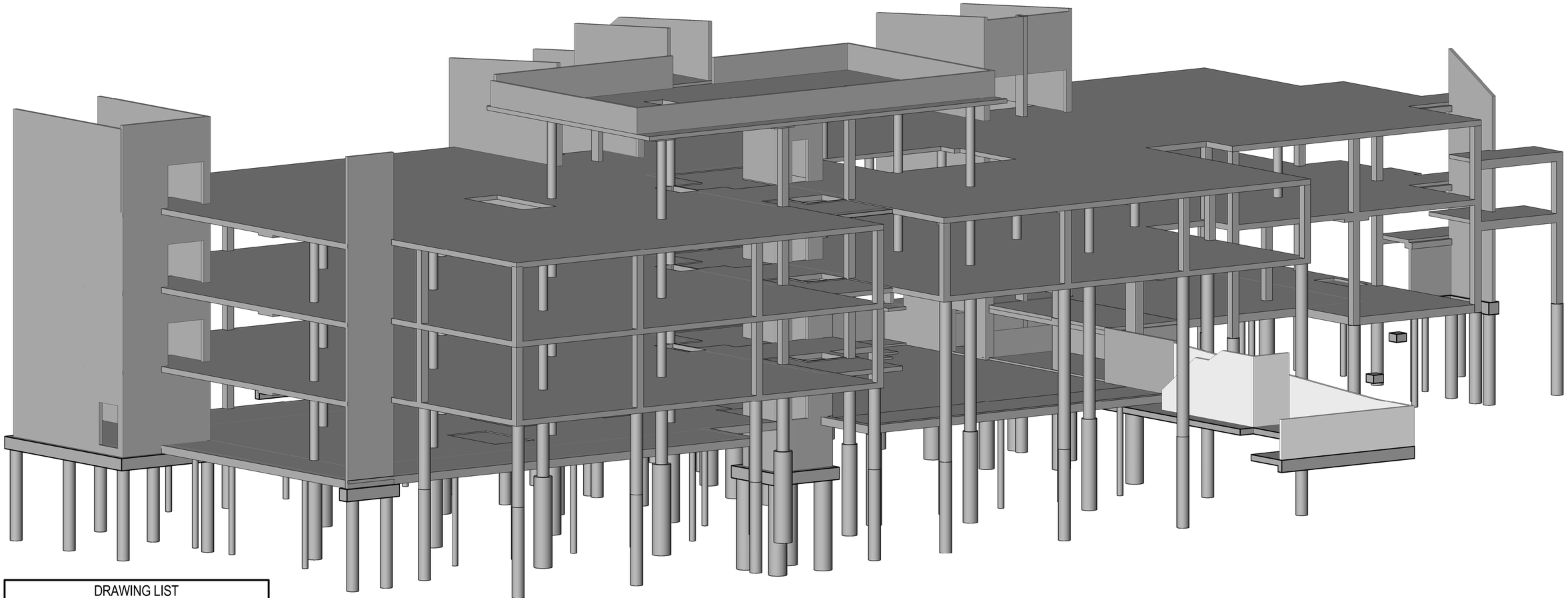
A1

WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076



DRAWING LIST	
DRAWING No.	DRAWING TITLE
S1.00	TITLE SHEET & DRAWING LIST
S1.01	CONSTRUCTION NOTES
S2.00	FOOTING PLAN
S2.01	FOOTING DETAILS - SHEET 1
S2.02	FOOTING DETAILS - SHEET 2
S3.00	COLUMN DETAILS
S3.01	WALL ELEVATION SHEET 1
S3.02	WALL ELEVATION SHEET 2
S3.03	WALL ELEVATION SHEET 3
S3.04	WALL DETAILS
S4.00	LEVEL 1 FLOOR PLAN
S4.01	LEVEL 1 DETAILS
S5.00	LEVEL 2 FLOOR PLAN
S5.01	LEVEL 2 DETAILS
S6.00	LEVEL 3 FLOOR PLAN
S6.01	LEVEL 3 DETAILS
S7.00	LEVEL 4 FLOOR PLAN
S8.00	ROOF FLOOR PLAN
S9.00	ROOF FRAMING PLAN
S9.01	STEEL FRAMING PART PLANS
S9.02	ELEVATIONS SHEET 1
S9.03	ELEVATIONS SHEET 2
S9.04	ELEVATIONS SHEET 3
S9.05	STEEL DETAILS SHEET 1
S9.06	STEEL DETAILS SHEET 2
S9.07	STEEL DETAILS SHEET 3
S10.00	STAIR DETAILS

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
2	TENDER ISSUE	S.W.	P.R.	31.08.2018
1	PRELIMINARY ISSUE	S.W.	P.R.	09.08.2018

Client
NSW DEPARTMENT OF EDUCATION

Architect
NBRS ARCHITECTURE

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Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Drawn: S.W. | Designed: T.M. | Date: JULY 2018
Checked: P.R. | Approved: R.K. | Scale:

Title
TITLE SHEET & DRAWING LIST

Drawing number
18380-S1.00

Revision
A

A1

WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

GENERAL NOTES

G1 THESE DRAWINGS AND NOTES SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT'S DRAWINGS, REPORTS, SPECIFICATIONS AND ANY OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER FOR CLARIFICATION OR DECISION BEFORE PROCEEDING WITH THE WORK.

G2 CONSTRUCTION FROM THESE DRAWINGS SHALL NOT COMMENCE UNTIL THEY ARE APPROVED BY THE RELEVANT AUTHORITIES.

G3 DIMENSIONS SHALL NOT BE OBTAINED FROM THE STRUCTURAL DRAWINGS BY WAY OF SCALING (OR DETERMINING UNDIMENSIONED MEASUREMENTS FROM THE ELECTRONIC DRAWING). WALL, PIER, AND COLUMN THICKNESS', AND STRUCTURAL MEMBER SIZES SHOWN ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER THOSE SHOWN ON THE ARCHITECT'S DRAWINGS. THE BUILDER SHALL VERIFY ALL DIMENSIONS ON SITE AND BE RESPONSIBLE FOR THE SETTING OUT OF THE BUILDING.

G4 ELEMENTS INDICATED ON THESE DRAWINGS ARE SHOWN IN THEIR INTENDED COMPLETE STATE. THE BUILDER SHALL PROVIDE ANY TEMPORARY WORKS INCLUDING PROPPING, BRACING, SHORING AND ANY OTHER REQUIREMENTS NECESSARY TO MAINTAIN THE STRUCTURE, OR ANY PART OF IT, IN A STABLE CONDITION DURING CONSTRUCTION. IF THE BUILDER IS IN ANY DOUBT AS TO HOW TO ACHIEVE THIS HE SHALL OBTAIN ADVICE FROM APPROPRIATELY QUALIFIED AND EXPERIENCED PERSONNEL. UNLESS STATED OTHERWISE TEMPORARY WORKS SHALL BE THE BUILDERS RESPONSIBILITY.

G5 THE BUILDING SHALL NOT BE ERECTED ON OR ADJACENT TO ANY OF THE FOLLOWING HAZARDS UNLESS THE HAZARD IS INDICATED ON THE STRUCTURAL DRAWING:- EMBANKMENTS, BATTERS, WATER RETAINING STRUCTURES, RETAINING WALLS, PITS, SEWERS, SERVICE TRENCHES, DRAINAGE CHANNELS, STREAMS OR ANY POTENTIAL SOURCE OF DAMAGE TO THE STRUCTURE. IF ANY SUCH HAZARDS ARE ENCOUNTERED THE ENGINEER SHALL BE NOTIFIED AND HIS APPROVAL OBTAINED BEFORE PROCEEDING.

G6 THE BUILDER SHALL LOCATE ALL EXISTING AND PROPOSED SERVICES AND EASEMENTS, ON AND ADJACENT TO THE SITE. THE APPROVAL OF THE RELEVANT STATUTORY AUTHORITY AND THE ENGINEER SHALL BE OBTAINED BEFORE BUILDING ON OR OVER ANY SERVICES OR EASEMENTS.

G7 THE BUILDER SHALL NOT EXCAVATE BELOW THE LEVEL OF THE FOOTINGS TO ANY EXISTING BUILDINGS WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

G8 THE WRITTEN CONSENT OF ADJOINING PROPERTY OWNERS SHALL BE OBTAINED BEFORE INSTALLATION OF UNDERPINNING, ANCHORING WORK, DRAINAGE LINES OR ANY OTHER WORK BEYOND THE PROPERTY BOUNDARY.

G9 NO HOLES OR CHASES SHALL BE MADE IN ANY STRUCTURAL ELEMENT, UNLESS SHOWN ON THESE DRAWINGS OR WRITTEN APPROVAL OF THE ENGINEER.

G10 A FULL DEPTH 'V' JOINT SHALL BE STRUCK IN RENDER WHERE TWO DIFFERING STRUCTURAL MATERIALS ABUT. i.e. AT THE JUNCTION OF MASONRY WITH CONCRETE.

G11 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS, THE BUILDING CODE OF AUSTRALIA, AND THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITIES. ALL WORKMANSHIP SHALL BE CONSISTENT WITH GOOD TRADE PRACTICE.

G12 WATERPROOFING REQUIREMENTS SHALL BE SPECIFIED BY THE ARCHITECT AND ARE NOT NECESSARILY INDICATED ON THESE DRAWINGS.

G13 AUSTRALIAN STANDARDS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST REVISIONS OF THE NOMINATED STANDARD.

G14 APPROVAL OF A SUBSTITUTION OR ALTERNATIVE FROM THE ENGINEER IS NOT, IN ITSELF AUTHORISATION FOR A VARIATION.

G15 THE ENGINEER SHALL BE GIVEN 48 HOURS NOTICE FOR INSPECTIONS.

G16 THE WORD ENGINEER AS USED IN THESE NOTES REFERS TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF H & H CONSULTING ENGINEERS P/L (TRADING AS HENRY & HYMAS)

FOUNDATIONS:

F1 FOOTINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH GEOTECHNICAL REPORT PSM3331-007R BY PELLS SULLIVAN MEYNINK DATED 5/9/2017

F2 FOOTINGS HAVE BEEN DESIGNED FOR THE FOLLOWING BEARING PRESSURES:
PAD/STRIP FOOTINGS - 150 kPa
PIERS - 1500 kPa -- REFER PIER SCHEDULE

F3 FOUNDATION MATERIAL SHALL BE APPROVED BY THE CONSULTING GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

PILE NOTES

P1 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE GEOTECH REPORT, THE ARCHITECT'S DRAWINGS AND ANY OTHER RELEVANT CONSULTANTS DRAWINGS AND/OR SPECIFICATIONS.

P2 ALL PILES ARE INDICATED ON PLAN WITH ASSOCIATED WORKING LOADS.

P3 ALL PILES SHALL BE DESIGNED FOR SAFE WORKING LOADS AS INDICATED ON PLAN. IT SHALL BE PERMISSIBLE TO DETERMINE ULTIMATE LOADS BY MULTIPLYING THE SAFE WORKING LOADS BY A LOAD FACTOR OF 1.4

P4 THE DESIGN, TESTING AND INSTALLATION OF ALL PILES SHALL BE IN ACCORDANCE WITH AS2159 AND ANY OTHER RELEVANT AUSTRALIAN STANDARD FOR THE TYPE OF PILE USED.

P5 THE PILES SHALL BE DESIGNED BY A SUITABLY QUALIFIED ENGINEER ELIGIBLE FOR MEMBERSHIP TO THE INSTITUTE OF ENGINEERS.

P6 THE DESIGNER SHALL VERIFY BY SUBMITTING CALCULATIONS INDICATING THE METHOD BY WHICH THE LOADS INDICATED ON PLAN ARE SAFELY TRANSMITTED TO THE FOUNDATION MATERIAL. THE STRESSES INDUCED INTO THE FOUNDATION MATERIAL BY THE PILE LOADS SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER.

P7 A SOILS REPORT PREPARED BY PSM3331-007R BY PELLS SULLIVAN MEYNINK

SHALL BE MADE AVAILABLE TO THE CONTRACTOR BY THE SUPERINTENDENT TO ASSIST WITH THE DESIGN. IT SHALL BE THE PILING CONTRACTORS RESPONSIBILITY TO DETERMINE PILE LENGTHS FROM THESE REPORTS AND GATHER ANY FURTHER INFORMATION WHICH MAY BE REQUIRED THAT IS NOT INCLUDED IN THE REPORT FOR THE DESIGN OF THE PILES.

P8 IT SHALL BE THE PILING CONTRACTORS RESPONSIBILITY TO CUT OFF ALL PILES AT SURFACE LEVEL.

P9 PIER FOUNDING LEVELS SHALL BE AS NOTED IN PIER SCHEDULE.

P10 THE PILING CONTRACTOR SHALL FURNISH THE BUILDER WITH A WORK AS EXECUTED SURVEY OF THE PLAN POSITION OF ALL PILES RELEVANT TO THE BUILDING GRID. THIS SHALL BE PREPARED BY A QUALIFIED SURVEYOR.

P11 UNLESS THE PILING CONTRACTOR CAN DEMONSTRATE OTHERWISE, ANY PILES WHICH ARE OUT OF POSITION BY MORE THAN 75mm SHALL BE REFERRED TO THE STRUCTURAL ENGINEER FOR THE DESIGN OF SUITABLE RECTIFICATION BEAMS.

P12 UPON COMPLETION THE PILING CONTRACTOR SHALL CERTIFY THAT THE PILES HAVE BEEN DESIGNED BY A SUITABLY QUALIFIED ENGINEER, TESTED IF NECESSARY AND INSTALLED IN ACCORDANCE WITH AS2159 TO SAFELY CARRY THE LOADS INDICATED ON PLAN.

FORMWORK:

F1 FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS 3610.

F2 THE DESIGN, CONSTRUCTION, CERTIFICATION AND PERFORMANCE OF FORMWORK, FALSEWORK, AND ITS SUPPORT, IS THE RESPONSIBILITY OF THE CONTRACTOR.

F3 DESIGN INFORMATION CONCERNING THE GROUND SUPPORT OF FORMWORK AND FALSEWORK SHALL BE DETERMINED FROM THE CONDITIONS EXISTING ON SITE AT THE TIME OF CONSTRUCTION.

F4 THE FORMWORK SHALL BE DESIGNED TO RELY ON NO RESTRAINT OR STABILITY FROM THE PERMANENT STRUCTURE WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

F5 WHERE APPLICABLE, THE FORMWORK SHALL BE DESIGNED TO ACCOMMODATE MOVEMENT AND LOAD REDISTRIBUTION DUE TO POST-TENSIONING.
THE FORMWORK DESIGNER MAY NEED TO CONSULT THE POST-TENSIONING SUBCONTRACTOR TO ACHIEVE THIS.

F6 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE APPLIED FINISHES. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE THE SLAB THICKNESS. FOR CHAMFERS, DRIP GROOVES, REGLETS etc. REFER TO THE ARCHITECT'S DRAWINGS AND/OR SPECIFICATION.

F7 PROVIDE UPWARD CAMBER OF FORMWORK TO SLABS AND BEAMS WHERE NOTED ON THESE DRAWINGS. ALSO APPLY AN UPWARD PRE-SET OF L/120 TO CANTILEVERS WHERE L IS THE SHORTEST PROJECTION FROM THE COLUMN OR WALL FACE. THE FORMWORKER SHALL MAKE THE BUILDER AND CONCRETOR FULLY AWARE OF WHERE FORMWORK IS CAMBERED OR PRE-SET IN ORDER THAT THE FULL DEPTH OF THE MEMBERS IS ACHIEVED DURING CONCRETING.

F8 FOR HORIZONTAL REINFORCED CONCRETE ELEMENTS, FORMWORK MAY BE STRIPPED WHEN THE CONCRETE HAS REACHED 80% OF ITS SPECIFIED 28 DAY STRENGTH UNLESS STRIPPING TIMES ARE OTHERWISE NOTED ON THE DRAWINGS. ALTERNATIVELY, FORMWORK MAY BE STRIPPED AND PROGRESSIVELY BACK PROPPED AFTER 5 DAYS. THE PROPS SHALL REMAIN IN PLACE UNTIL THE CONCRETE HAS REACHED 80% OF ITS SPECIFIED 28 DAY STRENGTH.

F9 VERTICAL FORMS TO BEAM SIDES, COLUMNS AND WALLS (UNLOADED) MAY BE STRIPPED AFTER 3 DAYS AND WHEN THE FORMWORKER IS SATISFIED STRIPPING WILL NOT DAMAGE THE GREEN CONCRETE.

F10 STRIPPING AND BACK PROPPING TO POST-TENSIONED SLABS SHALL BE AS DIRECTED BY THE STRESSING DESIGNER.

F11 CONSTRUCTION AND SUPPORT PROPPING SHALL BE ADDED, OR LEFT IN PLACE, TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING.

F12 THE FORMWORKER SHALL PROVIDE CLEANOUTS TO ALL COLUMNS - LEAVE OPEN FOR ENGINEERS INSPECTION, THEN CLOSE OFF IMMEDIATELY PRIOR TO POURING.

F13 IN MULTI STOREY CONSTRUCTION PROPPING SHALL BE PROVIDED FOR AT LEAST 3 LEVELS BELOW THE FLOOR BEING CAST. PROP REMOVAL SHALL BE PROGRAMMED TO AVOID DISTRESS TO PREVIOUSLY CAST FLOORS. RE-SHORING OR BACK PROPPING IS SUBJECT TO THE APPROVAL OF THE ENGINEER.

F14 REFER TO THE ARCHITECTS SPECIFICATION FOR THE CLASS SURFACE FINISH TO FORMED SURFACES REQUIRED.

LOADING

L1 SUPERIMPOSED LOADS ARE GENERALLY IN ACCORDANCE WITH AS 1170. AND AS NOTED.

L2 WIND LOADS ARE IN ACCORDANCE WITH AS 1170 AS FOLLOWS:-
BASIC WIND VELOCITY (REGION A) V1000 = 46 m/s
TERRAIN CATEGORY 3

L3 EARTHQUAKE LOADS DESIGN CATEGORY = EDCII
SITE SUB-SOIL CLASS = B
HEARD FACTOR Z = 0.08
PROBABILITY FACTOR Kp = 1.3

CONCRETE:

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 AND ANY OTHER RELEVANT AUSTRALIAN STANDARDS UNLESS VARIED BY THE ENGINEER.

C2 HOLES, PENETRATIONS, CHASES AND CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

C3 CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED WHERE VERTICAL. THE FIRST POUR SHALL BE THOROUGHLY SCABBLED AND CLEANED OF ALL POORLY COMPACTED MATERIAL AND LAITANCE, THOROUGHLY SOAKED AND PAINTED WITH A 2:1 SAND CEMENT SLURRY IMMEDIATELY BEFORE PLACING THE SECOND POUR. THOROUGHLY COMPACT THE SECOND POUR AGAINST THE FIRST POUR.

C4 CONDUITS, PIPES AND THE LIKE SHALL BE PLACED WITHIN THE MIDDLE THIRD OF THE SLAB DEPTH AND AT A MINIMUM SPACING OF NOT LESS THAN 3 DIAMETERS. CONDUITS AND PIPES SHALL NOT BE PLACED WITHIN THE CONCRETE COVER OUTLINED BELOW.

C5 THE FINISHED CONCRETE SHALL BE FULLY MECHANICALLY VIBRATED TO ACHIEVE FULL COMPACTION, COMPLETELY FILLING FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE, INCLUDING SLABS ON GROUND AND FOOTINGS, SHALL BE FULLY VIBRATED USING A HIGH FREQUENCY MECHANICAL VIBRATOR.

C6 ALL CONCRETE SHALL BE PROPERLY CURED. CURING SHALL COMMENCE WITHIN 2 HOURS OF POURING AND SHALL CONTINUE FOR A MINIMUM OF 7 DAYS, FOLLOWED BY A GRADUAL DRYING OUT. CURING SHALL BE BY CONTINUOUS SATURATION WITH POTABLE WATER OR BY USE OF AN APPROVED PROPRIETARY CURING COMPOUND COMPLYING WITH AS 3799, APPLIED UNIFORMLY IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. THE COMPATIBILITY OF CURING COMPOUNDS WITH PROPOSED APPLIED FINISHES SHALL BE VERIFIED PRIOR TO APPLICATION. FORMED SURFACES EXPOSED WITHIN 14 DAYS OF CASTING SHALL BE SPRAYED WITH AN APPROPRIATE CURING AGENT IMMEDIATELY UPON EXPOSURE.

C7 SPECIFICATION OF CONCRETE:

Element	Slump	Max Agg.	Cement Type	Admix	Cocrete Grade	Exposure Classif'n	Fire Resistance Rating	Cover U.N.O.
Mass conc. Footings/Piers	80	20	GP	NIL	25 MPa	A2	-	-
Reinforced Footings/Pires	80	20	GP	NIL	32 MPa	A2	-	50
Columns	80	20	GP	NIL	40 MPa	A1	2 hr	50
Walls	80	20	GP	NIL	40 MPa	A1	2 hr	45
Core Filling Grout	230±30	10	GP	NIL	20 MPa	B1	-	-
External Slab on ground	80	20	SL	NIL	32 MPa	B1	-	40
Internal Slab on Ground	80	20	SL	NIL	32 MPa	A1	-	30
External Suspended Slabs/Beams	80	20	SL	NIL	32 MPa	B1	2 hr	40
Internal Suspended Slabs/Beams	80	20	SL	NIL	32 MPa	A1	2 hr	25
Tilt-up Wall Panels	80	20	SL	NIL	32 MPa	B1	2 hr	45

NOTE:

1. ALL CONCRETE WITH SHRINKAGE LIMITED (SL) CEMENT SHALL HAVE A MAXIMUM SHRINKAGE STRAIN OF 650 MICROSTRAINS AS DETERMINED BY TEST IN ACCORDANCE WITH AS 1012.13 AFTER 8 WEEKS OF DRYING.
2. WATER CEMENT RATIO OF CONCRETE SHALL NOT EXCEED 0.55 (EXCEPT FOR CORE FILLING GROUT IN BLOCK WALLS)

C8 WHERE A VAPOUR BARRIER IS SPECIFIED BENEATH SLABS ON GROUND PROVIDE A 0.2mm BRANDED POLYTHENE MEMBRANE THROUGHOUT. LAP SHEETS 300mm AND SEAL WITH A 50mm WIDE PRESSURE SENSITIVE WATERPROOF TAPE.

C9 WHERE CONCRETE SLABS BEAR ON MASONRY, INCLUDING CORED BRICKS, THE BEARING SURFACE OF THE MASONRY SHALL BE RENDERED WITH 1:3 CEMENT SAND MORTAR TO GIVE A LEVEL SURFACE AND A METAL SLIP JOINT LAID PROTECTED BY 0.2mm POLYTHENE SHEET TAPED TO FORMWORK BEFORE PLACING CONCRETE. SPECIAL DETAILS SHALL APPLY FOR ROOF SLABS OR SIMILARLY EXPOSED SLABS.

C10 NON LOADBEARING MASONRY SHALL BE SEPARATED FROM THE SOFFIT OF SLABS AND BEAMS BY 12mm CANITE OR OTHER MEANS APPROVED BY THE ENGINEER.

C11 BEFORE THE COMMENCEMENT OF CONCRETING THE BUILDER SHALL ENSURE THE CONCRETOR IS FULLY AWARE OF ANY AREAS OF FORMWORK THAT HAVE BEEN PRE-CAMBERED OR PRE-SET. EXTREME CARE MUST BE TAKEN TO ENSURE THE SPECIFIED DEPTHS OF BEAMS AND SLABS ARE ACHIEVED IN AREAS OF PRE-SETOR PRE-CAMBERED FORMWORK. THIS CANNOT BE ACHIEVED BY LEVELLING THE CONCRETE SURFACE INTO THE NOMINAL FINISHED CONCRETE LEVEL.

C12 CONSTRUCTION AND SUPPORT PROPPING SHALL BE ADDED, OR LEFT IN PLACE, TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADS.

C13 NO MASONRY OR PARTITION WALLS SHALL BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL 7 DAYS AFTER PROPPING HAS BEEN REMOVED AND THE SLAB PRE-LOADED WITH THE BRICKS OR MATERIALS TO BE USED IN THE WALL.

REINFORCEMENT:

R1 REFER TO THE CONCRETE NOTES FOR THE SPECIFIED COVERS TO REINFORCEMENT. COVER MUST BE MAINTAINED AT ALL CHAMFERS, DRIP GROOVES AND REGLETS etc. UNLESS NOTED OTHERWISE ON THE DRAWINGS.

R2 REINFORCEMENT IS SHOWN DIAGRAMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.

R3 REINFORCEMENT SHALL NOT BE CUT OR WELDED ON SITE WITHOUT APPROVAL BY THE ENGINEER. AT SMALL HOLES LESS THAN 300mm DIAMETER, eg PLUMBING PENETRATIONS, BARS SHALL BE DISPLACED TO EITHER SIDE.

R4 SITE BENDING OF REINFORCEMENT SHALL BE AVOIDED IF POSSIBLE. WHERE SITE BENDING IS SPECIFIED, OR UNAVOIDABLE, IT SHALL BE CARRIED OUT COLD, WITHOUT THE APPLICATION OF HEAT, AND IN ACCORDANCE WITH THE PRACTICE NOTE RPN1 OF THE STEEL REINFORCEMENT INSTITUTE OF AUSTRALIA.

R5 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN. THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE OBTAINED FOR ANY OTHER SPLICES. WHERE LAP LENGTHS ARE NOT SHOWN THEY SHALL BE AS INDICATED BELOW:

BAR SIZE	MINIMUM LAP LENGTH	
N10	300	(300)
N12	400	(500)
N16	600	(800)
N20	800	(1000)
N24	1000	(1300)
N28	1200	(1600)
N32	1500	(1900)
N36	1700	(2200)

* LENGTHS SHOWN IN BRACKETS APPLY TO HORIZONTAL BARS WITH MORE THAN 300mm OF CONCRETE CAST BELOW THE BAR.

THE ABOVE DEVELOPMENT LENGTHS ARE FOR MAIN REINFORCEMENT IN f'c=32 MPa CONCRETE WITH 30mm CLEAR COVER FOR WALLS AND SLABS AND 30mm CLEAR COVER TO MIN. R10 FITMENTS FOR COLUMNS AND BEAMS.

R6 REINFORCEMENT SYMBOLS:
N - DENOTES D500N DEFORMED BAR TO AS 4671
R - DENOTES 250R HOT ROLLED PLAIN BAR TO AS 4671
SL/RL - DENOTES HARD DRAWN WIRE REINFORCEMENT FABRIC TO AS 4671
W - DENOTES R500L HARD DRAWN PLAIN WIRE TO AS 4671

R7 FABRIC REINFORCEMENT SHALL BE LAPPED TWO TRANSVERSE WIRES PLUS 50mm.

JOGGLES TO BARS SHALL COMPRISE A LENGTH OF 12 BAR DIAMETERS BETWEEN BEGINNING AND END OF AN OFFSET OF ONE BAR DIAMETER.

R8 ALL REINFORCEMENT SHALL BE CHAIRED AT MAXIMUM CENTERS AS FOLLOWS:-
BARS - 800 CENTERS EACH WAY
FABRIC - 600 CENTERS EACH WAY

R9 EXTRA CHAIRS MAY BE REQUIRED ADJACENT TO SLAB EDGES AND JOINTS TO PREVENT THE UPWARD DEFLECTION OF THE FABRIC WHEN STOOD ON.

R10 ALL STEEL CHAIRS SHALL BE PLASTIC TIPPED. STEEL CHAIRS SHALL ONLY BE USED FOR EXPOSURE CONDITIONS A1 AND A2. FULLY PLASTIC CHAIRS ONLY SHALL BE USED ON ELEMENT FACES HAVING EXTERNAL EXPOSURE IN THE COMPLETED STRUCTURE. WHERE REINFORCEMENT IS GROUND SUPPORTED PROVIDE PLATES UNDER ALL BAR CHAIRS.

R11 AT THE END SUPPORT OF A SLAB ON A MASONRY WALL, ALL BOTTOM REINFORCEMENT SHALL EXTEND OVER THE MASONRY WALL BY 75mm FOR N12 BARS OR 95mm FOR N16 BARS. IF COVER REQUIREMENTS PROHIBIT THIS THE BARS SHALL BE COGGED.

FLOOR SLAB CONSTRUCTION:

FS1 THE BUILDER SHALL PROVIDE CONSTANT SUPERVISION OF CONCRETE POURS EXECUTED BY SUB-CONTRACTORS TO ENSURE:

- REINFORCEMENT DISPLACED OFF CHAIRS ARE REPLACED PRIOR TO CONCRETE
- NO SITE WATER IS ADDED TO CONCRETE OR CONCRETE IN WAITING TRUCKS. (REQUIRED SLUMP FOR PLACEMENT SHALL BE ACHIEVED USING SUPER PLASTICISER).
- ALL CONCRETE IS FULLY COMPACTED USING A POKER VIBRATOR.
- NO POURS ARE EXECUTED WHEN THE AMBIENT TEMPERATURE EQUALS OR EXCEEDS 35°C.
- POURS ARE PROTECTED FROM ANY HOT DRYING WINDS.

FS2 FINAL SURFACE COMPACTION SHALL BE ACHIEVED USING A TWO HEAD 'RIDE ON' POWER TROWEL.

FS3 THE FINISHED CONCRETE SHALL BE CURED FOR A MINIMUM OF SEVEN DAYS USING AT LEAST ONE OF THE FOLLOWING METHODS:
a. PONDING OR CONTINUOUS SPRINKLING WITH WATER.
b. THE USE OF AN ABSORBENT COVER KEPT CONSTANTLY WET. (WHEN THE AMBIENT TEMPERATURE EXCEEDS 32°C CURING MAY ONLY BE ACHIEVED USING METHODS a AND b).
c. THE USE OF AN IMPERMEABLE SHEET MEMBRANE OVER A MOISTENED SURFACE. (THE MEMBRANE SHALL BE FIXED AND LAPPED SO THAT NO AIR CIRCULATION CAN OCCUR AT THE CONCRETE SURFACE).
d. THE USE OF A CURING COMPOUND COMPLYING WITH AS3799, APPLIED UNIFORMLY IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, AND WHEN DRY THE COAT SHOULD BE CONTINUOUS, FLEXIBLE AND WITHOUT VISIBLE BREAKS OR PIN HOLES FOR SEVEN DAYS.

STRUCTURAL STEEL:

S1 TWO COPIES OF SHOP DETAIL DRAWINGS SHALL BE SUBMITTED TO ENGINEERS AND APPROVAL OF SAME OBTAINED BEFORE COMMENCING FABRICATION, APPROVAL WILL NOT COVER DIMENSIONS OF LAYOUT.

S2 STEEL SHALL BE GRADE 350 FOR HOLLOW SECTIONS AND GRADE 300 FOR ALL ROLLED SECTIONS U.N.O.

S3 STEEL FABRICATOR SHALL PROVIDE ALL CERTIFICATION FOR QUALITY AND GRADE OF STEEL AND STRUCTURAL BOLTS, AND H & H ENGINEERS WILL REVIEW CERTIFICATION AND CONFIRM THAT IT COMPLIES WITH RELEVANT STANDARDS.

S4 BOLTS ARE DESIGNATED ON THE DRAWINGS BY THE NUMBER, DIAMETER, GRADE AND TIGHTENING PROCEDURE IN ACCORDANCE WITH A.I.S.C. BOLTING PROCEDURES (STANDARDISED STRUCTURAL CONNECTIONS) AND A.S.4100.

S5 UNLESS OTHERWISE NOTED, WELDS SHALL BE 6mm CATEGORY SP CONTINUOUS FILLET LAID DOWN WITH APPROVED COVERED ELECTRODE. BOLTS SHALL BE M20 8.8/S, min. 2 BOLTS PER CONNECTION. CLEATS AND GUSSETS SHALL BE 10mm THICK.

S6 ALL CLEATS AND DRILLINGS FOR FIXING OF TIMBER MEMBERS etc. SHALL BE PROVIDED BY FABRICATOR.

S7 CAMBER TO STRUCTURAL STEEL ROOF BEAMS, TRUSSES, PORTALS etc. SHALL BE 5mm FOR EVERY 2000 OF SPAN UNLESS OTHERWISE NOTED.

S8 ALL STRUCTURAL STEELWORK BELOW GROUND SHALL BE ENCASED IN CONCRETE MINIMUM 75mm ALL AROUND.

S9 TRANSLUCENT SHEETING SHALL BE OF GAUGE COMPATIBLE WITH PURLIN SPACING IF STANDARD GAUGE IS USED THEN ADDITIONAL C10012 PURLIN TRIMMERS SHALL BE PROVIDED TO GIVE SUPPORT TO SHEETING AT 1200 CENTRES MAX. SAFETY MESH UNDER TRANSLUCENT SHEETING SHALL CONFORM WITH WORKCOVER REQUIREMENTS.

S10 ALL STRUCTURAL STEELWORK SHALL BE GRIT BLASTED TO CLASS 2.5 AND PAINTED WITH BLUE ZINC PHOSPHATE 75um DRY FILM THICKNESS UNLESS NOTED OTHERWISE IN ARCHITECTS SPECIFICATION.

S11 ALL STRUCTURAL STEEL MEMBERS SPECIFIED ON THE DRAWINGS OR OTHER RELATED CONTRACTS AS BEING GALVANISED SHALL CONFORM TO THE REQUIREMENTS OF A.S.4680.

S12 THE MINIMUM APPLICATION RATE FOR GALVANISING SHALL BE 550g/sq.m.

S13 ALL STRUCTURAL STEELWORK, MATERIALS, FABRICATION AND ERECTION SHALL COMPLY WITH A.S. 4100.

S14 WELD TESTING
THE EXTENT OF NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS NOTED BELOW RADIOGRAPHIC OR ULTRASONIC EXAMINATION SHALL BE TO AS1554.1, AS2177.1 AND AS2307

TYPE OF WELD AND CATEGORY	EXAMINATION METHOD	EXTENT (% TOTAL LENGTH OF WELD)
FILLET WELDS, GP.SP	VISUAL INSPECTION	100%
BUTT WELDS, GP	VISUAL INSPECTION	100%
BUTT WELD, SP	VISUAL INSPECTION	100%
BUTT WELD SP	RADIOGRAPHIC OR ULTRASONIC INSPECTION	10%

S15 FLASH WELDING AND TESTING OF ALL STUDS SHALL COMPLY WITH A.S.1554.2

S16 SUSPENDED CEILINGS AND BULKHEADS, WHERE SUPPORTED BY PURLINS, SHALL BE SUPPORTED BY WEB CONNECTION ONLY AND NOT HOOKED FROM BOTTOM LIP. THE CONTRACTOR SHALL PROVIDE THE BUILDER WITH CERTIFICATION OF STRUCTURAL ADEQUACY STATING COMPLIANCE WITH THE ABOVE.

S17 ALL EXTERNAL STEELWORK SHALL BE HOT DIPPED GALVANISED

STEELWORK ERECTION GUIDE:

HOLD

SE1 THIS GUIDE IS ONLY INTENDED TO PROVIDE THE STEEL ERECTOR WITH A RECOMMENDED PROCEDURE FOR ERECTING THE STEELWORK SAFELY AND EFFICIENTLY.
THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY A COMPETENT PERSON IN ORDER TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET. HENRY & HYMAS WILL NOT BE LIABLE FOR THE QUALITY OF ERECTION NOR ASSUME ANY RESPONSIBILITY FOR ANY CONSTRUCTION DEFECTS RESULTING FROM IMPROPER ERECTION TECHNIQUES OR NEGLIGENCE OF OTHER PARTIES.

SE2 THE STEEL ERECTOR MUST BE A COMPETENT PERSON FAMILIAR WITH THE FOLLOWING STANDARDS/ MANUALS AND OTHER INDUSTRY PRACTISES & GUIDELINES.

i) AS / NZS 5131-2016 : STRUCTURAL STEELWORK - FABRICATION AND ERECTION

ii) AS 4100-1998 : STEEL STRUCTURES

iii) PRACTICAL GUIDE TO PLANNING THE SAFE ERECTION OF STEEL STRUCTURES (1ST EDITION) - AUSTRALIAN STEEL INSTITUTE, OCT. 2016

iv) SAFE DESIGN OF STRUCTURES CODE OF PRACTICE – SAFEWORK AUSTRALIA, JULY 2014

SE3 THE CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTORS ON SITE. CONTRACTORS ARE RESPONSIBLE FOR FULL COMPLIANCE WITH ALL THE SAFETY REQUIREMENTS OF THE GOVERNING REGULATORY AUTHORITY AS WELL AS ANY ADDITIONAL REQUIREMENTS IMPOSED BY THE DEVELOPER.

SE4 THE STRUCTURE MUST NOT BE SUBJECTED TO EXCESSIVE CONSTRUCTION LOADING SUCH AS MATERIAL STACKING UNLESS EXPLICITLY NOTED ON THE DESIGN DRAWINGS.

SE5 ALL GUY ROPES AND PROPS SHALL BE DESIGNED BY A COMPETENT PERSON FOR AN OUT-OF-PLANE LOAD EQUAL TO 2.5% OF GRAVITY LOADS PLUS WIND LOADS ARISING FROM A 100 YEAR RETURN PERIOD. LONG SPAN RAFTERS/ TRUSSES MUST BE BRACED AGAINST TWISTING AND BUCKLING.

SE6 OUTLINED BELOW IS HENRY & HYMAS' RECOMMENDED PROCEDURE FOR STEEL ERECTION. THE STEEL ERECTOR MUST SUBMIT A DETAILED ERECTION SEQUENCE METHODOLOGY INCLUDING THE 'WITNESS AND HOLD POINTS' AND ANY DEVIATIONS FROM THE RECOMMENDED PROCEDURE FOR REVIEW BY HENRY & HYMAS PRIOR TO ERECTING ANY STEELWORK.

SE7 STEELWORK ERECTION SEQUENCE - STEEL FRAMED STRUCTURE

STEP 1 ERECT COLUMNS ALONG *GRID X FROM GRID A TO B* AND BRACE THEM WITH GUY ROPES OR PROPS TO RESTRAIN AGAINST POTENTIAL SWAY IN ANY DIRECTION. ERECT RAFTERS ALONG THE SAME GRID LINE STARTING FROM *GRID A*.

STEP 2 ERECT COLUMNS AND RAFTERS ALONG *GRID X+1* AND PROGRESSIVELY ATTACH LEAD PURLINS/ STRUTS AND DIAGONAL BRACINGS BACK TO THE FRAME ALREADY ERECTED. SQUARE AND PLUMB BRACED BAYS BEFORE MOVING TO STEP 3.

STEP 3 PROCEED WITH THE ERECTION OF THE REMAINING FRAMES ALONG GRIDS *X+2 TO X+N* INCLUDING ANY VERTICAL BRACING.

STEP 4 TEMPORARY BRACING MAY BE REMOVED AFTER ALL THE PRIMARY MEMBERS SUCH AS COLUMNS, RAFTERS AND WALL/ ROOF BRACING ELEMENTS HAVE BEEN ERECTED AND SIGNED OFF BY HENRY & HYMAS, OR WHEN SUFFICIENT LATERAL STABILITY HAS BEEN ACHIEVED. INSTALLATION OF SECONDARY COMPONENTS SUCH AS PURLINS, GIRTS, FLY BRACING, FASCIA TRUSSES ETC. SHOULD FOLLOW.

BLOCKWORK:

BL1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH A.S. 3700 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS

BL2 BLOCK COMPRESSIVE STRENGTH f'uc SHALL BE 15 MPa min. U.N.O
BLOCK GRADE SHOULD BE CLEARLY INDICATED ON THE DELIVERY DOCKET.

BL3 MORTAR SHALL CONSIST OF 1 PART CEMENT, 1 PART LIME AND 6 PARTS SAND. MORTAR SHALL COMPLY WITH A.S. 3700.

BL4 REINFORCEMENT SHALL BE PLACED AND SECURELY HELD IN THE LOCATIONS INDICATED. RODS SHALL BE TIED TO STARTER BARS IN CLEANOUT BLOCKS. COVER TO VERTICAL REINFORCEMENT SHALL BE 50mm FROM THE OUTSIDE OF THE BLOCK WHERE DRAWN ADJACENT TO BLOCK FACE.

BL5 MORTAR PROTRUDING INTO CORE HOLES SHALL BE REMOVED BY THE BLOCK LAYER AFTER EACH COURSE IS LAID. EVERY CORE FILLED WITH GROUT SHALL HAVE A CLEANOUT BLOCK IN THE BOTTOM COURSE.

BL6 CORE FILLING GROUT SHALL BE AS SET OUT IN NOTE C7.

BL7 PROVIDE MOVEMENT JOINTS EVERY 8m AND/OR OVER EVERY FLOOR JOINT U.N.O. PROVIDE MOVEMENT JOINTS EVERY 4m IN PARAPET WALLS.

BL8 PROVIDE SMOOTH TROWELED MORTAR BED AND TWO LAYERS OF 'ALCOR' ON TOP OF ALL LOAD BEARING WALLS WHERE SLIP JOINTS ARE NOMINATED.

FOR CONSTRUCTION

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A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
3	REVISED FOR TENDER	I.S.	P.R.	26.10.2018
2	TENDER ISSUE	S.W.	P.R.	31.08.2018
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Client
NSW DEPARTMENT OF EDUCATION

Architect
NBRS ARCHITECTURE

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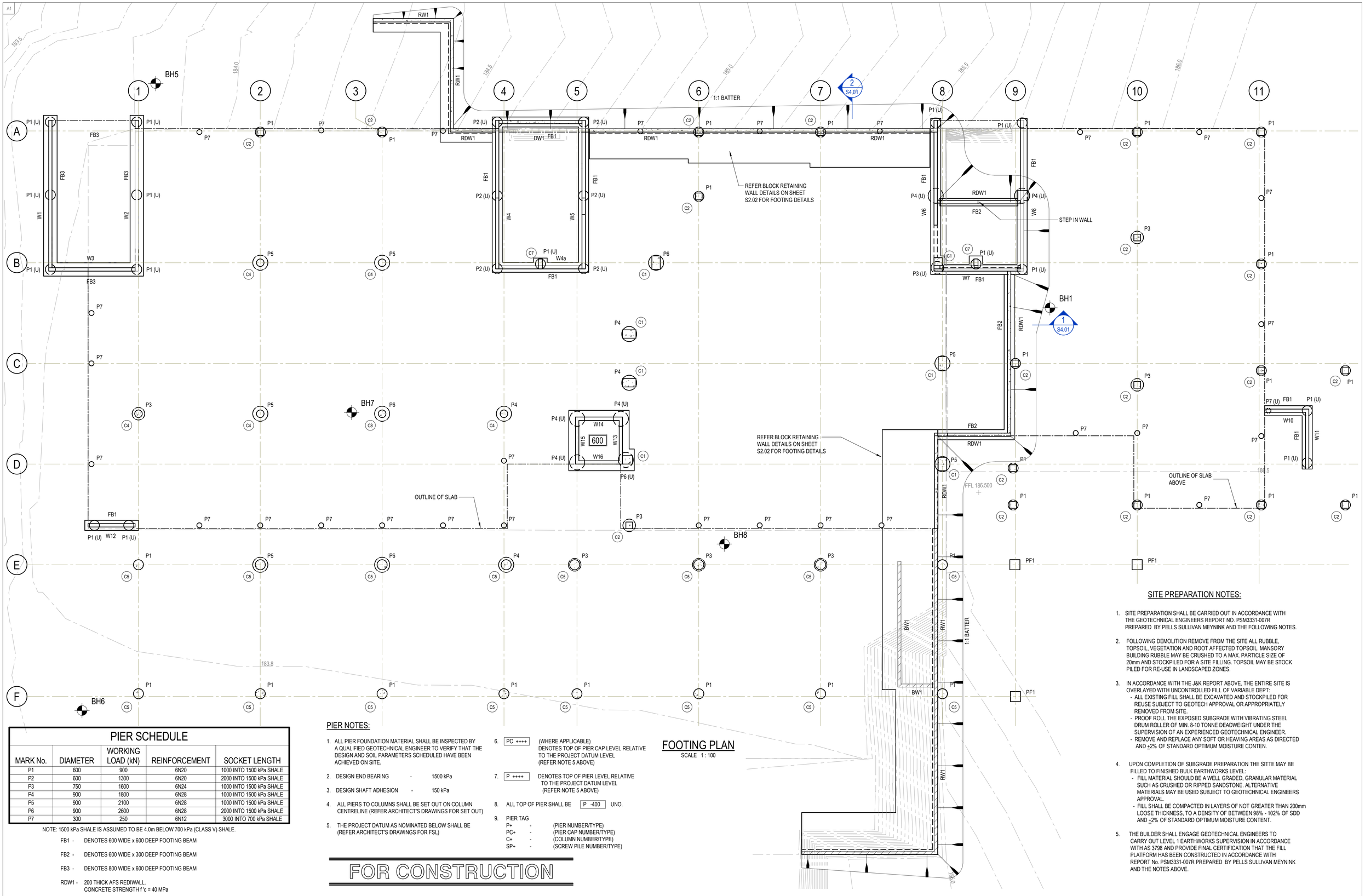
henry&hymas

Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title
CONSTRUCTION NOTES

Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	**Approved**	**Scale**
P.R.	R.K.	1 : 1

Drawing number: 18380-S1.01
Revision: A



PIER SCHEDULE

MARK No.	DIAMETER	WORKING LOAD (kN)	REINFORCEMENT	SOCKET LENGTH
P1	600	900	6N20	1000 INTO 1500 kPa SHALE
P2	600	1300	6N20	2000 INTO 1500 kPa SHALE
P3	750	1600	6N24	1000 INTO 1500 kPa SHALE
P4	900	1800	6N28	1000 INTO 1500 kPa SHALE
P5	900	2100	6N28	1000 INTO 1500 kPa SHALE
P6	900	2600	6N28	2000 INTO 1500 kPa SHALE
P7	300	250	6N12	3000 INTO 700 kPa SHALE

NOTE: 1500 kPa SHALE IS ASSUMED TO BE 4.0m BELOW 700 kPa (CLASS V) SHALE.

FB1 - DENOTES 600 WIDE x 600 DEEP FOOTING BEAM

FB2 - DENOTES 600 WIDE x 300 DEEP FOOTING BEAM

FB3 - DENOTES 800 WIDE x 600 DEEP FOOTING BEAM

RDW1 - 200 THICK AFS REDIWALL.
CONCRETE STRENGTH f'c = 40 MPa

BW1 - DENOTES 190 CORE FILLED BLOCK WALLS
N16-400 EW CENTRAL.

PF1 - DENOTES PAD FOODING -- REFER DETAILS

PIER NOTES:

1. ALL PIER FOUNDATION MATERIAL SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THAT THE DESIGN AND SOIL PARAMETERS SCHEDULED HAVE BEEN ACHIEVED ON SITE.
2. DESIGN END BEARING - 1500 kPa
3. DESIGN SHAFT ADHESION - 150 kPa
4. ALL PIERS TO COLUMNS SHALL BE SET OUT ON COLUMN CENTRELINE (REFER ARCHITECT'S DRAWINGS FOR SET OUT)
5. THE PROJECT DATUM AS NOMINATED BELOW SHALL BE (REFER ARCHITECT'S DRAWINGS FOR FSL)
6. PC +### (WHERE APPLICABLE) DENOTES TOP OF PIER CAP LEVEL RELATIVE TO THE PROJECT DATUM LEVEL (REFER NOTE 5 ABOVE)
7. P +### DENOTES TOP OF PIER LEVEL RELATIVE TO THE PROJECT DATUM LEVEL (REFER NOTE 5 ABOVE)
8. ALL TOP OF PIER SHALL BE P -400 UNO.
9. PIER TAG
   - P+ - (PIER NUMBER/TYPE)
   - PC+ - (PIER CAP NUMBER/TYPE)
   - C+ - (COLUMN NUMBER/TYPE)
   - SP+ - (SCREW PILE NUMBER/TYPE)

FOOTING PLAN

SCALE 1 : 100

SITE PREPARATION NOTES:

1. SITE PREPARATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS REPORT NO. PSM3331-007R PREPARED BY PELLS SULLIVAN MEYNINK AND THE FOLLOWING NOTES.
2. FOLLOWING DEMOLITION REMOVE FROM THE SITE ALL RUBBLE, TOPSOIL, VEGETATION AND ROOT AFFECTED TOPSOIL. MANSORY BUILDING RUBBLE MAY BE CRUSHED TO A MAX. PARTICLE SIZE OF 20mm AND STOCKPILED FOR A SITE FILLING. TOPSOIL MAY BE STOCK PILED FOR RE-USE IN LANDSCAPED ZONES.
3. IN ACCORDANCE WITH THE J&K REPORT ABOVE, THE ENTIRE SITE IS OVERLAYED WITH UNCONTROLLED FILL OF VARIABLE DEPT:
   - ALL EXISTING FILL SHALL BE EXCAVATED AND STOCKPILED FOR REUSE SUBJECT TO GEOTECH APPROVAL OR APPROPRIATELY REMOVED FROM SITE.
   - PROOF ROLL THE EXPOSED SUBGRADE WITH VIBRATING STEEL DRUM ROLLER OF MIN. 8-10 TONNE DEADWEIGHT UNDER THE SUPERVISION OF AN EXPERIENCED GEOTECHNICAL ENGINEER.
   - REMOVE AND REPLACE ANY SOFT OR HEAVING AREAS AS DIRECTED AND ±2% OF STANDARD OPTIMUM MOISTURE CONTEN.
4. UPON COMPLETION OF SUBGRADE PREPARATION THE SITTE MAY BE FILLED TO FINISHED BULK EARTHWORKS LEVEL:
   - FILL MATERIAL SHOULD BE A WELL GRADED, GRANULAR MATERIAL SUCH AS CRUSHED OR RIPPED SANDSTONE. ALTERNATIVE MATERIALS MAY BE USED SUBJECT TO GEOTECHNICAL ENGINEERS APPROVAL.
   - FILL SHALL BE COMPACTED IN LAYERS OF NOT GREATER THAN 200mm LOOSE THICKNESS, TO A DENSITY OF BETWEEN 98% - 102% OF SDD AND ±2% OF STANDARD OPTIMUM MOISTURE CONTENT.
5. THE BUILDER SHALL ENGAGE GEOTECHNICAL ENGINEERS TO CARRY OUT LEVEL 1 EARTHWORKS SUPERVISION IN ACCORDANCE WITH AS 3798 AND PROVIDE FINAL CERTIFICATION THAT THE FILL PLATFORM HAS BEEN CONSTRUCTED IN ACCORDANCE WITH REPORT No. PSM3331-007R PREPARED BY PELLS SULLIVAN MEYNINK AND THE NOTES ABOVE.

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Client: NSW DEPARTMENT OF EDUCATION

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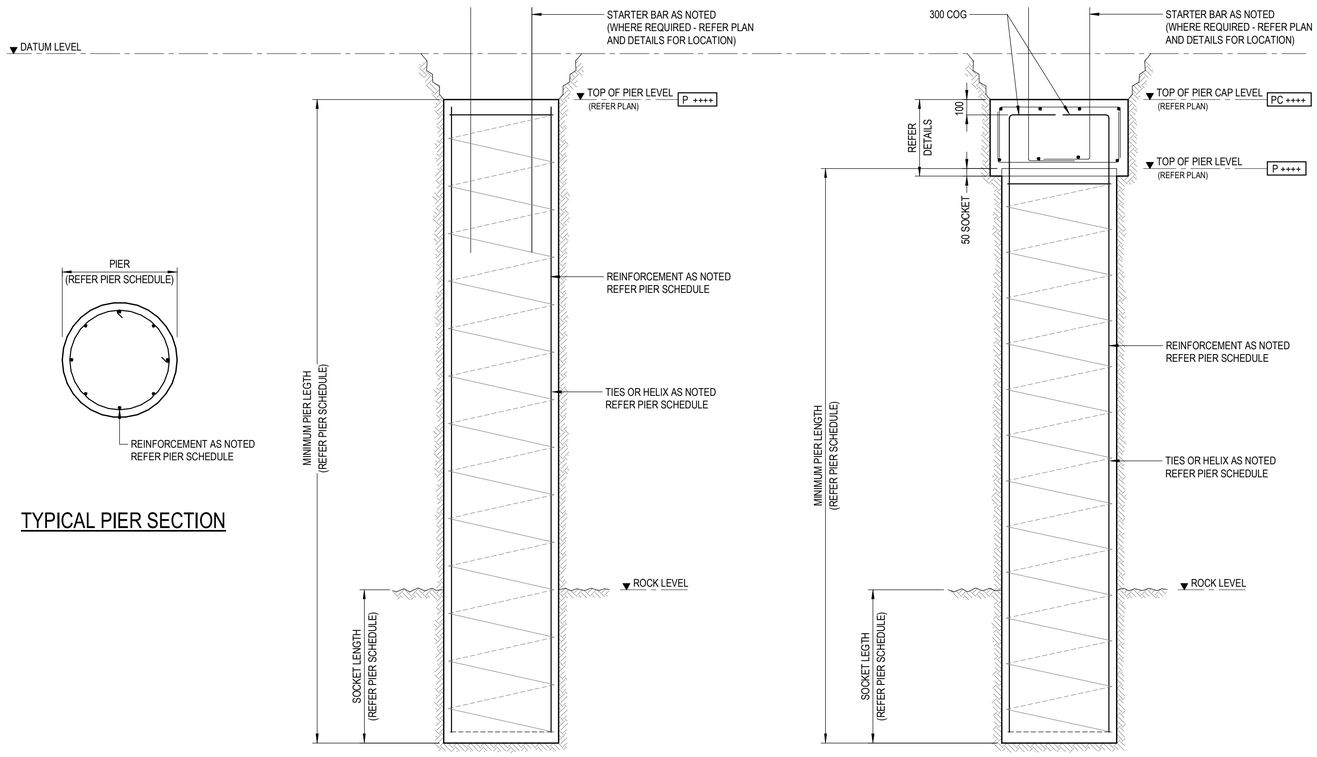
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Drawn: S.W. | Designed: T.M. | Date: JULY 2018
Checked: P.R. | Approved: R.K. | Scale: As indicated

Title: FOOTING PLAN

Drawing number: 18380-S2.00

Revision: A



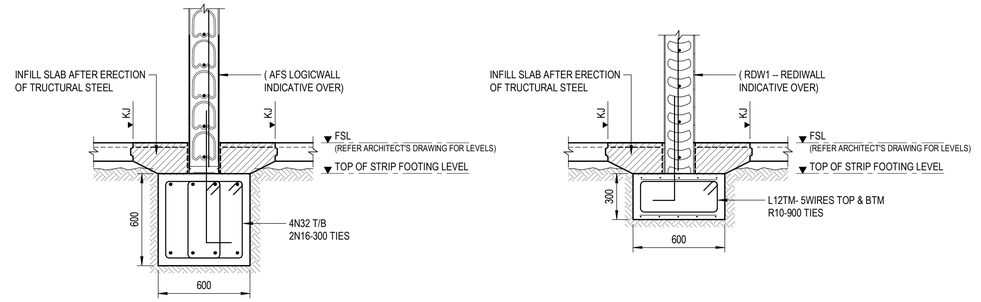
TYPICAL PIER SECTION

REINFORCED PIER ONLY

REINFORCED PIER AND FOOTING BEAM

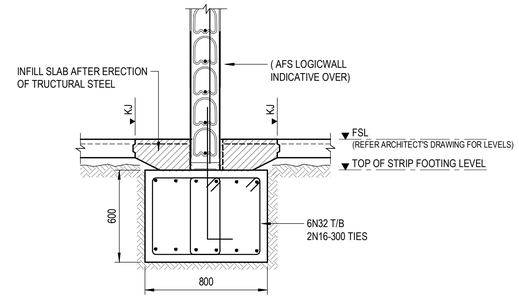
TYPICAL PIER ELEVATIONS

SCALE 1 : 20

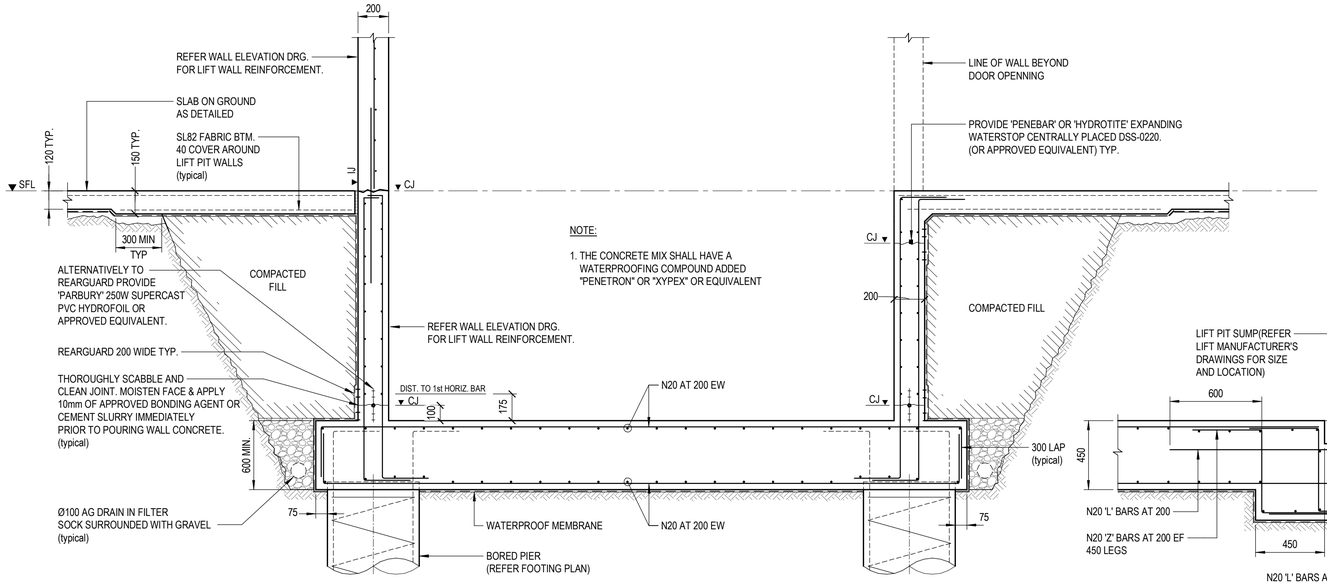


FOOTING BEAM - FB1

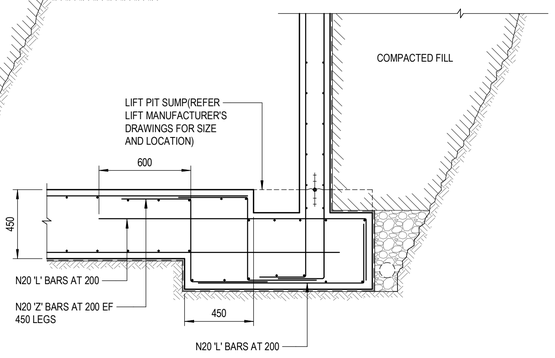
FOOTING BEAM - FB2



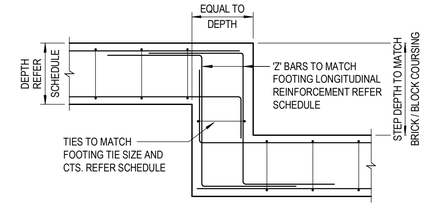
FOOTING BEAM - FB3



TYPICAL LIFT PIT SECTION

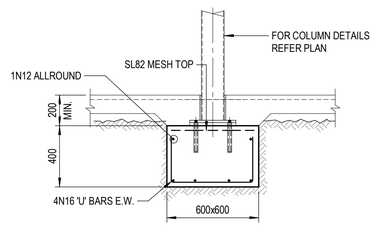


TYPICAL LIFT PIT SUMP DETAIL



TYPICAL FOOTING STEP DETAIL

SCALE 1 : 20



SECTION

TYPICAL PAD FOOTING PF1 DETAIL

FOR CONSTRUCTION

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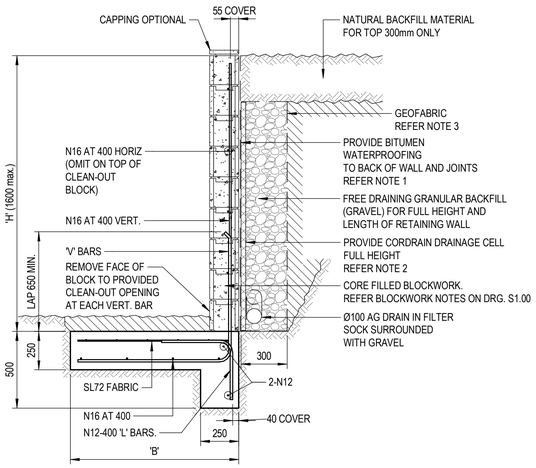
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: FOOTING DETAILS - SHEET 1

Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	Approved	Scale
P.R.	R.K.	1 : 20

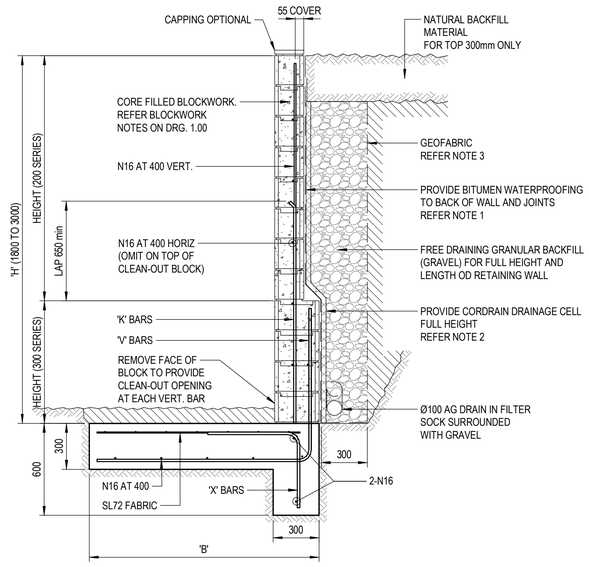
Drawing number: 18380-S2.01

Revision: A



150 OR 200 SERIES BLOCK WALL

15.0 kPa SURCHARGE



200 OR 300 SERIES BLOCK WALL

15.0 kPa SURCHARGE

RETAINING WALL SCHEDULE RW1

TOTAL HEIGHT 'H' (mm)	HEIGHT OF BLOCK TYPE		'B' (mm)	'V' & 'X' BARS	'K' BARS
	200 SERIES	300 SERIES			
800	800	-	800	N16 AT 400	-
1000	1000	-	1200	N16 AT 400	-
1200	1200	-	1500	N16 AT 400	-
1400	1400	-	1800	N16 AT 400	-
1600	1600	-	2100	N16 AT 400	-
1800	1800	-	2300	N16 AT 200	N16 AT 400
2000	1400	600	2500	N16 AT 200	N16 AT 400
2200	1400	800	2700	N16 AT 200	N16 AT 200
2400	1400	1000	3000	N20 AT 200	N16 AT 200
2600	1400	1200	3300	N20 AT 200	N16 AT 200
2800	1400	1400	3500	N20 AT 200	N16 AT 200
3000	1400	1600	3800	N20 AT 200	N16 AT 200

NOTES:

1. ENSURE REAR FACE OF RETAINING WALL IS FULLY WATERPROOFED. USE EMER-PROOF ECOFLEX OR APPROVED EQUIVALENT IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION. EG: 2 COATS min. APPLIED IN OPPOSITE DIRECTIONS AND ALLOWED TO CURE FOR 7 DAYS. (TO BE CONIRMED BY THE ARCHITECT)
2. INSTALL FULL HEIGHT DRAINAGE CELL TO REAR OF WALL, USE NYLEX CORDRAIN/18 OR APPROVED EQUIVALENT.
3. PROVIDE GEOFABRIC MATERIAL AS SEPARATION BETWEEN GRANULAR BACKFILL (GRAVEL) AND NATURAL BACKFILL MATERIAL. USE BIDIM A24 OR APPROVED EQUIVALENT.
4. MINIMUM ALLOWABLE BEARING PRESSURE AT BASE = 150 kPa

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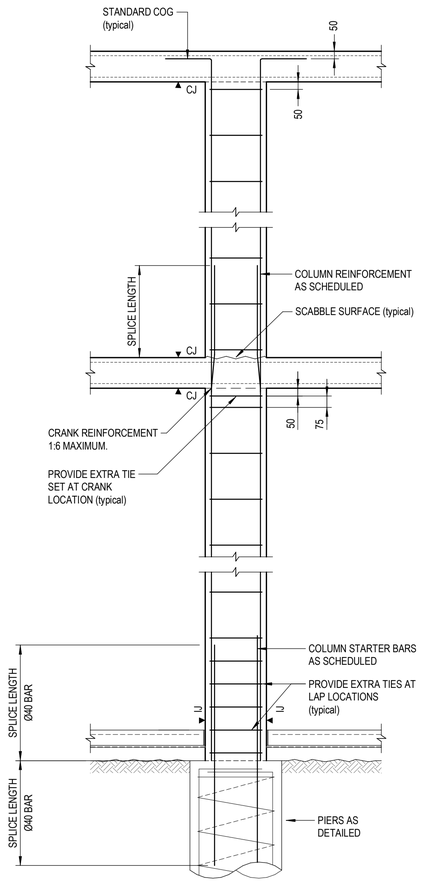
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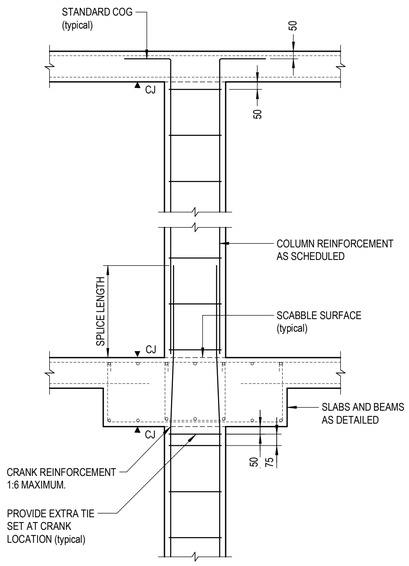
Title: FOOTING DETAILS - SHEET 2

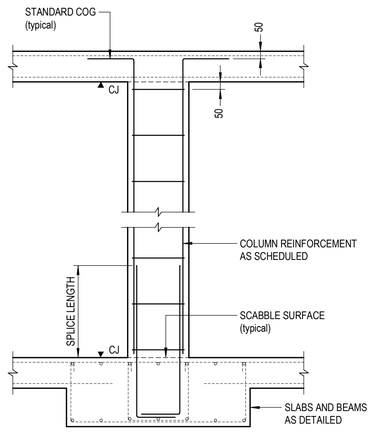
Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked: P.R.	Approver: R.K.	Scale: 1 : 20

Drawing number: 18380-S2.02

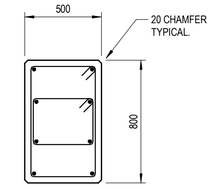
Revision: A



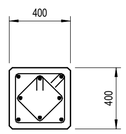




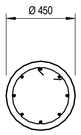
TYPICAL COLUMN ELEVATIONS
SCALE 1 : 20



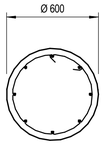
COLUMN TYPE 'C1'



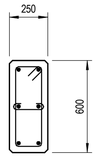
COLUMN TYPE 'C2'



COLUMN TYPE 'C4 & C8'



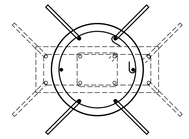
COLUMN TYPE 'C5'



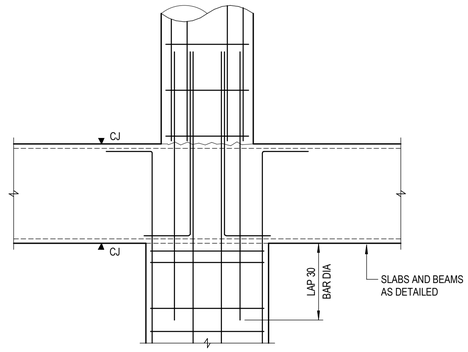
COLUMN TYPE 'C7'

COLUMN SECTIONS
SCALE 1 : 20

COLUMN SCHEDULE				
COLUMN TYPE	CONCRETE STRENGTH	COLUMN REINFORCEMENT	STARTER BARS	TIES
C1	40 MPa	10N24	10N24	2R10-300
C2	40 MPa	8N20	8N20	2R10-300
C4	40 MPa	6N20	6N20	R10-300
C5	40 MPa	8N24	8N24	R10-300
C7	40 MPa	6N24	6N24	2R10-300
C8	40 MPa	8N28	8N28	R10-300



PLAN



SECTION

COLUMN TRANSITION DETAILS
SCALE 1 : 20

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
4	REVISED FOR TENDER	T.L.	P.R.	17.10.2018
3	REVISED FOR TENDER	I.S.	P.R.	10.10.2018
2	TENDER ISSUE	S.W.	P.R.	31.08.2018
1	PRELIMINARY ISSUE	S.W.	P.R.	09.08.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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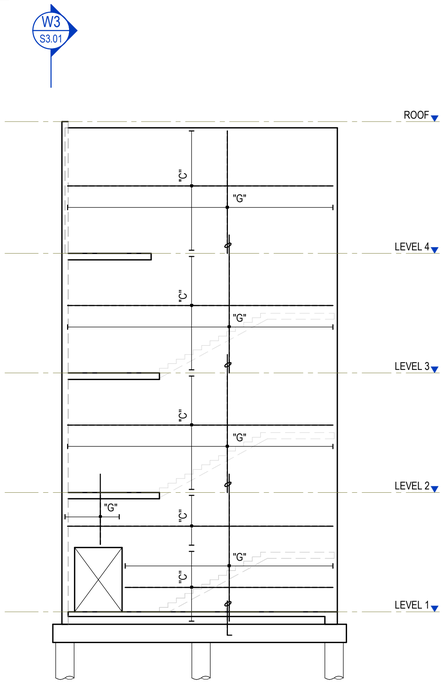
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Drawn: S.W. | Designed: T.M. | Date: JULY 2018
Checked: P.R. | Approved: R.K. | Scale: 1 : 20

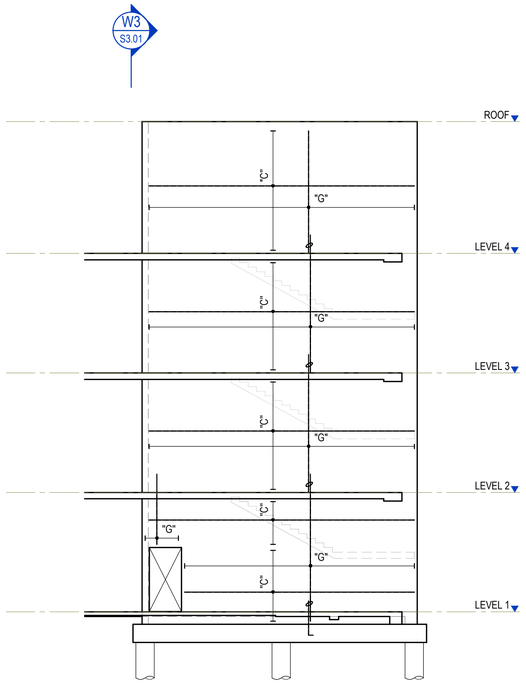
Title: COLUMN DETAILS

Drawing number: 18380-S3.00

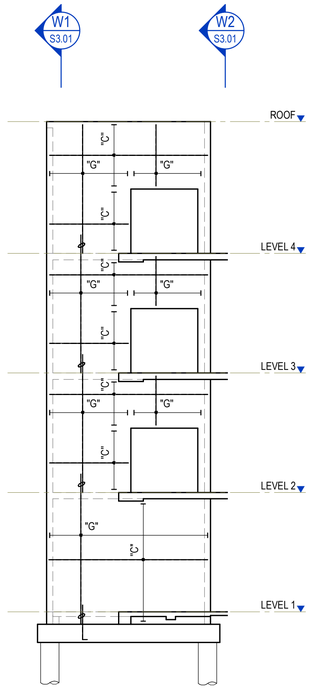
Revision: A



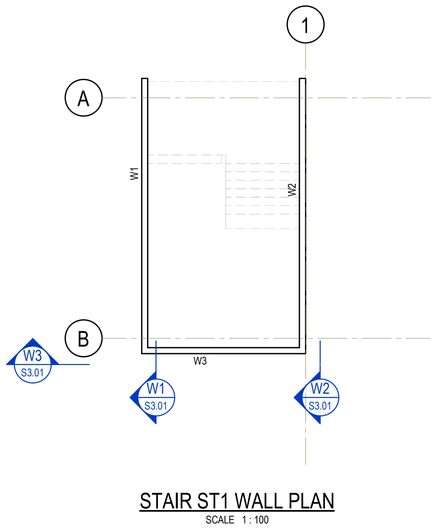
WALL W1 ELEVATION
SCALE 1 : 100



WALL W2 ELEVATION
SCALE 1 : 100



WALL W3 ELEVATION
SCALE 1 : 100



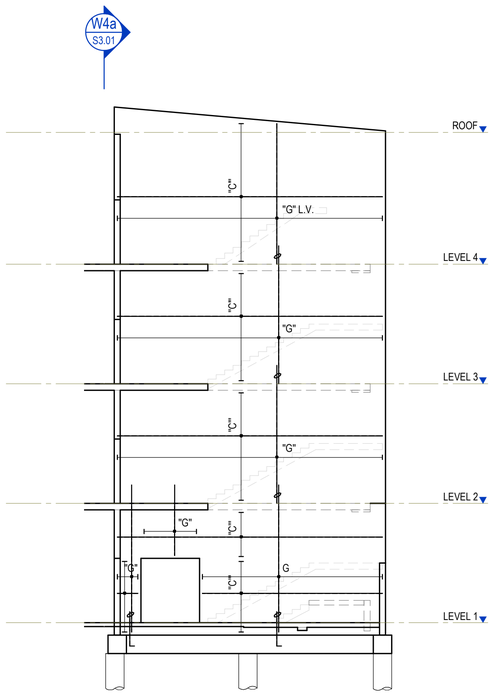
STAIR ST1 WALL PLAN
SCALE 1 : 100

REINFORCEMENT SCHEDULE

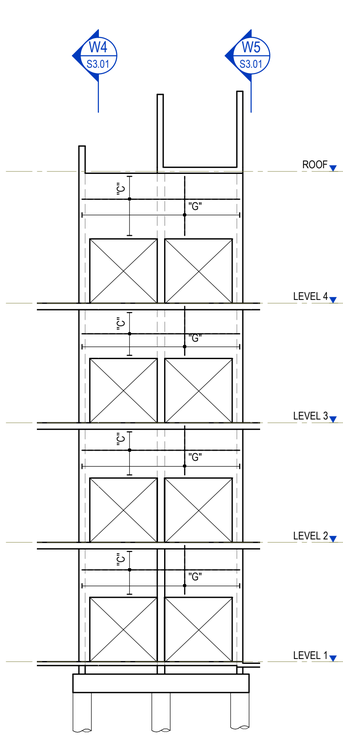
TAG	DESIGNATION (DIAMETER - CENTRES)	CROSS-SECTIONAL AREA (mm^2/m)
'A'	N12 AT 300	367
'B'	N12 AT 200	440
'C'	N16 AT 200	1000
'D'	N16 AT 150	1333
'E'	N16 AT 150	1333
'F'	N20 AT 200	1550
'G'	N20 AT 150	2067

NOTE:

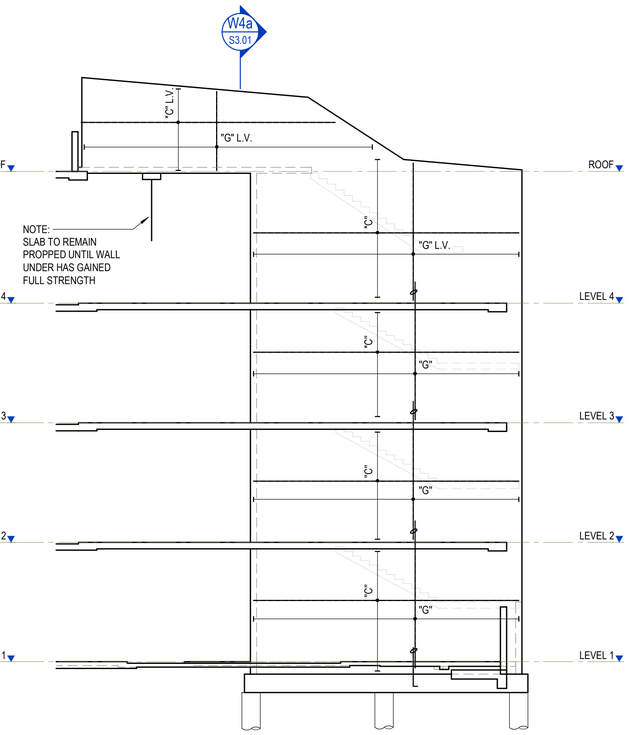
1. ALL WALLS TO BE AFS LOGICWALL 200 THICK UNO, CORE FILLED WITH 40 MPa CONCRETE UNO.
2. ALL BARS TO BE CENTRALLY PLACED UNO.



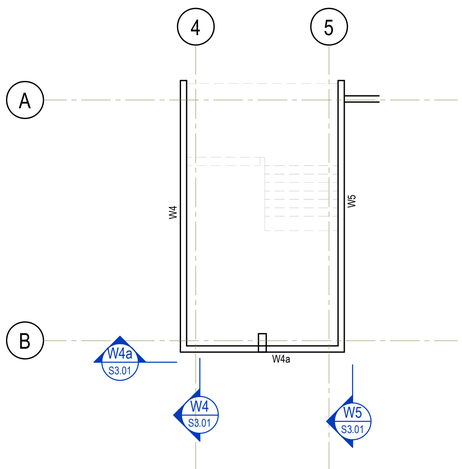
WALL W4 ELEVATION
SCALE 1 : 100



WALL W4a- ELEVATION
SCALE 1 : 100



WALL W5 ELEVATION
SCALE 1 : 100



STAIR ST2 WALL PLAN
SCALE 1 : 100

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
1	TENDER ISSUE	I.S.	P.R.	26.10.2018

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NSW DEPARTMENT OF EDUCATION

Architect
NBRS ARCHITECTURE

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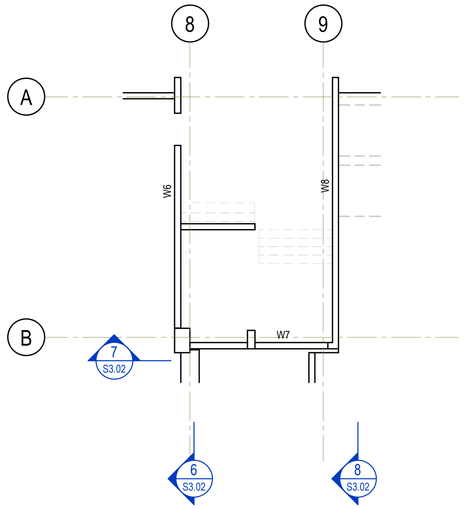
Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title
WALL ELEVATION SHEET 1

Drawn	Designed	Date
Author	T.M.	10/19/18
Checked	Approved	Scale
P.R.	R.K.	As indicated

Drawing number
18380-S3.01

Revision
A



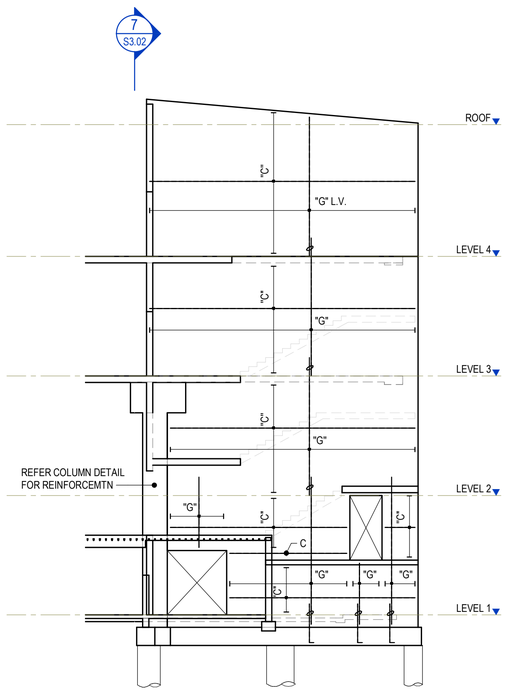
STAIR ST3 WALL PLAN

SCALE 1 : 100

REINFORCEMENT SCHEDULE		
TAG	DESIGNATION (DIAMETER - CENTRES)	CROSS-SECTIONAL AREA (mm^2/m)
'A'	N12 AT 300	367
'B'	N12 AT 200	440
'C'	N16 AT 200	1000
'D'	N16 AT 150	1333
'E'	N16 AT 150	1333
'F'	N20 AT 200	1550
'G'	N20 AT 150	2067

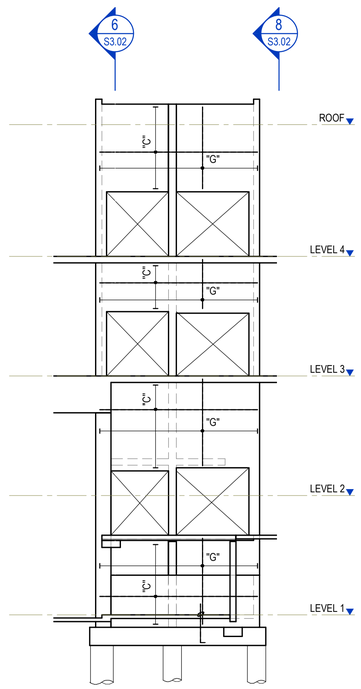
NOTE:

1. ALL WALLS TO BE AFS LOGICWALL 200 THICK UNO, CORE FILLED WITH 40 MPa CONCRETE UNO.
2. ALL BARS TO BE CENTRALLY PLACED UNO.



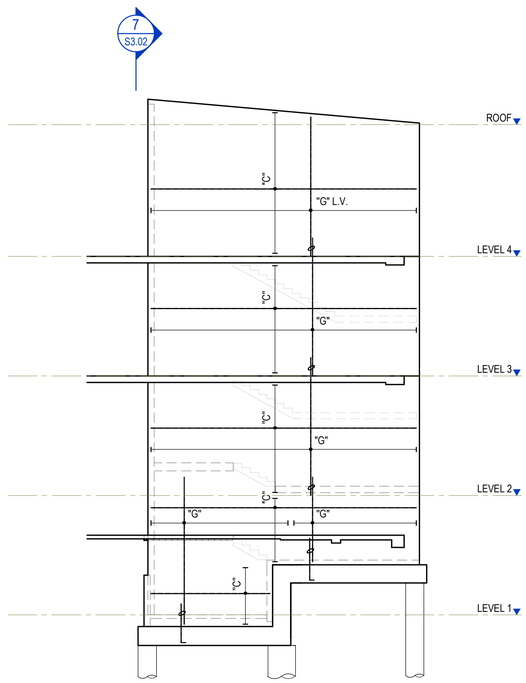
SECTION 6 S3.02

SCALE 1 : 100



SECTION 7 S3.02

SCALE 1 : 100



SECTION 8 S3.02

SCALE 1 : 100

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019

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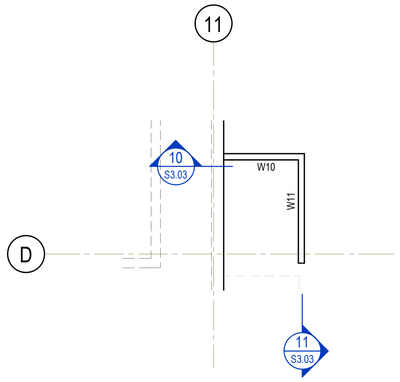
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: WALL ELEVATION SHEET 2

Drawn	Designed	Date
Author	Designer	01/25/19
Checked: Checker	Approved: Approver	Scale: As indicated

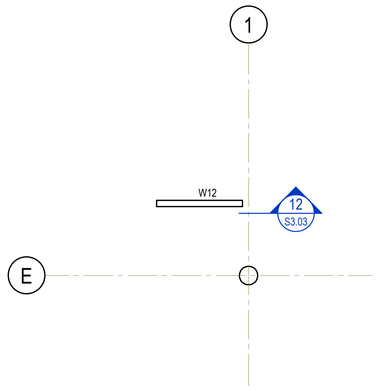
Drawing number: 18380-S3.02

Revision: A



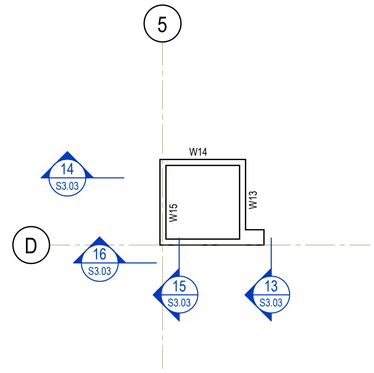
STAIR ST4 WALL PLAN

SCALE 1 : 100



WALL W12 PLAN VIEW

SCALE 1 : 100



LIFT SHAFT WALL PLAN

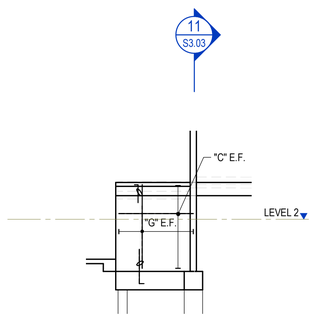
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REINFORCEMENT SCHEDULE

TAG	DESIGNATION (DIAMETER - CENTRES)	CROSS-SECTIONAL AREA (mm^2/m)
'A'	N12 AT 300	367
'B'	N12 AT 200	440
'C'	N16 AT 200	1000
'D'	N16 AT 150	1333
'E'	N16 AT 150	1333
'F'	N20 AT 200	1550
'G'	N20 AT 150	2067

NOTE:

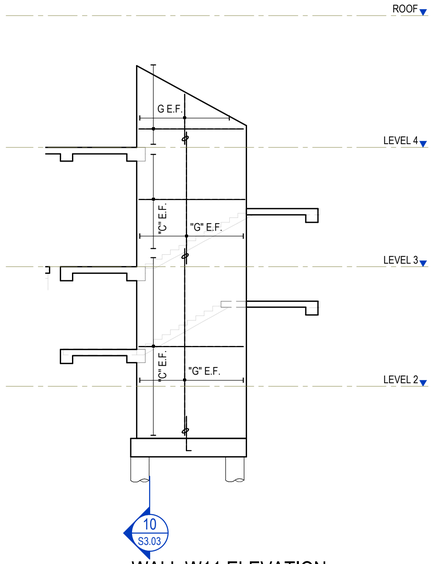
1. ALL WALLS TO BE AFS LOGICWALL 200 THICK UNO, CORE FILLED WITH 40 MPa CONCRETE UNO.
2. ALL BARS TO BE CENTRALLY PLACED UNO.



WALL W10 ELEVATION

SCALE 1 : 100

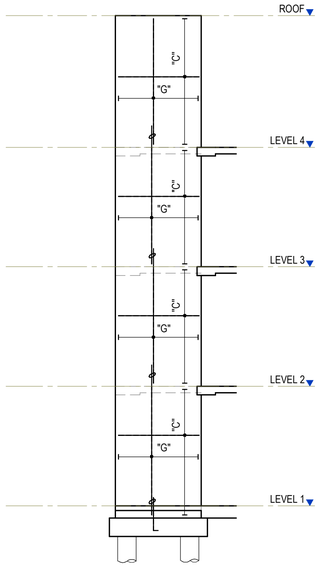
200 THK OFF-FORM CONCRETE.



WALL W11 ELEVATION

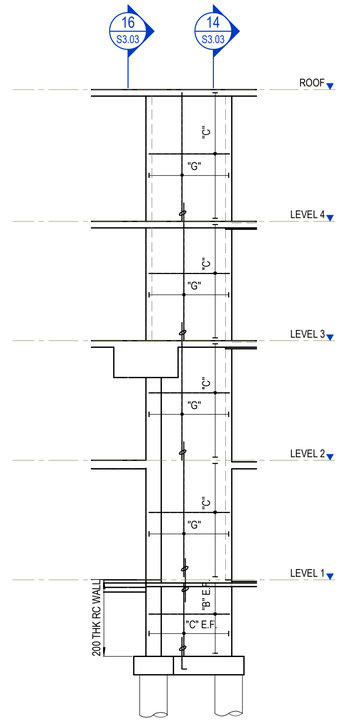
SCALE 1 : 100

200 THK OFF-FORM CONCRETE.



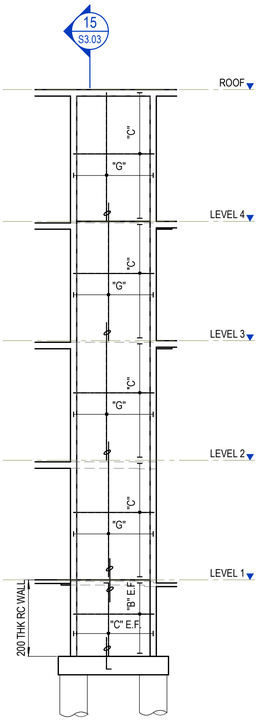
WALL W12 ELEVATION

SCALE 1 : 100



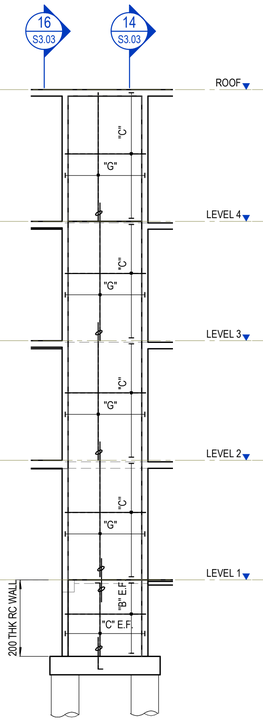
WALL W13 ELEVATION

SCALE 1 : 100



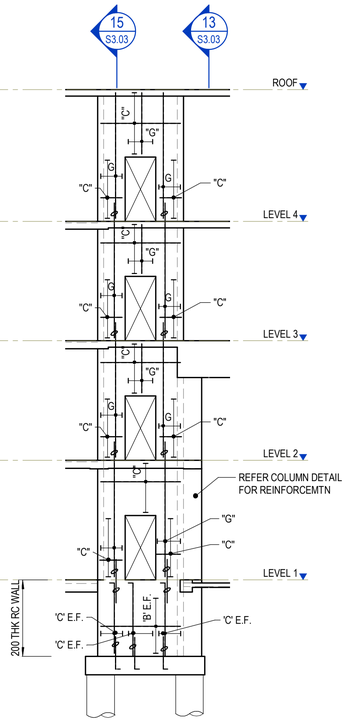
WALL W14 ELEVATION

SCALE 1 : 100



WALL W15 ELEVATION

SCALE 1 : 100



WALL W16 ELEVATION

SCALE 1 : 100

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019

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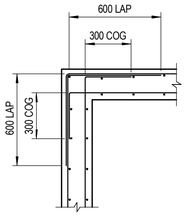
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: WALL ELEVATION SHEET 3

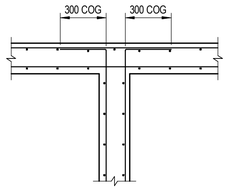
Drawn	Designed	Date
Author	Designer	01/25/19
Checked: Checker	Approved: Approver	Scale: As indicated

Drawing number: 18380-S3.03

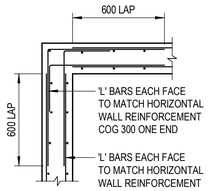
Revision: A



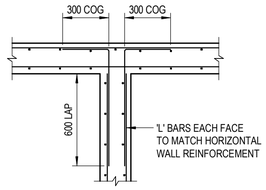
200 WALL - CORNER DETAIL



200 WALL
"T" INTERSECTION DETAIL



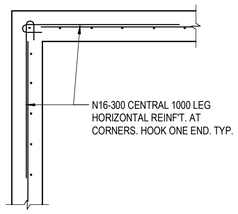
200 WALL - ALTERNATIVE
CORNER DETAIL



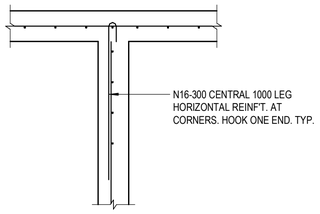
200 WALL - ALTERNATIVE
"T" INTERSECTION DETAIL

TYPICAL WALL INTERSECTION PLAN DETAILS

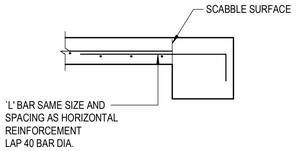
FOR 200 THICK OFF-FORM CONCRETE WALLS ONLY



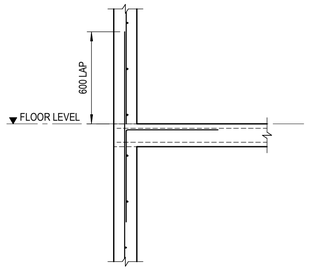
200 AFS LOGICWALL - CORNER DETAIL



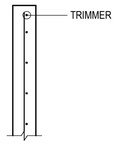
200 AFS LOGICWALL
"T" INTERSECTION DETAIL



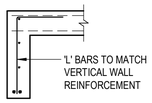
TYPICAL WALL TO COLUMN CONNECTION



SLAB INTERSECTION DETAIL



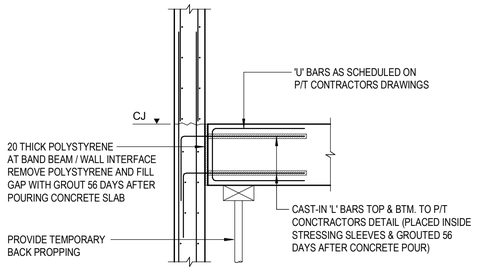
END OF WALL



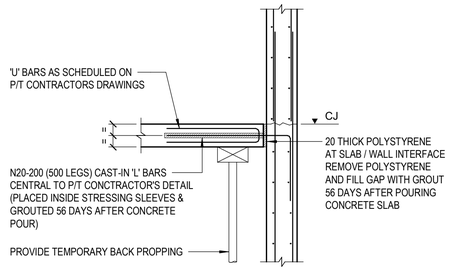
WALL DOOR OPENING

TYPICAL WALL INTERSECTION ELEVATION DETAILS

FOR 200 AFS WALLS ONLY



TYPICAL TEMP. MOVEMENT JOINT 'TSJ' DETAIL
AT BEAM / WALL CONNECTION



TYPICAL TEMP. MOVEMENT JOINT 'TSJ' DETAIL
AT SLAB / WALL CONNECTION

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
1	TENDER ISSUE	I.S.	P.R.	26.10.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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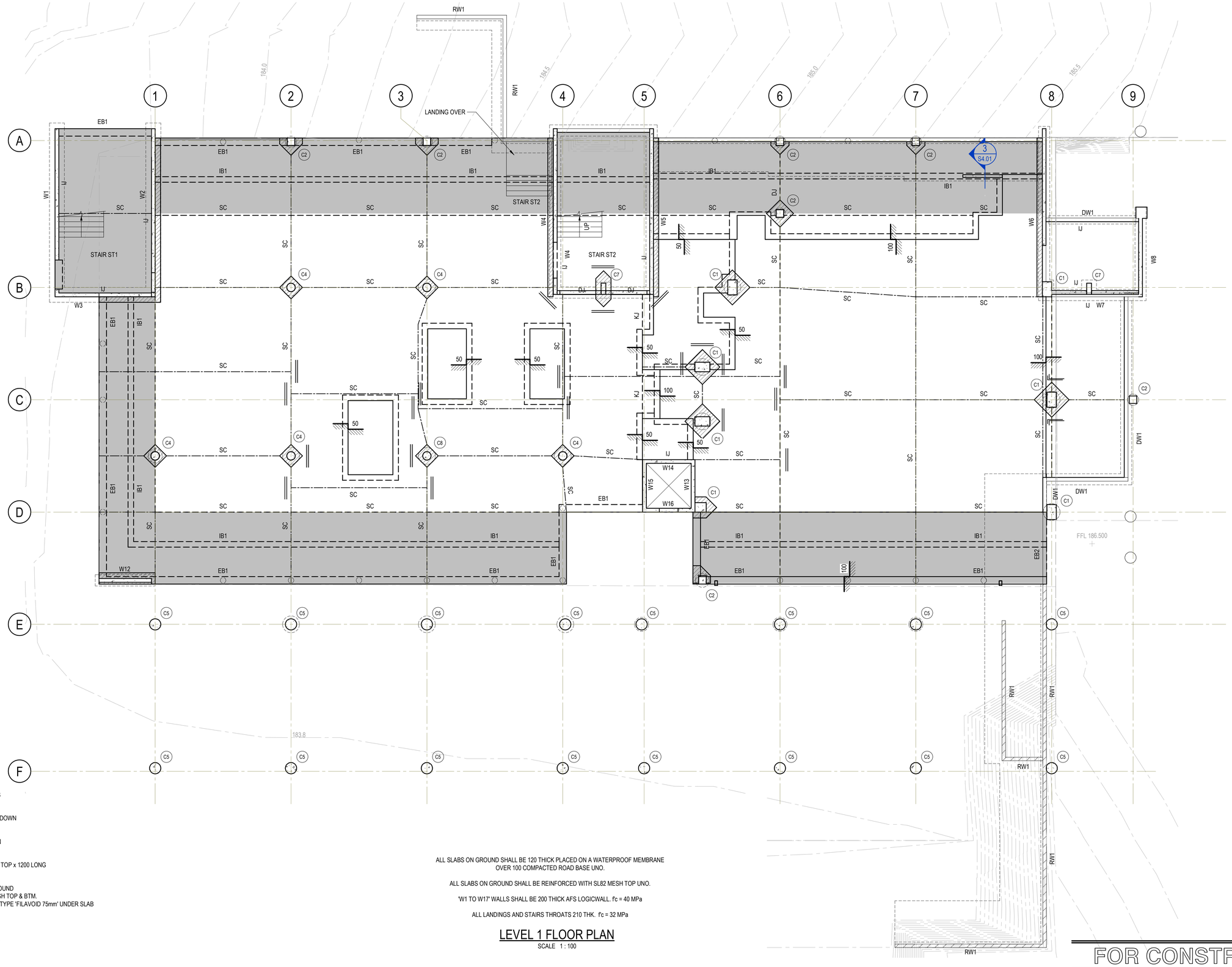
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: WALL DETAILS

Drawn	Designed	Date
Author	T.M.	10/19/18
Checked	Approved	Scale
P.R.	R.K.	1 : 20

Drawing number: 18380-S3.04

Revision: A



SLAB ON GROUND LEGEND :

- +++ DENOTES SLAB THICKNESS
- +++ DENOTES LOCAL SLAB SETDOWN
- +++ DENOTES SLAB STEPDOWN
- DENOTES 2-N12 TRIMMERS TOP x 1200 LONG
- DENOTES 150 SLAB ON GROUND
  REINFORCE WITH SL82 MESH TOP & BTM.
  ALLOW FOR VOID FORMER TYPE 'FILAVOID 75mm' UNDER SLAB

SLAB JOINTS DENOTED THUS:

- DJ DENOTED DOWELED JOINT
- SC DENOTES SAW CUT JOINT
- IJ DENOTES ISOLATION JOINT

ALL SLABS ON GROUND SHALL BE 120 THICK PLACED ON A WATERPROOF MEMBRANE OVER 100 COMPACTED ROAD BASE UNO.

ALL SLABS ON GROUND SHALL BE REINFORCED WITH SL82 MESH TOP UNO.

'W1 TO W17' WALLS SHALL BE 200 THICK AFS LOGICWALL. f'c = 40 MPa

ALL LANDINGS AND STAIRS THROATS 210 THK. f'c = 32 MPa

LEVEL 1 FLOOR PLAN

SCALE 1 : 100

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
5	REVISED FOR TENDER	I.S.	P.R.	26.10.2018
4	REVISED FOR TENDER	T.L.	P.R.	17.10.2018
3	REVISED FOR TENDER	I.S.	P.R.	10.10.2018
2	TENDER ISSUE	S.W.	P.R.	31.08.2018
1	PRELIMINARY ISSUE	S.W.	P.R.	09.08.2018

Client
NSW DEPARTMENT OF EDUCATION

Architect
NBRS ARCHITECTURE

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henry&hymas

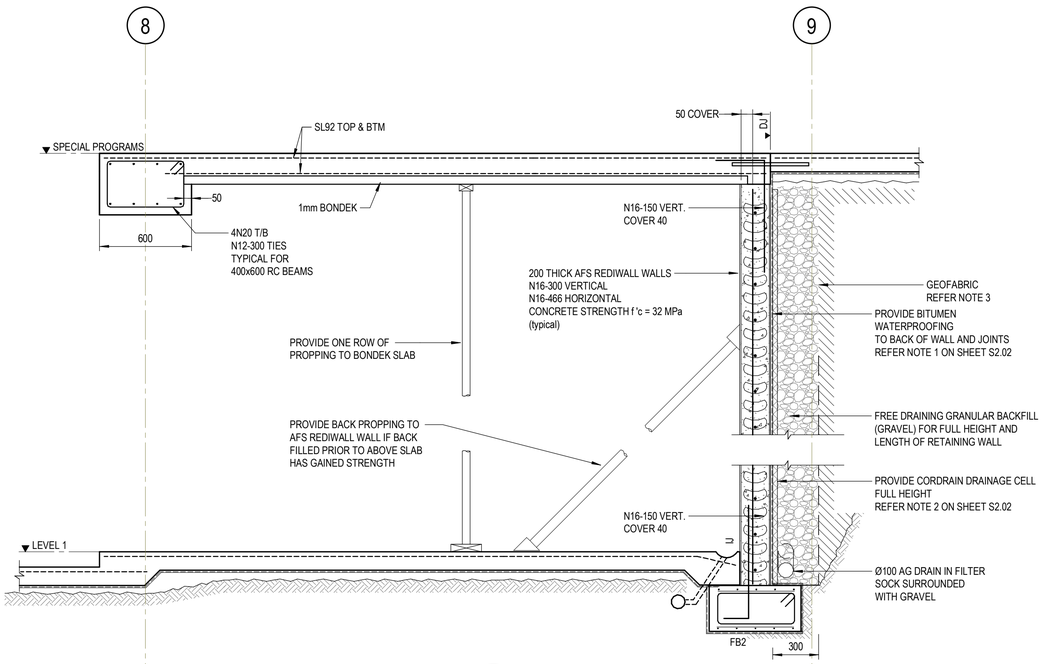
Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title
LEVEL 1 FLOOR PLAN

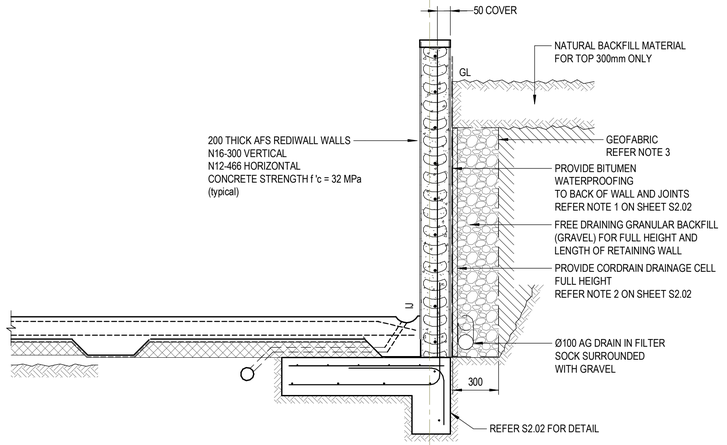
Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	Approved	Scale
P.R.	R.K.	As indicated

Drawing number
18380-S4.00

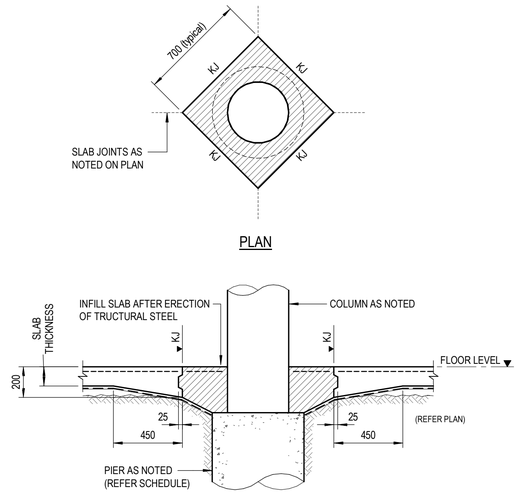
Revision
A



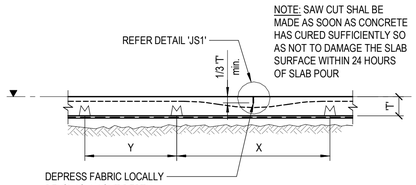
SECTION 1 / S2.00
SCALE 1 : 20



SECTION 2 / S2.00
SCALE 1 : 20



TYPICAL SLAB ON GROUND BLOCK-OUT AT COLUMN
SCALE 1 : 20

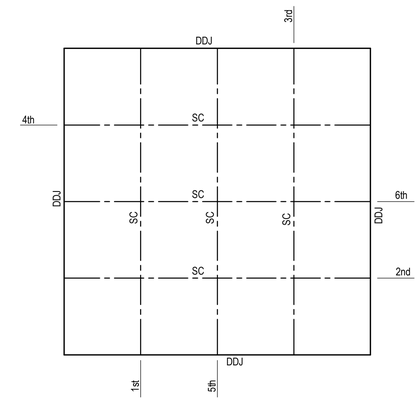


NOTE: SAW CUT SHAL BE MADE AS SOON AS CONCRETE HAS CURED SUFFICIENTLY SO AS NOT TO DAMAGE THE SLAB SURFACE WITHIN 24 HOURS OF SLAB POUR

SAW CUT JOINT
NOTED 'SC' ON PLAN

NOTE:
X = INDICATES CHAIR SPACING AT SAW CUT
SL72 = 1000
SL82 = 1200
Y = INDICATES CHAIR SPACING TYPICALLY THROUGHOUT
SL72 = 600 c/c
SL82 = 800 c/c

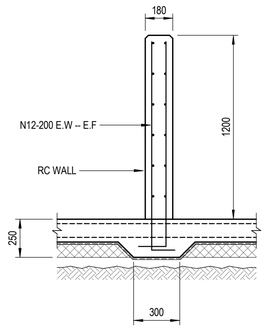
* SAW CUT LOCATIONS SHALL BE ACCURATELY MARKED OUT USING CHALK LINE
* SAW CUTS SHALL BE MADE IN ONE PASS TO CORRECT DEPTH
* TIME OF SAW CUT TO BE RECORDED AND LOGGED WITH BUILDER
* SAW CUT ORDER SHALL COMMENCE AT 1ST CUT FROM OUTSIDE EDGE AND CONTINUE IN A ROTATIONAL ORDER TOWARDS MIDDLE OF SLAB PANEL. REFER EXAMPLE BAYS BELOW:



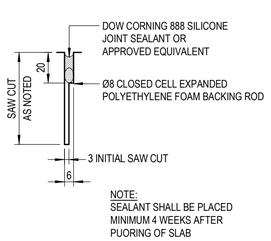
EXAMPLE SAW CUT SEQUENCE

EDGE BEAM 'EB1' DETAIL
SCALE 1 : 20

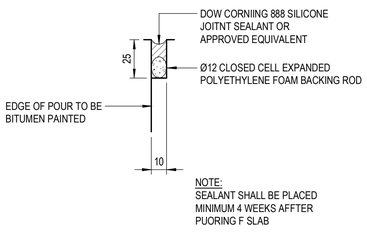
INTERNAL BEAM 'IB1' DETAIL
SCALE 1 : 20



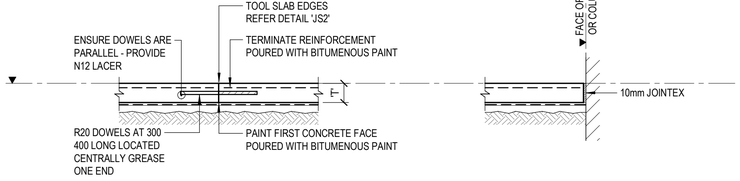
SECTION 3 / 4.00



TYPICAL SAW CUT JOINT SEALANT DETAIL 'JS1'

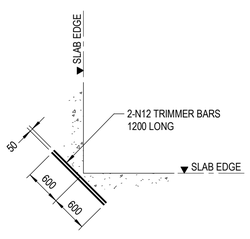


TYPICAL CONTINUOUS POUR DOWELED JOINT DETAIL 'JS2'
MAXIMUM DOWEL JOINT SPACING 25m. NOTIFY ENGINEER IF JOINT SPACING EXCEEDS 25m

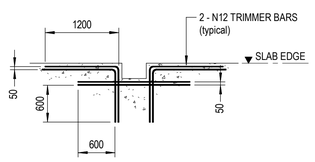


DOWELED JOINT
NOTED DJ ON PLAN

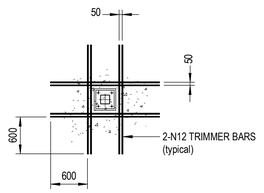
ISOLATION JOINT
TYPICAL AT ALL WALLS AND COLUMNS



RE-ENTRANT CORNER - INTERNAL



EDGE PENETRATION



COLUMN RECESS
FOR COLUMN RECESS DETAILS REFER PLAN

TYPICAL TRIMMING DETAILS
SCALE 1 : 50

FOR CONSTRUCTION

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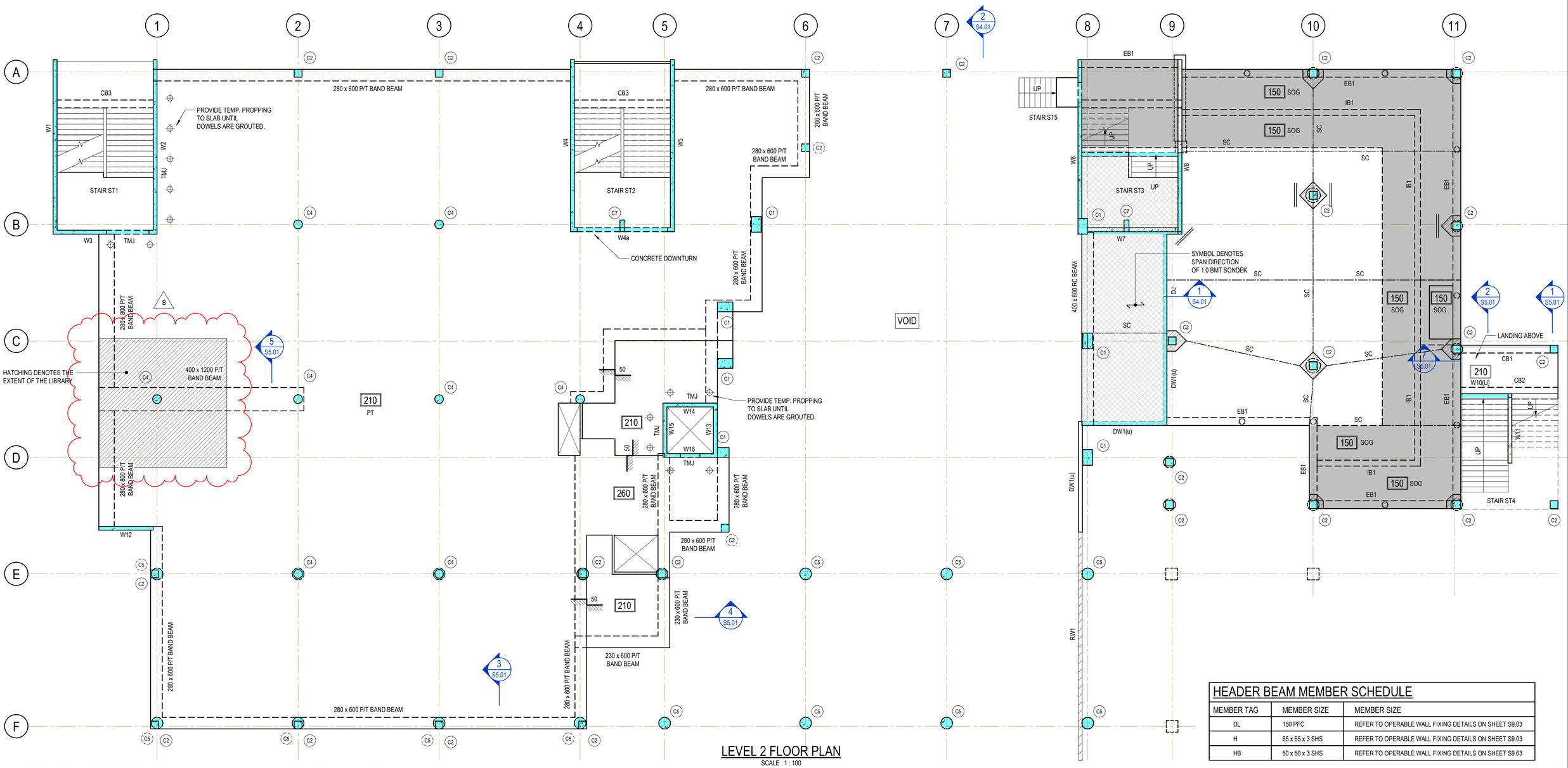
Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title
LEVEL 1 DETAILS

Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	Approved	Scale
P.R.	R.K.	As indicated

Drawing number
18380-S4.01

Revision
A



HEADER BEAM MEMBER SCHEDULE

MEMBER TAG	MEMBER SIZE	MEMBER SIZE
DL	150 PFC	REFER TO OPERABLE WALL FIXING DETAILS ON SHEET S9.03
H	65 x 65 x 3 SHS	REFER TO OPERABLE WALL FIXING DETAILS ON SHEET S9.03
HB	50 x 50 x 3 SHS	REFER TO OPERABLE WALL FIXING DETAILS ON SHEET S9.03

LEVEL 2 FLOOR PLAN

SCALE 1 : 100

ALL SUSPENDED SLABS SHALL BE 210 THICK UNO.

ALL SLABS ON GROUND SHALL BE 120 THICK PLACED ON A WATERPROOF MEMBRANE OVER 100 COMPACTED ROAD BASE UNO.

ALL SLABS ON GROUND SHALL BE REINFORCED WITH SL82 MESH TOP UNO.

'W1 TO W17' WALLS SHALL BE 200 THICK AFS LOGICWALL. f'c = 40 MPa

ALL LANDINGS AND STAIRS THROATS 210 THK. f'c = 32 MPa

SUSPENDED CONCRETE LEGEND:

- +++ — DENOTES SLAB THICKNESS
- +++ — DENOTES LOCAL SLAB SETDOWN
- +++ — DENOTES STEP IN SLAB
- DENOTES LOAD BEARING WALL/COLUMN UNDER
- DENOTES REINFORCED CONCRETE WALL/COLUMN OVER
- DENOTES REINFORCED CONCRETE WALL/COLUMN UNDER & OVER
- C+ — DENOTES COLUMN OVER TYPE REFER DRAWING SERIES S4.00 FOR DETAILS
- C+ — DENOTES COLUMN UNDER TYPE REFER DRAWING SERIES S4.00 FOR DETAILS
- DENOTES NON-LOAD BEARING WALL OVER
- HOB — DENOTES HOB. REFER ARCHITECT'S DRAWINGS FOR LOCATIONS & SIZES
- +++ UPSTAND — DENOTES WIDTH OF CONCRETE UPSTAND REFER ARCHITECTURAL CONCRETE SETOUT DRAWINGS FOR DETAILS

SLAB ON GROUND LEGEND :

- +++ — DENOTES SLAB THICKNESS
- +++ — DENOTES LOCAL SLAB SETDOWN
- +++ — DENOTES SLAB STEPDOWN
- DENOTES 2-N12 TRIMMERS TOP x 1200 LONG
- DENOTES 150 SLAB ON GROUND REINFORCE WITH SL82 MESH TOP & BTM. POURED OVER VOID FORMER TYPE 'FILAVOID 75mm' UNDER SLAB
- DENOTES 170 THICK SLAB POURED ON 1.0 BMT BONDEK

SLAB JOINTS DENOTED THUS:

- DJ — DENOTED DOWELED JOINT
- SC — DENOTES SAW CUT JOINT
- IJ — DENOTES ISOLATION JOINT

POST-TENSIONED SLAB AND BEAM CONSTRUCTION FLOOR DESIGN PARAMETERS

DESIGN LOADING:

LIVE LOADS

- GENERALLY:		3.0 kPa
- BALCONY/ STAIRS		4.0 kPa
- ROOF PLANT		5.0 kPa
- LIBRARY		7.0 kPa
SUPERIMPOSED DEAD LOAD	- GENERALLY	1.0 kPa
- BALCONY		1.5 kPa
- ROOF PLANT		2.0 kPa

LIVE LOAD REDUCTIONS SHALL NOT BE USED

POINT LOADS - DL++ - DENOTES DEAD LOAD OF ++kN
- LL++ - DENOTES LIVE LOAD OF ++kN

LINE LOADS - DL/m++ - DENOTES DEAD LOAD OF ++kN/m
- LL/m++ - DENOTES LIVE LOAD OF ++kN/m

CONCRETE STRENGTH:

UNLESS NOTED OTHERWISE MINIMUM CONCRETE STRENGTH SHALL BE:
- GENERALLY f'c = 40 MPa

FIRE RATING:

UNLESS NOTED OTHERWISE FIRE RATING SHALL BE: 2 HOURS

DEFLECTION LIMITATION:

TOTAL DEFLECTION:	L/250 OR 25mm (typical UNO)
	L/125 (CANTILEVER)
INCREMENTAL DEFLECTION:	L/500
	L/1000 (AT MASONRY WALLS

COVER:

INTERNAL:	25mm
EXPOSED SURFACES:	40mm

PROVIDE PLASTIC OR CONCRETE BAR CHAIRS TO ALL EXPOSED SURFACES.

NOTE:

1. THE MINIMUM CONCRETE STRENGTH AS NOTED MAY BE INCREASED BY THE POST TENSIONING DESIGNER TO FACILITATE THE STRESSING PROGRAM.
2. THE POST TENSIONING CONTRCTOR SHALL DESIGN AND DOCUMENTS ALL ELEMENTS CAST INTEGRALLY WITH THE POST TENSIONED FLOOR INCLUDING ALL EDGE BEAMS.
3. STRUCTURAL SIZES AND FRAMING AS INDICATED ON PLAN ARE INDICATIVE ONLY, THE POST TENSIONING CONTRACTOR MAY VARY THE INDICATED SIZES AS REQUIRED TO COMPLY WITH AUSTRALIAN STANDARDS OR TO PRODUCE A MORE ECONOMICAL DESIGN.
4. FOR CO-ORDINATION PURPOSES, ANY VARIATIONS TO THIS PLAN/DESIGN MADE BY THE POST TENSIONING CONTRACTOR SHALL BE APPROVED BY HENRY AND HYMAS.

FOR CONSTRUCTION

NOTES :

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REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
B	REVISED FOR CONSTRUCTION	I.S.	P.R.	30.01.2019
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
5	REVISED FOR TENDER	I.S.	P.R.	26.10.2018
4	REVISED FOR TENDER	T.L	P.R.	17.10.2018
3	REVISED FOR TENDER	I.S.	P.R.	10.10.2018
2	TENDER ISSUE	S.W.	P.R.	31.08.2018
1	PRELIMINARY ISSUE	S.W.	P.R.	09.08.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

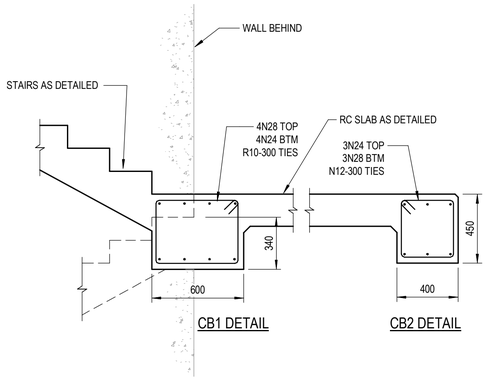
Title: LEVEL 2 FLOOR PLAN

Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked: P.R.	Approved: R.K.	Scale: As indicated

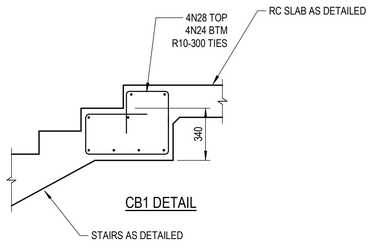
Drawing number: 18380-S5.00

Revision: B

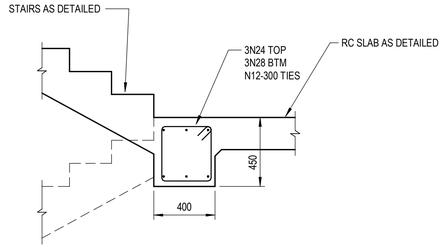
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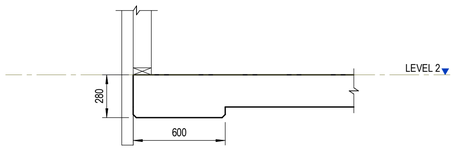
SECTION 1 / S5.00
SCALE 1 : 20



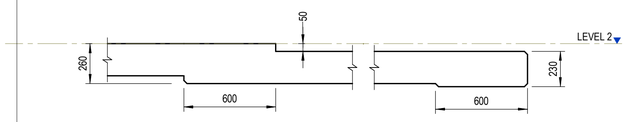
SECTION 2 / S5.00
SCALE 1 : 20



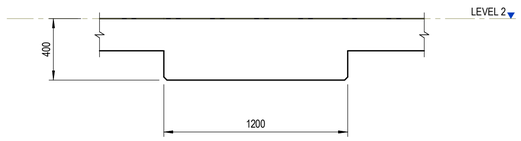
CB3 DETAIL



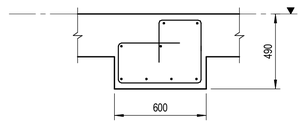
SECTION 3 / S5.00
SCALE 1 : 20



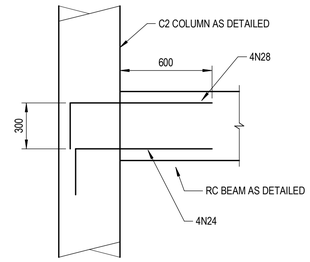
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SECTION 5 / S5.00
SCALE 1 : 20



SECTION 6 / S6.00
SCALE 1 : 20



SECTION 7 / S5.00
SCALE 1 : 20

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019

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Architect
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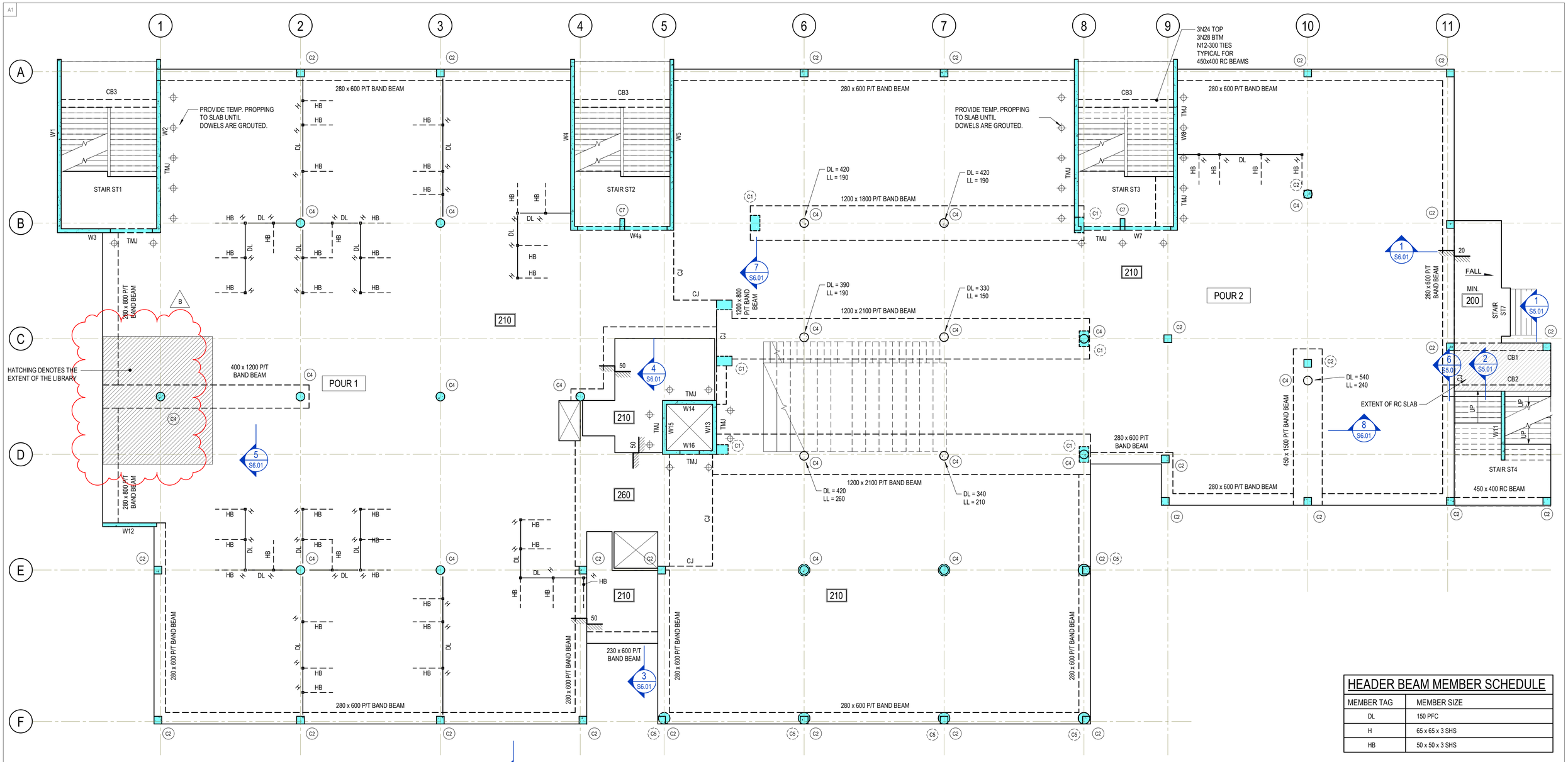
Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title
LEVEL 2 DETAILS

Drawn	Designed	Date
Author	T.M.	01/21/19
Checked	Approved	Scale
P.R.	R.K.	1 : 20

Drawing number
18380-S5.01

Revision
A



HEADER BEAM MEMBER SCHEDULE

MEMBER TAG	MEMBER SIZE
DL	150 PFC
H	65 x 65 x 3 SHS
HB	50 x 50 x 3 SHS

SUSPENDED CONCRETE LEGEND:

- +++ — DENOTES SLAB THICKNESS
- +++ — DENOTES LOCAL SLAB SETDOWN
- DENOTES STEP IN SLAB
- DENOTES LOAD BEARING WALL/COLUMN UNDER
- DENOTES REINFORCED CONCRETE WALL/COLUMN OVER
- DENOTES REINFORCED CONCRETE WALL/COLUMN UNDER & OVER
- C+ — DENOTES COLUMN OVER TYPE REFER DRAWING SERIES S4.00 FOR DETAILS
- C+ — DENOTES COLUMN UNDER TYPE REFER DRAWING SERIES S4.00 FOR DETAILS
- DENOTES NON-LOAD BEARING WALL OVER
- HOB — DENOTES HOB. REFER ARCHITECT'S DRAWINGS FOR LOCATIONS & SIZES
- +++ UPSTAND — DENOTES WIDTH OF CONCRETE UPSTAND REFER ARCHITECTURAL CONCRETE SETOUT DRAWINGS FOR DETAILS

DL = XX
DX = XX — DENOTES TRANSFER LOADS FOR PT DESIGN

CJ — DENOTES TIED CONSTRUCTION JOINTS REFER DETAIN ON SHEET S6.01

LEVEL 3 FLOOR PLAN

SCALE 1 : 100

ALL POST-TENSIONED SLABS SHALL BE 210 THICK UNO.

'W1 TO W17' WALLS SHALL BE 200 THICK AFS LOGICWALL, f'c = 40 MPa

ALL LANDINGS AND STAIRS THROATS 210 THK, f'c = 32 MPa

POST-TENSIONED SLAB AND BEAM CONSTRUCTION FLOOR DESIGN PARAMETERS

DESIGN LOADING:

LIVE LOADS — LIVE LOAD REDUCTIONS SHALL NOT BE USED

- GENERALLY:	3.0 kPa
- BALCONY/ STAIRS	4.0 kPa
- ROOF PLANT	5.0 kPa
- LIBRARY	7.0 kPa

SUPERIMPOSED DEAD LOAD

- GENERALLY	1.0 kPa
- BALCONY	1.5 kPa
- ROOF PLANT	2.0 kPa

POINT LOADS
- DL++ - DENOTES DEAD LOAD OF ++kN
- LL++ - DENOTES LIVE LOAD OF ++kN

LINE LOADS
- DL/m++ - DENOTES DEAD LOAD OF ++kN/m
- LL/m++ - DENOTES LIVE LOAD OF ++kN/m

CONCRETE STRENGTH:

UNLESS NOTED OTHERWISE MINIMUM CONCRETE STRENGTH SHALL BE:
- GENERALLY f'c = 40 MPa

FIRE RATING:

UNLESS NOTED OTHERWISE FIRE RATING SHALL BE: 2 HOURS

DEFLECTION LIMITATION:

TOTAL DEFLECTION:	L/250 OR 25mm (typical UNO)
	L/125 (CANTILEVER)
INCREMENTAL DEFLECTION:	L/500
	L/1000 (AT MASONRY WALLS

COVER:

INTERNAL:	25mm
EXPOSED SURFACES:	40mm

PROVIDE PLASTIC OR CONCRETE BAR CHAIRS TO ALL EXPOSED SURFACES.

NOTE:

1. THE MINIMUM CONCRETE STRENGTH AS NOTED MAY BE INCREASED BY THE POST TENSIONING DESIGNER TO FACILITATE THE STRESSING PROGRAM.
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2	TENDER ISSUE	S.W.	P.R.	31.08.2018
1	PRELIMINARY ISSUE	S.W.	P.R.	09.08.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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henry&hymas

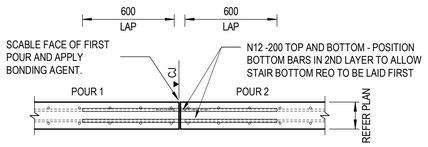
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: LEVEL 3 FLOOR PLAN

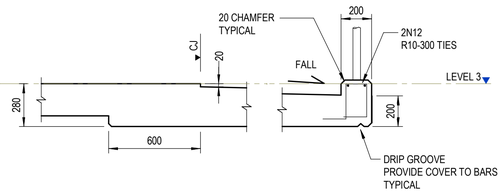
Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	Approvec	Scale
P.R.	R.K.	As indicated

Drawing number: 18380-S6.00

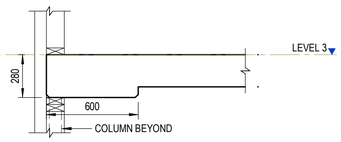
Revision: B



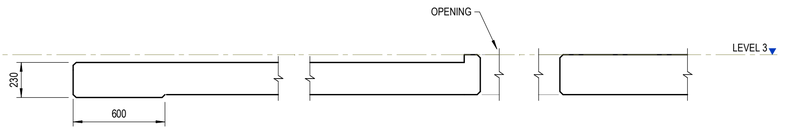
TYPICAL PT SLAB CONTROL JOINT 'CJ' DETAIL



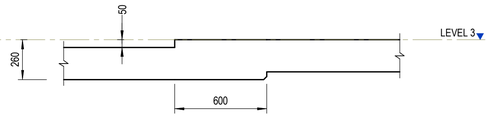
SECTION 1
SCALE 1 : 20 S6.00



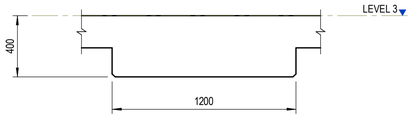
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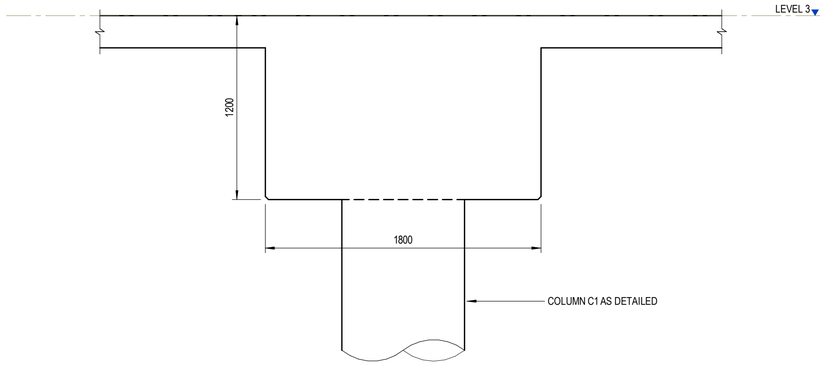
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SCALE 1 : 20 S6.00



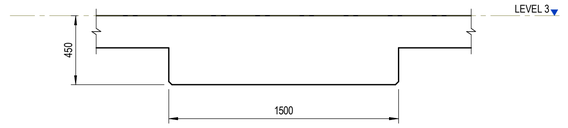
SECTION 4
SCALE 1 : 20 S6.00



SECTION 5
SCALE 1 : 20 S6.00



SECTION 7
SCALE 1 : 20 S6.00



SECTION 8
SCALE 1 : 20 S6.00

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019

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Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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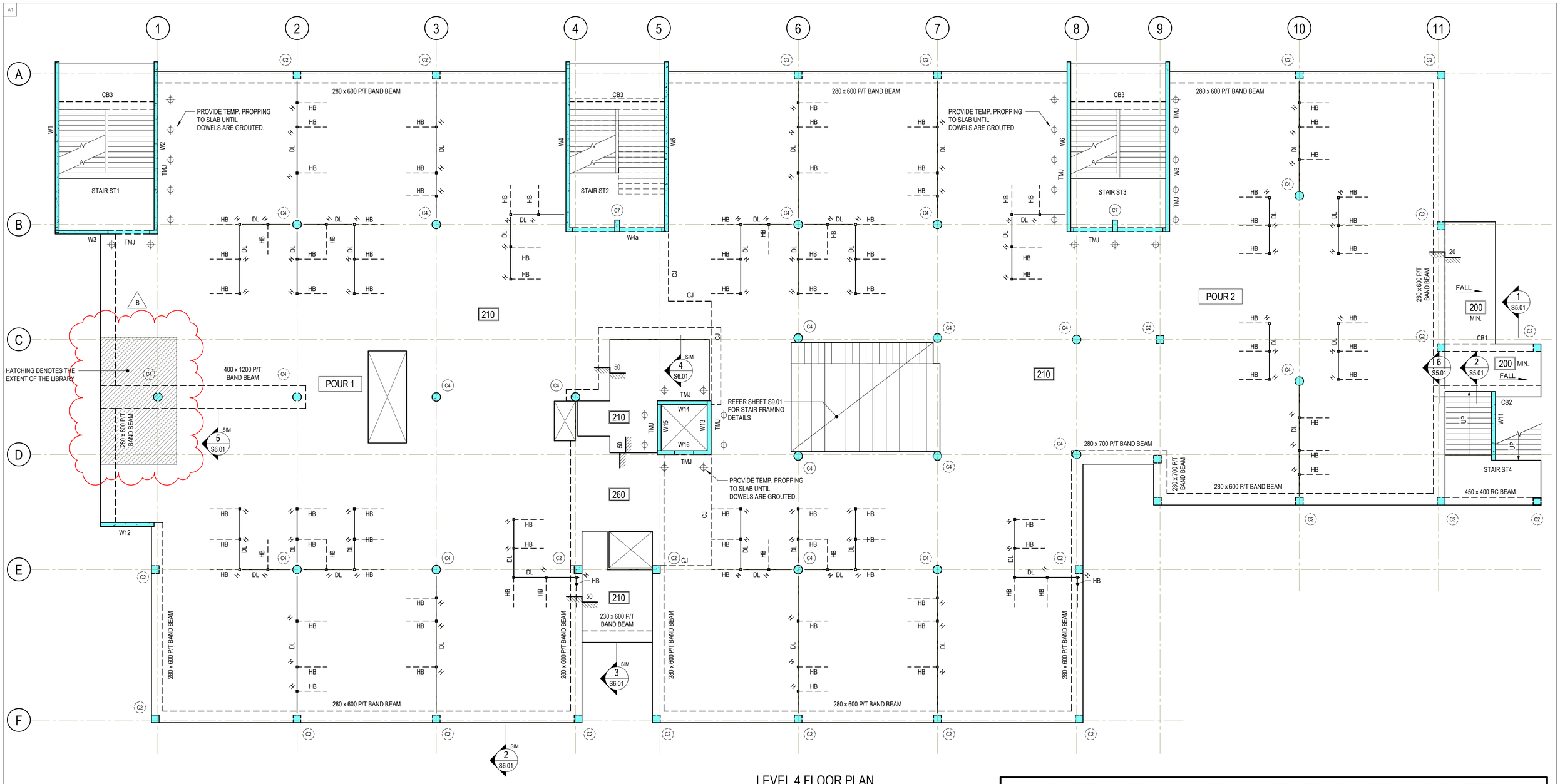
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: LEVEL 3 DETAILS

Drawn	Designed	Date
Author	T.M.	01/21/19
Checked	Approved	Scale
P.R.	R.K.	1 : 20

Drawing number: 18380-S6.01

Revision: A



SUSPENDED CONCRETE LEGEND:

+++	DENOTES SLAB THICKNESS
(+++)	DENOTES LOCAL SLAB SETDOWN
+++	DENOTES STEP IN SLAB
	DENOTES LOAD BEARING WALL/COLUMN UNDER
	DENOTES REINFORCED CONCRETE WALL/COLUMN OVER
	DENOTES REINFORCED CONCRETE WALL/COLUMN UNDER & OVER
C+	DENOTES COLUMN OVER TYPE REFER DRAWING SERIES S4.00 FOR DETAILS
C+	DENOTES COLUMN UNDER TYPE REFER DRAWING SERIES S4.00 FOR DETAILS
	DENOTES NON-LOAD BEARING WALL OVER
HOB	DENOTES HOB. REFER ARCHITECT'S DRAWINGS FOR LOCATIONS & SIZES
+++ UPSTAND	DENOTES WIDTH OF CONCRETE UPSTAND REFER ARCHITECTURAL CONCRETE SETOUT DRAWINGS FOR DETAILS

LEVEL 4 FLOOR PLAN

SCALE 1 : 100

ALL POST-TENSIONED SLABS SHALL BE 210 THICK UNO.

'W1 TO W17' WALLS SHALL BE 200 THICK AFS LOGICWALL. f'c = 40 MPa

ALL LANDINGS AND STAIRS THROATS 210 THK, f'c = 32 MPa

FOR CONSTRUCTION

NOTES :

THIS DRAWING SHALL BE USED FOR FORMWORK PURPOSES ONLY AND SHALL BE READ IN CONJUNCTION WITH THE POST TENSIONING CONTRACTORS DRAWINGS.
ANY DISCREPANCIES FOUND IN THE SIZING OF CONCRETE ELEMENTS ON THE DRAWING SHALL BE FORWARDED TO THE ENGINEER PRIOR TO ERECTING THE FORMWORK.

POST-TENSIONED SLAB AND BEAM CONSTRUCTION FLOOR DESIGN PARAMETERS

DESIGN LOADING:

LIVE LOADS — LIVE LOAD REDUCTIONS SHALL NOT BE USED

- GENERALLY:		3.0 kPa
- BALCONY/ STAIRS		4.0 kPa
- ROOF PLANT		5.0 kPa
- LIBRARY		7.0 kPa

SUPERIMPOSED DEAD LOAD

- GENERALLY	1.0 kPa
- BALCONY	1.5 kPa
- ROOF PLANT	2.0 kPa

POINT LOADS
- DL++ - DENOTES DEAD LOAD OF ++kN
- LL++ - DENOTES LIVE LOAD OF ++kN

LINE LOADS
- DL/m++ - DENOTES DEAD LOAD OF ++kN/m
- LL/m++ - DENOTES LIVE LOAD OF ++kN/m

CONCRETE STRENGTH:

UNLESS NOTED OTHERWISE MINIMUM CONCRETE STRENGTH SHALL BE:
- GENERALLY f'c = 40 MPa

FIRE RATING:

UNLESS NOTED OTHERWISE FIRE RATING SHALL BE: 2 HOURS

DEFLECTION LIMITATION:

TOTAL DEFLECTION:	L/250 OR 25mm (typical UNO)
	L/125 (CANTILEVER)
INCREMENTAL DEFLECTION:	L/500
	L/1000 (AT MASONRY WALLS

COVER:

INTERNAL:	25mm
EXPOSED SURFACES:	40mm

PROVIDE PLASTIC OR CONCRETE BAR CHAIRS TO ALL EXPOSED SURFACES.

NOTE:

1. THE MINIMUM CONCRETE STRENGTH AS NOTED MAY BE INCREASED BY THE POST TENSIONING DESIGNER TO FACILITATE THE STRESSING PROGRAM.
2. THE POST TENSIONING CONTRCTOR SHALL DESIGN AND DOCUMENTS ALL ELEMENTS CAST INTEGRALLY WITH THE POST TENSIONED FLOOR INCLUDING ALL EDGE BEAMS.
3. STRUCTURAL SIZES AND FRAMING AS INDICATED ON PLAN ARE INDICATIVE ONLY, THE POST TENSIONING CONTRACTOR MAY VARY THE INDICATED SIZES AS REQUIRED TO COMPLY WITH AUSTRALIAN STANDARDS OR TO PRODUCE A MORE ECONOMICAL DESIGN.
4. FOR CO-ORDINATION PURPOSES, ANY VARIATIONS TO THIS PLAN/DESIGN MADE BY THE POST TENSIONING CONTRACTOR SHALL BE APPROVED BY HENRY AND HYMAS.

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
B	REVISED FOR CONSTRUCTION	I.S.	P.R.	30.01.2019
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
5	REVISED FOR TENDER	I.S.	P.R.	26.10.2018
4	REVISED FOR TENDER	T.L	P.R.	17.10.2018
3	REVISED FOR TENDER	I.S.	P.R.	10.10.2018
2	TENDER ISSUE	S.W.	P.R.	31.08.2018
1	PRELIMINARY ISSUE	S.W.	P.R.	09.08.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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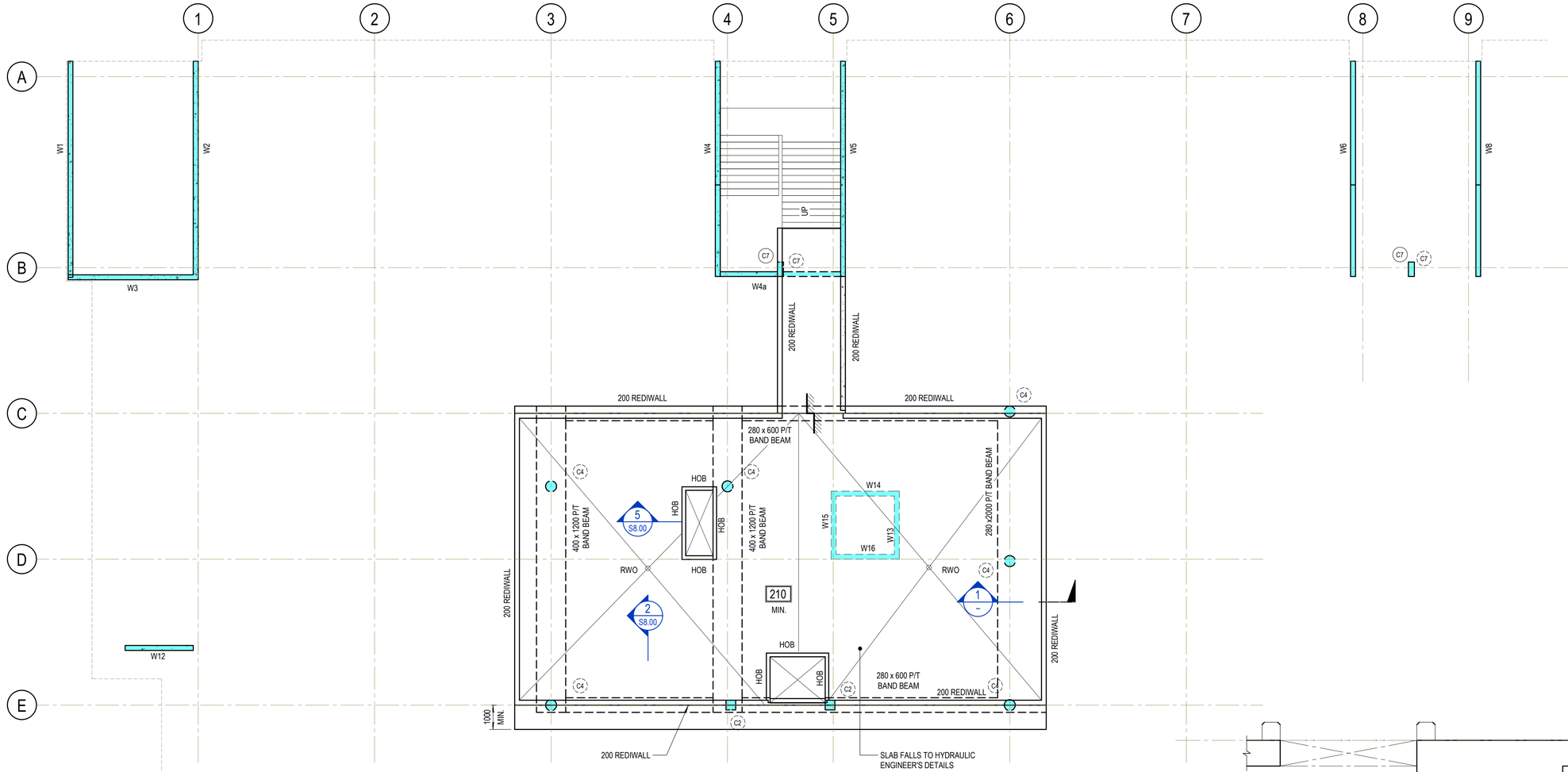
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: LEVEL 4 FLOOR PLAN

Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	Aproved	Scale
P.R.	R.K.	As indicated

Drawing number: 18380-S7.00

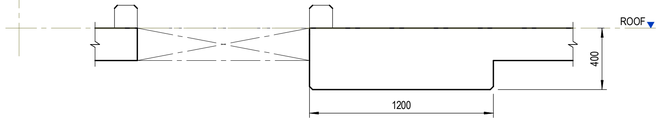
Revision: B



ROOF PLAN

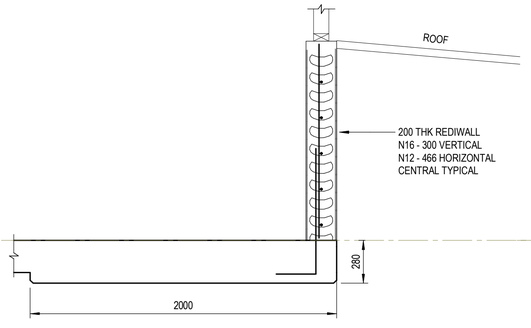
SCALE 1 : 100

ALL POST-TENSIONED SLABS SHALL BE 210 MIN. THICK UNO.



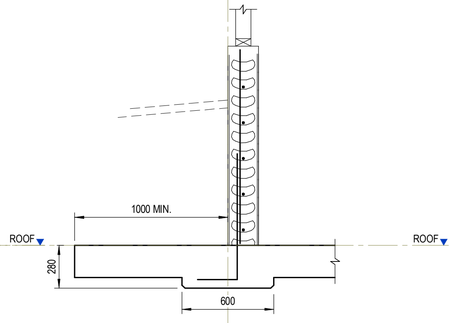
ELEVATION 5 / -

SCALE 1 : 20



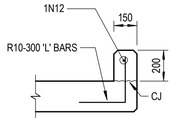
SECTION 1 / -

SCALE 1 : 20



SECTION 2 / -

SCALE 1 : 20



TYPICAL HOB DETAIL

SUSPENDED CONCRETE LEGEND:

- +++ — DENOTES SLAB THICKNESS
- (+++) — DENOTES LOCAL SLAB SETDOWN
- +++ — DENOTES STEP IN SLAB
- DENOTES LOAD BEARING WALL/COLUMN UNDER
- DENOTES REINFORCED CONCRETE WALL/COLUMN OVER
- DENOTES REINFORCED CONCRETE WALL/COLUMN UNDER & OVER
- C+ — DENOTES COLUMN OVER TYPE. REFER DRAWING SERIES S4.00 FOR DETAILS
- C+ — DENOTES COLUMN UNDER TYPE. REFER DRAWING SERIES S4.00 FOR DETAILS
- DENOTES NON-LOAD BEARING WALL OVER
- HOB — DENOTES HOB. REFER ARCHITECT'S DRAWINGS FOR LOCATIONS & SIZES
- +++ UPSTAND — DENOTES WIDTH OF CONCRETE UPSTAND. REFER ARCHITECTURAL CONCRETE SETOUT DRAWINGS FOR DETAILS

NOTES :

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POST-TENSIONED SLAB AND BEAM CONSTRUCTION FLOOR DESIGN PARAMETERS

DESIGN LOADING:

LIVE LOADS
- GENERALLY: 3.0 kPa
- BALCONY/ STAIRS 4.0 kPa
- ROOF PLANT 5.0 kPa

SUPERIMPOSED DEAD LOAD
- GENERALLY 1.0 kPa
- BALCONY 1.5 kPa
- ROOF PLANT 2.0 kPa

POINT LOADS
- DL++ - DENOTES DEAD LOAD OF ++kN
- LL++ - DENOTES LIVE LOAD OF ++kN

LINE LOADS
- DL/m++ - DENOTES DEAD LOAD OF ++kN/m
- LL/m++ - DENOTES LIVE LOAD OF ++kN/m

CONCRETE STRENGTH:

UNLESS NOTED OTHERWISE MINIMUM CONCRETE STRENGTH SHALL BE:
- GENERALLY f'c = 40 MPa

FIRE RATING:

UNLESS NOTED OTHERWISE FIRE RATING SHALL BE: 2 HOURS

LIVE LOAD REDUCTIONS SHALL NOT BE USED

DEFLECTION LIMITATION:

TOTAL DEFLECTION: L/250 OR 25mm (typical UNO); L/125 (CANTILEVER)

INCREMENTAL DEFLECTION: L/500; L/1000 (AT MASONRY WALLS)

COVER:

INTERNAL: 25mm

EXPOSED SURFACES: 40mm

PROVIDE PLASTIC OR CONCRETE BAR CHAIRS TO ALL EXPOSED SURFACES.

NOTE:

1. THE MINIMUM CONCRETE STRENGTH AS NOTED MAY BE INCREASED BY THE POST TENSIONING DESIGNER TO FACILITATE THE STRESSING PROGRAM.
2. THE POST TENSIONING CONTRCTOR SHALL DESIGN AND DOCUMENTS ALL ELEMENTS CAST INTEGRALLY WITH THE POST TENSIONED FLOOR INCLUDING ALL EDGE BEAMS.
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FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
4	REVISED FOR TENDER	I.S.	P.R.	26.10.2018
3	REVISED FOR TENDER	T.L	P.R.	17.10.2018
2	REVISED FOR TENDER	I.S.	P.R.	10.10.2018
1	TENDER ISSUE	S.W.	P.R.	31.08.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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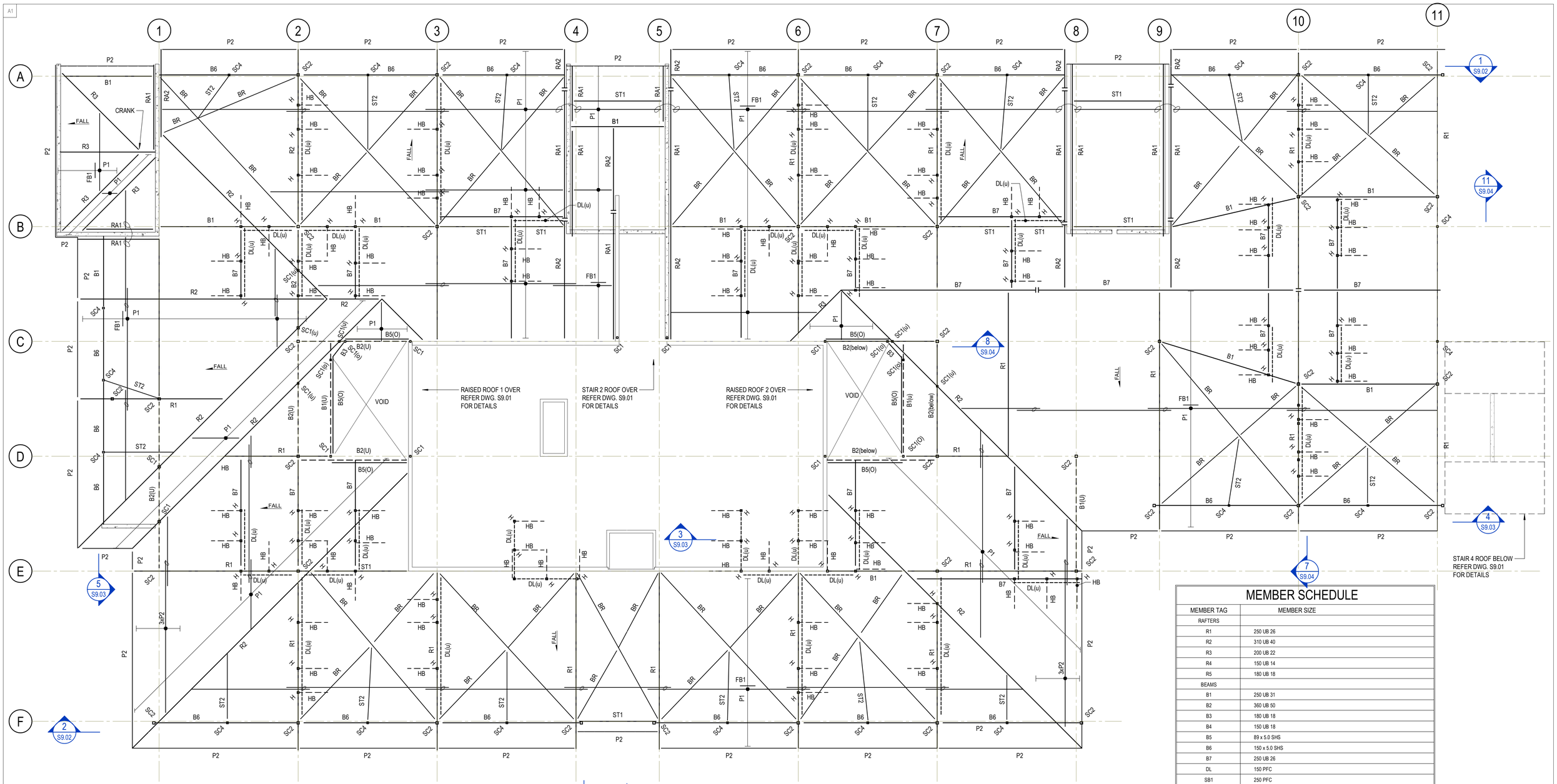
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: ROOF FLOOR PLAN

Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	Approved	Scale
P.R.	R.K.	As indicated

Drawing number: 18380-S8.00

Revision: A



ROOF FRAMING

SCALE 1 : 100

PURLIN NOTES:

1. UNLESS NOTED OTHERWISE ALL PURLINS SHALL BE LAPPED AS FOLLOWS:-

SPAN	MINIMUM LAP
< 6000	900
> 6000 < 8000	1200
> 8000 < 12000	1500
> 12000	1800

2. PURLINS, GIRTS AND BRIDGING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION.

3. UNLESS NOTED OTHERWISE PROVIDE PURLIN / GIRT BRIDGING AS FOLLOWS:-

PURLIN SIZE	MAXIMUM PURLIN SPAN		
	0 BRIDGES	1 BRIDGES	2 BRIDGES
100	2000	4000 (3000)	6000 (5000)
150	3000	6000 (5000)	9000 (7000)
200	4000	8000 (7000)	12000 (9000)
250	5000	10000 (8000)	15000 (12000)

NOTED: FIGURES IN BRACKETS APPLY TO SIMPLY SUPPORTED PURLINS

NOTES:

1. FOR ALL GENERAL STEELWORK NOTES REFER CONSTRUCTION NOTES ON DRAWING S1.00
2. ALL BOLTS FOR STEEL TO STEEL CONNECTIONS SHALL BE M20 GRADE 8.8/S U.N.O
3. ALL BRACE MEMBERS SHALL BE TIED TO EVERY SECOND PURLIN CROSSED WITH UNISTRUT STRAP TO PREVENT SAG.
4. PRECAMBER TO ALL STRUCTURE STEEL RAFTERS, TRUSSES AND PORTALS SHALL BE 5mm FOR EVERY 2000mm OF SPAN UNLESS NOTED OTHERWISE ON PLAN.
5. UNLESS NOTED OTHERWISE ALL EXTERNAL STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANISED.
6. UNLESS NOTED OTHERWISE FLY BRACE RAFTERS EVERY 3rd PURLIN.
7. PROVIDE FIRE PROTECTION TO ALL STRUCTURAL STEEL ELEMENTS AS REQUIRED (REFER ARCHITECT'S DRAWING FOR FIRE RATING REQUIREMENTS)

MEMBER SCHEDULE

MEMBER TAG	MEMBER SIZE
PURLINS	
P1	SZ20012 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) LAP AND BRIDGE AS NOTED
P2	SC20024 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) BRIDGE AS NOTED
P3	SC20015 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) BRIDGE AS NOTED
P4	SC10012 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) BRIDGE AS NOTED
G1	SC15015 GIRTS AT 900 max. CENTRES

MEMBER SCHEDULE

MEMBER TAG	MEMBER SIZE
RAFTERS	
R1	250 UB 26
R2	310 UB 40
R3	200 UB 22
R4	150 UB 14
R5	180 UB 18
BEAMS	
B1	250 UB 31
B2	360 UB 50
B3	180 UB 18
B4	150 UB 18
B5	89 x 5.0 SHS
B6	150 x 5.0 SHS
B7	250 UB 26
DL	150 PFC
SB1	250 PFC
SB2	SC15012
COLUMNS	
SC1	89 x 5.0 SHS
SC2	125 x 5.0 SHS
SC3	114.3 x 4.8 CHS
SC4	89 x 5.0 SHS
SC5	125x75x6 RHS
SC6	250x150x5 RHS
SC7	75x4 RHS
DR1	89 x 5.0 SHS
H	65 x 3.0 SHS
BRACES	
BR	75 x 6 EA
RA1	90 x 6 EA
RA2	150 PFC
FB1	50 x 5.0 EA - PROVIDE FB TO EVERY THIRD PURLIN
HB	50 x 3 EA
STRUTS	
ST1	Ø114.3 x 3.2 CHS (EQUIVALENT SHS = 100 x 3.0)
ST2	Ø76.1 x 2.3 CHS (EQUIVALENT SHS = 75 x 2.5)
ST3	89 x 5.0 SHS

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
3	REVISED FOR TENDER	I.S.	P.R.	26.10.2018
2	REVISED FOR TENDER	T.L.	P.R.	17.10.2018
1	ISSUED FOR APPROVAL	I.S.	P.R.	27.09.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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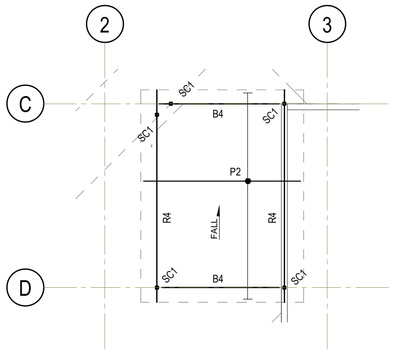
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: ROOF FRAMING PLAN

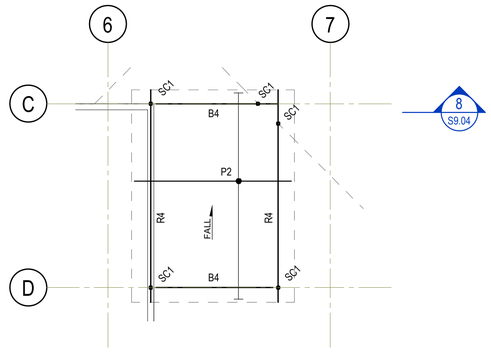
Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked	Approve	Scale
P.R.	R.K.	As indicated

Drawing number: 18380-S9.00

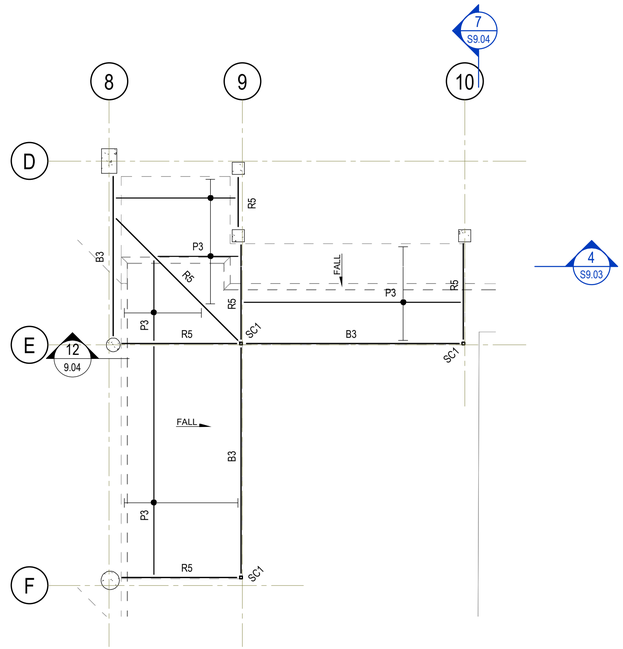
Revision: A



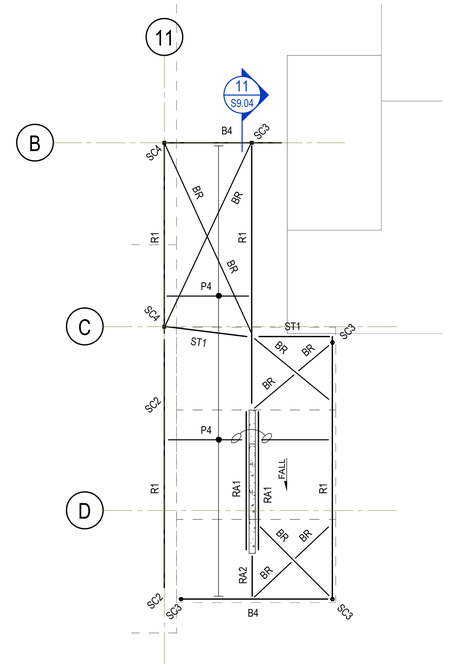
RAISED ROOF 1 FRAMING PLAN
SCALE 1 : 100



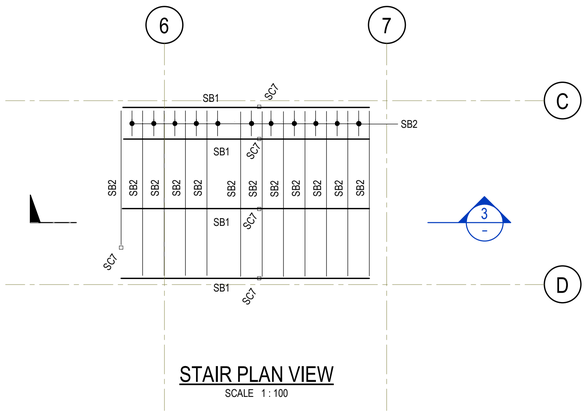
RAISED ROOF 2 FRAMING PLAN
SCALE 1 : 100



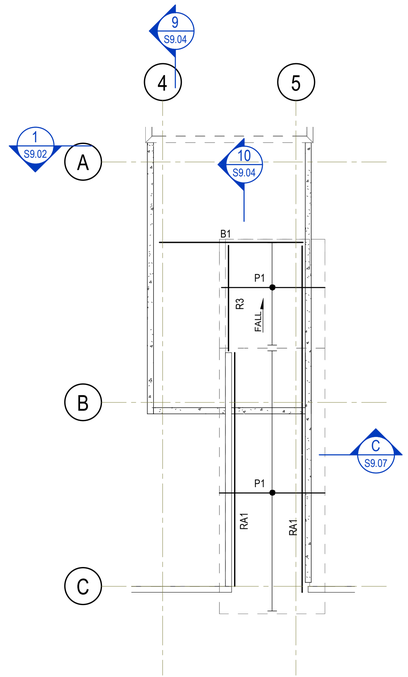
AWNING ROOF FRAMING PLAN
SCALE 1 : 100



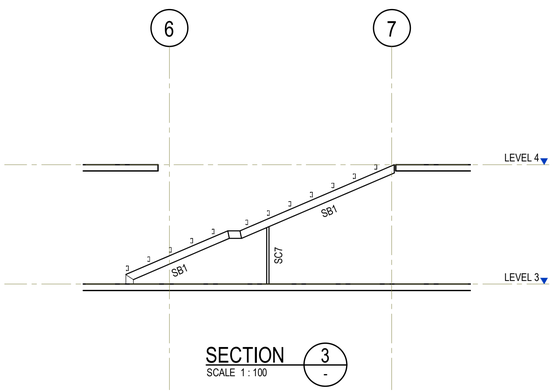
STAIR 4 ROOF FRAMING PLAN
SCALE 1 : 100



STAIR PLAN VIEW
SCALE 1 : 100



STAIR 2 ROOF FRAMING PLAN
SCALE 1 : 100



SECTION
SCALE 1 : 100

PURLIN NOTES:

1. UNLESS NOTED OTHERWISE ALL PURLINS SHALL BE LAPPED AS FOLLOWS:-

SPAN	MINIMUM LAP
≤ 6000	900
> 6000 ≤ 8000	1200
> 8000 ≤ 12000	1500
> 12000	1800

2. PURLINS, GIRTS AND BRIDGING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION.
3. UNLESS NOTED OTHERWISE PROVIDE PURLIN / GIRT BRIDGING AS FOLLOWS:-

PURLIN SIZE	MAXIMUM PURLIN SPAN		
	0 BRIDGES	1 BRIDGES	2 BRIDGES
100	2000	4000 (3000)	6000 (5000)
150	3000	6000 (5000)	9000 (7000)
200	4000	8000 (7000)	12000 (9000)
250	5000	10000 (8000)	15000 (12000)

NOTED: FIGURES IN BRACKETS APPLY TO SIMPLY SUPPORTED PURLINS

NOTES:

1. FOR ALL GENERAL STEELWORK NOTES REFER CONSTRUCTION NOTES ON DRAWING S1.00
2. ALL BOLTS FOR STEEL TO STEEL CONNECTIONS SHALL BE M20 GRADE 8.8/S U.N.O.
3. ALL BRACE MEMBERS SHALL BE TIED TO EVERY SECOND PURLIN CROSSED WITH UNISTRUT STRAP TO PREVENT SAG.
4. PRECAMBER TO ALL STRUCTURE STEEL RAFTERS, TRUSSES AND PORTALS SHALL BE 5mm FOR EVERY 2000mm OF SPAN UNLESS NOTED OTHERWISE ON PLAN.
5. UNLESS NOTED OTHERWISE ALL EXTERNAL STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANISED.
6. UNLESS NOTED OTHERWISE FLY BRACE RAFTERS EVERY 3rd PURLIN.
7. PROVIDE FIRE PROTECTION TO ALL STRUCTURAL STEEL ELEMENTS AS REQUIRED (REFER ARCHITECT'S DRAWING FOR FIRE RATING REQUIREMENTS)

MEMBER SCHEDULE

MEMBER TAG	MEMBER SIZE
PURLINS	
P1	SZ20012 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) LAP AND BRIDGE AS NOTED
P2	SC20024 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) BRIDGE AS NOTED
P3	SC20015 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) BRIDGE AS NOTED
P4	SC10012 PURLINS AT 1200 max. CENTRES 1000 max. END SPAN (SHEETING) BRIDGE AS NOTED
G1	SC15015 GIRTS AT 900 max. CENTRES

MEMBER SCHEDULE

MEMBER TAG	MEMBER SIZE
RAFTERS	
R1	250 UB 26
R2	310 UB 40
R3	200 UB 22
R4	150 UB 14
R5	180 UB 18
BEAMS	
B1	250 UB 31
B2	360 UB 50
B3	180 UB 18
B4	150 UB 18
B5	89 x 5.0 SHS
B6	150 x 5.0 SHS
B7	250 UB 26
DL	150 PFC
SB1	250 PFC
SB2	SC15012
COLUMNS	
SC1	89 x 5.0 SHS
SC2	125 x 5.0 SHS
SC3	114.3 x 4.8 CHS
SC4	89 x 5.0 SHS
SC5	125x75x6 RHS
SC6	250x150x5 RHS
SC7	75x4 RHS
DR1	89 x 5.0 SHS
H	65 x 3.0 SHS
BRACES	
BR	75 x 6 EA
RA1	90 x 6 EA
RA2	150 PFC
FB1	50 x 5.0 EA - PROVIDE FB TO EVERY THIRD PURLIN
HB	50 x 3 EA
STRUTS	
ST1	Ø114.3 x 3.2 CHS (EQUIVALENT SHS = 100 x 3.0)
ST2	Ø76.1 x 2.3 CHS (EQUIVALENT SHS = 75 x 2.5)
ST3	89 x 5.0 SHS

FOR CONSTRUCTION

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A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
3	REVISED FOR TENDER	I.S.	P.R.	26.10.2018
2	REVISED FOR TENDER	T.L.	P.R.	17.10.2018
1	ISSUED FOR APPROVAL	I.S.	P.R.	27.09.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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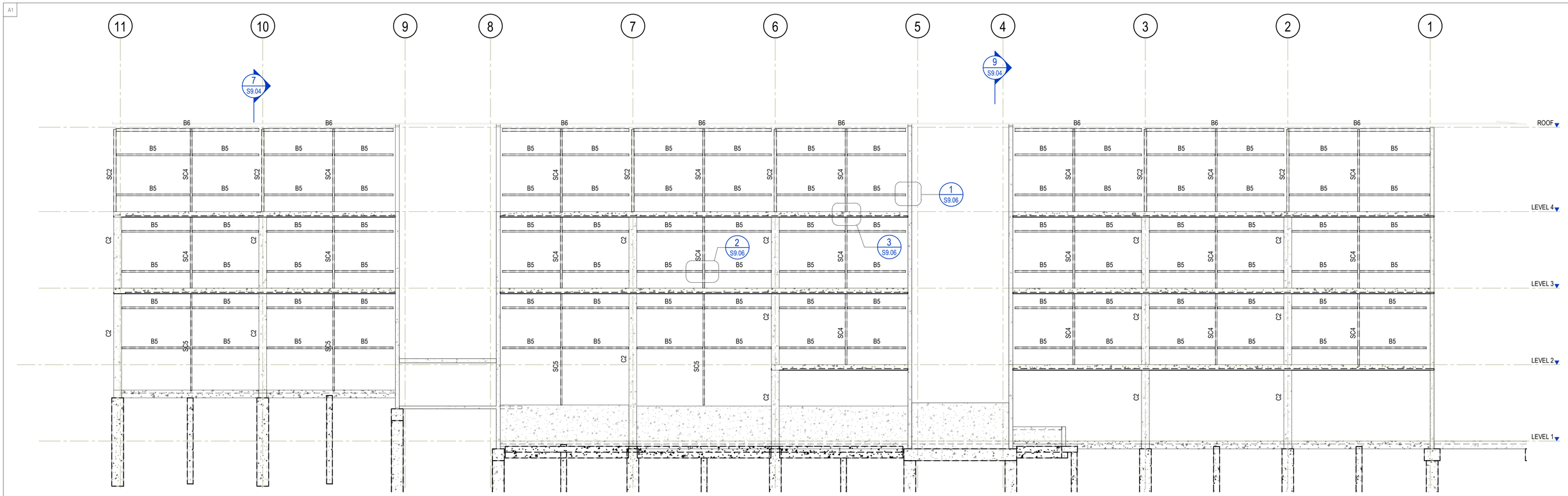
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: STEEL FRAMING PART PLANS

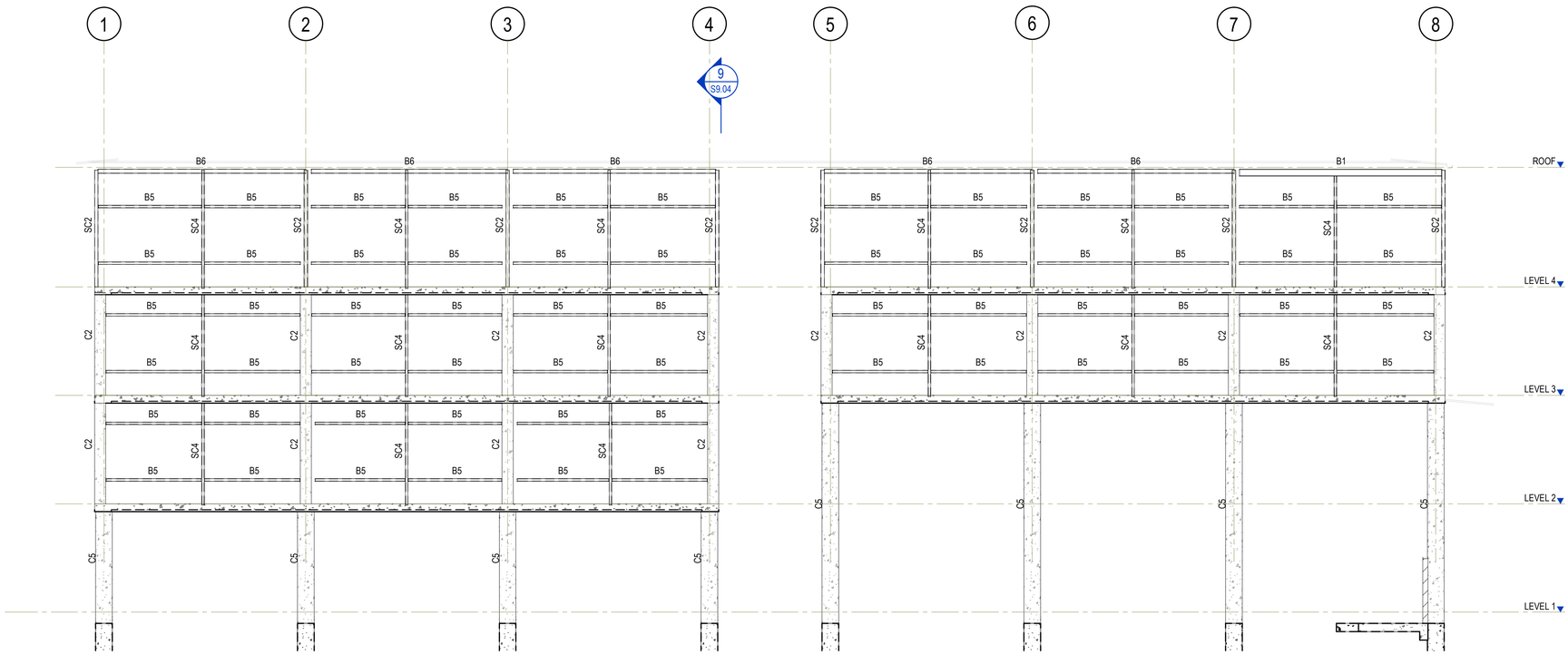
Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked: P.R.	Approved: R.K.	Scale: As indicated

Drawing number: 18380-S9.01

Revision: A



SECTION 1 (S6.00)
SCALE 1 : 100



SECTION 2 (S6.00)
SCALE 1 : 100

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
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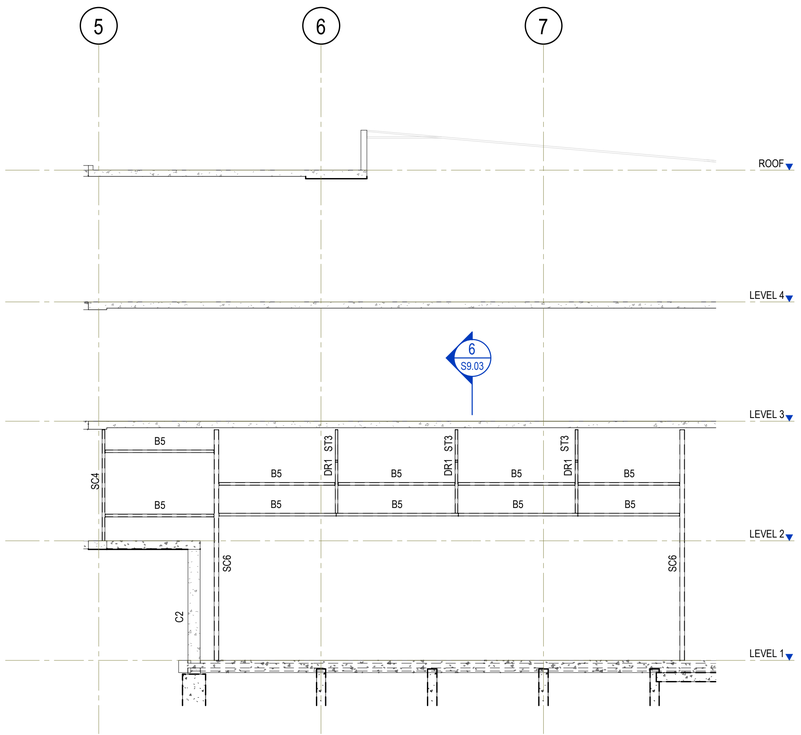
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: ELEVATIONS SHEET 1

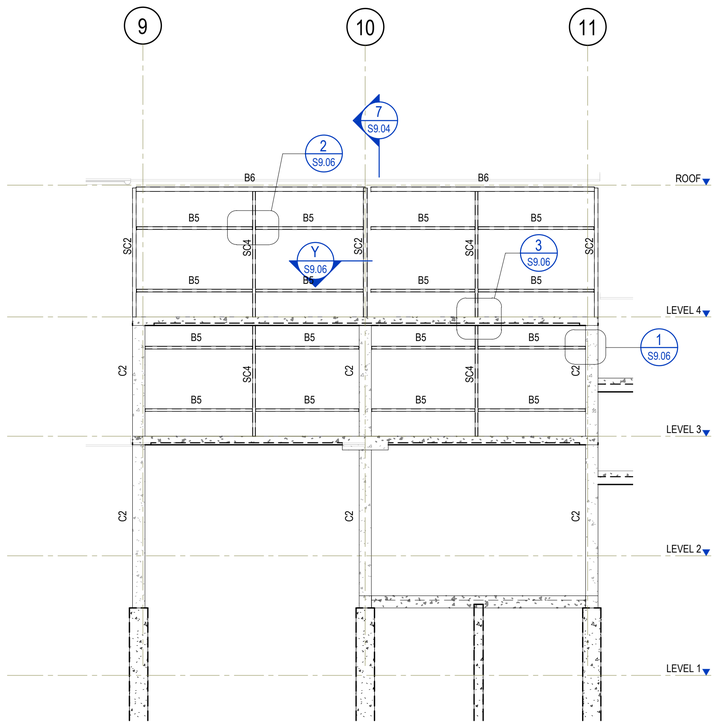
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S.W.	T.M.	JULY 2018
Checked: P.R.	Approve: R.K.	Scale: 1 : 100

Drawing number: 18380-S9.02

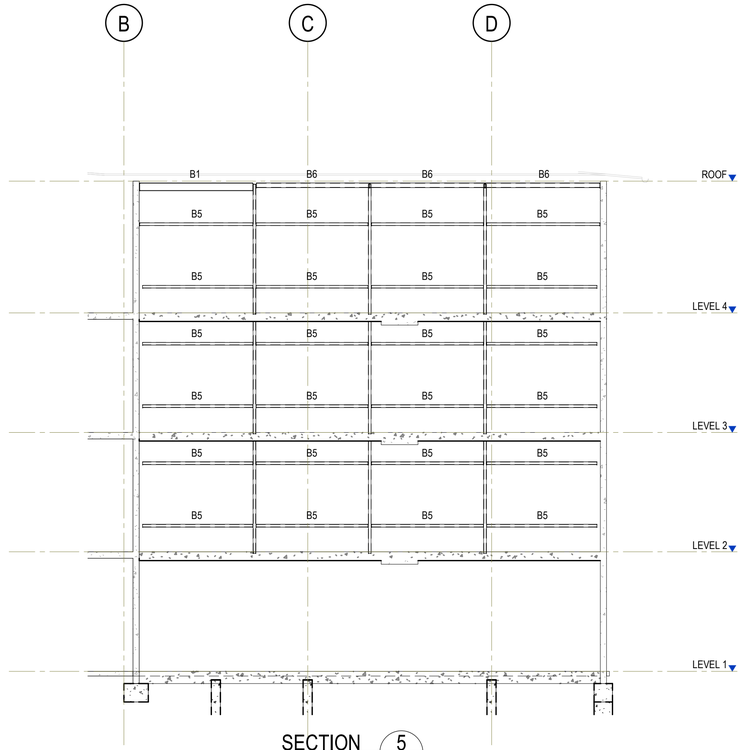
Revision: A



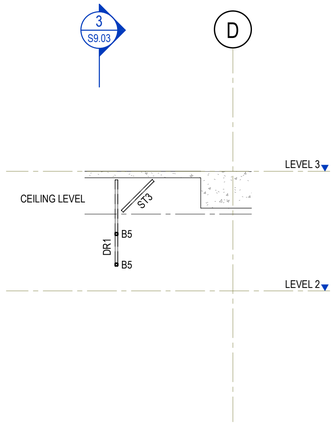
SECTION 3
SCALE 1:100 S9.00



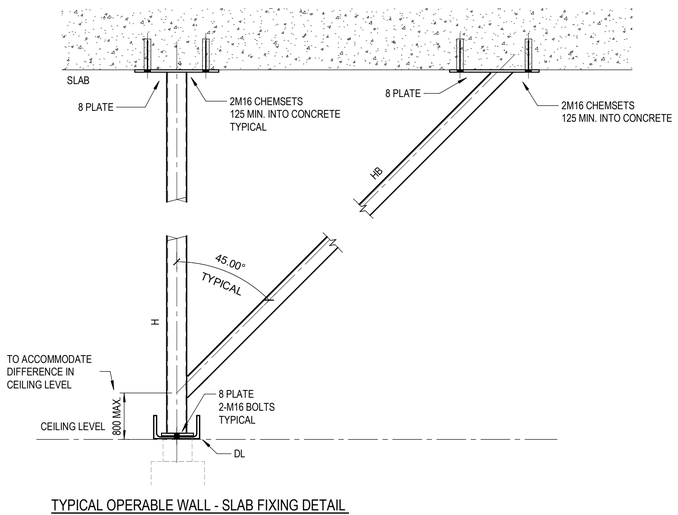
SECTION 4
SCALE 1:100 S9.00



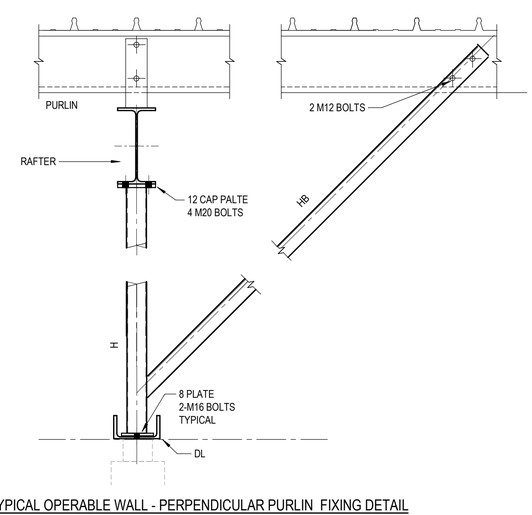
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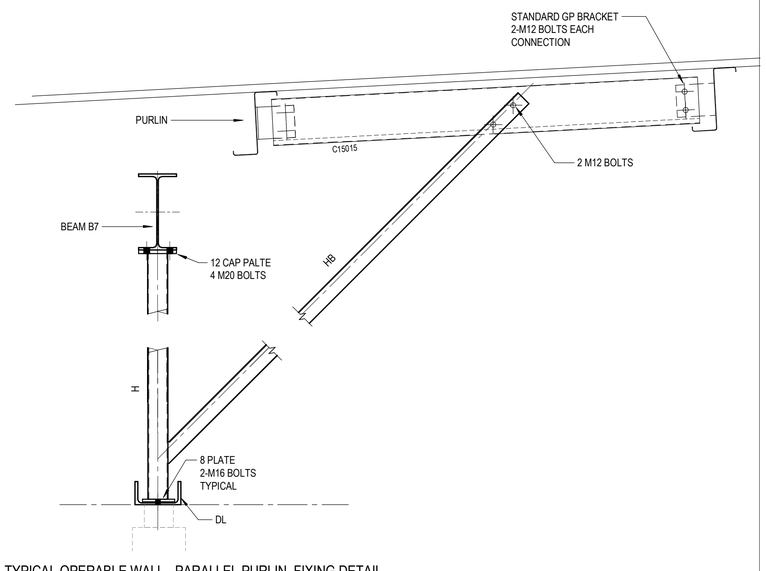
SECTION 6
SCALE 1 : 100 -



TYPICAL OPERABLE WALL - SLAB FIXING DETAIL



TYPICAL OPERABLE WALL - PERPENDICULAR PURLIN FIXING DETAIL



TYPICAL OPERABLE WALL - PARALLEL PURLIN FIXING DETAIL

FOR CONSTRUCTION

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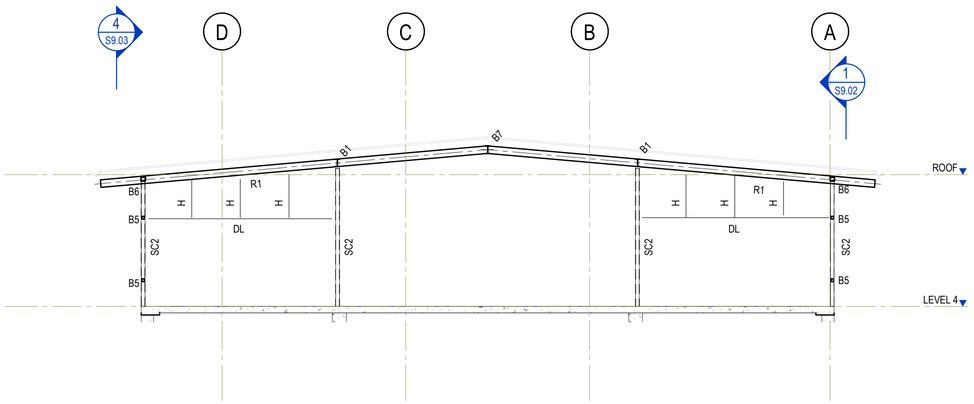
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: ELEVATIONS SHEET 2

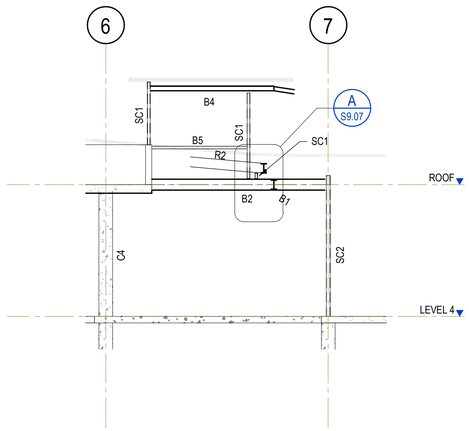
Drawn	Designed	Date
S.W.	T.M.	JULY 2018
Checked: P.R.	Approve: R.K.	Scale: As indicated

Drawing number: 18380-S9.03

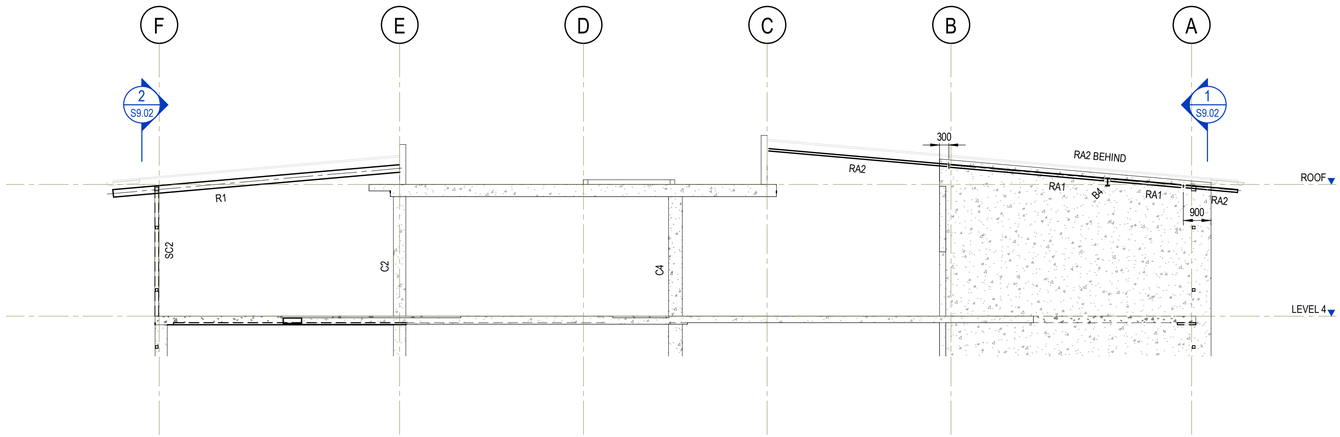
Revision: A



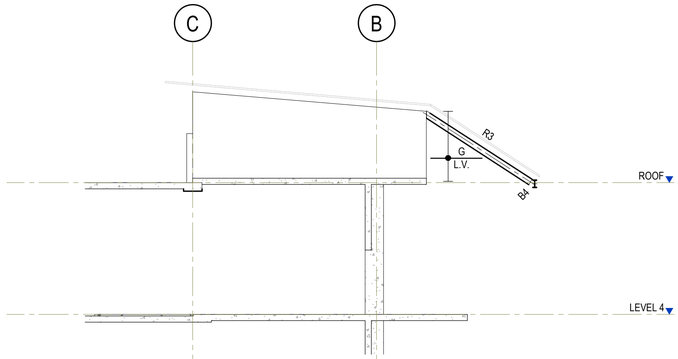
SECTION 7
SCALE 1 : 100 S9.00



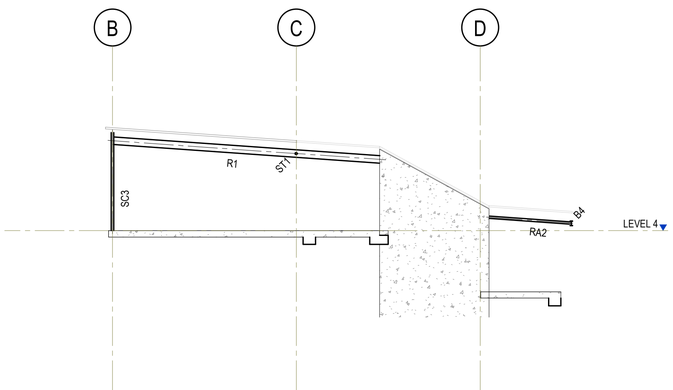
SECTION 8
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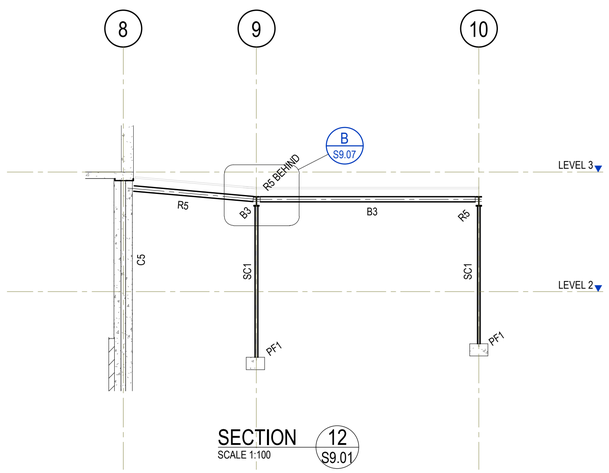
SECTION 9
SCALE 1 : 100 S9.00



SECTION 10
SCALE 1 : 100 S9.00



SECTION 11
SCALE 1 : 100 S9.01



SECTION 12
SCALE 1:100 S9.01

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019

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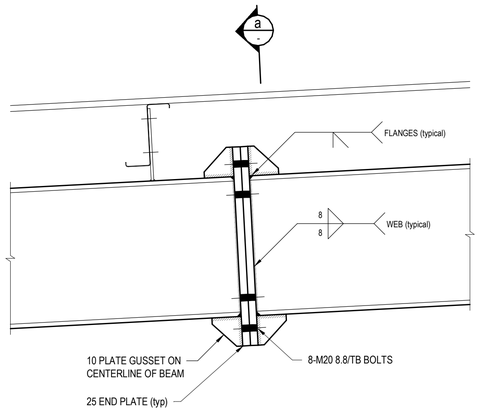
Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: ELEVATIONS SHEET 3

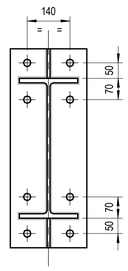
Drawn	Designed	Date
Author	T.M.	01/17/19
Checked	Approve	Scale
P.R.	R.K.	1 : 100

Drawing number: 18380-S9.04

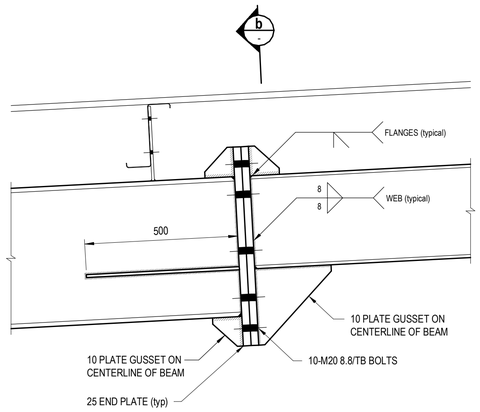
Revision: A



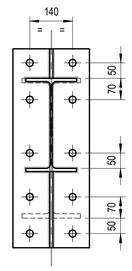
RAFTER SAME SIZES



SECTION a



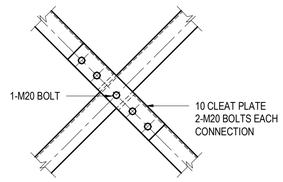
RAFTER VARYING SIZE



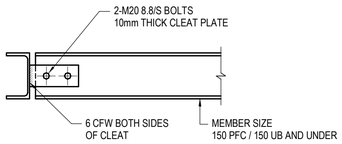
SECTION b

TYPICAL RAFTER SPLICE DETAILS

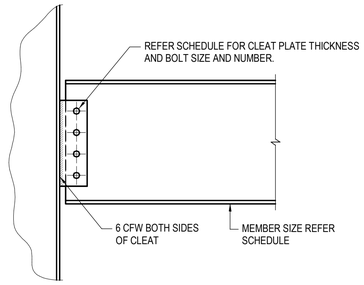
REFER MARKING PLAN FOR LOCATIONS AND MEMBER SIZES



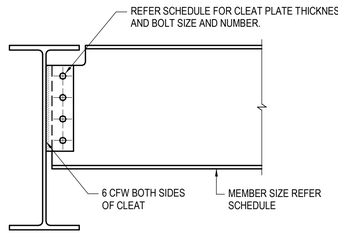
TYPICAL BRACING INTERSECTION DETAIL



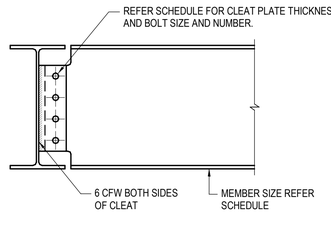
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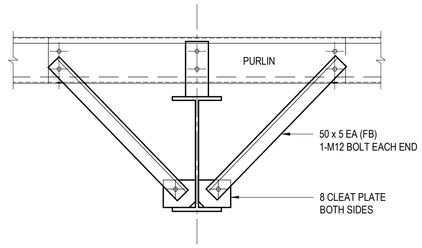
UNCOPED



SINGLE WEB COPED

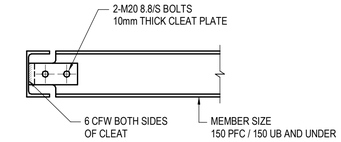


DOUBLE WEB COPED

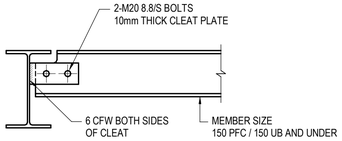


TYPICAL FLYBRACE DETAIL

NOTED FB ON PLAN



DOUBLE WEB COPED

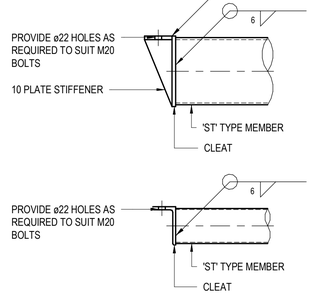


SINGLE WEB COPED

TYPICAL WEB SIDE PLATE CONNECTION DETAILS 150 PFC / 150 UB AND BELOW

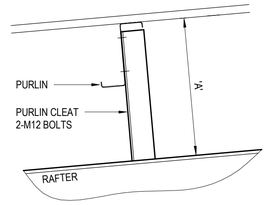
WEB SIDE PLATE CONNECTION SCHEDULE		
MEMBER SIZE	BOLTS (No. - SIZE, GRADE)	CLEAT PLATE THICKNESS (mm)
CHANNELS		
180 PFC, 200 PFC, 230 PFC	2-M20 8.8/S	10
250 PFC	2-M20 8.8/S	10
300 PFC	3-M20 8.8/S	10
380 PFC	4-M20 8.8/S	10
UNIVERSAL BEAMS / COLUMNS		
180 UB	2-M20 8.8/S	10
200 UB & 200UC	2-M20 8.8/S	10
250 UB & 250 UC	2-M20 8.8/S	10
310 UB & 310 UC	3-M20 8.8/S	10
360 UB	3-M20 8.8/S	10
410 UB	4-M20 8.8/S	10
460 UB	5-M20 8.8/S	10
530 UB	6-M20 8.8/S	10
610 UB	7-M20 8.8/S	10
WELDED BEAMS		
700 WB	8-M20 8.8/S	10
800 WB	9-M20 8.8/S	10

TYPICAL WEB SIDE PLATE CONNECTION DETAILS 180 PFC / 180 UB AND ABOVE



ANGLE CLEAT SCHEDULE		
MEMBER SIZE	CLEAT SIZE	CLEAT LENGTH
ø88.9 CHS	100 x 75 x 6 UA	140
ø101.6 CHS	125 x 75 x 6 UA	140
ø114.3 CHS	125 x 75 x 6 UA	140
ø139.7 CHS	150 x 90 x 10 UA	160
ø165.1 CHS	200 x 90 x 13 UA (EX 200 x 13 EA)	180
ø168.3 CHS	200 x 90 x 13 UA (EX 200 x 13 EA)	180
ø219.1 CHS	230 x 100 x 12 P CLEAT c/w STIFFENER PLATE (refer detail above)	230

* WHERE 3 BOLTS ARE SPECIFIED CLEATS SHALL BE PROVIDE minimum 210 LONG



TYPICAL PURLIN CLEAT DETAIL

CLEAT SCHEDULE	
HEIGHT 'A'mm	CLEAT SIZE
0 - 250	8 PLATE
250 - 350	10 PLATE
350 - 450	12 PLATE
450 +	75 x 6 EA

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1	TENDER ISSUE	I.S.	P.R.	26.10.2018

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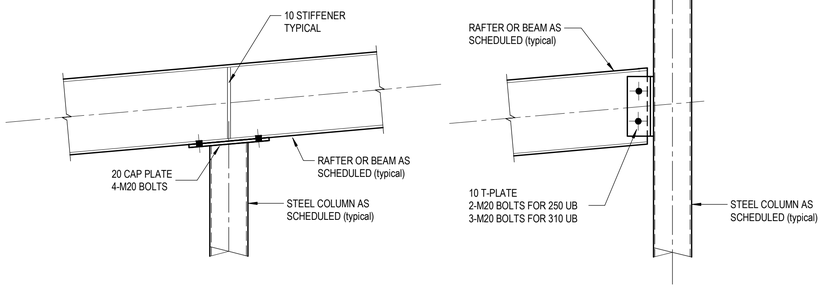
henry&hymas

Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

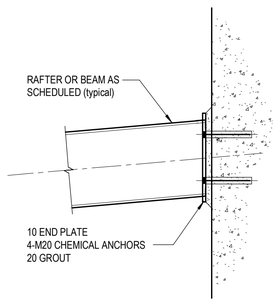
Title: STEEL DETAILS SHEET 1

Drawn: IS | Designed: T.M. | Date: 08/04/17
Checked: P.R. | Approve: R.K. | Scale: As indicated

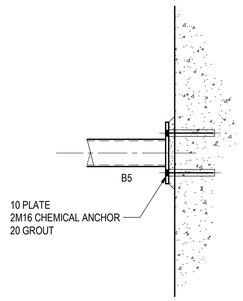
Drawing number: 18380-S9.05 | Revision: A



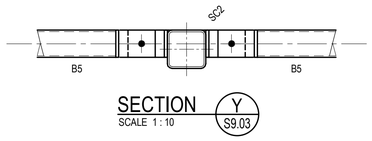
TYPICAL COLUMN TO RAFTER CONNECTION



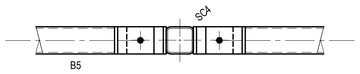
TYPICAL RAFTER TO REDIWALL CONNECTION



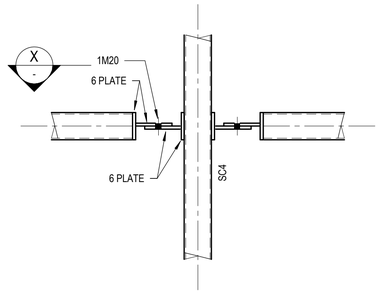
DETAIL 1 / S9.02
SCALE 1 : 10



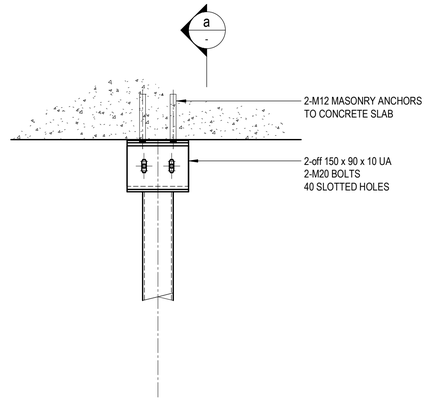
SECTION Y / S9.03
SCALE 1 : 10



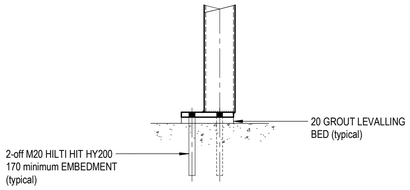
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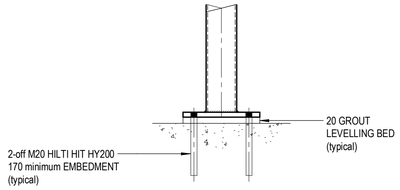
DETAIL 2 / S9.02
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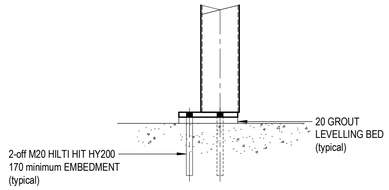
DETAIL 3 / S9.02
SCALE 1 : 10



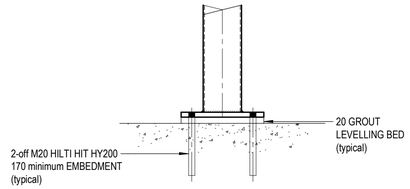
SECTION - FOOTING / SLAB



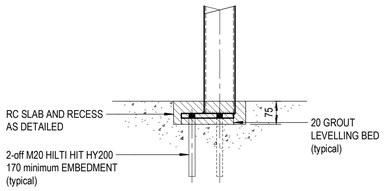
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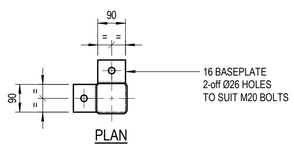
SECTION - FOOTING / SLAB



SECTION - FOOTING / SLAB

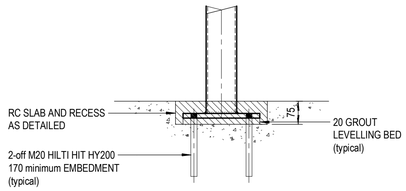


SECTION - SLAB (RECESSED)

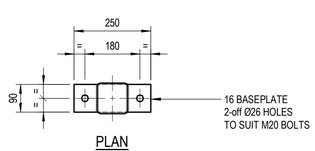


PLAN

TYPICAL COLUMN BASEPLATE
(89 SHS)

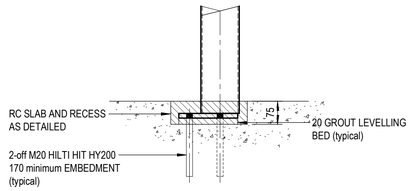


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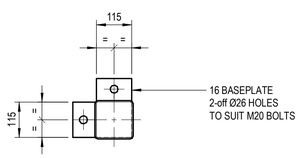


PLAN

TYPICAL COLUMN BASEPLATE
(89 SHS)

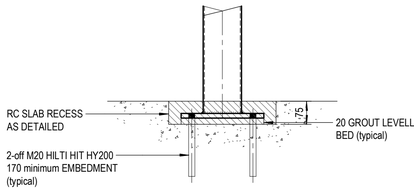


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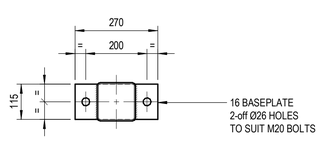


PLAN

TYPICAL COLUMN BASEPLATE
(125 SHS)



SECTION - SLAB (RECESSED)



PLAN

TYPICAL COLUMN BASEPLATE
(125 SHS)

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
1	TENDER ISSUE	I.S.	P.R.	26.10.2018

Client
NSW DEPARTMENT OF EDUCATION

Architect
NBRS ARCHITECTURE

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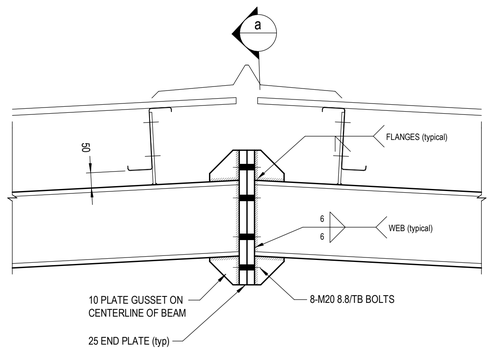
Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title
STEEL DETAILS SHEET 2

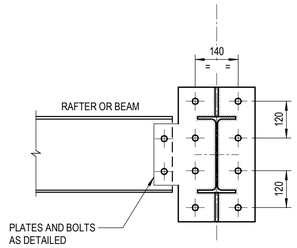
Drawn	Designed	Date
Author	T.M.	10/23/18
Checked	Approve	Scale
P.R.	R.K.	1 : 10

Drawing number
18380-S9.06

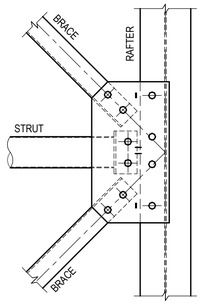
Revision
A



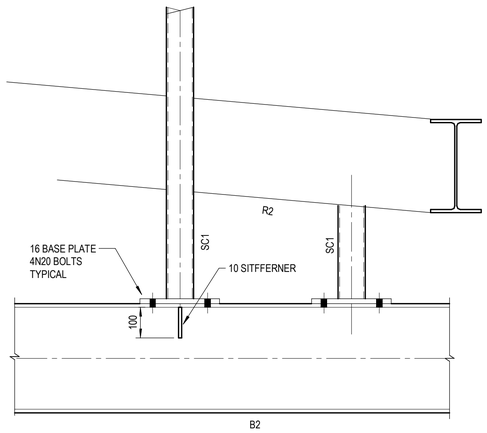
TYPICAL APEX DETAIL



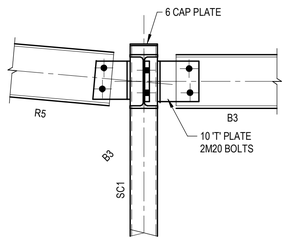
SECTION a



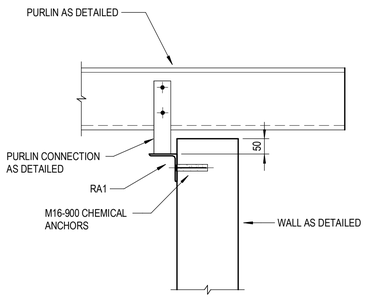
TYPICAL BRACING STRUT CONNECTION DETAILS



DETAIL A
SCALE 1 : 10 S9.04



DETAIL B
SCALE 1 : 10 S9.04



SECTION C
SCALE 1 : 10 S9.01

FOR CONSTRUCTION

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019

Client
NSW DEPARTMENT OF EDUCATION

Architect
NBRS ARCHITECTURE

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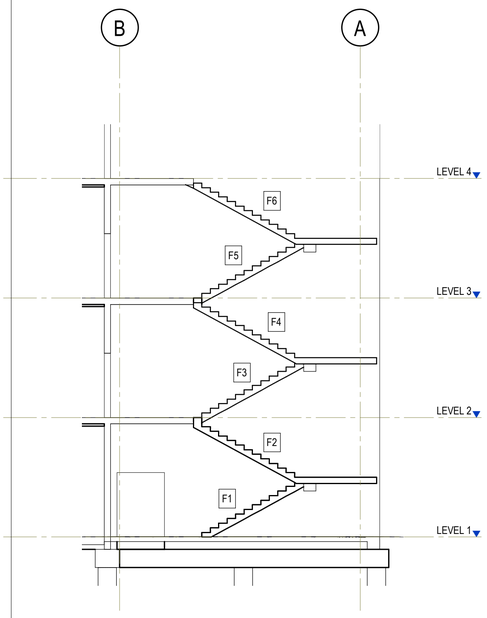
Project
WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title
STEEL DETAILS SHEET 3

Drawn	Designed	Date
Author	Designer	01/24/19
Checked	**Approvec**	**Scale**
Checker	Approv	1 : 10

Drawing number
18380-S9.07

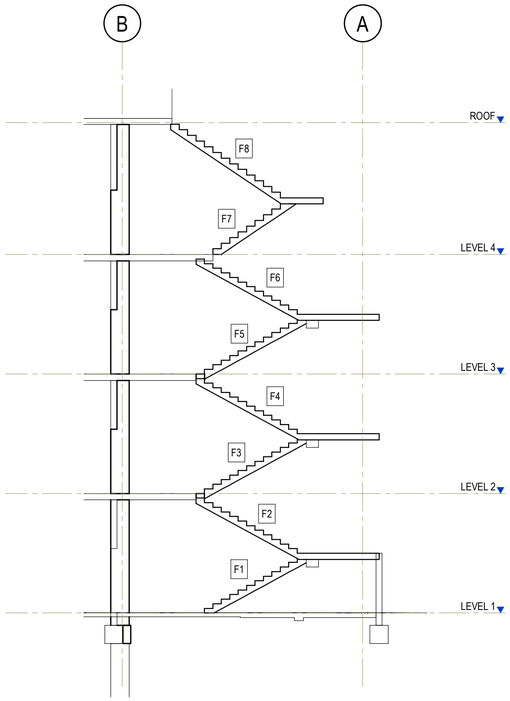
Revision
A



STARI SECTION ST1

SCALE 1 : 100

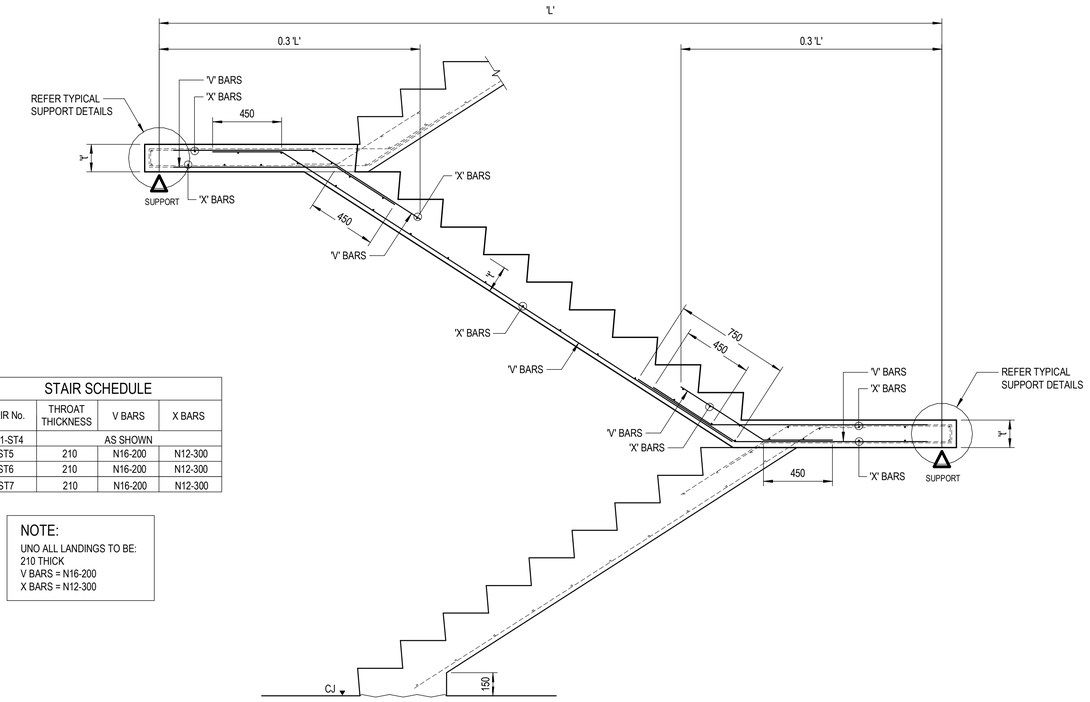
STAIR ST1 SCHEDULE			
FLIGHT No.	THROAT THICKNESS	V BARS	X BARS
F1	210	N16-200	N12-300
F2	210	N16-200	N12-300
F3	210	N16-200	N12-300
F4	210	N16-200	N12-300
F5	210	N16-200	N12-300
F6	210	N16-200	N12-300



STARI SECTION ST2

SCALE 1 : 100

STAIR ST1 SCHEDULE			
FLIGHT No.	THROAT THICKNESS	V BARS	X BARS
F1	210	N16-200	N12-300
F2	210	N16-200	N12-300
F3	210	N16-200	N12-300
F4	210	N16-200	N12-300
F5	210	N16-200	N12-300
F6	210	N16-200	N12-300

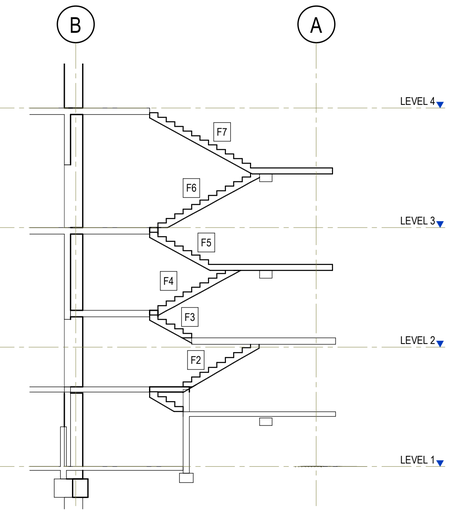


STAIR SCHEDULE			
STAIR No.	THROAT THICKNESS	V BARS	X BARS
ST1-ST4	AS SHOWN		
ST5	210	N16-200	N12-300
ST6	210	N16-200	N12-300
ST7	210	N16-200	N12-300

NOTE:
UNO ALL LANDINGS TO BE:
210 THICK
V BARS = N16-200
X BARS = N12-300

TYPICAL SECTION THROUGH STAIR FLIGHT

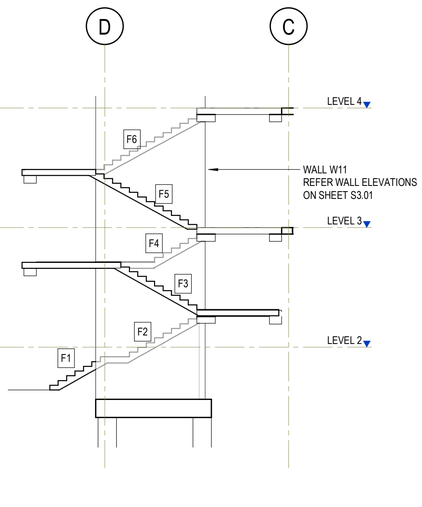
FOR REINFORCEMENT DESIGNATIONS i.e. 'X' or 'V' BARS
REFER STAIR SCHEDULES (TYPICAL)



STARI SECTION ST3

SCALE 1 : 100

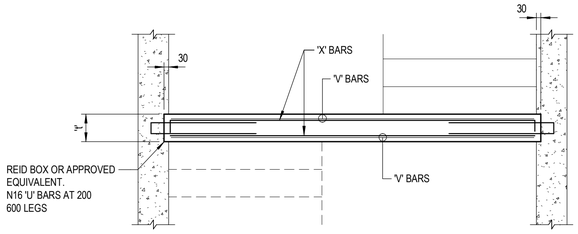
STAIR ST1 SCHEDULE			
FLIGHT No.	THROAT THICKNESS	V BARS	X BARS
F1	210	N16-200	N12-300
F2	210	N16-200	N12-300
F3	210	N16-200	N12-300
F4	210	N16-200	N12-300
F5	210	N16-200	N12-300
F6	210	N16-200	N12-300



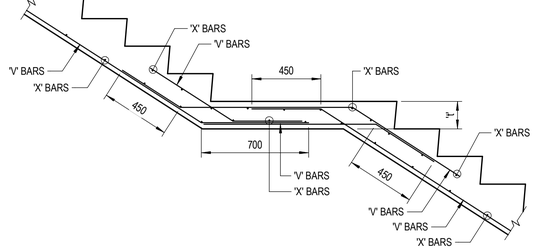
STARI SECTION ST4

SCALE 1 : 100

STAIR ST1 SCHEDULE			
FLIGHT No.	THROAT THICKNESS	V BARS	X BARS
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F2	210	N16-200	N12-300
F3	210	N16-200	N12-300
F4	210	N16-200	N12-300
F5	210	N16-200	N12-300
F6	210	N16-200	N12-300

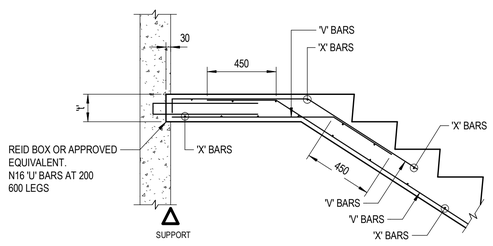


RC WALL LANDING

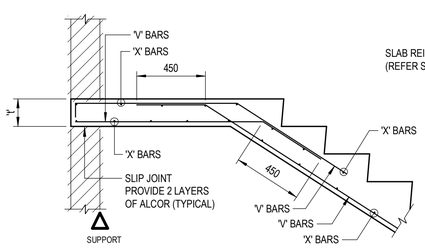


TYPICAL SECTION THROUGH MID-LANDING

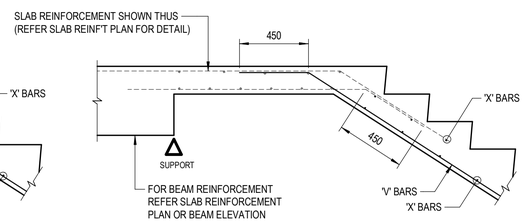
FOR REINFORCEMENT DESIGNATIONS i.e. 'X' or 'V' BARS
REFER STAIR SCHEDULES (TYPICAL)



RC WALL



BLOCKWORK WALL



R.C. BEAM

FOR CONSTRUCTION

TYPICAL STAIR SUPPORT DETAILS

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
A	ISSUED FOR CONSTRUCTION	I.S.	P.R.	25.01.2019
1	REVISED FOR TENDER	I.S.	P.R.	26.10.2018

Client: NSW DEPARTMENT OF EDUCATION

Architect: NBRS ARCHITECTURE

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Project: WAITARA PUBLIC SCHOOL REDEVELOPMENT
68 EDGEWORTH DAVID AVENUE, WAHROONGA 2076

Title: STAIR DETAILS

Drawn	Designed	Date
Author	T.M.	10/24/18
Checked	Approved	Scale
P.R.	R.K.	As indicated

Drawing number: 18380-S10.00

Revision: A