# APPENDIX A

**STAGE 2 DRAWINGS** 

#### **WSP UK Document & Drawing Issue Sheet**

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Position/Function

Dwg/Doc Number	Title	Scale	Size	Revision
GUH-WSP-00-00-DR-S-020100	GENERAL NOTES	NTS	NTS	P01
GUH-WSP-00-00-DR-S-130101	PROPOSED LOO GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-0M-DR-S-200101	PROPOSED MEZZANINE GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-01-DR-S-200101	PROPOSED L01 GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-02-DR-S-200101	PROPOSED LO2 GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-03-DR-S-200101	PROPOSED LO3 GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-04-DR-S-200101	PROPOSED L04 GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-05-DR-S-200101	PROPOSED ROOF GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-06-DR-S-200101	PROPOSED TOP ROOF GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-00-ZZ-DR-S-200301	PROPOSED SECTIONS SHEET 1 OF 3	AS NOTED	A0	P02
GUH-WSP-00-ZZ-DR-S-200302	PROPOSED SECTIONS SHEET 2 OF 3	AS NOTED	A0	P02
GUH-WSP-00-ZZ-DR-S-200303	PROPOSED SECTIONS SHEET 3 OF 3	AS NOTED	A0	P02
GUH-WSP-00-ZZ-DR-S-200501	PROPOSED COLUMN SCHEDULE SHEET 1 OF 2	NTS	NTS	P01
GUH-WSP-00-ZZ-DR-S-200502	PROPOSED COLUMN SCHEDULE SHEET 2 OF 2	NTS	NTS	P01
GUH-WSP-00-ZZ-DR-S-200901	PROPOSED 3D VIEWS	1:200	A0	P02
GUH-WSP-DE-0M-DR-S-200101	DEMOLITION EXISTING MEZZANINE	AS NOTED	A0	P01
GUH-WSP-DE-01-DR-S-200101	DEMOLITION EXISTING LEVEL 01	AS NOTED	A0	P01
GUH-WSP-DE-04-DR-S-200101	DEMOLITION EXISTING ROOF	AS NOTED	A0	P01
GUH-WSP-EX-00-DR-S-130101	EXISTING LEVEL 00 GENERAL ARRANGEMENT	AS NOTED	A0	P02
GUH-WSP-EX-00-DR-S-160101	EXISTING FOUNDATION GENERAL ARRANGEMENT	AS NOTED	A0	P02
GUH-WSP-EX-0M-DR-S-200101	EXISTING MEZZANINE GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-EX-01-DR-S-200101	EXISTING LEVEL 01 GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-EX-04-DR-S-200101	EXISITING ROOF GENERAL ARRANGEMENT	1:100	A0	P02
GUH-WSP-EX-ZZ-DR-S-200301	EXISTING SECTIONS SHEET 1 OF 2	1:100	A0	P02
GUH-WSP-EX-ZZ-DR-S-200302	EXISTING SECTIONS SHEET 2 OF 2	1:100	A0	P02
GUH-WSP-EX-ZZ-DR-S-200501	EXISITING COLUMN SCHEDULE SHEET 1 OF 2	NTS	NTS	P01
GUH-WSP-EX-ZZ-DR-S-200502	EXISITING COLUMN SCHEDULE SHEET 2 OF 2	NTS	NTS	P01
GUH-WSP-EX-ZZ-DR-S-200901	EXISTING 3D VIEWS	AS NOTED	A0	P01

Name

Issue 1.7

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#### **GENERAL NOTES**

- THE ENGINEERS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS, SPECIFICATIONS, REPORTS AND METHOD STATEMENTS. ANY DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO
- THE ARCHITECT AND ENGINEER BEFORE WORK PROCEEDS. ALL DIMENSIONS ARE GIVEN IN MILLIMETRES AND ALL LEVELS ARE GIVEN IN METRES AOD UNLESS NOTED OTHERWISE.
- DIMENSIONS ARE NOT TO BE SCALED FROM THE DRAWINGS. ONLY FIGURED DIMENSIONS ARE TO BE USED. WHERE DIMENSIONS ARE SUBJECT TO CONFIRMATION BY SITE MEASUREMENT THIS SHALL BE CARRIED OUT BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION.
- ALL GRIDLINES, BUILDING LINES, ETC. ARE TO BE SET OUT IN ACCORDANCE WITH THE RELEVANT ARCHITECTS DRAWINGS.
- COLUMNS AND FOUNDATIONS ARE TO BE SET-OUT SYMMETRICALLY ABOUT GRIDLINES OR THEIR CENTRELINES UNLESS NOTED
- 7. ALL BEAMS ARE REFERENCED DEPTH x BREADTH UNLESS NOTED OTHERWISE.
- WHERE IT IS REQUIRED THAT INSPECTION BE MADE BY THE LOCAL AUTHORITY THIS SHALL BE ARRANGED BY THE CONTRACTOR TO SUIT THEIR PROGRAMME
- ALL FOUNDATIONS AND ELEMENTS OF ENCASED WORK ARE TO BE INSPECTED BY THE BUILDING INSPECTOR PRIOR TO BACKFILLING, CONCRETING OR COVERING.
- IO. ABBREVIATIONS USED:
- UNO: UNLESS NOTED OTHERWISE NTS: NOT TO SCALE
- CL: CENTERLINE EGL: EXISTING GROUND LEVEL
- PGL: PROPOSED GROUND LEVEL BGL: BELOW GROUND LEVEL FFL: FINISHED FLOOR LEVEL
- SSL: STRUCTURAL SLAB LEVE
- TOS: TOP OF STEEL LEVEL TOC: TOP OF CONC
- SOP: SETTING OUT POINT U/S: UPSTAND
- D/S: DOWNSTAND C/C: CONCRETE CASED WP: WIND POST RC:REINFORCED CONCRETE
- 11. HOLES LESS THAN 300mm x 300mm THROUGH SLABS OR WALLS ARE NOT NECESSARILY SHOWN ON WSP DRAWINGS. FOR POSITIONING OF ALL SUCH HOLES REFER TO ARCHITECTS AND SPECIALISTS DRAWINGS. REINFORCEMENT IS TO BE DISPLACED SYMMETRICALLY ABOUT THESE HOLES.
- 2. OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS ARE TO BE CHECKED BY THE CONTRACTOR AGAINST ALL OTHER RELEVANT CONTRACTOR'S DRAWINGS INCLUDING APPROVED BUILDERS WORK DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE DRAWN TO THE ATTENTION OF THE ENGINEER.
- 13. GENERALLY THE FOLLOWING INFORMATION WILL NOT BE SHOWN ON WSP DRAWINGS: NON-STRUCTURAL INCLUSIONS OR CAST-IN FIXINGS, E.G. COLUMN GUARDS, LOCATION AND DETAILS OF FIXINGS FOR BRICKWORK, BLOCKWORK, CLADDING, DOORS, WINDOWS ETC. (FIXINGS MAY BE SHOWN IN SITUATIONS OF ABOVE NORMAL COMPLEXITY AND WHERE THEY ARE ESSENTIAL TO THE STRUCTURAL STABILITY), CHAMFERS, ARRISES., CHASES AND REBATES FOR DRIPS, ASPHALT TUCK-INS, ARCHITECTURAL DETAILS, ETC. CAST-IN SOCKETS, BOLTS OR STUDS FOR FIXING PIPEWORK, DUCTWORK ETC CONCRETE KERBS, SLOPES, FLOOR DRAINS. DETAILS FOR DAMP-PROOFING AND WATERPROOFING MEMBRANES, SEALANTS, DETAILS OF FIRE PROTECTION SYSTEMS ETC. OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS. THIS INFORMATION MAY BE FOUND ON BUILDERSWORK DRAWINGS PREPARED BY THE ARCHITECT, BUILDING SERVICES ENGINEERS OR SPECIALIST SUPPLIER OR SUBCONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AND CO-ORDINATE THIS INFORMATION AND TO ENSURE THAT ALL NECESSARY PROVISIONS ARE
- ACCOMMODATED. 14. NO HOLES, CHASES, CUT-OUTS OR THE LIKE MAY BE FORMED IN ANY BEAM, COLUMN, OR LOADBEARING WALL UNLESS WRITTEN PERMISSION IS OBTAINED FROM THE ENGINEER.
- 15. REFER TO THE ARCHITECT FOR DETAILS OF NON-LOADBEARING WALLS AND THEIR INTERFACE WITH THE STRUCTURAL FRAME.
- 16. UNLESS NOTED OTHERWISE ALL NON-LOADBEARING WALLS ARE TO BE TIED TO THE STRUCTURE, WHERE BRICKWORK OR BLOCKWORK ABUTS THE STRUCTURAL FRAME CONSTRUCTION RESTRAINT FIXINGS ARE TO BE PROVIDED AT 450 CRS VERTICALLY AND 900 CRS HORIZONTALLY. A FLEXIBLE JOINT OF 20mm IS TO BE FORMED BETWEEN THE TOP OF THE WALL AND THE STRUCTURE TO ACCOMMODATE VERTICAL MOVEMENT. THE JOINT SHALL BE FILLED WITH AN APPROVED COMPRESSIBLE MATERIAL IN ACCORDANCE WITH THE ARCHITECTS DETAILS.
- 17. APPROVED DOVETAIL SLOTS ARE TO BE CAST INTO CONCRETE / CONCRETE CASED COLUMNS, SLABS AND BEAM ETC. TO ACCOMMODATE BRICKWORK AND BLOCKWORK RESTRAINT FIXINGS. REFER TO THE ARCHITECTS DETAILS.
- 18. WHERE CONCRETE OR STEEL MEMBERS ARE IN CONTACT WITH THE EXTERNAL ENVIRONMENT, OR ARE WITHIN 75mm OF THE EXTERNAL SKIN OF BRICKWORK AN APPROVED WATERPROOFING / CORROSION PROTECTION IS TO BE APPLIED.
- 19. THE STRUCTURAL FRAME HAS A 60 YEAR DESIGN LIFE.
- 20. REFER TO THE ARCHITECT FOR FIRE PROTECTION DETAILS.

1 │ FLOOR SLAB & BEAMS GENERALLY

#### 3 | CORE WALLS CODES AND STANDARDS

COLUMNS GENERALLY

ALL STRUCTURAL ELEMENTS ARE TO BE DESIGNED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS AND RECOMMENDATIONS OF THE RELEVANT CODES AND STANDARDS. THE REQUIREMENTS AND

REGARDED AS MINIMUM CRITERIA AND THE DESIGN WILL UTILISE THE VALUES SPECIFIED WITHIN THE ENGINEERS DRAWINGS, SPECIFICATIONS OR DOCUMENTS WHERE THESE PROVE MORE THE CURRENT SCHEME DESIGN HAS BEEN UNDERTAKEN IN ACCORDANCE WITH THE LATEST ADDITIONS AND AMENDMENTS OF

RECOMMENDATIONS OF THE CODES AND STANDARDS ARE

FIRE RATINGS SCHEDULE

1 HRS.

THE CODES AND STANDARDS NOTED BELOW.

BS EN 1990 BASIS OF STRUCTURAL DESIGN BS EN 1991 ACTIONS OF STRUCTURES BS EN 1992 DESIGN OF CONCRETE STRUCTURES BS EN 1993 DESIGN OF STEEL STRUCTURES BS EN 1994 DESIGN OF COMPOSITE STEEL AND CONCRETE

STRUCTURES

BS EN 1996 DESIGN OF MASONRY STRUCTURES BE EN 1997 GEOTECHNICAL DESIGN BS EN 6472 EVALUATION OF HUMAN EXPOSURE TO VIBRATION IN BUILDINGS BS 8102 PROTECTION OF STRUCTURES AGAINST WATER FROM

KEY TO SYMBOLS (GENERAL)

INDICATES COLUMN OVER (STARTING AT THIS LEVEL) INDICATES COLUMN UNDER (STOPPING AT THIS LEVEL)

INDICATES POST OVER (STARTING AT THIS LEVEL) INDICATES POST UNDER (STOPPING AT THIS LEVEL)

INDICATES HANGER ABOVE (STARTING AT THIS LEVEL) INDICATES HANGER BELOW (STOPPING AT THIS LEVEL)

INDICATES SLIDING JOINT BELOW INDICATES STEP IN SLAB

INDICATES UPSTAND INDICATES STEP IN SOFFIT

INDICATES SOFT SPOTS IN SLAB FOR FUTURE OPENINGS

SECOND STAGE MASS CONCRETE

RC SLAB ON DENSE POLYSTYRENE VOID FORMER

OPENINGS TO HAVE 150Wx 150H RC UPSTAND UNO

#### KEY TO SYMBOLS (STEELWORK)

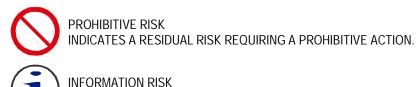
OF BEAM PENETRATIONS.

- BEAMS CALLED UP AS FOLLOWS: SECTION SIZE SHEAR ONLY/NON-MOMENT CONNECTION ADDITIONAL BRACKETS MAY BE REQUIRED TO SUPPORT CLADDING FIXING. REFER TO CLADDING CONTRACTORS DRAWINGS FOR
- INDICATES DUCT OR PIPE PENETRATION THROUGH CENTERLINE UNDERGROUND SERVICES. OF BEAM WEB U.N.O. FIRST DIMENSION INDICATES DEPTH. DIMENSION SHOWN THUS (-300) INDICATES DEPTH FROM TOP OF STEEL BEAM TO CENTRE LINE OF PENETRATION. ALL PENETRATIONS LOCATED CENTRALLY BETWEEN ADJACENT STEEL BEAMS U.N.O. REFER TO DWGS. XXXXXX FOR LOCATION
- ▼ INDICATES NOTCH, FIRST DIMENSION INDICATES NOTCH DEPTH. NOTCH LENGTH IS INDICATED FROM COLUMN CENTERLINE U.N.O
- HEALTH AND SAFETY NOTES 1. THE RESPONSIBILITY FOR ALL HEALTH, SAFETY AND WELFARE
- ISSUES RELATED TO THE WORKS LIES WITH THE CONTRACTOR. 2. THE CONTRACTOR IS TO ADOPT BEST PRACTICE AND SHALL COMPLY WITH ALL REQUIREMENTS SET OUT IN THE CDM REGULATIONS, ANY OTHER RELEVANT THE HEALTH AND SAFETY EXECUTIVE GUIDANCE AND ALL RELEVANT CODES OF PRACTICE OR STANDARDS.
- THE CONTRACTOR SHALL IMPLEMENT SAFE SYSTEMS OF WORK AND MANAGEMENT PROCEDURES, IDENTIFYING HAZARDS, RISKS AND MITIGATION CONTROLS. RISK ASSESSMENTS AND METHOD STATEMENTS SHALL BE PRODUCED FOR ALL ACTIVITIES.
- 4. WHERE RESIDUAL DESIGN RISKS ARE IDENTIFIED ON THE DRAWINGS THE FOLLOWING SYMBOLS ARE USED. IT SHOULD BE NOTED THAT ALL RESIDUAL RISKS ARE NOT NECESSARILY INDICATED ON THE DRAWINGS AND THE CONTRACTOR SHOULD ALSO REFER TO THE DESIGNERS RISK ASSESSMENTS.

### KEY TO HEALTH & SAFETY SYMBOLS

WARNING RISK INDICATES A RESIDUAL RISK AS A WARNING. COMPULSORY RISK

INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY



INDICATES A RESIDUAL RISK FOR INFORMATION.

**ENGINEERS REVIEW OF CONTRACTORS SHOP DRAWINGS** 

- THE PURPOSE OF THE CONSULTANTS REVIEW IS TO EXAMINE THE DETAILED DESIGNS AND A REPRESENTATIVE SAMPLE OF SHOP FABRICATION DRAWINGS IN RESPECT OF CONFORMITY WITH THE CONSULTANT'S DESIGN AND PERFORMANCE CRITERIA.
- 2. FOLLOWING REVIEW DRAWINGS WILL BE RETURNED MARKED A, B OR C AS FOLLOWS: A - CONFORMS TO DESIGN INTENT.
- B CONFORMS TO DESIGN INTENT SUBJECT TO INCORPORATION OF
- C REJECTED FOR REASONS MARKED ON THE DRAWING, TO BE RE-
- HOWEVER WE CONFIRM THAT ANY COMMENTS MADE ARE NOT TO BE CONSTRUED AS REDUCING OR ADOPTING ANY LIABILITY IN RELATION TO THESE MATTERS. SUCH LIABILITY CONTINUES TO REST FULLY

COMMENTS MARKED ON THE DRAWING.

IT SHOULD BE NOTED THAT NO DETAILED REVIEW WILL BE CARRIED OUT OF STEELWORK CONTRACTORS PIECE DRAWINGS OR THE CONCRETE CONTRACTORS REINFORCEMENT BAR BENDING

WITH THE CONTRACTOR.

# **EXCAVATION & SOIL RETENTION**

- 1. THESE NOTES SHOULD BE READ IN CONJUNCTION WITH THE SPECIFICATION FOR EXCAVATION AND FILLING.
- THE PERIMETER OF THE EXCAVATION SHALL BE RETAINED BY A SOIL RETENTION SYSTEM OR BATTERED SLOPES. THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL, AS REQUIRED, OF THE RETENTION SYSTEM SHALL BE THE COMPLETE AND SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO MINIMISE MOVEMENT OF THE SOIL RETENTION SYSTEM AND TO PREVENT DAMAGE AND MINIMISE SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE OF THE SITE BOUNDARY. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE SITE BOUNDARY CAUSED BY CONSTRUCTION TECHNIQUES OR MOVEMENTS OF THE SOIL RETENTION SYSTEM IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- BEFORE PROCEEDING WITH THE WORK THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL AVAILABLE RECORD INFORMATION INCLUDING SITE INVESTIGATION AND GEOTECHNICAL REPORTS AND DETAILS OF EXISTING STRUCTURES, INFRASTRUCTURE AND UTILITIES. THE CONTRACTOR SHALL COORDINATE ALL ELEMENTS OF THE SOIL RETENTION SYSTEM WITH ALL ELEMENTS OF THE PERMANENT BUILDING WORK, INFRASTRUCTURE AND UTILITIES.
- PRIOR TO ANY EXCAVATION OR INSTALLATION OF THE SOIL RETENTION SYSTEM, THE CONTRACTOR SHALL ESTABLISH A GRID OF SURVEY POINTS AROUND THE PERIMETER OF THE AREA TO BE EXCAVATED, INCLUDING POINTS UP TO AN AGREED ZONE OF INFLUENCE LIMIT. THESE POINTS SHALL BE SURVEYED FOR VERTICAL AND HORIZONTAL MOVEMENT AT FREQUENT INTERVALS DURING EXCAVATION AND CONTINUED DURING EACH SUBSEQUENT PHASE OF THE WORK. AND SUBMITTED TO THE ENGINEER FOR INFORMATION. 5. ALL EXCAVATIONS SHALL BE BASED ON ENGINEERED DRAWINGS
- PREPARED BY THE CONTRACTOR INCLUDING PLANS AND SECTIONS OF EXCAVATION SEQUENCES. THE EXCAVATION SEQUENCES SHALL BE CONTROLLED TO MATCH THE REQUIREMENTS OF THE SOIL RETENTION SYSTEM AND SHALL INCLUDE MONITORING OF WALL AND GROUND MOVEMENTS.
- 6. WHERE REQUIRED THE CONTRACTOR SHALL PROVIDE POSITIVE PROTECTION (MAT/SHEET COVERINGS), FOR ALL EXCAVATION SLOPES, TO PROTECT SLOPES FROM INSTABILITY AND DETERIORATION DUE TO RAIN, WIND OR SNOW / ICE.
- 7. THE CONTRACTOR SHALL PROVIDE SURFACE DRAINAGE CHANNELS AND SUMPS AND SUMP PUMPS AS NECESSARY TO PROTECT ALL EXCAVATION FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF ANY SUBGRADE WILL BE CAUSE FOR COMPLETE REMOVAL OF CONCRETE BLINDING, AND THE COMPLETE RE-PREPARATION AND APPROVAL OF THE SUBGRADE.
- THE SITE SHALL BE DEWATERED AS REQUIRED BEFORE OR AS THE EXCAVATION PROCEEDS. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND MAKE PROVISION FOR THE DEWATERING SYSTEM INCLUDING, BUT NOT LIMITED TO: TRENCHES, SUMPS, DEWATERING WELLS, WELL POINTS, OBSERVATION WELLS, PUMPING SYSTEMS, DISPOSAL LOCATION, SETTLING BASINS, MAINTENANCE AND EMERGENCY BACK UP EQUIPMENT, ETC.. AT ALL TIMES. THE DEWATERING SYSTEM SHALL MAINTAIN THE WATER LEVEL AT A MINIMUM OF ONE METER BELOW THE DEEPEST FOUNDATION SUBGRADE. THE DEWATERING SYSTEM SHALL BE MAINTAINED UNTIL ALL LOWER & UPPER LEVEL GROUND FLOOR SLABS, PERIMETER WALLS AND WATERPROOFING ARE INSTALLED AND THE PERMANENT BUILDING DRAINAGE SYSTEM IS FULLY OPERATIONAL.
- 9. THE CONTRACTOR SHALL REVIEW AND CONTINUOUSLY MONITOR THE EXCAVATION, DEWATERING AND SOIL RETENTION SYSTEMS, THE CONTRACTOR SHALL INSTALL AND CONTINUOUSLY SURVEY: (A) VERTICAL AND HORIZONTAL MOVEMENTS OF THE SOIL RETENTION SYSTEM: (B) BENCH MARKS ADJACENT TO AND AWAY FROM THE SITE PERIMETER FOR VERTICAL AND HORIZONTAL MOVEMENTS: AND (C) OBSERVATION WELLS FOR MONITORING WATERS LEVELS BELOW GROUND SURFACE.

#### **FOUNDATIONS**

- 1. FOUNDATIONS ARE TO BE SET OUT SYMMETRICALLY ABOUT COLUMN
- CENTRE LINES UNLESS NOTED OTHERWISE. BEFORE PROCEEDING WITH THE WORK THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL AVAILABLE RECORD INFORMATION FOR THE SITE AND SHALL UNDERTAKE ADDITIONAL INVESTIGATIONS AS REQUIRED TO DETERMINE THE LOCATION OF ALL EXISTING
- FORMATION LEVELS ARE TO BE INSPECTED AND APPROVED BY THE BUILDING CONTROL OFFICER.
- 4. FOUNDATIONS ARE TO BE CONSTRUCTED AS SOON AS POSSIBLE AFTER EXCAVATION. UNLESS NOTED OTHERWISE ALL EXCAVATED SURFACES ARE TO BE SEALED WITHIN 12 HOURS WITH A 75mm CONCRETE BLINDING.

FOUNDATIONS AND GROUND BEARING SLABS SHALL BE PLACED ON

- UNDISTURBED, NATURAL SUBGRADE WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 200 kN/m2. THE FINAL BEARING LEVELS SHALL BE FIELD DETERMINED. THE SOIL SUBGRADE FOR ALL FOOTINGS AND SLABS SHALL BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY WHO SHALL VERIFY THE SOIL BEARING CAPACITY IMMEDIATELY PRIOR TO PLACING FOUNDATION CONCRETE OR CONCRETE BLINDING. ALL ORGANIC AND / OR OTHERWISE UNSUITABLE MATERIAL SHALL BE REMOVED FROM FOUNDATION AND
- SLAB SUBGRADES AND BACKFILLED WITH LEAN MIX CONCRETE NO BLINDING, FOUNDATIONS OR SLABS SHALL BE PLACED AGAINST SUBGRADES CONTAINING FREE WATER, FROST OR ICE. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY WATER, FROST OR ICE FROM PENETRATING THE SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL
- SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANEN BUILDING STRUCTURE. SHOULD WATER, FROST OR ICE ENTER AN EXCAVATION AFTER SUBGRADE APPROVAL THE SUBGRADE SHALL BE RE-INSPECTED BY THE INDEPENDENT SOIL TESTING LABORATORY.
- ALL FOUNDATION AND SLAB BLINDING SHALL BE THOROUGHLY CLEANED IMMEDIATELY PRIOR TO CONCRETE PLACEMENT.
- 8. SERVICES PASSING THROUGH THE FOUNDATIONS OR SUB-STRUCTURE ARE TO BE ISOLATED AND PROTECTED. REFER TO THE SERVICES CONSULTANT FOR DETAILS.

#### PRECAST CONCRETE

- 1. ALL PC STAIRS AND FLOORS ARE TO BE DESIGNED BY THE CONTRACTOR FOR THE LOADING INDICATED OR OTHERWISE
- ASCERTAINABLE FROM THE DRAWINGS. REFERENCE SHOULD BE MADE TO THE ARCHITECTS DETAILS FOR THE GEOMETRY, SETTING OUT, FINISHES AND REQUIREMENTS FOR CAST IN ELEMENTS.
- 3. THE CONTRACTOR SHALL PRODUCE & SUBMIT DIMENSIONED LAYOUT DRAWINGS & CALCULATIONS FOR REVIEW AND APPROVAL BY THE
- 4. IT SHOULD BE NOTED THAT THE ENGINEERS REVIEW WILL CENTRE ON COMPLIANCE WITH DESIGN INTENT & WILL EXCLUDE DIMENSIONAL CHECKS. THE CONTRACTORS DETAILS ARE TO INDICATE THE LINES OF SUPPORT OF THE STAIRCASE OR FLOOR UNITS AND INDICATE ANY AREAS OF INSITU CONCRETE REQUIRED TO COMPLETE THE
- THE UNITS SHALL INCORPORATE LIFTING EYES POSITIONED TO ENABLE SAFE HANDLING ON SITE GIVING CONSIDERATION TO THE CENTRE OF MASS.

#### **TEMPORARY WORKS**

#### **CONSTRUCTION NOTES**

- 1. THE STRUCTURE HAS BEEN DESIGNED FOR THE ARRANGEMENT AND LOADING ACHIEVED IN THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR THE CHOICE OF FINAL CONSTRUCTION SEQUENCE
- AND ANY TEMPORARY WORKS THAT MAY BE REQUIRED. 2. SHOULD THE PROPOSED CONSTRUCTION SEQUENCE ALTER THE LOAD PATHS OR STRESSES IN THE STRUCTURE IN THE TEMPORARY CONDITION THE CONTRACTOR SHALL BE RESPONSIBLE FOR VALIDATING THE DESIGN, NO BACK PROPPING OF THE STRUCTURE WILL BE PERMITTED WITHOUT THE ENGINEERS APPROVAL.
- 3. IT IS ASSUMED THAT THE CONSTRUCTION WILL PROGRESS IN A BOTTOM UP SEQUENCE WITH THE SUBSTRUCTURE COMPLETED
- BEFORE COMMENCING WITH THE SUPERSTRUCTURE. 4. A SOIL RETENTION SYSTEM WILL BE PROVIDED, PROPPED IN THE TEMPORARY CONDITION, THAT WILL FORM PART OF THE PERMANENT
- STRUCTURE. 5. THE STRUCTURAL DESIGN ASSUMES THAT ALL NECESSARY STABILITY ELEMENTS ARE CONSTRUCTED IN ADVANCE OF THE FLOOR
- STRUCTURE AT EACH LEVEL. 6. THE STABILITY CORES ARE TO BE CONSTRUCTED IN ADVANCE OF THE FLOOR FRAMING.
- ANY BRACING INDICATED ON THE ENGINEERS DRAWINGS HAS BEEN DESIGNED AS PART OF THE PERMANENT STRUCTURAL STABILITY SYSTEM AND HAS NOT BEEN DESIGNED TO PROVIDE RESTRAINT OR SUPPORT TO WALLS, CEILINGS OR SERVICES.
- SERVICE LOADS. 9. UNLESS NOTED OTHERWISE ALL BEAMS AND SLABS HAVE BEEN DESIGNED AS UN-PROPPED.

8. ROOF BRACING HAS NOT BEEN DESIGNED TO SUPPORT CEILING OR

10. WALLS AND COLUMNS ARE DESIGNED TO SPAN BETWEEN FLOOR SLABS. THE CONTRACTOR IS TO ASSESS THEIR STABILITY DURING CONSTRUCTION AND PROVIDE TEMPORARY PROPPING AS REQUIRED.

WALLS UNTIL THE RETAINING WALL CONCRETE HAS ATTAINED FULL

DESIGN LOADS. SHOULD THE CONTRACTOR PROPOSE TO USE THE

HOISTS OR OTHER PLANT THE CONTRACTOR SHALL BE RESPONSIBLE

PERMANENT STRUCTURE TO SUPPORT OR RESTRAIN CRANES,

TEMPORARY WORKS SHALL BE THE RESPONSIBILITY OF THE

11. UNLESS NOTED OTHERWISE DO NOT BACKFILL AGAINST BASEMENT

DESIGN STRENGTH. DO NOT REMOVE TEMPORARY PROPS UNTIL THE PROPPING CONCRETE FLOORS HAVE ATTAINED FULL DESIGN 12. NO SPECIAL ALLOWANCE HAS BEEN MADE IN THE DESIGN OF THE STRUCTURE FOR CRANE OR CONSTRUCTION PLANT LOADING. REFERENCE SHOULD BE MADE TO THE LOADING PLANS FOR THE

#### FOR VALIDATING THE DESIGN IN THE TEMPORARY CONDITION.

- TEMPORARY WORKS THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL
- CONTRACTOR. ARCHITECT AND ENGINEER PRIOR TO FABRICATION. THE DESIGN MUST CONSIDER THE TEMPORARY STABILITY OF THE PARTIALLY COMPLETED STRUCTURE AND ADJACENT INFRASTRUCTURE TAKING DUE ACCOUNT OF ALL EXISTING AND PROPOSED BELOW GROUND SERVICES, BASEMENTS, PAVEMENT VAULTS, TUNNELS, METHODS OF WORKING ETC, THE TEMPORARY WORKS SHALL INCLUDE ALL TEMPORARY RAINWATER PIPES AND
  - DRAINAGE. PRIOR TO COMMENCING THE WORKS THE CONTRACTOR IS TO INSTALL ALL NECESSARY PROPPING AND BRACING TO MAINTAIN STRUCTURAL STABILITY DURING THE WORKS AND TO ENSURE THAT THE STRUCTURE DOES NOT BECOME OVERSTRESSED OR DAMAGED
  - DURING THE WORKS. 4. IF THERE IS A REQUIREMENT TO TRANSFER LOADS INTO THE PERMANENT STRUCTURE THE CONTRACTOR SHALL SUBMIT FOR APPROVAL DIMENSIONED DRAWINGS, REFERENCED TO GRIDS AND LEVELS, SHOWING THE DIRECTION AND MAGNITUDES OF THE LOAD. THE CONTRACTOR SHALL TAKE INTO CONSIDERATION THE DESIGN LOADINGS INDICATED ON THE LOADING PLANS AND THE
  - ARRANGEMENTS SHOWN ON THE STRUCTURAL DRAWINGS. . BEFORE WORK COMMENCES EACH SUB-CONTRACTOR SHALL SUBMIT A METHOD STATEMENT AND SEQUENCE OF WORKS TO THE CONTRACTOR FOR APPROVAL.

#### LIGHTNING PROTECTION

ARE CARRIED OUT:

MAIN REINFORCEMENT.

- MAIN COLUMN REINFORCEMENT OR STRUCTURAL STEEL COLUMNS WILL BE USED AS PART OF THE DOWN CONDUCTOR IN THE LIGHTNING PROTECTION SYSTEM. TESTING POINTS WILL NEED TO BE CAST INTO THE STRUCTURE AT APPROPRIATE LOCATIONS.
- WHERE REINFORCED CONCRETE COLUMNS ARE DESIGNATED AS LIGHTING PROTECTION COLUMNS THE REINFORCEMENT MUST BE CONTINUOUS TO EARTH. REFER TO THE SERVICE ENGINEERS DRAWINGS FOR LOCATION AND DETAILS.
- 3. FOR DETAILS AND LOCATION OF EARTHING PITS REFER TO RELEVANT SERVICE ENGINEERS DRAWINGS.

4. THE CONTRACTOR SHALL ENSURE THAT THE FOLLOWING MEASURES

CONTINUITY SHALL BE ENSURED FOR BOTH VERTICAL LAPS IN MAIN REINFORCEMENT AND BETWEEN LINKS AND MAIN REINFORCEMENT.

ENSURED, SCREW CLAMPS ARE TO BE USED TO ENSURE

CONTINUITY. WELDING OF REINFORCEMENT IS NOT PERMITTED.

TYING WIRE IS ONLY PERMITTED FOR FIXING BETWEEN LINKS AND

 CONTINUITY SHALL BE ENSURED BETWEEN COLUMN REINFORCEMENT AND BETWEEN STEEL COLUMN BASEPLATES USING SCREW CLAMPS AND TAPES. GOOD CONTACT BETWEEN REINFORCING BARS SHOULD BE

### **CONCRETE**

- **CONCRETE NOTES** ALL CAST-IN-SITU CONCRETE SHALL BE IN ACCORDANCE BS EN 1992 AND BS EN 13670 AND HAVE MINIMUM STRENGTH CLASS AS SHOWN IN THE STRUCTURAL CONCRETE SCHEDULE UNLESS NOTED
- OTHERWISE FOR ALL NON-STRUCTURAL CONCRETE REFER TO THE ARCHITECTS DETAILS.
- WATER RESISTANT CONCRETE CONSTRUCTION SHALL CONTAIN AN APPROVED WATERPROOFING ADMIXTURE (XYPEX OR SIMILAR
- APPROVED). CONCRETE EXPOSED TO FREEZING OR DE-ICING CHEMICALS SHALL ALSO CONTAIN AN APPROVED AIR-ENTRAINING ADMIXTURE
- 4. NO CALCIUM CHLORIDE, OR ADMIXTURES CONTAINING CALCIUM CHLORIDE, SHALL BE USED IN ANY CONCRETE. ALL ADMIXTURE
- DETAILS ARE TO BE SUBMITTED FOR APPROVAL. 5. ALL REINFORCING STEEL BARS SHALL CONFORM TO BS EN 10080. ALL COUPLERS WILL BE OF A TYPE APPROVED BY ENGINEER.

6. ALL WELDED STEEL WIRE FABRIC SHALL CONFORM TO BS EN 10080.

- WELDED FABRIC IN SLABS SUBJECT TO DE-ICING SALTS SHALL BE GALVANIZED. ALL CONCRETE REINFORCEMENT SHALL BE FABRICATED, LABELLED, SUPPORTED, SPACED IN FORMS, AND SECURED IN PLACE IN
- ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF BS EN 1992-1-1 "DESIGN OF CONCRETE STRUCTURES" AND BS 8666.
- THE CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE LOCATIONS OF ALL CONSTRUCTION JOINTS, UPSTANDS, SLAB DEPRESSIONS, SLEEVES, OPENINGS, EMBEDMENTS FOR ARCHITECTURAL PRE-CAST PANEL CONNECTIONS, INSERTS FOR HANGERS, ANCHORAGE FOR CLADDING, WATER BARS ETC... FOR THE
- GENERAL COORDINATION OF ALL TRADES. ALL REINFORCING SPLICES SHALL BE STAGGERED BY AT LEAST A LAP LENGTH AND SHALL CONFORM TO THE REQUIREMENTS OF BS EN 1992-1-1 BUT IN NO CASE SHALL BE LESS THAN 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
- 10. ALL WELDED STEEL FABRIC SHALL BE LAPPED TWO (2) FULL MESH PANELS AND TIED SECURELY.

11. WHERE REQUIRED, DOWELS SHALL MATCH THE SIZE, TYPE AND

- NUMBER OF THE MAIN REINFORCEMENT. 12. ALL WALLS AND STRUCTURAL SLABS SHALL BE REINFORCED WITH AT LEAST B12 BARS SPACED AT 300mm EACH WAY, EACH FACE, UNLESS NOTED OTHERWISE. ALL SLABS-ON-GRADE SHALL BE REINFORCED WITH AT LEAST B16 BARS SPACED AT 200mm EACH WAY, EACH FACE, UNLESS NOTED OTHERWISE. CONCRETE FILL ABOVE THE STRUCTURAL SLAB SHALL BE REINFORCED WITH WELDED MESH; MIN AREA OF REINFORCEMENT EQUIVALENT TO 0.13% OF THE CROSS
- SECTIONAL AREA OF THE FILL. 13. ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS. REFER TO THE TYPICAL DETAILS AND REINFORCEMENT REQUIREMENT DRAWINGS.
- 14. REINFORCEMENT CHAIRS HAVE NOT BEEN DETAILED ON DRAWINGS OR SCHEDULES THE CONTRACTOR IS TO MAKE APPROPRIATE ALLOWANCE FOR PROVISION OF CHAIRS
- 15. THE CONTRACTOR SHALL CO-ORDINATE PLACEMENT OF ALL CAST IN ELEMENTS AND EMBEDMENTS IN THE STRUCTURE REQUIRED INCLUDING BUT NOT LIMITED TO CLADDING FIXINGS, SHELF ANGLES, WALL RESTRAINT TIES, SERVICES SUPPORT HANGERS, FIXINGS FOR ARCHITECTURAL METALWORK, COLUMN GUARDS, ETC... REFER TO THE RELEVANT SERVICE ENGINEER'S, ARCHITECT'S OR SPECIALIST SUBCONTRACTOR'S DRAWINGS FOR DETAILS.
- 16. FORMWORK TO SUSPENDED BEAMS AND SLABS SHALL BE CONSTRUCTED SO THAT UPWARD CAMBERS EXIST IMMEDIATELY BEFORE STRIKING IN ACCORDANCE WITH THE SPECIFICATION.
- 17. ALL EXPOSED COLUMNS AND WALLS TO HAVE 20mm CHAMFER TO CORNERS UNLESS NOTED OTHERWISE.
- 18. PROVIDE AN APPROVED CURING COMPOUND. SEALER AND HARDENER FOR THE TOP SURFACE OF ALL SLAB WORK, AS PER SPECIFICATION E41 'WORKED FINISHES TO IN-SITU CONCRETE'. DETAILS TO BE SUBMITTED FOR REVIEW. 19. THE CONTRACTOR SHALL PROVIDE A SITE "MOCK-UP" OF EACH INSITU
- CONCRETE FINISH SPECIFIED FOR APPROVAL BY THE EMPLOYER PRIOR TO COMMENCEMENT OF CONCRETE WORK. 20. CONCRETE TO BE POURED ONTO METAL DECKING SHALL, UNLESS NOTED OTHERWISE, BE CONSTRUCTED TO THE THICKNESS INDICATED ON THE STRUCTURAL DRAWINGS, AND SHALL FOLLOW THE
- PROFILE OF THE SUPPORTING STRUCTURE. 21. THE CONTRACTOR SHALL CARRY OUT AND SUBMIT SURVEYS OF ALL FINISHED REINFORCED CONCRETE AND METAL DECK CONCRETE SLAB SURFACES, BOTH BEFORE AND AFTER REMOVAL OF FORMWORK AND
- 22. NO CUTTING OR REMOVAL OF PLACED CONCRETE IS PERMITTED
- WITHOUT AGREEMENT OF THE ENGINEER. 23. WHERE IT IS NECESSARY TO DRILL INTO CONCRETE ELEMENTS FOR FIXINGS, THE CONTRACTOR SHALL PROPOSE A METHOD FOR ACCEPTANCE BY THE ENGINEER. THE CONTRACTOR SHALL LOCATE ALL REINFORCEMENT USING A COVER METER TO AVOID ANY
- REINFORCEMENT. 24. MISPLACED HOLES FOR DRILLED FIXINGS IN VISUAL GRADE CONCRETE SHALL BE THOROUGHLY CLEANED AND FILLED WITH RONAFIX MODIFIED MORTAR OR SIMILAR TO WITHIN 2mm OF THE SURFACE OF THE CONCRETE. BEFORE HARDENING OF THE MORTAR HAS TAKEN PLACE, THE REMAINDER OF THE HOLE SHALL BE FILLED WITH A SAND/CEMENT PASTE, COLOUR MATCHED TO ELEMENT BEING REPAIRED. AFTER INITIAL SET HAS TAKEN PLACE, THE REPAIR SHALL BE TROWELLED SMOOTH. ALL OTHER HOLES CAN BE REPAIRED COMPLETELY WITH RONAFIX MODIFIED MORTAR OR SIMILAR. ALL

FILLING AND REPAIRS ARE TO BE APPORVED BY THE ARCHITECT.

- **CONSTRUCTION JOINTS** 1. CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS, AS DESCRIBED IN THE SPECIFICATION, OR OTHERWISE
- THE CONTRACTOR SHALL SUBMIT PROPOSALS FOR APPROVAL. THE LOCATION AND DISTANCE BETWEEN ALL CONSTRUCTION JOINTS IS TO BE IN ACCORDANCE WITH THE CONCRETE SPECIFICATION AND THE NATIONAL STRUCTURAL CONCRETE SPECIFICATION.

. CONSTRUCTION JOINTS IN ALL WALLS, SLABS AND BEAMS SHALL NOT

AGREED WITH THE ENGINEER. WHERE JOINTS ARE NOT INDICATED

- BE FURTHER APART THAN 30 METRES IN ANY DIRECTION. 4. SPLICES IN REINFORCEMENT HAVE NOT BEEN DETAILED IN ACCORDANCE WITH ANY PREDETERMINED CONSTRUCTION JOINT POSITION. IF THE CONTRACTOR WISHES TO ALTER POSITIONS OF SPLICES HE WILL BE REQUIRED TO SUBMIT FULL DETAILED
- 6. ALL CONSTRUCTION JOINTS SHALL BE WIRE BRUSHED, CLEANED AND MOISTENED IMMEDIATELY PRIOR TO PLACING NEW CONCRETE. 7. ALLOW A MINIMUM OF THREE (3) HOURS BETWEEN PLACEMENT OF

CONCRETE FOR COLUMNS, WALLS OR PIERS AND PLACEMENT OF

REINFORCEMENT DRAWINGS & SCHEDULES FOR APPROVAL

5. COLUMN AND WALL KICKERS ARE NOT PERMITTED UNLESS NOTED

8. GROUND SLABS AND EXTERNAL WALLS ARE TO BE WATERPROOFED AS INDICATED ON THE DRAWINGS. WATERPROOFING TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. 9. ALL CONSTRUCTION JOINTS BELOW GROUND LEVEL TO HAVE EXTERNAL PVC WATER BARS AND HYDROPHILIC STRIPS. THE

CONCRETE ON THE ADJACENT FLOOR.

- CONTRACTOR IS TO PREPARE FULL WATER BAR LAYOUTS FOR ACCEPTANCE AT LEAST FOUR (4) WEEKS BEFORE PROGRAMMED INSTALLATION. 10. ALL CONCRETE ON GROUND TO BE PLACED ON 1000 g/m2/
- POLYTHENE SEPARATING MEMBRANE UNLESS NOTED OTHERWISE. 11. GROUND SLABS TO BE PLACED IN A CHECKERBOARD FASHION BETWEEN CONSTRUCTION JOINTS OR IN STRIP POURS OF MAXIMUM 5m WIDTH. MINIMUM CURE TIME BEFORE CASTING ADJOINING BAYS IS THREE (3) DAYS.

#### WATER RESISTANT CONCRETE

1. WATER RESISTANT CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH BS 8102 FOR THE REQUIRED BASEMENT GRADE. 2. THE CONTRACTOR SHALL REFER TO THE GUIDANCE GIVEN IN BS EN

1992-3 FOR DETAILING AND CONSTRUCTION OF REINFORCED

- CONCRETE TO PREVENT WATER PENETRATION. 3. WATER RESISTANT CONCRETE CONSTRUCTION SHALL CONTAIN AN APPROVED WATERPROOFING ADMIXTURE (XYPEX OR SIMILAR APPROVED). CONCRETE EXPOSED TO FREEZING OR DE-ICING CHEMICALS SHALL ALSO CONTAIN AN APPROVED AIR-ENTRAINING ADMIXTURE
- CONSTRUCTION JOINTS TO ENSURE WATERTIGHT CONSTRUCTION. 5. SLAB AND WALL PENETRATIONS ARE TO DETAILED BY THE

4. COMPATIBLE WATER BARS ARE TO BE PROVIDED AS NECESSARY AT

## CONTRACTOR TO ENSURE WATER TIGHTNESS.

#### **STEELWORK**

8.8 UNLESS NOTED OTHERWISE.

BE THROUGH DECK WELDED.

AS PRIMARY MEMBERS.

FOR APPROVAL

- 1. ALL STRUCTURAL STEELWORK SHALL BE DESIGNED AND DETAILED IN
- ACCORDANCE WITH BS EN 1993 AND BS EN 1994 AND EXECUTED IN ACCORDANCE WITH BS EN 1090.
- 2. UNLESS NOTED OTHERWISE STRUCTURAL STEELWORK SHALL BE GRADE S355 TO BS EN 10 025 BS EN 10 113 AND BS EN 10 210. ALL STEEL SHALL BE OF WELDABLE QUALITY. ALL BOLTS SHALL BE GRADE

3. STEEL SUBGRADES SHALL BE DETERMINED BY THE CONTRACTOR TO

4. PROTECTIVE COATING SYSTEMS TO ALL STRUCTURAL STEELWORK

5. TOP OF BEAMS ARE TO BE UNPAINTED WHERE SHEAR STUDS ARE TO

6. ALL STRUCTURAL STEEL SHALL BE FIREPROOFED TO ACHIEVE THE

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF

RELATION TO TEMPERATURE DIFFERENTIALS, ERECTION

THE ENGINEER FOR REVIEW PRIOR TO FABRICATION:

TOLERANCES AND TEMPORARY STABILITY.

ALL PHASES OF CONSTRUCTION.

ALL STRUCTURAL STEEL

**ENGINEERS DRAWINGS** 

THE STRUCTURAL DRAWINGS.

CAMBER RAISES THE CANTILEVER END.

SPACING, UNLESS NOTED OTHERWISE.

BUILDING SERVICES INSTALLATIONS.

PSDxBFWxTFW BFT TFT TWxWT

PS = Plate Section

BFW = Bottom Flange Width

BFT = Bottom Flange Thickness

REQUIREMENTS OF BS EN 1993-1-8.

WT = Weight in kilograms per metre length (Kg/m)

eg. Equal Flanges PS640x350x350 40 35 25x330

Unequal Flanges PS640x450x350 40 35 25x340

THE CONTRACTOR SHALL DESIGN AND SUBMIT CALCULATIONS FOR

ALL CONNECTIONS INCLUDING THOSE FULLY DETAILED ON THE

ENGINEERS DRAWINGS. CALCULATIONS SHALL CONFORM TO THE

2. THE CONTRACTOR SHALL DESIGN CONNECTIONS FOR THE LOADS AND

CALCULATE TIE FORCES REQUIRED IN ACCORDANCE WITH BS EN 1991.

CRITERIA GIVEN ON THE DRAWINGS. THE CONTRACTOR SHALL

SHOULD BE CONSIDERED AS INDICATIVE ONLY AND SHOULD BE

VALIDATED BY THE CONTRACTOR AT TENDER STAGE. DETAILS

THICKNESS SHALL BE CONSIDERED TO REPRESENT THE MINIMUM

4. IF FOR ANY REASON THE CONNECTION NEEDS TO BE CHANGED, THE

REQUIRED CAPACITY. THE REVISIONS SHALL BE MADE AT NO

ADDITIONAL COST AND WITH NO DELAY TO THE PROJECT.

5. BEAM END REACTIONS SHOWN ON THE DRAWINGS ARE ULTIMATE

SHALL BE DESIGNED FOR THE FORCES AND MOMENTS SHOWN

6. ALL BEAM TO COLUMN AND BEAM TO CORE CONNECTIONS SHALL BE

DESIGNED BY THE STEELWORK CONTRACTOR TO SUPPORT THE

OF THE TIE FORCES. THE GUIDANCE GIVEN IN 'JOINTS IN STEEL

PUBLICATION P358 SHOULD BE FOLLOWED. CLEATED WEB OR

FLANGE CONNECTIONS WILL BE ACCEPTABLE AS WELL AS OTHER

BOTH THE REACTION LOAD AND THE TIE FORCES OR JUST THE TIE

FORCES, WITH A SEPARATE CONNECTION FOR THE REACTION

CONNECTIONS OF SIMILAR FLEXIBILITY. THE CLEATS MAY SUPPORT

LOADS. THE CONTRACTOR IS TO DEVELOP THE CONNECTION DESIGN

AND DETAILS TO ALLOW ADEQUATE END ROTATION OF THE BEAM AS

ROTATION MUST NOT IMPAIR THE SHEAR AND TYING CAPACITY. THE

ENSURE A BEARING MODE OF FAILURE IN EITHER THE FIN PLATE OR

IT TAKES UP ITS SIMPLY SUPPORTED DEFLECTED PROFILE. THIS

CONNECTION SHALL BE DESIGNED WITH SUFFICIENT DUCTILITY TO

CONFIGURATION WHICH INHERENTLY PROVIDES LOAD REVERSAL

a - REACTIONS INDICATED ON THE DRAWINGS. IF UNAVAILABLE

b - TIE FORCES IN ACCORDANCE WITH BS EN 1991-1-7 FOR

9. ALL BOLTED CONNECTIONS SHALL USE A MINIMUM GRADE OF 8.8

10. THE FOLLOWING MINIMUM REQUIREMENTS SHALL BE ASSUMED

c - BRACING MEMBERS - 2 No. M16 GRADE 8.8 BOLTS

12. ALL CONTACT SURFACES FOR HSFG BOLTS ARE TO BE LEFT

13. SPLICE LOCATIONS WHERE SHOWN ON THE DRAWINGS ARE

a - MEMBERS SUPPORTING OTHER MEMBERS - 4 No. M16 GRADE 8.8

b - MEMBERS NOT SUPPORTING OTHER MEMBERS - 2 No. M16 GRADE

11. BOLTED MOMENT CONNECTIONS WHERE SHOWN SHALL UTILISE HIGH-

STRENGTH FRICTION GRIP BOLTS FOR BOTH FLANGE AND WEB

INDICATIVE ONLY, FINAL LOCATION IS TO BE AGREED WITH THE

ENGINEER. SPLICE LOADS ARE TO BE DETERMINED BY THE

14. ALL BOLT HOLES SHALL BE PRE-DRILLED AND WHERE REQUIRED, REAMED. UNLESS NOTED OTHERWISE PROVIDE STANDARD

15. UNLESS NOTED OTHERWISE 8mm THICK HARDENED WASHERS ARE

CLEARANCE HOLES. PROVIDE OVERSIZED HOLES WHERE REQUIRED

REACTIONS SHOULD BE CALCULATED FROM UNIFORM LOAD

BEAM WEB AND NOT IN ANY EMBEDDED CONNECTION.

8. CONNECTION SHALL BE DESIGNED FOR THE GREATEST OF THE

7. ALL BOLTED BEAM END CONNECTIONS ARE TO BE OF A

CAPACITY e.g. FIN PLATES OR END PLATES.

LOCALISING ACCIDENTAL DAMAGE

BOLTS UNLESS NOTED OTHERWISE.

UNLESS NOTED OTHERWISE:

8.8 BOLTS

BOLTS.

UNPAINTED.

CONTRACTOR.

FOR ERECTION OR WHERE SHOWN.

TO USED OVER ALL SLOTTED HOLES.

FOLLOWING:

CAPACITIES x 1.2.

CONSTRUCTION - SIMPLE JOINTS TO BE EUROCODE 3' SCI

REACTION LOADS GIVEN ON THE DRAWINGS AND THE TIE FORCES

REQUIRED BY BS EN 1993. IN ADDITION, THE CONNECTIONS SHOULD

BE DESIGNED TO BE AS FLEXIBLE AS POSSIBLE UNDER THE ACTION

CONTRACTOR SHALL REDESIGN THE CONNECTION TO DEVELOP THE

LIMIT STATE LOADS. UNLESS NOTED OTHERWISE THE CONNECTIONS

INDICATING THE NUMBER OF BOLTS, WELD SIZES AND PLATE

3. ANY CONNECTIONS INDICATED ON THE ENGINEERS DRAWINGS

TFT = Top Flange Thickness

TFW = Top Flange Width

TW = Thickness of Web

CONNECTION DESIGN

REOUIREMENTS.

ACTING CONCURRENTLY.

UNLESS NOTED OTHERWISE.

APPROVAL

OTHERWISE

ALL ERECTION PROCEDURES AND SEQUENCES ESPECIALLY IN

8. THE CONTRACTOR SHALL SUBMIT THE FOLLOWING INFORMATION TO

PROPOSALS FOR MAINTAINING STRUCTURAL STABILITY DURING

ERECTION SEQUENCE METHOD STATEMENT INCLUDING

DETAILS OF ERECTION LOADS APPLIED TO THE STRUCTURE

DETAILS OF ANY TEMPORARY WORKS OR PROPPING PROPOSED

DETAILED, CO-ORDINATED AND CHECKED SHOP DRAWINGS FOR

CONNECTION DETAIL DRAWINGS AND CALCULATIONS (PRIOR TO

CONNECTIONS INCLUDING THOSE FULLY DETAILED ON THE

DETAIL DRAWINGS AND CALCULATIONS FOR METAL DECK FLOOR

EMPLOYER. ALL SUCH ADDITIONAL STEEL SHALL BE REMOVED BY THE

NATURAL CAMBER UP. ADDITIONAL CAMBERS ARE AS INDICATED ON

9. NO REMEDIAL WORK WILL BE PERMITTED WITHOUT PRIOR

CONTRACTOR UNLESS APPROVED BY THE ENGINEER.

10. ALL ADDITIONAL STEEL REQUIRED BY THE CONTRACTOR FOR

ERECTION PURPOSES SHALL BE PROVIDED AT NO COST TO THE

11. ALL BEAMS, JOISTS AND TRUSSES SHALL BE FABRICATED WITH THE

12. CANTILEVER BEAMS SHALL BE FABRICATED SO THAT NATURAL

13. ALL BEAMS ARE ASSUMED TO BE UNPROPPED UNLESS NOTED

14. SOME STEELWORK ELEMENTS MAY BE OF AESTHETIC IMPORTANCE

STEELWORK NOT FULLY COMPLIANT WITH THE SPECIFIED

THE DRAWINGS FOR LOCATION OF SUCH STEELWORK

AND REQUIRE SPECIAL ARCHITECTURAL TREATMENT. ANY SUCH

REQUIREMENTS WILL BE REJECTED FROM THE WORKS. REFER TO

15. DIMENSIONAL CONSTRAINTS APPLY TO COLUMN SPLICES. REFER TO

SHOULD BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR

16. ALL MINOR FRAMING MEMBERS WHERE SIZE IS NOT INDICATED ON

17. CANTILEVER STUBS WHERE SIZE IS NOT INDICATED ON PLAN TO BE

18. THE CONTRACTOR IS TO MAKE ADEQUATE ALLOWANCE FOR THE

UC203x203x46 WITH MINIMUM 1 No. STUD PER TROUGH SPACING,

PROVISION AND FITTING OF SECONDARY STRUCTURAL STEELWORK AND BRACKETS TO INCLUDE A) TO SUPPORT HORIZONTAL AND

VERTICAL LOADS FROM CLADDING PANELS OR PARTITIONS. B) FOR

19. PLATE GIRDERS / FABRICATED BEAMS ARE CALLED UP AS FOLLOWS:

TRIMMING AROUND OPENINGS IN SLABS AND WALLS. C) TO SUPPORT

ARCHITECTS COLUMN CASING DETAILS. PROPOSED SPLICE DETAILS

PLAN TO BE UB254x146X31 WITH MINIMUM 1 No. STUD PER TROUGH

APPROVAL PRIOR TO THE PREPARATION OF FABRICATION DRAWINGS.

SUBMISSION OF SHOP DRAWINGS) FOR STANDARD AND TYPICAL

APPLICABLE FIRE-RESISTANCE RATINGS. FOR DETAILS OF FIRE

PROTECTION REFER TO THE ARCHITECTS DRAWINGS. SECONDARY

STRUCTURAL STEEL TO RECEIVE FIRE PROTECTION AND COATINGS

SHALL BE IN ACCORDANCE WITH THE SCHEDULE AND THE

STRUCTURAL STEELWORK SPECIFICATION.

SUIT THE FABRICATION DETAILS. SUBMIT DETAILS TO THE ENGINEER

### **STEELWORK (CONTINUED)**

1. ALL WELDING TO BE IN ACCORDANCE WITH BS EN 1090 AND THE

2. NO SITE WELDING IS PERMITTED WITHOUT PRIOR APPROVAL.

MINIMUM SIZE FILLET WELD

MATERIAL THICKNESS OF | MINIMUM SIZE OF

THICKER PART JOINED (mm) | FILLET WELD (mm)

ALL WELD SIZES ARE THROAT THICKNESS

ALL BUTT WELDS SHALL BE FULL PENETRATION, FULL STRENGTH

ALL WELDED CONNECTIONS SHALL BE FULLY SEALED AGAINST

ELECTRODES FOR ALL FILLET WELDS SHALL BE IN ACCORDANCE

ELECTRODES USED FOR ALL BUTT WELDS TO PROVIDE A MINIMUM

4. SHOP AND FIELD TESTING AND INSPECTION OF STRUCTURAL STEEL

FABRICATION AND ERECTION WORK, INCLUDING WELDED AND

a - ALL STRUCTURAL STEEL FABRICATION AND ERECTION SHALL BE

c - ALL WELDING PROCEDURES SHALL BE APPROVED TO BS4870,

d - WELD MEASUREMENTS SHALL BE PERFORMED FOR 15% OF ALL

e - MAGNETIC PARTICLE TESTING TO BS6072 SHALL BE PERFORMED

1. 100% BEAM FLANGE TO END PLATE OR COLUMN FLANGE

2. 10% OF ALL SHEAR PLATE, TRUSS CONNECTIONS, AND

MISCELLANEOUS FILLET WELDS, AT RANDOM.

5. 20% ALL BUILT-UP MEMBER FLANGE TO WEB WELDS, AT

f - ULTRASONIC TESTING, IN ACCORDANCE WITH BS3923, PART 1.

EXAMINATION LEVEL 2SHALL BE PERFORMED FOR A MINIMUM OF:

g - ULTRASONIC TESTING IN ACCORDANCE WITH BS5996 AND VISUAL

INSPECTION IN ACCORDANCE WITH BS4360 OR BS4848.

HANGER CONNECTION PLATES, ETC.).

1. 100% OF ALL FULL PENETRATION WELDS.

2. 100% OF ALL PARTIAL PENETRATION WELDS.

3. 20% OF ALL CONTINUITY PLATE FILLET WELDS, AT RANDOM.

4. 100% OF TENSION MEMBER CONNECTION FILLET WELDS (I.E.

b - ALL WELDERS SHALL BE CERTIFIED PER BS4871, PART 1

VISUALLY INSPECTED. VISUALLY INSPECT ALL WELDS TO BS5289.

BOLTED CONNECTLONS, SHALL BE AS FOLLOWS:

WELDS ON A RANDOM BASIS.

FOR A MINIMUM OF:

FILLET WELDS.

YIELD & TENSILE STRENGTH NOT LESS THAN THOSE SPECIFIED FOR

INGRESS OF WATER USING 4mm CONTINUOUS FILLET WELDS WHERE

STRUCTURAL WELDS SHALL NOT BE LESS THAN 6mm

STRUCTURAL WELDS ARE NOT REQUIRED.

WITH TABLE 37 OF BS 5950-1

THE PARENT METAL.

WELD TESTING

STEELWORK SPECIFICATION.

TO 6 INCLUSIVE

**OVER 6 TO 12** 

OVER 19

OVER 12 TO 19

3. MINIMUM WELD SIZE:

TIMBER NOTES 1. ALL TIMBER SHALL COMPLY WITH BS EN 1996 AND BS EN 14081-1.

TIMBER & MASONRY

2. UNLESS NOTED OTHERWISE ALL TIMBER SHALL BE STRENGTH CLASS C24 TO BS EN 338. TIMBER TO BE PRESSURE IMPREGNATED WITH PRESERVATIVE & CUT ENDS BRUSH TREATED

#### <u>MASONRY</u>

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND ALL
- RELEVANT SPECIFICATIONS. REFER TO THE ARCHITECTS MASONRY SPECIFICATION
- 3. REFER TO ARCHITECT DETAILS FOR WALL SETTING OUT, MOVEMENT
- JOINT LOCATIONS AND DETAILS, WIND POST LOCATIONS AND
- 4. UNLESS NOTED OTHERWISE ALL BRICKWORK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 20.0N/mm2 AND A WATER ABSORPTION
- . UNLESS NOTED OTHERWISE ALL BLOCKWORK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 7.3N/mm2. (10.0N/mm<sup>2</sup> TO WALLS FORMING LIFT SHAFTS).
- 6. ALL BRICKS AND BLOCKS SHALL BE OBTAINED FROM MANUFACTURERS WHICH OPERATE APPROVED FACTORY CONTROL SYSTEMS WHICH MEET THE REQUIREMENTS OF BS EN 771 (ALL
- 7. THE CONTRACTOR SHALL ENSURE THAT SITE SUPERVISION AND CONTROL IS STRICTLY IN ACCORDANCE WITH BS EN 1996-2.

#### 8. ALL MORTAR SHALL BE DESIGNATION M4; 1:1:5 TO 6 CEMENT: LIME:SAND, EXCEPT BELOW GROUND WHERE MORTAR DESIGNATION M6; 1:0.5:4 TO 4.5 CEMENT:LIME:SAND, IS TO BE USED.

10. MOVEMENT JOINTS TO BE PROVIDED IN ACCORDANCE WITH THE

9. ALL TIES TO BE ANCON RANGE OR SILIMAR APPROVED.

BRICK/BLOCK MANUFACTURER'S INSTRUCTIONS. SPACING NOT TO EXCEED THE FOLLOWING: SPACING (m) CLAY BRICKWORK

CONCRETE BLOCKWORK 6 OR 12\*

DURING CONSTRUCTION.

- PARAPET WALLS \*DENOTES BED JOINT REINFORCED WALL 11. ALL MOVEMENT JOINTS TO BE 15mm U.N.O. COMPRISING A
- COMPRESSIBLE FILLER AND AN ELASTIC SEALANT. REFER TO ARCHITECT FOR DETAILS AND SPECIFICATION. 12. IN SITUATIONS WHERE HEAD RESTRAINT IS SHOWN, AND IN ALL
- CASES WHERE THE EXTERNAL LEAF OF A CAVITY WALL IS CONTINUOUS PAST A FLOOR. 13. INTERNAL PARTITIONS HAVE BEEN DESIGNED TO RESIST WIND
- PRESSURES UNDER INTERNAL CONDITIONS ONLY AND HAVE BEEN DESIGNED TO RELY ON HEAD RESTRAINT FOR STABILITY. 14. THE CONTRACTOR IS TO PROVIDE TEMPORARY SUPPORT AS NECESSARY TO ENSURE STABILITY OF ALL BRICK AND BLOCK WALLS
- 15. UNLESS NOTED OTHERWISE ALL NON-LOADBEARING WALLS ARE TO BE TIED TO THE STRUCTURE OVER WITH TIES ALLOWING VERTICAL MOVEMENT AND A FLEXIBLE JOINT OF 20mm TO BE FORMED BETWEEN TOP OF THE WALL AND THE STRUCTURE. THE JOINT SHALL BE FILLED WITH AN APPROVED COMPRESSIBLE MATERIAL IN
- 16. WHERE BRICKWORK OR BLOCKWORK ABUTS STRUCTURE WALL TIES ARE REQUIRED. THESE WILL GENERALLY BE AT 450 CRS VERTICALLY AND 900 CRS HORIZONTALLY WITH ONE END HAVING DEBONDING SLEEVE. REFER TO DETAIL.

ACCORDANCE WITH THE ARCHITECTS DETAILS.

18. CHASES IN WALLS SHALL ONLY BE CARRIED OUT WHEN APPROVED BY THE ENGINEER. REFER TO SPECIFICATION.

17. HOLES IN WALLS SHALL ONLY BE CARRIED OUT WHEN APPROVED BY

THE ENGINEER. HOLES IN WALLS EXCEEDING 200 MM SHOULD HAVE A

#### <u>LINTELS</u>

- 1 REFER TO ARCHITECTS DOOR, WINDOW AND OPENING SCHEDULES
- REFER TO MEP CONSULTANT FOR BWIC OPENINGS. 3. ALL LINTELS TO BE STRESSLINE PRE-STRESSED CONCRETE LINTELS UNLESS NOTED OTHERWISE.

4. LINTELS TO BE PROVIDED AS FOLLOWS UNLESS NOTED OTHERWISE

- OPENINGS UP TO 900mm 100mm DEEP - OPENINGS 900-1500mm 140mm DEEP
- WIDTH OF LINTEL TO BE SAME AS WIDTH OF WALL

6. ALL LINTELS TO BE STRESSLINE PRE-STRESSED CONCRETE LINTELS

OPENINGS 1500mm -2100mm 225mm DEEP

WHERE AN ALTERNATIVE MANUFACTURER IS USED THE CONTRACTOR IS TO ENSURE THAT LINTELS HAVE EQUIVALENT LOAD CARRYING

- OPENINGS UP TO 900mm 100mm DEEP

LINTELS TO BE BEDDED ON SOUND FLAT MASONRY OR MORTAR BED. 9. MIN. BEARING AS FOLLOWS:

UNLESS NOTED OTHERWISE.

- OPENINGS 900mm - 1500mm 150mm DEEP - OPENINGS 1500mm - 2100mm 225mm DEEP

10. FIRE RATING AND ADDITIONAL PROTECTION TO ARCHITECT'S DETAILS

#### KEY TO HEALTH & SAFETY SYMBOLS

DO NOT SCALE

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT

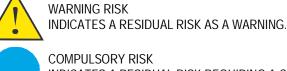
ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER

. FOR GENERAL NOTES, ABBREVIATIONS AND SYMBOL LEGEND REFER

2. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.

WITH RELEVANT SPECIFICATIONS.

TO DRAWING GUH-WSP-00-00-DR-S-020100



INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY

INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.

INFORMATION RISK INDICATES A RESIDUAL RISK FOR INFORMATION.

DRAWING STATUS: STAGE 2

http://www.wsp.com

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ASW

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SELLAR DEVELOPMENTS

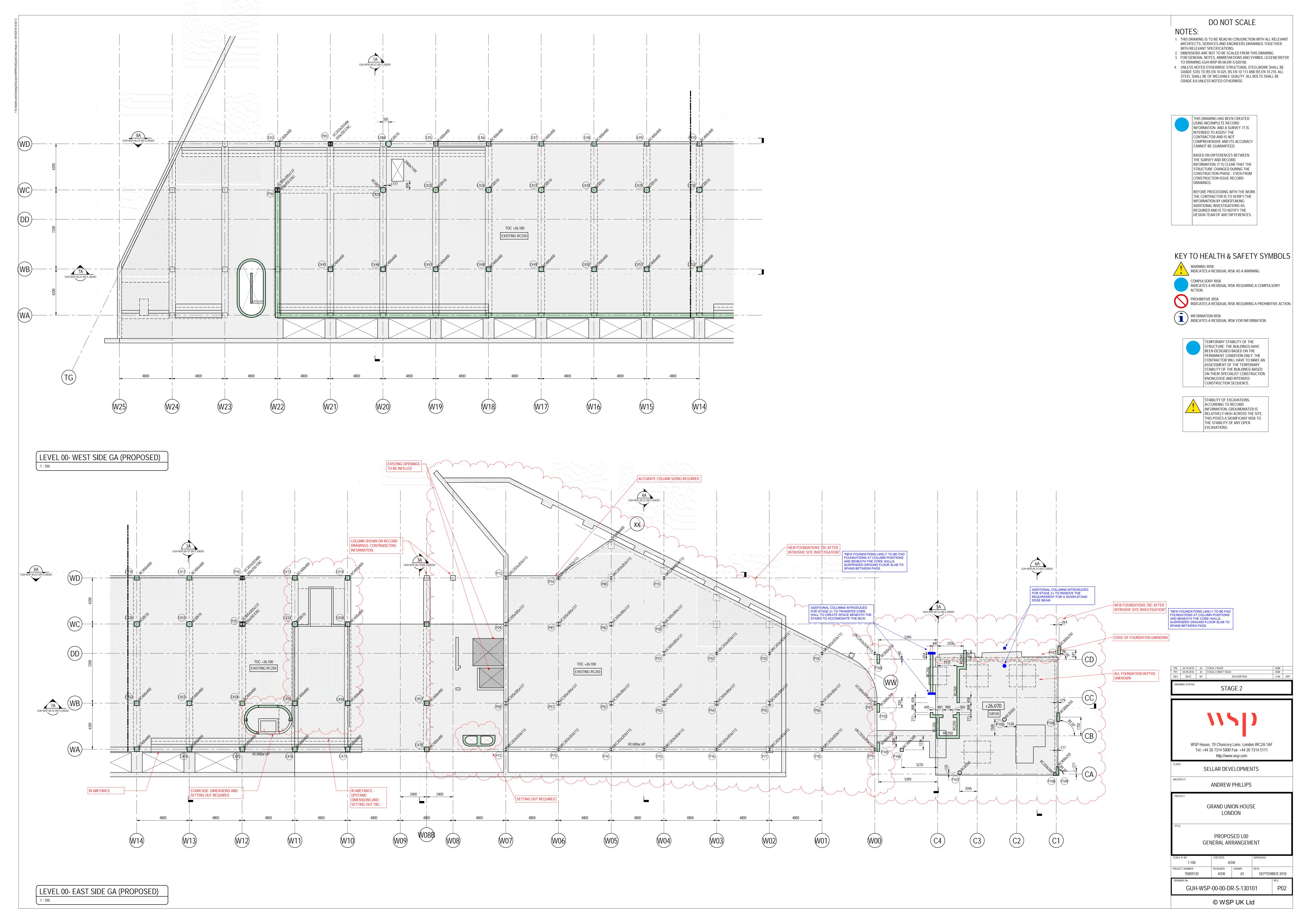
NTS DESIGNED: DRAWN: ASW JO SEPTEMBER 2018 70009120

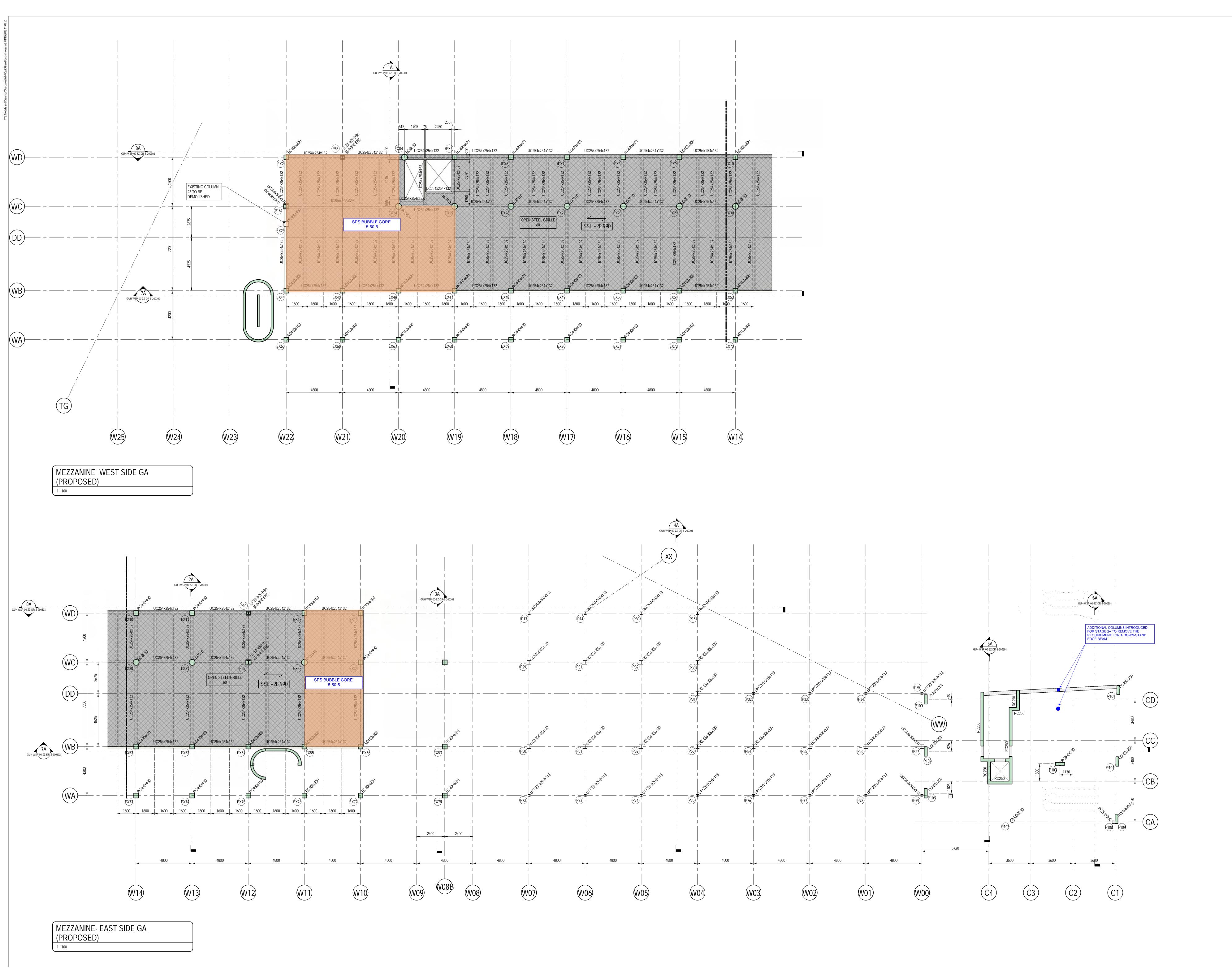
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ANDREW PHILLIPS

GENERAL NOTES





2. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.

TO DRAWING GUH-WSP-00-00-DR-S-020100.

GRADE 8.8 UNLESS NOTED OTHERWISE.

3. FOR GENERAL NOTES, ABBREVIATIONS AND SYMBOL LEGEND REFER

4. UNLESS NOTED OTHERWISE, BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS ARE PINNED CONNECTIONS ON THIS MEZZANINE

5. UNLESS NOTED OTHERWISE STRUCTURAL STEELWORK SHALL BE GRADE S355 TO BS EN 10 025, BS EN 10 113 AND BS EN 10 210. ALL STEEL SHALL BE OF WELDABLE QUALITY. ALL BOLTS SHALL BE

KEY TO HEALTH & SAFETY SYMBOLS

COMPULSORY RISK INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY

INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.

INDICATES A RESIDUAL RISK AS A WARNING.

INFORMATION RISK INDICATES A RESIDUAL RISK FOR INFORMATION.

TEMPORARY STABILITY OF THE STRUCTURE: THE BUILDINGS HAVE

BEEN DESIGNED BASED ON THE
PERMANENT CONDITION ONLY; THE
CONTRACTOR WILL HAVE TO MAKE AN
ASSESSMENT OF THE TEMPORARY
STABILITY OF THE BUILDINGS BASED

ON THEIR SPECIALIST CONSTRUCTION

KNOWLEDGE AND INTENDED CONSTRUCTION SEQUENCE.

WARNING RISK

NOTES:

 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER WITH RELEVANT SPECIFICATIONS.

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PROJECT NUMBER: DESIGNED: DRAWN: DATE: SEPTEMBER 2018

DRAWING No: REV:

GUH-WSP-00-0M-DR-S-200101 P02

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STAGE 2

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SELLAR DEVELOPMENTS

ANDREW PHILLIPS

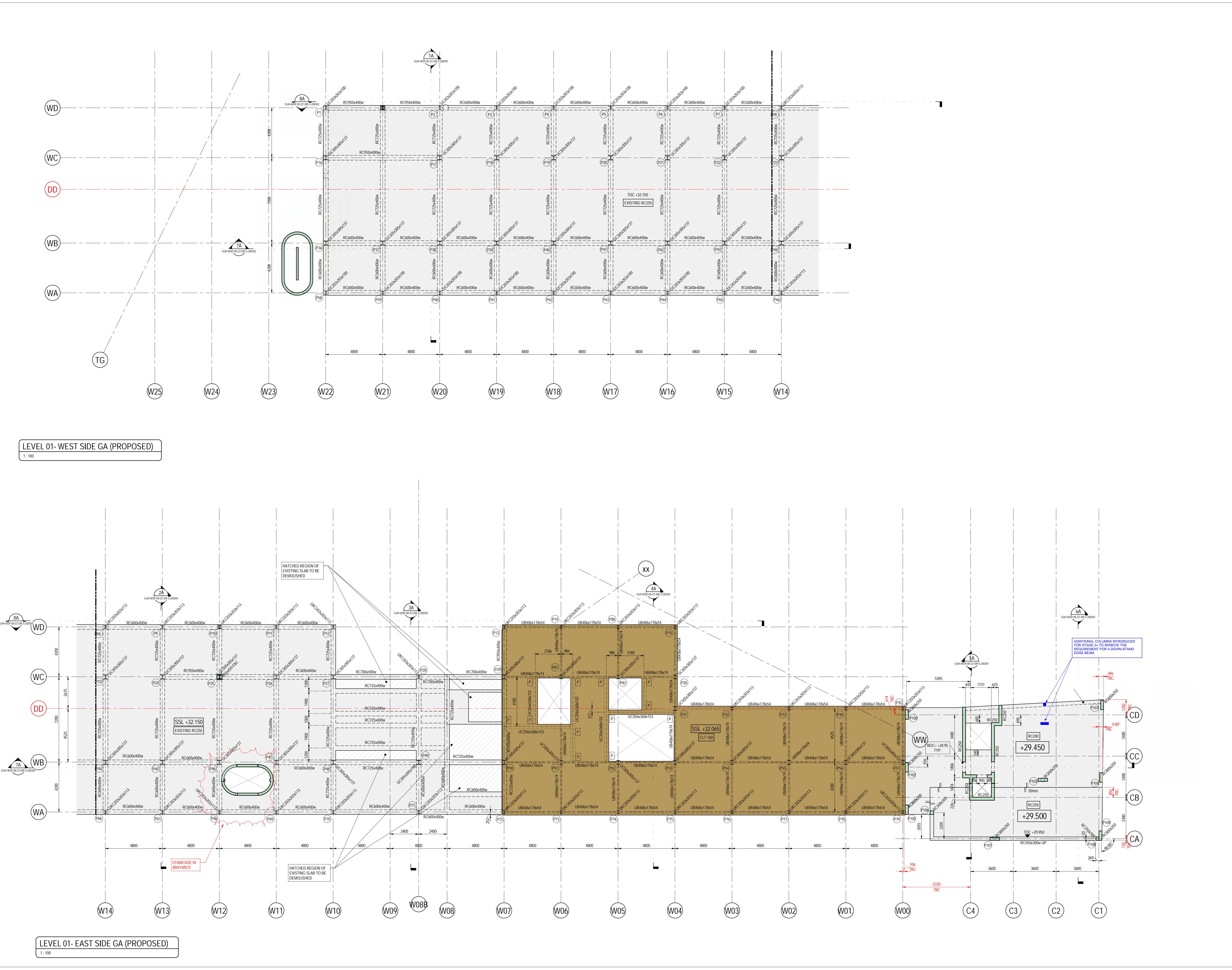
**GRAND UNION HOUSE** 

LONDON

PROPOSED MEZZANINE

GENERAL ARRANGEMENT

ASW



NOTES:

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7. 160 CLT PANELS TO BE GRADE 24, L5s-2. FOUR LAYERS TO BE IN

MIDDLE LAYER TO BE TRANSVERSE. COVER LAYERS IN PAIRS IN

KEY TO HEALTH & SAFETY SYMBOLS

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INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.

INDICATES A RESIDUAL RISK AS A WARNING.

INFORMATION RISK INDICATES A RESIDUAL RISK FOR INFORMATION.

CONNECTIONS IN SOME LOCATIONS IN THE CORE AREA AND PART OF THE SAW-TOOTH ROOF. THE STEELWORK FABRICATOR IS THEREFORE REQUIRED TO DETAIL THE FIN-PLATE IN THE CONNECTION IN SUCH A WAY AS TO ENSURE THE BEAM IS ABLE TO ROTATE WITHOUT THE DEVELOPMENT OF ADVERSE LOAD CONNECTIONS IN THE DETAIL; THE DETAIL DEVELOPED MUST ALLOW THE BEAM TO ROTATE, WHILST ALLOWING THE FULL DESIGN LOADS TO

THE DESIGN ASSUMES SIMPLE

BE REALISED.

 P02
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**GRAND UNION HOUSE** 

LONDON

PROPOSED L01 GENERAL ARRANGEMENT

> ASW DESIGNED: DRAWN:

70009120

ASW JO SEPTEMBER 2018

TEMPORARY STABILITY OF THE

KNOWLEDGE AND INTENDED CONSTRUCTION SEQUENCE.

STRUCTURE: THE BUILDINGS HAVE BEEN DESIGNED BASED ON THE PERMANENT CONDITION ONLY; THE CONTRACTOR WILL HAVE TO MAKE AN ASSESSMENT OF THE TEMPORARY STABILITY OF THE BUILDINGS BASED ON THEIR SPECIALIST CONSTRUCTION

WARNING RISK

COMPULSORY RISK

5. UNLESS NOTED OTHERWISE, BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS ARE MOMENT CONNECTIONS. 6. BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS NOTATED

SPAN DIRECTION AND ONE LAYERS TRANSVERSE.

TO DRAWING GUH-WSP-00-00-DR-S-020100.

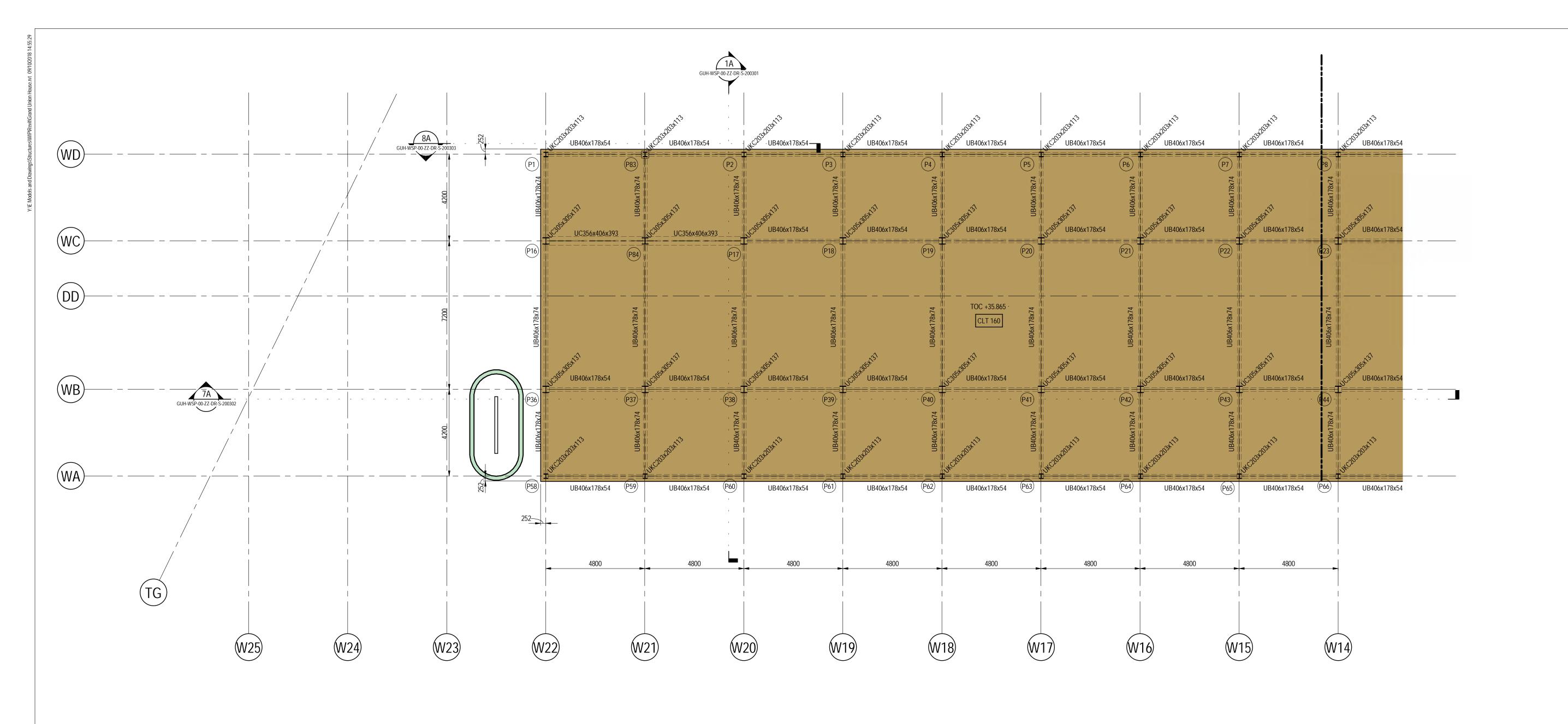
GRADE 8.8 UNLESS NOTED OTHERWISE.

WITH A 'P' ARE PINNED CONNECTIONS.

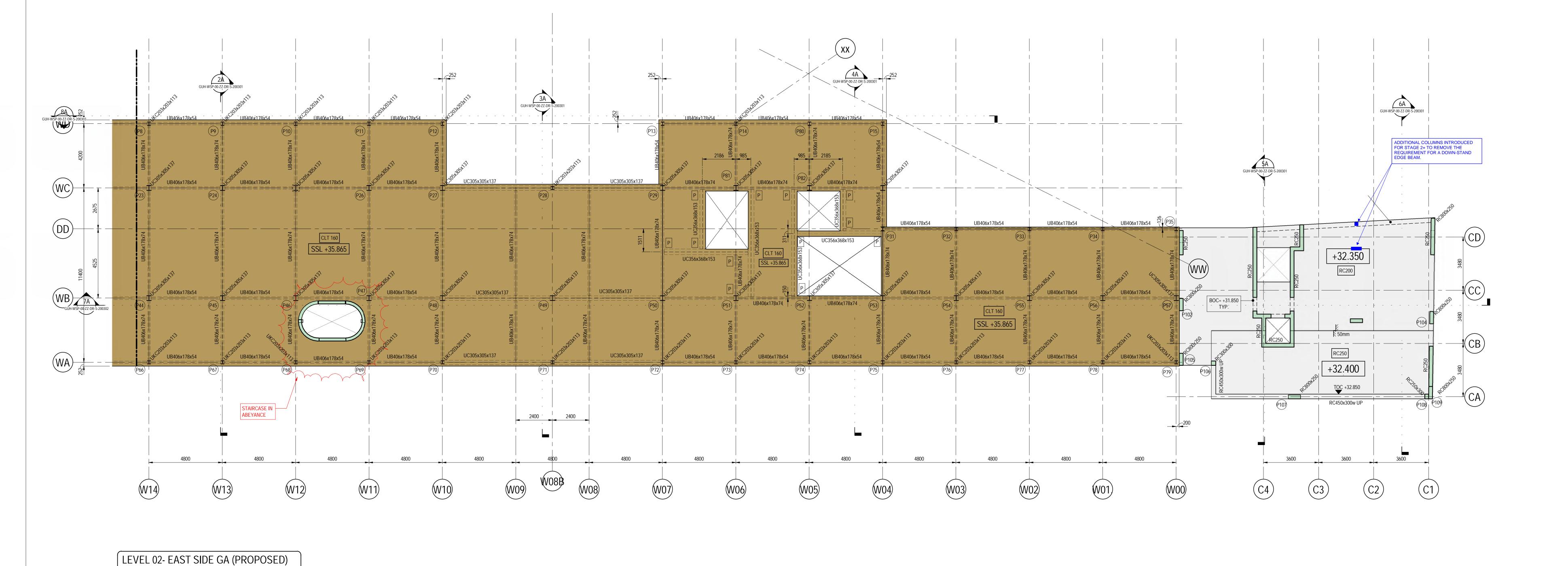
SPAN DIRECTION.

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LEVEL 02- WEST SIDE GA (PROPOSED)



DO NOT SCALE

NOTES:

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WITH RELEVANT SPECIFICATIONS.

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TO DRAWING GUH-WSP-00-00-DR-S-020100.

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KEY TO HEALTH & SAFETY SYMBOLS

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CONSTRUCTION SEQUENCE.

 P02
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 P01
 05.09.2018
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WSP House, 70 Chancery Lane, London WC2A 1AF Tel: +44 20 7314 5000 Fax: +44 20 7314 5111

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SELLAR DEVELOPMENTS

CT:
ANDREW PHILLIPS

GRAND UNION HOUSE LONDON

PROPOSED L02 GENERAL ARRANAGEMENT

 SCALE @ A0:
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 APPROVED:

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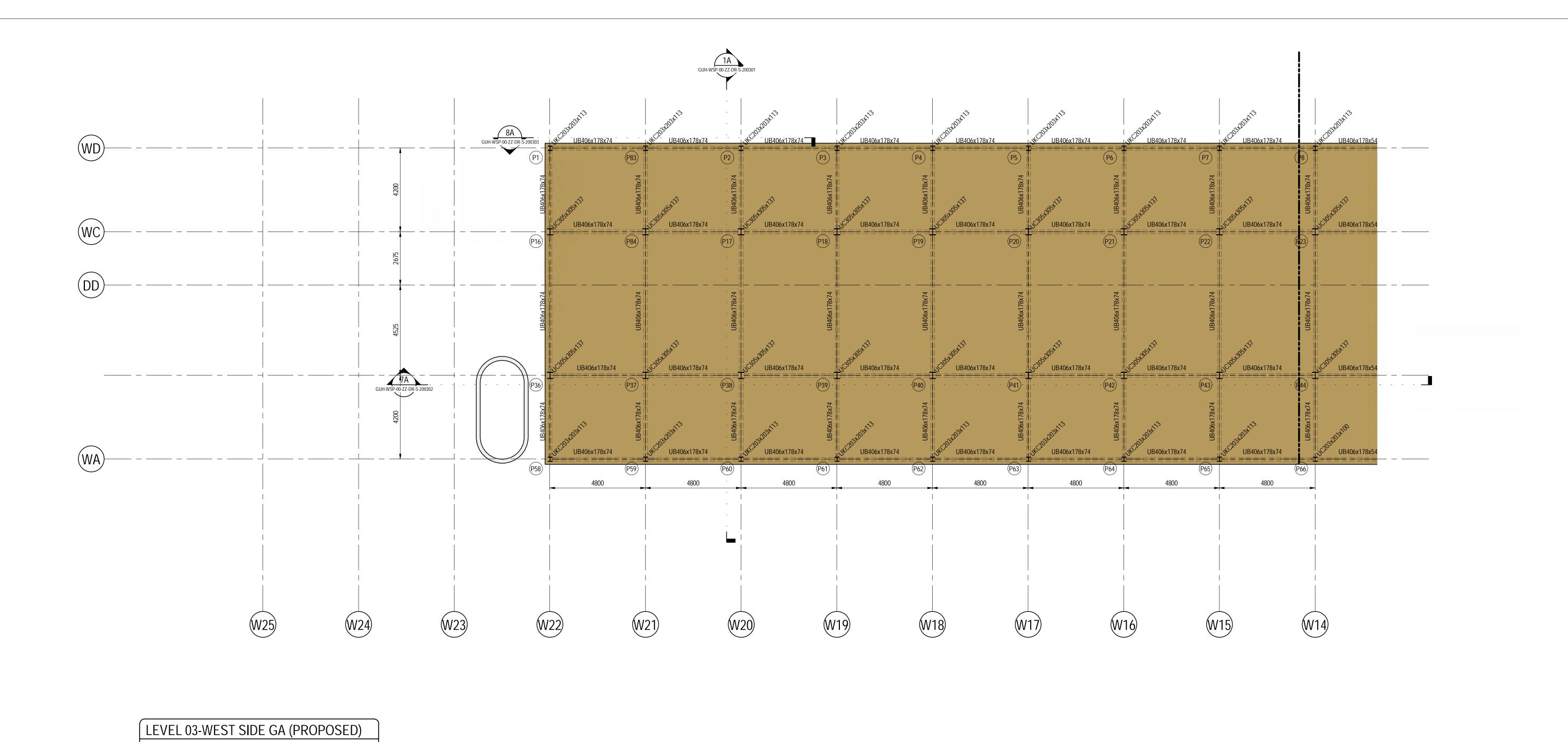
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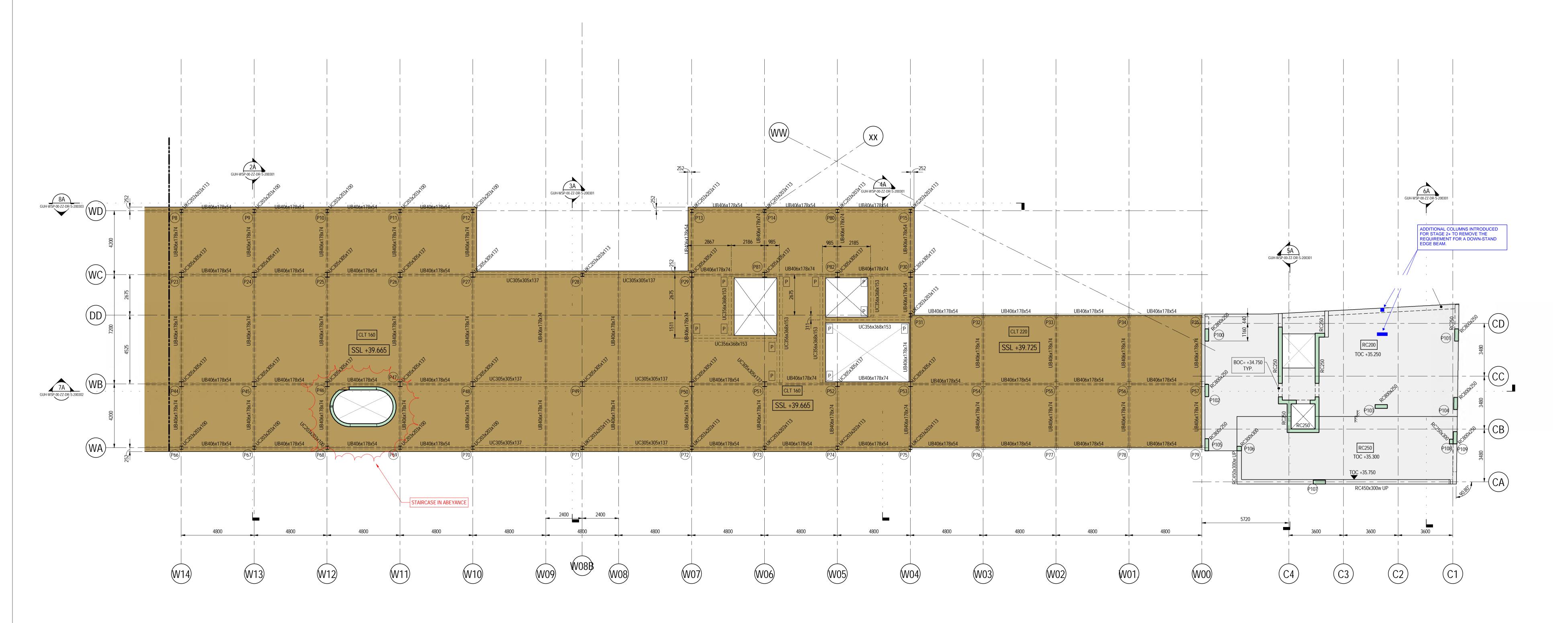
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P02





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KEY TO HEALTH & SAFETY SYMBOLS

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KNOWLEDGE AND INTENDED

CONSTRUCTION SEQUENCE.

BE REALISED.

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DRAWING STATUS:

STAGE 2

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SELLAR DEVELOPMENTS

ANDREW PHILLIPS

GRAND UNION HOUSE LONDON

> PROPOSED L03 GENERAL ARRANGEMENT

 SCALE @ A0:
 CHECKED:
 APPROVED:

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 PROJECT NUMBER:
 DESIGNED:
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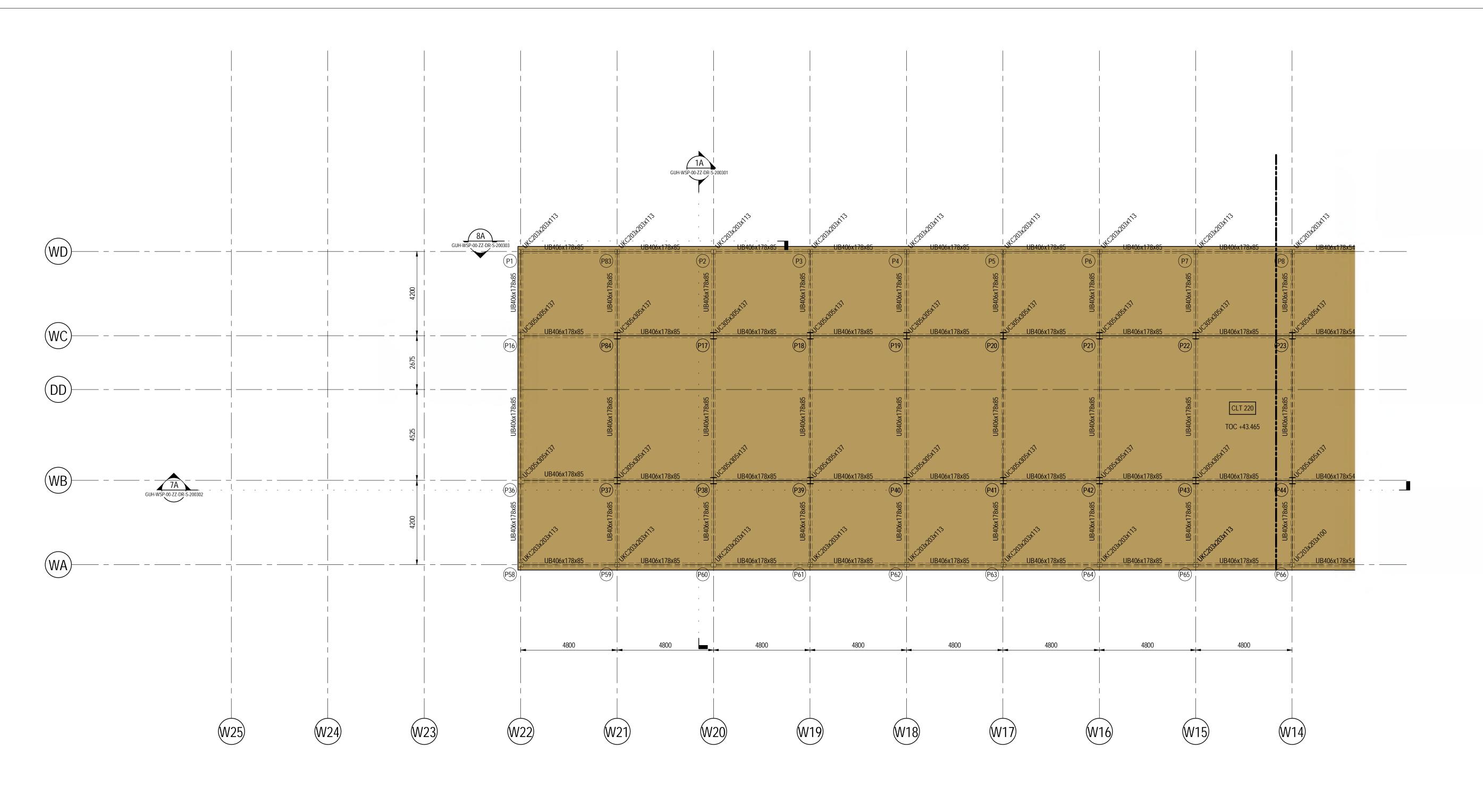
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 SEPTEMBER 2018

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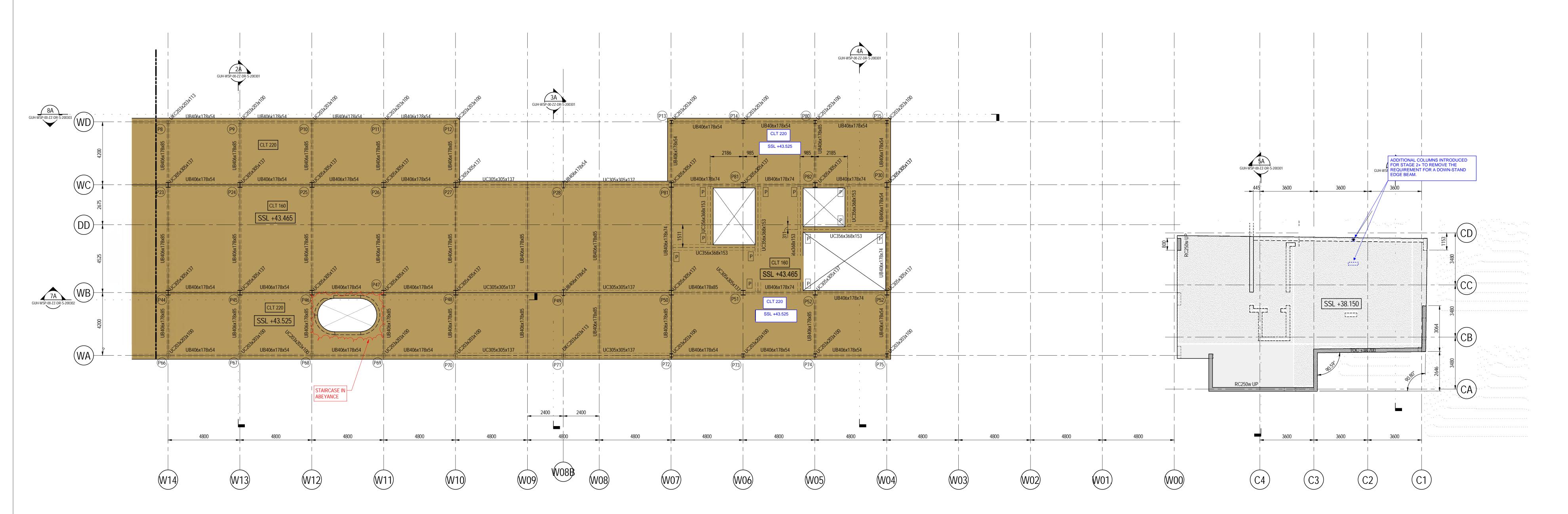
P02

LEVEL 03- EAST SIDE GA (PROPOSED)



### LEVEL 04- WEST SIDE GA (PROPOSED)

LEVEL 04- EAST SIDE GA (PROPOSED)



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DO NOT SCALE

NOTES:

ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER WITH RELEVANT SPECIFICATIONS. 2. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT

3. FOR GENERAL NOTES, ABBREVIATIONS AND SYMBOL LEGEND REFER TO DRAWING GUH-WSP-00-00-DR-S-020100. 4. UNLESS NOTED OTHERWISE STRUCTURAL STEELWORK SHALL BE

GRADE S355 TO BS EN 10 025, BS EN 10 113 AND BS EN 10 210. ALL STEEL SHALL BE OF WELDABLE QUALITY. ALL BOLTS SHALL BE GRADE 8.8 UNLESS NOTED OTHERWISE. 5. UNLESS NOTED OTHERWISE, BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS ARE MOMENT CONNECTIONS.

6. BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS NOTATED WITH A 'P' ARE PINNED CONNECTIONS. 7. 160 CLT PANELS TO BE GRADE 24, L5s-2. FOUR LAYERS TO BE IN SPAN DIRECTION AND ONE LAYERS TRANSVERSE. MIDDLE LAYER TO BE TRANSVERSE. COVER LAYERS IN PAIRS IN SPAN DIRECTION. 8. 220 CLT PANELS TO BE GRADE 24, L7s-2. FIVE LAYERS TO BE IN SPAN

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KEY TO HEALTH & SAFETY SYMBOLS

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CONSTRUCTION SEQUENCE.

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Tel: +44 20 7314 5000 Fax: +44 20 7314 5111 http://www.wsp.com SELLAR DEVELOPMENTS

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ANDREW PHILLIPS

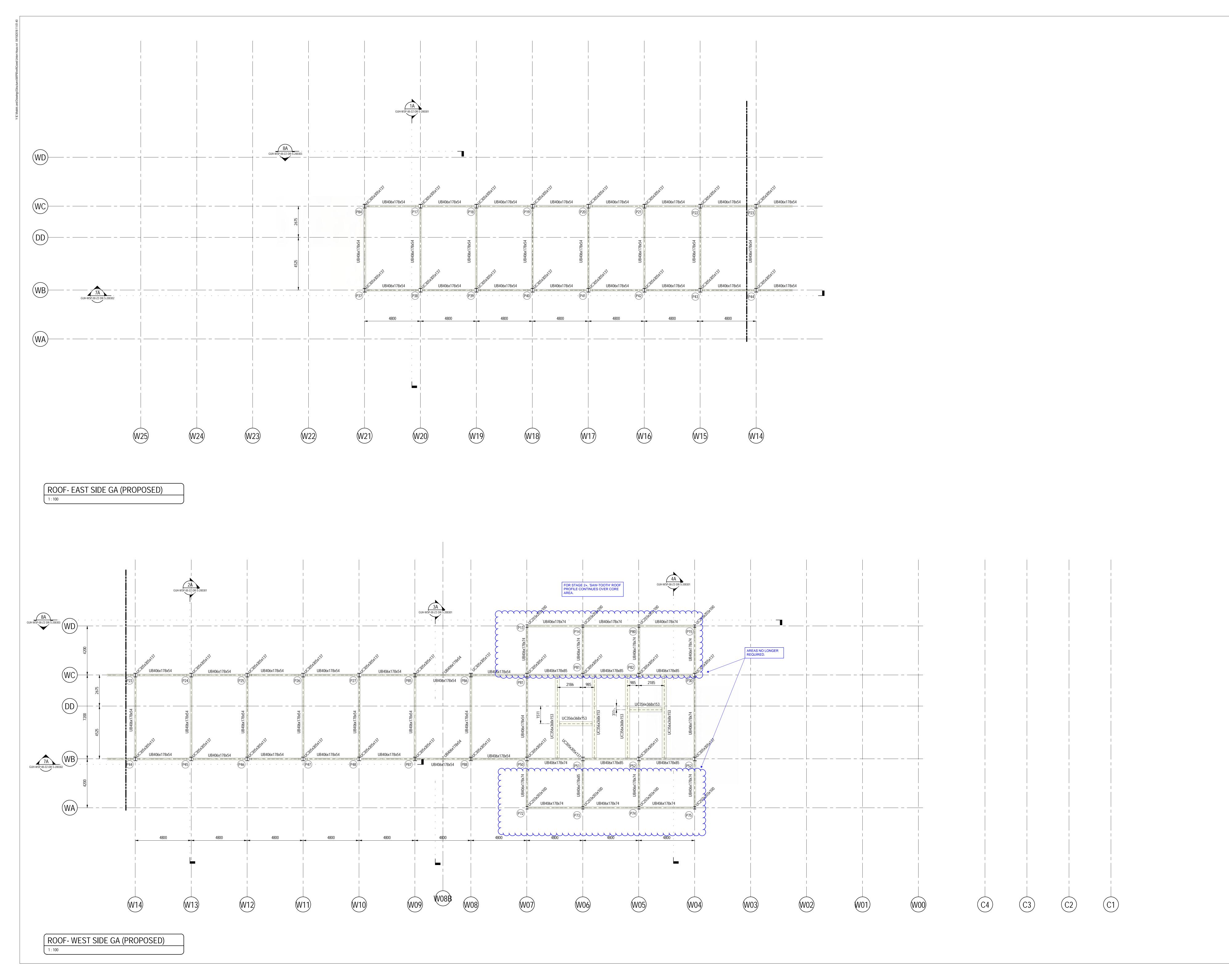
**GRAND UNION HOUSE** LONDON

GENERAL ARRANGEMENT

PROPOSED L04

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P02



NOTES:

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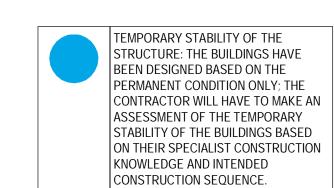
KEY TO HEALTH & SAFETY SYMBOLS

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 P02
 04.10.2018
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SELLAR DEVELOPMENTS

ANDREW PHILLIPS

OJECT:

GRAND UNION HOUSE LONDON

PROPOSED ROOF GENERAL ARRANGEMENT

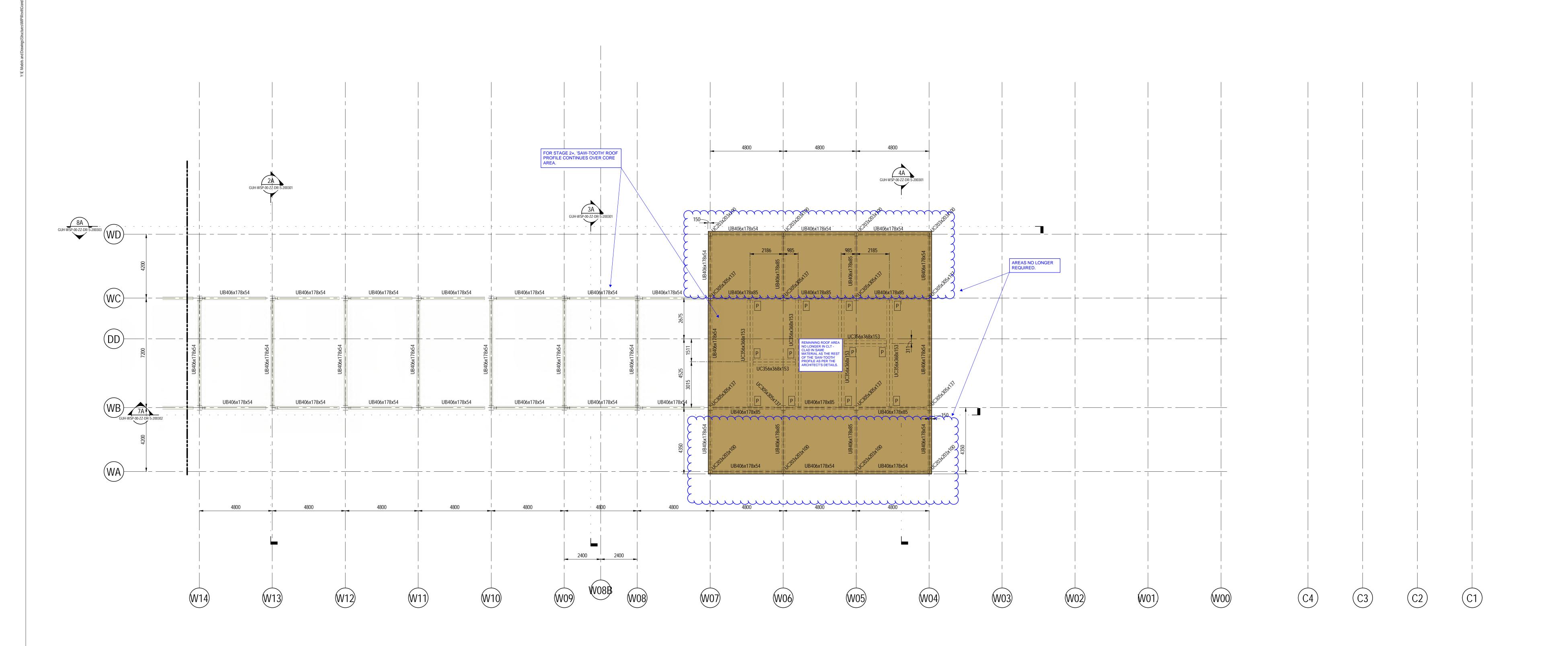
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PROJECT NUMBER: DESIGNED: DRAWN: DATE:
70009120 ASW JO SEPTEMBER 2018

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GUH-WSP-00-05-DR-S-200101

P02



TOP ROOF- GA (PROPOSED)

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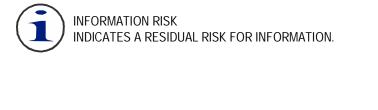
MIDDLE LAYER TO BE IN SPAN DIRECTION. COVER LAYERS IN PAIRS IN SPAN DIRECTION. TRANSVERSE LAYERS TO SEPARATE MIDDLE AND COVER LAYERS.

#### KEY TO HEALTH & SAFETY SYMBOLS

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 04.10.2018
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 P01
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 DRAWING STATUS:

STAGE 2



SELLAR DEVELOPMENTS

ANDREW PHILLIPS

ANDICEW I FIIELII 3

GRAND UNION HOUSE LONDON

PROPOSED TOP ROOF GENERAL ARRANGEMENT

 SCALE @ A0:
 CHECKED:
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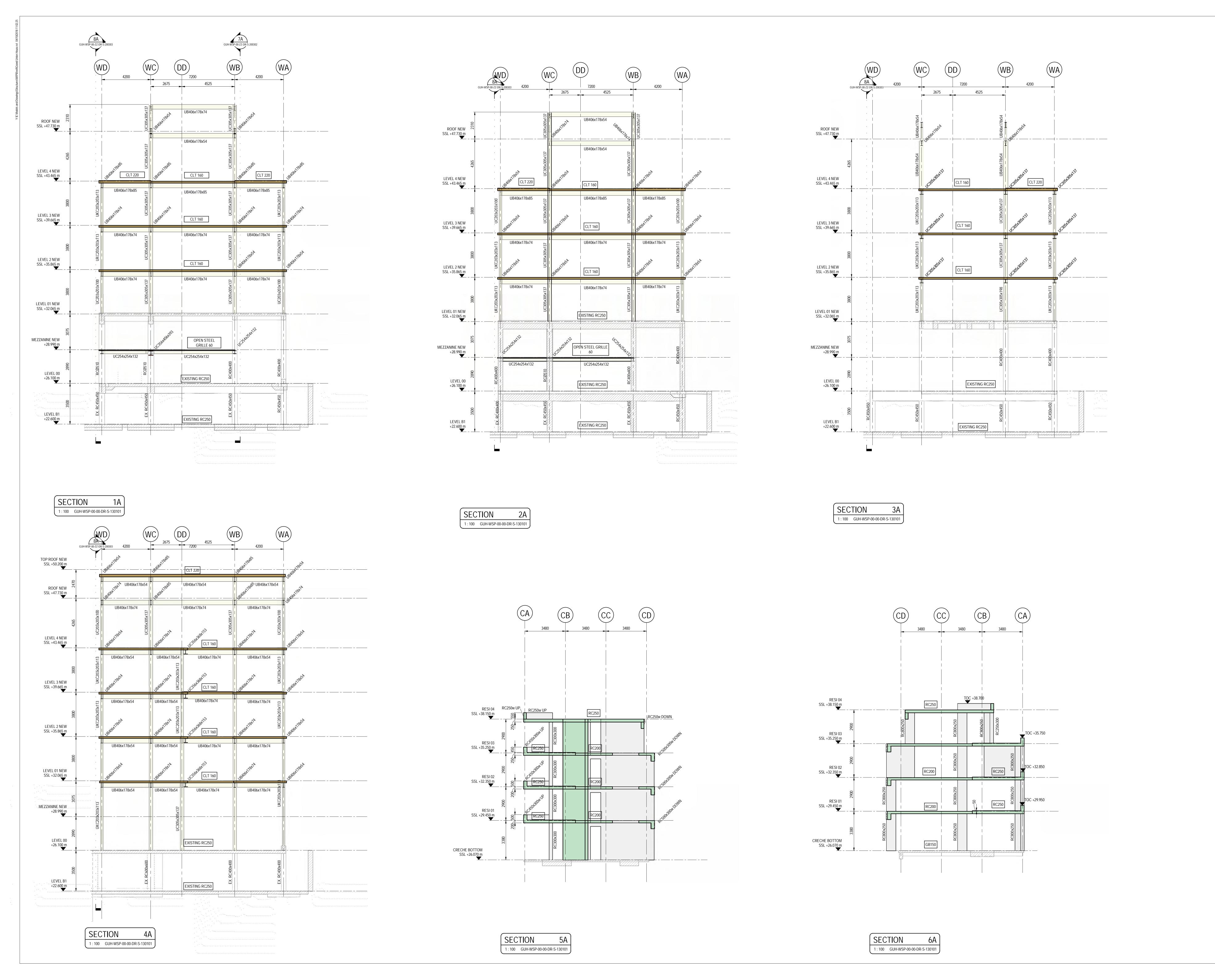
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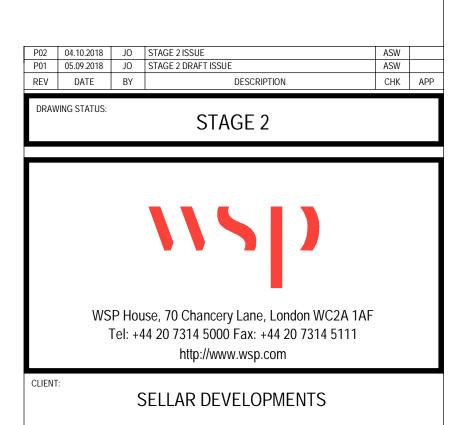
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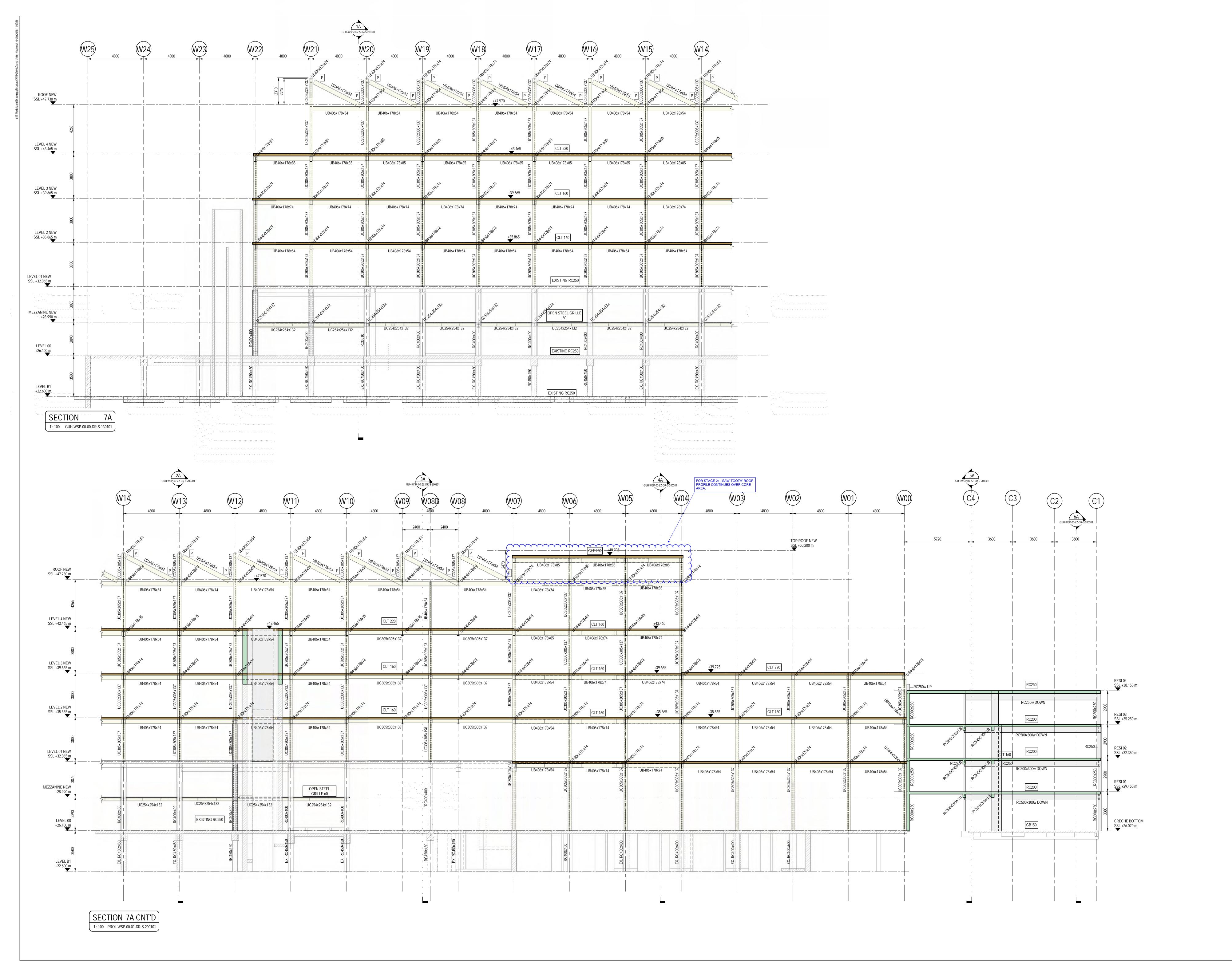
ANDREW PHILLIPS

**GRAND UNION HOUSE** 

LONDON PROPOSED SECTIONS SHEET 1 OF 3

ASW DESIGNED: DRAWN:

ASW JO SEPTEMBER 2018 70009120 GUH-WSP-00-ZZ-DR-S-200301



NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER

WITH RELEVANT SPECIFICATIONS.

2. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING. 3. FOR GENERAL NOTES, ABBREVIATIONS AND SYMBOL LEGEND REFER TO DRAWING GUH-WSP-00-00-DR-S-020100.

4. UNLESS NOTED OTHERWISE STRUCTURAL STEELWORK SHALL BE GRADE S355 TO BS EN 10 025, BS EN 10 113 AND BS EN 10 210. ALL STEEL SHALL BE OF WELDABLE QUALITY. ALL BOLTS SHALL BE

GRADE 8.8 UNLESS NOTED OTHERWISE. 5. UNLESS NOTED OTHERWISE, BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS ARE MOMENT CONNECTIONS.

6. BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS NOTATED WITH A 'P' ARE PINNED CONNECTIONS. 7. 160 CLT PANELS TO BE GRADE 24, L5s-2. FOUR LAYERS TO BE IN SPAN DIRECTION AND ONE LAYERS TRANSVERSE. MIDDLE LAYER TO BE TRANSVERSE. COVER LAYERS IN PAIRS IN

SPAN DIRECTION. 8. 220 CLT PANELS TO BE GRADE 24, L7s-2. FIVE LAYERS TO BE IN SPAN DIRECTION AND TWO LAYERS TRANSVERSE. MIDDLE LAYER TO BE IN SPAN DIRECTION. COVER LAYERS IN PAIRS IN SPAN DIRECTION. TRANSVERSE LAYERS TO SEPARATE MIDDLE AND COVER LAYERS.

## KEY TO HEALTH & SAFETY SYMBOLS

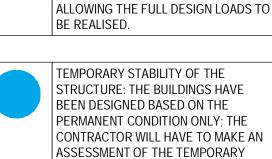
WARNING RISK INDICATES A RESIDUAL RISK AS A WARNING. COMPULSORY RISK

INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY

INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.



THE DESIGN ASSUMES SIMPLE CONNECTIONS IN SOME LOCATIONS IN THE CORE AREA AND PART OF THE SAW-TOOTH ROOF. THE STEELWORK FABRICATOR IS THEREFORE REQUIRED TO DETAIL THE FIN-PLATE IN THE CONNECTION IN SUCH A WAY AS TO ENSURE THE BEAM IS ABLE TO ROTATE WITHOUT THE DEVELOPMENT OF DETAIL; THE DETAIL DEVELOPED MUST ALLOW THE BEAM TO ROTATE, WHILST



ASSESSMENT OF THE TEMPORARY STABILITY OF THE BUILDINGS BASED ON THEIR SPECIALIST CONSTRUCTION KNOWLEDGE AND INTENDED CONSTRUCTION SEQUENCE.

 
 P02
 04.10.2018
 JO
 STAGE 2 ISSUE

 P01
 05.09.2018
 JO
 STAGE 2 DRAFT ISSUE
 DRAWING STATUS:

> WSP House, 70 Chancery Lane, London WC2A 1AF Tel: +44 20 7314 5000 Fax: +44 20 7314 5111 http://www.wsp.com

SELLAR DEVELOPMENTS

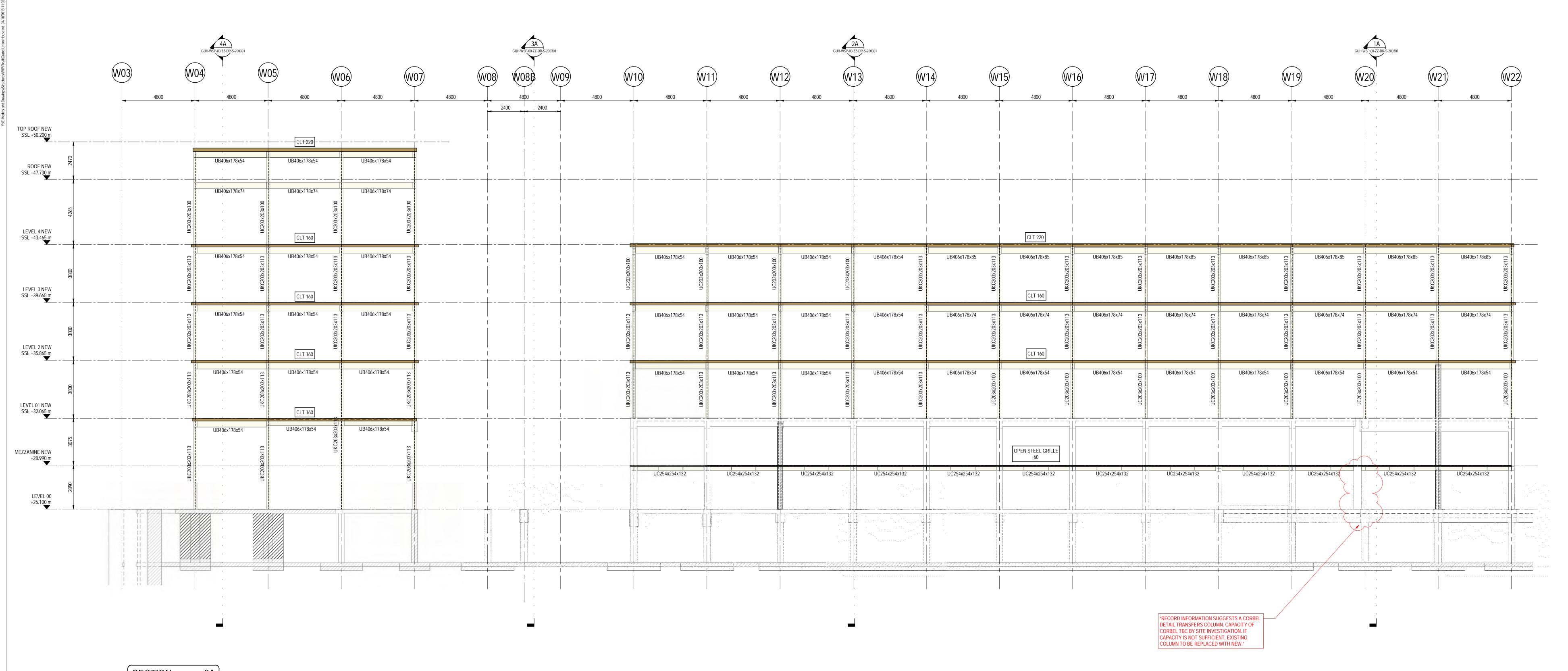
ANDREW PHILLIPS

**GRAND UNION HOUSE** LONDON

PROPOSED SECTIONS SHEET 2 OF 3

AS NOTED ASW DESIGNED: DRAWN: ASW JO SEPTEMBER 2018 70009120

GUH-WSP-00-ZZ-DR-S-200302



SECTION 1:100 GUH-WSP-00-00-DR-S-130101 DO NOT SCALE

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER

WITH RELEVANT SPECIFICATIONS. 2. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.

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DIRECTION AND TWO LAYERS TRANSVERSE.

7. 160 CLT PANELS TO BE GRADE 24, L5s-2. FOUR LAYERS TO BE IN SPAN DIRECTION AND ONE LAYERS TRANSVERSE. MIDDLE LAYER TO BE TRANSVERSE. COVER LAYERS IN PAIRS IN SPAN DIRECTION. 8. 220 CLT PANELS TO BE GRADE 24, L7s-2. FIVE LAYERS TO BE IN SPAN

IN SPAN DIRECTION. TRANSVERSE LAYERS TO SEPARATE MIDDLE AND COVER LAYERS.

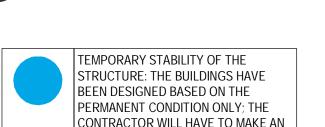
MIDDLE LAYER TO BE IN SPAN DIRECTION. COVER LAYERS IN PAIRS

KEY TO HEALTH & SAFETY SYMBOLS

WARNING RISK INDICATES A RESIDUAL RISK AS A WARNING.

COMPULSORY RISK INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY

INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION. INFORMATION RISK INDICATES A RESIDUAL RISK FOR INFORMATION.



CONTRACTOR WILL HAVE TO MAKE AN ASSESSMENT OF THE TEMPORARY STABILITY OF THE BUILDINGS BASED ON THEIR SPECIALIST CONSTRUCTION KNOWLEDGE AND INTENDED CONSTRUCTION SEQUENCE.

DRAWING STATUS: STAGE 2

> WSP House, 70 Chancery Lane, London WC2A 1AF Tel: +44 20 7314 5000 Fax: +44 20 7314 5111 http://www.wsp.com

SELLAR DEVELOPMENTS

ANDREW PHILLIPS

**GRAND UNION HOUSE** LONDON

> PROPOSED SECTIONS SHEET 3 OF 3

1:100 ASW DESIGNED: DRAWN: DATE:

70009120 ASW JO SEPTEMBER 2018 GUH-WSP-00-ZZ-DR-S-200303

COLUMN REF.	CONC. GRADE	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	P28	P29	COLUMN REF. LEVEL
TOP ROOF NEW	C32/40																														TOP ROOF NEW
																		305x137	x305x137	305x137	305x137	305x137	305x137	305x137	305x137	305x137	305x137	305x137			
ROOF NEW	C32/40													6	0			UC305x;	UC305x,	UC305x,	UC305x;	UC305x	UC305x;	UC305x	UC305x;	UC305x,	UC305x305x137	UC305x305x137			ROOF NEW
	C32/40													x203x100	UC203x203x100	UC203x203x100															
														UC203:	UC203	UC203		05x137	(305x137	05x137	305x137	305x137	305x137	305x137	05x137	305x137	x305x137	305x137	78x54		
LEVEL A NEW																		JC305x3	UC305x3	JC305x3	JC305x3	JC305x3	JC305x3	JC305x3	JC305x3	JC305x3	UC305x3	UC305x305x137	UB406x1		LEVEL 4 NEW
LEVEL 4 NEW	C32/40 C32/40																		_	_	_	_		_	_	_	_	_			TEVEL TIVEV
		(203x113	)3x113	)3x113	x203x113	)3x113	.203x113	(203x113	(203x113	3×100	3x100	3x100	(203×100	)3x203x113	203x203x113	)3x113	:305x137	)5x137	ix305x137	5x137	5x137	(305x137	5x137	5x137	5x137	5x137	x305x137	5x137	:03x203x113	305x137	
		C203x20	UKC203x203x1	C203x20	203;	UKC203x203x1	C203x	,203	C203)	2203x20	2203x20	2203x20	2203x20	C203x20	C203x20	UKC203x203x113	C305x30	2305x30	C305x30	2305x30	2305x30	2305x30	C305x30	C305x30	3305x30	 2305x30	UC305x30	C305x305x137	JKC203x20	3305x30	
LEVEL 3 NEW	C32/40 C32/40	Yn	Ä	Ä	UKC	) Y	Ä H	n n n	M Y	) )	) 	)n	) )	¥	UKCZ	¥	)n	)n	)n	)n	)n	)n	) )	) )	)n	)   	)   	On	Yn N	)n	LEVEL 3 NEW
	C32/40	(203x113	(203x113	(203x113	(203x113	.203x113	(203x113	(203x113	(203x113	:203x113	.03x113	.203x113	(203x113	:203x113	(203x113	<203x113	)5x137	5x137	305x137	x137	5x137	15x137	×137	ix137		x137	05x137	305x137	.203×113	305x137	
		03					03	_ ~		033	203x203	)3x	03	033		1 8	5x3(	5x30	23	05x305x	5x30		05x305x	5x305	)5x30	05x305x	) 2X3	` <u>×</u>	× 1	2X,	
LEVEL 2 NEW	C32/40	UKC2	UKC203	UKC203	UKC203	UKC203	UKC2	UKC203	UKC203	UKCZ	UKC	UKC2	UKC2	UKCZ	UKC203	UKC203	UC30	nc30	UC30i	nc3	UC30	UC30	nc3	UC30	nc3	nc3	UC30	UC305	UKC203	UC30	LEVEL 2 NEW
	C32/40	100	01	00	00	00	00	00	13	x113	13	13	x113	13		13		1.	7:	7:	7:				7:			<u></u>	13		
		x203x10	;x203x100	x203x100	x203x100	03x203x100	x203x100	x203x100	3x203x113	3x203x1	3x203x113	3x203x11	3x203x1	3x203x113		03x203x113	x305x13	ix305x137	x305x137	ix305x137	x305x137	ix305x137	ix305x137	×305×137	x305x137	.NC	.x305x13	×305×13	3x203x1		
LEVEL 01 NEW	C32/40	NC203	UC203	UC203	UC203		UC203	UC203	UKC20	UKC20	UKC20	UKC20	UKC20	UKC20		UKC20	UC30E	UC30E	UC30E	UC30E	UC30E	UC30E	UC30E	UC305		50x450 E	UC30E	UC305	UKC20		LEVEL 01 NEW
	C32/40														-		000000000000000000000000000000000000000	<u> </u>								5x137 4					_
															.203x113		NC									.305x30				305x137	
MEZZANINE NEW											:350 ENC			113	JKC203x	×113	x450 EN									)   				UC305x3	MEZZANINE NEW
VILLEZAMINE INEW	C32/40 C32/40										(86 350x			33x203x		)3x203x	137 450;										  - 			_	WIEZZAWINE INEW
											203x203y			UKC20		UKC20	05x305x														
									***************************************		ÖN			-			UC3									C305x30!					
LEVEL 00	C32/40 TBD								-			•														) A	-		ļ		LEVEL 00
	טאו								***************************************						***************************************												1				
														1			ž 														
LEVEL B1	TBD																														LEVEL B1
LEVEL COLUMN REF.	CONC. GRADE	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	P28	P29	COLUMN REF.

#### PROPOSED COLUMN SCHEDULE

COLUMN REF.	CONC. GRADE	P30	P31	P32	P33	P34	P35	P36	P37	P38	P39	P40	P41	P42	P43	P44	P45	P46	P47	P48	P49	P50	P51	P52	P53	P54	P55	P56	P57	P58	COLUMN REF. LEVEL
TOP ROOF NEW	C32/40																				•										TOP ROOF NEW
ROOF NEW	C32/40	(137							UC305x305x137		(137	(137	5x137							ROOF NEW											
LEVEL 4 NEW	C32/40	UC305x305							UC305x305x137	UB406x178x54	UC305x305	UC305x305x137	UC305x305;							LEVEL 4 NEW											
<b>V</b>	C32/40			•																						+					<b>—</b>
LEVEL 3 NEW	C32/40	UC305x305x137	UKC203x203x113					UC305x305x137					UKC203x203x113	LEVEL 3 NEW																	
	C32/40				~																										
LEVEL 2 NEW	C32/40	UC305x305x137	UKC203x203x113	UKC203x203x113	UKC203x203x113	UKC203x203x113	UKC203x203x113	UC305x305x137	UKC203x203x113	LEVEL 2 NEW																					
LEVEL 01 NEW	C32/40	UC305x305x137	UC305x305x137	UKC203x203x113	UKC203x203x113	UKC203x203x113	UKC203x203x113	UC305x305x137	UC305x305x198									UC203x203x100	LEVEL 01 NEW												
	C32/40																					-									
MEZZANINE NEW	C32/40	05x137	05x137	203x113	203x113	203x113	203x113															UC305x305x137		MEZZANINE NEW							
	C32/40	UC305x3	UC305x305x137	UKC203X	UKC203X	UKC203X	UKC203X																								
LEVEL 00	C32/40		-					<u> </u>																						_	LEVEL 00
	TBD																														
LEVEL B1	TBD																														LEVEL B1
			<u> </u>																								i I I				LEVEL
COLUMN REF.	GRADE	P30	P31	P32	P33	P34	P35	P36	P37	P38	P39	P40	P41	P42	P43	P44	P45	P46	P47	P48	P49	P50	P51	P52	P53	P54	P55	P56	P57	P58	COLUMN REF.

PROPOSED COLUMN SCHEDULE CONTINUED

DO NOT SCALE

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TO DRAWING GUH-WSP-00-00-DR-S-020100.

INFORMATION RISK INDICATES A RESIDUAL RISK FOR INFORMATION.

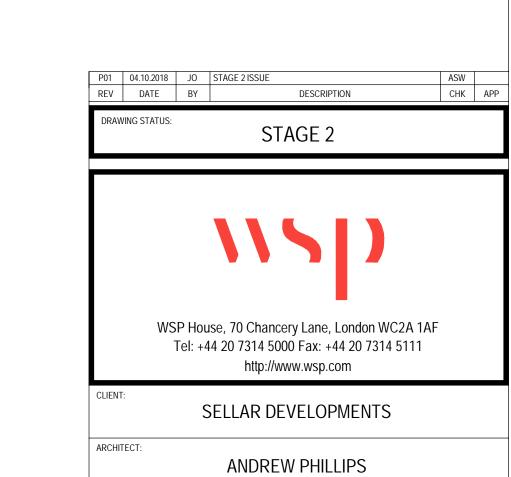
KEY TO HEALTH & SAFETY SYMBOLS

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INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY

PROHIBITIVE RISK INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.

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TEMPORARY STABILITY OF THE STRUCTURE: THE BUILDINGS HAVE BEEN DESIGNED BASED ON THE PERMANENT CONDITION ONLY; THE CONTRACTOR WILL HAVE TO MAKE AN ASSESSMENT OF THE TEMPORARY STABILITY OF THE BUILDINGS BASED ON THEIR SPECIALIST CONSTRUCTION KNOWLEDGE AND INTENDED CONSTRUCTION SEQUENCE.



	GF	RAND UNION HOUS LONDON	Ε
TITLE:	PROPC	OSED COLUMN SCH SHEET 1 OF 2	IEDUE
SCALE @ A0:		CHECKED:	APPROVED:
DIM		W/2W	

SCALE @ A0:	CHECKED:		APPROVED:	
NTS	AS	W		
PROJECT NUMBER:	DESIGNED:	DRAWN:	DATE:	
70009120	ASW	JO	SEPTEM	BER 201
DRAWING No:				REV:
GUH-WSP-	00-ZZ-DI	R-S-2005	01	P0

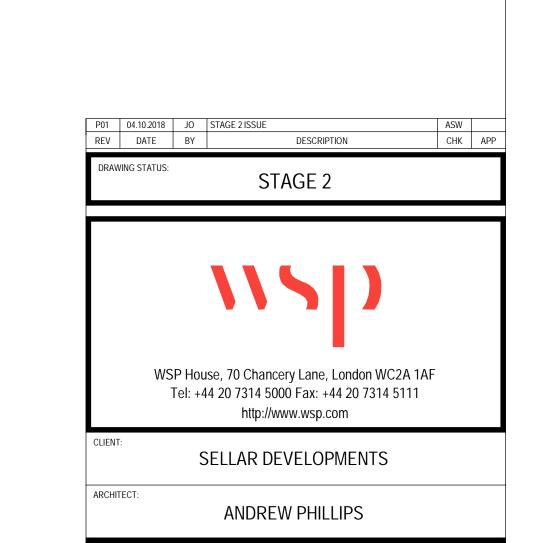
COLUMN REF	· CONC. GRADE	P59	P60	P61	P62	P63	P64	P65	P66	P67	P68	P69	P70	P71	P72	P73	P74	P75	P76	P77	P78	P79	P80	P81	P82	P83	P84	P85	P86	P87	COLUMN REF. LEVEL
TOP ROOF NEW	C32/40																									•					TOP ROOF NEW
																											)5x305x137	5x305x137	5x305x137	5x305x137	
ROOF NEW	C32/40														)3x100	)3x100	)3x100	(203x100					(203x100	)5x137	)5x137		nc30	nc30	nc30	nc30	ROOF NEW
															UC203x20	UC203x203x100	UC203x20;	UC203x20					UC203x20	UC305x305x137	UC305x305x137		05x137				
LEVEL 4 NEW	C32/40																										UC305x3				LEVEL 4 NEW
_	C32/40	33	<sub>2</sub>	3	3	3	33	33		0			0		33	3	3	8	_				8			33					
		03x203x113	03x203x113	03x203x113	UKC203x203x113	C203x203x113	03x203x113	UKC203x203x113	3x203x100	;203x203x100	203x203x100	3x203x100	UC203x203x100	UKC203x203x113	C203x203x113	UKC203x203x113	03x203x113	03x203x113					03x203x113	5x305x137	5x305x137	UKC203x203x113	5x305x137				
LEVEL 3 NEW	C32/40	UKC2	UKC203x203	UKC2	UKC2	UKC2	UKC2	UKC2	UC203	nc20	nc20	UC203x	ncz0	UKC2	UKC2	UKC2	UKC2	UKC2					UKC2	UC305x	UC305	UKC20	nc30				LEVEL 3 NEW
	C32/40	x113	x113	03x113	x203x113	(203x113	03x113	.203x113	03x113	203x113	.03x113	.03x113	K203x113	(203x113	.203x113	<203×113	03x113	(203x113	(203x113	x113	.03x113	03x113	<203×113	.305x137	.305x137	x203x113	(137				
		UKC203x203	UKC203x203x1	UKC203x203	UKC203x203	UKC203x203	(C203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203	UKC203x203x	UKC203x203	UKC203x203	UKC203x203	UC305x305>	UC305x305>	UKC203x203	UC305x305x137				LEVEL ONEW
LEVEL 2 NEW	C32/40	Š	Š	Ď	Š	Š	Š	ă	Ň N	Ť	Ď	Š	Š	Š	Š	Ť	Š	Š	Š	Š	Š	Š	Š	Ď	Ď	Š	Ď	<u> </u>			LEVEL 2 NEW
	032/40	)3x100	(203x100	)3x100	)3x100	203x203x100	)3x100	)3x100	03x113	(203x113	.03x113	.03x113	03x113	03x113									03x113								
LEVEL 01 NEW	022/40	UC203x20	UC203x20	UC203x20	UC203x203x100	UC203x20	UC203x20:	UC203x203x	JKC203x2	JKC203x2	JKC203x2	JKC203x2	UKC203x203x113	UKC203x203x113									JKC203x2			x350 ENC					LEVEL 01 NEW
<b>▼</b>	C32/40 C32/40														_											(86 350)					<b>V</b>
															.203x113	.203x113	.203x113	x203x113	(203x113	.203x113	:203x113	:203x113		305x137	305x137	UC203x203:					
MEZZANINE NEW	C32/40														UKC203»	UKC203x203x113	UKC203»	UKC203»	UKC203)	UKC203»	UKC203»	UKC203»	03x113	UC305x30!	UC305x30						MEZZANINE NEW
•	C32/40													***************************************					***************************************				KC203x20			9.0					
														000000000000000000000000000000000000000					***************************************				ח			UC203x203x86 350x350 ENC					
LEVEL 00	C32/40													***************************************												350	-				LEVEL 00
	TBD																										_				
LEVEL B1	TBD																		0.011.0000.011.000.011.0000.01									1			LEVEL B1
LEVEL		-												W					are well and the second												LEVEL
COLUMN REF	CONC. GRADE	P59	P60	P61	P62	P63	P64	P65	P66	P67	P68	P69	P70	P71	P72	P73	P74	P75	P76	P77	P78	P79	P80	P81	P82	P83	P84	P85	P86	P87	COLUMN REF.

COLUMN REF.	CONC. GRADE	P100	P101	P102	P103	P104	P105	P106	P107	P108	P109	COLUMN REF. LEVEL
RESI 04	TBD											RESI 04
RESI 03	TBD	RC800x250	RC800x250	RC800x250	RC800x250	RC800x250	RC800x250	RC300x300	RC800x250	RC250x300	RC800x250	RESI 03
	TBD											
RESI 02	TBD			RC800x250	RC800x250	RC800x250	RC800x250	RC300x300	RC800x250	RC250x300	RC800x250	RESI 02
•	TBD											
RESI 01	TBD	RC800x250	RC800x250	RC800x250	RC800x250	RC800x250	RC800x250	RC300x300	RC800x250	RC250x300	RC800x250	RESI 01
•	TBD											
CRECHE BOTTOM		RC800x250	RC800x250	RC800x250	RCØ350	RC800x250	RC800x250	RC300x300	RCØ350	RC250x300	RC800x250	CRECHE BOTTOM
T TOWN	TBD											CRECIL BOTTOM
LEVEL COLUMN REF.	CONC. GRADE	P100	P101	P102	P103	P104	P105	P106	P107	P108	P109	LEVEL COLUMN REF.

PROPOSED RESIDENTIAL COLUMN SCHEDULE

PROPOSED COLUMN SCHEDULE CONTINUED

COLUMNIDEE			COLUMNIDEE
COLUMN REF.	CONC. GRADE	P88	COLUMN REF.
LEVEL			LEVEL
TOP ROOF NEW	C32/40		TOP ROOF NEW
		(137	
		,x305)	
ROOF NEW	C32/40	UC305x305x137	ROOF NEW
	C32/40		
LEVEL 4 NEW	C32/40		LEVEL 4 NEW
	C32/40		
LEVEL 3 NEW	02040		LEVEL 3 NEW
<b>V</b>	C32/40 C32/40		▼
	032/40		
LEVEL 2 NEW	C32/40		LEVEL 2 NEW
	C32/40		
LEVEL 01 NEW	C32/40		LEVEL 01 NEW
	C32/40		
MEZZANINE NEW	C32/40		MEZZANINE NEW
▼	C32/40		<b>—</b>
LEVEL 00			
LEVEL 00	C32/40		LEVEL 00
	TBD		
LEVEL B1	TBD		LEVEL B1
·	ואט		
LEVEL	CONC.	D.C.C.	LEVEL
COLUMN REF.	GRADE	P88	COLUMN REF.



GRAND UNION HOUSE LONDON

PROPOSED COLUMN SCHEDULE SHEET 2 OF 2

ASW

GUH-WSP-00-ZZ-DR-S-200502

ECT NUMBER: DESIGNED: DRAWN: DATE:
70009120 ASW JO SEPTEMBER 2018

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NTS

DO NOT SCALE

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CONSTRUCTION SEQUENCE.

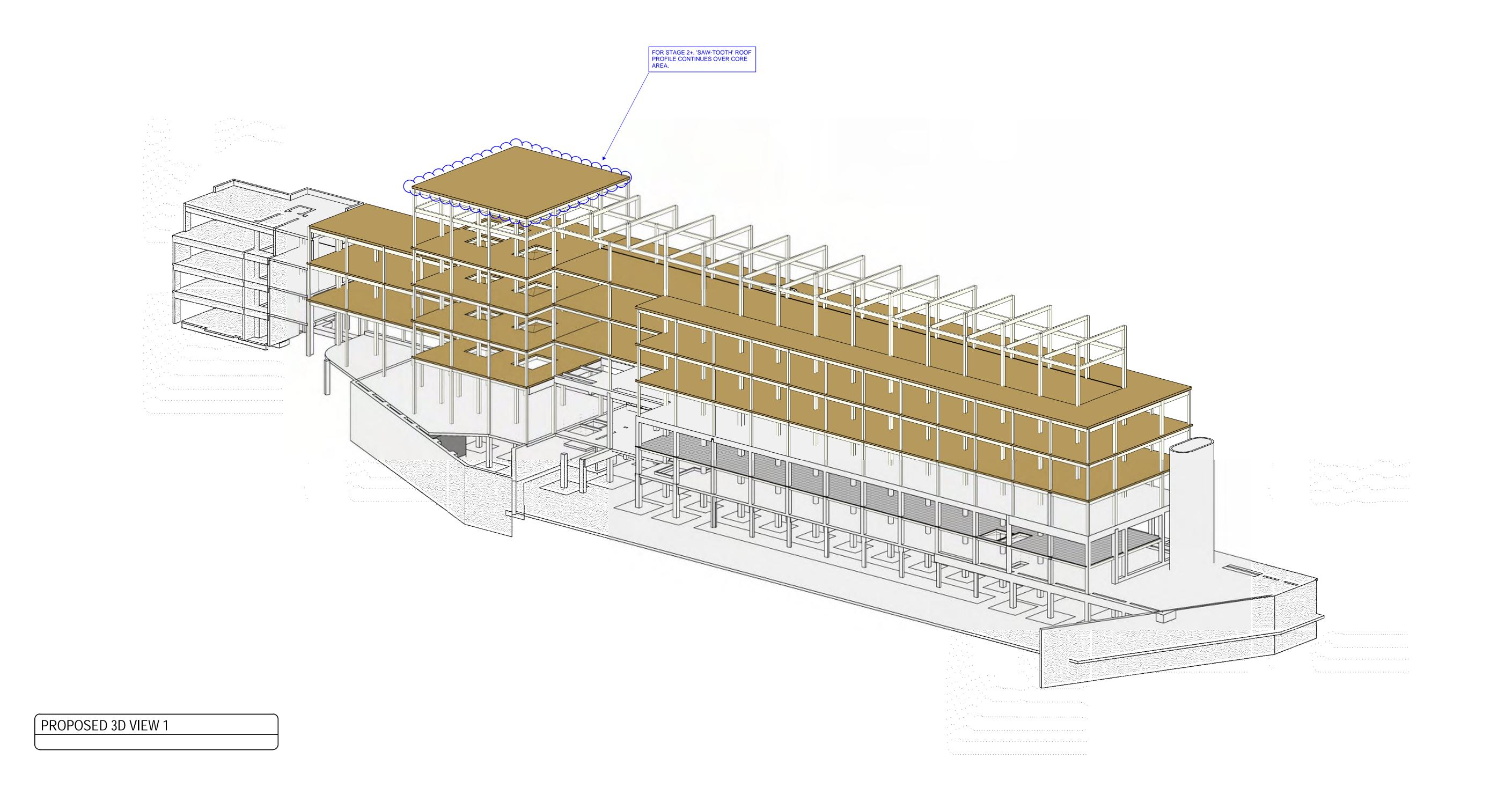
CONTRACTOR WILL HAVE TO MAKE AN ASSESSMENT OF THE TEMPORARY STABILITY OF THE BUILDINGS BASED ON THEIR SPECIALIST CONSTRUCTION

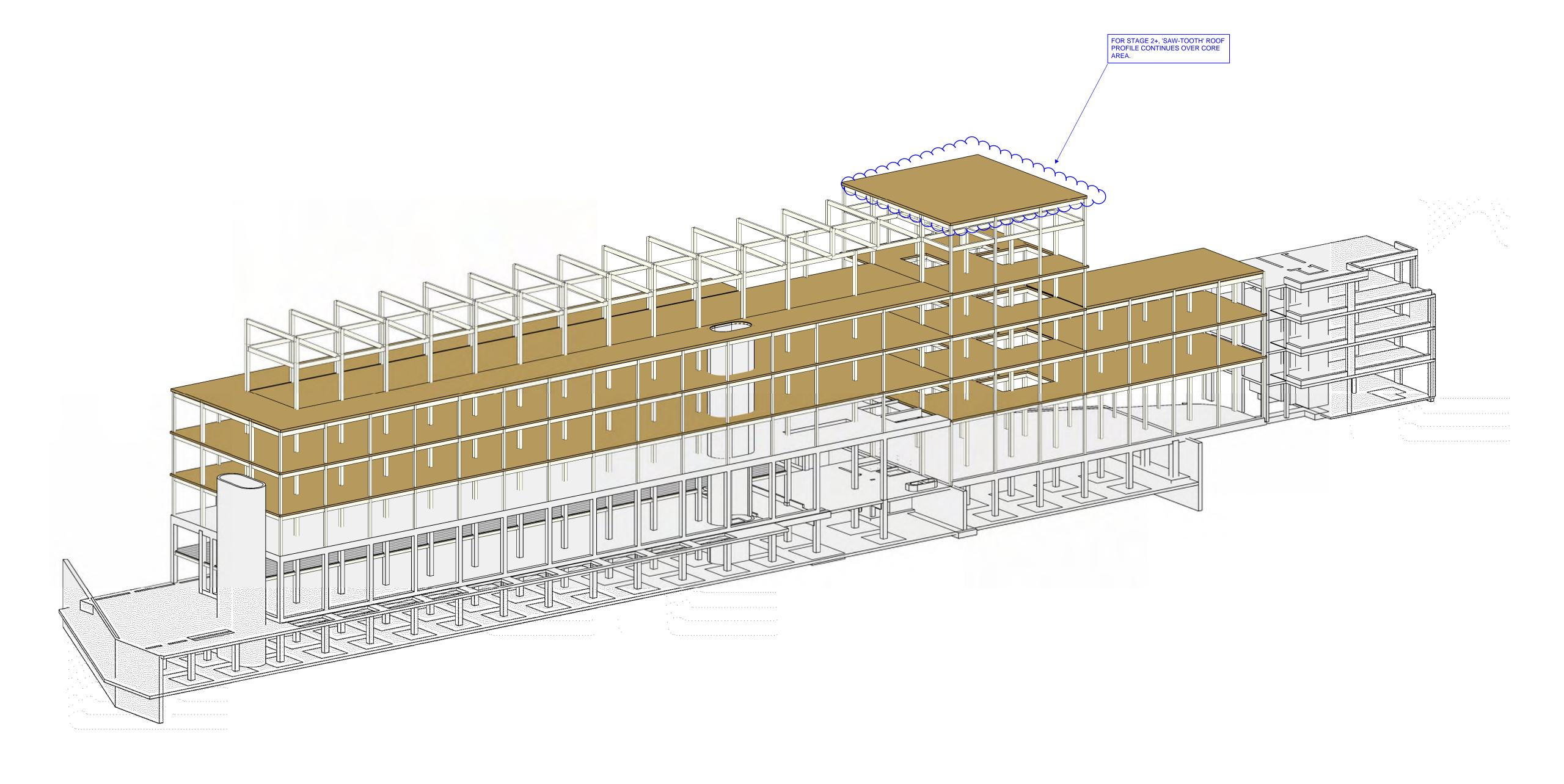
WITH RELEVANT SPECIFICATIONS.

2. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.

TO DRAWING GUH-WSP-00-00-DR-S-020100.

NOTES:





PROPOSED 3D VIEW 2

 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER WITH RELEVANT SPECIFICATIONS.

2. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.

DO NOT SCALE

3. FOR GENERAL NOTES, ABBREVIATIONS AND SYMBOL LEGEND REFER

TO DRAWING GUH-WSP-00-00-DR-S-020100.

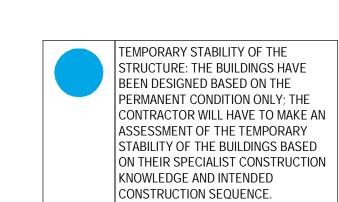
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KEY TO HEALTH & SAFETY SYMBOLS

WARNING RISK INDICATES A RESIDUAL RISK AS A WARNING.

COMPULSORY RISK INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY PROHIBITIVE RISK INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.

INFORMATION RISK INDICATES A RESIDUAL RISK FOR INFORMATION.



STAGE 2

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SELLAR DEVELOPMENTS

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PROPOSED 3D VIEWS

ASW ECT NUMBER: DESIGNED: DRAWN: DATE:
70009120 ASW JO SEPTEMBER 2018 GUH-WSP-00-ZZ-DR-S-200901