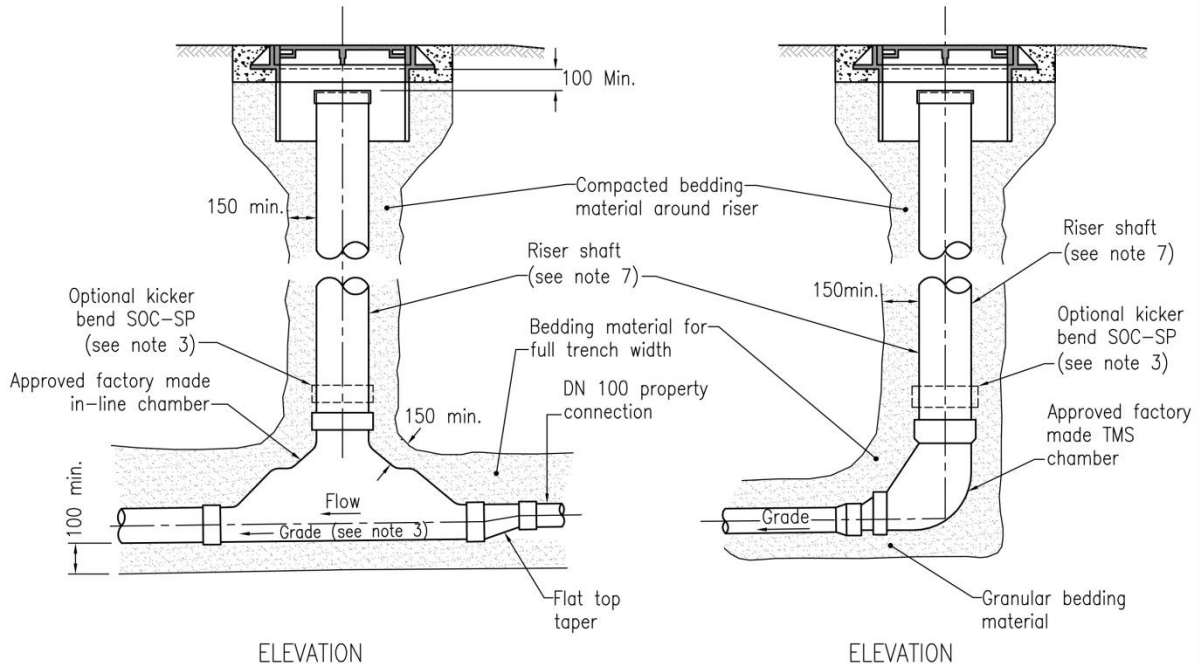
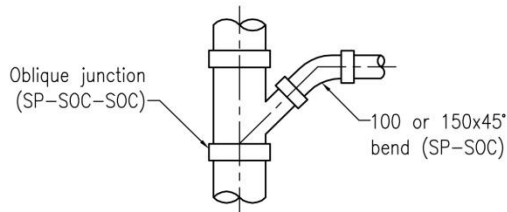


Sheet 40 Terminal Maintenance Shaft and Connection Details



TERMINAL MAINTENANCE SHAFT WITH PROPERTY CONNECTION AHEAD

TERMINAL MAINTENANCE SHAFT



TYPICAL PROPERTY CONNECTION
(Positioned in riser as required)

NOTES:

1. For use with DN150 and DN225 pipes only.
2. Maximum depth 3.6m.
3. Adjust MS to pipe grade by tilting chambers. Maximum deviation from vertical of riser to be 300mm at surface.
4. Not to be located in carriageways or heavily trafficked areas.
5. See Section 5.10.3.4 for restrictions of use.
6. Connection types shown are applicable to VC, PVC, (solvent weld) and PVC (rubber ring) pipes.
7. Install branch property connections (as shown above) in riser shaft (drop junctions). Maximum of 2 property connections.

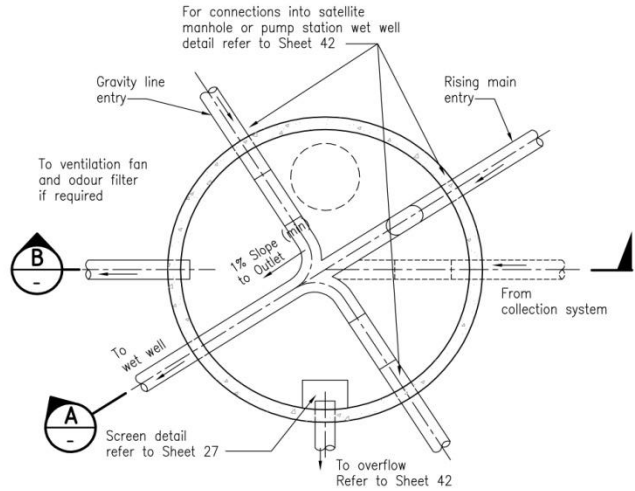
TERMINAL MAINTENANCE SHAFT & CONNECTION DETAILS FOR ALL ENVIRONMENTS



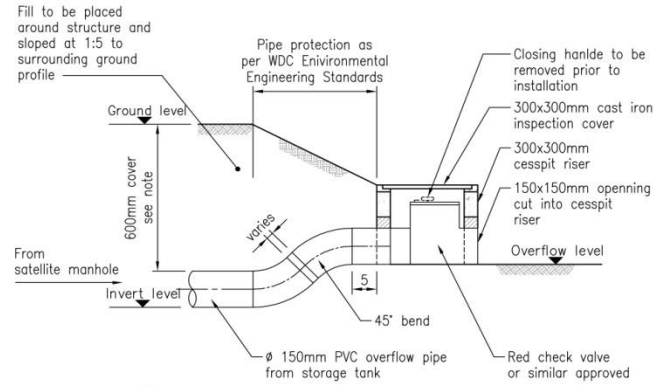
WHANGAREI DISTRICT COUNCIL
ENVIRONMENTAL ENGINEERING STANDARDS

Date:	APRIL 2010
Revision:	RO
Scale:	Scale: NTS
SHEET No.	40

WDC 8036



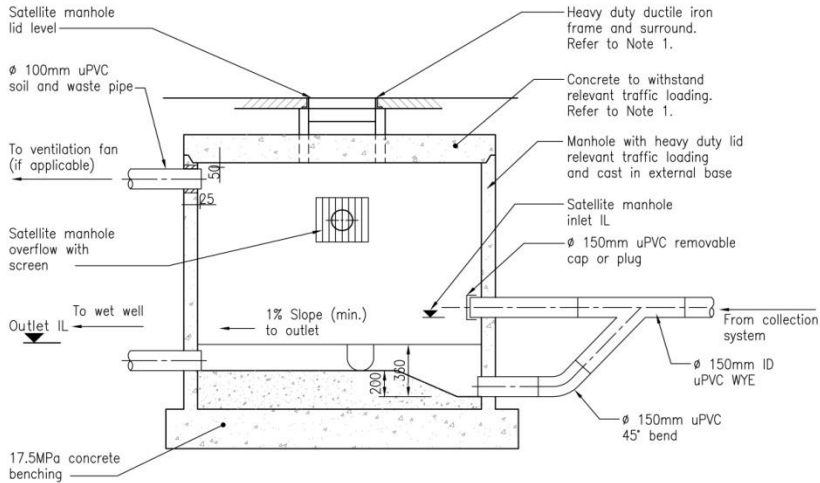
PLAN SATELLITE MANHOLE
N.T.S.



Note:
Overflow level to be set at a level at least 200mm below all service connections and manhole lids.
Refer suppliers information for valve installation details.

- Notes:**
1. Heavy duty ductile iron frame and surround for use in road reserve or other area with traffic loading.
 2. Standard ductile iron frame and lid in private property where no traffic loading is possible.

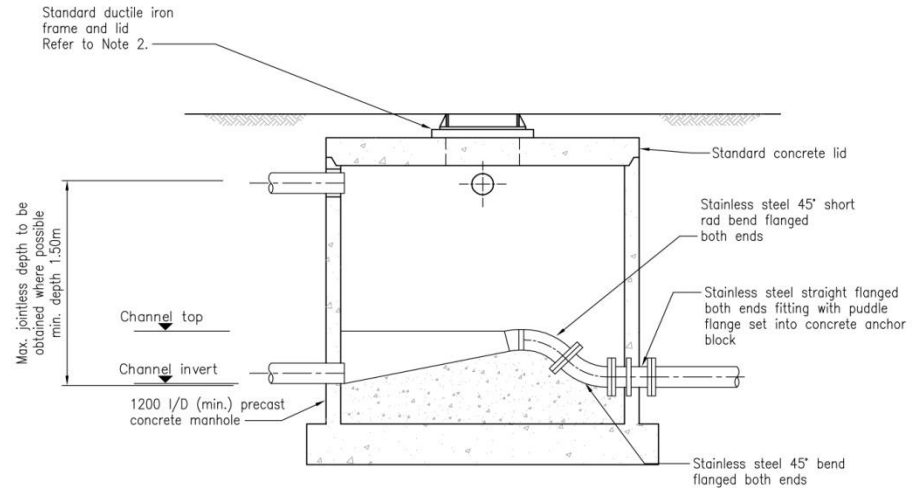
OVERFLOW OUTLET - LAND DISCHARGE
N.T.S.



SECTION A-A
TYPICAL GRAVITY LINE ENTRY INTO MANHOLES

NOTE:

- Orientation of manhole inlets & outlets varies.
- Where all flow into the MH is gravity flow standard MH details may be used.



SECTION B-B
RISING MAIN DISCHARGE DETAILS TO MANHOLES
N.T.S.

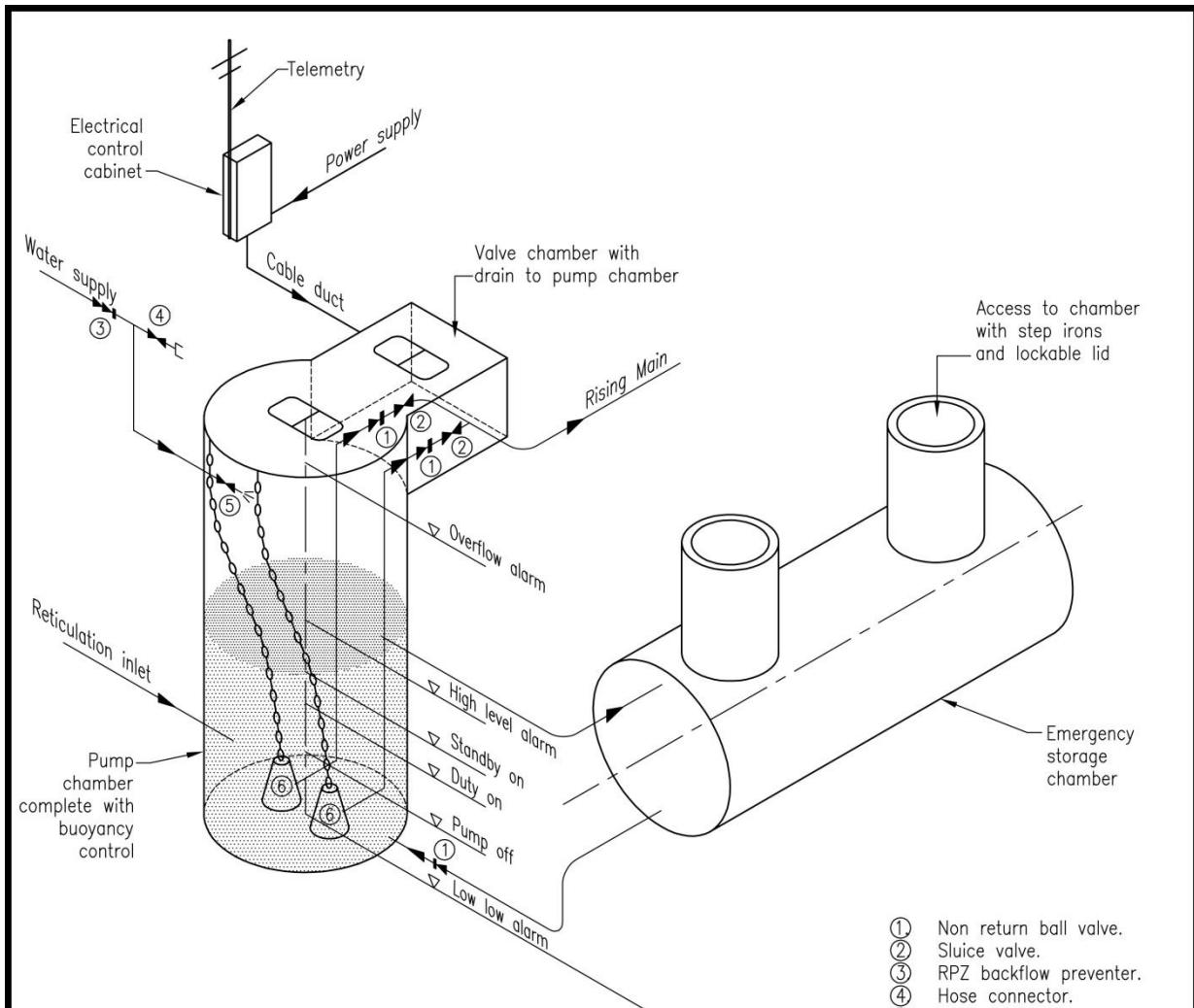
SATELLITE MANHOLE DETAILS
FOR ALL ENVIRONMENTS



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ENVIRONMENTAL ENGINEERING STANDARDS

Date:	APRIL 2010
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Scale:	AS SHOWN
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Sheet 42 Sewer Pump Station Typical Requirements



- ① Non return ball valve.
- ② Sluice valve.
- ③ RPZ backflow preventer.
- ④ Hose connector.
- ⑤ Well washer.
- ⑥ Pumps

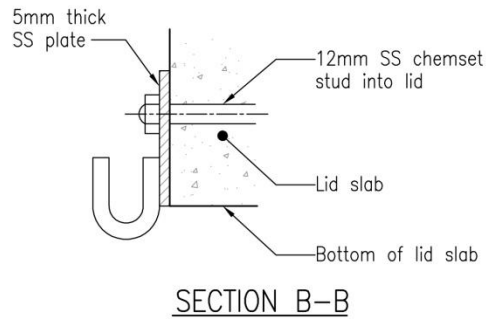
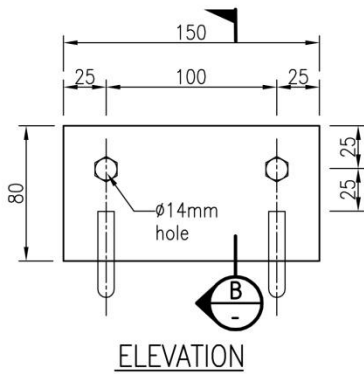
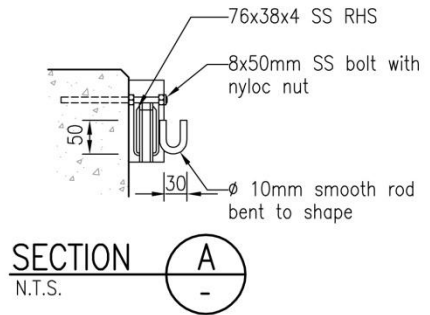
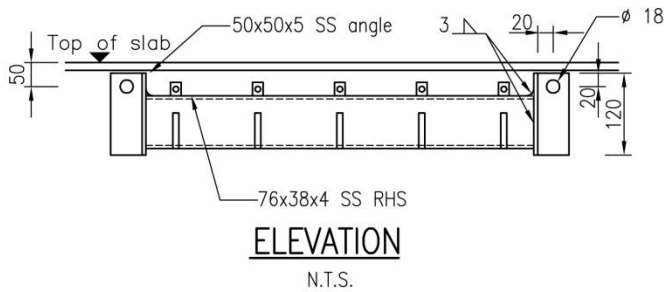
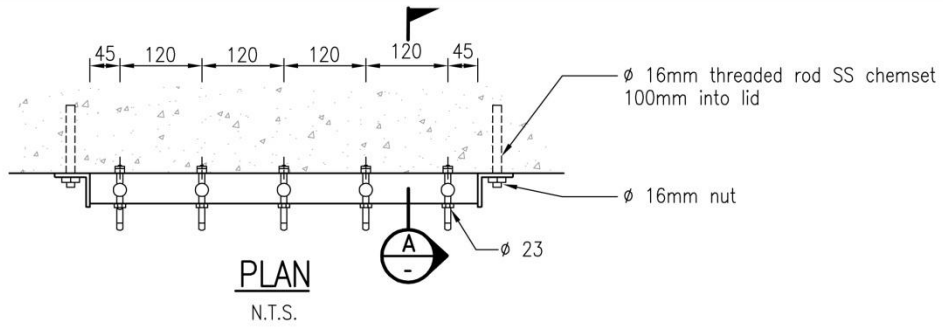
Notes:

1. Emergency storage (including emergency storage tank) to be at least sufficient for 12 hours design average dry weather flow (ADWF) above standby pump on level.
2. Pumps to be Flygt – 3 phase, submersible.
3. Pump configuration is to be duty/ standby with operator selectable duty.
4. All pumps 5 kw or greater to have variable speed drive.
5. Power supply to include generator connection.
6. IP55 single phase connection to be included in power supply unit.
7. Telemetry unit to include backup 24 hr power supply.
8. Pump station PLC to have 20% redundant I/O.
9. The following alarms are to be available via telemetry: overflow, high level, low level, pump run fault.
10. On site indication shall be available for: cumulative pump run hours, amps (each pump), volts (phase selectable).
11. Pump run signal and current to be available via telemetry.
12. All tanks/ chambers to include buoyancy control based on groundwater being at at ground level.
13. All fittings within pump well to be 316 stainless steel including guide rails, lifting chains and safety grids.
14. Float or probe controls for pump and alarm operations.
15. Access to be minimum 600mm x 600mm.
16. Pump stations to be provided with lighting.
17. Odour control to be provided as required.
18. Refer to Section 5.10.5 for further details.

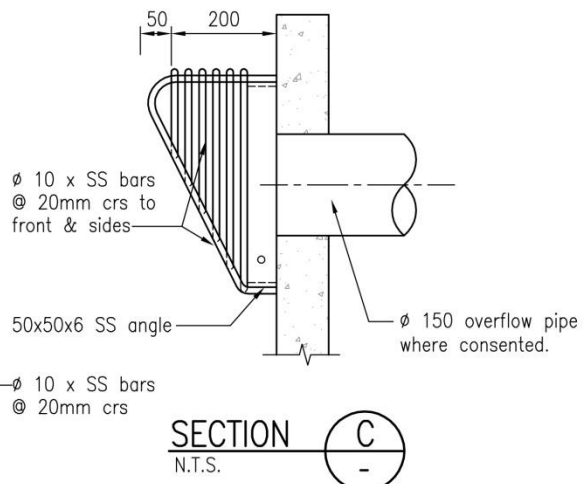
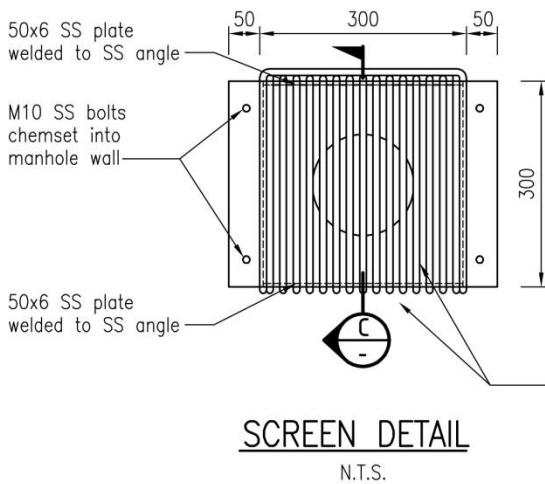
<p>SEWER PUMP STATION TYPICAL REQUIREMENTS (FOR ALL ENVIRONMENTS)</p>	Date: APRIL 2010
	Revision: R0
<p>WHANGAREI DISTRICT COUNCIL ENVIRONMENTAL ENGINEERING STANDARDS</p>	Scale: AS SHOWN
	SHEET No. 42

WDC 80.36

Sheet 43 Sewer Pump Station Metal Works



Note:
All fittings to be type 316 S/S



SEWER PUMP STATION METAL WORK DETAILS

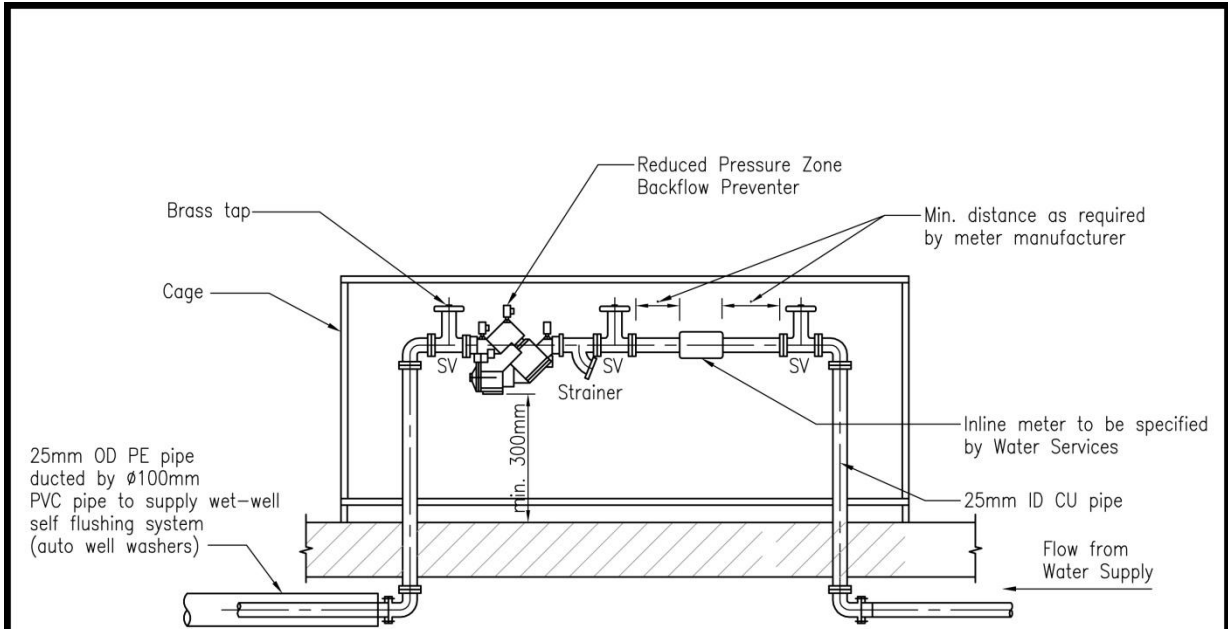


WHANGAREI DISTRICT COUNCIL
ENVIRONMENTAL ENGINEERING STANDARDS

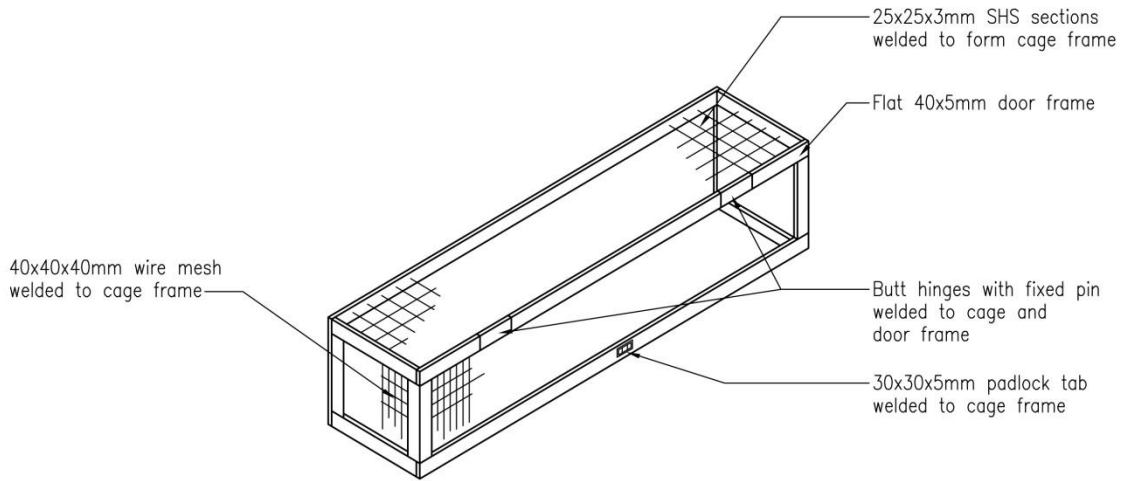
Date:	APRIL 2010
Revision:	R0
Scale:	AS SHOWN
SHEET No.	43

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Sheet 44 RPZ Water Connection



TYPICAL PIPE DETAIL N.T.S.
FOR 50mm + ID BFP



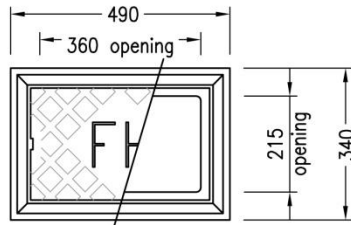
CAGE DETAIL
N.T.S.

RPZ WATER CONNECTION REQUIRED FOR SEWER PUMP STATIONS	Date:	APRIL 2010
	Revision:	R0
 WHANGAREI DISTRICT COUNCIL ENVIRONMENTAL ENGINEERING STANDARDS	Scale:	AS SHOWN
	SHEET No.	44

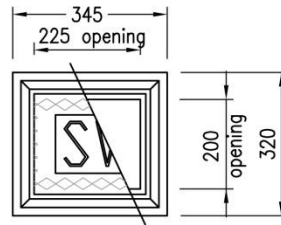
WDC 8036

Sheet 45 Water Pipeline Details

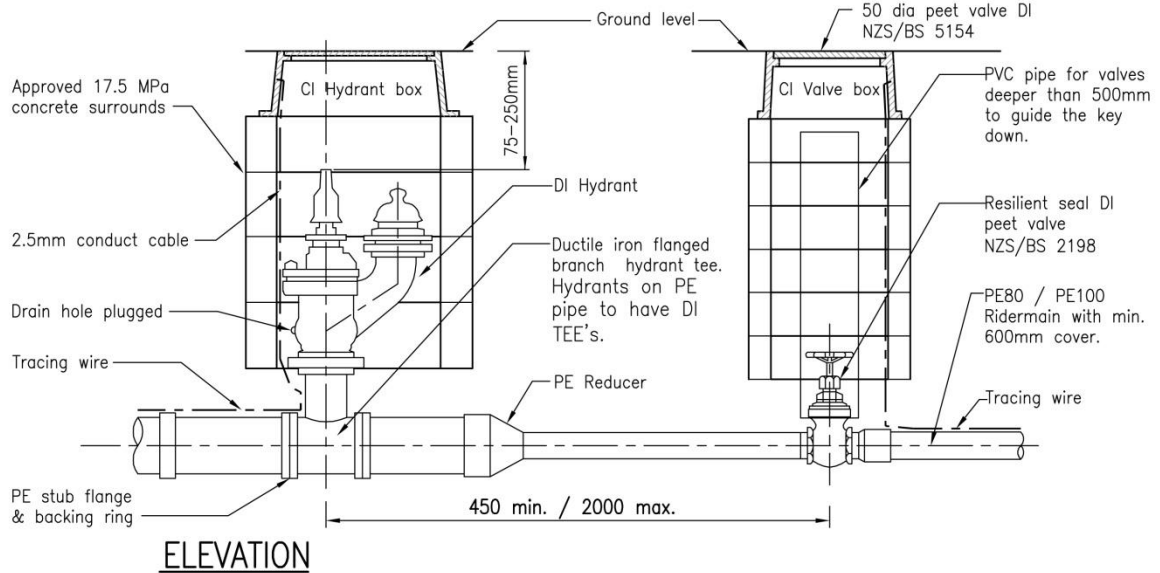
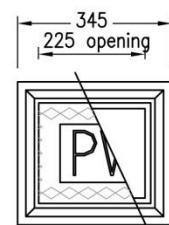
"TALL TYPE" screw down DI hydrant to NZS/BS 750. To close clockwise when viewed from above.



PLAN CAST IRON HYDRANT BOX



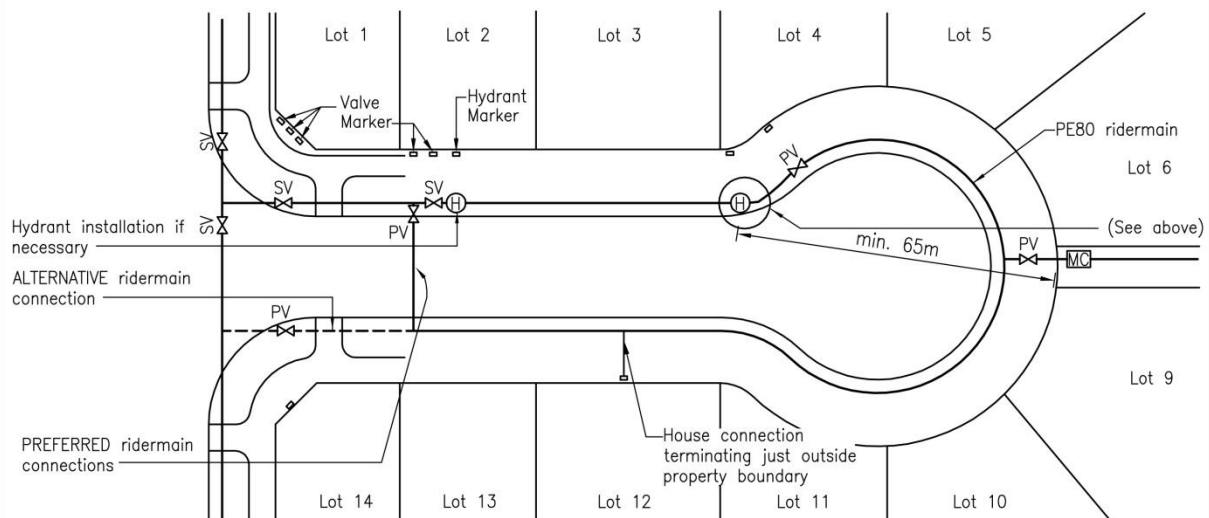
PLAN CAST IRON VALVE BOX



ELEVATION

Notes

1. Deflection of joints is not to exceed the manufacturers recommendation.
2. Where there are more than 15 connections from a rider main, an isolating peet valve should be provided in the middle of the rider main.
3. All underground bolts to be stainless steel and wrapped with denso tape, mastic and polytape.
4. Service connections to terminate just outside from boundary with an approved manifold, meter box (including base) and diaphragm valve including dual check valve.
5. Dimensions to be supplied with as-builts.



WATER PIPELINE DETAILS
(FOR ALL ENVIRONMENTS)



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ENVIRONMENTAL ENGINEERING STANDARDS

Date: APRIL 2010

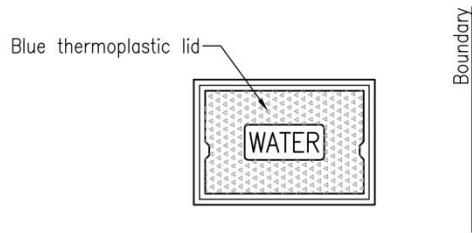
Revision: R0

Scale: AS SHOWN

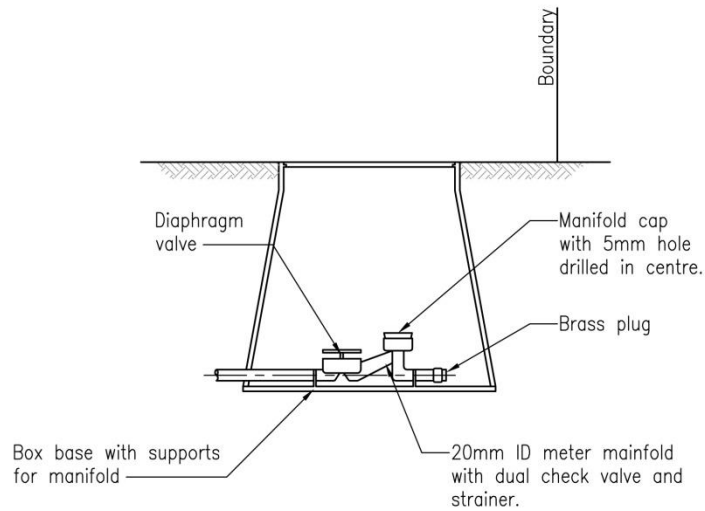
SHEET No. **45**

WDC 8036

Sheet 46 Single Meter Box Connection



PLAN



SINGLE METER BOX CONNECTION

NOTE:

1. All fittings to be WDC approved.
2. Backflow preventers shall be provided if required by WDC bylaws and shall be installed in a separate box.

SINGLE METER BOX CONNECTION (FOR ALL ENVIRONMENTS)	Date: APRIL 2010
	Revision: R0
 WHANGAREI DISTRICT COUNCIL ENVIRONMENTAL ENGINEERING STANDARDS	Scale: AS SHOWN
	SHEET No. 46

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Sheet 47 Multiple Water Connections and Back Flow Preventers

100mm steel or reinforced concrete box to suit with galv. or Alu lid.

Developer to leave minimum length of 250mm pipe inside box at time of construction

Room for BFP

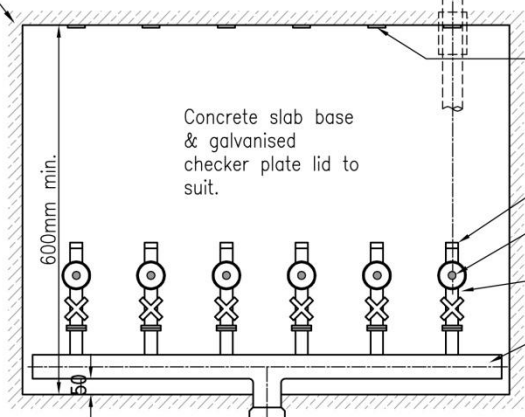
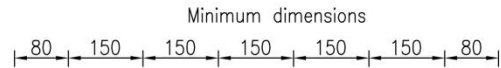


Plate or ID tag show lot number. Tag min. 50 x 50 with plastic stick or labelling as per fire hydrants.

Brass plug

Manifold cap with 5mm hole drilled in centre.

Water Meter manifold with Diaphragm valve.

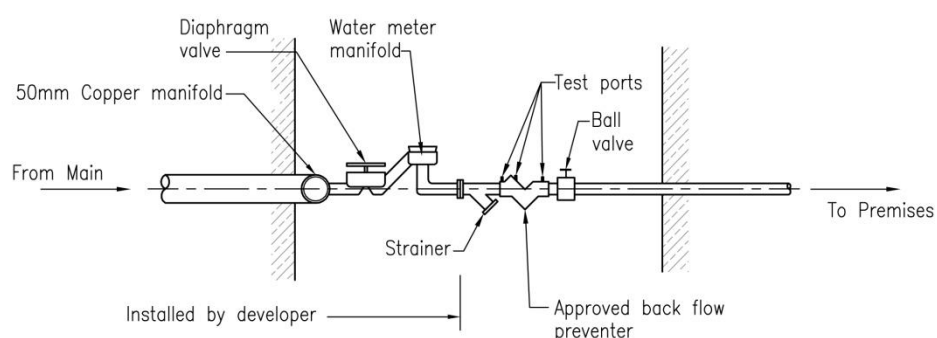
50mm Copper manifold

NOTE:
House No. on each tapping.

PE pipe Ø as per table

PLAN

Main Service Connection Feed	
Number of services	ID
2	25
3	32
≥ 4	50



METERED SUPPLY WITH DOUBLE CHECK VALVE
BACK FLOW PREVENTER

- NOTE:
1. All fittings to be WDC approved.
 2. The width and length of box is to suit the number of meters. The minimum width shall be 450mm and the minimum length 600mm.
 3. The width of box may be modified to accommodate pressure reducing valves if required.
 4. The numbered tags to be provided on each connection starting with unit 1 (or the lowest unit number) from one side. The tags shall be clearly marked and firmly attached.
 5. Back flow preventers shall be provided if required by WDC bylaws.

Refer to Sheets 44 & 46.

MULTIPLE WATER CONNECTIONS & BACK FLOW PREVENTERS
(FOR ALL ENVIRONMENTS)

Date:	APRIL 2010
Revision:	RO
Scale:	AS SHOWN
SHEET No.	47

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