

About Marline Engineering Newcastle
At Marline, we take a comprehensive approach when designing your new development.

With in-house electrical, mechanical and hydraulic engineers, Marline Engineering makes your engineering design needs a breeze. We are able to adjust, implement and create designs on AutoCAD and REVIT which makes it easy for contractors and builders to build our designs.

We advise you on the most affordable, practical and effective solutions and systems based on the site and legal factors.

As consulting engineers, Marline has also expanded the range of services to provide a wide range of building services disciplines including Air-conditioning, Electrical, Hydraulics, Fire Protection and Lift Services.

Marline has seen a huge amount of growth in the Energy sector. We provide services that go above and beyond the standard regulatory requirements and offer unique solutions to your Section J or JV3 Alternative solution reports. We also offer a fast NABERS and BEEC certification that ensures advertising for commercial properties are fully compliant with the CBD advertising rules and regulations.

With engineering consulting experience that dates back as far as 1975, we're one of the best engineering companies in Australia, and have developed the kind of projects that residential and commercial property developers benefit from.

Our Newcastle engineering firm continues to grow, however our team prides itself on every customer receiving the kind of high quality workmanship and personalised service that our company is known for.

To accommodate the expansion and demand for engineering services within Newcastle and throughout New South Wales, Marline Engineering has almost doubled the number of highly trained employees in the last five years.

Our engineering firm currently employs ten engineers, eight technical assistants and an office administrator. As a result, we continue to be leaders amongst engineering companies in Australia, with a large portfolio and a positive attitude.

PROJECT No:
MN14834

CLIENT:
WEDGETAIL PROJECT CONSULTING

ARCHITECT:

Fire Services

PROPOSED EXTENSION WOOD WASTE PROCESSING BUILDING

ANL TEA GARDENS, PINDIMAR ROAD, TEA GARDENS, NSW 2324

DRAWING SCHEDULE	
FH-00-000	COVER SHEET
FH-00-001	LEGEND & NOTES
FH-00-002	SITE SERVICES
FH-10-001	WOOD WASTE PROCESSING BUILDING - FIRE SERVICES LAYOUT
FH-20-001	DETAILS - SHEET 1
FH-20-002	DETAILS - SHEET 2

NOTE: SOME ITEMS MAY NOT BE USED

LINETYPES

	COLD WATER
	FIRE HYDRANT
	COLD WATER
	FIRE HYDRANT
	30m INTERNAL FIRE HYDRANT RUN
	60m EXTERNAL FIRE HYDRANT RUN
	10m FIRE HYDRANT SPRAY
	36m FIRE HOSE REEL RUN
	4m FIRE HOSE REEL SPRAY
	FIRE WALL
	SMOKE WALL

ABBREVIATIONS

DPH	DOUBLE PILLAR HYDRANT.
e	EXISTING.
FH	FIRE HYDRANT.
FHR	FIRE HOSE REEL.

KEY

	AREA NOT COVERED BY HYDRANT OR HOSE REEL.
	10m EXCLUSION ZONE FROM BUILDING
	HYDRANT BOOSTER IN LINE OF SIGHT OF FRONT ENTRY

SYMBOLS - FIRE

	BOOSTER ASSEMBLY
	PUMP SET
	VALVE SET
	TEST POINT
	ALARM STROBE
	SINGLE PILLAR HYDRANT (INTERNAL)
	DOUBLE PILLAR HYDRANT (EXTERNAL)
	STREET HYDRANT
	FIRE HOSE REEL
	THRUST BLOCK
	FIRE INDICATOR PANEL
	FIRE TRUCK (MUST BE LOCATED MINIMUM 10m FROM BUILDING & MAXIMUM 20m FROM FEED HYDRANT).

WATER REQUIREMENTS

FIRE HYDRANTS

ALL CLASS BUILDING SPRINKLED $>1000m^2 \leq 10,000m^2$ = 20L/S

SPRINKLER

OH3 FIRE SPRINKLER DESIGN - ROOF SLOPE $<6^\circ$ 18 OPERATIONAL HEADS @ 1L/SEC EACH = 18L/S

TOTAL WATER REQUIREMENTS = 38L/S

STORED WATER REQUIREMENTS

WATER REQUIRED TO BE STORED

20L/SEC - HYDRANT
18L/SEC - SPRINKLER

FIRE HYDRANTS

20L/SEC x 4 HOURS STORAGE REQUIREMENT = 288,000L

FIRE SPRINKLER

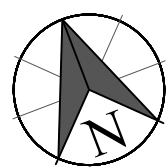
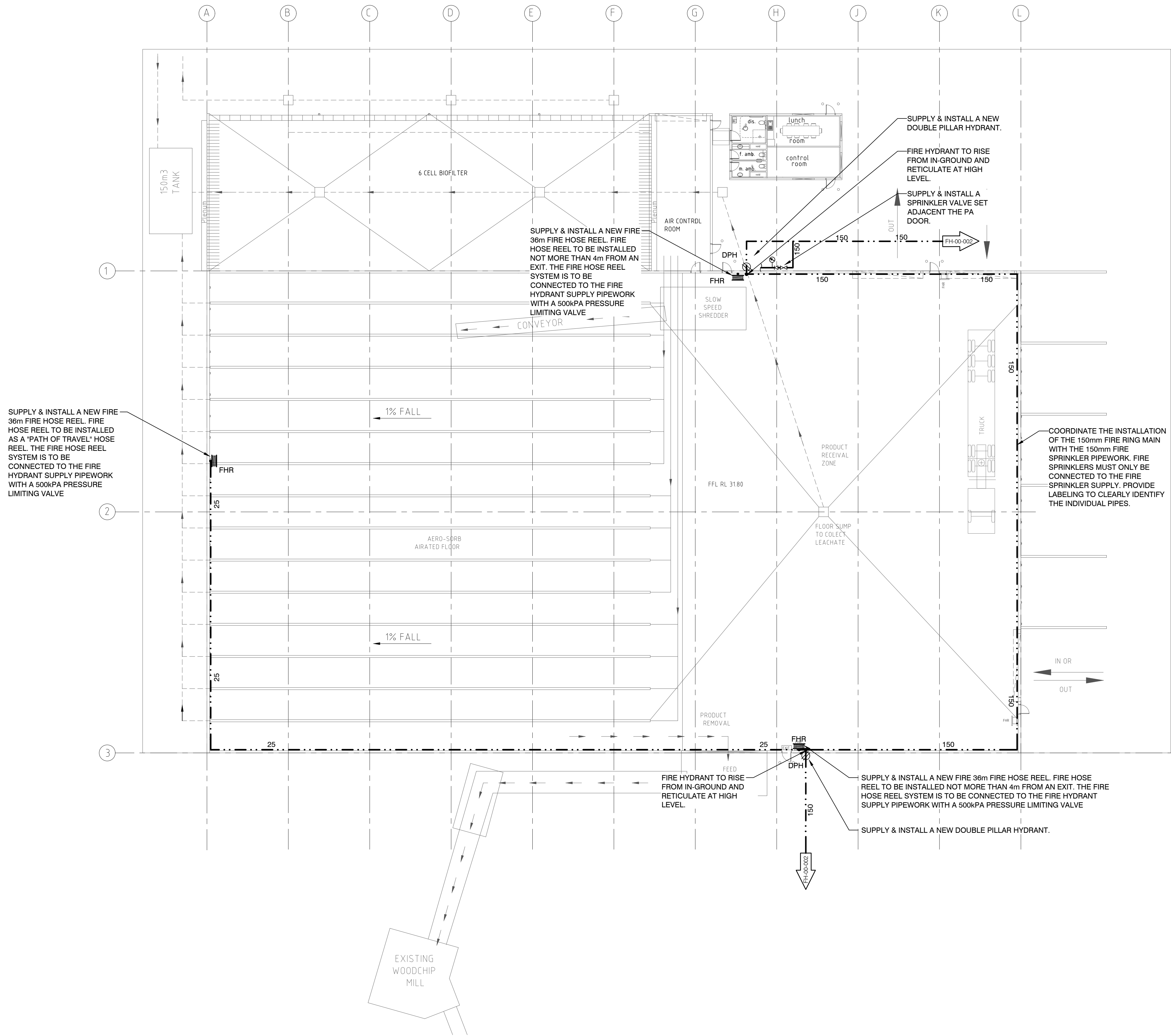
18L/SEC x 1 HOUR STORAGE REQUIREMENT + 20% = 78,000L

TOTAL STORED WATER

366,000L EFFECTIVE CAPACITY
2x 200,000L TANKS (50% CAPACITY EACH)

GENERAL NOTES

- ISOLATION VALVE AT WATER METER ASSEMBLY TO BE SECURED IN THE OPEN POSITION BY A PADLOCKED METAL STRAP AND AN ENGRAVED NON FERROUS METAL LABEL ATTACHED. LABEL TO BE ENGRAVED WITH 8mm UPPER CASE WORDING: 'FIRE SERVICE VALVE - CLOSE ONLY TO SERVICE FIRE HOSE REELS'.
- ALL SERVICES INSTALLED ADJACENT THE BUILDING ARE TO BE LOCATED OUTSIDE THE ZONE OF INFLUENCE AS PER AS3500.
- ALL HYDRANT PIPEWORK TO BE BLUE BRUTE CLASS 16 INGROUND OR GALVANIZED STEEL ABOVE GROUND TO COMPLY WITH AUSTRALIAN STANDARDS. ALL BLUE BRUTE PIPEWORK TO BE SUPPORTED BY THRUST BLOCKS.



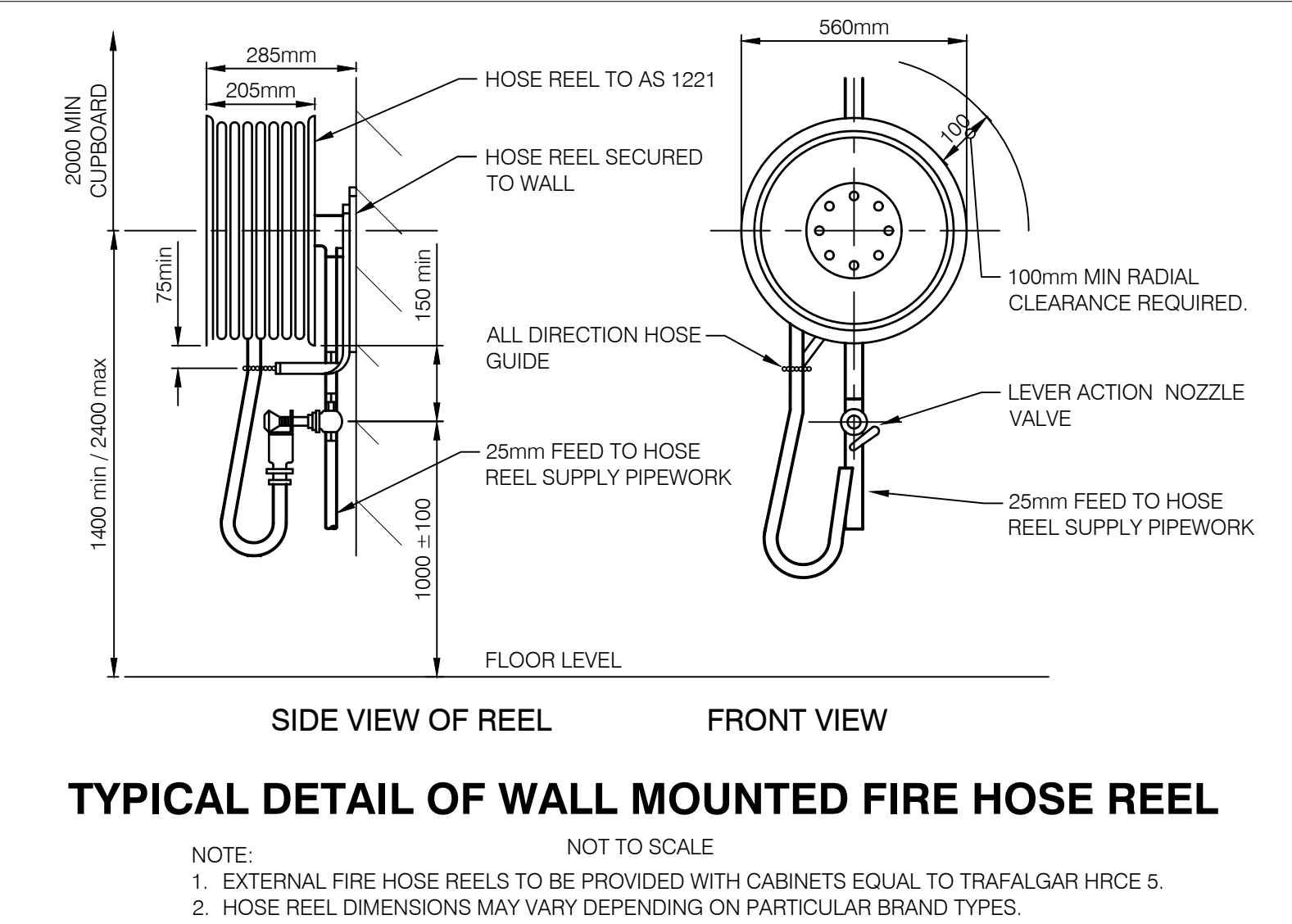
Rev	Date	Reason for Issue
4	21.08.24	100% ISSUE
3	02.07.24	100% ISSUE FOR REVIEW
2	19.06.24	REVISED AS REQUESTED
1	31.01.24	50% ISSUE FOR REVIEW

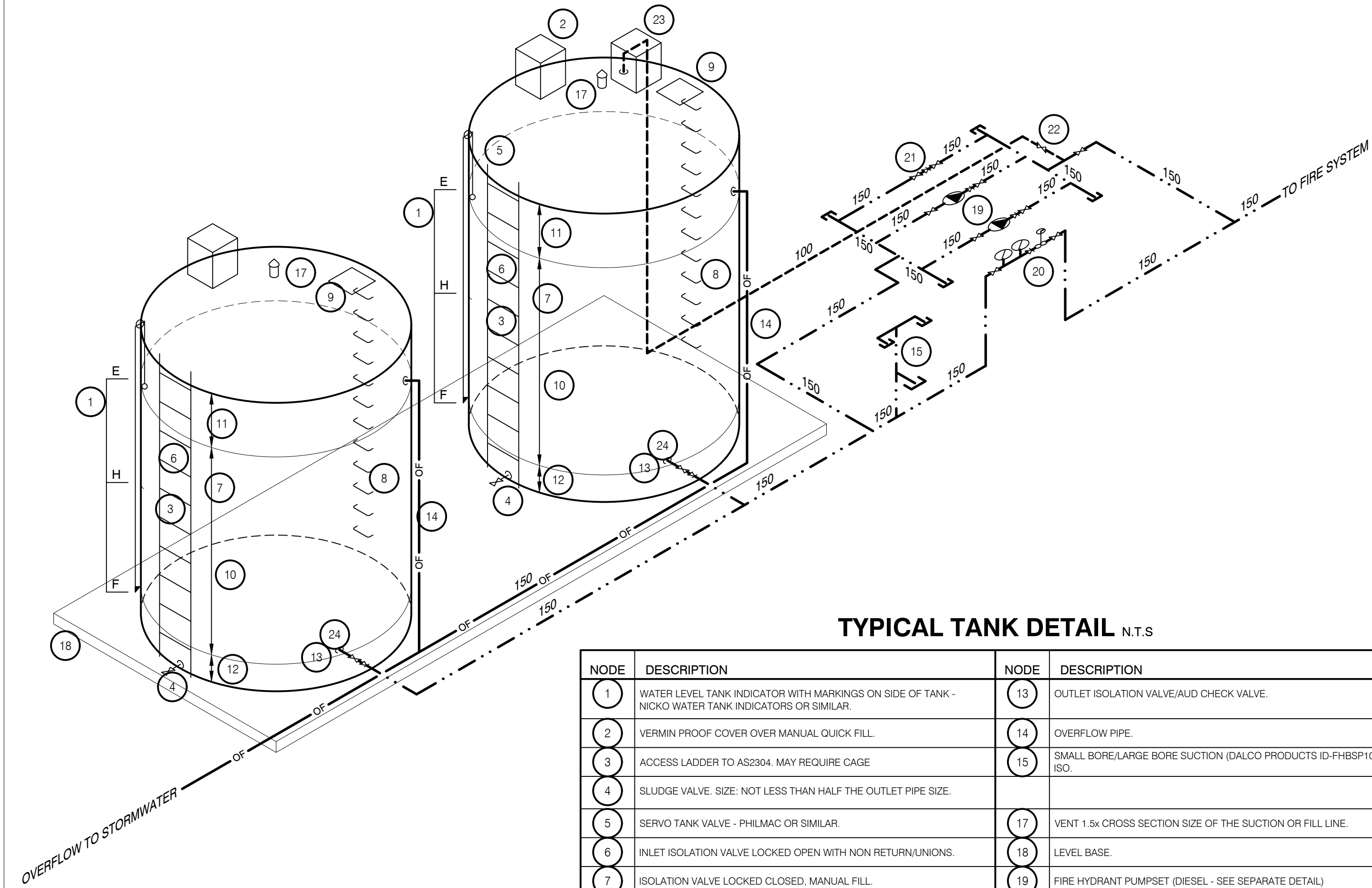
CM	CB	DW
CM	CB	CB
CM	CB	CB
CM	CB	CB
CM	CB	CB
Drawn	Design	Verify

Project
PROPOSED EXTENSION WOOD WASTE PROCESSING BUILDING
ANL TEA GARDENS
PINDIMAR ROAD, TEA GARDENS, NSW 2324

Drawing Title
WOOD WASTE PROCESSING BUILDING
FIRE SERVICES LAYOUT

Discipline	Job No.	Drawing No.	Rev
	MN14834	FH-10-001	4





NODE	DESCRIPTION	NODE	DESCRIPTION
1	WATER LEVEL TANK INDICATOR WITH MARKINGS ON SIDE OF TANK - NICKO WATER TANK INDICATORS OR SIMILAR.	13	OUTLET ISOLATION VALVE/AUD CHECK VALVE.
2	VERMIN PROOF COVER OVER MANUAL QUICK FILL.	14	OVERFLOW PIPE.
3	ACCESS LADDER TO AS2304. MAY REQUIRE CAGE	15	SMALL BORE/LARGE BORE SUCTION (DALCO PRODUCTS ID-FHBS100 & ISO.
4	SLUDGE VALVE. SIZE: NOT LESS THAN HALF THE OUTLET PIPE SIZE.		
5	SERVO TANK VALVE - PHILMAC OR SIMILAR.	17	VENT 1.5x CROSS SECTION SIZE OF THE SUCTION OR FILL LINE.
6	INLET ISOLATION VALVE LOCKED OPEN WITH NON RETURN/UNIONS.	18	LEVEL BASE.
7	ISOLATION VALVE LOCKED CLOSED, MANUAL FILL.	19	FIRE HYDRANT PUMPSET (DIESEL - SEE SEPARATE DETAIL)
8	INTERNAL STEP IRONS TO AS2340.	20	BOOSTER ASSEMBLY (SEE SEPARATE DETAIL)
9	ACCESS HATCH (750mmx750mm).	21	BYPASS
10	EFFECTIVE CAPACITY	22	ISOLATION VALVE FOR TEST DRAIN. IN LOCK POSITION.
11	AIR GAP.	23	TEST DRAIN.
12	MINIMUM WATER LEVEL UNDER VORTEX INHIBITOR.	24	150mm BELLMOUTH SUCTION INCORPORATING ANTI-VORTEX PLATE

