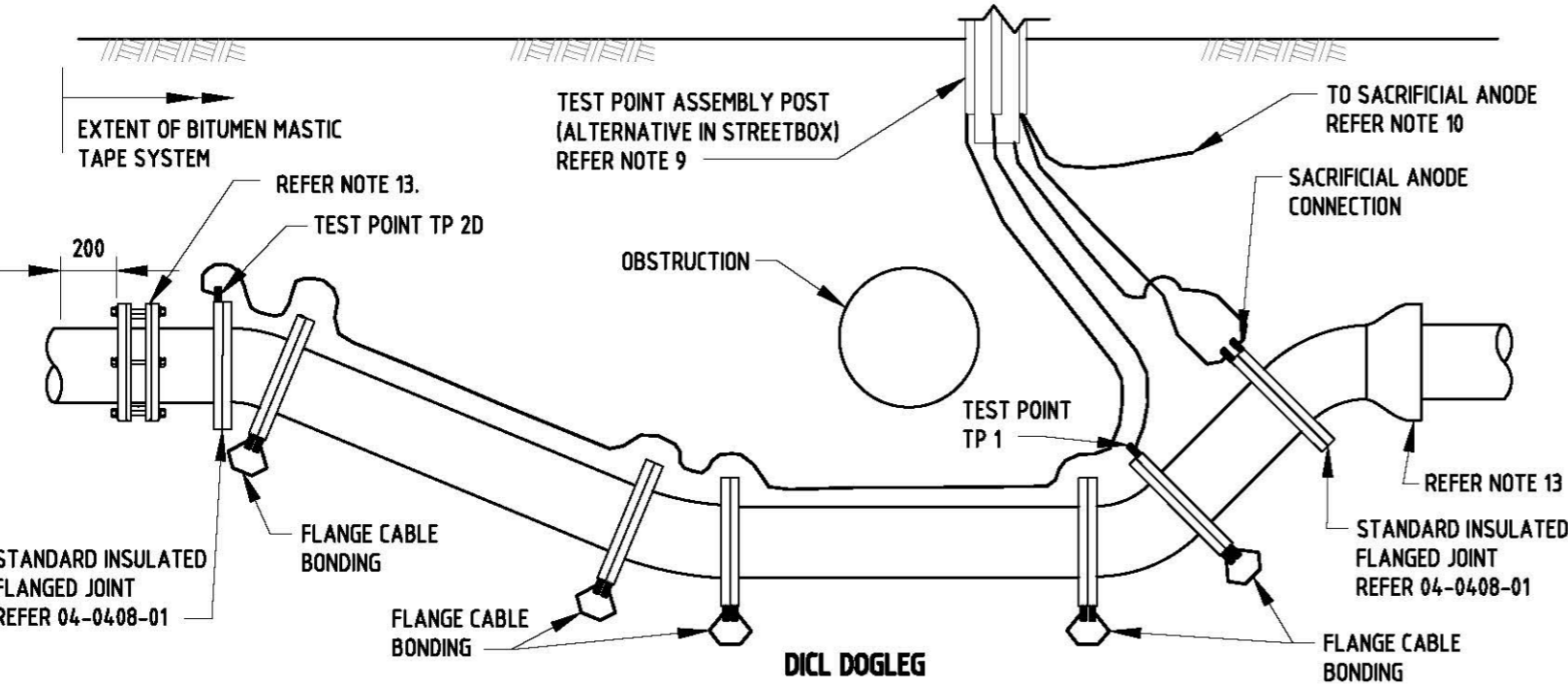
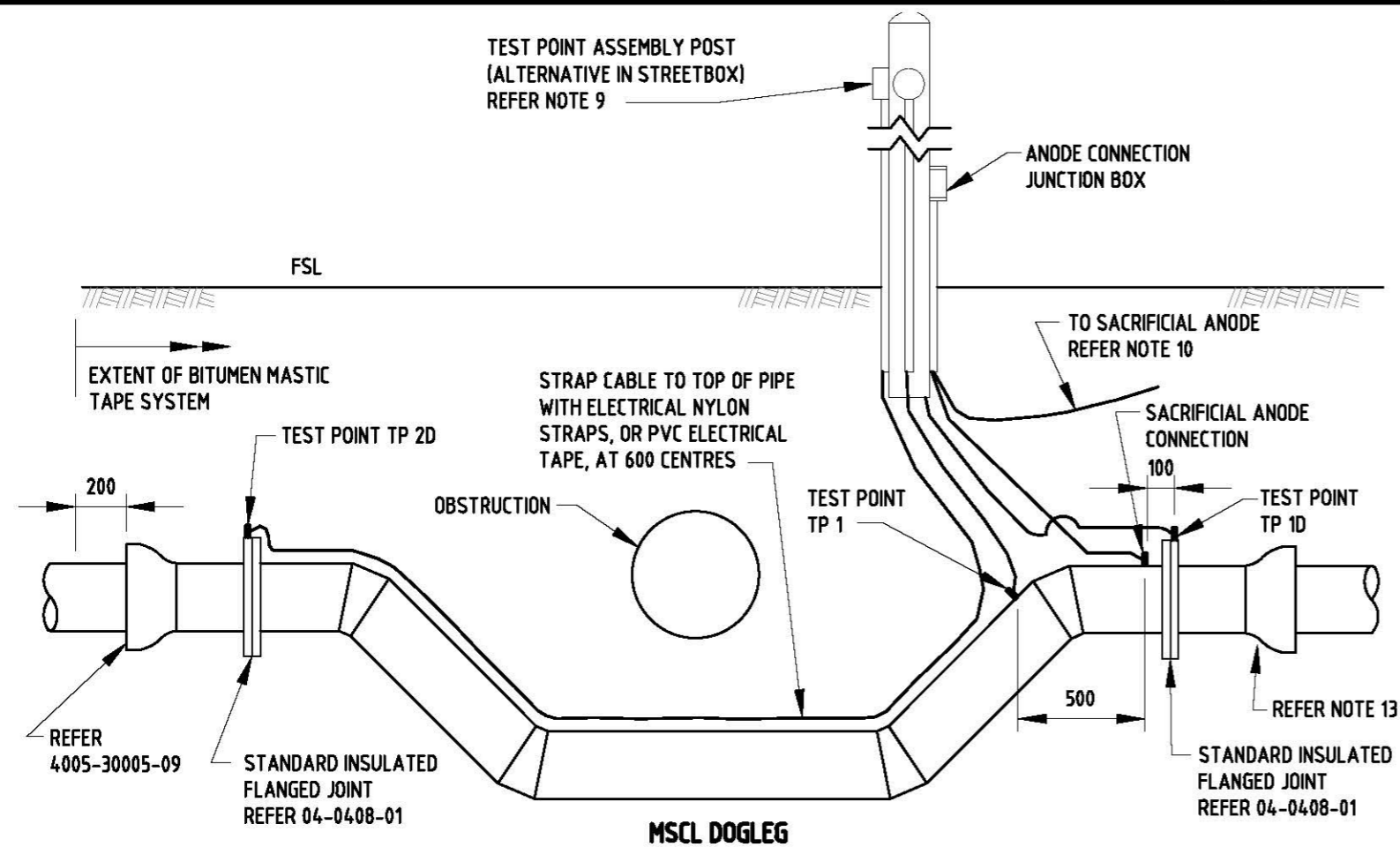


NOTES:

- REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
- ALL BRASS & GUNMETAL FITTINGS SHALL BE PROTECTED IN ACCORDANCE WITH TS 18.
- FBE & STAINLESS STEEL FITTINGS DO NOT REQUIRE PROTECTIVE WRAPPING UNLESS DAMAGED. REFER NOTE 5 FOR CLARIFICATION OF DAMAGE.
- THE CONTRACTOR SHALL INSPECT ALL FBE & STAINLESS STEEL FITTINGS PRIOR THE INSTALLATION.
- IF DAMAGE IS DETECTED PROCEED USING THESE GUIDELINES:
 - EXTERNAL DAMAGE <25 x 25 mm - WRAP THE ITEM IN ACCORDANCE WITH TS 18 AND THIS DRAWING.
 - INTERNAL OR EXTERNAL DAMAGE >25 x 25 mm - REPLACE THE ITEM.
- THE PROCEDURE FOR WRAPPING ALL METALLIC TAPPING SADDLES AND ALL BRASS FITTINGS SHALL BE:
 - COAT WITH PETROLATUM PRIMER,
 - WRAP WITH 50 mm WIDE PETROLATUM TAPE,
 - IN ACCORDANCE WITH TS 18.
- POLYETHYLENE SLEEVING AROUND THE PETROLATUM TAPE IS NOT REQUIRED IF PIPE IS PVC, AC OR CICL.
- WHERE THE PIPE IS DICL, THE CONTINUITY OF THE POLYETHYLENE SLEEVING SHALL BE MAINTAINED BY:
 - CUTTING A PIECE OF POLYETHYLENE SLEEVING SUFFICIENTLY LONG AND WIDE TO PROVIDE MIN 150 OVERLAP (AT EACH END) TO THE SLEEVE PROTECTING THE PIPE.
 - APPLYING THE PETROLATUM TAPE SYSTEM AROUND THE SADDLE OR PRETAPPED CONNECTOR TAPPING AND FITTING.
 - FIT THE PREPARED PIECE OF SLEEVE AROUND THE PIPE AND FITTING AND SECURE BOTH ENDS TO THE PIPE SLEEVE WITH ADHESIVE TAPE.
- WHERE THE PIPE IS MSCL:
 - PRIOR TO WELDING, REMOVE THE PIPE COATING AROUND THE AREA WHERE BOSS IS TO BE LOCATED,
 - CLEAN THE PIPE COATING FOR THE FULL CIRCUMFERENCE 100 mm WIDE EACH SIDE OF THE BOSS,
 - FOLLOWING WELDING, COAT PIPE, BOSS AND BRASS FITTINGS WITH PETROLATUM PRIMER AND FILL GAPS WITH MASTIC,
 - WRAP PIPE, BOSS, COCK PLUG AND BRASS FITTINGS WITH 50 mm WIDE PETROLATUM TAPE,
 - APPLY OVERWRAP TAPE OVER THE PIPE AND FITTINGS.
- PETROLATUM PRODUCTS AND METHODS FOR APPLICATION OF THE TAPE SYSTEM SHALL BE IN ACCORDANCE WITH TS 18.

REVISION PANEL					DESIGN PANEL			SA Water Department of State for Infrastructure	SA WATER STANDARD DRAWINGS WATER SUPPLY CONSTRUCTION MANUAL CORROSION PROTECTION FOR COPPER CONNECTIONS		A3 SHT SIZE	1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV	DESIGNED:	AUTHORISED:		This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	TOTAL SHEETS:		
					AUTHORISED:	RJP	T.GALEK	SUPERSEDES: H1, H2, H3, H5				
					SIGNATURE:	DRAWN:	SIGNATURE:	DRAWING NUMBER		4005-30010-01		
1	31/03/16	MS	2016 STANDARDS REVIEW	TG		MS	T.Galek	PREFIX NUMBER SHEET				



NOTES:

1. CATHODIC PROTECTION IS GENERALLY ONLY REQUIRED FOR DOGLEGS LARGER THAN DN200. **FOR MORE SIGNIFICANT LOCATIONS, EG. MAJOR ROAD OR CREEK CROSSINGS, DN100 & DN150 DOGLEGS MAY REQUIRE CATHODIC PROTECTION.** REFER NOTE 3.
2. THE DOG LEG DESIGN SHALL BE APPROVED BY SA WATER PRIOR TO UNDERTAKING THE CATHODIC PROTECTION DESIGN.
3. THE DESIGNER SHALL CONSULT THE SA WATER CATHODIC PROTECTION SPECIALIST FOR CONFIRMATION OF REQUIREMENTS.
4. IF THE ADJOINING PIPE IS AC, PVC OR PE, STANDARD INSULATED FLANGED JOINTS AND TEST POINTS ARE NOT REQUIRED.
5. SACRIFICIAL CP SYSTEM SHALL BE DESIGNED TO PROVIDE A POTENTIAL MORE NEGATIVE THAN 0.85 V WITH RESPECT TO A COPPER/ COPPER SULPHATE REFERENCE ELECTRODE AND SHALL HAVE A MINIMUM DESIGN LIFE OF 10 YEARS IN ACCORDANCE WITH AS2832.2.
6. INSTALL STUDS ON THE PIPELINE FOR TEST POINT CONNECTIONS AND SACRIFICIAL ANODE CONNECTION AT THE LOCATIONS SHOWN ON THE DESIGN DRAWING AND IN ACCORDANCE WITH SA WATER DRG. 75 10.
7. WHERE THE PIPE IS:
 - SINTAKOTE MSCL AND THE SINTAKOTE HAS BEEN REMOVED,
 - NON SINTAKOTE MSCL,**THE PIPE TOGETHER WITH CABLE CONNECTION POINTS AND EXTENSION PIPES AT EACH END SHALL BE PROTECTED BY WRAPPING WITH BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH SA WATER SPECIFICATION TS 18.**
 - FLANGED DICL,**THE PIPE SHALL NOT BE COVERED BY A THE PROTECTIVE PE SLEEVE. THE PIPE TOGETHER WITH CABLE CONNECTION POINTS AND EXTENSION PIPES AT EACH END SHALL BE PROTECTED BY WRAPPING WITH BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH TS 18.**
8. THE CABLES SHALL BE LAID OVER THE BITUMEN MASTIC TAPE SYSTEM.
9. THE CONTRACTOR SHALL IDENTIFY THE CATHODIC PROTECTION TEST POINT BY EITHER:
 - FOR IMPROVED AREAS,** IN A CAST IRON STREETBOX, IN ACCORDANCE WITH SA WATER DRG. 75 19. (REFER 4005-30007-01 FOR STREET BOX INSTALLATION).
 - OR
 - FOR UNIMPROVED AREAS,** ON A 90 x 90 PAR WOODEN POST, IN ACCORDANCE WITH SA WATER DRG. 75 10
10. AT THE ANODE A LENGTH OF DN40 PVC CONDUIT SHALL BE INSTALLED VERTICALLY, STARTING FROM DIRECTLY ABOVE THE ANODE AND FINISHING OPEN ENDED IN A FIBREGLASS GROUND BOX INSTALLED DIRECTLY ABOVE THE ANODE. WHERE THE ANODE IS INSTALLED IN THE ROADWAY A CAST IRON STREETBOX BE USED.
11. CABLE FROM THE ANODE TO THE CONNECTION JUNCTION BOX SHALL PASS UNBROKEN VIA THE GROUND BOX OR STREETBOX.
12. FOR FLANGE CABLE BONDING DETAILS REFER SA WATER DRG 75-10.
13. OPTIONS AVAILABLE FOR FITTINGS FOR CONNECTION TO PIPELINE (FLANGE/ SOCKET/ SPIGOT ENDS). REFER 4005-30005-09 AND APPROVED ITEMS CATALOGUE.
14. PRIOR TO CPC, CATHODIC PROTECTION POTENTIAL MEASUREMENTS AT TEST POINTS AND ANODE CURRENTS SHALL BE RECORDED.
15. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING AS CONSTRUCTED DOCUMENTATION TO THE SA WATER CATHODIC PROTECTION SPECIALIST:
 - THE CATHODIC PROTECTION POTENTIAL MEASUREMENTS AT TEST POINTS AND THE ANODE CURRENTS RECORDED AFTER COMMISSIONING THE SYSTEM.
 - AN 'AS CONSTRUCTED' DRAWING SHOWING ANODES, TEST POINTS, BONDING AND INSULATED FLANGES INCORPORATING DETAILED LOCATION OF ALL ITEMS.

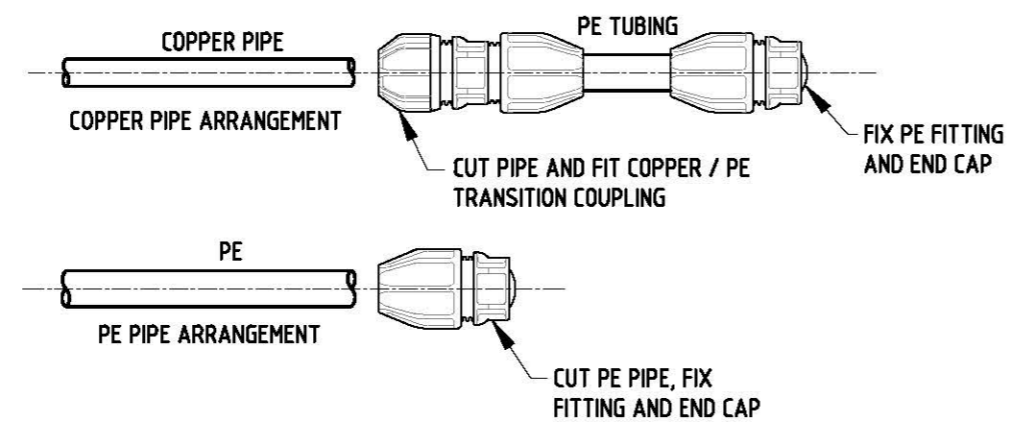
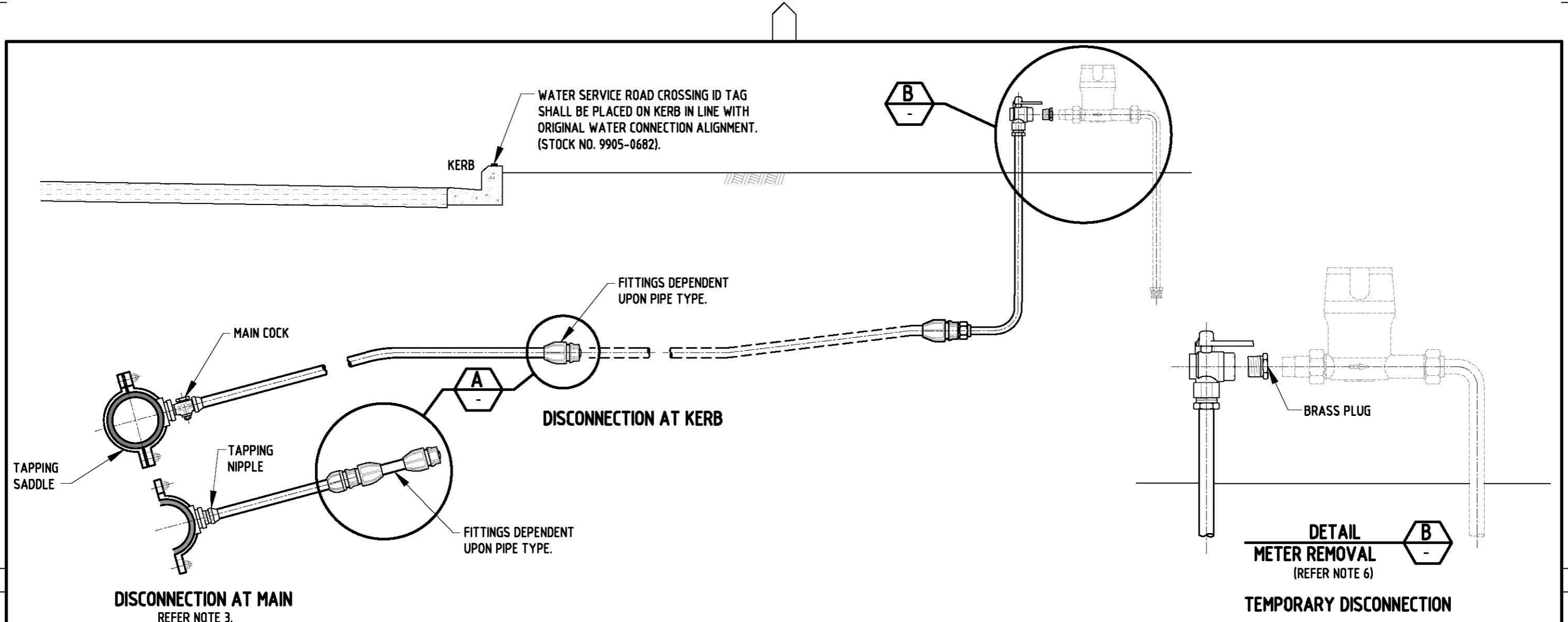
REVISION PANEL					
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORISED:
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	

DESIGN PANEL	
DESIGNED: 25/09/15 RJP	AUTHORISED: 31/03/16 T.GALEK
DRAWN: 16/11/15 MS	SIGNATURE: <i>T. Galek</i>
REVIEWED: 21/03/16 TG	

This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.

SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
CATHODIC PROTECTION
FOR WATER MAINS
TYPICAL DETAILS

A3	1
SHT SIZE	REVISION
TOTAL SHEETS:	
SUPERSEDES: H6, H7	
DRAWING NUMBER	
4005-30010-02	
PREFIX	NUMBER SHEET



DETAIL A
PE FITTINGS FOR END CAP

NOTES:

- REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
- THE PREFERRED METHOD FOR DISCONNECTION IS DISCONNECTION AT THE MAIN. APPROVAL OF THE SA WATER REPRESENTATIVE IS REQUIRED FOR DISCONNECTION AT THE KERB.
- FOR DISCONNECTION AT THE MAIN:
 - IF MAIN COCK INSTALLED:
 - TURN OFF,
 - DISCONNECT INSULATING ADAPTOR/ TAPPING NIPPLE,
 - IF TAPPING NIPPLE INSTALLED:
 - LEAVE SHORT LENGTH OF EXISTING PIPE - APPROX. 300,
 - FIT PE FITTINGS TO ACHIEVE PIPE END,
 - REFER DETAIL A FOR REQUIRED FITTINGS.
- FOR DISCONNECTION BEHIND KERB:
 - FITTINGS DEPENDENT UPON PIPE TYPE,
 - INSTALL AS SHOWN, REFER DETAIL A,
 - FIX ID TAG ON KERB FOR FUTURE CONFIRMATION OF DISCONNECTION LOCATION.
- FOR ALL DISCONNECTIONS, INLET RISER, METER, OUTLET RISER SHALL BE REMOVED.
- WHERE TEMPORARY REMOVAL OF METER REQUIRED, FIT HEX DR BRASS PLUG (BSP TAPERED THREAD) AND REMOVE METER AND OUTLET RISER.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
-	31/03/16	MS	2016 STANDARDS REVIEW	TG

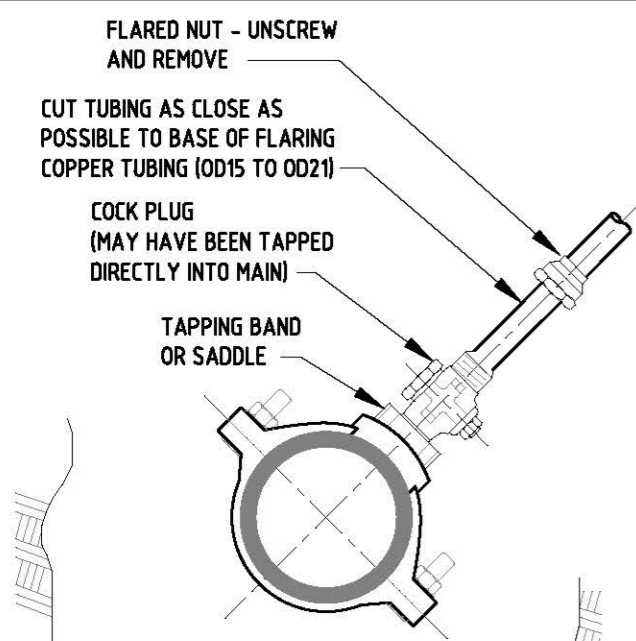
DESIGN PANEL	
DESIGNED: 28/09/15 RJP	AUTHORISED: 31/03/16 T.GALEK
DRAWN: 16/11/15 MS	SIGNATURE: <i>T. Galek</i>
REVIEWED: 21/03/16 TG	

SA Water

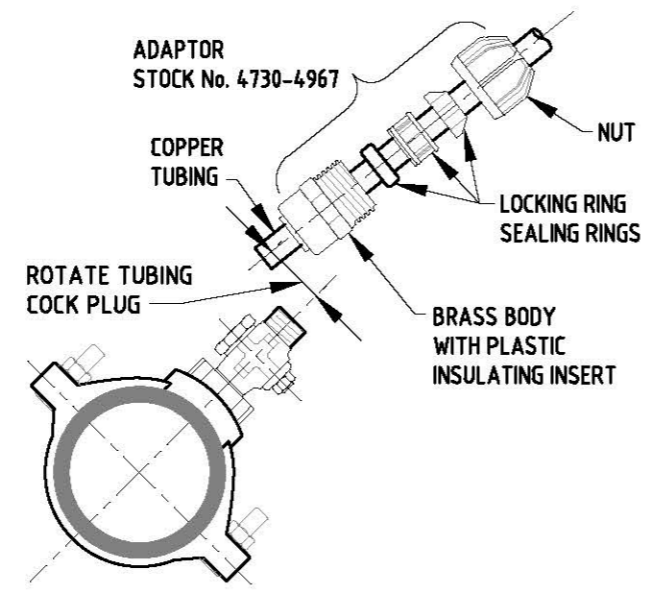
This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.

SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
WATER CONNECTIONS
DISCONNECTIONS
PERMANENT & TEMPORARY

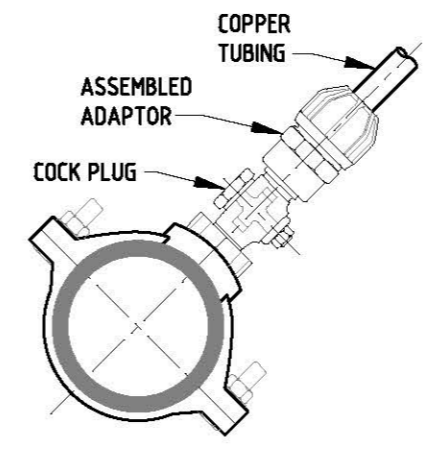
A3	1
SHT SIZE	REVISION
TOTAL SHEETS:	
SUPERSEDES: L3, L4	
DRAWING NUMBER	
4005-30010-03	
PREFIX	NUMBER SHEET



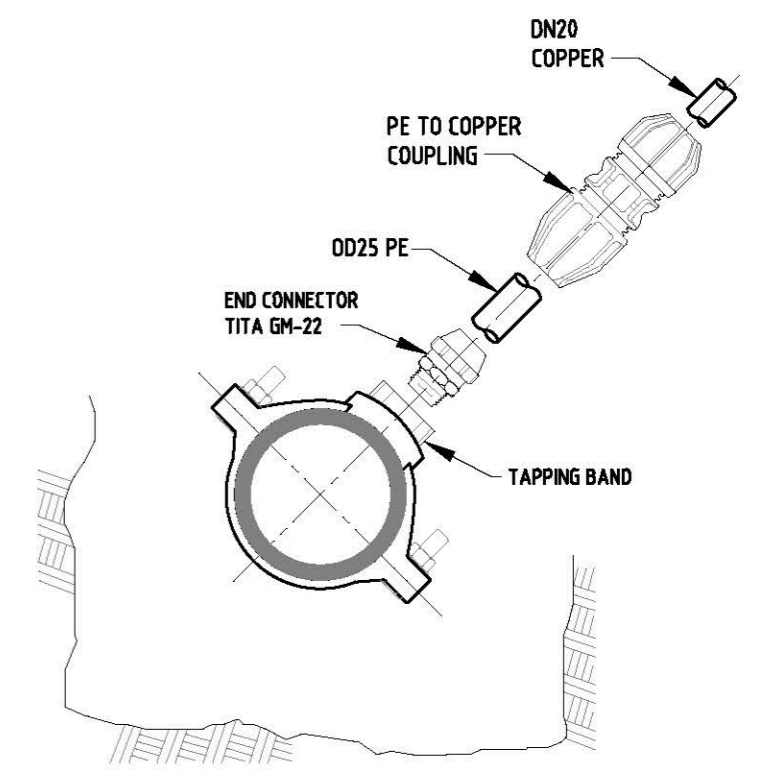
- STAGE 1**
1. EXPOSE CONNECTION.
 2. IF POSSIBLE TURN COCK PLUG OFF.
 3. UNSCREW FLARED NUT ON COCK PLUG.
 4. CUT TUBING AS CLOSE AS POSSIBLE TO BASE OF FLARE.



- STAGE 2**
5. ROTATE COPPER TUBING.
 6. REMOVE FLARED NUT AND TUBING FROM FLARE.
 7. THOROUGHLY CLEAN TUBING.
 8. SLIDE DISASSEMBLED ADAPTOR ONTO TUBING.



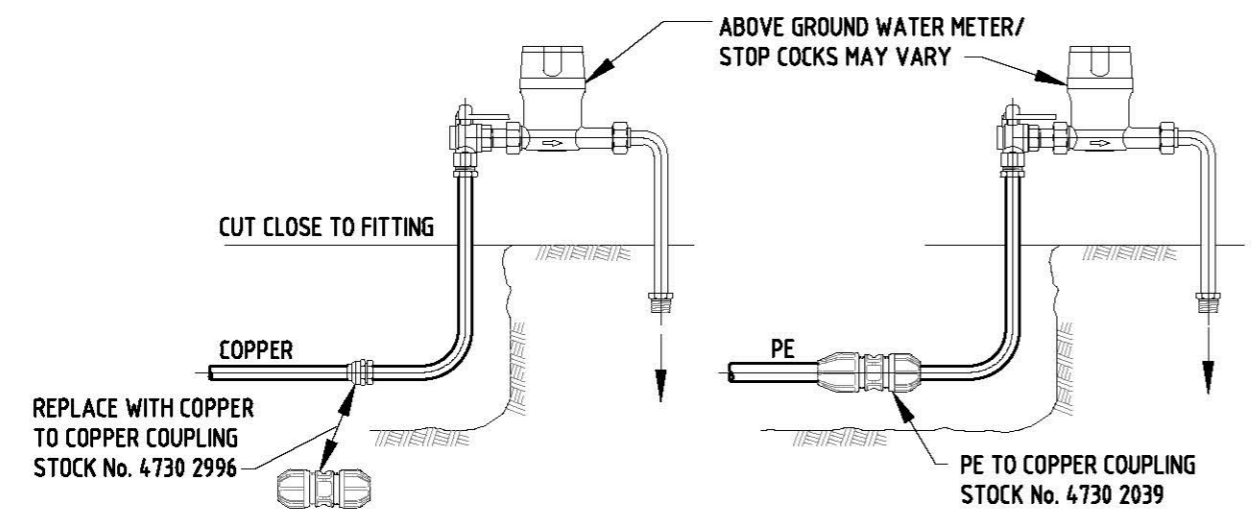
- STAGE 3**
9. RE-ALIGN COPPER TUBING WITH COCK PLUG.
 10. SLIDE BRASS BODY, WITH INSULATING INSERT, DOWN TUBING AND USING LOCTITE THREAD SCREW ONTO COCK PLUG.
 11. SLIDE REMAINING COMPONENTS DOWN TUBE AND SCREW NUT ONTO BRASS BODY.
 12. IF COCK PLUG OFF TURN ON.



NO MAINCOCK FITTED

WITH MAINCOCK FITTED

REPAIR OF DN20 COPPER WATER CONNECTION



REPAIR OF METER INLET

NOTES:

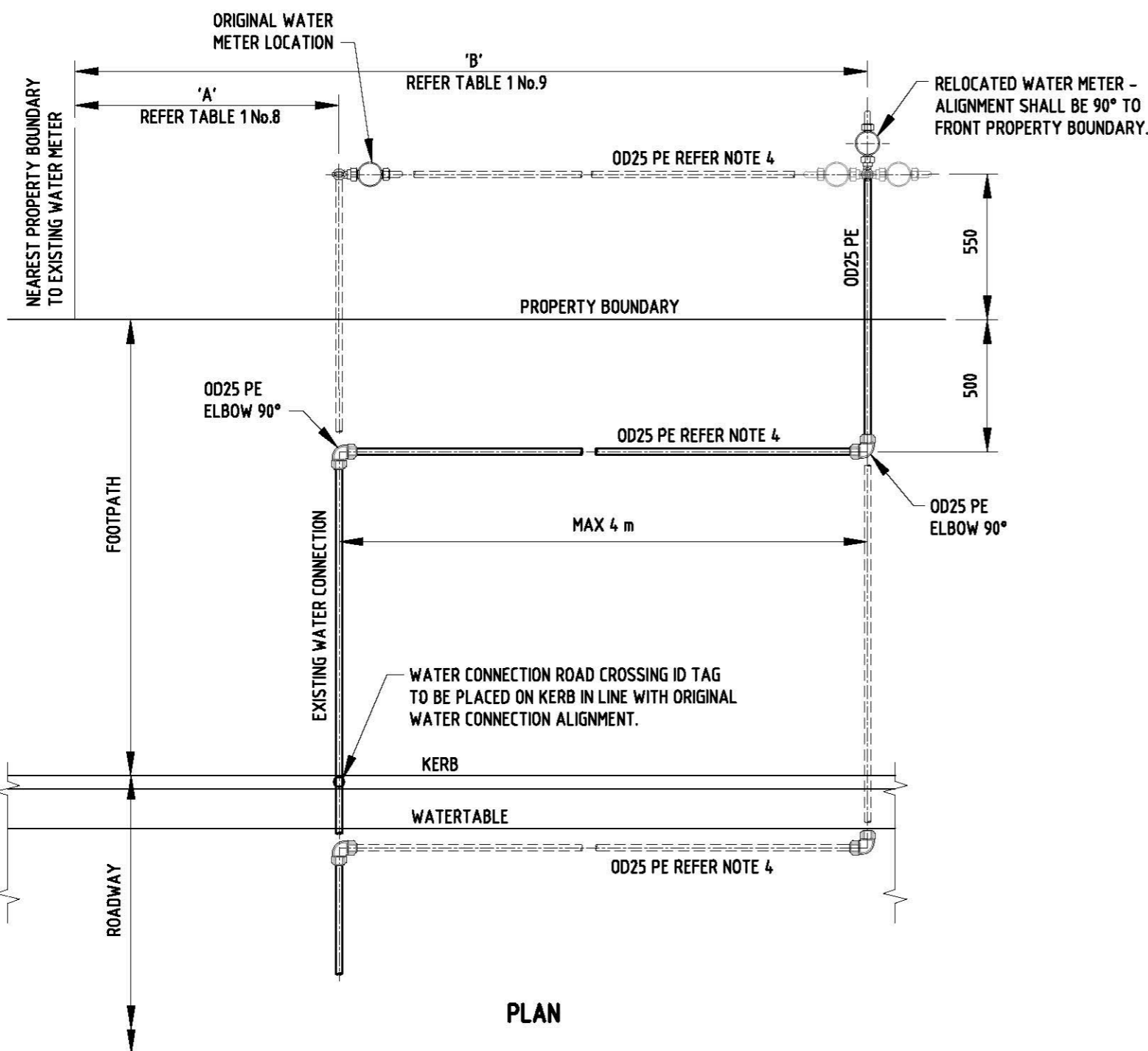
1. REFER 4005-30002-01 AND 4005-3002-02 FOR GENERAL NOTES.
2. SAFETY NOTE:
SAFETY - ELECTRICAL EARTH: CONNECT JUMPER LEADS UPSTREAM & DOWNSTREAM OF METER FITTING BEFORE REMOVING METER.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
1	31/03/16	MS	2016 STANDARDS REVIEW	TG

DESIGN PANEL	
DESIGNED: 28/09/15 RJP	AUTHORISED: 31/03/16 T.GALEK
DRAWN: 16/11/15 MS	SIGNATURE: <i>T. Galek</i>
REVIEWED: 21/03/16 TG	

SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
REPAIR OF
DN20 COPPER WATER CONNECTIONS

A3	1
SHT SIZE	REVISION
TOTAL SHEETS:	
SUPERSEDES: L1, L2	
DRAWING NUMBER	
4005-30010	-04
PREFIX	NUMBER SHEET



PLAN

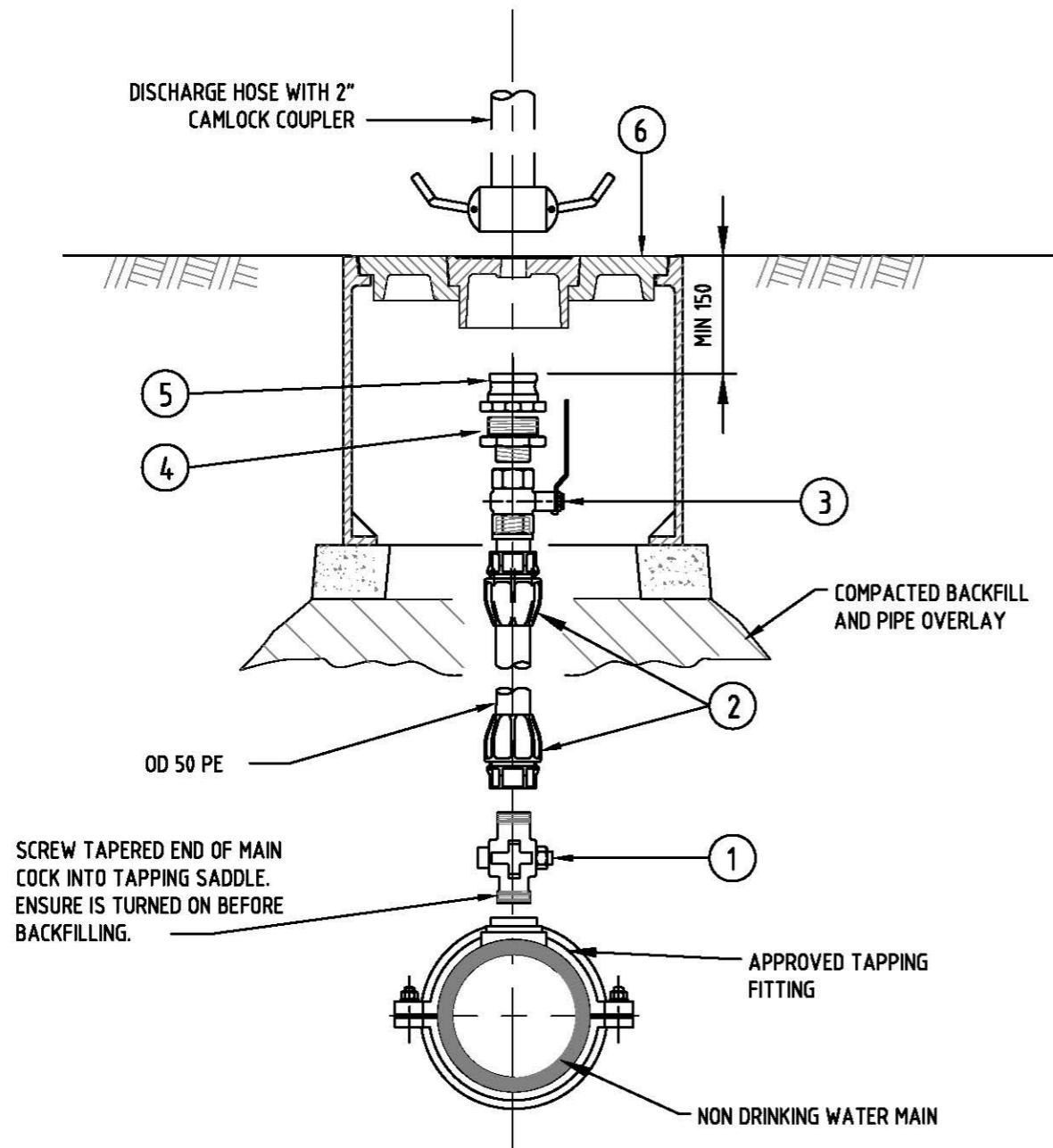
TABLE 1

No.	AS CONSTRUCTED DRAWING INFORMATION
1.	ADDRESS
2.	METER SIZE
3.	METER TYPE
4.	METER NUMBER
5.	ORIGINAL WATER CONNECTION PIPE DIAMETER
6.	ORIGINAL WATER CONNECTION PIPE MATERIAL TYPE
7.	WATER METER RELOCATED LEFT OR RIGHT
8.	LOCATION OF EXISTING INLET RISER - DISTANCE 'A'
9.	LOCATION OF RELOCATED INLET RISER - DISTANCE 'B'
10.	NEW PIPEWORK INSIDE / OUTSIDE FRONT BOUNDARY
11.	DISTANCE FROM FRONT BOUNDARY
12.	DEPTH OF NEW PIPEWORK

NOTES:

- REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
- CONNECTION (& METER) RELOCATION IS ONLY APPROVED FOR DN20 AND DN25 WATER METERS. **NO RELOCATION OF DN40 & DN50 METERS PERMITTED.**
- RELOCATION IS APPROVED FOR BOTH DRINKING WATER AND NON-DRINKING WATER SYSTEMS.
- THE OD25 PE PIPEWORK SHALL BE LAID IN FOOTPATH. SHOULD OTHER UTILITIES IMPACT COMPLIANCE WITH THIS REQUIREMENT, APPROVAL OF THE SA WATER REPRESENTATIVE SHALL BE SOUGHT FOR PERMISSION TO LOCATE PIPEWORK WITHIN THE PROPERTY (MAX 500 FROM FRONTAGE) OR WITHIN THE ROAD.
- DETECTABLE UNDERGROUND WARNING TAPE SHALL BE LAID APPROX 150 ABOVE OD25 PE PIPE. TAPE MARKINGS WILL BE DEPENDENT UPON THE DRINKING WATER SYSTEM.
- RELOCATION OF THE WATER CONNECTION OR WATER METER IS PERMITTED ONCE. A RELOCATED CONNECTION OR METER CANNOT BE MOVED.
- REFER 4005-30002-01 FOR GENERAL NOTES.
- REFER 4005-30006-01 FOR WATER CONNECTION NOTES & REQUIREMENTS.
- REFER 4005-30008-01 FOR FOR DN20 AND DN25 WATER METERS ASSEMBLY.
- FOR ALL RELOCATIONS:
THE CONTRACTOR SHALL PROVIDE THE SA WATER WITH AN 'AS CONSTRUCTED' DRAWING WITH REQUIRED DIMENSIONS & INFORMATION LISTED IN TABLE 1.
- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.

REVISION PANEL					DESIGN PANEL			<p>This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.</p>	SA WATER STANDARD DRAWINGS		A3 SHT SIZE	1 REVISION
REV	DATE	DRN	DETAILS	APR	DESIGNED: 28/09/15	AUTHORISED: 31/03/16	WATER SUPPLY CONSTRUCTION MANUAL		TOTAL SHEETS:			
					RJP	T.GALEK	WATER CONNECTION RELOCATION/ WATER METER RELOCATION		SUPERSEDES: K7, L6			
					DRAWN: 16/11/15	SIGNATURE: <i>T. Galek</i>	(DN20 & DN25 ONLY)		DRAWING NUMBER			
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	REVIEWED: 21/03/16	TG			4005-30010-05			
									PREFIX	NUMBER	SHEET	



**NON DRINKING WATER MAIN
AIR BLEED ASSEMBLY**

ITEM	DESCRIPTION	REMARKS
1	MAINCOCK (38 mm)	TURNT ON PRIOR TO BACKFILL
2	PE END CONNECTOR (FEMALE)	OD 50 x 1 1/2 "
3	DN 40 BALL VALVE	ZETCO SERIES 1298
4	REDUCING BUSH DR BRASS	2 1/2" BSP X 40mm SPIG - SOC BSP
5	2" CAMLOCK COUPLER (MALE)	
6	CI STREET BOX	

NOTES:

1. REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
2. REFER 4005-30005-11 FOR OD63 WATER MAIN.
3. REFER 4005-30006-05 FOR (TYPICAL) DN40 WATER CONNECTION DETAIL.
4. PIPE EMBEDMENT & TRENCH REINSTATEMENT SHALL BE IN ACCORDANCE WITH WSCM SECTION 3.
5. REFER WSCM SECTION 7 FOR STREET BOX INSTALLATION DETAILS.
6. THE INSTALLATION SHALL BE PERFORMED TO THE SATISFACTION OF THE SA WATER REPRESENTATIVE.

REVISION PANEL					DESIGN PANEL		SA WATER STANDARD DRAWINGS		A3		1
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORIZED:	DESIGNED:	AUTHORISED:	WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE	
1	25/11/16	RP	ISSUED			RP 25/11/16	16/12/16 T. GALEK	NON DRINKING WATER SYSTEM		TOTAL SHEETS: 1	
					SIGNATURE:	RP 25/11/16	SIGNATURE: <i>T. Galek</i>	RETRO FITTING OF AIR BLEED ASSEMBLY		SUPERSEDES: K5	
						REVIEWED: 16/12/16 TG				DRAWING NUMBER	
										4005-30010-06	
										PREFIX NUMBER SHEET	



This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.

**SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
NON DRINKING WATER SYSTEM
RETRO FITTING OF AIR BLEED ASSEMBLY**

A3
SHT SIZE
1
REVISION
TOTAL SHEETS: 1
SUPERSEDES: K5
DRAWING NUMBER
4005-30010-06
PREFIX NUMBER SHEET