Autodesk® Revit®
Basic Structural Sample Project

4 Analytical Model

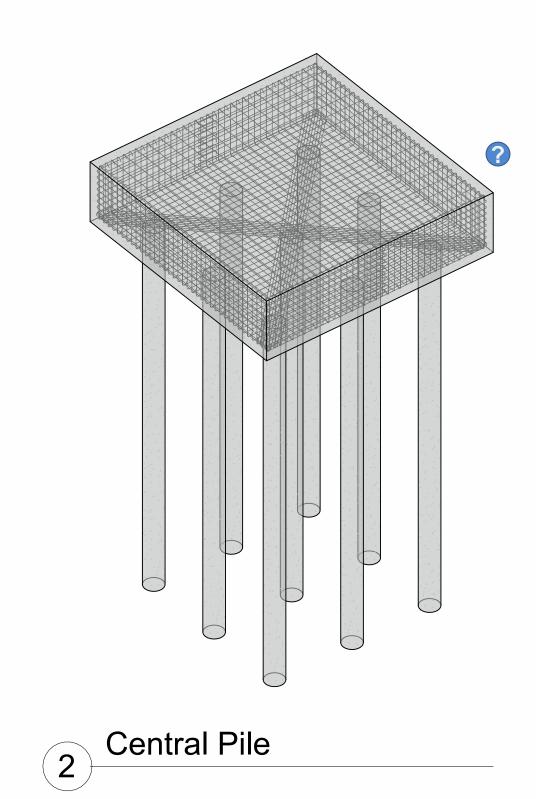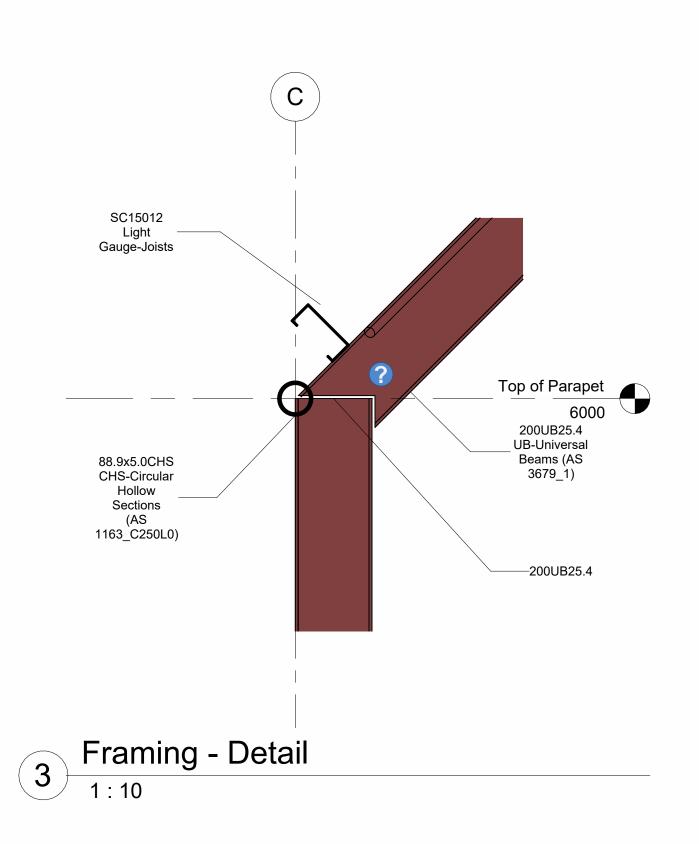| No.	Description	Date

How Do I

To learn more about the contents of the sample project look for the Help Icon ? near an element. Select the icon and then select the Learning Link parameter in the properties palette. Use the "..." to connect to the related wiki topic. Once you have reviewed the wiki topic select the content reviewed check box in the properties palette.

Level	Topic	What View	Reviewed?
01 - Basic	Add levels to the project.	Elevations - South	No
01 - Basic	Place grids into a project and control grid heads display.	Structural Plans - Level 1	No
01 - Basic	Add a Column	Structural Plans - Level 2	No
01 - Basic	Add a Beam	Sections - Longitudinal Section	No
01 - Basic	Create Structural Wall	Sheet - S202	No
01 - Basic	Place Beam Tags	Sections - Longitudinal Section	No
01 - Basic	Add floors to the project	Sections - Cross Section	No
01 - Basic	Create Wall Footing	Sheet - S202	No
01 - Basic	Create section views.	Sections - Longitudinal Section	No
01 - Basic	Add a callout	Sections - Cross Section	No
01 - Basic	Create a detail view.	Sections - Cross Section	No
01 - Basic	Create 3D View	Sheet - S001	No
01 - Basic	Set the scale of a view.	Roof Peak	No
01 - Basic	Specify the detail level of a view	Elevations - South	No
01 - Basic	Add detail lines to a view.	Drafting Views - Pile Cap Detail	No
01 - Basic	Add aligned dimensions to a view.	Structural Plans - Level 1	No
01 - Basic	Add text notes to a view.	Drafting Views - Pile Cap Detail	No
01 - Basic	Add a sheet to the project.	Sheet - S001	No
02 - Intermediate	Offset level head from the level line.	Elevations - South	No
02 - Intermediate	Copy/Monitor Elements from a linked model	Structural Plans - Level 1	No
02 - Intermediate	Create Beam System	Structural Plans - Level 1	No
02 - Intermediate	Create a schedule.	Sheet - S206	No
02 - Intermediate	Create Graphical Column Schedule	Sheet - S206	No
02 - Intermediate	Place Rebar	Structural Plans - Level 1	No
02 - Intermediate	Cut an Opening in a Framing Element	Sheet - S001	No
02 - Intermediate	Import DWG Details	Sheet - S204	No
02 - Intermediate	Make Elements Transparent	Sheet - S001	No
03 - Advanced	Structural Analytical Model	Sheet - S001	No
03 - Advanced	Create Parts	Sheet - S001	No

2 Central Pile

C

SC15012
Light
Gauge-Joists

Top of Parapet
6000

200UB25.4
UB-Universal
Beams (AS
3679_1)

88.9x5.0CHS
CHS-Circular
Hollow
Sections
(AS
1163_C250L0)

200UB25.4

3 Framing - Detail
1 : 10

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Sample House

Title Sheet

Project number	001-00
Date	Issue Date
Drawn by	AA
Checked by	JLH

S001

Scale	1 : 10

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Level 1 — 1 : 100

Level 2 — 2 : 100

No.	Description	Date

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Sample House

Framing Plans

Project number	001-00
Date	Issue Date
Drawn by	Author
Checked by	Checker

S101

Scale	1 : 100

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Longitudinal Section
1 — 1 : 50

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Labels (top):
- SC15012 Light Gauge-Joists
- SC15012 Light Gauge-Joists
- 30mm Round Bar
- SC15012 Light Gauge-Joists
- SC15012 Light Gauge-Joists
- SC15012 Light Gauge-Joists
- 30mm Round Bar
- SC15012 Light Gauge-Joists

Column labels:
- 200UB25.4
- 88.9x5.0CHS CHS-Circular Hollow Sections (AS 1163_C250L0)

Levels:
- Roof Level 9000
- Top of Parapet 6000
- Level 2 3000

Cross Section
2 — 1 : 50

| C | B | A |

Labels:
- SC15012 Light Gauge-Joists
- 200UB25.4 UB-Universal Beams (AS 3679_1)
- Timber_50 x200 Rectangular(Timber)-Beam
- 200UB25.4 UB-Universal Beams (AS 3679_1)

Levels:
- Roof Level 9000
- Top of Parapet 6000
- Level 2 3000
- Ceiling 2700

Wall Roof Connection Detail
3 — 1 : 10

Labels:
- SC15012 Light Gauge-Joists
- 88.9x5.0CHS CHS-Circular Hollow Sections (AS 1163_C250L0)
- 200UB25.4 UB-Universal Beams (AS 3679_1)
- 200UB25.4
- Top of Parapet 6000

Roof Peak
4 — 1 : 25

| B |

- Roof Level 9000

No.	Description	Date

Consultant
Address
Address
Phone
Fax
e-mail

Consultant
Address
Address
Phone
Fax
e-mail

Consultant
Address
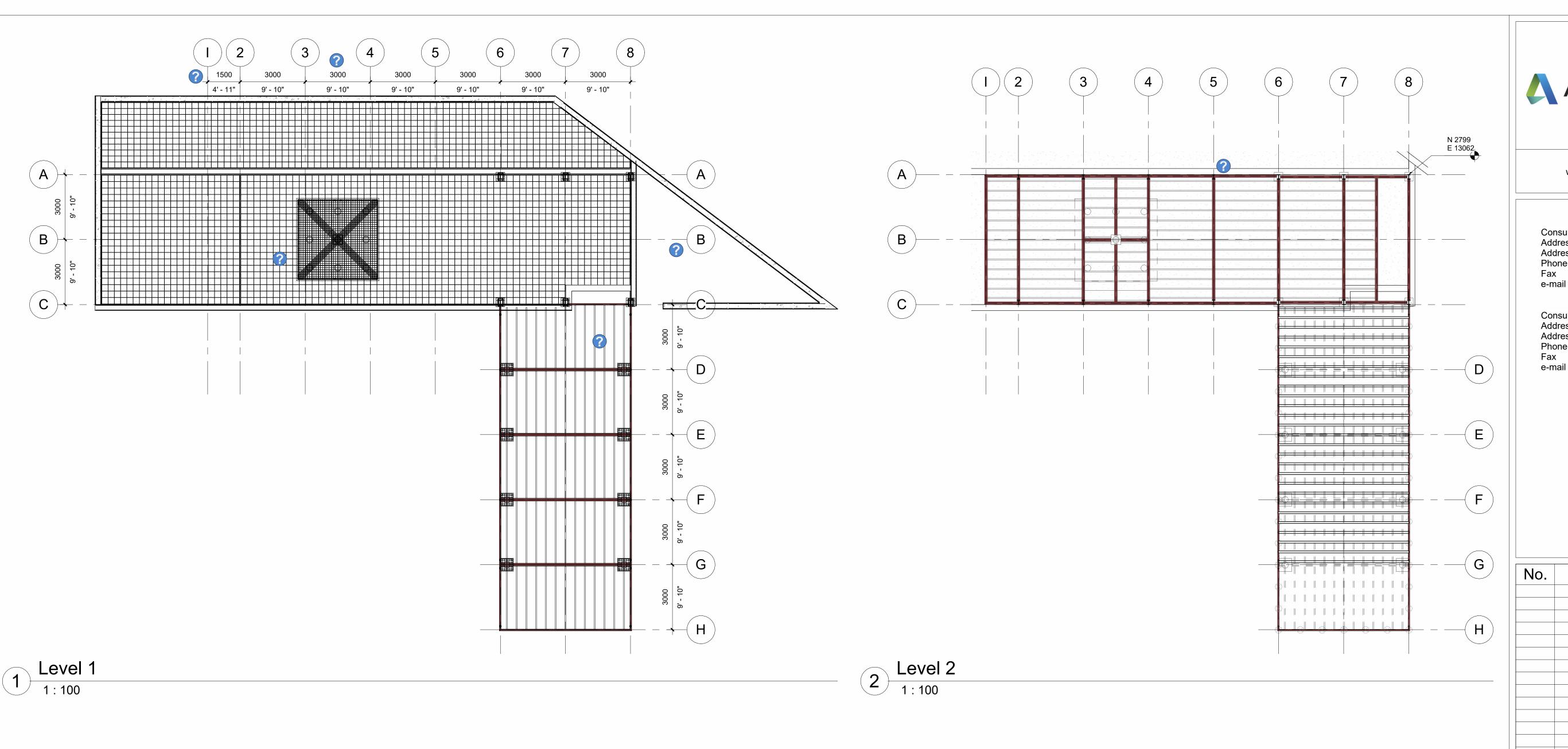Address
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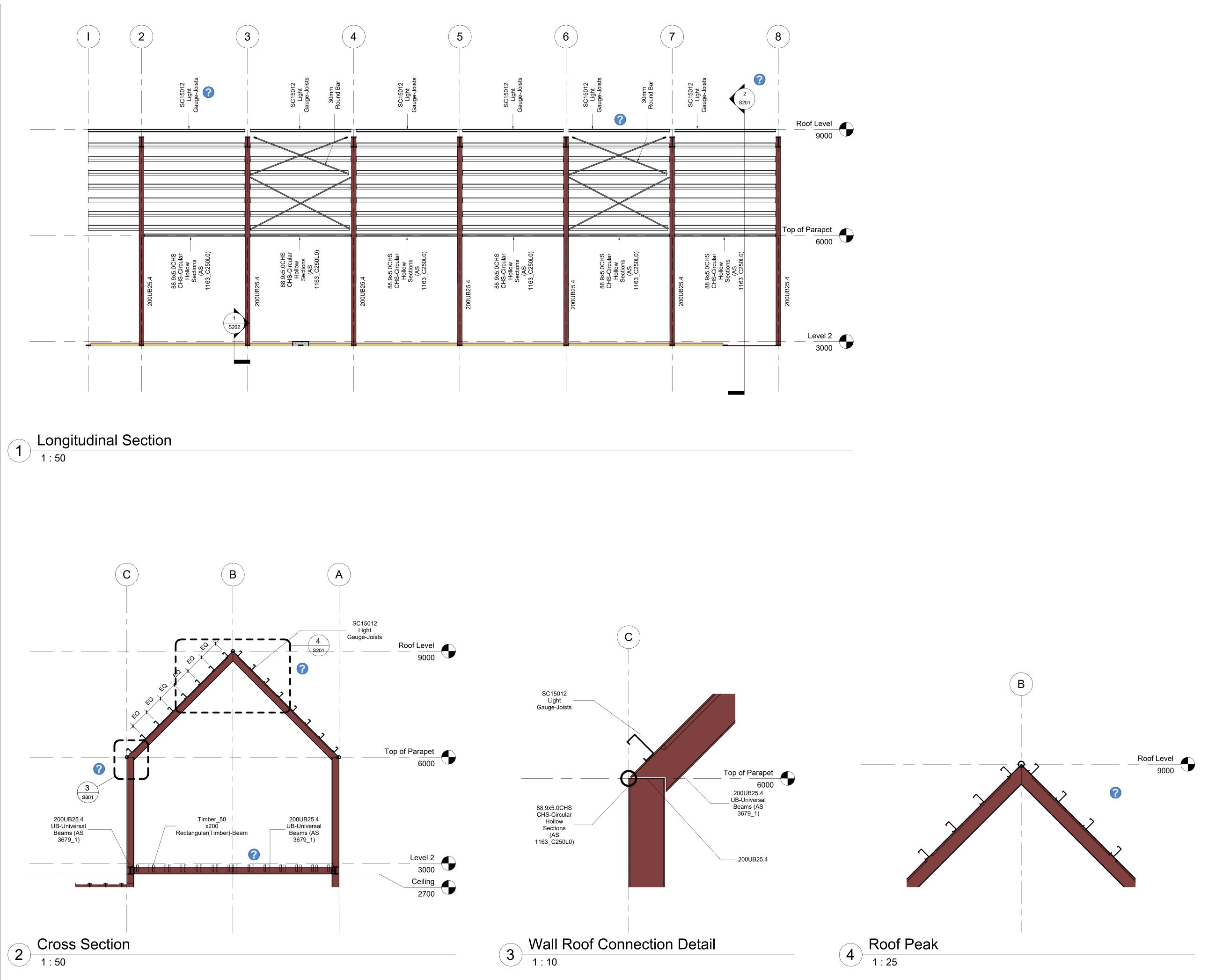e-mail

Consultant
Address
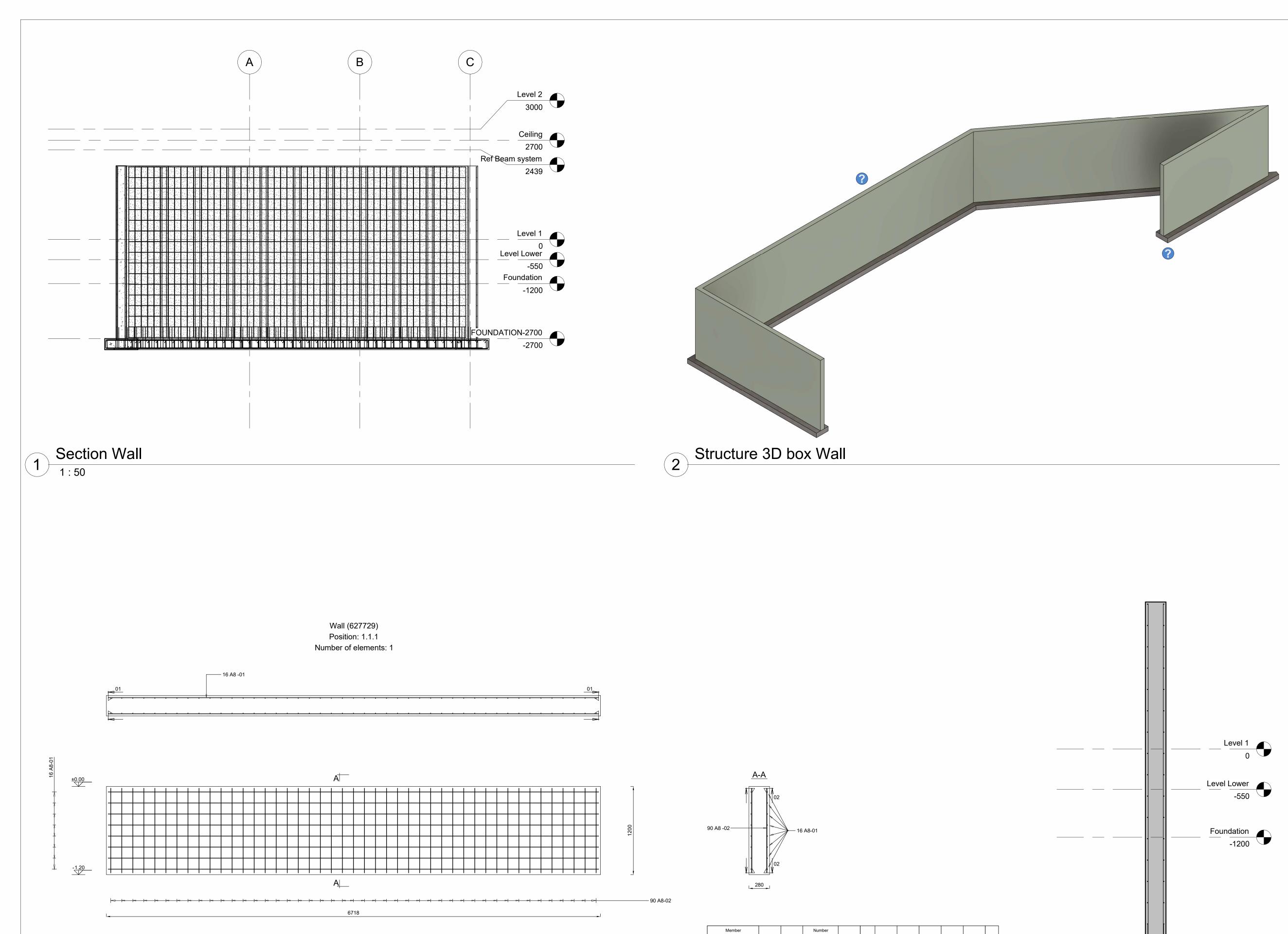Address
Phone
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Sample House

Upper House Framing

Project number	001-00
Date	Issue Date
Drawn by	Author
Checked by	Checker

S201

| Scale | As indicated |

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Section Wall

A B C

Level 2
3000

Ceiling
2700

Ref Beam system
2439

Level 1
0

Level Lower
-550

Foundation
-1200

FOUNDATION-2700
-2700

1 Section Wall
1 : 50

2 Structure 3D box Wall

Wall (627729)
Position: 1.1.1
Number of elements: 1

16 A8 -01

01

01

16 A8-01

±0.00

1200

-1.20

A

A

90 A8-02

6718

3 Wall (627729)
1 : 25

A-A

02

90 A8 -02

16 A8-01

02

280

Member				Number		Length (mm)	Shape code	A (mm)	B (mm)	C (mm)	D (mm)	E/R (mm)	Rev.
Name	Num	Bar mark	Type and Size	in the elem.	total								
Wall (627729)	1	01	X8	16	16	6675	00	6670					
		02	X8	90	90	1150	00	1150					

Level 1
0

Level Lower
-550

Foundation
-1200

FOUNDATION-2700
-2700

4 Section Wall2
1 : 25

Consultant   Consultant
Address   Address
Address   Address
Phone   Phone
Fax   Fax
e-mail   e-mail

Consultant   Consultant
Address   Address
Address   Address
Phone   Phone
Fax   Fax
e-mail   e-mail

No.	Description	Date

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Sample House

Wall Section

Project number	001-00
Date	Issue Date
Drawn by	Author
Checked by	Checker

S202

Scale	As indicated

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Pile cap Detail

8 8A6-06
8 8A6-07

+0.65

18 A10 -04

1000

-0.35

37 A8 -02

A-A

8 8A6-07
8 8A6-06

18 A10 -03

1000

37 A8 -01

9 9A12-05

9 9A12-05

8 A6 -06

37 37A8-02
18 18A10-04

A

B

3800

B-B

18 A12 -05

B

A

8 A6 -07
37 37A8-01
18 18A10-03

3800

1 **Pile cap Detail**
1 : 20

Member		Bar mark	Type and Size	Number		Length (mm)	Shape code	A (mm)	B (mm)	C (mm)	D (mm)	E/R (mm)	Rev.
Name	Num			in the elem.	total								
		01		37	37	5450	28	10	885	3685	10		
		02		37	37	5475	28	10	895	3685	10		
		03		18	18	5450	28	15	885	3685	10		
Pile cap (1175183)	1	04		18	18	5475	28	15	895	3685	10		
		05		18	18	5050 *	00	15					
		06		8	8	7675	28	10	1995	3700	5		
		07		8	8	7675	28	10	1995	3700	5		

* Average length

Central Pile

B

Level 1
0
Level Lower
-550
Foundation
-1200

FOUNDATION-2700
-2700

2 **Central Pile**
1 : 50

3 **Central Pile - 3D**

No.	Description	Date

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Sample House

Central Pile Section
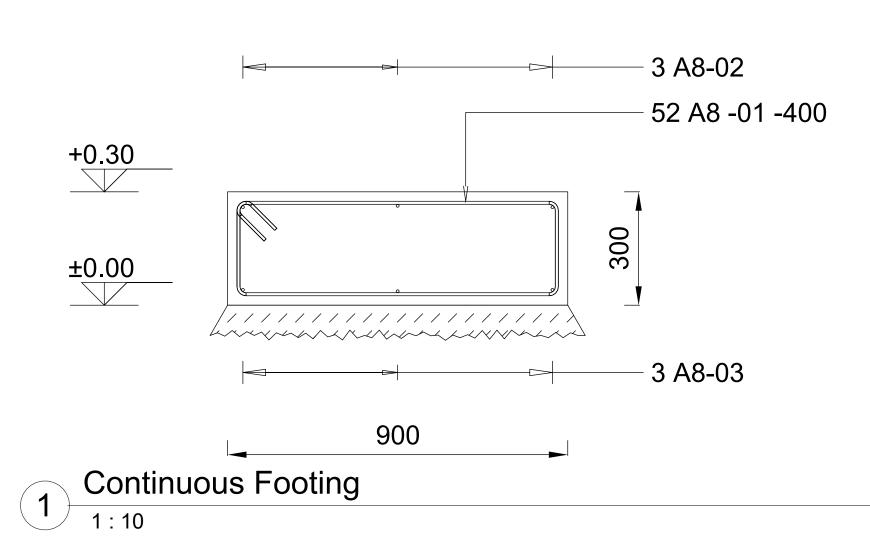
Project number	001-00
Date	Issue Date
Drawn by	Author
Checked by	Checker

S203

Scale	As indicated

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Continuous footing (1178029)
Position: 1.1.1
Number of elements: 1

1 Continuous Footing — 1 : 10

+0.30

±0.00

3 A8-02
52 A8 -01 -400
300
3 A8-03
900

Member		Bar mark	Type and Size	Number		Length (mm)	Shape code	A (mm)	B (mm)	C (mm)	D (mm)	E/R (mm)	Rev.
Name	Num			in the elem.	total								
Continuous footing (1178029)	1	01	X8	52	52	2375	31	250	850	250	850		
		02	X8	3	3	20650		20655					
		03	X8	3	3	20650		20655					

Spread footing (1177820) (F)
Scale 1 : 20

a-a

133 133 133
2 H12-02 -200
2 H12-02 -200
99
301
C
C
301
203
900
3 X8-01 -363
2 H12-02 -200
2 H12-02 -200
400

b-b

99 203 99
99
301
-0.30
02 02
2 H12 -02 -200
2 H12 -02 -200
01 01
01 01
900
-1.20
01 01
02 02
400

C-C

197 6 197
-0.30
02 02
2 H12 -02 -200
2 H12 -02 -200
01 01
01 01
900
-1.20 01 01
02 02
400

Member		Bar mark	Type and Size	Number		Length (mm)	Shape code	A (mm)	B (mm)	C (mm)	D (mm)	E/R (mm)	Rev.
Name	Num			in the elem.	total								
Spread footing (1177820) (F)	1	01	X8	3	3	1400	31	335	280	345	270		
		02	H12	8	8	625	00	360					

2 Spread Footing — 1 : 20

No.	Description	Date

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Sample House

Footing Detail
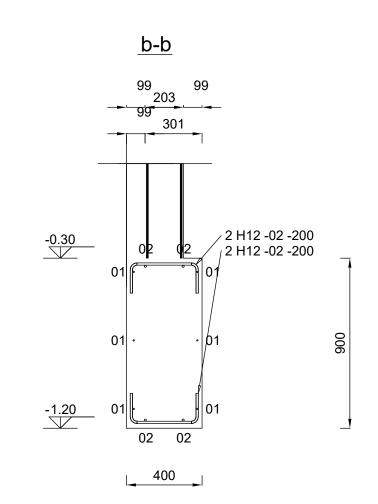
Project number	001-00
Date	Issue Date
Drawn by	Author
Checked by	Checker
	S204
Scale	As indicated

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Consultant
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Consultant
Address
Address
Phone
Fax
e-mail

Graphical Column Schedule

1 : 100

Top section (left)

Level	Value
Roof Level	9000
Top of Parapet	6000
Level 2	
Ceiling	
Ref Beam system	
	2700
	2439
Level 1	
Level Lower	
Foundation	850
	-1200
FOUNDATION-2700	
	-2700

Column Locations: A(-102)-2, A(-102)-3, A(-102)-4, A(-102)-5, A(-102)-6, A(-102)-7, A(-102)-8, B-3(1500), C-2, C-3, C-4, C-5, C-6, C(-460)-6, C-7, C-8, C(-460)-8, D-6, D-8, F-6

Bottom section (left)

Level	Value
Roof Level	9000
Top of Parapet	6000
Level 2	
Ceiling	
Ref Beam system	
	2700
	2439
Level 1	
Level Lower	
Foundation	850
	-1200
FOUNDATION-2700	
	-2700

Column Locations: F-8, G(220)-6, G(-160)-6, G(220)-8, G(-160)-8, H(160)-6, H(160)-8

Structural Column Schedule

Family	Type	Length	Base Level	Base Offset	Top Level	Top Offset
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3100	Level 2	-100	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3100	Level 2	-100	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3100	Level 2	-100	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3100	Level 2	-100	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3561	Ref Beam system	0	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	7200	Foundation	0	Top of Parapet	0
M_Concrete-Square-Column	450 x 450mm	3350	Level 1	-350	Level 2	0
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3639	Foundation	0	Ref Beam system	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3100	Level 2	-100	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3100	Level 2	-100	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3100	Level 2	-100	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	7200	Foundation	0	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	7200	Foundation	0	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3561	Ref Beam system	0	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3639	Foundation	0	Ref Beam system	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3561	Ref Beam system	0	Top of Parapet	0
UB-Universal Beams-Column (AS 3679_1)	200UB25.4	3639	Foundation	0	Ref Beam system	0
M_HSS Square-Column	HSS63.5X63.5X7.9	2793	Level Lower	-44	Ref Beam system	-240

No.	Description	Date

Autodesk
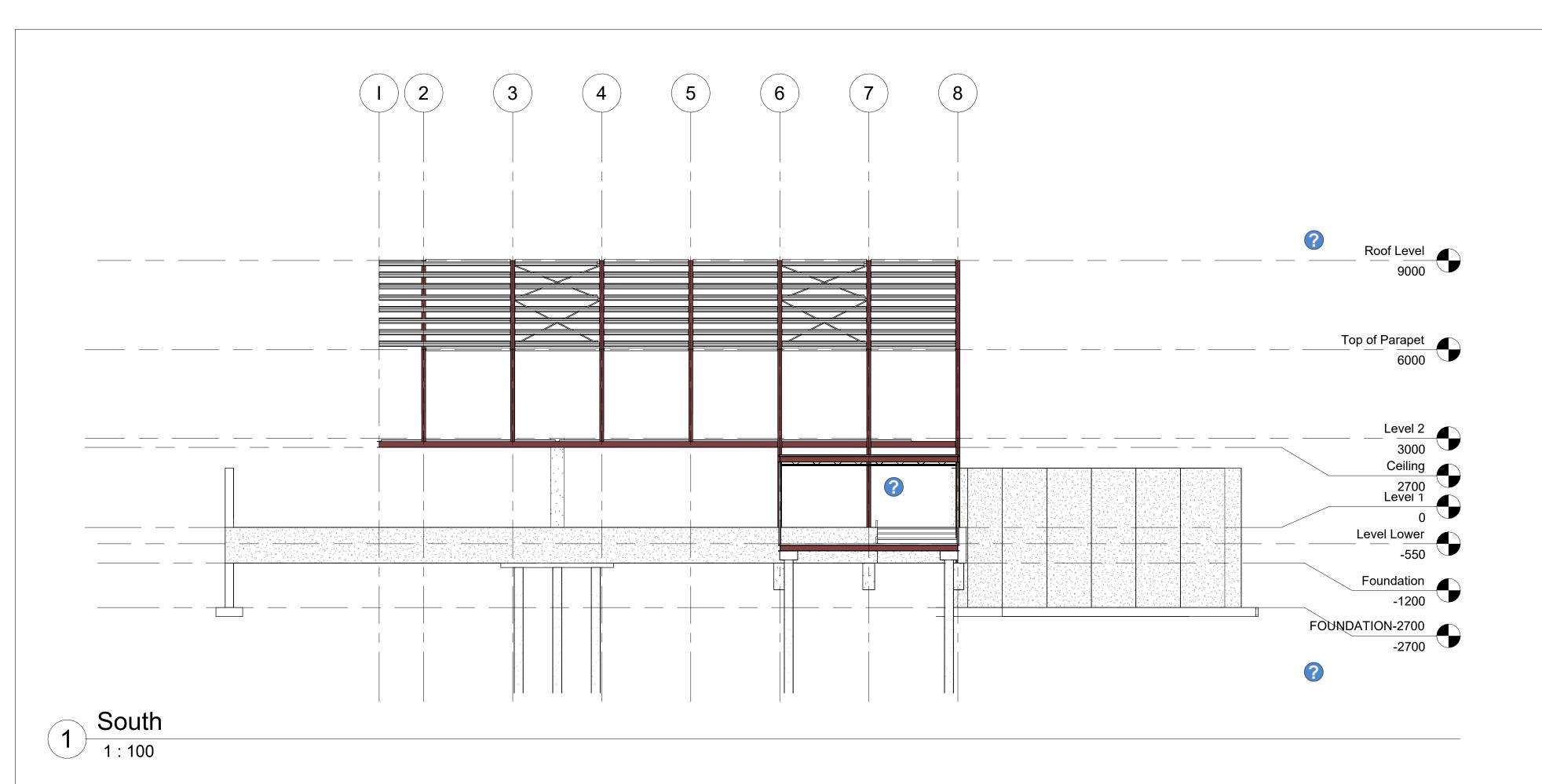
Sample House
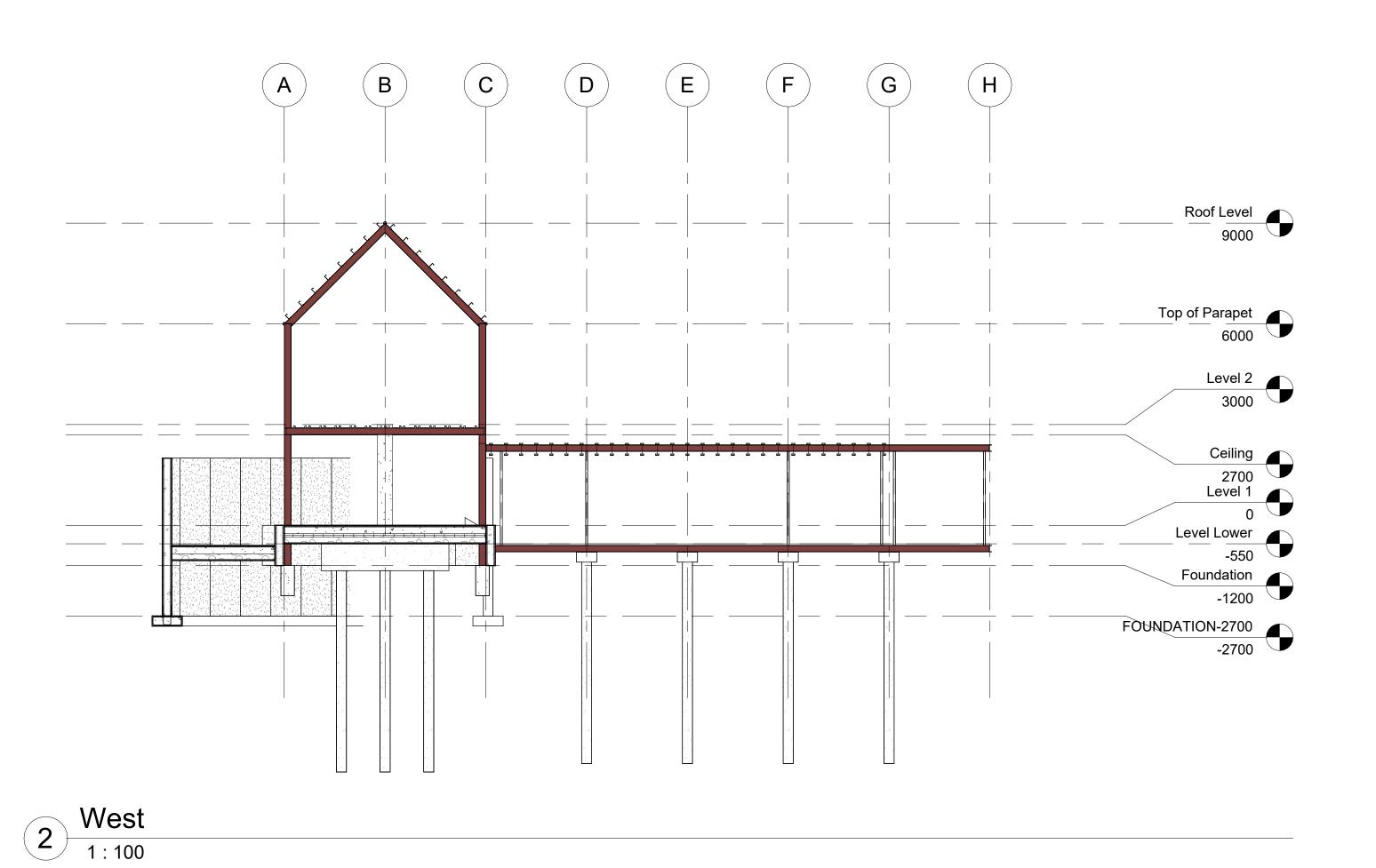
Column
Schedules

Project number	001-00
Date	Issue Date
Drawn by	Author
Checked by	Checker

S205

Scale	1 : 100

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South
1 : 100

Roof Level
9000

Top of Parapet
6000

Level 2
3000

Ceiling
2700

Level 1
0

Level Lower
-550

Foundation
-1200

FOUNDATION-2700
-2700

West
2 : 100

Roof Level
9000

Top of Parapet
6000

Level 2
3000

Ceiling
2700

Level 1
0

Level Lower
-550

Foundation
-1200

FOUNDATION-2700
-2700

Consultant	Consultant
Address	Address
Address	Address
Phone	Phone
Fax	Fax
e-mail	e-mail
Consultant	Consultant
Address	Address
Address	Address
Phone	Phone
Fax	Fax
e-mail	e-mail

No.	Description	Date

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Sample House

Elevations

Project number	001-00
Date	Issue Date
Drawn by	Author
Checked by	Checker

S206

Scale	1 : 100

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