ภาคผนวก

Source Code ของโปรแกรมที่ได้ทำการพัฒนาขึ้น

1. คาน

Source_Code_Userform1.frm

```
Private Sub CommandButton1_Click()
UserForm1.hide
Load select_span
select_span.Show
End Sub
Private Sub CommandButton2_Click()
'UserForm1.hide
Load span1
span1.Show
Call span_1
End Sub
Private Sub OptionButton1_Click()
UserForm1.Spreadsheet1.Worksheets("1-span").Cells(1, 1) =
"Fixed"
End Sub
Private Sub OptionButton2_Click()
UserForm1.Spreadsheet1.Worksheets("1-span").Cells(1, 1) =
"Hinge"
End Sub
Private Sub OptionButton3_Click()
UserForm1.Spreadsheet1.Worksheets("1-span").Cells(1, 1) =
"Free"
End Sub
Private Sub OptionButton4_Click()
UserForm1.Spreadsheet1.Worksheets("1-span").Cells(1, 5) =
"Fixed"
End Sub
Private Sub OptionButton5_Click()
UserForm1.Spreadsheet1.Worksheets("1-span").Cells(1, 5) =
"Hinge"
End Sub
Private Sub OptionButton6_Click()
UserForm1.Spreadsheet1.Worksheets("1-span").Cells(1, 5) =
"Free"
End Sub
Private Sub UserForm_Click()
End Sub
```

Source_Code_span1.frm

```
Private Sub ComboBox1_Change()
Call span
End Sub
Private Sub CommandButton1_Click()
'Create  Variable----------------------------------------------
Ba1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(3, 2))
/ 100
Ha1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(4, 2))
/ 100
Bb1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(3, 5))
/ 100
Hb1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(4, 5))
/ 100
Bc1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(3, 8))
/ 100
Hc1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(4, 8))
/ 100
ca1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(6, 2)) /
100
cb1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(6, 5)) /
100
cc1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(6, 8)) /
100
Spa1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(53,
2)) / 100
Spb1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(53,
5)) / 100
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Spc1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(53,
8)) / 100
Lspan1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(5,
2))
pa1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(25, 2))
pa2 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(24, 2))
pa3 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(23, 2))
pa4 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(20, 2))
pa5 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(21, 2))
pa6 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(22, 2))
pb1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(25,
5))
pb2 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(24,
5))
pb3 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(23,
5))
pb4 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(20,
5))
pb5 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(21,
5))
pb6 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(22,
5))
pc1 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(25, 8))
pc2 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(24, 8))
pc3 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(23, 8))
pc4 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(20, 8))
pc5 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(21, 8))
pc6 = (span1.Spreadsheet1.Worksheets("sheet1").Cells(22, 8))
'Section A-A
Dim i(1 To 18) As Double
'Bottom Low Bar
For i1 = 1 To pa1
If pa1 = 1 Then
Call AddSteel((Ha1 / 2) + Ba1 / 2, ca1 + 0.01)
Else
dx1 = (Ba1 - ca1 * 2 - 0.02 * pa1) / (pa1 - 1)
Call AddSteel((Ha1 / 2) + (ca1 + (2 * i1 - 1) * 0.01 + (i1 - 1) *
dx1), ca1 + 0.01)
End If
Next i1
'Bottom Middle Bar
For i2 = 1 To pa2
If pa2 = 1 Then
Call AddSteel((Ha1 / 2) + Ba1 / 2, ca1 + 0.01 + 0.025 + (2 *
0.01))
Else
dx2 = (Ba1 - ca1 * 2 - 0.02 * pa2) / (pa2 - 1)
Call AddSteel((Ha1 / 2) + (ca1 + (2 * i2 - 1) * 0.01 + (i2 - 1) *
dx2), ca1 + 0.01 + 0.025 + (2 * 0.01))
End If
Next i2
'Bottom Top Bar
For i3 = 1 To pa3
If pa3 = 1 Then
Call AddSteel((Ha1 / 2) + Ba1 / 2, ca1 + 0.025 + (2 * 0.01) +
(2 * 0.01) + 0.025 + 0.01)
Else
dx3 = (Ba1 - ca1 * 2 - 0.02 * pa3) / (pa3 - 1)
Call AddSteel((Ha1 / 2) + (ca1 + (2 * i3 - 1) * 0.01 + (i3 - 1) *
dx3), ca1 + 0.025 + (2 * 0.01) + (2 * 0.01) + 0.025 + 0.01)
End If
Next i3
'Top Top Bar
For i4 = 1 To pa4
If pa4 = 1 Then
Call AddSteel((Ha1 / 2) + Ba1 / 2, Ha1 - (ca1 + 0.01))
Else
dx4 = (Ba1 - ca1 * 2 - (0.01 * 2) * pa4) / (pa4 - 1)
Call AddSteel((Ha1 / 2) + (ca1 + (2 * i4 - 1) * 0.01 + (i4 - 1) *
dx4), Ha1 - (ca1 + 0.01))
End If
Next i4
Top Middle Bar
For i5 = 1 To pa5
If pa5 = 1 Then
Call AddSteel((Ha1 / 2) + Ba1 / 2, Ha1 - (ca1 + 0.01 + 0.025
+ (2 * 0.01)))
Else
dx5 = (Ba1 - ca1 * 2 - (0.01 * 2) * pa2) / (pa5 - 1)
Call AddSteel((Ha1 / 2) + (ca1 + (2 * i5 - 1) * 0.01 + (i5 - 1) *
dx5), Ha1 - (ca1 + 0.01 + 0.025 + (2 * 0.01)))
End If
Next i5
'Top Low Bar
For i6 = 1 To pa6
If pa6 = 1 Then
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Call AddSteel((Ha1 / 2) + Ba1 / 2, Ha1 - (ca1 + 0.025 + (2 *
0.01) + (2 * 0.01) + 0.025 + 0.01))
Else
dx6 = (Ba1 - ca1 * 2 - (0.01 * 2) * pa6) / (pa6 - 1)
Call AddSteel((Ha1 / 2) + (ca1 + (2 * i6 - 1) * 0.01 + (i6 - 1) *
dx6), Ha1 - (ca1 + 0.025 + (2 * 0.01) + (2 * 0.01) + 0.025 +
0.01))
End If
Next i6
'Section B-B
'Bottom Low Bar
For i7 = 1 To pb1
If pb1 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 / 2, cb1 + 0.01)
Else
dx7 = (Bb1 - cb1 * 2 - 0.02 * pb1) / (pb1 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 / 2 - (Bb1 / 2) + (cb1 + (2 *
i7 - 1) * 0.01 + (i7 - 1) * dx7), cb1 + 0.01)
End If
Next i7
'Bottom Middle Bar
For i8 = 1 To pb2
If pb2 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 / 2, cb1 + 0.01 + 0.025 + (2
* 0.01))
Else
dx8 = (Bb1 - cb1 * 2 - 0.02 * pb2) / (pb2 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 / 2 - (Bb1 / 2) + (cb1 + (2 *
i8 - 1) * 0.01 + (i8 - 1) * dx8), cb1 + 0.01 + 0.025 + (2 *
0.01))
End If
Next i8
'Bottom Top Bar
For i9 = 1 To pb3
If pb3 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 / 2, cb1 + 0.01 + 0.025 + (2
* 0.01) + 0.025 + (2 * 0.01))
Else
dx9 = (Bb1 - cb1 * 2 - 0.02 * pb3) / (pb3 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 / 2 - (Bb1 / 2) + (cb1 + (2 *
i9 - 1) * 0.01 + (i9 - 1) * dx9), cb1 + 0.01 + 0.025 + (2 * 0.01)
+ 0.025 + (2 * 0.01))
End If
Next i9
'Top Top Bar
For i10 = 1 To pb4
If pb4 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 / 2, Hb1 - (cb1 + 0.01))
Else
dx10 = (Bb1 - cb1 * 2 - 0.02 * pb4) / (pb4 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 / 2 - (Bb1 / 2) + (cb1 + (2 *
i10 - 1) * 0.01 + (i10 - 1) * dx10), Hb1 - (cb1 + 0.01))
End If
Next i10
'Top Middle Bar
For i11 = 1 To pb5
If pb5 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 / 2, Hb1 - (cb1 + 0.01 +
0.025 + (2 * 0.01)))
Else
dx11 = (Bb1 - cb1 * 2 - 0.02 * pb5) / (pb5 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 / 2 - (Bb1 / 2) + (cb1 + (2 *
i11 - 1) * 0.01 + (i11 - 1) * dx11), Hb1 - (cb1 + 0.01 + 0.025
+ (2 * 0.01)))
End If
Next i11
'Top Low Bar
For i12 = 1 To pb6
If pb6 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 / 2, Hb1 - (cb1 + 0.01 +
0.025 + (2 * 0.01) + 0.025 + (2 * 0.01)))
Else
dx12 = (Bb1 - cb1 * 2 - 0.02 * pb6) / (pb6 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 / 2 - (Bb1 / 2) + (cb1 + (2 *
i12 - 1) * 0.01 + (i12 - 1) * dx12), Hb1 - (cb1 + 0.01 + 0.025
+ (2 * 0.01) + 0.025 + (2 * 0.01)))
End If
Next i12
'Section C-C
'Bottom Low Bar
For i13 = 1 To pc1
If pc1 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 / 2, cc1 + 0.01)
Else
dx13 = (Bc1 - cc1 * 2 - 0.02 * pc1) / (pc1 - 1)
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Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 + (cc1 + (2 * i13 - 1)
* 0.01 + (i13 - 1) * dx13), cc1 + 0.01)
End If
Next i13
'Bottom Middle Bar
For i14 = 1 To pc2
If pc2 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 / 2, cc1 + 0.01 +
0.025 + (2 * 0.01))
Else
dx14 = (Bc1 - cc1 * 2 - 0.02 * pc2) / (pc2 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 + (cc1 + (2 * i14 - 1)
* 0.01 + (i14 - 1) * dx14), cc1 + 0.01 + 0.025 + (2 * 0.01))
End If
Next i14
'Bottom Top Bar
For i15 = 1 To pc3
If pc3 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 / 2, cc1 + 0.01 +
0.025 + (2 * 0.01) + 0.025 + (2 * 0.01))
Else
dx15 = (Bc1 - cc1 * 2 - 0.02 * pc3) / (pc3 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 + (cc1 + (2 * i15 - 1)
* 0.01 + (i15 - 1) * dx15), cc1 + 0.01 + 0.025 + (2 * 0.01) +
0.025 + (2 * 0.01))
End If
Next i15
For i16 = 1 To pc4
If pc4 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 / 2, Hc1 - (cc1 +
0.01))
Else
dx16 = (Bc1 - cc1 * 2 - 0.02 * pc4) / (pc4 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 + (cc1 + (2 * i16 - 1)
* 0.01 + (i16 - 1) * dx16), Hc1 - (cc1 + 0.01))
End If
Next i16
For i17 = 1 To pc5
If pc5 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 / 2, Hc1 - (cc1 + 0.01
+ 0.025 + (2 * 0.01)))
Else
dx17 = (Bc1 - cc1 * 2 - 0.02 * pc5) / (pc5 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 + (cc1 + (2 * i17 - 1)
* 0.01 + (i17 - 1) * dx17), Hc1 - (cc1 + 0.01 + 0.025 + (2 *
0.01)))
End If
Next i17
For i18 = 1 To pc6
If pc6 = 1 Then
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 / 2, Hc1 - (cc1 + 0.01
+ 0.025 + (2 * 0.01) + 0.025 + (2 * 0.01)))
Else
dx18 = (Bc1 - cc1 * 2 - 0.02 * pc6) / (pc6 - 1)
Call AddSteel((Ha1 / 2) + Lspan1 - Bc1 + (cc1 + (2 * i18 - 1)
* 0.01 + (i18 - 1) * dx18), Hc1 - (cc1 + 0.01 + 0.025 + (2 *
0.01) + 0.025 + (2 * 0.01)))
End If
Next i18
Call Beam1
Call texttop1
Call textbottom1
Call textsec1
Call peer1
Call dimt1A1
Call dimt1B1
Call dimt1C1
Call AddSecAA1(Ba1, Ha1)
Call PeerAA1(Ba1, Ha1, ca1)
Call AddSecBB1(Ha1, Bb1, Hb1, Lspan1)
Call PeerBB1(Ha1, Bb1, Hb1, cb1, Lspan1)
Call AddSecCC1(Ha1, Bc1, Hc1, Lspan1)
Call PeerCC1(Ha1, Bc1, Hc1, cc1, Lspan1)
End
End Sub
Private Sub CommandButton2_Click()
span1.hide
Load UserForm1
'UserForm1.Show
End Sub
Private Sub UserForm_Click()
'Call item
End Sub
```

Source_Code_Add_Section_Span1.frm

```
Sub AddSecAA1(Ba1, Ha1)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(Ha1 / 2, 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(Ha1 / 2 + Ba1, 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(Ha1 / 2 + Ba1, Ha1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(Ha1 / 2, Ha1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(Ha1 / 2, 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub PeerAA1(Ba1, Ha1, ca1)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint((Ha1 / 2) + ca1, ca1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) - ca1 + Ba1, ca1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) - ca1 + Ba1, Ha1 - ca1,
0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(Ha1 / 2 + ca1, Ha1 - ca1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(Ha1 / 2 + ca1, ca1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddSecBB1(Ha1, Bb1, Hb1, Lspan1)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1 / 2) - (Bb1 /
2), 0, 0)
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```
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + Bb1 + (Lspan1 / 2) -
(Bb1 / 2), 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + Bb1 + (Lspan1 / 2) -
(Bb1 / 2), Hb1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1 / 2) - (Bb1 /
2), Hb1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1 / 2) - (Bb1 /
2), 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub PeerBB1(Ha1, Bb1, Hb1, cb1, Lspan1)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint((Ha1 / 2) + cb1 + (Lspan1 / 2) -
(Bb1 / 2), cb1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) - cb1 + Bb1 + (Lspan1
/ 2) - (Bb1 / 2), cb1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) - cb1 + Bb1 + (Lspan1
/ 2) - (Bb1 / 2), Hb1 - cb1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + cb1 + (Lspan1 / 2) -
(Bb1 / 2), Hb1 - cb1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + cb1 + (Lspan1 / 2) -
(Bb1 / 2), cb1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddSecCC1(Ha1, Bc1, Hc1, Lspan1)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1) - Bc1, 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
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myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1), 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1), Hc1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1) - Bc1, Hc1,
0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + (Lspan1) - Bc1, 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub PeerCC1(Ha1, Bc1, Hc1, cc1, Lspan1)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint((Ha1 / 2) + cc1 + Lspan1 - Bc1,
cc1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) - cc1 + Lspan1, cc1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) - cc1 + Lspan1, Hc1 -
cc1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + cc1 + Lspan1 - Bc1,
Hc1 - cc1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((Ha1 / 2) + cc1 + Lspan1 - Bc1,
cc1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

2. เสา

Source_Code_Column.frm

```
Dim B As Double
Dim D As String
Dim P As String
Dim Ps As String
Dim S1 As Integer
Dim S2 As Integer
Dim S3 As Integer
Dim S4 As Integer
Dim S5 As Integer
Dim Sn As String
Dim P2 As Integer
Private Sub Op1_Click()
S1 = 2
S2 = 0
S3 = 2
S4 = 0
Sn = 4
P2 = 0
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 2
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 2
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 4
End Sub
Private Sub Op2_Click()
S1 = 3
S2 = 0
S3 = 3
S4 = 0
Sn = 6
P2 = 0
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) = 6
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 3
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 2
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 6
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 4
End Sub
Private Sub Op3_Click()
S1 = 2
S2 = 2
S3 = 2
S4 = 0
Sn = 6
P2 = 0
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) = 6
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 2
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 3
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 6
End Sub
Private Sub Op4_Click()
S1 = 3
S2 = 2
S3 = 3
S4 = 0
Sn = 8
P2 = 1
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) = 8
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 3
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 3
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 6
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 6
End Sub
Private Sub Op5_Click()
S1 = 4
S2 = 0
S3 = 4
S4 = 0
Sn = 8
P2 = 2
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) = 8
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 8
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 8
End Sub
Private Sub Op6_Click()
S1 = 2
S2 = 0
S3 = 2
```

```
S4 = 2
S5 = 0
Sn = 8
P2 = 3
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) = 8
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 8
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 8
End Sub
Private Sub Op7_Click()
S1 = 2
S2 = 0
S3 = 2
S4 = 2
S5 = 2
Sn = 12
P2 = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) = 12
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 4
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 12
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 12
End Sub
Private Sub Op8_Click()
S1 = 3
S2 = 2
S3 = 3
S4 = 2
S5 = 2
Sn = 16
P2 = 5
Column.Spreadsheet1.Worksheets("sheet1").Cells(14, 2) =16
Column.Spreadsheet1.Worksheets("sheet1").Cells(5, 8) = 5
Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 8) = 5
Column.Spreadsheet1.Worksheets("sheet1").Cells(7, 8) = 14
Column.Spreadsheet1.Worksheets("sheet1").Cells(8, 8) = 14
End Sub
Private Sub CommandButton1_Click()
If (Column.Spreadsheet1.Worksheets("sheet1").Cells(12, 2))
= "กลม" Then
Sp = " RB"
Else
Sp = " DB"
End If
If (Column.Spreadsheet1.Worksheets("sheet1").Cells(2, 2)) =
"SR24" Then
D1 = " RB"
Else
D1 = " DB"
End If
tx = Column.Spreadsheet1.Worksheets("sheet1").Cells(1, 2)
B = Column.Spreadsheet1.Worksheets("sheet1").Cells(4, 2)
DD1 = Column.Spreadsheet1.Worksheets("sheet1").Cells(10,
2)
DD2 = Column.Spreadsheet1.Worksheets("sheet1").Cells(11,
2)
c = Column.Spreadsheet1.Worksheets("sheet1").Cells(6, 2)
'Colum----------
Call AddColumn(B)
If P2 = 1 Then
Call AddPColumn2(B, c)
End If
If P2 = 2 Then
Call AddPColumn3(B, c)
End If
If P2 = 3 Then
Call AddPColumn4(B, c)
End If
If P2 = 4 Then
Call AddPColumn3(B, c)
Call AddPColumn4(B, c)
End If
If P2 = 5 Then
Call AddPColumn2(B, c)
Call AddPColumn3(B, c)
Call AddPColumn4(B, c)
End If
'steel----------
For i = 1 To S1
dx = (B - c * 2 - 0.02 * S1) / (S1 - 1)
Call AddSteel(c + (2 * i - 1) * 0.01 + (i - 1) * dx, B - c - 0.01)
Next i
For i = 1 To S2
dx = (B - c * 2 - 0.02 * S2) / (S2 - 1)
Call AddSteel(c + (2 * i - 1) * 0.01 + (i - 1) * dx, B / 2)
```

```
Next i
For i = 1 To S3
dx = (B - c * 2 - 0.02 * S3) / (S3 - 1)
Call AddSteel(c + (2 * i - 1) * 0.01 + (i - 1) * dx, c + 0.01)
Next i
For i = 1 To S4
dx = (B - c * 2 - 0.02 * S4) / (S4 - 1)
Call AddSteel(c + (2 * i - 1) * 0.01 + (i - 1) * dx, B / 3 + 0.01)
Call AddSteel(c + (2 * i - 1) * 0.01 + (i - 1) * dx, (2 * B / 3) -
0.01)
Next i
For i = 1 To S5
dx = (B - c * 2 - 0.02 * S5) / (S5 - 1)
Call AddSteel(B / 3 + 0.01, (c + (2 * i - 1) * 0.01 + (i - 1) *
dx))
Call AddSteel((2 * B / 3) - 0.01, c + (2 * i - 1) * 0.01 + (i - 1)
* dx)
Next i
'ETC.---------------------------------
Call Example_AddText_un3(B, tx)
Call AddPColumn1(B, c)
Call Example_AddText_un1(Sn, DD1, B, D1)
Call Example_AddText_un2(Sp, B, DD2)
Call Example_AddDimup(B, H)
Call Example_AddDimside(B, H)
End
End Sub
Private Sub CommandButton2_Click()
Column.hide
Load Select_Structure
Select_Structure.Show
End Sub
```

Source_Code_Add_Steel.bas

```
Sub AddSteel(x0, y0)
Dim icadDoc As IntelliCAD.Document
Dim icadCircle As IntelliCAD.Circle
Dim cenPt As IntelliCAD.Point
Set icadDoc = ActiveDocument
Set cenPt = Library.CreatePoint(x0, y0)
Set icadCircle = icadDoc.ModelSpace.AddCircle(cenPt, 0.01)
icadCircle.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_PColumn1.bas

```
Sub AddPColumn1(B, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(c, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c, B - c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(c, B - c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
```

```
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_PColumn2.bas

```
Sub AddPColumn2(B, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(B / 2, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(c, B / 2, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 2, B - c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c, B / 2, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_PColumn3.bas

```
Sub AddPColumn3(B, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(B / 3, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 3, B - c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(2 * B / 3, B - c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(2 * B / 3, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 3, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_PColumn4.bas

```
Sub AddPColumn4(B, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(c, B / 3, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(c, 2 * B / 3, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c, 2 * B / 3, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c, B / 3, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(c, B / 3, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Text_Column.bas

```
Sub Example_AddText_un1(Sn, DD1, B, D1, H)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.1, 2 * H / 3)
height = 0.04
myText = Sn & D1 & " " & DD1 & " +"
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
Sub Example_AddText_un2(Sp, B, DD2, H)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.1, H / 3)
height = 0.04
myText = "Stir " & Sp & " " & DD2 & " @ " &
(Column.Spreadsheet1.Worksheets("sheet1").Cells(54, 2) /
100) & " m."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
Sub Example_AddText_un3(B, tx)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint((B / 2) - 0.05, -0.1)
height = 0.04
myText = tx
```

```
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
```

Source_Code_dimup.bas

```
Sub Example_AddDimup(B, H)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B / 2 - 0.04, B + 0.16)
height = 0.04
myText = B & "  m."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
'-------------------------------------------------------------------
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(0, B + 0.08)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(0, B + 0.12)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, B + 0.1)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, B + 0.12)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, B + 0.08)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_dimside.bas

```
Sub Example_AddDimside(B, H)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(-0.3, B / 2)
height = 0.04
myText = H & "  m."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
'-------------------------------------------------------------------
Dim myDoc As IntelliCAD.Document
```

```
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(-0.08, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.12, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1, B)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.08, B)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.12, B)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

3. ฐานราก

Source_Code_DesignFooting.frm

```
Private Sub CommandButton1_Click()
DesignFooting.hide
Load Select_Structure
Select_Structure.Show
End Sub
Private Sub CommandButton2_Click()
DesignFooting.hide
Dim TCL As String
Dim TCB As String
If (DesignFooting.Spreadsheet1.Worksheets("sheet1").
Cells(2, 4)) = "SR24" Then
TCL = " RB"
TCB = " RB"
Else
TCL = " DB"
TCB = " DB"
End If
'create variable-----------------------------------
B =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(7, 4)
FL =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(8, 4)
H =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(9, 4)
Hsb=
 DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(11,
4)
Bc =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(5, 4)
CL
=DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(6,
4)
Df=DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(
13, 4)
Deep=
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(13,
4)
n2 =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(21,
5)
n1 =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(21,
4)
c =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(10,
4)
FootingB
=DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(7,
4)
FootingL =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(8, 4)
FootingH =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(9, 4)
Dleancon =
(DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(14,
4)) / 100
Dsand =
(DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(15,
4)) / 100
BDia =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(20,
4)
BNum =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(21,
5)
LDia =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(20,
5)
longNum =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(21,
4)
NameF =
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(1, 4)
'long steel ----------------------------------------
Dim i As Double
For i = 1 To n1
If n1 = 1 Then
Call AddSteel(B / 2, c + 0.01)
Else
dx1 = (B - c * 2 - 0.02 * n1) / (n1 - 1)
```

```
Call AddSteel(c + (2 * i - 1) * 0.01 + (i - 1) * dx1, c + 0.01)
End If
Next i
'เหล็กรัดรอบ1----------
If Hsb > 0 And Hsb <> H Then
Call AddSteel(c + 0.01, Hsb + c - 0.01)
Call AddSteel(B - c - 0.01, Hsb + c - 0.01)
ElseIf Hsb = H Then
Hsb = H - (2 * c)
Call AddSteel(c + 0.01, Hsb + c - 0.01)
Call AddSteel(B - c - 0.01, Hsb + c - 0.01)
Else: Hsb = 0
End If
'เหล็กรัดรอบ----------
If Hsb = H Then
Hsb = H - (2 * c)
Else: Hsb = Hsb
End If
If Hsb > 0 Then
Call AddLine5(B, c, Hsb)
Call AddTextVSteel(B)
Else
End If
'topview steel 1----------
Dim j As Double
For j = 1 To 3
If n1 = 1 Then
Call AddSteelTop(B / 2, c + Df + 0.75, B / 2, FL + Df + 0.75 -
c)
Else
dx1 = (B - c * 2 - 0.02 * n1) / (n1 - 1)
Call AddSteelTop(c + (2 * j - 1) * 0.01 + (j - 1) * dx1, c + Df
+ 0.75, c + (2 * j - 1) * 0.01 + (j - 1) * dx1, FL + Df + 0.75 -
c)
End If
Next j
'topview steel 2----------
Dim k As Double
 For k = 1 To 3
If n2 = 1 Then
Call AddSteelTop(c, Df + 0.75 + (FL / 2), B - c, Df + 0.75 +
(FL / 2))
Else
dx2 = (FL - c * 2 - 0.02 * n2) / (n2 - 1)
Call AddSteelTop(c, (Df + 0.75) + c + (2 * k - 1) * 0.01 + (k -
1) * dx2, B - c, (Df + 0.75) + c + (2 * k - 1) * 0.01 + (k - 1) *
dx2)
End If
Next k
'line----------
Call AddLine1(B, c, Df)
Call AddLine2(B, Df, FL, c)
Call AddLine3(B, c)
Call AddLine4(B, c)
Call AddLine6(B, Dleancon)
Call AddLine7(B, Dleancon, Dsand)
'footing----------
Call Sideview(B, H, Df, Bc)
Call Add_SteelB(B, Hsb, c)
Call Topview(B, Df, FL)
Call AddLine(B, Bc, Df)
Call AddFootColumn(B, Bc, FL, Df, CL)
Call AddSand(B, Dsand, Dleancon)
Call AddLeanConcrete(B, Dleancon)
'text----------
Call AddNameF(NameF, B)
Call AddTextLongSteel(TCL, B, H, longNum, LDia)
Call AddTextBSteel(TCB, B, H, BNum, BDia)
Call AddTextLongSteelTop(TCL, B, Df, FL, longNum, LDia)
Call AddTextBSteelTop(TCB, B, Df, BNum, BDia, FL)
Call AddTextLongTop(Df, FL, FootingL)
Call AddTextBTop(Df, B, FL, FootingB)
Call AddDimHigh(H, FootingH)
Call AddDimDf(H, FootingH, Df, Deep)
Call AddTextSand(B)
Call AddTextLeanCon(B)
End
End Sub
```

Source_Code_Add_Sideview.bas

```
Sub Sideview(B, H, Df, Bc)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
```

```
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(B / 2 - Bc / 2, Df, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 2 - Bc / 2, H, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(0, H, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(0, 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, 0, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, H, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 2 + Bc / 2, H, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 2 + Bc / 2, Df, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddLeanConcrete(B, Dleancon)
Dim myDoc As IntelliCAD.Document
Dim myLine As IntelliCAD.Line
Set myDoc = Application.ActiveDocument
Set myLine =
myDoc.ModelSpace.AddLine(Library.CreatePoint(0, -
Dleancon), Library.CreatePoint(B, -Dleancon))
myLine.Update
End Sub
Sub AddSand(B, Dsand, Dleancon)
Dim myDoc As IntelliCAD.Document
Dim myLine As IntelliCAD.Line
Set myDoc = Application.ActiveDocument
Set myLine =
myDoc.ModelSpace.AddLine(Library.CreatePoint(0, -Dsand -
Dleancon), Library.CreatePoint(B, -Dsand - Dleancon))
myLine.Update
End Sub
```

Source_Code_Add_Topview.bas

```
Sub Topview(B, Df, FL)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(0, Df + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(0, Df + FL + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
```

```
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, Df + FL + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, Df + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(0, Df + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_Steel.bas

```
Sub AddSteel(x0, y0)
Dim icadDoc As IntelliCAD.Document
Dim icadCircle As IntelliCAD.Circle
Dim cenPt As IntelliCAD.Point
Set icadDoc = ActiveDocument
Set cenPt = Library.CreatePoint(x0, y0)
Set icadCircle = icadDoc.ModelSpace.AddCircle(cenPt, 0.01)
icadCircle.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_Steel_B.bas

```
Sub Add_SteelB(B, Hsb, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(c, Hsb + c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(c, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c, Hsb + c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_Line.bas

```
Sub AddLine(B, Bc, Df)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint((B / 2) - ((Bc / 2) + 0.2), Df, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
```

```
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) - (Bc / 8), Df, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) - (Bc / 16), Df - 0.2, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) + (Bc / 16), Df + 0.2, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) + (Bc / 8), Df, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) + ((Bc / 2) + 0.2), Df, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Line.bas

```
Sub AddLine1(B, c, Df)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(c + 0.01, Df + c + 0.75 + 0.1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(3 * c, Df + c + 0.75 + 0.1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(3 * c, Df + 0.525 + 0.01, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 2, Df + 0.525 + 0.01, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddLine2(B, Df, FL, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(B + 0.48, Df + 0.75 + FL / 2 +
0.025, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(3 * B / 4, Df + 0.75 + FL / 2 +
0.025, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
```

```
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(3 * B / 4, Df + 0.75 + c + 0.01,
0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddLine3(B, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(B + 0.48, 0.25 + 0.025)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(((B + 0.48) + (B - c - 0.01)) / 2,
0.25 + 0.025)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B - c - 0.01, c + 0.01, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddLine4(B, c)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(B + 0.48, 0.5 + 0.025, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(((B / 2 + Bc / 4) + (B + 0.48)) /
2, 0.5 + 0.025, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B / 2 + Bc / 4, c, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddLine5(B, c, Hsb)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(B + 0.48, 0.75 + 0.025)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(((B + 0.48) + (B - c - 0.01)) / 2,
0.75 + 0.025)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
```

```
Set pt = Library.CreatePoint(B - c - 0.01, c - 0.01 + Hsb, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddLine6(B, Dleancon)
Dim myDoc As IntelliCAD.Document
Dim myLine As IntelliCAD.Line
Set myDoc = Application.ActiveDocument
Set myLine =
myDoc.ModelSpace.AddLine(Library.CreatePoint(B - 0.05, -
(Dleancon) / 2), Library.CreatePoint(B + 0.48, 0 + 0.025))
myLine.Update
End Sub
Sub AddLine7(B, Dleancon, Dsand)
Dim myDoc As IntelliCAD.Document
Dim myLine As IntelliCAD.Line
Set myDoc = Application.ActiveDocument
Set myLine =
myDoc.ModelSpace.AddLine(Library.CreatePoint(B - 0.05, -
(Dleancon + (Dsand / 2))), Library.CreatePoint(B + 0.48, -
0.25 + 0.025))
myLine.Update
End Sub
```

Source_Code_Add_Topview_steel.bas

```
Sub AddSteelTop(x1, y1, x2, y2)
Dim myDoc As IntelliCAD.Document
Dim myLine As IntelliCAD.Line
Set myDoc = Application.ActiveDocument
Set myLine =
myDoc.ModelSpace.AddLine(Library.CreatePoint(x1, y1),
Library.CreatePoint(x2, y2))
myLine.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_Text_Steel2_lean_sand.bas

```
Sub AddTextVSteel(B)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.5, 0.75)
height = 0.05
myText = "เหล็กรัดรอบ " &
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(12,
4)
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
Sub AddTextLeanCon(B)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.5, 0)
height = 0.05
myText = "คอนกรีตหยาบ" &
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(14,
4) & " cm."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
Sub AddTextSand(B)
Dim icadDoc As IntelliCAD.Document
```

```
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.5, -0.25)
height = 0.05
myText = "ทราย่ปรับระดับ" &
DesignFooting.Spreadsheet1.Worksheets("sheet1").Cells(15,
4) & " cm."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
```

Source_Code_Add_Text_NameFooting.bas

```
Sub AddNameF(NameF, B)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B / 2, -0.5)
height = 0.1
myText = NameF
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
```

Source_Code_Add_Text_LongSteel_Top.bas

```
Sub AddTextLongSteelTop(TCL, B, Df, FL, longNum, LDia)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B / 2 + 0.02, Df + 0.5)
height = 0.05
myText = "เหล็กตามยาว " & longNum & TCL & " " & LDia
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
```

Source_Code_Add_Text_LongSteel.bas

```
Sub AddTextLongSteel(TCL, B, H, longNum, LDia)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.5, 0.25)
height = 0.05
myText = "เหล็กตามยาว " & longNum & TCL & " " & LDia
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
```

Source_Code_Add_Text_Long_Top.bas

```
Sub AddTextLongTop(Df, FL, FootingL)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
```

```
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(-0.5, Df + 0.75 + (FL / 2))
height = 0.05
myText = FootingL & "  m."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
'-------------------------------------------------------------
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(-0.12 - 0.1, Df + 0.75)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.08 - 0.1, Df + 0.75)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1 - 0.1, Df + 0.75)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1 - 0.1, Df + 0.75 + FL)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.08 - 0.1, Df + 0.75 + FL)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.12 - 0.1, Df + 0.75 + FL)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_Text_BSteel_Top.bas

```
Sub AddTextBSteelTop(TCB, B, Df, BNum, BDia, FL)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.5, Df + 0.75 + FL / 2)
height = 0.05
myText = "เหล็กตามขวาง  " & BNum & TCB & " " & BDia
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
```

Source_Code_Add_Text_BSteel.bas

```
Sub AddTextBSteel(TCB, B, H, BNum, BDia)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B + 0.5, 0.5)
height = 0.05
myText = "เหล็กตามขวาง " & BNum & TCB & " " & BDia
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
```

```
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
End Sub
```

Source_Code_Add_Text_B_Top.bas

```
Sub AddTextBTop(Df, B, FL, FootingB)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(B / 2, Df + 0.75 + FL + 0.25)
height = 0.05
myText = FootingB & "  m."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
'-------------------------------------------------------------
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(0, Df + 0.75 + FL + 0.08 + 0.1)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(0, Df + 0.75 + FL + 0.12 + 0.1)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, Df + 0.75 + FL + 0.1 + 0.1)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, Df + 0.75 + FL + 0.12 + 0.1)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(B, Df + 0.75 + FL + 0.08 + 0.1)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_Footing_Column.bas

```
Sub AddFootColumn(B, Bc, FL, Df, CL)
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint((B / 2) - (Bc / 2), Df + (FL / 2) -
(CL / 2) + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) + (Bc / 2), Df + (FL / 2) -
(CL / 2) + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
```

```
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) + (Bc / 2), Df + (FL / 2) +
(CL / 2) + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) - (Bc / 2), Df + (FL / 2) +
(CL / 2) + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint((B / 2) - (Bc / 2), Df + (FL / 2) -
(CL / 2) + 0.75, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```

Source_Code_Add_Dim_Footing.bas

```
Sub AddDimDf(H, FootingH, Df, Deep)
Dim icadDoc As IntelliCAD.Document
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(-0.5, H + (Df - H) / 2)
height = 0.05
myText = (Deep - FootingH) & "  m."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
'-------------------------------------------------------------------
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(-0.12 - 0.1, H)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.08 - 0.1, H)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1 - 0.1, H)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1 - 0.1, Df)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.08 - 0.1, Df)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.12 - 0.1, Df)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
Sub AddDimHigh(H, FootingH)
Dim icadDoc As IntelliCAD.Document
```

```
Dim myText As String
Dim mtextObj As IntelliCAD.Text
Dim insPt As IntelliCAD.Point
Dim height As Double
Set icadDoc = ActiveDocument
Set insPt = Library.CreatePoint(-0.5, H / 2)
height = 0.05
myText = FootingH & "  m."
Set mtextObj = icadDoc.ModelSpace.AddText(myText, insPt,
height)
mtextObj.Update
ThisDocument.ActiveViewport.ZoomCenter insPt, 20
'-------------------------------------------------------------
Dim myDoc As IntelliCAD.Document
Dim myPline As Polyline
Dim myPoints As Points
Dim pt As Point
Set myDoc = ActiveDocument
Set myPoints = Library.CreatePoints
Set pt = Library.CreatePoint(-0.12 - 0.1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.08 - 0.1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1 - 0.1, 0)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.1 - 0.1, H)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.08 - 0.1, H)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set pt = Library.CreatePoint(-0.12 - 0.1, H)
myPoints.Add
myPoints(myPoints.Count).x = pt.x
myPoints(myPoints.Count).y = pt.y
myPoints(myPoints.Count).z = pt.z
Set myPline =
ThisDocument.ModelSpace.AddPolyline(myPoints)
myPline.Update
ThisDocument.ActiveViewport.ZoomExtents
End Sub
```