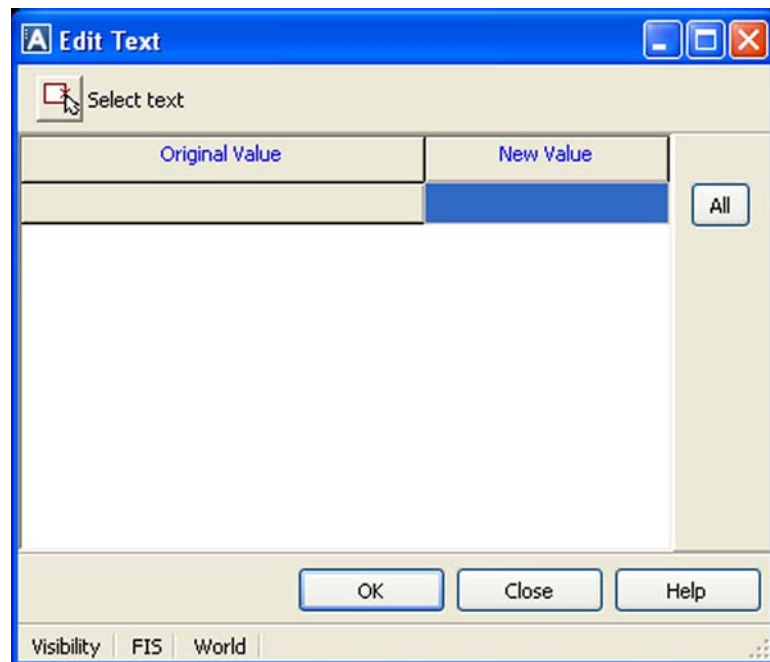
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Edit Text



This screen allows you to edit multiple text objects at a time.

Select Text

Clicking this button allows you to select the text that you want to edit in AutoCAD. Once all of the text objects are selected, right click to return to this screen. The text objects you selected will be loaded into the grid.

Original Value

This grid column displays the original value for the selected text.

New Value

This grid column displays the updated value for the selected text.

All

Displays a screen allowing you to enter a value for all of the cells in the grid.

OK

Applies the changes.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Combine Text

The Combine Text function allows you to select multiple text objects and combine them into a single text object.

Edit Shop Bill

Det Id	Ship Qty	Piece Qty	Ship Mark	Piece Mark	Shape	Size	Feet	Inches	Remarks	Steel	Misc

This screen allows you to edit the shop bill of a drawing.

Drawing job number

The drawing job number of the current drawing.

Drawing number

The drawing number of the current drawing.

Add Item

Clicking this button allows you to add piece marks to the shop bill. You can add any piece mark that exists on the drawing or you can add a new piece mark. You can modify the quantity of the piece mark that you add.

Add Detail

Clicking this button allows you to add a detail to the shop bill. You can add any detail that exists on the drawing or you can add a new detail.

Insert Row

Inserts a row into the grid at the current position.

Delete Row

Deletes the row at the current position in the grid.

Delete Detail

Deletes a detail that you select from the shop bill.

Delete All

Deletes all data from the shop bill.

OK

Applies the changes.

Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

CHAPTER 10

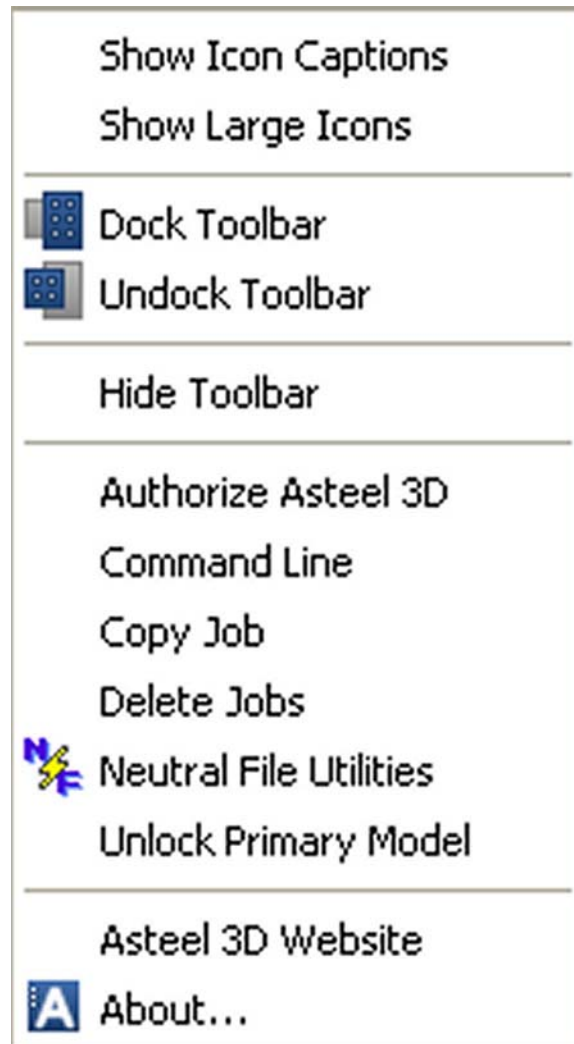
The Toolbar Menu

This chapter describes the Asteel 3D toolbar menu and the screens that are accessed from the Asteel 3D toolbar menu.

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Toolbar Menu Overview



The Asteel 3D toolbar menu is accessed by right clicking the Asteel 3D toolbar. It gives you access to options for the Asteel 3D toolbar as well as a few rarely used functions.

Show Icon Captions

If checked, then a text caption will be shown underneath each button on the Asteel 3D toolbar.

Show Large Icons

If checked, then the Asteel 3D toolbar buttons will double in size.

Dock Toolbar

Docks the Asteel 3D toolbar in AutoCAD.

Undock Toolbar

Undocks the Asteel 3D toolbar in AutoCAD.

Hide Toolbar

Hides the Asteel 3D toolbar. To show the Asteel 3D toolbar again, you must click the Asteel 3D toolbar launch button.

If you hide the toolbar and close AutoCAD, Asteel 3D will not automatically launch the next time you launch AutoCAD.

For more information on the Asteel 3D toolbar launch button, see the topic *The Toolbar Launch Button and the Toolbar* or the Asteel Installation Guide.

Authorize Asteel 3D

For more information on this topic, see the *Authorization* topic.

Command Line

For more information on this topic, see the *Command Line* topic.

Copy Job

For more information on this topic, see the *Copy Job* topic.

Delete Jobs

For more information on this topic, see the *Delete Jobs* topic.

Neutral File Utilities

For more information on this topic, see the *Import/Export Neutral File* topic.

Unlock Primary Model

For more information on this topic, see the *Unlock Primary Model* topic.

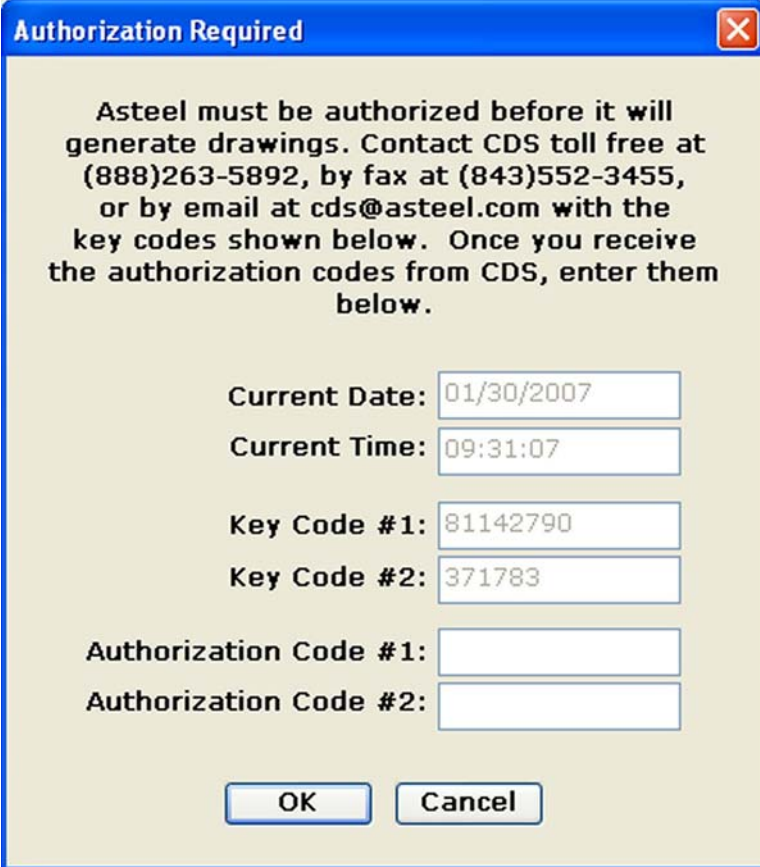
Asteel 3D Website

Opens the Asteel 3D website in your web browser.

About...

Displays the Asteel 3D splash screen.

Authorization



The image shows a Windows-style dialog box titled "Authorization Required" with a red 'X' icon in the top right corner. The background is a light beige color. The text inside the dialog box reads: "Asteel must be authorized before it will generate drawings. Contact CDS toll free at (888)263-5892, by fax at (843)552-3455, or by email at cds@asteel.com with the key codes shown below. Once you receive the authorization codes from CDS, enter them below." Below this text are several input fields. The first two are labeled "Current Date:" and "Current Time:", with values "01/30/2007" and "09:31:07" respectively. The next two are labeled "Key Code #1:" and "Key Code #2:", with values "81142790" and "371783" respectively. The final two are labeled "Authorization Code #1:" and "Authorization Code #2:", both of which are empty. At the bottom of the dialog box are two buttons: "OK" and "Cancel".

Authorization Required

Asteel must be authorized before it will generate drawings. Contact CDS toll free at (888)263-5892, by fax at (843)552-3455, or by email at cds@asteel.com with the key codes shown below. Once you receive the authorization codes from CDS, enter them below.

Current Date: 01/30/2007

Current Time: 09:31:07

Key Code #1: 81142790

Key Code #2: 371783

Authorization Code #1:

Authorization Code #2:

OK Cancel

This screen allows you to authorize Asteel 3D.

In order to use Asteel 3D, it must be authorized. Authorization involves sending two key codes to CDS via email or phone. In return you will receive the two sequence codes required to authorize and use Asteel 3D. Contact CDS via email at cds@asteel.com or via phone at (843) 552-6741 for these codes. Our hours of operation are 7:30 AM to 4:00 PM (EST), Monday through Friday.

Current Date

The current date.

Current Time

The current time.

Key Code #1

The first code that must be given to CDS.

Key Code #2

The second code that must be given to CDS.

Authorization Code #1

The first code you get from CDS that authorizes your copy of Asteel 3D.

Authorization Code #2

The second code you get from CDS that authorizes your copy of Asteel 3D.

OK

Attempts to authorize Asteel 3D with the authorization codes you provided.

Cancel

Closes the screen. No action is taken.

Command Line



This screen gives you access to rarely used commands that apply only in certain situations.

Command

Enter the command to execute and click the OK button. Below is a list of commands.

Command	Description
MILL ORDER	Updates the model will mill order numbers from a file.
SET NF NUMBERS	Updates neutral file numbers.
ORPHAN	Removes orphaned entities.

OK

Executes the command in the Command field.

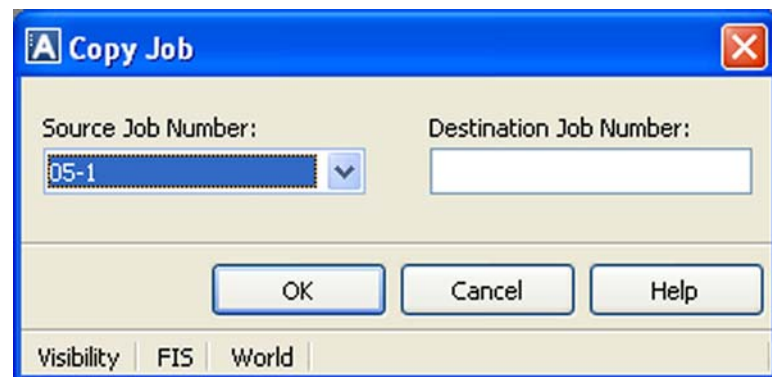
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Copy Job



This screen allows you to copy one job to another. The model and the job associated with the model will be copied.

If the source job is a local job, then the destination job will also be a local job. If the source job is a server job, then the destination job will also be a server job.

Source Job Number

The source job that will be copied. All jobs that exist on the local machine will be displayed in the Source Job Number list.

Destination Job Number

The destination job number. If a job exists that has the destination job number, then you will be prompted and asked if you want to overwrite.

OK

Copies the job.

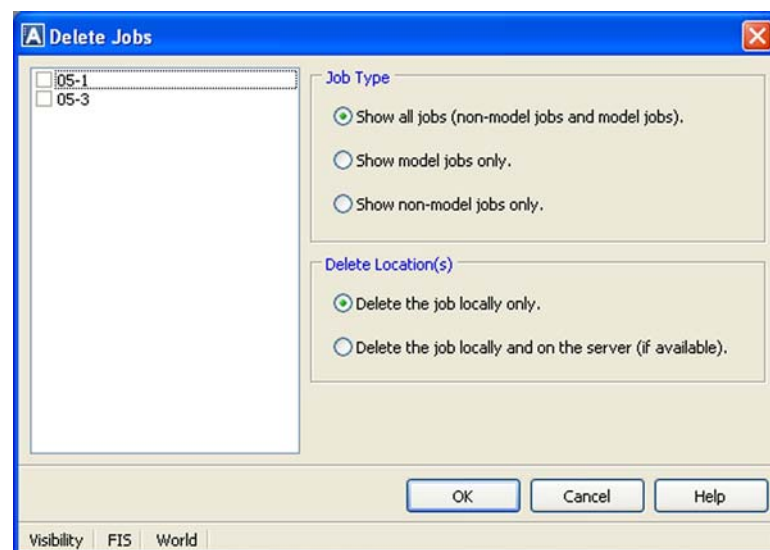
Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

Delete Jobs



This screen allows you to delete jobs from the local system and from the server.

Job Type

There are two job types: model jobs and non-model jobs. A job that exists in both Asteel 3D and Asteel 2 is a model job. A job that exists only in Asteel 2 is a non-model job. The Job Type radio buttons allow you to only display jobs of a certain job type.

If "Show all jobs (non-model jobs and model jobs)." is checked, then jobs of both job types will be displayed.

If "Show model jobs only." is checked, then only model jobs will be displayed.

If "Show non-model jobs only." is checked, then only non-model jobs will be displayed.

Delete Location(s)

Jobs will exist locally and may also exist on a server drive. This option allows you to delete the job from the local drive only or from both the local and server drives if applicable.

OK

Deletes the checked jobs.

Cancel

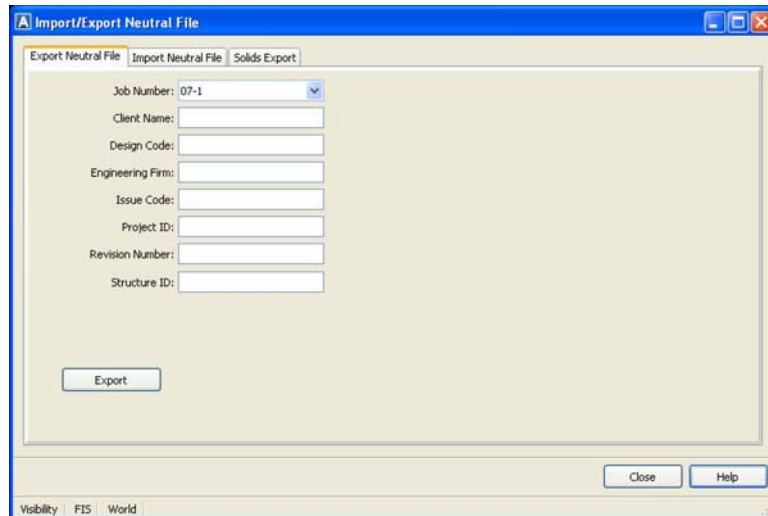
Closes the screen. No action is taken.

Help

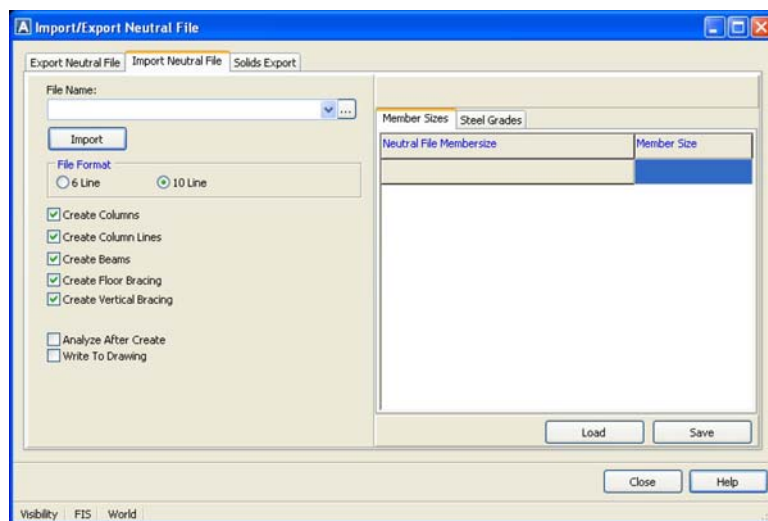
Displays help for this screen.

Import/Export Neutral File

This screen allows you to import and export neutral file data into or out of a model. There are three tabs on this screen: the Export Neutral File tab, the Import Neutral File tab, and the Solids Export tab. Each tab is described below.



The Export Neutral File tab allows you to export a model to a neutral file. The data input into the fields on this tab will be exported into the neutral file as well as all of the members in the current model.



The Import Neutral File tab allows you to import a neutral file into a model. The neutral file data will be imported into the current model.

File Name

The filename of the neutral file to import. The ellipses button allows you to navigate to and select the neutral file.

File Format

Neutral files come in two file formats: six line and ten line. Older neutral files will use the six line format while newer ones will use the ten line format.

Create Columns

If this is checked then columns will be imported from the neutral file.

Create Column Lines

If this is checked then column lines will be imported from the neutral file.

Create Beams

If this is checked then beams will be imported from the neutral file.

Create Floor Bracing

If this is checked then floor bracing will be imported from the neutral file.

Create Vertical Bracing

If this is checked then vertical bracing will be imported from the neutral file.

Analyze After Create

If this is checked then all members will be analyzed after the import is complete. This assigns default connections to members.

Write To Drawing

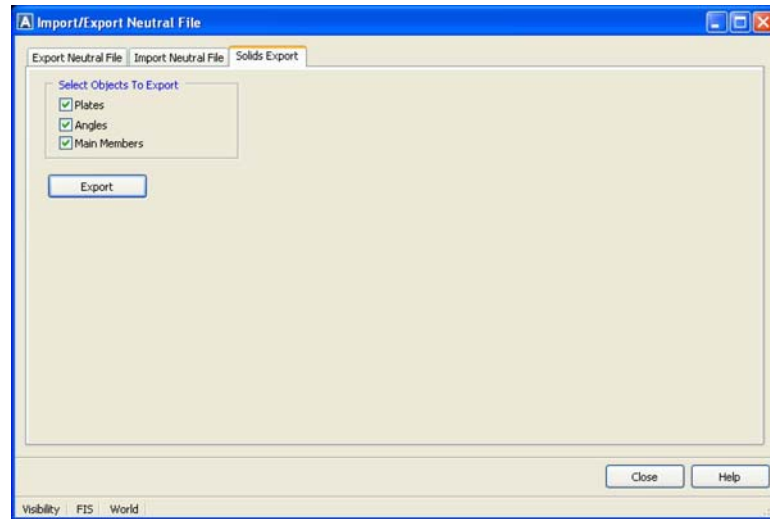
If this is checked then neutral file data is stored with each member in the model.

Member Sizes

When importing a neutral file, you may get errors about unknown member sizes. The Member Sizes tab handles these errors. Each unknown member size found in the neutral file will be listed in the grid on this tab. For each unknown member size, you can input a known member size. The information in the grid can be loaded and saved using the Load and Save buttons underneath the grid.

Steel Grades

When importing a neutral file, you may get errors about unknown steel grades. The Steel Grades tab handles these errors. Each unknown steel grade found in the neutral file will be listed in the grid on this tab. For each unknown steel grade, you can input a known steel grade. The information in the grid can be loaded and saved using the Load and Save buttons underneath the grid.



The Solids Export tab allows you to export solids from a model into another drawing.

Select Objects To Export

Only checked items will be exported from the model.

The buttons on this form are described below.

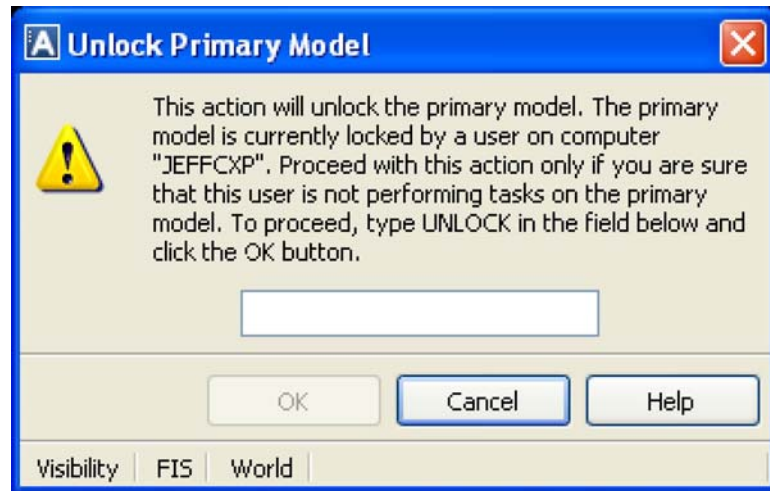
Close

Closes the screen. No action is taken.

Help

Displays help for this screen.

Unlock Primary Model



This screen allows you to unlock the primary model if it is stuck in a locked state.

When working with server models, network users may lock the primary model on the server. The primary model is locked so that other users cannot modify the primary model until the user who locked it is finished working with it. If an error occurs while the primary model is locked, the primary model may stay in a locked state even though it is not in use. If this occurs, then you can use the Unlock Primary Model function to unlock the primary model.

Notice that the last user who locked the primary model is shown on this screen. It is a good idea to ask that person if they are done with the primary model before clicking OK.

OK

This button will be grayed out and unclickable until the word UNLOCK is typed into the field. This is a precaution to avoid unlocking the primary model unless you really want to do so. Once UNLOCK is typed into the field, you can click the OK button to unlock the primary model.

Cancel

Closes the screen. No action is taken.

Help

Displays help for this screen.

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