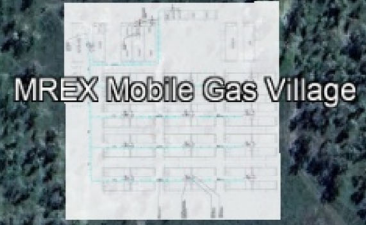


MREX Mobile Gas Village
Lot 433 on Plan 2984



MREX Mobile Gas Village

North Erregulla Deep

Mooray Rd

Mooray Rd

Google Earth

Image © 2024 Airbus



200 m

Bushfire Prone Areas

Lot 433 on DP 2904
North Erregulla-3
MREX Mobile Gas Village

North Erregulla-3

MREX Mobile Gas Village

North Erregulla Deep





MOBILE RIG - MAIN VILLAGE
SITE PLAN

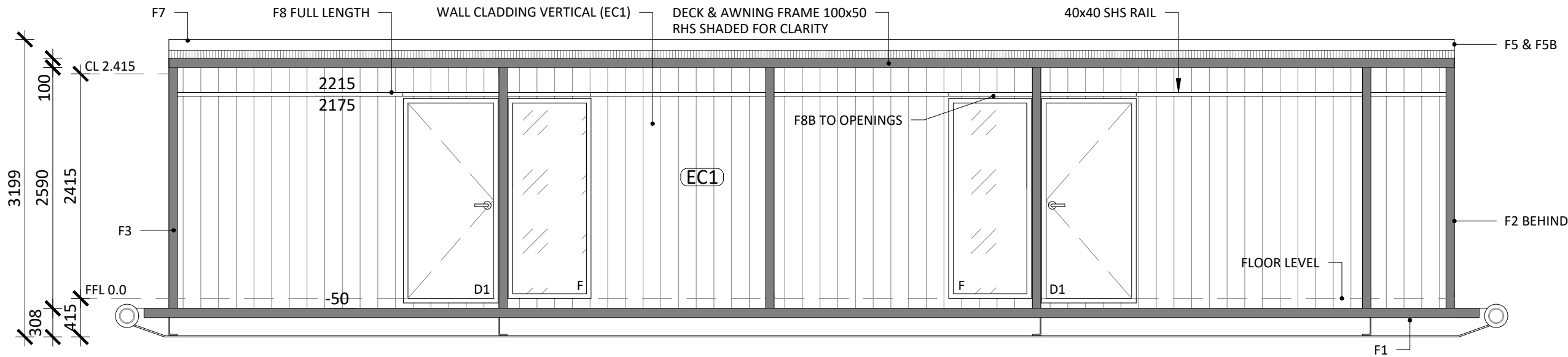
SITE PLAN - CURRENT

DRAWING NO.	REVISION
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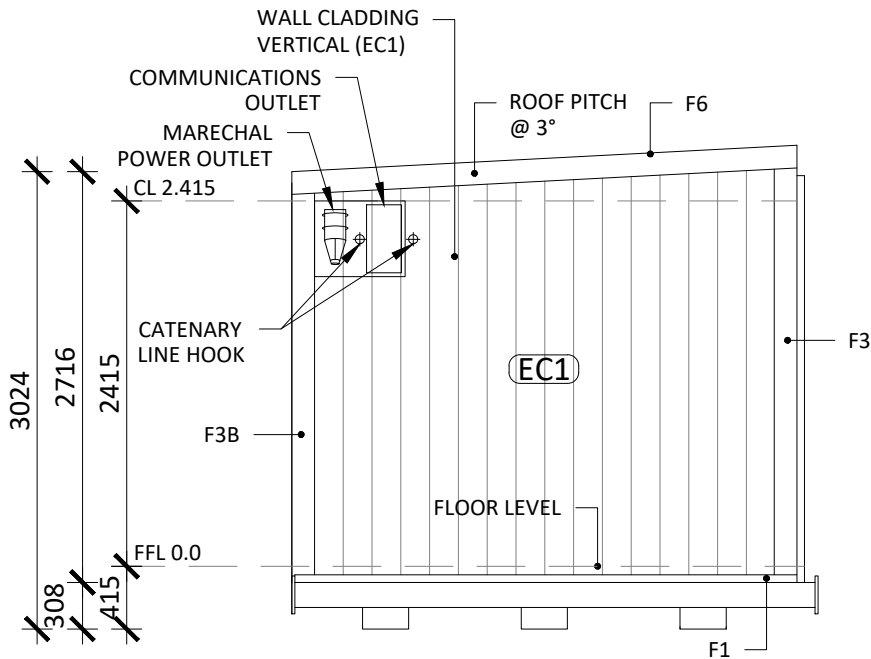
DRAWING NO. **S-SK000** REVISION

NOTE

- REFER TO GENERIC FLASHING DETAILS
- 40x40 SHS RAIL IS WELDED STUD WALL FRAME & DECK/AWNING FRAME



A ELEVATION
2010 1:50



B ELEVATION
2010 1:50

PB 4230 TO PB 4241 AND PB 4261, 4262 TO 4263 (150F)

CLIENT APPROVAL :
CLIENT SIGNATURE :
DATE :
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REV	DESCRIPTION	INIT	DATE

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COMPLETE

SITE SERVICES

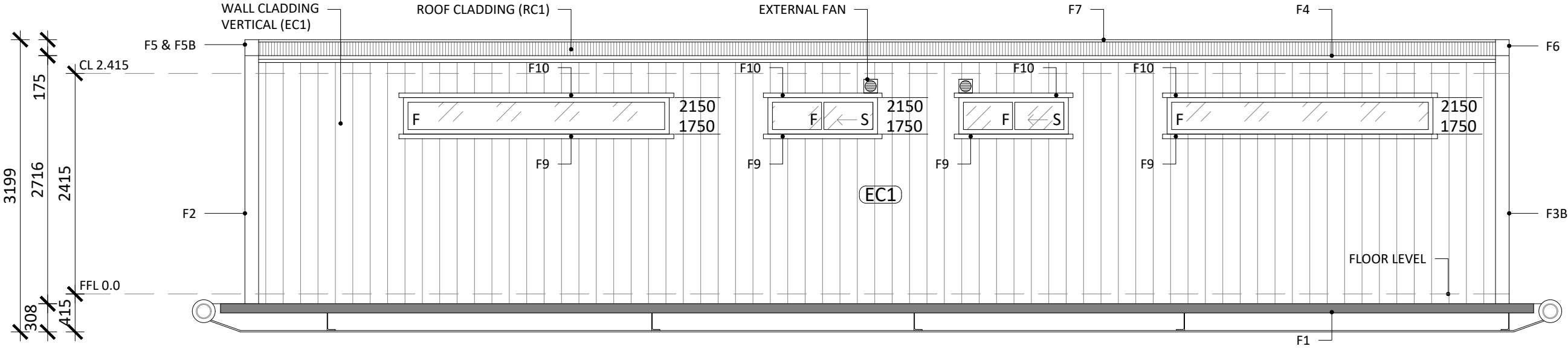
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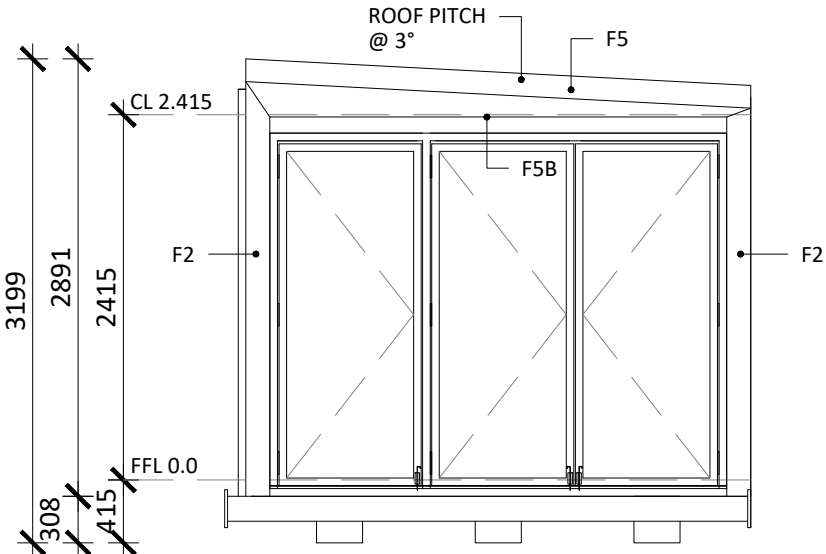
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SITE SERVICES

NOTE

- REFER TO GENERIC FLASHING DETAILS
- 40x40 SHS RAIL IS WELDED STUD WALL FRAME & DECK/AWNING FRAME



C ELEVATION
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D ELEVATION
2010 1:50

PB 4230 TO PB 4241 AND PB 4261, 4262 TO 4263 (150F)

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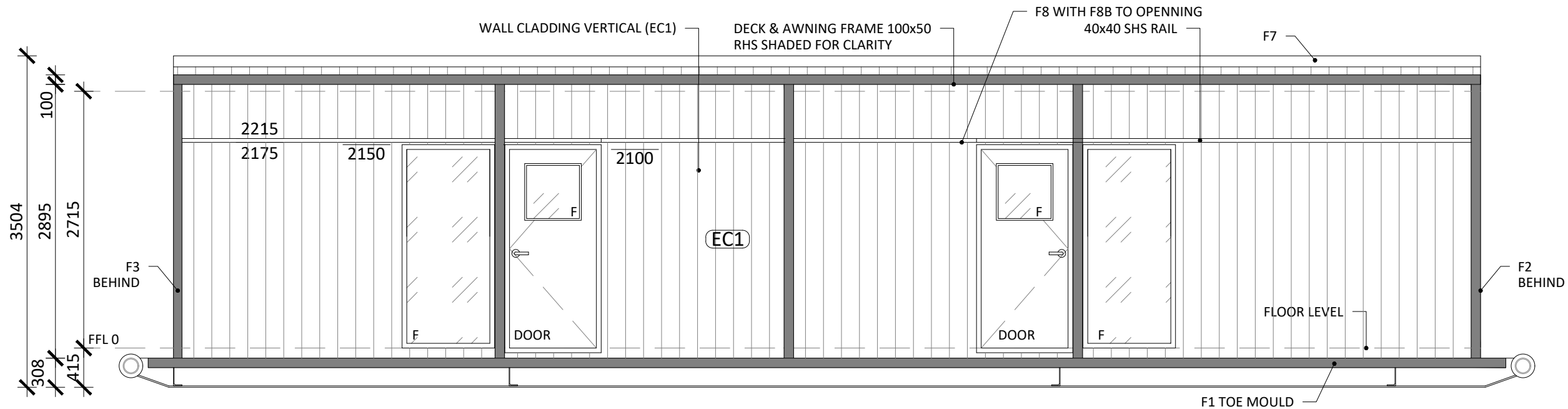
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COMPLETE SITE SERVICES

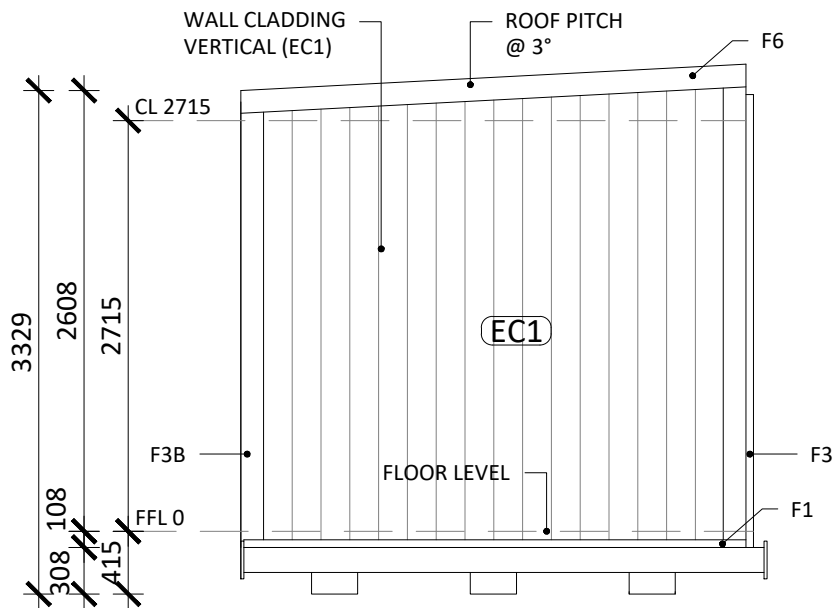
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A ELEVATION
2010 1:50



B ELEVATION
2010 1:50

PB4258

CLIENT APPROVAL :
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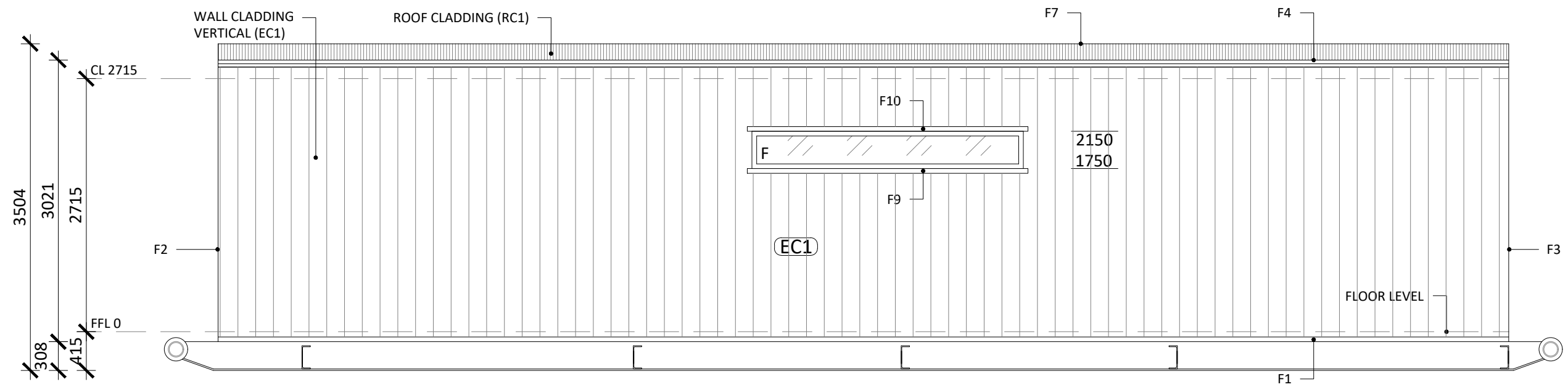
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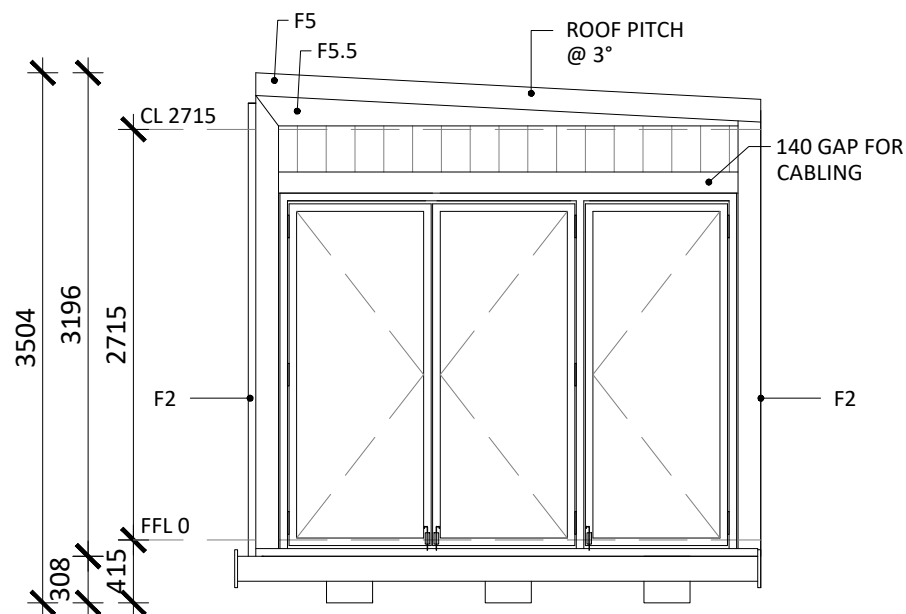
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COMPLETE
SITE SERVICES



C ELEVATION
2010 1:50



D ELEVATION
2010 1:50

PB4258

CLIENT APPROVAL :
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LOCATION :	MOBILE GAS RIG VILLAGE		
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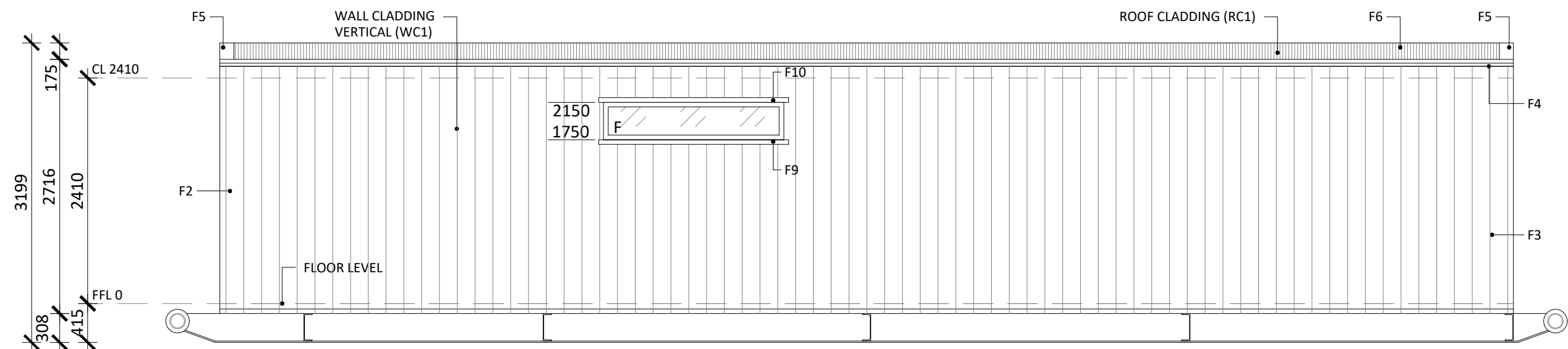
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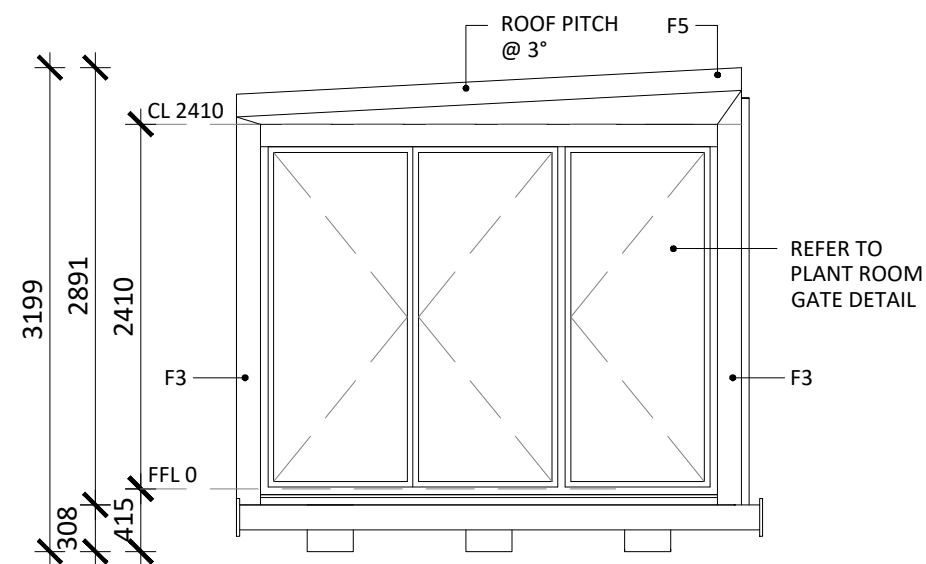
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SITE SERVICES





C ELEVATION C
1:50



D ELEVATION D
1:50

PB 4259

CLIENT APPROVAL :
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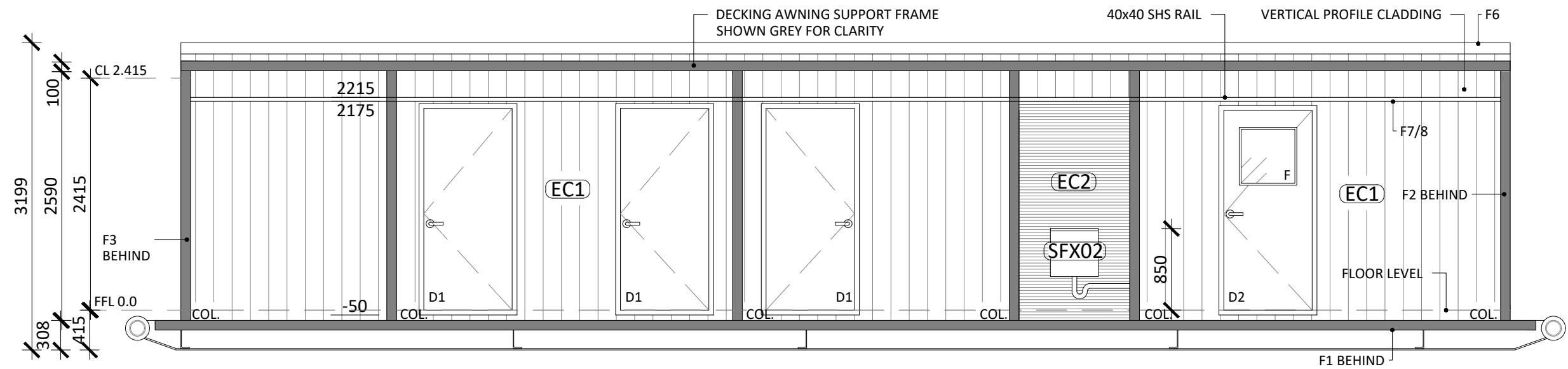
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SITE SERVICES

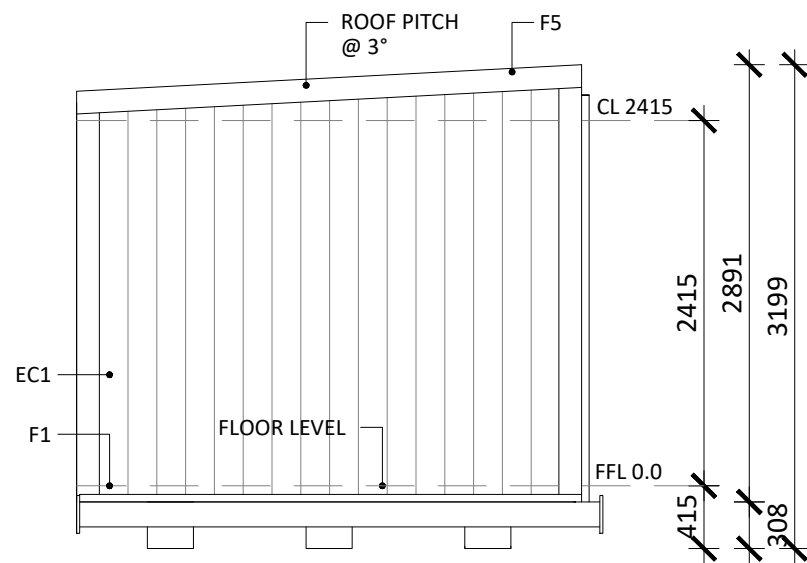
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SITE SERVICES



A ELEVATION
1:50



B ELEVATION
1:50

PB 4264

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CLIENT SIGNATURE :
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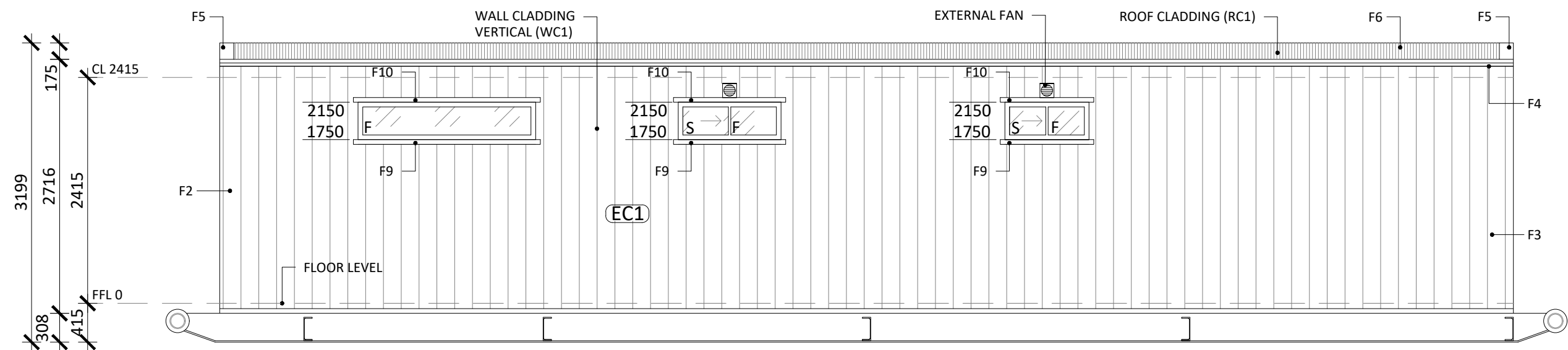
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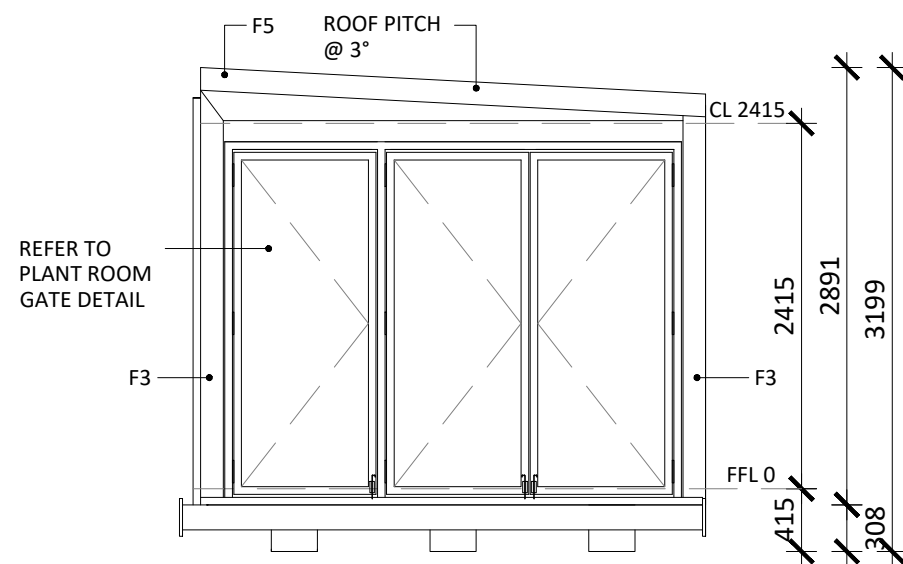
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C ELEVATION
1:50



D ELEVATION
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PB 4264

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LOCATION :	MOBILE GAS RIG VILLAGE		
TITLE :	ABLUTION - RIGHT HAND - ELEVATION - 02		
CLIENT DWG NO :	-----	REV :	A
CSS DWG NO :	12-0282-PB4264-AR-3010	REV :	A.2
CSS JOB NO :	12-0282		

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SITE SERVICES

3. Design Requirements

3.1. Site Details

Details	Information
Project Name	Lockyer Mobile Gas Rig Village - PWTP and WWTP
Project Location	Near Dongara, Western Australia
Wind Region	Region D

3.2. Village PWTP Specifications

Details	Units	Parameter
Raw Water Quality	Water source	- Bore water
	Temperature ²	°C 15-35
	TDS ¹	mg/L <5,000
	TSS ²	mg/L <30
	Particle size ²	µm 95% >10, 5% >1
	pH	pH units 6.0-6.7
	Free chlorine ²	mg/L <0.1
	Iron ²	mg/L <0.1
	Manganese ²	mg/L <0.1
	Silica ²	mg/L <10
	TOC (as C) ²	mg/L <1
Treated Water Quality	Use	- Potable water, compliant to ADWG
	TDS	mg/L <600
	TSS	mg/L <1
	pH	- 6.5-8.5
	Free chlorine	mg/L 0.2-2.0
Treated Water Volume		m ³ /day 15
Raw Water Tank Volume		kL 14
Potable Water Tank Volume		kL 3 x 14
Potable Water Distribution Pump Duty		m ³ /h @ kPa 11.4 @ 500 kPa (2 x 100% pumps)
Plant Type	Reverse Osmosis - Brackish Water (RO-BW)	
Assembly	Equipment installed on a suitable client designed and supplied skid	
Notes	¹ As per water analysis received from client: 20231114 NED1 Baseline SGA Report, Nov22-Feb23. Noting that we have assumed errors in adequately flushing and sampling of bores and the presence of historical drilling fluid, hence we have assumed normal levels of TOC, iron and manganese and included standard pre-treatment of media and cartridge filtration	

²Assumed values, a complete, accurate and current raw water analysis is required to confirm design and final equipment selection



ABCO 24 m³/day containerised RO plant

3.3. Village WWTP Specifications

Details		Units	Parameter
Influent Quality ¹	Water Source	-	Macerated raw domestic strength sewage
	Peak Flow	m ³ / hr	2.5
	Temperature	°C	15-32
	BOD	mg/L	<300
	TSS	mg/L	<300
	pH	pH units	6.5-8.5
	TN	mg/L	<80
	TP	mg/L	<15
	FOG ³	mg/L	<20
Treated Effluent Quality	Exposure Risk Level	-	Low (Class C)
	BOD	mg/L	<20
	TSS	mg/L	<30
	pH	pH units	6.5-8.5
	TN	mg/L	N/A
	TP	mg/L	N/A
	E Coli	cfu/100mL	<1,000
	Free chlorine	mg/L	0.5-2.0
Design Influent Flow		m ³ /day	12
Peak Influent Flow ²		m ³ / hr	10.4
Balance Tank Volume		kL	10.5
Irrigation Tank Volume		kL	4.5
Irrigation Pump Duty		m ³ /hr @ kPa	6 @ 300
Plant Type	Rotating Biological Contactor (RBC)		
Assembly	Equipment installed on a suitable client designed and supplied skid		
Notes	¹ Assumed values. ² Maximum peak flow based on 5 x average flow for 2 hours in morning/evening. By accepting this quotation, client confirms acceptance of these parameters as the basis for design.		



ABCO 15 m³/day skid mounted RBC plant

4. Plant and Equipment Details

The scope of supply is outlined below subject to detailed design upon contract award.

4.1. Village PWTP

Item	Qty	Equipment
1.	1	14kL Raw water tank in PE construction with appropriate fittings
2.	3	14kL Potable water tanks in PE construction with appropriate fittings
3.	1	As new 10' container complete with: <ul style="list-style-type: none"> Standard spray enamel painting inside and out Non-slip chemically resistant flooring coating Window mounted aircon (TECO) Internal ceiling mounted LED light (with battery backup) 1 x 10A GPO for maintenance Roof mounted alarm beacon
4.	1	Low pressure feed pump
5.	1	High pressure RO pump
6.	1	Potable water tank recirculation pump
7.	1 set	Variable speed potable water distribution pumps configured in duty/standby (2 x 100%): <ul style="list-style-type: none"> 2 x vertical multistage pumps, 304SS construction Pumps fitted with motor mounted variable speed drives 1 x 40L pressure vessel, manifold mounted 304SS suction and discharge manifolds 2 x isolating ball valves and 1 x wafer check valve per pump All mounted to a pressed stainless steel skid base
8.	1	Anti-scalant dosing pump with low-level switch and bunded dosing tank
9.	1	Hypochlorite dosing pump with low-level switch and bunded dosing tank
10.	1	Auto-backwashing multi-media filter
11.	1 lot	Cartridge filters (5 and 1 micron)
12.	1 lot	Brackish water RO vessels and membranes
13.	1	Calcite filter
14.	1	CIP tank with manual valves
15.	1 lot	Pressure gauges
16.	2	Pressure switches
17.	3	Float level switches
18.	3	Flow gauges (rotameter)
19.	1	Flow switch
20.	1	Conductivity transmitter
21.	2	pH transmitters

22.	1	Free chlorine analyser
23.	1	Power distribution board to AS 3000, IP65 plastic enclosure
24.	1	Combined motor starter and PLC control panel to AS 3000
25.	1 lot	uPVC piping and valves
26.	1 lot	Interconnecting piping and cabling within the battery limits

Note: full equipment list subject to engineering design and approval



ABCO 480 m³/day containerised RO plant

4.2. Village WWTP

Item	Qty	Equipment
1.	1	10.5kL Balance tank in PE construction with appropriate fittings
2.	1	10.5kL Sedimentation tank in PE construction with appropriate fittings
3.	1	4.5kL Irrigation tank in PE construction with appropriate fittings
4.	1	Rotating biological contractor (RBC) in FRP construction, PP disks
5.	1	Lamella clarifier (LC) in FRP construction
6.	1	Feed pump
7.	1	RAS pump
8.	1	Irrigation tank recirculation pump
9.	1	Irrigation pump
10.	1	Hypochlorite dosing pump with low-level switch and bunded dosing tank
11.	1	Coagulant dosing pump with low-level switch and bunded dosing tank
12.	1 lot	Pressure gauges
13.	1 lot	Level switches
14.	2	Flow switches
15.	2	Flow transmitters
16.	1	ORP sensor
17.	1	Power distribution board to AS 3000, IP65 plastic enclosure
18.	1	Combined motor starter and PLC control panel with HMI to AS 3000
19.	1 lot	uPVC piping and valves
20.	1 lot	Interconnecting piping and cabling within the battery limits
21.	1	Tank access platform

Note: full equipment list subject to engineering design and approval



ABCO PWTP and WWTP installed onsite

5. Project Deliverables

5.1. Engineering Standards & Specifications

ABCO's Water and Wastewater Treatment plants are designed to ABCO's process design specifications in accordance with Australian Standards, including AS3000 for the electrical component.

ABCO's is committed to continuous improvement in the quality of our management systems, occupational health and safety performance, and environmental practices.

We hold internationally recognised certification in the following areas which ensures our plants are manufactured to the highest standards.



Optional pricing can be provided for compliance with company specific engineering standards and specifications.

5.2. Drawings and Documentation

The following documents will be provided as part of this proposal

- ✓ Process Drawings (P&IDs)
- ✓ General Arrangement Drawings
- ✓ Civil Outline Drawings (showing weights and dimensions)
- ✓ Electrical Drawings (SLD, schematics)
- ✓ Electrical Load List
- ✓ Equipment List
- ✓ Installation, Operation and Maintenance Manual
- ✓ Factory Acceptance Test Report
- ✓ Site Acceptance Test Report

Optional pricing can be provided for company specific vendor data requirements.

5.3. Equipment Suppliers

This proposal is based on using ABCO Water's preferred equipment suppliers/brands, which are selected based on suitability for this project, proven performance, local availability of spares and after sales support:

Equipment	Brands
Pumps	Ebara
	Lowara
	Grundfos
Submersible pumps	Tsurumi
	Xylem
	Domo
Dosing pumps	Etatron
	Grundfos
Instruments	WIKA
	Stubbe
	GTS Gauges
	IFM
	Etatron
	George Fischer
	E&H
Filters	Wave Cyber
	Southland Filtration
	Brother Filtration
	WaterCo
RO vessels	Pentair
	Wavecyber
	BEL
RO membranes	Hydranautics
	Toray
RBCs and lamella clarifiers	PlanetTEK
Electric valve actuators	Valpes
Manual valves	FIP
	Stubbe
	George Fischer
PLC/HMI	Allen Bradley
	Siemens

Note: list is not exhaustive; ABCO Water may deviate from the above at its discretion

Optional pricing can be provided for company preferred equipment suppliers/brands.

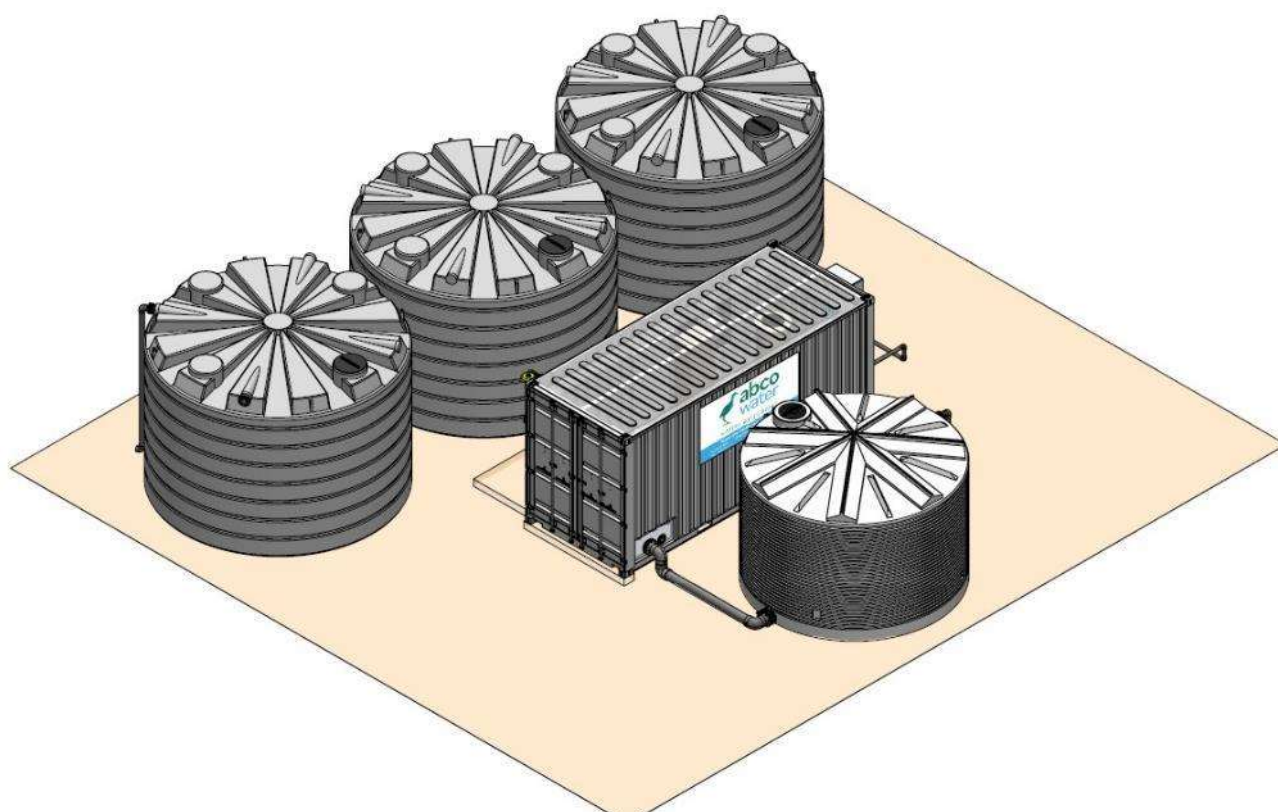
5.4. Battery Limits

The following battery limits have been allowed for within the pricing of this offer.

5.4.1. Village PWTP

Battery Limits	
Mechanical	Raw water inlet connection of raw water tank
	Potable water outlet connection of container
	Drain and overflow outlets of each tank
	Brine and waste outlet connections of container
	Analyser sample waste and floor drain outlet(s) of container
Electrical	Power supply connection terminals of the distribution board
	Alarm signal output connection terminals of the control panel
Civil/Structural	Underside/base of skid

ABCO Water will supply and install all equipment and interconnecting piping and cabling within the above specified battery limits, on a client designed and supplied skid suitable for installation of equipment.

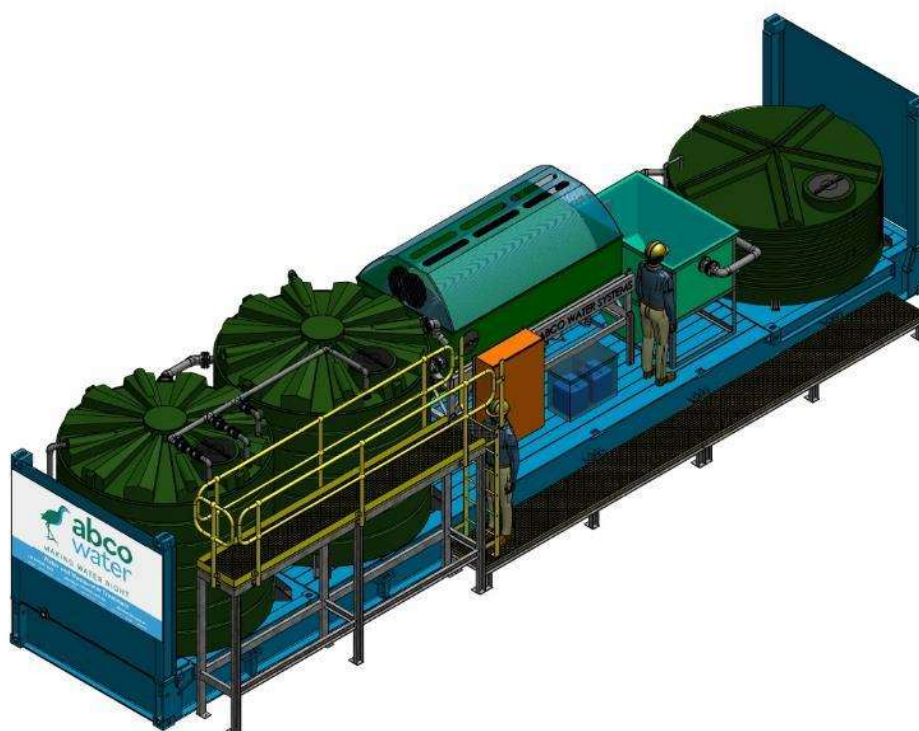


ABCO containerised RO plant

5.4.2. Village WWTP

Battery Limits	
Mechanical	Macerated sewage inlet connection of balance tank
	Treated effluent outlet connection of irrigation pump
	Sludge pump-out connection of sedimentation tank
	Drain and overflow outlets of each tank
	Potable water connection (if applicable)
Electrical	Power supply connection terminals of the distribution board
	Alarm signal output connection terminals of the control panel
Civil	Underside/base of skid

ABCO Water will supply and install all equipment and interconnecting piping and cabling within the above specified battery limits, on a client designed and supplied skid suitable for installation of equipment.



ABCO skid mounted RBC plant

5.5. Commissioning and Training

5.5.1. Site Acceptance Test

Once the plant has been installed onsite and all mechanical, hydraulic and electrical works have been completed the ABCO commissioning team will attend site to carry out a Site Acceptance Test on the plant.

5.5.2. Training/ Familiarisation

Whilst onsite the commissioning team will provide familiarisation training on the plant to the operators. This training generally covers:

- ✓ Safety protocols
- ✓ System overview
- ✓ System Start Up, Adjustments, Shut Down
- ✓ Trouble shooting
- ✓ Daily Operational Tasks
- ✓ Log Sheets Review

If additional training is required, please contact your local ABCO office for prices of this service.

6. Service and Maintenance

ABCO operates a service office, and can provide technical services, incorporating:

- ✓ Monthly routine site visits
- ✓ Immediate response to emergency breakdowns
- ✓ 24/7 technical support via mobile phone
- ✓ Weekly review of operating logs/Remote monitoring (optional)
- ✓ Operation and maintenance services
- ✓ Ongoing supply of chemicals, filters, and all consumables
- ✓ Priority access to spare parts

Note that scheduled servicing is required for ABCO Water rental plants.