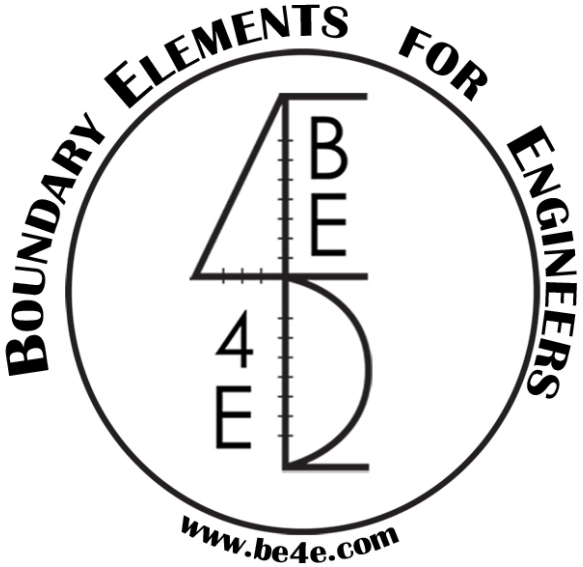

The PLPAK™

BIM Single-Floor MANUAL

PLPAK™ Version 2.00

STRUCTURAL ANALYSIS SOFTWARE USING

THE BOUNDARY ELEMENTS METHOD

E-mail: plpak@be4e.com

Disclaimer

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Department of structural engineering,
Cairo University, Egypt.

e-mail: plpak@be4e.com
web: https://www.plpak.com

The Single-Floor Package

1 Package description

This package is part of the PLPAK-Revit extension. The Single-Floor Package provide the full capability of PLPAK-Revit Link within one floor problem.

2 Capabilities

1- Export model to PLPAK basic package

2- Possibility of review and edit the problem in PLGEN before solve it.

3- Full feature of post processing packages (PLPost, PLDesign, PTPak).

4- Prepare design note and RFT details.

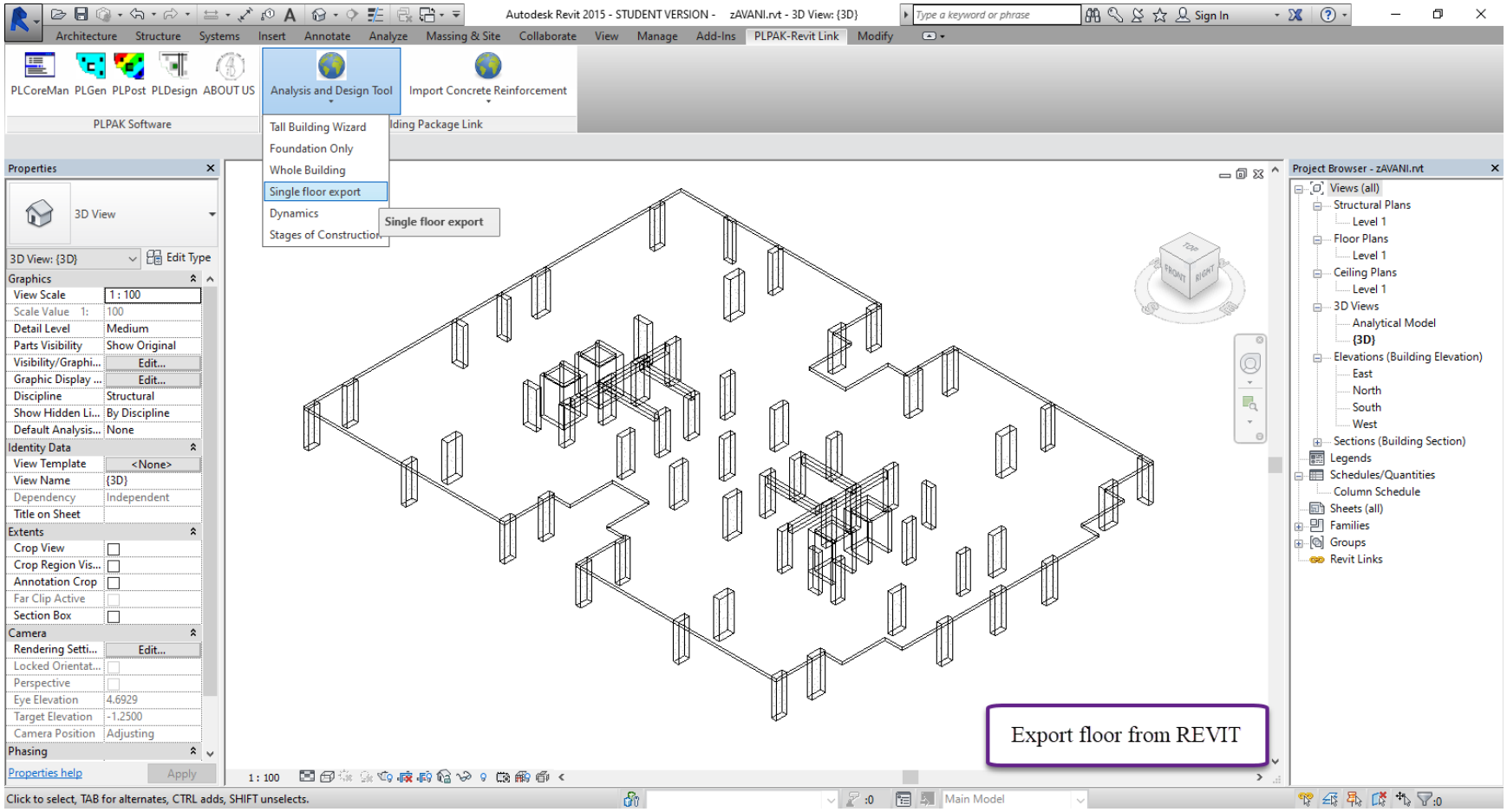
5- Export RFT detail to Revit model.

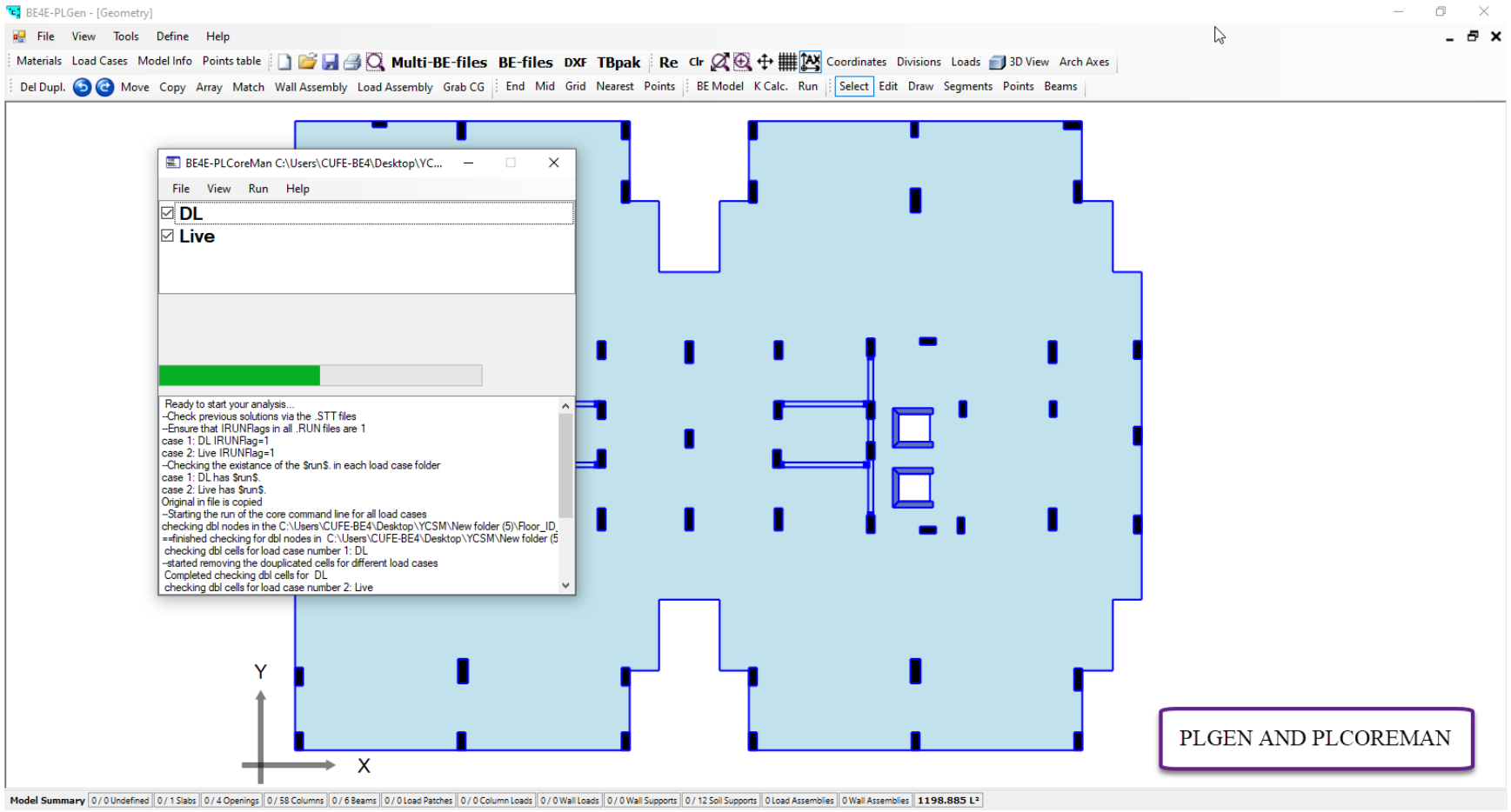
3 What's new in this package

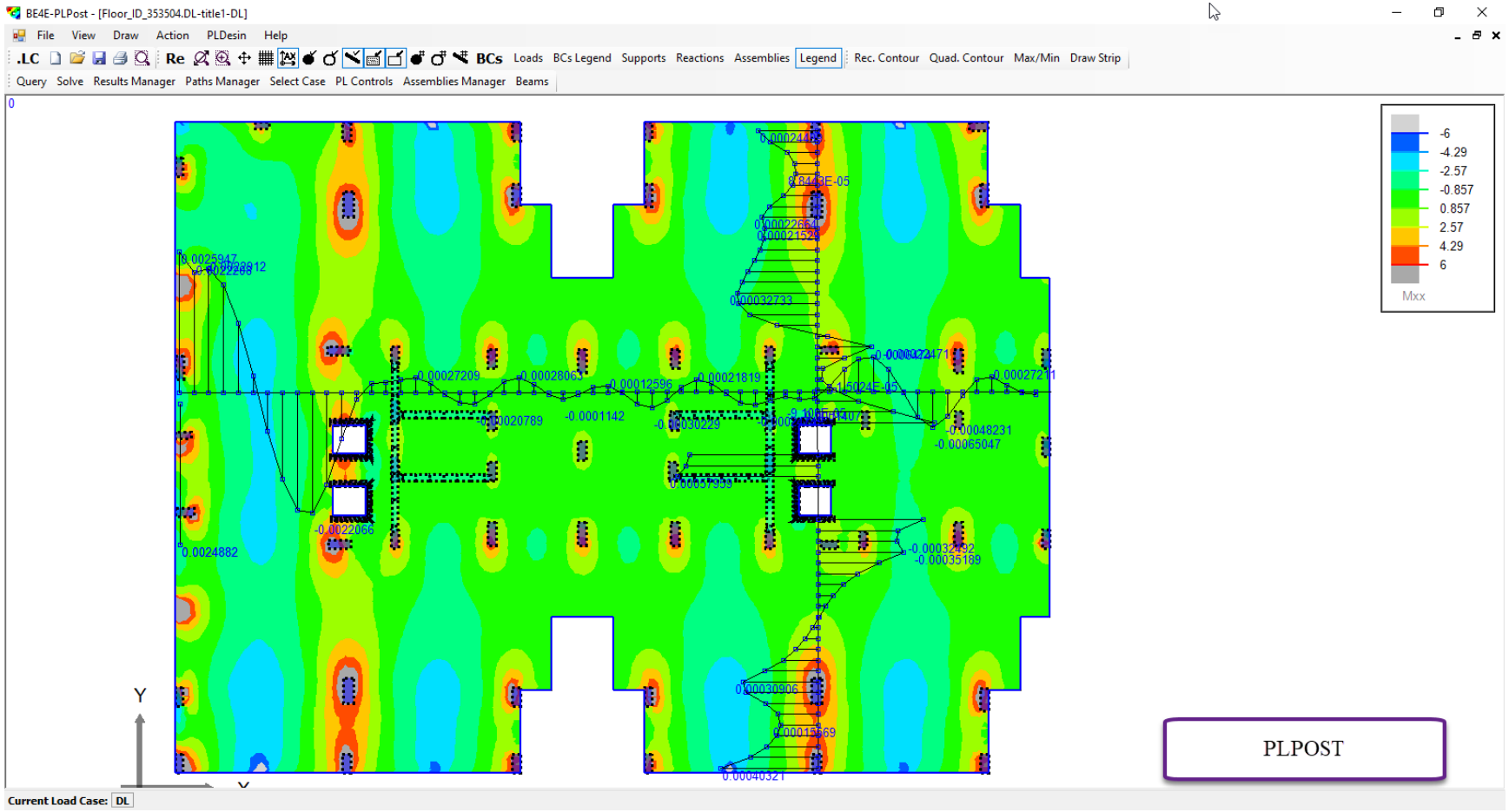
1 Simplified and fast tool to export floors from Revit to PLPAK

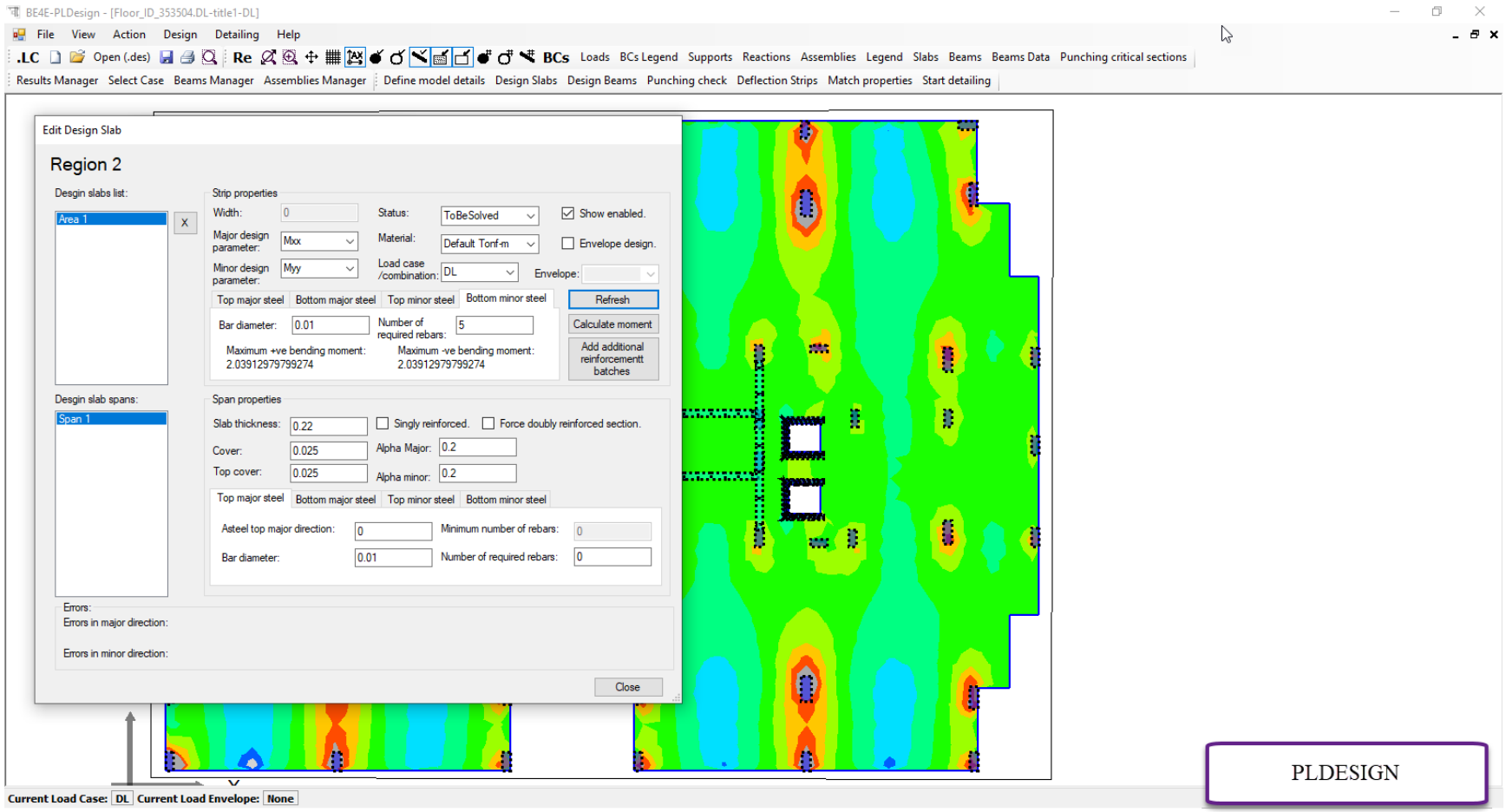
2 Possibility of review and edit the problem in PLGEN before solve it

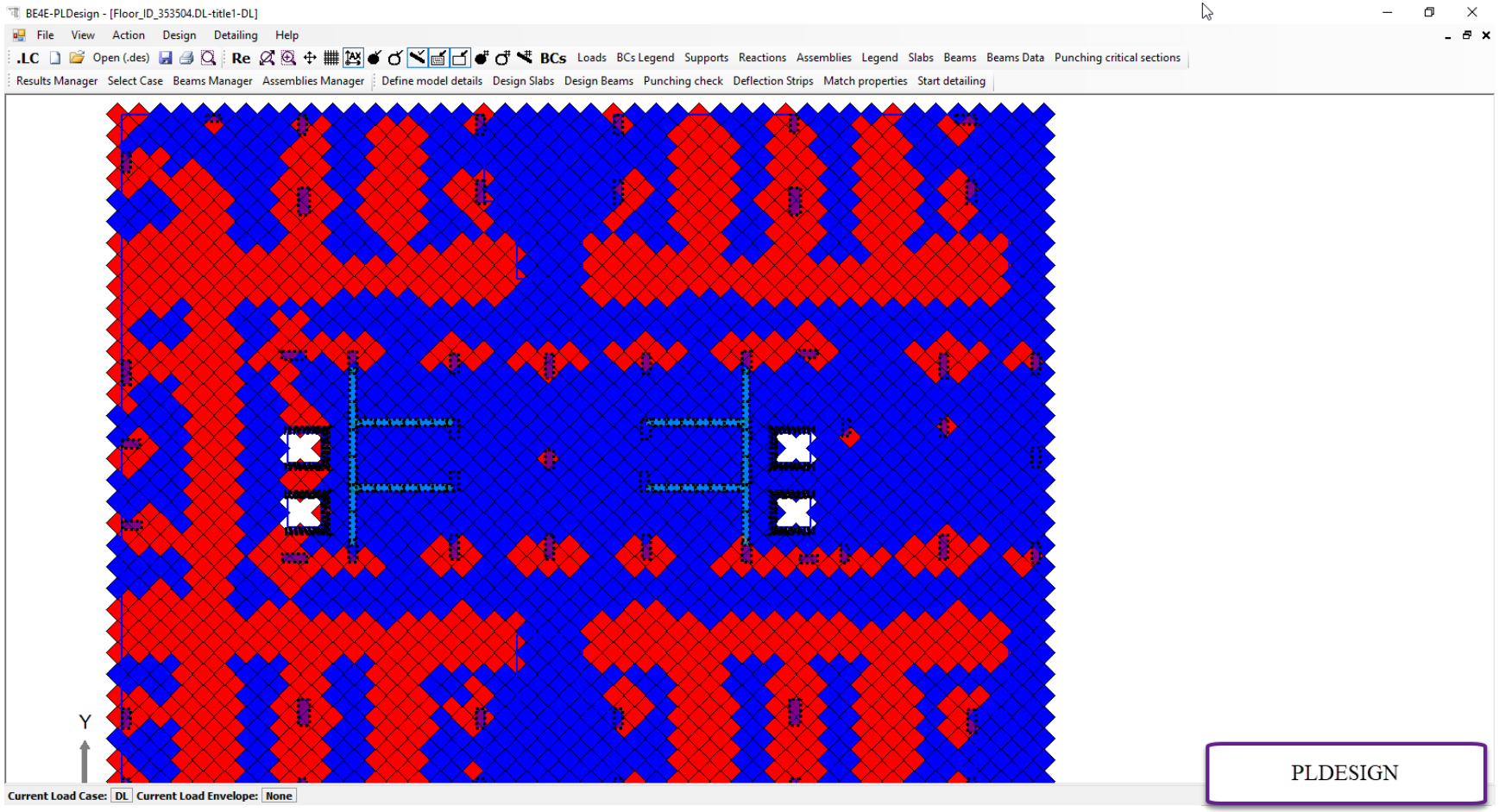
3 Screen shots




BE4E-PLGen - [Geometry]
File View Tools Define Help
Materials Load Cases Model Info Points table
Multi-BE-files BE-files DXF TBpak Re Clr
Coordinates Divisions Loads 3D View Arch Axes
Del Dupl. Move Copy Array Match Wall Assembly Load Assembly Grab CG
End Mid Grid Nearest Points BE Model K Calc. Run
Select Edit Draw Segments Points Beams
BE4E-PLCoreMan C:\Users\CUFE-BE4\Desktop\YC...
File View Run Help
DL
Live
Ready to start your analysis...
--Check previous solutions via the .STT files
--Ensure that IRUNFlags in all .RUN files are 1
case 1: DL IRUNFlag=1
case 2: Live IRUNFlag=1
--Checking the existance of the run. in each load case folder
case 1: DL has run.
case 2: Live has run.
Original in file is copied
--Starting the run of the core command line for all load cases
checking dbl nodes in the C:\Users\CUFE-BE4\Desktop\YCSM\New folder (5)\Floor_ID
==finished checking for dbl nodes in C:\Users\CUFE-BE4\Desktop\YCSM\New folder (5
checking dbl cells for load case number 1: DL
--started removing the douplicated cells for different load cases
Completed checking dbl cells for DL
checking dbl cells for load case number 2: Live
Y
X
PLGEN AND PLCOREMAN
Model Summary
0 / 0 Undefined
0 / 1 Slabs
0 / 4 Openings
0 / 58 Columns
0 / 6 Beams
0 / 0 Load Patches
0 / 0 Column Loads
0 / 0 Wall Loads
0 / 0 Wall Supports
0 / 12 Soil Supports
0 Load Assemblies
0 Wall Assemblies
1198.885 L²


BE4E-PLPost - [Floor_ID_353504.DL-title1-DL]
File View Draw Action PLDesin Help
.LC Re BCs Loads BCs Legend Supports Reactions Assemblies Legend Rec. Contour Quad. Contour Max/Min Draw Strip
Query Solve Results Manager Paths Manager Select Case PL Controls Assemblies Manager Beams
-6
-4.29
-2.57
-0.857
0.857
2.57
4.29
6
Mxx
Y
PLPOST
Current Load Case: DL


BE4E-PLDesign - [Floor_ID_353504.DL-title1-DL]
File View Action Design Detailing Help
.LC Open (.des) Re BCs Loads BCs Legend Supports Reactions Assemblies Legend Slabs Beams Beams Data Punching critical sections
Results Manager Select Case Beams Manager Assemblies Manager Define model details Design Slabs Design Beams Punching check Deflection Strips Match properties Start detailing
Edit Design Slab
Region 2
Desgin slabs list:
Area 1
X
Strip properties
Width: 0
Status: ToBeSolved
Show enabled.
Major design parameter: Mxx
Material: Default Tonf-m
Envelope design.
Minor design parameter: Myy
Load case /combination: DL
Envelope:
Top major steel Bottom major steel Top minor steel Bottom minor steel
Refresh
Bar diameter: 0.01
Number of required rebars: 5
Calculate moment
Maximum +ve bending moment: 2.03912979799274
Maximum -ve bending moment: 2.03912979799274
Add additional reinforcementt batches
Desgin slab spans:
Span 1
Span properties
Slab thickness: 0.22
Singly reinforced.
Force doubly reinforced section.
Cover: 0.025
Alpha Major: 0.2
Top cover: 0.025
Alpha minor: 0.2
Top major steel Bottom major steel Top minor steel Bottom minor steel
Asteel top major direction: 0
Minimum number of rebars: 0
Bar diameter: 0.01
Number of required rebars: 0
Errors:
Errors in major direction:
Errors in minor direction:
Close
Current Load Case: DL Current Load Envelope: None
PLDESIGN


BE4E-PLDesign - [Floor_ID_353504.DL-title1-DL]
File View Action Design Detailing Help
.LC Open (.des) Re BCs Loads BCs Legend Supports Reactions Assemblies Legend Slabs Beams Beams Data Punching critical sections
Results Manager Select Case Beams Manager Assemblies Manager Define model details Design Slabs Design Beams Punching check Deflection Strips Match properties Start detailing
Y
Current Load Case: DL Current Load Envelope: None
PLDESIGN

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