

TABLE 307-A: MAINS REQUIRING SCOURS

WATER AGENCY	MAIN SIZE
CWW or YVW	≥DN300
SEW	≥DN600

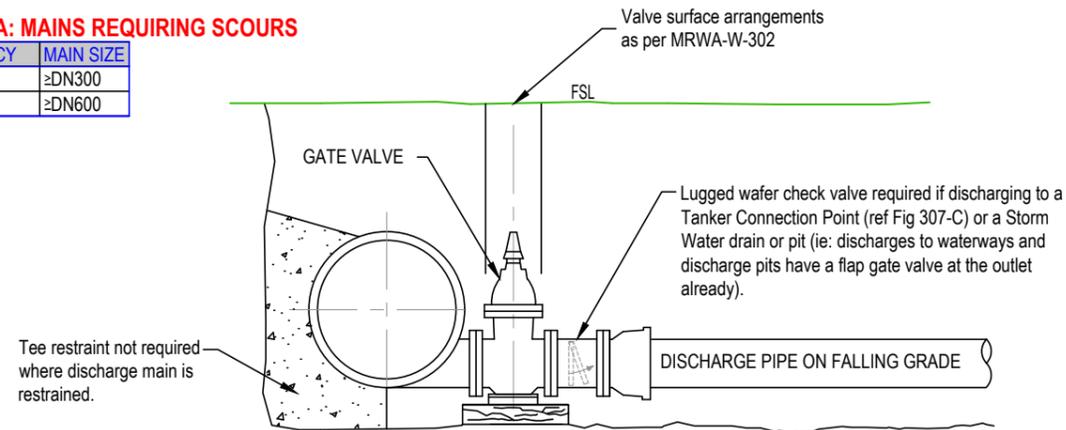


FIGURE 307-A: SCOUR CONNECTION

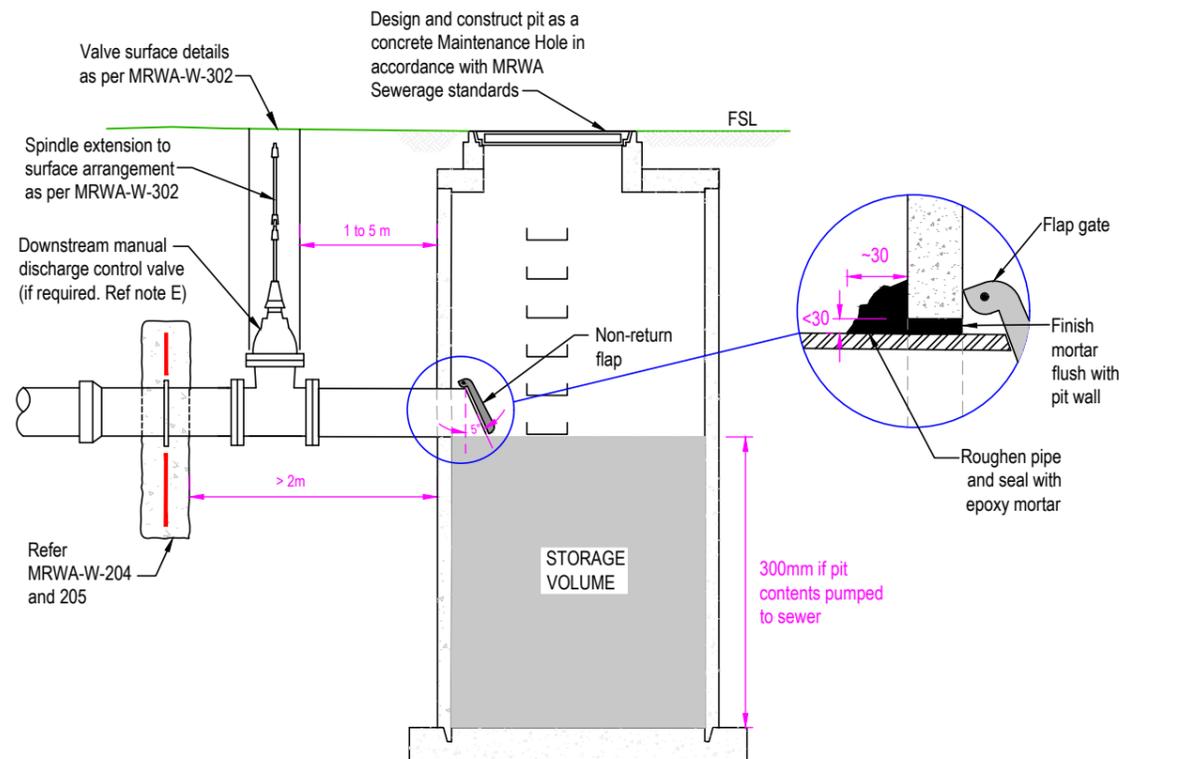


FIGURE 307-B: DISCHARGE PIT DETAIL

NOTES Regarding Discharge Pits:

- Design and construct in accordance with WSA 02- cast in situ MHs.
- Designers must produce a feasible scour water removal plan and adjust the scour pit design to suit. The plan should take into account: the grade of the main, the volume of water in the main, the volume of the pit, the feasibility of pumping pit contents to a sewer, or the number of eductor truck loads required to empty the main.
- Discharge pits may be used in the following situations:
 - On NDW mains.
 - On DW mains in cases where there the water main is constructed ahead of drainage. DW Pump out pits shall be decommissioned and replaced with properly constructed drainage system scour connections when drainage becomes available.
 - On DW mains which have localised low points where they pass under obstructions (eg: drains, freeway crossings etc) and a scour connection to the drainage systems is impractical.
- Locate discharge pits with the following preferences:
 - Nearby (< 25m) a ≥DN300 sewerage main maintenance structure if practical. Maintenance structures on DN225 sewers may be considered where sufficient sewer capacity is available.
 - In a non-trafficable area with suitable truck access adjacent to discharge pit.
- Size the storage volume as follows:
 - Provide nominal storage depth of 300mm where pit contents are to be pumped to a sewer.
 - < 1/50 of the water main shutoff volume where pit contents are **not** to be pumped to a sewer.
- Water main shut off block volume shall be ≤300 m³ where pit contents are **not** to be pumped to a sewer.

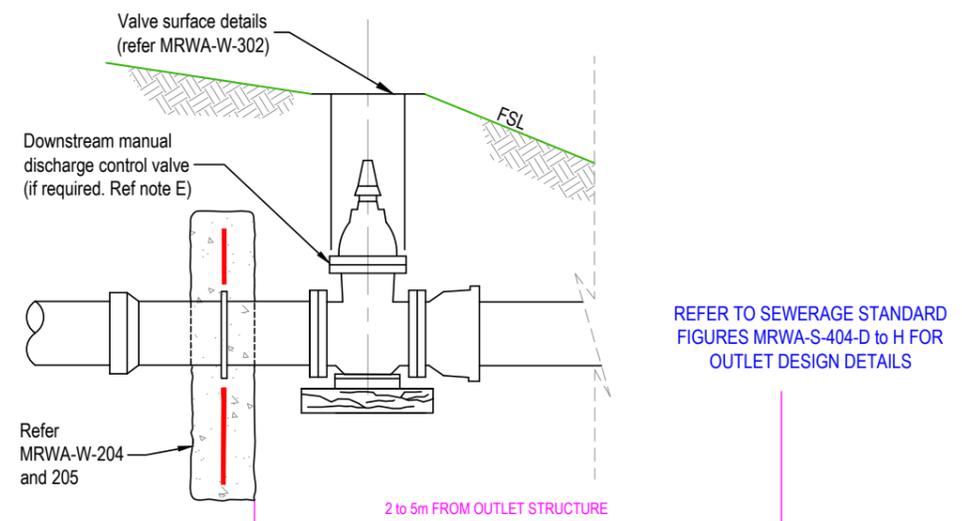


FIGURE 307-C: DISCHARGE TO WETLANDS OR WATERWAYS

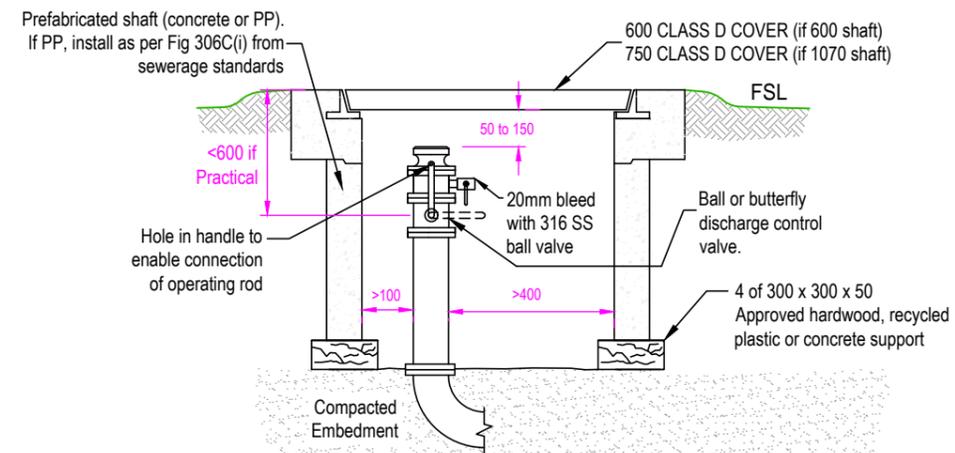


FIGURE 307-D: TANKER CONNECTION POINT

NOTES Regarding Tanker Connection Points:

- This arrangement is an alternative to Figure 307-B. It is preferred when the scour water removal plan indicates a single tanker truck could empty the isolated section of main within the required time (refer to table 8.3 of WSA03).
- Locate the pit in a non trafficable location if possible.
- Cover shall be Class D and the shaft shall be reinforced concrete if the pit is located in a trafficable location.
- Approved polymeric or concrete shaft may be used in non trafficable locations.
- Cover should lie 25mm above the surrounding natural surface level (not to protrude excessively above ground) in non trafficable locations.
- System to be operated as follows: 1) sit on edge of opening, with legs in pit, 2) couple truck hose to quick connector, 3) open discharge control valve (with operating rod) & fill tanker, 4) close valve, 5) disconnect hose from quick connector or truck. The shaft shall be sized and dimensioned to enable this.
- Quick connector is a Bauer couplings for CWW.

GENERAL NOTES:

- Scour valve and pipework to provide required main drainage time (refer table 8.3 of WSA 03- MRWA edition).
- SEW mains DN300, 375 & 450 in diameter require Valve Controlled Hydrants (refer Figure 305-C) in lieu of scours at Shut Off Block low points.
- Discharge to drains and water ways is preferred for drinking water.
- Discharge to a pit or tanker connection point is required for non drinking water. Locate discharge pits nearby ≥DN300 sewerage main maintenance structures if practical.
- Downstream valves at the end of the scour line are only required when the discharge cannot be seen or heard at the distribution main's offtake valve. This is typically when the drain, pit or waterway is more than 20m away. For tanker connection points, the butterfly valve below the connection coupling provides satisfactory discharge control. This is in addition to the offtake valve at the distribution main.
- Un-reinforced concrete to be N20 and reinforced concrete N25.
- Connections into drains shall be undertaken as per the requirements of the relevant drainage authority.
- Discharge to wetlands, creeks and drains only permitted for drinking water and treated storm water.
- Scour mains are typically sized as per bypass valves, although drainage time and scour flow velocity should also be taken into account (refer to Table 105-A for details).

REV	DESCRIPTION	DATE	APPROVED	DESIGNED	DATE	CHECKED	DATE	APPROVED	DATE
4	REVISED SEW MAINS SIZE REQUIRING SCOURS	APR 20	CP	R. JAGGER	13/04/2011	R. JAGGER	13/04/2011		
3	CHANGED FIG B & DISCHARGE	1/06/16	RJ / CP / JT						
2	PUBLISHED FIRST ISSUE	04/04/12	R.JAGGER	C. RIVETTE	04/04/12	C. RIVETTE	04/04/12	R.CARRUTHERS	04/04/12
1	PRE PUBLISHED DRAFT FOR COMMENT	12/07/11	R.JAGGER	C.PAXMAN	04/04/12	C.PAXMAN	04/04/12	G.REYNOLDS	04/04/12
				K.DAWSON	04/04/12	K.DAWSON	04/04/12	A.COSHAM	04/04/12

MELBOURNE RETAIL WATER AGENCIES



MRWA WATER SUPPLY STANDARDS

SCOUR ARRANGEMENTS
CWW & YVW: ≥DN300 MAINS
SEW: ≥DN600 MAINS

NOT TO SCALE

MRWA-W-307

ISSUED 2012 REVISION NO. 4