Old Granada Studios, Manchester (OGS)

Zone 4 & 5 Ventilation Strategy Statement

Document Reference:
660/4.0/4.2 – Ventilation Strategy Statement

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Approvals

Name	Signature	Title	Date of Issue	Version
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Distribution

Name	Organisation	Role
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Note: Unless otherwise noted herein, the conclusions and recommendations contained in this report are based on the information supplied by the Client and visual inspection and testing (if any) described within. CONSOLUX can accept no liability in respect of differences between the actual structure and the information supplied except

(i) where these are readily apparent by visual inspection or

(ii) Where physical investigation has been undertaken by, or under the control of Consolux Ltd, and then only to the extent of such physical investigation.

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1.0 Introduction

This statement has been prepared to provide outline details of the ventilation proposals for the redevelopment of the existing Granada HQ building into a proposed Hotel and events space. This statement shall be read as an addendum to the Crookes Walker Ventilation Strategy Statement (P5) & in conjunction with the following Vaughan Engineering Ltd drawings:

Drawing Number	Drawing Name
0765-VAU-ZZ-LG-DR-M-5701	Ventilation Services Layout - Lower Ground Floor (Zone 4 & 5)
0765-VAU-ZZ-00-DR-M-5701	Ventilation Services Layout - Ground Floor (Zone 4 & 5)
0765-VAU-ZZ-01-DR-M-5701	Ventilation Services Layout - First Floor (Zone 4 & 5)
0765-VAU-ZZ-02-DR-M-5701	Ventilation Services Layout -Second Floor (Zone 5)
0765-VAU-ZZ-03-DR-M-5701	Ventilation Services Layout -Third Floor (Zone 5)
0765-VAU-ZZ-04-DR-M-5701	Ventilation Services Layout -Forth Floor (Zone 5)
0765-VAU-ZZ-05-DR-M-5701	Ventilation Services Layout - Fifth Floor (Zone 5)
0765-VAU-ZZ-06-DR-M-5701	Ventilation Services Layout - Sixth Floor (Zone 5)
0765-VAU-ZZ-ZZ-DR-M-5702	Ventilation Services Layout - Pool Plantroom Layout (Zone 5)
0765-VAU-ZZ-07-DR-M-5701	Ventilation Services Layout - Seventh Floor (Zone 5)
0765-VAU-ZZ-08-DR-M-5701	Ventilation Services Layout - Eighth Floor (Zone 5)
0765-VAU-ZZ-09-DR-M-5701	Ventilation Services Layout - Ninth Floor (Zone 5)

2.0 Proposals

The Old Granada Studios proposals represent an opportunity to deliver a landmark scheme within the St Johns masterplan, at a prominent gateway location to the wider city centre. The Old Granada Studios proposals include:

- Conversion of the iconic Granada House building in to a 127-bed destination hotel, with associated food and beverage facilities & Gym.
- Construction of a rooftop extension to Granada House incorporating a swimming pool, bar and restaurant for use of the hotel members.

All the above shall be treated with the following ventilation systems, detailed in this report, which shall be designed to comply with Part F of the Building Regulations and be compliant to the requirements of the acoustic and air quality reports.

3.0 Hotel Public Areas

For energy efficiency and occupant comfort purposes, it is proposed that all occupied areas of the hotel (ie guestrooms, reception, bars and restaurants etc) are provided with mechanical ventilation. These systems shall be balanced supply and extract type systems with high efficiency heat recovery and shall be served from a combination of centralised air handling units located externally on the roof space, and internal MVHR units. The air shall be distributed through the building via a ductwork system, sized and tested to the current standards. The ventilation air shall be heated to appropriate levels to avoid cold draughts. Back of house (BOH) areas of the hotel shall be suitably ventilated in accordance to use (e.g. laundry / linen space). This shall be via the combined AHU systems.

Plant spaces shall be screened through the use of louvered screens which shall be acoustically rated where required. Plant noise limits are specified in the Sandy Brown Acoustic Noise Report 15037-R12-A, submitted with this application, which will be adhered to and confirmed through the submission of condition discharge information prior to operation.

4.0 Hotel Kitchen Areas

The proposed kitchen areas shall be provided with mechanical kitchen extract and make-up supply air ventilation. The kitchens are located on the ground, 1st and 7th floors. The kitchen extract systems shall be designed to meet the various criteria in the Chartered Institute of Building Service Engineers Guides, DW172 and DEFRA design guidance. These systems shall generally comprise of roof mounted supply and extract systems with the extract outlets located as far away as possible from any fresh air intake points and be directed away from the occupied spaces and other air handling plant. The main kitchen area extract systems shall incorporate specialist filtration to control the emission of odours and grease particles. This detailed ventilation will be confirmed through the submission of condition discharge information prior to operation once the odour mitigation requirements are known.
Kitchen extract ducts shall be routed through the building in a manner that facilitates ease of access for frequent cleaning, without blocking corridors. Fire rated ductwork shall be used throughout to maintain integrity.

Supply ventilation shall be sized at 95% of the extract requirements, to ensure negative pressure, in accordance with DW172.

5.0 Sanitary Facilities

All WC, shower facilities and temporary waste stores (for use between waste collections) shall be provided with adequate ventilation to prevent the build-up of smells, mould and mildew, and to control excess humidity of the air. The systems shall be designed in accordance with the requirements of Building Regulations Part F and CIBSE standards. The sanitary facilities within all areas of the building shall be provided with extract ventilation, at rates which are equal to, or exceed the minimum requirements of Building Regulations Part F whilst remaining energy efficient:

- Hotel bathrooms/WC's will be ventilated by heat recovery, air handling units located in external plant areas at roof level. Extract ventilation will be provided directly to WC's/bathrooms, whilst supply air shall be provided external to the rooms. Doors shall be undercut to allow air refresh for the supply air, ensuring odour & humidity control.

- The WCs in the New Build block will be mechanically ventilated via local MVHR's on each level, ducted to louvres in the façade overlooking the studios.

- Hotel pool area changing rooms/shower facilities will be ventilated by heat recovery, supply and extract air handling plant located in an external plant area at roof level.

Control systems shall be based on time control, individually adjustable to suit the various occupancy patterns.

6.0 Gym

The proposed Gym on level 01 shall be provided with mechanical heat recovery ventilation systems that shall provide adequate ventilation to meet the requirements of the Building Regulations Part F and CIBSE standards.

The Gym facility areas of the building shall be provided with supply and extract ventilation, at rates which are equal to, or exceed the minimum requirements of Building Regulations Part F whilst remaining energy efficient:

- Gym area changing rooms/shower facilities will be ventilated by heat recovery, supply and extract air via local units discharging to atmosphere in an external plant area at roof level.

7.0 Acoustics & Attenuation

All ventilation systems shall be suitably attenuated to ensure noise levels internally & externally are in line with Sandy Brown acoustic report 15037-R12-A. All internal ductwork and final terminal points will be sized to ensure the noise levels at final terminal adhere to the acoustic report.

Table 2 Plant noise limits for Zone 4 and Zone 5

	Plant noise limit at 1 m from noise sensitive receiver, L_{Aeq} (dB)	
Location	Daytime (07:00 – 23:00)	Night (23:00 – 07:00)
West and south of the site	46	45
East of the site	43	37

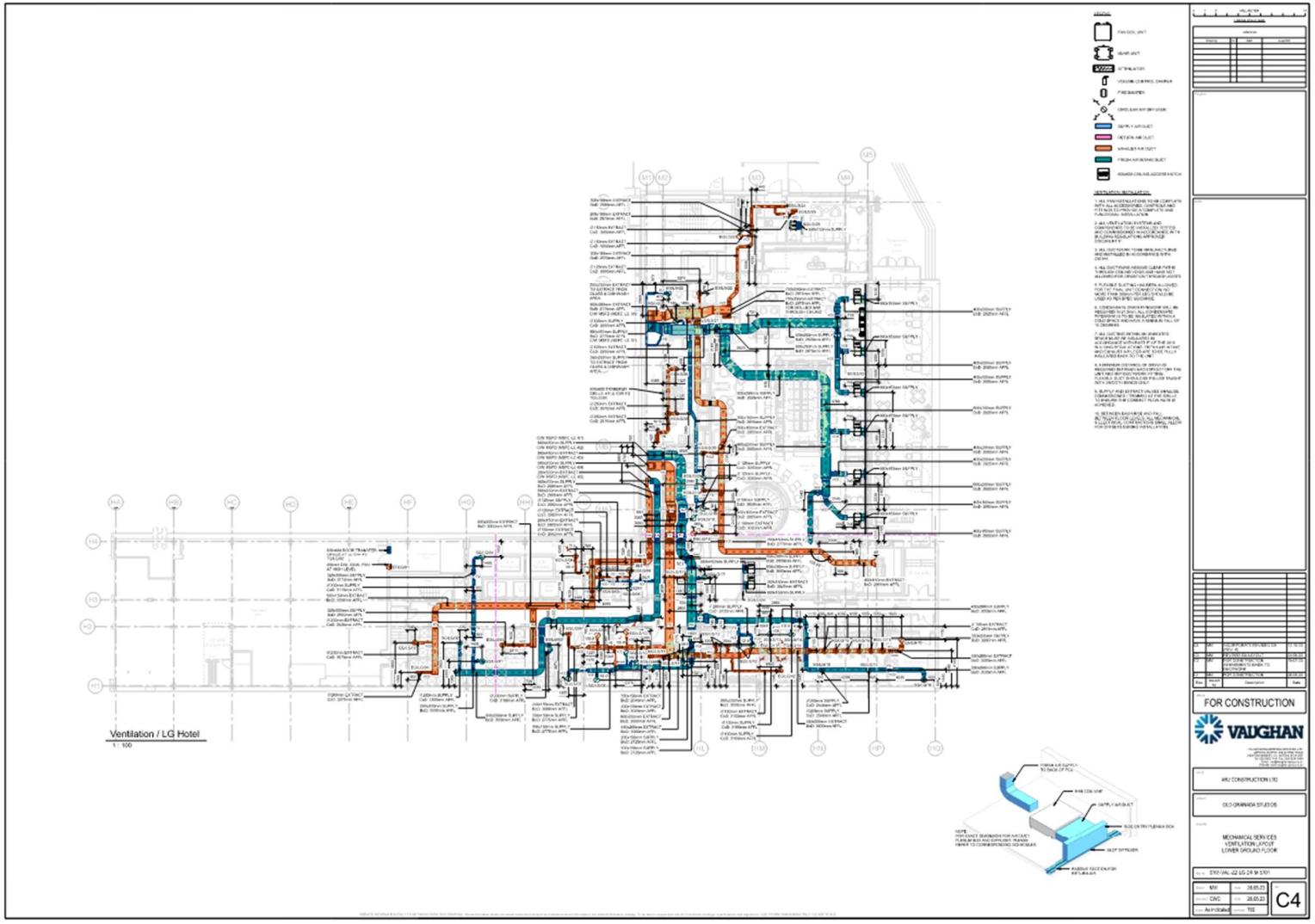
Corrections will need to be applied for any attention catching features in line with BS4142:2014.

To the west of the site, the nearest and worst effected receptor is considered to be Manchester Goods Yard. This comprises of office premises and is therefore considered to only be a receptor during the daytime (07:00-23:00).

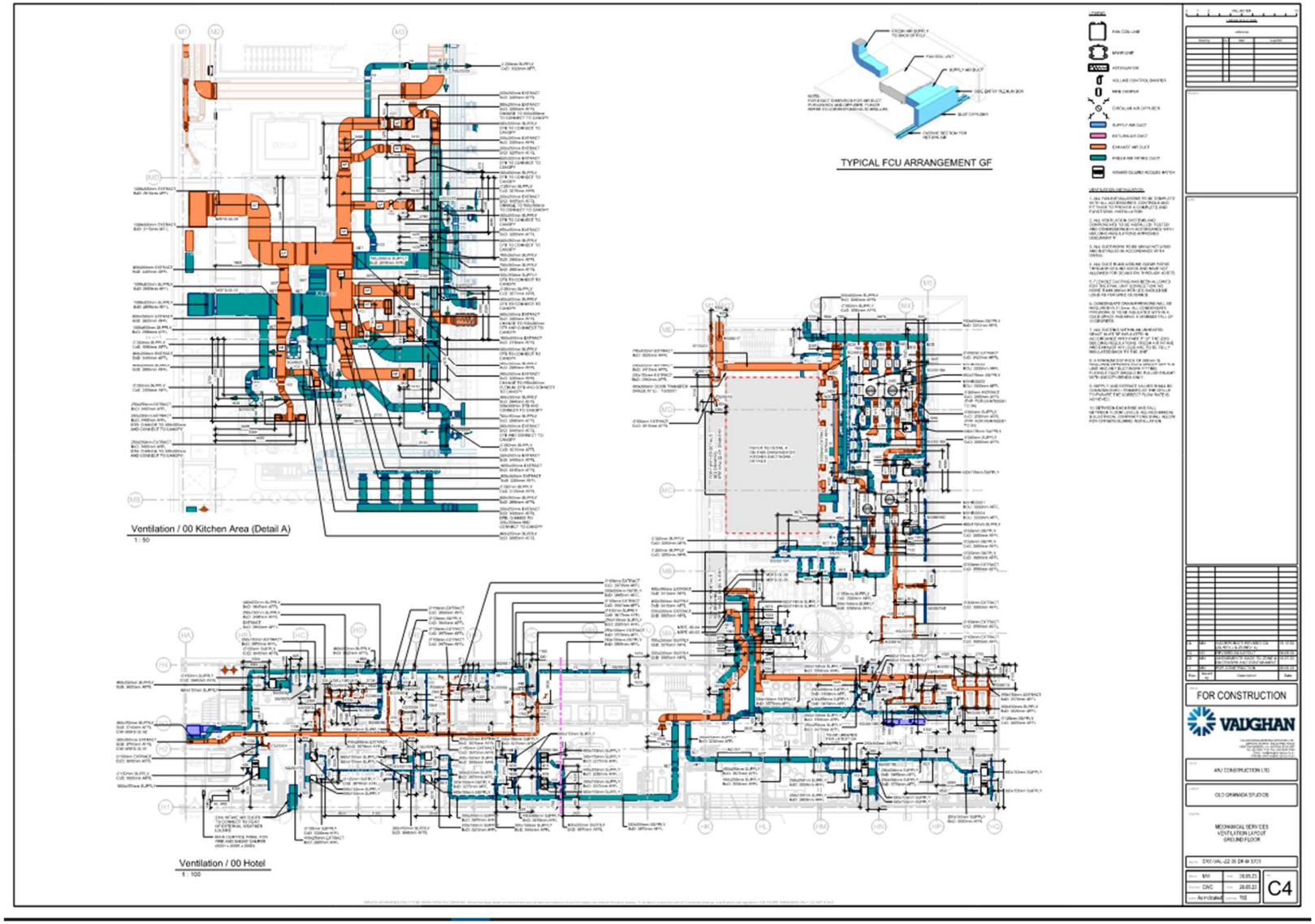
To the east of the site, the nearest and worst effected receptor is considered to be Bauhaus. This residential receptor is considered to be sensitive during the daytime (07:00-23:00) and night-time (23:00-07:00).

8.0 Appendix 1 Zone 4 & 5 Ventilation Drawings

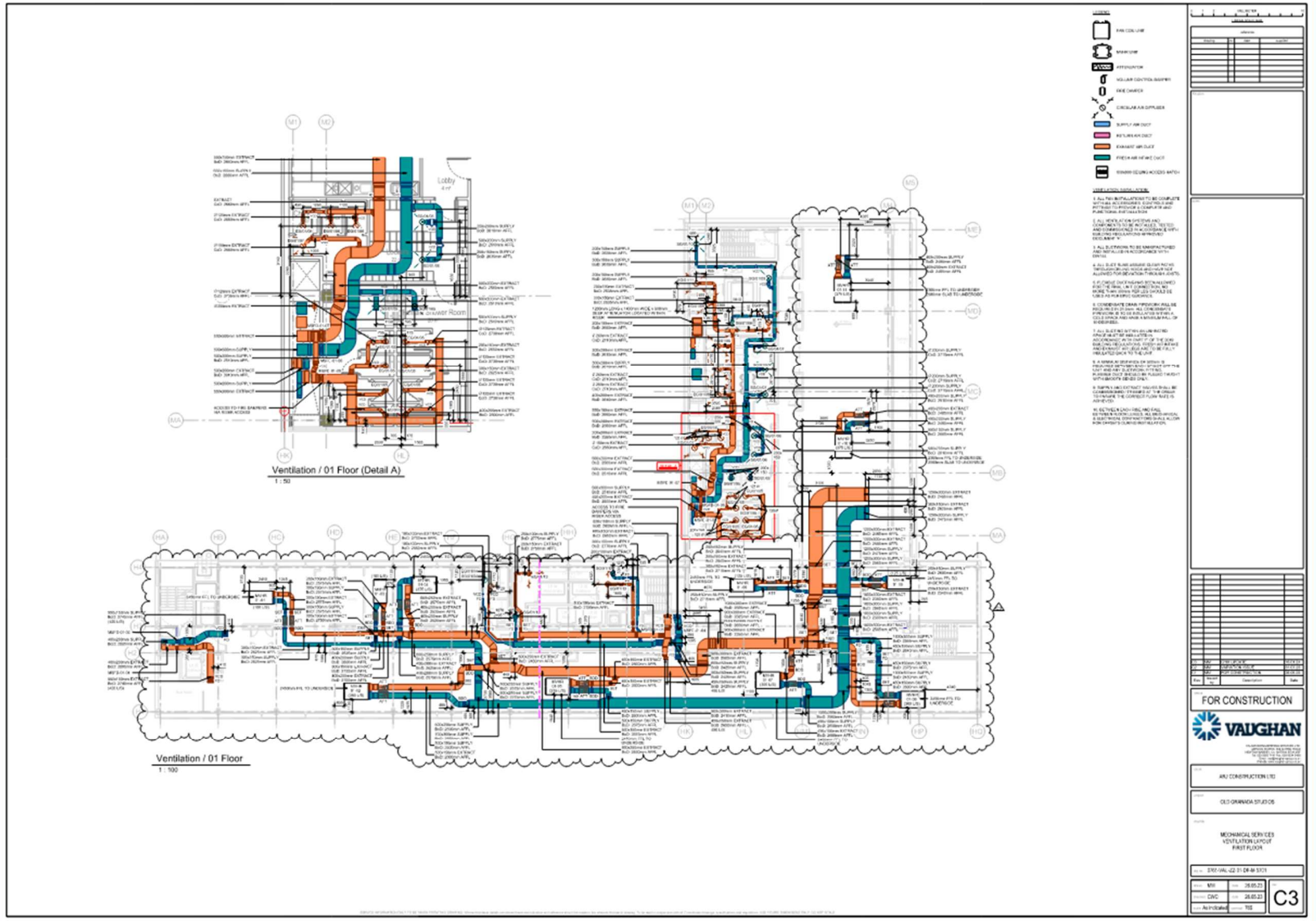
8.1 Lower Ground Floor



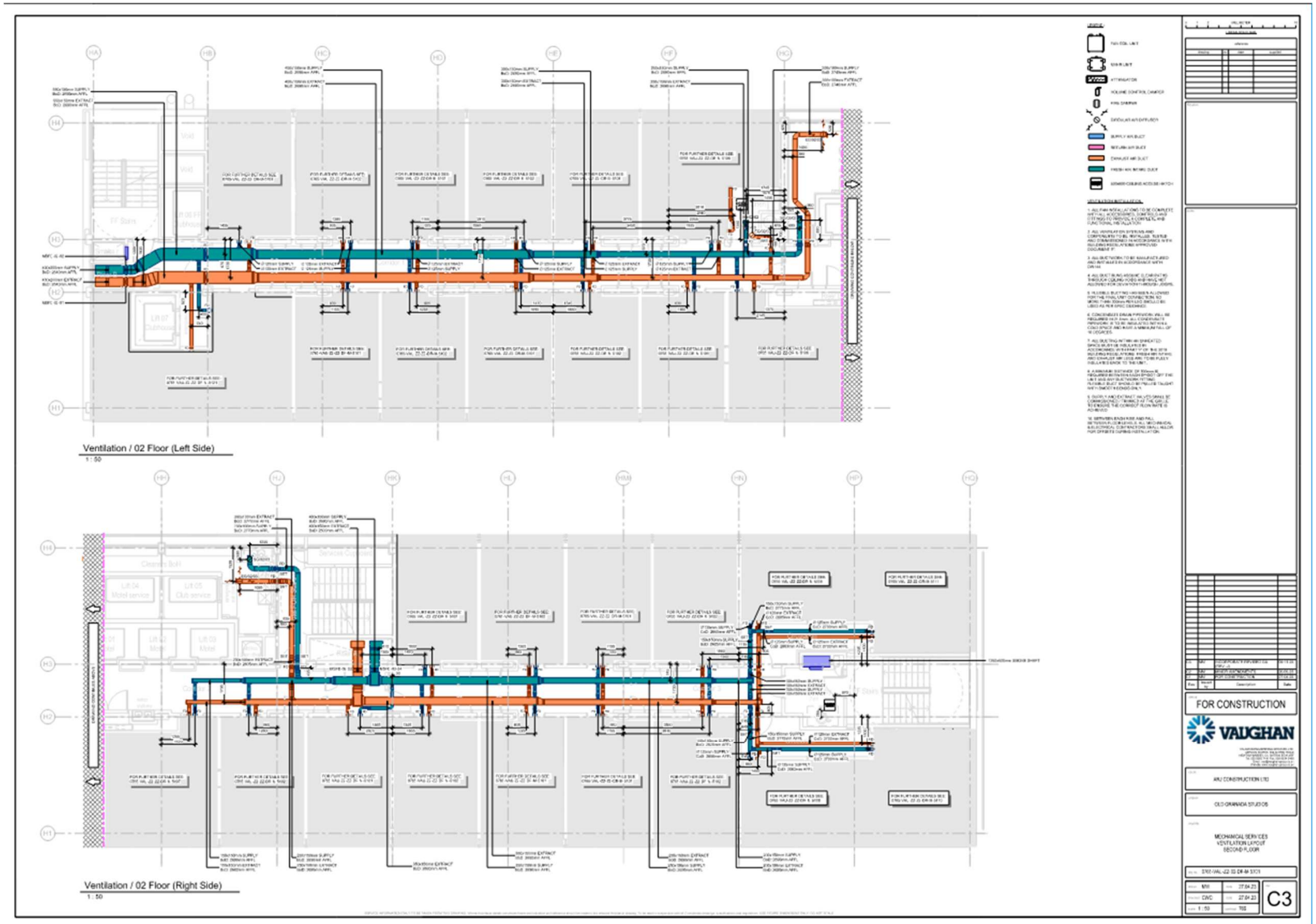
8.2 Ground Floor Level



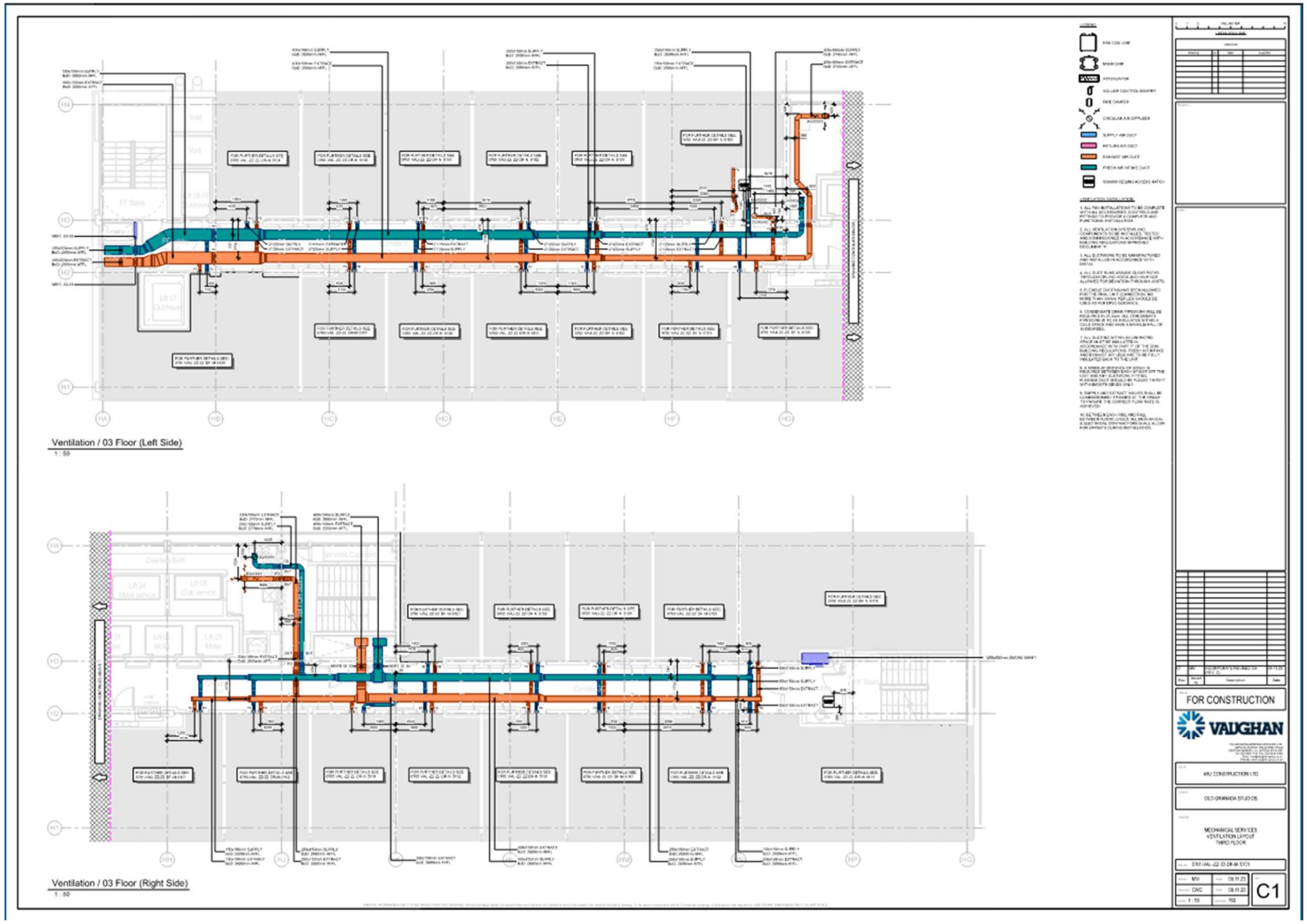
8.3 First Floor



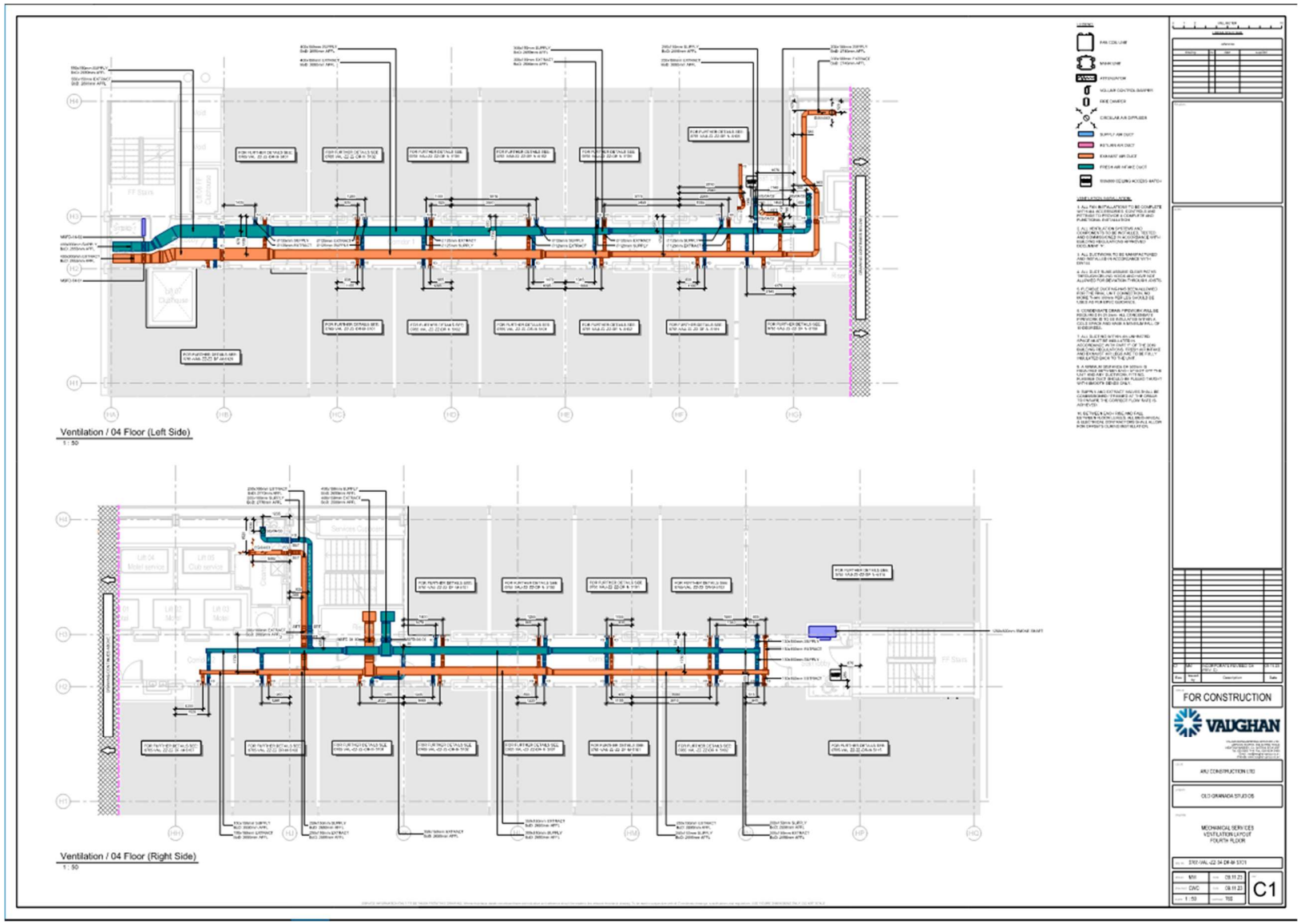
8.4 Second Floor



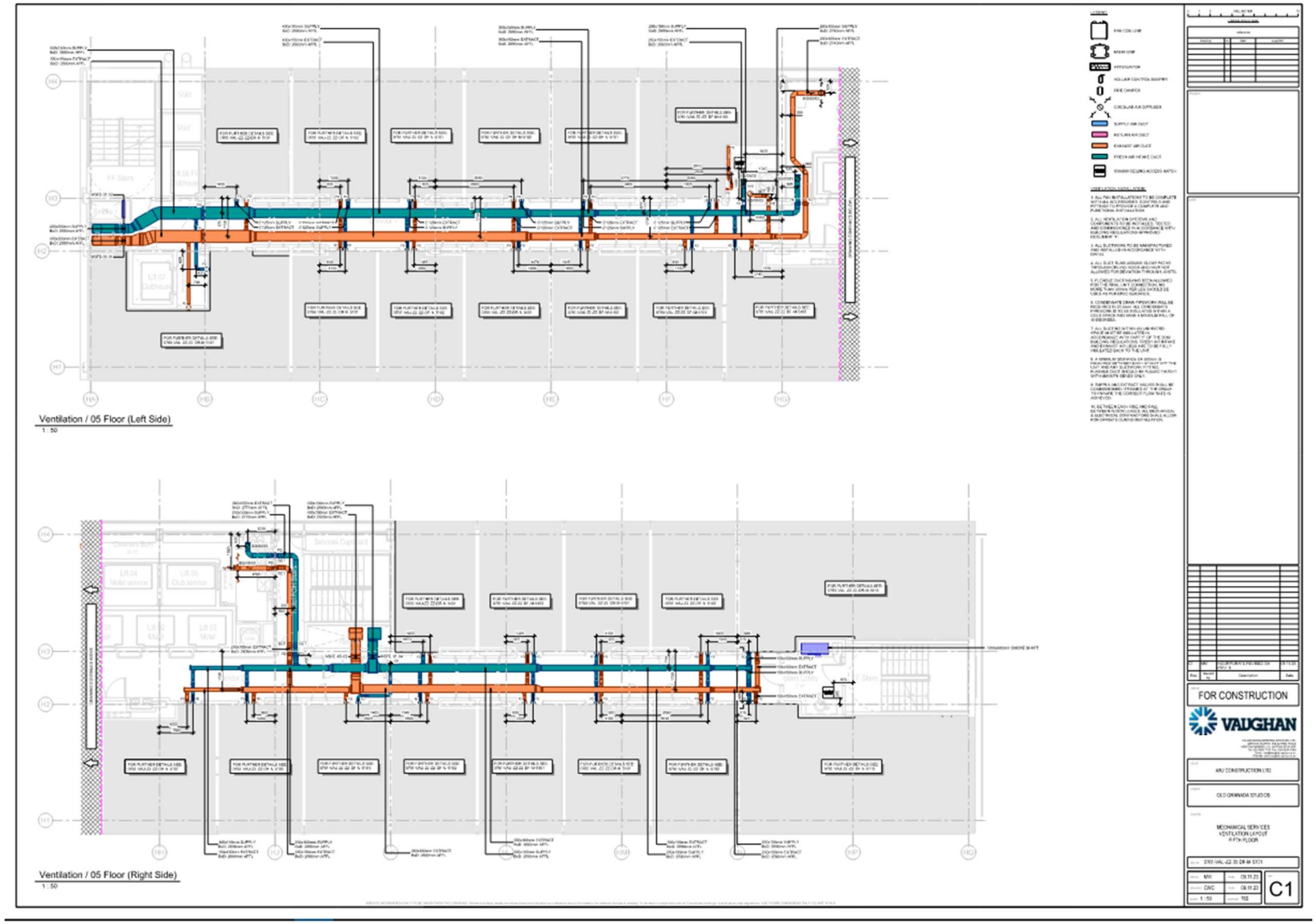
8.5 Third Floor



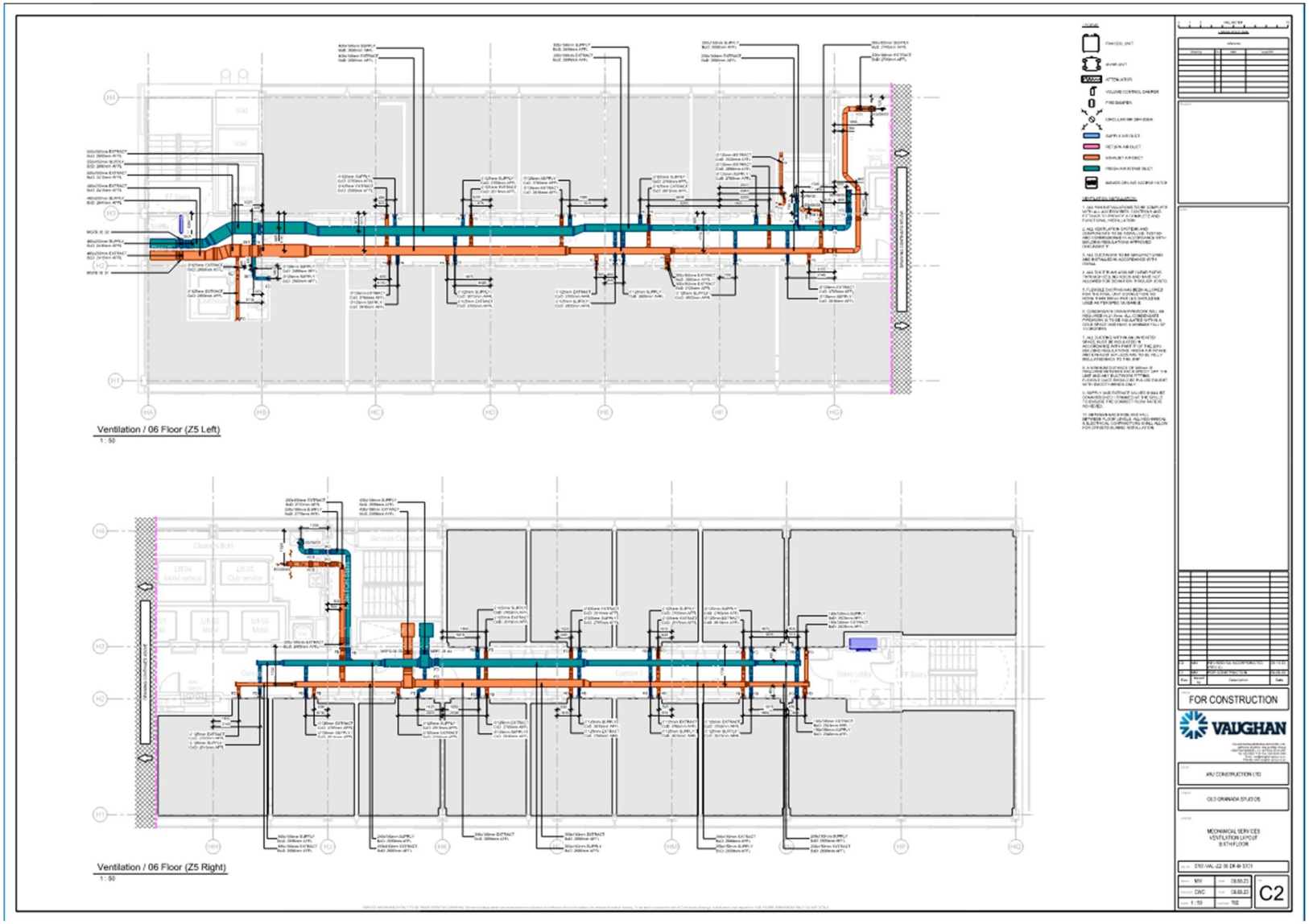
8.6 Fourth Floor



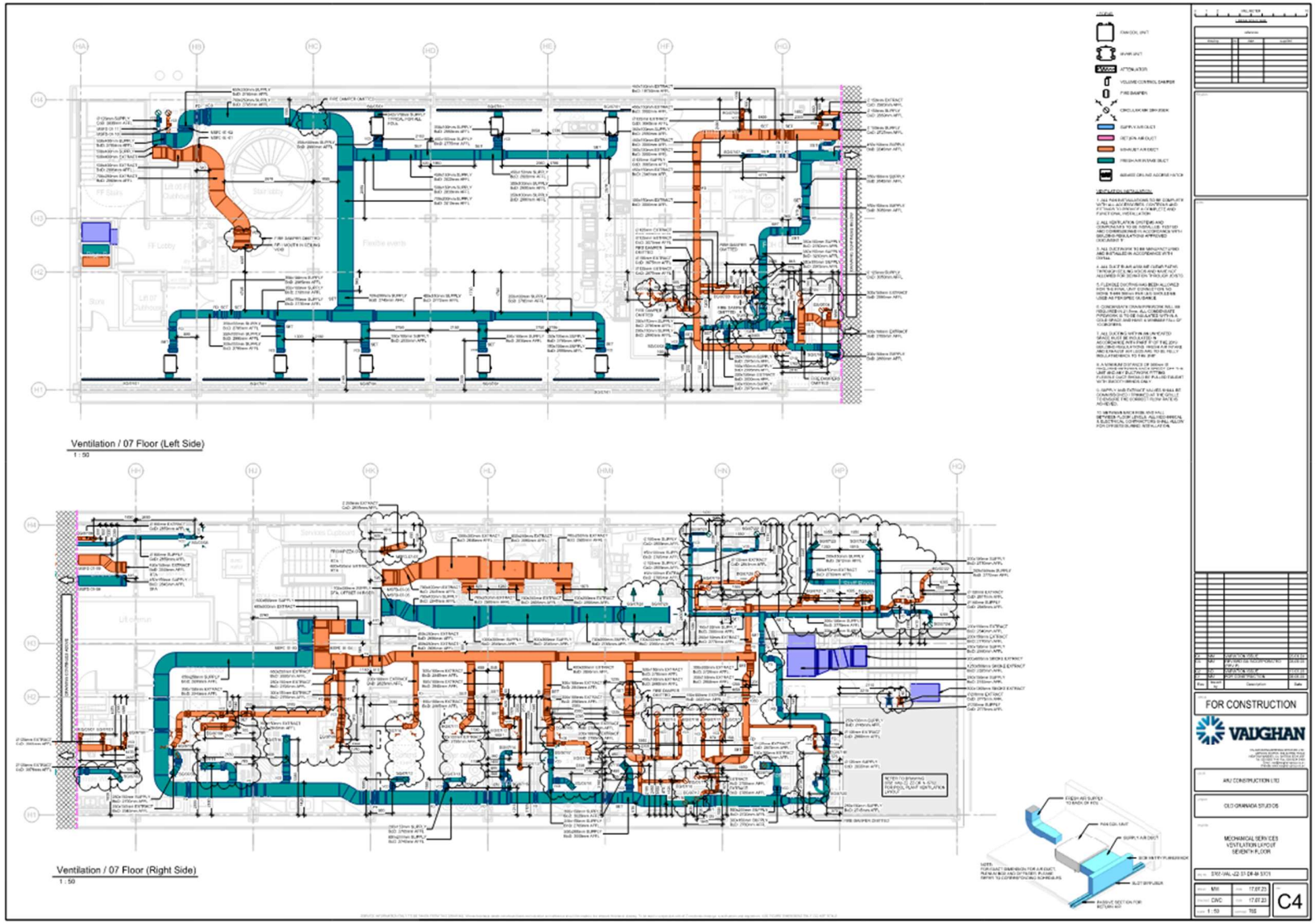
8.7 Fifth Floor



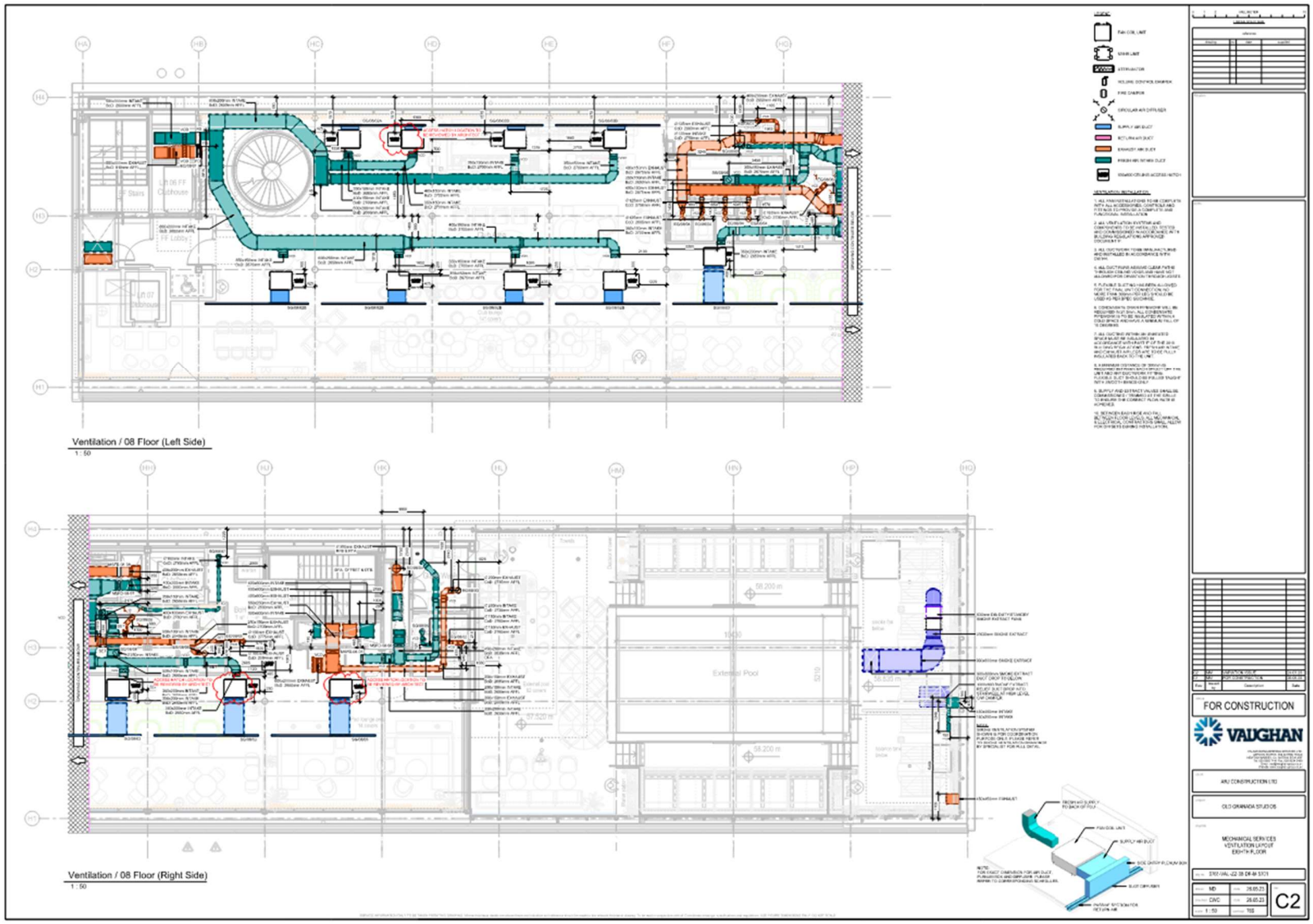
8.8 Sixth Floor



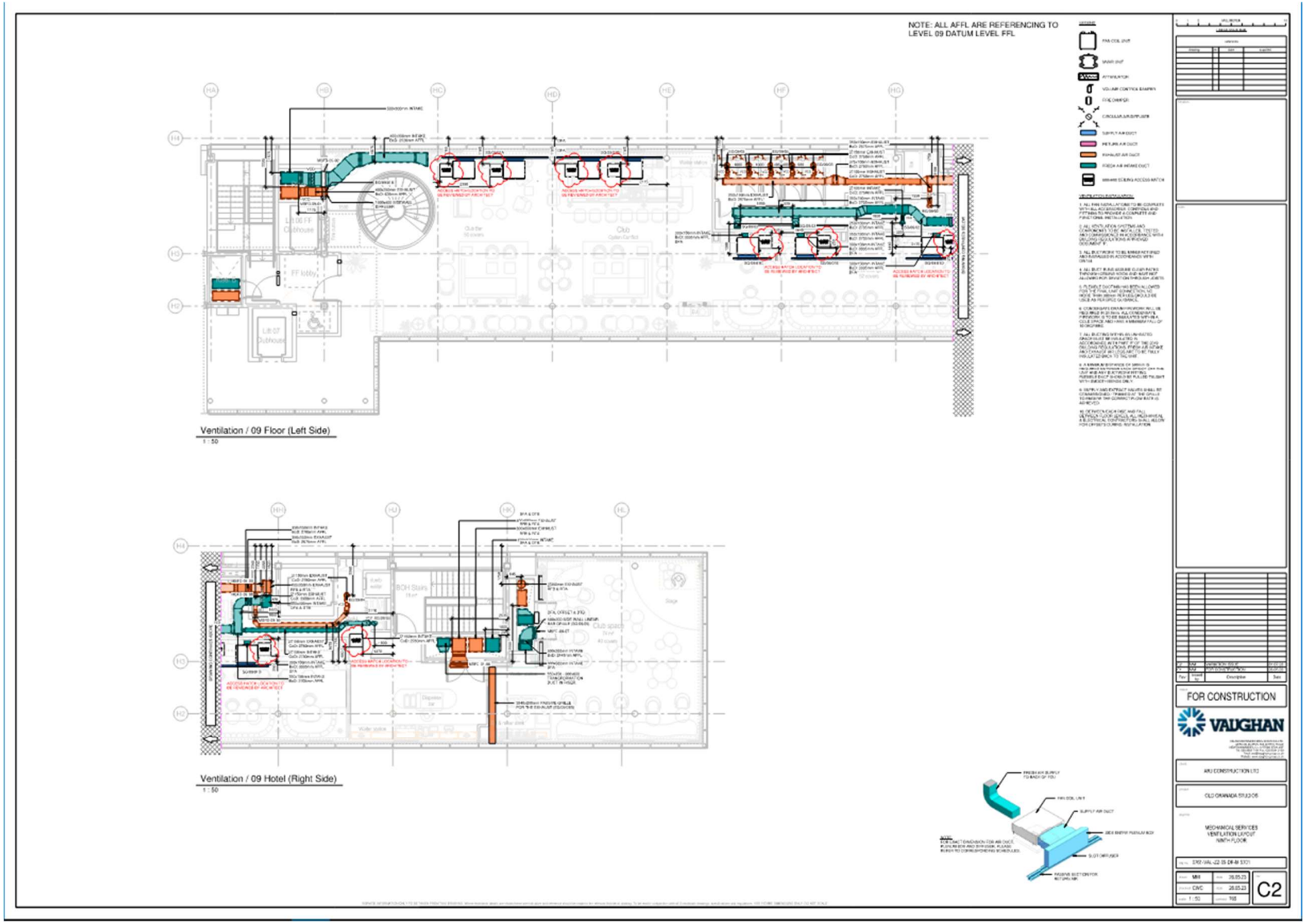
8.9 Seventh Floor



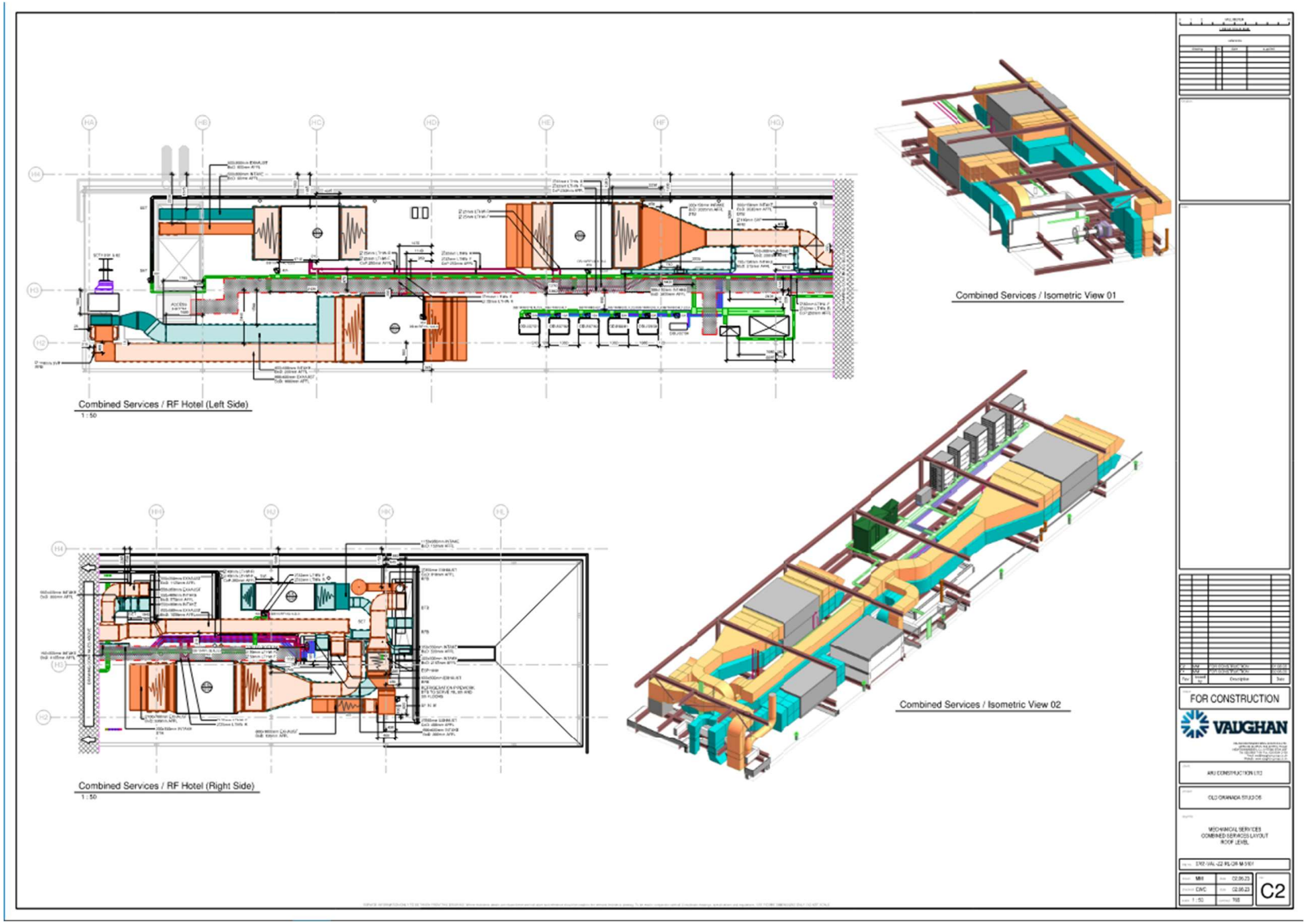
8.10 Eighth Floor



8.11 Ninth Floor



8.12 Z5 Roof Level



8.13 Z4 Roof Level

