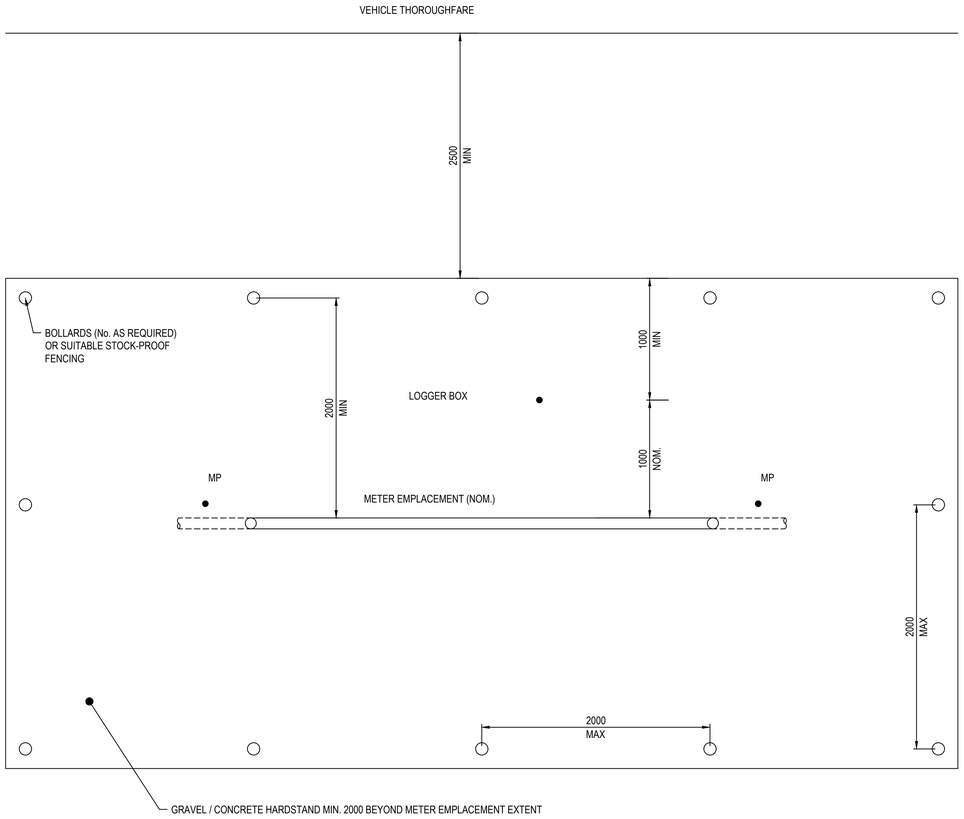
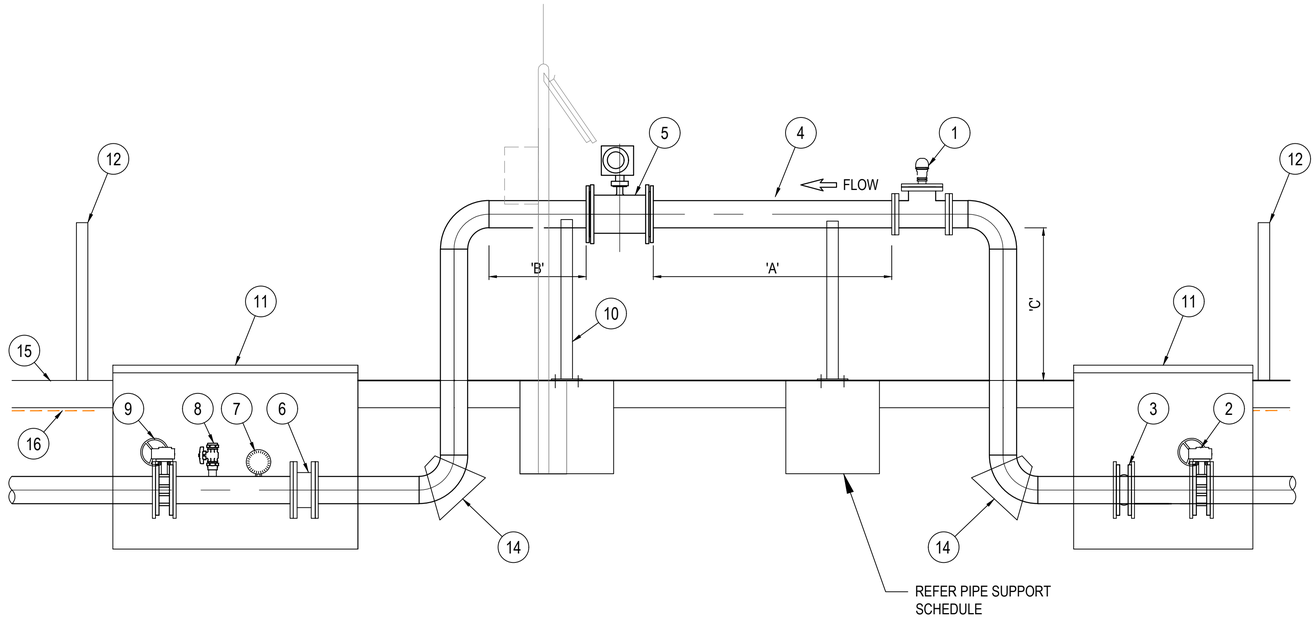


SITE PLAN

NOT TO SCALE



ABOVE GROUND ASSEMBLY

NOT TO SCALE

NOTES:

- THE DRAWINGS AND CHECKLISTS ARE GUIDELINES ONLY AND INDICATIVE OF THE RECOMMENDED BEST-PRACTICES THAT SHOULD BE CONSIDERED DURING METER INSTALLATION. THESE DRAWINGS ARE NOT TO SCALE, AND ANY INSTALLATION WILL NEED TO BE MODIFIED TO MEET SITE CONDITIONS.
- ITEMS SHADED GREY ARE INDICATIVE ONLY AND NON-PRESCRIPTIVE
- REFER TO DRAWING 25026-CI-1007 FOR LID ASSEMBLY
- STANDARD DRAWINGS APPLICABLE TO DN100 - DN600 METERS ONLY. METERS > DN600 REQUIRE SITE-SPECIFIC ENGINEERED DESIGNS.
- UNITS ARE IN MILLIMETRES U.N.O.
- RECOMMENDED PRINTING SIZE A3

PIPE SUPPORT SCHEDULE (ABOVE GROUND)

	Ø100-300mm PIPE	Ø301-600mm PIPE
SUPPORT MEMBER	50X5 SHS	100X5 SHS
FOOTING	Ø450 x 1000D PIER	Ø650 x 1000D PIER
MAX. SPACING	3000	4000

MATERIALS SCHEDULE

ITEM NO.	ITEM	DESCRIPTION
1	AIR VALVE	SIZED AS REQUIRED FOR DESIGN FLOW RATE, INCLUSIVE OF ISOLATION BALL VALVE. AIR VALVE AND BALL VALVE ASSEMBLY TO BE MOUNTED ATOP A BLANK PLATED EQUAL TEE TO ADVANTAGE AIR CAPTURE.
2	UPSTREAM ISOLATION VALVE	TYPE (E.G. GATE, BUTTERFLY, BALL, GLOBE, ETC.) AS REQUIRED FOR APPLICATION. THE VALVE MUST LOCKED AT 100% OPEN DURING NORMAL OPERATION, TO MAINTAIN METER ACCURACY.
3	RUBBER FLEXIBLE JOINT	JOINT TO ELIMINATE THERMAL PIPE MOVEMENT STRESSES AND MINIMISE VIBRATION TRANSFER TO METER BODY. TYPE DETERMINED BY PIPE MATERIAL AND APPLICATION
4	PIPEWORK	STRAIGHT LENGTH OF PIPE FREE FROM DISTURBANCES (LENGTH AS PER TABLE OF DIMENSIONS). ID OF PIPE MUST EQUAL METER ID. CORROSION-RESISTANT MATERIALS INCLUDE STAINLESS STEEL, ALUMINIUM, COPPER, BRONZE AS PER SPECIFICATIONS OF AS4747.2. FLEXIBLE PIPES MAY BE USED E.G. HDPE, ABS, PVC HOWEVER THE DESIGN IS TO ENSURE THAT THE METER EMPLACEMENT AND METER ACCURACY IS NOT IMPACTED BY THERMAL EFFECTS (TEMPERATURE CHANGES OF PIPEWORK, FITTINGS AND WATER CONVEYED), AND THE METER BODY IS NOT EXPOSED TO STRESSES FROM EXPANSION/CONTRACTION OF THE SURROUNDING PIPEWORK.
5	METER	PATTERN-APPROVED METER
6	CHECK VALVE	ONE-WAY CHECK VALVE PREVENTING REVERSE FLOW AND ENSURE METER EMPLACEMENT REMAINS FULL
7	PRESSURE GAUGE	100MM DIAMETER FACE, LIQUID FILLED ANALOGUE PRESSURE GAUGE, LOCATED DOWNSTREAM OF METER EMPLACEMENT
8	INSPECTION PORT	DN50 TAPPING AND BALL VALVE INSPECTION PORT, LOCATED DOWNSTREAM OF METER EMPLACEMENT
9	DOWNSTREAM ISOLATION VALVE	TYPE (E.G. GATE, BUTTERFLY, BALL, GLOBE, ETC.) AS REQUIRED FOR APPLICATION
10	PIPE SUPPORTS	CORROSION-RESISTANT PIPE SUPPORTS DESIGNED FOR APPLICATION, MOUNTED ON SUITABLE FOOTING. NUMBER AND SPACING AS PER DESIGN
11	PIT	TRAFFICABLE PIT, COVER CLASS AS PER DESIGN IN CONSIDERATION OF EXPECTED LOCAL TRAFFIC LOADS. PIT DIMENSIONS, AS REQUIRED TO SUIT SITE.
12	MARKER POST	GENERALLY CONSISTENT WITH WSAA DWG WAT-1300, BLUE OR WHITE IN COLOUR, MIN. 900MM HIGH (ABOVE-GROUND) AND CORROSION RESISTANT (350MM MIN. EMBEDMENT IN GROUND)
13	BOLLARDS	1200MM HIGH, CONCRETE FILLED, DN100 HEAVY WALL HDG STEEL PIPE PAINTED WHITE OR YELLOW. NUMBER AS REQUIRED FOR PROTECTION FROM VEHICLE THOROUGHFARE. Ø450MM, 600MM DEEP MASS CONCRETE (N20, 20MM) FOOTING
14	THRUST BLOCKS	CONCRETE THRUST BLOCKS AS PER DESIGN IN ACCORDANCE WITH WAT-1205
15	HARD STAND	200MM DEPTH OF GRAVEL E.G. 20MM FINE CRUSHED ROCK, OR MIN. 20MPa CONCRETE SLAB TO AS 3600, FOR MINIMUM 2M BEYOND METER EMPLACEMENT EXTENTS
16	MARKING TAPE	DETECTABLE, COMPLYING WITH AS 2648.1, MINIMUM WIDTH OF 100MM WITH INSCRIPTION "DANGER BURIED WATER MAIN BELOW"
17	PIT SUPPORTS	200X50 REDGUM SLEEPERS TO WIDTH OF PIT +500MM TO BE PLACED UNDER BOTH ENDS OF PIT TO MINIMISE PIT SUBSIDENCE

TABLE OF DIMENSIONS

DIMENSION	DESCRIPTION	APPLICATION	VALUE
A	STRAIGHT PIPE LENGTH OF UNIFORM CIRCULAR CROSS SECTION, FREE FROM FLOW DISTURBANCES* - UPSTREAM OF METER	AS LONG AS PRACTICABLE BEFORE METER UNIT, IN EXCESS OF (BY APPLICATION):	
		MINIMUM	10 X METER ID
		METER EMPLACEMENT DIAMETER SMALLER THAN SURROUNDING PIPEWORK	10 X METER ID
		METER EMPLACEMENT DIAMETER LARGER THAN SURROUNDING PIPEWORK	20 X METER ID
		PIPE CHANGE IN DIRECTION (SINGLE OR MULTIPLE), BEND/S ON SAME PLANE	15 X METER ID
		PIPE CHANGE IN DIRECTION (SINGLE OR MULTIPLE), BEND/S OUT OF PLANE	40 X METER ID
		METER EMPLACEMENT AFTER PUMP	30 X METER ID
B	STRAIGHT PIPE LENGTH OF UNIFORM CIRCULAR CROSS SECTION, FREE FROM FLOW DISTURBANCES* - DOWNSTREAM OF METER	AS LONG AS PRACTICABLE AFTER METER UNIT, IN EXCESS OF (BY APPLICATION):	
		MINIMUM	5 X METER ID
		METER EMPLACEMENT DIAMETER SMALLER THAN SURROUNDING PIPEWORK	5 X METER ID
		METER EMPLACEMENT DIAMETER LARGER THAN SURROUNDING PIPEWORK	5 X METER ID
		PIPE CHANGE IN DIRECTION (SINGLE OR MULTIPLE), BEND/S ON SAME PLANE	5 X METER ID
		PIPE CHANGE IN DIRECTION (SINGLE OR MULTIPLE), BEND/S OUT OF PLANE	5 X METER ID
		METER EMPLACEMENT AFTER PUMP	5 X METER ID
C	METER EMPLACEMENT CLEARANCE	MINIMUM CLEARANCE FROM GROUND LEVEL TO UNDERSIDE OF PIPE	MIN. 600MM
D	METER EMPLACEMENT DEPTH OF COVER	DEPTH OF COVER TO TOP OF METER EMPLACEMENT PIPE & METER	MIN. 600MM
	* DISTURBANCES INCLUDE: VALVES, VALVES PARTIALLY OPENED, THROTTLING DEVICES, FLOW STRAIGHTENERS, SCREENS, T & Y JUNCTIONS, CHECK VALVES, BENDS (SINGLE OR MULTIPLE; IN AND OUT OF PLANE), PUMPS, TAPPINGS, CHANGES IN DIAMETER, PROTRUSIONS INTO THE INTERNAL PIPEWORK E.G. WELD BEADS, GASKETS, MISALIGNED FITTINGS/JOINTS, TAPPINGS, PROBES, ETC.		

Rev.	Date	Description
A	31/01/25	FOR INFORMATION

NSW

Client: DEPARTMENT OF CLIMATE CHANGE, ENERGY, THE ENVIRONMENT & WATER

Project: NON-URBAN WATER METERING - STANDARD DESIGNS

Title: SURFACE WATER METER ASSEMBLY & DETAILS HYBRID PUB25/508 (FLOW METER ABOVE AND INSTALL BELOW)

Status: AN INSTALLATION GUIDE FOR DEMONSTRATION PURPOSES

Drawing Number: 25026-CI-1006

Revision: A