

ASDIP STRUCTURAL SOFTWARE

ASDIP Concrete

User's Manual

ASDIP *Concrete*

STRUCTURAL ENGINEERING SOFTWARE

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Welcome to ASDIP Concrete

Frequently the design process involves an iterative procedure of selecting preliminary proportions of structural elements, and then checking the suitability of this solution, otherwise new member properties are used until the algorithm converges in an optimum design. This repetitive and tedious procedure may become time and effort consuming.

ASDIP Concrete is a collection of calculation modules that carefully combine the latest building code provisions and proved design and analysis methodologies to perform many of the cumbersome calculations most commonly used in any structural design office. **ASDIP Concrete** is an integrated system that combines the flexibility of Windows Forms to effortlessly develop either an optimized design or a quick investigation.

All the modules have been assembled to help the designer obtain specific results from procedures common to structural concrete design. However, they cannot replace the judgment of an experienced engineer who must select the structural types and appropriate loads, and interpret the results. **ASDIP Concrete** fully complies with the latest edition of IBC and the ACI 318. The load combinations per the ASCE 7.

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In no event shall ASDIP Structural Software's total liability to you for all damages, losses, and causes of action (whether in contract or otherwise) exceed the amount paid by you for the Software.

How to Start a New Project

When you start **ASDIP Concrete** the Project Manager pops up. From there, you may either create a new project or open an existing one. If you are working in a project and just want to create a new one select File | New from the menu bar. **ASDIP Concrete** will ask you to confirm, in case that you haven't saved your previous project. The new project will have the calculation tree empty. From there you may start creating calculations.

How to Open an Existing Project

ASDIP Concrete projects are saved with the extension .cdp. To open an existing project, in the Project Manager select File | Open from the menu. A new dialog box will pop up to let you specify the location of the requested file. When an existing project is retrieved, all the information and calculations saved with that project will be retrieved as well, so that all the information regarding that specific project is brought up.

How to Save a Project

ASDIP Concrete projects are saved with the extension .cdp. To save a project, in the Project Manager select File | Save from the menu. If the project has been saved previously, it will be saved directly, otherwise a new dialog box will pop up to let you specify the location of the file. When a project is saved, all the settings and calculations will be saved as well, so that all the information regarding that specific project will be ready to come up when you open the project in the future. When you save the project the file name, which is also the project name, will be appended to the title in the Project Manager.

How to Specify the Units for a Project

In **ASDIP Concrete** you may work with any of the following three units systems:

- US - Imperial units, customarily used in the United States (in, ft, kip, ksi)
- SI - The International Standard system of units (cm, m, N, MPa)
- ME - Metric units, mostly used in Latin America (cm, m, Tn, Kg/cm²)

You may specify the desired units system in two different ways:

- Directly in the Settings Menu of the Project Manager. This will affect the units of the whole project. The default is US.
- In the Design Menu of the individual calculations. This setting will affect only that specific calculation, and it may be useful if for some reason you need to calculate something in other units different to the rest of the project.

How to Enter User and Project Information

When you work in a project, it's a good practice to provide all the information regarding the designer and the project itself. **ASDIP Concrete** provides two dialog boxes for this purpose in the Settings Menu of the Project Manager, as shown. This information is also saved with the rest of the calculations that belong to the project.

Information

User Project

Company Name SPECTRA Engineering PSC

Lead Engineer Your Name

Email Address myname@mycompany.com

Phone # 555-555-5555

OK Cancel

Information

User Project

Project Title ABC Building

Location XYZ City, US

Description Three story braced frame

Project # 123456

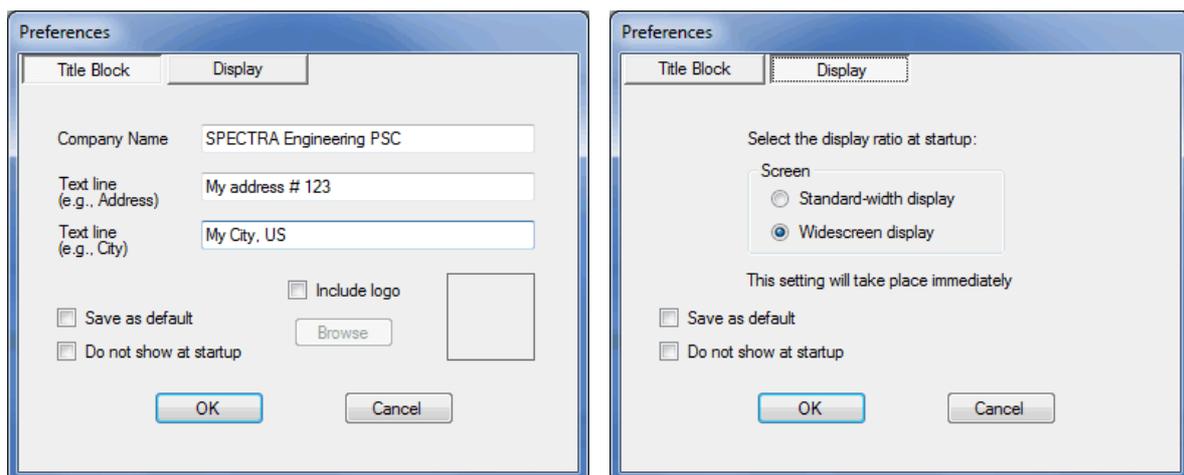
OK Cancel

How to Set Preferences for a Project

ASDIP Concrete allows you set project preferences in order to customize your program and improve your experience. Although not mandatory, these settings will affect the way the program looks and the way your Reports will be generated. You may set the preferences in the Settings Menu of the Project Manager, and they consist of two dialog boxes, as shown below. One is for the Title Block definition that will be included in the Report and the other is to specify the display screen. All this information may be saved as default, so you don't need to enter it again in the future. When you start **ASDIP Concrete** the Preferences dialog box shows up. You may instruct the program not to show it at startup by checking mark the corresponding check box.

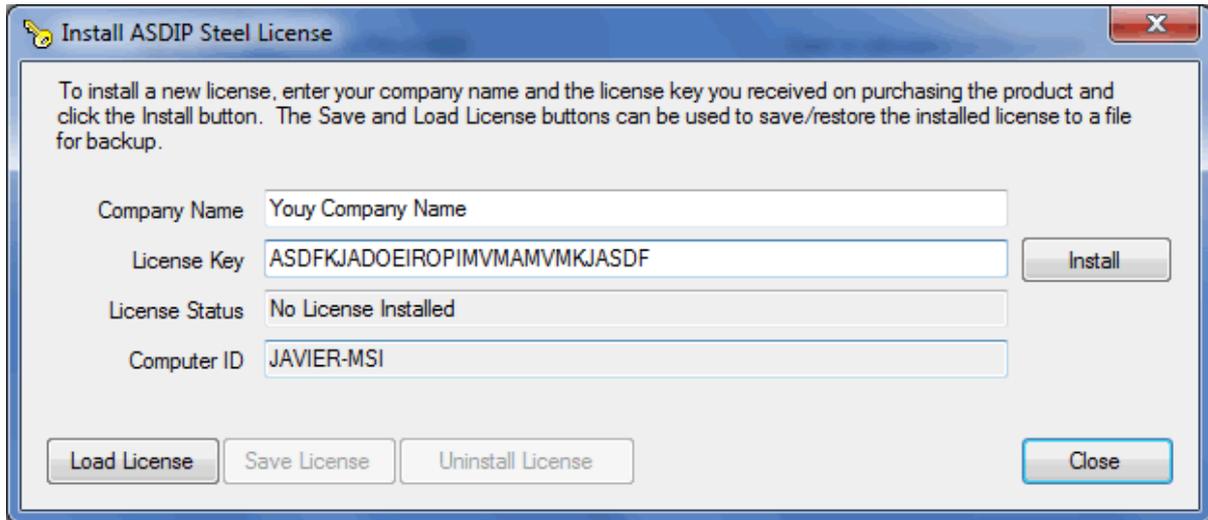
The Title Block information is mostly used as a header in the Report. and it consists of basic information about your company or any other text you may want to include in your Report. You may also specify your company logo.

The display screen may be either Standard-width or Widescreen display, depending of your monitor. Basically, the Standard-width display fits the screens with a 4:3 ratio such as the common desktop monitors. Widescreen display works better in flat screens with 16:10 ratio such as many laptops and some LCD monitors.



How to Authenticate the License

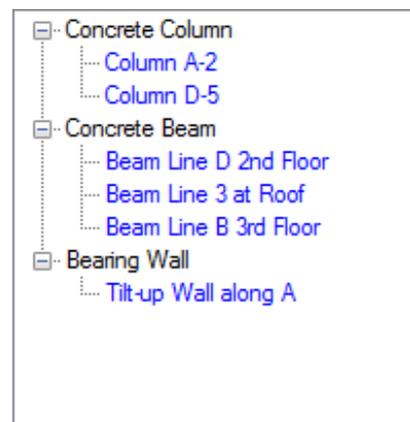
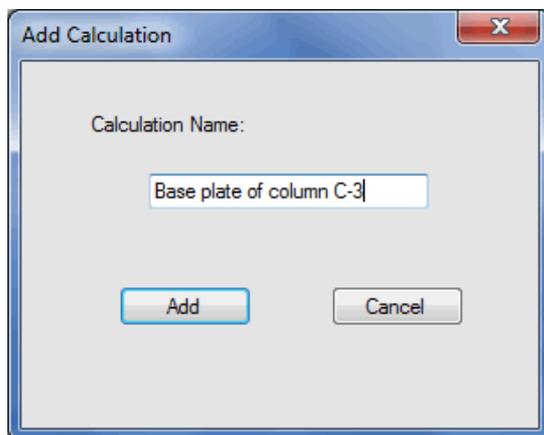
When you download and start using **ASDIP Concrete**, what you are actually running is an Evaluation version, which is fully functional for 15 days. The only limitation during this period is that you cannot printout your calculations and you cannot save your project, otherwise it is the full version that you will permanently have if you authenticate your license. To do so, you need to order the program by visiting our web site www.asdipsoft.com. Then an email will be sent to you with a license key, which will convert your Evaluation version into the Full version. To install your license either select Settings | License in the Project Manager or select *Install License* in the Evaluation dialog box at startup. The dialog box shown below will show up.



In this dialog box you enter your company name and the license key that you just received in your email inbox. When you click the *Install* button the program connects to our web server and authenticates the license for you. Note that you have to have an internet connection to do the authentication. Once the authenticated license is installed on your computer the application can be run without contacting the authentication service. Basically **your license will be linked to your computer name**, not to your hardware. This will allow you to upgrade your hardware without invalidating your license, provided you keep your computer name. Two authentications are granted with your license, which means that you may authenticate your license in two different computers as a maximum, for example your desktop and your laptop. If you try to authenticate the license in a third computer an error message will show up.

How to Create a Calculation

Structural Engineering is all about calculations, isn't it? **ASDIP Concrete** is a software that allows you perform calculations... and manage them. To create a calculation simply click on any of the calculation buttons in the Project Manager. The dialog box shown below will show up.

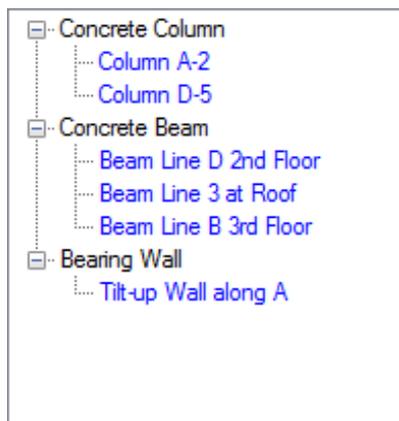


Enter the calculation name or a short, meaningful description of the calculation. When you click the *Add* button the calculation tree at the right half of the Project Manager reflects the change by adding a new node under the corresponding calculation branch. You may continue adding calculations to the tree, or you may open the calculation that you just created.

Think of this as a paper folder on your desk, where you are putting your hand calcs and sketches together. Imagine that you are designing a spread footing by hand and that you ended up with some pages of calcs. If you are a little bit organized, you will put these sheets in a paper folder labeled with the project name. Then imagine that you continue designing by hand another footing of the project, and several more. Add all these paper sheets to your binder. If there are several types of footings in the project, your binder will have to be organized further.

ASDIP Concrete organizes the set of calculations for you in an electronic version of the situation described above. The Project Manager will add individual calculations to the project and will organize them in an expandable tree view, similar to the Windows Explorer tree view. You may add as many calculations as you need, and they will be organized properly for future reference.

How to Run a Calculation

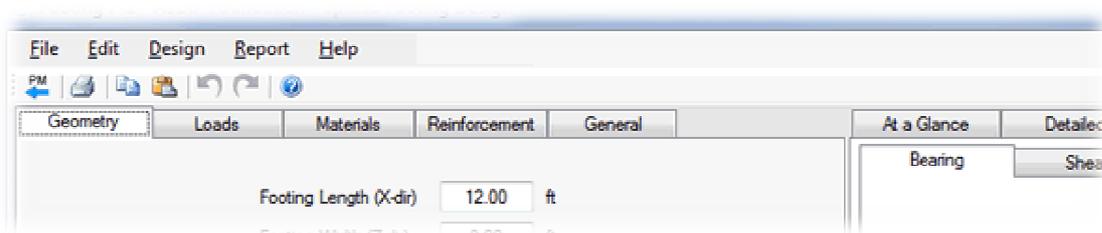


Once you have created a calculation, you can run it by double-clicking on the corresponding node at the tree view in the Project Manager. Alternatively, click on the node to highlight it and then click on the *Open* button. This will retrieve the calculation module. Once there, you may enter the input data and see the results. When you close the calculation sheet, you will be sent back to the Project Manager, which will have the latest information about your calculation, with all the changes that you have just done.

If you have multiple calculations in your project, you can jump to any of them and edit it as needed by simply double-clicking the corresponding node in the tree, as explained above. When you save your project all the information about all your calculations will be saved as well. The next time that you open that project all the calcs will be there.

How to Enter the Input Data

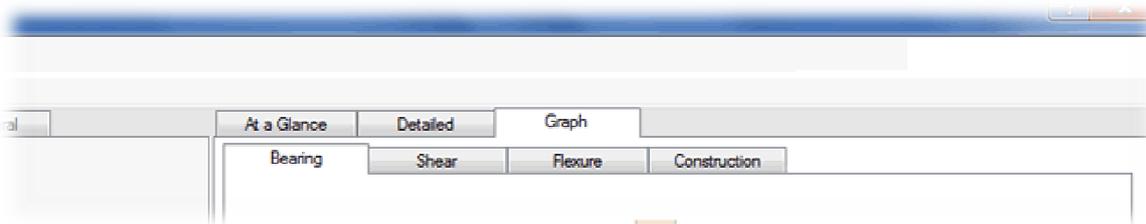
When you open a calculation, a predefined module template is retrieved, where you may enter your input data and see immediately the results associated with the change that you have just done. All the modules in **ASDIP Concrete** have two tabbed controls, as shown below. The left tabbed box is dedicated to the input data, whereas the right tabbed box shows the tabs associated with the results. To enter input data simply select the corresponding tab at the left side and use the text boxes and controls designed for that purpose.



ASDIP Concrete has been designed with multiple types of controls in order to enter data the easiest way. Among the controls provided we have buttons, text boxes, labels, combo boxes, ratio buttons, check boxes, tabs, tree views, dialog boxes, menu bars and tool bars. All these combined elements create a rich user interface.

How to See the Results

In **ASDIP Concrete** the results are always current, which means that as soon as you change any of the input data fields the results are updated accordingly. To see the results, simply click on any of the tabs located at the right half of the screen, as shown below.

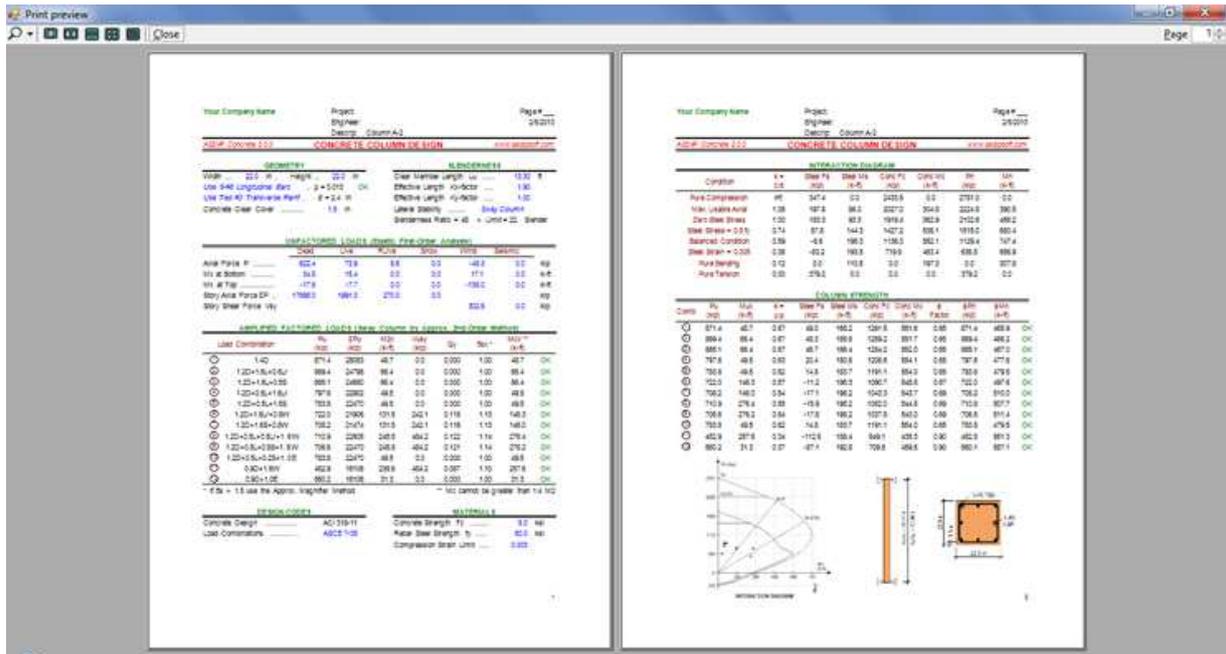


The three tabs are described as follows:

- **At a Glance** tab - Shows a summary of the results, with the most relevant information that fits in one screen height. No scroll bars. The user can see "at a glance" if the design passes or fails. If necessary, you may prefer to see the Detailed tab.
- **Detailed** tab - Shows a more detailed report of the calculations, with more in-depth results. It is intended for a more laborious checking of the step-by-step calculations. The results are organized by topic for easier reading, and consist of values and text messages always up-to-date. Individual checks show either **OK** or **NG** for pass or fail respectively.
- **Graph** tab - Shows graphic images related to the calculation, either a plan, elevation, detail, or diagram. ASDIP Concrete includes graphic views of the soil bearing pressures, the one-way shear in both directions, the punching shear, the flexural moments, and the construction diagram.

How to Preview the Report

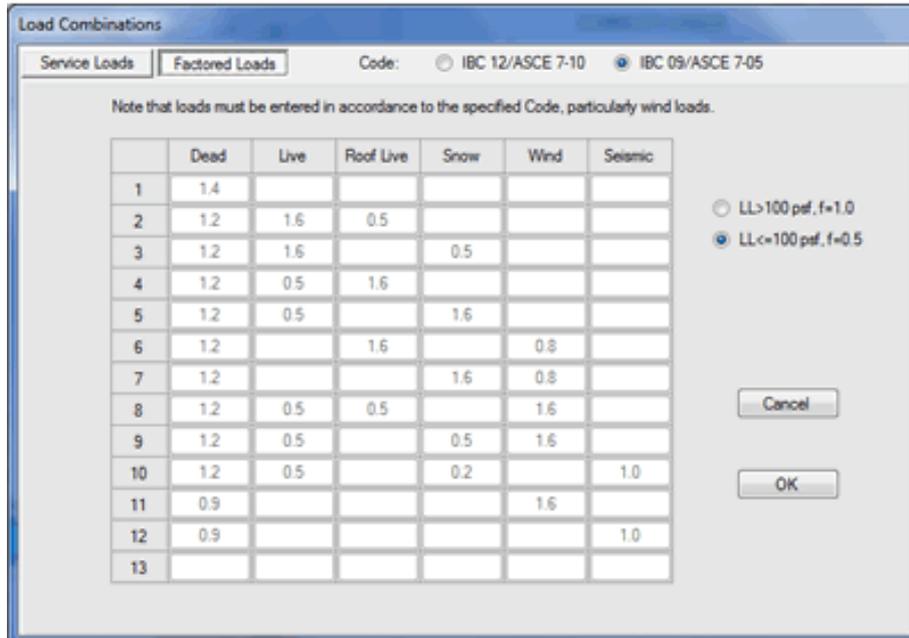
ASDIP Concrete generates a pre-formatted report that can be printed out. To preview the report simply select Report | Print Preview from the menu bar. To printout the report, select Report | Print from the menu bar. The preview window provides several buttons to multi-page views, zoom and print, as shown below.



Load Combinations

Structural engineering is all about loads. Loads are typically defined by its source, either dead, live, wind, seismic, etc. The design codes generally group these load cases in load combinations, where each load case is assigned a load factor. The end result is a series of load combinations, both service and factored. Service load combinations are typically used for bearing calculations, whereas factored load combinations are used for concrete design.

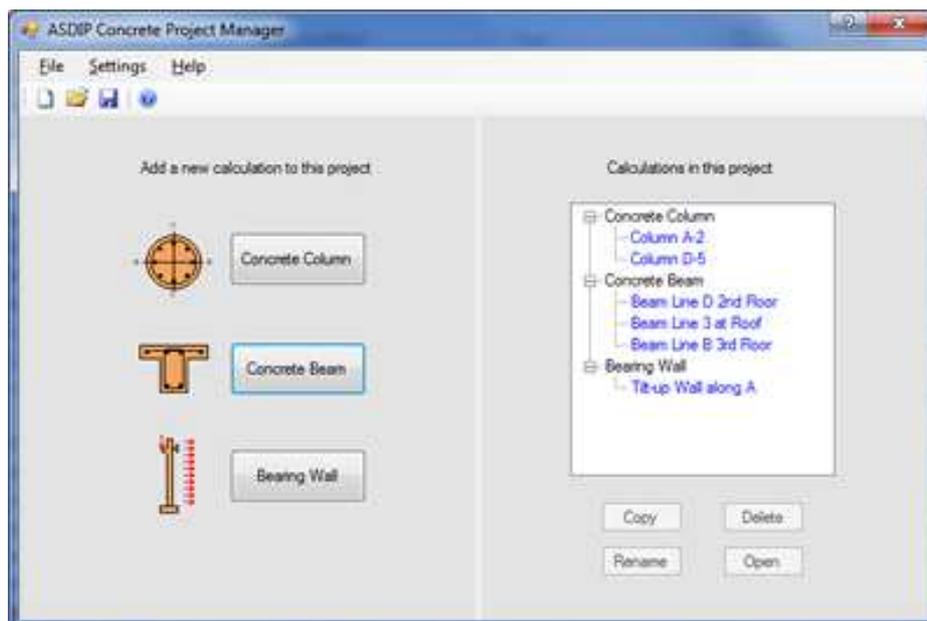
ASDIP Concrete lets you specify the Design Code and it internally uses the corresponding load combinations, as shown below:



The Load Combinations dialog box may be invoked from the Design Menu. At the top of the dialog box you may specify the Design Code. In addition, for factored loads the live load factor depends whether the load is > 100 psf.

Project Manager Main Window

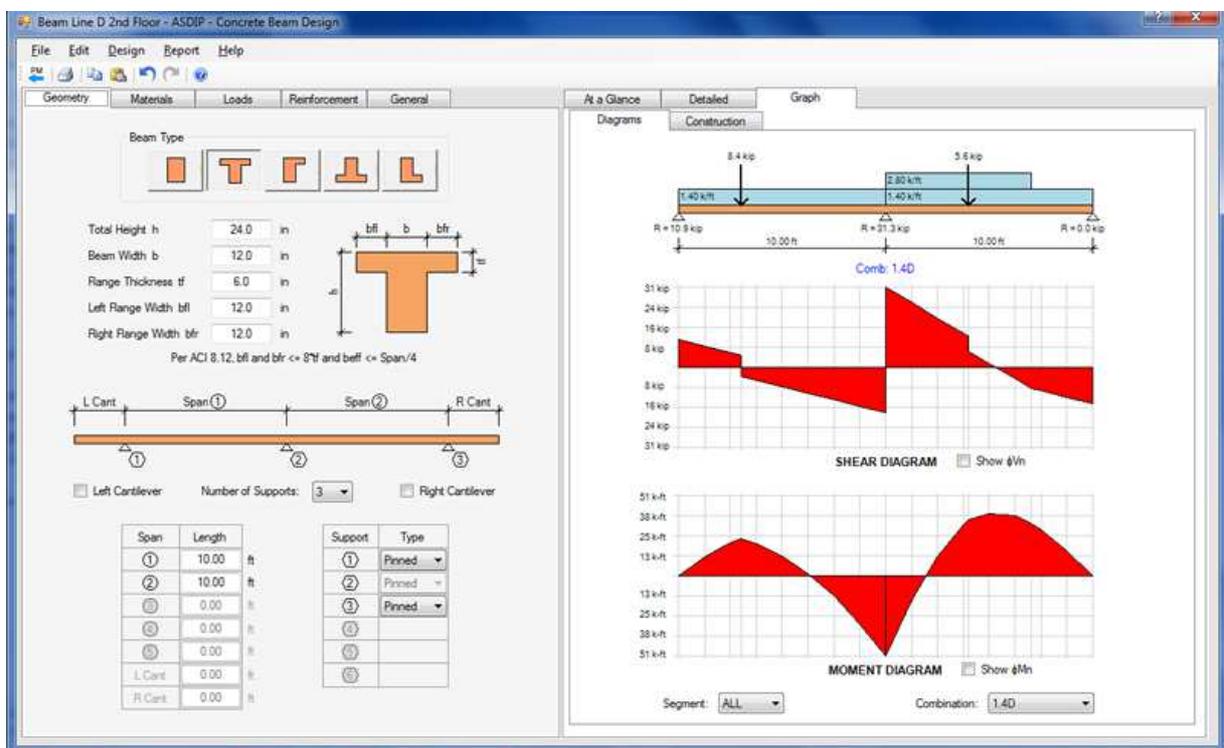
The Project Manager is the central piece of **ASDIP Concrete**. From there all file activities may be performed, as well as get access to the calculation sheets. In the Project Manager you may create a calculation, save a project, set the units system, enter the information and preferences, and organize your



work. Basically the Project Manager is in charge of organizing the calculations in a project, and keeping the common information updated and active. All basic file operations, such as Start a new project, Open an existing project, and Save a project are only possible in the Project Manager. In addition, the expandable tree calculation view is a great way to visualize all the calculations in a project.

Calculation Main Window

Being **ASDIP Concrete** a structural design package, the calculation modules are the essence of the software. All the modules have been designed and developed with a deep understanding of the needs of structural engineers. A typical calculation main window is shown below.



A typical calculation main window is basically composed of the menu bar at the top, and immediately below is the tool bar. Below that is the work area, which consists of two tabbed panes: the left pane is designed to enter the input data, and the right pane shows the results of the calculation. The different tabs have a specific purpose, depending of the calculation module. The current version of **ASDIP Concrete** includes the following calculation modules:

- Concrete Column Design
- Concrete Beam Design
- Bearing Wall Design

Concrete Column - Overview

Columns are structural compression members which transmit loads from the upper floors to the lower levels and then to the soil through the foundations. Since columns are compression elements, failure of one column in a critical location can cause the progressive collapse of adjoining floors, and in turn, even the collapse of the entire structure. Failure in concrete columns could occur as a result of material failure or by loss of lateral structural stability. If a column fails due to material failure, it is classified as a short column, as opposed to the slender column whose failure is by buckling.

The program performs the design of a circular or rectangular concrete column when subjected to a combination of bending moments and axial loading, based on the latest ACI design criteria and the Ultimate Strength Design Method. It calculates the magnified moments due to slenderness and generates the capacity axial-moment interaction diagram.

Concrete Column - Geometry

Use the *Geometry* tab to enter the information of the dimensions of the column, as shown below.

The screenshot displays the 'Geometry' tab of a software interface for concrete column design. It features a 'Column Type' selector with two options: a rectangular column and a circular column. Below this, a diagram of a rectangular column shows its dimensions: Height, Width, and Cover. The diagram also labels 'Top/Bottom Bars' and 'Left/Right Bars'. To the right of the diagram, there are input fields for: Column Width (22.0 in), Column Height (22.0 in), Longitudinal Bars (#8), Top / Bottom (3), Left / Right (1), Transverse Bars (#3), and Concrete Clear Cover (1.5 in). Below these fields, there is a 'Slenderness' section with input fields for Clear Member Length L_u (20.00 ft), Effective Length K_x -factor (1.00), and Effective Length K_y -factor (1.00). A 'Typical Conditions' button is located next to the K_x -factor field. Under 'Lateral Stability', the 'Sway Column' option is selected. To the right of the slenderness section, a vertical diagram shows the 'Effective Length $K \cdot L_u$ '.

At the top of the page you may specify the column type, dimensions and reinforcing bars. If the column is circular, the rebars are distributed uniformly along the perimeter. If the column is rectangular the program provides simple and straightforward ways to specify the reinforcement. The slenderness effects are accounted for by specifying the effective length factors, and if the column is sway or non-sway. **ASDIP Concrete** internally checks the dimensions and validates the input data.

Concrete Column - Loads

The *Loads* tab lets you enter the loads acting on the concrete column, as shown below. Different sub-tabs facilitate the load data input.

The screenshot shows the 'Loads' tab in the ASDIP Concrete software. It features several sub-tabs: 'Dead', 'Live', 'Roof Live', 'Snow', 'Wind', and 'Seismic'. The 'Dead' sub-tab is active, showing input fields for 'Axial Force P' (622.4 kip) and 'Moment Mx' (34.8 k-ft at the Bottom, -17.6 k-ft at the Top). Below this, there is a section for '2nd-Order Moments' with radio buttons for 'Elastic Second-Order Analysis' and 'Amplified Elastic First-Order Analysis'. A 'Show Parameters' button is also present. At the bottom, there are two diagrams: a rectangular cross-section of a column with X and Y axes, and a vertical column with axial force P and moments Mx at the top and bottom.

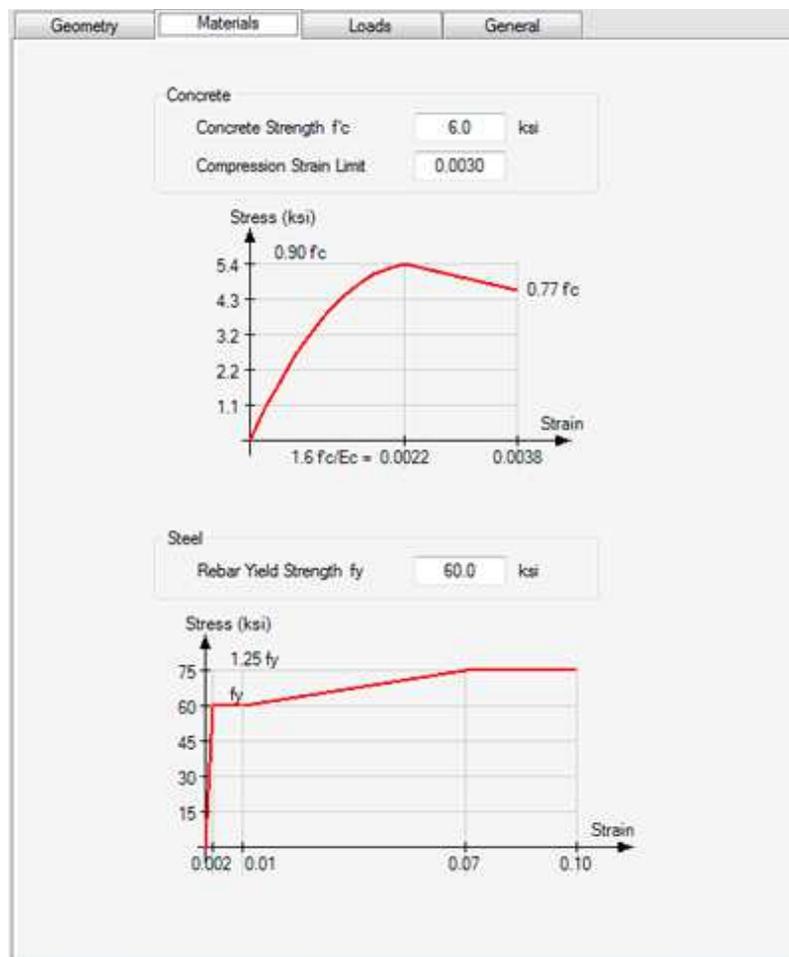
ASDP Concrete allows you specify either a single set of pre-combined loads, or a set of nominal load cases to be combined, as briefly described below:

- **Pre-combined loads** - In this case you specify two types of pre-combined loads: Service and Factored. This is useful when you have the combined loads and want to either design or verify the footing for those loads.
- **Nominal load cases** - **ASDIP Concrete** support a full set of independent load cases, according to the type of loading, such as *Dead, Live, Roof Live, Snow, Wind and Seismic*. The program internally will combine these loads in accordance to the specified Load Combinations.

2nd Order Moments - When the applied loads come from a Second Order Analysis, the loads will be applied to the column without any further magnification. However, when the loads come from a First Order Analysis, **ASDIP Concrete** performs an extensive magnification procedure in accordance with the Moments Magnification Method of the ACI. This procedure varies depending whether the column is sway or non-sway, this is, if the column is part of a lateral resisting frame or not. Click on the *Show Parameters* button to see the details of the magnification analysis.

Concrete Column - Materials

The *Materials* tab is designed to enter the information about the column materials, as shown below.



You are required to specify the concrete and the rebars strength. **ASDIP Concrete** uses the actual parabolic concrete stress-strain curve, rather than the simplified equivalent rectangular one. The steel considers the strain hardening region.

General Tab

The *General* tab contains information about the calculation that may be of interest to the designer or to someone else who reviews the calculation, as shown below.

The image shows a software window with four tabs: Geometry, Composite, Loads, and General. The General tab is active. It contains the following fields:

- Company: SPECTRA Engineering PSC
- Project: Your Project Name
- Engineer: Your Name
- Description: Beam BM-1
- Notes: You may type here any instruction to the reviewer.

Company - The company name was setup when you installed the license and cannot be changed.

Project - Since the project name is common for all the calculations of this project, it can only be specified in the Settings | Information menu command of the Project Manager .

Engineer - When you create a calculation , the engineer's name is brought from the user information that you entered in the Project Manager . Since two calculations of the same project may be done by two different engineers, this text can be edited in your calculation.

Description - By default, this is the calculation name that you entered when you created the calculation . This text, however, can be changed to a more meaningful description if desired. This text will be copied into the report.

Notes - This text is intended to provide any information to the reviewer, or a remainder to yourself in the future.

Concrete Beam - Overview

Beams are structural elements that support loads applied transversely, and therefore they mostly resist bending moments, as well as shear forces. Concrete beams are usually continuous, this is, they span between several supports. A common example of a T-beam occurs at the interior bay of a building floor, where a portion of the slab acts together with the projecting beam web. A beam at the border of the floor is called a spandrel beam. Inverted-T and L-beams are commonly used to support prefabricated double-T members.

The program performs the design of a multi-span rectangular, T, spandrel, L or inverted-T concrete beam when subjected to a combination of bending and shear loading, based on the latest ACI design criteria and the Ultimate Strength Design Method. Multiple options are included to model the beam geometry and loads, as well as the reinforcing steel.

Concrete Beam - Geometry

Use the *Geometry* tab to enter the information of the dimensions of the beam, as shown below.

The screenshot shows the 'Geometry' tab of a software interface. It includes a 'Beam Type' selection area with icons for rectangular, T, L, inverted-T, and another L-beam. Below this are input fields for dimensions: Total Height h (24.0 in), Beam Width b (12.0 in), Flange Thickness tf (6.0 in), Left Flange Width bfl (12.0 in), and Right Flange Width bfr (12.0 in). A diagram of a T-beam cross-section shows these dimensions. Below the diagram is the text: 'Per ACI 8.12, bfl and bfr <= 8*tf and beff <= Span/4'. The span diagram shows a beam with three supports (1, 2, 3) and two spans (Span 1, Span 2), with cantilevered ends (L Cant, R Cant). There are checkboxes for 'Left Cantilever' and 'Right Cantilever', and a 'Number of Supports' dropdown set to 3. At the bottom, there are two tables:

Span	Length	ft
①	15.00	ft
②	15.00	ft
③	0.00	ft
④	0.00	ft
⑤	0.00	ft
L Cant	0.00	ft
R Cant	0.00	ft

Support	Type
①	Pinned
②	Pinned
③	Pinned
④	
⑤	
⑥	

At the top of the page you may specify the beam type, either rectangular, T, spandrel, L, or inverted-T, as well as dimensions of the beam cross section. At the bottom of the page you specify the number of supports. **ASDIP Concrete** works with a maximum of six supports, this is, a maximum of five spans plus two cantilevers. The end supports may be either pinned or fixed, and the program calculates the internal shears and moments accordingly. **ASDIP Concrete** internally checks the dimensions and validates the input data.

Concrete Beam - Loads

The *Loads* tab lets you enter the loads acting on the concrete beam, as shown below. Different sub-tabs facilitate the load data input.

Segment: Span 1

Let ASDIP calculate selfweight

Superimposed Uniform

	Full	Start	End	Dead	Live	R Live	Snow
Length	ft	ft	ft	k/ft	k/ft	k/ft	k/ft
w1	<input type="checkbox"/>	0.00	10.00	1.00	0.00	0.00	0.00
w2	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.00

Concentrated

	Dist	Dead	Live	R Live	Snow
	ft	kip	kip	kip	kip
P1	3.00	6.0	0.0	0.0	0.0
P2					
P3					
P4					
P5					
P6					

ASDP Concrete allows you specify a set of nominal load cases to be combined, as briefly described below:

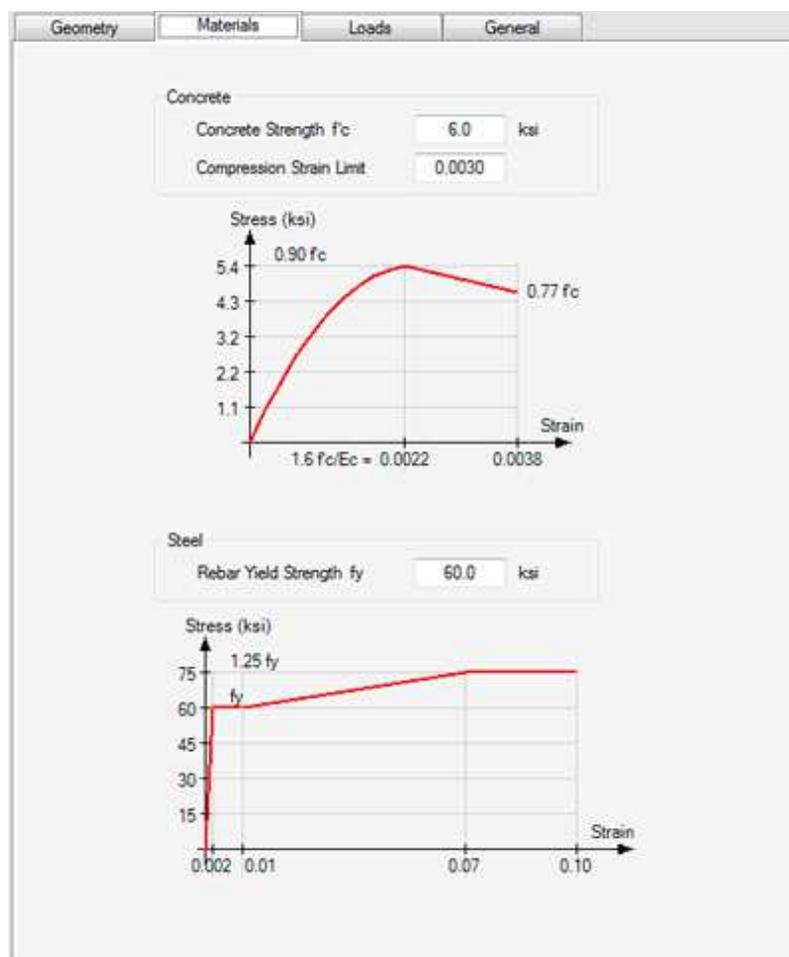
- **Nominal load cases** - **ASDIP Concrete** support a full set of independent vertical load cases, according

to the type of loading, such as *Dead, Live, Roof Live, Snow*. The program internally will combine these loads in accordance to the specified Load Combinations.

ASDIP Concrete accepts up to two sets of uniform loads and up to six sets of concentrated loads per span. The input loads are internally stored along the beam for further calculation. Click on the *Segment* button to specify the span number.

Concrete Beam - Materials

The *Materials* tab is designed to enter the information about the beam materials, as shown below.



You are required to specify the concrete and the rebars strength. **ASDIP Concrete** uses the actual parabolic concrete stress-strain curve, rather than the simplified equivalent rectangular one. The steel considers the strain hardening region.

Concrete Beam - Reinforcement

The *Reinforcement* tab has been included to enter all the required information to design the rebars for the beam, as shown below.

Segment:

Top Reinf.

Quantity	Bars	Bar Size	Description	d' to Bar CL
2	Bars	#5	Continuous Along the Segment	2.0 in
2	Bars	#5	x 3.00 ft At Left End	2.0 in
2	Bars	#5	x 3.00 ft At Right End	2.0 in

Bottom Reinf.

Quantity	Bars	Bar Size	Start (ft)	End (ft)	d' to Bar CL
2	Bars	#5	2.00	8.00	2.0 in
2	Bars	#5	Continuous Along the Segment		2.0 in

Stirrups

Quantity	Stirrups	Bar Size	Spacing	Location
6	Stirrups	#3	@ 6.0 in	At Left End
6	Stirrups	#3	@ 6.0 in	At Right End
4	Stirrups	#3	@ 12.0 in	At Center

Diagram labels: Left Length, Right Length, Start, End

ASDIP Concrete fully complies with the provisions of the latest edition of the ACI 318. The *Reinforcement* tab has been designed to allow the user specify the reinforcing steel of the beam, both for bending and for shear. A number of controls are provided to completely customize and optimize the steel reinforcement. The program calculates the capacity of the reinforced concrete beam and checks the development length of the rebars. All changes are reflected graphically.

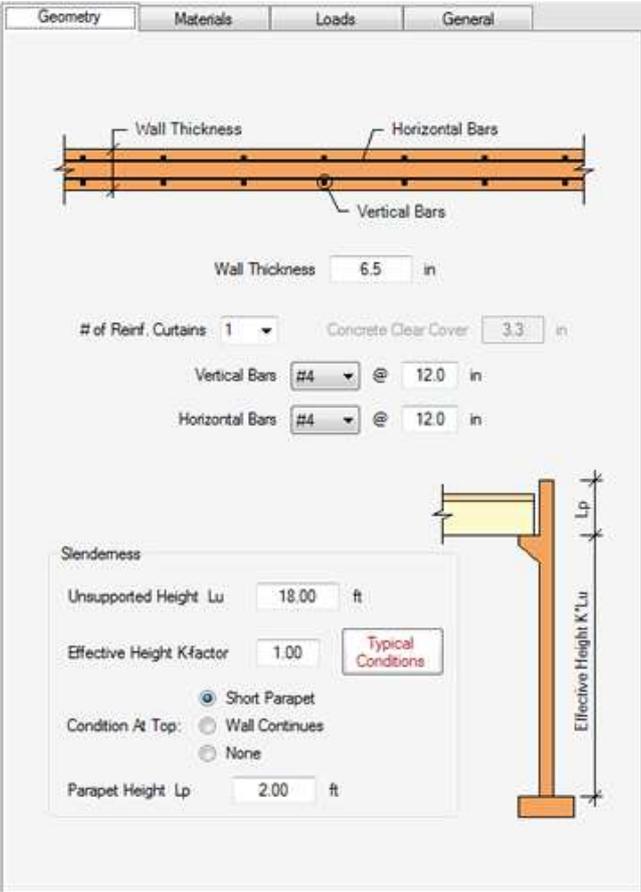
Bearing Wall - Overview

Bearing walls are structural compression members which also may resist out-of-plane lateral loads. The resulting moments are referred to as weak-axis bending. A tilt-up wall panel exposed to wind is an example of this type of wall. Per ACI, bearing walls may be designed as compression members using the strength design provisions for flexure and axial loads, like columns. Any wall may be designed by this method and no minimum wall thicknesses are prescribed. As with columns, the design of walls is difficult without the use of design aids. Wall design is further complicated by the fact that slenderness is a consideration in practically all cases. The ACI Moment Magnification method is generally used to account for the slenderness effects.

The program performs the design of a concrete bearing wall when subjected to a combination of weak-axis bending moments and axial loading, based on the latest ACI design criteria and the Ultimate Strength Design Method. It calculates the magnified moments due to slenderness and generates the capacity axial-moment interaction diagram. A multi-story wall may also be modeled.

Bearing Wall - Geometry

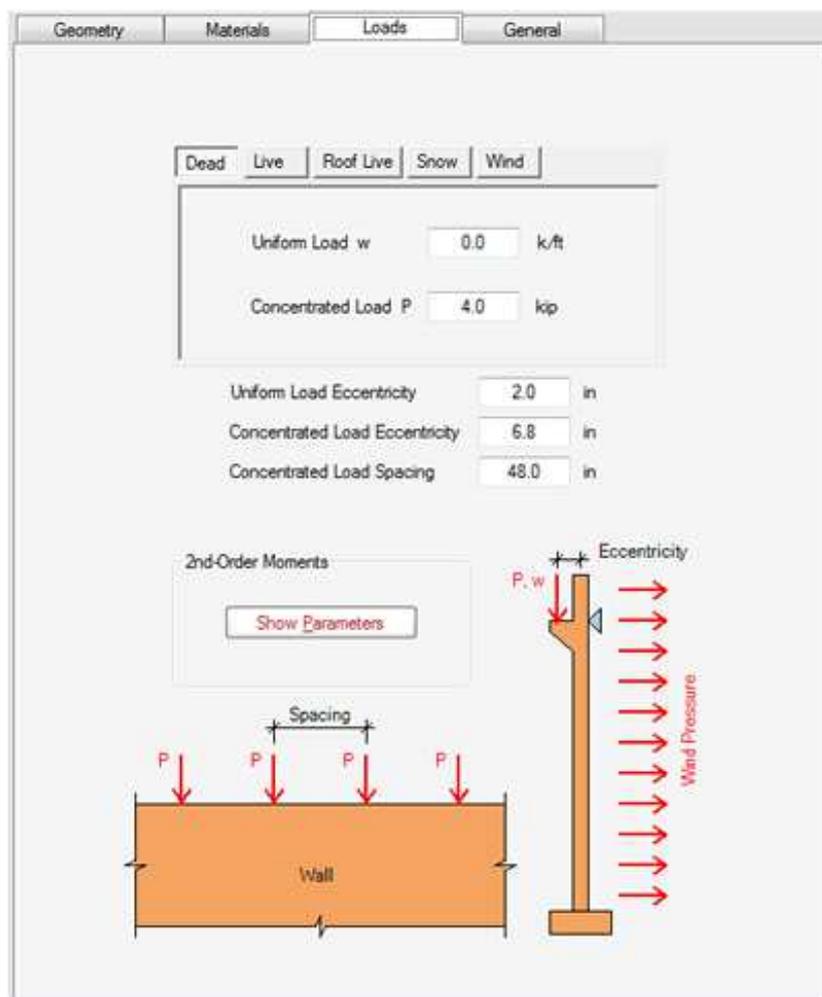
Use the *Geometry* tab to enter the information of the dimensions of the wall, as shown below.



At the top of the page you may specify the thickness of the wall, as well as the reinforcing bars. Per ACI, if the wall is 10" or thicker, two curtains of rebars are required. For thinner walls, practical limitations control the number of curtains. At the bottom of the page you specify the Slenderness effects. The wall may have a parapet at top, or it may be continuous. **ASDIP Concrete** internally checks the dimensions and validates the input data.

Bearing Wall - Loads

The *Loads* tab lets you enter the loads acting on the concrete wall, as shown below. Different sub-tabs facilitate the load data input.



ASDP Concrete allows you specify a set of nominal load cases to be combined, as briefly described below:

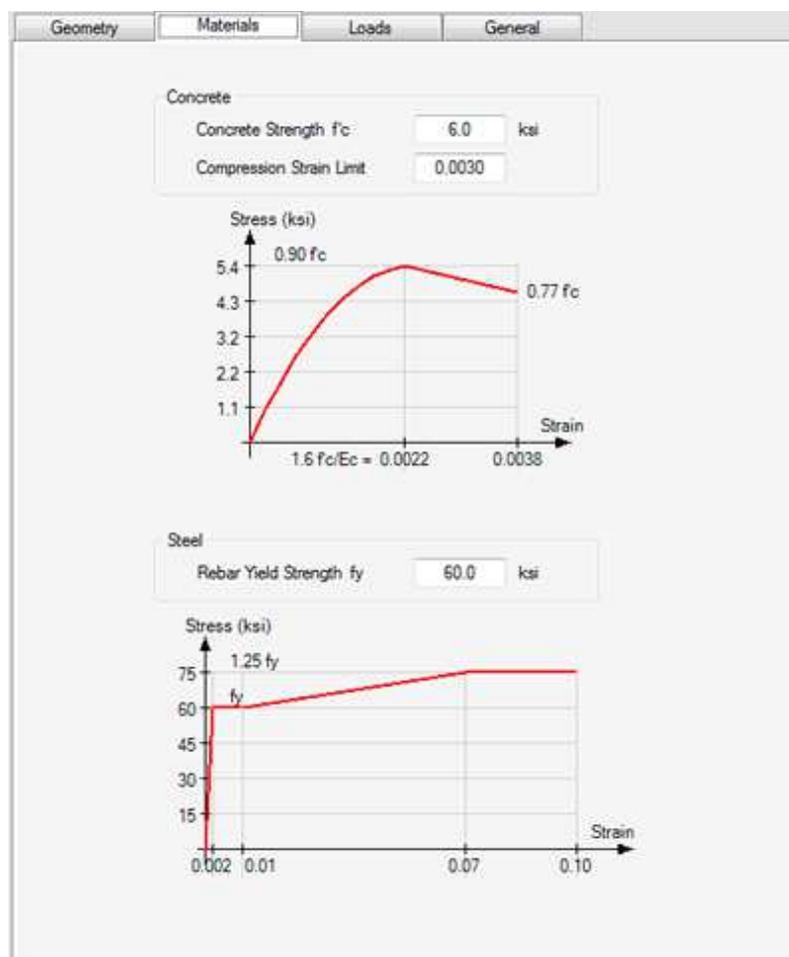
- **Nominal load cases** - **ASDIP Concrete** support a full set of independent load cases, according to the type of loading, such as *Dead*, *Live*, *Roof Live*, *Snow*, *Wind*. The program internally will combine these loads in accordance to the specified Load Combinations. You may specify both concentrated and

uniform loads, with their corresponding eccentricity. If the wall is continuous above, the load from the upper floor may be accounted for by setting the uniform load eccentricity as zero.

ASDIP Concrete performs an extensive procedure in accordance with the Moments Magnification Method of the ACI. Click on the *Show Parameters* button to see the details of the moment magnification analysis.

Bearing Wall - Materials

The *Materials* tab is designed to enter the information about the wall materials, as shown below.



You are required to specify the concrete and the rebars strength. **ASDIP Concrete** uses the actual parabolic concrete stress-strain curve, rather than the simplified equivalent rectangular one. The steel considers the strain hardening region.

File Menu

- New
- Open
- Save
- Save As
- Go to Project Manager
- Exit ASDIP Concrete

File | New

This command is only available in the Project Manager and it will clear all the information from previous projects, such as the user and project information and calculations. Remember to save your work before you start a new project, otherwise it will be lost. **ASDIP Concrete** will ask you to confirm, in case that you haven't saved your previous project.

File | Open

This command is only available in the Project Manager and it will retrieve all the information contained in a file previously saved in **ASDIP Concrete**. The Open Project dialog box will pop up, so that you may specify where the file is located.

File | Save

This command is only available in the Project Manager and it will save all the information regarding your project in a file with extension .cdp, which is the default extension for **ASDIP Concrete** projects. If the project has been saved previously, it will be saved directly, otherwise the Save Project dialog box will pop up, so that you can specify the location of the file.

File | Save As

This command is only available in the Project Manager and it will save all the information regarding your project in a file with extension .cdp, which is the default extension for **ASDIP Concrete** projects. The Save Project dialog box will pop up, so that you can specify the name and location of the file.

File | Go to Project Manager

This command is only available in the Calculation modules and it will close the current calculation sheet and will take you back to the Project Manager. From there, you may either open another calculation or save your work. It has the same effect as clicking on the X at the upper right corner of the calculation. Note that all your input data and results are not lost, they are still in memory. If you open your calculation again you will see all the information there.

File | Exit ASDIP Concrete

This option will close and terminate the application. **ASDIP Concrete** will ask you to confirm, in case that you haven't saved your project. If you accept, the program will close immediately.

Settings Menu

Units – Sets the system of units of the whole project.
Information – Enter basic information of both the user and the project.
Preferences – Sets different options to customize your experience with *ASDIP Concrete*.
License – Lets you authenticate your license.

Edit Menu

Undo - It will reverse the last command
Redo - It will reverse the last undo operation
Copy - It will store the highlighted text in the clipboard
Paste - It will place the clipboard contents in the current position

Design Menu

Units – Sets the system of units for the current calculation, otherwise it uses the default .
Criteria – Sets the design parameters to be used in the calculation.

Report Menu

Print - It will show the *Print* dialog box
Print Preview

Help Menu

Contents - Shows the Table of Contents of the Help file, where you may select by topic.

Index - Shows the Index tab, where you may select by keyword.

Search - Shows the Search tab, where you may find a word in the Help file.

About - Shows the **ASDIP Concrete** information dialog.