




TEES




Tee
(SOC/SOC/SOC)




Tee
(FL/FL/FL)




Tee
(SOC/SOC/FL)



Tee
(SOC/SP/FL)




Tee
(SP/SP/SP)




Tee
(SP/SP/FL)


TAPERS




Taper
(SOC/SOC)




Taper
(concentric)
(FL/FL)



Taper
(eccentric)
(FL/FL)




Taper
(SP/FL)




Taper
(SP/SP)

BENDS

11¼




11¼° Bend
(SOC/SOC)




11¼° Bend
(FL/FL)

22½




22½° Bend
(SOC/SOC)




22½° Bend
(FL/FL)

45




45° Bend
(SOC/SOC)




45° Bend
(FL/FL)

90




90° Bend
(SOC/SOC)




90° Bend
(FL/FL)


CONNECTORS



Connector
(SOC/SOC)




Connector
(FL/SOC)




Connector
(FL/SP)

END CAPS




End Cap




Blank Flange

RISER/
SPACER




Riser
(FL/FL)

FITTINGS

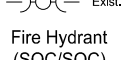


Gibault

FH

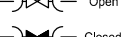


Prop.
Fire Hydrant
(SOC/SOC)




Exist.
Fire Hydrant
(SOC/SOC)


SV




Open
Sluice Valve
(SOC/SOC)



Open
Sluice Valve
(FL/FL)




Closed
Sluice Valve
(SOC/SOC)




Closed
Sluice Valve
(FL/FL)


ScV




Open
Scour Valve
(SOC/SOC)



Open
Scour Valve
(FL/FL)




Closed
Scour Valve
(SOC/SOC)




Closed
Scour Valve
(FL/FL)

AV



Air Valve
(SOC/SOC)



Air Valve
(FL/FL)

SEWER RISING MAINS (PRESSURE)

DIRECTION	MIN GRADIENT
Up	0.200% (1 in 500)
Down	0.400% (1 in 250)






HORIZONTAL BENDS

CHANGE OF ANGLE	STD FITTINGS
78.75°	45° + 22.5° + 11.25° Bend
67.5°	45° + 22.5° Bend
56.25°	45° + 11.25° Bend
45°	45° Bend
33.75°	22.5° Bend + 11.25° Bend
22.5°	22.5° Bend
11.25°	11.25° Bend
6°	Connector
1°	Pipe Joint

SEWER GRAVITY MAINS (NON PRESSURE)

PIPE DIA	MIN GRADIENT
150	0.667% (1 in 150)
225	0.345% (1 in 290)
300	0.238% (1 in 420)
375	0.175% (1 in 570)
450	0.133% (1 in 750)

FALL THROUGH MANHOLE (FIBREGLASS BASE)

MANHOLE DESC.	DIAGRAM	MIN. DROP (mm)
Straight through		20
Deflection up to 40°		30
Deflection 40°-90°		40
Branch <40Ø		30
Branch 40° - 90°		40

MAIN AND BRANCH VARY IN DIA.

MAIN DIA.	BRANCH DIA	MIN DROP (mm)
300	225	80
300	150	150
300	100	200
225	150	80
225	100	130
150	100	50

RECYCLED EFFLUENT MAIN CONSTRUCTION NOTES

- All recycled water mains to be on 1.8m alignment unless otherwise noted.
- Recycled water mains shall be RRJ to AS1477 Series 2 (lilac colour) Material Class 400. uPVC Class 12, mPVC Class 16 or oPVC Class 16.
- Minimum cover to recycled water mains to be 900mm for road pavements and 600mm elsewhere.
- Sluice Valves are to be clockwise closing.
- Place detectable marker tape in trench approx. 300 mm above pipe.

WATER CONSTRUCTION NOTES

- All water mains to be on 2.5m alignment unless otherwise noted.
- Water mains shall be RRJ to AS1477 Series 2 (blue colour) uPVC Class 12, mPVC Class 16 or oPVC Class 16. Material Class 400.
- Minimum cover to Water mains shall be 900mm for road pavements and 600mm elsewhere.
- Concrete thrust blocks to be constructed in accordance with Std. Dwg. CMDG-W-041.
- Water Sluice Valves are to be anti-clockwise closing.
- Hydrant box as per Std. Dwg. CMDG-W-061 to be provided with 0.6m turf surround. Hydrant markers to be blue rrpm's (stimsonite or equiv) positioned offset on crown of road & fixed in accordance with manufacturers recommendations. Refer Std. Dwg. CMDG-W-062.
- Hydrants & valves to be installed in accordance with Std. Dwg. CMDG-W-060.
- Place detectable marker tape in trench approx. 300 mm above pipe.

SEWER RISING MAIN CONSTRUCTION NOTES

- All sewer rising mains to be on 1.8m alignment unless otherwise noted.
- Sewer rising mains shall be RRJ to AS1477 Series 2 (cream or grey colour) Material Class 400. uPVC Class 12, mPVC Class 16 or oPVC Class 16.
- Minimum cover to rising main to be 900mm for road pavements and 600mm elsewhere.
- Concrete thrust blocks to be constructed in accordance with Std. Dwg. CMDG-W-041.
- Scour Valves to be installed in accordance with Std. Dwg. CMDG-S-073.
- Air Valves to be installed in accordance with Std. Dwg. CMDG-S-072.
- Valves to be installed in accordance with Std. Dwg. CMDG-W-060 and provided with 600mm turf surround.
- Valves to be fitted with a concrete surround 50mm above natural surface level.
- Backfilling of all driveway and road crossings to be cement stabilised.
- Sluice Valves are to be clockwise closing.
- Place detectable marker tape in trench approx. 300 mm above pipe.

SEWER GRAVITY MAIN CONSTRUCTION NOTES

- All sewers to be on 1.5m alignment from front and back boundaries or 1.0m from side boundaries, unless noted otherwise.
- All 150 diam. sewer pipes shall be uPVC Class SN8 up to 3m deep (cream or grey colour) to AS1260. Refer to sewerage longitudinal sections for sewer diameters.
- Manhole locations shall be pegged by surveyor prior to construction.
- Finished manhole top levels to be confirmed on site. Generally top of finished MH should be 75mm above surrounding finished surface levels.
- Manhole lids to be Class C or D.
- Provide a 1.5m long star picket driven 0.5m into the ground within 200mm of the ends of each house connection.
- Plastic warning tape 0.3mm thick x 50mm wide shall be attached to the top of the jump-up and wired to the base of the star picket.
- Sewer manholes to be precast and minimum 1050Ø. Concrete manholes to be in accordance with Std. Dwg. CMDG-S-021.
- Lamphole to be constructed in accordance with Std. Dwg. CMDG-S-026.
- Bases to be fibreglass compлас type.
- House connections to be constructed in accordance with Std. Dwg. CMDG-S-030.
- Provide concrete stops in accordance with Std. Dwg. CMDG-S-090 on slopes greater than 1 on 6.
- Maximum manhole spacing to be 90m. Maximum lamphole segment to be 40m.
- Place detectable marker tape in trench approx. 300 mm above pipe.
- Trench compaction to be 85%.

REVISIONS

		DATE
D	IRC ADDED	11/2016
C	GRC AND LSC ADDED	09/2014
B	FALL THROUGH MANHOLE TABLE AMENDED	02/2013
A	POST AMALGAMATION REVIEW	

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Central Highlands Regional Council (CHRC)

Gladstone Regional Council (GRC)

Isaac Regional Council (IRC)

Livingstone Shire Council (LSC)

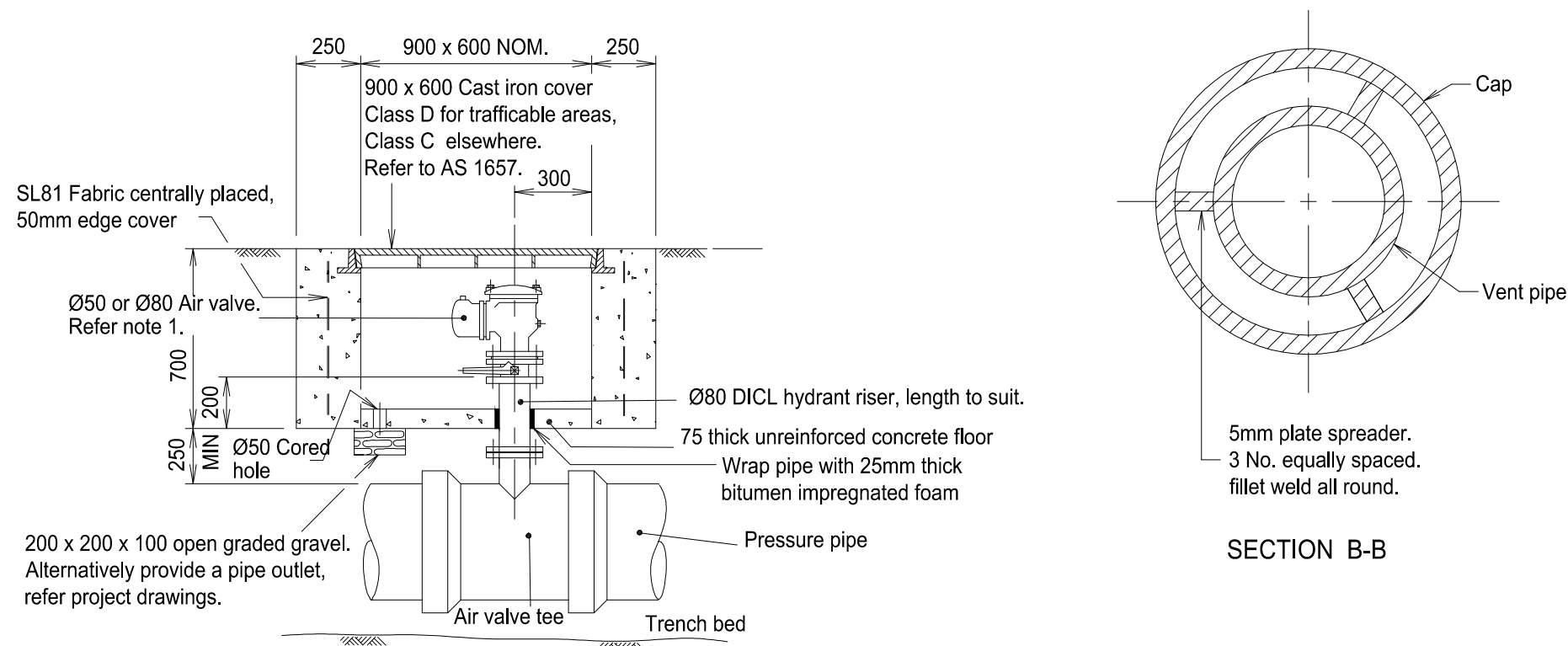
Maranoa Regional Council (MRC)

Rockhampton Regional Council (RRC)

SEWER/WATERMAIN INFORMATION
FITTING AND BEND SYMBOLS, PIPE
INFORMATION AND GENERAL NOTES

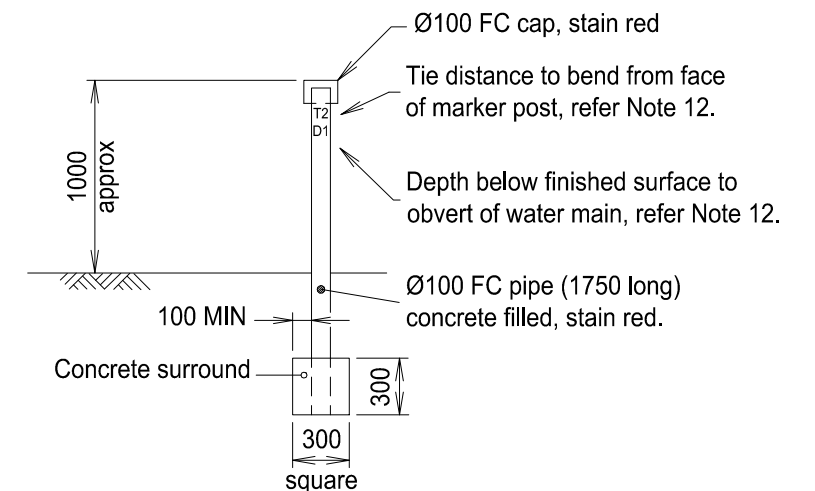
STANDARD
STANDARD
DRAWING
CMDG-W-005

REV. A B C D



ELEVATION

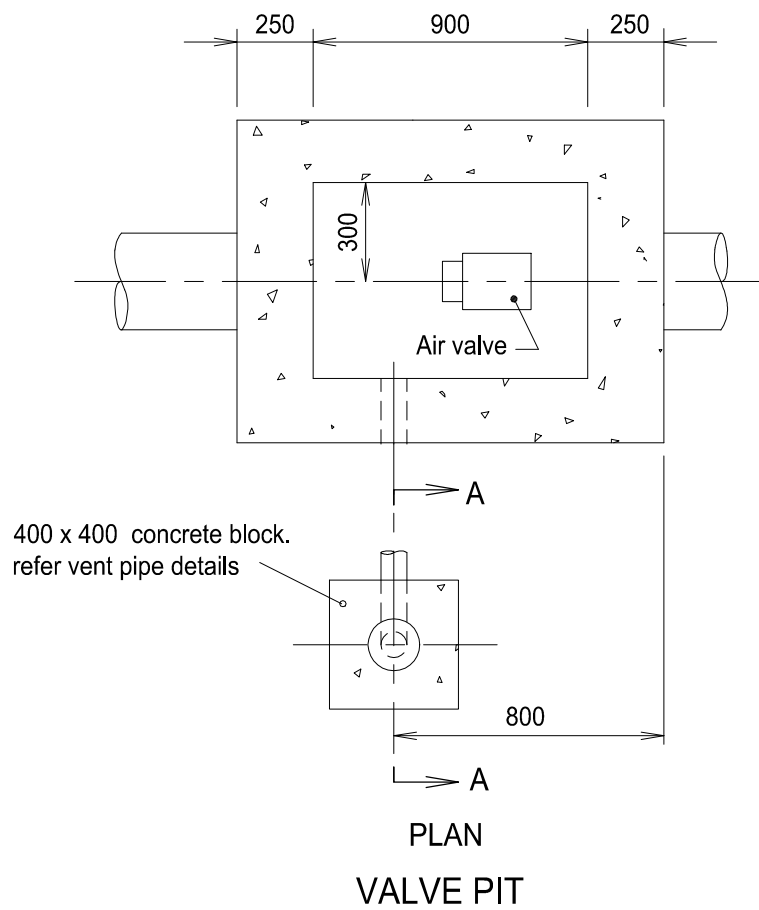
SECTION B-B



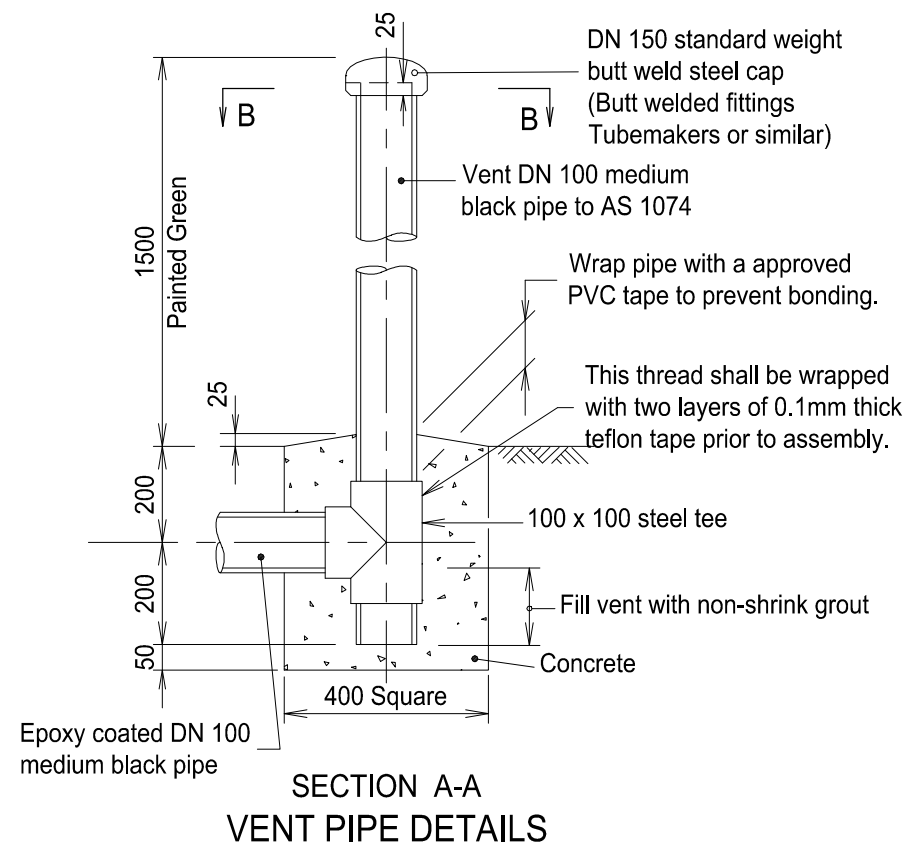
ELEVATION
AIR VALVE MARKER DETAIL

NOTES

1. Approved Ø50 and Ø80 Air Valves, fitted with Ø80 butterfly valves for isolation purposes. The installation shall be such that the air valve can be removed while the butterfly valve remains in place.
2. Ø50 Air Valves shall be supplied with adaptor flange suitable for connection to the Ø80 DICL riser.
3. The full length of the DICL riser pipe including underground flanges shall be epoxy coated or wrapped with 'Denso' protective coating applied in accordance with the manufacturer's instructions.
(a) Denso 360 primer to clean metal;
(b) Wrap of cold applied Denso 760 tape;
(c) Wrap of Denso 931 self adhesive PVC tape.
4. Water mains Ø250 and smaller:-
Walls of pit to extend below pipe, provide 200mm space between water main and floor of pit.
5. Concrete N25 in accordance with AS 1379 and AS 3600.
6. Provide a fine non-slip surface with a wood float to the top surface of all walls.
7. Refer project drawing for Vent pipe location. Vent steelwork shall be painted with System Reference LP2-A to AS/NZS 2312:2002 / Amdt 1:2004.
8. Compacted sand backfill shall be brought up to the underside of the air valve pit.
9. Air valves shall be placed on the high point of all trunk mains.
10. All flanges shall be in accordance with AS 2129-2000 - Table C unless noted otherwise on project drawings.
11. Position markers at changes of direction and all fence lines.
12. Lettering on side of marker shall be positioned directly on line between marker and water main bend. All lettering shall be painted yellow and shall be minimum 30 high x 20 wide.
13. All dimensions in millimetres.



PLAN
VALVE PIT



SECTION A-A
VENT PIPE DETAILS

If specified in project documentation

APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS	DATE
E REINFORCING DETAILS AMENDED	12/2017
D IRC ADDED	11/2016
C GRC AND LSC ADDED	09/2014
B RRC AMENDMENTS	24-05-11
A ORIGINAL ISSUE	01/2010

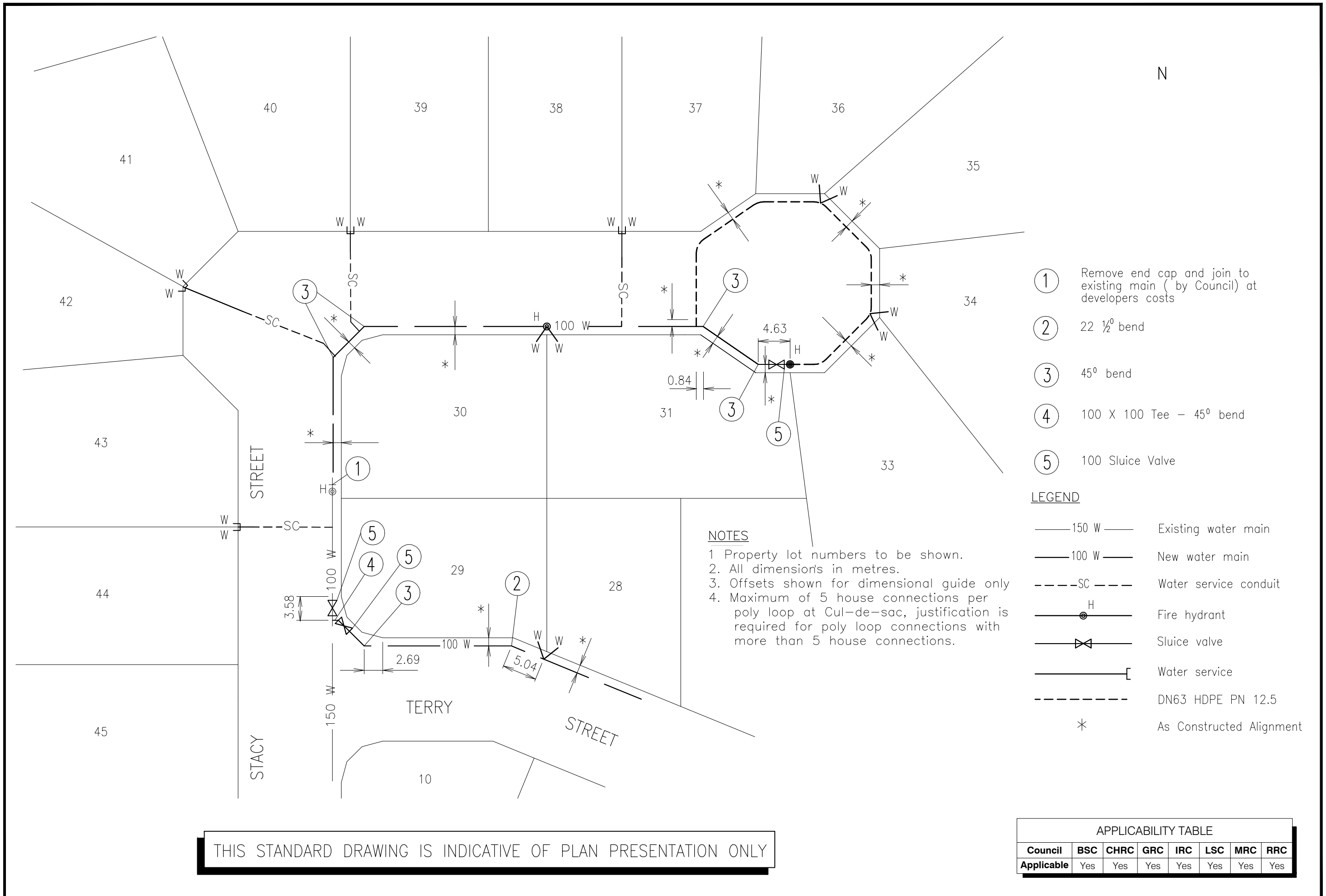
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Maranoa Regional Council (MRC)
Rockhampton Regional Council (RRC)

AIR VALVE PIT 50Ø AND 80Ø AIR VALVES

ROADS
STANDARD DRAWING CMDG-W-010
REV. A B C D E



- ① Remove end cap and join to existing main (by Council) at developers costs
- ② 22 ½° bend
- ③ 45° bend
- ④ 100 X 100 Tee – 45° bend
- ⑤ 100 Sluice Valve

LEGEND	
—— 150 W ——	Existing water main
—— 100 W ——	New water main
---SC---	Water service conduit
H	Fire hydrant
⋈	Sluice valve
—[Water service
-----	DN63 HDPE PN 12.5
*	As Constructed Alignment

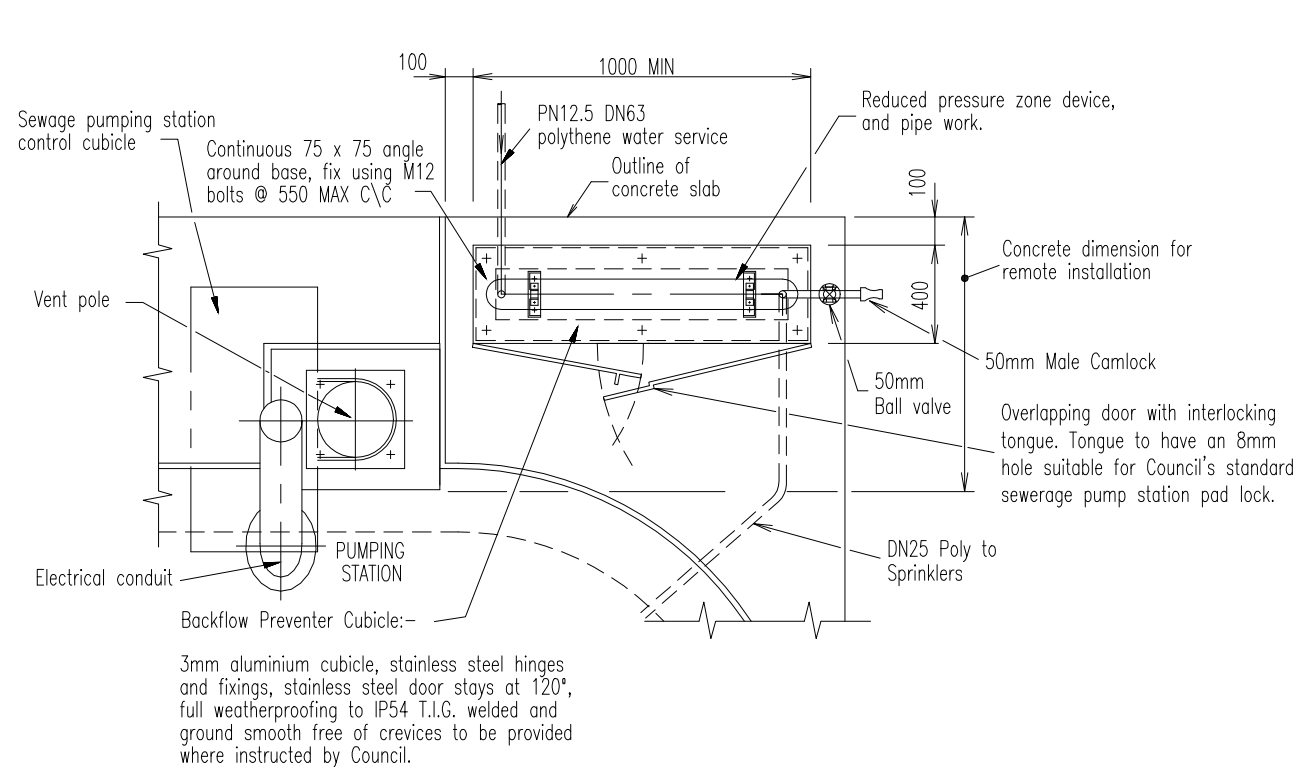
- NOTES**
- 1. Property lot numbers to be shown.
 - 2. All dimension's in metres.
 - 3. Offsets shown for dimensional guide only
 - 4. Maximum of 5 house connections per poly loop at Cul-de-sac, justification is required for poly loop connections with more than 5 house connections.

APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

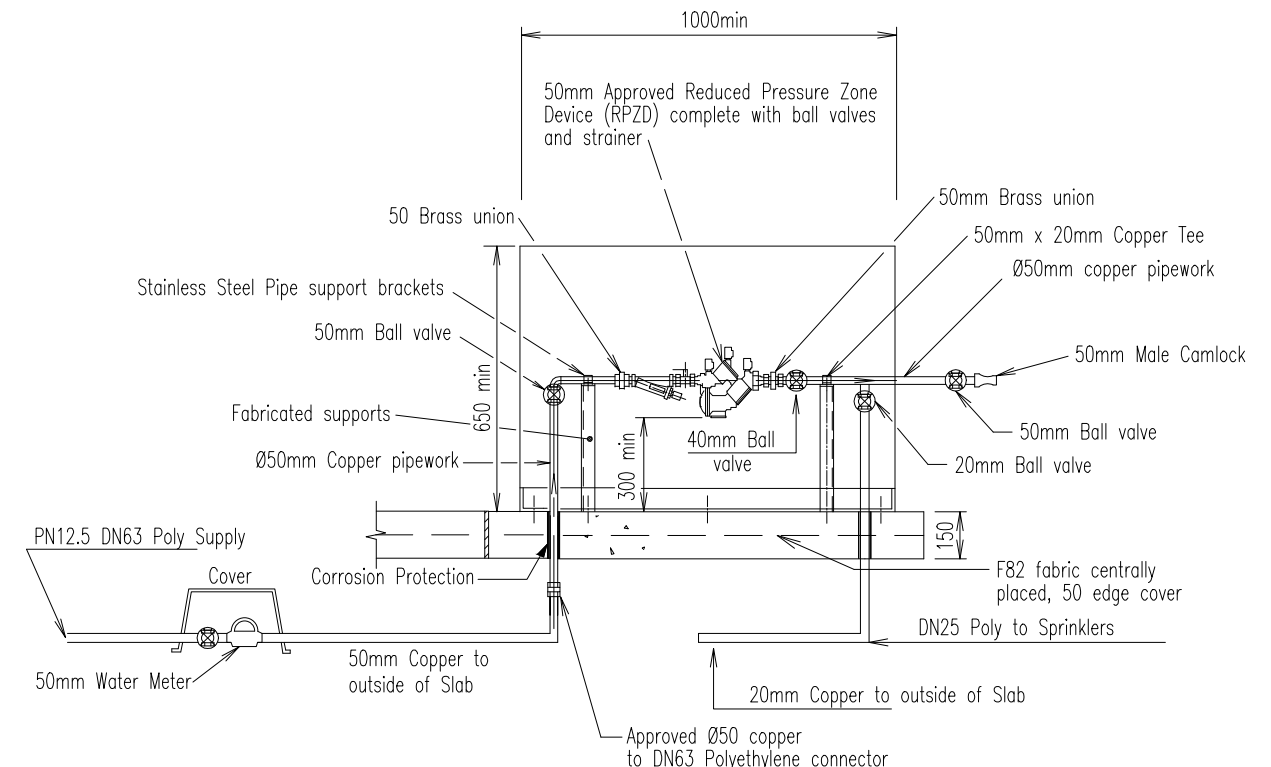
REVISIONS		DATE	DISCLAIMER.				Capricorn Municipal Development Guidelines				ROADS			
			The authors and sponsoring organisations shall have no liability or responsibility to the user or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused, directly or indirectly, by the adoption and use of these Standard Drawings including, but not limited to, any interruption of service, loss of business or anticipatory profits, of consequential damages resulting from the use of these Standard Drawings. Persons must not rely on these Standard Drawings as the equivalent of, or a substitute for, project-specific design and assessment by an appropriately qualified professional.				Incorporating:				STANDARD DRAWING			
E	IRC ADDED	11/2016					Banana Shire Council (BSC)				Livingstone Shire Council (LSC)			
D	GRC AND LSC ADDED	09/2014					Central Highlands Regional Council (CHRC)				Maranoa Regional Council (MRC)			
C	SERVICES ALTERED AND IS. SHOWN	28/02/13					Gladstone Regional Council (GRC)				Rockhampton Regional Council (RRC)			
B	RRC AMENDMENTS	24/05/11					Isaac Regional Council (IRC)							
A	ORIGINAL ISSUE	01/2010									REV. A B C D E			

WATER RETICULATION
SAMPLE AS-CONSTRUCTED PLAN

CMDG-W-020



PLAN
SLAB MOUNTED CUBICLE



SECTION
BACKFLOW DEVICE ASSEMBLY
FOR SEWER PUMP STATIONS

NOTES:

1. This is regulated work and requires a Plumbing & Drainage Act Permit & Certificate.
2. Concrete S32 in accordance with AS 1379 Supp 1–1997/Amdt 1–2000 and AS 3600–2001/Amdt 2–2004.
3. Aluminium Sheet 5083–H321, Extruded sections 6061–T6, to AS 2848–1998.
4. All dimensions in millimetres.
5. Backflow Warning signage as per AS 3500.1

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS	DATE
E IRC ADDED	11/2016
D GRC ADDED	02/2014
C AMENDED 50mm BALL VALVE	22/2013
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	01/2010

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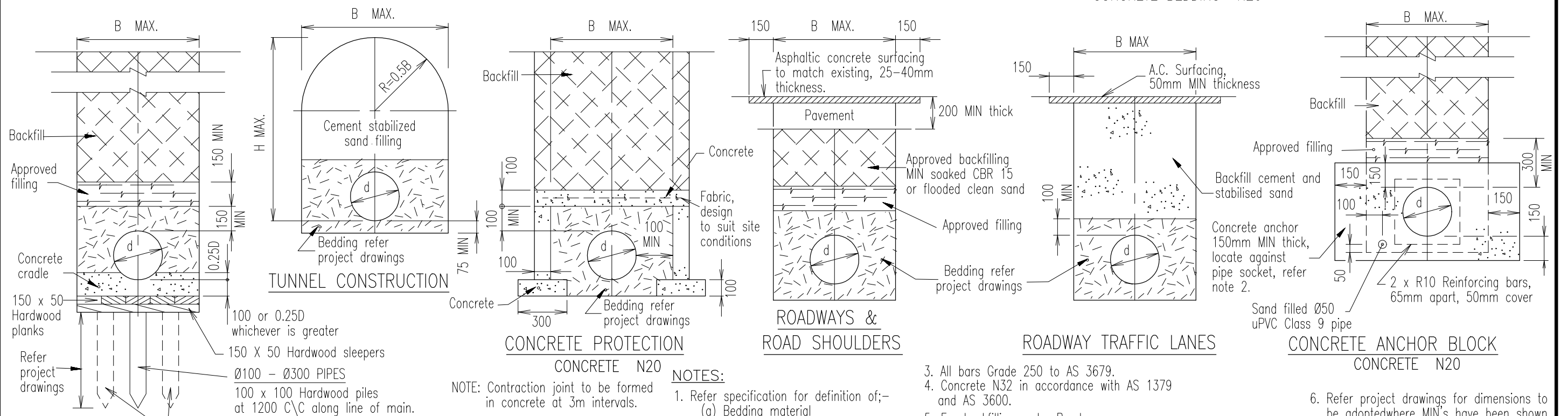
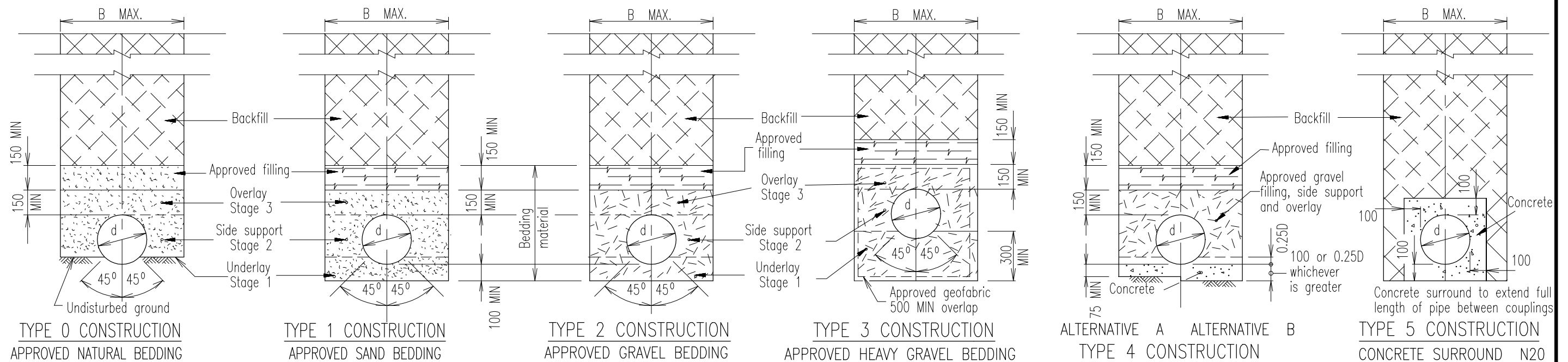
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Central Highlands Regional Council (CHRC)	Maranoa Regional Council (MRC)
Gladstone Regional Council (GRC)	Rockhampton Regional Council (RRC)
Isaac Regional Council (IRC)	

BACKFLOW PREVENTION DEVICE SLAB AND POLE MOUNTED CUBICLE

ROADS
STANDARD DRAWING CMDG-W-030
REV. A B C D E



TYPE 6 CONSTRUCTION
TIMBER PILE & RAFT FOUNDATION CONCRETE N20

Ø375 – Ø900 PIPES
100 x 100 Hardwood piles
in pairs at 1200 C/C along line of main.

Ø100 – Ø300 PIPES
100 x 100 Hardwood piles
at 1200 C/C along line of main.

NOM DIA. PIPE	d	Ø100	Ø150	Ø200	Ø225	Ø300	Ø375	Ø400	Ø450	Ø525	Ø600	Ø675	Ø750	Ø825	Ø900
OPEN TRENCH (OTHER THAN MPVC)	B	400	450	500	550	600	700	700	750	850	950	–	–	–	–
OPEN TRENCH (MPVC)	B	350	400	450	500	–	–	–	–	–	–	–	–	–	–
TUNNEL CONST.	B	750	750	750	750	900	900	900	1000	1050	1150	1220	1300	1350	1450
	H	1100	1100	1100	1100	1200	1200	1200	1400	1400	1400	1450	1500	1600	1650

NOTE:– d = NOMINAL DIAMETER OF PIPE

REVISIONS	DATE
F IRC ADDED	11/2016
E GRC AND LSC ADDED	09/2014
D APPLICABILITY AMENDED	01/2013
C BSC ADDED	09/2007
B CMDG REVIEW CHANGES	04/2007
A ORIGINAL ISSUE	10/2003

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Capricorn Municipal Development Guidelines

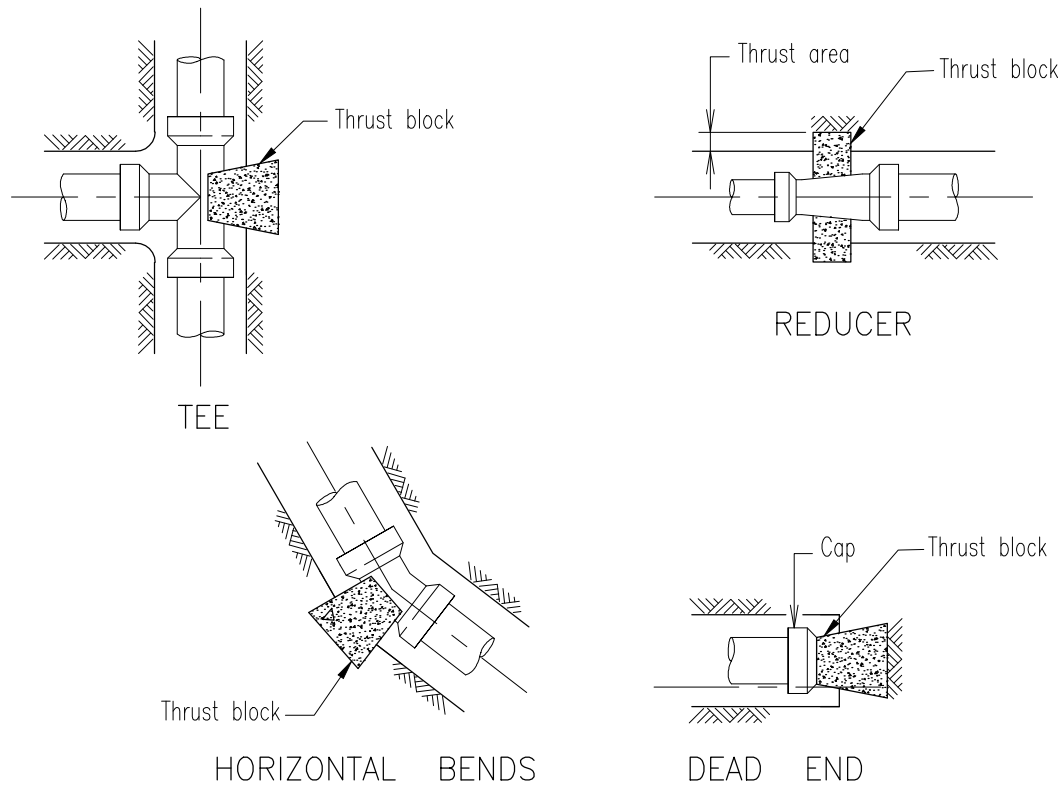
Incorporating:

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Gladstone Regional Council (GRC)	Rockhampton Regional Council (RRC)
Isaac Regional Council (IRC)	

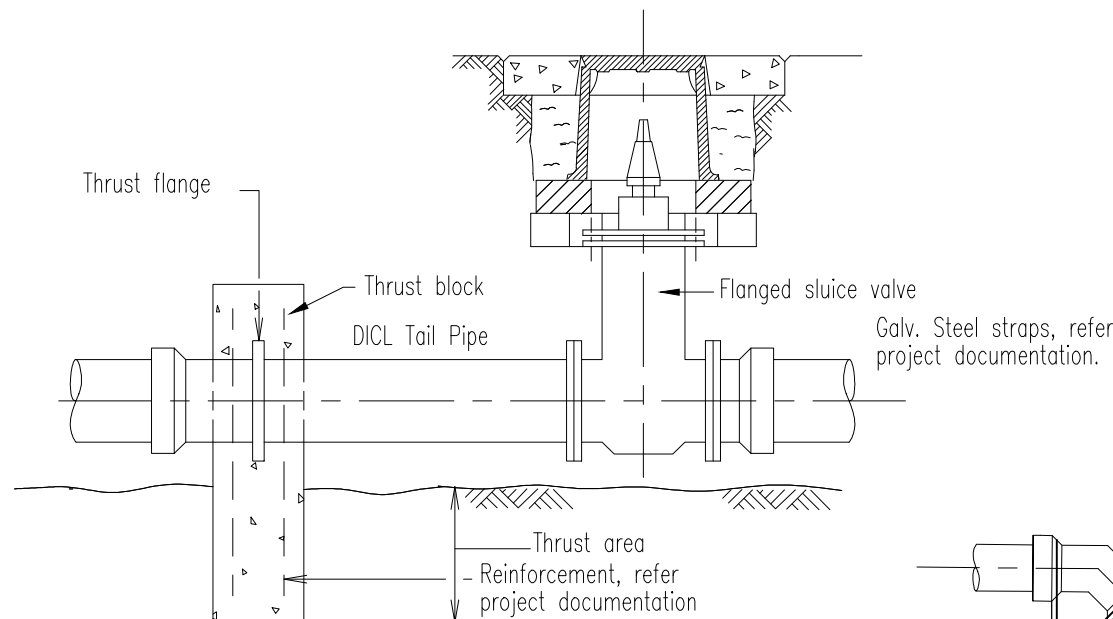
BEDDING AND BACKFILL FOR WATER MAIN CONSTRUCTION

ROADS
STANDARD DRAWING
CMDG-W-040
REV. A B C D E F

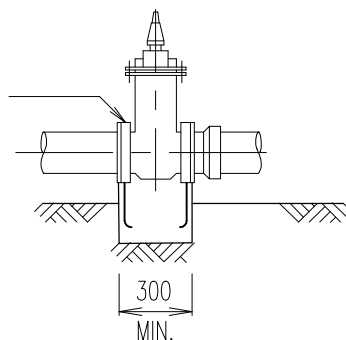
APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes



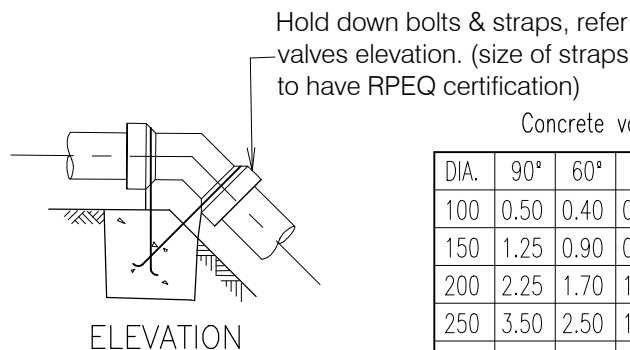
PLAN AT FITTINGS



SLUICE VALVE (Ø300 OR LESS – SOFT CLAY)
(REFER NOTE 8)



ELEVATION
VALVES



Concrete volume (m³)

DIA.	90°	60°	45°	30°	22½°	11¼°
100	0.50	0.40	0.30	0.20	0.15	0.10
150	1.25	0.90	0.70	0.50	0.35	0.20
200	2.25	1.70	1.25	0.80	0.65	0.35
250	3.50	2.50	1.90	1.30	1.00	0.50
300	4.90	3.50	2.70	1.80	1.40	0.70

VERTICAL BENDS, CRESTS

MINIMUM THRUST AREA FOR ANCHORAGE IN SQUARE METRES
WITH TEST PRESSURE 1300 kPa (NOM. 130m – HEAD)

SAFE HORIZONTAL BEARING CAPACITY OF GROUND

For horizontal thrusts, the safe bearing load values for soils in trenches, where the cover over pipes is 450mm or greater.

DIAMETER OF FITTING	90° & 60° HORIZ. BENDS				45° & 30° HORIZ. BENDS				22 1/2° HORIZ. BENDS				11 1/4° HORIZ. BENDS				TEES & DEAD ENDS			
	50 kPa SOFT CLAY	FIRM CLAY SANDY LOAM 100 kPa	SAND & GRAVEL HARD CLAY 150 kPa	SAND & GRAVEL CEMENTED WITH CLAY 200 kPa	50 kPa SOFT CLAY	FIRM CLAY SANDY LOAM 100 kPa	SAND & GRAVEL HARD CLAY 150 kPa	SAND & GRAVEL CEMENTED WITH CLAY 200 kPa	50 kPa SOFT CLAY	FIRM CLAY SANDY LOAM 100 kPa	SAND & GRAVEL HARD CLAY 150 kPa	SAND & GRAVEL CEMENTED WITH CLAY 200 kPa	50 kPa SOFT CLAY	FIRM CLAY SANDY LOAM 100 kPa	SAND & GRAVEL HARD CLAY 150 kPa	SAND & GRAVEL CEMENTED WITH CLAY 200 kPa	50 kPa SOFT CLAY	FIRM CLAY SANDY LOAM 100 kPa	SAND & GRAVEL HARD CLAY 150 kPa	SAND & GRAVEL CEMENTED WITH CLAY 200 kPa
100	0.44	0.22	0.15	0.11	0.23	0.12	N	N	0.13	N	N	N	N	N	N	N	0.31	0.16	0.11	N
150	0.91	0.46	0.30	0.23	0.49	0.25	0.16	0.12	0.26	0.13	0.09	N	0.13	N	N	N	0.65	0.33	0.22	0.16
200	1.56	0.78	0.52	0.39	0.83	0.42	0.28	0.21	0.44	0.22	0.15	0.11	0.21	0.10	N	N	1.09	0.55	0.36	0.27
250	2.37	1.18	0.79	0.59	1.27	0.64	0.42	0.32	0.65	0.33	0.22	0.16	0.34	0.17	0.11	N	1.66	0.83	0.55	0.42
300	3.46	1.73	1.15	0.86	1.87	0.94	0.62	0.47	0.96	0.48	0.32	0.24	0.47	0.23	0.16	0.12	2.44	1.22	0.81	0.61
375	5.25	2.63	1.75	1.31	2.83	1.42	0.94	0.71	1.46	0.73	0.49	0.36	0.73	0.36	0.24	0.18	3.72	1.86	1.24	0.93
450	7.44	3.72	2.48	1.86	4.03	2.02	1.34	1.01	2.05	1.03	0.68	0.51	1.04	0.52	0.35	0.26	5.25	2.63	1.75	1.31

*N' Denotes nominal thrust area (Refer Note 5)

NOTES

- All fittings shall be provided with thrust blocks formed against solid ground to transfer unbalanced forces from fitting to solid ground.
- Concrete N25 in accordance with AS 1379 Supp 1-1997/Amdt 1-2000 and AS 3600-2001/Amdt 2-2004.
- Nominal thrust area 'N' shall be effected by Class N25 concrete over full length of fitting, and extending in depth from the bottom of the trench to 65mm above the top of the fitting.
- Minimum area of blocks for reducers shall be equal to the difference in corresponding area for dead ends of each end diameter of reducer.
- Tabulated "minimum thrust area for anchorage" apply for test pressure of 1300 kPa. Areas shall be adjusted pro rata for other specified test pressures except that nominal thrust areas 'N' shall have to be re-calculated for test pressures over 1300 kPa.
- Shape and dimensions of concrete blocks shown are diagrammatic only.
- For vertical thrust acting downwards, the safe bearing loads of the various soils may be taken as twice those for horizontal thrusts.
- Sluice valves Ø375 or larger shall be installed in valve pits.
- When placing the concrete on a uPVC pipe, care shall be taken to avoid encasing the pipe completely. The maximum encasement shall be 180°.
- Where uPVC rubber ring jointed pipes are used, the normal practice of anchoring of bends tees, dead ends and reducers shall be followed.
- When setting uPVC pipes in concrete a membrane of polythene, PVC or felt shall surround the pipe and fitting to permit pipe movement in the concrete.
- Unless otherwise specified, concrete anchorages are required for all valves Ø200 and above. Thrust area shall be as for dead ends.
- Reducers to have a minimum area for anchors equal to difference in corresponding area for dead ends of each diameter of reducer.
- Minimum cover to pipe shall be 600mm
- All dimensions in millimetres.
- All thrust blocks to be keyed in 50mm into natural or equivalent ground.

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS	DATE
E IRC ADDED	11/2016
D GRC AND LSC ADDED	09/2014
C NOTE 2 AMENDED	02/2013
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	01/2010

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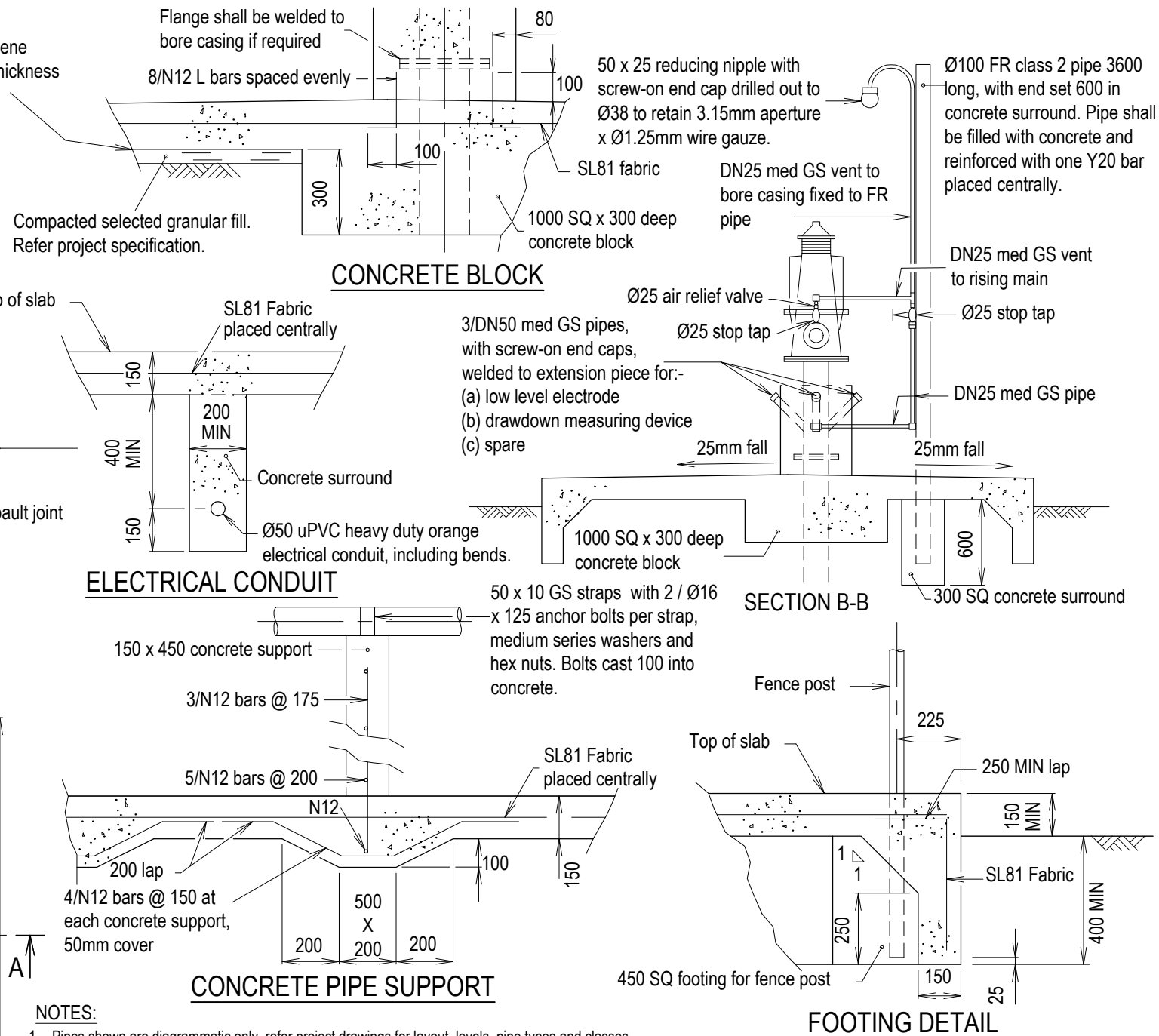
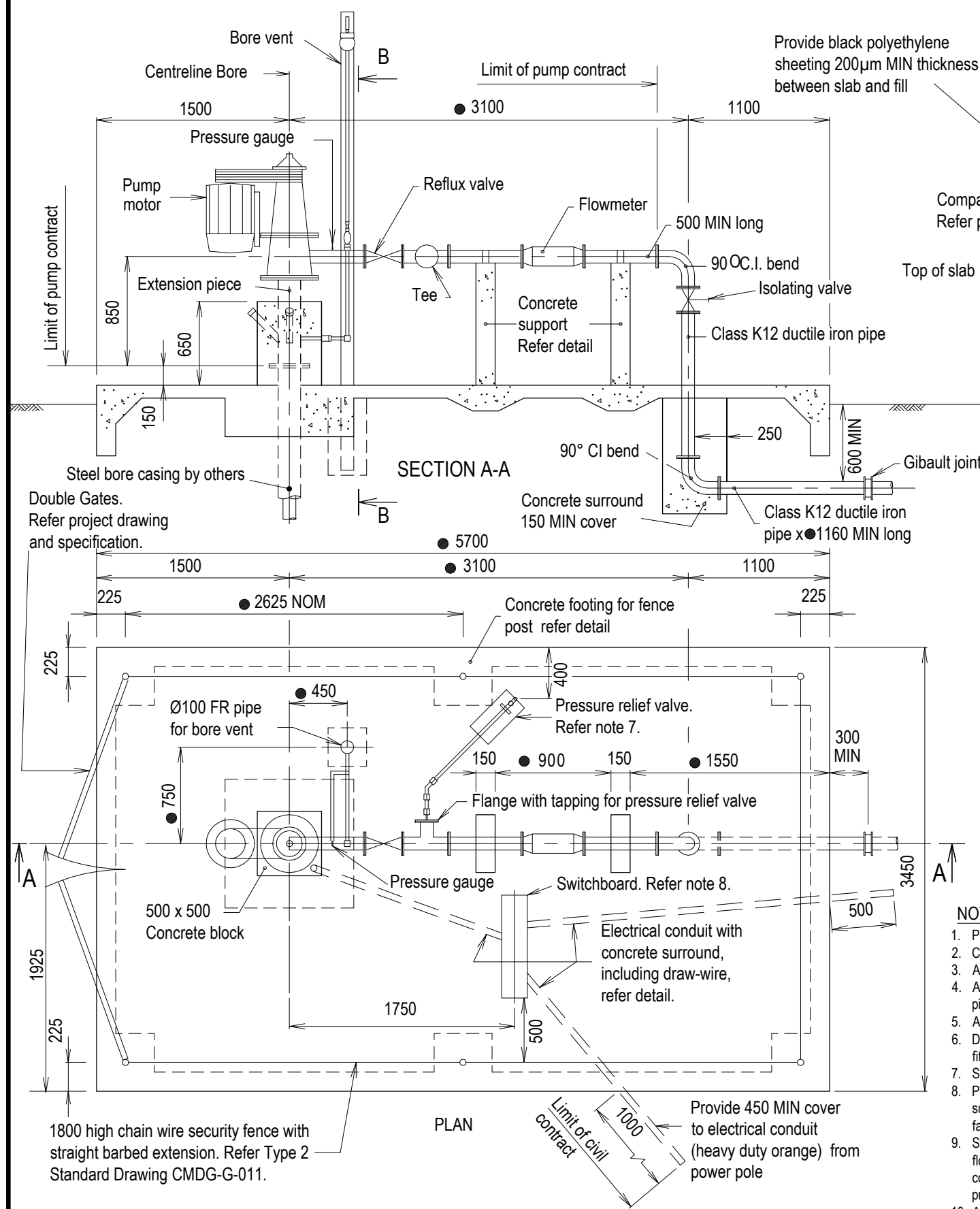
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Gladstone Regional Council (GRC)
Isaac Regional Council (IRC)
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Rockhampton Regional Council (RRC)

WATER MAIN THRUST BLOCK DETAILS

ROADS				
STANDARD DRAWING CMDG-W-041				
REV.	A	B	C	D E



NOTES:

- Pipes shown are diagrammatic only, refer project drawings for layout, levels, pipe types and classes.
- Concrete N25 in accordance with AS 1379 and AS 3600.
- All steelwork hot dip galvanized after fabrication to AS 1650.
- All bars Grade 400 to AS 1302. Fabric to AS 1304. Reinforcement bars shall be cut or displaced around pipes.
- All bolts and washers Grade AS 2837/316 stainless steel. All nuts Grade AS 2837/304 stainless steel.
- Ductile Iron Pipes, Valves & fittings, Class K12 to AS/NZS 2280. All underground ductile iron pipes and fittings shall be wrapped in polyethylene sleeving to AS 3680.
- Steel tube to AS 1074.
- Pressure relief valve with outlet pipe to discharge vertically onto floor slab. Outlet pipe shall be rigidly supported on a reinforced concrete column (200 x 400) and terminate 50 above slab. Reinforce with SL81 fabric placed centrally, folded and tied to floor reinforcement (250 MIN lap), 50mm edge cover.
- Switchboard shall sit on 300 high plinth. Plinth reinforced with SL81 fabric placed centrally, folded and tied to floor reinforcement (250 MIN lap), 50 edge cover, & shall be constructed to dimensions supplied by pump contractor. Electrical conduits to project 100 beyond top of the concrete plinth. For conduit layout, refer project drawing.
- All dimensions in millimetres.

LEGEND

● Dimension is for Ø100 pipes.

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	No	Yes	Yes	Yes	No	Yes	No
Applicable DWG							

REVISIONS	DATE
F IRC ADDED	11/2016
E GRC AND LSC ADDED	09/2014
D POST ALMAGAMATION REVIEW	01/2013
C BSC ADDED	09/2007
B CMDG REVIEW CHANGES	04/2007
A ORIGINAL ISSUE	10/2003

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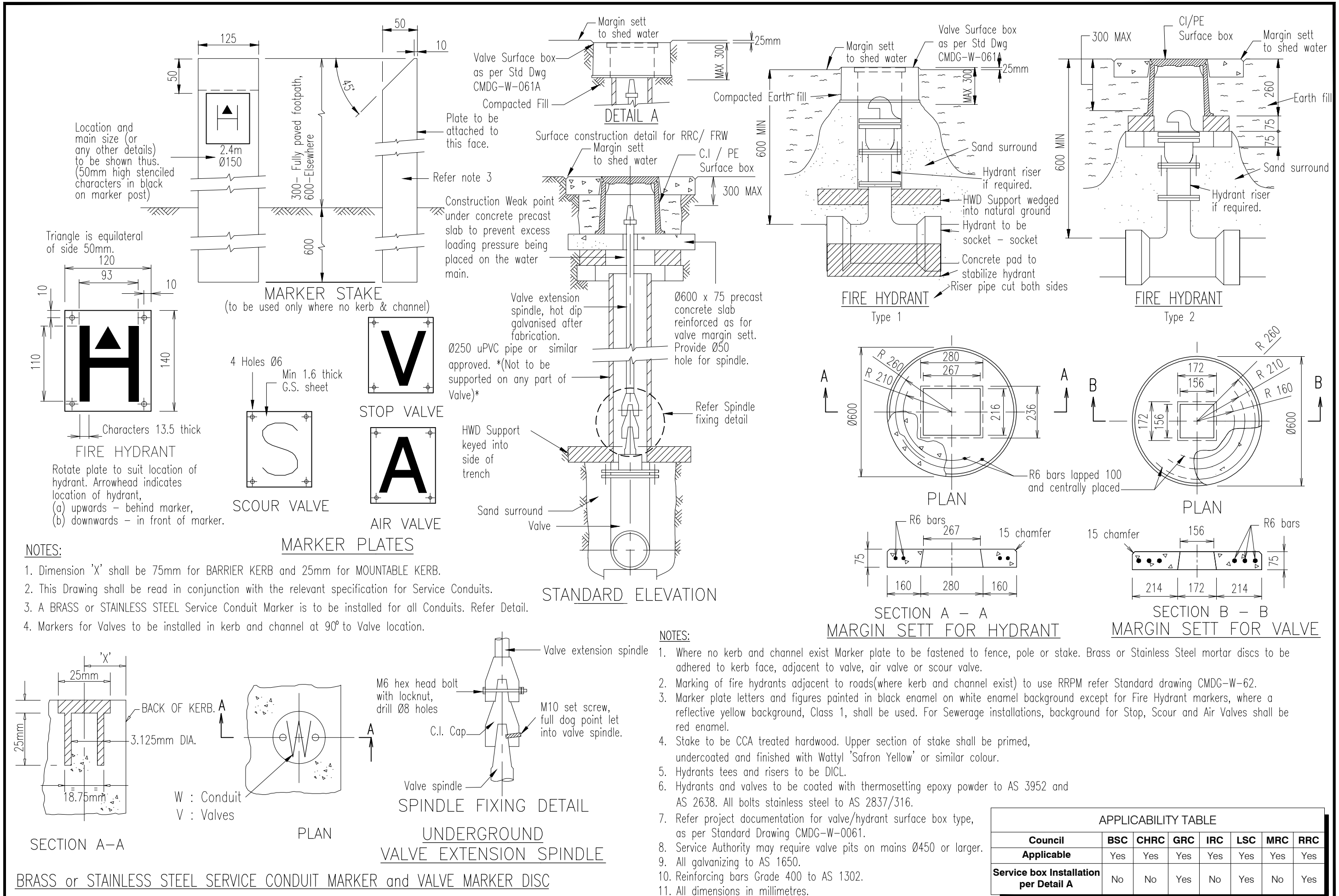
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 Isaac Regional Council (IRC)

HEADWORKS AT BORES

WATER						
STANDARD DRAWING						
CMDG-W-050						
REV.	A	B	C	D	E	F
REV.	G					



REVISIONS	DATE
E IRC ADDED	11/2016
D GRC AND LSC ADDED	09/2014
C APPLICABILITY CHANGES	01/2013
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	01/2010

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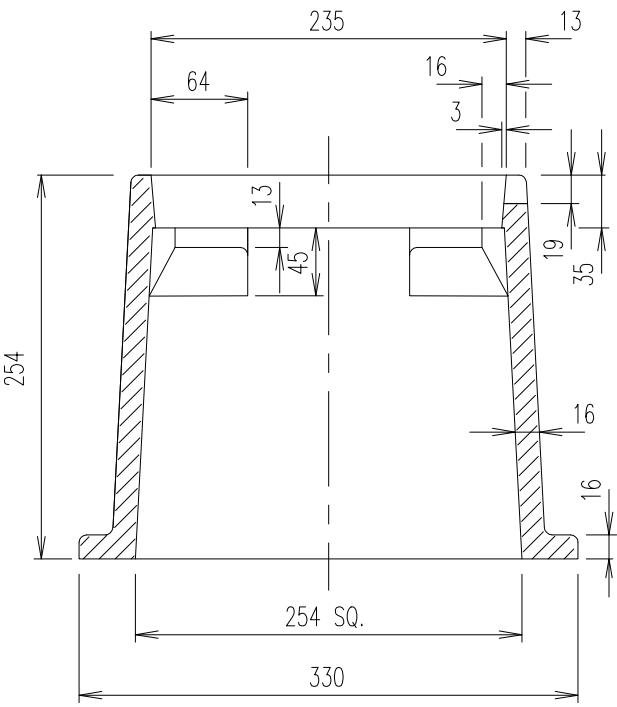
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Rockhampton Regional Council (RRC)

HYDRANT AND VALVE INSTALLATION

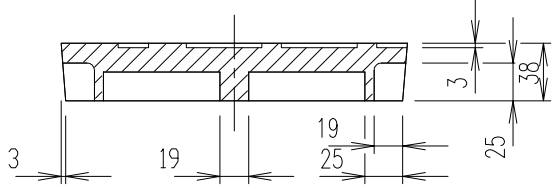
ROADS
STANDARD DRAWING
CMDG-W-060
REV. A B C D E

NOTES:

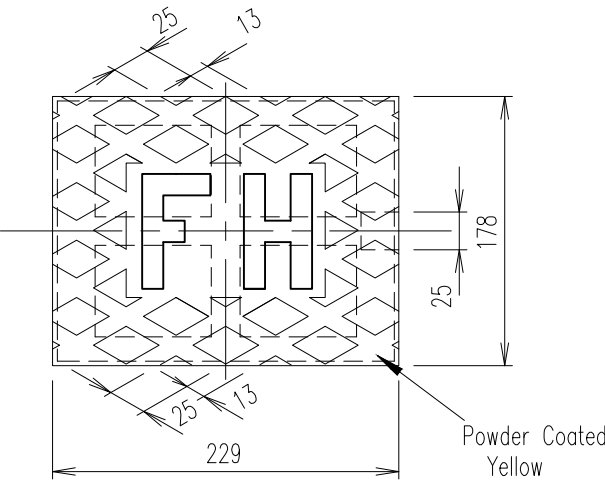
- Mass of cover = 14kg approx.
- Mass of body 5mm 370mm approx.
- Non-slip at all corners.
- Grey cast Iron, grade \geq T180 to AS 1830.
- Alternative valve boxes may be adopted where approved by the Service Authority.
- All dimensions in millimetres.



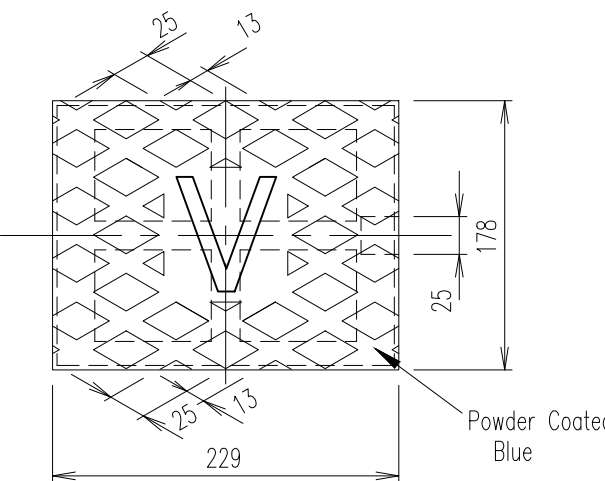
ELEVATION



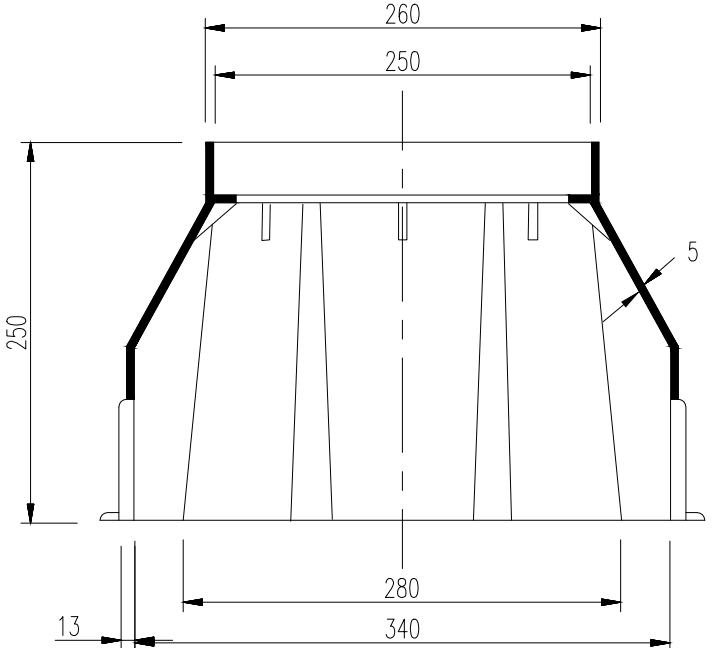
SECTIONAL VIEW



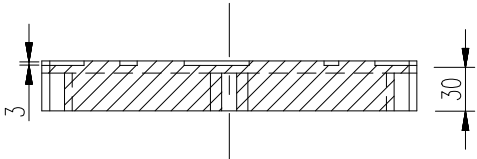
PLAN HYDRANT COVER



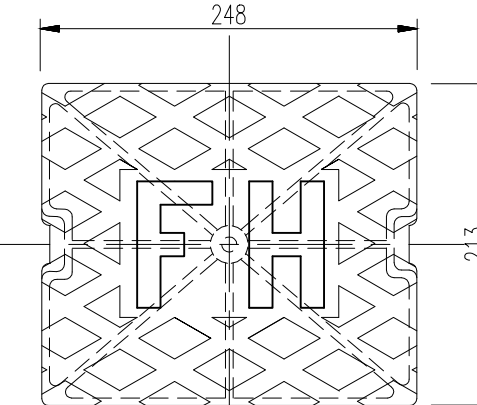
PLAN VALVE COVER



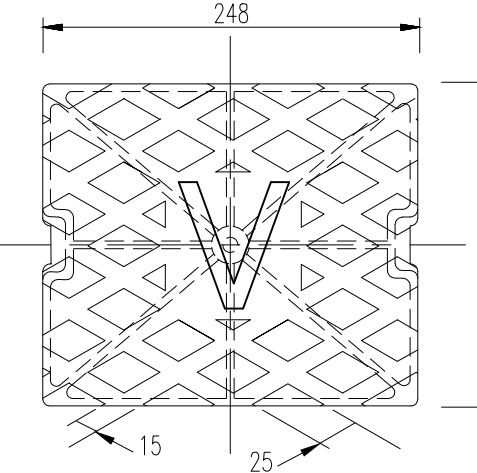
SECTIONAL VIEW



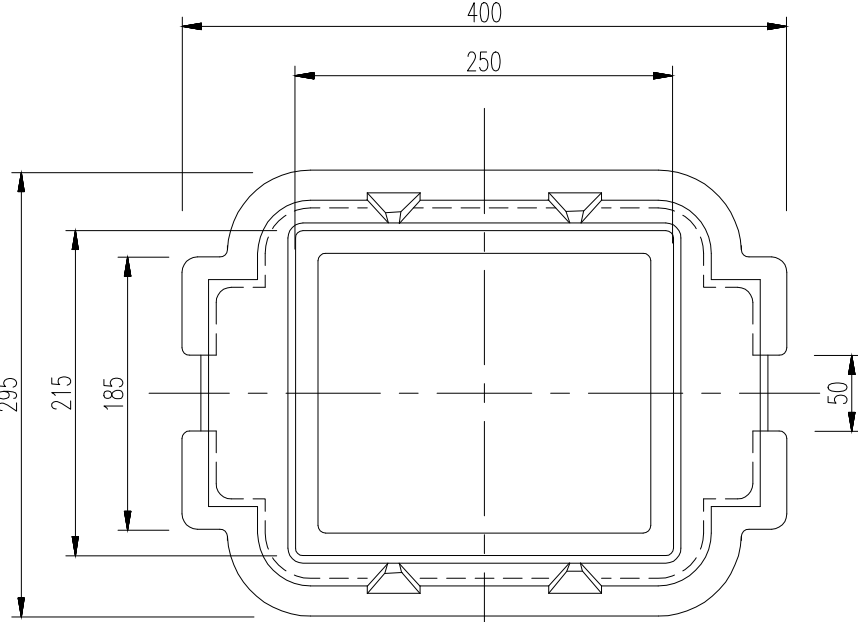
SECTIONAL VIEW



PLAN HYDRANT COVER



PLAN VALVE COVER



POLYETHYLENE SURFACE BOX – HYDRANT/VALVE
(FOR USE IN NON TRAFFIC AREAS ONLY)

C.I. SURFACE BOX – HYDRANT/VALVE

NOTES:

- The lid is secured to the body by a galvanized chain with stainless steel nuts and bolts.
- Boxes made from UV resistant, high impact, high density Polyethylene or heavy duty glass filled nylon.
- Aluminium pins are attached to the underside of the lid for location purposes.
- Tapered with stacking lugs makes storage and carriage easier.
- All dimensions in millimetres.

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	No	No	No
Applicable DWG	CMDG-W-061A						

REVISIONS	DATE
D IRC ADDED	11/2016
C GRC AND LSC ADDED	09/2014
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	01/2010

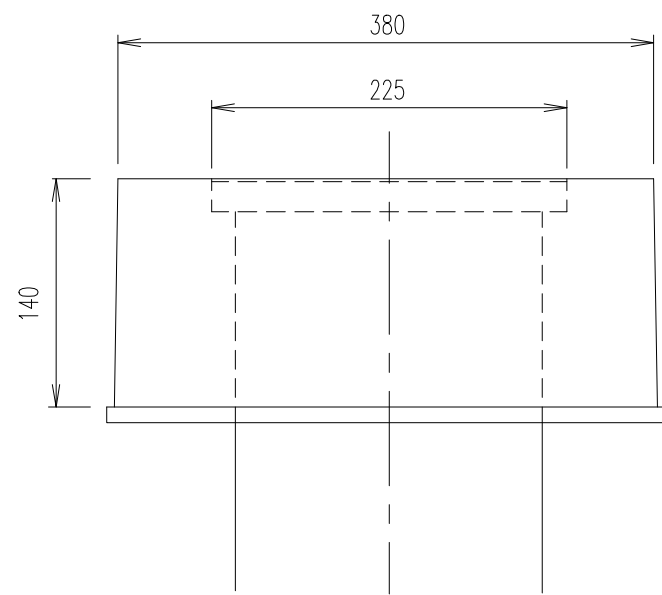
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Capricorn Municipal Development Guidelines

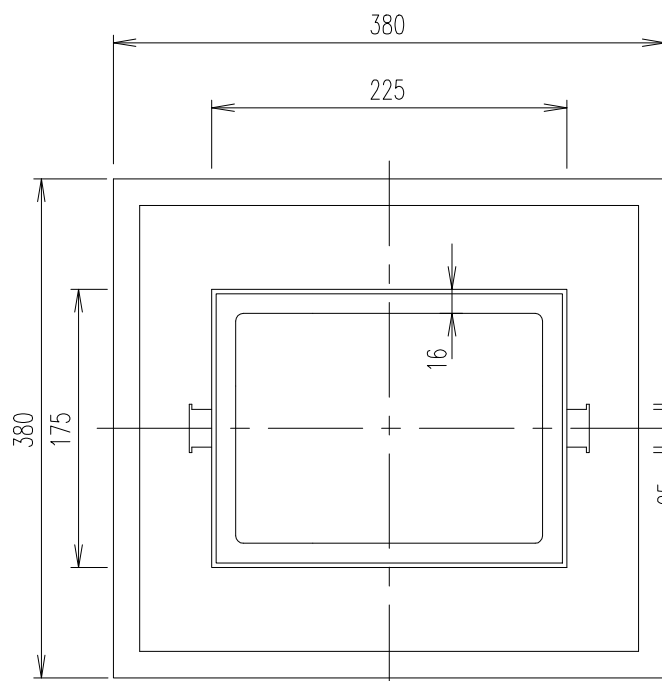
Incorporating:
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Maranoa Regional Council (MRC)
Rockhampton Regional Council (RRC)

HYDRANT AND VALVE
SURFACE BOXES

ROADS
STANDARD DRAWING CMDG-W-061
REV. A B C D



ELEVATION



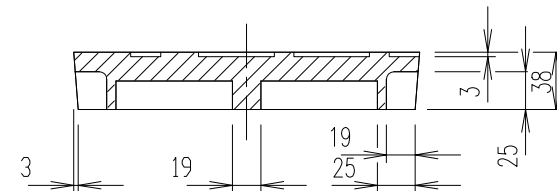
PLAN

POLYETHYLENE SURFACE BOX – HYDRANT/VALVE

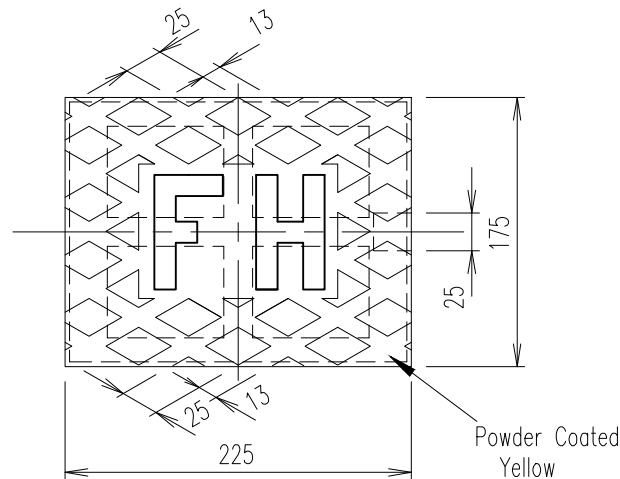
NOTE: BOX NOT RECOMENDED FOR HEAVY,
FAST MOVING TRAFFICABLE AREAS

NOTES:

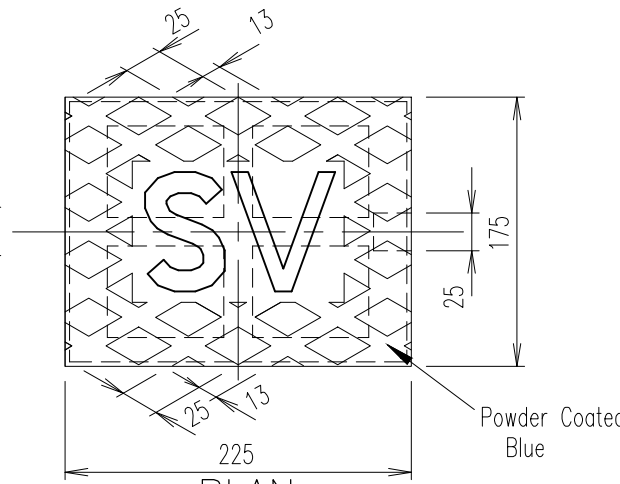
1. Mass of base & lid = 17kg approx.
2. Grey cast Iron, grade \geq T180 to AS 1830.
3. Alternative valve boxes may be adopted where approved by the Service Authority.
4. All dimensions in millimetres.



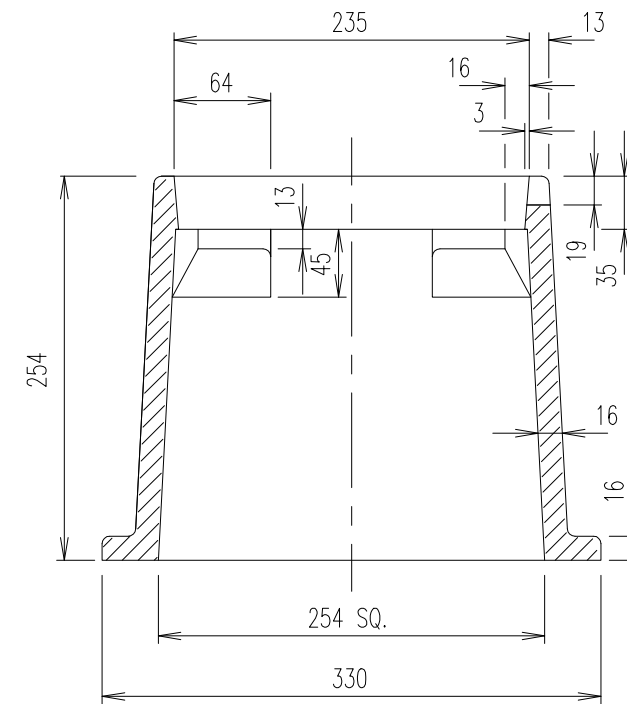
SECTIONAL VIEW



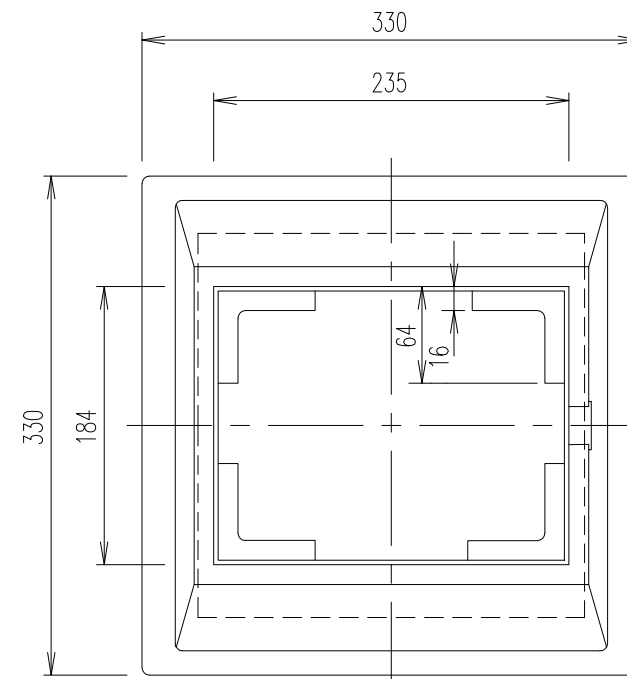
PLAN
HYDRANT COVER



PLAN
VALVE COVER



ELEVATION



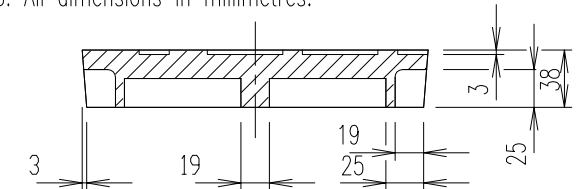
PLAN

C.I SURFACE BOX – HYDRANT/VALVE

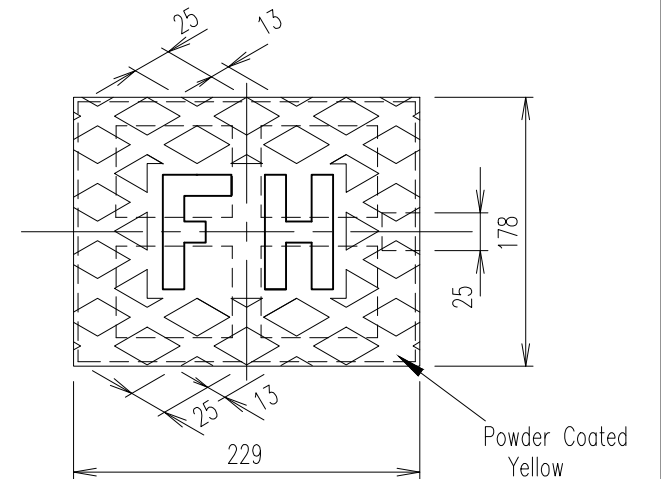
NOTE: BOX RECOMENDED FOR HEAVY,
FAST MOVING TRAFFICABLE AREAS

NOTES:

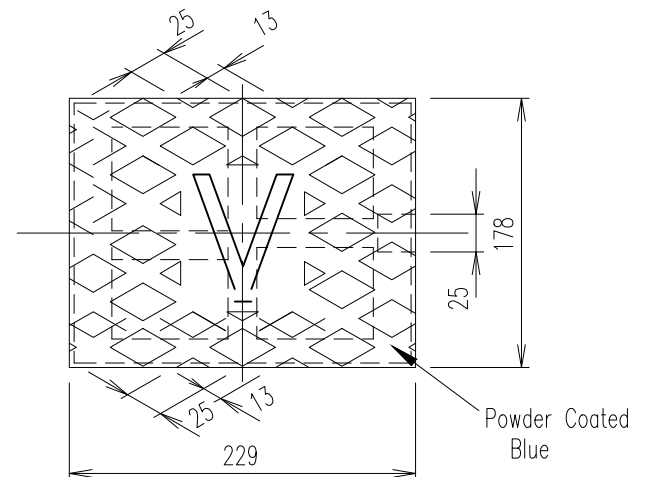
1. Mass of body = 37kg approx.
2. Mass of cover = 14kg approx.
3. Rounding of 5mm NOM. RAD. at all corners.
4. Grey cast Iron, grade \geq T180 to AS 1830.
5. Alternative valve boxes may be adopted where approved by the Service Authority.
6. All dimensions in millimetres.



SECTIONAL VIEW



PLAN
HYDRANT COVER



PLAN
VALVE COVER

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

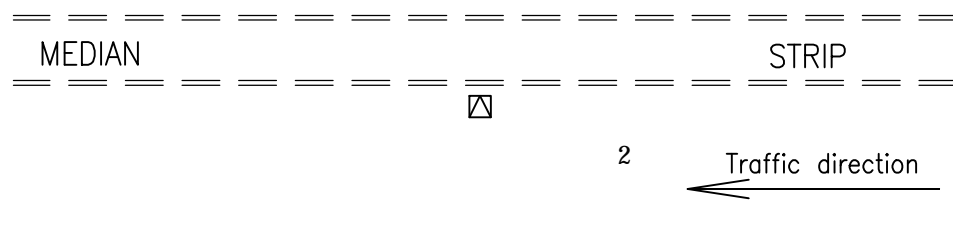
REVISIONS	DATE
D IRC ADDED	11/2016
C GRC AND LSC ADDED	09/2014
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	01/2010

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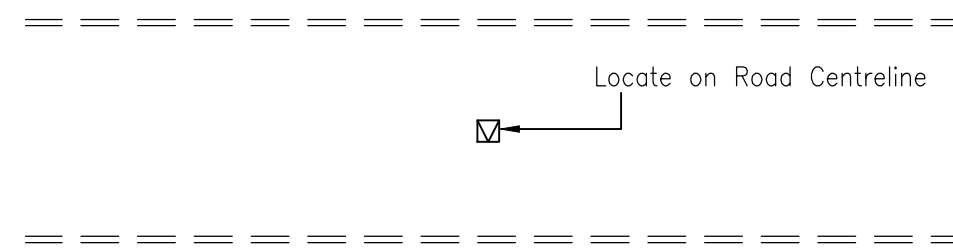
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HYDRANT AND VALVE SURFACE BOXES

ROADS					
STANDARD DRAWING					
CMDG-W-061A					
REV.	A	B	C	D	

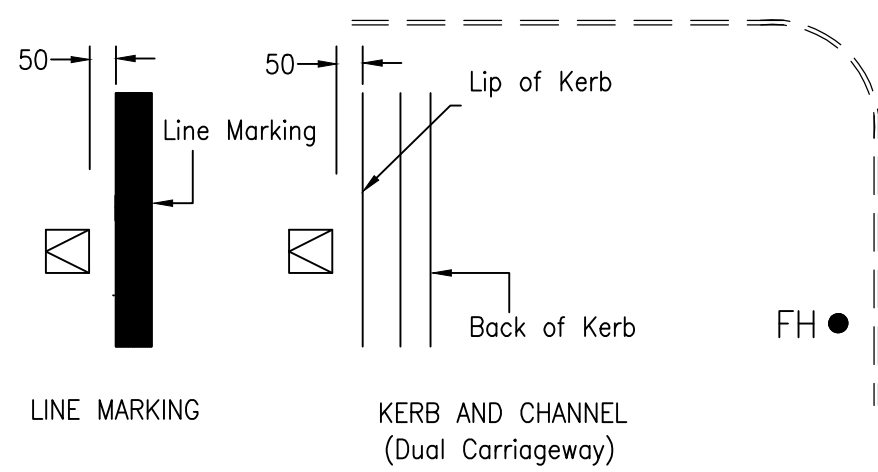


DUAL CARRIAGEWAY



UNMARKED CARRIAGEWAY

Marked Carriageways



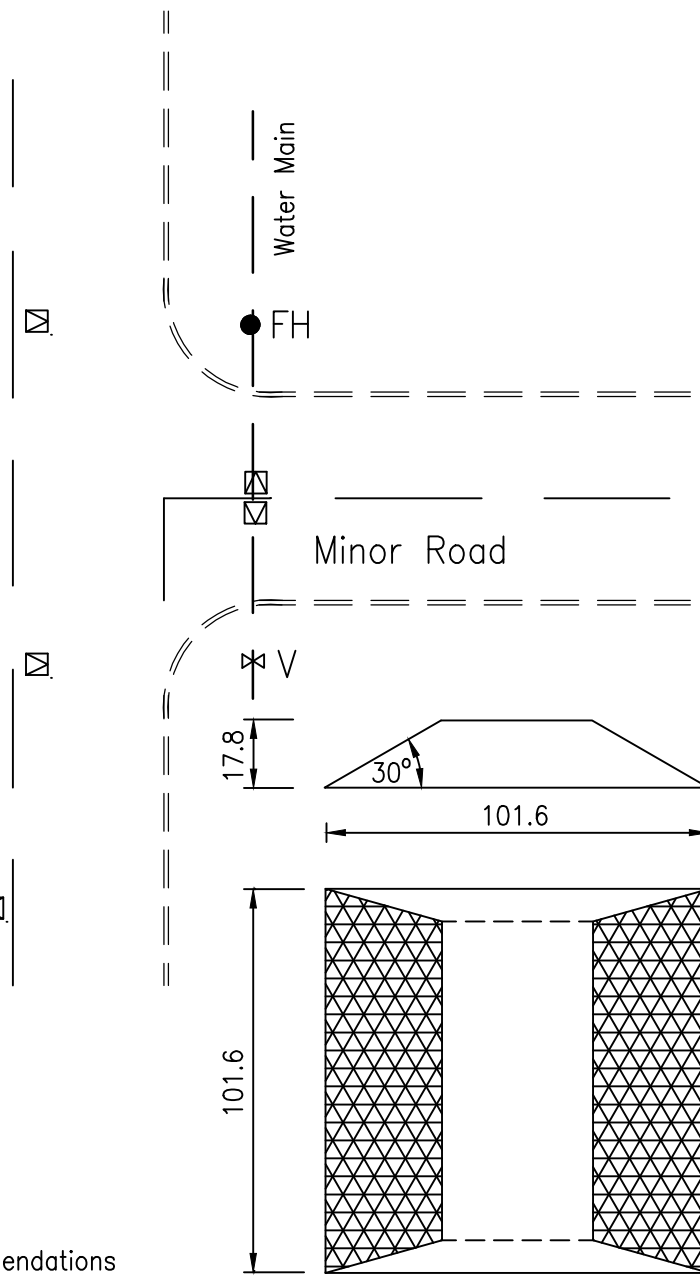
MARKER OFFSET DETAILS

NOTES:

1. Directional arrow on Marker MUST point to the hydrant or valve.
2. Fixing of markers shall be in accordance with manufacturers recommendations
3. For Urban Areas, hydrant posts (if in position) to be removed when marker is positioned
4. Pavement markers to be blue in colour for hydrants and yellow in colour for valves and constructed to AS 1906.3 (1992)
5. For GRC, the kerb is to be painted (White – Valves, Yellow – Hydrants) perpendicular to the asset and 300mm wide
6. For IRC, the kerb is to be painted (Blue – Valves, Yellow – Hydrants) perpendicular to the asset and 300mm wide

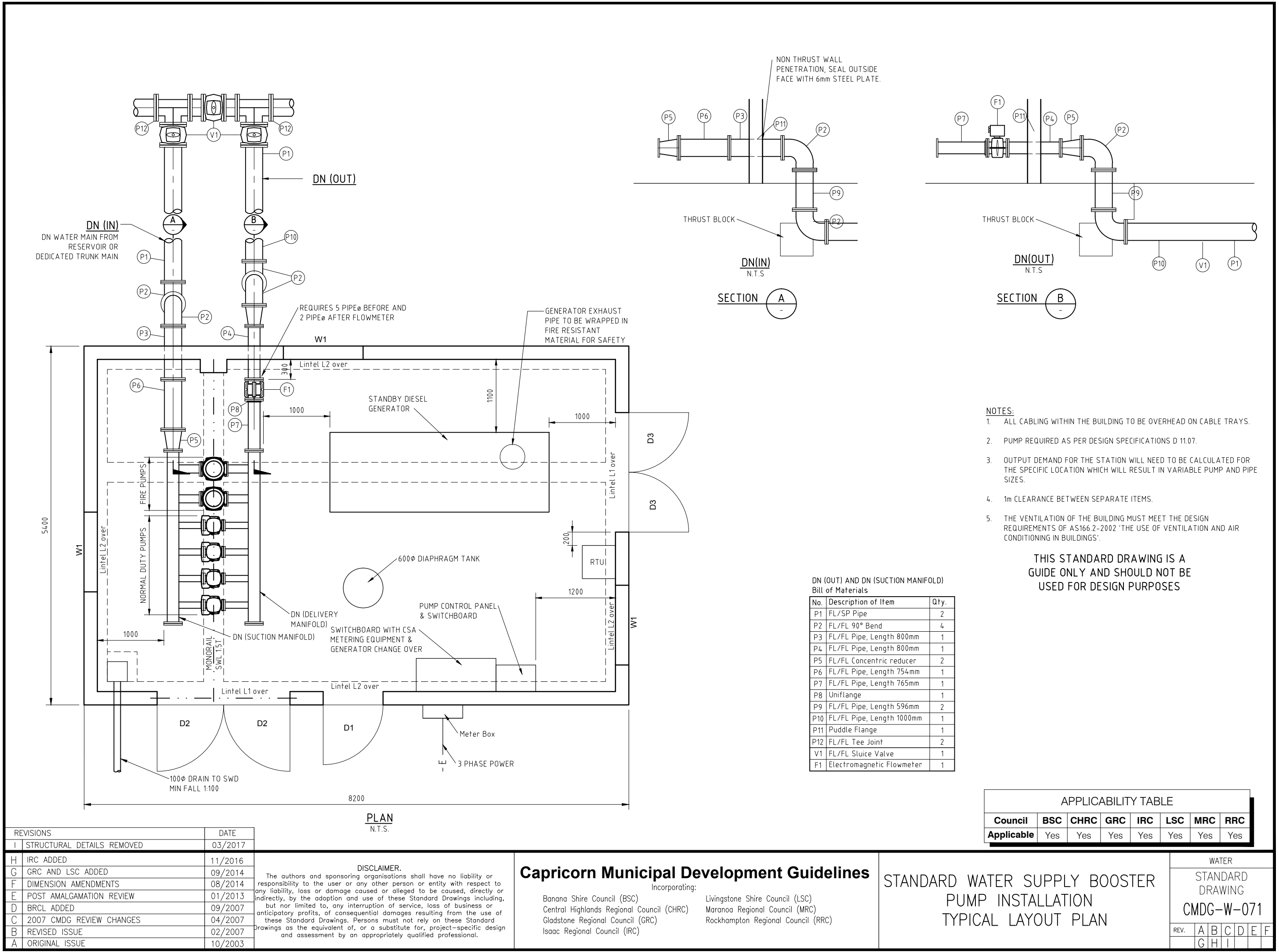
LEGEND:

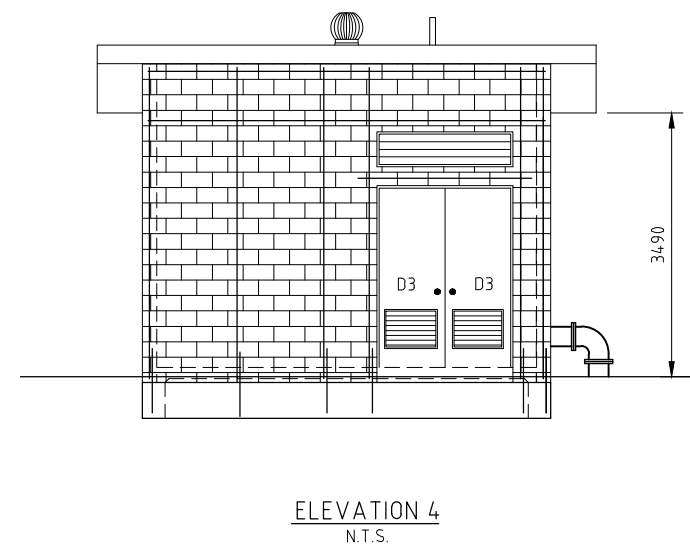
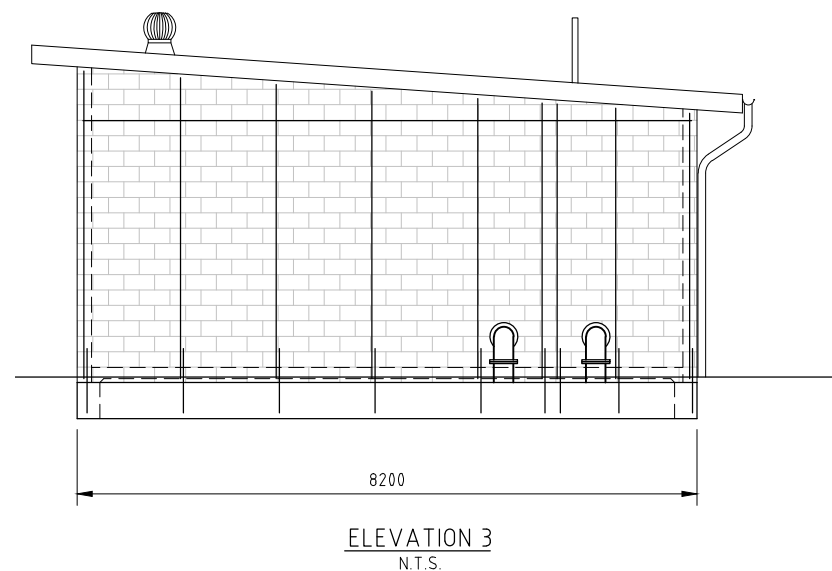
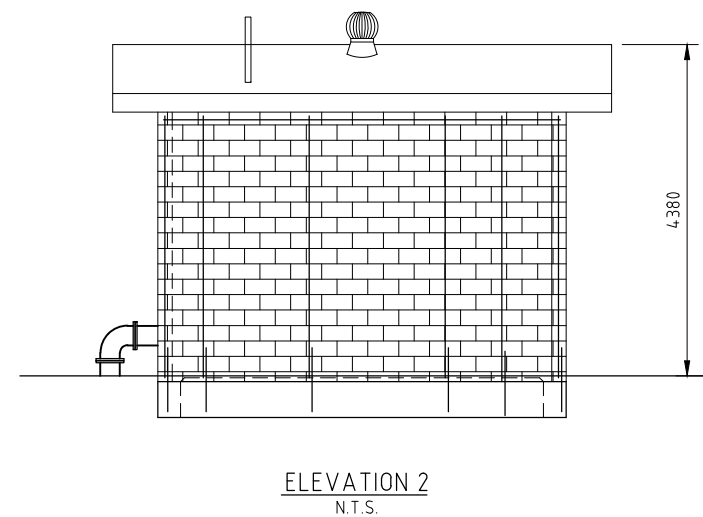
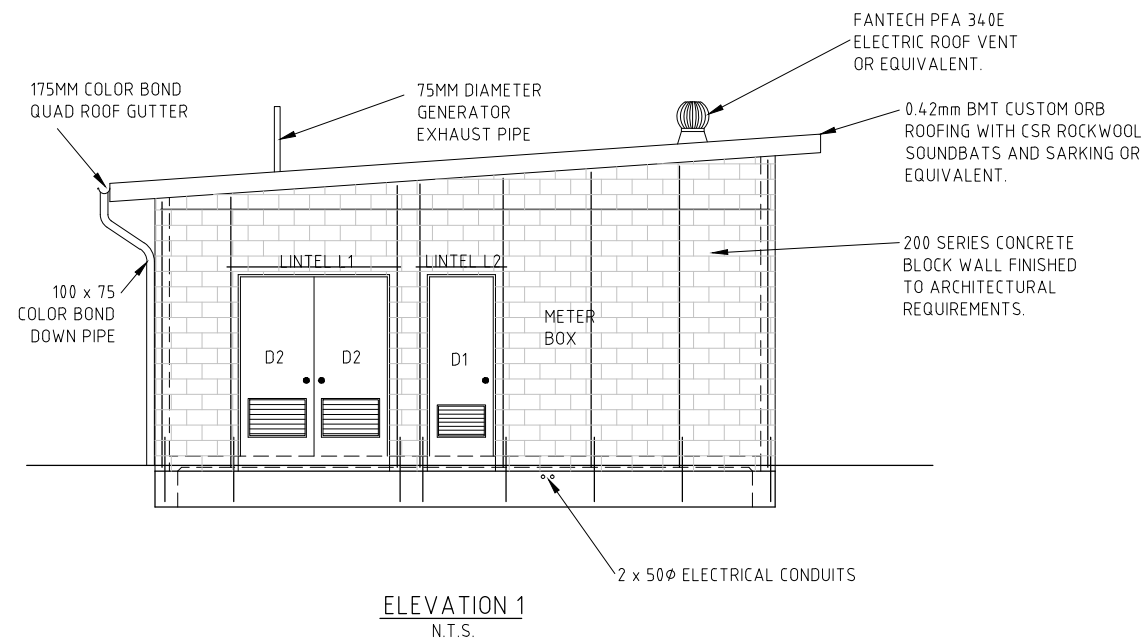
- PM (Retroreflective Pavement Marker) with visible directional marking.
- FH Fire Hydrant
- V Valve



TYPICAL RETROREFLECTIVE PAVEMENT MARKER

APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kerb Painting (See Note 5)	No	No	Yes (Note 5)	Yes (Note 6)	No	No	No





- NOTES:**
- BUILDING FORM MAY VARY ACCORDING TO THE LOCATION AND SURROUNDING ENVIRONMENT.
 - FOOTINGS MUST BE DESIGNED TO SUIT BUILDING DESIGN AND FOUNDATION CONDITIONS.
 - DUE TO A POSSIBILITY OF CHANGES TO THE SIZE OF THE PUMPS AND PIPES THE BUILDING MAY CHANGE.

THIS STANDARD DRAWING IS A GUIDE ONLY AND SHOULD NOT BE USED FOR DESIGN PURPOSES

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISION	DATE
H	STRUCTURAL DETAILS REMOVED
G	IRC ADDED
F	GRC AND LSC ADDED
E	DIMENSION AMENDMENTS
D	POST AMALGAMATION REVIEW
C	BANANA SHIRE COUNCIL ADDED
B	CMDG REVIEW CHANGES
A	ORIGINAL ISSUE

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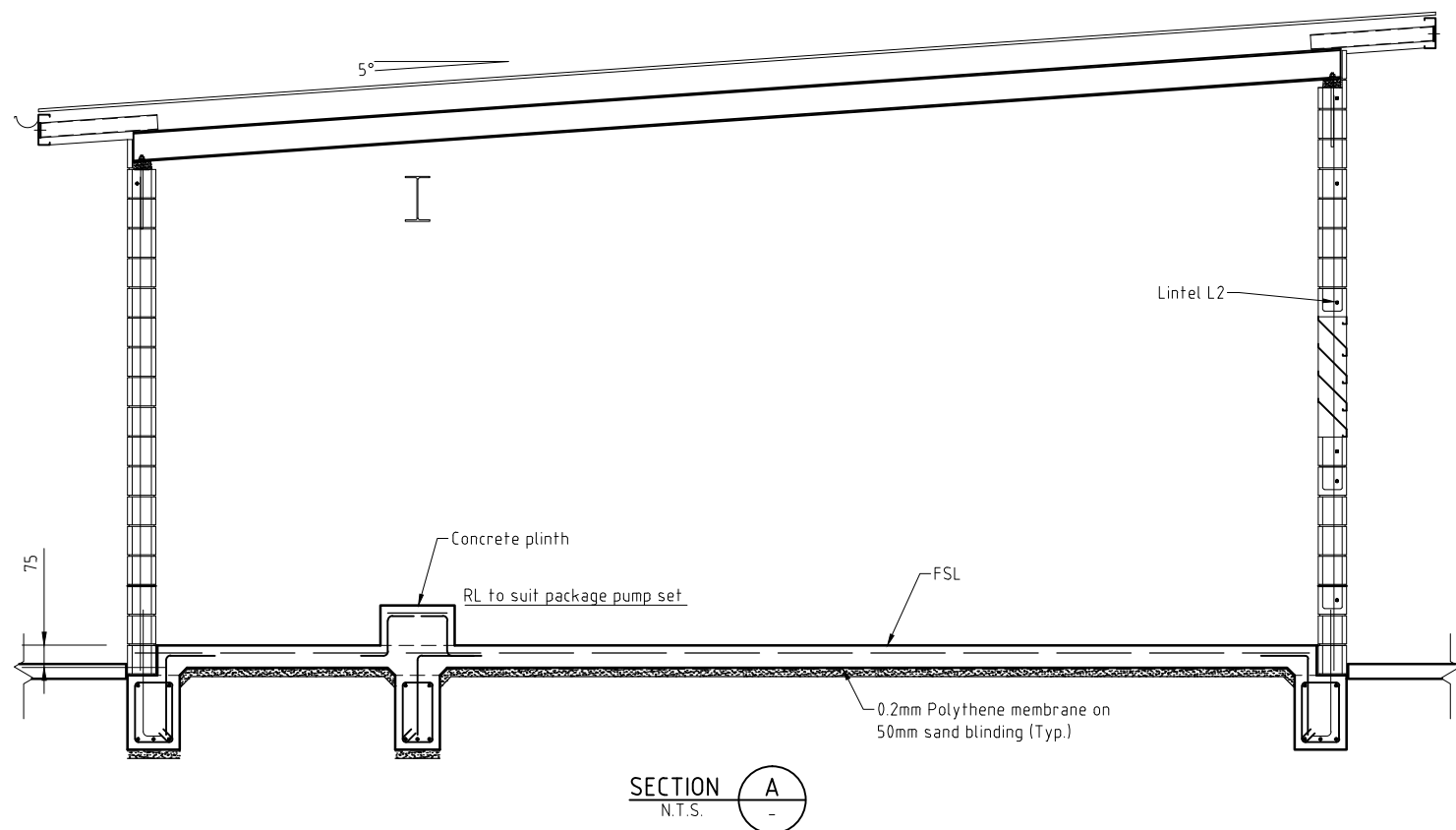
Capricorn Municipal Development Guidelines

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Isaac Regional Council (IRC)
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Rockhampton Regional Council (RRC)

STANDARD WATER SUPPLY BOOSTER PUMP INSTALLATION ELEVATIONS

WATER						
STANDARD DRAWING						
CMDG-W-072						
REV.	A	B	C	D	E	F
REV.	G	H				



ITEM	DESCRIPTION	No. of
D1	Nominal 2200 high x 900 wide acoustic door externally faced with 1.6mm galvanised steel sheet metal, with 1.6mm thick pressed galvanised steel welded door frame, three 100mm heavy duty stainless steel hinges and "Lockwood - 303" single cylinder dead lock. Provide internal and external door handles. Door and frame is to be painted with an approved gloss enamel paint system. Colour is to be advised.	1
D2	Nominal 2200 high x 2000 wide 2 leaf factory hung acoustic door with suitably designed heavy duty galvanised steel frame with stainless steel sill, and purpose designed adjustable heavy duty ball bearing hinges. Doors shall be externally faced with 1.6mm galvanised steel sheet. Both leaves to be fitted with satin chrome shoot bolts top and bottom. Top shoot bolts shall extend down to 1800 above floor level. Provide internal and external door handles. Door and frame is to be painted with an approved gloss enamel paint system. Colour is to be advised.	1
D3	Nominal 2200 high x 1800 wide 2 leaf factory hung acoustic door with suitably designed heavy duty galvanised steel frame with stainless steel sill, and purpose designed adjustable heavy duty ball bearing hinges. Doors shall be externally faced with 1.6mm galvanised steel sheet. Both leaves to be fitted with satin chrome shoot bolts top and bottom. Top shoot bolts shall extend down to 1800 above floor level. Provide internal and external door handles. Door and frame is to be painted with an approved gloss enamel paint system. Colour is to be advised.	1
W1	Nominal 800 high x 1200 wide powder coated aluminium weather/insect-proof acoustic louvres. Colour is to be anodized bronze. (ACRAN 200 Series or equivalent)	3

THIS STANDARD DRAWING IS
A GUIDE ONLY AND SHOULD
NOT BE USED FOR DESIGN
PURPOSES

NOTES:

- NOTES:**
1. ALL CABLING WITHIN THE BUILDING TO BE OVERHEAD ON CABLE TRAYS.
 2. REDESIGN OF STRUCTURAL COMPONENTS WILL BE REQUIRED FOR EACH SPECIFIC LOCATION.

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS		DATE
I	STRUCTURAL DETAILS REMOVED	03/2017
H	IRC ADDED	11/2016
G	GRC AND LSC ADDED	09/2014
F	DIMENSION AMENDMENTS	08/2014
E	POST AMALGAMATION REVIEW	01/2013
D	BANANA SHIRE COUNCIL ADDED	09/2007
C	CMDG REVIEW CHANGES	04/2007
B	REVISED ISSUE	02/2007
A	ORIGINAL ISSUE	10/2003

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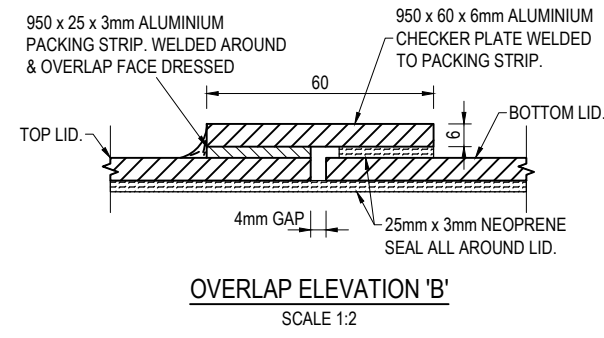
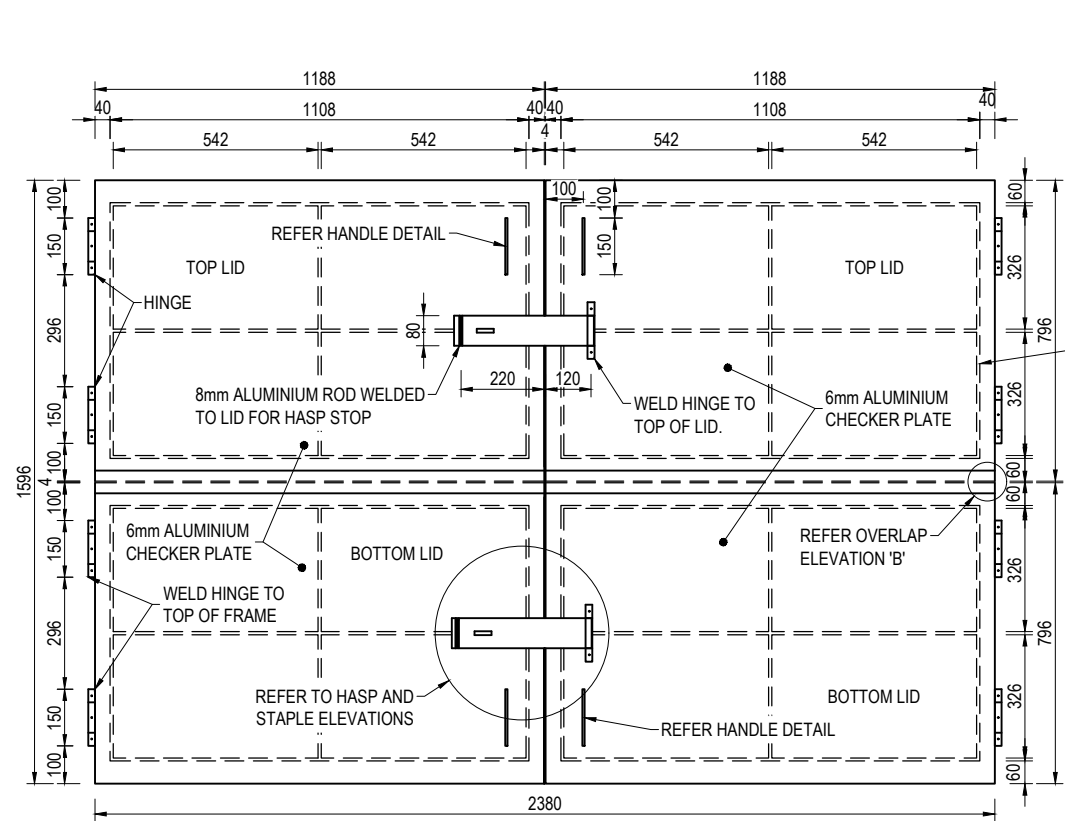
STANDARD WATER SUPPLY BOOSTER PUMP INSTALLATION ELEVATION

WATER

STANDARD
DRAWING

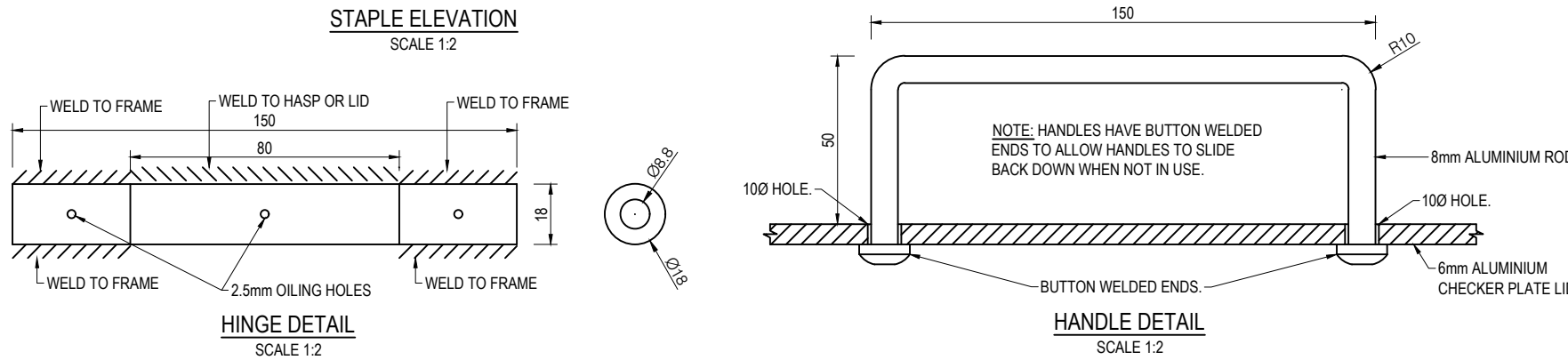
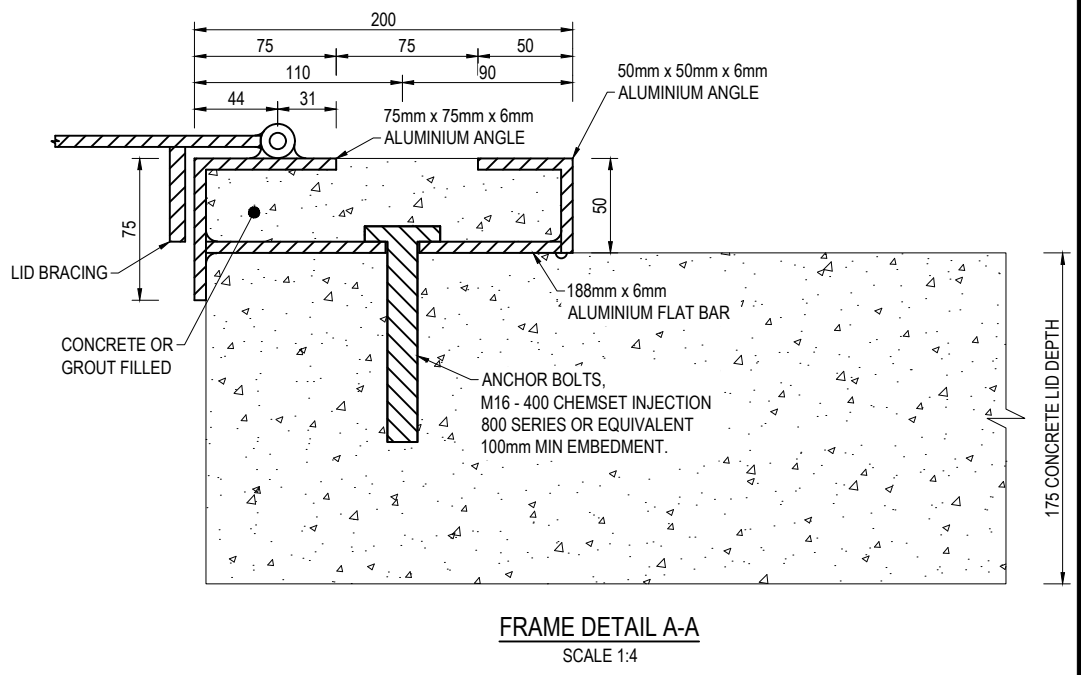
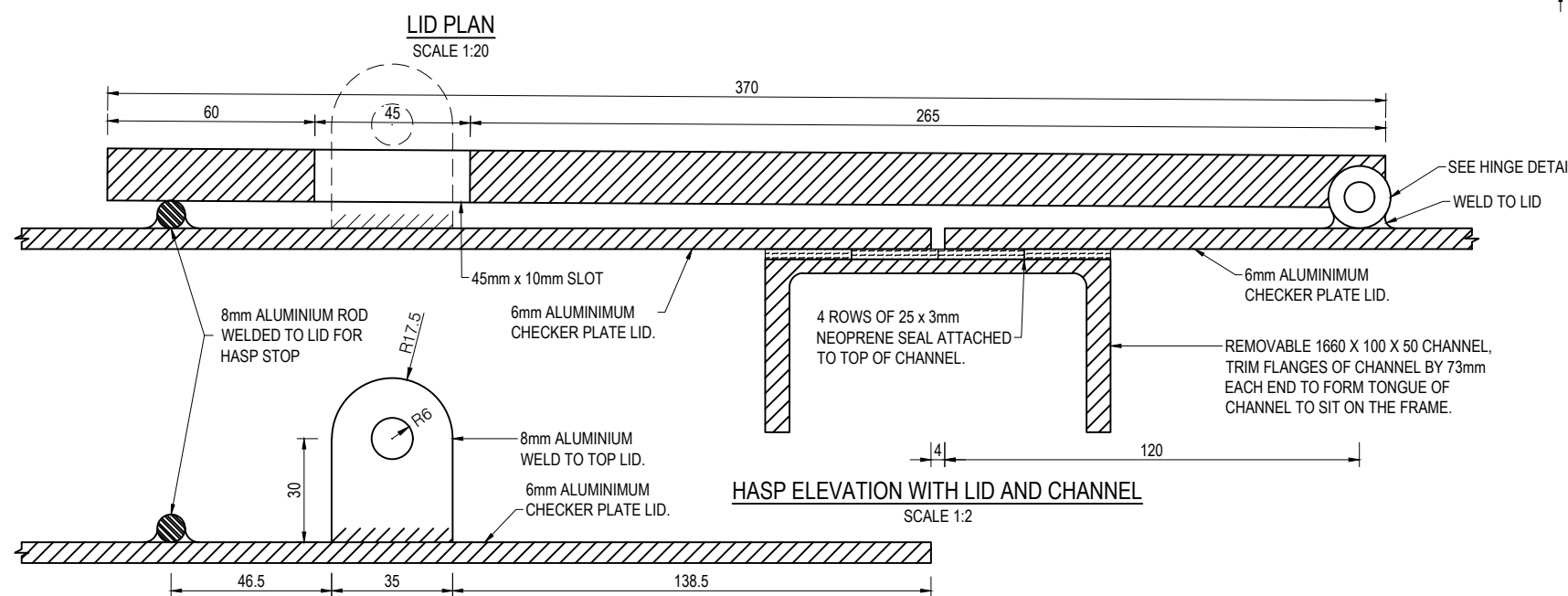
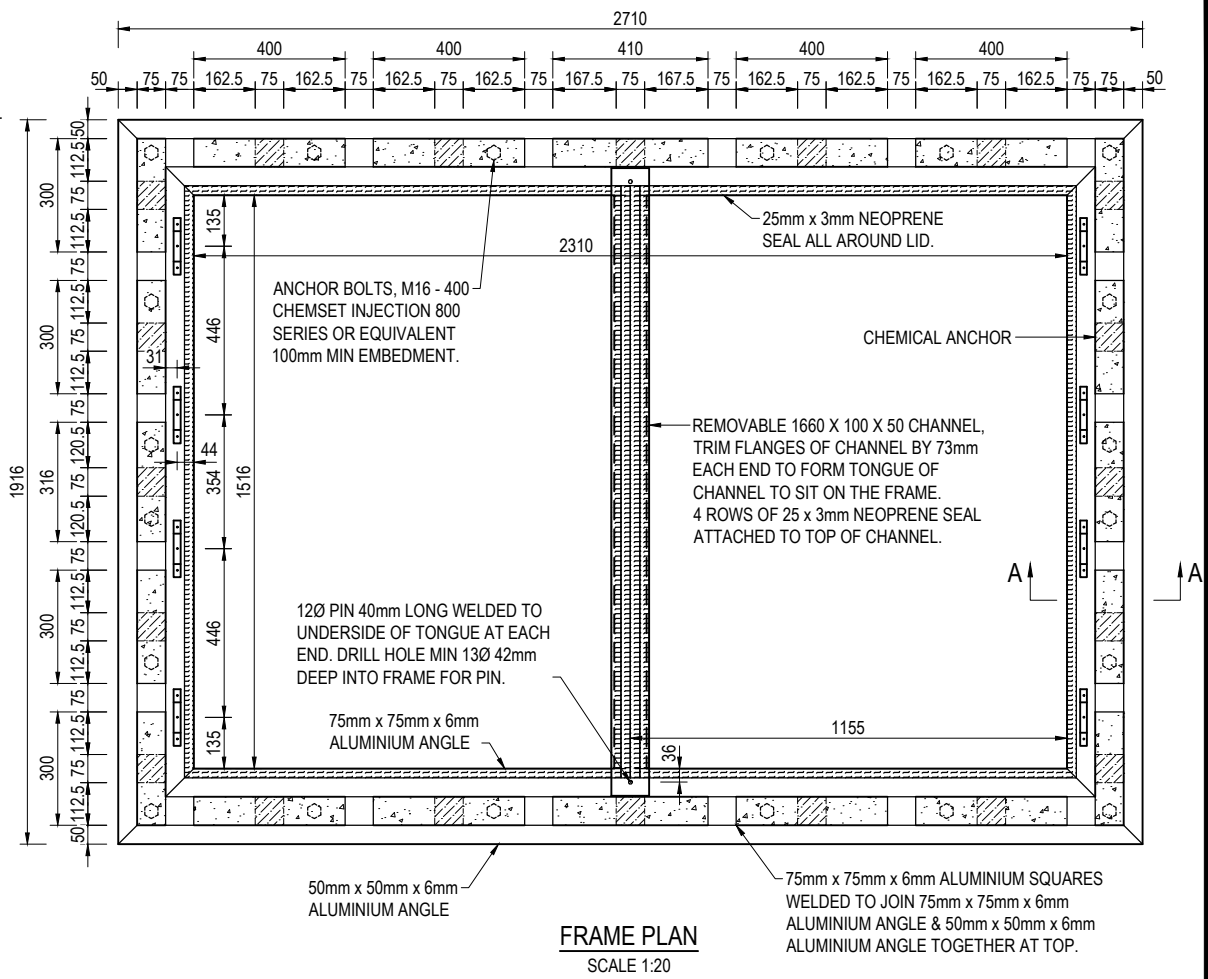
CMDG-W-073

REV.	A	B	C	D	E	F
	G	H	I			



NOTE:
 1. DESIGN SAFE LIVE LOAD = 2.5kpa
 2. MATERIAL GRADE:
 A. 6mm ALUMINIUM CHECKER PLATE = 5251-P5
 B. ALUMINIUM FLAT BAR = 6082-T6
 C. ALUMINIUM ANGLE = 6082-T5
 3. ALL WELDS TO AS1665

200 100 0 200 400 600 800 mm
1:20 (A3)



APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	No	No	Yes	Yes	Yes	No	Yes
Applicable DWG							

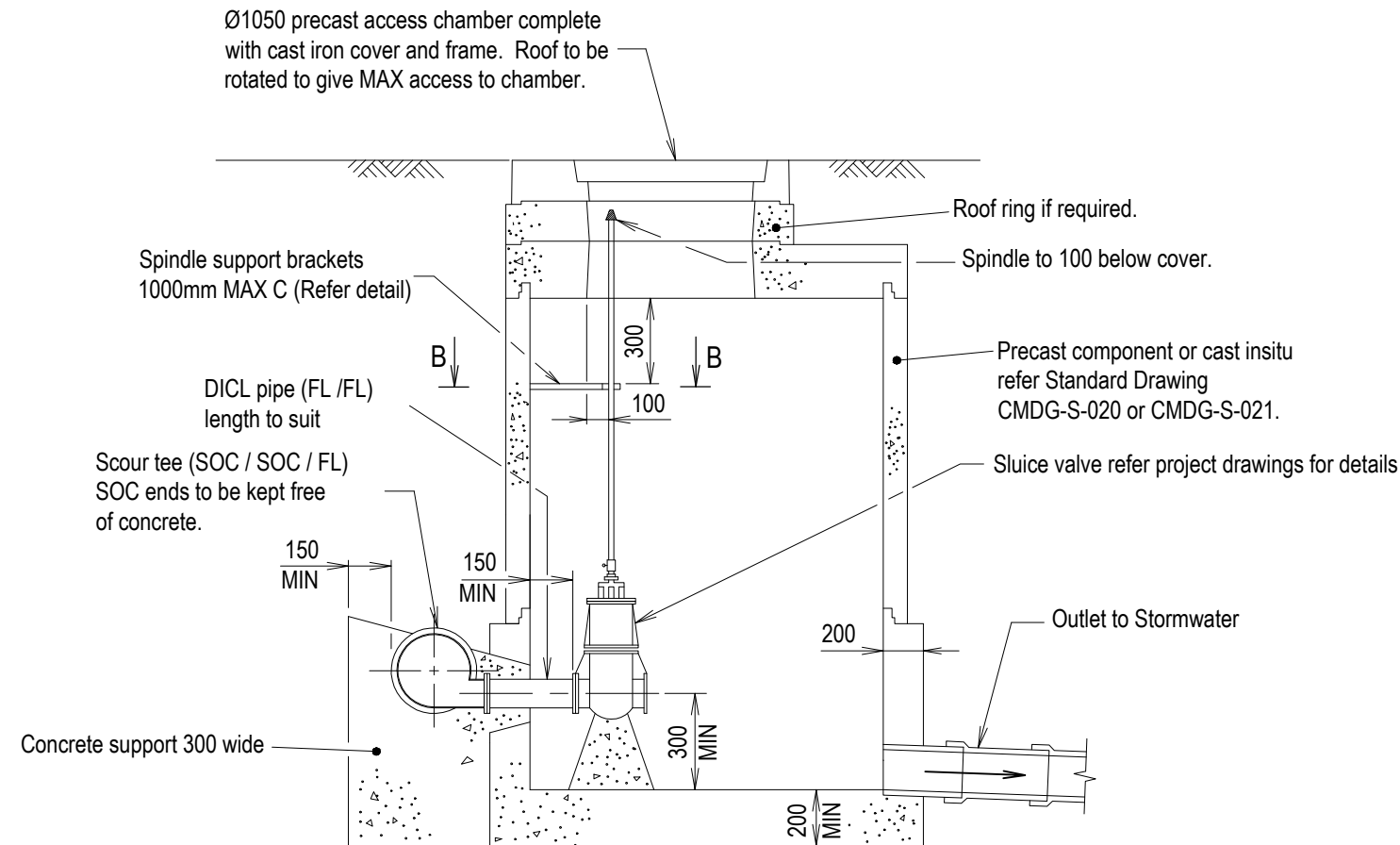
REVISIONS	DATE
G SCALES & LID ARRANGEMENT AMENDED	01/2018
F IRC ADDED	11/2016
E GRC AND LSC ADDED	09/2014
D DIMENSION AMENDMENTS	08/2014
C APPLICABILITY CHANGES	01/2013
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	01/2010

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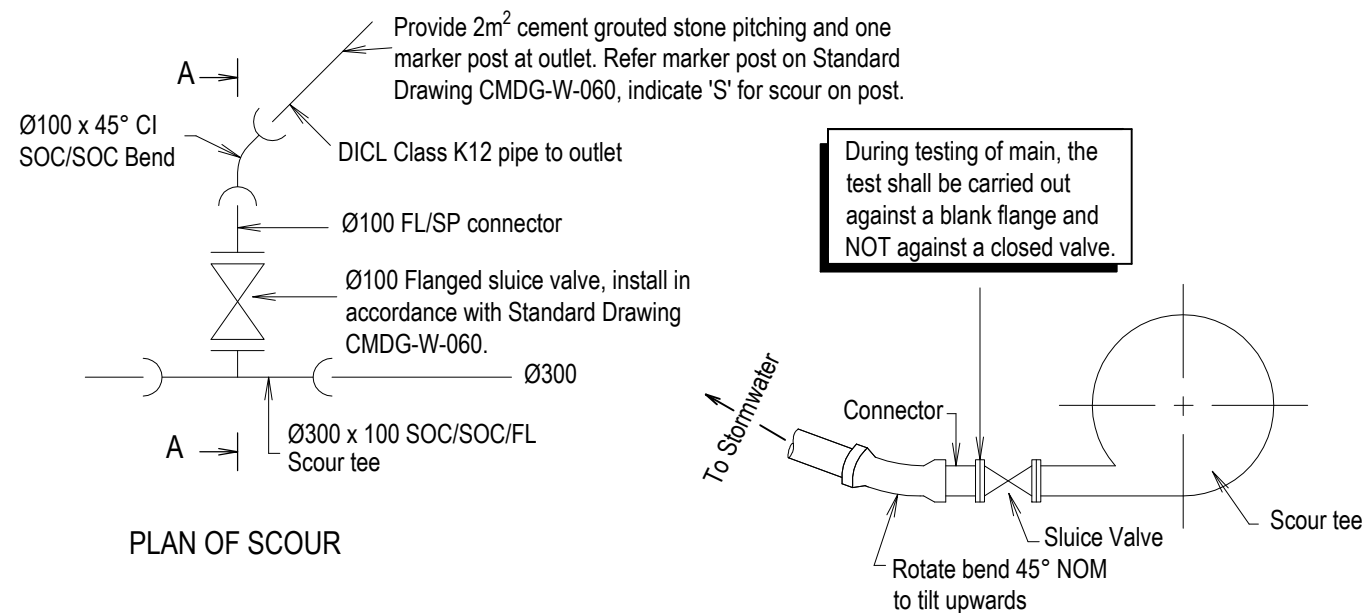
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**STANDARD WATER SUPPLY BOOSTER
 PUMP INSTALLATION
 FLOWMETER PIT LID DETAILS**

ROADS							
STANDARD DRAWING							
CMDG-W-074							
REV.	B	C	D	E	F	G	

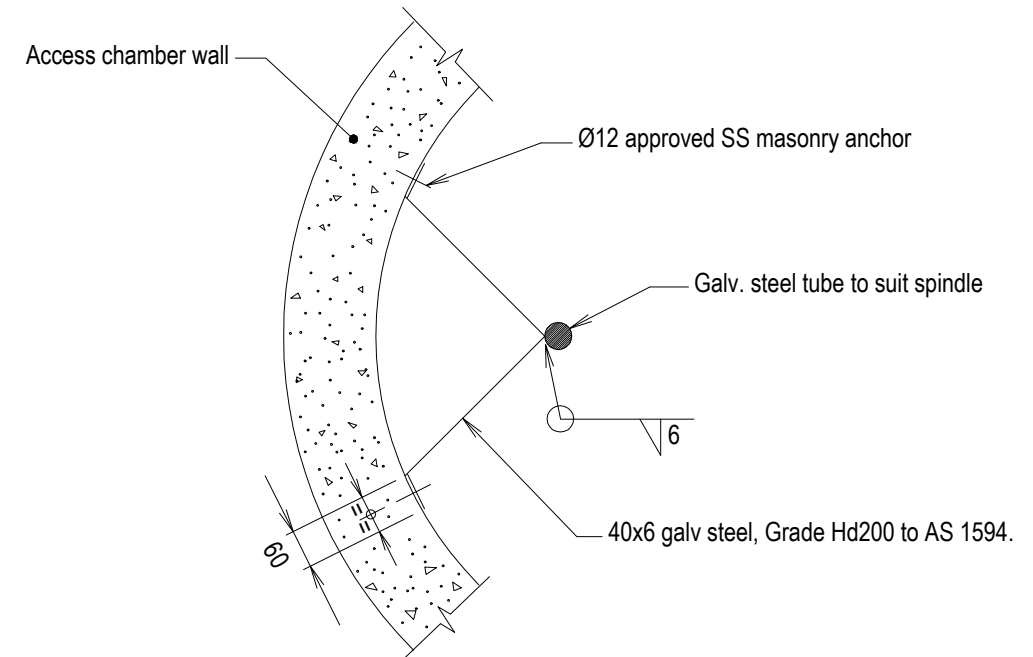


**ELEVATION
SCOUR DETAIL AT ACCESS CHAMBER**
(Where Specified by Council)



PLAN OF SCOUR

**SECTIONAL ELEVATION OF
SCOUR TEE AT A-A**



**SECTION B-B
BRACKET DETAIL**

NOTES

1. Refer Standard Drawings CMDG-S-020 and CMDG-S-025 for details of access chambers and covers.
2. Where foundation bearing pressure is less than 50kPa, excavate and replace unsatisfactory material with compacted CBR15 material to the depth ordered by the Superintendent.
3. Concrete N25 in accordance with AS 1379 Supp 1-1997/Amdt 1-2000 and AS 3600-2001/Amdt 2-2004.
4. All welds to AS 1554. All welding symbols to AS 1101.3.-2005.
5. The location of the scour valve and extent of scour discharge pipe are indicated on project drawings.
6. All dimensions in millimetres.
7. The puprose of the scour system is to release water and remove any sedimentation that maybe in the water reticulation network.

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS	DATE
F DRAWING REFERENCES AMENDED	12/2017
E IRC ADDED	11/2016
D GRC AND LSC ADDED	09/2014
C NOTE 2 AMENDED	02/2014
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	01/2010

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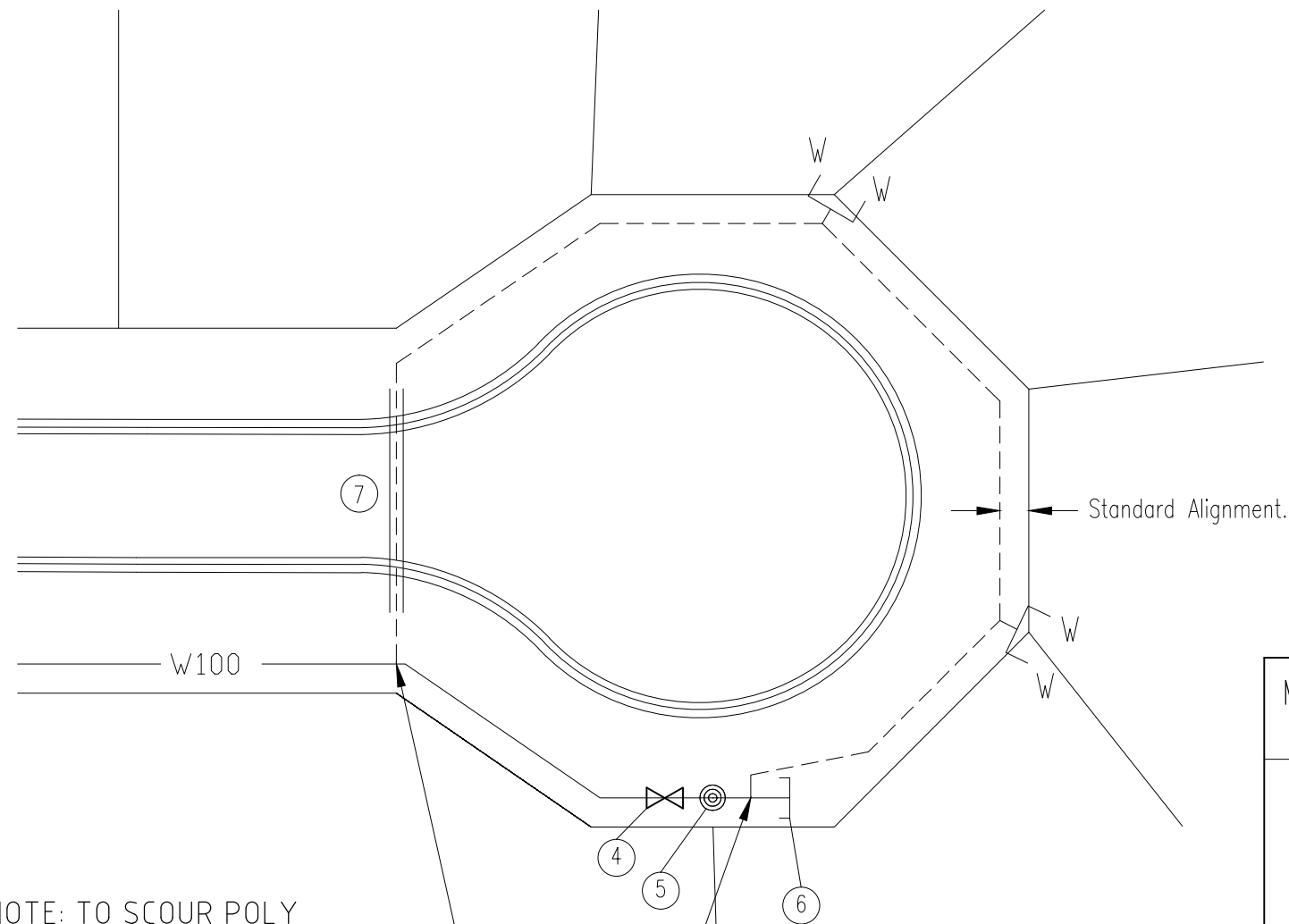
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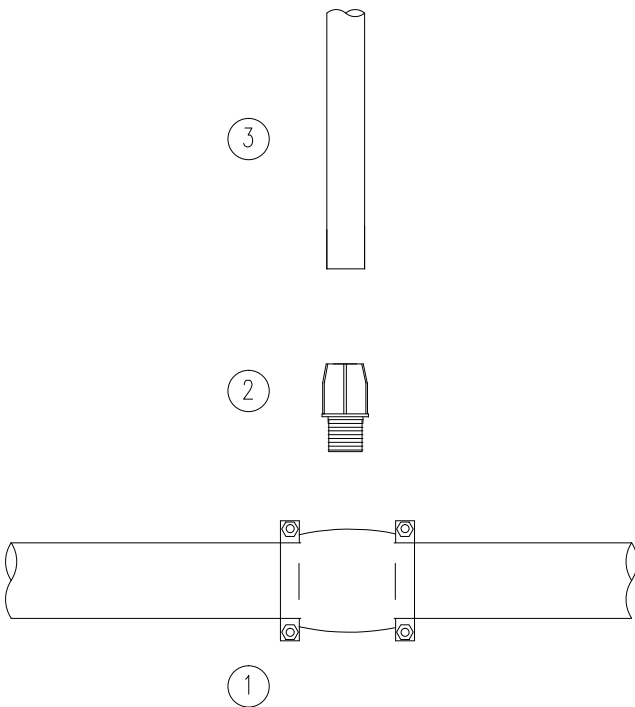
SCOUR DETAILS

ROADS
STANDARD DRAWING CMDG-W-080
REV. A B C D E F



NOTE: TO SCOUR POLY
LOOP, CLOSE VALVE
AND OPEN HYDRANT

TYPICAL CUL-DE-SAC
WATER PLAN



DETAIL A (PLAN)

MARK NO	DESCRIPTION
1	Elongated Tapping Band – Tapped to 50mmØ BSPT
2	50mmØ MI 63mmØ Poly End Connector
3	DN63 HDPE PN 12.5
4	100 Sluice Valve
5	100 Hydrant, Tee and Riser
6	End Cap and Thrust Block
7	100mm PVC Service Conduit

FITTINGS DETAIL

APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS		DATE
D	IRC ADDED	11/2016
C	GRC AND LSC ADDED	09/2014
B	RRC AMENDMENTS	05/2011
A	ORIGINAL ISSUE	01/2010

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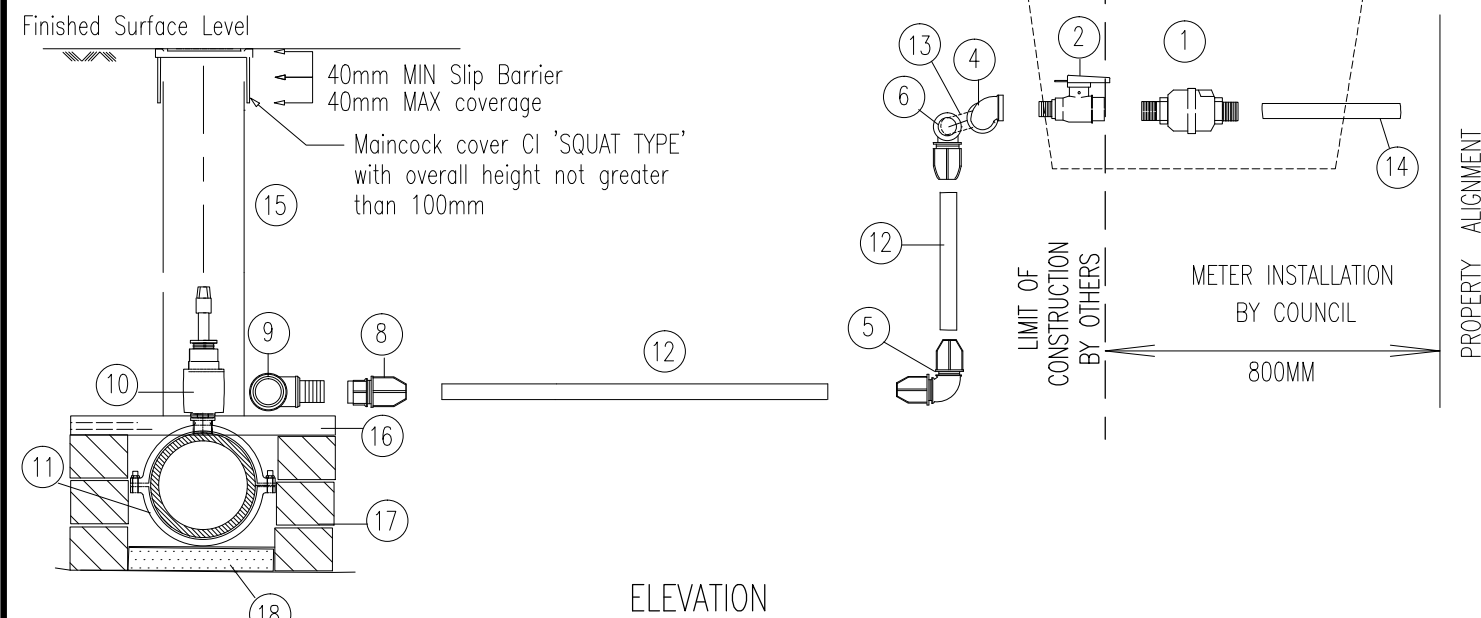
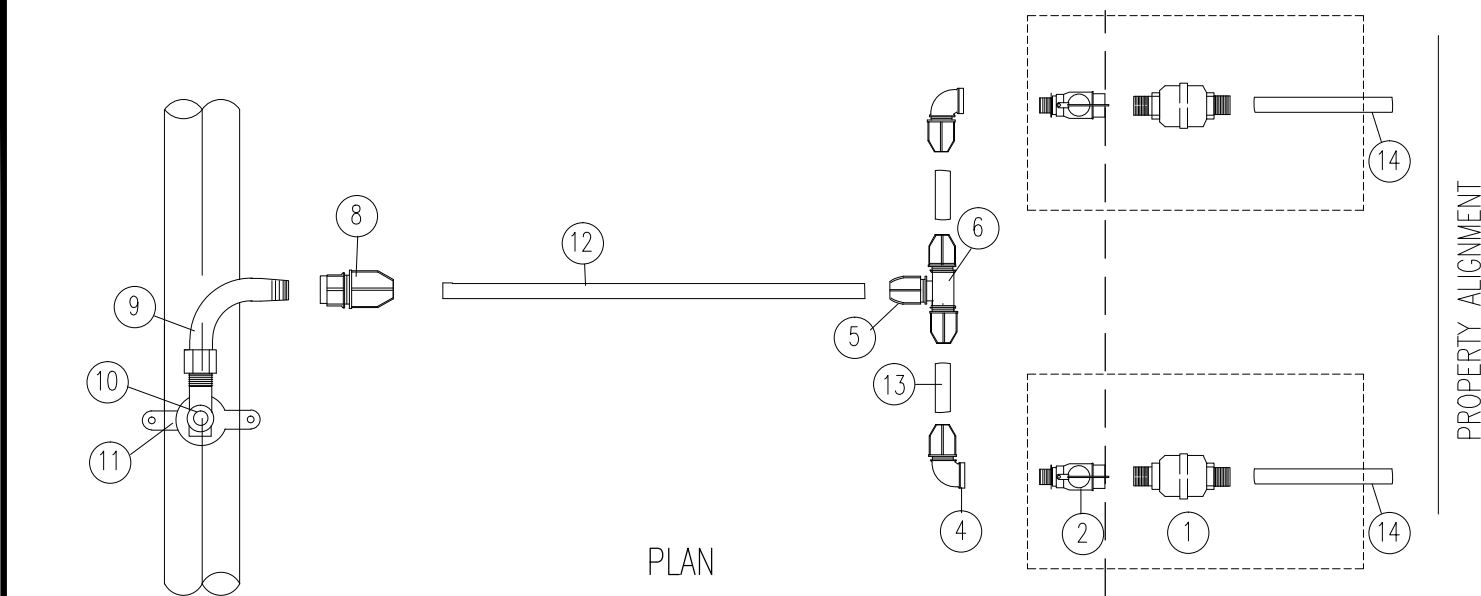
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CUL-DE-SAC SCOUR DETAILS

ROADS							
STANDARD DRAWING							
CMDG-W-081							
REV.	A	B	C	D			



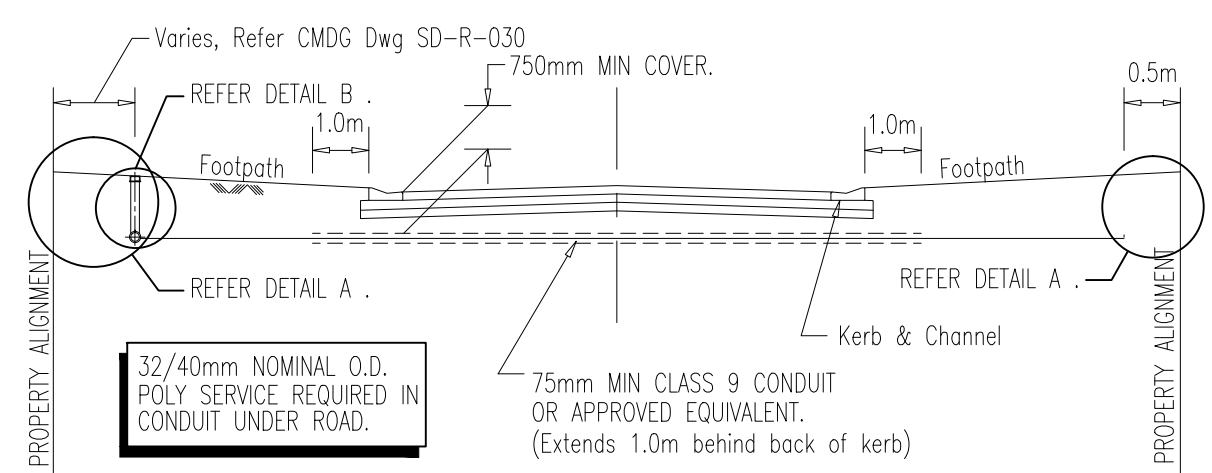
WATER MAIN CONNECTION
DETAIL: B

MARK NO	DESCRIPTION	MARK NO	DESCRIPTION
1	Approved 20mm Water Meter	10	32mm TPFNR with Spindle Top
2	20mm Ball Cock	11	Approved Tapping Band – Tapped 25/32mm DIA..
4	20mm F.I. x 25 OD Poly Connector Elbow	12	32/40mm OD Nominal
5	32/40mm OD x 90 Poly Bend	13	25mm Nominal OD Poly
6	25P x 25Px32/40P Nominal OD Poly Tee (or equivalent)	14	20mm x 150 threaded Poly
8	25/32mm F.I. x 32/40 mm Poly Connector	15	100mm o UPVC Sewer Class SEH Riser
9	M.I Ferrule Bend	16	30 x 75 x 350 HWD Support
		17	3 Brick Support
		18	50mm MIN Sand Bedding

NOTES :

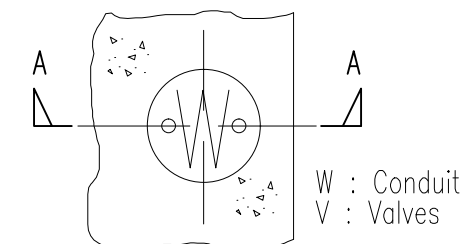
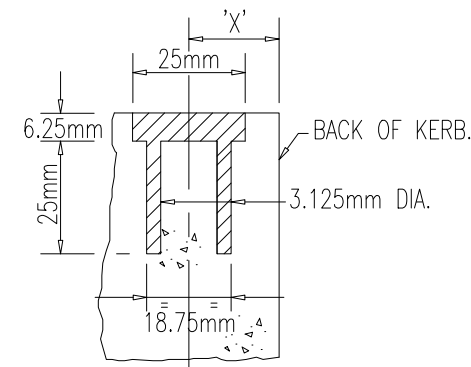
1. No galvanized fittings to be used.
2. Check applicability box for service requirements for different councils

WATER SERVICE CONNECTION
DETAIL: A



NOTES:

1. Dimension 'X' shall be 75mm for BARRIER KERB and 25mm for MOUNTABLE KERB.
2. This Drawing shall be read in conjunction with the relevant specification for Service Conduits.
3. A BRASS or STAINLESS STEEL Service Conduit Marker is to be installed for all Conduits. Refer Detail.
4. Markers for Valves to be installed in kerb and channel at 90° to Valve location.



SECTION A-A

BRASS or STAINLESS STEEL SERVICE CONDUIT MARKER and VALVE MARKER DISC

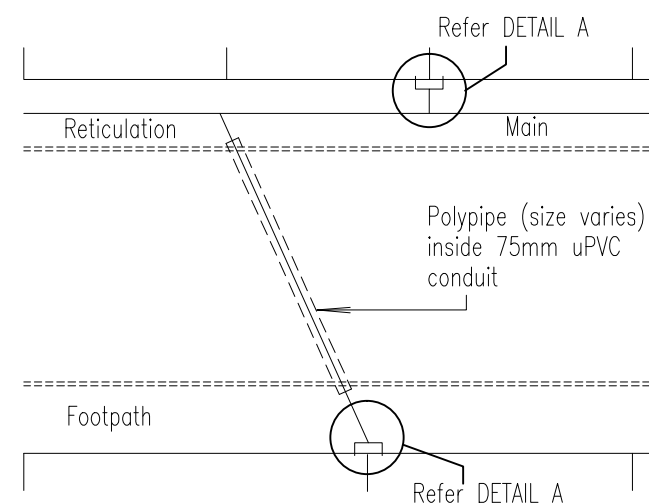
MINIMUM COVER IN PUBLIC AREAS

Location	Minimum Cover Measure below ground surface level in mm
Unpaved	450
Paved or Road Surface	450
Solid Rock	300

Table 5.3 as given in
A.S.3500.1.2 of 1998

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	No	Yes	Yes	Yes	Yes
Short / long dual and short long single size (OD)	32	32		32	40	32	40
Service box Installation	No	No		No	Yes	No	Yes
Applicable DWG	CMDG-W-090A						



N.T.S

REVISIONS	DATE
F IRC ADDED	11/2016
E AMMEND TPFNR TO 32mm	04/2016
D GRC AND LSC ADDED, DOUBLE SERVICE SIZE 40mm. AMENDED TPFNR REFERENCE	01/2015
C APPLICABILITY CHANGES	01/2013
B RRC AMENDMENTS	05/2011
A ORIGINAL ISSUE	

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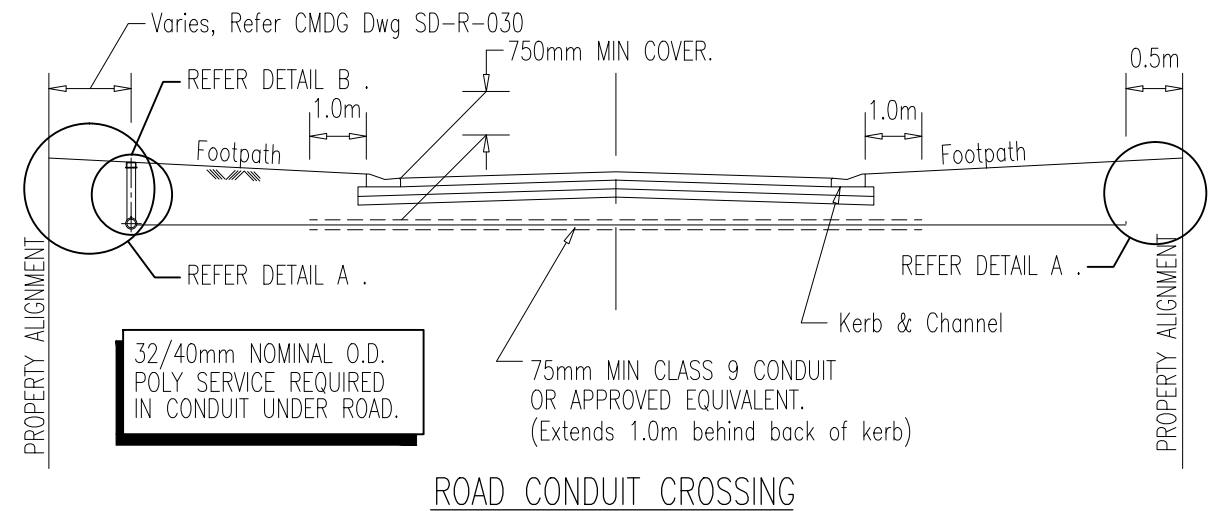
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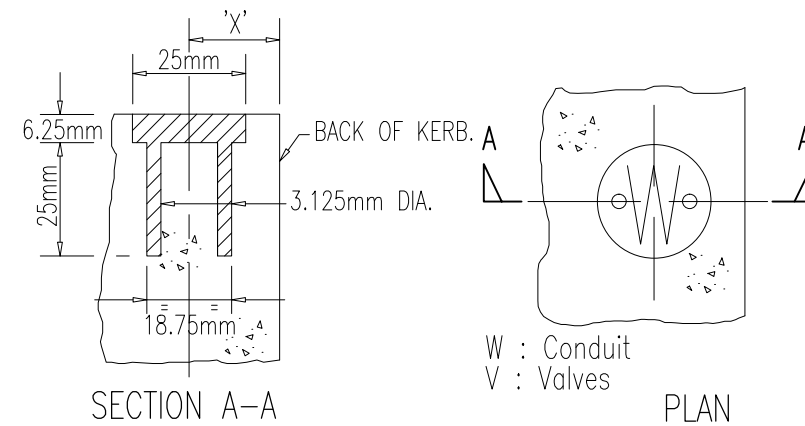
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20 & 25mm SERVICE AND
WATER METER CONNECTIONS

ROADS
STANDARD DRAWING CMDG-W-090
REV. A B C D E F



1. Dimension 'X' shall be 75mm for BARRIER KERB and 25mm for MOUNTABLE KERB.
2. This Drawing shall be read in conjunction with the relevant specification for Service Conduits.
3. A BRASS or STAINLESS STEEL Service Conduit Marker is to be installed for all Conduits. Refer Detail.
4. Markers for Valves to be installed in kerb and channel at 90° to Valve location.



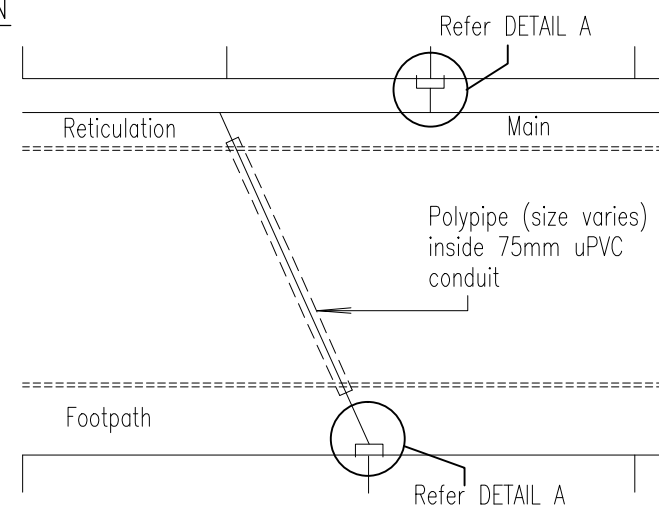
SECTION A-A PLAN
BRASS or STAINLESS STEEL SERVICE CONDUIT MARKER and VALVE MARKER DISC

Location	Minimum Cover Measured below ground surface level in mm
Unpaved	450
Paved or Road Surface	450
Solid Rock	300

Table 5.3 as given in
A.S.3500.1.2 of 1998

MARK NO	DESCRIPTION	MARK NO	DESCRIPTION
1	Approved 20mm Water Meter	10	25/32mm TPFNR with Spindle Top
2	20mm Ball Cock	11	Approved Tapping Band – Tapped 25/32mm OD Poly.
		12	32/40mm OD Poly
		13	25mm OD Poly
4	20mm F.I. x 25 OD Poly Connector Elbow	14	20mm x 150 threaded OD Poly
5	32/40mm OD x 90 Poly Bend	15	100mm o UPVC Sewer Class SEH Riser
6	25P x 25P x 32/40P OD Poly Tee (or equivalent)	16	30 x 75 x 350 HWD Support
8	25/32mm F.I. x 40 mm OD Poly Connector	17	3 Brick Support
9	M.I Ferrule Bend	18	50mm MIN Sand Bedding

1. No galvanized fittings to be used.
2. Check applicability box for service requirements for different councils



TYPICAL WATER MAIN CONNECTIONS

APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	No	No	Yes	No	No	No	No
Short Single			25mm TPFNR 32 OD Poly				
Short dual, long single & long dual			32mm TPFNR 40 OD Poly				
Service box Installation			Yes				
Applicable DWG	CMDG-W-090						

REVISIONS		DATE
F	IRC ADDED	11/2016
E	POLY PIPE DIAMETER CHANGES	03/2015
D	GRC AND LSC ADDED, DOUBLE SERVICE SIZE 40mm. AMENDED TPFNR REFERENCE	01/2015
C	APPLICABILITY CHANGES	01/2013
B	RRC AMENDMENTS	05/2011
A	ORIGINAL ISSUE	01/2010

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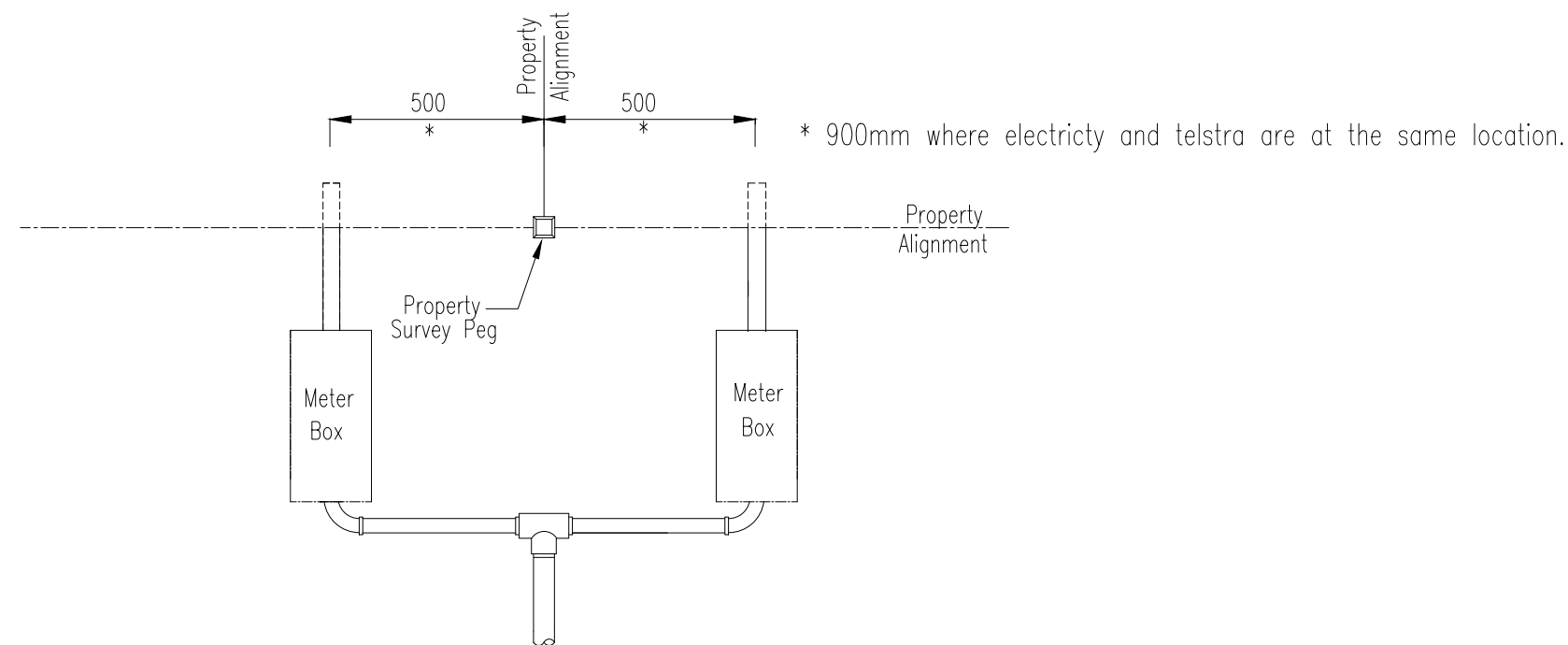
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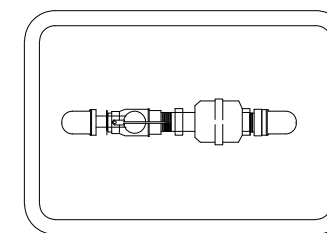
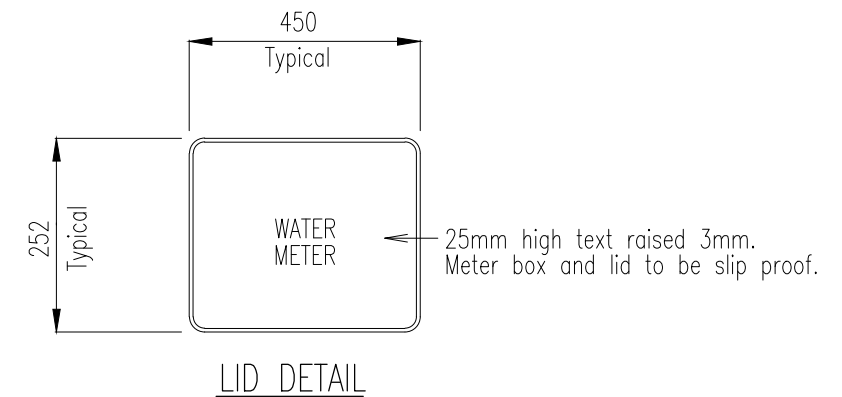
Banana Shire Council (BSC)	Livingstone Shire Council (LSC)
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20 & 25mm SERVICE AND WATER METER CONNECTIONS

ROADS						
STANDARD DRAWING						
CMDG-W-090A						
REV.	A	B	C	D	E	F



METER BOX DETAIL
AT PROPERTY LINE

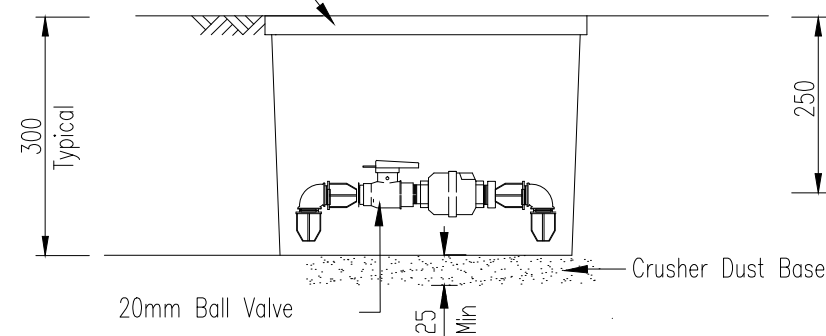


PLAN

NOTES:

1. Ball valves must be Water Mark Approved.
2. Ball valves shall be made from brass or gunmetal and shall have a chrome plated ball.
3. 20mm I.D. Ball Valves shall have BSP threaded male and female ends..
4. All Polyethylene Pipes and Fittings shall be CLASS PN 12.5 or PN16 in Accordance with AS/NZS 4130 and AS/NZS 4129 respectively.
5. 20mm Ball valves to be fixed in place 250mm below finished surface level.
6. Watermeters shall comply with A.S.3563.3 – 1998 which incorporates a dual check valve
7. * Alignment for existing connections will vary according to the area. Replacement connections and meters will align with existing property line connection.
8. NO GALVANIZED FITTINGS TO BE USED.
9. All dimensions in millimetres
10. Meter box to be provided by Council

Polyethylene Meter Box
with Chain attached Lid
REFER LID DETAIL



ELEVATION

METER BOX
NTS

APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	LSC	IRC	MRC	RRC
Applicable	Yes	No	Yes	Yes	Yes	No	Yes
Poly Pipe and Class	PN12.5		PN16	PN12.5	PN12.5		PN12.5
Applicable DWG	CMDG-W-093						

REVISIONS		DATE
G	IRC ADDED	11/2016
F	CHANGE + POLY CLASS FOR GRC	03/2015
E	GRC AND LSC ADDED	09/2014
D	RRC AMENDMENTS	09/2014
C	APPLICABILITY CHANGES	01/2013
B	RRC AMENDMENTS	05/2011
A	ORIGINAL ISSUE	01/2010

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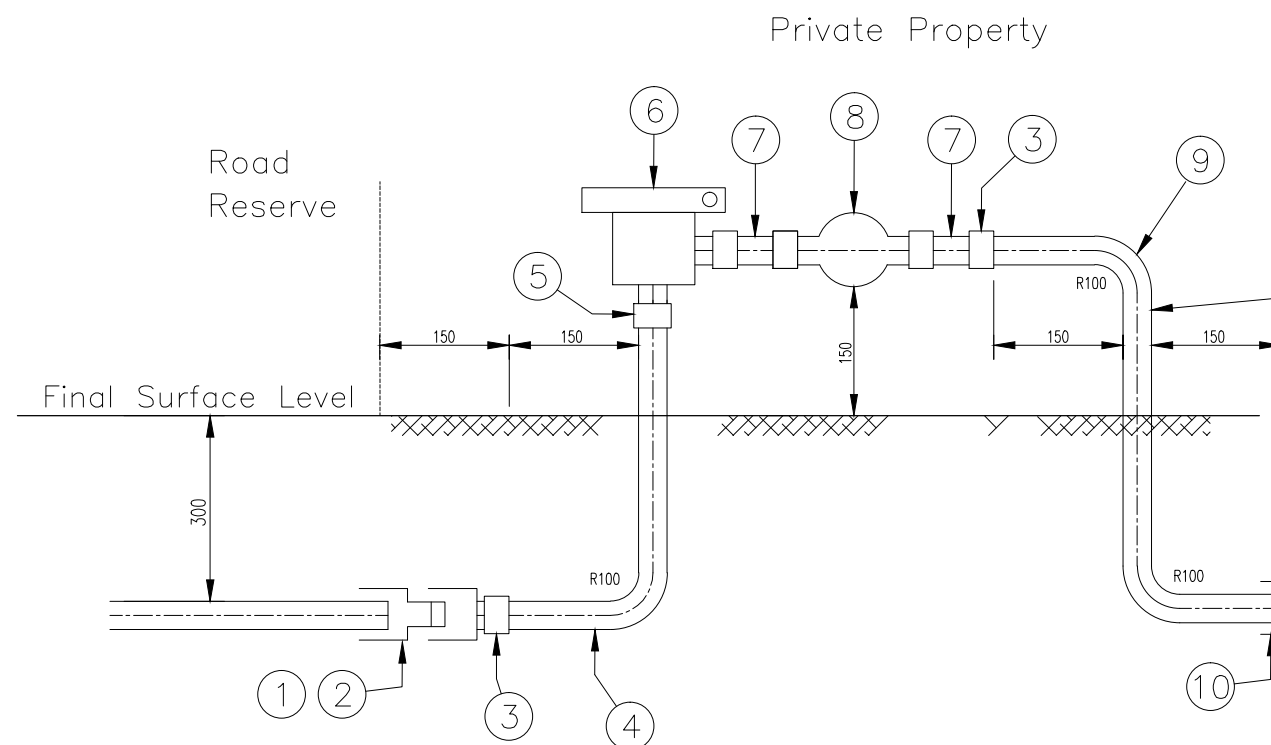
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Gladstone Regional Council (GRC) Rockhampton Regional Council (RRC)
Isaac Regional Council (IRC)

**20 & 25MM WATER METER DETAILS
BELOW GROUND**

ROADS						
STANDARD DRAWING CMDG-W-091						
REV.	A	B	C	D	E	F
REV.	G					



Note: Lagging above joint copper to be provided if directed

MINIMUM COVER IN PUBLIC AREAS

Location	Minimum Cover Measure below ground surface level in mm
Unpaved	450
Paved or Road Surface	450
Solid Rock	300

Table 5.3 as given in A.S.3500.1:2003

NOTES:

1. Ball valves must be Q.W.R.C. Joint Committee Approved.
2. Ball valves shall be made from brass or gunmetal and shall have a chrome plated ball.
3. 20mm I.D. Ball Valves shall have BSP threaded male and female ends.
4. All Polyethylene Pipes and Fittings shall be CLASS 12 in Accordance with AS/NZS 4130 and AS/NZS 4129 respectively.
5. * Alignment for existing connections will vary according to the area. Replacement connections and meters will align with existing property line connection.
6. NO GALVANIZED FITTINGS TO BE USED.
7. All dimensions in millimetres

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	No	Yes	No
Applicable DWG	CMDG-W-091						

REVISIONS		DATE
H	IRC ADDED	11/2016
G	GRC APPLICABILITY CHANGE	03/2015
F	GRC AND LSC ADDED	09/2014
E	RRC AMENDMENTS	09/2014
D	POST AMALGAMATION REVIEW	01/2013
C	BANANA SHIRE COUNCIL ADDED	09/2007
B	CMDG REVIEW CHANGES	04/2007
A	ORIGINAL ISSUE	10/2003

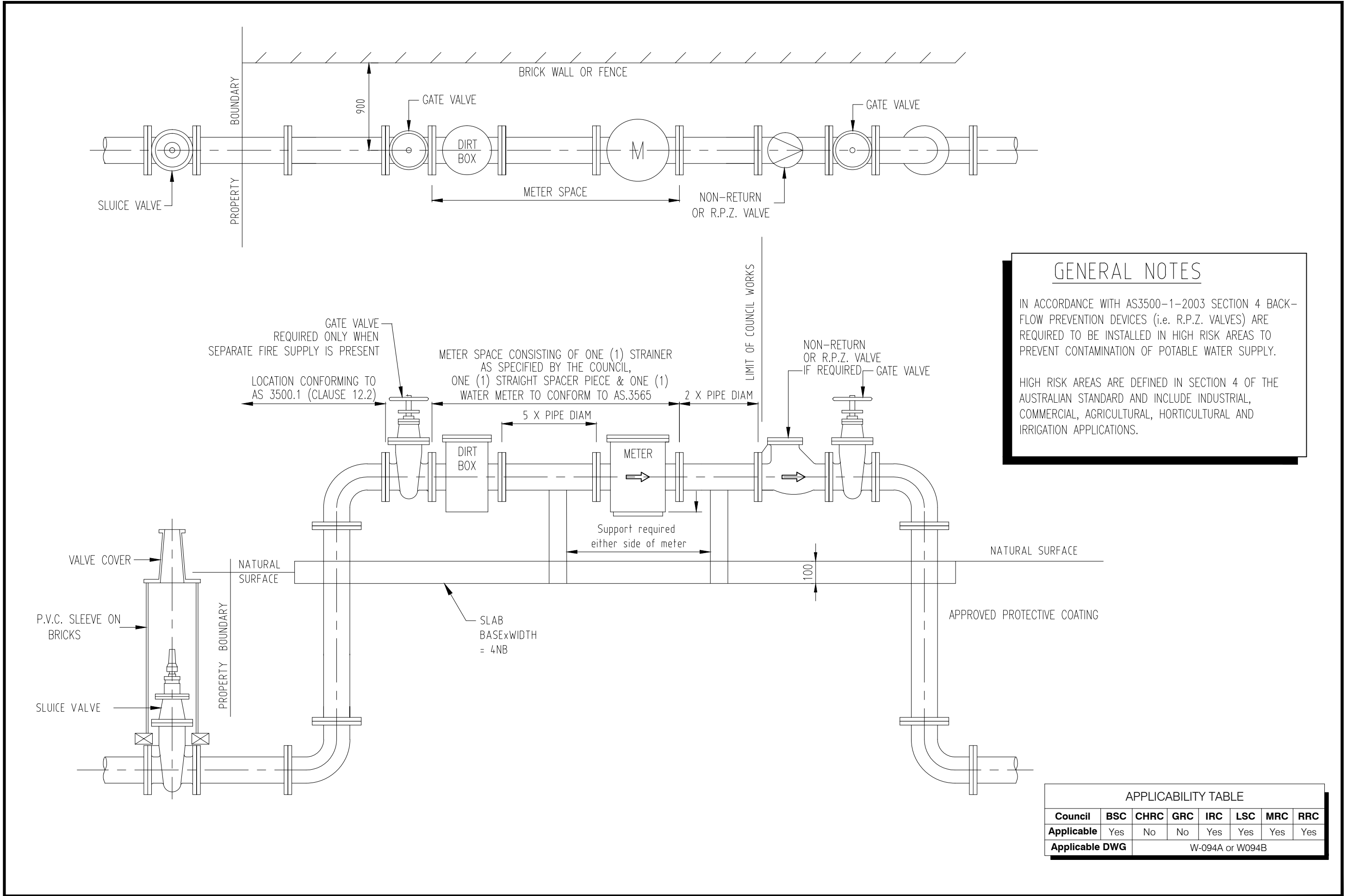
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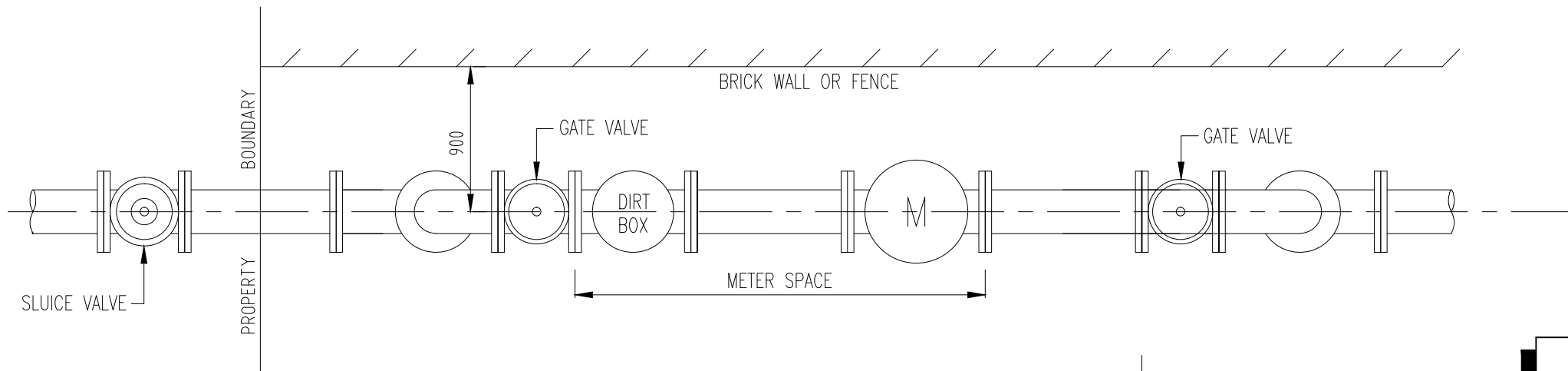
Incorporating:
Banana Shire Council (BSC) Livingstone Shire Council (LSC)
Central Highlands Regional Council (CHRC) Maranoa Regional Council (MRC)
Gladstone Regional Council (GRC) Rockhampton Regional Council (RRC)
Isaac Regional Council (IRC)

**20 & 25mm WATER METER DETAILS
ABOVE GROUND**

WATER							
STANDARD DRAWING							
CMDG-W-093							
REV	A	B	C	D	E	F	G
REV	H						



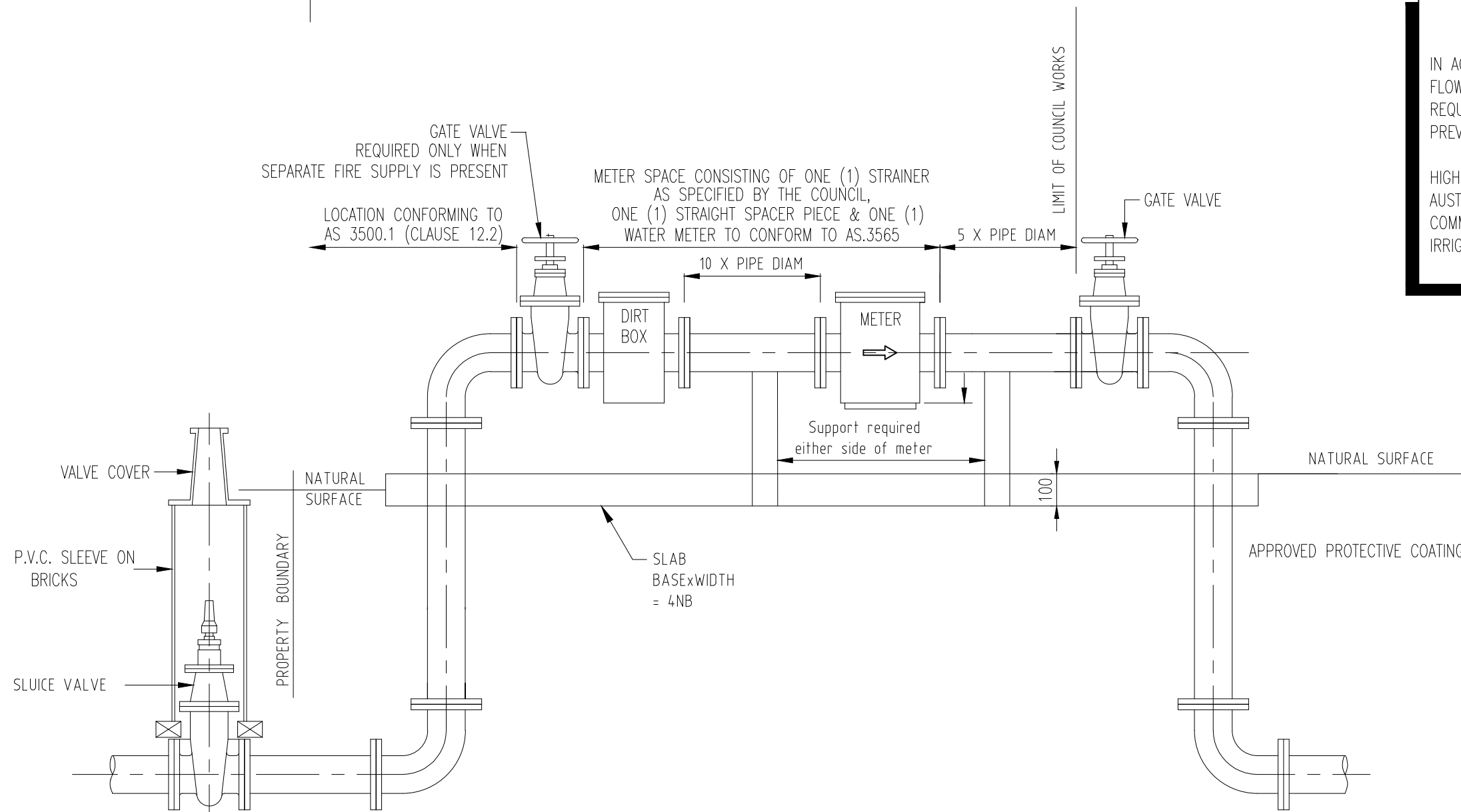
REVISIONS			DATE	<div>DISCLAIMER.</div> <div>The authors and sponsoring organisations shall have no liability or responsibility to the user or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused, directly or indirectly, by the adoption and use of these Standard Drawings including, but not limited to, any interruption of service, loss of business or anticipatory profits, of consequential damages resulting from the use of these Standard Drawings. Persons must not rely on these Standard Drawings as the equivalent of, or a substitute for, project-specific design and assessment by an appropriately qualified professional.</div>	Capricorn Municipal Development Guidelines										<div>100 & 200MM</div> <div>WATER METER CONNECTIONS</div>										ROADS													
					Incorporating:																				STANDARD DRAWING													
					Banana Shire Council (BSC) Central Highlands Regional Council (CHRC) Gladstone Regional Council (GRC) Isaac Regional Council (IRC)																				Livingstone Shire Council (LSC) Maranoa Regional Council (MRC) Rockhampton Regional Council (RRC)							CMDG-W-094						
G	IRC ADDED		11/2016																																			
F	AMEND RRC APPLICABILITY		03/2015																																			
E	GRC AND LSC ADDED		09/2014																																			
D	MRC APPLICABILITY - YES		03-04-13																																			
C	SLAB DETAILS INCLUDED		22-01-13																																			
B	RRC AMENDMENTS		24-05-11																																			
A	ORIGINAL ISSUE		01/2010																																			



GENERAL NOTES

IN ACCORDANCE WITH AS3500-1-2003 SECTION 4 BACK-FLOW PREVENTION DEVICES (i.e. R.P.Z. VALVES) ARE REQUIRED TO BE INSTALLED IN HIGH RISK AREAS TO PREVENT CONTAMINATION OF POTABLE WATER SUPPLY.

HIGH RISK AREAS ARE DEFINED IN SECTION 4 OF THE AUSTRALIAN STANDARD AND INCLUDE INDUSTRIAL, COMMERCIAL, AGRICULTURAL, HORTICULTURAL AND IRRIGATION APPLICATIONS.



APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	No	No	Yes	No	No	No	No
Applicable DWG	W-094 or W-094A						

REVISIONS	DATE
B	IRC ADDED
A	ORIGINAL ISSUE - GRC DRAWING

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100mm, 150mm & 200mm
WATER METER CONNECTIONS

ROADS
STANDARD DRAWING CMDG-W-094B
REV. A B