

## STEELWORK

- S1.** FABRICATE AND ERECT STRUCTURAL STEELWORK IN ACCORDANCE WITH AS4100-1998.
- S2.** PROVIDE HOLES, CLEATS AND FIXING FOR LIGHT STEEL/TIMBER FRAMING, FINISHES, ETC. SHOWN ON ARCHITECTURAL DRAWINGS.
- S3.** THESE DRAWINGS HAVE BEEN PREPARED TO INDICATE THE STRUCTURAL INTENT. THE SHOP DETAILER IS TO USE THESE DRAWINGS AS A BASIS FOR DIMENSIONAL COORDINATION WITH OTHER CONSULTANT'S DRAWINGS AND IS TO PREPARE DETAILED SHOP DRAWINGS. WHERE NECESSARY, THE SHOP DETAILER IS TO MAKE ASSUMPTIONS AND SUBMIT TO NORTHPROP CONSULTING ENGINEERS FOR RESOLUTION. SHOP DETAILER IS TO ALLOW TO RE-WORK SHOP DRAWINGS AS NECESSARY. FABRICATOR SHALL PREPARE SHOP DRAWINGS AND SUBMIT THEM TO THE BUILDER FOR THEIR APPROVAL. BUILDER SHALL LODGE TWO HARD COPIES OF APPROVED DRAWINGS TO NORTHPROP CONSULTING ENGINEERS FOR REVIEW PRIOR TO FABRICATION, (ALLOW 5 WORKING DAYS FOR REVIEW).

**S4. TYPICAL STEELWORK CONNECTIONS (UNLESS NOTED OTHERWISE):**

- ALL BOLTS (EXCEPT PURLIN BOLTS) ARE TO BE MINIMUM M16-8.8/S.
- HOLD DOWN BOLTS / ANCHORS TO BE GRADE 4.6/S.
- COLUMN BASE PLATES: 10 BASE PLATE, 4/M16 HILTI HIT-HY200-R CHEMICAL INJECTION ANCHORS.
- BEAM TO TOP OF COLUMN: CAP PLATE, 2 BOLTS TO CHANNELS, 4 BOLTS TO RHS/CHS/SHS/UB/UC.
- BEAM TO SIDE OF COLUMN: FIN PLATE, 2 BOLTS.
- BEAM TO SIDE OF BEAM: END OR FIN PLATE, 2 BOLTS.
- COLUMNS TO TOP OF BEAM: BASE PLATE, 2 BOLTS TO CHANNELS, 4 BOLTS TO UB/UC SECTIONS.
- ALL ROOF & WALL BRACING: CLEAT PLATES, 2 BOLTS.
- PURLINS/WALL GIRTS: 8 CLEAT PLATES, 2 PURLIN BOLTS.

**UNLESS NOTED OTHERWISE, USE:**

- 10mm BASE, CAP, GUSSET, FIN AND END PLATES.
- M20 8.8/S BOLTS. (4.6/S GRADE TO BE USED FOR HOLD DOWN BOLTS).
- 6mm CONTINUOUS FILLET WELDS MADE WITH E4918 MILD STEEL ELECTRODES.
- ALL WELDS SP CATEGORY.

- S5.** NO PAINT ON MATING SURFACES WITH TF OR TB BOLTING UNLESS APPROVED BY NORTHPROP CONSULTING ENGINEERS.

- S6.** TF OR TB BOLTS TO BE INSTALLED WITH ONE HARDENED WASHER UNDER THE TURNED PART.

- S7.** USE LOAD INDICATING WASHERS FOR ALL TB AND TF CONNECTIONS.

- S8.** ALL BOLTS, NUTS, WASHERS, SCREWS, HOLD DOWN BOLTS, MASONRY ANCHORS SHALL BE HOT DIP GALVANISED TO AS1214-1983, AS/NZS 4534-2006, AS/NZS 4680-2006 & AS/NZS 4792-2006. NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS. HOLES SHALL BE 2mm LARGER THAN THE BOLT DIAMETER FOR BOLTS NOT EXCEEDING 24mm DIAMETER, OR 3mm LARGER THAN THE BOLT DIAMETER FOR BOLTS EXCEEDING 24mm DIAMETER.

**S9. MINIMUM YIELD STRESS:**

- HOT ROLLED SECTIONS = 300MPa
- SQUARE HOLLOW SECTIONS = 350MPa
- RECTANGULAR HOLLOW SECTIONS = 350MPa
- CIRCULAR HOLLOW SECTION = 250MPa
- HOT ROLLED PLATE = 250MPa

- S10.** COLD FORMED SECTIONS TO CONFORM WITH:

- AS/NZS 1594-2002, AS/NZS 1595-1998, AS/NZS 4600-2005 AND AS 1397-2001, AS1397, AS/NZS1594 AND AS/NZS1595.
- MINIMUM YIELD STRESSES SECTIONS 450MPa.

**S11. SURFACE TREATMENT UNLESS NOTED OTHERWISE:**

- PROTECTED FROM WEATHER (HALL ONLY) = AS/NZS 2312-1ZS2.
- ALL OTHER STEELWORK = AS/NZS ZINC GALVANISED.

\*\*REFER TO PURLIN & GIRTS NOTES FOR SURFACE TREATMENT OF THESE ITEMS\*\*

- S12.** UNLESS OTHERWISE DETAILED, FABRICATOR SHALL PROVIDE C100 15 TRIMMER PURLINS ALONG WITH GENERAL PURPOSE BRACKETS TO SUPPORT EDGE OF ROOF SHEETING AT ALL HIPs, VALLEYS AND PENETRATIONS.

- S13.** FIX CROSS BRACING TO PURLINS AT 3000 MAX CENTRES WITH M10 BOLTS OR M6 HOOKS. BOLTS ARE TO BE MECHANICALLY FIXED TO PURLINS, WITH HOOKS TO BE LOOPED THROUGH THE WEB OF THE PURLINS AND SECURED USING A NUT TO ENSURE THEY WILL NOT BECOME LOOSE DURING MOVEMENT OF THE ROOF. ALTERNATIVELY, GALVANISED STRAP MAY BE USED TO SECURE THE BRACING. THE STRAP IS TO BE INSTALLED TO LIFT THE BRACE SUCH THAT IT IS PLUMB, WITH THE BRACE SCREW FIXED TO THE WEB OF THE PURLIN AT BOTH ENDS USING 2/12-14 TEKs SCREWS.

- S14.** ALL BURIED STEELWORK TO BE TREATED BY:

- THE APPLICATION OF A SINGLE COAT OF INTERNATIONAL PROTECTIVE COATINGS INTERZONE 954 APPLIED TO BARE CLEAN STEEL (THICKNESS 300-400 MICRONS). APPLY TO WHOLE OF RELEVANT MEMBER, TOP COAT IF REQUIRED BY ARCHITECT FOR VISUAL APPEARANCE.

OR

- THE APPLICATION OF HDG AS SPECIFIED IN S11 ABOVE FOLLOWED BY AN APPLICATION OF TWO COATS OF INTERNATIONAL PROTECTIVE COATINGS INTERPLUS 1180 (EACH COAT 150-250 MICRONS) WHERE BURIED IN THE GROUND.

THEN

- CONCRETE ENCASE STEELWORK WITH MASS CONCRETE (MINIMUM 75mm COVER TO STEELWORK) UNLESS NOTED OTHERWISE.
- HOLD DOWN BOLTS / ANCHORS MAY BE BLACK IF FULLY ENCASED IN CONCRETE.

- S15.** STEELWORK TO BE CONCRETE ENCASED FOR FIRE RATING PURPOSES SHALL BE FREE FROM ALL LOOSE RUST, LOOSE MILL SCALE, DIRT, OIL, GREASE, ETC. AND REINFORCED WITH SL41 FABRIC OR EQUIVALENT BLACK IRON WIRE, 3mm DIA.

- S16.** BOLT SYMBOLS:

- 4.6/S = GRADE 4.6 BOLT / SNUG TIGHTENED.
- 8.8/S = GRADE 8.8 BOLT / SNUG TIGHTENED.
- 8.8/TF = GRADE 8.8 BOLT / FULLY TENSIONED FRICTION TYPE (USE LOAD INDICATOR WASHERS).
- 8.8/TB = GRADE 8.8 BOLT / FULLY TENSIONED BEARING TYPE (USE LOAD INDICATOR WASHERS).

- S17.** THE CONTRACTOR SHALL SUPPLY WRITTEN CERTIFICATION TO THE STRUCTURAL ENGINEER PRIOR TO THE ERECTION OF ANY STRUCTURAL STEEL STATING THAT THE BOLTS PROPOSED TO BE USED COMPLY WITH AS/NZS 1252-1996. HIGH STRENGTH BOLTS (8.8) ARE NOT TO BE WELDED.

- S18.** THE FABRICATION AND ERECTION OF THE STRUCTURAL STEEL WORK SHALL BE SUPERVISED BY A QUALIFIED PERSON EXPERIENCED IN SUCH SUPERVISION, IN ORDER TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET.

- S19.** ALL MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS. SPLICES SHALL ONLY BE PERMITTED IN LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

- S20.** ALL BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS CATEGORY SP TO AS1554.1-2004 U.N.O THE EXTENT ON NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS NOTED BELOW:

- RADIOGRAPHIC OR ULTRASONIC EXAMINATION SHALL BE TO AS/NZS 1554.1-2004, AS 2177-2006 AND AS2207-2007 AS APPROPRIATE.

- S21.** GROUT ALL STEEL BASES BY DRY PACKING USING GROUT WHICH IS NON-SHRINK AND HAS A MINIMUM COMPRESSIVE STRENGTH AT 7 DAYS OF 40MPa.

- S22.** PROVIDE SEAL PLATES TO THE ENDS OF ALL HOLLOW SECTIONS, WITH 'BREATHER' HOLES IF MEMBERS ARE TO BE HOT DIP GALVANISED.

- S23.** THESE DRAWINGS MAY NOT IDENTIFY ALL SECONDARY STEELWORK ELEMENTS THAT ARE REQUIRED FOR SUPPORT, FIXING AND FINISHING OF GLAZING, CLADDING AND LINING. THE TENDERER IS RESPONSIBLE FOR THE INCLUSION OF SUCH STEELWORK ELEMENTS TO THE EXTENT REQUIRED ON THE ARCHITECT'S DRAWINGS.

**S24. IMPORTED STRUCTURAL STEEL MATERIAL**

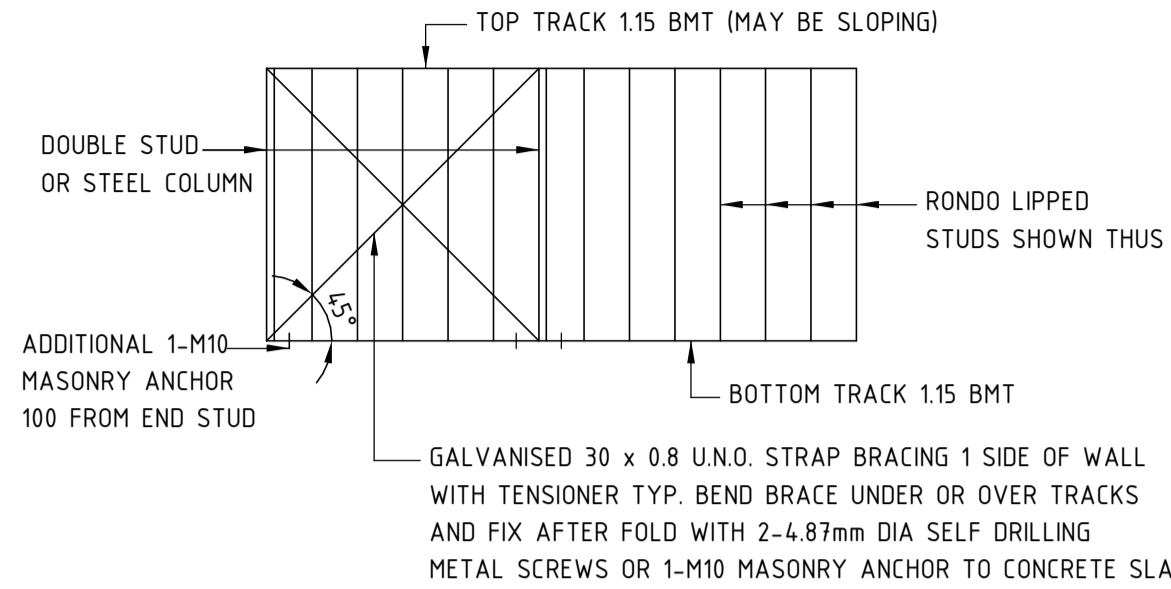
ALL STRUCTURAL STEELWORK USED ON THIS PROJECT SHALL BE COMPLIANT WITH AS4100, AND IN PARTICULAR:

- CERTIFIED MILL TEST REPORTS, OR TEST CERTIFICATES SHALL BE PROVIDED AS EVIDENCE OF COMPLIANCE WITH THE STANDARDS REFERRED TO IN AS4100. THESE CERTIFICATES SHALL BE SUBMITTED TO NORTHPROP CONSULTING ENGINEERS FOR APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION.
  - PROVIDE TEST CERTIFICATED FOR COMPLIANCE FOR ALL FASTENERS. THESE CERTIFICATES SHALL BE SUBMITTED TO NORTHPROP CONSULTING ENGINEERS FOR APPROVAL PRIOR TO FABRICATION.
  - FOR COLD FORMED SECTIONS A "CERTIFICATE OF CONFORMITY TO AS1163-1991" SHALL BE SUBMITTED TO NORTHPROP CONSULTING ENGINEERS FOR APPROVAL PRIOR TO FABRICATION.
  - CERTIFICATES SHALL ONLY BE ACCEPTED FROM TESTING COMPANIES ACCREDITED BY A TESTING AUTHORITY RECOGNISED IN AUSTRALIA, EG NATA OR JAS-ANZ CERTIFIED.
  - UNIDENTIFIED STEEL ie. ANY STEEL THAT IS NOT ACCOMPANIED WITH EVIDENCE STATING COMPLIANCE WITH THE REQUIREMENT OF AS4100 SHALL ONLY BE USED STRICTLY IN ACCORDANCE WITH CLAUSE 2.2.3 OF AS4100.
- IF MATERIALS SUPPLIED AND INSTALLED ARE SUBSEQUENTLY PROVEN TO BE NON COMPLIANT WITH THE SPECIFIED AUSTRALIAN STANDARDS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND COST TO UNDERTAKE NATA OR EQUIVALENT CERTIFIED TESTING TO PROVE CONFORMANCE TO THE AUSTRALIAN STANDARDS AND DESIGN SPECIFICATIONS. SIMILARLY ANY RECTIFICATION WORKS THAT MAY SUBSEQUENTLY BE REQUIRED TO SATISFY AUSTRALIAN CODE REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

## METAL STUD WALLS

- SW1.** ALL DESIGN, WORKMANSHIP AND MATERIAL TO AS/NZS4600.

- SW2.** PROVIDE BRACING IN WALLS AS PER THE PLANS, USING PRYDA 30 x 0.8 GALVANISED STRAP BRACING OR EQUIVALENT FIXED TO THE STUD WALLS, OR NOGGING SECTIONS. FIX STRAP TO EACH STUD BY ONE (1) WAFER HEADED SELF DRILLING METAL SCREW (4.8mm DIAMETER).



BRACING DETAIL (NOGGINGS NOT SHOWN).

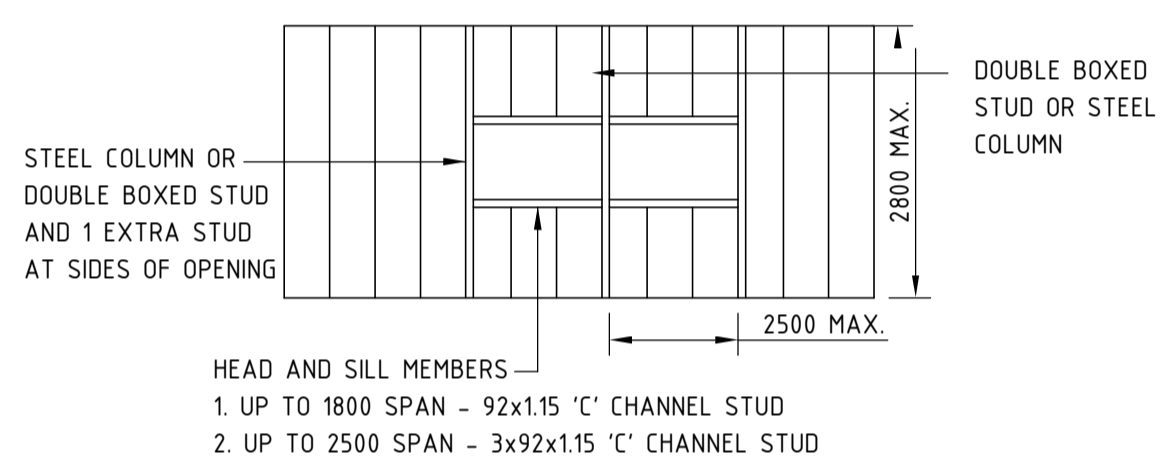
- SW3.** PROVIDE LIPPED AND GALVANISED WALL STUDS AS FOLLOWS U.N.O. ON DRAWINGS.

WALL TYPE	SPACING (mm)	MAX. HEIGHT
INTERNAL 92.1 x 0.55 BMT	600	4200
EXTERNAL AND LINED INTERNALLY 92.1 x 1.15 BMT	450	4000
EXTERNAL AND NOT LINED INTERNALLY 92.1 x 0.75 BMT	600	2500
92.1 x 1.15 BMT	600	3200

- SW4.** PROVIDE NOGGINGS AT 16 METRES CTS MAX U.N.O. NOGGING SECTION SHALL BE 0.75 BMT. NOGGINGS SHALL BE MECHANICALLY FIXED TO STUDS AS PER MANUFACTURERS SPECIFICATIONS.

- SW5.** PROVIDE DOUBLE 1.15mm 'C' CHANNEL STUDS (BOXED) AND 1 EXTRA STUD AT SIDES OF OPENING.

- SW6.** PROVIDE DOUBLE 1.15mm 'C' CHANNEL STUDS (BOXED AT INTERMEDIATE GLAZING SECTIONS):



- SW7.** UNLESS NOTED OTHERWISE, STUD WALLS SHALL BE NON LOAD BEARING. ALLOW FOR DEFLECTION OF STUDS WITHIN TOP TRACK AT 20mm.

- SW8.** FIX BOTTOM TRACK OF BRACED PANELS TO CONCRETE FLOOR AS PER SW2. FOR ALL OTHER FIXINGS REFER TO MANUFACTURERS SPECIFICATION.

- SW9.** TOP PLATES SHALL BE FIXED TO THE UNDERSIDE OF THE SLAB UNLESS NOTED OTHERWISE. SHOT FIX RONDO DEFLECTION HEAD TRACKS TO THE UNDERSIDE OF SLABS/BEAMS.

## REPAIR OF FIELD WELDS IN HOT DIP GALVANISING

- NOTE:** ALL WELDING SHOULD BE SHOP WELDING, SITE WELDING IS NOT TO BE USED UNLESS APPROVED BY THE PRINCIPAL.
- HD1.** ALL REPAIRS SHOULD BE CARRIED OUT IN ACCORDANCE WITH AS4680:

**HD2.** 8.2 REPAIR REQUIREMENTS:

SURFACES THAT REMAIN UNCOATED DURING THE GALVANIZING PROCESS AS OUTLINED ABOVE AND REQUIRE REPAIR, SHALL BE REPAIRED BY THE APPLICATION OF ONE OF THE FOLLOWING COATINGS:

- ORGANIC ZINC RICH EPOXY PAINT COMPLYING WITH AS/NZS 3750.9. THIS IS TO BE APPLIED TO THE REPAIR AREAS IN TWO COATS. EACH COAT SHALL HAVE A MINIMUM DRY FILM THICKNESS OF 50µm.
- INORGANIC ZINC SILICATE PAINT COMPLYING TO AS/NZS 3750.15. THIS SHALL HAVE A MINIMUM DRY FILM THICKNESS OF 100µm.
- ZINC METAL SPRAY TO ISO 2063 OR AS/NZS 2312.
- ZINC ALLOY SOLDER STICK.

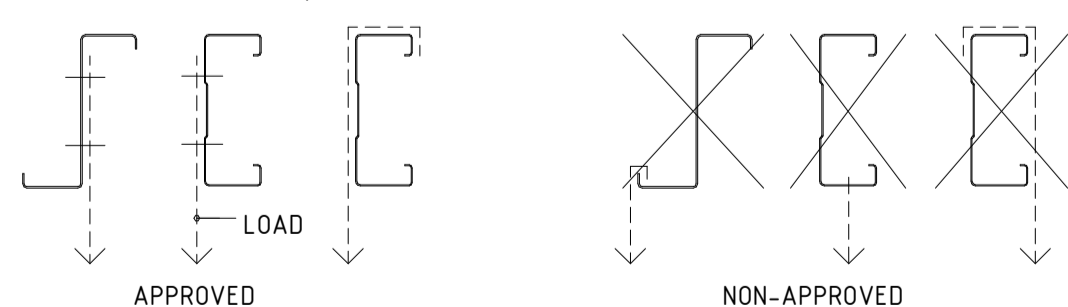
ALL OF THE ABOVE TREATMENTS SHALL BE APPLIED AS PER MANUFACTURER'S REQUIREMENTS AND SHALL INCLUDE ANY NECESSARY PRE-TREATMENT TO ENSURE GOOD ADHESION TO THE SUBSTRATE. THE COATING THICKNESS ON THE RENOVATED AREA SHALL BE A MINIMUM OF 30µm MORE THAN THE LOCAL COATING THICKNESS REQUIREMENTS IN TABLES 1 AND 2 FOR THE RELEVANT HOT DIP GALVANIZED COATING UNLESS THE PURCHASER ADVISES THE GALVANIZER OTHERWISE EG, WHEN THE GALVANIZED SURFACE IS TO BE OVER COATED AND THE THICKNESS FOR RENOVATED AREAS IS TO BE THE SAME AS FOR THE HOT DIP GALVANIZED COATING.

- HD3.** THE SELECTED COATING ON THE RENOVATED AREAS SHALL BE CAPABLE OF GIVING SACRIFICIAL PROTECTION TO THE STEEL TO WHICH IT IS APPLIED.

- HD4.** IF A FURTHER COATING HAS BEEN SPECIFIED BY THE PURCHASER FOR AESTHETIC OR FURTHER PROTECTIVE PURPOSES, THE PURCHASER AND APPLICATOR OF SUCH COATINGS SHALL ASSURE THEMSELVES THAT THEY ARE COMPATIBLE WITH THE REPAIR METHODS AND MATERIALS USED IN THE REPAIR OF UNCOATED AREAS.

## PURLINS AND GIRTS

- PG1.** THE SUSPENSION OF CEILINGS, SERVICES ETC FROM PURLINS AND GIRTS SHALL BE IN ACCORDANCE WITH THE APPROVED METHODS DETAILED BELOW:



- PG2.** MINIMUM YIELD STRESSES OF PURLINS AND GIRTS TO BE 450MPa. SURFACE TREATMENT OF ALL PURLINS AND GIRTS TO BE 350g/m<sup>2</sup> IN ACCORDANCE WITH AS1397-2001 U.N.O. LAPS, BRIDGING, BRACKETS AND PURLIN BOLTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

- PG3.** UNLESS OTHERWISE DETAILED FABRICATOR SHALL PROVIDE C10015 TRIMMER PURLINS ALONG WITH GENERAL PURPOSE BRACKETS TO SUPPORT EDGE OF ROOF SHEETING AT ALL HIPs, VALLEYS AND PENETRATIONS.

- PG4.** UNLESS OTHERWISE DETAILED, FABRICATOR SHALL ALLOW TO PROVIDE ONE ROW OF BRIDGING FOR PURLINS SPANNING UP TO 4.0m, TWO ROWS FOR PURLINS SPANNING BETWEEN 4.0m AND 8.0m AND THREE ROWS FOR SPANS GREATER THAN 8.0m INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

- PG5.** PURLIN CLEATS SHALL GENERALLY BE MINIMUM 75 WIDE x 8 PLATE U.N.O. WHERE THE DISTANCE BETWEEN THE UNDERSIDE OF PURLIN AND THE TOP OF THE BEAM EXCEEDS 150mm THE CLEATS SHALL BE MINIMUM 75 x 6 EA. UP TO A MAXIMUM HEIGHT OF 800mm.

- PG6.** PURLINS SHALL BE LAPPED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SHOWN ON THE DRAWINGS.

## STEEL DECK FORMWORK (BONDEK or CONDECK)

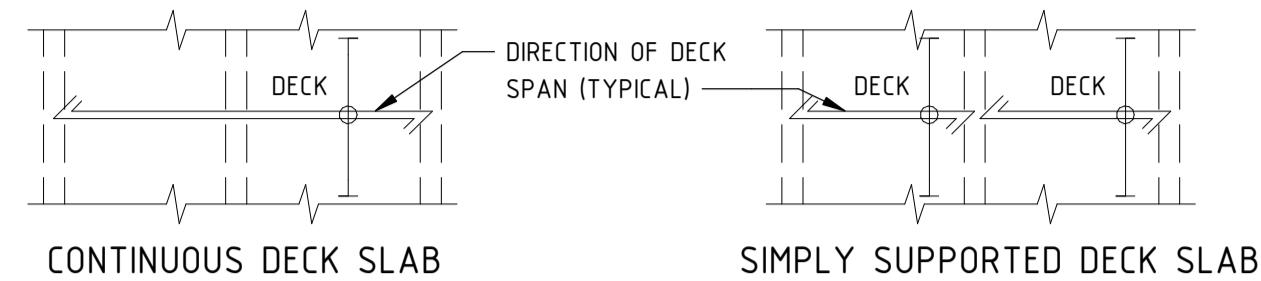
- BS1.** STEEL DECKING TO BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

- BS2.** REFER TO PLAN FOR STEEL DECKING SPECIFICATION. CONTRACTOR MAY SUBMIT FOR APPROVAL EQUIVALENT DECKING PRODUCTS.

- BS3.** PROVIDE 50mm MINIMUM BEARING AT SUPPORTS.

- BS4.** AT ALL RE-ENTRANT CORNERS PROVIDE 3/12 TRIMMERS 2000 LONG TIED TO UNDERSIDE OF MESH.

- BS5.** UNLESS NOTED OTHERWISE, PROVIDE TEMPORARY PROPPING OF DECK IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.



## FIRE PROTECTION OF STEELWORK

- FP1.** PROVIDE AS PER ARCHITECTS / BCA REQUIREMENTS FIRE PROTECTION TO ALL PERMANENT STRUCTURAL STEEL MEMBERS AND CONNECTIONS.

- FP2.** REINSTATE ANY FIRE PROTECTION REMOVED FROM EXISTING STRUCTURAL STEELWORK.

- FP3.** INSTALL FIRE PROTECTION MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS.

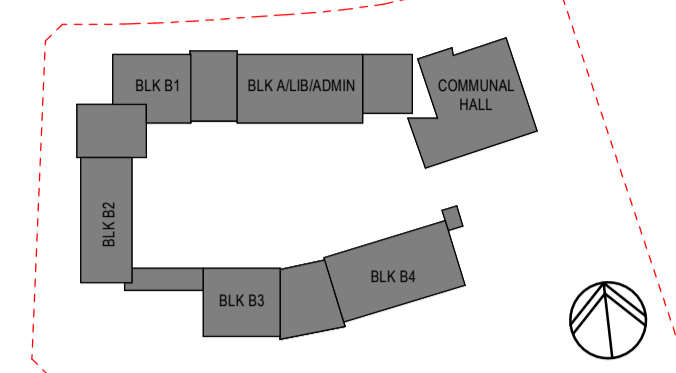
- FP4.** PROVIDE CERTIFICATION OF FIRE PROTECTION ON COMPLETION.

## LEGEND

TERM	ABBREVIATION	TERM	ABBREVIATION
BOTH SIDES	B/S	MAXIMUM	MAX
BOTTOM	B	MINIMUM	MIN
BLOCK WALL	BW	MISCELLANEOUS	MISC
BRICK WALL	BRW	NEAR FACE	NF
CENTRALLY PLACED	CENT	NEAR SIDE	N/S
CENTRE LINE	CL	NOMINAL	NOM
CENTRES	CTS	NOT SHOWN ON PLAN	NSOP
CIRCULAR HOLLOW SECTION	CHS	NOT SHOWN ON PLAN	NSOE
CONCRETE	CONC	ELEVATION	
CONCRETE WALL	CW	NOT TO SCALE	NTS
CONSTRUCTION JOINT	CJ	OPPOSITE	OPP
DEEP/DEPTH	D	OVERALL	O/A
DIAMETER	DIA	PARALLEL	PPC
DIAMETER INSIDE	ID	FLANGE CHANNEL	
DIAMETER NOMINAL	DN	PLATE	PL
DIAMETER OUTSIDE	OD	PERMANENT ACTION	G
DRAWING	DWG	(DEAD LOAD)	
EACH FACE	EF	POST TENSION	PT
EACH WAY	EW	QUANTITY	QTY
EQUAL	EQ	RADIUS	RAD
EQUAL ANGLE	EA	RECTANGULAR HOLLOW SECTION	RHS
EXISTING	EXST	REINFORCED CONCRETE	RC
EXPANSION JOINT	EJ	REINFORCEMENT	REINF
FAR SIDE	F/S	REQUIRED	REQ'D
FAR FACE	FF	SQUARE	SQ
FINISHED FLOOR LEVEL	FFL	SQUARED	SHS
FLAT	FL	HOLLOW SECTION	
GALVANISED	GALV	TOP	T
GENERAL PURPOSE	GPB	TOP & BOTTOM	T&B
BRACKET		TYPICAL	TYP
HIGH/HEIGHT	H	UNDER SIDE	U/S
HORIZONTAL	HORIZ	UNEQUAL ANGLE	UA
IMPOSED ACTION (LIVE LOAD)	Q	UNIVERSAL BEAM	UB
INTERSECTION POINT	IP	UNIVERSAL COLUMN	UC
LONG/LENGTH	L	UNLESS NOTED OTHERWISE	UNO
LENGTH VARIES	LV	VERTICAL	VERT
		WIDE/WIDTH	W

DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED. THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHPROP CONSULTING ENGINEERS PTY LTD. ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH ARCHITECT AND BUILDER BEFORE COMMENCING SHOP DRAWINGS OR SITE WORK. NORTHPROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.

## KEYPLAN



REV	DESCRIPTION	ISS'D	VER'D	APP'D	DATE
A	ISSUED FOR DDR	L.M		R.D	14.06.19
B	REVISED FOR DDR SUBMISSION	L.M		R.D	21.06.19
C	PROGRESS ISSUE	L.M		R.D	28.06.19
D	PROGRESS ISSUE	L.M		R.D	05.07.19
E	FINAL COORDINATION ISSUE	L.M		R.D	12.07.19
F	ISSUED FOR CONSTRUCTION	L.M	P.O'H	R.D	17.07.19

CLIENT

**RICHARD CROOKES**

CONSTRUCTIONS

ARCHITECT

**GROUP USA**

**NSW** GOVERNMENT | **Education**

PROJECT

**ALEX AVENUE PUBLIC SCHOOL**

**NORTHPROP**

Sydney  
Level 11, 345 George Street, Sydney, N.S.W. 2000  
Ph (02) 9241 4188 Email: sydney@northrop.com.au  
ABN 81 094 433 100

DRAWING TITLE

**STRUCTURAL DRAWING SPECIFICATION NOTES - SHEET 3**

JOB NUMBER	DRAWING NUMBER	REVISION
<b>S182535-01</b>	<b>S01.3</b>	<b>F</b>
DRAWING SHEET SIZE = A1		

**FOR CONSTRUCTION**

VERIFIER: PHIL O'HARA

JOB MANAGER: RORY DALE

DESIGNED: BRENDAN BLAKE

DRAWN: LIAM MCKEOUGH