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November 26, 2020

Job Number: S182535-01 Alex Avenue Public School

S182535-01-SL02-02

Darren Vozzo Richard Crookes Constructions Level 3, 4 Broadcast Way Artarmon NSW 2064

Dear Darren,

## Re: Alex Avenue Public School STRUCTURAL CONSTRUCTION CERTIFICATE

## STAGE 1 NON-MODULAR BUILDINGS <u>ONLY</u> INCLUDING; COLA A/B/C, COVERED ENTRY, COMMUNAL HALL (NON-MODULAR), EXTERNAL STAIRS

We, Northrop Engineers, being professional engineers, confirm that we have periodically visited the site to observe the structural components (listed on the Northrop design certificate SL01-01 dated September 10, 2019, which includes the Fire Safety Engineering report issued by BCA Logic, Rev 5, Ref #110468, dated 4/9/2019) during construction.

The work required by structural engineering drawings (as shown in Appendix A) and engineering instructions issued up to the time of inspection conformed generally with the drawings and instructions. Please note that drawings listed in Appendix A describe the same intent of the structural works as was referenced on the original design certificate SL01-01 dated September 10, 2019.

These observed structural works include the following elements;

- Concrete;
  - Pad footings, slabs-on-ground, COLA columns and walls, COLA suspended slabs, external stairs and landings, lift shaft walls and lid
  - We confirm that the concrete lift shaft and concrete lid has been constructed to achieve a fire rating of 120/120/120 FRL
- Structural steelwork;
  - Hall building, cantilevered and attached awnings, canopies fixed to the concrete COLA's, entry awning, COLA roof primary steelwork and ceiling joists
- Secondary steel framing for;
  - o bathroom stud walls, COLA roof edge nosing pieces



The following items are excluded from this certificate:

- Other structural elements not listed above
- Waterproofing, Glazing, Balustrades
- Modular buildings / structures refer to Modscape installation certificate
- Support framing for COLA roof ceilings refer to D&C Contractors certificate
- External pavements and playing courts
- Other items by D&C sub-contractors, including play equipment and external timber decking

This certificate shall not be construed as relieving any other party of their responsibility liability or contractual obligations.

Yours faithfully,

Rory Dale

Associate | Structural Engineer BE MIEAust CPEng NER

On behalf of Northrop Consulting Engineers Pty Ltd



## Appendix A - Northrop Structural Drawing List

Drawing Number	Drawing Revision	Drawing Title
S00.1	G	COVER SHEET & DRAWING LIST
S01.1	Е	SPECIFICATION NOTES - SHEET 1
S01.2	Е	SPECIFICATION NOTES - SHEET 2
S01.3	F	SPECIFICATION NOTES - SHEET 3
S10.1	1	COMMUNAL HALL FOUNDATION & GROUND FLOOR SLAB PLAN
S10.2	G	COMMUNAL HALL ROOF FRAMING PLAN
S10.3	G	COMMUNAL HALL FRAMING ELEVATIONS – SHEET 1
S10.4	F	ENTRY CANOPY ROOF FRAMING PLAN
S11.1	1	BLOCK A LIBRARY & ADMIN, COLA A-B1 FOUNDATION PLAN
S11.2	F	BLOCK A LIBRARY & ADMIN, COLA A-B1 LEVEL 1 SLAB PLAN
S11.3	F	COLA A-B1 ROOF FRAMING PLAN
S12.1	1	BLOCK B1 & COLA B1-B2 FOUNDATION PLAN
S12.2	F	BLOCK B1 & COLA B1-B2 LEVEL 1 SLAB PLAN
S12.3	F	COLA B1-B2 ROOF FRAMING PLAN
S13.1	1	BLOCK B2 FOUNDATION PLAN
S13.2	F	BLOCK B2 & COLA B2-B3 LEVEL 1 SLAB PLAN
S13.3	F	COLA B2-B3 ROOF FRAMING PLAN
S14.1	1	BLOCK B3 & COLA B3-B4 FOUNDATION PLAN
S14.2	F	BLOCK B3 & COLA B3-B4 LEVEL 1 SLAB PLAN
S14.3	F	COLA B3 ROOF FRAMING PLAN
S15.1	1	BLOCK B4 FOUNDATION PLAN
S15.2	F	BLOCK B4 LEVEL 1 SLAB PLAN
S15.3	F	COLA B4 ROOF FRAMING PLAN
S16.1	D	TOILET BLOCK FRAMING PLAN & ELEVATION - SHEET 1
S16.2	Α	TOILET BLOCK FRAMING PLAN & ELEVATION - SHEET 2
S16.5	В	COLA FRAMING ELEVATIONS
S20.1	E	FOUNDATION & GROUND FLOOR SLAB DETAILS - SHEET 1
S25.1	D	TYPICAL LIFT PIT & SHAFT DETAILS
S25.2	D	TYPICAL COLUMN DETAILS
S30.1	E	SUSPENDED SLAB DETAILS - SHEET 1
S30.2	С	SUSPENDED SLAB DETAILS - SHEET 2
S40.1	D	STEEL FRAMING DETAILS - SHEET 1
S40.2	D	STEEL FRAMING DETAILS - SHEET 2
S40.3	D	STEEL FRAMING DETAILS - SHEET 3
\$40.4	D	STEEL FRAMING DETAILS - SHEET 4



S40.5	С	STEEL FRAMING DETAILS - SHEET 5
S50.1	D	TYPICAL STAIR DETAILS