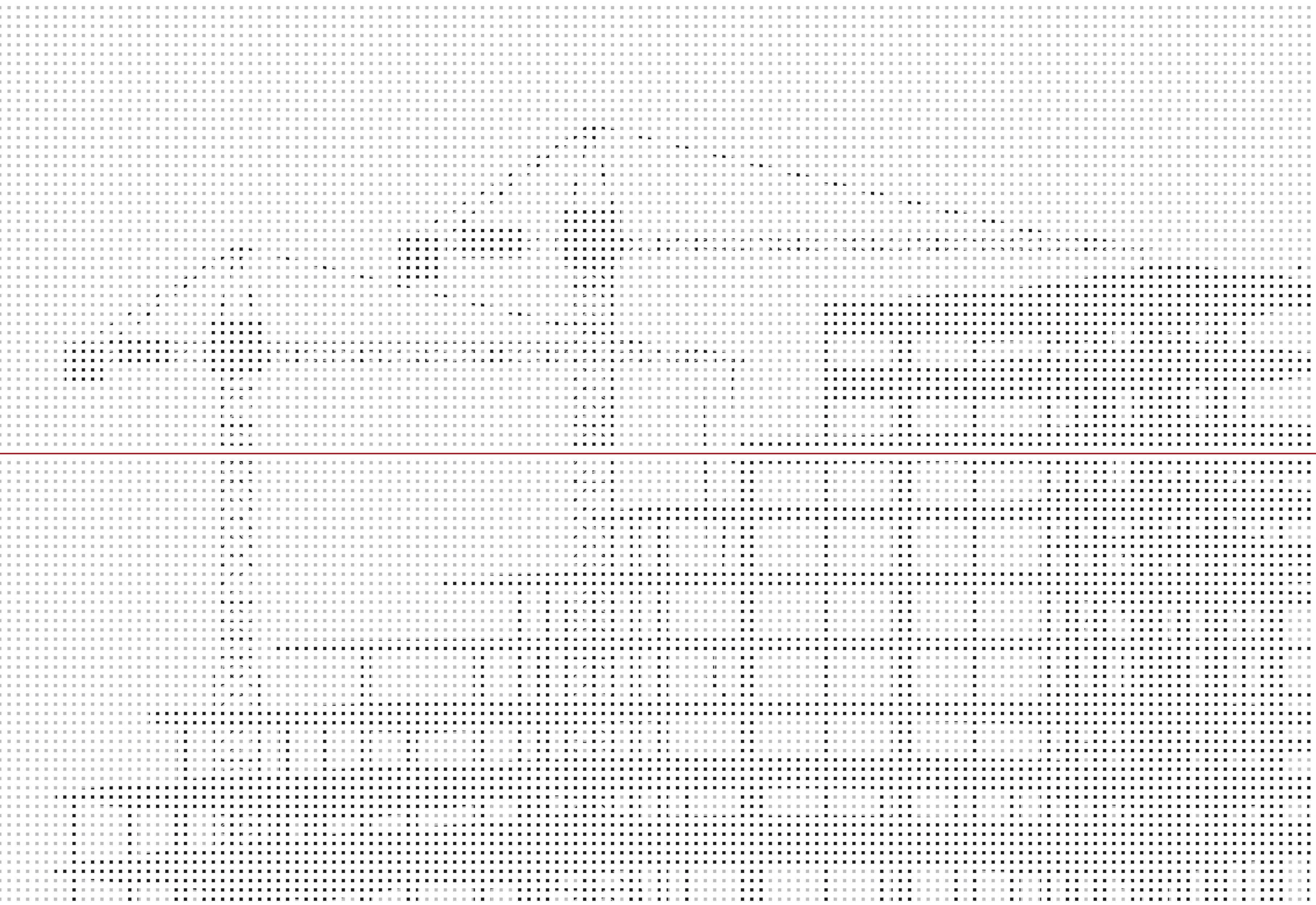
SPIDetail

Smart Solutions for Detailing Concrete Structures



SPIDETAIL

Smart Solutions for Detailing Concrete Structures

About Us, About SPIDetail

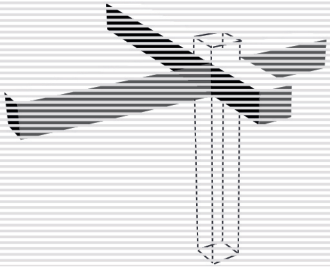
Since 1991, we have been a group of structural engineers who have developed subroutines for our professional needs. These subroutines were put together and presented as a software package. After that in 2009, SPIDTECH Structural Software helped us to get ready for international market. Now in 2019, we present you this mature software package named SPIDetail.

SPIDetail is a software package for structural detailing. It imports structures, modeled in CSI software, ETABS, SAP, and SAFE to AutoCAD and details them based on engineering requirements of ACI.
SPIDetail details multistory concrete structures consisting of beams, columns, shear walls, foundations, slabs, joists, stairs, and much more. SPIDetail also checks ACI code ductility in addition to splice and hook requirements, prepares list of materials as well as cut orders to minimize rebar waste, manages detailing elements in sheets and does much more.

SPIDetail

Features and Abilities

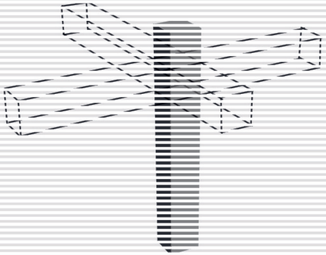
SPIDetail



Detailing **Beams**

Detailing Longitudinal Sections of Beams: With main bars, added bars, appropriate bar bending, dimensions of top and bottom columns, length and POS ID of bars, size, distance and POS ID of stirrups, appropriate signs to show section of beams, appropriate detailing where height of beams changes, structure axis, and related dimensioning.

Detailing Cross Sections of Beams: With appropriate naming, at user's preferred point, accurate dimensioning for beam dimensions, bar cover, spacing of top and bottom bars, minimum spacing to group bars, stirrups and cross ties and much more...



Detailing **Columns**

Detailing Column Layout: Including column categories, dimensions, direction and position of columns, plan axis and related dimensioning.

Detailing Elevation of Columns: Including levels of foundation and stories, longitudinal bars of columns with related length and POS ID, stirrups of columns with pertinent distance, size and POS ID, extra column stirrups within floors, extra column stirrups under foundation level, appropriate naming for elevation of columns.

Detailing Cross Sections of Columns: Including appropriate naming, appropriate scaling, dimensioning of section and envelop on reinforcement, size and number of reinforcement pieces and much more...

Detailing **Shear Walls**

- Without limitation in cross section geometrical shape
- Detailing walls with openings
- Detailing spandrel beams with full details, including diagonal, longitudinal and lateral reinforcement
- Special reinforcement of boundary element capable of substituting column reinforcement if required
- Detailing 3D image of the wall
- Detailing elevations for all legs of the wall
- Detailing wall sections
- Providing list of materials
- Wall section editor capable of:
  - -Lining up main body of the wall and columns
  - -Adding bars with single, linear and square layout
  - -Deleting or changing the drawn bars
- Controlling code provisions and much more...

Detailing **Foundations/Slabs**

- Importing data from SAFE
- Detailing layouts of main and added rebars
- Detailing layouts of top and bottom rebars
- Detailing layouts of one way and punching shear reinforcement
- Detailing of forming layout
- 3D view of foundation
- Making sections wherever you wish
- Detailing lift wells
- Rebar management panel
- Calculating concrete and rebars weight and volume
- Foundations and Slabs of different levels
- and much more...

Detailing **Joists**

- Based on ETABS Model – List of joists with POS ID
- Layout of joists for each floor
- List of length and size of rebars used for each floor
- Modularization of length of joists
- Designing joists including: main bar, reinforcing bar, top bar, stirrups, and deflection
- Drawing sections of joists
- Determining required materials
- Calculating dead load based on data of ETABS
- Determining bar size for main, reinforcing, upper, negative, stirrup and tie beams separately
- Determining possibility of using double joist
- User-friendly interface
- and much more...

Detailing **Stairs**

- Detailing structural layout for any shape of stairs
- Detailing cross sections of stairs
- Calculations of longitudinal and lateral reinforcement
- Detailing different types of supports for stairs including hanger, story beam, and foundation support
- Specifying place of stair support by user
- Dynamic relationship of ramp length, ramp height, number of steps, length and height of each step
- User-friendly interface
- and much more...

Other Capabilities

Computing Length of Splice and Hooks: Based on ACI code. It can be changed by user according to the concrete strength, steel strength, position of reinforcement, and other parameters.

Checking Ductility Requirements: Based on ACI code for medium and high ductility provisions.

Setting Lateral Reinforcement Design Strategy: For beams and columns based on increasing size of rebars, decreasing stirrups distance and/or adding cross ties.

Preparing List of Materials: For longitudinal rebars, stirrups and cross ties, preparing individual lists, filtration of lists based on length of rebars, preparing cut orders and determining concrete volume and weight.

Smart Detailings: In some elements of detailings, by changing one part, other related parts are changed correspondingly.

Sheet Manager: You can transfer selected detailings to sheets automatically.

SED: You can change general, special, and engineering properties of detailings by one click.

Settings: All commands can be managed by well-developed features of SPIDetail settings.

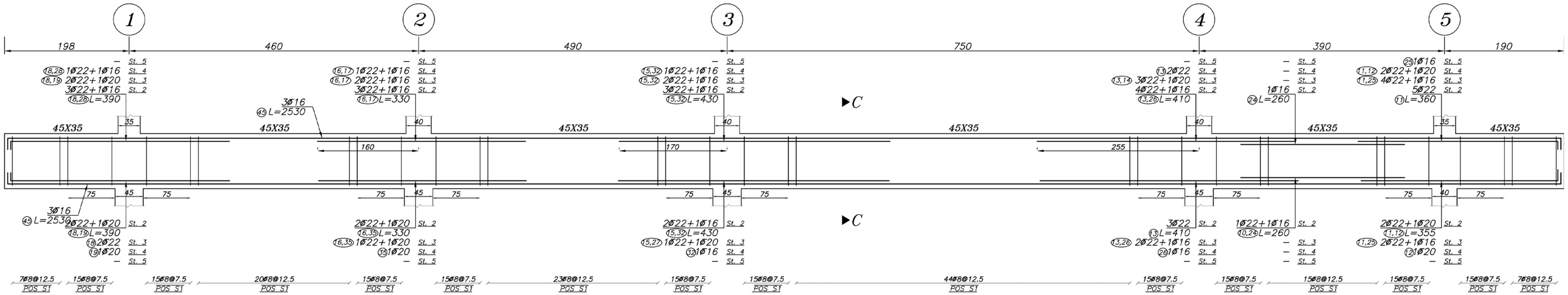
...**Other** Capabilities

Reporting: Selecting some detailed objects, you can see the technical report about the selected elements.These elements include:

- Stirrups for columns
- Stirrups for beams
- Beams longitudinal reinforcement

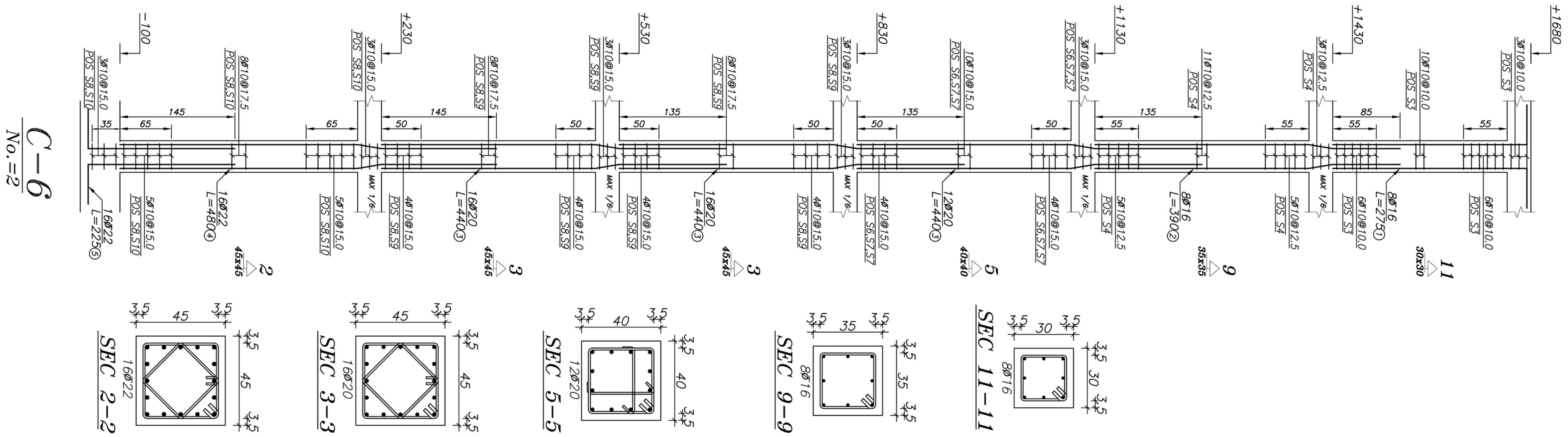
Optimum System Requirements: The preferred system to run SPIDetail is a 64bit system with powerful CPU and GPU in addition to adequate amount of RAM.

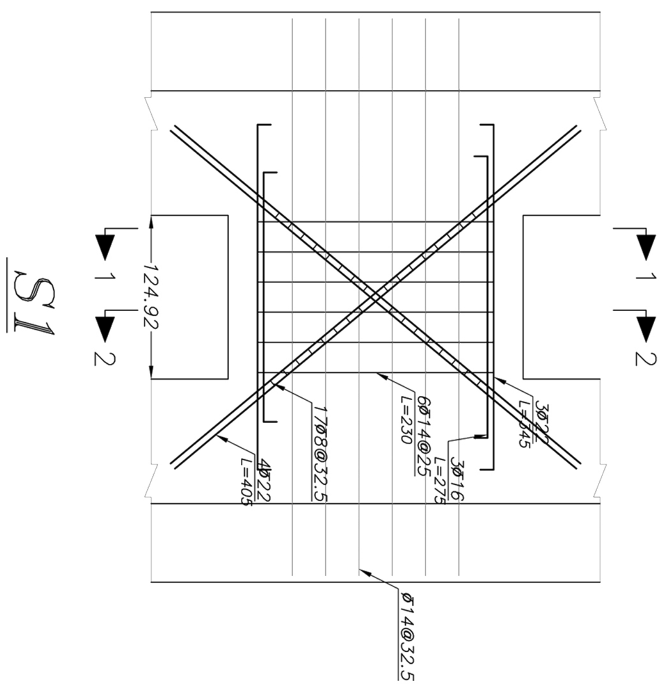
Multi-User Version of SPIDetail: This version is available for universities, offices, organizations, and companies with multiple users.

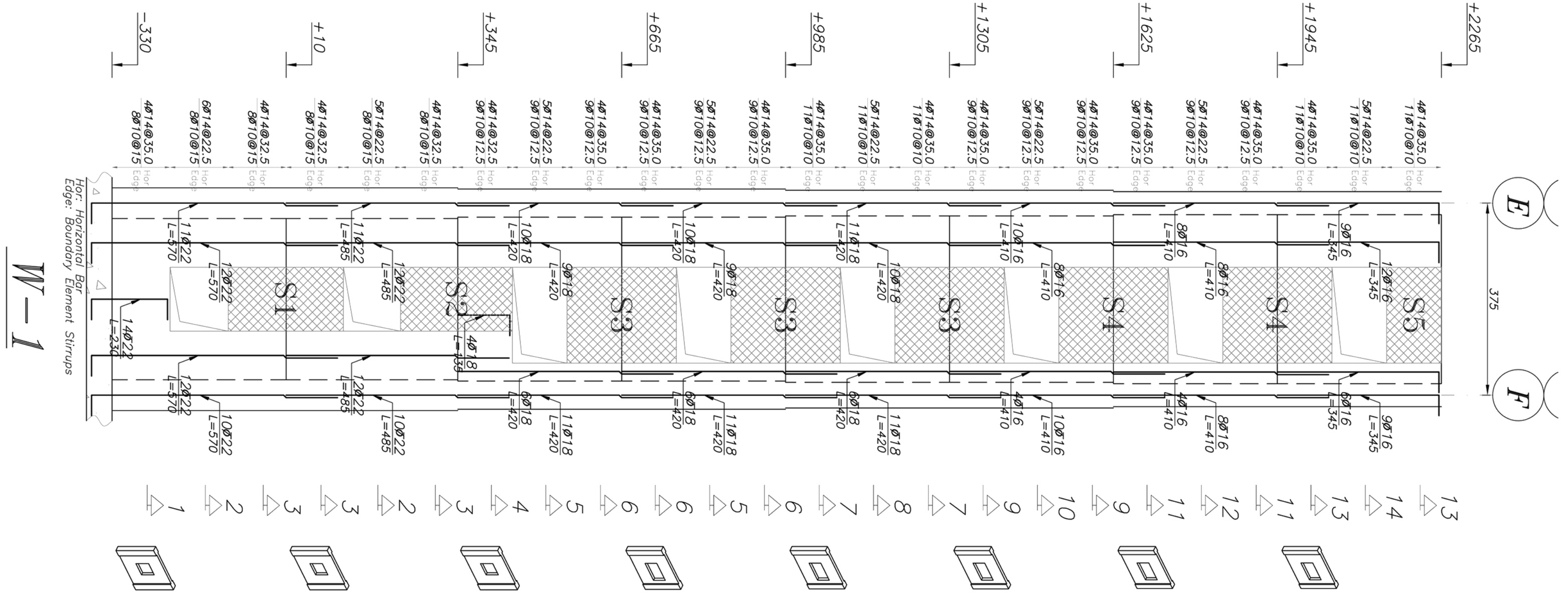


Beam Typ. B-8

Elev: 530,830,1130,1430

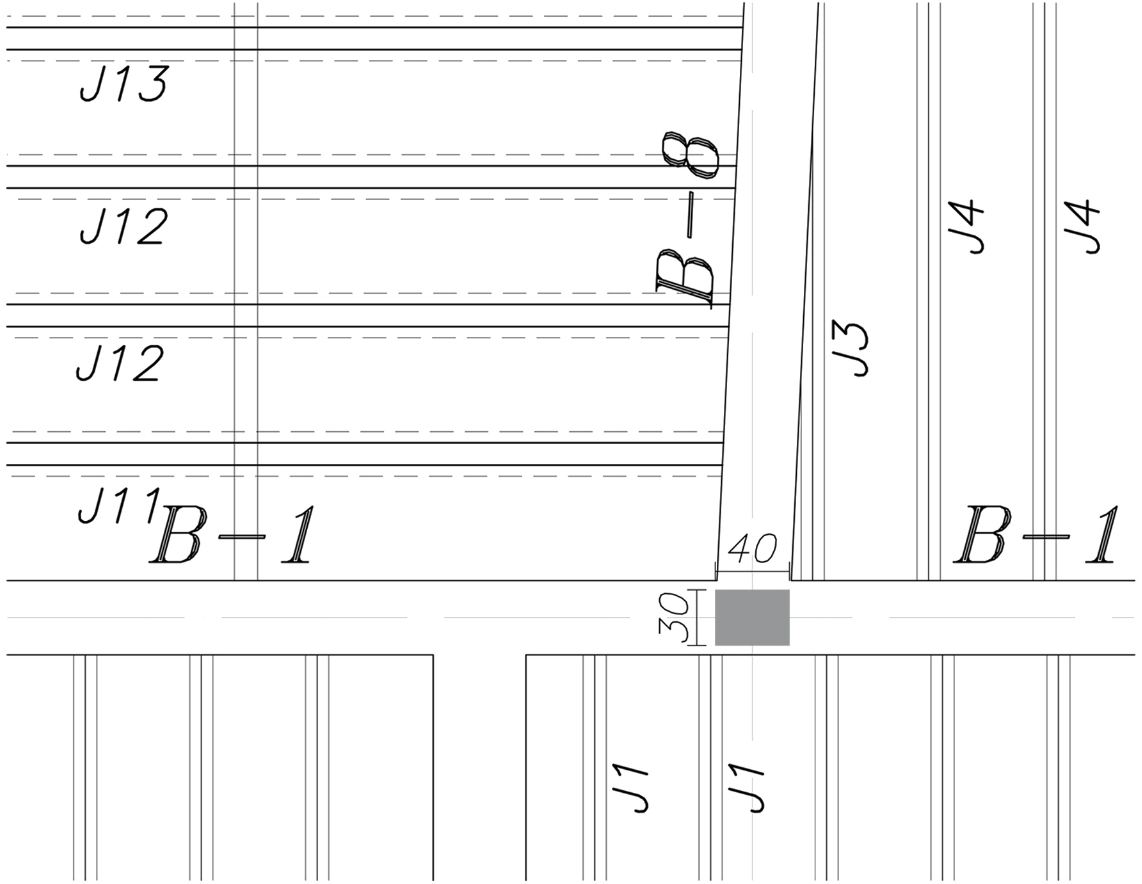



S1
124.92
1
2


W-1
Hor: Horizontal Bar
Edge: Boundary Element Stirrups
-330
+10
+345
+665
+985
+1305
+1625
+1945
+2265
S1
S2
S3
S3
S3
S4
S4
S5
E
F
375

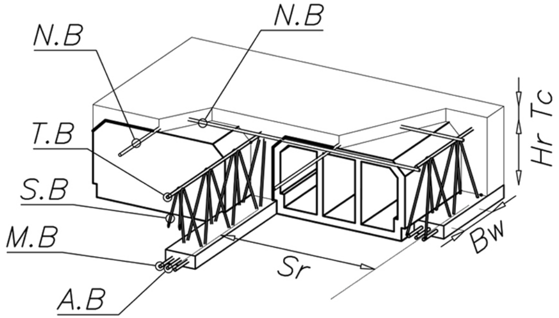
Beams Bar Schedule

POS	SHAPE	Ø (mm)	No.	L(m)	W(kg)	TOTAL W(kg)
1	0.30 2.40	16	4	2.70	4.23	16.93
2	0.85 4.55 0.30	16	6	5.70	8.93	53.61
3	0.35 2.90	20	3	3.25	7.96	23.88
4	0.30 2.90	16	7	3.20	5.02	35.11
5	2.60	22	3	2.60	7.71	23.12
6	0.40 3.15	22	28	3.55	10.52	294.58
12	0.35 3.15	20	4	3.50	8.57	34.29
13	4.10	22	26	4.10	12.15	315.91
14	4.10	20	2	4.10	10.04	20.08
15	4.30	22	17	4.30	12.74	216.63
16	3.30	22	33	3.30	9.78	322.73
17	3.30	16	14	3.30	5.17	72.42
18	0.40 3.50	22	15	3.90	11.56	173.37
19	0.35 3.50	20	4	3.85	9.43	37.72
20	0.85 4.55 0.30	16	6	5.70	8.93	53.61
21	0.85 6.30	16	6	7.15	11.21	67.25
22	0.85 5.80	16	6	6.65	10.42	62.54
23	0.30 8.05	16	3	8.35	13.09	39.27
24	2.60	16	9	2.60	4.08	36.68
25	0.30 3.20	16	6	3.50	5.49	32.92
26	4.10	16	6	4.10	6.43	38.56
27	4.30	20	2	4.30	10.53	21.06
28	0.30 3.50	16	3	3.80	5.96	17.87
29	1.10 9.60 0.30	16	6	11.00	17.24	103.45
30	1.10 6.20	16	6	7.30	11.44	68.66
31	0.30 8.90	16	3	9.20	14.42	43.26
32	4.30	16	7	4.30	6.74	47.18
33	0.40 2.90	22	21	3.30	9.78	205.37
34	0.30 7.50	16	3	7.80	12.23	
35	3.30	20	6			
36	0.30 8.30					
37	3.10					

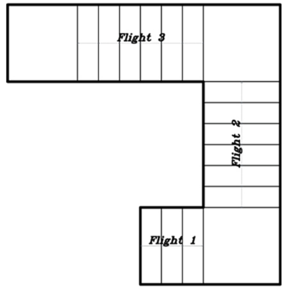


Joist Table

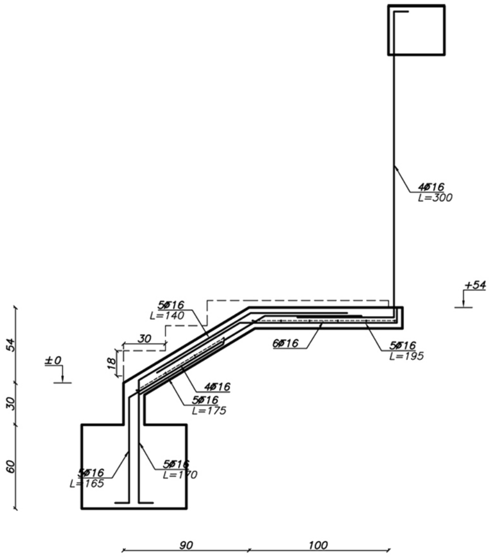
$f'c = 210\ kg/cm^2$
$Fy = 4000\ kg/cm^2$
$Hr = 25\ cm$
$Tc = 5\ cm$
$Sr = 62.5\ cm$
$Bw = 18\ cm$
$DL = 410\ kg/m^2$



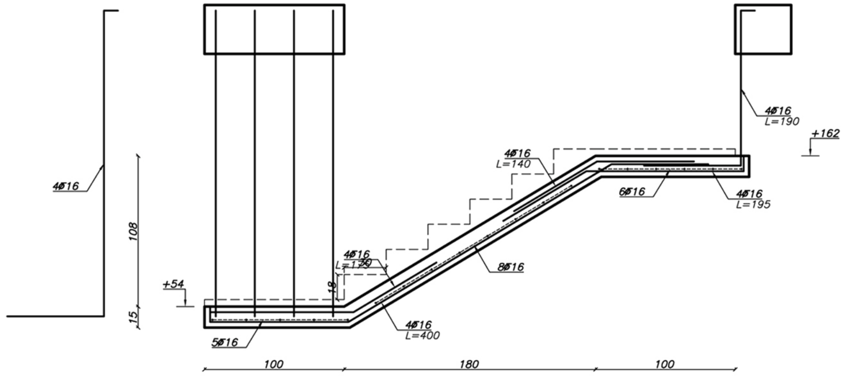
Pos	No	Live	Joist	Type	Bars	Length	Ø6	Ø8	Ø10	Ø12	Ø14
J1	2	200	1.6 +2 x 0.125	T.B	1Ø10	1.85			3.70		
				S.B	Ø6@18	1.42	2.84				
				M.B	2Ø14	1.85					7.40
				A.B							
	Negative Bar			N.B	Ø14	0.55					1.10
J2	2	200	2.5 2 x 0.125	T.B	1Ø10	2.75			5.50		
				S.B	Ø6@18	2.27	4.54				
				M.B	2Ø14	2.75					11.00



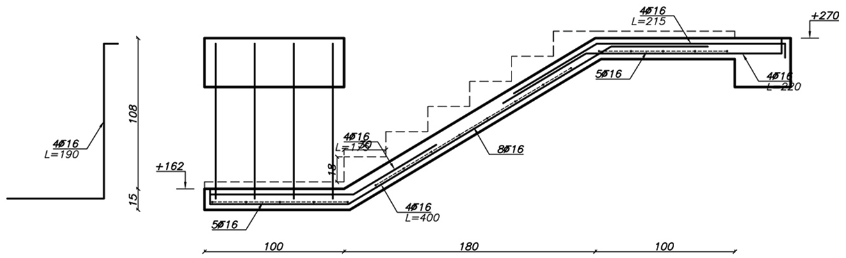
Staircase Plan



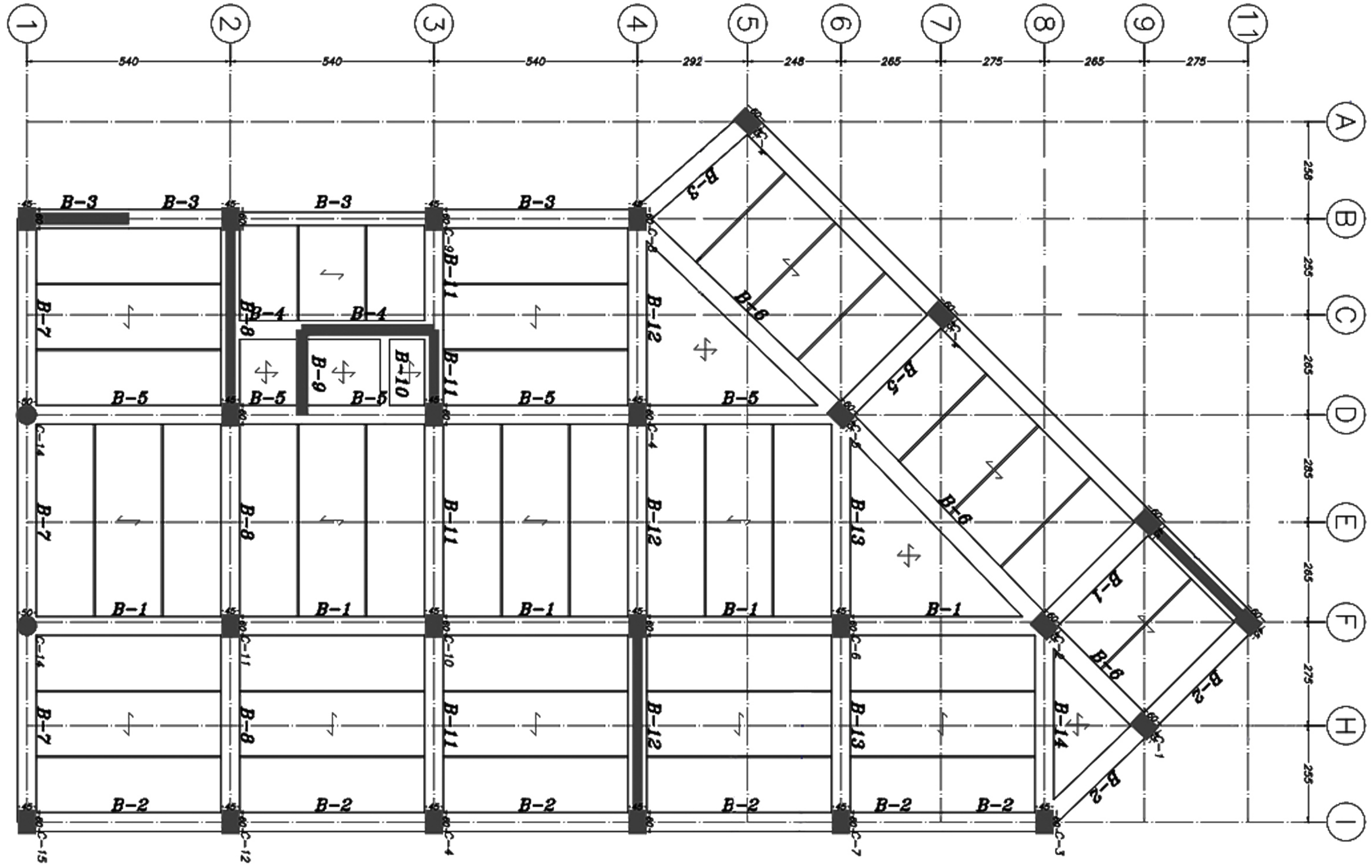
Flight 1

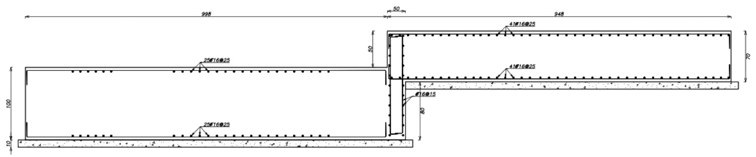


Flight 2

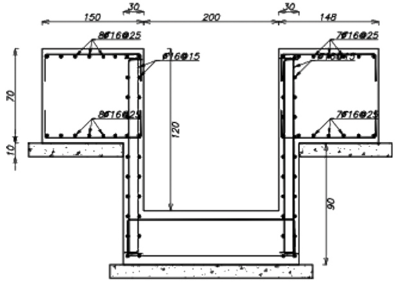


Flight 3

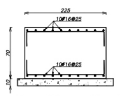

1
2
3
4
5
6
7
8
9
11
540
540
540
292
248
265
275
265
275
A
B
C
D
E
F
H
I
B-3
B-4
B-5
B-1
B-2
B-6
B-7
B-8
B-9
B-10
B-11
B-12
B-13
B-14



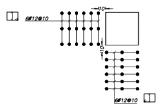
Section K–K
H Scale : 1:50
V Scale : 1:25



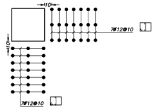
Section L–L
H Scale : 1:50
V Scale : 1:25



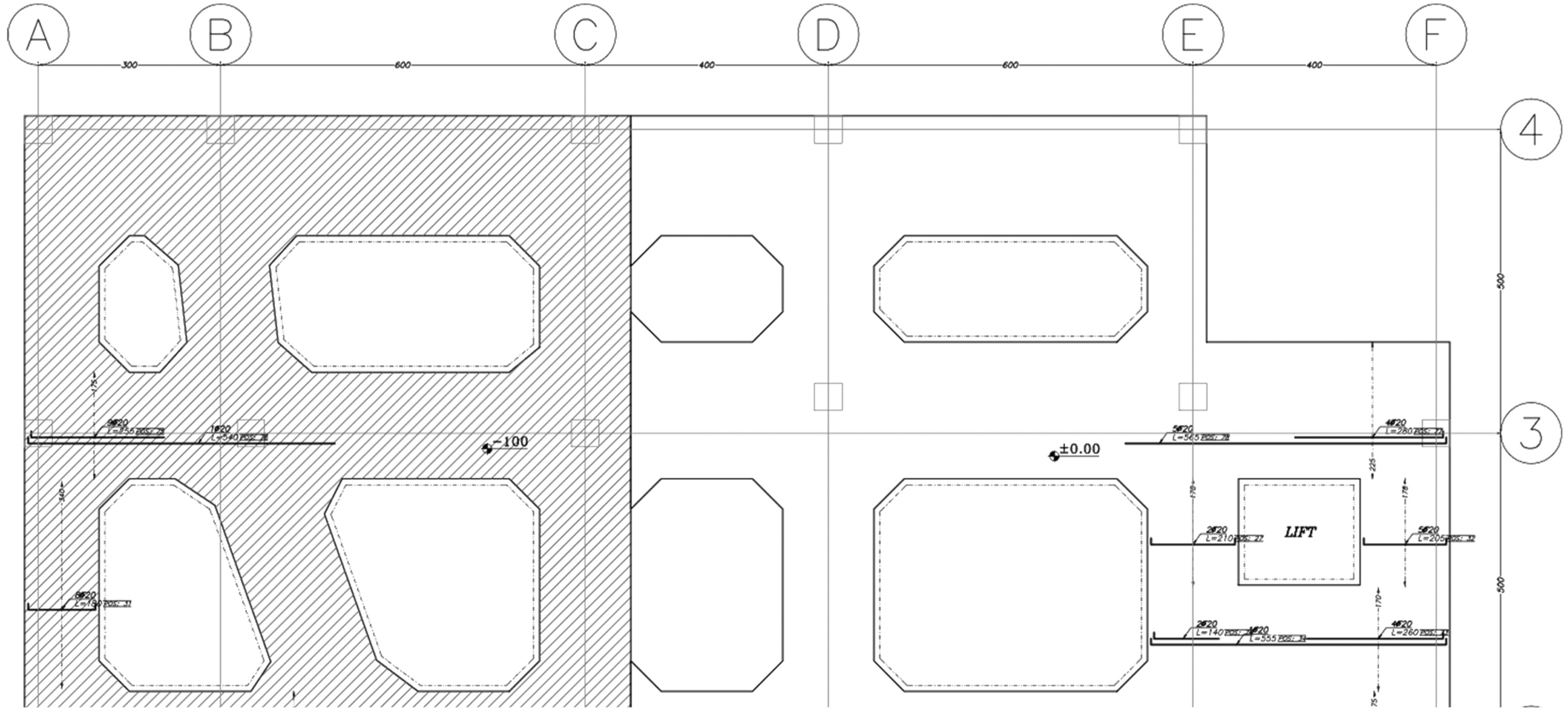
Section D–D
H Scale : 1:50
V Scale : 1:25



Det.A
Scale: 1:25



Det.B
Scale: 1:25



Contact

Structural Software

SPIDTECH

601 West Broadway Street
Unit 400
Vancouver, BC
Canada V5Z 4C2

TEL: +1 (778) 800-2102
FAX: +1 (778) 785-0985
info@spidtech.com

www.SPIDTECH.com

Structural Software

SPIDTECH

www.spidtech.com