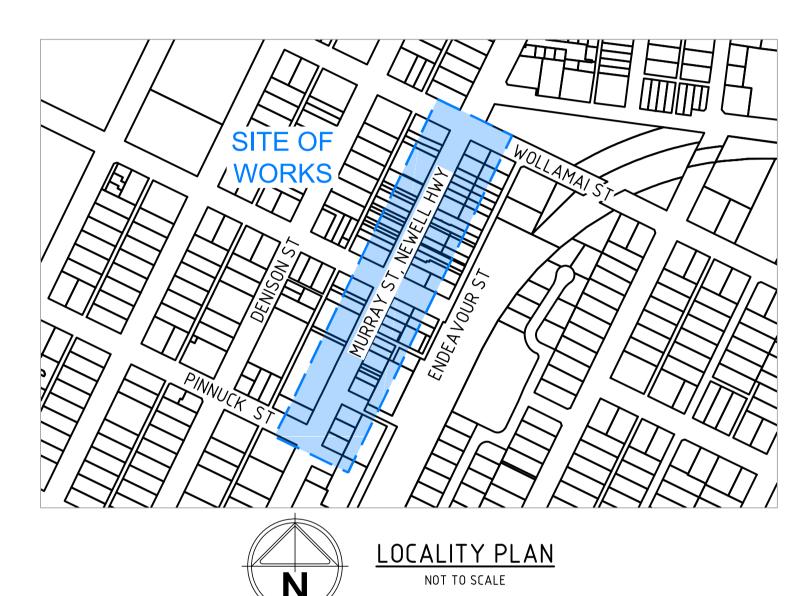
# BERRIGAN SHIRE COUNCIL ROAD RECONSTRUCTION WORKS - WATERMAIN MURRAY STREET, FINLEY NSW 2713



DRAWING SCHEDULE			
DRAWING NO.	DRAWING TITLE	REVISION	
4389-00-WAT-001	FACE SHEET	E	
4548-00-WAT-300	LAYOUT PLAN	Е	
4548-00-WAT-301	LONG SECTIONS	E	
4548-00-WAT-302	STANDARD DETAILS AND TABLES	E	

### <u>LEGEND</u>

<b>◆</b>	PERMANENT SURVEY MARK
$\triangle$	SURVEY TRAVERSE STATION
	PROPERTY BOUNDARY
	PROPERTY EASEMENT
—— — SWD — ——	STORMWATER DRAIN (EXISTING)
	STORMWATER MAIN (EXISTING)
	BITUMEN EDGE (EXISTING)
— — — — — — — — — — — — — — — — — — —	SEWER MAIN (EXISTING)
s	SEWER MAIN (PROPOSED)
UE	ELECTRICITY UNDERGROUND (EXISTING)
— — — — — —	TELECOMMUNICATIONS MAIN (EXISTING)
— - G- — —	GAS MAIN (EXISTING)
	WATER MAIN (REDUNDANT)
— -W- — —	WATER MAIN (EXISTING)
— W —	WATER MAIN (PROPOSED)
WATER 🔀	WATER MARKER POST (EX/PR)
₩ H	WATER HYDRANT (EX/PR)
wM DW —	WATER METER (EX/PR)
	WATER STOP VALVE (EX/PR)
	WATER MAIN THRUST BLOCK (PROPOSEI
<b>I</b>	

### **GENERAL**

- ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- 2. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
- 3. ALL WORKS TO BE UNDERTAKEN AND TESTED IN ACCORDANCE WITH WSA 03-2011-3.1 WATER SUPPLY CODE OF AUSTRALIA, (REFERRED TO AS THE 'CODE') REGIONAL NEW SOUTH WALES EDITION, VERSION 1.
- 4. ALL NEW AND ALL ALTERED MAINS TO BE CONSTRUCTED UNDER AGREEMENT CONDITIONS IN ACCORDANCE WITH THE 'CODE' SPECIFICATION DRAWINGS AT
- 5. THE LOCATION OF EXISTING SERVICES SHOULD BE CONFIRMED BY THE CONTRACTOR PRIOR TO COMMENCING ANY EXCAVATION BY CONTACTING ALL LOCAL SERVICE AUTHORITIES. ANY EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS
- 6. ALL WORKS CARRIED OUT IN THE VICINITY OF OVERHEAD POWERLINES SHALL BE SUPERVISED BY A LICENSED SPOTTER.
- 7. ALL WORK WITHIN THE ROAD RESERVE SHALL BE IN ACCORDANCE WITH 'COUNCIL' ROAD OPENING PERMITS GUIDELINES AND SPECIFICATIONS.
- 8. ALL PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- . ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS SHALL BE REFERRED TO THE SUPERINTENDENT.
- 10. WORKMANSHIP AND MATERIALS SHALL COMPLY WITH REQUIREMENTS OF CURRENT AUSTRALIAN STANDARDS.
- 11. ALL PIPES VALVES AND FITTINGS SHALL COMPLY WITH THE 'CODE'
- 12. CONTRACTOR IS TO ENGAGE A SUITABLY QUALIFIED AND EXPERIENCED SURVEYOR TO UNDERTAKE ASSET RECORDING OF THE WORK. ALL SURVEYOR WORKS AND DATA RECORDING SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE MRWA SURVEY MANUAL.

### DISPOSAL OF EXCESS SOIL / MATERIAL

- 1. REMOVE FROM SITE AND DISPOSE OF ALL EXCESS AND UNSUITABLE MATERIAL REMOVED FROM TRENCHES NOT USED IN THE COMPLETED WORKS.
- 2. REDUNDANT MATERIALS SHALL BE TAKEN UP AND REMOVED FROM SITE.

### PIPELINE CONSTRUCTION

- 1. ALL PIPES AND FITTINGS SHALL BE HANDLED, LAID, JOINTED AND PROTECTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 2. PIPEWORK SHALL BE MEASURED ON SITE WHERE REQUIRED TO ENSURE FIT.
- ALL FLANGE CONNECTIONS SHALL CONSIST OF COMPLETE INSERTION SETS (GASKETS, BOLTS, NUTS AND WASHERS) MATCHING THE FLANGE TYPE AND THE MANUFACTURERS RECOMMENDATIONS.
- 4. FLANGED JOINTS, BOLTS, NUTS AND WASHERS SHALL BE GALVANISED STEEL AND HAVE THE FOLLOWING PROTECTION: DENSO 300 PRIMER, 400 MASTIC, 400 TAPE & 931 OVER WRAP APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 5. ALL DICL PIPES INSTALLED BELOW GROUND TO BE WRAPPED AND TAPED IN LOOSE POLYETHYLENE SLEEVING.
- 6. CONSTRUCTION BY BORING SHALL BE CARRIED OUT WHERE SPECIFIED.
- 7. WHERE HORIZONTAL AND VERTICAL BENDS ARE NOT SPECIFIED, CHANGES IN HORIZONTAL AND VERTICAL PIPE ALIGNMENT SHALL BE ACHIEVED BY DEFLECTING JOINTS UP TO PIPE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
- 8. ALL TREES TO BE RETAINED AND MUST BE PRESERVED AND PROTECTED AT ALL TIMES.

### BACKFILL REQUIREMENTS

- BACKFILL DETAILS FOR TRAFFICABLE AND NON-TRAFFICABLE AREAS SHALL COMPLY WITH 'CODE' AND 'COUNCIL' REQUIREMENTS.
   USE MARKER TAPE ABOVE ALL PIPELINES AND COMMUNICATIONS CONDUITS AS
- PER AS2033-2008 SECTION 5.3.16.
- 3. COMPACTION REQUIREMENT DETAILED REFER TO PERCENTAGE OF MAXIMUM DRY DENSITY AS DEFINED BY STANDARD COMPACTION TEST IN AS1289.

### SLUICE (ISOLATION) VALVES & HYDRANTS

- 1. SLUICE VALVE AND HYDRANT SHALL BE INSTALLED TO 'CODE' WITH TRAFFICABLE COVERS.
- 2. ALL CONNECTIONS SHALL BE FLANGED.
- 3. ALL HYDRANTS BEING REMOVED AND DISPOSED SHALL HAVE HYDRANT HEAD, COVER AND SURROUND AND MARKER POST DECOMMISSIONED.
- 4. VALVES TO BE REMOVED AND DISPOSED SHALL HAVE VALVE SPINDLE, COVER AND SURROUND AND MARKER POST DECOMMISSIONED.

### THRUST RESTRAINT

- 1. CAST IN SITU CONCRETE THRUST BLOCKS AND ANCHORS SHALL BE INSTALLED AT ALL HORIZONTAL AND VERTICAL BENDS, TEES VALVES AND REDUCERS.
- 2. REFER TO THE "CODE" STANDARD DRAWING WAT 1300 FOR DETAILS.
- 3. THE MINIMUM THRUST BEARING AREA SHALL BE 0.30 SQUARE METRES.
- 4. THRUST RESTRAINT SHALL BE DESIGNED TO RESIST PIPELINE TEST PRESSURE.

### MARKER POSTS

- MARKER POSTS SHALL BE PLACED OPPOSITE TO ALL VALVES, BENDS AND
  HYDRANTS
- 2. MARKER POSTS SHALL BE LOCATED SUCH THAT THEY DO NOT OBSTRUCT EXISTING LAND USE OR TRAFFIC AND TO APPROVAL OF BERRIGAN SHIRE COUNCIL
- 3. REFER TO "CODE" STANDARD DRAWING WAT 1300 FOR DETAILS.

### PIPE BEDDING AND EMBEDMENT

- ALL WATER MAINS UNDER ROADWAYS TO BE BACKFILLED IN ACCORDANCE WITH THE 'CODE' STANDARD DRAWINGS WAT-1202.
- 2. HAND AND MECHANICAL TAMPERS SPECIALLY DESIGNED FOR THE PURPOSE SHALL BE USED TO COMPACT THE EMBEDMENT MATERIAL AROUND THE PIPES.
- 3. THE BEDDING MATERIAL SHALL EXTEND FOR THE FULL WIDTH OF THE EXCAVATED TRENCH.
- 4. BACKFILL SHALL BE PLACED UNIFORMLY OVER THE EMBEDMENT AND COMPACTED IN SUCH A MANNER THAT THE PIPE IS NOT DISTURBED OR DAMAGED TO ACHIEVE THE SPECIFIED COMPACTION.

### **VEGETATION PROTECTION**

- 5. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- 6. WHEN WORKING WITHIN 4M OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8M BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- 7. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- 8. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

### **SOIL**

- 9. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY
- 10. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING TH STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
- 11. ACID SULPHATE SOILS EXIST IN THE WORKS AREA. THE OUTPUTS FROM THE RISK ASSESSMENT BASED ON THE ACID SULPHATE SOIL TECHNICAL MANUAL REQUIRES THAT ACID SULPHATE SOILS BE MANAGED AS FOLLOWS:

### REHABILITATION

- 12. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- 13. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

ALL WORKS TO BE UNDERTAKEN AND TESTED IN ACCORDANCE WITH WSA 03-2011-3.1 WATER SUPPLY CODE OF AUSTRALIA, REGIONAL NEW SOUTH WALES EDITION (REFERRED TO AS THE 'CODE').

NOTE!

NOTE!

MANDATORY WORKSAFE NOTIFICATION REQUIRED

PRIOR TO THE COMMENCEMENT OF WORKS



WARNING!
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE
APPROXIMATE ONLY &THEIR EXACT POSITION
SHOULD BE PROVEN ON SITE. NO GUARANTEE IS
GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

NOTE!

ND SERVICES

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ACT POSITION
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NOTE!

THIS DRAWING SET IS TO
CONJUNCTION WITH THE CUP
VERSION OF THE INFRASTR

THIS DRAWING SET IS TO BE READ IN CONJUNCTION WITH THE CURRENT ADOPTED VERSION OF THE INFRASTRUCTURE DESIGN MANUAL STANDARD DRAWINGS.

NOTE!

BEWARE OF EXISTING OVERHEAD

ELECTRICAL CABLES!

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/07	ISSUE	DESCRIPTION	DATE

NOTATIONS:

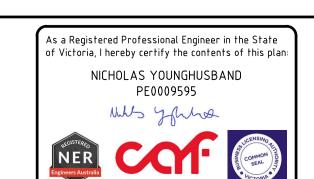
SURVEY DATUM ## RL ##m

LEVELS ARE IN A.H.D

LENGTHS ARE SHOWN IN METRES

CONTOUR INTERVAL IS 0.10m







t: 03 5849 1400
e: info@cafconsulting.com.au
w: www.cafconsulting.com.au

	CLIENT:	BERRIGAN SHIRE COUNCIL	SURVEYED: DTP / CAF AUGUST 2024	DRAWN: J. BARCIAL AUGUST 2024	
0	PROJECT: LOCATION:	MURRAY STREET	DESIGNED: C. TAYAG AUGUST 2024	CHECKED: S. GALEA AUGUST 2024	
u u	PROPERTY:	FINLEY, NSW 2713	APPROVED: N. YOUNGHUSBAND AUGUST 2024	SCALE: AS SHOWN	SIZE:
	DRAWING:	FACE SHEET	DRAWING NO: 4548-00-W	/AT-001	ISSUE:

TABLE 1 - NEW PIPE SCHEDULE			
PIPE SIZE (DN)	PIPE TYPE	CLASS	WATER MAIN LENGTH
150	mPVC	PN16	238

TABLE 2- PIPE MATERIAL SCHEDULE		
MATERIAL	REFERENCE	
PVC-M	WSA-PS-209	
PE (PROPERTY SERVICES)	WSA-PS-215	

TABLE 3 - HYDRANT & WASHOUT SCHEDULE					
MAIN SIZE	FITTING TYPE	OWNERSHIP	LOCATION	STREET	LOCATION
150	ISOLATION VALVE	COUNCIL	IN LINE	MURRAY ST	1.1m WEST OF BACK OF KERB
150	HYDRANT	COUNCIL	IN LINE	MURRAY ST	1.1m WEST OF BACK OF KERB
150	HYDRANT	COUNCIL	IN LINE	MURRAY ST	1.1m WEST OF BACK OF KERB
150	HYDRANT	COUNCIL	IN LINE	MURRAY ST	1.1m WEST OF BACK OF KERB
150	HYDRANT	COUNCIL	IN LINE	MURRAY ST	1.1m WEST OF BACK OF KERB
150	ISOLATION VALVE	COUNCIL	IN LINE	MURRAY ST	1.1m WEST OF BACK OF KERB

TABLE 4 - THRUST RESTRAINT SCHEDULE					
LOCATION	TYPE	THRUST	AHBP (kPa) USED	Area $(m2)$ , or $W(m) \times Y(m)$	NO. LOCATIONS
А	END OF LINE	END OF LINE	50	0.48	1
В	IN LINE	VALVE	50	0.48	2
С	IN LINE	ANCHOR DN150x45 BEND	50	1.58	1

## TABLE 5 - VERTICAL CLEARANCES

EXISTING OR PROPOSED SERVICE	MINIMUM VERTICAL CLEARANCE (mm)
WATER MAINS ≤ DN375	150
WATER MAINS >DN375	300
GAS MAINS	150
TELECO CONDUITS AND CABLES	150

EXISTING OR PROPOSED SERVICE	MINIMUM VERTICAL CLEARANCE (mm)
ELECTRICITY CONDUITS AND CABLES	225
STORMWATER DRAINS & PITS	150
SEWERS - GRAVITY	500
SEWERS - PRESSURE & VACUUM	300

VERTICAL CLEARANCE BETWEEN WATER MAINS SHALL DEPEND ON THE LARGER MAIN DIAMETER.
 WATER MAINS SHALL CROSS OVER SEWERS AND DRAINS UNLESS SHOWN OTHERWISE.
 MAINTAIN ADDITIONAL CLEARANCE FROM HIGH VOLTAGE ELECTRICAL CABLES TO ALLOW FOR A PROTECTIVE BARRIER AND MARKING.

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	С	DETAILED DESIGN APPROVAL	19/02/24
/20:	В	FUNCTIONAL DESIGN APPROVAL	03/02/24
28/04/2025	Α	FUNCTIONAL DESIGN APPROVAL	16/01/24
28/	ISSUE	DESCRIPTION	DATE

NOTATIONS: SURVEY DATUM ## RL ##m LEVELS ARE IN A.H.D LENGTHS ARE SHOWN IN METRES CONTOUR INTERVAL IS 0.10m

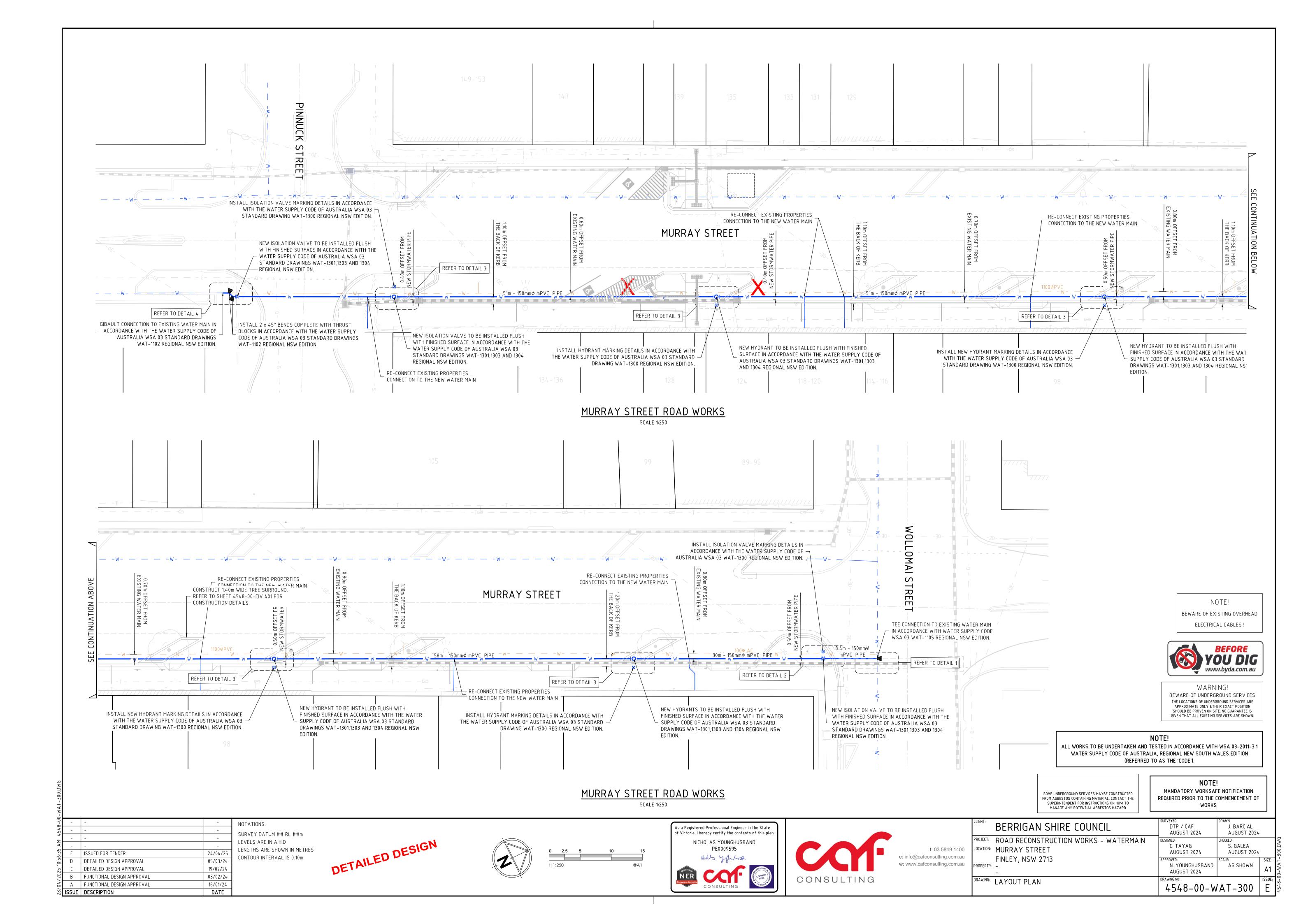


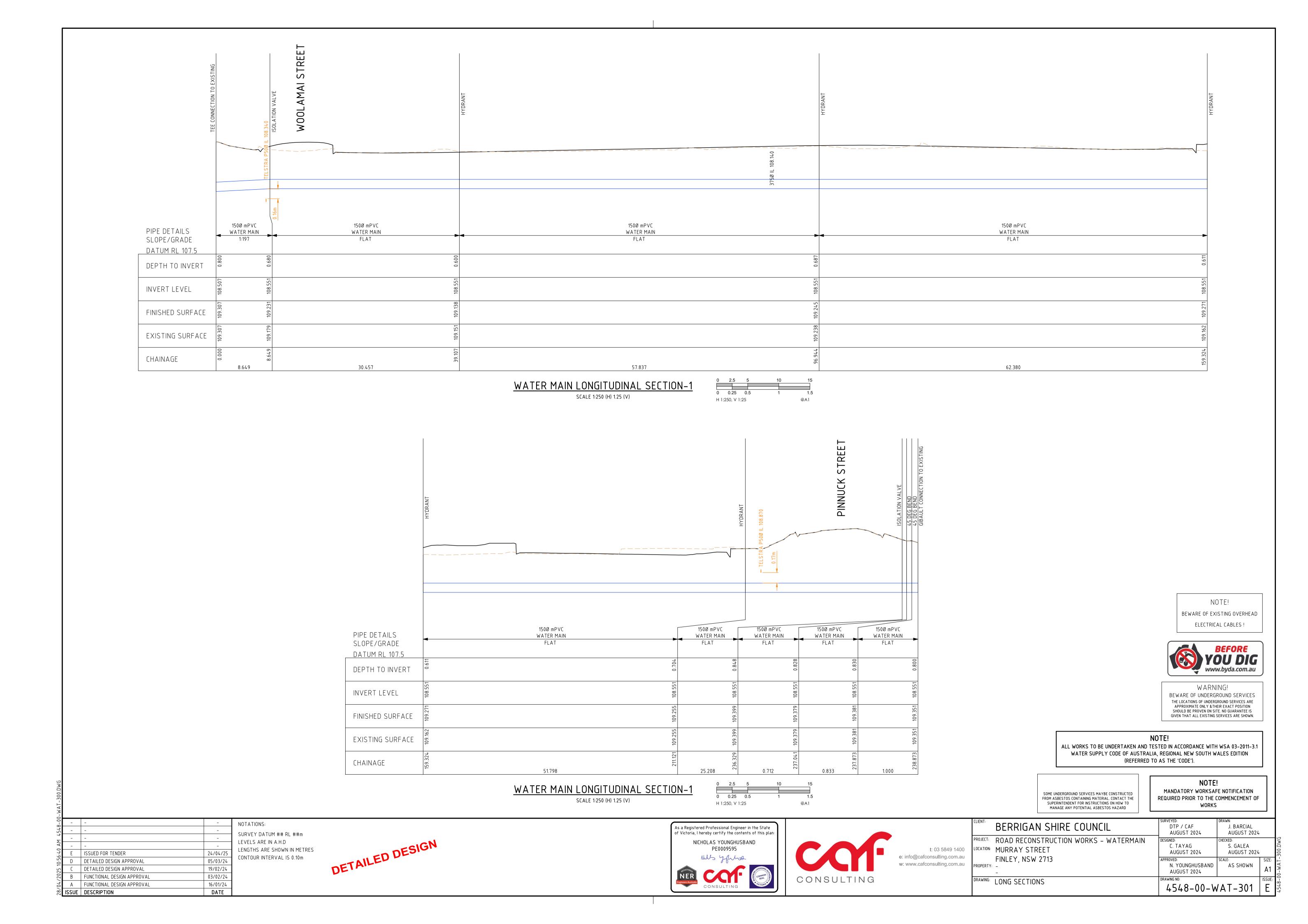


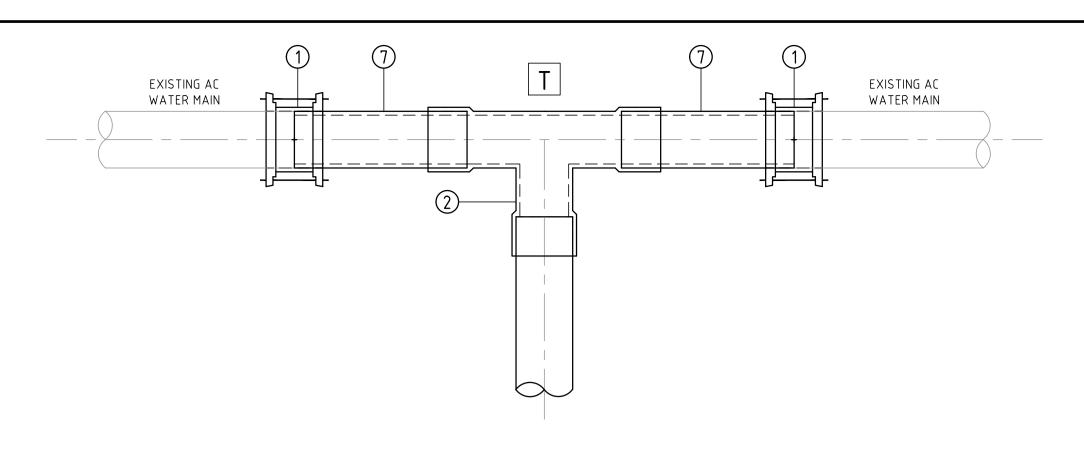


		BERRIGAN SHIRE COUNCIL
	PROJECT:	ROAD RECONSTRUCTION WORKS - WATERMAIN
t: 03 5849 1400	LOCATION:	MURRAY STREET
e: info@cafconsulting.com.au		FINLEY, NSW 2713
w: www.cafconsulting.com.au	PROPERTY:	-
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	DIA WING.	STANDARDS TABLES

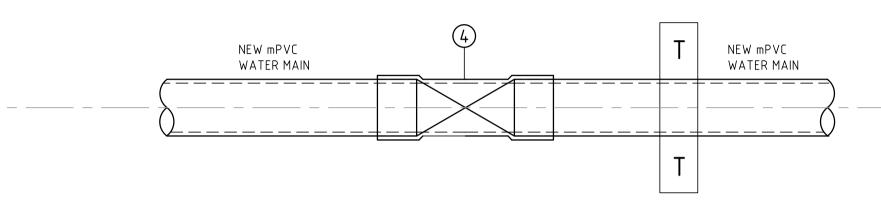
CLIENT:	BERRIGAN SHIRE COUNCIL	SURVEYED: DTP / CAF AUGUST 2024	DRAWN: J. BARCIAL AUGUST 2024		
PROJECT: LOCATION:	ROAD RECONSTRUCTION WORKS – WATERMAIN MURRAY STREET	DESIGNED: C. TAYAG AUGUST 2024	CHECKED: S. GALEA AUGUST 2024		001.DWG
PROPERTY:	FINLEY, NSW 2713	APPROVED: N. YOUNGHUSBAND AUGUST 2024	SCALE: AS SHOWN	SIZE:	00-WAT-
DRAWING:	STANDARDS TABLES	DRAWING NO: 4548-00-W	VAT-001 E		0-8757

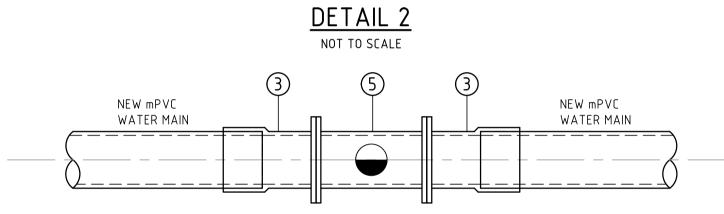






# DETAIL 1 NOT TO SCALE





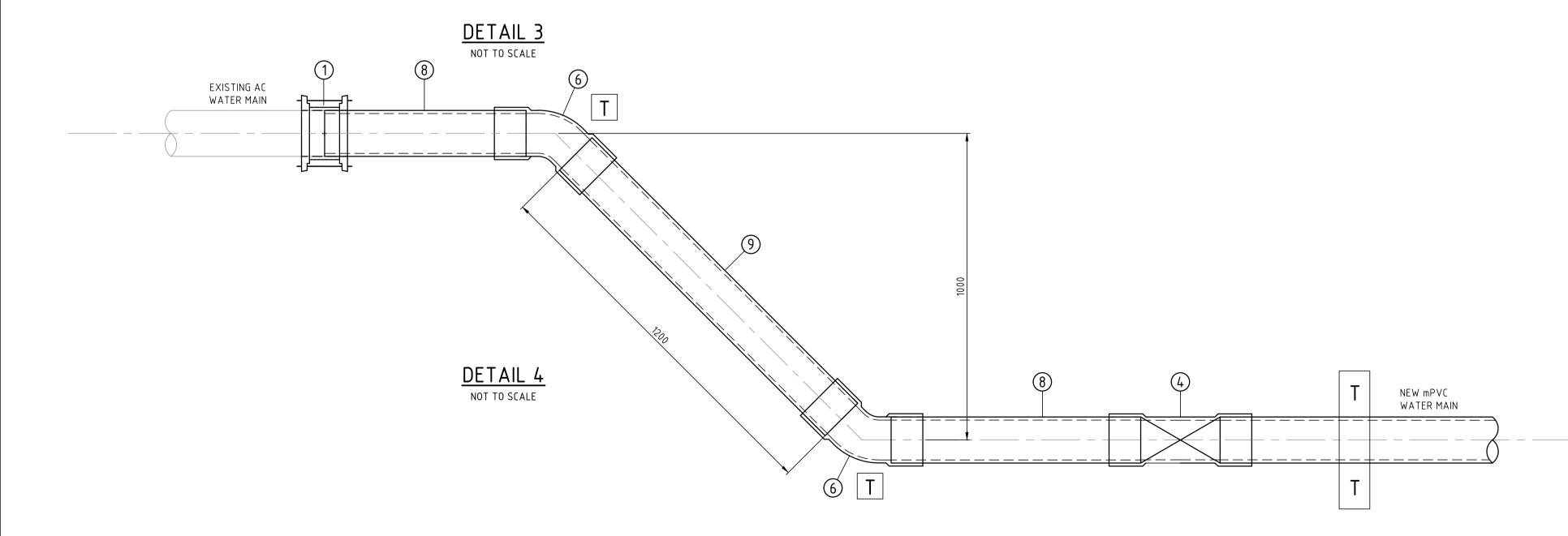
WATER MAIN MATERIAL LIST -1500 PIPE			
MARK	DESCRIPTION	QUANTITY	
1	Ø150mm GIBAULT JOINT	3	No
2	1500mm - Ø150mm - Ø150mm DICL TEE (SOC-SOC-SOC)	1	No
3	∅150mm CONNECTOR (FLANGED-SOCKET)	8	No
4	Ø150mm ISOLATION VALVE (SOC-SOC)	2	No
5	1500mm - Ø80mm DICL HYDRANT TEE (SOC-SOC-FLANGE)	4	No
6	Ø150mm 45° DICL BEND (SOC-SOC)	2	No
7	Ø150mm PVC PN35 - 0.60m LENGTH (SP - SP)	2	No
8	Ø150mm PVC PN35 - 0.60m LENGTH (SP - FL)	2	No

SYMBOL DENOTES THRUST BLOCKS INSTALLATION IN ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA WSA 03 STANDARD DRAWINGS WAT-1102 REGIONAL NSW EDITION.

Ø150mm PVC PN35 − 1.10m LENGTH (FL − FL)

### NOTE!

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		DF

CLIENT:		SURVEYED:	DRAWN:	
	BERRIGAN SHIRE COUNCIL	DTP / CAF AUGUST 2024	J. BARCIAL AUGUST 2024	
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LOCATION:	MURRAY STREET	AUGUST 2024	S. GALEA AUGUST 2024	
PROPERTY:	FINLEY, NSW 2713	APPROVED: N. YOUNGHUSBAND AUGUST 2024	SCALE: AS SHOWN	SIZE:
DRAWING	STANDARD DETAILS AND TABLES	DRAWING NO: 4548-00-W	48-00-WAT-302 E	