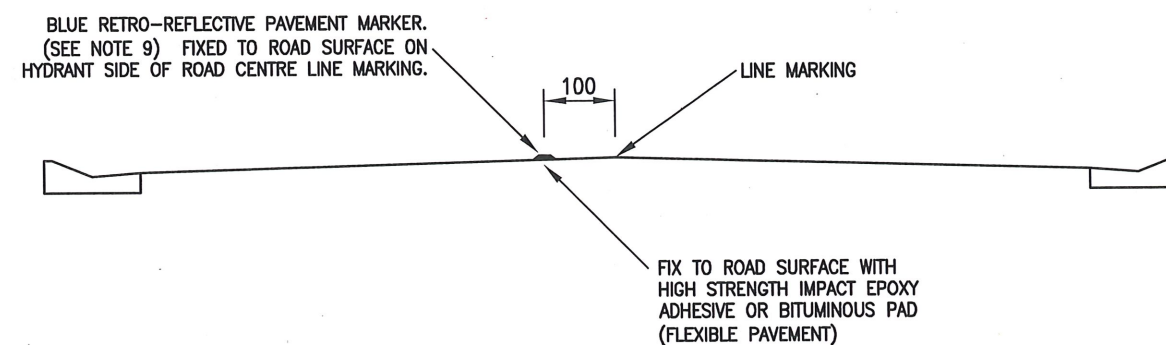


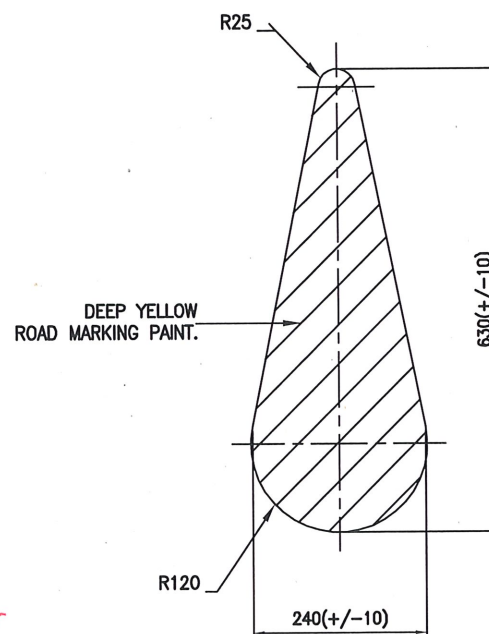
FIRE HYDRANT



HYDRANT RETRO-REFLECTIVE PAVEMENT MARKER

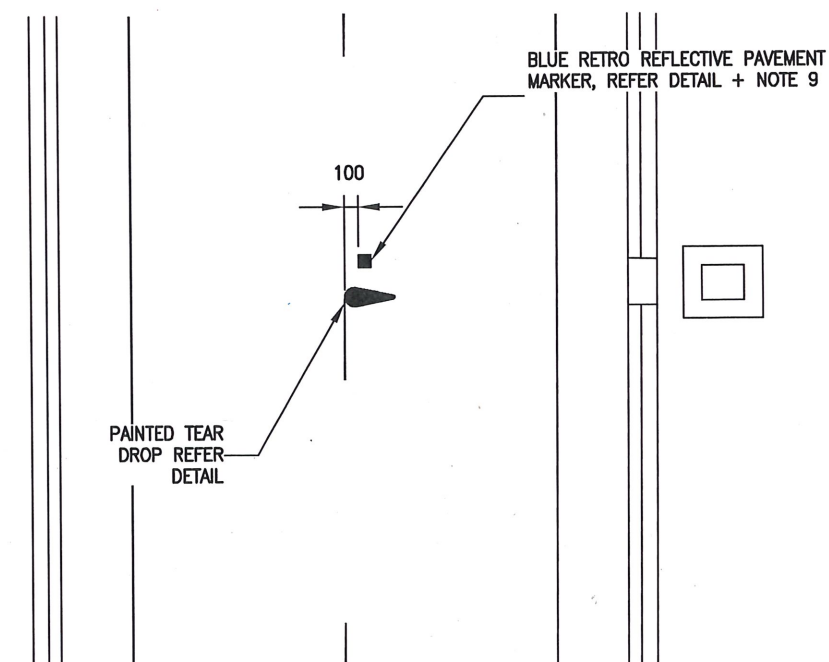
NOTES

1. HYDRANTS SHALL BE ORIENTATED WITH BOLTS IN THE DIRECTION OF THE MAIN.
 2. RECYCLED PLASTIC SURROUND AROUND COVER BOX TO BE PAINTED YELLOW.
 3. LONG SIDE OF COVER BOX OPENING SHALL BE ALIGNED WITH WATER MAIN TO LOCATE RECESSES WITH HYDRANT BOLTS.
 4. LUG WHERE POSSIBLE WITH AN ABSOLUTE MAXIMUM DEPTH OF 125mm. DEPTH OF HYDRANT SHALL BE A 75mm MINIMUM FROM TOP OF BOX TO TOP OF LUG.
 5. ALL HYDRANTS SHALL BE INSTALLED WITH DUST COVERS.
 6. HYDRANT TEES & RISERS TO BE DICL.
 7. HYDRANTS TO BE COATED WITH THERMOSETTING EPOXY POWDER TO AS3952 AND AS2638. ALL BOLTS, NUTS AND WASHERS TO BE STAINLESS STEEL TO AS2837/316.
 8. REFER TO IMEAQ STD. DRG. W-0061 FOR CI HYDRANT BOX DETAILS.
 9. RETRO-REFLECTIVE RAISED PAVEMENT MARKERS TO COMPLY WITH AS1906.3.
 10. FOR NON TRAFFICABLE APPLICATIONS ELEVATE COVER 25mm ABOVE FINISHED SURFACE LEVEL AND GRADE SOIL AWAY TO PREVENT WATER ENTRY.
 11. WHERE LOCATED IN PAVED AREAS, USE EXPANSION JOINT MATERIAL TO ALLOW FOR REMOVAL OF SURROUND FOR MAINTENANCE WITHOUT BREAKAGE - REFER S1035.
- 51035 for Pathway/Bikeway detail. Refer*



PAINTED TEARDROP

TEARDROP TO BE POSITIONED TO BE ACROSS THE ROAD CENTRELINE AND POINTING AT HYDRANT (REFER NOTE 3).



FIRE HYDRANT LOCATION MARKERS

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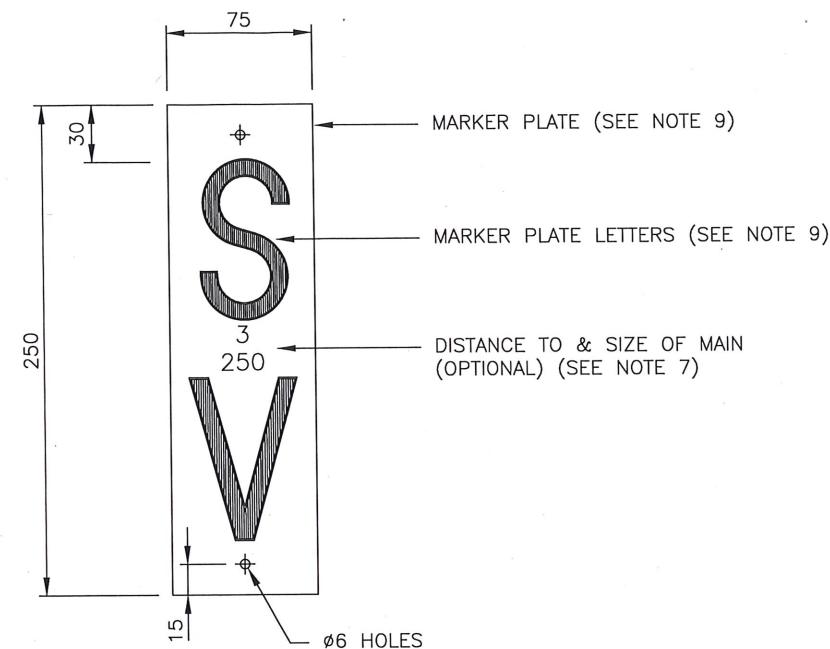


HYDRANT BOX INSTALLATION

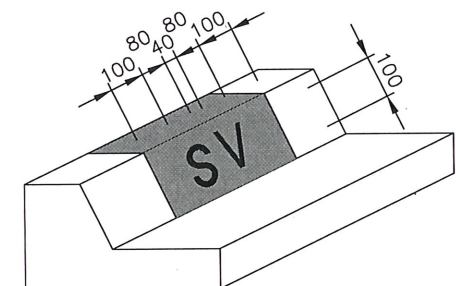
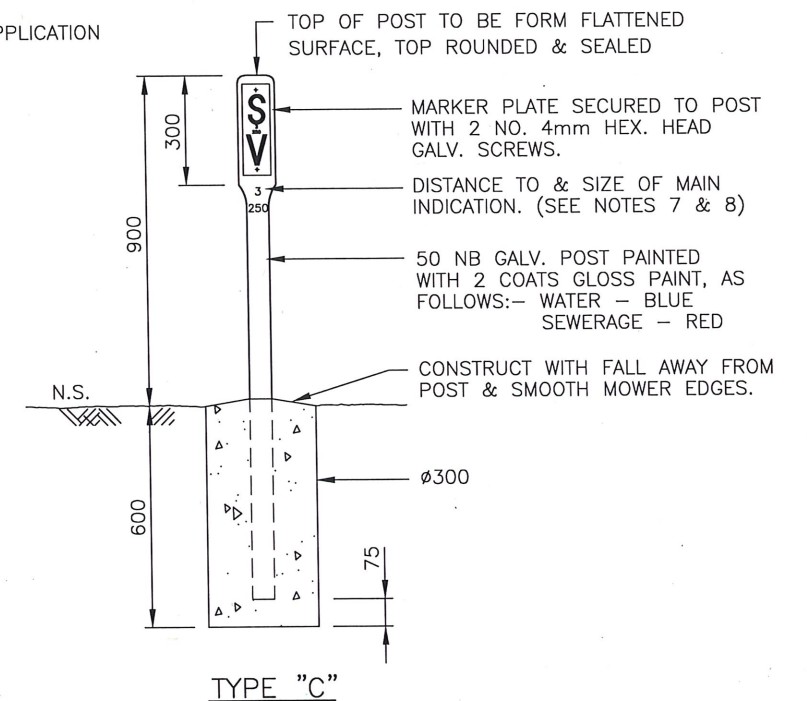
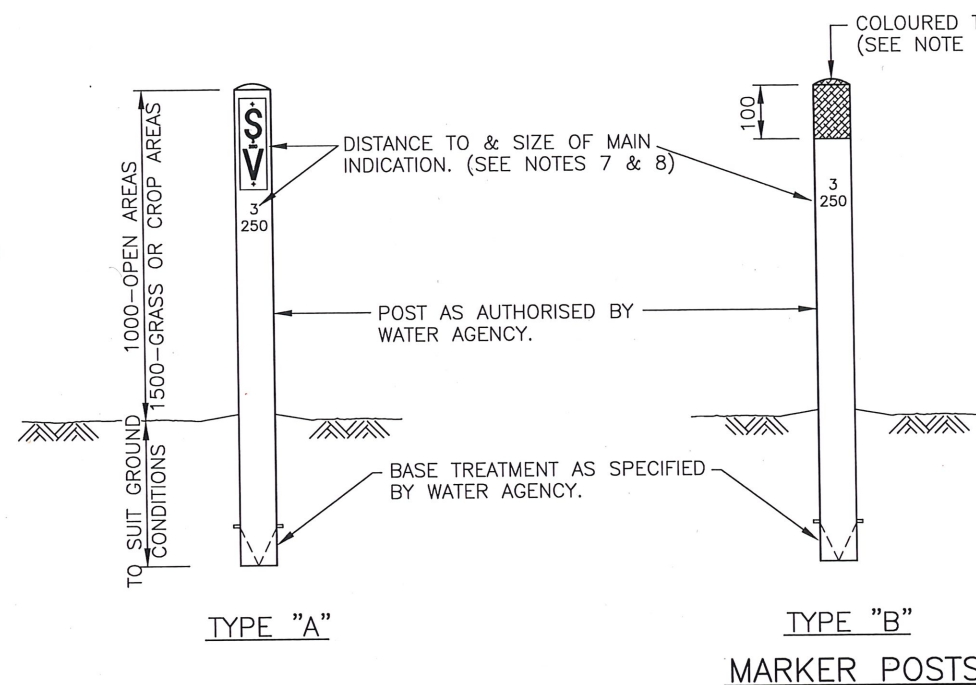
Standard
Drawing
S2005

A B C D

REVISIONS	DATE
C MINOR AMENDMENTS	25/10/17
B CRC DRAWING ADOPTED	28/11/12
A ORIGINAL ISSUE	12/03/04

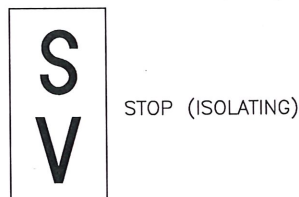


TYPICAL PLATE ARRANGEMENT
MAY BE FIXED TO POST OR BUILDING

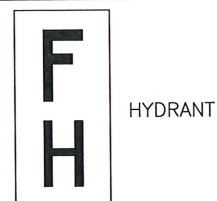


KERB MARKING

VALVES



HYDRANTS



OPTIONAL IDENTIFIERS



MARKER PLATES

NOTES - MARKER PLATES

- CONCRETE TO BE N25 IN ACCORDANCE WITH AS 1379 & AS 3600 UNLESS SPECIFIED OTHERWISE.
- MARKER POST SHALL ONLY BE USED IN THE ABSENCE OF A SUITABLE KERB FIXING POSITION & A DIRECTED BY COUNCIL.
- MARKER PLATES SHALL BE CONSTRUCTED FROM 1.6mm ALUMINIUM SHEET.
- WATER MAIN (WM) & SEWER RISING MAIN (RM) MARKER POSTS WHERE REQUIRED SHALL BE LOCATED AT ALL LINE DEVIATIONS AND AT 200m MAX. CRS. POSTS SHALL BE DIRECTLY OVER TOP OF MAIN.
- VALVE & HYDRANT MARKER POSTS WHERE REQUIRED IN LOW DENSITY RESIDENTIAL DEVELOPMENTS ADJACENT TO SEWER PRESSURE MAINS OR THROUGH CROWN LAND, SHALL BE LOCATED 200mm CLEAR OF ROAD/PROPERTY BOUNDARY WITH THE MARKER PLATE FACING THE MAIN.
- NOTWITHSTANDING THE REQUIREMENTS OF NOTE 5 VALVE & HYDRANT MARKER POSTS SHALL NOT BE LOCATED GREATER THAN 5.0m CLEAR OF THE MAIN ALIGNMENT.
- DISTANCE TO & SIZE OF MAIN/FITTING TO BE MARKED ON POST OR MARKER PLATE.
 - NUMBERS TO BE 12 (MIN) HIGH.
 - NUMBERS TO BE PAINTED OR PUNCHED TO CREATE A PERMANENT IDENTIFICATION.
 - TOP NUMBER TO BE DISTANCE TO MAIN (m).
 - BOTTOM NUMBER TO BE SIZE OF MAIN (mm).
- LOCATE MARKERS AT RIGHT ANGLES TO THE MAIN WITH MARKINGS FACING TOWARDS THE VALVE OR HYDRANT.
- LETTERS FOR ALL MARKERS SHALL BE PAINTED IN BLACK ENAMEL WITH BACKGROUND PAINTED WITH A REFLECTORISED PAINT AS FOLLOWS:-

HYDRANT	- YELLOW (GOLDEN YELLOW Y14*)
WATER (OTHER)	- WHITE
SEWERAGE	- RED (HOMEBUSH R22*)

- COLOURED MARKER TOPS ON TYPE "B" POSTS TO BE:
 - WATER (GENERAL) - BLUEBELL (B41)
 - HYDRANTS - HOMEBUSH RED (R22)
 - * COLOURS TO AS 2700.

NOTES - KERB MARKING

- LETTER SIZE TO BE 100mm HIGH, 80mm WIDE, 15mm DEEP WITH 40mm SEPARATION BETWEEN LETTERS
- ALL LETTERS (EXCEPT 'HYDRANT') TO BE 'WHITE-N14'. HYDRANT LETTERS TO BE 'BLUE-B41' PAINT TO BE REFLECTIVE PAINT INCORPORATING GLASS BEADS
- BACKGROUND PAINT TO COVER FRONT AND TOP OF KERB AND TO EXTEND 100mm PAST EACH LETTER.
- BACKGROUND PAINT COLOURS TO BE:-

SEWER	- 'RED-R13'
POTABLE WATER	- 'BLUE-B41'
RECYCLED WATER	- 'LILAC-P23'
FIRE HYDRANTS	- 'YELLOW-Y14'

 * COLOURS TO AS2700

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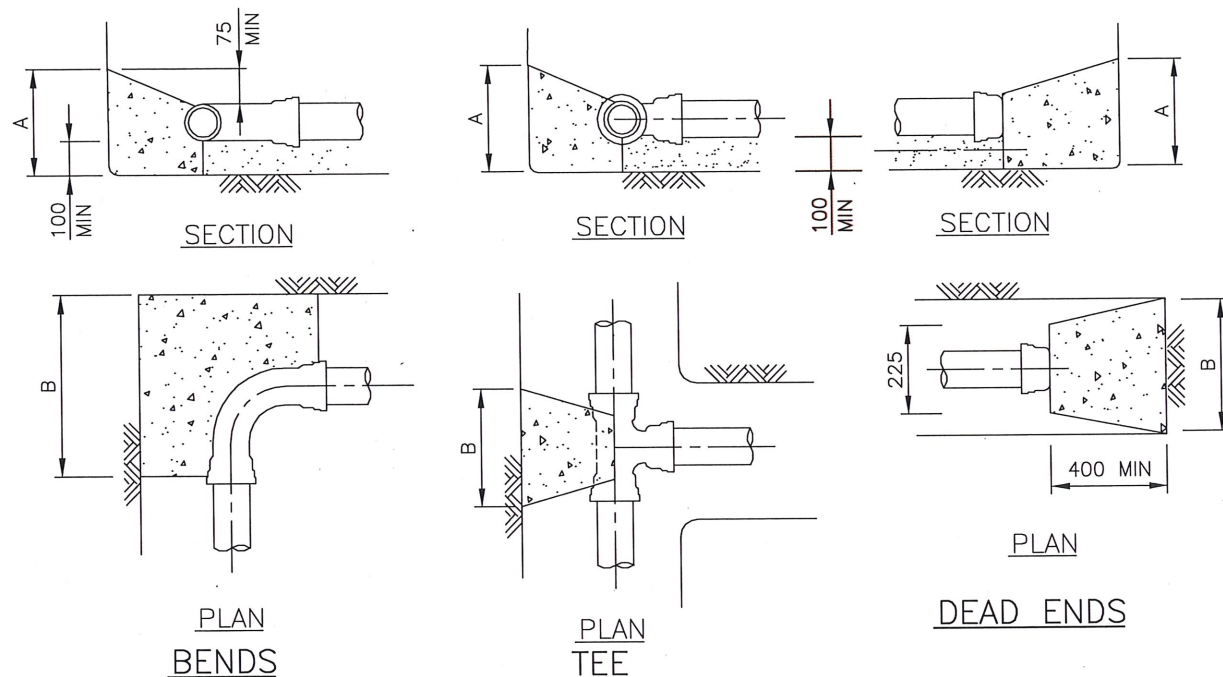


KERB / ROAD MARKERS

Standard
Drawing
S2010

A B C D E

E	VP ADDED	28/11/19
D	MINOR AMENDMENTS	25/10/17
C	CRC DRAWING ADOPTED	28/11/12
B	HYDRANT RETRO-REFLECTIVE MARKER ADDED	10/09/09
A	ORIGINAL ISSUE	12/03/04
REVISIONS		DATE



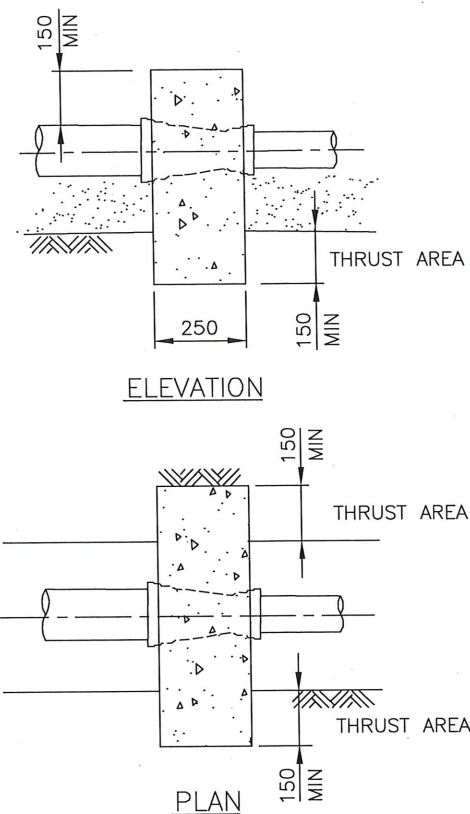
MINIMUM THRUST AREA (A x B) IN m² FOR 1200 kPa TEST PRESSURE

SAFE BEARING LOAD		90° & Ø60 BENDS				45° & 30° BENDS				22 1/2° BENDS				11 1/4° BENDS				DEAD ENDS/TEES						
		25 kPa	50 kPa	75 kPa	100 kPa	25 kPa	50 kPa	75 kPa	100 kPa	25 kPa	50 kPa	75 kPa	100 kPa	25 kPa	50 kPa	75 kPa	100 kPa	25 kPa	50 kPa	75 kPa	100 kPa			
		DIA. OF BRANCH OR TEE BRANCH	100	150	225	0.82	0.41	0.27	0.20	0.44	0.21	0.14	0.11	0.24	0.12	0.08	N	0.10	N	N	N	0.58	0.29	0.19
		100	150	225	0.82	0.41	0.27	0.20	0.44	0.21	0.14	0.11	0.24	0.12	0.08	N	0.10	N	N	N	0.58	0.29	0.19	0.15
		150	225	300	1.68	0.84	0.56	0.42	0.91	0.46	0.30	0.23	0.48	0.24	0.16	0.12	0.24	0.12	0.08	N	1.20	0.60	0.40	0.30
		225	300	375	2.55	1.27	0.85	0.64	1.92	0.96	0.64	0.48	1.00	0.50	0.34	0.25	0.48	0.24	0.16	0.12	2.54	1.27	0.85	0.64

N - DENOTES NOMINAL THRUST AREA. REFER TO NOTE 10.

NOTES

- CONCRETE FOR THRUST BLOCKS TO BE N25 MIN. IN ACCORDANCE WITH AS3179 & AS3600 & SHALL BE POURED AGAINST UNDISTURBED SOIL.
- TAPERS TO HAVE A MIN. THRUST AREA FOR ANCHORS EQUAL TO THE DIFFERENCE IN CORRESPONDING THRUST AREA FOR DEAD ENDS OF EACH DIAMETER OF TAPER.
- FOR VERTICAL BENDS IN SAG, THE SAFE BEARING LOADS OF THE VARIOUS SOILS MAY BE TAKEN AS TWICE THOSE FOR HORIZONTAL THRUST.
- UNLESS NOTED OTHERWISE THRUST BLOCKS ARE REQUIRED FOR ALL VALVES Ø200 & GREATER & SHALL HAVE A THRUST AREA EQUAL TO THAT FOR A DEAD END. ALSO WHEN IN SOFT CLAY ALL VALVES SHALL HAVE THRUST BLOCKS EQUAL TO THAT FOR A DEAD END.
- HOLD DOWN BOLTS TO BE M12 STAINLESS STEEL. MIN. EMBEDMENT LENGTH 300mm WITH 75 HOOK, COG OF 50 x 50 x 6 WASHER, STRAPS 40 50 x 6 STAINLESS STEEL PLATE BENT TO SUIT.
- THRUST BLOCK FOR MATERIALS WITH SAFE BEARING LOAD < 25kPa ARE TO BE DETAILED WITH ENGINEERING DESIGN.
- FOR PIPES > 225mm DIA. THE THRUST BLOCKS SHALL BE SPECIFICALLY DESIGNED & DETAILED AFTER SOIL TESTING..
- ALL FITTINGS SHALL BE PROVIDED WITH THRUST BLOCKS FORMED AGAINST SOLID GROUND TO TRANSFER UNBALANCED FORCES FROM FITTING TO SOLID GROUND.
- NOMINAL THRUST AREA 'N' SHALL BE EFFECTED BY N25 CONCRETE OVER FULL LENGTH OF FITTING, & EXTENDING IN DEPTH FROM THE BOTTOM OF THE TRENCH TO AT LEAST 75mm ABOVE THE TOP OF THE FITTING.
- TABULATED 'MIN. THRUST AREA FOR ANCHORAGE' APPLY FOR TEST PRESSURE OF 1200kPa. AREAS SHALL BE ADJUSTED PRORATA FOR OTHER TEST PRESSURES EXCEPT THAT NOMINAL THRUST AREAS 'N' SHALL HAVE TO BE CALCULATED FOR TEST PRESSURES OVER 1200kPa.
- SHAPE & DIMENSIONS OF CONCRETE BLOCKS SHOWN ARE MINIMUM REQUIREMENTS.
- WHEN PLACING THE CONCRETE ON A PVC PIPE, CARE SHALL BE TAKEN TO AVOID ENCASING THE PIPE COMPLETELY. THE MAXIMUM ENCASMENT SHALL BE 180°.
- WHEN PLACING A PVC PIPE IN CONCRETE A MEMBRANE OF POLYTHENE, PVC OR FELT SHALL SURROUND THE PIPE & FITTING TO PERMIT PIPE MOVEMENT IN THE CONCRETE.
- MINIMUM COVER TO PIPE SHALL BE 600mm REFER TO S2016 FOR MIN. COVER TO INDIVIDUAL PIPE TYPES.



TAPER

CONCRETE VOLUMES TO COUNTER THRUST (m³ PER 1200kPa TEST PRESSURE)

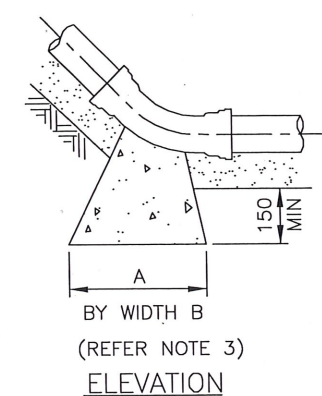
DIA	90°	45°	22½°	11¼°
100	0.85	0.45	0.25	0.10
150	1.75	0.95	0.50	0.25
225	3.75	2.00	1.05	0.50

VERTICAL BENDS, CREST

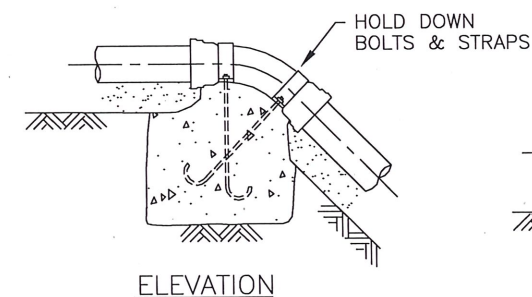
SAFE BEARING LOADS (kPa)

MATERIAL		SAFE BEARING LOAD (kPa)
SOFT CLAY	Requires soil testing to determine safe bearing load	
MARINE CLAY	Requires soil testing to determine safe bearing load	
MEDIUM CLAY, SANDY LOAM		50
SAND & GRAVEL, HARD CLAY		75
SAND & GRAVEL CEMENTED WITH CLAY		100
SHALE		240

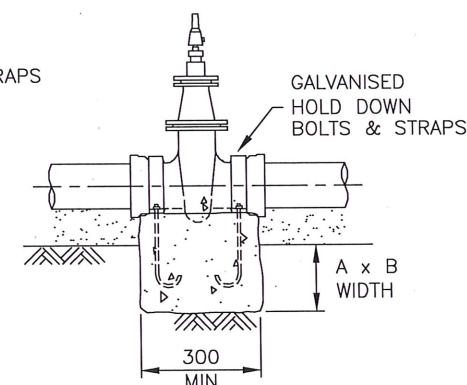
FOR HORIZONTAL THRUST BLOCKS IN TRENCHES WHERE THE COVER TO PIPE IS > 450MM



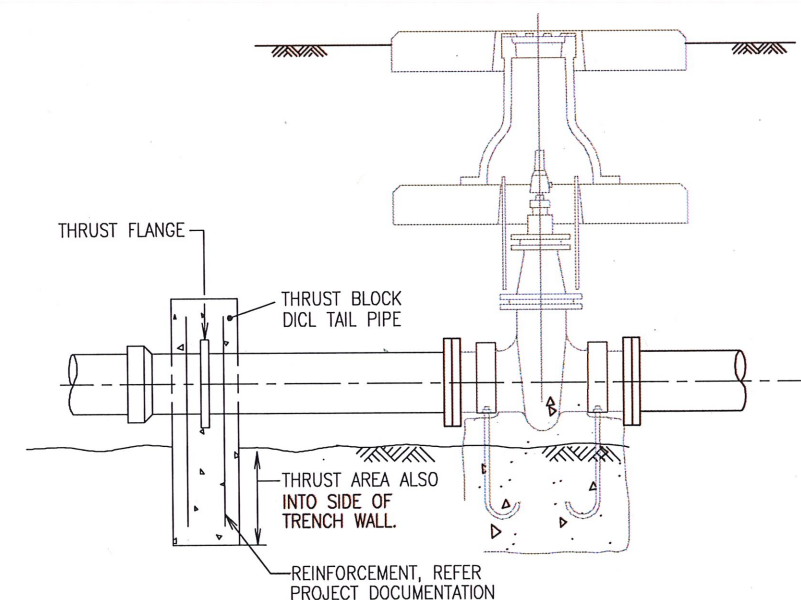
VERTICAL BENDS, SAG



VERTICAL BENDS, CREST



VALVES

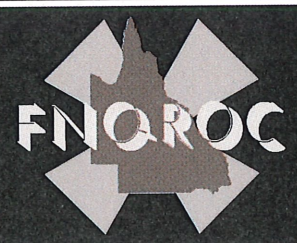


SLUICE VALVE (Ø200 & GREATER - SOFT CLAY)

(REFER NOTE 4)

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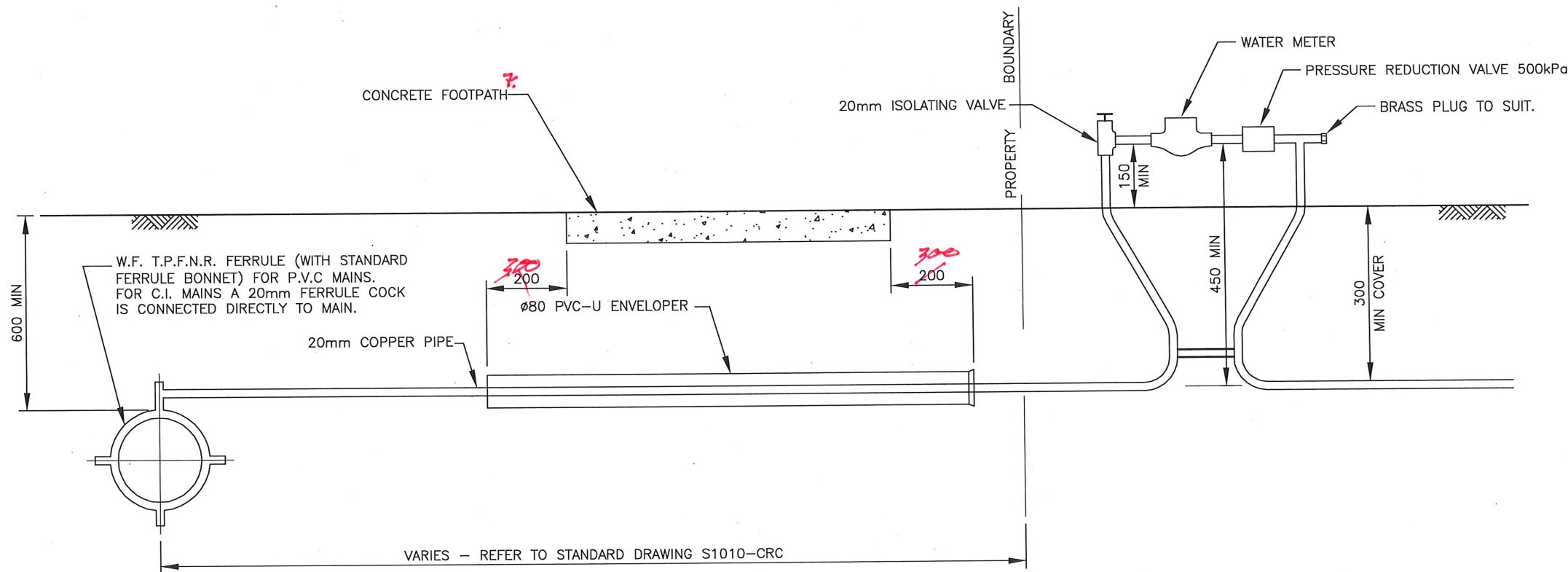


THRUST BLOCK DETAILS PIPE DIA ≤ 225

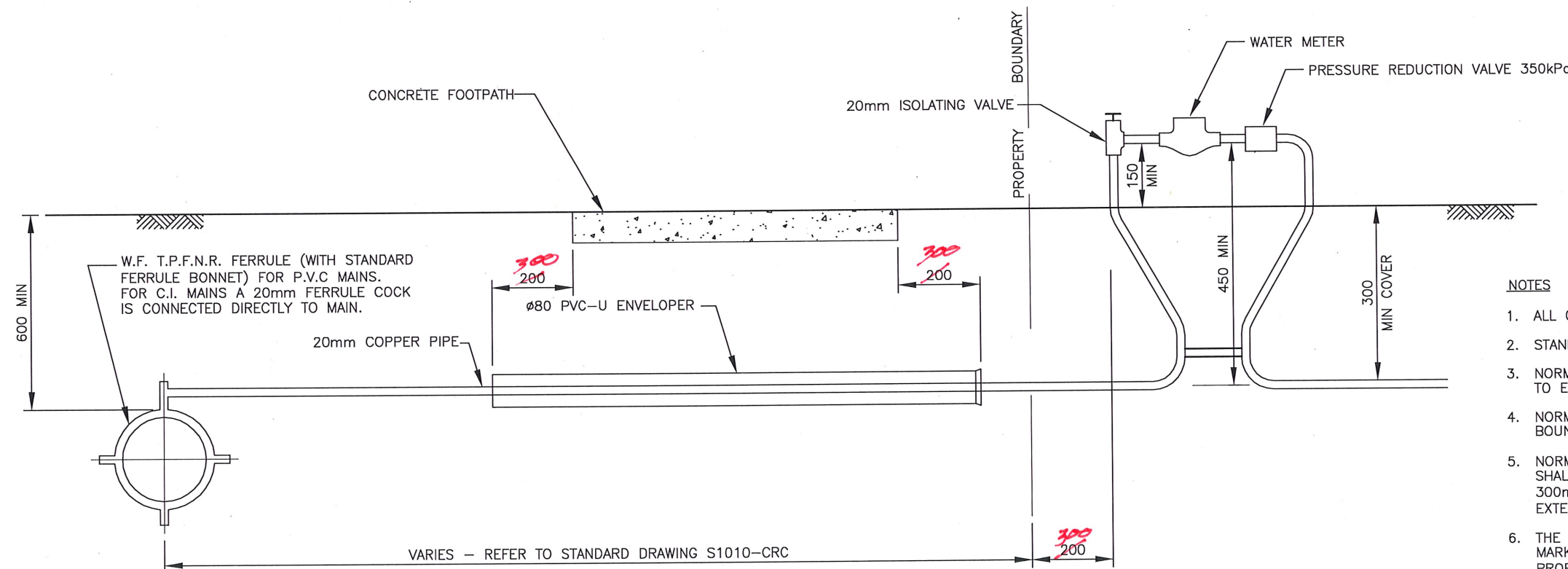
Standard
Drawing
S2015

A B C

REVISIONS	DATE
C CRC DRAWING ADOPTED	28/11/12
B NOTE 1 AMENDED	01/02/07
A ORIGINAL ISSUE	12/03/04



STANDARD ARRANGEMENT OF 20mm WATER SERVICE INSTALLATION (BLUE)



STANDARD ARRANGEMENT OF 20mm RECYCLED WATER INSTALLATION (LILAC)

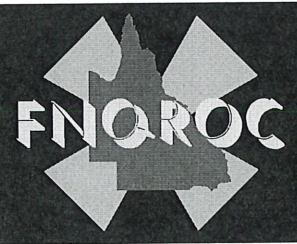
NOTES

1. ALL CONNECTIONS ARE TO BE UNDERTAKEN BY COUNCIL.
2. STANDARD DOMESTIC SERVICE IS 20mm.
3. NORMAL LOCATION OF WATER SERVICE TO BE ON OPPOSITE BOUNDARY TO ELECTRICITY SUPPLY.
4. NORMAL WATER SERVICE LOCATION TO BE 200mm INSIDE THE FRONT BOUNDARY AND OFFSET 300mm FROM THE SIDE BOUNDARY.
5. NORMAL POSITION OF CONDUITS UNDER FOOTPATHS (WHERE REQUIRED) SHALL BE A MINIMUM OF 80mm DIAMETER PVC CLASS 6 WITH 300mm COVER, 300mm OFFSET FROM THE SIDE BOUNDARY AND EXTEND 300mm PAST THE EDGE OF THE FOOTPATH.
6. THE POSITION OF CONDUITS UNDER FOOTPATHS SHALL BE CLEARLY MARKED BY THE CASTING OF NON-FERROUS CUPHEAD BOLT INTO THE PROPERTY SIDE OF THE FOOTPATH WHILE THE CONCRETE IS WET.

7. Footpath widths to be confirmed by council!

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STANDARD ARRANGEMENT OF 20mm WATER SERVICE AND RECYCLED WATER INSTALLATIONS

Standard
Drawing
S2038

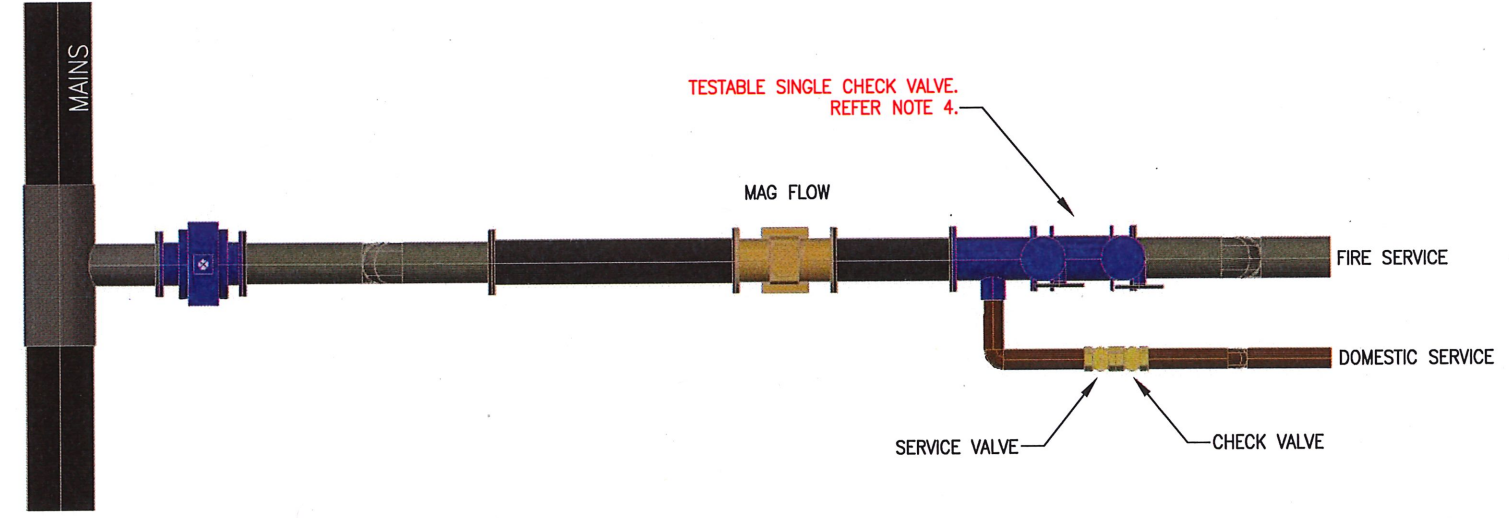
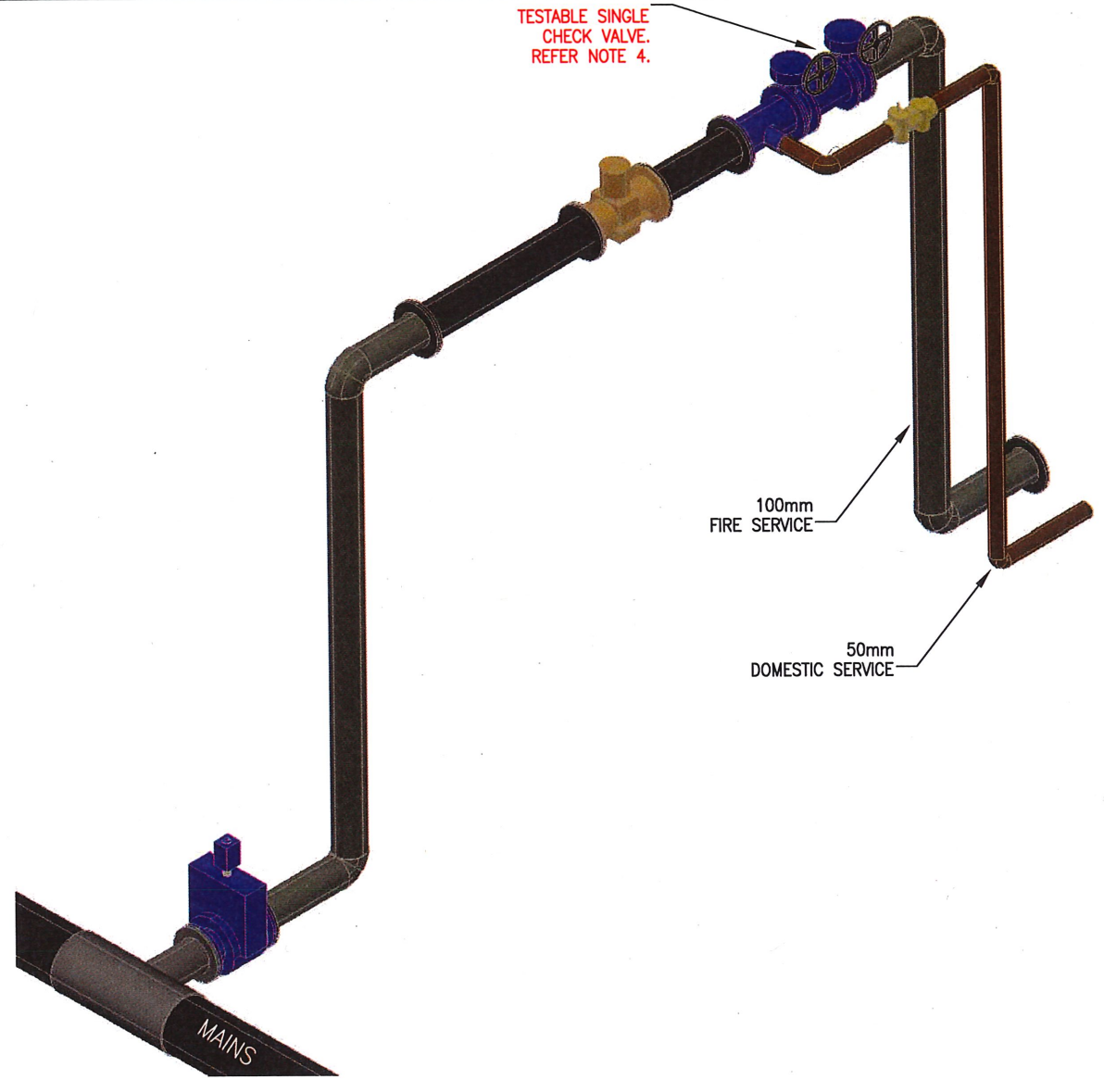
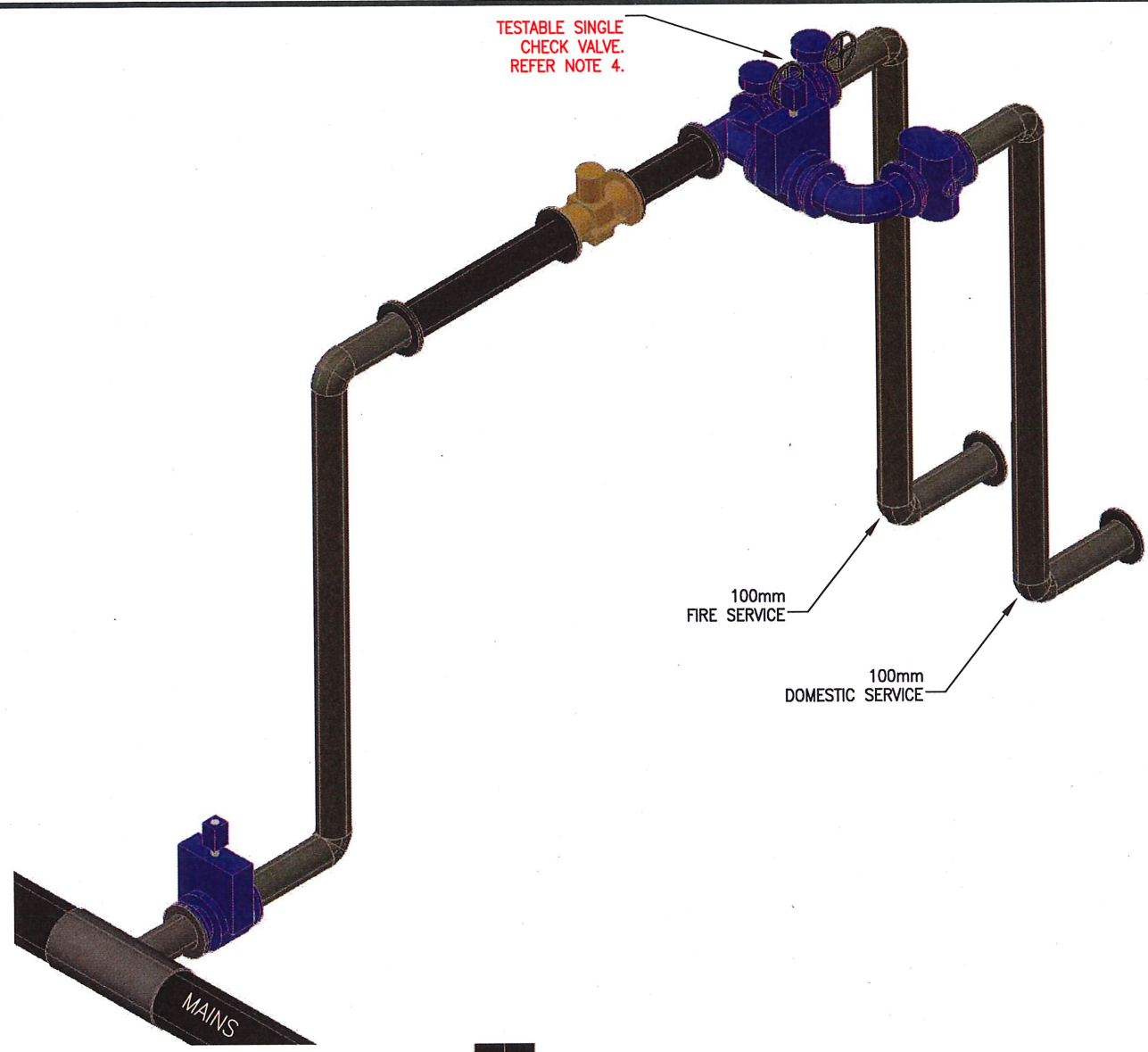
A ORIGINAL ISSUE - CRC DRAWING ADOPTED

28/11/12

REVISIONS

DATE

A *B*



NOTES

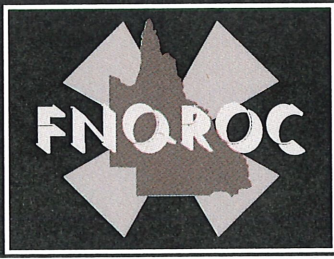
1. All connections are to be undertaken by Council.
2. Normal location of water service to be on opposite boundary to electricity supply.
3. Normal water service location to be 300mm inside the front boundary and offset 300mm from the side boundary.
4. Testable Single Check Valve is to be installed by Council. Initial and Annual Testing and maintenance of this valve is the responsibility of the property owner.

DRAFT

REVISIONS	DATE
B NOTE ADDED	28/11/19
A ORIGINAL ISSUE - CRC DRAWING ADOPTED	28/11/12

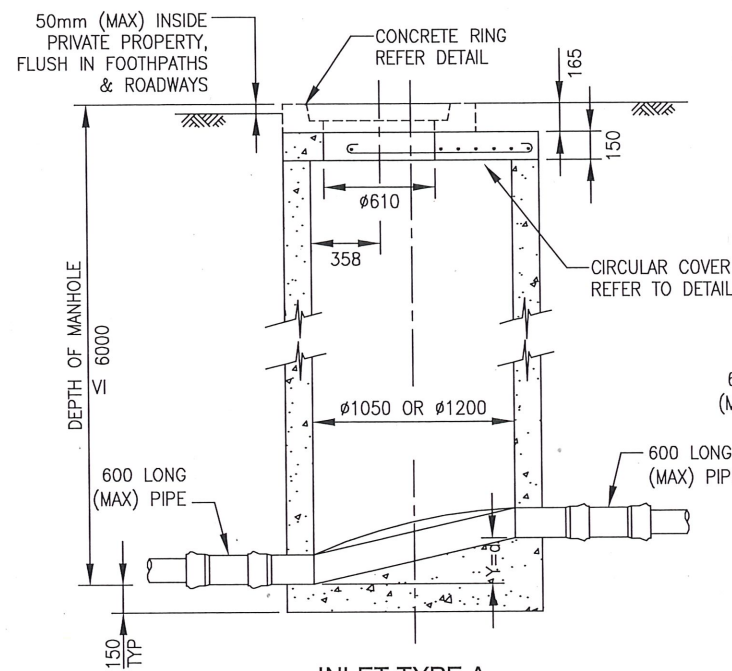
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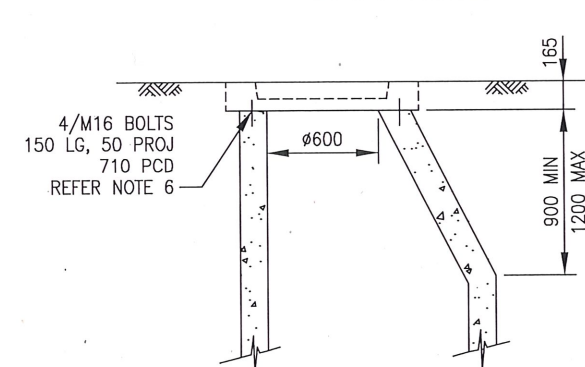


**STANDARD ARRANGEMENT OF >80mm
WATER AND FIRE INSTALLATIONS**

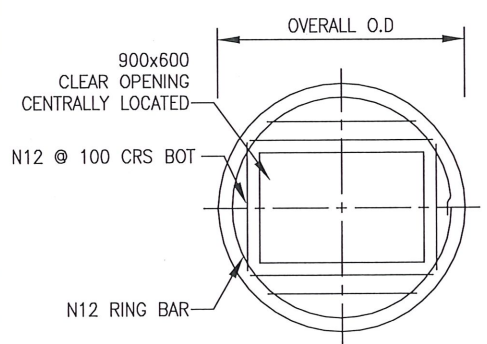
Standard Drawing S2050	
A	B



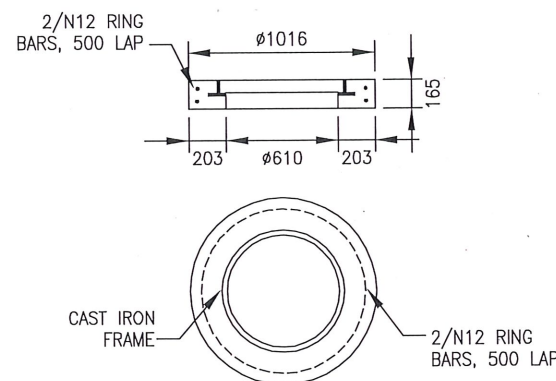
INLET TYPE A



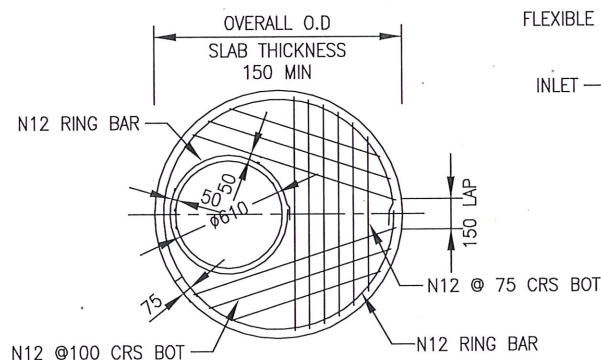
ALTERNATIVE TAPERED TOP



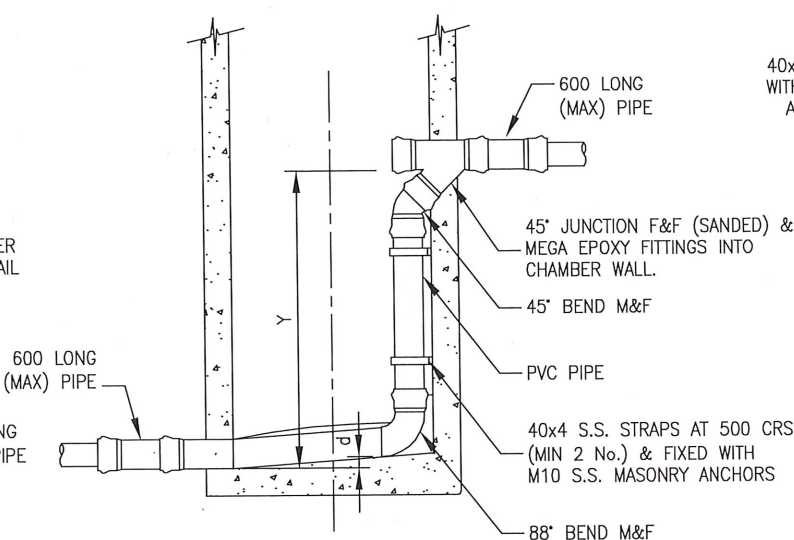
RECTANGULAR COVER



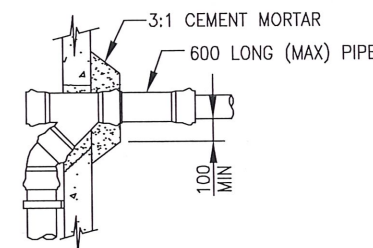
CONCRETE RING
(COVER OMITTED FOR CLARITY)



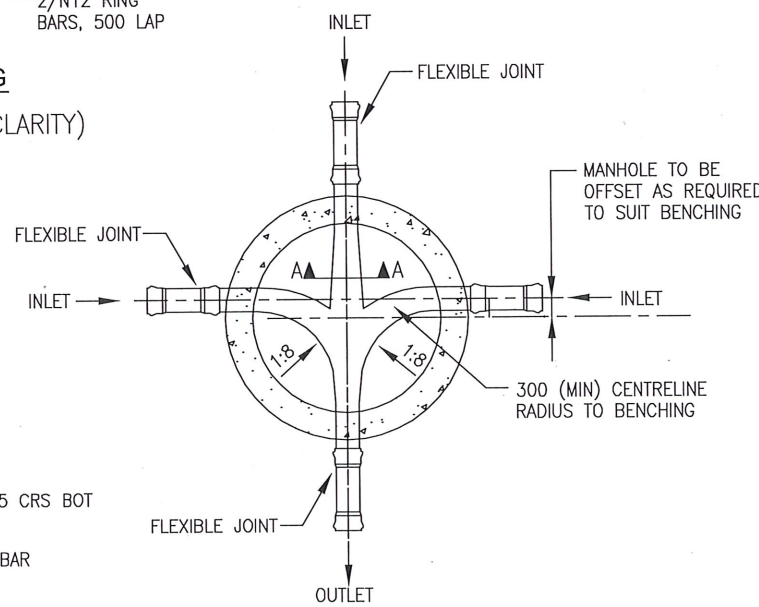
CIRCULAR COVER



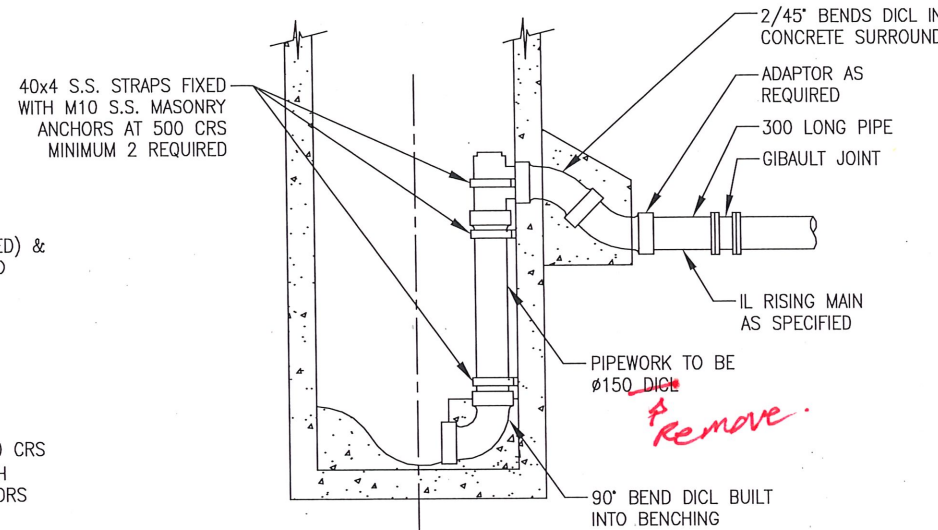
INLET TYPE C



NEW PRECAST CONNECTION
BREAK IN DETAIL



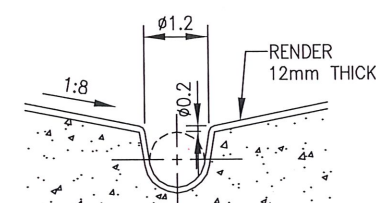
MANHOLE BENCHING



RIISING MAIN DISCHARGE MANHOLE DETAIL

NOTE:-









1. CONSTRUCT INTERNAL DROP & BENCHING AS NECESSARY. (REFER INLET TYPE C)
2. DISCHARGE MANHOLE SHALL HAVE INTERNAL LINING. (REFER NOTE 14)



A-A SECTION

NOTES

1. PIPES SHOWN ARE DIAGRAMMATIC ONLY AND ARE NOT MEANT TO REPRESENT ANY PARTICULAR CLASS OR MATERIAL. PIPE MATERIAL AND CLASS ARE TO BE PROJECT SPECIFIC.
2. ALL CONCRETE SHALL BE GRADE N32, IN ACCORDANCE WITH AS1379 AND AS3600. MINIMUM COVER TO REINFORCING TO BE 40mm.
3. ALL COUPLINGS ENTERING CONCRETE SHALL BE FACTORY SANDED TO PROVIDE A SECURE WATERTIGHT BOND WITH CONCRETE WALL.
4. MANHOLES GREATER THAN 6.0m DEEP SHALL BE ENGINEER DESIGNED AND SPECIFICALLY DETAILED.
5. COVERS TO MANHOLES TO BE CAST IRON WATER TIGHT/GAS TIGHT COVERS (REFER C.R.C. SPECIFICATION) AND SHALL BE TYPE B INSIDE PROPERTIES, TYPE C ELSEWHERE.
6. BOLTS TO CONCRETE RING REQUIRED ONLY WHEN BOLT DOWN COVER IS SPECIFIED, OTHERWISE SHALL BE SEATED ON A MORTAR BED.
7. CONNECTIONS TO EXISTING MANHOLES SHALL BE CARRIED OUT ONLY WITH PRIOR APPROVAL OF COUNCIL.
8. WHERE DEPTH OF MANHOLE FROM OBVERT OF PIPE TO TOP OF MANHOLE LID < 1400mm, A RECTANGULAR COVER SHALL BE USED, OTHERWISE ALL COVERS SHALL BE CIRCULAR.
9. MANHOLE COVERS SHALL BE LOCATED DIRECTLY OVER OUTLET PIPE.
10. MAXIMUM CHANGE OF ANGLE THROUGH MANHOLE SHALL BE 90°.
11. COVERS SHALL BE FITTED WITH A THICK COATING OF HEAVY GREASE TO THE SEATING RING TO PREVENT SEIZING.
12. CONSTRUCTION JOINTS SHALL BE SCABBLED AND DOWELED WITH 4/N16 GALVANIZED COGGED DOWELS.
13. MANHOLE TOP TO BE SEATED ON WATERPROOF BITUMEN MASTIC.
14. INTERNAL LINING TO DISCHARGE MANHOLE TO BE ~~A PRODUCT APPROVED BY COUNCIL~~ (WHITE OR OFF-WHITE). THE CONCRETE SURFACE SHALL BE SMOOTH AND FREE FROM HOLES AND LIGHTLY SANDBLASTED OR ACID-ETCHED BEFORE PAINTING. THE CONCRETE SURFACE SHALL HAVE CURED FOR AT LEAST 28 DAYS. THE PAINT SHALL BE APPLIED IN TWO COATS WITH A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 600 MICRONS.
15. MAXIMUM No INLET PIPES CONNECTED TO MANHOLE = 3
16. MAXIMUM INTERNAL DROPS IN A MANHOLE:-
FOR Ø1050, ONE INTERNAL DROP WITH Ø150 IN SIZE.
FOR Ø1200, TWO VERTICAL/INTERNAL DROPS WITH Ø150 OR GREATER IN SIZE.
17. WALL AND BASE THICKNESS TO BE 225mm (MIN) FOR AGGRESSIVE SOIL.
18. Precast units in accordance with these requirements are acceptable. Precast units must comply with AS4198.

INLET TYPES A & C				
Manhole description		Diagram	Min. drop d	
Same diameters				
Straight through			40	
Angle up to 45			40	
Angle from 45 –90			40	
Branch at angle less than 30			40	
Branch at angle 30 – 60			50	
Branch at angle 60 – 90			70	
Main and branch varying diameters				
Main Dia	Branch Dia			
300	225		80	
300	150		150	
300	100		200	
225	150		80	
225	100		130	
150	100		50	
House drains entering end manholes.				
150 House drain			30	
100 House drain			80	
MANHOLE CHANGE IN LEVEL (Y)				
NOM. DIA	Type A – Fall Across Manhole		Type C–Vertical Internal Drop	
	MIN.	MAX.	MIN.	MAX.
150	—	250	600	—
225	—	280	700	—
300	—	330	900	—

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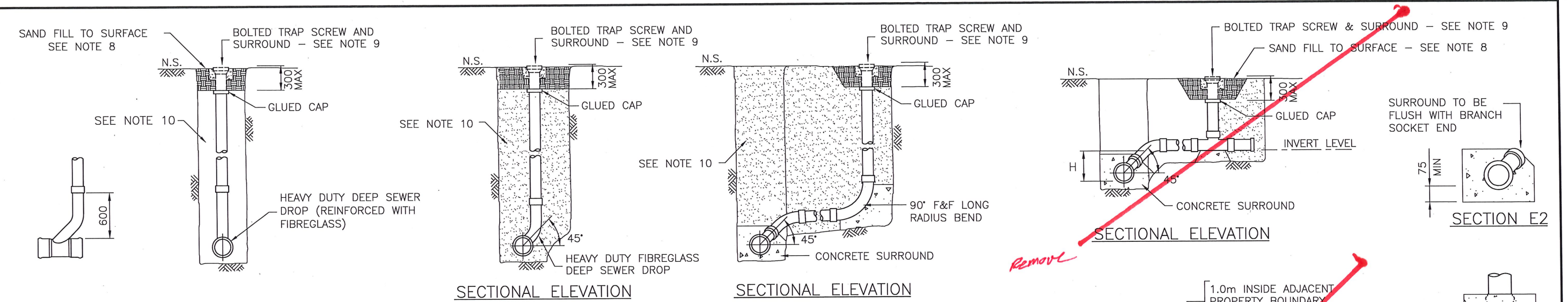


SEWERAGE MANHOLES

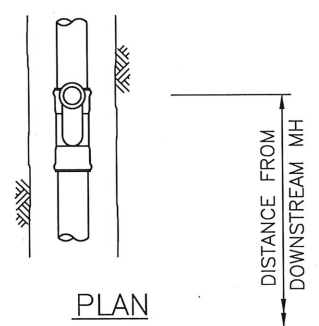
Standard
Drawing
S3000

A B C D

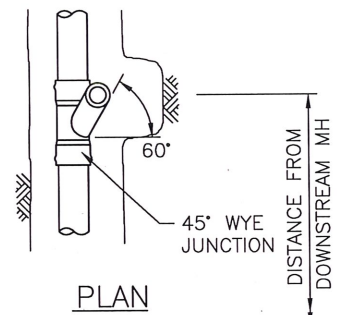
REVISIONS	DATE
C CRC DRAWING ADOPTED	28/11/12
B INLET TYPE B REMOVED	18/01/05
A ORIGINAL ISSUE	13/03/04



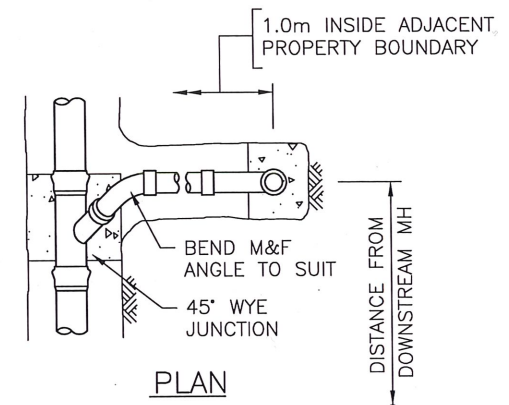
SIDE ELEVATION SECTIONAL ELEVATION



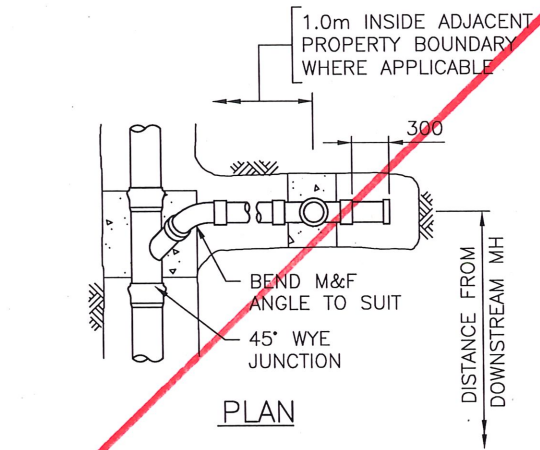
TYPE E1A
(SEWER INSIDE PROPERTY)



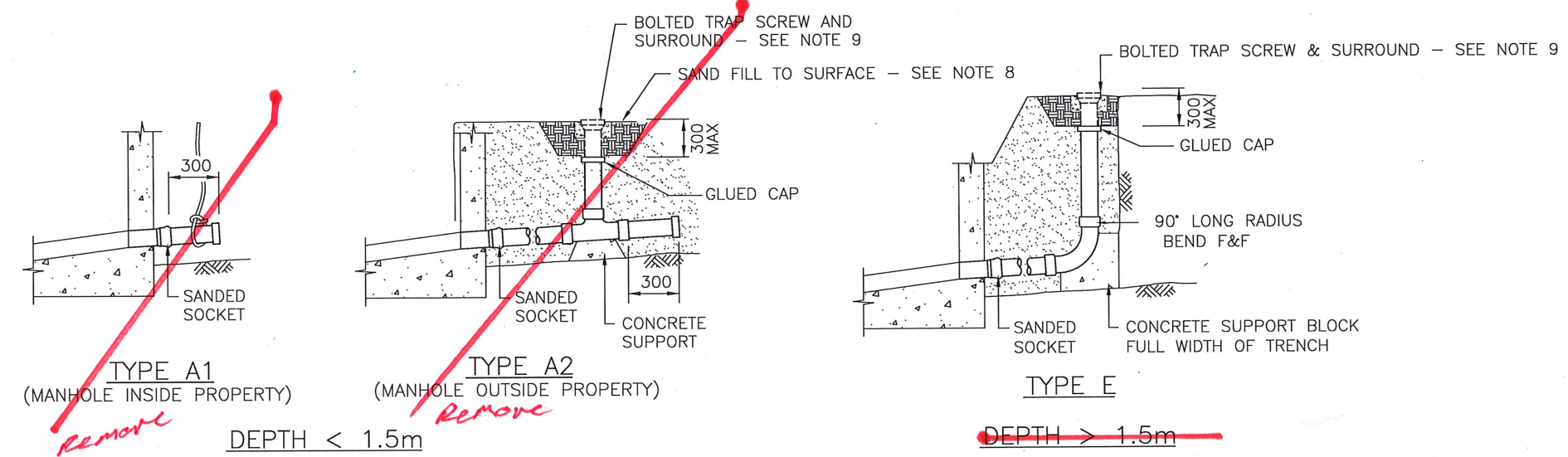
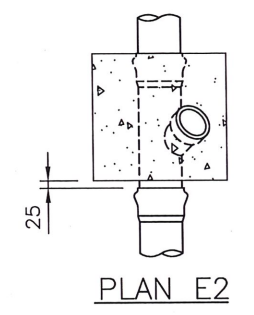
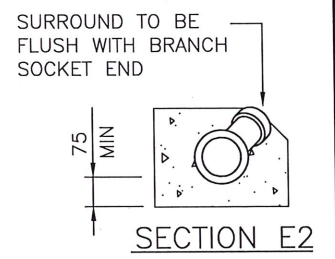
TYPE E1B
(SEWER INSIDE PROPERTY)



TYPE E2



TYPE A
(H < 400)



PROPERTY CONNECTIONS TO MANHOLES

NOTES

1. INSPECTION TEES OR VERTICAL RISERS SHALL NOT BE LOCATED LESS THAN 1.0m INSIDE PROPERTY BOUNDARY OR CLEAR OF ANY STRUCTURES (IE CATCH DRAINS).
2. ALL CONCRETE SHALL BE GRADE N25 IN ACCORDANCE WITH AS1379 AND AS3600 AND POURED AGAINST UNDISTURBED SOIL.
3. CONCRETE SURROUNDS SHALL BE POURED FULL WIDTH OF TRENCH & SHALL HAVE A MINIMUM CLEARANCE OF 25mm TO SPIGOT ENDS & FLUSH AT SOCKET ENDS OF FITTINGS, NO FLEXIBLE JOINTS SHALL BE ENCASED IN CONCRETE.
4. SAND BEDDING SHALL NOT BE LAID UNDER THE CONCRETE SURROUNDS. CONCRETE SHALL BE POURED FROM THE SOLID FOOTING OF THE TRENCH TO THE SPECIFIED LEVEL ON THE FITTING.
5. ALL RISERS SHALL HAVE A BOLTED TRAP SCREW AND CONCRETE SURROUND INSTALLED AT FINISHED SURFACE LEVEL.
6. PIPE MATERIALS AND FITTINGS SHALL HAVE A 'STANDARDS MARK' UNDER THE NATIONAL PLUMBING CERTIFICATION SCHEME.
7. BECAUSE OF CONTROLS ANY DEVIATION FROM THIS PROFORMA SHALL BE DIRECTED BY THE LOCAL AUTHORITY.
8. AT SUBDIVISION CONSTRUCTION STAGE THE CIVIL CONTRACTOR WILL BRING THE INSPECTION RISER TO WITHIN A MAXIMUM OF 300mm OF THE FINISHED SURFACE LEVEL AND INSTALL A GLUED CAP THEN FILL TO FINISHED SURFACE WITH SAND. INSTALL A 50X25 HW PEG 20mm ABOVE FINISHED SURFACE LEVEL WITH PLASTIC IDENTIFICATION TAPE LOOSELY TIED TO THE HCB.
9. AT BUILDING CONSTRUCTION STAGE THE HOUSE DRAINER WILL EXTEND THE RISER TO THE FINISHED SURFACE LEVEL AND INSTALL A BOLTED TRAP SCREW AND CONCRETE SURROUND.
10. 150 LAYERS OF EMBEDMENT COMPACTED EVENLY AROUND RISER EXTENDING ACROSS AND 150 MIN ALONG THE TRENCH.

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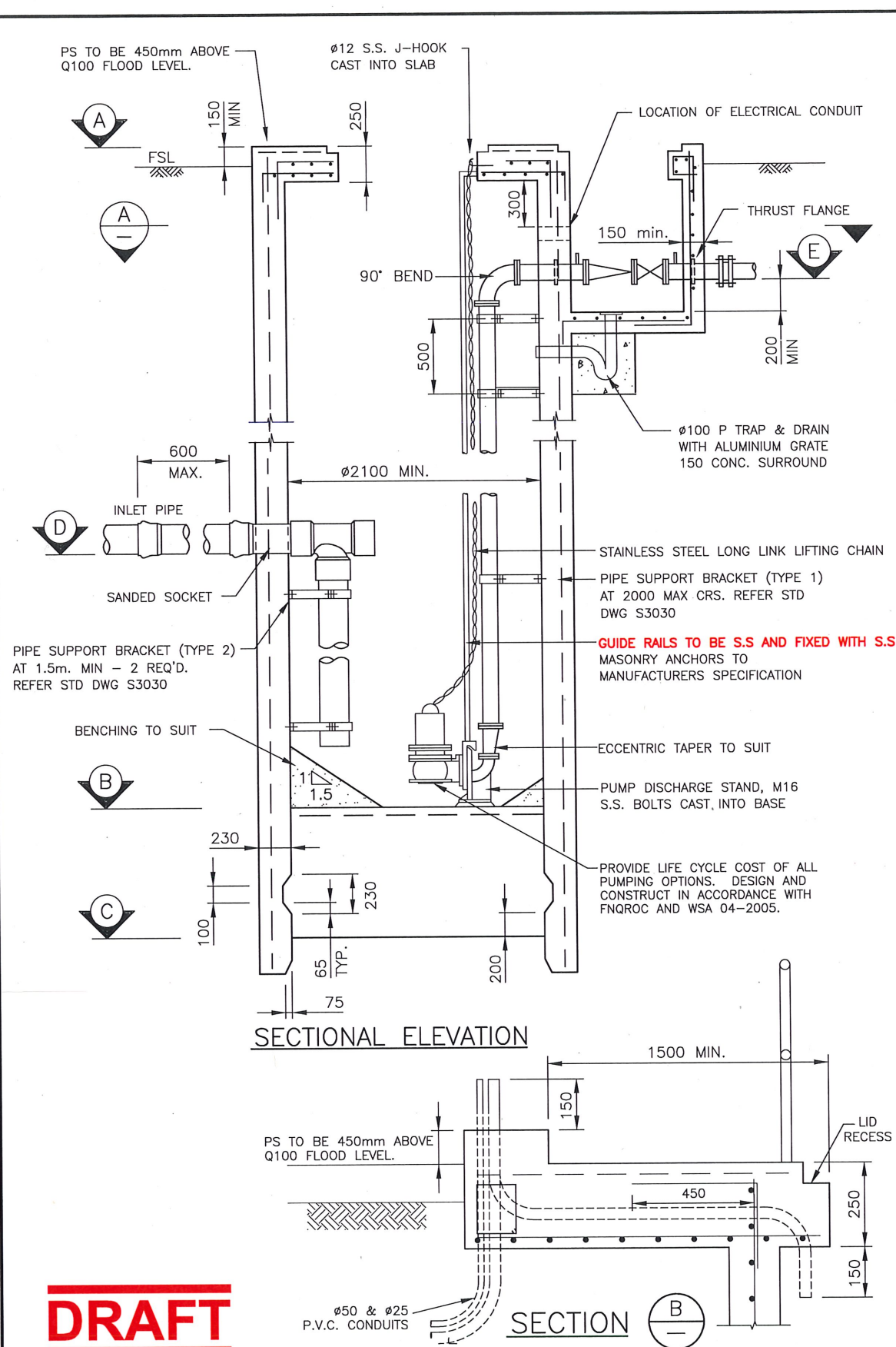


PROPERTY CONNECTION BRANCHES

Standard Drawing
S3005

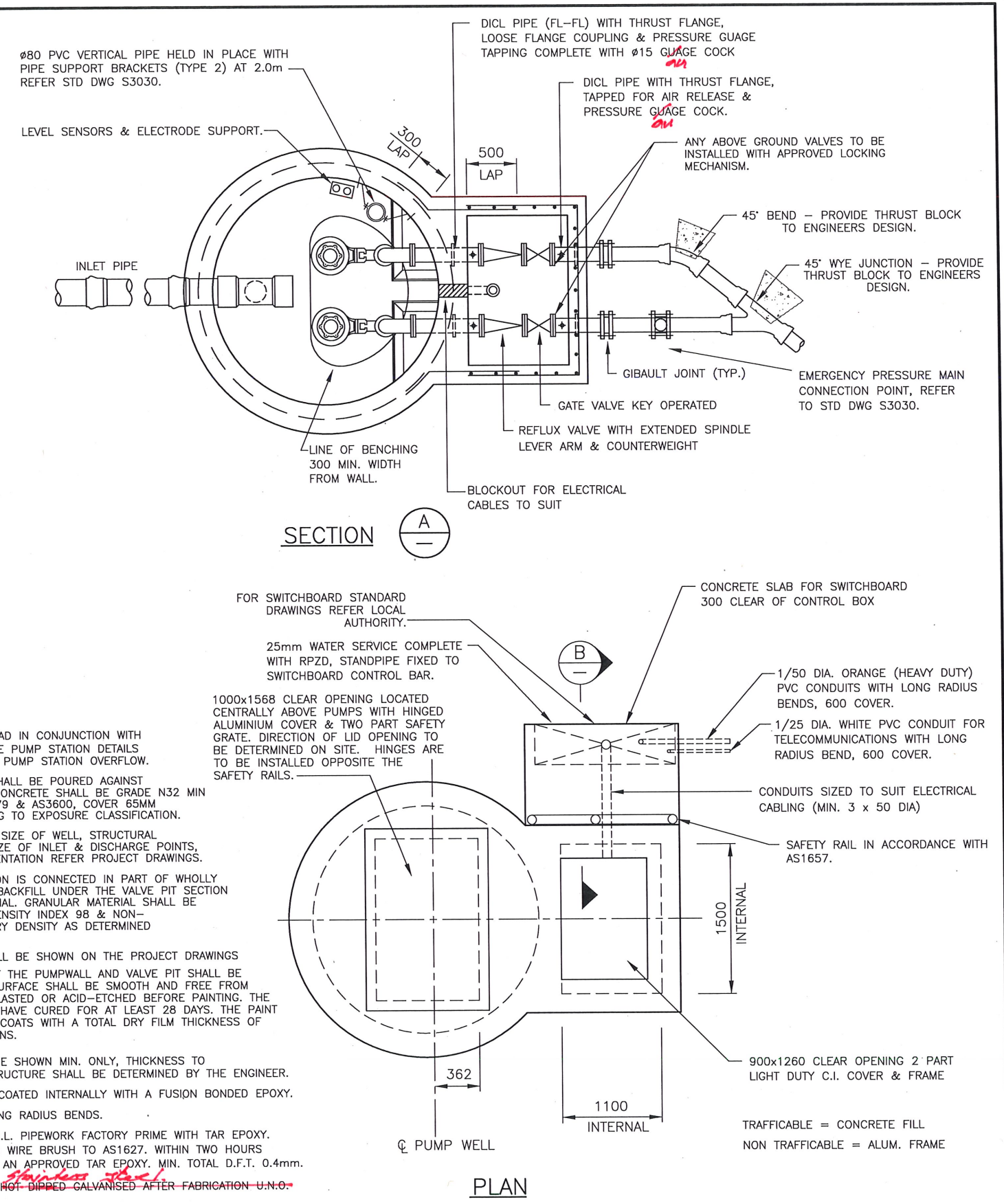
REVISIONS	DATE
D MINOR AMENDMENTS	25/10/17
C ADDITION TO NOTE 8	26/11/14
B CRC DRAWING ADOPTED	28/11/12
A ORIGINAL ISSUE	12/03/04

A	B	C	D
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NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH STD DWG'S S3030 SEWERAGE PUMP STATION DETAILS AND S3035-CRC SEWERAGE PUMP STATION OVERFLOW.
- PUMP WELL & VALVE PIT SHALL BE POURED AGAINST UNDISTURBED SOIL & ALL CONCRETE SHALL BE GRADE N32 MIN IN ACCORDANCE WITH AS1379 & AS3600, COVER 65MM OR AS REQUIRED ACCORDING TO EXPOSURE CLASSIFICATION.
- FOR RELATIVE LEVELS A-E, SIZE OF WELL, STRUCTURAL ELEMENTS OF THE WELL, SIZE OF INLET & DISCHARGE POINTS, CONDUIT SIZES & SITE ORIENTATION REFER PROJECT DRAWINGS.
- WHERE THE PUMPING STATION IS CONNECTED IN PART OF WHOLLY IN OPEN CUT EXCAVATION, BACKFILL UNDER THE VALVE PIT SECTION SHALL BE APPROVED MATERIAL. GRANULAR MATERIAL SHALL BE COMPACTED TO RELATIVE DENSITY INDEX 98 & NON-GRANULAR TO 98% MAX. DRY DENSITY AS DETERMINED BY AS 1289, E1.1
- BENCHING DIMENSIONS SHALL BE SHOWN ON THE PROJECT DRAWINGS
- ALL INTERNAL SURFACES OF THE PUMPWALL AND VALVE PIT SHALL BE COATED. THE CONCRETE SURFACE SHALL BE SMOOTH AND FREE FROM HOLES AND LIGHTLY SANDBLASTED OR ACID-ETCHED BEFORE PAINTING. THE CONCRETE SURFACE SHALL HAVE CURED FOR AT LEAST 28 DAYS. THE PAINT SHALL BE APPLIED IN TWO COATS WITH A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 600 MICRONS.
- FLOOR/PLUG THICKNESS ARE SHOWN MIN. ONLY, THICKNESS TO COUNTER FLOTATION OF STRUCTURE SHALL BE DETERMINED BY THE ENGINEER.
- REFLUX VALVES SHALL BE COATED INTERNALLY WITH A FUSION BONDED EPOXY.
- ALL CONDUITS TO HAVE LONG RADIUS BENDS.
- PAINTING OF EXPOSED D.I.C.L. PIPEWORK FACTORY PRIME WITH TAR EPOXY. BEFORE FINAL COAT POWER WIRE BRUSH TO AS1627. WITHIN TWO HOURS PAINT WITH TWO COATS OF AN APPROVED TAR EPOXY. MIN. TOTAL D.F.T. 0.4mm.
- ALL STEELWORK SHALL BE HOT-DIPPED GALVANISED AFTER FABRICATION U.N.O.



E	GUARDRAILS UPDATED TO STAINLESS STEEL	28/11/19
D	MINOR AMENDMENTS	25/10/17
C	CRC DRAWING ADOPTED	28/11/12
B	LIFTING CHAIN SPECIFIED AS S.S.	13/01/06
A	ORIGINAL ISSUE	12/03/04
REVISIONS		DATE

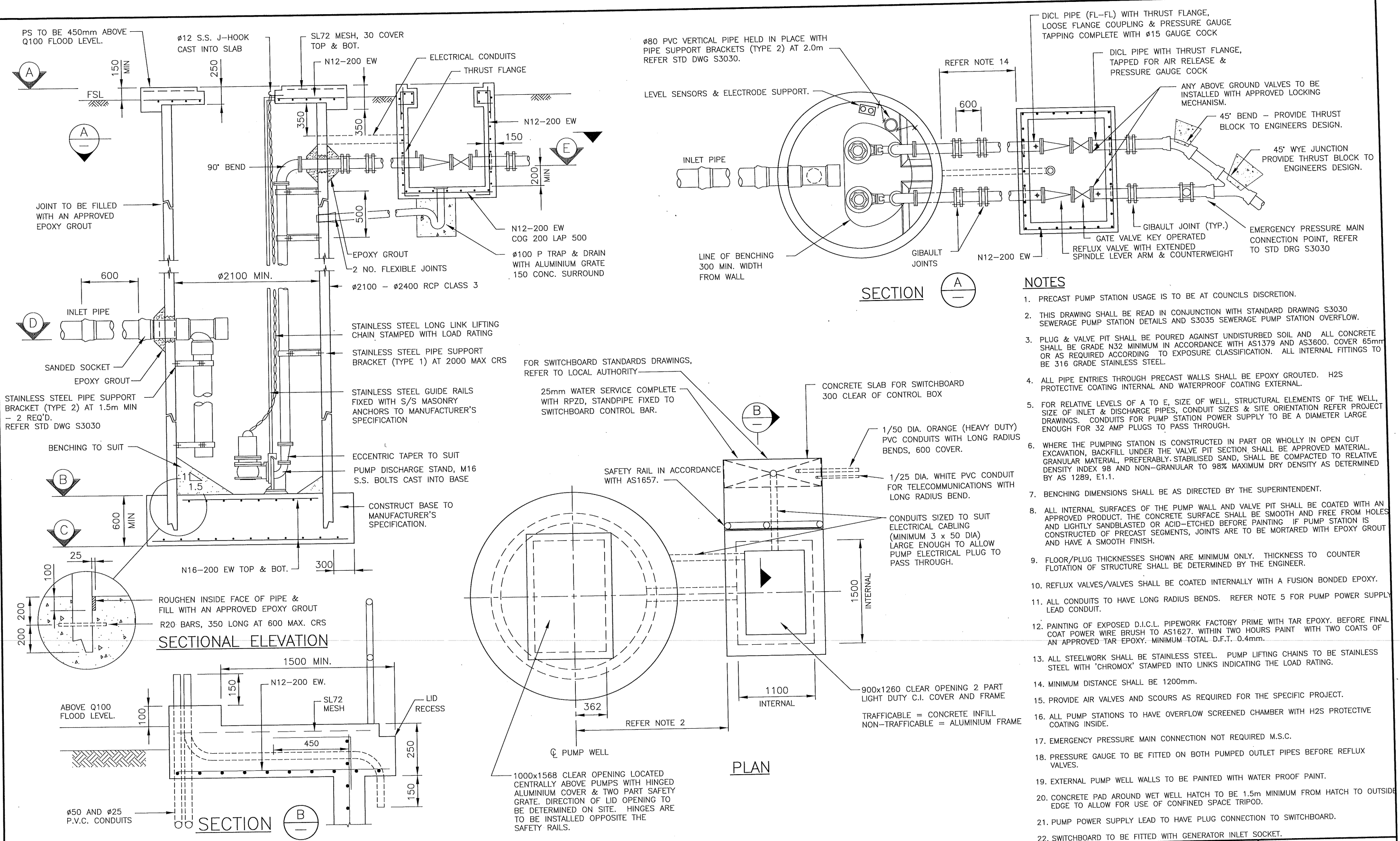
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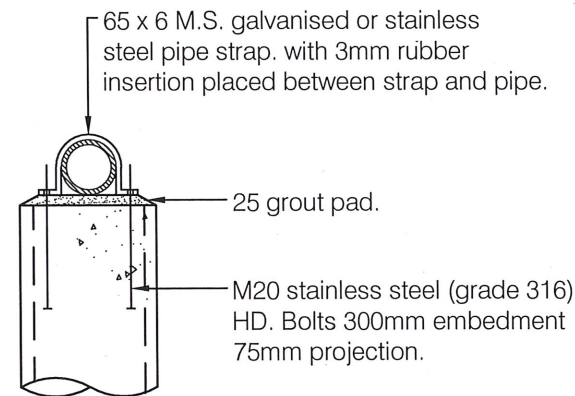
**SEWERAGE PUMP STATION CAST IN SITU
TYPICAL LAYOUT**

Standard Drawing S3020				
A	B	C	D	E

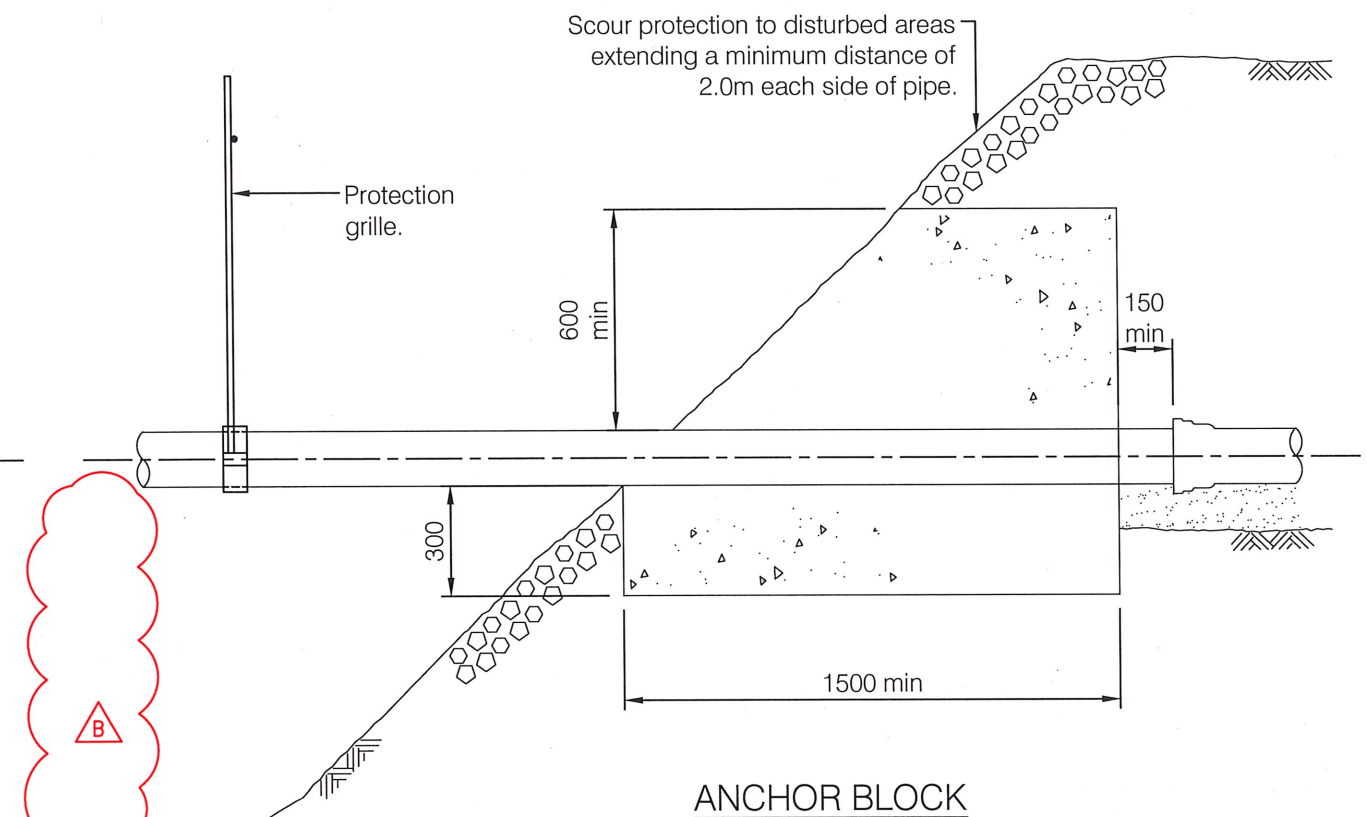
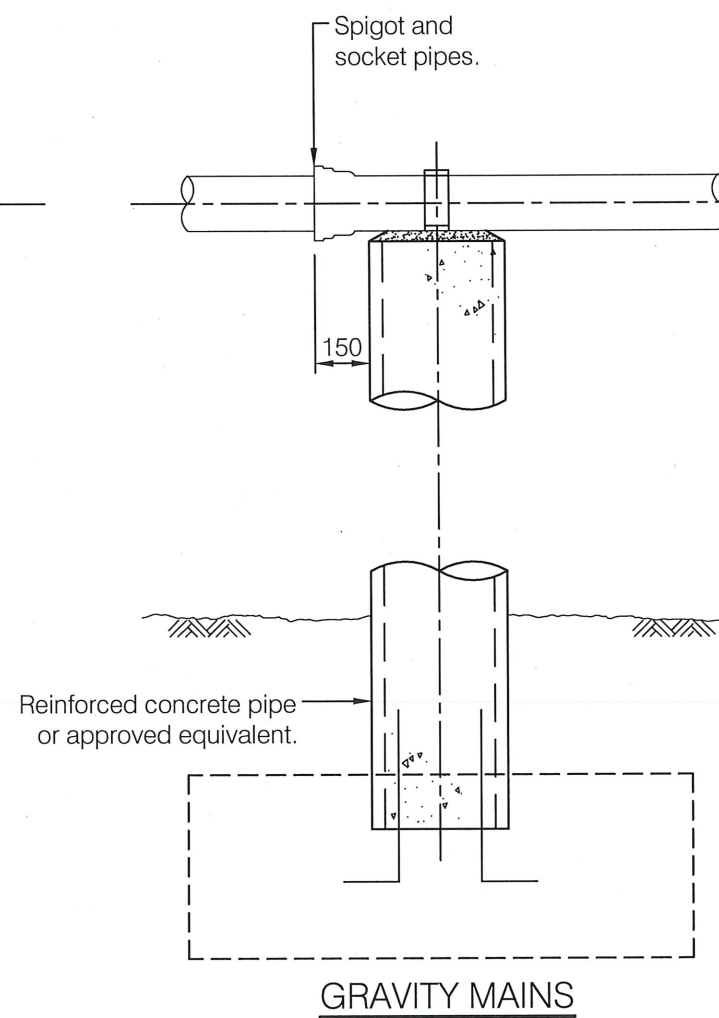
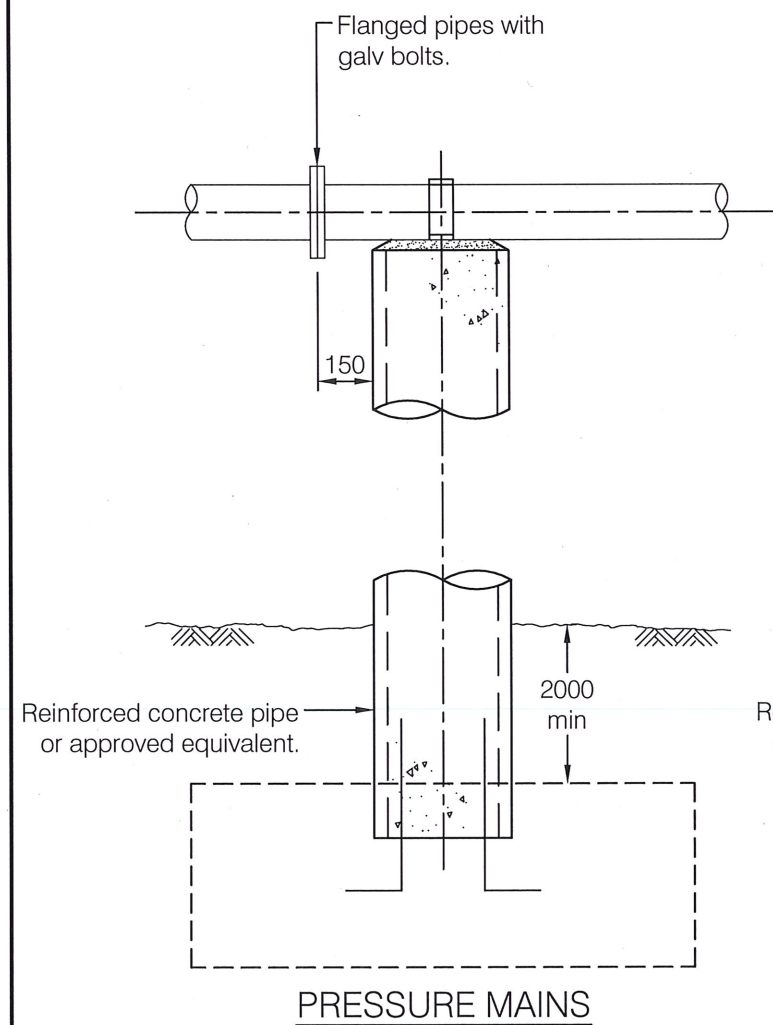


			<div>DISCLAIMER</div> <div>The authors and sponsoring organisations shall have no liability or responsibility to the user or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused, directly or indirectly, by the adoption and use of these Standard Drawings including, but not limited to, any interruption of service, loss of business or anticipatory profits, or 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> <div></div> <div>TYPICAL SEWERAGE PUMP STATION PRECAST UNITS</div>	Standard Drawing S3025	
C	MISCELLANEOUS AMENDMENTS	25/10/17			
B	CRC DRAWING ADOPTED	28/11/12			
A	ORIGINAL ISSUE	12/03/04			
REVISIONS		DATE			

DRAFT



HOLD DOWN DETAIL



NOTES

1. All above ground pipework shall be D.I.C.L. class K9 (Spigot - Socket) or K12 (Flanged) and shall extend until 600mm cover to pipe (or not less than 2000 into embankment).
2. Footing design, pier size and pier spacing to be in accordance with engineering design and dependant on stream flow, height of crossing and debris loading.
3. Galvanised steel protection grilles shall be provide each side of the crossing where the pipe height exceeds 1800mm. Refer standard drawing S9001 for details.
4. "Danger Keep Off" signs shall be erected each side off crossing. Refer project drawings for location.
5. All dimensions are in millimetres.

B	DIMENSION REMOVED	28/11/19
A	ORIGINAL ISSUE	12/03/04
REVISIONS		DATE

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AERIAL PIPE CROSSINGS

Standard
Drawing
S9000

A	B			
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