

# METLIFECARE GULF RISE

# 65 HIBISCUS COAST HIGHWAY, RED BEACH

## BUILDING 7

## MECHANICAL SERVICES

## FOR CONSTRUCTION

DRAWING INDEX

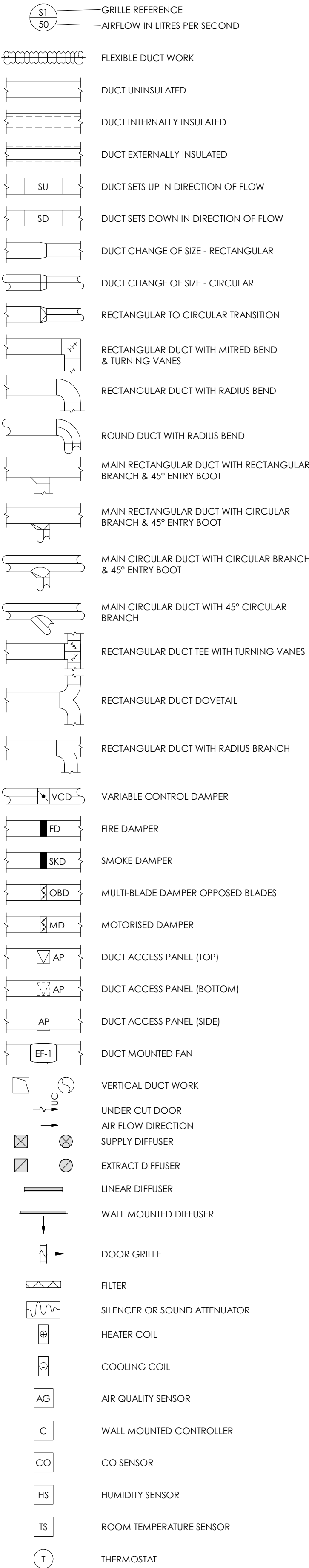
NUMBER	NAME	ISSUE	AMENDMENT	DATE
M001	STANDARD SYMBOLS LEGEND & DETAILS	1	FOR CONSTRUCTION	22.08.24
M101	HVAC DUCTWORK LAYOUT LEVEL 01	1	FOR CONSTRUCTION	22.08.24
M102	HVAC DUCTWORK LAYOUT LEVEL 02	1	FOR CONSTRUCTION	22.08.24
M103	HVAC DUCTWORK LAYOUT LEVEL 03	1	FOR CONSTRUCTION	22.08.24
M104	HVAC DUCTWORK LAYOUT LEVEL 04	1	FOR CONSTRUCTION	22.08.24
M105	HVAC DUCTWORK LAYOUT LEVEL 05	1	FOR CONSTRUCTION	22.08.24
M106	HVAC DUCTWORK LAYOUT LEVEL 06	1	FOR CONSTRUCTION	22.08.24
M107	HVAC DUCTWORK LAYOUT ROOF	1	FOR CONSTRUCTION	22.08.24
M201	HVAC PIPEWORK & CONTROLS LAYOUT LEVEL 01	1	FOR CONSTRUCTION	22.08.24
M202	HVAC PIPEWORK & CONTROLS LAYOUT LEVEL 02	1	FOR CONSTRUCTION	22.08.24
M203	HVAC PIPEWORK & CONTROLS LAYOUT LEVEL 03	1	FOR CONSTRUCTION	22.08.24
M204	HVAC PIPEWORK & CONTROLS LAYOUT LEVEL 04	1	FOR CONSTRUCTION	22.08.24
M205	HVAC PIPEWORK & CONTROLS LAYOUT LEVEL 05	1	FOR CONSTRUCTION	22.08.24
M206	HVAC PIPEWORK & CONTROLS LAYOUT LEVEL 06	1	FOR CONSTRUCTION	22.08.24
M301	MECHANICAL DETAILS	1	FOR CONSTRUCTION	22.08.24
M401	MECHANICAL SCHEMATIC	1	FOR CONSTRUCTION	22.08.24



Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03)

ORIGINAL DRAWINGS PRODUCED WITH COLOUR

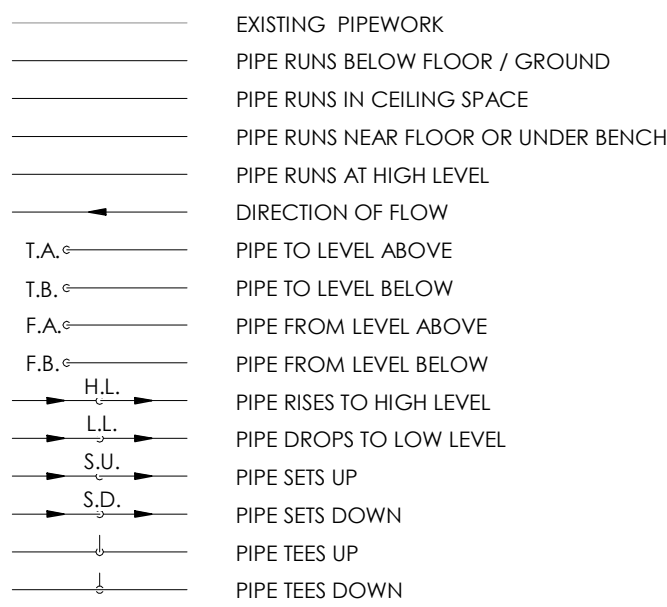
## HVAC SYMBOLS



## HVAC ABBREVIATION

E (PREFIX)	EXTRACT AIR
O (PREFIX)	OUTDOOR AIR
R (PREFIX)	RETURN AIR
S (PREFIX)	SUPPLY AIR
T (PREFIX)	TRANSFER AIR
/1 (SUFFIX)	UNINSULATED
/2 (SUFFIX)	25mm INTERNAL LINING
/3 (SUFFIX)	50mm INTERNAL LINING
/4 (SUFFIX)	25mm EXTERNAL LINING
/5 (SUFFIX)	50mm EXTERNAL LINING
/6 (SUFFIX)	40mm FYPEWRAP EXTERNAL ELITE 1.5 INSULATION
AFFL	ABOVE FINISHED FLOOR LEVEL
F.A	FROM LEVEL ABOVE
F.B	FROM LEVEL BELOW
H.L	HIGH LEVEL
L.L	LOW LEVEL
T.A	TO LEVEL ABOVE
T.B	TO LEVEL BELOW
RC	ROOF COWL
DG	DOOR GRILLE
L	LOUVRE
P	PUMP
AC-G.01	EQUIPMENT REFERENCE
AC-#.##	REFERS TO EQUIPMENT ABBREVIATION
##-G.##	REFERS TO LEVEL (GROUND FLOOR)
##-#.01	REFERS TO EQUIPMENT NUMBER
AC	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
HRV	HEAT RECOVERY VENTILATION
FCU	FAN COIL UNIT
SF	SUPPLY FAN
EF	EXTRACT FAN
HB	HEATER BATTERY
HC	HEATING COIL
CC	COOLING COIL

## PIPEWORK SYMBOLS

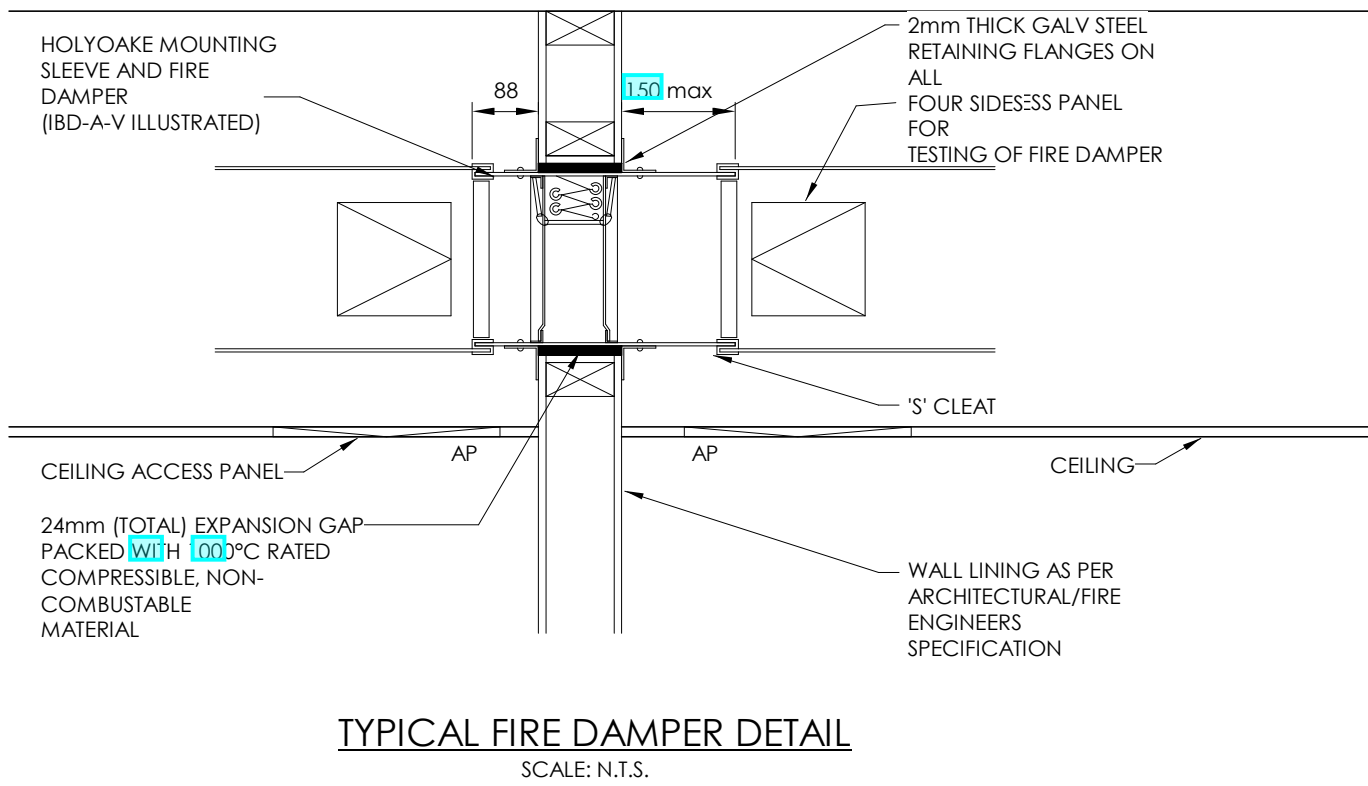


## PIPEWORK SYSTEM ABBEVIATIONS

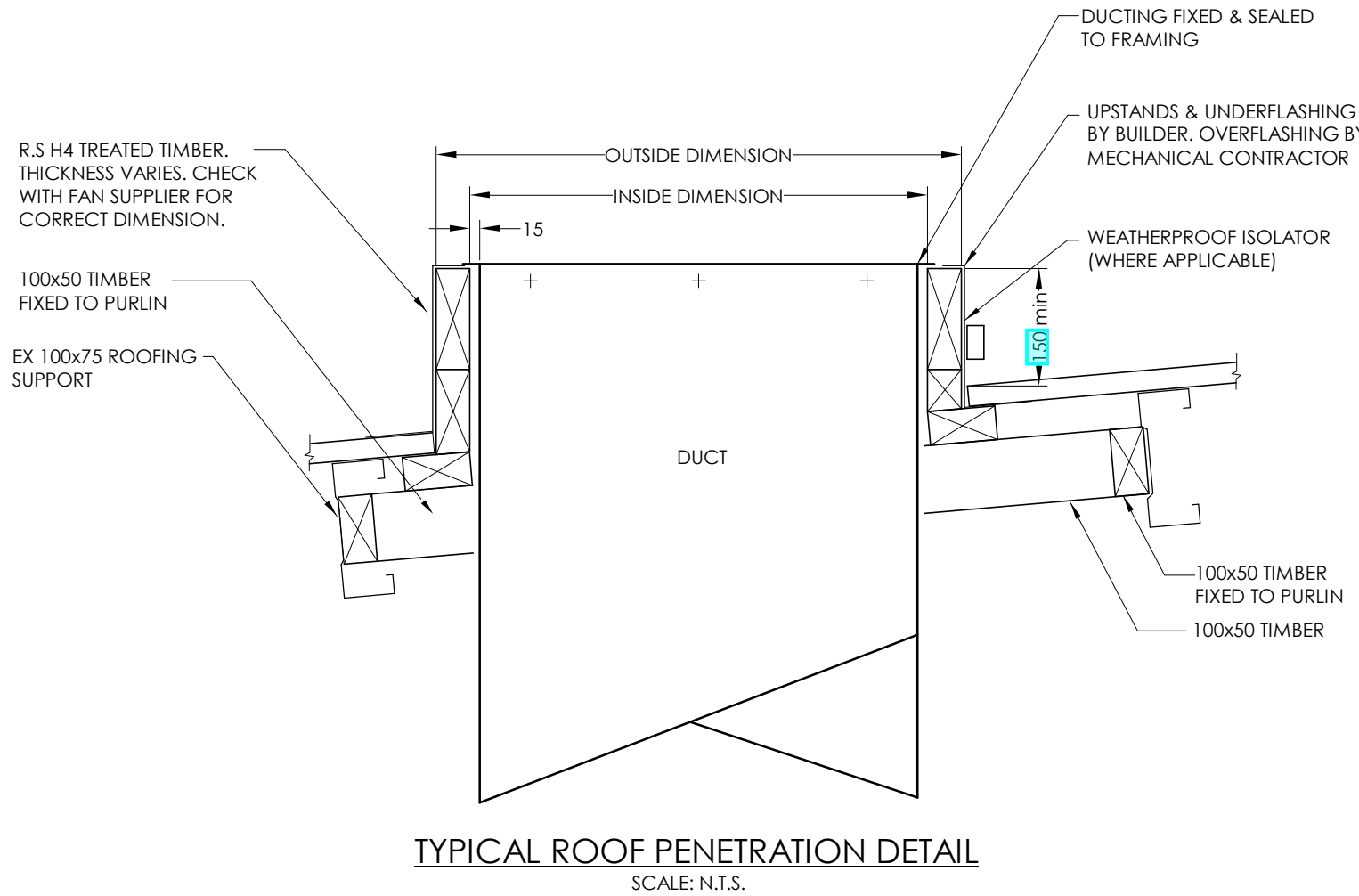
CD	CONDENSATE
CHW-F	CHILLED WATER FLOW
CHW-r	CHILLED WATER RETURN
HTG-F	HEATING WATER FLOW
HTG-r	HEATING WATER RETURN
RFGT	REFRIGERANT

## NOTES:

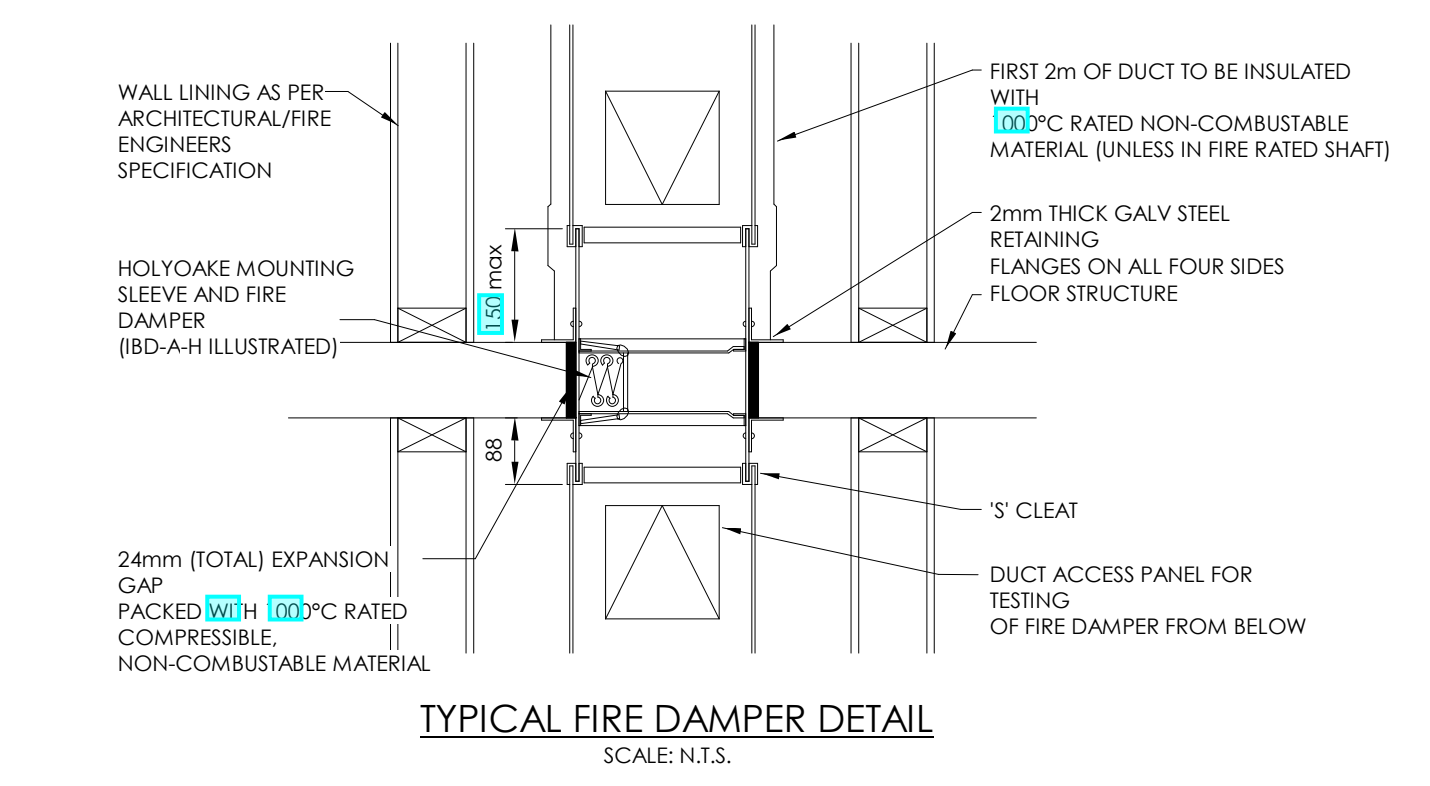
- ALL DUCT TAKE OFFS TO BE PROVIDED WITH A BALANCING DAMPER.
- ALL DUCT SIZES SHOWN ARE CLEAR AIRWAY SIZES. DUCT DIMENSIONS ARE NOTED BY THE HORIZONTAL DIMENSION FIRST.
- DO NOT SCALE FROM THESE DRAWINGS. REFER TO ARCHITECTS DRAWINGS FOR DETAILED DIMENSIONS.
- THERES DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER SERVICES DRAWINGS.
- ROOM TEMPERATURE SENSORS TO BE INSTALLED 1600 AFFL UNLESS OTHERWISE NOTED.
- ALL VISIBLE INTERNAL SURFACES OF DUCTS, CUSHION HEADS, PLENUM BOXES ETC ARE TO BE PAINTED MATT BLACK.
- PROVIDE FIRE DAMPERS/COLLARS TO MATCH THE FIRE RATING OF THE STRUCTURE. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- PROVIDE ALL NECESSARY ACCESS PANELS IN DUCTWORK FOR MAINTENANCE AND TESTING OF FIRE DAMPERS AND CLEANING OF DUCTWORK.
- ALL SQUARE DUCTS BENDS AND TEES WILL BE PROVIDED WITH TURNING OR SPLITTING VANES.
- FABRICATION OF DUCTWORK TO BE IN ACCORDANCE WITH SMACNA AND/OR AS4245.
- PIPEWORK AND DUCTWORK CROSSING BUILDING EXPANSION JOINTS SHALL HAVE A FLEXIBLE CONNECTIONS TO PROVIDE SUFFICIENT MOVEMENT.
- PLENUMS AND CUSHION BOXES TO BE ACOUSTICALLY LINED WITH 25mm INSULATION.
- ALL SUPPLY AIR DUCTWORK IS TO BE INSULATED, INTERNAL TO THE BUILDING R0.6, EXTERNAL TO THE BUILDING R1.0. RETURN DUCTWORK TO THE HEAT EXCHANGER TO BE INSULATED EXTERNAL TO THE BUILDING R1.0
- ALL SUPPLY AIR DUCTWORK FROM FAN COIL UNITS TO HAVE A MINIMUM OF 2m ACOUSTICALLY RATED FLEXIBLE DUCTWORK BEFORE THE DIFFUSER.
- GRILLES, DIFFUSERS AND COWLS TO BE PAINTED TO MATCH THE COLOUR OF THE WALL, CEILING OR ROOF THEY ARE MOUNTED TO.
- ALL CONDENSATE PIPEWORK TO BE INSULATED WITH 13mm INSULATION WITH VAPOUR SEALS.
- EACH FAN COIL OR FILTERED RETURN GRILLE TO BE FITTED WITH A G4 FILTER.
- ALL REFRIGERANT PIPEWORK TO BE INSULATED WITH 13mm INSULATION.
- ALL EXTERNAL INSULATION ON THE BUILDING TO BE CLAD WITH ZINC CLADDING.
- ALL REFRIGERANT PIPEWORK UP TO BRANCH SELECTOR BOXES TO BE STRAIGHT BRAZED SECTIONS. PIPEWORK BETWEEN BRANCH SELECTOR BOXES AND FAN COIL UNITS CAN BE PAIR COIL. ENSURE INSULATION OF PAIR COIL DOES NOT DAMAGE THE INSULATION AND VAPOUR BARRIER ON THE PIPEWORK. ANY DAMAGE IS THE REPAIR AND VAPOUR BARRIER MAINTAINED.



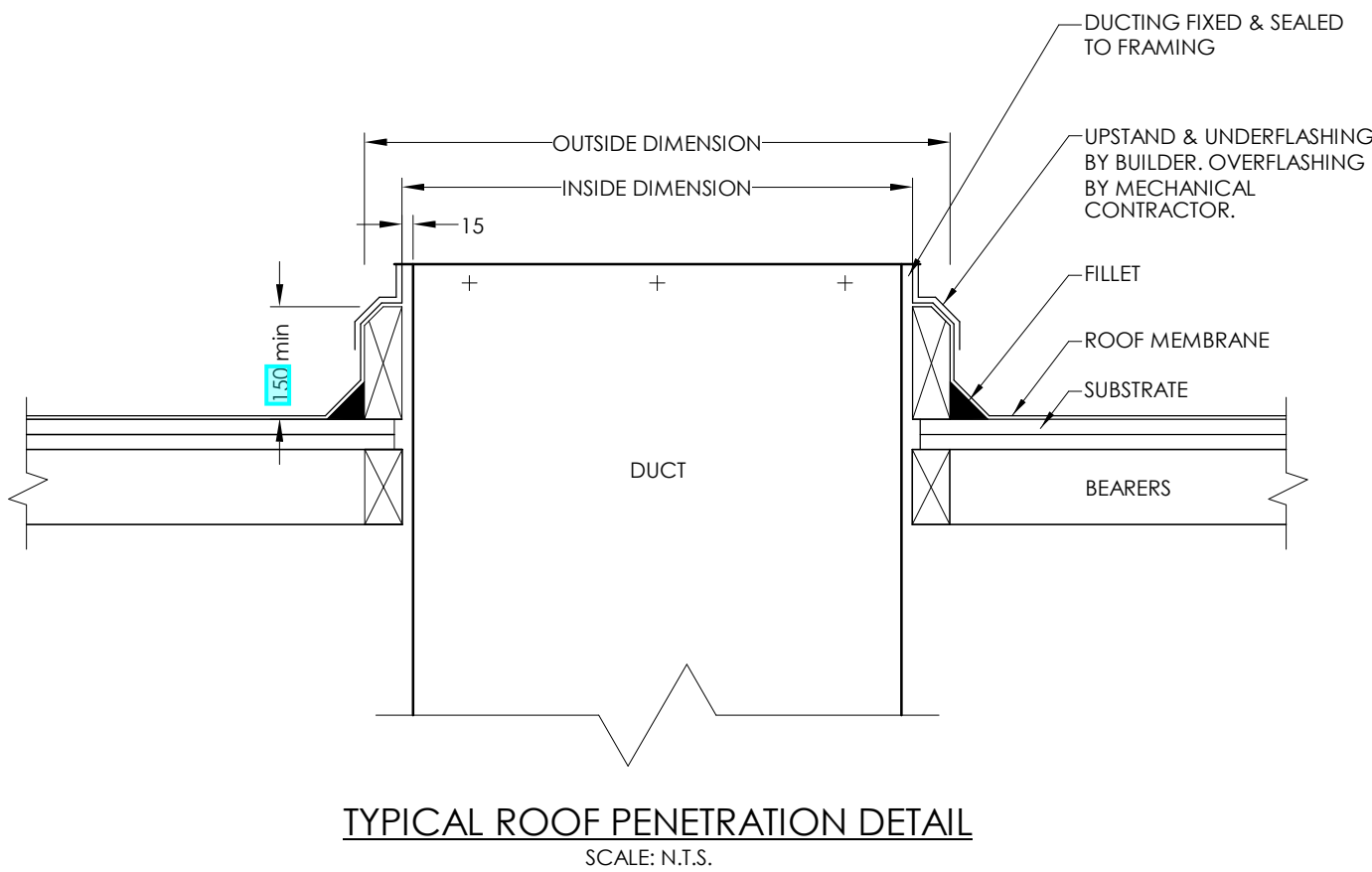
TYPICAL FIRE DAMPER DETAIL  
SCALE: N.T.S.



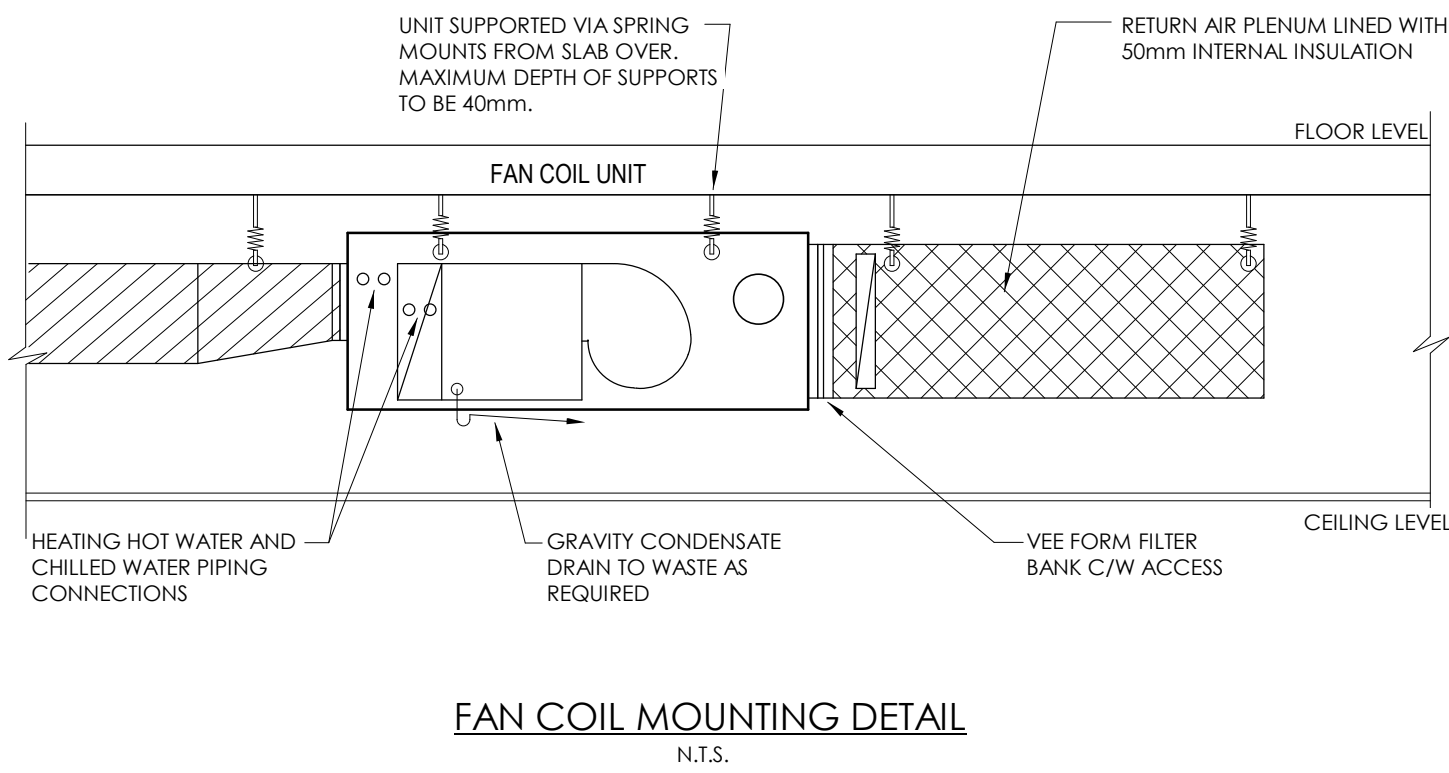
TYPICAL ROOF PENETRATION DETAIL  
SCALE: N.T.S.



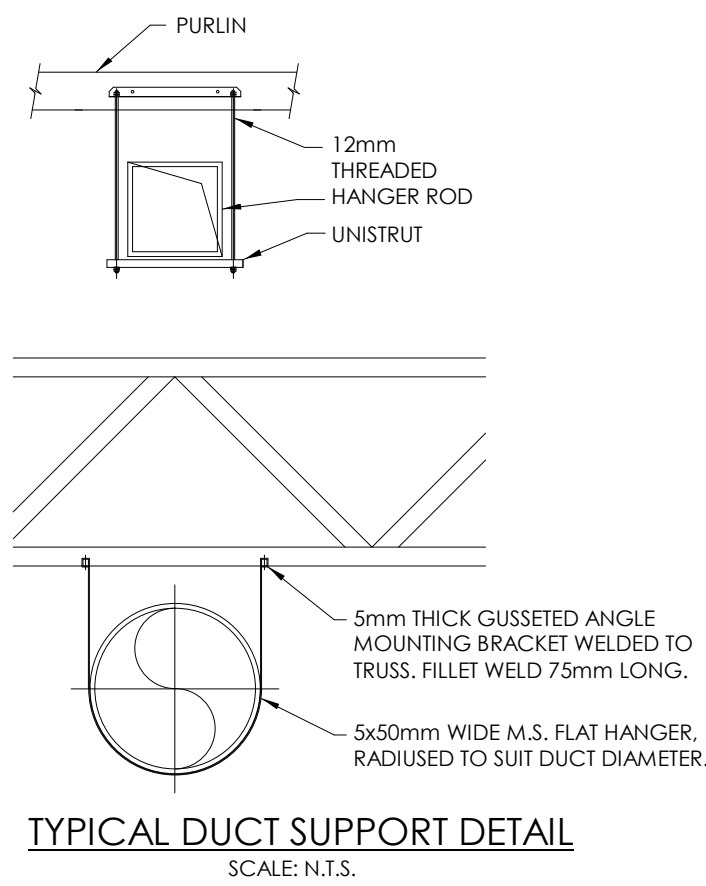
TYPICAL FIRE DAMPER DETAIL  
SCALE: N.T.S.



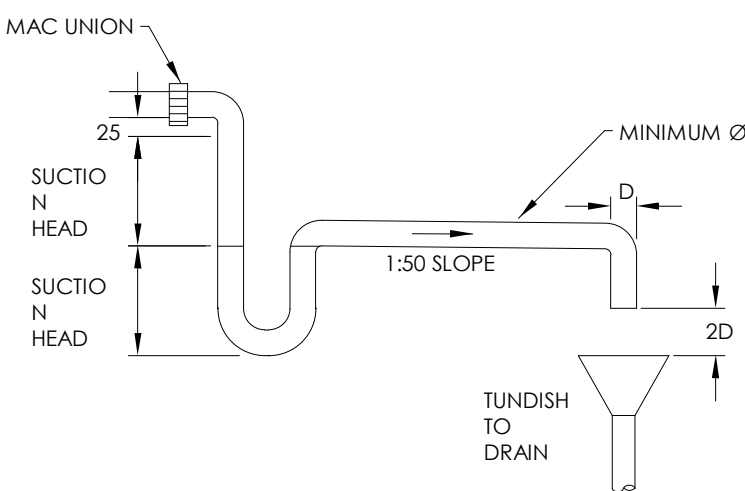
TYPICAL ROOF PENETRATION DETAIL  
SCALE: N.T.S.



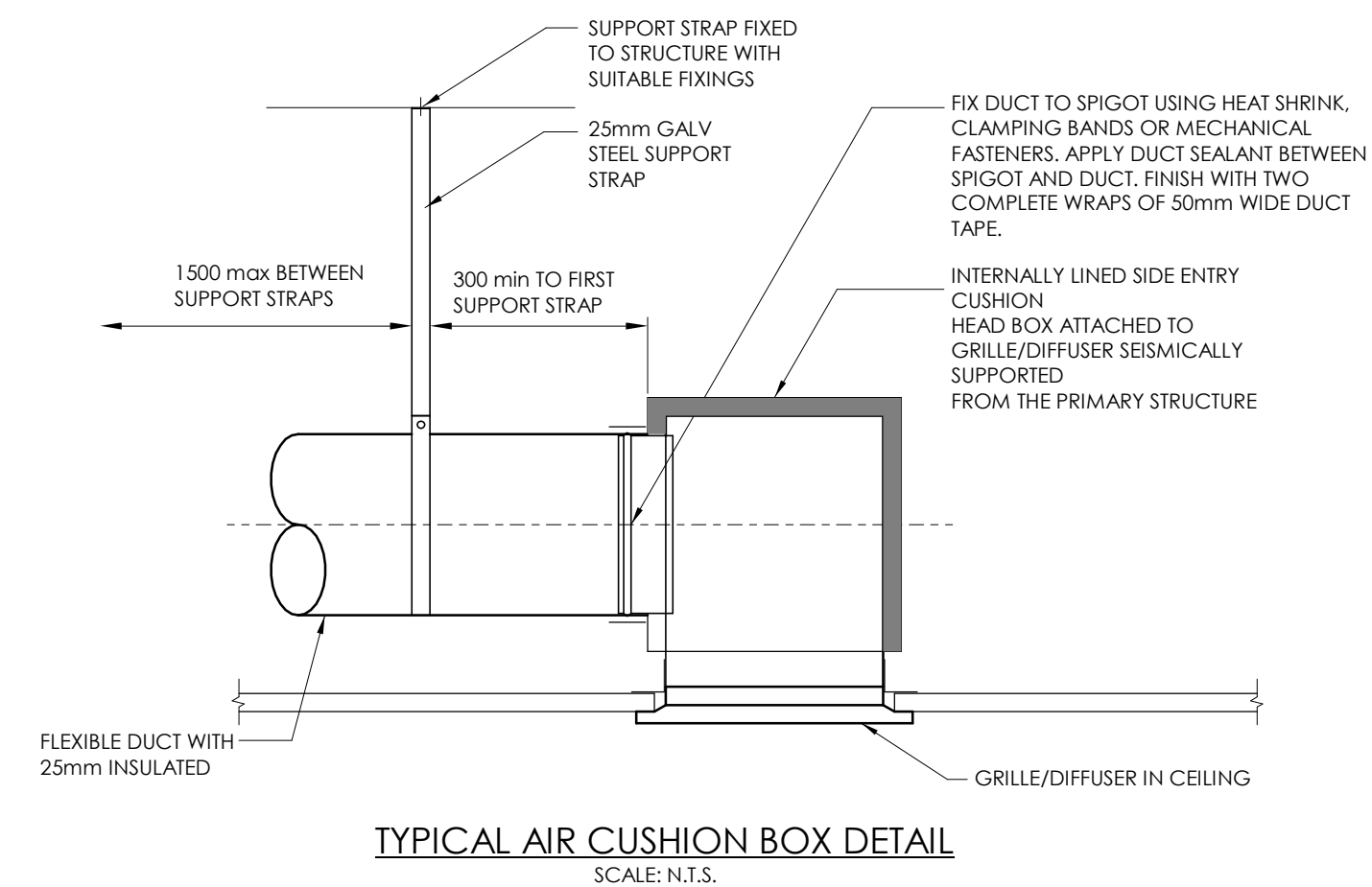
FAN COIL MOUNTING DETAIL  
N.T.S.



TYPICAL DUCT SUPPORT DETAIL  
SCALE: N.T.S.



AC UNIT CONDENSATE TRAP DETAIL



TYPICAL AIR CUSHION BOX DETAIL  
SCALE: N.T.S.

## NOTES:

- SOME SYMBOLS ON THIS LEGEND MAY NOT BE APPLICABLE TO THIS PROJECT.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR SET-OUT OF ALL CEILING MOUNTED SERVICES.
- REFER TO THE ENGINEERS SPECIFICATION FOR FURTHER INFORMATION.

1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
**METLIFECARE GULF RISE**  
**65 HIBISCUS COAST**  
**HIGHWAY, RED BEACH**  
**BUILDING 7**

SHEET TITLE:  
**STANDARD SYMBOLS**  
**LEGEND & DETAILS**

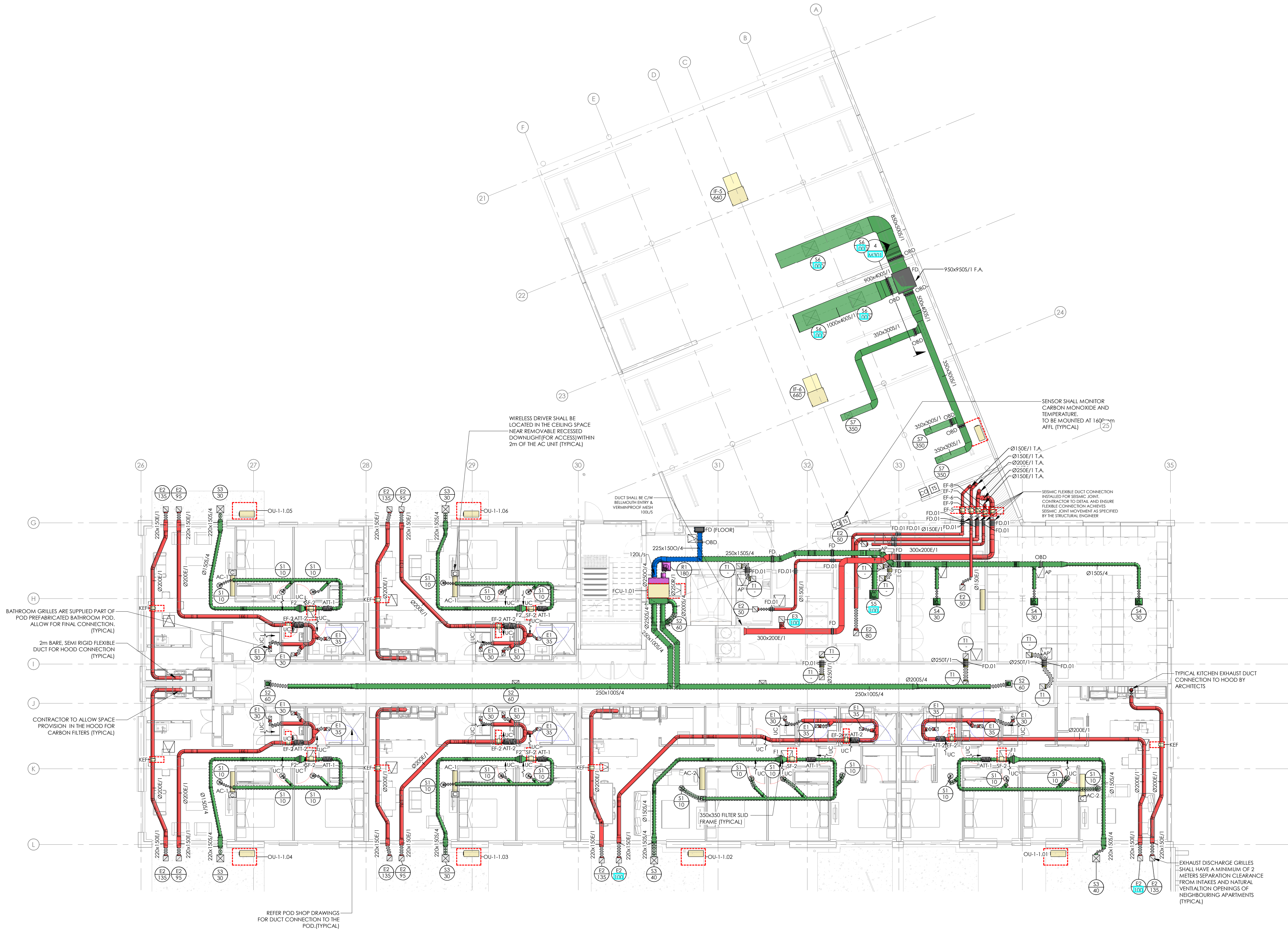
FOR CONSTRUCTION

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: **CA17016-7**

SHEET No: **M001**





- NOTES:
1. FCU CONTROLLER LOCATIONS TO BE AGREED WITH CLIENT/ARCHITECT.
  2. 20mm DOOR UNDER CUTS TO ALL INTERNAL DOORS FOR SPLI/HAVE/UP AIR PATH.
  3. FANS TO BE ISOLATED FROM THE STRUCTURE ON THE APARTMENT BY NEOPRENE PADS ON SPRINGS TO REDUCE VIBRATION AND NOISE TRANSFER OF THE STRUCTURE.
  4. MECHANICAL CONTRACTOR TO COORDINATE WITH MAIN CONTRACTOR IN LOCATING FAN ACCESS PANELS AND GRILLES. FINAL LOCATIONS DICTATED BY CEILING SERVICES COORDINATION / STRUCTURE. LOCATIONS TO BE AGREED WITH ARCHITECT IN LINE WITH RCP.
  5. VCDs TO BE PROVIDED AT GRILLE TO EACH DUCT TAKE-OFF.
  6. REFRIGERANT PIPE ROUTE INDICATIVE ONLY. FIREWORK TO BE RUN NEATLY ON CABLE TRAY WHERE EXPOSED (LOWER ROOF).
  7. FIRE DAMPERS THROUGH ALL FIRE RATED WALLS AND FLOORS IN ACCORDANCE WITH FIRE REPORT.
  8. CONDENSING DRYERS TO BE SPECIFIED TO ALL LAUNDRIES. NO PROVISION FOR VENTED DRYERS, WHERE LAUNDRY IS IN A CLOSET/BOARD A CEILING EXTRACT GRILLE WILL BE PROVIDED.
  9. ELECTRIC UNDERFLOOR HEATING TO BATHROOM ONLY. SEE ELECTRICAL DRAWING FOR DETAILS.
  10. EACH CORRIDOR OF FAN COIL UNIT FILTERED RETURN GRILLE TO BE FITTED WITH A G4 FILTER.
  11. REFRIGERANT PIPE RISES TO SERVE LEVEL BELOW/ABOVE. REFER TO SPECIFICATION SECTION F FOR PIPEWORK SPACING REQUIREMENTS IN TIMBER STRUCTURE.
  12. OUTDOOR CONDENSER UNITS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. INSTALLATION TO BE OPEN TO ATMOSPHERE AND MOUNTED MINIMUM 500mm OFF UNDERSIDE OF SLAB, 100mm OFF WALL. MINIMUM OF 500mm CLEAR EDGE UNITS FOR MAINTENANCE. UNITS TO BE BRACED WITH APPROPRIATE EQUIPMENT.
  13. PLATFORM/PLINTH/MONKEY TOE C/W SEISMIC RESTRAINTS. CONTRACTOR TO VERIFY FINAL REFRIGERANT PIPE LENGTHS ARE WITHIN OUTDOOR UNITS LIMITS BEFORE INSTALLATION. CONSULTANT TO BE NOTIFIED OTHERWISE. CONTRACTOR TO ALLOW COORDINATES FROM STACKED/WALL MOUNTED UNITS TO BE COMBINED AND RUN NEATLY TO NEAREST GARDEN BED / CHANNEL DRAIN.
  14. ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE ARE TO BE SEALED AND WEATHERPROOFED.
  15. OVER FLASHINGS TO BE INSTALLED TO ALL ROOF PENETRATIONS BY MECHANICAL CONTRACTOR.
  16. ALL MECHANICAL SERVICES ARE TO BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH NZS4129:2009.
  17. A MINIMUM OF 2m LONG BARE, SEMI-RIGID FLEXIBLE DUCT WILL BE REQUIRED BEFORE THE CORRIDOR GRILLES ON EACH LEVEL.
  18. TUNDSHES PROVIDED BY HYDRAULIC TRADE. CONTRACTOR TO COORDINATE FINAL PIPEWORK TERMINATIONS ON SITE. REFER TO HYDRAULICS DRAWINGS FOR LOCATIONS OF TUNDSHES.
  19. FLEXIBLE DUCTWORK LENGTHS SHALL NOT EXCEED 3m. RIGID DUCT TO BE USED FOR CONNECTION IF LENGTHS EXCEED 3m.

1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

SHEET TITLE:  
HVAC DUCTWORK  
LAYOUT LEVEL 01

FOR CONSTRUCTION

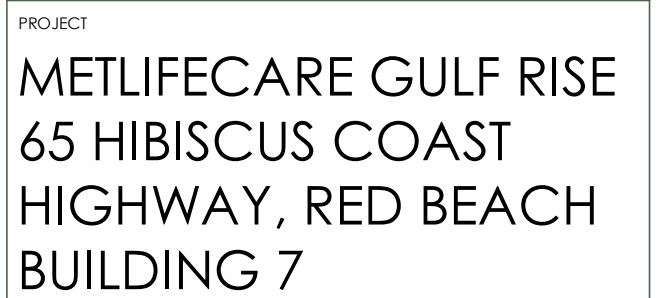
DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT NO: CA17016-7  
SHEET NO: M101



- |              |                  |             |
|--------------|------------------|-------------|
|              |                  |             |
|              |                  |             |
|              |                  |             |
|              |                  |             |
| 1            | FOR CONSTRUCTION | 22.08.24    |
| <b>ISSUE</b> | <b>AMENDMENT</b> | <b>DATE</b> |

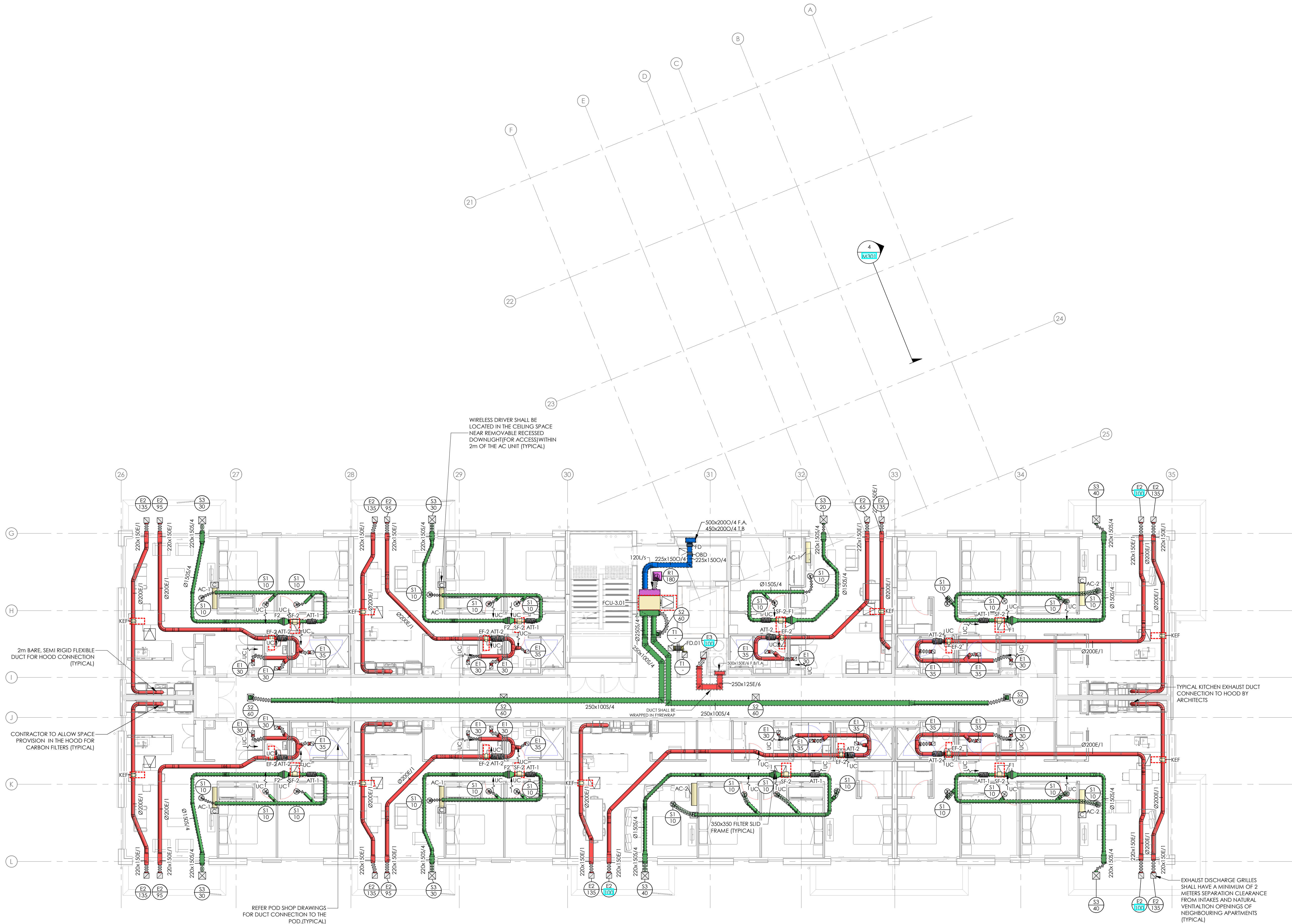
ORIGINAL DRAWINGS PRODUCED WITH COLOUR



FOR CONSTRUCTION

PROJECT No:	CA17016-7
SHEET No:	M102





- NOTES:
1. FCU CONTROLLER LOCATIONS TO BE AGREED WITH CLIENT/ARCHITECT.
  2. 20mm DOOR UNDER CUTS TO ALL INTERNAL DOORS FOR SPLI/HAVE/UP AIR FLOW.
  3. FANS TO BE ISOLATED FROM THE STRUCTURE ON THE APARTMENT BY NEOPRENE PADS ON SPRINGS TO REDUCE VIBRATION AND NOISE TRANSFER OF THE STRUCTURE.
  4. MECHANICAL CONTRACTOR TO COORDINATE WITH MAIN CONTRACTOR IN LOCATING FAN ACCESS PANELS AND GRILLES. FINAL LOCATIONS DICTATED BY CEILING SERVICES COORDINATION / STRUCTURE. LOCATIONS TO BE AGREED WITH ARCHITECT IN LINE WITH RCP.
  5. VCDs TO BE PROVIDED AT GRILLE TO EACH DUCT TAKE-OFF.
  6. REFRIGERANT PIPE ROUTE INDICATIVE ONLY. FIREWORK TO BE RUN NEATLY ON CABLE TRAY WHERE EXPOSED (LOWER ROOF).
  7. FIRE DAMPERS THROUGH ALL FIRE RATED WALLS AND FLOORS IN ACCORDANCE WITH FIRE REPORT.
  8. CONDENSING DRYERS TO BE SPECIFIED TO ALL LAUNDRIES. NO PROVISION FOR VENTED DRYERS, WHERE LAUNDRY IS IN A CLOSET/BOARD A CEILING EXTRACT GRILLE WILL BE PROVIDED.
  9. ELECTRIC UNDERFLOOR HEATING TO BATHROOM ONLY. SEE ELECTRICAL DRAWING FOR DETAILS.
  10. EACH CORRIDOR FAN COIL UNIT FILTERED RETURN GRILLE TO BE FITTED WITH A G4 FILTER.
  11. REFRIGERANT PIPE RISES TO SERVE LEVEL BELOW/ABOVE. REFER TO SPECIFICATION SECTION F FOR PIPEWORK SPACING REQUIREMENTS IN TIMBER STRUCTURE.
  12. OUTDOOR CONDENSER UNITS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. INSTALLATION TO BE OPEN TO ATMOSPHERE AND MOUNTED MINIMUM 500mm OFF UNDERSIDE OF SLAB, 100mm OFF WALL. MINIMUM OF 500mm CLEAR EDGE UNITS FOR MAINTENANCE. UNITS TO BE BRACED WITH APPROPRIATE EQUIPMENT.
  13. PLATFORM/PLUMB/MONKEY TOE c/w SEISMIC RESTRAINTS. CONTRACTOR TO VERIFY FINAL REFRIGERANT PIPE LENGTHS ARE WITHIN OUTDOOR UNITS LIMITS BEFORE INSTALLATION. CONSULTANT TO BE NOTIFIED OTHERWISE. CONTRACTOR TO ALLOW CONDENSATES FROM STACKED/WALL MOUNTED UNITS TO BE COMBINED AND RUN NEATLY TO NEAREST GARDEN BED / CHANNEL DRAIN.
  14. ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE ARE TO BE SEALED AND WEATHERPROOFED.
  15. OVER FLASHINGS TO BE INSTALLED TO ALL ROOF PENETRATIONS BY MECHANICAL CONTRACTOR.
  16. ALL MECHANICAL SERVICES ARE TO BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH NZS4129:2009.
  17. A MINIMUM OF 2m LONG BARE SEMI-RIGID FLEXIBLE DUCT WILL BE REQUIRED BEFORE THE CORRIDOR GRILLES ON EACH LEVEL.
  18. TUNISHES PROVIDED BY HYDRAULIC TRADE. CONTRACTOR TO COORDINATE FINAL PIPEWORK TERMINATIONS ON SITE. REFER TO HYDRAULICS DRAWINGS FOR LOCATIONS OF TUNISHES.
  19. FLEXIBLE DUCTWORK LENGTHS SHALL NOT EXCEED 3m. RIGID DUCT TO BE USED FOR CONNECTION IF LENGTHS EXCEED 3m.

1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR

**cosgroves** BRINGING BUILDINGS TO LIFE

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
**METLIFECARE GULF RISE**  
**65 HIBISCUS COAST**  
**HIGHWAY, RED BEACH**  
**BUILDING 7**

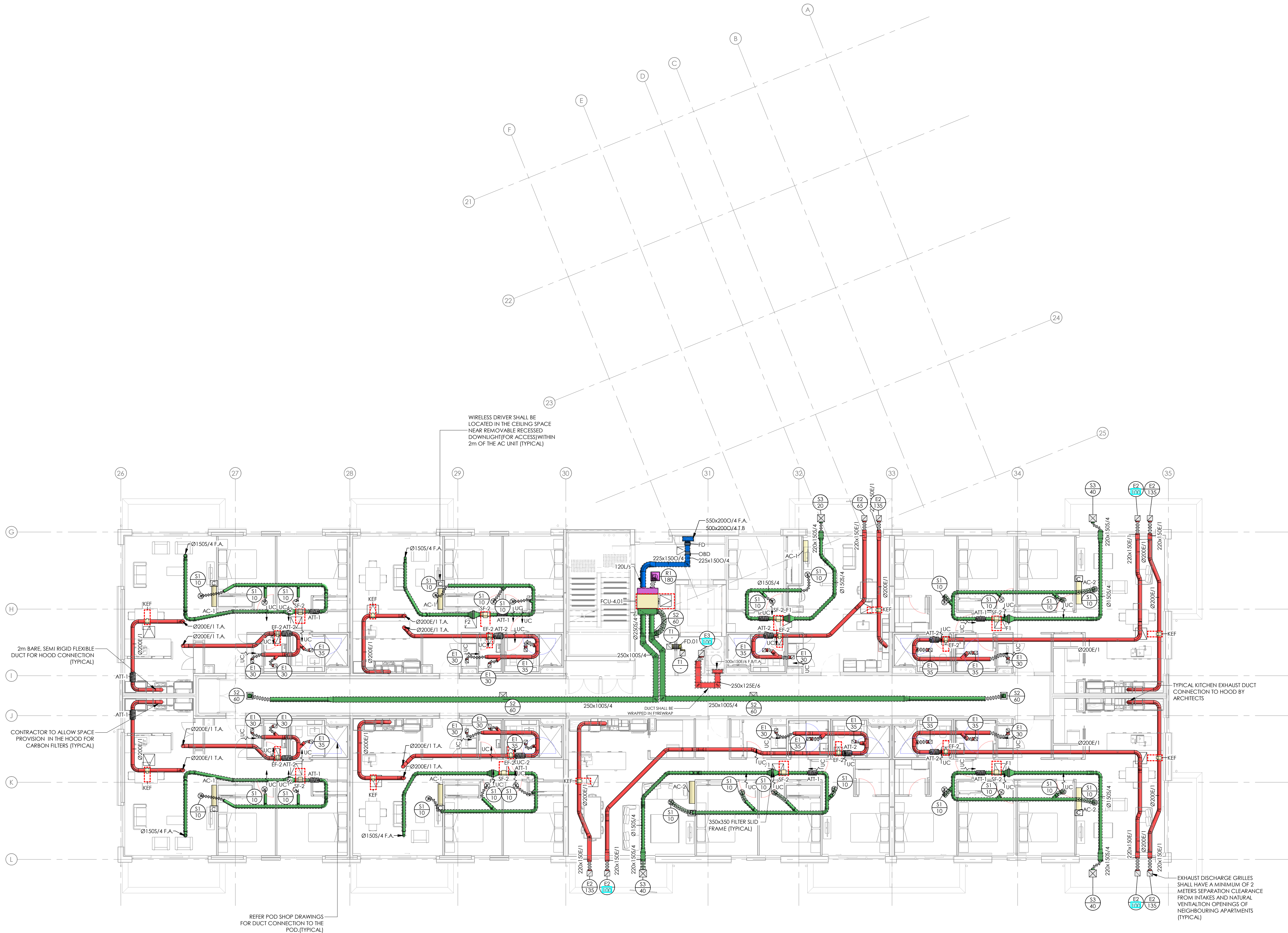
SHEET TITLE:  
**HVAC DUCTWORK**  
**LAYOUT LEVEL 03**

**FOR CONSTRUCTION**

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT NO: **CA17016-7**  
SHEET NO: **M103**





- NOTES:
1. FCU CONTROLLER LOCATIONS TO BE AGREED WITH CLIENT/ARCHITECT.
  2. 20mm DOOR UNDER CUTS TO ALL INTERNAL DOORS FOR SPLI/HASHP AIR PATH.
  3. FANS TO BE ISOLATED FROM THE STRUCTURE ON THE APARTMENT BY NEOPRENE PADS ON SPRINGS TO REDUCE VIBRATION AND NOISE TRANSFER OF THE STRUCTURE.
  4. MECHANICAL CONTRACTOR TO COORDINATE WITH MAIN CONTRACTOR IN LOCATING FAN ACCESS PANELS AND GRILLES. FINAL LOCATIONS DICTATED BY CEILING SERVICES COORDINATION / STRUCTURE. LOCATIONS TO BE AGREED WITH ARCHITECT IN LINE WITH RCP.
  5. VCDs TO BE PROVIDED AT GRILLE TO EACH DUCT TAKE-OFF.
  6. REFRIGERANT PIPE ROUTE INDICATIVE ONLY. PIPEWORK TO BE RUN NEATLY ON CABLE TRAY WHERE EXPOSED (LOWER ROOF).
  7. FIRE DAMPERS THROUGH ALL FIRE RATED WALLS AND FLOORS IN ACCORDANCE WITH FIRE REPORT.
  8. CONDENSING DRYERS TO BE SPECIFIED TO ALL LAUNDRIES. NO PROVISION FOR VENTED DRYERS, WHERE LAUNDRY IS IN A CLOPCARD A CEILING EXTRACT GRILLE WILL BE PROVIDED.
  9. ELECTRIC UNDERBLOOR HEATING TO BATHROOM ONLY. SEE ELECTRICAL DRAWING FOR DETAILS.
  10. EACH CORRIDOR FAN COIL UNIT FILTERED RETURN GRILLE TO BE FITTED WITH A G4 FILTER.
  11. REFRIGERANT PIPE RISES TO SERVE LEVEL BELOW/ABOVE. REFER TO SPECIFICATION SECTION F FOR PIPEWORK SPACING REQUIREMENTS IN TIMBER STRUCTURE.
  12. OUTDOOR CONDENSER UNITS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. INSTALLATION TO BE OPEN TO ATMOSPHERE AND MOUNTED MINIMUM 500mm OFF UNDERSIDE OF SLAB, 100mm OFF WALL. MINIMUM OF 500mm CLEAR EDGE UNITS FOR MAINTENANCE. UNITS TO BE BRACED WITH APPROPRIATE EQUIPMENT.
  13. PLATFORM/PLUMB/MONKEY TOE c/w SEISMIC RESTRAINTS. CONTRACTOR TO VERIFY FINAL REFRIGERANT PIPE LENGTHS ARE WITHIN OUTDOOR UNITS LIMITS BEFORE INSTALLATION. CONSULTANT TO BE NOTIFIED OTHERWISE. CONTRACTOR TO ALLOW COORDINATES FROM STACKED/WALL MOUNTED UNITS TO BE COMBINED AND RUN NEATLY TO NEAREST GARDEN BED / CHANNEL DRAIN.
  14. ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE ARE TO BE SEALED AND WEATHERPROOFED.
  15. OVER FLASHINGS TO BE INSTALLED TO ALL ROOF PENETRATIONS BY MECHANICAL CONTRACTOR.
  16. ALL MECHANICAL SERVICES ARE TO BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH NZS4129:2009.
  17. A MINIMUM OF 2m LONG BARE, SEMI-RIGID FLEXIBLE DUCT WILL BE REQUIRED BEFORE THE CORRIDOR GRILLES ON EACH LEVEL.
  18. TUNDSHES PROVIDED BY HYDRAULIC TRADE. CONTRACTOR TO COORDINATE FINAL PIPEWORK TERMINATIONS ON SITE. REFER TO HYDRAULICS DRAWINGS FOR LOCATIONS OF TUNDSHES.
  19. FLEXIBLE DUCTWORK LENGTHS SHALL NOT EXCEED 3m. RIGID DUCT TO BE USED FOR CONNECTION IF LENGTHS EXCEED 3m.

1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR

**cosgroves** BRINGING BUILDINGS TO LIFE<sup>®</sup>

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
**METLIFECARE GULF RISE**  
**65 HIBISCUS COAST**  
**HIGHWAY, RED BEACH**  
**BUILDING 7**

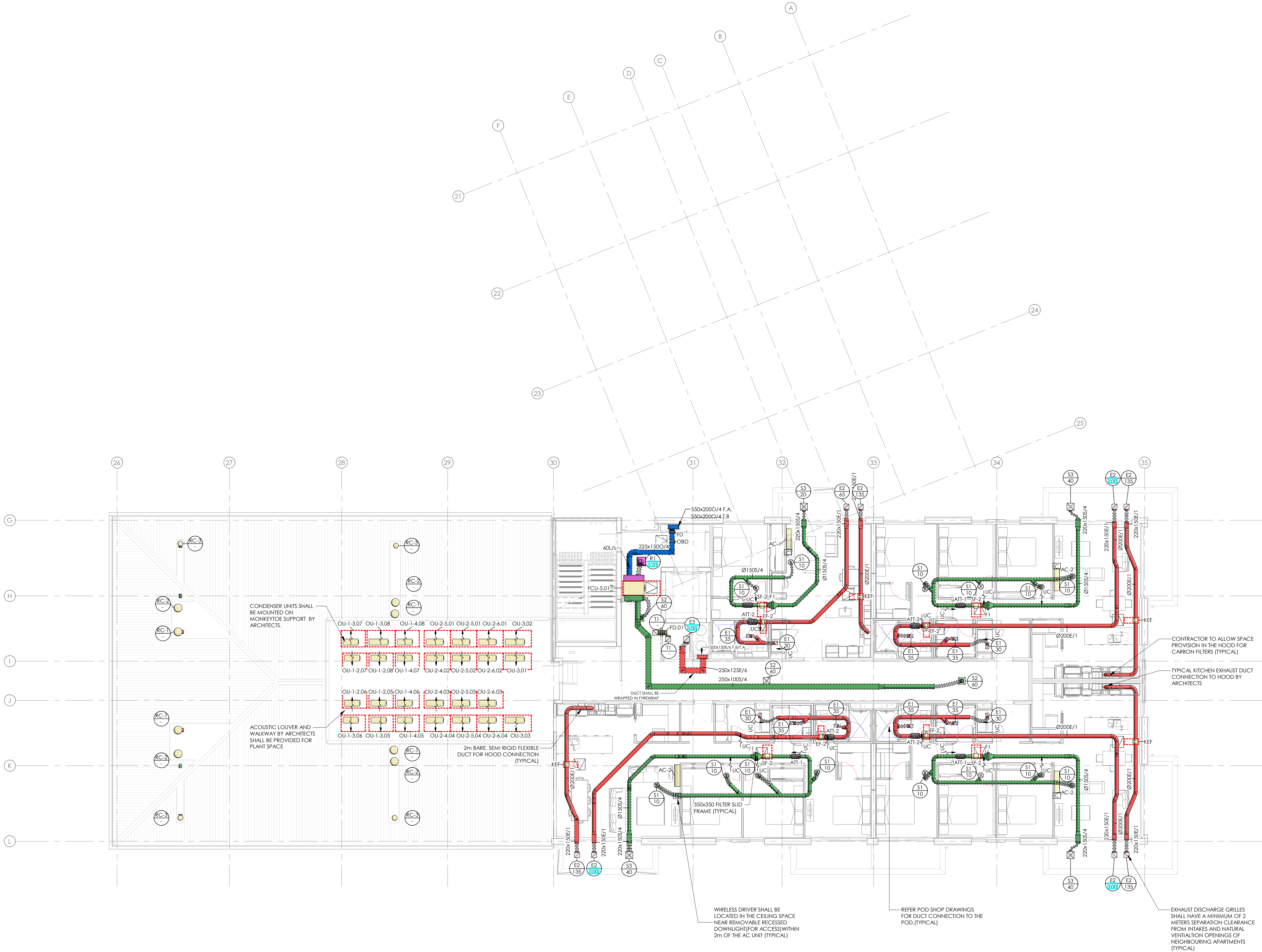
SHEET TITLE:  
**HVAC DUCTWORK**  
**LAYOUT LEVEL 04**

**FOR CONSTRUCTION**

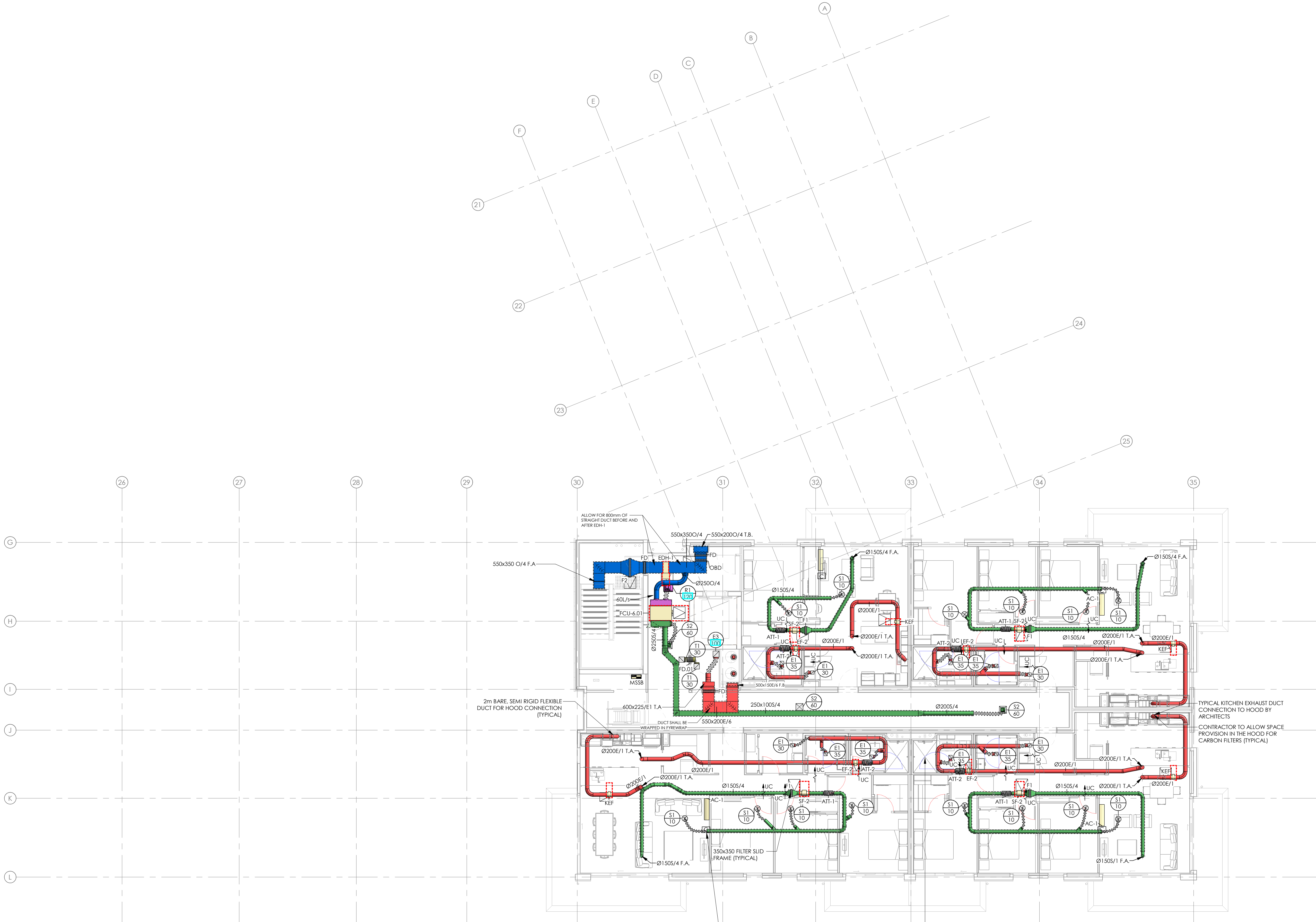
DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT NO:  
**CA17016-7**  
SHEET NO:  
**M104**









- NOTES:
1. FCU CONTROLLER LOCATIONS TO BE AGREED WITH CLIENT/ARCHITECT.
  2. 20mm DOOR UNDER CUTS TO ALL INTERNAL DOORS FOR SPLU/HANDSUP AIR PATHS.
  3. FANS TO BE ISOLATED FROM THE STRUCTURE ON THE APARTMENT BY NEOPRENE PADS ON SPRINGS TO REDUCE VIBRATION AND NOISE TRANSFER OF THE STRUCTURE.
  4. MECHANICAL CONTRACTOR TO COORDINATE WITH MAIN CONTRACTOR IN LOCATING FAN ACCESS PANELS AND GRILLES. FINAL LOCATIONS DICTATED BY CEILING SERVICES COORDINATION / STRUCTURE. LOCATIONS TO BE AGREED WITH ARCHITECT IN LINE WITH RCP.
  5. VCDs TO BE PROVIDED AT GRILLE TO EACH DUCT TAKE-OFF.
  6. REFRIGERANT PIPE ROUTE INDICATIVE ONLY. PIPework TO BE RUN NEATLY ON CABLE TRAY WHERE EXPOSED (LOWER ROOF).
  7. FIRE DAMPERS THROUGH ALL FIRE RATED WALLS AND FLOORS IN ACCORDANCE WITH FIRE REPORT.
  8. CONDENSING DRIVERS TO BE SPECIFIED TO ALL LAUNDRIES. NO PROVISION FOR VENTED DRYERS, WHERE LAUNDRY IS IN A CLIPBOARD A CEILING EXTRACT GRILLE WILL BE PROVIDED.
  9. ELECTRIC UNDERFLOOR HEATING TO BATHROOM ONLY. SEE ELECTRICAL DRAWING FOR DETAILS.
  10. EACH CORRIDOR FAN COIL UNIT FILTERED RETURN GRILLE TO BE FITTED WITH A G4 FILTER.
  11. REFRIGERANT PIPE RISES TO SERVE LEVEL BELOW/ABOVE. REFER TO SPECIFICATION SECTION F FOR PIPework SPACING REQUIREMENTS IN TIMBER STRUCTURE.
  12. OUTDOOR CONDENSER UNITS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. INSTALLATION TO BE OPEN TO ATMOSPHERE AND MOUNTED MINIMUM 500mm OFF UNDERSIDE OF SLAB, 100mm OFF WALL. MINIMUM OF 500mm CLEAR EDGE UNITS FOR MAINTENANCE. UNITS TO BE BRACED WITH APPROPRIATE EQUIPMENT.
  13. PLATFORM/PLINTH/MONKEY TOE c/w SEISMIC RESTRAINTS. CONTRACTOR TO VERIFY FINAL REFRIGERANT PIPE LENGTHS ARE WITHIN OUTDOOR UNITS LIMITS BEFORE INSTALLATION. CONSULTANT TO BE NOTIFIED OTHERWISE. CONTRACTOR TO ALLOW COORDINATES FROM STACKED/WALL MOUNTED UNITS TO BE COMBINED AND RUN NEATLY TO NEAREST GARDEN BED / CHANNEL DRAIN.
  14. ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE ARE TO BE SEALED AND WEATHERPROOFED.
  15. OVER FLASHINGS TO BE INSTALLED TO ALL ROOF PENETRATIONS BY MECHANICAL CONTRACTOR.
  16. ALL MECHANICAL SERVICES ARE TO BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH NZS4219:2009.
  17. A MINIMUM OF 2m LONG BARE, SEMI-RIGID FLEXIBLE DUCT WILL BE REQUIRED BEFORE THE CORRIDOR GRILLES ON EACH LEVEL.
  18. TUNDSHES PROVIDED BY HYDRAULIC TRADE. CONTRACTOR TO COORDINATE FINAL PIPework TERMINATIONS ON SITE. REFER TO HYDRAULICS DRAWINGS FOR LOCATIONS OF TUNDSHES.
  19. FLEXIBLE DUCTWORK LENGTHS SHALL NOT EXCEED 3m. RIGID DUCT TO BE USED FOR CONNECTION IF LENGTHS EXCEED 3m.

1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



**BRINGING3  
BUILDINGS3  
TO LIFE3**

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
**METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7**

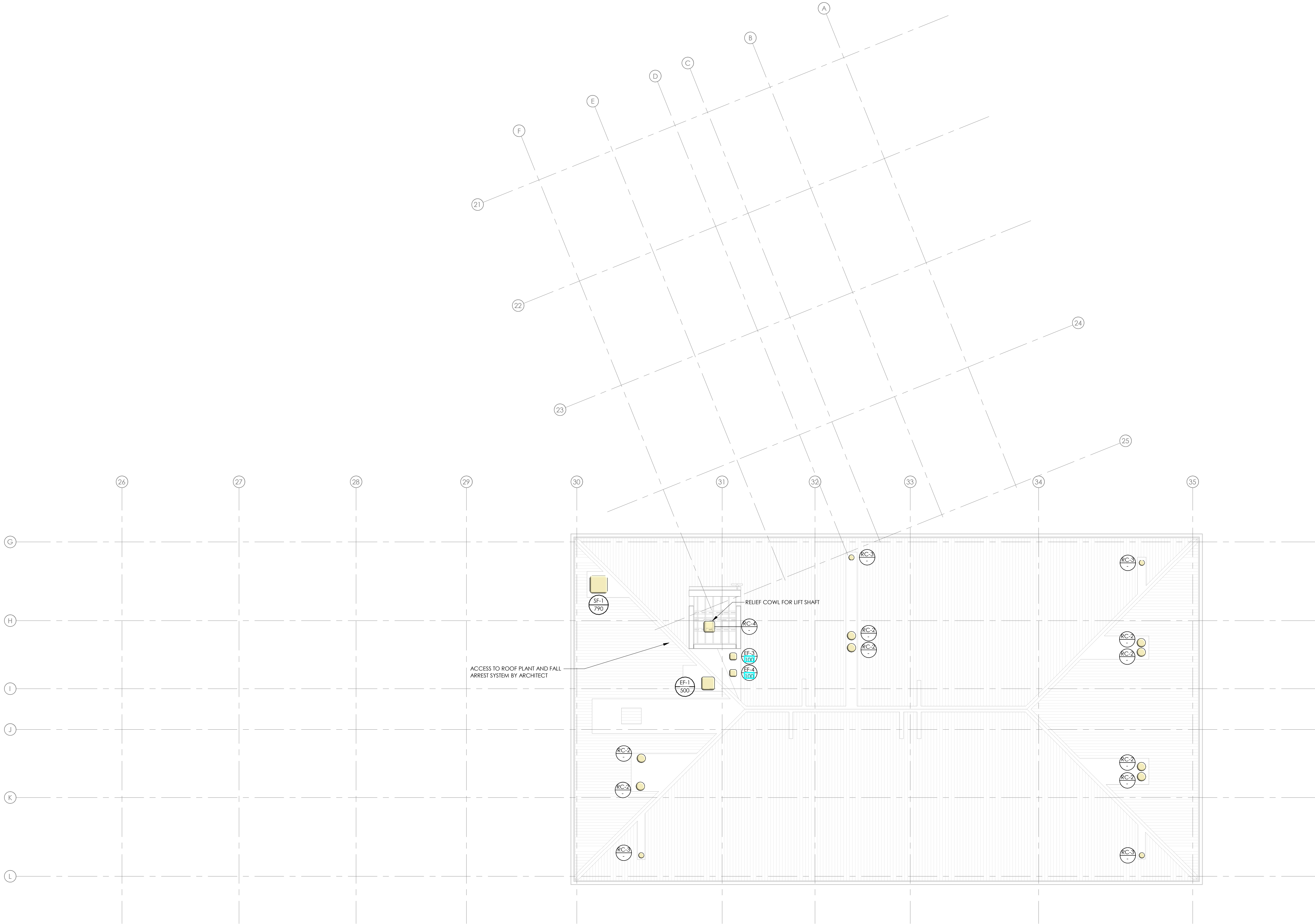
SHEET TITLE:  
**HVAC DUCTWORK  
LAYOUT LEVEL 06**

**FOR CONSTRUCTION**

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No:  
**CA17016-7**  
SHEET No:  
**M106**





- NOTES:
1. FCU CONTROLLER LOCATIONS TO BE AGREED WITH CLIENT/ARCHITECT.
  2. 20mm DOOR UNDER CUTS TO ALL INTERNAL DOORS FOR SPLU/MAKEUP AIR PATH.
  3. FANS TO BE ISOLATED FROM THE STRUCTURE ON THE APARTMENT BY NEOPRENE PADS ON SPRINGS TO REDUCE VIBRATION AND NOISE TRANSFER OF THE STRUCTURE.
  4. MECHANICAL CONTRACTOR TO COORDINATE WITH MAIN CONTRACTOR IN LOCATING FAN ACCESS PANELS AND GRILLES. FINAL LOCATIONS DICTATED BY CEILING SERVICES COORDINATION / STRUCTURE. LOCATIONS TO BE AGREED WITH ARCHITECT IN LINE WITH RCP.
  5. VCDs TO BE PROVIDED AT GRILLE TO EACH DUCT TAKE-OFF.
  6. REFRIGERANT PIPE ROUTE INDICATIVE ONLY. PIPework TO BE RUN NEATLY ON CABLE TRAY WHERE EXPOSED (LOWER ROOF).
  7. FIRE DAMPERS THROUGH ALL FIRE RATED WALLS AND FLOORS IN ACCORDANCE WITH FIRE REPORT.
  8. CONDENSING DRYERS TO BE SPECIFIED TO ALL LAUNDRIES. NO PROVISION FOR VENTED DRYERS, WHERE LAUNDRY IS IN A CLIPBOARD A CEILING EXTRACT GRILLE WILL BE PROVIDED.
  9. ELECTRIC UNDERFLOOR HEATING TO BATHROOM ONLY. SEE ELECTRICAL DRAWING FOR DETAILS.
  10. EACH CORRIDOR FAN COIL UNIT FILTERED RETURN GRILLE TO BE FITTED WITH A G4 FILTER.
  11. REFRIGERANT PIPE RISES TO SERVE LEVEL BELOW/ABOVE. REFER TO SPECIFICATION SECTION F FOR PIPework SPACING REQUIREMENTS IN TIMBER STRUCTURE.
  12. OUTDOOR CONDENSER UNITS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. INSTALLATION TO BE OPEN TO ATMOSPHERE AND MOUNTED MINIMUM 500mm OFF UNDERSIDE OF SLAB, 100mm OFF WALL. MINIMUM OF 500mm CLEAR EDGE UNITS FOR MAINTENANCE. UNITS TO BE BRACED WITH APPROPRIATE EQUIPMENT.
  13. PLATFORM/PLINTH/MONKEY TOE c/w SEISMIC RESTRAINTS. CONTRACTOR TO VERIFY FINAL REFRIGERANT PIPE LENGTHS ARE WITHIN OUTDOOR UNITS LIMITS BEFORE INSTALLATION. CONSULTANT TO BE NOTIFIED OTHERWISE. CONTRACTOR TO ALLOW CONDENSATES FROM STACKED/WALL MOUNTED UNITS TO BE COMBINED AND RUN NEATLY TO NEAREST GARDEN BED / CHANNEL DRAIN.
  14. ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE ARE TO BE SEALED AND WEATHERPROOFED.
  15. OVER FLASHINGS TO BE INSTALLED TO ALL ROOF PENETRATIONS BY MECHANICAL CONTRACTOR.
  16. ALL MECHANICAL SERVICES ARE TO BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH NZS4219:2009.
  17. A MINIMUM OF 2m LONG BARE, SEMI-RIGID FLEXIBLE DUCT WILL BE REQUIRED BEFORE THE CORRIDOR GRILLES ON EACH LEVEL.
  18. TUNDSHES PROVIDED BY HYDRAULIC TRADE. CONTRACTOR TO COORDINATE FINAL PIPework TERMINATIONS ON SITE. REFER TO HYDRAULICS DRAWINGS FOR LOCATIONS OF TUNDSHES.
  19. FLEXIBLE DUCTWORK LENGTHS SHALL NOT EXCEED 3m. RIGID DUCT TO BE USED FOR CONNECTION IF LENGTHS EXCEED 3m.

1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



BRINGING'S  
BUILDINGS'S  
TO LIFE'S

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT

METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

SHEET TITLE:

HVAC DUCTWORK  
LAYOUT ROOF

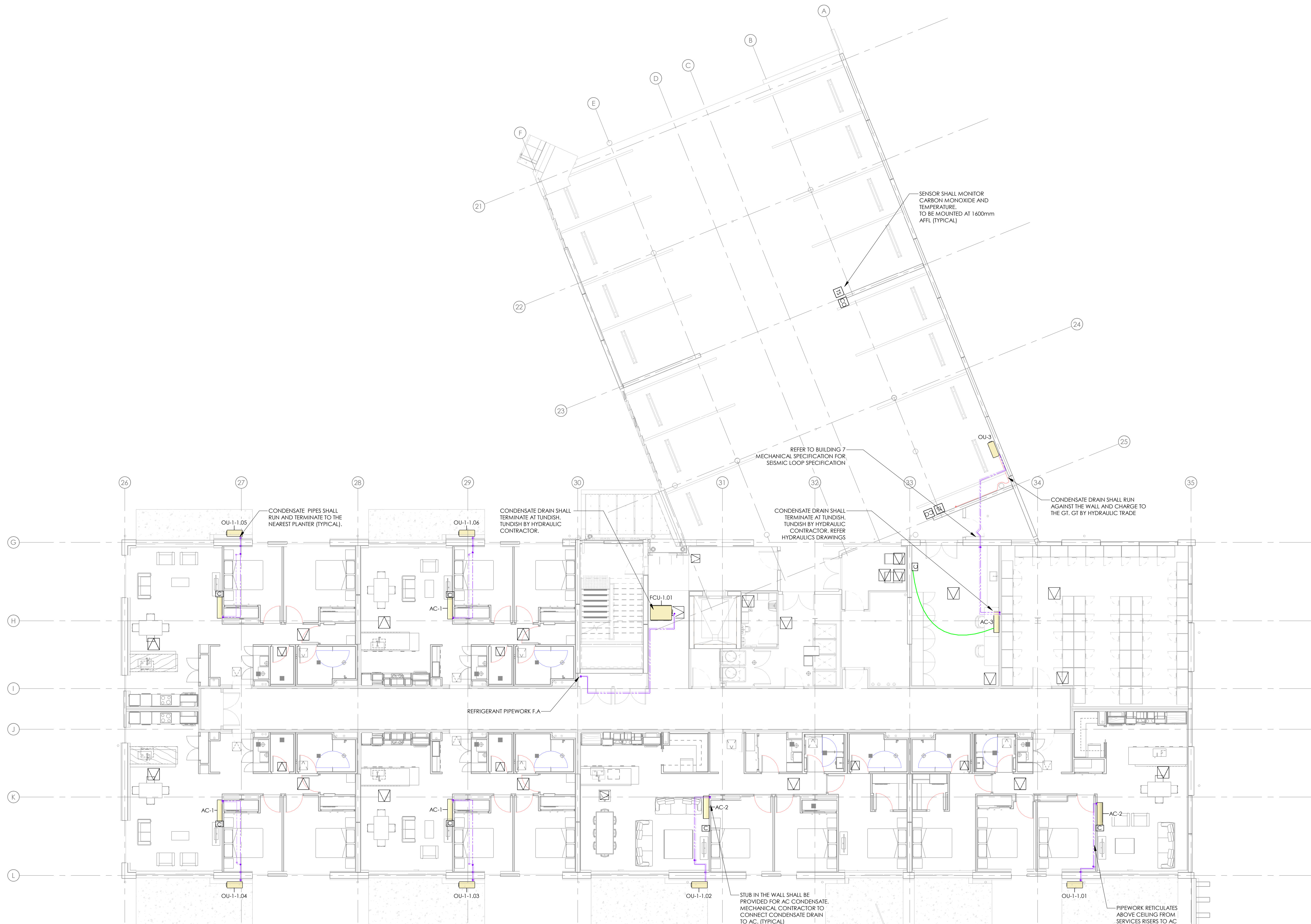
FOR CONSTRUCTION

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: CA17016-7

SHEET No: M107





1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



BRINGING BUILDINGS TO LIFE

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

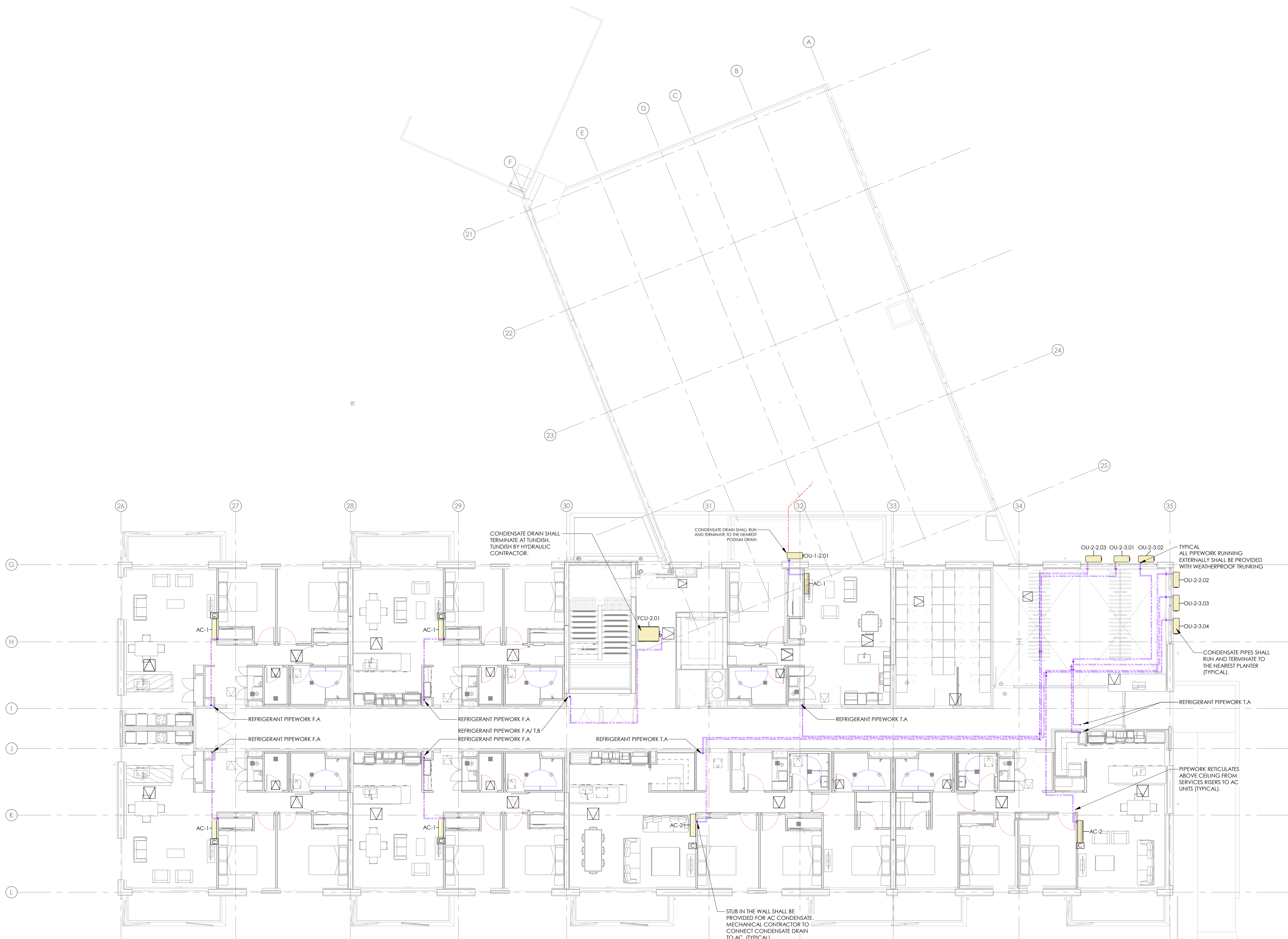
SHEET TITLE:  
HVAC PIPEWORK &  
CONTROLS LAYOUT  
LEVEL 01

FOR CONSTRUCTION

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: CA17016-7  
SHEET No: M201





1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR

**cosgroves**  
BRINGINGS BUILDINGS TO LIFE<sup>®</sup>

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
**METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7**

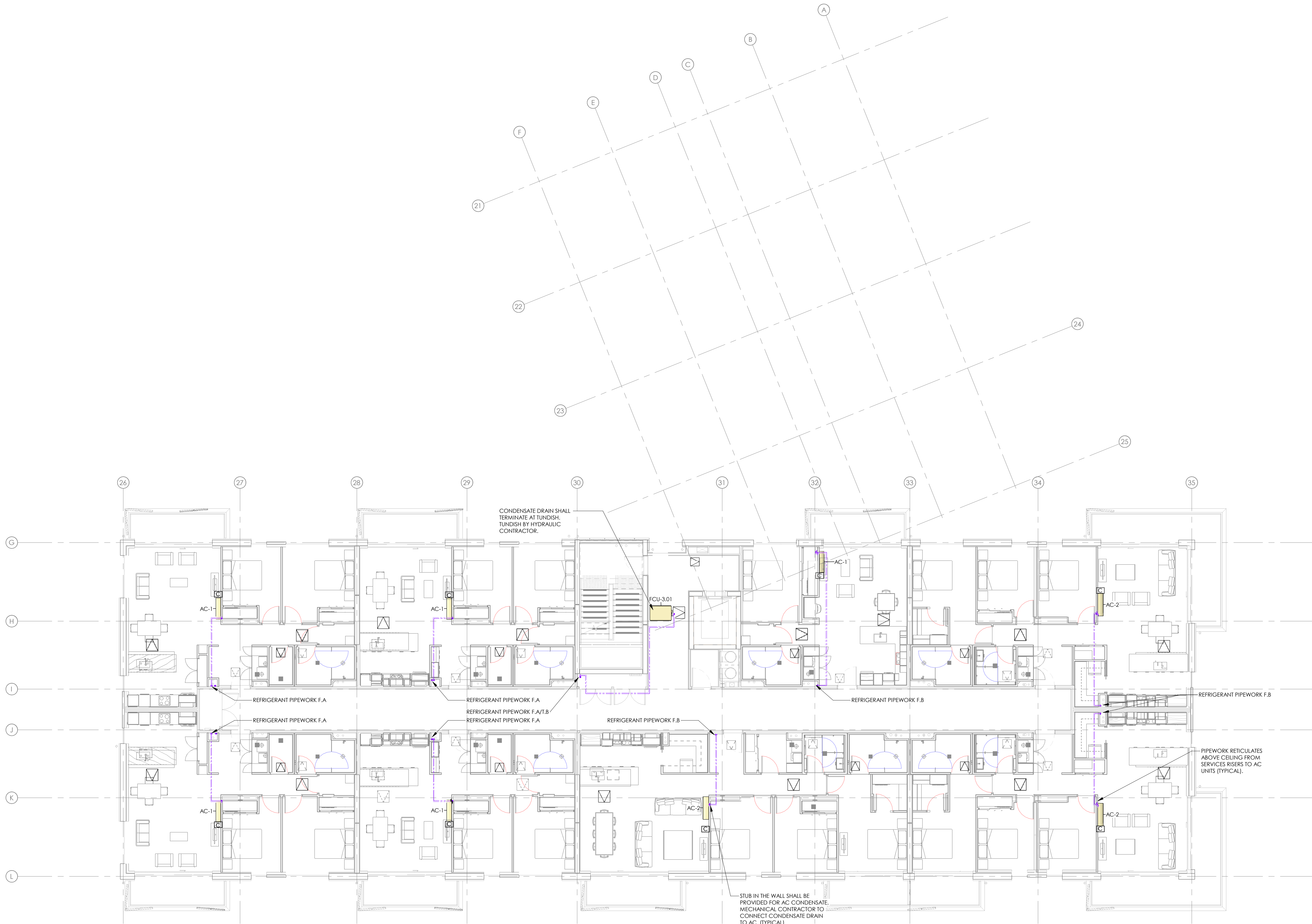
SHEET TITLE:  
**HVAC PIPEWORK &  
CONTROLS LAYOUT  
LEVEL 02**

**FOR CONSTRUCTION**

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: **CA17016-7**  
SHEET No: **M202**





1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



BRINGING BUILDINGS TO LIFE

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

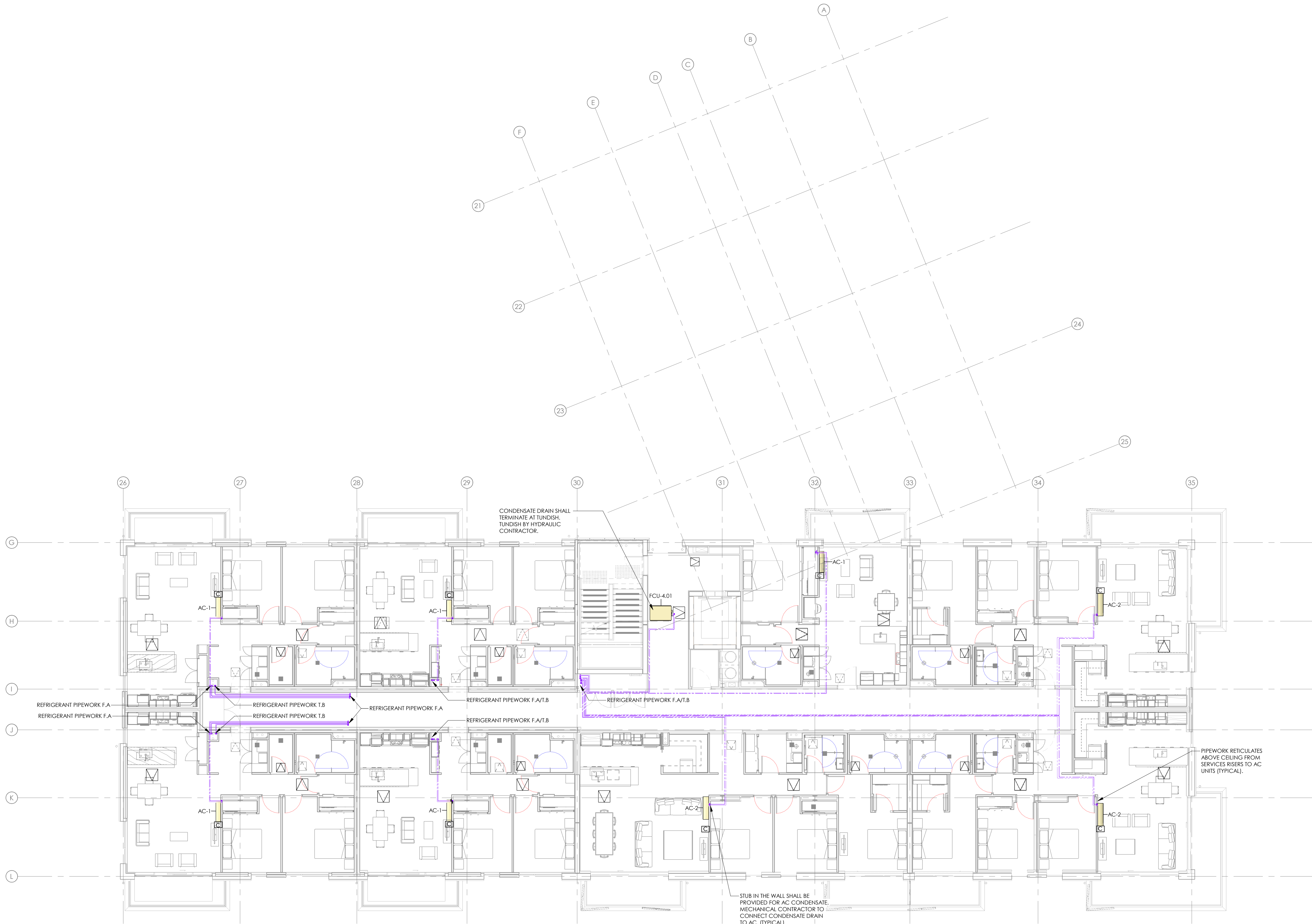
SHEET TITLE:  
HVAC PIPEWORK &  
CONTROLS LAYOUT  
LEVEL 03

FOR CONSTRUCTION

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: CA17016-7  
SHEET No: M203





1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR

**cosgroves**  
BRINGINGS  
BUILDINGS  
TO LIFE<sup>2</sup>

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
**METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7**

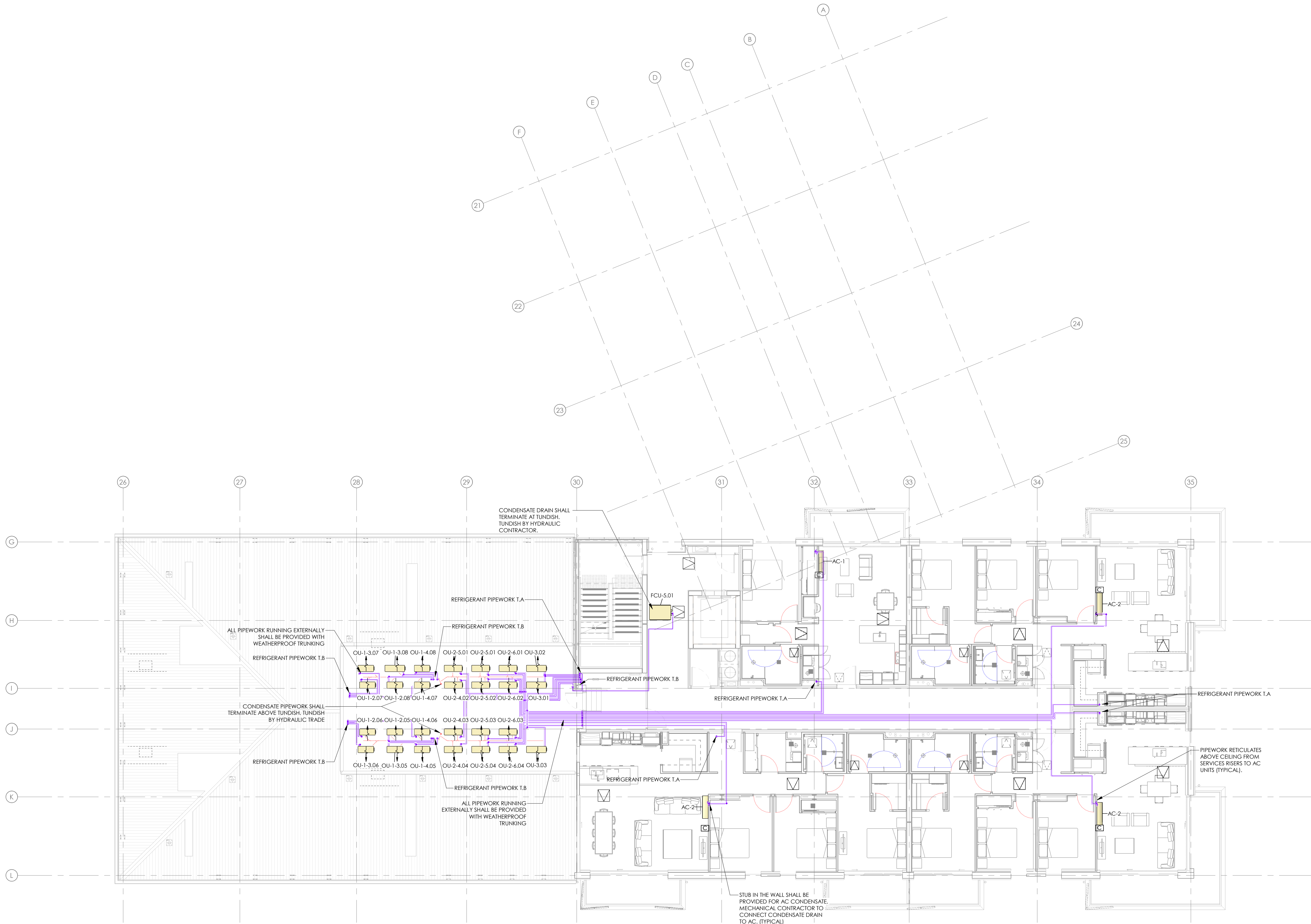
SHEET TITLE:  
**HVAC PIPEWORK &  
CONTROLS LAYOUT  
LEVEL 04**

**FOR CONSTRUCTION**

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: **CA17016-7**  
SHEET No: **M204**





1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



PROJECT  
METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

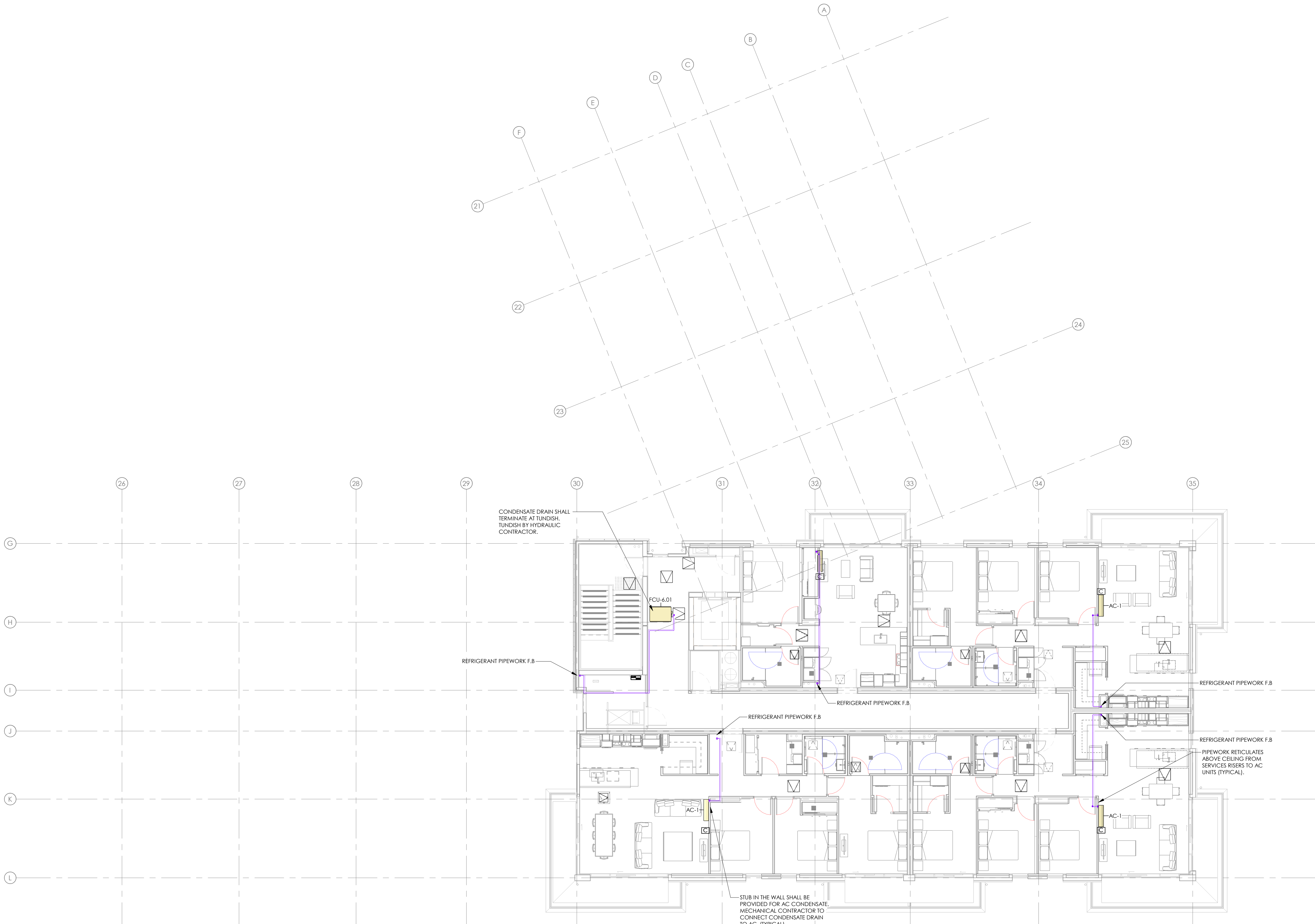
SHEET TITLE:  
HVAC PIPEWORK &  
CONTROLS LAYOUT  
LEVEL 05

FOR CONSTRUCTION

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: CA17016-7  
SHEET No: M205





1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



BRINGINGS  
BUILDINGS  
TO LIFE<sup>2</sup>

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

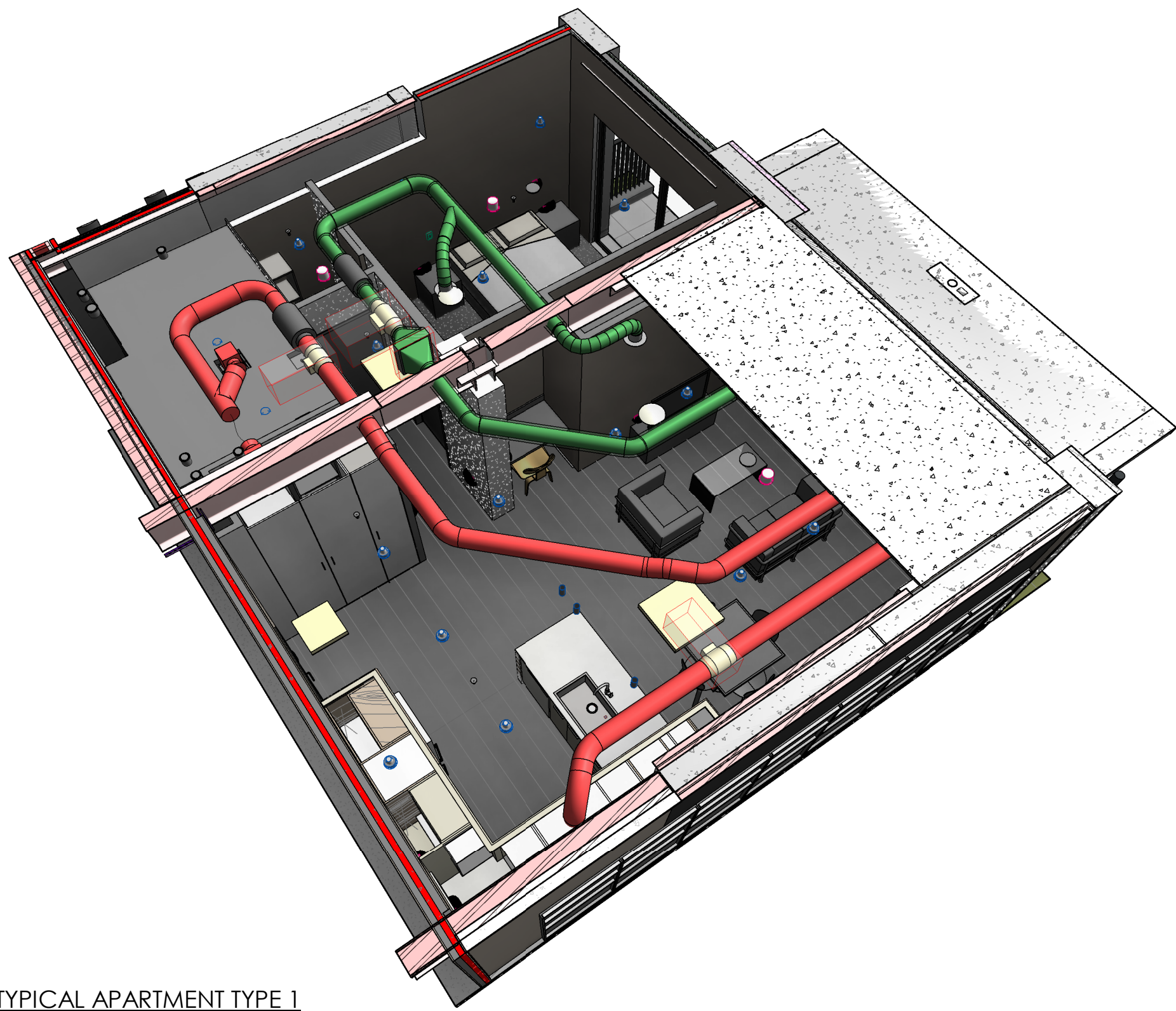
SHEET TITLE:  
HVAC PIPEWORK &  
CONTROLS LAYOUT  
LEVEL 06

FOR CONSTRUCTION

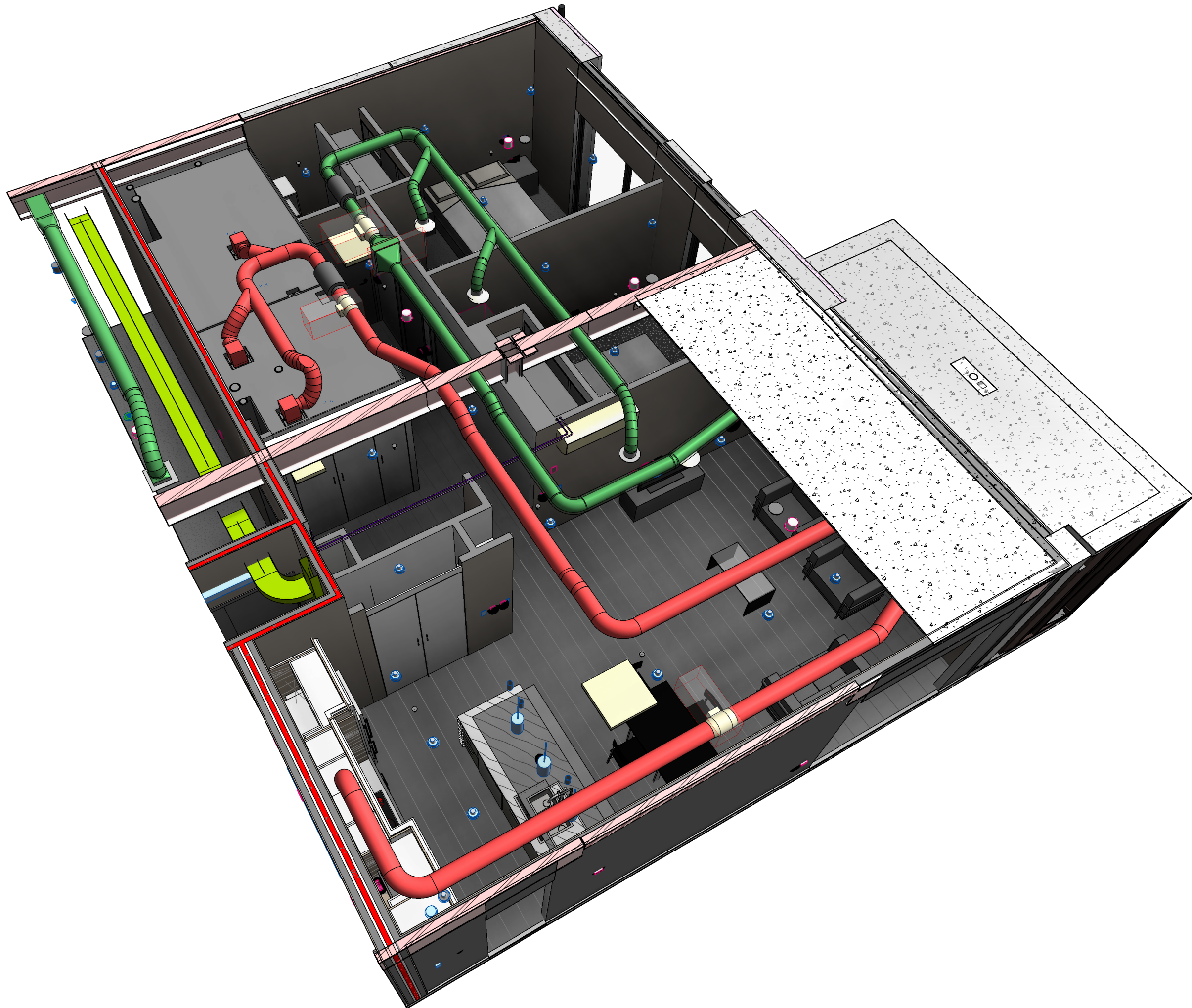
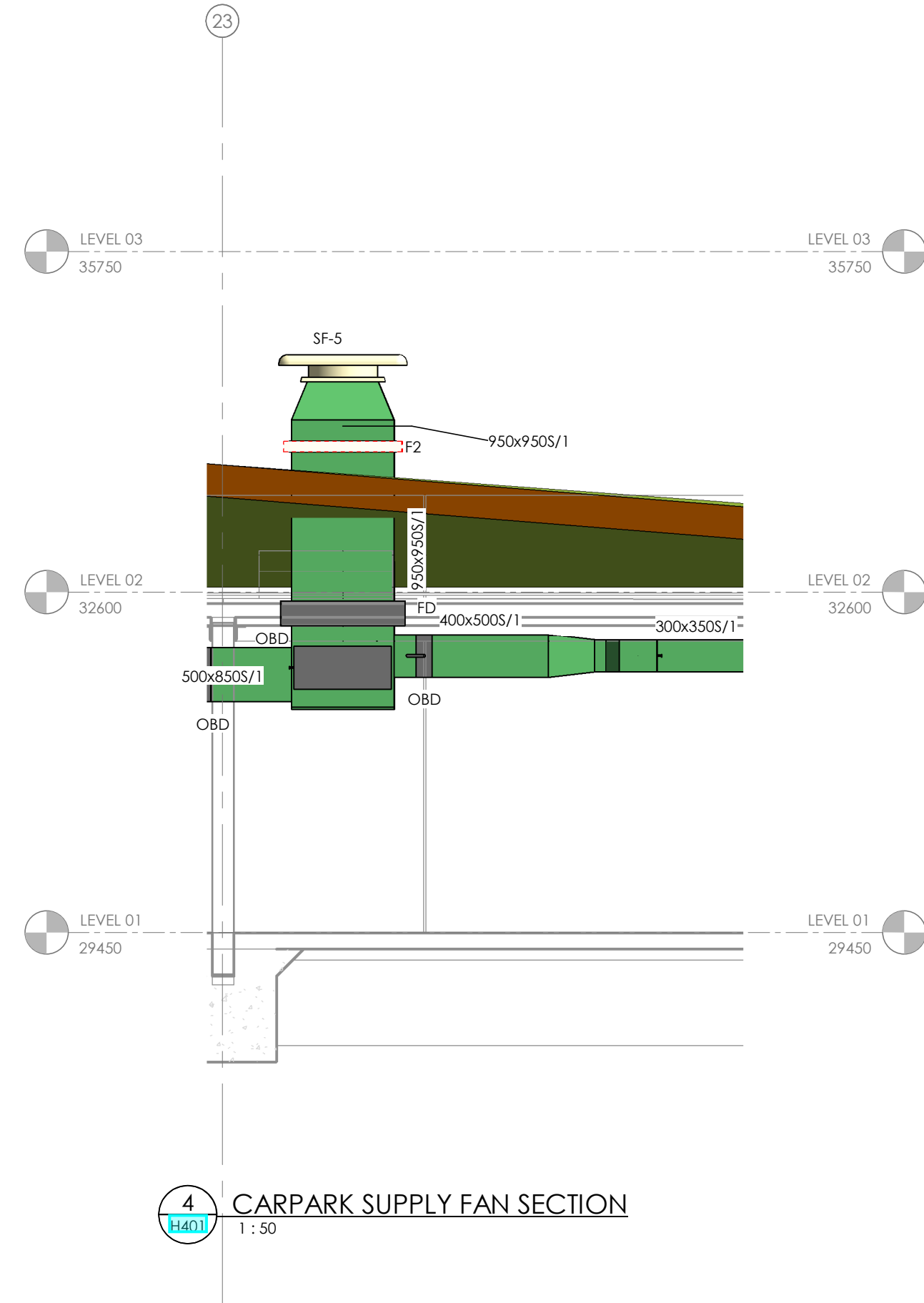
DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 100	

PROJECT No: CA17016-7  
SHEET No: M206

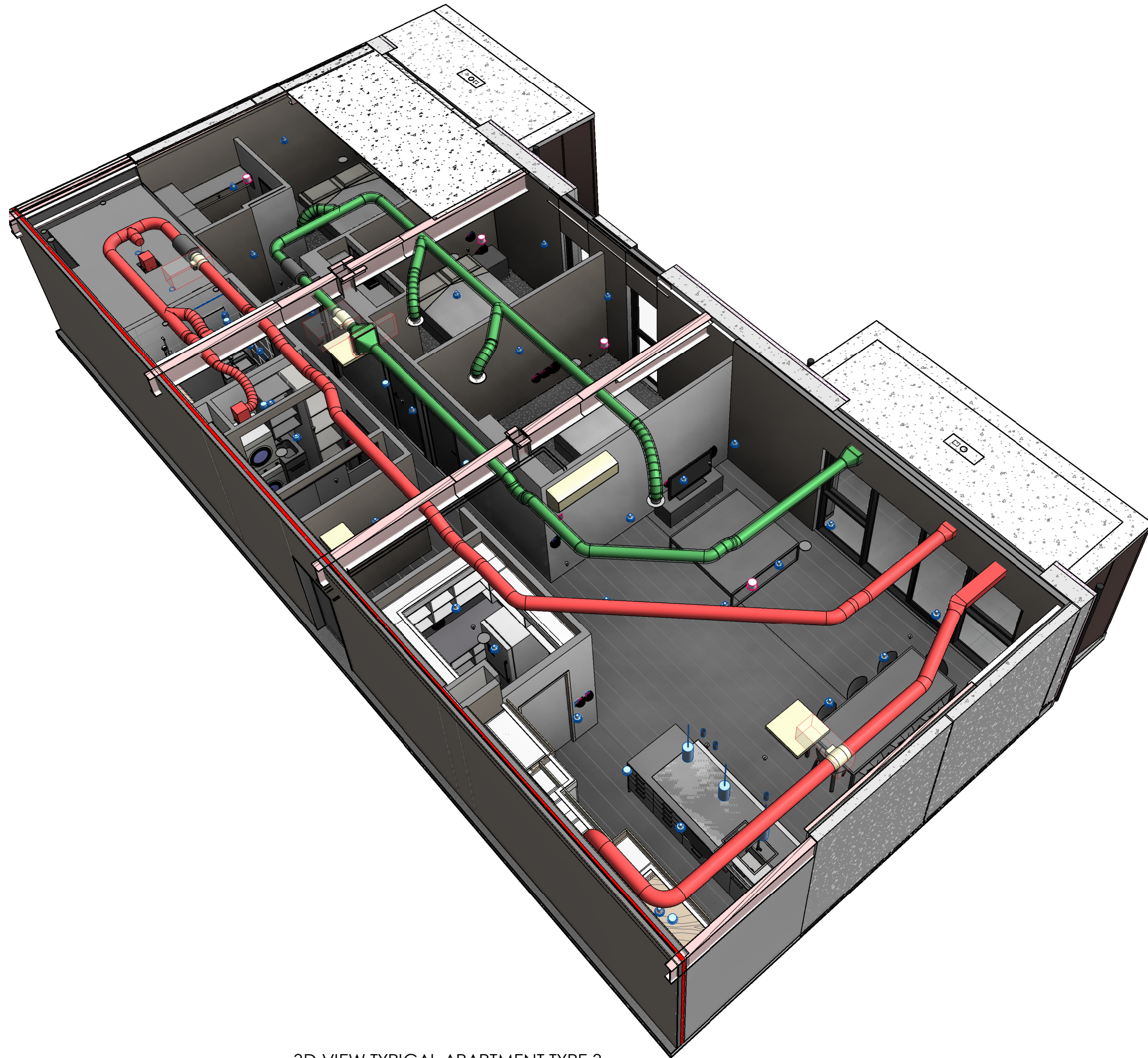




3D VIEW TYPICAL APARTMENT TYPE 1



3D VIEW TYPICAL APARTMENT TYPE 2



3D VIEW TYPICAL APARTMENT TYPE 3

1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

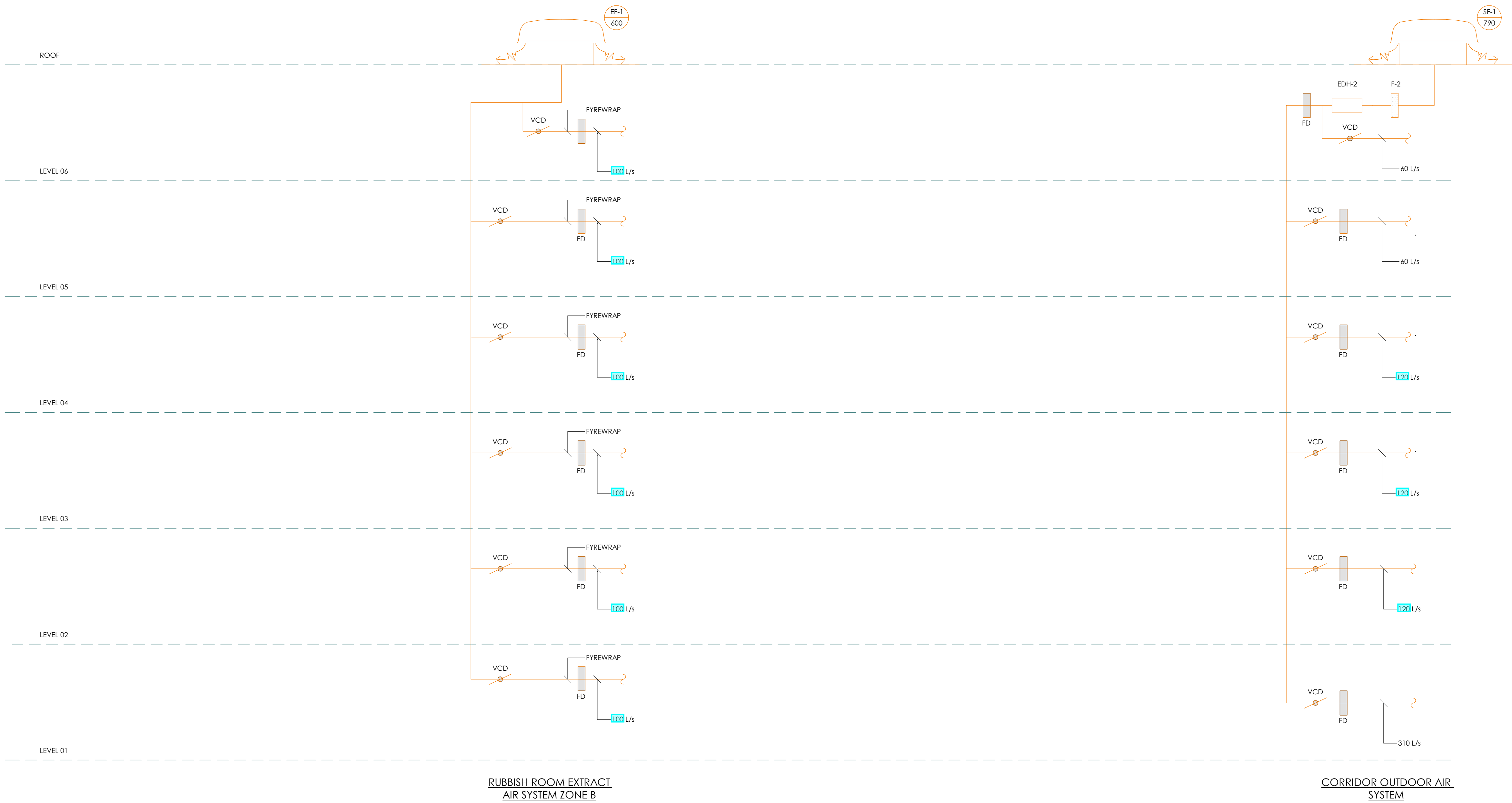
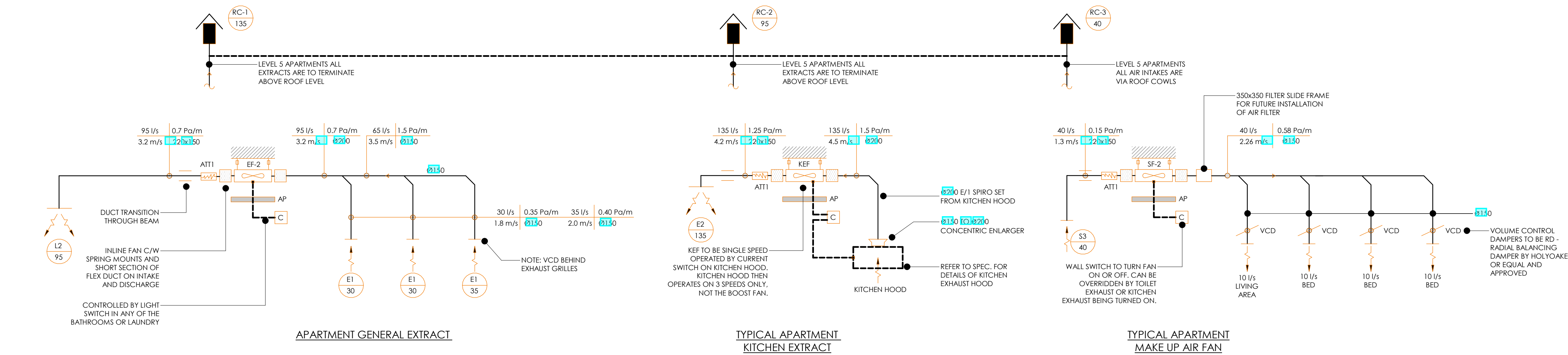
SHEET TITLE:  
MECHANICAL  
DETAILS

FOR CONSTRUCTION

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: AJ	SCALE @ A1: 1 : 50	

PROJECT No: CA17016-7  
SHEET No: M301





1	FOR CONSTRUCTION	22.08.24
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

ORIGINAL DRAWINGS PRODUCED WITH COLOUR



BRINGING  
BUILDINGS  
TO LIFE<sup>2</sup>

Auckland - Ph. (09) 551.9350  
Wellington - Ph. (03) 377.8600  
Christchurch - Ph. (03) 377.8600  
Queenstown - Ph. (03) 555.2103  
Email: admin@cosgroves.com

PROJECT  
METLIFECARE GULF RISE  
65 HIBISCUS COAST  
HIGHWAY, RED BEACH  
BUILDING 7

SHEET TITLE:  
MECHANICAL  
SCHEMATIC

FOR CONSTRUCTION

DESIGNED: SR	DATE: 22.08.24	ISSUE: 1
DRAWN: SN	SCALE @ A1: 1 : 1	

PROJECT No:  
CA17016-7  
SHEET No:  
M401