

Creating an In-ground Swimming Pool

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The information in this article applies to:



QUESTION

I would like to create an in-ground swimming pool in the backyard of my plan. How can I do this?




ANSWER

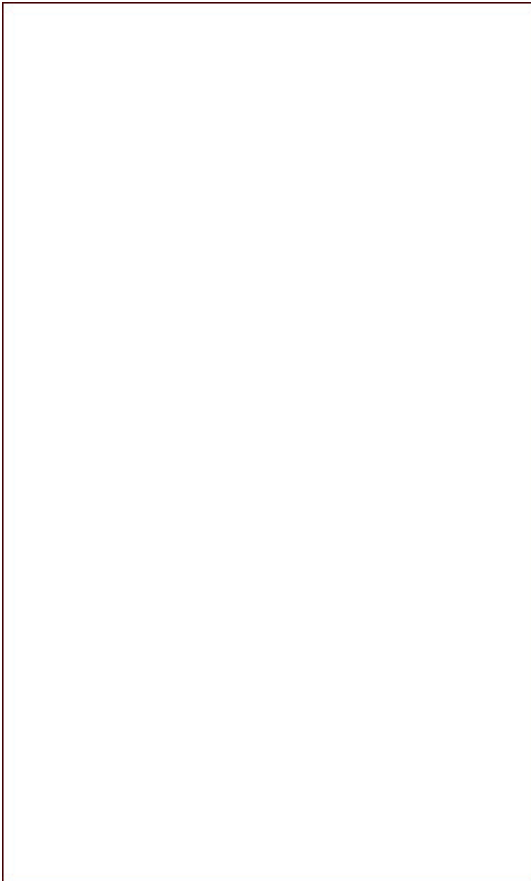
Using the Terrain Feature tools and furnishings and fixtures from the Library Browser, you can design and accessorize an in-ground swimming pool area.


- [Establishing the shape of the swimming pool](#)
- [Adding water](#)

- [Creating a patio around the pool](#)
- [Creating steps inside the pool](#)
- [Adding furniture and accessories](#)




To establish the shape of the swimming pool


1. Select **Terrain> Feature> Rectangular Feature**  from the menu, then click and drag a rectangular shape in a flat area within your Terrain Perimeter. This feature will become your swimming pool.

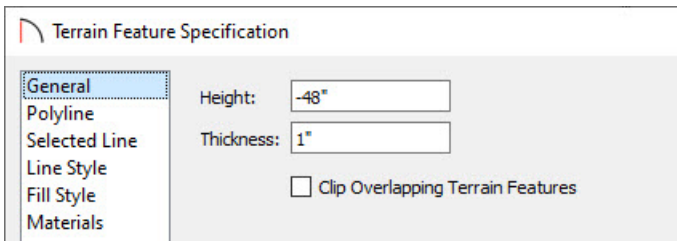


- If this option is not active in your menu, a Terrain Perimeter does not exist in the plan and needs to be created.
- To create a Terrain Perimeter if one is not present, select **Terrain> Create Terrain Perimeter** .

Feature regions follow the contours of your terrain. If you place a feature region on a slope, it will follow the slope rather than form a flat area. If your terrain is sloped, use Elevation Lines or a Flat Region to create a level area to place your pool in.

2. Using the **Select Objects**  tool, click on the pool region to select it and use the edit handles that display to resize it, reshape it, and move it into the desired position in your plan.
 - Use the **Break Line**  tool to place break points and add additional edges to the shape.
 - Use the **Change Line/Arc**  edit button to change a straight line into an arc.

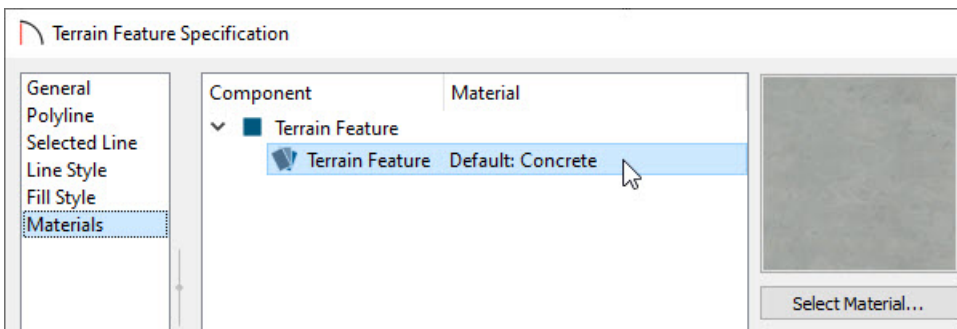
3. When you are satisfied with the shape of the pool region, click the **Open Object**  edit button while the pool region is still selected.
4. On the **GENERAL** panel of the **Terrain Feature Specification** dialog that displays:



- o Specify the desired depth of the pool in the **Height** field using a negative value.



In this example, a value of -48" is used.

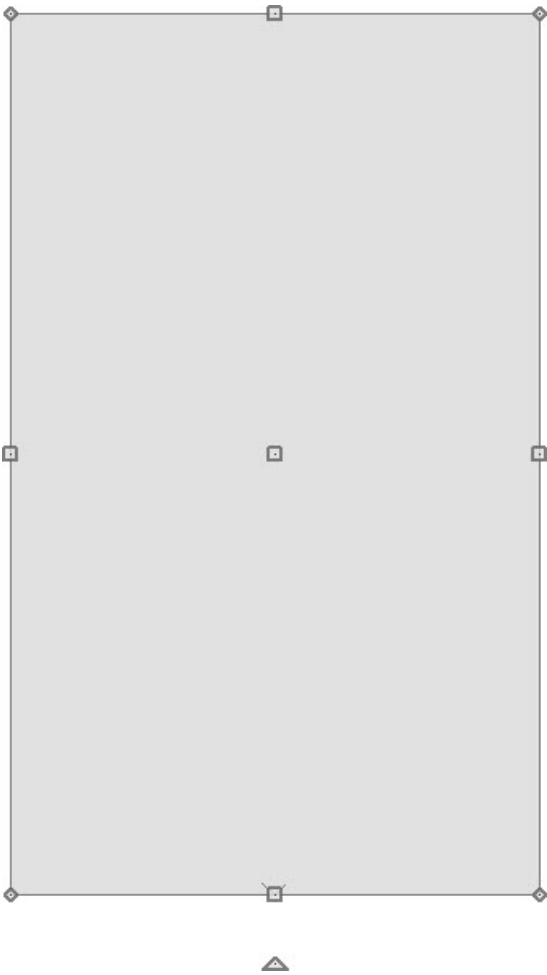
5. On the **MATERIALS** panel, select the Terrain Feature component, click the **Select Material** button, and browse the Library for a suitable material for the interior of your pool.




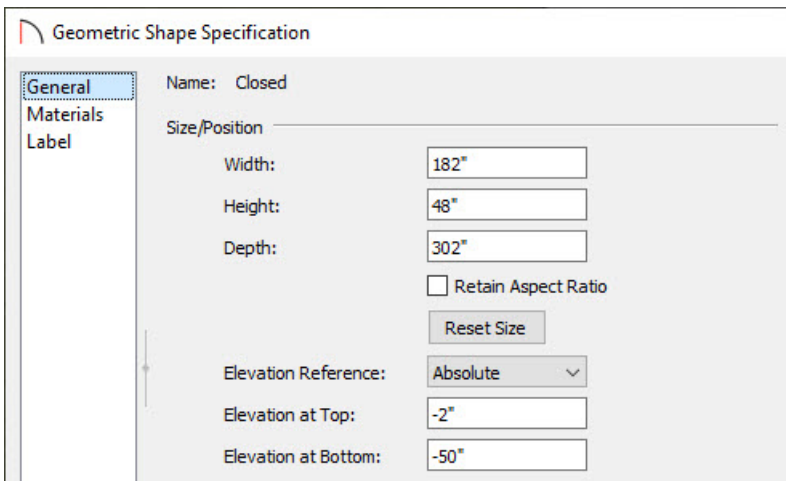
6. Click **OK** to apply the changes and close the dialogs.

To add water

1. Select **View> Library Browser**  from the menu to open the Library Browser.
 - o Navigate to **Shapes> Boxes> Closed**.
 - o Click once inside the pool region to place a box at that location. After editing, this box will form the surface of the water.
2. Using the **Select Objects**  tool, click on the box to select it and use the edit handles to resize and reshape it so that it covers the pool region. It's recommended to extend the edges of the box slightly past the edges of the pool area to prevent a conflict from occurring in camera views.



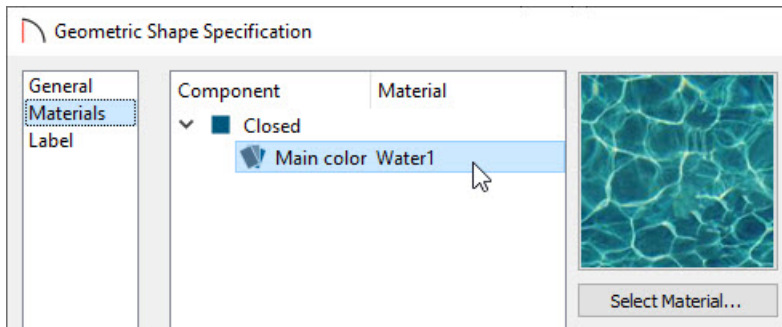
3. With the box still selected, click the **Open Object**  edit button.
4. On the **GENERAL** panel of the **Geometric Shape Specification** dialog that displays:




- Specify a **Height** that is close to the height of the pool. This will serve as the thickness of the water surface.
In this example, a value of 48" is used.
- Specify the Elevation Reference to be **Absolute**, then adjust either the **Elevation at Top** or **Elevation at Bottom** value.
In this example, an Elevation at Top value is set to -2". This is set to be 2" lower than the pool. This is done

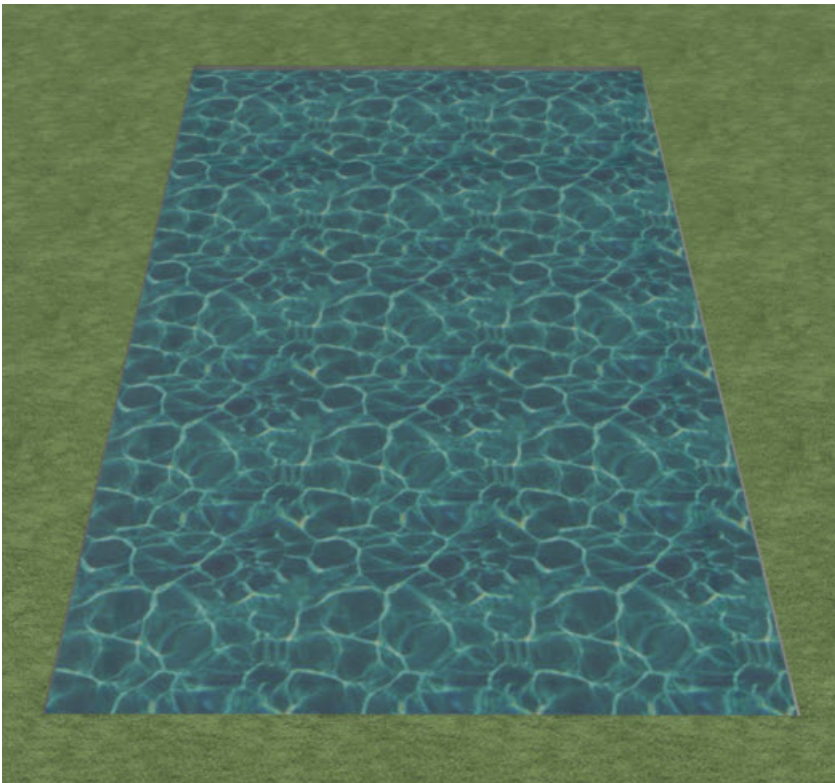
intentionally to prevent a conflict from occurring with the terrain feature that is in the same area.

5. On the **MATERIALS** panel, click on **Main Color**, click the **Select Material** button, browse to **Materials> Landscaping & Roadways> Water** within the Library, and select a water material of your choice.




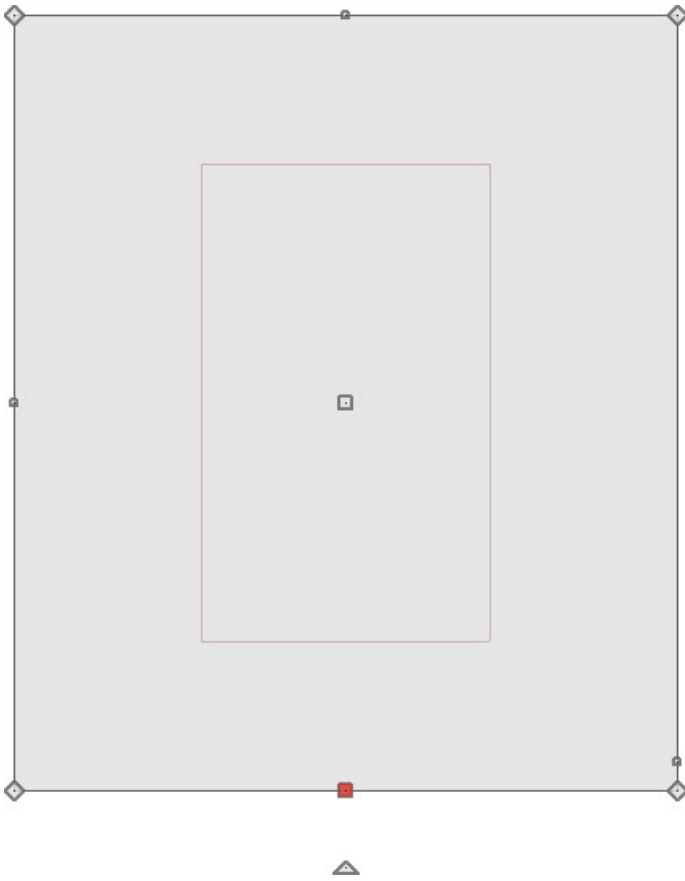
6. Click **OK** to apply the changes and close the dialogs.



7. Select **3D> Create Camera View> Perspective Full Overview**  from the menu to see the results so far.

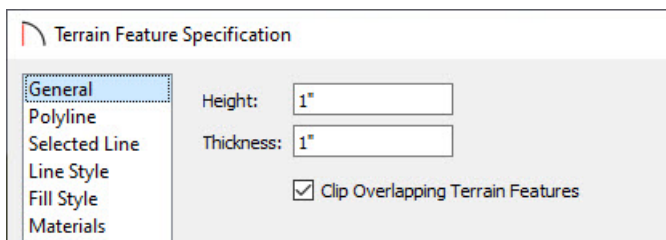


To create a patio around the pool

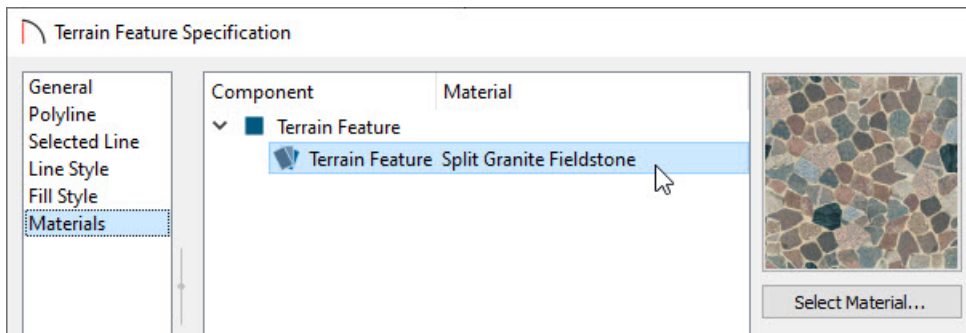
1. Select **Terrain> Feature> Rectangular Feature**  from the menu, then click and drag a rectangular shape around the pool region. This feature will serve as the patio area around the pool.




- Using the **Select Objects**  tool, click on the patio region to select it and use the edit handles to reshape the patio to your liking.
- With the patio region still selected, click the **Open Object**  edit button.
- On the **GENERAL** panel of the **Terrain Feature Specification** dialog, check the **Clip Overlapping Terrain Features** box.

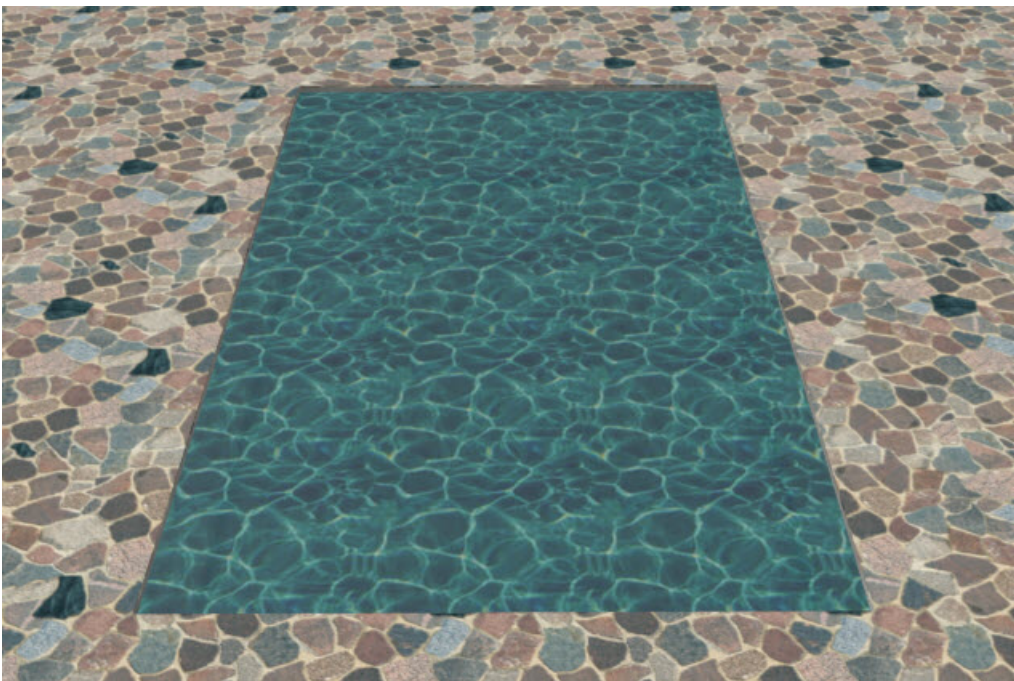


- On the **MATERIALS** panel, select the Terrain Feature component, click the **Select Material** button, and browse the Library for an appropriate material for your patio surface.

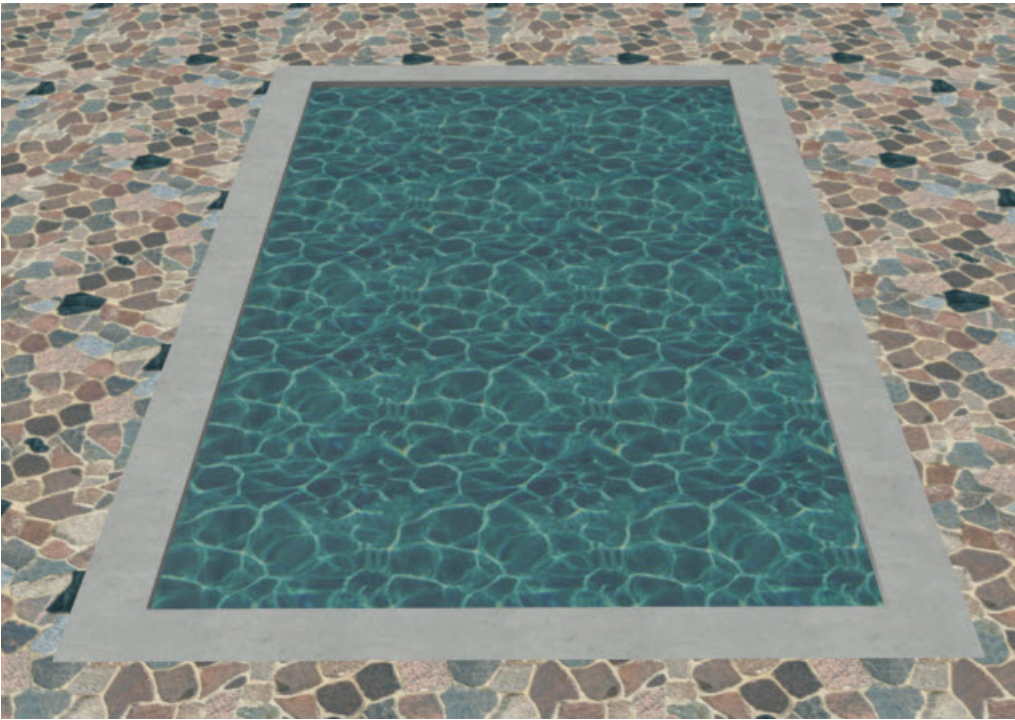


In this example, the **Split Granite Fieldstone** material is used, which can be accessed from the [Buechel Stone Corp.](https://www.chiefarchitect.com/3d-library/index.php?r=site/detail/1020) (<https://www.chiefarchitect.com/3d-library/index.php?r=site/detail/1020>) Manufacturer catalog. For more information on accessing additional catalogs, please see the "Downloading Library Catalogs" resource in the [Related Articles](#) section.

6. Click **OK** to apply the changes and close the dialogs.
7. Select **3D> Create Camera View> Perspective Full Overview**  from the menu to see the pool in its current state.






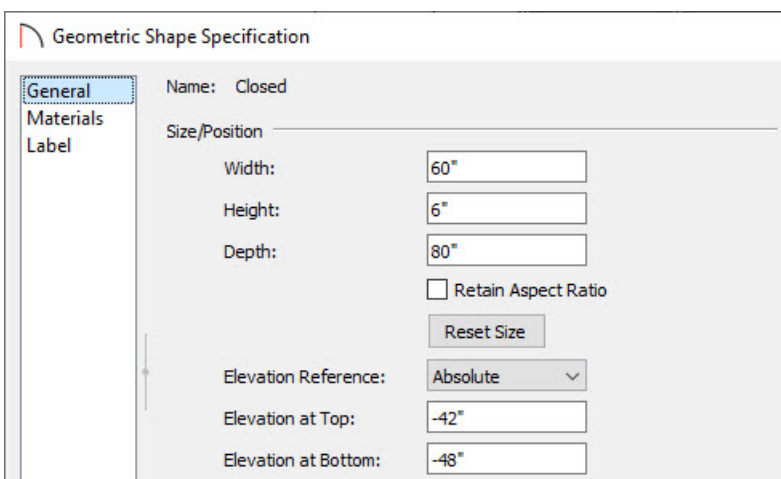
You can create more than one Terrain Feature to surround the pool and apply different materials to each one as well.



Many pools have a stepped platform for wading into the water.

To add a stepped platform inside the pool

1. Select **View > Library Browser**  from the menu to open the Library Browser and browse to **Shapes > Boxes**.
2. Click on the **Closed** box to select it, then click once in an empty space in your drawing area to place a box at that location. This box will form the bottom step.
3. Using the **Select Objects**  tool, click on the box to select it and select the **Open Object**  edit button.
4. On the **GENERAL** panel of the **Geometric Shape Specification** dialog:



Geometric Shape Specification

General

Name: Closed

Size/Position

Width: 60"

Height: 6"

Depth: 80"

Retain Aspect Ratio

Reset Size

Elevation Reference: Absolute

Elevation at Top: -42"




Elevation at Bottom: -48"

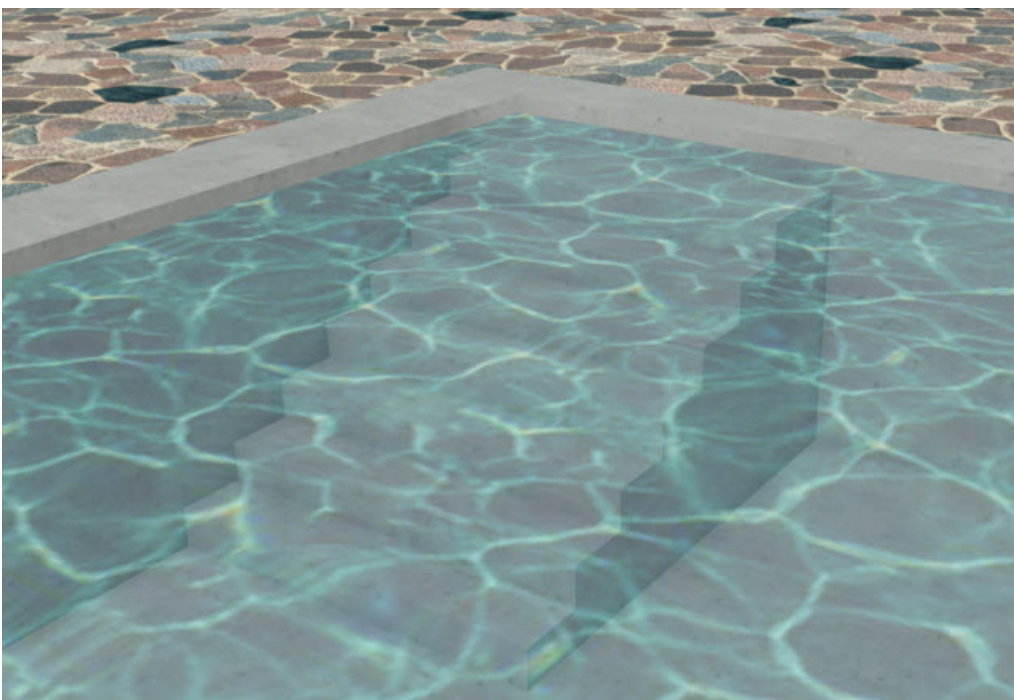
- Specify the **Height**, **Width**, and **Depth** of the bottom step, as well as the **Elevation**.

In this example, the Height is set to 6", the Width is set to 60", and the Depth is set to 80".

- Specify the **Elevation Reference** and change either the **Elevation at Top** or **Elevation at Bottom value**.

In this example, the Elevation Reference has been set to Absolute with a Elevation at Bottom value of -48".


5. On the **MATERIALS** panel, click on the **Main color** component, click the **Select Material** button, and browse the Library for a suitable material for the step.
6. Click **OK** to apply your changes and close the dialog.
7. With the step still selected, use the **Move**  edit handle that displays at its center to move the step(s) into position inside the pool.
8. Use the **Copy/Paste**  edit button to create a copy of the bottom step, and then edit its size and position.
 - In this example, each step tread is 10" deep, so the 2nd step has a **Depth** of 70", the 3rd step 60", and so on.
 - Since the **Height** of each step is 6", the 2nd step will have a **Elevation at Bottom** value of -42, the 3rd step -36, and so on.
 - If you have trouble moving a step into position, hold down the **Ctrl/Command** key on your keyboard and then move the step. Doing this allows you to move the object through obstructions caused by other objects.
9. Select **3D> Create Camera View> Full Camera** , then click and drag a camera arrow towards the steps to see the results.



A variety of outdoor accessories are available in the Library Browser.

To add furniture and accessories

A variety of outdoor accessories are available in the Library Browser.

1. Select **View> Library Browser**  from the menu to open the Library Browser.
 - Browse to **Exteriors> Outdoor Living** to find patio accessories and furniture.
 - Browse to **Exteriors> Recreation** to find pool accessories like diving boards.
2. Click on an item in the library to select it, then click once to place the selected library object at that location.
3. Repeat this process to place any additional items.

Related Articles

-  [Adding a Pond and Stream to Your Terrain \(/support/article/KB-00447/adding-a-pond-and-stream-to-your-terrain.html\)](/support/article/KB-00447/adding-a-pond-and-stream-to-your-terrain.html)
-  [Creating a Deck Around a Pool or Hot Tub \(/support/article/KB-00853/creating-a-deck-around-a-pool-or-hot-tub.html\)](/support/article/KB-00853/creating-a-deck-around-a-pool-or-hot-tub.html)
-  [Creating an Indoor Swimming Pool \(/support/article/KB-02082/creating-an-indoor-swimming-pool.html\)](/support/article/KB-02082/creating-an-indoor-swimming-pool.html)
-  [Downloading Library Catalogs \(/support/article/KB-00048/downloading-library-catalogs.html\)](/support/article/KB-00048/downloading-library-catalogs.html)
-  [Moving Objects Without Restrictions \(/support/article/KB-00739/moving-objects-without-restrictions.html\)](/support/article/KB-00739/moving-objects-without-restrictions.html)