



Robert
Bird
Group

SSD Report
for
**UNIVERSITY OF WOLLONGONG-
WESTERN BUILDING**

Issue: SSD

04.10.2017

Prepared For: **UNIVERSITY OF WOLLONGONG**

Project No.: 17271

Document No.: 17271-DCWC RPT-S



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1.0 Introduction

The following report sets out our understanding of the project requirements for the University of Wollongong – Western Building Project and the basis of the structural design that is consistent with these requirements and the various site constraints.

University of Wollongong (UOW) is proposing to develop a four storey Building for Social Sciences, Law Humanities and Arts Building within the western precinct of the campus. The proposed building is located opposite the UOW Building 21 Early Start Facility on the Campus Rind Road

Project team comprises of the following Client and Design Team participants:

Developer- University of Wollongong;

Project Management: Donald Cant Watts Corke,

Architect: Hassell

Electrical Service: Arup

Mechanical Service: Aecom

Structural Engineering: Robert Bird Group

Civil Engineering: Taylor Thomas Whitting

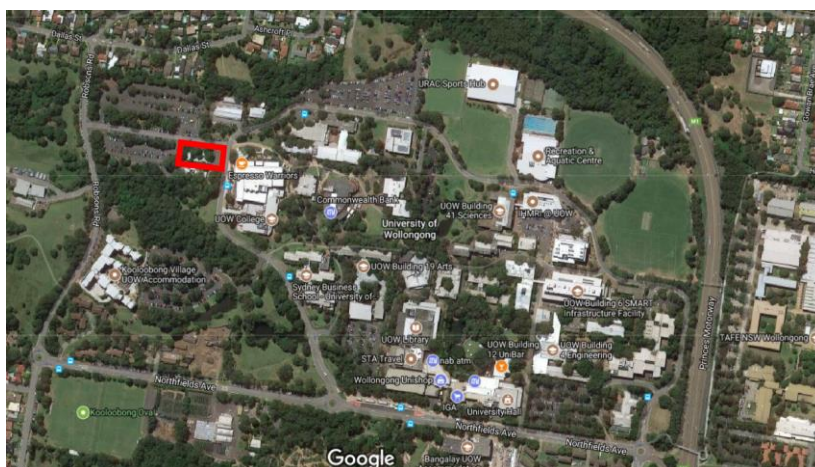
Hydraulic and Fire Services: AJ Whipps Consulting

Theatre and Performance Space: Marshall Day

The Project is currently at the end of schematic stage.

2.0 Site Description

The site is located to the North West of the University of Wollongong's campus. The site currently contains a number of demountable small buildings which will be removed for the new construction works. The site existing levels range from 33.5m to 38.5m (AHD).



Site Location Plan

The subsurface conditions comprise of a thin layer of topsoil/fill over an Alluvial and Residual layer with bedrock approximately 10m below the surface.

Ground water was encountered during the site investigation works at approximately 9.5m below the surface. The water table level will not affect the Structural design.

The Geotechnical Report classifies the site as "H1" which means "highly reactive clay or silt sites, which may experience high ground movement from moisture changes".

Refer to the Geotechnical Report by Coffey dated 11th July 2017.

3.0 Design Criteria

3.1 General

The following outlines the various design and loading criteria that are consistent with the project principal's requirements and the site constraints for the project outlined above.

3.2 Design Life

The design life adopted for all structural elements shall be 50 years.

The continued satisfactory performance of the structures designed to the criteria outlined in this report assumes an appropriate and comprehensive maintenance regime specific to those structures will be developed and implemented by the building owner as part of the overall maintenance regime for the facility.

3.3 Codes and Specifications

The structural design of the project is to be completed in accordance with the relevant Australian Standard Codes of Practice including but not limited to the following:

- Building Code of Australia (BCA)
- AS/NZS 1170 Part 0 Structural Design Actions - General Principles
- AS/NZS 1170 Part 1 Structural Design Actions - Permanent, Imposed & Other Actions
- AS/NZS 1170 Part 2 Structural Design Actions - Loading Code Wind
- AS 1170 Part 4 Structural Design Actions - Loading Code Earthquakes
- AS 2159 Piling Code
- AS 2670 Part 2 Evaluation of human exposure to whole-body vibration
- AS/NZS 3600 Concrete Structures
- AS/NZS 3700 Masonry Code
- AS/NZS 4100 Steel Structures
- AS 5100 Bridge Design Code

3.4 Loading Criteria

Refer to the architectural documents for the extent of different floor use areas and hence different live and super imposed dead loadings. Unless noted otherwise the following loads are to be adopted:

BCA Importance Level

The UOW-Western Building are designed for Importance Level 3 and classified as Class 9b with Type A construction to the Building Code of Australia.

Dead Load General

Floor Slabs and Beams	s.w. as calculated
Lightweight Partitions	1.0 kPa
Masonry Partitions	22kN/cu.m
Façade load along building perimeter at each level	10 kN/m
Ceilings	0.25kPa

The following Design Loads have been considered on the floor areas throughout the project for various usages.

Floor Usage	Superimposed Dead Load (SDL)-kPa	Live Load (LL)- kPa
Auditorium, Lecture Theatre, Studio	1.5	4
Lobby, Corridor and Stairs	2	4
Plant & Store Room	1	7.5
Office or Working Place	1.8	3
LAB	2	5
Rehearsal	1.5	5
Kitchen, Toilet and Suite	1.5	3
Interaction, Collaboration Room	1.5	4
Balcony	2	5
L.04 - Plant Roof	1.5	5.0
L.05 Roof	0.5	0.6

Balustrade Live Loads

Handrails generally	Class A to D to Table 3.3 in AS1170.1
Handrails in any specific area	Class B to D to Table 3.3 in AS1170.1

Refer to Appendix C for Loading Plans which contain SDL and LL throughout each floor also.



Specific / Heavy Services

Location of water tanks and a generator must be confirmed.

Earthquake Load

The structures are to be designed for seismic load in accordance with the relevant Australian Standard being AS 1170.4 for the following parameters:

Factor	Adopted Value
Hazard Factor	0.09
Site Subsoil Class	Ce
Building Importance Level	3
Annual Probability of Exceedance	1:1000
Probability Factor k_p	1.3
Earthquake Design Category	EDC II

Wind Load

The building is to be designed for wind loads in accordance with the relevant Australian Standards (being AS/NZS 1170.2) for the following parameters:

Factor	Adopted Value
Region	A2
Terrain Category	3
Building Importance Level	3
Annual Probabilities of Exceedance	Ultimate 1:1000 Permissible 1:100 Service 1:25
Basic Wind Velocities – V_{2000} V_{100} V_{25}	48m/s 41m/s 37m/s
M_d	1
M_s	1
M_t	1

3.5 Serviceability Criteria

The following outline the general criteria to be adopted to ensure adequate performance of the structure in terms of serviceability.

Building Lateral Deformation

Wind Load

Total deflection not greater than Height/500 (at permissible loads).

Inter-storey deflection not greater than Floor to Floor/500 (at permissible loads).

Earthquake Load

Inter-storey drift not greater than 1.5% of Floor to Floor

Vertical Deformation

Slab and beams are to be designed to achieve the following maximum deflection criteria for dead and live load:

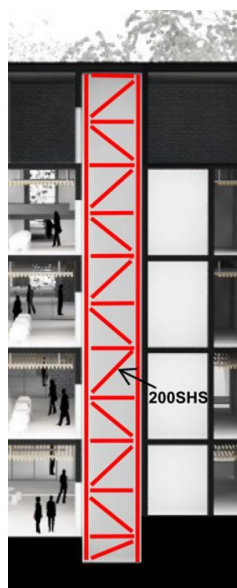
Structural Element	Deflection Type	Limit
Overall building structure	Lateral sway due to permissible wind load	height/500
	Lateral sway due to ultimate earthquake loads	interstorey drift limit of 1.5% of story height
Floor slabs – spans (no sensitive partitions)	Long-term deflection	span/250 or 25mm whichever is less
Floor slabs – spans (with sensitive partitions)	Incremental deflection	span/500 or 25mm whichever is less
Floor slabs – cantilevers (no sensitive partitions)	Long-term deflection	cantilever/125 or 25mm whichever is less
Floor slabs – cantilevers (with sensitive partitions)	Incremental deflection	cantilever/250 or 25mm whichever is less
Transfer beams	Long-term deflection	span/1000 or 10mm, whichever is less

Vibration

Slabs and beams are designed to achieve the vibration criteria in AS2670.2.

We have been requested by the End Users to provide an option to isolate the Lift Shaft from the structure to ensure no vibration is absorbed by the structure and which may affect recording sensitive equipment.

We have proposed the following welded braced steel frame which is a standalone structure inside the concrete lift shaft.



Steel Lift Shaft Section

The steel frame is isolated from the concrete structure and the bracing provides independent stability.

Joint Movements

There are no requirements for a permanent movement joint in this structure. Construction joints will be coordinated with the Contractor and is dependent on the quantity of concrete the contractor can pour per day and the Post Tensioning layout also.

3.6 Durability Criteria

General	exposure classification A2 to AS3600
Pile Caps and In-ground Elements	exposure classification A2 to AS3600
Piles	TBC in accordance with AS2159 (Geotechnical Engineer to confirm)
External elements	exposure classification A2 to AS3600

All steelwork will be painted with a protective paint coating system in accordance with AS/NZS 2312.

The maintenance regime is to allow for recoating of paintwork every 10 to 15 years in order to achieve the required 50 year design life.

3.7 Fire Rating

Structural elements are to be designed in accordance with the Building Code of Australia and the relevant Australian Standards to satisfy the required FRL levels for fire.

All new concrete structural elements to be designed for a minimum 2 hour fire rating and as per Table 3 Type A Construction in the BCA/NCC as follows:

<u>Building Element</u>	<u>FRL</u>
Floor slabs and beams	[120/120/120]
External Wall (Load Bearing) (Non-Load Bearing)	[120/120/120] [- /120/120]
External Columns (Load Bearing) (Non-Load Bearing)	[120/ - / -] [- / - / -]
Common Walls & Fire Walls	[120/120/120]
Internal Walls	[120/120/120]
Other Load Bearing Walls/Internal Beams/Columns	[120/ - / -]
Roof	[120/60/30]

Steelwork fire ratings are to be achieved by the application of fire protection material such as intumescent paint, fire board or fire spray. The supplier is to provide the material type and thicknesses in coordination with the Architect requirements and to achieve an FRL of 120mins unless noted otherwise by the BCA consultant.

4.0 Structural Concept and Schematic's

A number of items affect the possible structural concepts as follows:

- Building Grid
- The grid is typically set out by the Architect and is predominately a function of the spaces and their usage throughout the building. The typical Grid in this building is a 13.2m x 7.2m Grid
- Floor to floor and over all building height criteria
- Fire requirements
- This Building requires a 120min FRL given it has a Classification – 9b
- Any Acoustic and Vibration requirements
- Local market material availability and experience
- Soil conditions
- Design Life

Considering the above requirements and criteria we looked at two options in particular:

1. Post tensioned band beams and one way slab
2. Post tensioned flat plate slab

Refer to Appendix A for Concept Sketches.

4.1 Scheme Design

As we developed the Concept in parallel with the Architect, Design Team and Quantity Surveyor we determined that the band beam and slab option was the most efficient and suitable option. The main criteria that influenced this outcome was the large 13.2m spans throughout the structure. Post tensioned band beams are a very effective and efficient solution with respect to the quantity of material required to achieve these spans.

Additionally reinforced concrete structures have good fire properties, good acoustic properties and good vibration properties. The use of Post Tensioned concrete in Wollongong NSW is also common and therefore the local market should be able to supply the necessary material and skilled resource.

Therefore with the Building envelope and Grids reasonably confirmed we have developed our scheme using a PT Band beam and slab option on Levels 1,2 and 3.

Following advice from the Geotechnical Consultant Coffey we have adopted a piled foundation system. We also understand that the soil is highly reactive and is classified as "H1". Therefore a traditional slab on grade is not appropriate for this building. We have adopted a continuous reinforced slab on grade which is tied into the piling system and therefore preventing any slab uplift from the soils under.

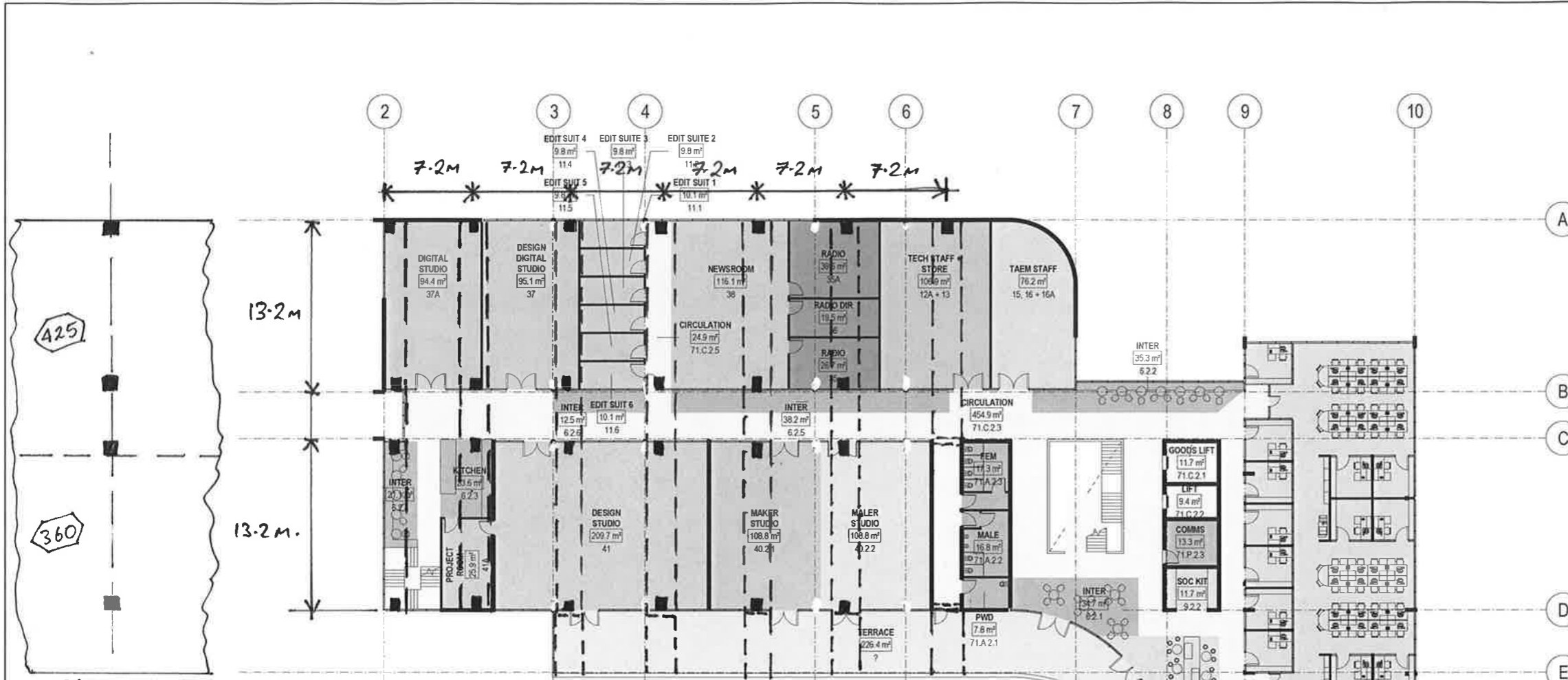
We are currently proposing a Steel Framed roof at Level's 4 and 5. This should be the most economical solution but must be confirmed by the costing team. We will provide a concrete optional design for level 4 for costing comparison.

Refer to Appendix C for our Schematic Sketch's.

Appendix A

Concept Sketches





OPTION 2

OPTION 1: BAND BEAMS - 1200(W) x 500 (DP).
 + 23kg/m² P.T. + 75 kg/m³ Reinf.

Slab - 180 mm thk. P.T Slab un.o
 + 5kg/m² P.T. + 45 kg/m³ Reinf.

OPTION 2: Flat P.T. Slab. - 360/425mm thk.
 + 8.4kg/m² P.T.
 + 45kg/m³ Reinf.

ALL Conc - 40MPa.



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REV	DESCRIPTION	DATE
2	CONSULTANT CO-ORDINATION	07/07/17
1	CURRENT STATUS ISSUE TO QS FOR COST CHECK	26/06/17

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 Nominated architects NSW Terry Greal 5350 Ross de la Motte 7398

HASSELL
 CLIENT
 UNIVERSITY OF WOLLONGONG

PROJECT
 WESTERN BUILDING

DRAWING TITLE
 LEVEL 2 FLOOR PLAN
 PREFERRED OPTION

13.2 x 7.2m GRID.

STATUS
 CD+SD

SCALE @ A1
 1:200

PROJECT NUMBER
 012734

DRAWING NUMBER
 A_1102

REV
 2

R.B.G. 18-07-2017.

C:\Revit



Notes:

**Edge Beam - 400(w) x 350Dp
- 45kg/cu.m Reinf.**

**Slab - 200mm thk
- 2 Layers SL102 Mesh**

**Columns - 400 x 750mm Typ. or 600mm dia
- 225kg/cu.m Reinf**


Wall - 250mm thk + 125kg/cu.m reinf.

All Concrete 40MPa

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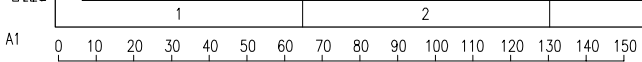


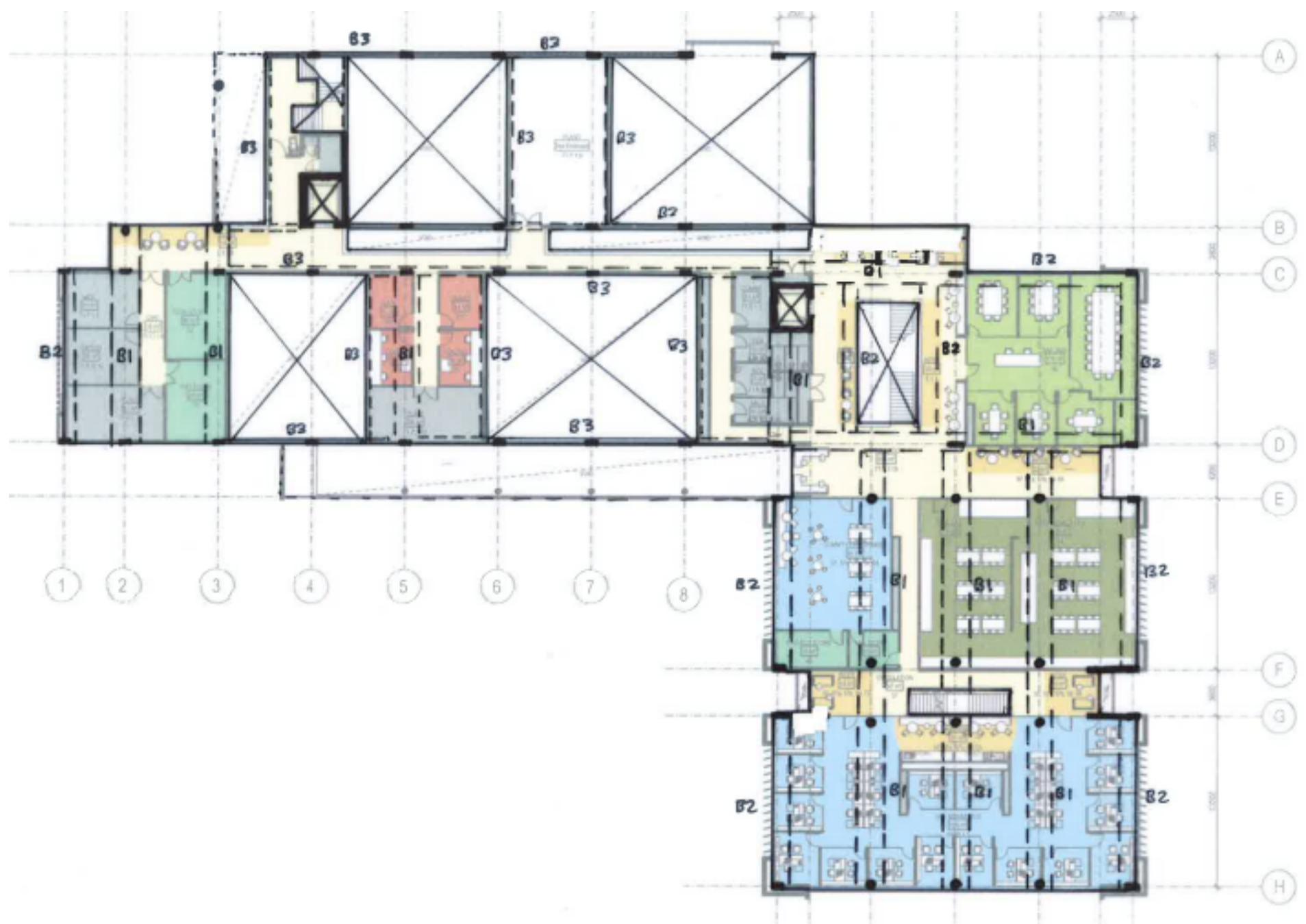
Rev.	Revision Description	By	App	Date

Client:
UNIVERSITY OF WOLLONGONG

Title
Ground Floor Layout Plan
Project
UOW - Western Building

Date	By	
29.08.2017	O. Farrell	
Job Number	Drawing Number	Revision
17271	SK - 01	02





Notes:

Band Beams B1 - 1,200(w) x 550dp PT
 - 23kg/sq.m PT + 75kg/cu.m Reinf.

Band Beams B2 - 600(w) x 550dp PT
 - 23kg/sq.m PT + 75kg/cu.m Reinf.

Beams B3 - 100(w) x 550dp PT
 - 20kg/sq.m PT + 85kg/cu.m Reinf.

Slab - 200mm thk
 - 5kg/sq.m PT + 45kg/cu.m reinf.

Columns - 400 x 750 Typ or 600mm dia.
 - 225kg/cu.m Reinf

Wall - 250mm thk + 125kg/cu.m reinf.

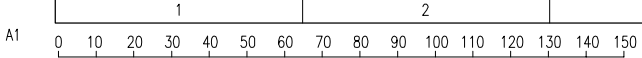
All Concrete 40MPa

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Client:
UNIVERSITY OF WOLLONGONG

Title	Level 1 Layout Plan		Date	29.08.2017		By	O. Farrell	
Project	UOW - Western Building		Job Number	17271		Drawing Number	SK - 02	
			Revision	02				





Notes:

Band Beams - 1,200(w) x 500dp PT
 - 23kg/sq.m PT + 75kg/cu.m Reinf.

Slab - 200mm thk
 - 5kg/sq.m PT + 45kg/cu.m reinf.

Columns - 400 x 750 Typ or 600mm Dia.
 - 225kg/cu.m Reinf

All Concrete 40MPa

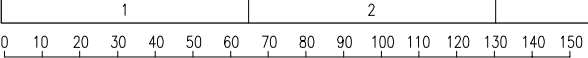
Level 3 Layout is Similar

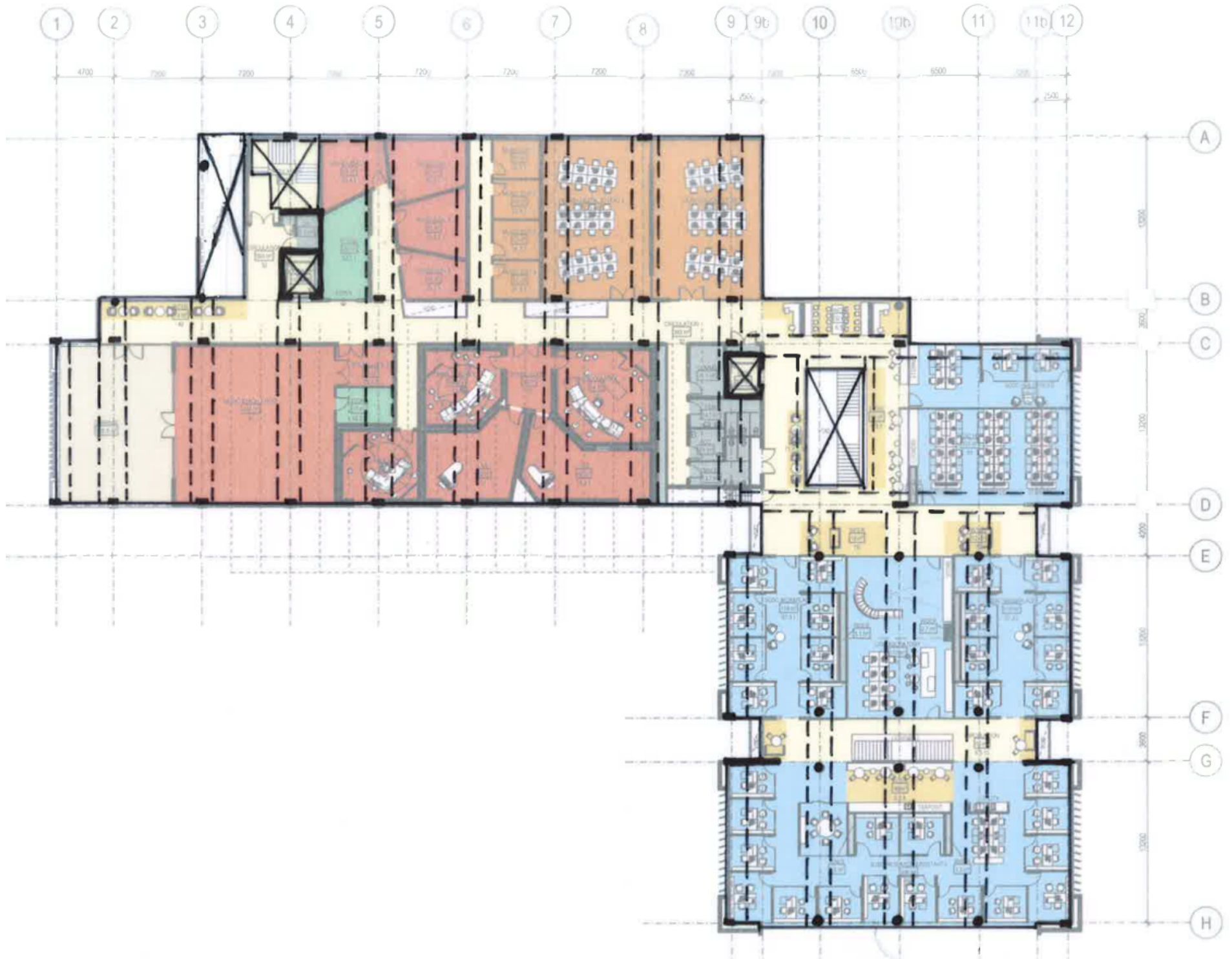
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Client:
UNIVERSITY OF WOLLONGONG

Title	Level 2 Layout Plan		Date	28.08.2017		By	O. Farrell	
Project	UOW - Western Building		Job Number	17271		Drawing Number	SK - 03	
			Revision	02				





Notes:

Band Beams - 1,200 (w) x 500dp PT
 - 23kg/sq.m PT + 75kg/cu.m Reinf.

Slab - 200mm thk
 - 5kg/sq.m PT + 45kg/cu.m reinf.

Columns - 400 x 750 Typ or 600mm Dia.
 - 225kg/cu.m Reinf

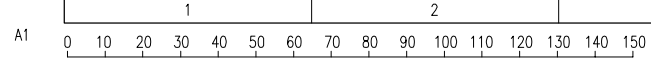
All Concrete 40MPa

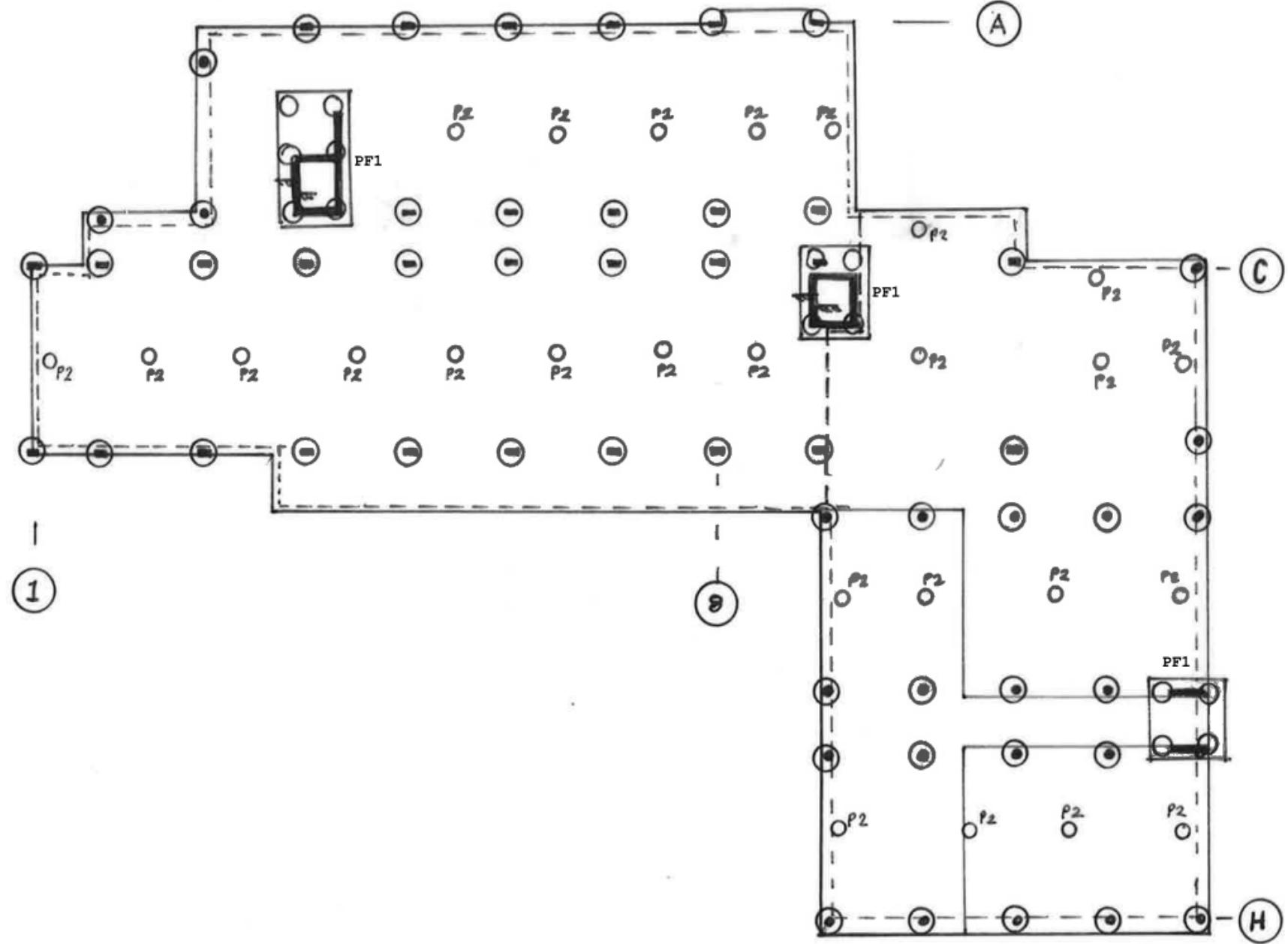
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UNIVERSITY OF WOLLONGONG

Title Level 3 Layout Plan	Date 28.08.2017	By O. Farrell	
Project UOW - Western Building	Job Number 17271	Drawing Number SK - 04	Revision 02





Notes:

All Piles P1 u.n.o

Pile P1 - 900mm Dia.
 - 15m Long
 - Reinf. - 85kg/cu.m
 - 40MPa

Pile P2 - 300mm Dia
 - 7.5m Long
 - Reinf. - 150kg/cu.m

Pad Footing PF1 - 600mm Dp
 - Reinf. 125kg/cu.m
 - 40MPa Conc.

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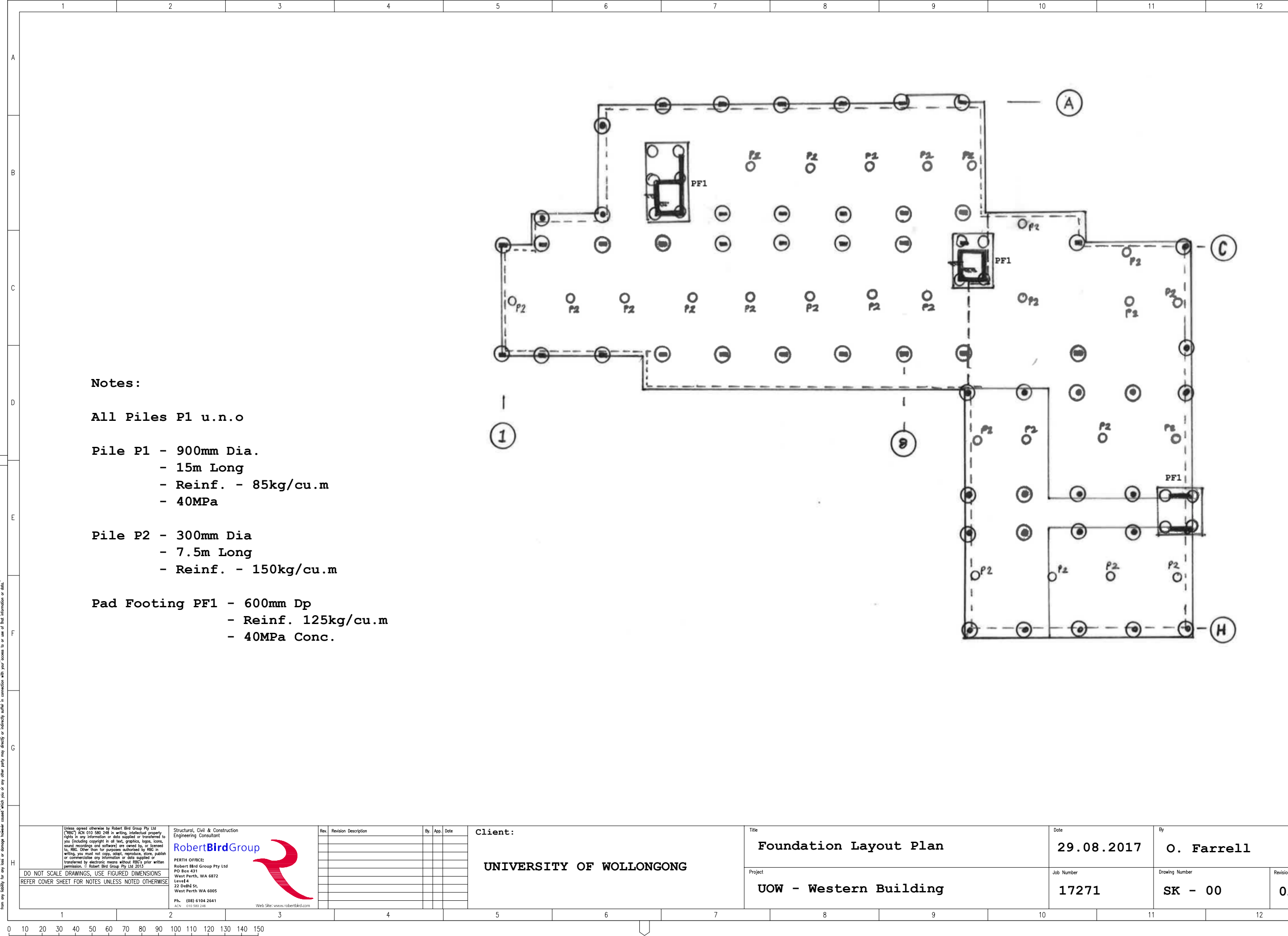
Rev.	Revision Description	By	App	Date

Client:
UNIVERSITY OF WOLLONGONG

Title
Foundation Layout Plan

Project
UOW - Western Building

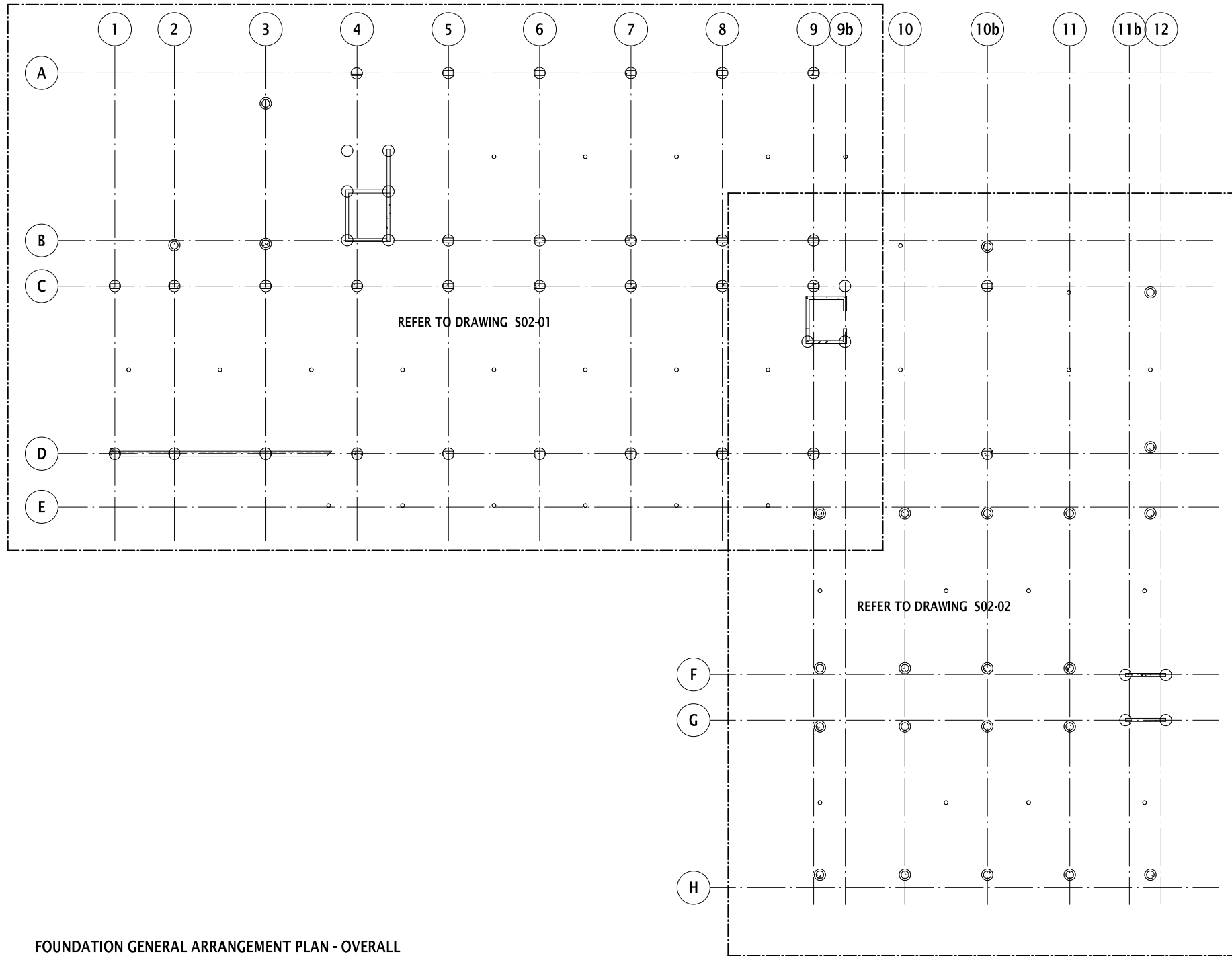
Date 29.08.2017	By O. Farrell
Job Number 17271	Drawing Number SK - 00
	Revision 02



Appendix B

Schematic Drawings/Sketches





FOUNDATION GENERAL ARRANGEMENT PLAN - OVERALL
SCALE 1 : 200

P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev	Description	By	App	Date
1	ISSUED FOR INFORMATION			06.09.17

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Engineering Consultant



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Level 11, 151 Castlereagh St Web: www.robertbird.com
Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**FOUNDATION
GENERAL ARRANGEMENT PLAN
OVERALL**

Date
Sep 2017
Scale at A1
1:200

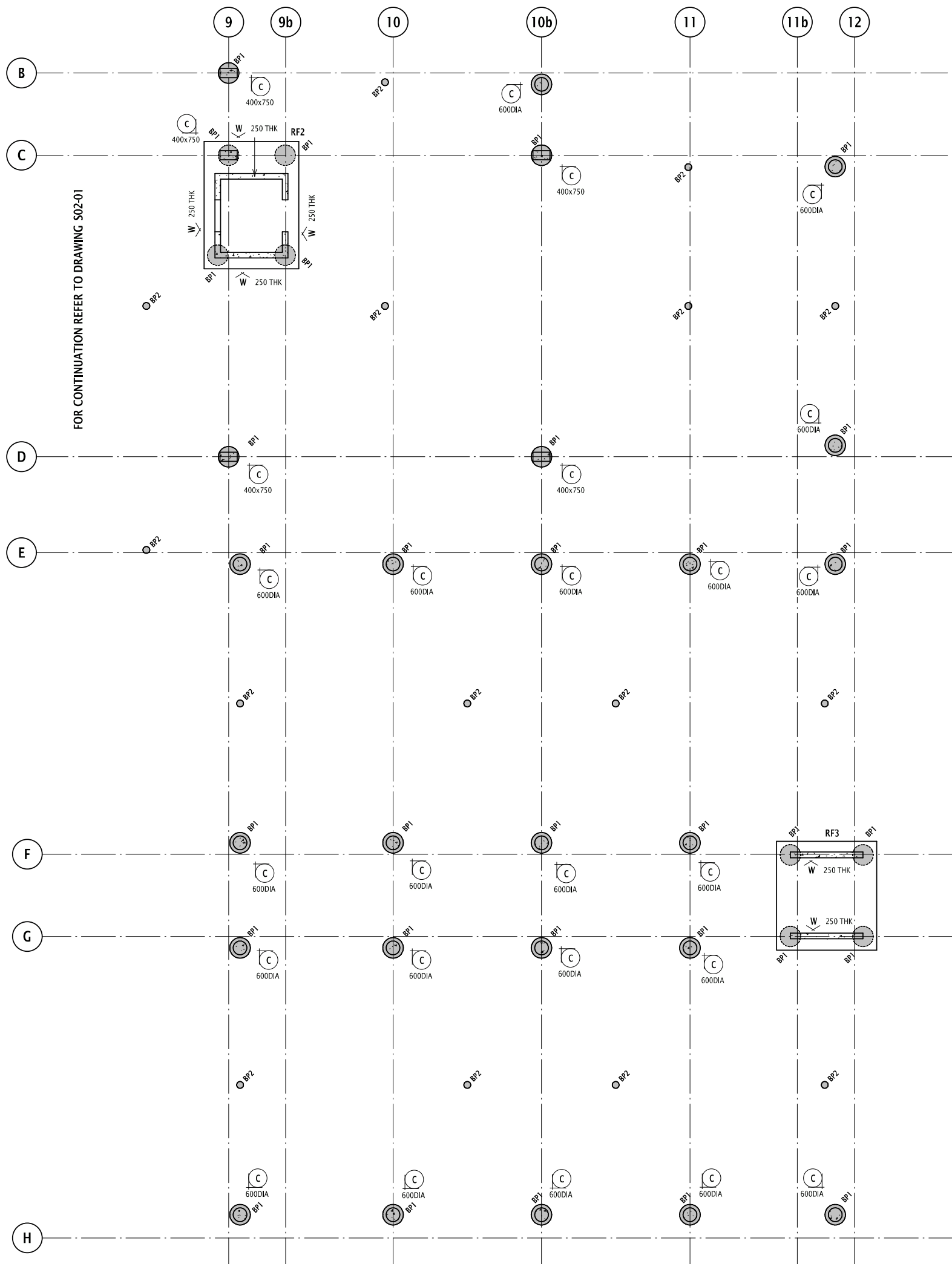
Drawn
K.PETROVSKI
Designer
Design Checker

Job Number
17271

Approved

NOT FOR CONSTRUCTION

Drawing Number	Revision
S02-00	P1



- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S7.7 SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES:
-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	Pc
BORED PIERS	40
RAFT FOOTINGS	40

REINFORCEMENT RATES:
-REFER NOTES ON COVER SHEET

LOCATION	RATE
PILES BP1	85 kg/m ³
PILES BP2	150 kg/m ³
RAFT FOOTINGS	125 kg/m ³

CORE RAFT FOOTING SCHEDULE				
MARK	LENGTH	WIDTH	DEPTH	REMARKS
RF1	8250	4475	600	FOR SIZE REFER DETAILS
RF2	5575	4150	600	
RF3	4765	4380	600	

BORED PIER SCHEDULE		
MARK	PILE DIA	PILE DEPTH
BP1	900	15000
BP2	300	7500

P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev. Revision Description By App Date
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 Sydney NSW 2000 ACN 910 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
FOUNDATION GENERAL ARRANGEMENT PLAN SHEET 2

Date
 Sep 2017
 Scale at A1
 1:100

Drawn
 K.PETROVSKI
 Designer

Design Checker

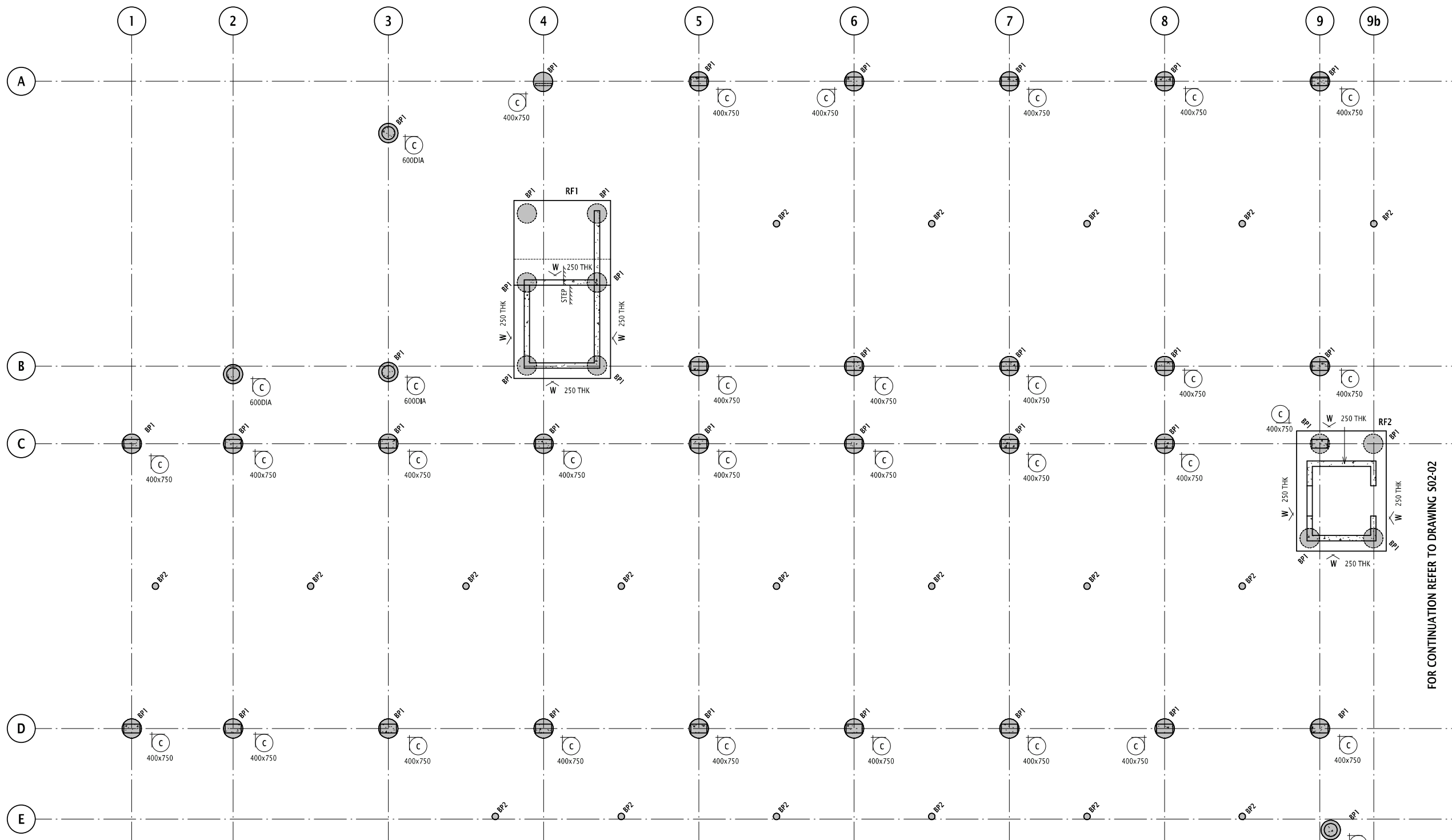
Job Number
 17271

Approved

NOT FOR CONSTRUCTION

Drawing Number
 S02-02

Revision
 P1



FOUNDATION GENERAL ARRANGEMENT PLAN SHEET 1
SCALE 1 : 100

- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S77.77 SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES :
-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	Fc
BORED PIERS	40
RAFT FOOTINGS	40

REINFORCEMENT RATES:
-REFER NOTES ON COVER SHEET

LOCATION	RATE
PILES BP1	85 kg/m ³
PILES BP2	150 kg/m ³
RAFT FOOTINGS	125 kg/m ³

CORE RAFT FOOTING SCHEDULE				
MARK	LENGTH	WIDTH	DEPTH	REMARKS
RF1	8250	4475	600	FOR SIZE REFER DETAILS
RF2	5575	4150	600	
RF3	4765	4380	600	

BORED PIER SCHEDULE		
MARK	PILE DIA	PILE DEPTH
BP1	900	15000
BP2	300	7500

FOR CONTINUATION REFER TO DRAWING S02-02

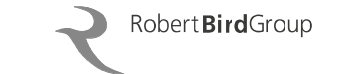
Rev	Revision Description	By	App	Date
P1	ISSUED FOR INFORMATION			06.09.17

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Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
FOUNDATION GENERAL ARRANGEMENT PLAN SHEET 1

Date
Sep 2017
Scale at A1
1:100

Drawn
K.PETROVSKI
Designer

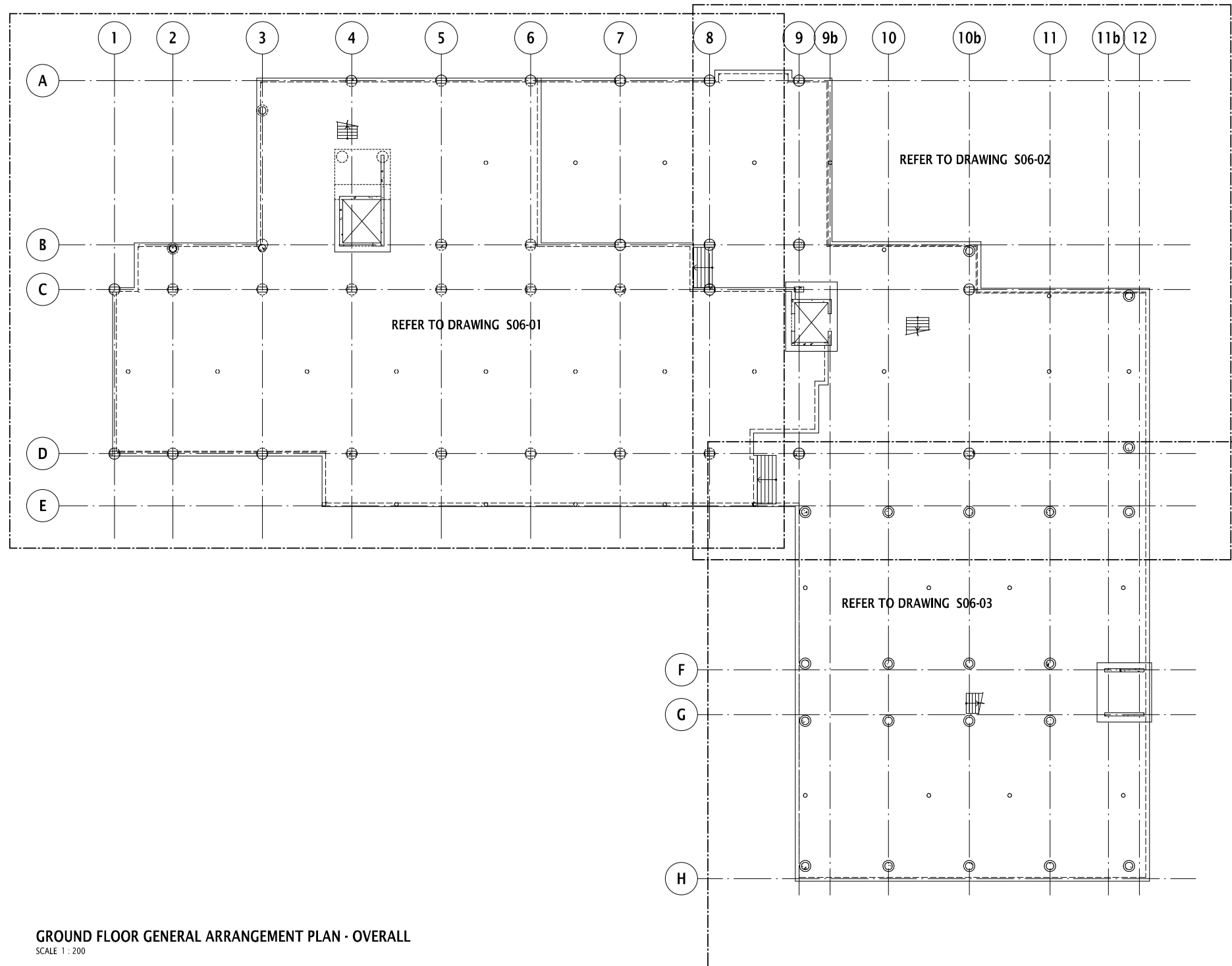
Job Number
17271

Approved
Design Checker

NOT FOR CONSTRUCTION

Drawing Number
S02-01

Revision
P1



GROUND FLOOR GENERAL ARRANGEMENT PLAN - OVERALL
SCALE 1 : 200

P2	ISSUED FOR INFORMATION	KP	OF	25.09.17
P1	ISSUED FOR INFORMATION	KP	OF	06.09.17

Rev	Revision Description	By	App	Date
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Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**GROUND FLOOR
GENERAL ARRANGEMENT PLAN
OVERALL**

Date
Sep 2017
Scale at A1
1:200

Drawn
K. PETROVSKI
Designer
Design Checker

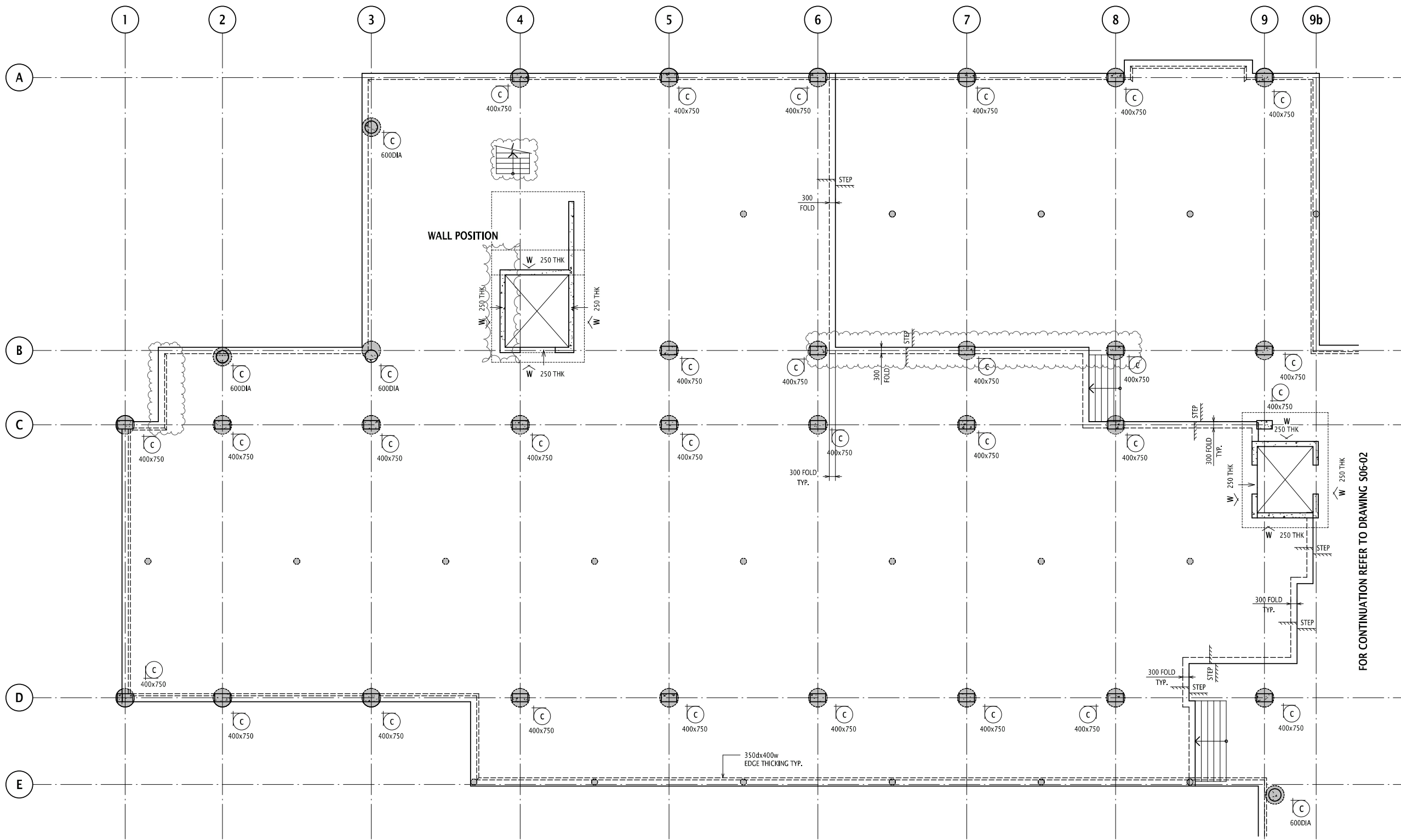
Job Number
17271

Approved

NOT FOR CONSTRUCTION

Drawing Number
S06-00

Revision
P2



GROUND FLOOR GENERAL ARRANGEMENT PLAN SHEET 1

SCALE 1 : 100
 SLAB TO BE 200 THICK SOG UNO
 2 LAYERS SL102 MESH

CONCRETE NOTES :
 -REFER NOTES ON COVER SHEET
 -MIN CONC. STRENGTH AT 28 DAYS

LOCATION	Fc
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
 -REFER NOTES ON COVER SHEET

LOCATION	RATE
EDGE BEAM	45 kg/m ³
COLUMNS	225 kg/m ³
WALLS	125 kg/m ³

GENERAL ARRANGEMENT

- DENOTES INSITU CONCRETE ELEMENT OVER
- DENOTES LOAD BEARING ELEMENT UNDER
- DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
- DENOTES PRECAST ELEMENT OVER
- DENOTES BLOCKWORK AND TYPE REFER S7:?? SERIES
- DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
- DENOTES WET AREA SET DOWN
- DENOTES PENETRATION
- DENOTES SUMP
- DENOTES SLAB STEP
- DENOTES SLAB THICKNESS
- DENOTES COLUMN NUMBER AND SIZE
- DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
- DENOTES SPAN DIRECTION
- DENOTES SAWN JOINT
- DENOTES TOOLED JOINT
- DENOTES KEYED JOINT
- DENOTES DOWELLED JOINT
- DENOTES CONSTRUCTION JOINT
- DENOTES EXPANSION JOINT

NOTE: REFER ARCHITECTS DRAWINGS FOR

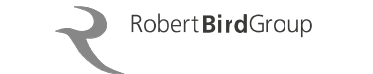
Rev	Revision Description	By	App	Date
P2	ISSUED FOR INFORMATION	KP	OF	25.09.17
P1	ISSUED FOR INFORMATION	KP	OF	06.09.17

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 Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
GROUND FLOOR GENERAL ARRANGEMENT PLAN SHEET 1

Date
 Sep 2017
 Scale at A1
 1:100

Drawn
 K.PETROVSKI
 Designer

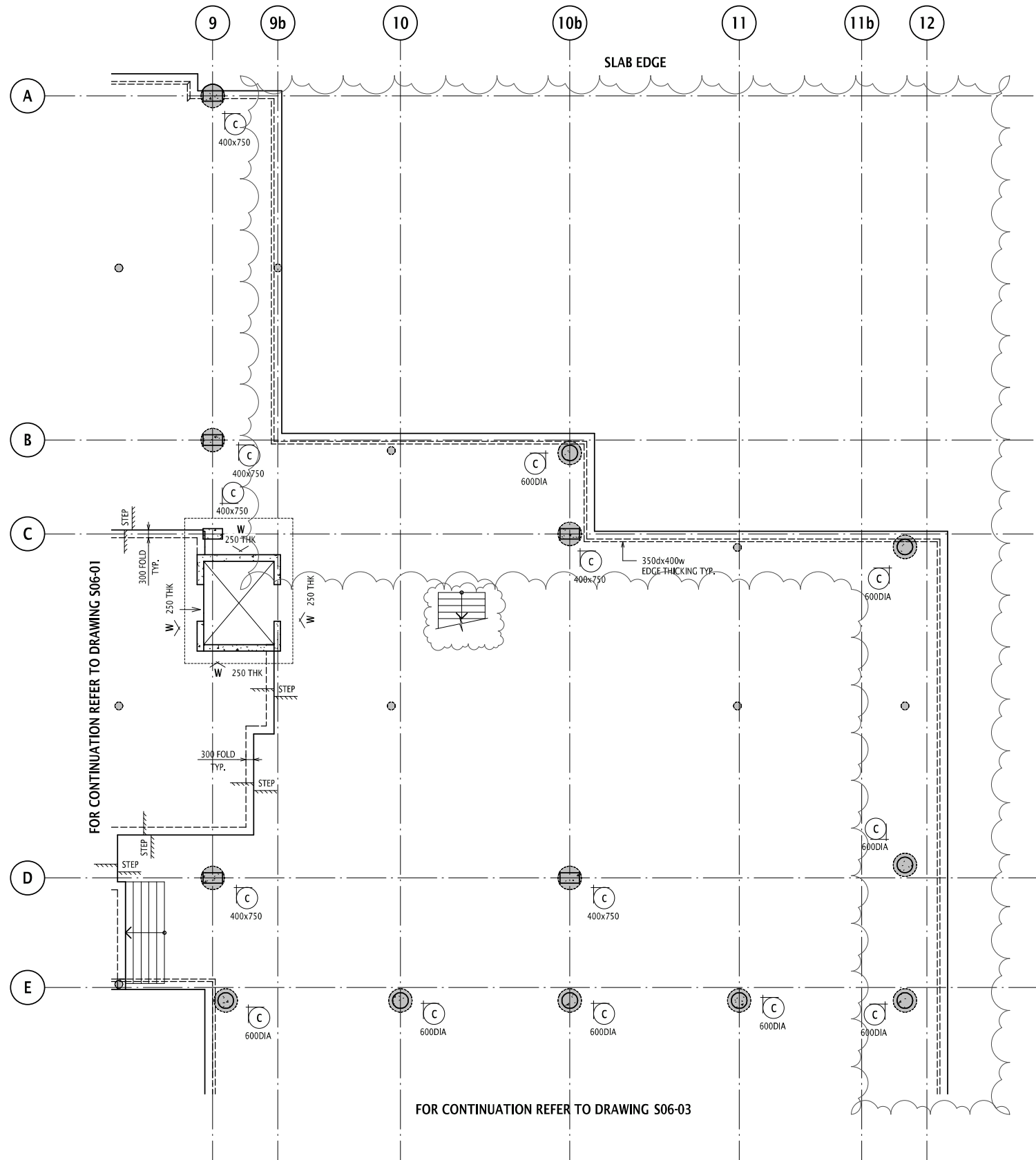
Job Number
 17271

Approved
 Design Checker

NOT FOR CONSTRUCTION

Drawing Number
 S06-01

Revision
 P2



GROUND FLOOR GENERAL ARRANGEMENT PLAN SHEET 2
 SCALE 1 : 100
 SLAB TO BE 200 THICK SOG UNO
 2 LAYERS SL102 MESH

- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S72.77 SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES :
 REFER NOTES ON COVER SHEET
 MIN CONC. STRENGTH AT 28 DAYS

LOCATION	Pc
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
 REFER NOTES ON COVER SHEET

LOCATION	RATE
EDGE BEAM	45 kg/m ³
COLUMNS	225 kg/m ³
WALLS	125 kg/m ³

P2 ISSUED FOR INFORMATION KP OF 25.09.17
 P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev **Revision Description** **By** **App** **Date**

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Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**GROUND FLOOR
 GENERAL ARRANGEMENT PLAN
 SHEET 2**

Date
 Sep 2017
 Scale at A1
 1:100

Drawn
 K.PETROVSKI
 Designer
 Design Checker

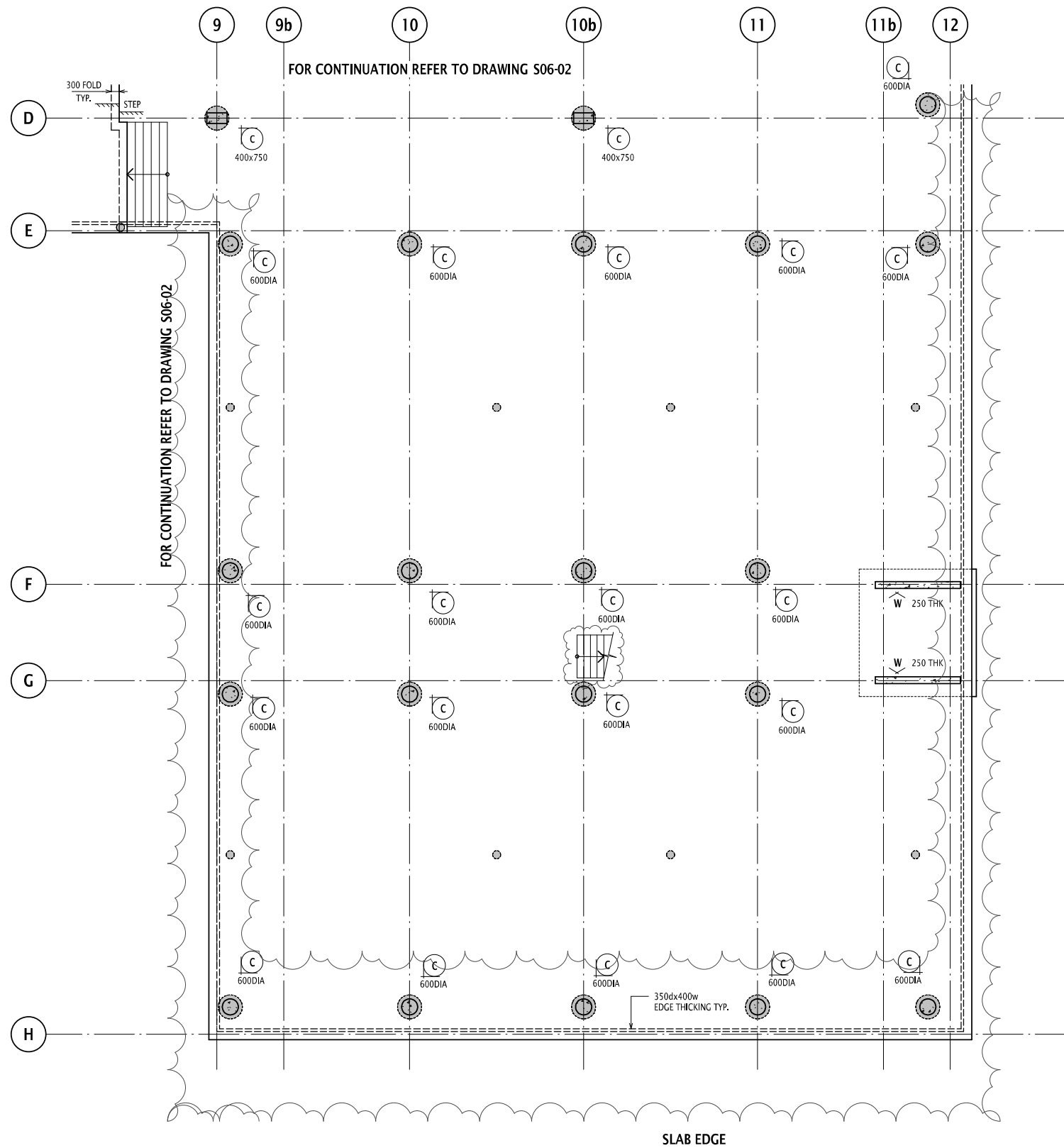
Job Number
 17271

Approved

NOT FOR CONSTRUCTION

Drawing Number Revision

S06-02 P2



GROUND FLOOR GENERAL ARRANGEMENT PLAN SHEET 3
 SCALE 1 : 100
 SLAB TO BE 200 THICK SOG UNO
 2 LAYERS SL102 MESH

- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER AND PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S77.?? SERIES
 - DENOTES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES :
 -REFER NOTES ON COVER SHEET
 -MIN CONC. STRENGTH AT 28 DAYS

LOCATION	Fc
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
 -REFER NOTES ON COVER SHEET

LOCATION	RATE
EDGE BEAM	45 kg/m ³
COLUMNS	225 kg/m ³
WALLS	125 kg/m ³

P2 ISSUED FOR INFORMATION KP OF 25.09.17
 P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev	Revision Description	By	App	Date
1	ISSUED FOR INFORMATION			06.09.17
2	ISSUED FOR INFORMATION			25.09.17

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 Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
GROUND FLOOR GENERAL ARRANGEMENT PLAN SHEET 3

Date
 Sep 2017
 Scale at A1
 1:100

Drawn
 K.PETROVSKI
 Designer

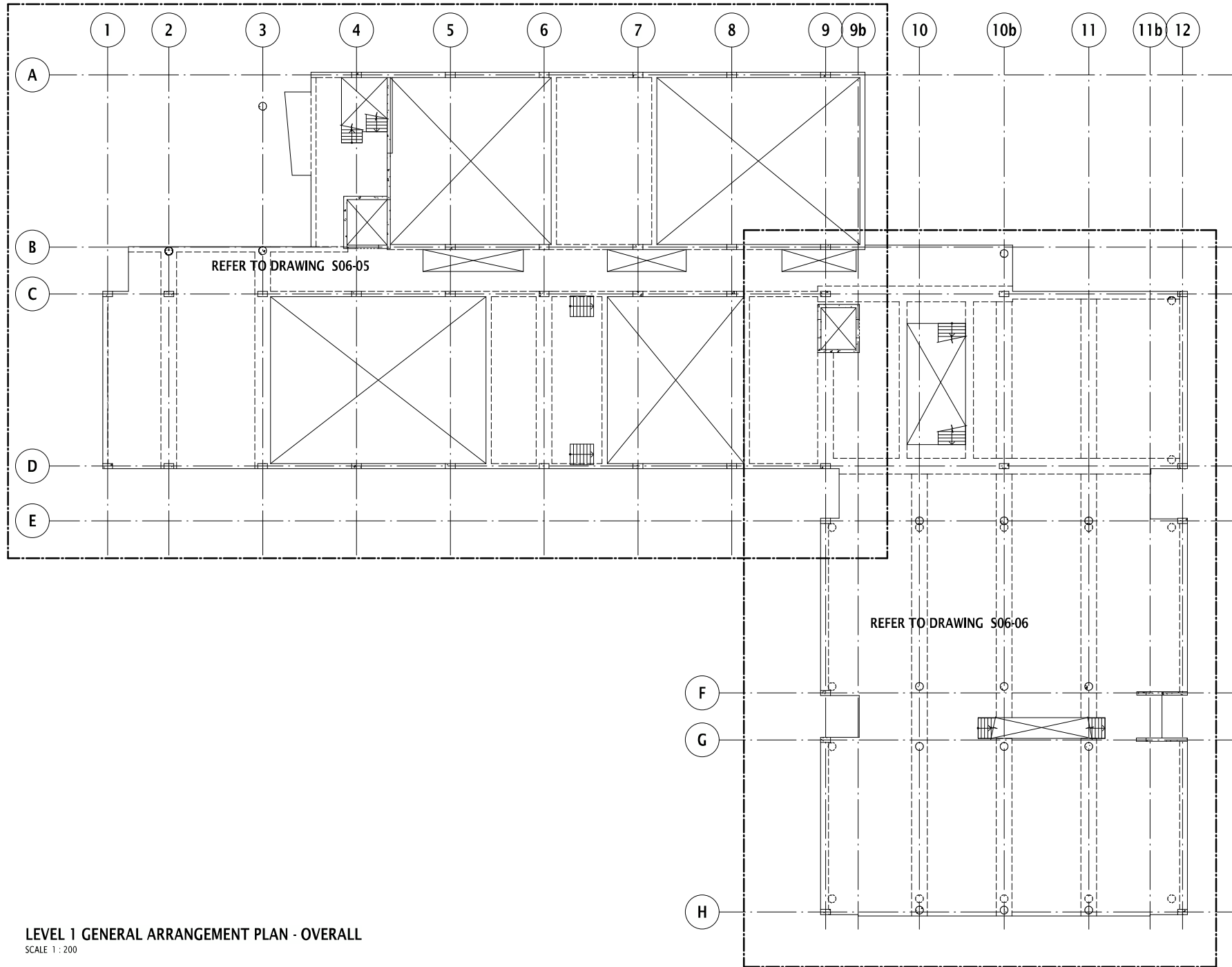
Job Number
 17271

Approved

NOT FOR CONSTRUCTION

Drawing Number Revision

S06-03 P2



LEVEL 1 GENERAL ARRANGEMENT PLAN - OVERALL
SCALE 1 : 200

P2	ISSUED FOR INFORMATION	KP	OF	25.09.17
P1	ISSUED FOR INFORMATION	KP	OF	06.09.17

Rev. Revision Description By App Date

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Level 11, 151 Castlereagh St Web: www.robertbird.com
Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**LEVEL 1
GENERAL ARRANGEMENT PLAN
OVERALL**

Date
Sep 2017
Scale at A1
1:200

Drawn
K. PETROVSKI
Designer
Design Checker

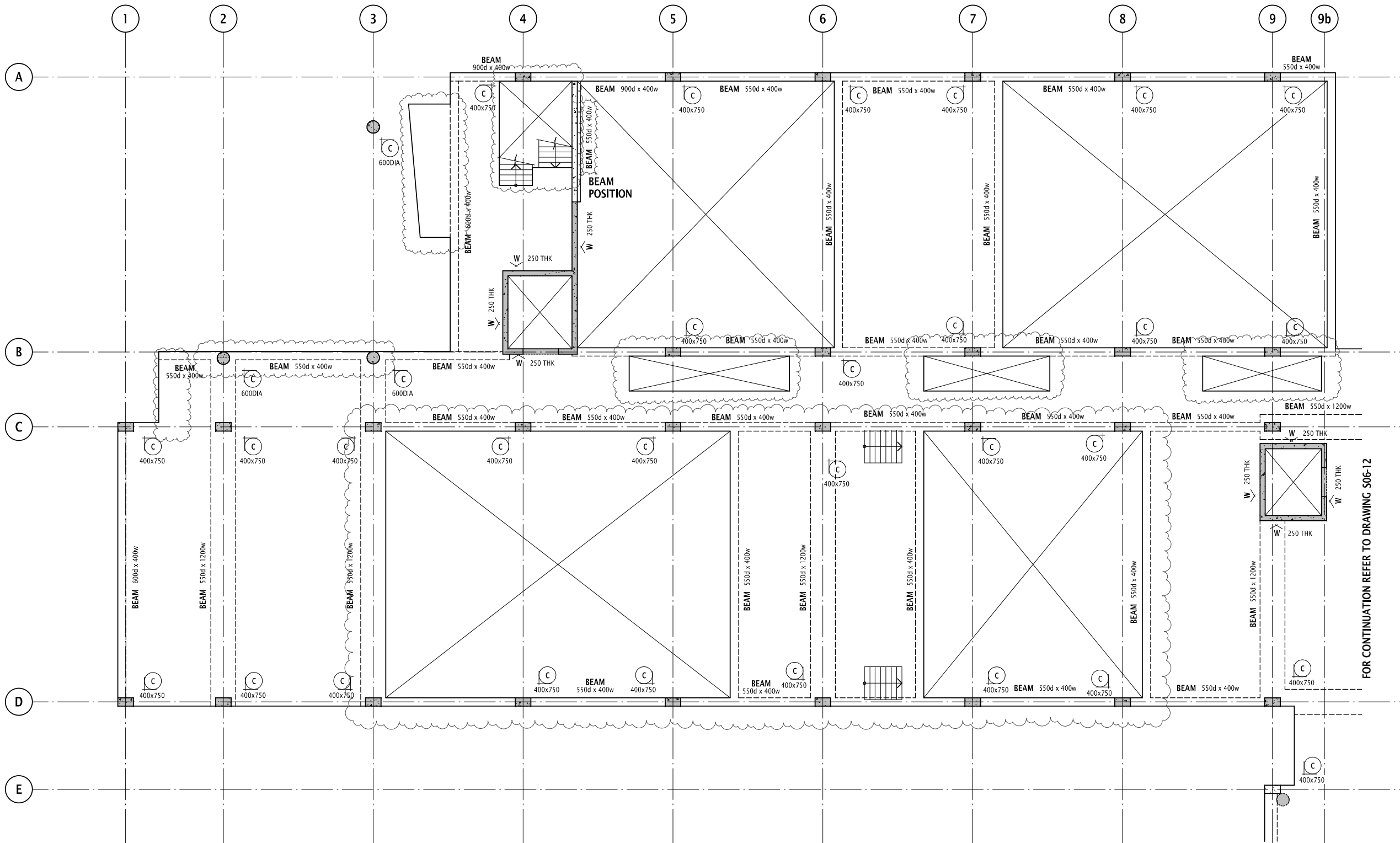
Job Number
17271

Approved

NOT FOR CONSTRUCTION

Drawing Number Revision

S06-10 P2



LEVEL 1 GENERAL ARRANGEMENT PLAN SHEET 1

SCALE 1 : 100
SLAB TO BE 200 THICK PT UNO

GENERAL ARRANGEMENT

- DENOTES INSITU CONCRETE ELEMENT OVER
- DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
- DENOTES PRECAST ELEMENT OVER
- DENOTES BLOCKWORK AND TYPE REFER S?? SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
- DENOTES WET AREA SET DOWN
- DENOTES PENETRATION
- DENOTES SUMP
- DENOTES SLAB STEP
- DENOTES SLAB THICKNESS
- DENOTES COLUMN NUMBER AND SIZE
- DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
- DENOTES SPAN DIRECTION
- DENOTES SAWN JOINT
- DENOTES TOOLED JOINT
- DENOTES KEYED JOINT
- DENOTES DOWELLED JOINT
- DENOTES CONSTRUCTION JOINT
- DENOTES EXPANSION JOINT

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES :
-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f _c
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
-REFER NOTES ON COVER SHEET

LOCATION	RATE
SLABS :	
PT	5 kg/m ³
REINF.	45 kg/m ³
COLUMNS	225 kg/m ³
BEAM 550d X 1200w	
PT	23 kg/m ³
REINF.	75 kg/m ³
BEAM 550d X 600w	
PT	23 kg/m ³
REINF.	75 kg/m ³
BEAM 550d X 400w	
PT	20 kg/m ³
REINF.	85 kg/m ³
WALLS	125 kg/m ³

Rev	Revision Description	By	App	Date
P2	ISSUED FOR INFORMATION			25.09.17
P1	ISSUED FOR INFORMATION			06.09.17

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Structural, Civil & Construction Engineering Consultant



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Sydney NSW 2000 ACN 910 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
LEVEL 1 GENERAL ARRANGEMENT PLAN SHEET 1

Date
Sep 2017
Scale at A1
1:100

Drawn
K. PETROVSKI
Designer

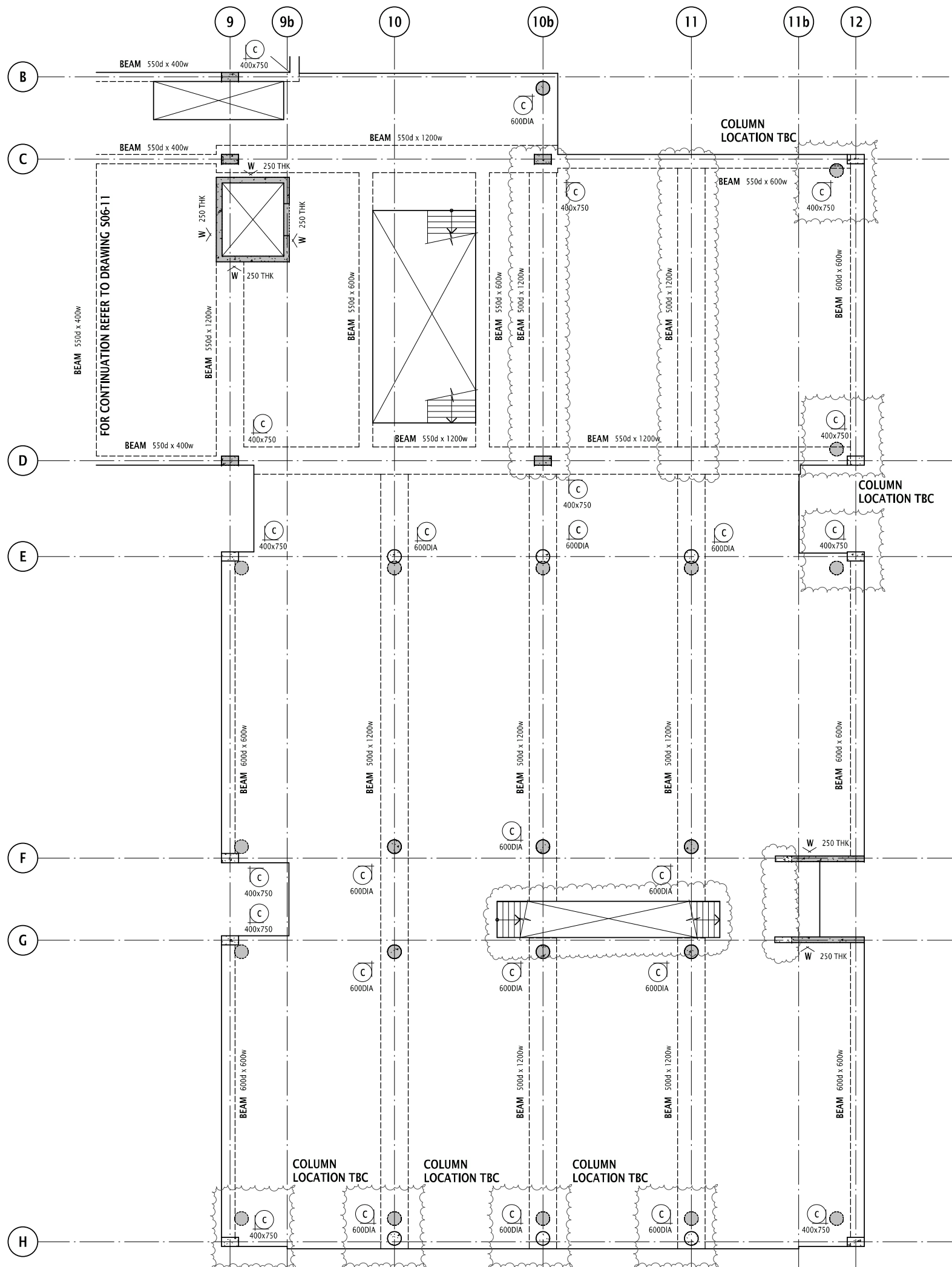
Job Number
17271

Approved
Design Checker

NOT FOR CONSTRUCTION

Drawing Number
S06-11

Revision
P2



- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S71-77 SERIES
 - DENOTES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES :
 -REFER NOTES ON COVER SHEET
 -MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f _c
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
 -REFER NOTES ON COVER SHEET

LOCATION	RATE
SLABS :	
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REINF.	45 kg/m ³
COLUMNS	225 kg/m ³
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REINF.	75 kg/m ³
BEAM 550d X 600w	
PT	23 kg/m ²
REINF.	75 kg/m ³
BEAM 550d X 400w	
PT	20 kg/m ²
REINF.	85 kg/m ³
WALLS	125 kg/m ³

P2 ISSUED FOR INFORMATION KP OF 25.09.17
 P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev **Revision Description** **By** **App** **Date**

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Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**LEVEL 1
 GENERAL ARRANGEMENT PLAN
 SHEET 2**

Date
 Sep 2017
 Scale at A1
 1:100

Drawn
 K.PETROVSKI
 Designer

Design Checker

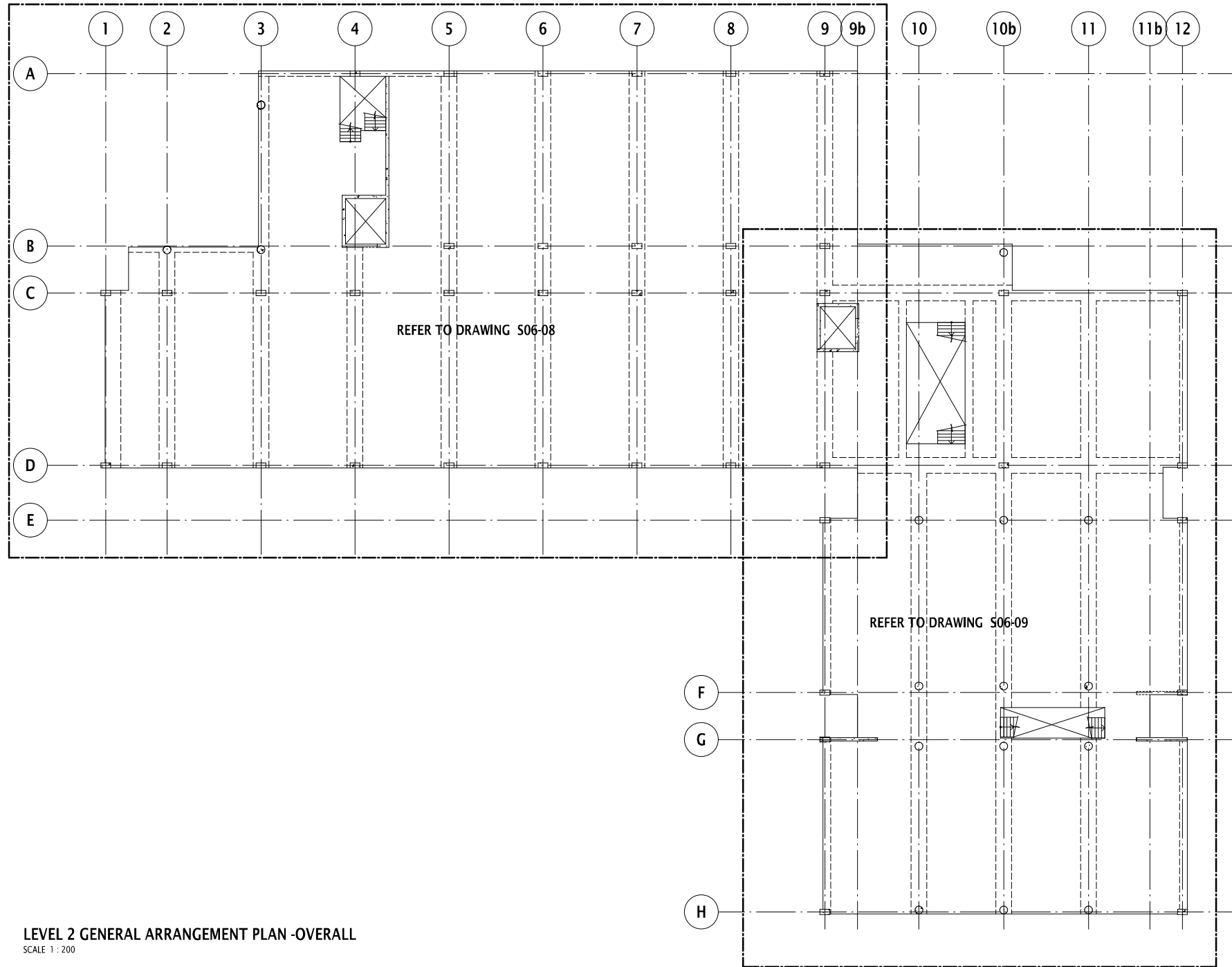
Job Number
 17271

Approved

NOT FOR CONSTRUCTION

Drawing Number Revision

LEVEL 1 GENERAL ARRANGEMENT PLAN SHEET 2
 SCALE 1:100
 SLAB TO BE 200 THICK PT UNO



LEVEL 2 GENERAL ARRANGEMENT PLAN -OVERALL
SCALE 1 : 200

P2	ISSUED FOR INFORMATION	KP	OF	25.09.17
P1	ISSUED FOR INFORMATION	KP	OF	06.09.17

Rev	Description	By	App	Date
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Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**LEVEL 2
GENERAL ARRANGEMENT PLAN
OVERALL**

Date
Sep 2017
Scale at A1
1:200

Drawn
K.PETROVSKI
Designer

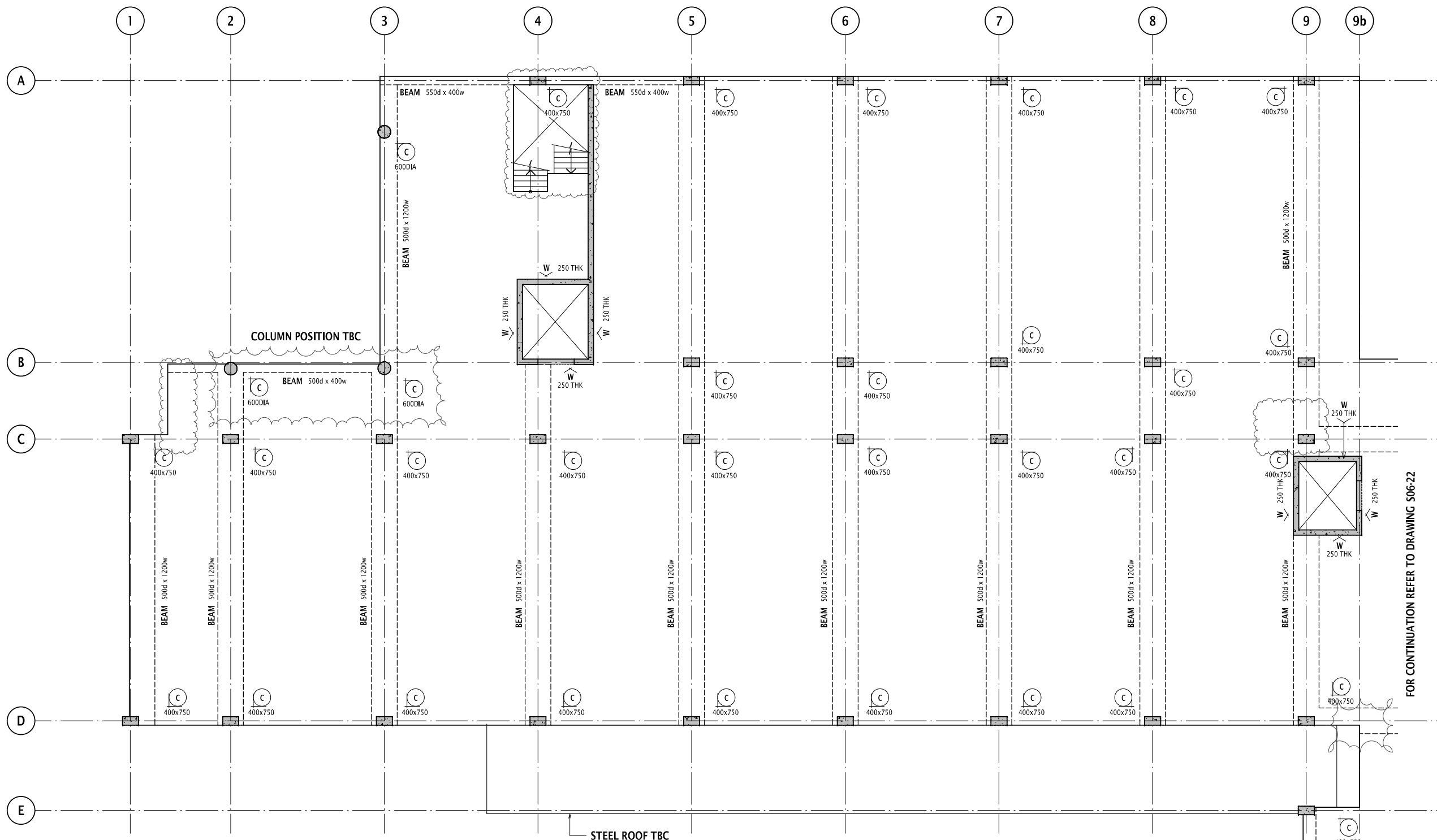
Design Checker

Job Number
17271

Approved

NOT FOR CONSTRUCTION

Drawing Number	Revision
S06-20	P2



LEVEL 2 GENERAL ARRANGEMENT PLAN SHEET 1
 SCALE 1:100
 SLAB TO BE 200 THICK UNO

- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S7.2 SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES:
 -REFER NOTES ON COVER SHEET
 -MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f _c
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
 -REFER NOTES ON COVER SHEET

LOCATION	RATE
SLABS:	
PT	5 kg/m ²
REINF.	45 kg/m ²
COLUMNS	225 kg/m ²
BAND BEAMS:	
PT	23 kg/m ²
REINF.	75 kg/m ²
WALLS	125 kg/m ²

P2 ISSUED FOR INFORMATION KP OF 25.09.17
 P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev	Revision Description	By	App	Date

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 Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
LEVEL 2 GENERAL ARRANGEMENT PLAN SHEET 1

Date
 Sep 2017
 Scale at A1
 1:100

Drawn
K.PETROVSKI
 Designer

Job Number
17271

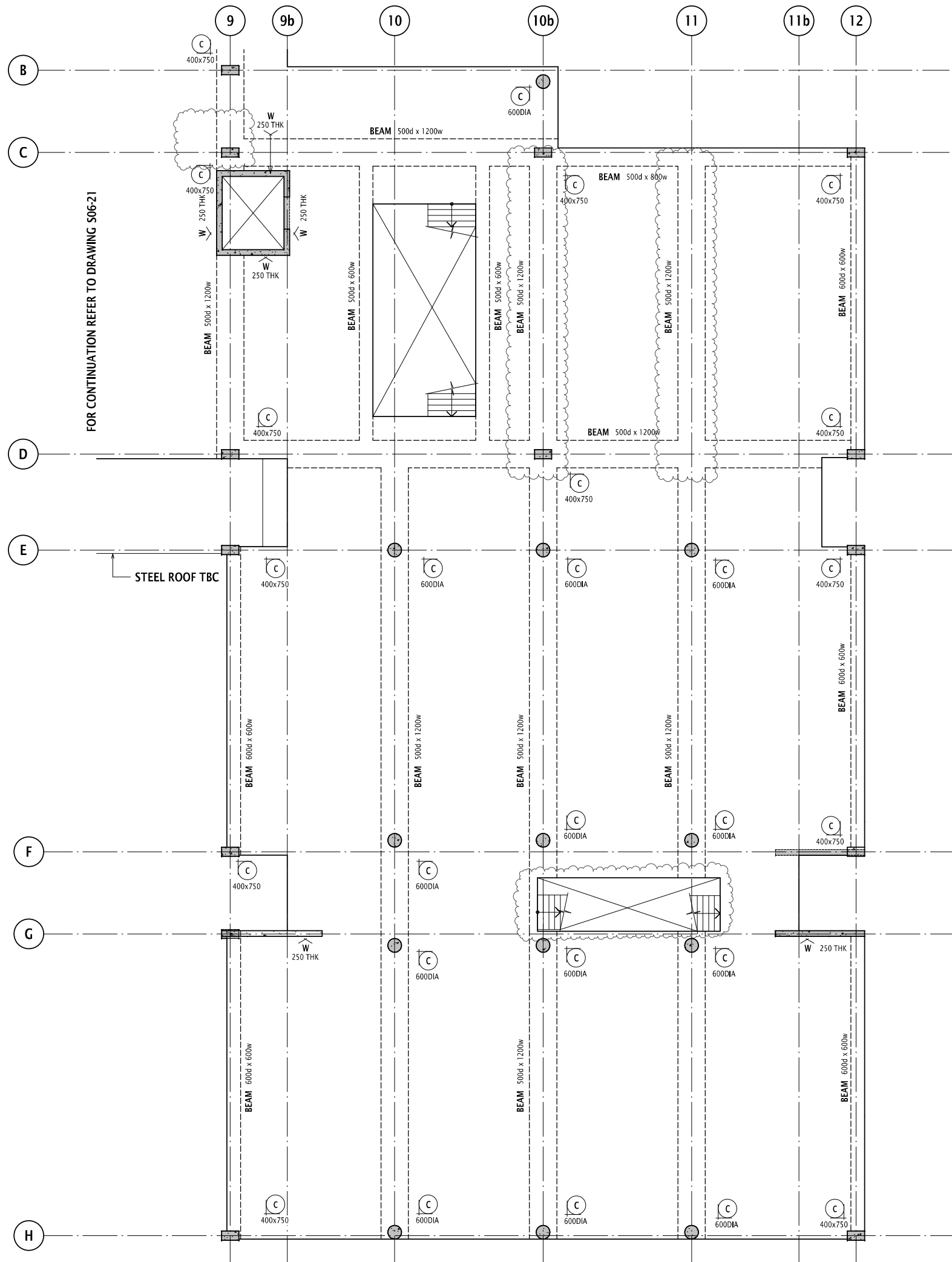
Approved
 Design Checker

NOT FOR CONSTRUCTION

Drawing Number
S06-21

Revision
P2

25/09/2017 10:45:55 AM



- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S???.??.? SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES:
-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f _c
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
-REFER NOTES ON COVER SHEET

LOCATION	RATE
SLABS :	
PT	5 kg/m ²
REINF.	45 kg/m ²
COLUMNS :	
BAND BEAMS :	
PT	23 kg/m ²
REINF.	75 kg/m ²
WALLS	125 kg/m ²

LEVEL 2 GENERAL ARRANGEMENT PLAN SHEET 2
SCALE 1 : 100
SLAB TO BE 200 THICK UNO

P2 ISSUED FOR INFORMATION KP OF 25.09.17
P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev	Revision Description	By	App	Date

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Sydney NSW 2000 ACN 910 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**LEVEL 2
GENERAL ARRANGEMENT PLAN
SHEET 2**

Date
Sep 2017
Scale at A1
1:100

Drawn
K. PETROVSKI
Designer

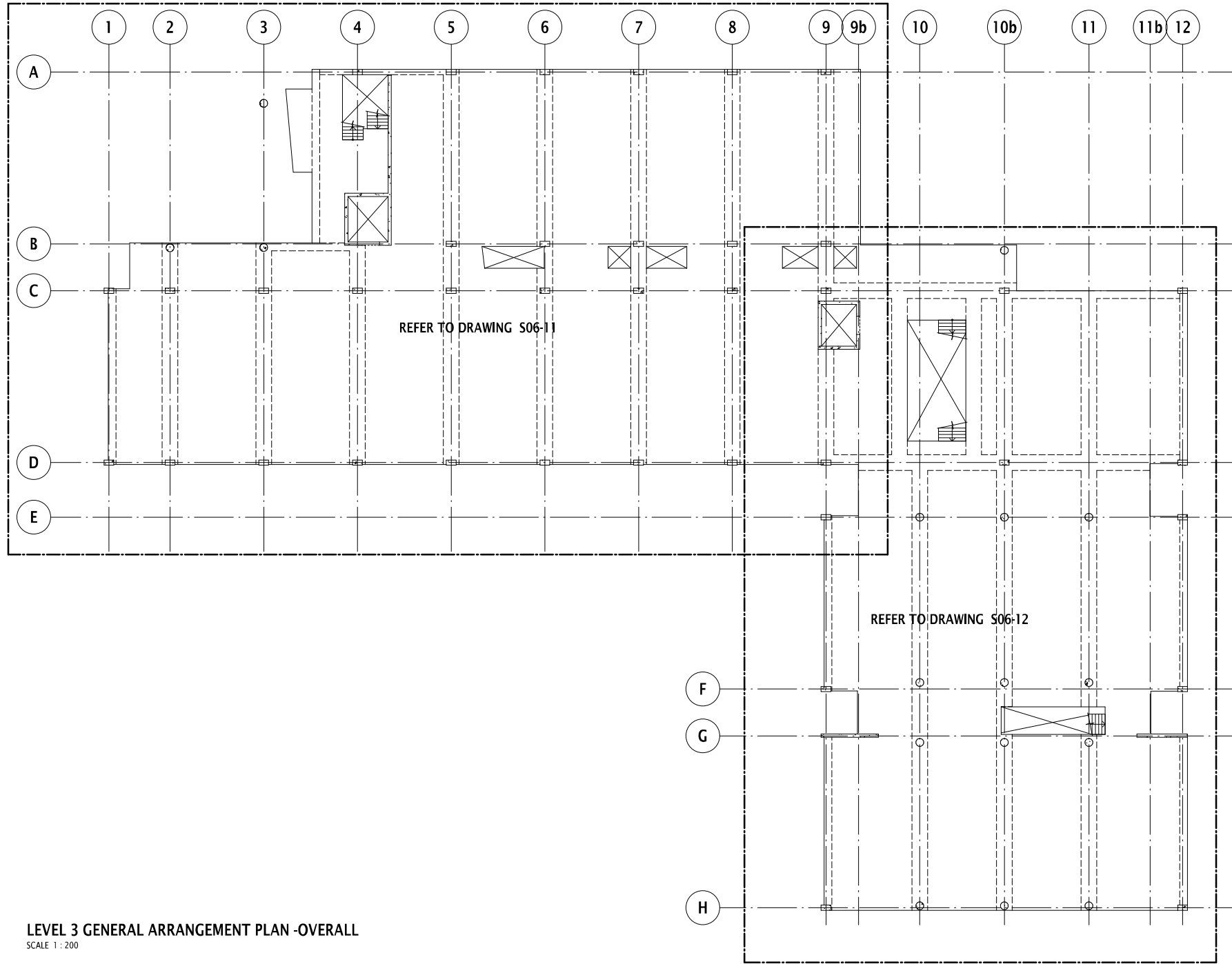
Job Number
17271

Approved

NOT FOR CONSTRUCTION

Drawing Number
S06-22

Revision
P2



LEVEL 3 GENERAL ARRANGEMENT PLAN -OVERALL
SCALE 1 : 200

P2	ISSUED FOR INFORMATION	KP	OF	25.09.17
P1	ISSUED FOR INFORMATION	KP	OF	06.09.17

Rev **Revision Description** **By** **App** **Date**

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Engineering Consultant



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Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**LEVEL 3
GENERAL ARRANGEMENT PLAN
OVERALL**

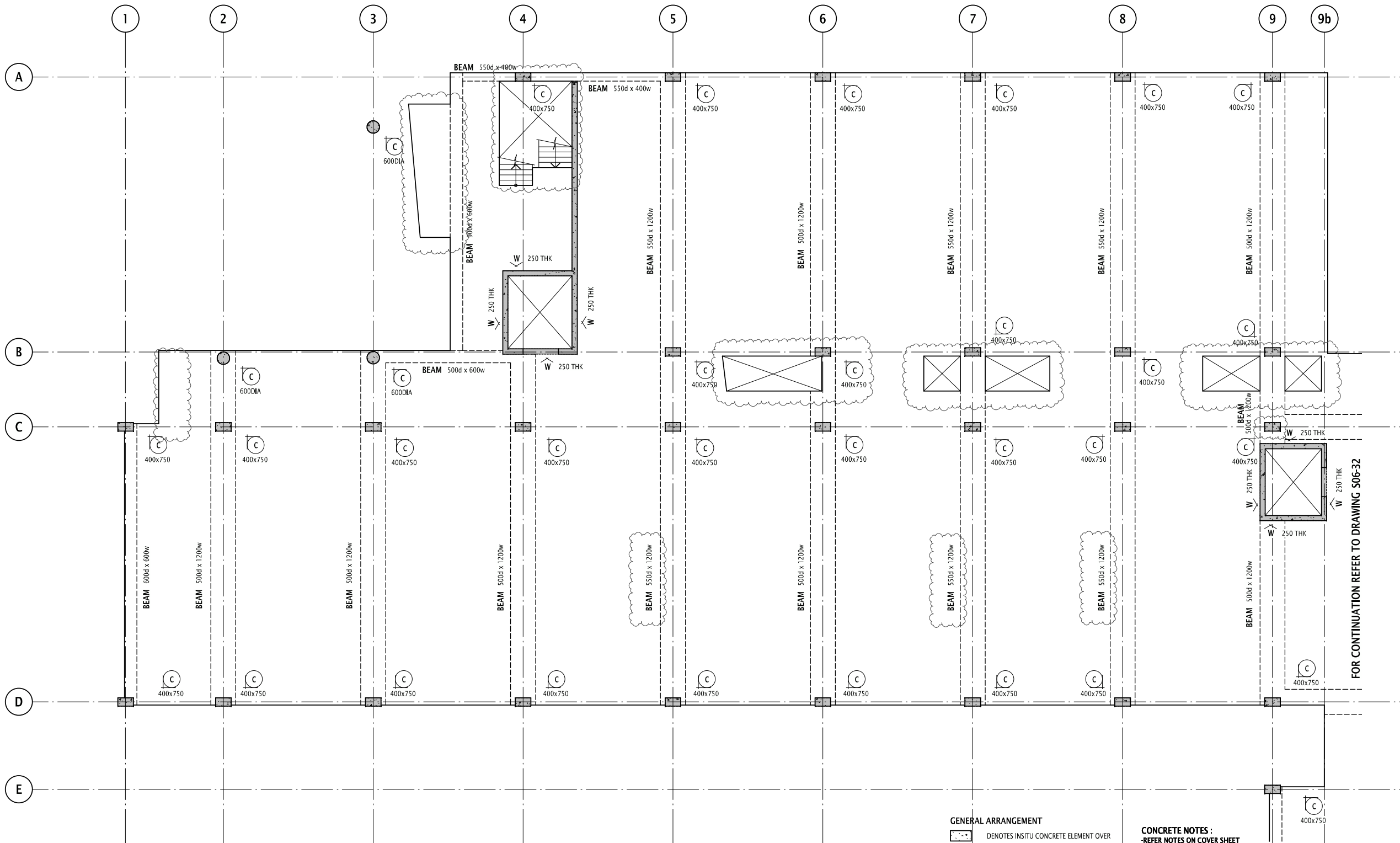
Date **Drawn**
Sep 2017 K.PETROVSKI
Scale at A1 **Designer**
1:200

Job Number **Approved**
17271

NOT FOR CONSTRUCTION

Drawing Number	Revision
S06-30	P2

25/09/2017 10:55:01 AM



LEVEL 3 GENERAL ARRANGEMENT PLAN SHEET 1
 SCALE 1 : 100
 SLAB TO BE 200 THICK PT UNO

- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S72?? SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES :
 -REFER NOTES ON COVER SHEET
 -MIN CONC. STRENGTH AT 28 DAYS

LOCATION	f'c
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
 -REFER NOTES ON COVER SHEET

LOCATION	RATE
SLABS :	
PT	5 kg/m ²
REINF.	45 kg/m ²
COLUMNS	225 kg/m ²
BAND BEAMS :	
PT	23 kg/m ²
REINF.	75 kg/m ²
WALLS	125 kg/m ²

FOR CONTINUATION REFER TO DRAWING S06-32

Rev	Revision Description	By	App	Date
P2	ISSUED FOR INFORMATION			25.09.17
P1	ISSUED FOR INFORMATION			06.09.17

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 Sydney NSW 2000 ACN 910 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
LEVEL 3 GENERAL ARRANGEMENT PLAN SHEET 1

Date
 Sep 2017
 Scale at A1
 1:100

Drawn
K. PETROVSKI
 Designer

Job Number
17271

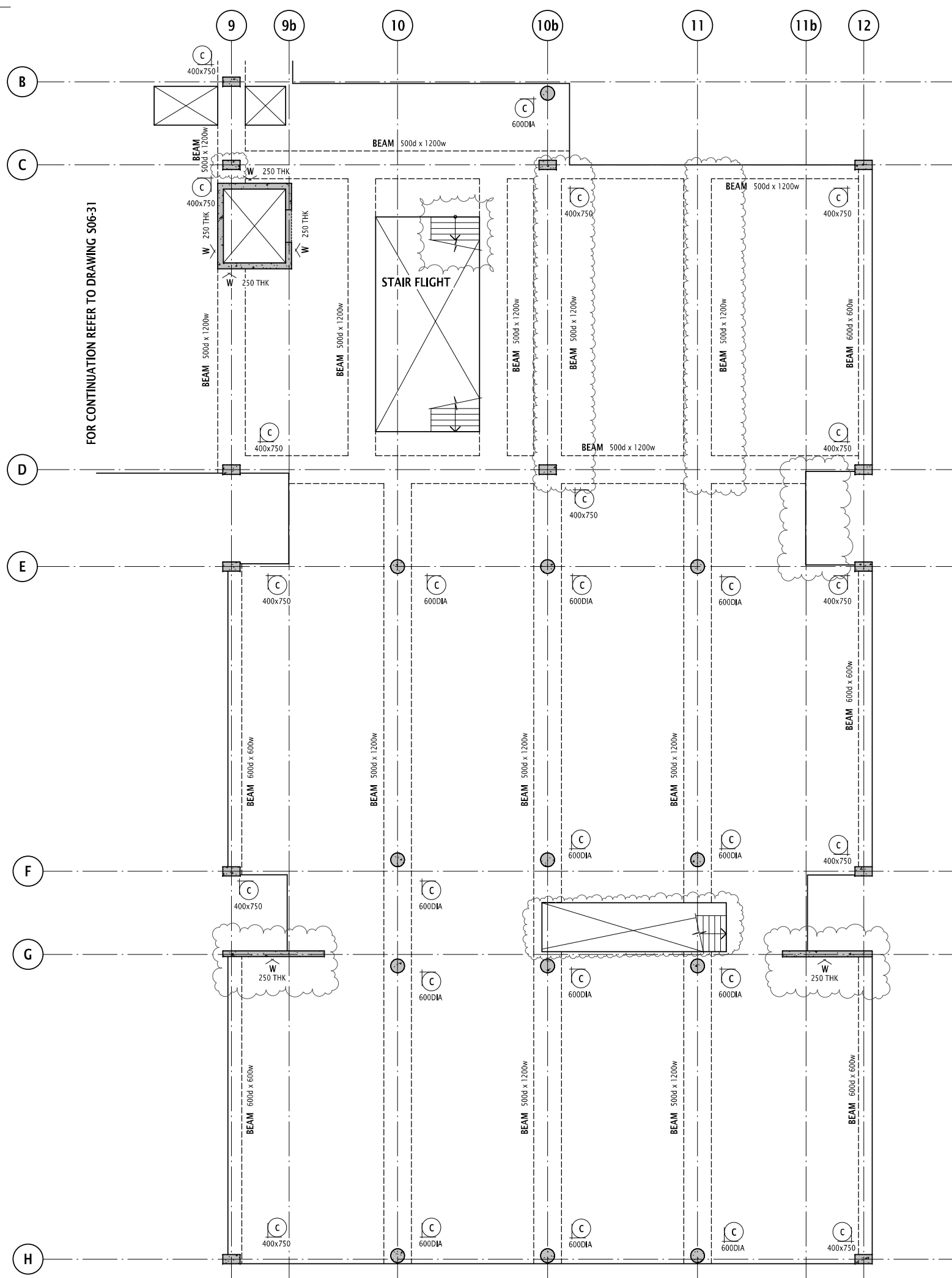
Approved

NOT FOR CONSTRUCTION

Drawing Number
S06-31

Revision
P2

25/09/2017 10:55:02 AM



- GENERAL ARRANGEMENT**
- DENOTES INSITU CONCRETE ELEMENT OVER
 - DENOTES LOAD BEARING ELEMENT UNDER
 - DENOTES LOAD BEARING ELEMENT UNDER AND INSITU CONCRETE ELEMENT OVER
 - DENOTES PRECAST ELEMENT OVER
 - DENOTES BLOCKWORK AND TYPE REFER S7.77 SERIES DRAWINGS FOR SCHEDULE AND TYPICAL DETAILS
 - DENOTES WET AREA SET DOWN
 - DENOTES PENETRATION
 - DENOTES SUMP
 - DENOTES SLAB STEP
 - DENOTES SLAB THICKNESS
 - DENOTES COLUMN NUMBER AND SIZE
 - DENOTES WALL NUMBER & DIRECTION ELEVATION IS VIEWED
 - DENOTES SPAN DIRECTION

NOTE: REFER ARCHITECTS DRAWINGS FOR

CONCRETE NOTES :
-REFER NOTES ON COVER SHEET
-MIN CONC. STRENGTH AT 28 DAYS

LOCATION	F _c
SLABS & BEAMS	40
COLUMNS	40
WALLS	40

REINFORCEMENT RATES:
-REFER NOTES ON COVER SHEET

LOCATION	RATE
SLABS :	
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REINF.	45 kg/m ²
COLUMNS	225 kg/m ³
BAND BEAMS :	
PT	23 kg/m ²
REINF.	75 kg/m ²
WALLS	125 kg/m ²

P2 ISSUED FOR INFORMATION KP OF 25.09.17
P1 ISSUED FOR INFORMATION KP OF 06.09.17

Rev	Revision Description	By	App	Date
1	Issue for information			25.09.17
2	Issue for information			06.09.17

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Structural, Civil & Construction Engineering Consultant

Robert Bird Group

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Sydney NSW 2000 ACN 010 580 248

Client
UNIVERSITY OF WOLLONGONG

Project
WESTERN BUILDING

Title
**LEVEL 3
GENERAL ARRANGEMENT PLAN
SHEET 2**

Date
Sep 2017
Scale at A1
1:100

Drawn
K. PETROVSKI
Designer

Design Checker

Job Number
17271

Approved

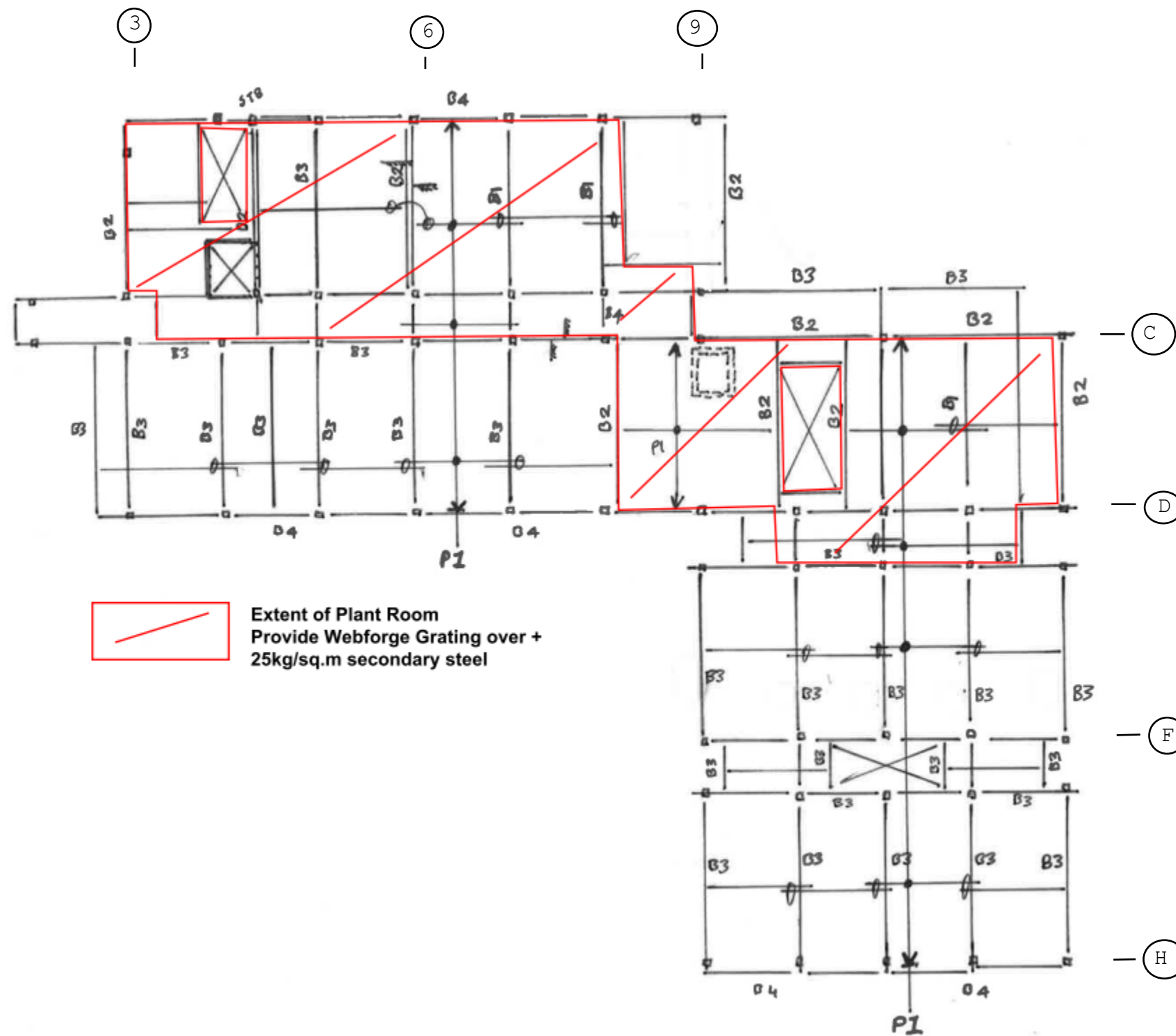
NOT FOR CONSTRUCTION

Drawing Number
S06-32

Revision
P2

LEVEL 3 GENERAL ARRANGEMENT PLAN SHEET 2
SCALE 1 : 100
SLAB TO BE 200 THICK PT UNO

25/09/2017 10:55:03 AM



Steel Schedule:

- B1 - 700WB 173**
- B2 - 610UB 113**
- B3 - 460UB 67**
- B4 - 200PFC**

P1 - Purlins - Z200.19 + 2 rows Bridging @ 1.2m c/c.

VB - Vertical X-Brace - 100EA10

All Columns - 200SHS10

**Extent of Plant Room
Provide Webforge Grating over +
25kg/sq.m secondary steel**

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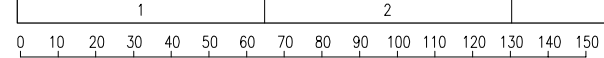
Rev.	Revision Description	By	App	Date

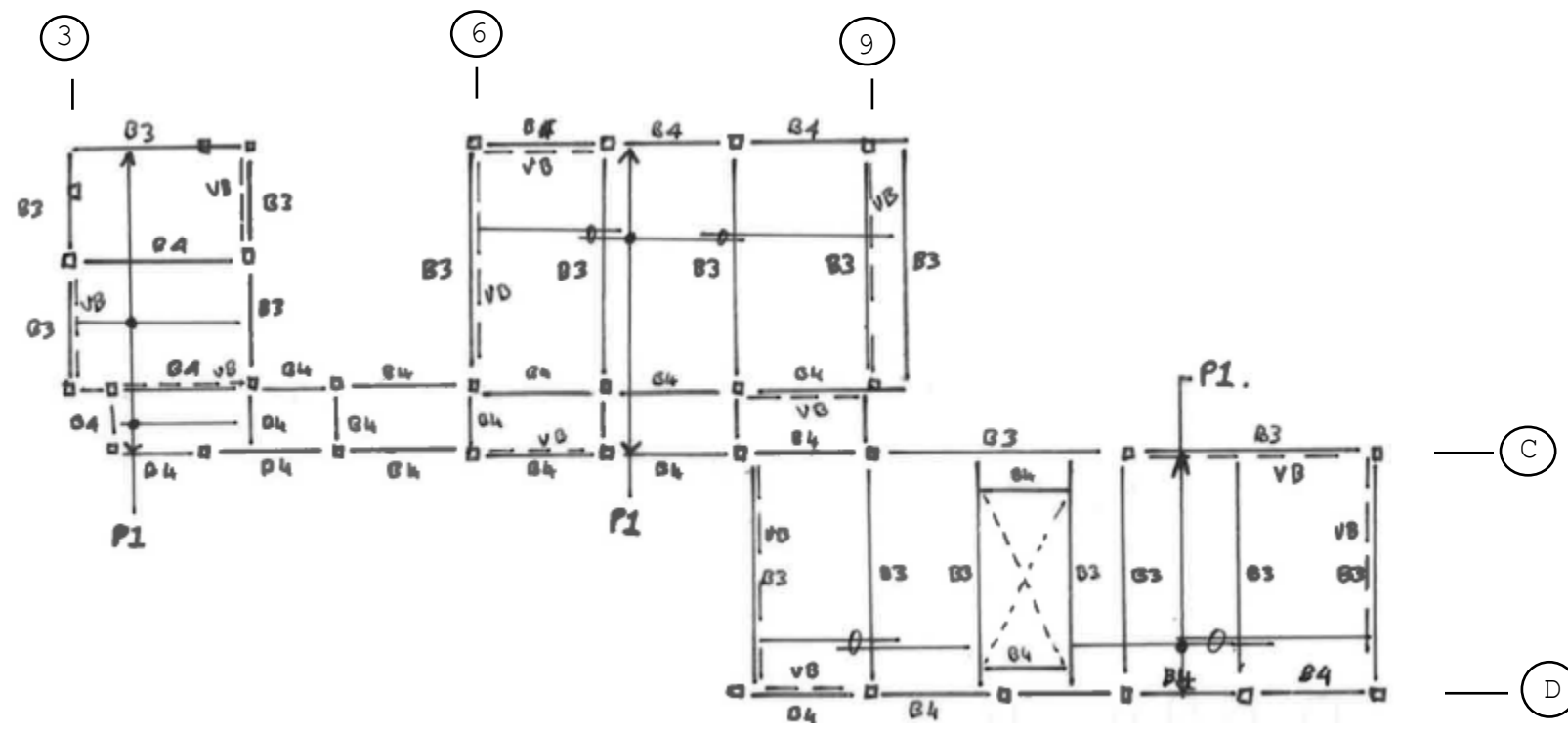
Client:
UNIVERSITY OF WOLLONGONG

Title
Level 4 Roof Layout Plan

Project
UOW - Western Building

Date 04.10.2017	By O. Farrell	Job Number 17271	Drawing Number SK - 05
		Revision 02	





Steel Schedule:

- B1 - 700WB 173**
- B2 - 610UB 113**
- B3 - 460UB 67**
- B4 - 200PFC**

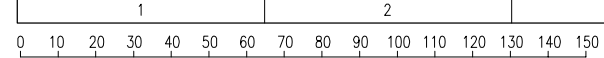
- P1 - Purlins - Z200.19 + 2 rows Bridging @ 1.2m c/c.**

- VB - Vertical X-Brace - 100EA10**

- All Columns - 200SHS10**

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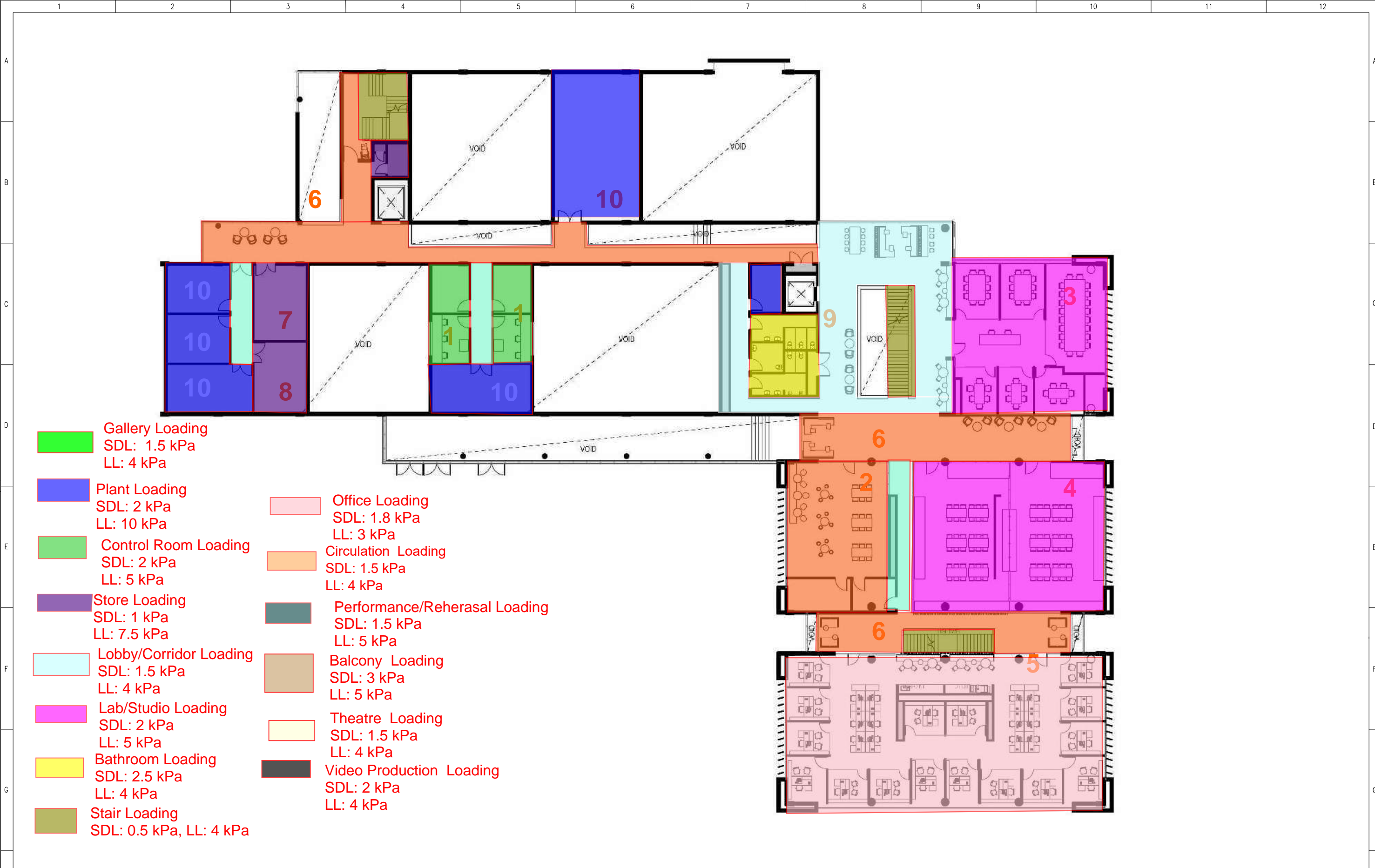
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Appendix C

Loading Plans





- Gallery Loading
SDL: 1.5 kPa
LL: 4 kPa
- Plant Loading
SDL: 2 kPa
LL: 10 kPa
- Control Room Loading
SDL: 2 kPa
LL: 5 kPa
- Store Loading
SDL: 1 kPa
LL: 7.5 kPa
- Lobby/Corridor Loading
SDL: 1.5 kPa
LL: 4 kPa
- Lab/Studio Loading
SDL: 2 kPa
LL: 5 kPa
- Bathroom Loading
SDL: 2.5 kPa
LL: 4 kPa
- Stair Loading
SDL: 0.5 kPa, LL: 4 kPa
- Office Loading
SDL: 1.8 kPa
LL: 3 kPa
- Circulation Loading
SDL: 1.5 kPa
LL: 4 kPa
- Performance/Rehearsal Loading
SDL: 1.5 kPa
LL: 5 kPa
- Balcony Loading
SDL: 3 kPa
LL: 5 kPa
- Theatre Loading
SDL: 1.5 kPa
LL: 4 kPa
- Video Production Loading
SDL: 2 kPa
LL: 4 kPa

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Rev.	Revision Description	By	App	Date																															





Gallery Loading
 SDL: 1.5 kPa
 LL: 4 kPa

- Plant Loading
 SDL: 2 kPa
 LL: 10 kPa
- Control Room Loading
 SDL: 2 kPa
 LL: 5 kPa
- Store Loading
 SDL: 1 kPa
 LL: 7.5 kPa
- Lobby/Corridor Loading
 SDL: 1.5 kPa
 LL: 4 kPa
- Lab/Studio Loading
 SDL: 2 kPa
 LL: 5 kPa
- Bathroom Loading
 SDL: 2.5 kPa
 LL: 4 kPa
- Stair Loading
 SDL: 0.5 kPa, LL: 4 kPa
- Office Loading
 SDL: 1.8 kPa
 LL: 3 kPa
- Circulation Loading
 SDL: 1.5 kPa
 LL: 4 kPa
- Performance/Rehearsal Loading
 SDL: 1.5 kPa
 LL: 5 kPa
- Balcony Loading
 SDL: 3 kPa
 LL: 5 kPa
- Theatre Loading
 SDL: 1.5 kPa
 LL: 4 kPa
- Video Production Loading
 SDL: 2 kPa
 LL: 4 kPa

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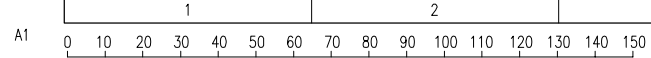
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UNIVERSITY OF WOLLONGONG

Level 2 Loading Plant		31.08.2017	K. Sapkota
Project	Job Number	Drawing Number	Revision
UOW - Western Building	17271	SK - 03A	01





- Gallery Loading**
SDL: 1.5 kPa
LL: 4 kPa
- Plant Loading**
SDL: 2 kPa
LL: 10 kPa
- Control Room Loading**
SDL: 2 kPa
LL: 5 kPa
- Store Loading**
SDL: 1 kPa
LL: 7.5 kPa
- Lobby/Corridor Loading**
SDL: 1.5 kPa
LL: 4 kPa
- Lab/Studio Loading**
SDL: 2 kPa
LL: 5 kPa
- Bathroom Loading**
SDL: 2.5 kPa
LL: 4 kPa
- Stair Loading**
SDL: 0.5 kPa, LL: 4 kPa
- Office Loading**
SDL: 1.8 kPa
LL: 3 kPa
- Circulation Loading**
SDL: 1.5 kPa
LL: 4 kPa
- Performance/Rehearsal Loading**
SDL: 1.5 kPa
LL: 5 kPa
- Balcony Loading**
SDL: 3 kPa
LL: 5 kPa
- Theatre Loading**
SDL: 1.5 kPa
LL: 4 kPa
- Video Production Loading**
SDL: 2 kPa
LL: 4 kPa

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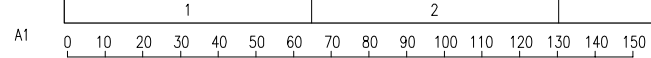
Rev.	Revision Description	By	App	Date

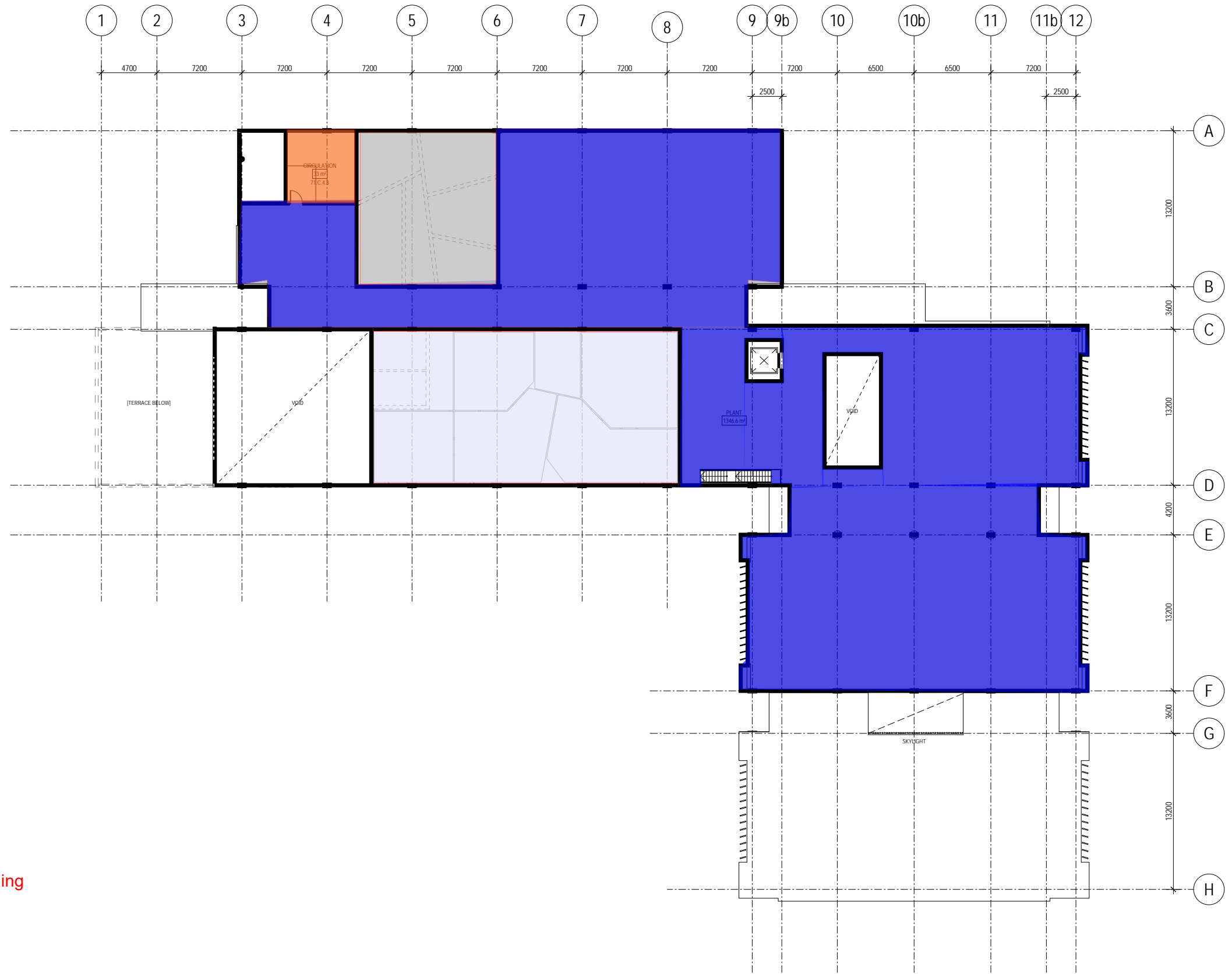
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Title
Level 3 Loading Plan

Project
UOW - Western Building

Date	31.08.2017	By	K. Sapkota
Job Number	17271	Drawing Number	SK - 03A
		Revision	01





- 
Plant Loading
 SDL: 2 kPa
 LL: 10 kPa
- 
Circulation Loading
 SDL: 1.5 kPa
 LL: 4 kPa
- 
General Roof Loading
 SDL: 0.5 kPa
 LL: 0.25 kPa

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Rev.	Revision Description	By	App	Date

Client:
UNIVERSITY OF WOLLONGONG

Title
Level 4 Loading Plan

Project
UOW - Western Building

Date 31.08.2017	By K. Sapkota
Job Number 17271	Drawing Number SK - 03A
Revision 01	



- Gallery Loading
SDL: 1.5 kPa
LL: 4 kPa
- Plant Loading
SDL: 2 kPa
LL: 10 kPa
- Control Room Loading
SDL: 2 kPa
LL: 5 kPa
- Store Loading
SDL: 1 kPa
LL: 7.5 kPa
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SDL: 2 kPa
LL: 5 kPa
- Bathroom Loading
SDL: 2.5 kPa
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- Stair Loading
SDL: 0.5 kPa, LL: 4 kPa

- Office Loading
SDL: 1.8 kPa
LL: 3 kPa
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SDL: 1.5 kPa
LL: 4 kPa
- Performance/Reherasal Loading
SDL: 1.5 kPa
LL: 5 kPa
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SDL: 3 kPa
LL: 5 kPa
- Theatre Loading
SDL: 1.5 kPa
LL: 4 kPa
- Video Production Loading
SDL: 2 kPa
LL: 4 kPa

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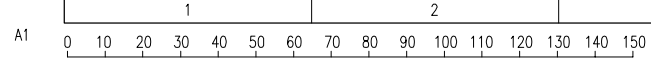
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Client:
UNIVERSITY OF WOLLONGONG

Title
Ground Floor Loading Plan

Project
UOW - Western Building

Date 31.08.2017	By K. Sapkota
Job Number 17271	Drawing Number SK - 03A
	Revision 01





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Sydney Office

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