

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:
MN13203

CLIENT:
CENTRAL DARLING SHIRE COUNCIL

ARCHITECT:
BARNSON

MECHANICAL - ELECTRICAL - HYDRAULIC - FIRE - ENERGY - NABERS - STORMWATER - SECTION J - BEEC

Hydraulic Services

VICTORY PARK CARAVAN PARK

BARRIER HIGHWAY, WILCANNIA, NSW 2836

DRAWING SCHEDULE

HY-00-000	COVER SHEET
HY-00-001	LEGEND & NOTES
HY-00-002	SITE SERVICES
HY-10-001	GROUND FLOOR - WATER LAYOUT
HY-20-001	GROUND FLOOR - SANITARY DRAINAGE LAYOUT
HY-30-001	DETAIL SHEET

FOR CONSTRUCTION

HYDRAULIC SERVICES

HY-00-000 A

LINETYPES - EXISTING

-----eCW---	COLD WATER
-----eHW---	HOT WATER
-----eWW---	WARM WATER
-----eFH---	FIRE HYDRANT
-----eSP---	FIRE SPRINKLER
-----eG---	GAS
-----eNP---	NON POTABLE
-----eRW---	RAINWATER REUSE
-----eS---	SANITARY
-----eVP---	VENT PIPE OFFSET
-----eTW---	TRADE WASTE
-----eSW---	STORMWATER
-----eDP---	STORMWATER TO RWT
-----eOF---	STORMWATER OVERFLOW
-----eSS---	SUBSOIL DRAIN
-----DISUSE---	DISUSE PIPE

LINETYPES - NEW

-----COLD---	COLD WATER
-----HOT---	HOT WATER
-----HWF---	HOT WATER FLOW
-----HWR---	HOT WATER RETURN
-----WARM---	WARM WATER
-----T---	TEMPERED WATER
-----HEAT---	HEAT TRACE
-----FIRE---	FIRE HYDRANT
-----SP---	FIRE SPRINKLER
-----GAS---	GAS
-----NP---	NON POTABLE
-----RW---	RAINWATER REUSE
-----SANIT---	SANITARY
-----VENT---	VENT PIPE OFFSET
-----TW---	TRADE WASTE
-----PD---	PUMP DISCHARGE
-----SW---	STORMWATER
-----DP---	STORMWATER TO RWT
-----BD---	BALCONY DRAIN TO STORMWATER
-----RC---	RECYCLED/RECLAIMED WATER
-----OF---	STORMWATER OVERFLOW
-----SS---	SUBSOIL DRAIN

SYMBOLS - OTHER

	PIPEWORK CAP
	EXPANSION LOOP
	PIPEWORK PENETRATION TEE
	PIPEWORK PENETRATION RISER
	PIPEWORK PENETRATION DROPPER
	PIPEWORK DROP DOWN
	FIXTURE UNITS
	LOADING UNITS
	MEGA JOULES
	LITRES/SECOND
	FLOW ARROW
	PIPEWORK RISES
	PIPEWORK DROPS
	PIPEWORK RISES & DROPS
	SURFACE LEVEL
	PIPEWORK REDUCER

SYMBOLS - WATER

	ISOLATION VALVE
	BALANCING VALVE
	CHECK VALVE
	REFLUX VALVE IN SHAFT WITH INSPECTION OPENING
	WATER VALVE IN PATH BOX
	CIRCULATING PUMP
	DUAL CHECK VALVES
	REDUCES PRESSURE ZONE DEVICE
	THERMOSTATIC MIXING VALVE
	TEMPERING VALVE
	THERMOSTATIC MIXING VALVE IN WALL BOX
	TEMPERING VALVE IN WALL BOX
	MAIN WATER METER
	PRIVATE WATER METER
	MICRON FILTER
	HOT WATER STORAGE UNIT

SYMBOLS - SANITARY

	AIR ADMITTANCE VALVE
	FLOOR WASTE
	BASKET FLOOR WASTE
	CHROME PLATED BRASS SCREWED CAP
	SEALED FLOOR WASTE
	OVERFLOW GULLY
	CLEAR OUT/INSPECTION OPENING
	SANITARY FIXTURE
	INSPECTION SHAFT
	INSPECTION SHAFT WITH BOUNDARY TRAP
	INDUCT PIPE MICA FLAP
	TUNDISH ON WALL
	TUNDISH IN WALL
	SEWER ACCESS CHAMBER
	SEWER MAINTENANCE SHAFT
	PLASTER TRAP
	SWIVEL EXPANSION JOINT
	PIPEWORK CAST IN BEAM
	BUNDED AREA

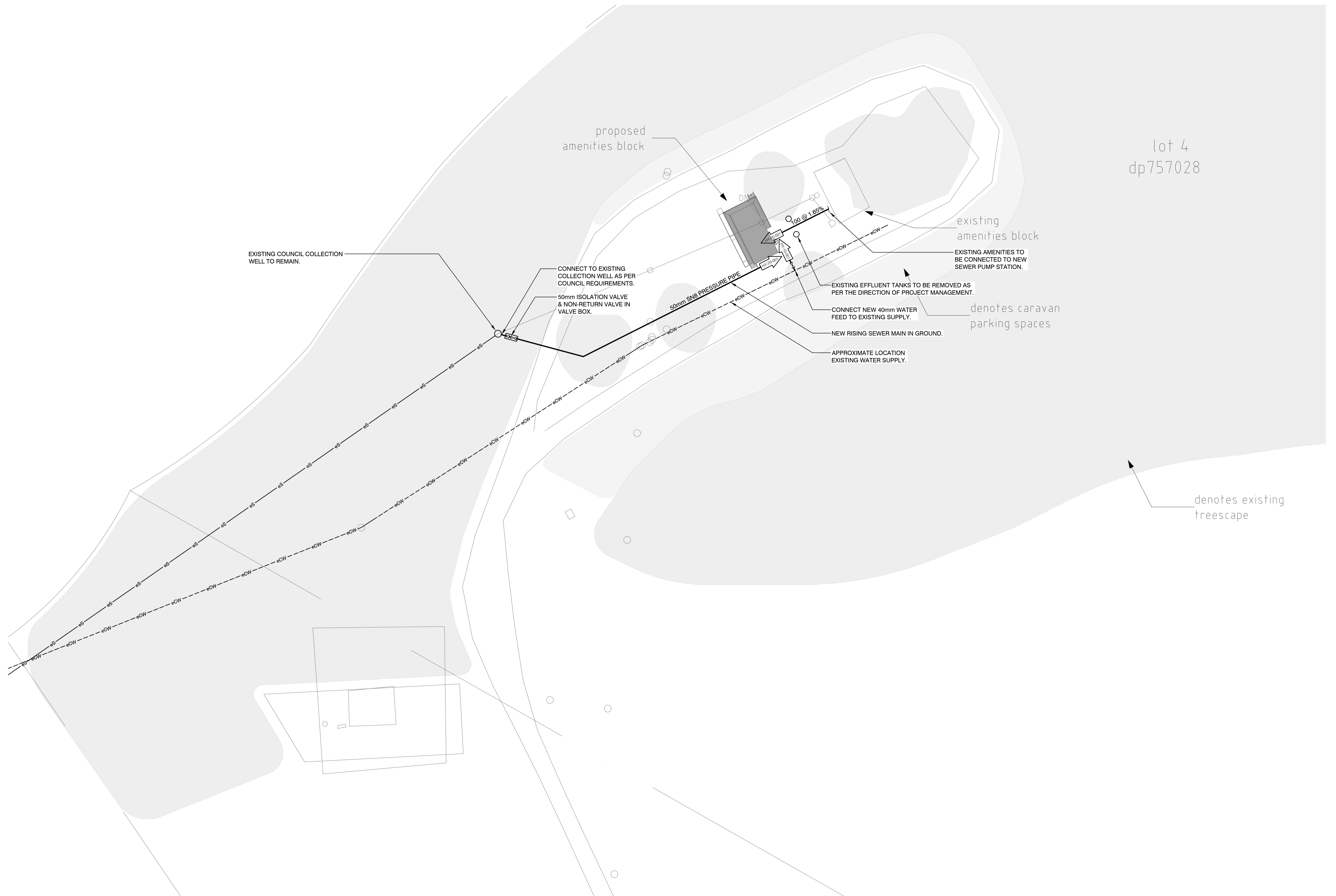
ABBREVIATIONS

AT	ART TROUGH.
ACU	AIR CONDITIONING UNIT.
AAV	AIR ADMITTANCE VALVE.
B	BATH.
BFW	BUCKET FLOOR WASTE.
BKS	BUCKET SINK.
BS	BAR SINK.
BID	BIDETTE.
BT	BOUNDARY TRAP.
BWU	BOILING WATER UNIT.
CD	CONDENSATE DRAIN.
CO	CLEAROUT.
CPC	CHROME PLATED BRASS SCREWED CLEAROUT.
CS	CLEANERS SINK.
DCV	DOUBLE CHECK VALVE (TESTABLE).
DE	DIESEL EXHAUST.
DF	DRINKING FOUNTAIN.
DN	DIAMETER NOMINAL.
DG	DISCONNECTOR GULLY.
DP	DOWNPIPE.
DPH	DOUBLE PILLAR HYDRANT.
DT	DRINKING TROUGH.
DUCV	DUAL CHECK VALVE.
DW	DISHWASHER.
e	EXISTING.
ED	ELEVATED DRAINAGE.
eSAC	EXISTING SEWER ACCESS CHAMBER.
eSWP	EXISTING STORMWATER PIT.
EW	EYE WASH.
FC	FUME CUPBOARD.
FH	FIRE HYDRANT.
FL	FLOOR LEVEL.
FS	FLUSHER SANITIZER.
FSL	FINISHED SURFACE LEVEL.
FU	FIXTURE UNITS.
FW	FLOOR WASTE.
GB	GAS BAYONET.
GCH	GAS CONVECTION HEATER.
GCT	GAS COOK TOP.
GD	GRATED DRAIN.
GW	GLASS WASHER.
Hb	HANDBASIN.
HT	HOSE TAP.
HWC	HUNTER WATER CORPORATION.
HWU	HOT WATER UNIT.
IL	INVERT LEVEL.
IM	ICE MACHINE.
IO	INSPECTION OPENING.
IS	INSPECTION SHAFT.
IPMF	INDUCT PIPE MICA FLAP.
KIP	KERB INLET PIT.
LPG	LIQUID PETROLEUM GAS.
LS	LABORATORY SINK.
NG	NATURAL GAS.
OG	OVERFLOW GULLY.
PA	PLASTER ARRESTOR.
PAT	PRACTICAL ACTIVITIES TROUGH.
PLD	PLANTER DRAIN.
RL	RELATIVE LEVEL.
RPZD	REDUCED PRESSURE ZONE DEVICE.
RWO	RAIN WATER OUTLET.
RV	REFLUX VALVE.
SAC	SEWER ACCESS CHAMBER.
Shr	SHOWER.
SH	SLOP HOPPER.
SPW	SEALED FLOOR WASTE.
SL	SURFACE LEVEL.
SMS	SEWER MAINTENANCE SHAFT.
Snk	KITCHEN SINK.
SPH	SINGLE PILLAR HYDRANT.
SPR	RAINWATER SPREADER.
SShr	SAFETY SHOWER.
SS	SOIL STACK.
ST	STERILIZER.
SVS	SPRINKLER VALVE SET.
T	TUBS.
TD	TUNDISH.
TMV	THERMOSTATIC MIXING VALVE.
TWV	TRADE WASTE VENT.
UR	URINAL.
Vb	VANITY BASIN.
VP	VENT PIPE.
Wc	WATER CLOSET.
WD	WINDOW DRENCHER.
WM	WASHING MACHINE.
WS	WASTE STACK.
WT	WASH TROUGH.

GENERAL NOTES

- IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN A 'DIAL BEFORE YOU DIG' TO ASCERTAIN THE FULL EXTENT OF EXISTING SERVICES SURROUNDING THE SUBJECT PROPERTY. PRIOR TO ANY EXCAVATION THE RELEVANT AUTHORITIES eg TELSTRA OPTUS, AGILITY etc. ARE TO BE NOTIFIED OF ALL WORKS.
- ALLOW TO PAY ALL FEES & CHARGES FOR ALL AUTHORITIES RELATING TO ALL WORKS DESIGNED & SPECIFIED.
- IT IS THE HYDRAULIC CONTRACTORS RESPONSIBILITY TO ENGAGE A SUITABLE QUALIFIED CONTRACTOR TO CARRY OUT A THOROUGH GROUND SEARCH FOR EXISTING SERVICES AROUND AND IN THE PROPOSED BUILDING FOOTPRINT. NOTIFY THE SUPERINTENDENT IMMEDIATELY IF ADDITIONAL SERVICES TO THAT DOCUMENTED ARE LOCATED. THIS IS TO BE CARRIED OUT PRIOR TO ANY WORKS BEING COMMENCED.
- ALL HOT, WARM & COLD WATER ISOLATION VALVES SHOWN ARE TO BE LOCATED IN THE CEILING VOID COMPLETE WITH ACCESS PANEL OTHERWISE 300mm DOWN FROM CEILING IN ROOM USING ENWARE VP356 ISOLATION VALVE WITH CHROME COVERPLATE.
- ALLOW TO PREPARE & SUPPLY DETAILED 'AS INSTALLED' DRAWINGS & MAINTENANCE MANUALS FOR ALL ASSOCIATED WORKS AS DETAILED IN THE SPECIFICATION.
- ALL HYDRAULIC SERVICES PIPEWORK, EQUIPMENT & VALVES SHOULD BE LABELED TO ENABLE THEM TO BE CLEARLY IDENTIFIED. LOCATIONS OF LABELS TO BE APPROVED BY ARCHITECT.
- ALL DISRUPTIONS TO EXISTING SERVICES FOR NEW CONNECTIONS ARE TO BE COORDINATED ON SITE WITH THE PROJECT SUPERINTENDENT.
- ALL LEVELS & LOCATIONS SHOWN ON DRAWINGS FOR EXISTING PITS, SERVICES, SEWER ACCESS CHAMBERS & KERB INLET PITS ARE TO BE CONFIRMED ON SITE PRIOR TO ANY WORKS BEING CARRIED OUT.
- ALL SERVICES INSTALLED ADJACENT THE BUILDING ARE TO BE LOCATED OUTSIDE THE ZONE OF INFLUENCE AS PER AS3500.
- ALL LOCATIONS OF WATER POINTS FOR INTERNAL FITOUT SHOWN ON THESE PLANS ARE FOR CLARITY ONLY. FINAL LOCATIONS ARE TO BE DETERMINED USING ARCHITECTURAL 1:50 INTERNAL LAYOUTS & ELEVATIONS.
- EXCAVATE, LOCATE & CONNECT TO EXISTING SEWER SERVING THE SITE.

lot 4
dp757028

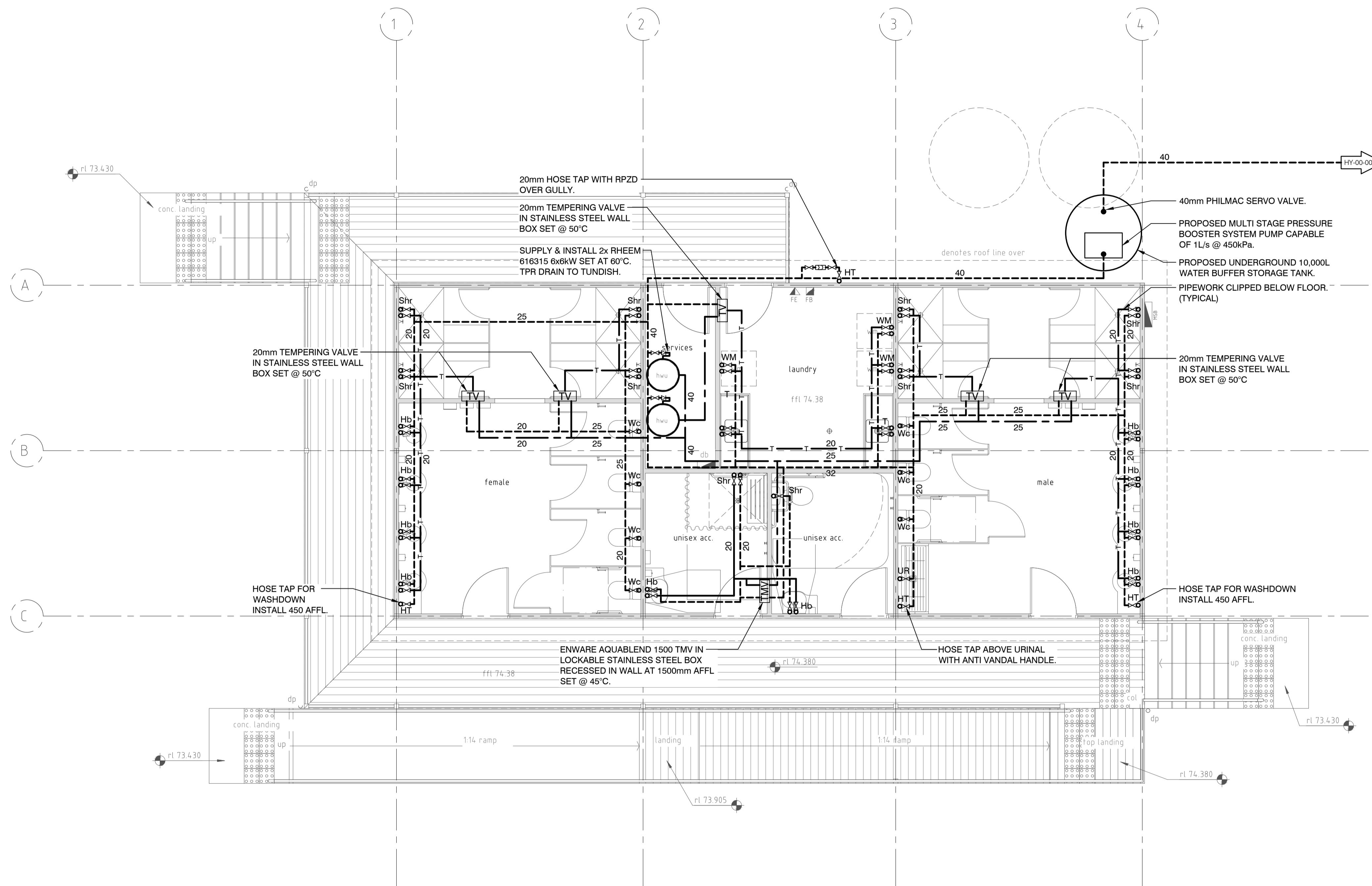


Rev	Date	Reason for Issue
A	14.10.22	FOR CONSTRUCTION
3	29.09.22	100% ISSUE FOR REVIEW
2	29.07.22	90% ISSUE FOR REVIEW
1	07.07.22	FOR REVIEW

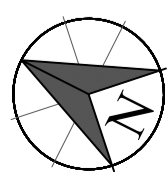
Drawn	Design	Verify
L.R.	I.B.	J.A.
L.R.	I.B.	
L.R.	I.B.	

Project
**VICTORY PARK CARAVAN PARK
TOILET AMENITIES BLOCK
WILCANNIA**

Drawing Title
SITE SERVICES



MECHANICAL — ELECTRICAL — HYDRAULIC — FIRE — ENERGY — NABERS — STORMWATER — SECTION J — BEEC

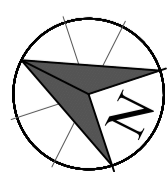
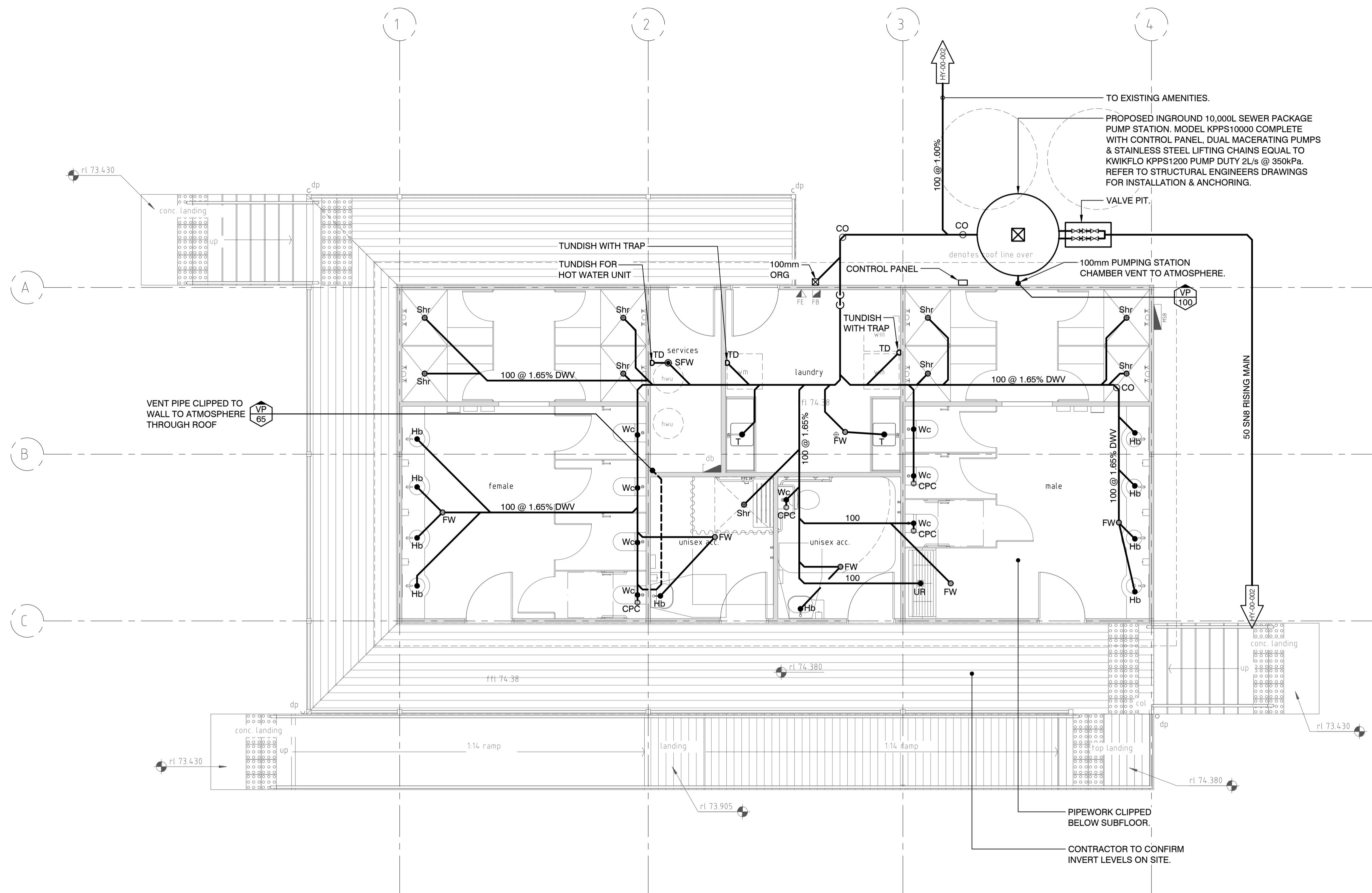


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Drawn	Design	Verify
L.R.	I.B.	J.A.
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L.R.	I.B.	

Project
VICTORY PARK CARAVAN PARK
 TOILET AMENITIES BLOCK
 WILCANNIA

Drawing Title
GROUND FLOOR
WATER LAYOUT



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1	07.07.22	FOR REVIEW
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Drawn	Design	Verify
L.R.	I.B.	J.A.
L.R.	I.B.	
L.R.	I.B.	
L.R.	I.B.	

Project
**VICTORY PARK CARAVAN PARK
 TOILET AMENITIES BLOCK
 WILCANNIA**

Discipline
**GROUND FLOOR
 SANITARY DRAINAGE LAYOUT**

Discipline
HYDRAULIC SERVICES

Job No. 13203
 Drawing No. **HY-20-001**
 Rev **A**

