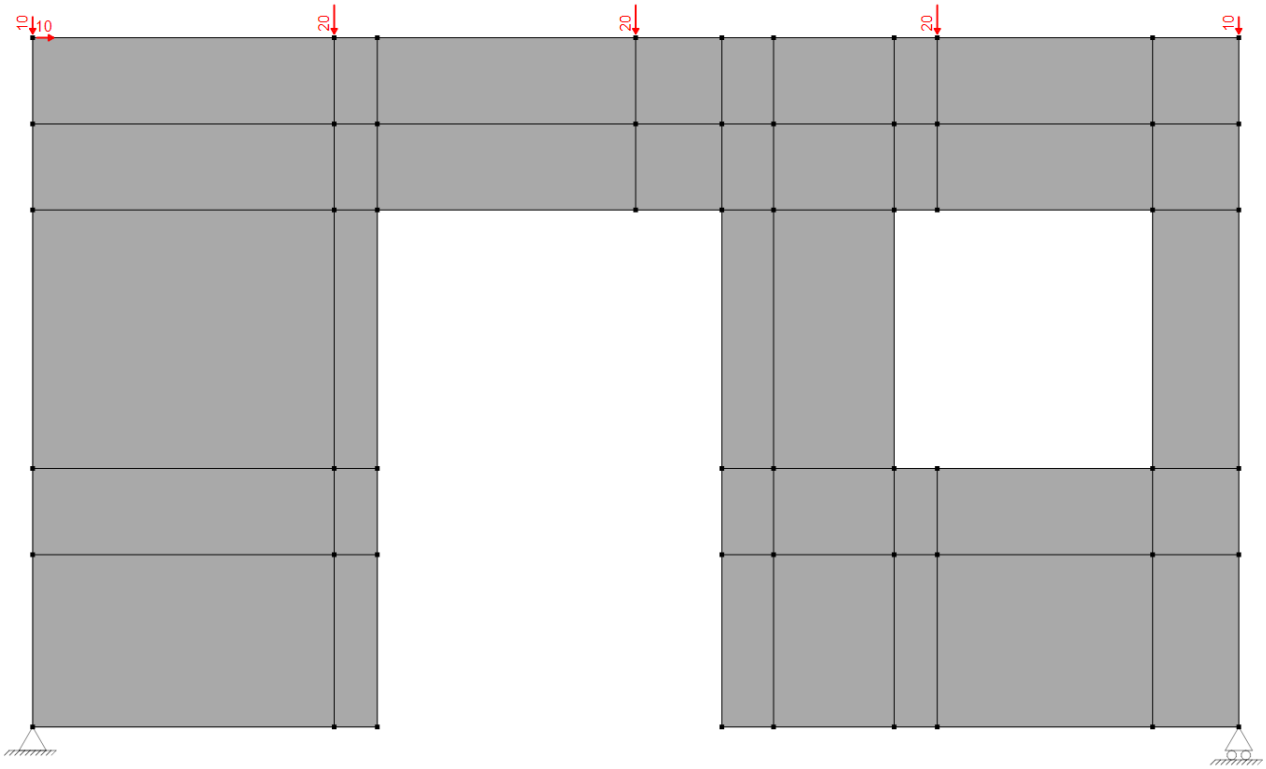
PolyStringer

An Optimal Plastic Solution

Excel Example-Wall



Introduction

This is a simple example that will show how to use PolyStringer API to create a wall with openings, loads and node supports.

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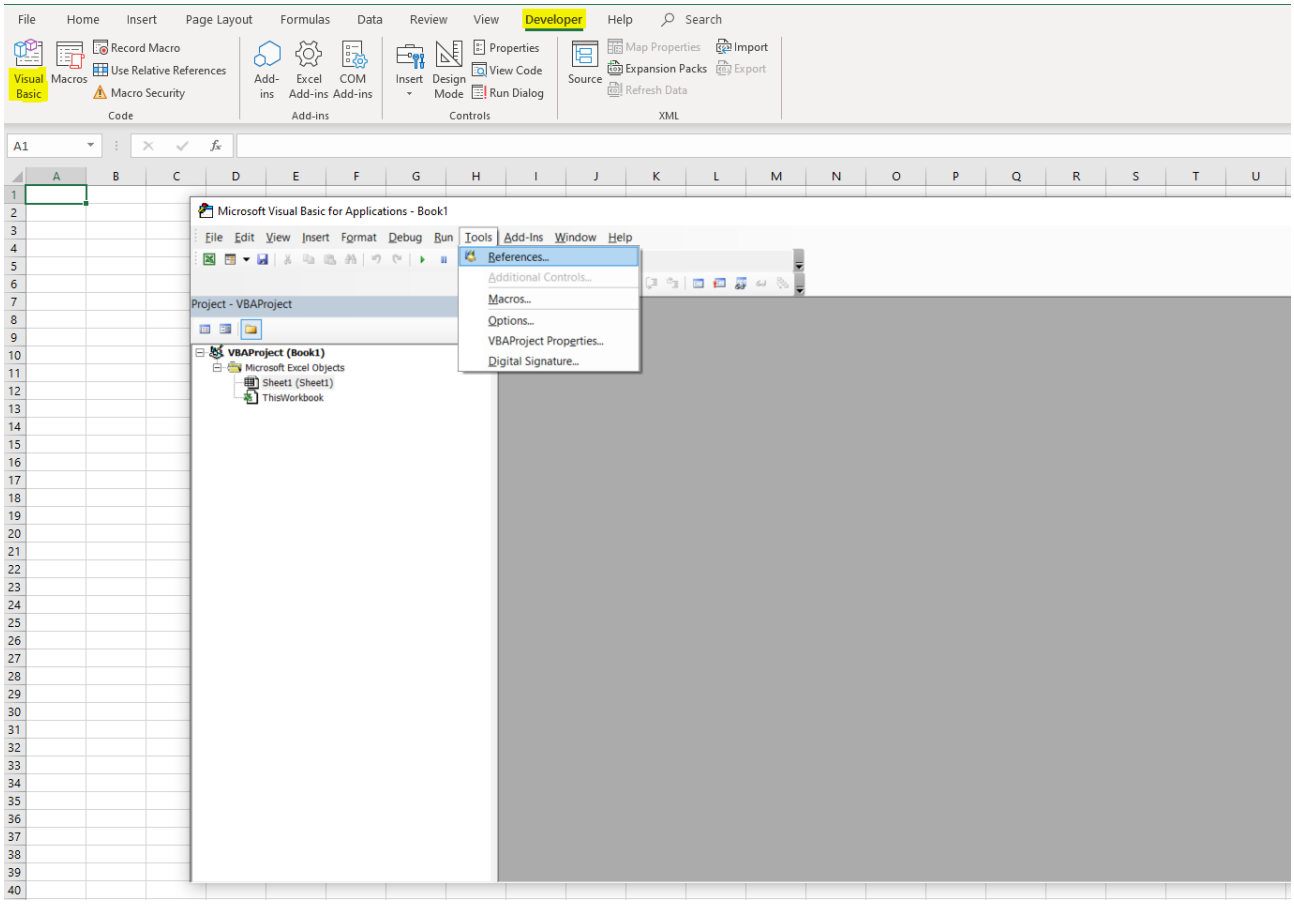
Excel Example Wall

1. Download and install PolyStringer from www.PolyStringer.com/Download
2. Make sure you have a PolyStringer API license or contact us at Contact@PolyStringer.com to inquire about license options.
3. For first time PolyStringerAPI user in Excel please follow the guide in section “Setup PolyStringer API for Excel VBA” in “PolyStringer API – Documentation” found on www.PolyStringer.com/PolyStringerAPI to setup your Excel application to use PolyStringerAPI.

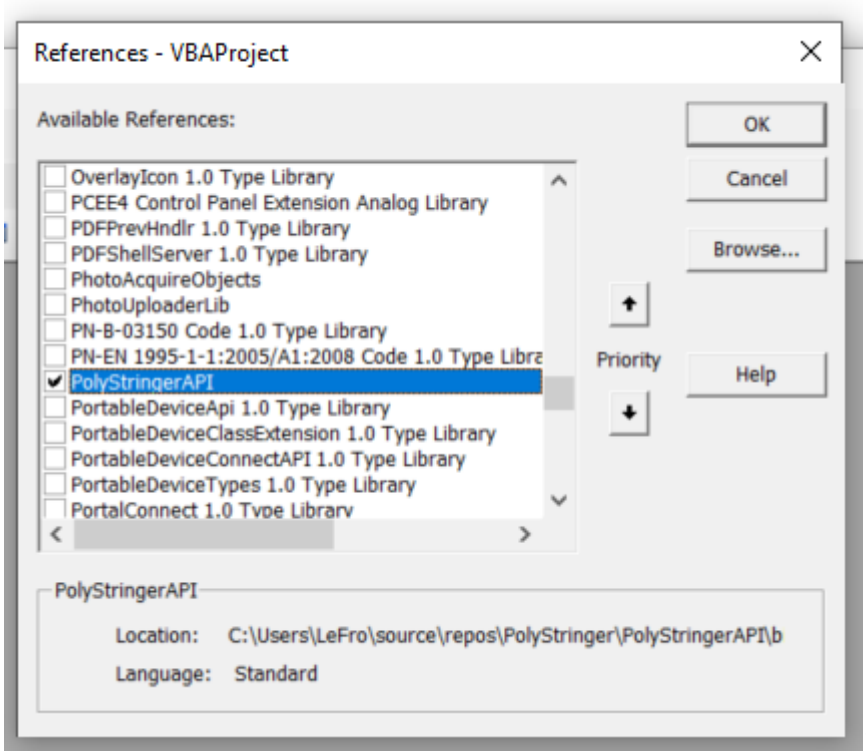
Use PolyStringer API with Excel VBA

1. Reference PolyStringer API in Excel

Open an Excel spreadsheet, go to the “developer” tab click on “Visual Basic” in the “Microsoft Visual Basic For Applications” form that appear, go to tools -> references

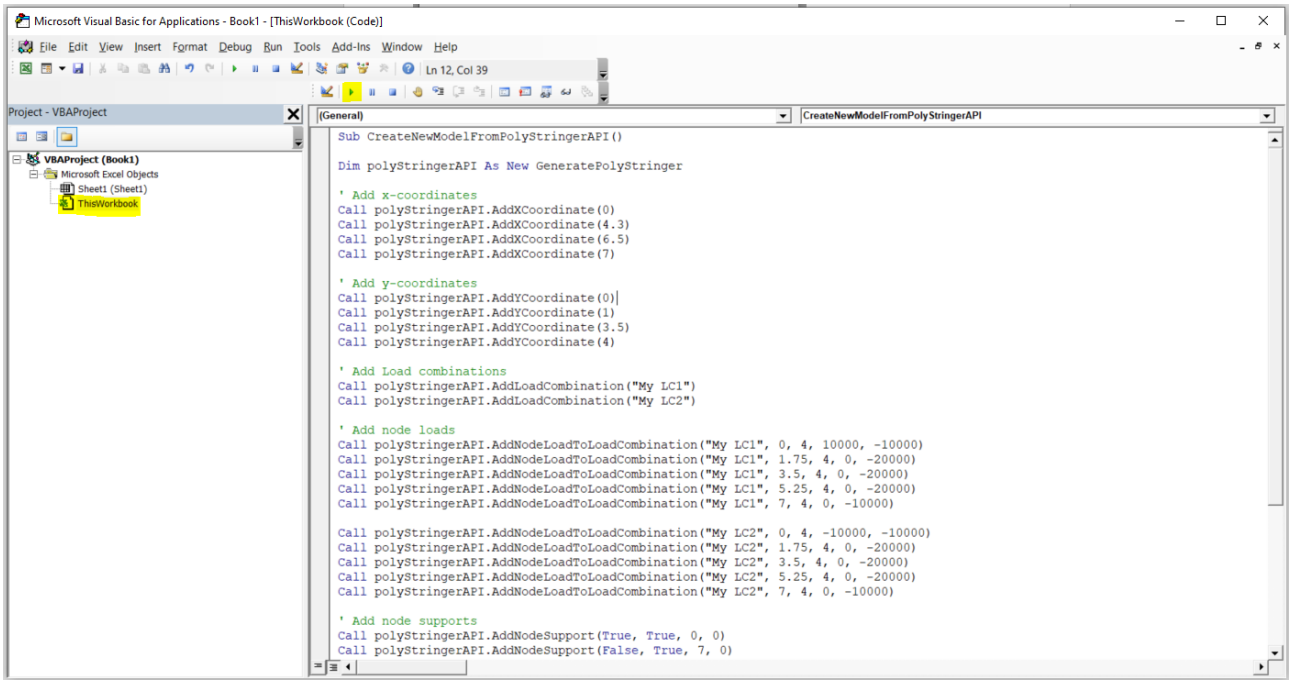


Find PolyStringerAPI in the list of “available References” check the tick box and click Ok.



2. Create PolyStringer model using PolyStringer API

Click on ”ThisWorkbook” and insert the following code into the window:

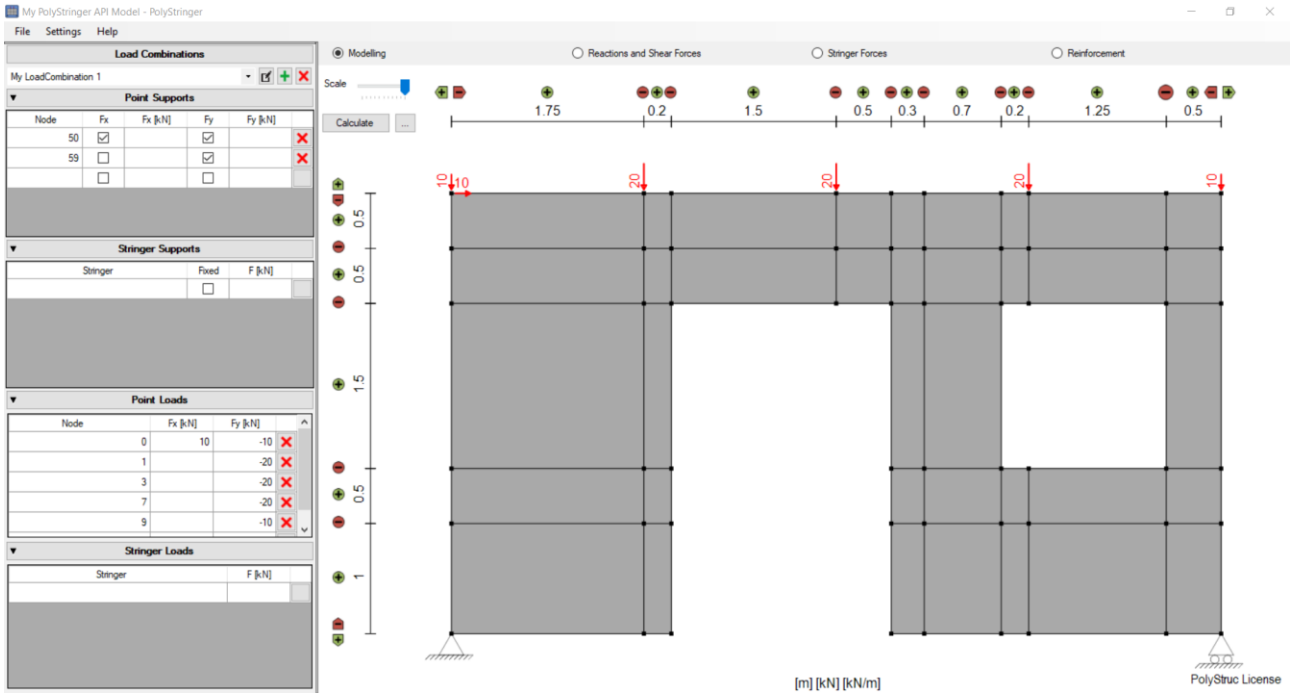


VBA Code Example:

```
Sub CreateNewModelFromPolyStringerAPI()

    Dim polyStringerAPI As New PolyStringerModel

    ' Add x-coordinates
    Call polyStringerAPI.AddXCoordinate(0)
    Call polyStringerAPI.AddXCoordinate(4.3)
    Call polyStringerAPI.AddXCoordinate(6.5)
    Call polyStringerAPI.AddXCoordinate(7)

    ' Add y-coordinates
    Call polyStringerAPI.AddYCoordinate(0)
    Call polyStringerAPI.AddYCoordinate(1)
    Call polyStringerAPI.AddYCoordinate(3.5)
    Call polyStringerAPI.AddYCoordinate(4)

    ' Add Load combinations
    Call polyStringerAPI.AddLoadCombination("My LC1")
    Call polyStringerAPI.AddLoadCombination("My LC2")

    ' Add node loads
    Call polyStringerAPI.AddNodeLoad("My LC1", 0, 4, 10000, -10000)
    Call polyStringerAPI.AddNodeLoad("My LC1", 1.75, 4, 0, -20000)
    Call polyStringerAPI.AddNodeLoad("My LC1", 3.5, 4, 0, -20000)
    Call polyStringerAPI.AddNodeLoad("My LC1", 5.25, 4, 0, -20000)
    Call polyStringerAPI.AddNodeLoad("My LC1", 7, 4, 0, -10000)

    Call polyStringerAPI.AddNodeLoad("My LC2", 0, 4, -10000, -10000)
    Call polyStringerAPI.AddNodeLoad("My LC2", 1.75, 4, 0, -20000)
    Call polyStringerAPI.AddNodeLoad("My LC2", 3.5, 4, 0, -20000)
    Call polyStringerAPI.AddNodeLoad("My LC2", 5.25, 4, 0, -20000)
    Call polyStringerAPI.AddNodeLoad("My LC2", 7, 4, 0, -10000)

    ' Add node supports
    Call polyStringerAPI.AddNodeSupport(True, True, 0, 0)
    Call polyStringerAPI.AddNodeSupport(False, True, 7, 0)

    ' Add opening
    Call polyStringerAPI.AddOpening(True, 2, 4, 0, 3)
    Call polyStringerAPI.AddOpening(True, 5, 6.5, 1.5, 3)

    ' Remove bottom stringer at opening
    Call polyStringerAPI.AddInactiveStringer(2, 4, 0, 0)

    ' Open PolyStringer model
    Call polyStringerAPI.OpenModel

End Sub
```

3. Run VBA

Press F5 to run the code. A dialog box will appear asking you to save the PolyStringer API file. Save the file with some name at your preferred location and PolyStringer will then open the created model. You can then continue working on the created model directly in PolyStringer.


My PolyStringer API Model - PolyStringer
File
Settings
Help
Load Combinations
My LoadCombination 1
Point Supports
Node
Fx
Fx [kN]
Fy
Fy [kN]
50
59
Stringer Supports
Stringer
Fixed
F [kN]
Point Loads
Node
Fx [kN]
Fy [kN]
0
10
-10
1
-20
3
-20
7
-20
9
-10
Stringer Loads
Stringer
F [kN]
Modelling
Reactions and Shear Forces
Stringer Forces
Reinforcement
Scale
Calculate
1.75
0.2
1.5
0.5
0.3
0.7
0.2
1.25
0.5
0.5
0.5
1.5
0.5
1
[m] [kN] [kN/m]
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