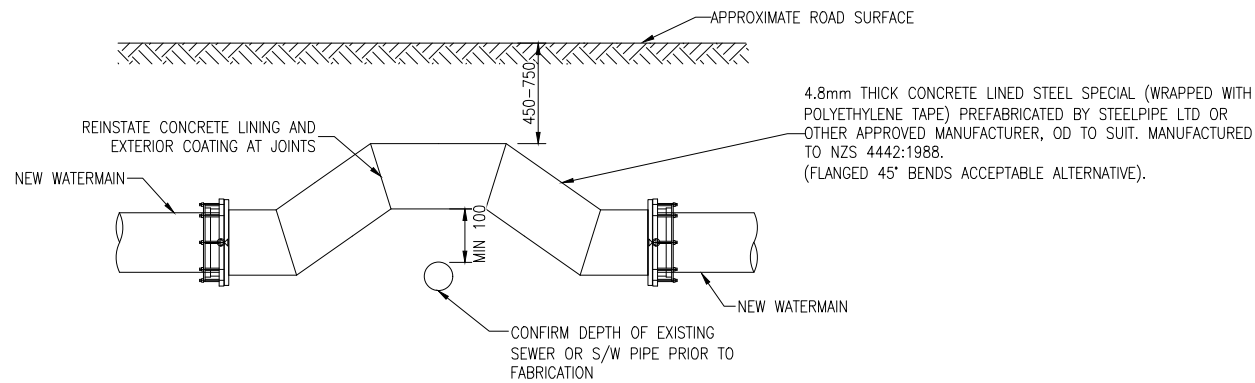
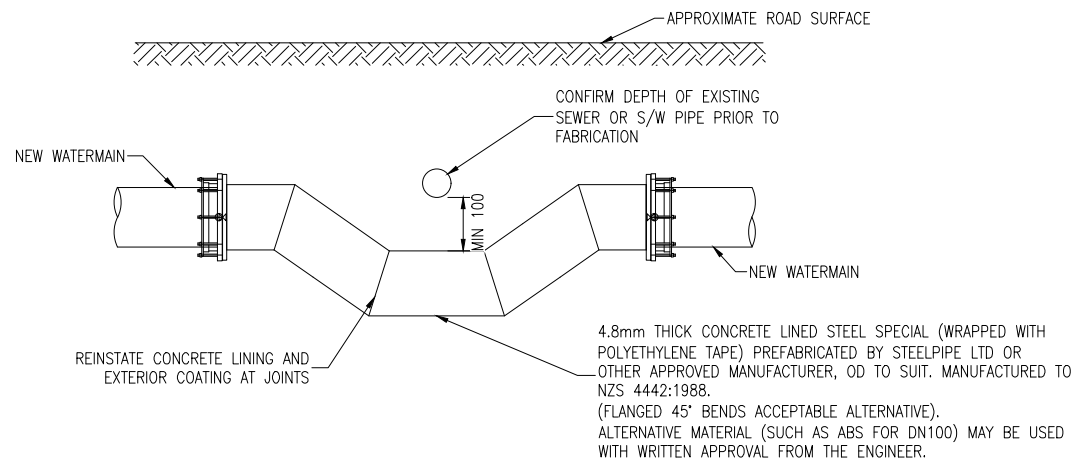


NOTE: AIR VALVE REQUIRED ONLY ON TRUNK MAINS  
(SEE DETAIL 3A SHEET 3)



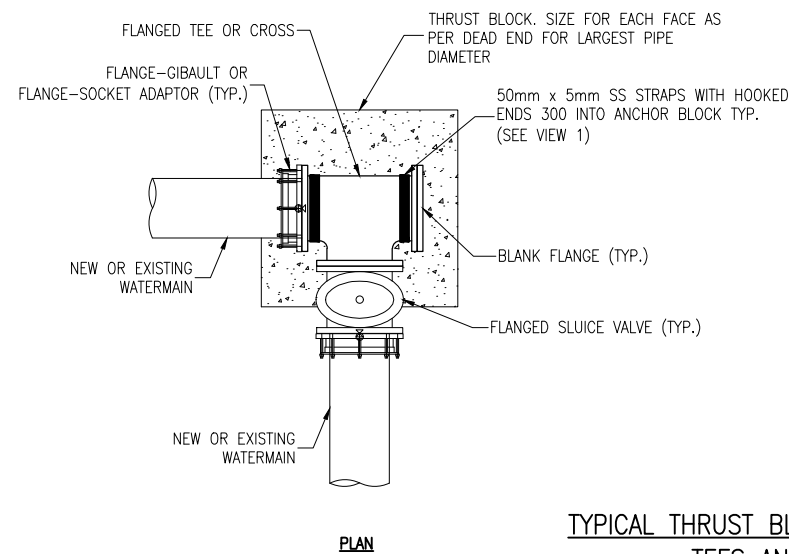
**DETAIL 1A**

**DEVIATION FOR NEW PVC-U WATERMAIN OVER EXISTING SEWER OR STORMWATER FOR DN 150 – DN 300 WHERE COVER IS < 750mm IN ROAD (ONLY TO BE USED WHEN DIRECTED BY THE ENGINEER.)**



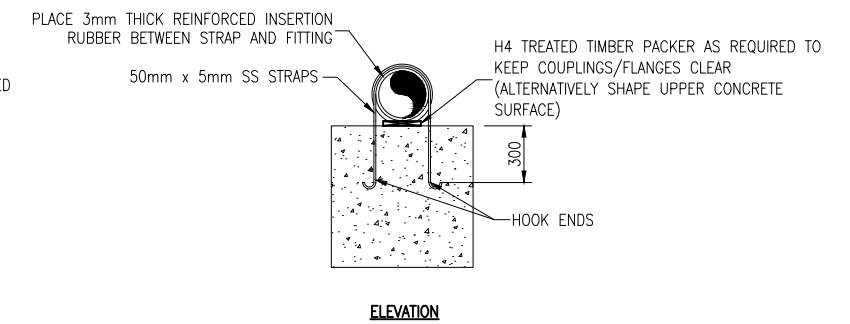
**DETAIL 1B**

**DEVIATION FOR NEW PVC-U WATERMAIN UNDER EXISTING SEWER OR STORMWATER FOR > DN 100 (ONLY TO BE USED WHEN DIRECTED BY THE ENGINEER.)**



**PLAN**

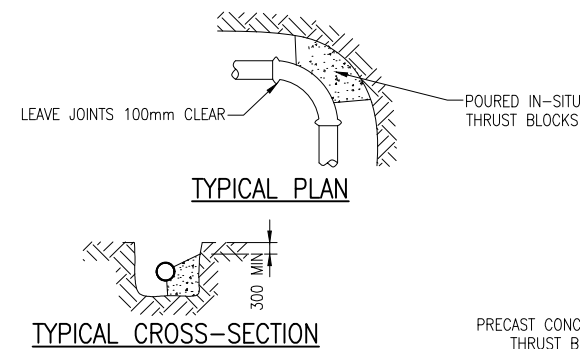
**DETAIL 1C**  
**TYPICAL THRUST BLOCK FOR VALVES BOLTED TO TEES AND CROSSES (PLAN)**



**ELEVATION**



**DETAIL 1F**  
**ALTERNATIVE: BOLTED BOMAC STRAP TO FLANGE NTS**

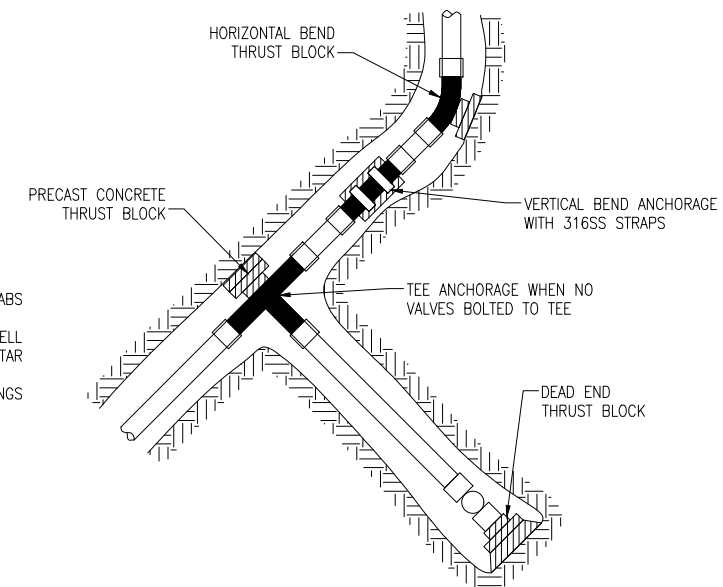


**TYPICAL PLAN**

**TYPICAL CROSS-SECTION**

**THRUST BLOCK NOTES:**

1. EITHER MASS CONCRETE OR PRECAST CONCRETE SLABS MAY BE USED.
2. IF PRECAST SLABS ARE USED THEY SHALL BE WELL BACKFILLED AND COMPACTED AND HAVE EPOXY MORTAR FILLER BETWEEN THE SLAB AND THE FITTING.
3. WHERE SPECIFIC SIZES ARE SHOWN ON THE DRAWINGS THESE TAKE PRECEDENCE.
4. REFER TO TDC DRAINAGE AND WATER SPECIFICATION FOR STANDARD TEST PRESSURE REQUIREMENT WHEN DESIGNING THRUST BLOCKS AND DENSO PROTECTION SYSTEM.



**DETAIL 1D**  
**TYPICAL THRUST BLOCKS (PLAN)**

1	WATER TANK COLLECTION DETAILS UPDATED				
H	CHANGES TO RURAL WATER TANK CONNECTION AND DETAIL	SSC		09/22	
G	CHANGES TO WATER SUPPLY SERVICE CONNECTION DETAILS	SSC		03/22	
F	CHANGE TO THRUST BLOCK NOTES & REMOVAL OF DETAIL	HEC		06/21	
E	CHANGES TO MANHOLE DETAIL	S.C		12/15	
D	THRUST BLOCK DETAIL	L.S		08/15	
C	TANK AIR GAP DETAIL	G.G		10/13	
B	RURAL TANK DETAIL	G.C		02/13	
1	DRAFT ISSUE	BMC		05/11	
	REVISION	BY	CHK	APP	DATE

SURVEY FILE:	WATER	INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A1):	1:20
DATA SOURCE:	DRAINAGE			SURVEYED	04/09	REDUCED SCALE (A3):	1:40
LEVEL DATUM:	ROADING			DESIGNED	04/09	PRODUCED BY:	
	PARKS			DESIGN CHECK	04/09	FOR:	
	ELEC.PWR			DRAWN			
	TELECOM			DRG CHECK			
	PLANNING			APPROVED			

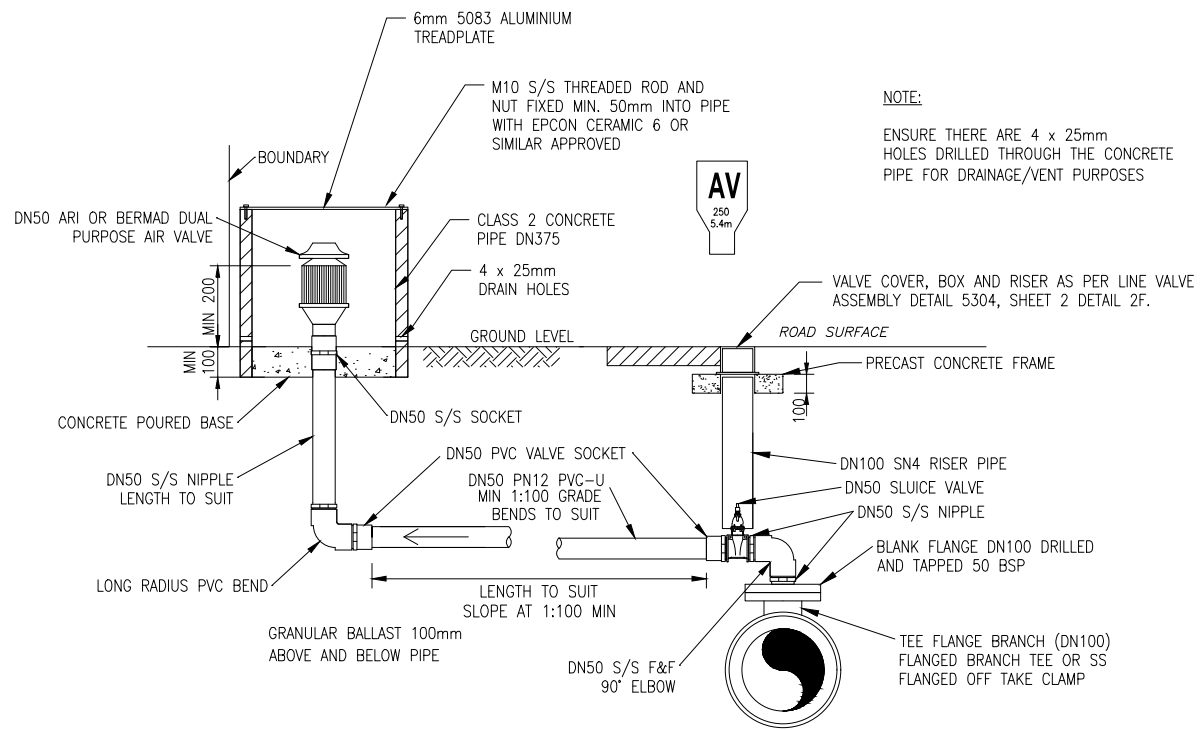
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**DRAINAGE AND WATER**  
**CODE OF PRACTICE**  
**STANDARD DETAILS**

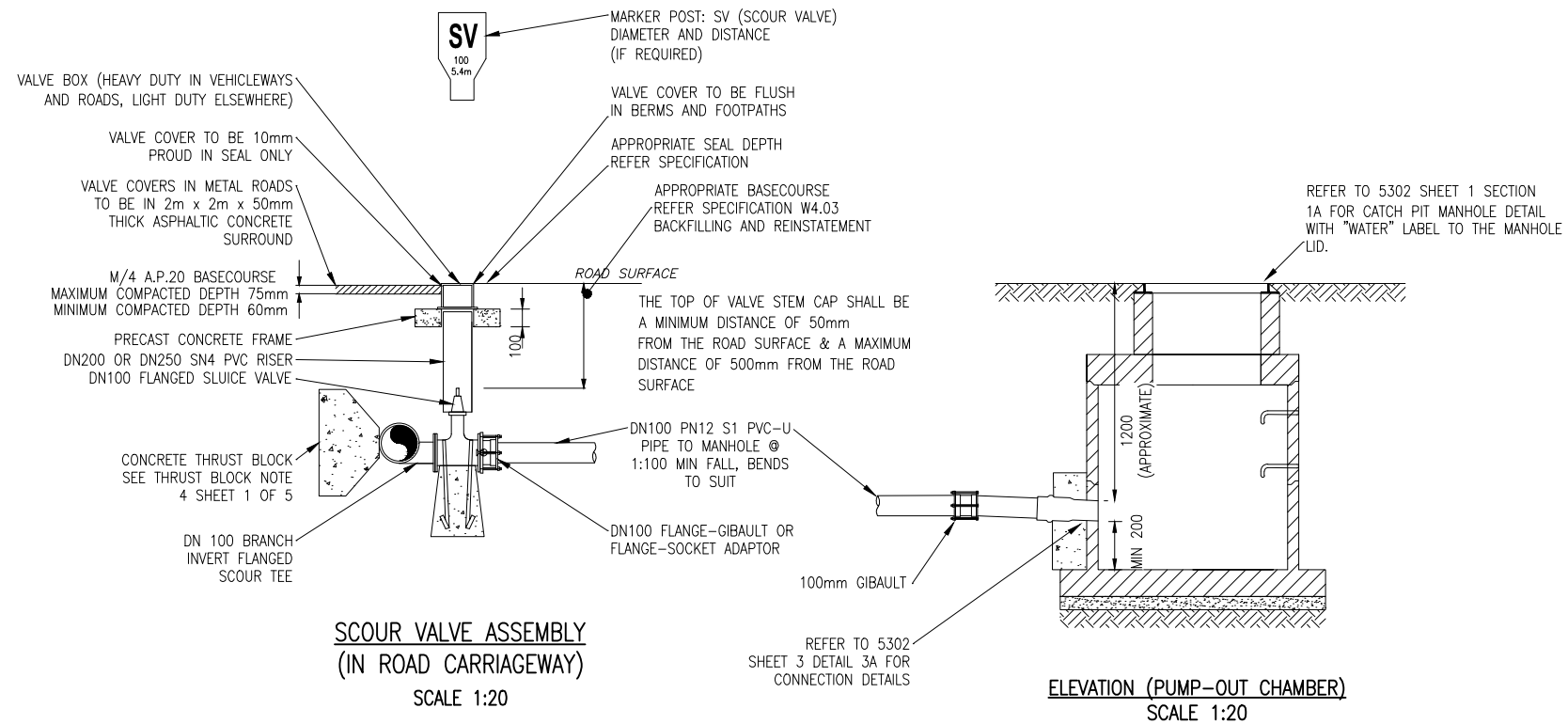
**WATER SUPPLY**  
**DEVIATIONS, ANCHORAGE, THRUST**  
**BLOCKS & JOINT WRAPPING DETAILS**

CONTRACT NUMBER:	5304	REVISION:	H
DRAWING NUMBER:	1	SHEET:	5





**DETAIL 3A**  
**TYPICAL OFFSET AIR VALVE INSTALLATION**  
 (RETICULATION MAIN DN100 - DN200)  
 SCALE 1:10

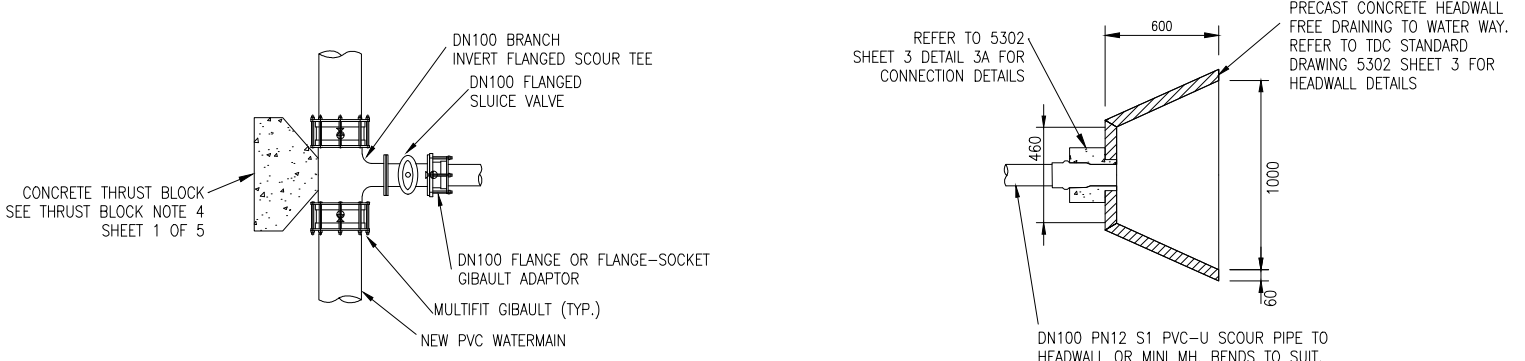


**SCOUR VALVE ASSEMBLY**  
 (IN ROAD CARRIAGEWAY)  
 SCALE 1:20

**ELEVATION (PUMP-OUT CHAMBER)**  
 SCALE 1:20

**GENERAL NOTES:**

1. ALL GIBAULTS, SLUICE VALVES, FIRE HYDRANTS AND DUCTILE IRON FITTINGS TO BE SUPPLIED WITH FACTORY APPLIED THERMALLY BONDED PROTECTIVE COATING TO AS/NZS 4158, RILSAN NYLON II OR SIMILAR APPROVED BY ENGINEER, UNLESS OTHERWISE SPECIFIED.
2. JOINT WRAPPING IS REQUIRED ON ALL JOINTS.
3. GEOTEXTILE CLOTH TO BE BIDIM A19 OR SIMILAR APPROVED. MINIMUM OVERLAP 300mm. TEXTILE TO EXTEND 300mm UP SIDES OF CHAMBERS UNLESS OTHERWISE SPECIFIED.
4. FLANGED RISERS AND HYDRANT TEES TO BE DUCTILE IRON (MIN 16 BAR) TO AS/NZS 2280 OR SIMILAR APPROVED UNLESS OTHERWISE SPECIFIED.
5. ALL SLUICE VALVES ARE TO BE RESILIENT SEAL (MIN 16 BAR) TO NZS/AS 2638.2 OR SIMILAR APPROVED UNLESS OTHERWISE SPECIFIED. DN50 SLUICE VALVES HAVE TYPICALLY BEEN SPECIFIED FOR CONNECTIONS TO RIDER MAINS.
6. AIR VALVES TO BE DUAL PURPOSE BERMAD/ARI OR SIMILAR APPROVED UNLESS OTHERWISE SPECIFIED.
7. FIRE HYDRANTS TO BE TALL PATTERN TO NZS/BS 750 UNLESS OTHERWISE SPECIFIED.
8. PRECAST CONCRETE HYDRANT RISERS AS SUPPLIED BY HUMES OR SIMILAR APPROVED UNLESS OTHERWISE SPECIFIED.
9. HYDRANT, AIR VALVE AND LINE VALVE COVERS ARE HEAVY DUTY OR SIMILAR APPROVED UNLESS OTHERWISE SPECIFIED.
10. MARKER POSTS ARE REQUIRED OUTSIDE TOWN LIMITS WHERE THE LOCATION MAY BE DIFFICULT TO IDENTIFY, OR WHERE IT MAY BE OBSCURED BY SNOW OR VEGETATION. CONTRACTOR TO CONFIRM WITH ENGINEER WHERE MARKER POSTS ARE REQUIRED.
11. AN ACCEPTABLE ALTERNATIVE FOR A HYDRANT TEE IS A NORTITE TEE (COMPATIBLE WITH SERIES 1 PVC) WITH FLANGED BRANCH.
12. TRAFFICABLE BOXES SHALL HAVE AN OPENING OF 225mm x 175mm.
13. ALL VALVE BOX COVERS TO BE ORIENTED SO THE LONGEST SIDE IS PARALLEL TO THE LINE OF THE WATERMAIN THE VALVE IS ATTACHED TO.



**PLAN (HEADWALL)**

**DETAIL 3B TYPICAL SCOUR VALVE DETAILS**  
 SCALE 1:20

1	WATER TANK COLLECTION DETAILS UPDATED				
H	CHANGES TO RURAL WATER TANK CONNECTION AND DETAIL	SSC		09/22	
G	CHANGES TO WATER SUPPLY SERVICE CONNECTION DETAILS	SSC		03/22	
F	CHANGE TO THRUST BLOCK NOTES & REMOVAL OF DETAIL	HEC		06/21	
E	CHANGES TO MANHOLE DETAIL	S.C		12/15	
D	THRUST BLOCK DETAIL	L.S		08/15	
C	TANK AIR GAP DETAIL	G.C		10/13	
B	RURAL TANK DETAIL	G.C		02/13	
1	DRAFT ISSUE	BMC		05/11	
	REVISION	BY	CHK	APP	DATE

SURVEY FILE:	WATER	INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A1):	AS SHOWN
DATA SOURCE:	DRAINAGE			SURVEYED	04/09	REDUCED SCALE (A3):	
LEVEL DATUM:	ROADING			DESIGNED	04/09	PRODUCED BY:	
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	ELEC.PWR			DRAWN			
	TELECOM			DRG CHECK			
	PLANNING			APPROVED			

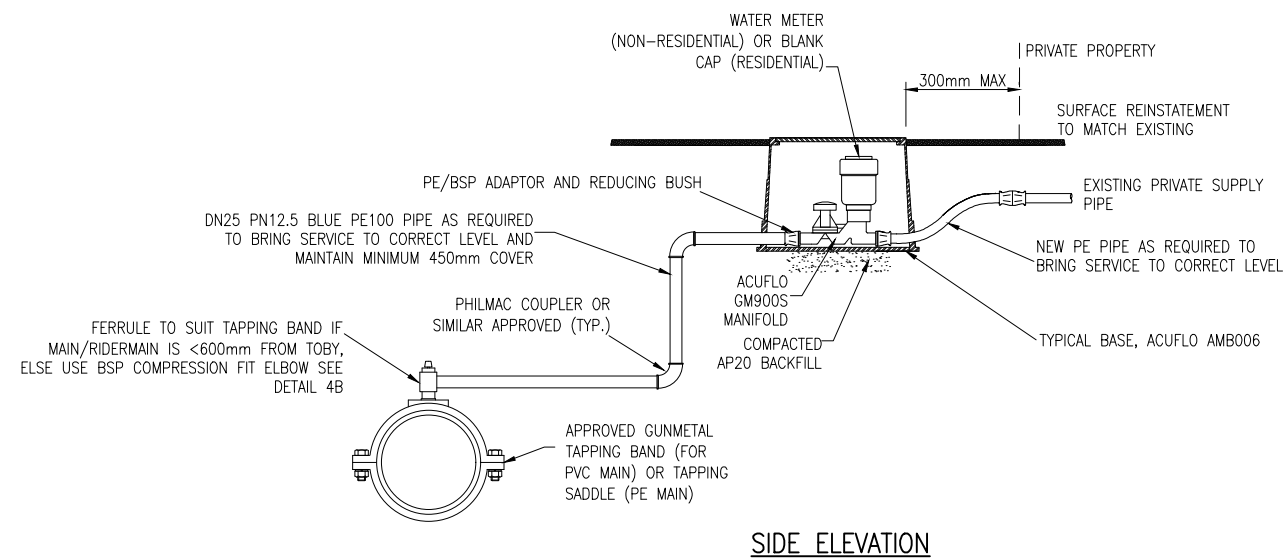
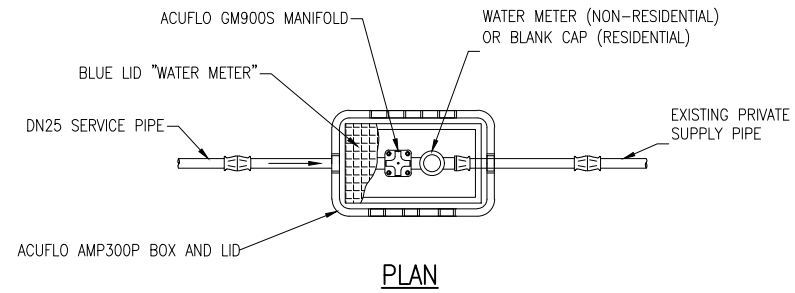
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 DISTRICT COUNCIL  
 Te Kaitiaki o Te Kaitiaki o Maru

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 2 King George Place  
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 Timaru 7940  
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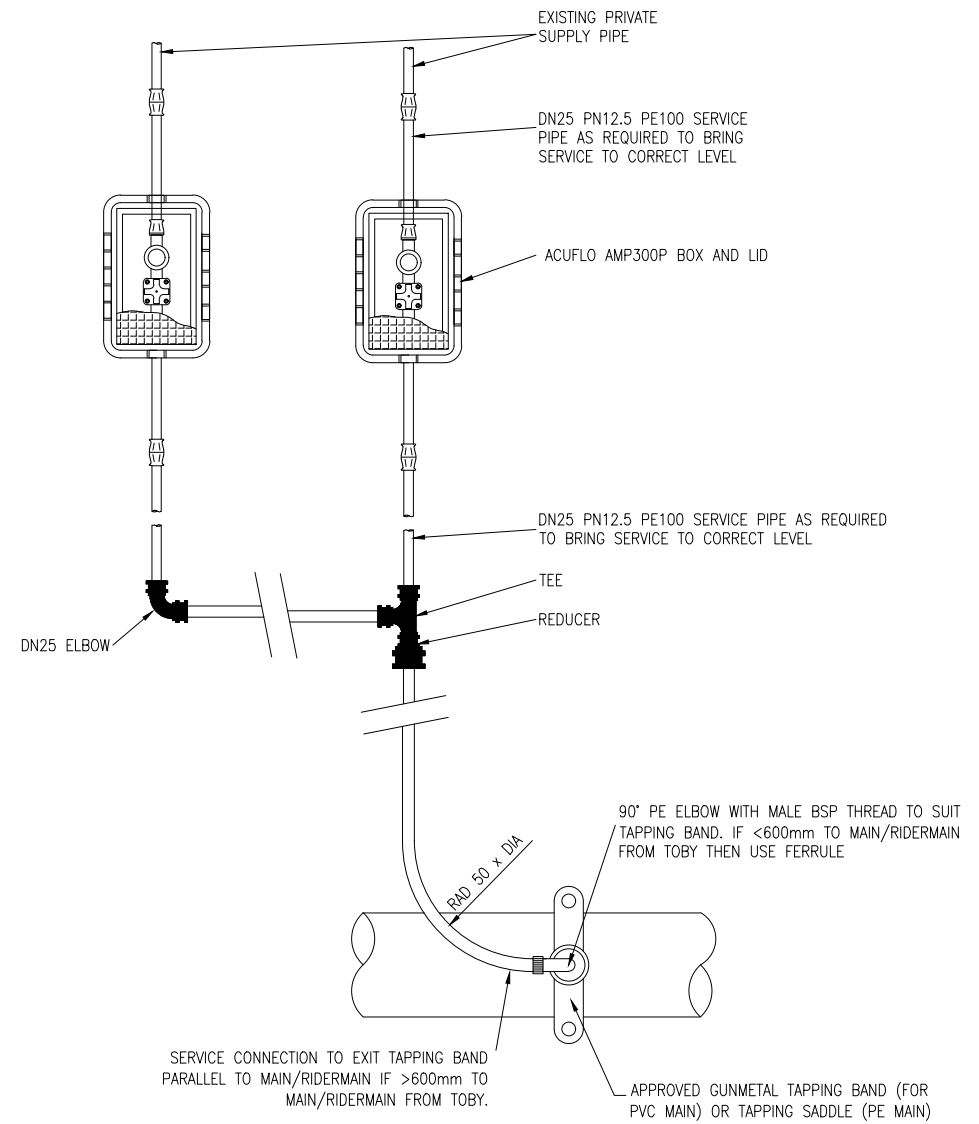
**DRAINAGE AND WATER**  
**CODE OF PRACTICE**  
**STANDARD DETAILS**

**WATER SUPPLY**  
**SCOUR & AIR VALVE**  
**INSTALLATION DETAILS**

CONTRACT NUMBER:	5304	REVISION:	H
DRAWING NUMBER:	3	OF	5



**DETAIL 4A**  
**TYPICAL SERVICE INSTALLATION**  
N.T.S.



**DETAIL 4B**  
**TYPICAL DUAL SERVICE INSTALLATION**  
N.T.S.

**GENERAL NOTES:**

1. USE 90° PE ELBOWS (PHILMAC OR SIMILAR APPROVED) AS REQUIRED TO BRING SERVICE TO CORRECT LEVEL AND MAINTAIN MINIMUM 450mm COVER UNDER FOOTPATHS.
2. TOBYS ARE TO BE INSTALLED OUTSIDE PRIVATE PROPERTY, BUT WITHIN 300mm OF THE PROPERTY BOUNDARY.
3. WHERE A METER IS REQUIRED, CONTRACTOR TO CONFIRM SIZE OF CONNECTION AND CONFIRM SIZE OF METER WITH ENGINEER.
4. DETAILS SHOWN ARE ACCEPTABLE SOLUTIONS. FUNCTIONALLY EQUIVALENT SOLUTIONS MAY BE PERMITTED SUBJECT TO ENGINEER'S WRITTEN APPROVAL.

**NOTE:**  
SERVICE CONNECTION TO EXIT TAPPING BAND PERPENDICULAR TO MAIN/RIDERMAIN IF <600mm TO MAIN/RIDERMAIN FROM TOBY.

I	WATER TANK COLLECTION DETAILS UPDATED				
H	CHANGES TO RURAL WATER TANK CONNECTION AND DETAIL	SSC		09/22	
G	CHANGES TO WATER SUPPLY SERVICE CONNECTION DETAILS	SSC		03/22	
F	CHANGE TO THRUST BLOCK NOTES & REMOVAL OF DETAIL	HEC		06/21	
E	CHANGES TO MANHOLE DETAIL	S.C		12/15	
D	THRUST BLOCK DETAIL	L.S		08/15	
C	TANK AIR GAP DETAIL	G.C		10/13	
B	RURAL TANK DETAIL	G.C		02/13	
1	DRAFT ISSUE	BMC		05/11	
	REVISION	BY	CHK	APP	DATE

SURVEY FILE:	INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A1):	AS SHOWN
DATA SOURCE:	WATER		SURVEYED	-	04/09	
LEVEL DATUM:	DRAINAGE		DESIGNED	RRP	04/09	
	ROADING		DESIGN CHECK	ANW	04/09	
	PARKS		DRAWN	RRP		
	ELEC.PWR		DRG CHECK	AD		
	TELECOM		APPROVED			
	PLANNING	04/09				

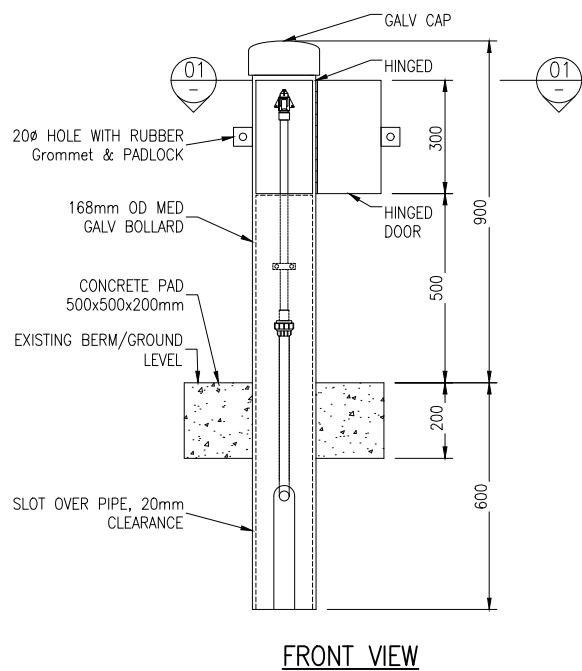
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Te Kaitiaki  
Te Kaitiaki

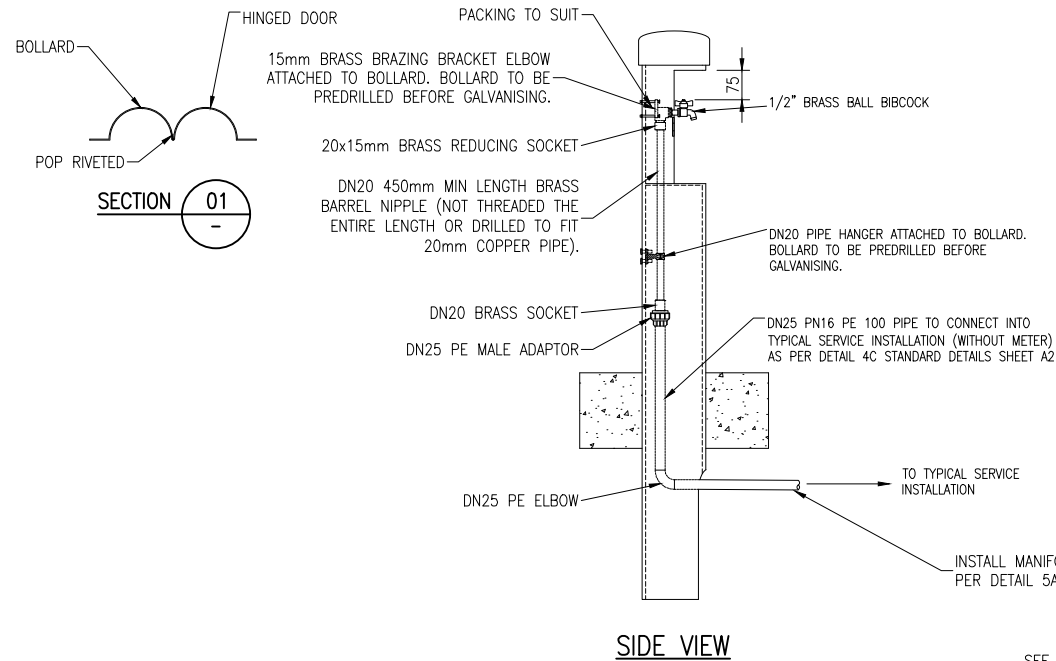
**DRAINAGE AND WATER**  
**CODE OF PRACTICE**  
**STANDARD DETAILS**

**WATER SUPPLY**  
**SERVICE CONNECTION**  
**DETAILS**

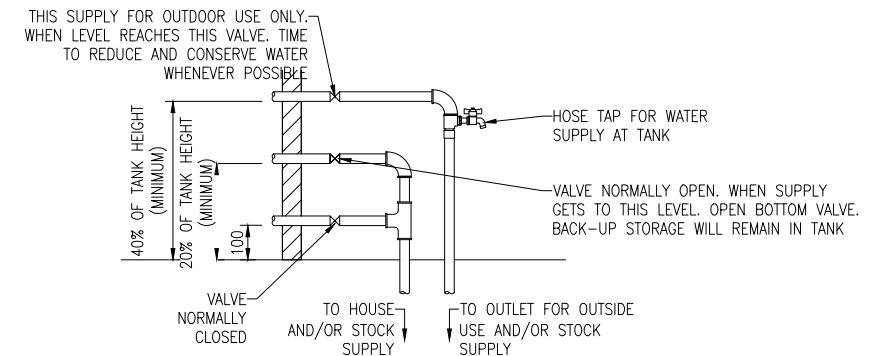
CONTRACT NUMBER:	
DRAWING NUMBER:	<b>5304</b>
REVISION:	<b>H</b>
SHEET:	4 OF 5



FRONT VIEW

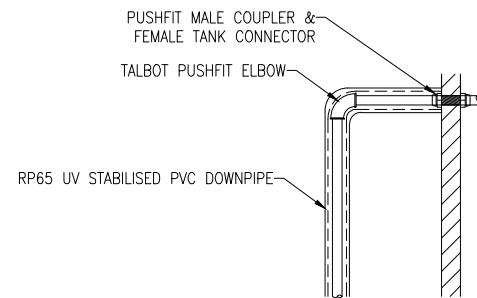


SIDE VIEW

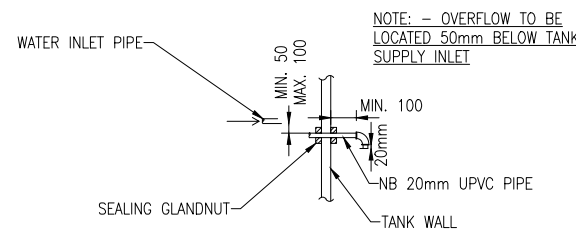


DETAIL 5D  
WATER TANK DETAIL  
SCALE 1:10

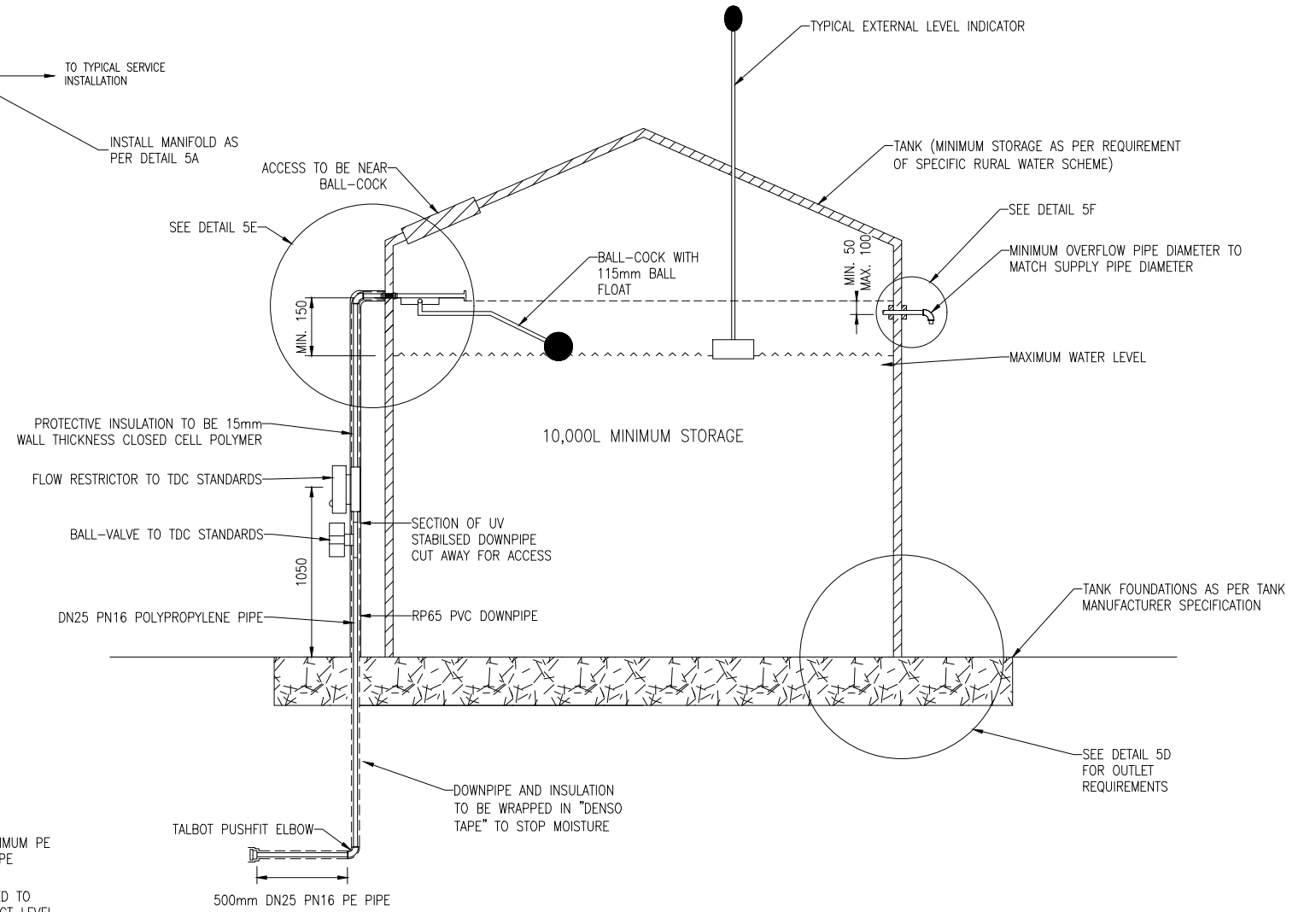
DETAIL 5B  
TYPICAL RETICULATION SAMPLE TAP  
SCALE 1:10



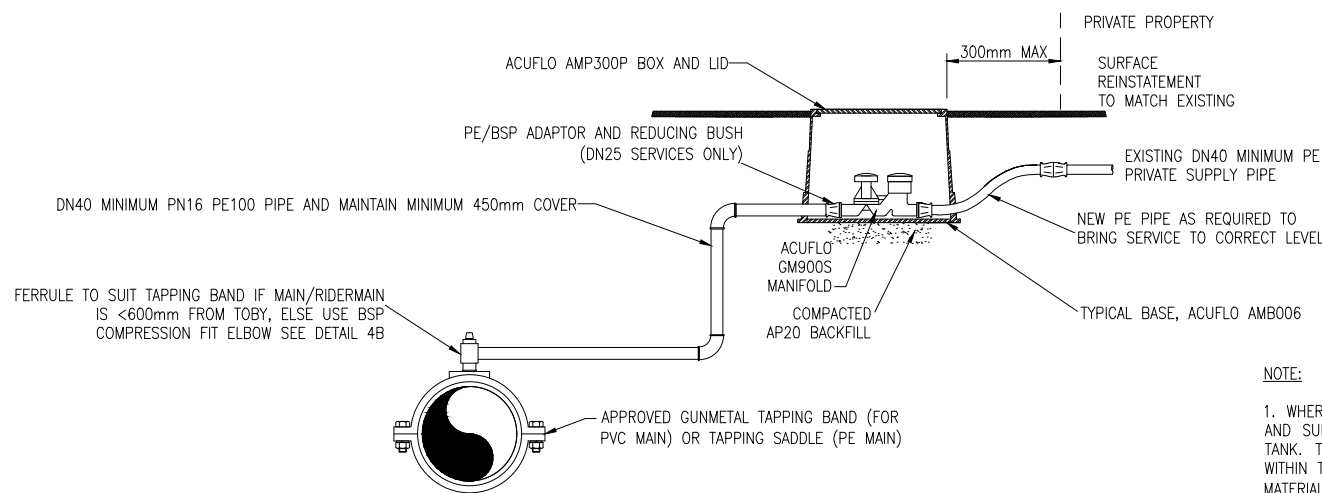
DETAIL 5E  
TANK WALL DETAIL  
SCALE 1:10



DETAIL 5F  
RURAL TANK OVER FLOW OUTLET  
SCALE 1:10



DETAIL 5C  
WATER TANK DETAIL  
SCALE 1:20



DETAIL 5A  
WATER TANK CONNECTION  
SCALE 1:10

NOTE:  
1. WHERE THE MAIN IS LOCATED WITHIN THE ROAD RESERVE A MANIFOLD AND SURFACE COVER WILL BE INSTALLED ON THE SERVICE LINE TO THE TANK. THE POSITION OF THE MANIFOLD AND SURFACE COVER WILL BE WITHIN THE ROAD RESERVE AND 300mm FROM THE ROAD BOUNDARY. ALL MATERIAL AND FITTINGS TO COMPLY WITH AS/NZS 4020: 2002.  
2. TIMARU DISTRICT COUNCIL OPERATE AND MAINTAIN UPTO AND INCLUDING THE BALL-COCK. THE TANK IS TO BE SUPPLIED AND INSTALLED BY THE LAND OWNER.

I	CHANGES TO WATER TANK CONNECTION DETAILS	B.K	01/25
H	CHANGES TO RURAL WATER TANK CONNECTION AND DETAIL	B.S.C	09/22
G	CHANGES TO WATER SUPPLY SERVICE CONNECTION DETAILS	S.C	03/22
F	CHANGE TO THRUST BLOCK NOTES & REMOVAL OF DETAIL	H.E.C	06/21
E	CHANGES TO MANHOLE DETAIL	S.C	12/15
D	THRUST BLOCK DETAIL	L.S	08/15
C	TANK AIR GAP DETAIL	G.C	10/13
B	RURAL TANK DETAIL	G.C	02/13
1	DRAFT ISSUE	B.M.C	05/11
	REVISION	BY	CHK APP DATE

INITIAL	DATE	SURVEYED	NAME	DATE	ORIGINAL SCALE (A1):	REDUCED SCALE (A3):	PRODUCED BY:
							AS SHOWN

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DRAINAGE AND WATER  
CODE OF PRACTICE  
STANDARD DETAILS

WATER SUPPLY - RURAL WATER  
CONNECTION / TANK DETAILS &  
RETICULATION SAMPLING TAP DETAIL

CONTRACT NUMBER:  
DRAWING NUMBER:  
**5304**  
SHEET 5 OF 5  
REVISION:  
**I**