

PROJECT:
**42 PELICAN STREET,
PEREGIAN BEACH**

NOOSA SHIRE COUNCIL

LOCATION:
42 PELICAN ST, PEREGIAN BEACH, QLD 4573



MAP LEGEND:

 SUBJECT AREA/BUILDING

SITE INFORMATION:

STREET ADDRESS: 42, PELICAN STREET, PERGIAN BEACH, 4573

RPS: LOT 174 ON P6312

DRAWING SHEET INDEX	
00-001	COVER SHEET
01-001	LEGEND
02-001	SPECIFICATION SHEET 1
02-001	SPECIFICATION SHEET 2
03-001	DETAILS SHEET 1
03-001	DETAILS SHEET 2
04-001	GROUND LEVEL - WATER SERVICES
04-002	LEVEL 1 - WATER SERVICES
05-001	GROUND LEVEL - DRAINAGE SERVICES
05-002	LEVEL 1 - DRAINAGE SERVICES
05-003	ROOF - DRAINAGE SERVICES

floth

BRISBANE
LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHDDDESCRIPTION

DRAWING TITLE	DRAWN N.M
COVER SHEET	
	CHECKED N.M
	ENGINEER C.T
SERVICE	DRAWING SCALE N.T.S @ A3
HYDRAULIC SERVICES	



TENDER ISSUE		
NOT FOR CONSTRUCTION		
PROJECT 42 PELICAN STREET, PEREGIAN BEACH		
PROJECT No	DRAWING No	REVISION
22253	H-00-001	A

1.1 PRELIMINARY REQUIREMENTS

1.1.1 CONTRACT

THE CONTRACTOR SHALL TENDER TO PROVIDE THE HYDRAULIC SERVICES IN ACCORDANCE WITH THE DESIGN INTENT INDICATED ON THESE DRAWINGS. THESE DRAWINGS HAVE BEEN PRODUCED TO SHOW THE MINIMUM REQUIREMENTS THAT SHALL BE COVERED BY THE CONTRACTOR’S TENDER SUBMISSION. THE CONTRACTOR SHALL SATISFY THEMSELVES WITH RESULTS FROM ON SITE SOIL TESTING AND MAKE THE NECESSARY PROVISIONS FOR ALL IN GROUND DRAINAGE SYSTEMS TO OFFSET REACTIVE SOILS BASED ON SITE CLASSIFICATIONS OF E, H OR P SITES.

1.2 SCOPE OF WORK

THE SCOPE OF WORK COVERED BY THESE DOCUMENTS INCLUDES THE MANUFACTURE, SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND SUBSEQUENT TRAINING TO USE THE INSTALLATION AND MAINTENANCE FOR THE STIPULATED PERIOD OF THE WORK SPECIFIED HEREIN AND SHOWN ON THE ACCOMPANYING DRAWINGS. PROVIDE ALL MANUFACTURED ITEMS, MATERIALS, LABOUR, CARTAGE, TOOLS, PLANT, APPLIANCES AND FIXINGS NECESSARY FOR THE PROPER EXECUTION OF THE WORKS, TOGETHER WITH ALL MINOR AND INCIDENTAL WORKS.

THE HYDRAULIC SERVICES INSTALLATION EXTENT OF WORK INCLUDES BUT IS NOT LIMITED TO:

- SHOP DRAWINGS
- WATER SERVICES RETICULATION
- SANITARY PLUMBING AND DRAINAGE
- STORMWATER DRAINAGE
- COORDINATION OF WORK WITH OTHER TRADES AND PROVIDED SHOP DRAWINGS
- PAINTING, COLOUR CODING AND LABELING INCLUDING DIRECTIONAL SIGNAGE
- COMPREHENSIVE DECOMMISSIONING AND QUALITY MONITORING
- OPERATIONAL MAINTENANCE MANUALS AND AS-BUILT DRAWINGS
- DEFECTS LIABILITY SERVICE
- SUBMITTAL OF ALL DOCUMENTS AND CERTIFICATES TO STATUTORY AUTHORITIES
- PREPARATION OF THE PROJECT “MAINTENANCE SCHEDULE”
- PROVIDE PRODUCT AND WORKMANSHIP WARRANTIES

1.2.1 WATER SERVICES

- RETICULATING COLD WATER TO ALL NEW TAPWARE, FITTINGS & ITEMS OF EQUIPMENT
- PROVIDING CAPPED ENDS WITH ISOLATION FOR FUTURE EXTENSION
- RETICULATING HOT AND WARM WATER TO ALL NEW TAPWARE, FITTINGS & ITEMS OF EQUIPMENT
- PROVIDE HOT WATER UNITS AS SHOWN ON PROJECT DRAWINGS
- PROVIDE THERMAL INSULATION FOR HOT & WARM WATER PIPEWORK
- PROVIDE THERMOSTATIC MIXING VALVE(S), COMPLETE WITH ACCESS PANEL TO TEMPER HOT WATER SUPPLY TO ALL BASINS
- PROVIDE PRESSURE REDUCTION VALVE WHERE PRESSURE EXCEED 500KPA
- SUPPLY AND INSTALLATION ALL TAPWARE AND FIXTURES AS PER THE PROJECT DRAWINGS AND ARCHITECTURAL

1.2.2 SANITARY SERVICES

- PROVIDE SUPPLY AND INSTALLATION OF COMPLETE SANITARY DRAINAGE AND VENTS AS REQUIRED TO SERVE NEW FIXTURES AND FITTINGS AS SHOWN ON THE PROJECT DRAWINGS.
- PROVIDE SITE SEWER RETICULATION CONNECTING TO THE SITE SEWER CONNECTION AS SHOWN ON THE PROJECT DRAWINGS. SITE SEWER CONNECTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTROLLING WATER AUTHORITY.
- SUPPLY AND INSTALLATION ALL TAPWARE AND FIXTURES AS PER THE PROJECT DRAWINGS AND ARCHITECTURAL DOCUMENTATION.
- PROVIDE ALL TUNDISH POINTS NECESSARY FOR MECHANICAL AND HYDRAULIC SERVICES.

1.2.3 STORMWATER DRAINAGE

- PROVIDE CONVENTIONAL GRAVITY ABOVE GROUND STORMWATER AND DOWNPIPE SYSTEM COLLECTING FROM ALL EAVES GUTTER AS SHOWN ON THE PROJECT DRAWINGS. CONVENTIONAL DOWNPIPES SHALL DISCHARGE TO THE BELOW GROUND CIVIL DRAINAGE NETWORK.

1.3 COORDINATION

IT SHOULD BE NOTED THAT THE LAYOUT, SIZING, ARRANGEMENT AND ROUTING OF SERVICES HAVE BEEN GENERALLY COORDINATED AND MUST NOT BE VARIED WITHOUT CONSULTATION.

NOT WITHSTANDING THIS REQUIREMENT, THE HYDRAULIC SUB-CONTRACTOR SHALL, IN CARRYING OUT HIS DESIGN AND PREPARING SHOP DRAWINGS, MAKE SUCH VARIATION AS MAY BE NECESSARY AND DICTATED BY SITE CONDITIONS AND THE MOST UP TO DATE ARCHITECTURAL/STRUCTURAL AND OTHER SERVICES LAYOUTS TO OBTAIN CLEARANCES FROM OBSTRUCTIONS AND OTHER SERVICES.

THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE ALL CONDENSATE LINES ARE DISCHARGING OVER TUNDISHES IN ACCORDANCE WITH AS3500.2 WITH THE REQUIRED AIR GAPS.

1.4 COMPLIANCE TO REGULATIONS AND STANDARDS

1.4.1 REGULATIONS

THE WHOLE OF THE WORKS SHALL COMPLY WITH ALL THE LATEST RELEVANT REGULATIONS AND ALL LOCAL AUTHORITY REQUIREMENTS INCLUDING BUT NOT LIMITED TO:

- LOCAL SUPPLY AUTHORITY
- LOCAL SHIRE COUNCIL.
- BUILDING CODE OF AUSTRALIA
- PLUMBING REGULATION 2018
- ANY OTHER AUTHORITY HAVING JURISDICTION OVER ALL OR PART OF THE INSTALLATIONS TO ENSURE THAT THE EQUIPMENT AND INSTALLATION, WHEN MANUFACTURED AND INSTALLED, SHALL COMPLY WITH THE RULES AND REGULATIONS

1.4.2 STANDARDS

THE WHOLE OF THE WORKS SHALL COMPLY WITH ALL THE LATEST RELEVANT STANDARDS INCLUDING BUT NOT LIMITED TO:

- PLUMBING AND DRAINAGE ACT AND STANDARD REGULATIONS
- PLUMBING CODE OF AUSTRALIA
- AUSTRALIAN STANDARDS INCLUDING AS3500 AND AS2419

WHERE STANDARDS AND REGULATIONS ARE MENTIONED IN THIS SPECIFICATION THEY SHALL INCLUDE ALL AMENDMENTS AND INTERPRETATIONS. IN CASES WHERE THE STANDARDS ASSOCIATION OF AUSTRALIA HAS NOT YET ISSUED SPECIFICATIONS OR CODES, THE RELEVANT PUBLICATIONS OF THE BRITISH STANDARDS INSTITUTION WILL BE HELD TO APPLY. WHERE A DISPARITY IS FOUND TO EXIST BETWEEN THESE DOCUMENTS THE MORE STRINGENT REQUIREMENT SHALL APPLY UNLESS CONFIRMED OTHERWISE BY THE ENGINEER.

1.5 CERTIFICATION

THE CONTRACTOR SHALL REVIEW THE DESIGN SHOWN ON THE TENDER DRAWINGS AND NOTIFY THE PROJECT MANAGER OF ANY NON-COMPLIANCES WITH THE STANDARDS DURING THE TENDER PERIOD OR ALLOW TO PROVIDE THE ITEMS NECESSARY TO COMPLY WITH THE STANDARDS. THE CONTRACTOR SHALL PROVIDE AT THE END OF THE PROJECT BEFORE PRACTICAL COMPLETION IS PROVIDED A FORM 16 FOR THE INSTALLATION SIGNED BY A SUITABLY COMPETENT PERSON ACCEPTABLE TO THE BUILDING CERTIFIER.

1.6 DRAWINGS

1.6.1 AS INSTALLED DRAWINGS

AMEND THE DESIGN DRAWINGS AND WORKSHOP DRAWINGS TO INDICATE AN ACCURATE REPRESENTATION OF THE FINAL INSTALLATION. PROVIDE THREE COPIES OF THE AS INSTALLED DRAWINGS TO THE PROJECT MANAGER AT PRACTICAL COMPLETION.

1.6.2 DRAWING STANDARDS

DRAWINGS SHALL BE PREPARED BY A COMPETENT DRAFTSPERSON USING AUTOCAD OR SIMILAR SOFTWARE PACKAGE WITH SYMBOLS THAT COMPLY WITH AS 1100 TO AS 1104 STANDARDS.

1.7 OPERATION & MAINTENANCE MANUALS

PRIOR TO PRACTICAL COMPLETION OF THE WORKS PROVIDE THREE SOFT AND HARD COPIES OF DRAWINGS AND BOUND MANUALS WHICH CONTAIN THE FOLLOWING INFORMATION:

- INDEX
- OUTLINE DESCRIPTION OF SYSTEMS AND DESIGN REFERENCE. STATE YEAR & CODES OF PRACTICES USED FOR INSTALLATION
- COMMISSIONING INFORMATION AND TEST DATA
- MANUFACTURER’S INSTALLATION AND SERVICE MANUALS
- MANUFACTURER’S SPARE PARTS LIST INCLUDING RECOMMENDED PRICES AND CONTACTS FOR SUPPLY
- MANUFACTURER’S SPARE ORDERING INSTRUCTIONS
- MANUFACTURER’S WARRANTIES/GUARANTEES
- OPERATIONAL ROUTINES
- A FULLY DETAILED PREVENTATIVE MAINTENANCE AND PROCEDURE SCHEDULE INCLUDING RECOMMENDED MAINTENANCE PROCEDURES AND EQUIPMENT MAINTENANCE INTERVALS
- MAINTENANCE DUTIES IN GENERAL, DAILY AND OTHER PERIODIC MAINTENANCE AND LUBRICATION CHART
- MONTHLY, BI-MONTHLY, SIX-MONTHLY AND ANNUAL TESTING SCHEDULE OF ESSENTIAL SERVICES
- DETAILS OF EMERGENCY MEASURES INCLUDING A FAULT FINDING GUIDE TO ASSIST IN THE RECTIFICATION OF MINOR OPERATION BREAKDOWNS
- BUILDING USER’S GUIDES

- A SCHEDULE OF SUPPLIERS WITH POSTAL ADDRESSES AND TELEPHONE NUMBERS
- NAME OF FIRM, POSTAL ADDRESS AND TELEPHONE NUMBER OF SPECIALIST SERVICE CONTRACTORS
- DRAWING LIST
- EQUIPMENT SCHEDULE
- ONE COPY OF ALL ‘AS INSTALLED’ DIAGRAMS, SCHEDULES AND ARRANGEMENTS
- TEST CERTIFICATES FOR EQUIPMENT AND ASSOCIATED SERVICE RETICULATION INSTALLED
- ANY OTHER INFORMATION AND INSTRUCTIONS NECESSARY FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT

1.8 ELECTRICAL WORK

ALL EQUIPMENT SUPPLIED AND WORK CARRIED OUT UNDER THE CONTRACT SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST APPROPRIATE AUSTRALIAN CODE OF PRACTICE.

THE ELECTRICAL INSTALLATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL SUPPLY AUTHORITY.

ALL ITEMS OF EQUIPMENT SHALL BE OF FIRST GRADE WITH REGARD TO DESIGN AND MANUFACTURE AND SHALL BE COMPLETELY SATISFACTORY FOR OPERATION, CONTROL, SAFETY AND MAINTENANCE UNDER ALL CONDITIONS OF SERVICE. UNIFORMITY OF TYPE AND MANUFACTURE OF SWITCH GEAR, CONTROL GEAR, FITTINGS AND ACCESSORIES SHALL BE PRESERVED THROUGHOUT THE WHOLE OF THE INSTALLATION, REFER TO THE ELECTRICAL AND MECHANICAL SPECIFICATION FOR THE TYPE OF FITTINGS, WIRING, CONDUITS, CONTROL GEAR, ETC.

1.9 COMMISSIONING AND TESTING

THE CONTRACTOR SHALL PERFORM ALL COMMISSIONING AND TESTING REQUIRED BY THE REGULATORY AUTHORITIES, CLIENT BRIEF AND RELEVANT STANDARDS. THE CONTRACTOR SHALL PROVIDE COPIES OF THE TEST RESULTS TO THE PROJECT MANAGER.

1.10 AUTHORITY FEES

THE CONTRACTOR SHALL ALLOW FOR ALL FEES ASSOCIATED WITH INSPECTION AND APPROVAL OF THE HYDRAULIC INSTALLATION BY THE APPROPRIATE REGULATORY AUTHORITY.

1.11 PROTECTION OF PLANT AND MATERIALS

ALL MATERIALS, GOODS, EQUIPMENT, ETC FORMING PART OF THE WORKS MUST BE COMPLETE, INTACT AND IN GOOD ORDER AT PRACTICAL COMPLETION. THE CONTRACTOR SHALL SAFEGUARD SUCH MATERIALS, GOODS AND EQUIPMENT UNTIL THEN.

1.12 MAINTENANCE AND SERVICE

THE CONTRACTOR SHALL ALLOW IN THEIR TENDER FOR A 52 WEEK DEFECTS LIABILITY PERIOD COMMENCING FROM THE DATE OF PRACTICAL COMPLETION. DURING THIS PERIOD THE CONTRACTOR SHALL CARRY OUT ALL OPERATIONAL MAINTENANCE RECOMMENDED BY THE EQUIPMENT MANUFACTURERS AND RELEVANT STANDARDS.



BRISBANE

LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHDD	DESCRIPTION
A	28.10.22	P.S C.T	TENDER ISSUE

DRAWING
TITLE
SPECIFICATION SHEET 1

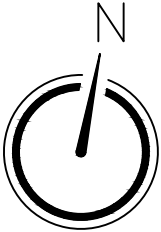
SERVICE
HYDRAULIC SERVICES

DRAWN
N.M

CHECKED
N.M

ENGINEER
C.T

DRAWING SCALE
N.T.S @ A3



TENDER ISSUE

NOT FOR CONSTRUCTION

PROJECT
42 PELICAN STREET,
PEREGIAN BEACH

PROJECT No 22253
DRAWING No H-02-001
REVISION A

2. TECHNICAL REQUIREMENTS

2.1 MAKING GOOD

THE SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL MAKE GOOD ANY DAMAGE HE MAY CAUSE TO THE BUILDING AND SURFACES GENERALLY AND ANY OTHER WORKS THAT MAY BE DISTRIBUTED OR INJURED BY CARTAGE, WORK GENERALLY OR OTHER OPERATIONS. THE REINSTATEMENT SHALL BE AT LEAST AS GOOD A STATE OF REPAIR AS BEFORE COMMENCEMENT.

2.2 PIPELAYING

2.2.1 GENERAL

LAY PIPELINES TO UNIFORM GRADIENTS FALLING TO THE OUTLETS, STRAIGHT BETWEEN REQUIRED CHANGES OF DIRECTION, PROPERLY SUPPORTED, WITH WATERTIGHT JOINTS ALIGNED FLUSH AT INTERNAL SURFACES AND WITH SPIGOT ENDS POINTED IN THE DIRECTION OF FLOW. PROVIDE THE NECESSARY FITTINGS AND ACCESSORIES, INCLUDING JUNCTIONS, BRANCHES, INSPECTION AND CLEANING OPENINGS, EXPANSION JOINTS, AND THE LIKE.

2.2.2 INSPECTION OPENINGS

PROVIDE INSPECTION OPENINGS AS REQUIRED BY THE REGULATORY AUTHORITY AND IN ANY CASE SO THAT EACH STRAIGHT LENGTH OF SEWER LINE CAN BE INSPECTED IN AT LEAST ONE DIRECTION. ALL NEW SEWER BRANCH CONNECTIONS SHALL HAVE AN INSPECTION OPENING FOR TESTING PURPOSES IMMEDIATELY AFTER THE NEW BRANCH JUNCTION SEAL THE OPENINGS WITH PURPOSE-MADE COVERS FIXED BY A JOINTING METHOD APPROPRIATE TO THE PIPEWORK. RAISE THE OPENINGS TO SURFACE LEVEL.

2.2.3 CLEANING OUT

CLEAN OUT PIPING OF LOOSE SCALE AND DIRT BEFORE INSTALLATION, AND AGAIN AFTER INSTALLATION AND SEALING OF JOINTS. FLUSH OUT THE PIPELINE WITH CLEAN WATER, LEAVE IT CLEAN AND FREE FROM DEBRIS ON COMPLETION.

2.2.4 PIPELINE IDENTIFICATION

LAY A DETECTABLE STRAP OR PLASTIC TAPE IN THE TRENCH AFTER PIPELAYING, TESTING AND INITIAL BACKFILLING FOR ALL SERVICES.

2.2.5 MARKER PLATES

PROVIDE A MARKER PLATE AT GROUND LEVEL AT EACH CHANGE OF DIRECTION OF THE UNDERGROUND PIPELINE, ENGRAVED TO SHOW THE DIRECTION OF THE LINE AND THE NAME OF THE SERVICE. INSET THE MARKER IN A 150 x 150 x 150mm CONCRETE BLOCK, WITH TOP SET FLUSH WITH THE FINISHED GROUND OR SURFACE LEVEL.

2.2.6 GRADIENTS

LAY DRAINS TO GRADIENTS COMPLYING WITH THE RELEVANT AUTHORITY'S REQUIREMENTS, TO THE LEVELS, IF ANY SHOWN ON THE DRAWINGS, AND IN ANY CASE NOT LESS THAN THE REQUIREMENTS OF AS3500

2.2.7 SLEEVES

WHERE PIPES PASS THROUGH WALLS, FLOORS, BEAMS OR COLUMNS, PROVIDE PURPOSE-MADE METAL OR PLASTIC SLEEVES WITH 12MM CLEARANCE ALL ROUND PIPES, PACKED WITH GUNNED SILICONE RUBBER JOINT SEALER (SELF-EXTINGUISHING GRADE).

2.2.8 WALL AND FLOOR PENETRATIONS

PIPES PASSING THROUGH WALLS BELOW GROUND LEVEL SHALL BE PROVIDED WITH A WATER STOP PUDDLE FLANGE. APPROVED FIRE COLLARS SHALL BE PROVIDED WHEREVER A FIRE RATED WALL, CEILING OR FLOOR IS PENETRATED. THE RATING OF THE FIRE COLLAR IS TO BE THE SAME FIRE RATING OF THE WALL, CEILING OR FLOOR PENETRATED, TO COMPLY TO AS 1530 PART 4.

2.2.9 CAPPING OFF

DURING CONSTRUCTION, TEMPORARILY SEAL OPEN ENDS OF PIPES TO PREVENT THE ENTRY OF FOREIGN MATTER INTO PIPE SYSTEMS. PROVIDE PURPOSE-MADE COVERS OF PRESSED STEEL OR RIGID PLASTIC. DO NOT USE RAGS, PAPER OR WOOD PLUGS.

2.2.10 CLEAR OUTS

INSTALL CLEAROUTS IN POSITIONS AS INDICATED ON THE DRAWINGS, AND AS REQUIRED BY LOCAL AUTHORITIES. ALLOW TO EXTEND FROM DRAIN LINES TO FINISHED SURFACE LEVEL USING A 60% JUNCTION AND 30% BEND. PROVIDE 100MM DIAMETER, BRASS CLEAROUTS AT FINISHED FLOOR LEVEL.

2.2.11 SUPPORTS

- PROVIDE SUPPORTS INCLUDING HANGERS, SADDLES, BOLTED CLIPS AND THE LIKE, SUFFICIENT TO SECURE THE PIPEWORK TO ADJACENT SURFACES, TO RESTRAIN THE INTERNAL FORCES OF PRESSURE PIPING AND TO SUPPORT IT AT JOINTS, AT CHANGES OF DIRECTION AND AT INTERVALS SUITABLE TO THE SIZE AND TYPE OF PIPE AND AS NECESSARY TO PREVENT SAGGING OF PIPEWORK. MAKE PROVISION FOR ADJUSTMENT OF GRADIENT AS REQUIRED.
- THE SAME MATERIAL AS THE PIPE OR GALVANISED OR NON-FERROUS METALS, WITH BONDED PVC OR FIBREGLOSS WOVEN TAPE SLEEVES TO SEPARATE DISSIMILAR METALS. PROVIDE FIXINGS OR COMPATIBLE MATERIAL.
- PROVIDE SUPPORTS FORMED TO FIT AROUND THE INSULATED PIPES.
- PIPES ON NOMINAL SIZE 25MM AND OVER: IF THE PIPE IS METAL SHEATHED, THE SHEATHING SHALL SERVE AS PROTECTION AT THE SUPPORTS. IF THE PIPE IS NOT METAL SHEATHED, REMOVE THE INSULATION IN WAY OF THE SUPPORTS AND REPLACE WITH WOOD SPACER BLOCKS FORMED TO FIT THE PIPE, AND WITH OUTSIDE DIAMETER EQUAL TO THE INSULATION. BUTT THE INSULATION UP TO THE BLOCKS AND SEAL WITH SILICONE COMPOUND. CLAD THE BLOCK AND INSULATION WITH .6MM GALVANISED IRON SHEET EXTENDING 100MM EACH SIDE OF THE SUPPORT.
- PIPES OF NOMINAL SIZE LESS THAN 25MM: MAY BE SUPPORTED WITHOUT WOODEN BLOCKS.
- UPVC PIPE SHALL BE SUPPORTED TO AS 2032, CLAUSE 6.8, AT MAXIMUM SPACINGS TO TABLE 6.3.
- FIXINGS SHALL BE 'DYNABOLTS', OR EQUAL APPROVED EXPANSION TYPE PLUGS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. EXTERNAL FIXING SHALL BE STAINLESS STEEL EXPANSION FASTENINGS.
- PIPE HANGERS SHALL BE INSTALLED AT EVERY CHANGE OF DIRECTION. NO PIPE HANGER SHALL BE FIXED TO A PIPE CLAMP

ALREADY SUPPORTED FROM OTHER PIPEWORK.

- COPPER PIPES SHALL BE SEPARATED FROM SUPPORTS BY 1MM (1) THICK PVC STRIP OR SIMILAR APPROVED MATERIALS.
- EXPLOSIVE POWER TOOLS SHALL NOT BE USED.
- REMOVE CEMENT DROPPINGS, DIRT AND SUPERFLUOUS MATERIAL FROM PIPE SUPPORTS.
- PAINT PIPE SUPPORTS AND CUT ENDS WITH ONE COAT OF GALVANISING PAINT, TO THE APPROVAL OF THE BUILDER.
- PIPES SHALL BE FIXED AT THE FOLLOWING MAXIMUM INTERVALS, UNLESS SPECIFIED OTHERWISE:
 - COPPER AND BRASS - 1800MM
 - FLEXIBLE PIPES - 900MM HORIZONTAL, 1800MM VERTICAL
- SOIL, WASTE AND VENT PIPES SHALL BE REGARDED AS BEING FIXED AT ALL SUPPORTS WHERE NO PROVISION HAS BEEN MADE FOR AXIAL AND/OR LATERAL MOVEMENT. PROVISION FOR MOVEMENT SHALL BE ACHIEVED BY THE PROVISION AT THE SUPPORT OF AN ANNULAR SPACE AROUND THE PIPE OF NOT LESS THAN 8MM CLEAR.
- THE FIRE-RESISTING PERFORMANCE OF THE BUILDING ELEMENT IS NOT TO BE IMPAIRED BY THE INSTALLATION OF HYDRAULIC SERVICES. BCA REQUIREMENTS C3.14 & SPEC. C3.15.
- PIPES SHALL BE SUPPORTED AGAINST SAGGING OR DISTORTION AND MUST BE HELD TO LINE AND GRADE BY MEANS OF APPROVED CLIPS, SADDLES OR OTHER FIXINGS.
- ENSURE THAT BRANCH PIPES ARE MAXIMUM LENGTHS FROM MAIN PIPE CIRCUITS BEFORE BEING RESTRAINED BY ENTERING BUILT IN POSITIONS, SUCH AS PASSING THROUGH WALLS OR CONCRETE FLOORS.

2.2.12 COVER PLATES REQUIREMENT

WHERE COLD WATER LINES EMERGE FROM WALL, FLOOR OR CEILING SURFACES, PROVIDE COVER PLATES OR NON-FERROUS METAL, FINISHED TO MATCH THE PIPE, OR OF STAINLESS STEEL AS FOLLOWED SIZES:

• PIPE DIAMETER:	COVER PLATE DIAMETER (NOMINAL):
• UP TO 20mm	65mm
• UP TO 50mm	100mm
• LARGER THAN 50mm	50mm LARGER THAN PIPE

2.2.13 COPPER PIPE AND FITTINGS

- COPPER TUBES SHALL BE SOLID DRAWN IN ACCORDANCE WITH AS 1432 TYPE A AND B. FITTINGS FOR COPPER AND BRASS TUBE SHALL:
- CONFORM TO AUSTRALIAN STANDARD AS 3688 - WATER SUPPLY - COPPER AND COPPER ALLOY COMPRESSION AND CAPILLARY FITTINGS AND THREADED END CONNECTORS
 - BE A MINIMUM 60/40 GUNMETAL OR BRASS
 - BE APPROVED AND STAMPED BY LOCAL AUTHORITY
 - BE DEZINCIFIED (D.R.) BRASS OR COPPER SUITABLE FOR JOINTING BY SILVER SOLDER. MINIMUM WALL THICKNESS SHALL BE NOT LESS THAN THE TUBE THICKNESS IT SERVES. BENDS, JUNCTIONS & FITTINGS FOR SANITARY PLUMBING SYSTEMS SHALL BE TYPE B
 - WATER SERVICE SIZES ARE BASED ON THE COPPER TUBE SIZES. WHERE PLASTIC PIPES IS USED, SIZES SHALL BE INCREASED ONE SIZE UP IN ACCORDANCE WITH AS 3500.1 EQUIVALENT PIPE SIZING GUIDE
 - AS AN ALTERNATIVE TO SILVER SOLDER JOINTING, PRESS FIT FITTINGS MAY BE USED. CONNECTION WITH PRESS-FIT FITTING

MADE OF COPPER OR GUNMETAL. INSPECTION OF UN-PRESSED

FITTINGS SHALL UTILISE A POSITIVE LEAK PATH FOR THE WHOLE RANGE 2.2KPA TO 300KPA WHEN A DRY PRESSURE TEST IS PERFORMED AND 100KPA TO 650KPA WITH A WET PRESSURE TEST. THIS WARRANTED SAFETY FUNCTION IS FACILITATED BY A CHANNEL IN THE METALLIC BODY OF THE FITTING. AFTER PRESSING, THE CONNECTION SHALL BE PERMANENT AND INSEPARABLE WITH THE SAFETY FUNCTION EFFECTIVELY REMOVED DURING THE PRESSING PROCESS. THE SEAL SHALL BE MADE OF EPDM, WITH PERFORMANCE CHARACTERISTICS ALLOWING USE IN SOLAR APPLICATIONS. THE FITTING BODY SHALL HAVE A CYLINDRICAL PIPE GUIDE IN FRONT OF THE SEAL. FITTINGS SHALL CARRY WATERMARK APPROVAL.

2.2.14 UPVC PIPES AND FITTINGS

PVC PIPES AND FITTINGS FOR UNDERGROUND DRAINAGE SHALL BE 'UNPLASTICATED POLY VINYL CHLORIDE' IN ACCORDANCE WITH AS 1273 STORMWATER, AS 1260 DRAINAGE, WASTE AND VENT. SOLVENT WELDED JOINTED FOR 100MM AND 150MM DIAMETER. INSTALL IN ACCORDANCE WITH AS 2032.

MARKINGS

ALL PIPES AND FITTINGS SHALL BEAR THE APPROVED STAMP OF THE LOCAL AUTHORITY AND ALL CARE SHALL BE TAKEN TO ENSURE THAT THE STAMP IS NOT ERASED DURING INSTALLATION. PIPES AND FITTINGS NOT BEARING THE APPROVED STAMP WILL NOT BE ACCEPTED.

EXPANSIONS

EXPANSION JOINTS FOR SEWER SHALL BE USED ON LONG STRAIGHT RUNS BETWEEN FIXED POINTS AT 12 METRE CENTRE AND SHALL BE IN ACCORDANCE WITH AS 2032 AND THE LOCAL AUTHORITY REQUIREMENTS. WHERE A RING SEAL ADAPTOR IS FITTED TO THE SOCKET OF THE FITTINGS, CARE MUST BE TAKEN TO LEAVE THE REQUIRED GAP BETWEEN THE END OF THE PIPE AND THE SHOULDER OF THE SOCKET OF THE FITTINGS. SWIVEL AND EXPANSION JOINTS WHERE REQUIRED SHALL BE INSTALLED ON ALL NEW CONNECTIONS TO ACCOMMODATE THE YS VALUE NOMINATED IN THE SITE SOIL CLASSIFICATION REPORT PREPARED BY QUALIFIED GEOTECHNICAL ENGINEER. ALL SWIVEL AND EXPANSION FITTINGS SHALL BE INSTALLED AT THEIR HALF WAY EXPANSION DISTANCE AND BE FULLY WRAPPED AND PROTECTED PRIOR TO BACKFILLING. FITTINGS TO BE EQUAL TO STORM PLASTICS

2.2.16 OFFSETS

WHERE WASTE PIPES ARE REQUIRED TO BE OFFSET, SWEEP BENDS SHALL BE USED AND THE MAXIMUM FALL SHALL BE GIVEN TO THE PIPE WORK WITHIN THE SPACE AVAILABLE.

2.2.17 TRAPS

TRAPS SHALL BE UPVC UNLESS OTHERWISE SPECIFIED.

2.2.18 FLOOR WASTES

PROVIDE TRAPS AND INLET RISERS OF THE SAME MATERIAL AS THE OUTLET PIPEWORK WITH PUDDLE FLANGE INCORPORATED ON RISER. DIMENSIONS: RISER: 100 GRATES: SCREW IN TYPE: MATERIAL AND FINISH: BRASS CHROME PLATED.



BRISBANE

LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHD	DESCRIPTION
A	28.10.22	P.S C.T	TENDER ISSUE

DRAWING
TITLE

SPECIFICATION SHEET 2

SERVICE

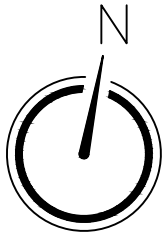
HYDRAULIC SERVICES

DRAWN
N.M

CHECKED
N.M

ENGINEER
C.T

DRAWING SCALE
N.T.S @ A3



PROJECT

42 PELICAN STREET,
PEREGIAN BEACH

PROJECT No

22253

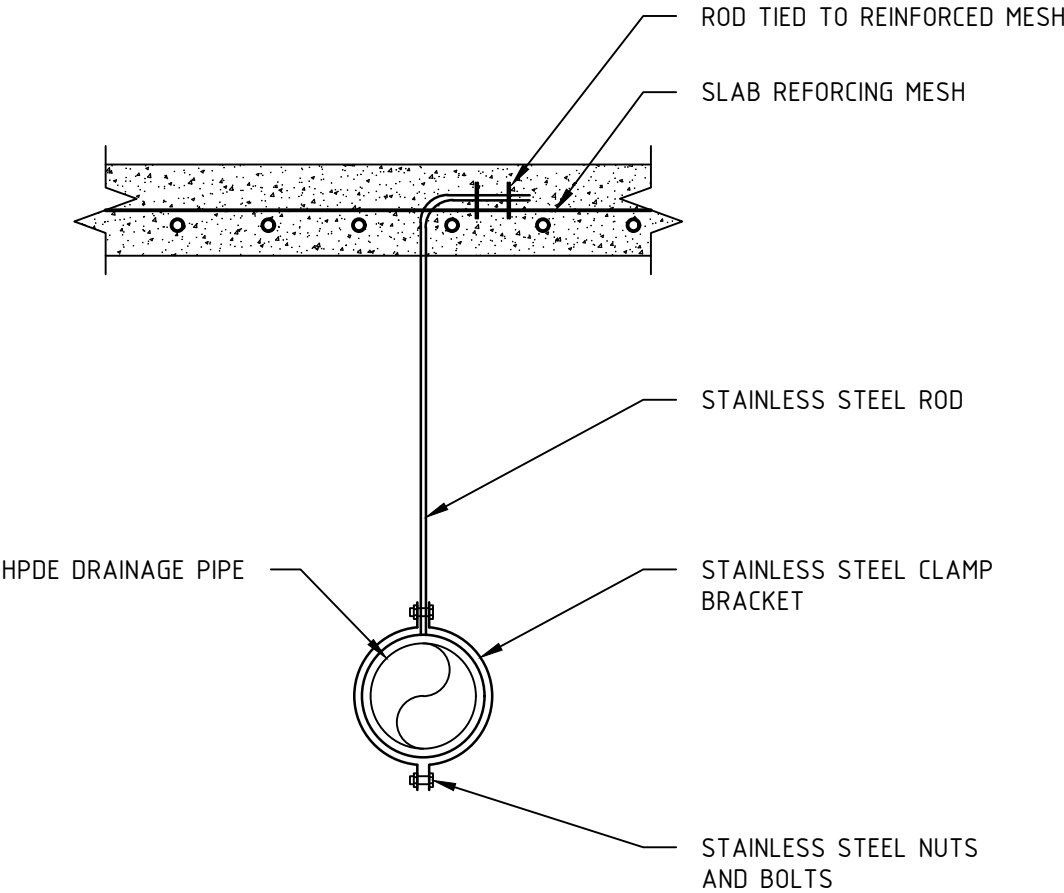
DRAWING No

H-02-002

REVISION

A

SOIL REPORT	
SITE CLASSIFICATION	CLASS 'E' - EXTERNAL TO BUILDING CLASS 'E' - UNDER BUILDING
REFERENCE	NO REPORT ASSUMED CLASS 'E'



INSET A
NOT TO SCALE

GENERAL REQUIREMENTS FOR SANITARY AND STORMWATER DRAINAGE INSTALLATION IN REACTIVE SOIL

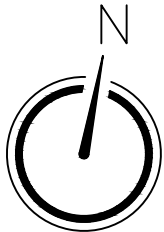
- THE FOLLOWING ARE PROVIDED FOR GUIDANCE ONLY AND DO NOT EXEMPT THE INSTALLER FROM THEIR REQUIREMENTS UNDER THE AUSTRALIAN STANDARDS, QLD PLUMBING AND DRAINAGE ACT, LOCAL COUNCIL REQUIREMENTS, AND QBCC CONDITIONS.
1. IN UNSTABLE, EXPANSIVE, WATER CHARGED, OR FILLED GROUND, OR WHERE SOIL MOVEMENT MAY IMPACT ANY DRAIN, AN ARTICULATION REPORT AND DESIGN MUST BE PROVIDED BY A QUALIFIED PROFESSIONAL. A SOIL TESTING CLASSIFICATION AND ALL CALCULATIONS SHOWING PROPOSED METHOD TO PROTECT THE INSTALLATION FROM GROUND MOVEMENT MAY BE REQUIRED.
 2. DETAILS ARE INDICATIVE ONLY. REFER TO THE ENGINEER FOR DESIGN OF RETICULATION, FOOTINGS, PENETRATIONS AND SIMILAR TO BE SPECIFIED BY AN ENGINEER.
 3. AVOID RUNNING PIPEWORK UNDER THE SLAB WHERE POSSIBLE. REFER AS3500.
 4. PROVIDE ARTICULATION AND EXPANSION JOINTS TO ALL PIPEWORK WITHIN 3 METERS OF THE BUILDING IN ACCORDANCE WITH AS 1260.
 5. LAG ALL PVC/HDPE PIPEWORK WITH ABLEFLEX OR SIMILAR 25mm LAGGING WHERE IT PASSES THROUGH CONCRETE.
 6. PROTECT ALL PIPEWORK AND EXPANSION/ARTICULATION JOINTS FROM MECHANICAL DAMAGE.
 7. INSTALL ALL FLEXIBLE FITTINGS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SET THEM AT THEIR MID-POINT SUCH THAT THEY MAY EXPAND/MOVE IN EITHER DIRECTION.
 8. BENDING OR CUTTING REINFORCEMENT STEEL TO ACCOMMODATE PIPEWORK IS NOT PERMITTED. REFER TO DETAILING FOR PENETRATION/CAST-INS BY THE STRUCTURAL ENGINEER.
 9. CLASS E SOIL SHOULD HAVE PIPEWORK RUN AT 1:30 OR STEEPER WITHIN 3 METERS OF THE BUILDING AND 1:60 ELSEWHERE. SET FLEXIBLE FITTINGS AT THE MINIMUM GRADE.
 10. "SWIVEL JOINTS" SHOULD NOT BE SUBSTITUTED IN PLACE OF A BEND. THEY SHOULD BE INSTALLED IN A STRAIGHT SECTION OF DRAIN. PROVIDE A MINIMUM 15° BEND BEFORE THE JOINTS IN ORDER TO MAINTAIN MINIMUM GRADE.
 11. ALLOW TO SUPPORT OVERFLOW RELIEF GULLY TRAPS WITH CONSIDERATION TO POTENTIAL MOVEMENT. THE ORG SHOULD BE FIXED SUCH THAT IT MOVES WITH THE BUILDING FOOTING.
 12. DO NOT USE CORRUGATED FLEXIBLE PVC PIPE PRODUCTS UNLESS SPECIFICALLY DETAILED BY THE MANUFACTURER.
 13. MAKE DRAINAGE PROVISIONS TO DEAL WITH CONDENSATE OR OVERFLOW DRAINAGE FROM FIXTURES SUCH AS HOT WATER UNITS. COMPLY WITH LOCAL AUTHORITY REQUIREMENTS.
 14. REQUIREMENTS FOR EXPANSION AND ROTATION FITTINGS (CLASS M):
MINIMUM EXPANSION OF JOINTS: 40mm
MINIMUM ALLOWABLE ROTATION: 15°
 15. IN THE INSTANCE OF A SLAB SITTING ON FILL SUPPORTED BY PIERS, DRAINAGE PIPEWORK SHALL BE HUNG FROM THE SLAB MESH BY MEANS OF STAINLESS STEEL STRAPS.
 16. ALL PIPEWORK UNDER SLAB (SUPPORTED FROM SLAB) TO BE IN HDPE PIPES AND FITTINGS

floth

BRISBANE
LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHDD	DESCRIPTION
A	28.10.22	P.S C.T	TENDER ISSUE

DRAWING TITLE	DRAWN N.M
DETAILS SHEET 1	CHECKED N.M
	ENGINEER C.T
SERVICE	DRAWING SCALE N.T.S @ A3
HYDRAULIC SERVICES	

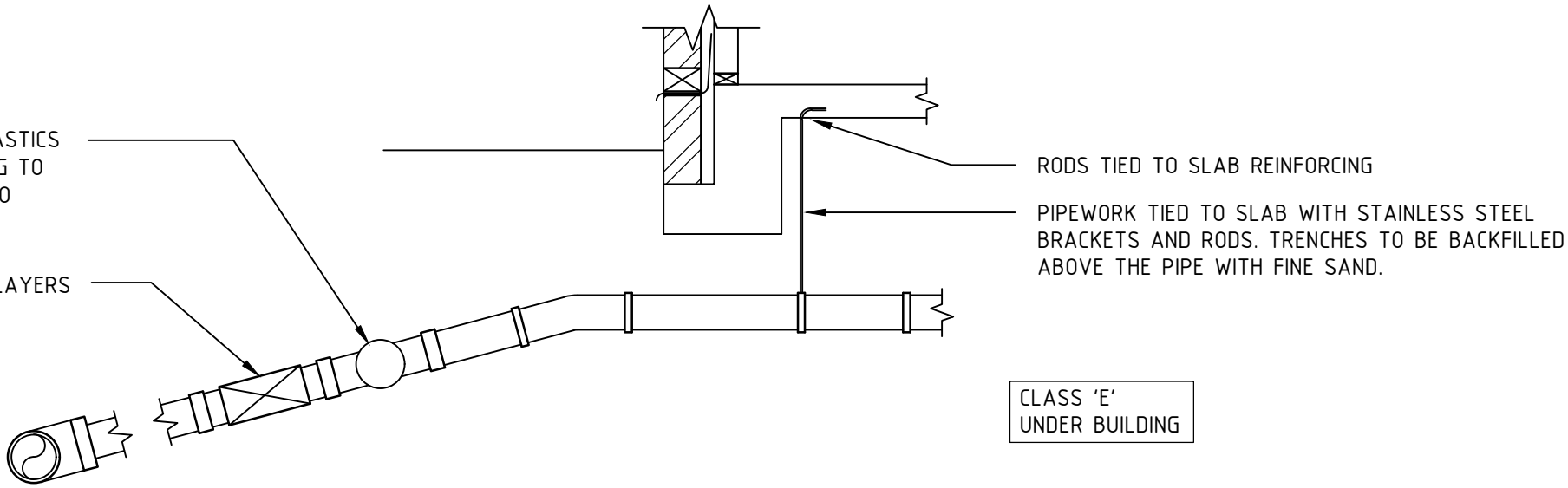


TENDER ISSUE		
NOT FOR CONSTRUCTION		
PROJECT	42 PELICAN STREET, PEREGIAN BEACH	
PROJECT No	DRAWING No	REVISION
22253	H-03-001	A

SELECTED ARTICULATION JOINT E.G. STORM PLASTICS 'SWIVEL JOINT' OR APPROVED FLEXIBLE FITTING TO ACCOMMODATE 50mm+ MOVEMENT INSTALLED TO MANUFACTURES RECOMMENDATIONS.

'EXPANDA' JOINT (LUBRICATED WRAPPED IN 2 LAYERS OF 200 MICRON POLYTHENE AND SEALED WITH PRESSURE SENSITIVE TAPE TO EXCLUDE SOIL PARTICLES

CLASS 'E' EXTERNAL TO BUILDING

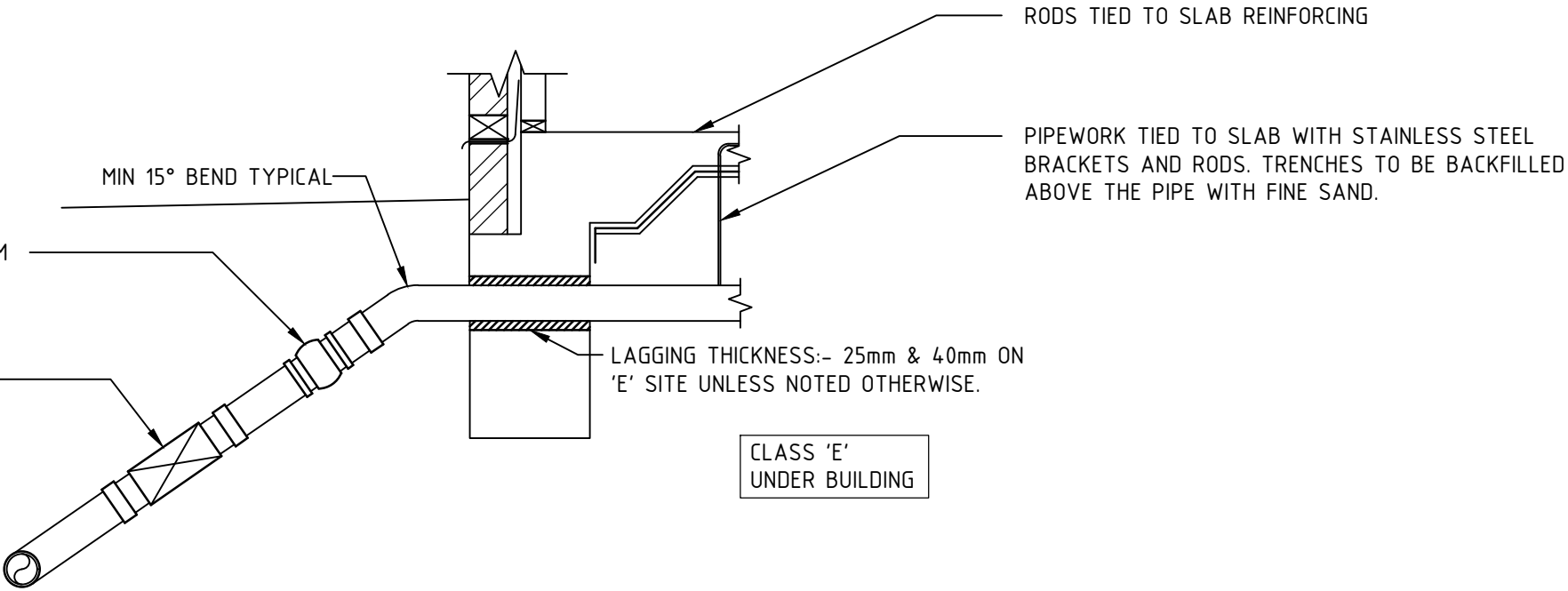


TYPICAL PIPE BELOW FOOTING (OCCURS AT EVERY EXIT POINT FROM UNDER BUILDING)
DETAIL - SECTION
NOT TO SCALE

SELECTED ARTICULATION JOINT E.G. STORM PLASTICS 'SWIVEL JOINT' OR APPROVED FLEXIBLE FITTING INSTALLED TO MANUFACTURES RECOMMENDATIONS.

'EXPANDA' JOINT (LUBRICATED WRAPPED IN 2 LAYERS OF 200 MICRON POLYTHENE AND SEALED WITH PRESSURE SENSITIVE TAPE TO EXCLUDE SOIL PARTICLES)

CLASS 'E' EXTERNAL TO BUILDING



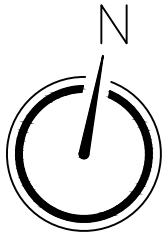
TYPICAL PIPE THROUGH FOOTING (OCCURS AT EVERY EXIT POINT FROM UNDER BUILDING)
DETAIL - SECTION
NOT TO SCALE



BRISBANE
LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHDDDESCRIPTION
A	28.10.22	P.S C.T TENDER ISSUE

DRAWING TITLE	DRAWN N.M
DETAILS SHEET 2	CHECKED N.M
	ENGINEER C.T
SERVICE	DRAWING SCALE N.T.S @ A3
HYDRAULIC SERVICES	



TENDER ISSUE

NOT FOR CONSTRUCTION

PROJECT
42 PELICAN STREET,
PEREGIAN BEACH

PROJECT No 22253 H-03-002 A
DRAWING No
REVISION

REV	DATE	DRNCHD	DESCRIPTION
P1	26.08.22	N.M C.T	PRELIMINARY ISSUE
A	28.10.22	P.S C.T	TENDER ISSUE

DRAWING
TITLE
ROOF LEVEL DRAIN &
STORMWATER LAYOUT

SERVICE
HYDRAULIC SERVICES

DRAWN
N.M

CHECKED
N.M

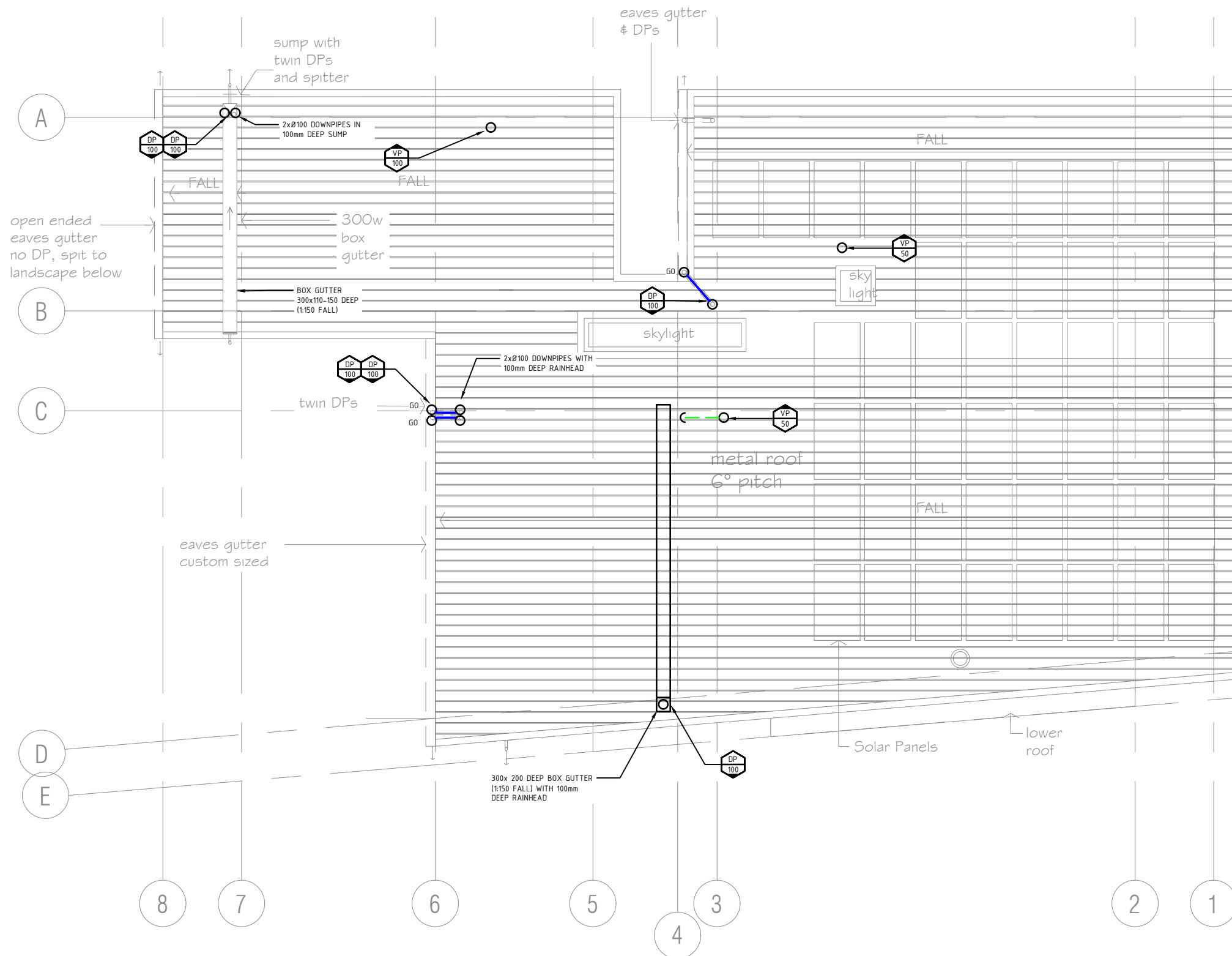
ENGINEER
C.T

DRAWING SCALE
1:100 @ A3



PROJECT
42 PELICAN STREET,
PEREGIAN BEACH

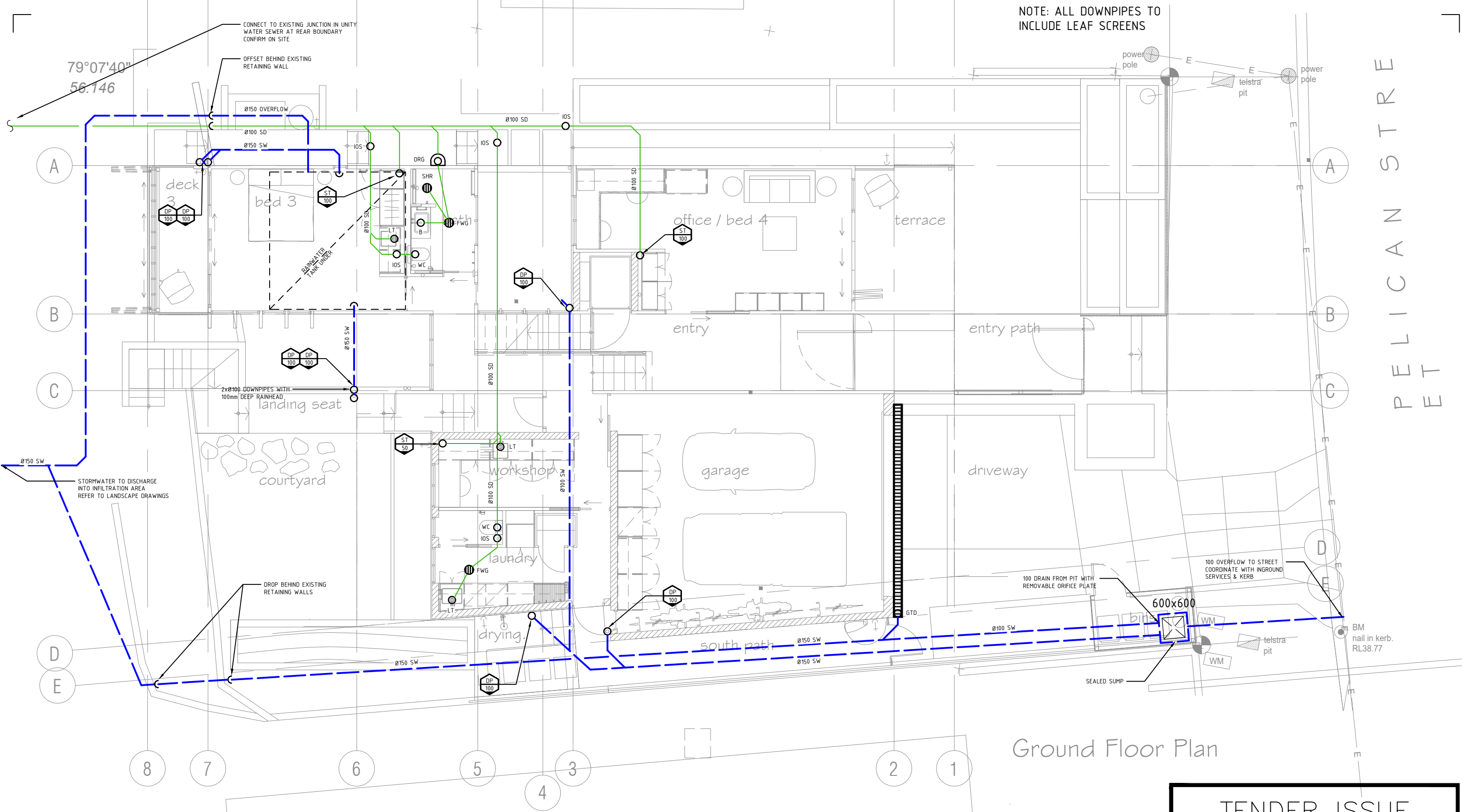
PROJECT No 22253 H-05-003 A
DRAWING No
REVISION



PELICAN STREET

TENDER ISSUE

NOT FOR CONSTRUCTION



BRISBANE
LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHD	DESCRIPTION
P1	26.08.22	N.M	C.T PRELIMINARY ISSUE
A	28.10.22	P.S	C.T TENDER ISSUE

DRAWING
TITLE
GROUND FLOOR DRAIN &
STORMWATER SERVICES
LAYOUT

SERVICE
HYDRAULIC SERVICES

DRAWN
N.M
CHECKED
N.M
ENGINEER
C.T



DRAWING SCALE
1:100 @ A3

PROJECT
42 PELICAN STREET,
PEREGIAN BEACH

PROJECT No
22253 H-05-001
DRAWING No
A
REVISION

PIPING SYSTEMS LEGEND		
LINE TYPE	ABBREVIATION	DESCRIPTION
	CW	COLD WATER
	RW	RECYCLED RAINWATER
	HW	HOT WATER FLOW
	SD	SANITARY DRAINAGE
	SW	STORMWATER DRAINAGE
	VP	VENT PIPE

ADDITIONAL ABBREVIATIONS			
AFFL	ABOVE FINISHED FLOOR LEVEL	IL	INVERT LEVEL
B	BASIN	KS	KITCHEN SINK
BG	BOX GUTTER	L/L	LOW LEVEL
BTH	BATH	NRV	NON-RETURN VALVE
CO	CLEAROUT	O/F	OVERFLOW
COS	CLEAROUT TO SURFACE	ORG	OVERFLOW RELIEF GULLY
CV	CONTROL VALVE	PDO	PLANTER DRAIN OUTLET
DCV	DOUBLE CHECK VALVE	RL	RELATIVE LEVEL
DP	DOWN PIPE	RWH	RAINWATER HEAD
DW	DISHWASHER	SHR	SHOWER
EG	EAVES GUTTER	SK	SINK
EJ	EXPANSION JOINT	SMH	SEWER MANHOLE
EPD	ELEVATED PIPE DRAINAGE	SPR	RAINWATER SPREADER
e	EXISTING (USED AS PREFIX)	ST	STACK
FFL	FINISHED FLOOR LEVEL	STW	STORMWATER
FW	FLOOR WASTE GULLY	SV	STOP VALVE
GDO	GRATED DRAIN OUTLET	T	TUB
GO	GUTTER OUTLET	TD	TUNDISH
H/L	HIGH LEVEL	TTD	TRAPPED TUNDISH
HT	HOSE TAP	TV	TEMPERING VALVE
HWU	HOT WATER UNIT	VP	VENT PIPE
		WC	TOILET
		WM	WASHING MACHINE

SYMBOL	DESCRIPTION
	WALL PENETRATION
	RELATIVE LEVEL
	PIPE DROP
	PIPE RISE
	PIPE TEE DOWN
	PIPE TEE UP
	CONTINUATION LINE
	CAPPED END AND PIPE BREAK
	PIPEWORK BREAK (FOR CLARITY)
	CONNECTION TO EXISTING SERVICE
	FLOW DIRECTION INDICATOR
	SERVICE PIPE DIAMETER OR NUMBER

STORMWATER/RAINWATER SYMBOLS	
SYMBOL	DESCRIPTION
	OVERFLOW
	GRATED DRAIN (LONGITUDINAL)
	STORMWATER PIT WITH SEALED LID C/W SIZE ANNOTATION
	STORMWATER PIT WITH GRATE C/W SIZE ANNOTATION
	RAIN WATER SPREADER (SINGLE)
	RAIN WATER HEAD

WATER SYMBOLS	
SYMBOL	DESCRIPTION
	WATER POINT
	WATER POINT HOT
	ISOLATION VALVE
	CHECK VALVE OR NON RETURN VALVE
	DOUBLE CHECK VALVE
	REDUCER
	HOSE TAP
	HOSE TAP WITH VACUUM BREAKER
	TEMPERING VALVE
	HOT WATER UNIT

DRAINAGE SYMBOLS	
SYMBOL	DESCRIPTION
	BASIN
	CLEAROUT
	CLEAROUT TO SURFACE
	LAUNDRY TUB
	SINK
	WATER CLOSET
	WASHING MACHINE
	WALL MOUNTED DRAIN FIXTURE
	FLOOR WASTE GULLY
	SHOWER
	OVERFLOW RELIEF GULLY

TENDER ISSUE

NOT FOR CONSTRUCTION

floth

BRISBANE

LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHDD	DESCRIPTION
A	27.10.22	P.S C.T	TENDER ISSUE

DRAWING
TITLE
LEGEND

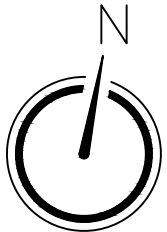
SERVICE
HYDRAULIC SERVICES

DRAWN
N.M

CHECKED
N.M

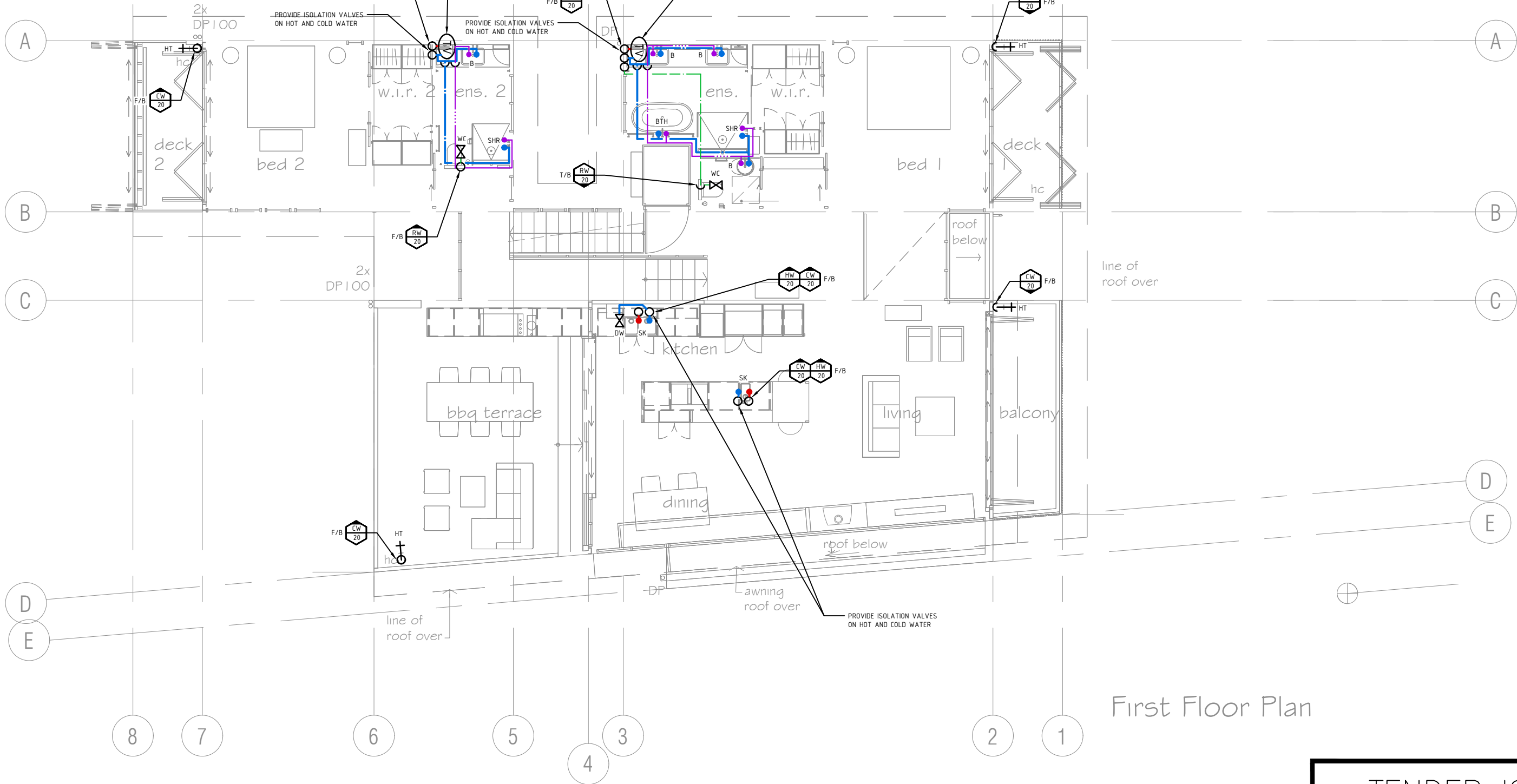
ENGINEER
C.T

DRAWING SCALE
N.T.S @ A3



PROJECT
42 PELICAN STREET,
PEREGIAN BEACH

PROJECT No	DRAWING No	REVISION
22253	H-01-001	A



First Floor Plan

TENDER ISSUE

NOT FOR CONSTRUCTION



BRISBANE
LEVEL 2,
69 ROBERTSON ST,
4006 QLD
T +617 3513 8000
E bne@floth.com.au
W www.floth.com.au

REV	DATE	DRNCHD	DESCRIPTION
P1	26.08.22	N.M	C.T PRELIMINARY ISSUE
A	28.10.22	P.S	C.T TENDER ISSUE

DRAWING
TITLE
FIRST FLOOR WATER SERVICES
LAYOUT

SERVICE
HYDRAULIC SERVICES

DRAWN
N.M

CHECKED
N.M

ENGINEER
C.T

DRAWING SCALE
1:100 @ A3



PROJECT
42 PELICAN STREET,
PEREGIAN BEACH

PROJECT No DRAWING No REVISION
22253 H-04-002 A