

FOOTPATHS/PRIVATE PROPERTY/ROADS

ROADS

ROADS

ROADS

FOOTPATHS/PRIVATE PROPERTY/ROADS

TYPE 1

Conforms to Support Type U AS 3725

TYPE 2

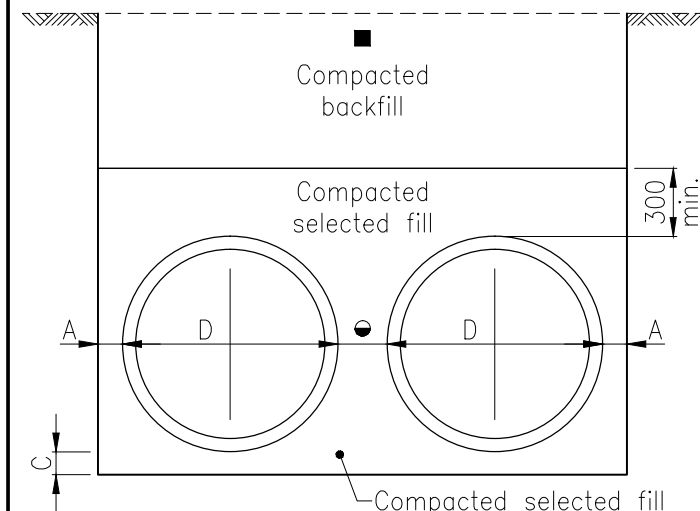
Conforms to Support Type H1 AS 3725

TYPE 3 – SAND SURROUND

TYPE 4 – CONCRETE OR GRAVEL SURROUND

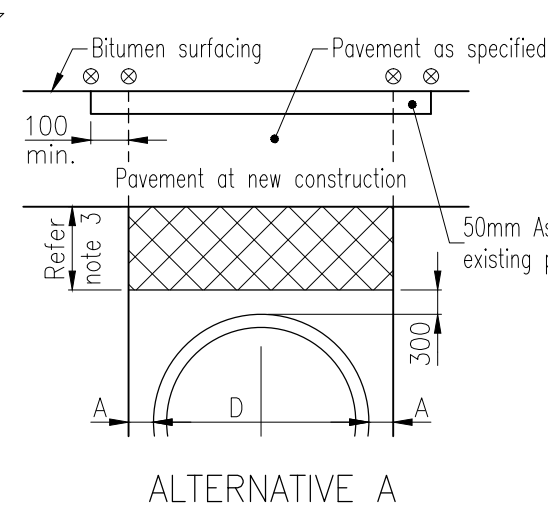
TYPE 5 – CONCRETE OR GRAVEL ENCASEMENT

TYPE 6 – BEDDING IN POOR GROUND



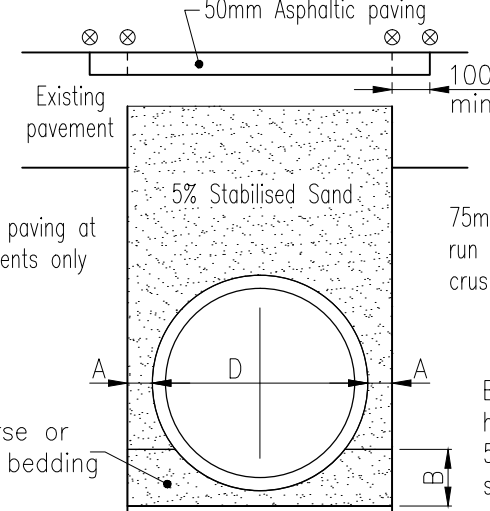
TYPE 7 – BEDDING OF MULTIPLE PIPES

Conforms to Support Type H1



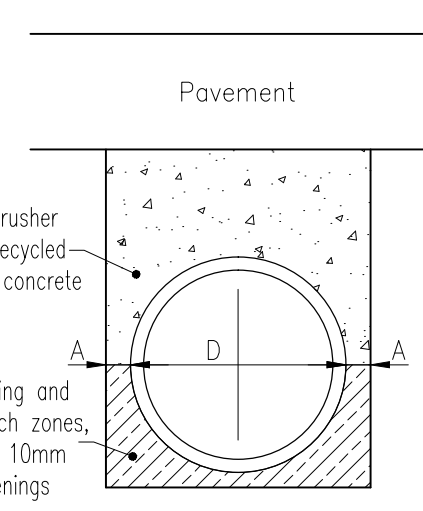
ALTERNATIVE A

(At new pavements on residential streets and rural roads and existing sealed roads)



ALTERNATIVE B

(At existing surfaced pavements on industrial, trunk collector, sub-arterial and arterial streets/roads)



ALTERNATIVE C

NOMINAL Ø culvert D (mm)	MINIMUM width A (mm)	HAUNCH depth B (mm)	BEDDING depth C (mm)	Allowable width, E(m)	
				DES	MAX
300	300	36	100	1.0	1.1
375	300	45	100	1.1	1.2
450	300	53	100	1.1	1.3
525	300	61	100	1.2	1.5
600	300	69	100	1.3	1.6
750	300	85	100	1.5	1.8
900	300	103	100	1.6	1.9
1050	300	120	100	1.8	2.1
1200	300	135	100	2.0	2.2
1350	300	150	100	2.1	2.4
1500	300	169	100	2.3	2.7
1650	330	184	150	2.6	2.9
1800	360	200	150	2.8	3.1
1950	390	222	150	3.1	3.3
2100	420	239	150	3.4	3.5
2400	480	270	150	3.9	4.2
2700	540	303	150	4.3	4.6
3000	600	335	150	4.9	5.0

BEDDING AND HAUNCH MATERIAL GRADING

(Gravel, loam, sand, or mixture)

AS Sieve Size	% Passing by mass	
	Type 1 Pipes < 1200Ø	Type 2 Pipes ≥ 1350Ø
19.0	100	98-100
9.5	-	35-50
4.75	-	5-10
2.36	40-100	0-2
0.425	15-70	0-1
0.075	3-30	0-1

NOTES:

- Selected backfill in all cases shall be carried through to the wings and continued 300 thick for the length and height of the wings.
- Bedding compaction (Compacted selected fill/sand bedding):
 - Cohesive material – 95% standard compaction.
 - Non-cohesive material – density index of 70MIN, refer AS1289.5.5.1.
 - Sand – compact by flooding and use of vibrators.
- Backfill compaction:
 - Compacted gravel (300mm) layer under road pavement 95% standard compaction.
 - Compacted selected fill/CBR 15 Gravel 90% standard compaction – below 300mm zone.
 - Compacted backfill – at footpaths/private property 90% standard compaction.
 - MAX. densities determined by standard compaction tests to AS 1289.5.1.1.

- Refer project drawings for types and/or alternatives to be adopted.
- Type U & Type H1 to conform to AS 3725.
- Dimension A can be reduced to 150 MIN for non mechanical compaction of backfill.
- Pipes are to be designed to their correct strength class under all construction loads, dead loads and in-service loads.
- All dimensions in millimetres.
- Where groundwater is encountered the superintendent must be notified and an appropriate trench drainage solution provided.

LEGEND

- ⊗ Saw cut at existing pavement.
- Pipes: 600 when NOMINAL D < 1800
900 when NOMINAL D > 1800
- Dimensions can be reduced to 100 MIN for 5% stabilised sand backfill.
- Refer Alternative A, B and C for backfill requirements at existing and new pavements.
- Depth to be approved by the superintendent.
- ⊠ Gravel (Min CBR 15).

APPLICABILITY TABLE

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

G	MINOR CORRECTION-ALTERNATIVE B & TABLE	06/2017
REVISIONS		
F	IRC ADDED	12/2016
E	GRC AND LSC ADDED	09/2014
D	NOTE 9 ADDED RE: GROUNDWATER	03/2012
C	MRC ADDED	04/2011
B	REFERENCE TO 'ORDINARY' FILL REMOVED	07/2010
A	POST AMALGAMATION REVIEW	10/2003

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

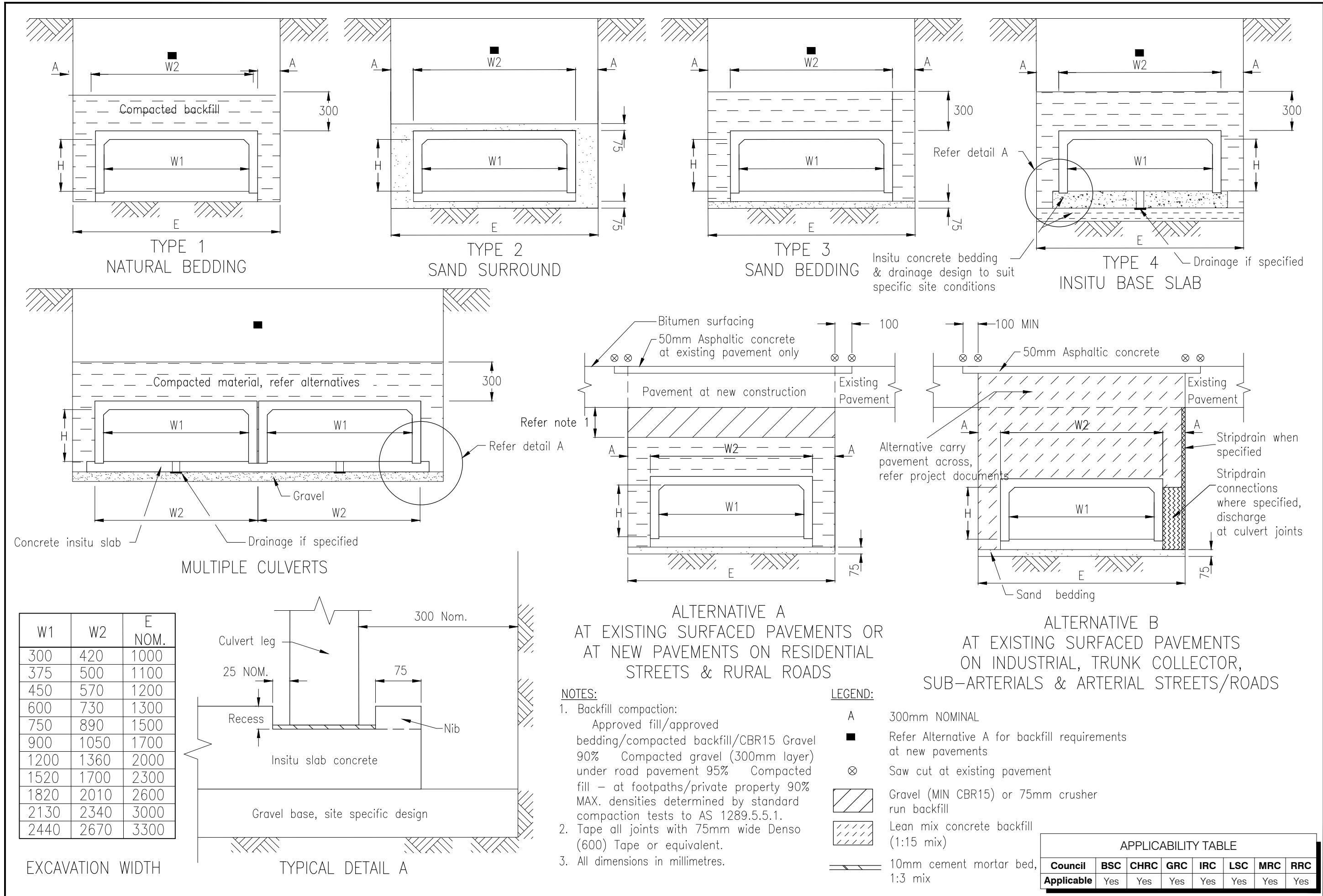
EXCAVATION, BEDDING AND BACKFILLING OF CONCRETE/REINFORCED FIBRE DRAINAGE PIPES

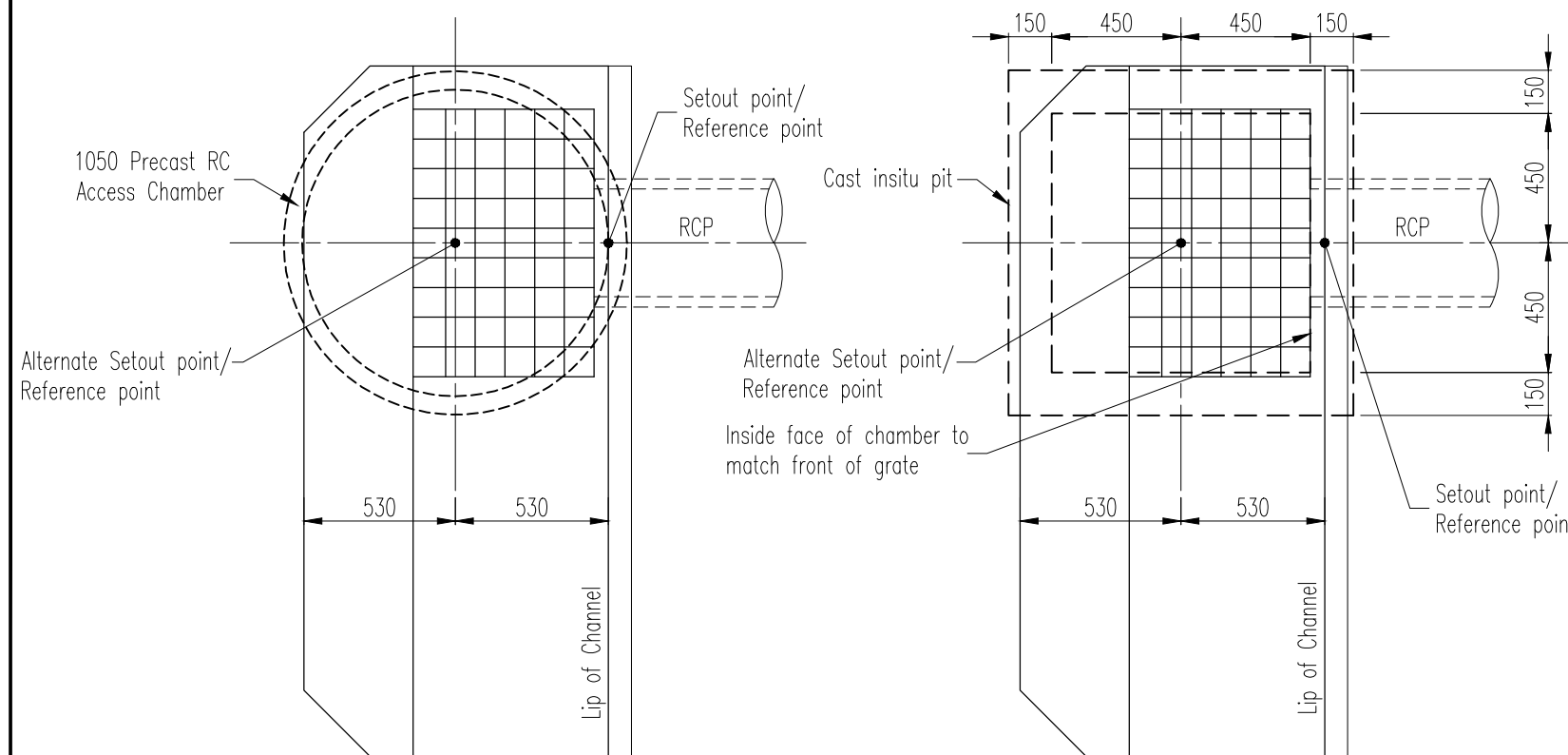
DRAINAGE

STANDARD DRAWING

CMDG-D-010

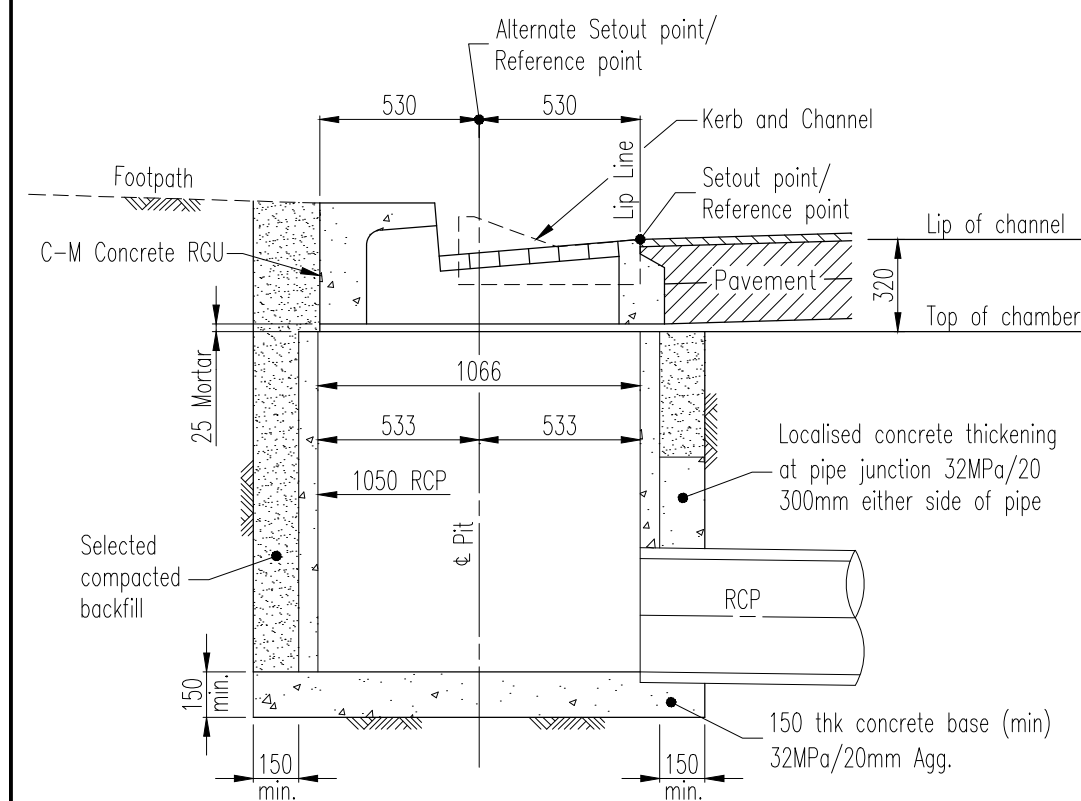
REV. | B | C | D | E | F | G



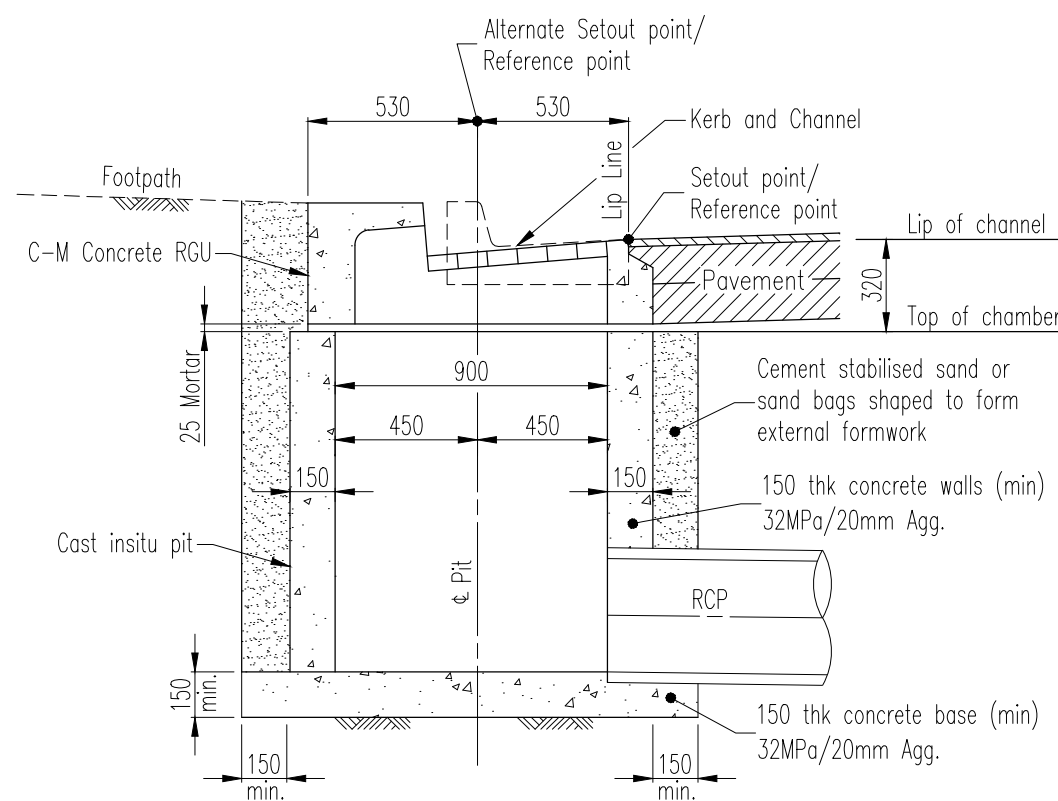


PLAN
C-M CONCRETE RGU
(with 1050 RCP shaft)

PLAN
C-M CONCRETE RGU
(with 900x900 insitu pit)



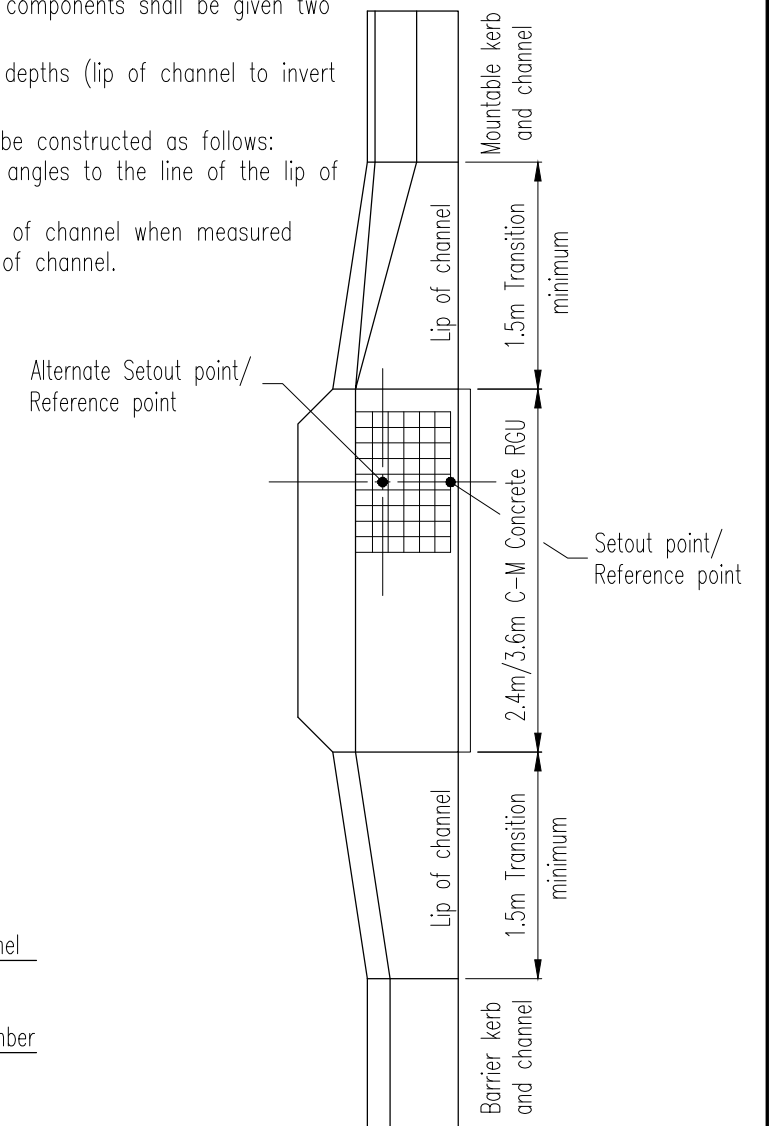
SECTIONAL ELEVATION



SECTIONAL ELEVATION

NOTES:

1. Precast road gully units to be 2.4m or 3.6m C-M Concrete Products (recessed type) or similar approved.
2. Reference point/setout point is on line of lip of kerb and channel at centre of grate. alternate reference point/setout point is geometric centre of chamber.
3. Pipe ends to be trimmed flush with internal wall and repaired so as to provide required concrete cover to pipe reinforcing.
4. Cut surfaces of concrete drainage components shall be given two coats of a tar epoxy paint.
5. Precast RC shafts to be used for depths (lip of channel to invert of pit) greater than 0.9m.
6. The plane of the top of pit is to be constructed as follows:
 - (a) Level when measured at right angles to the line of the lip of channel.
 - (b) To the same grade as the lip of channel when measured parallel to the line of the lip of channel.



C-M CONCRETE RGU CONFIGURATION

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

REVISIONS	DATE
F IRC ADDED	12/2016
E GRC AND LSC ADDED	09/2014
D MRC ADDED	04/2011
C REFERENCE TO LSC REMOVED	01/2011
B TRANSITION 1.5 MINIMUM	07/2010
A POST AMALGAMATION REVIEW	01/2010

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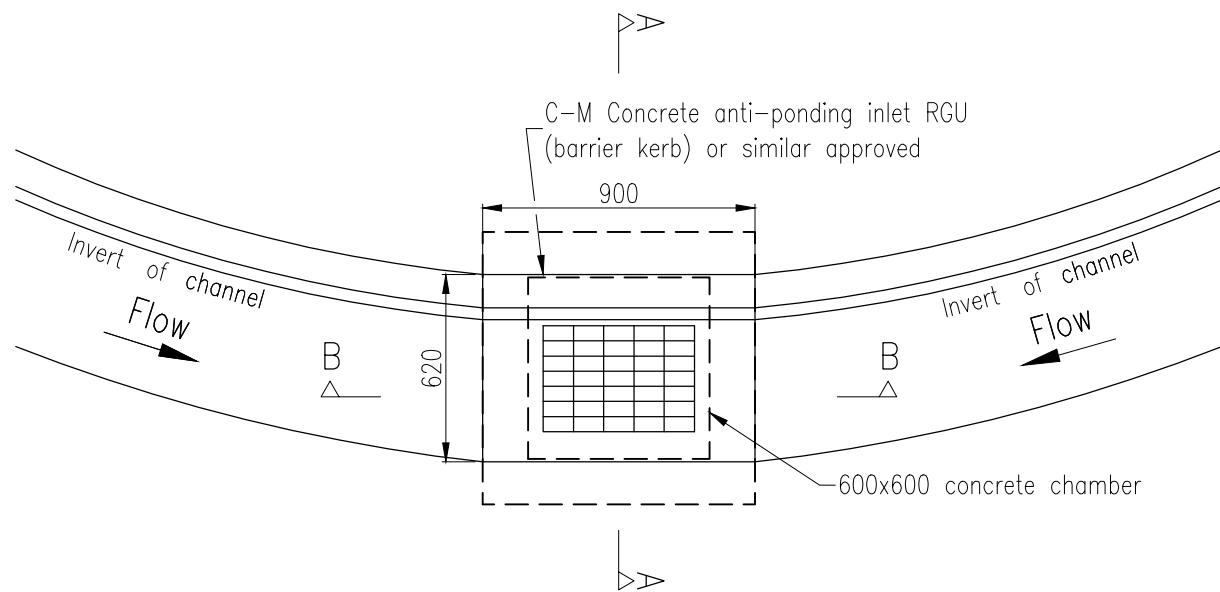
Capricorn Municipal Development Guidelines

Incorporating:

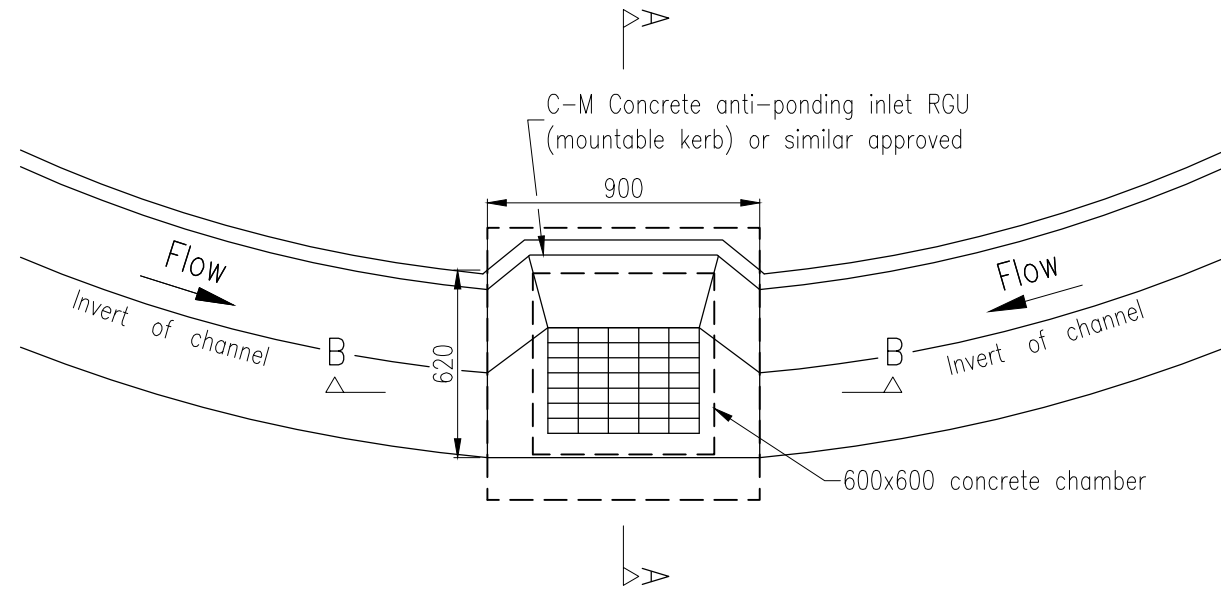
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Central Highlands Regional Council (CHRC)	Maranoa Regional Council (MRC)
Gladstone Regional Council (GRC)	Rockhampton Regional Council (RRC)
Isaac Regional Council (IRC)	

PRECAST STORMWATER INLET INSTALLATION DETAILS

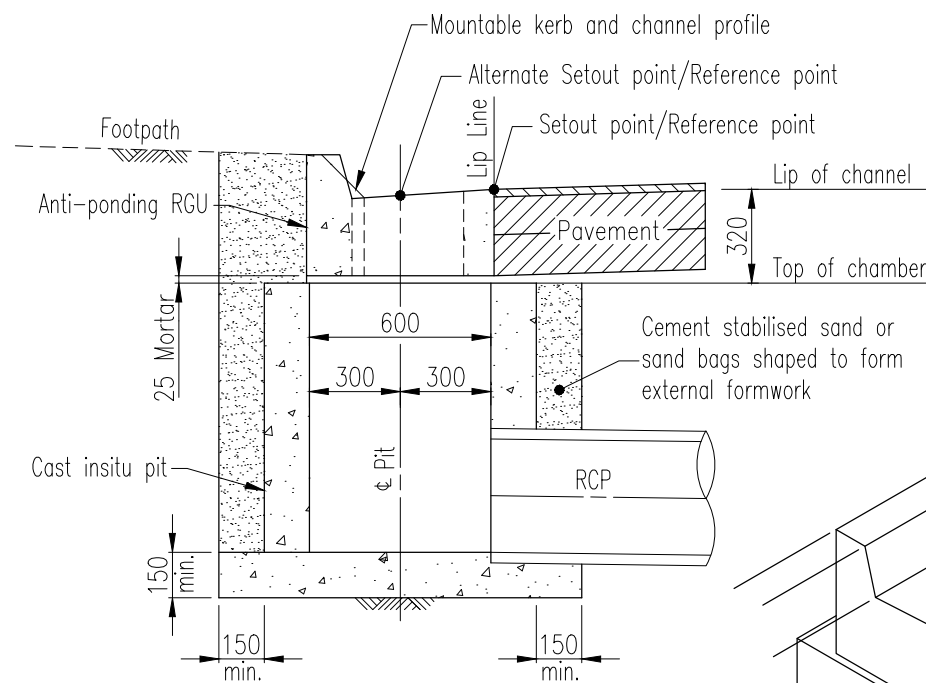
DRAINAGE
STANDARD DRAWING CMDG-D-020
REV. A B C D E F



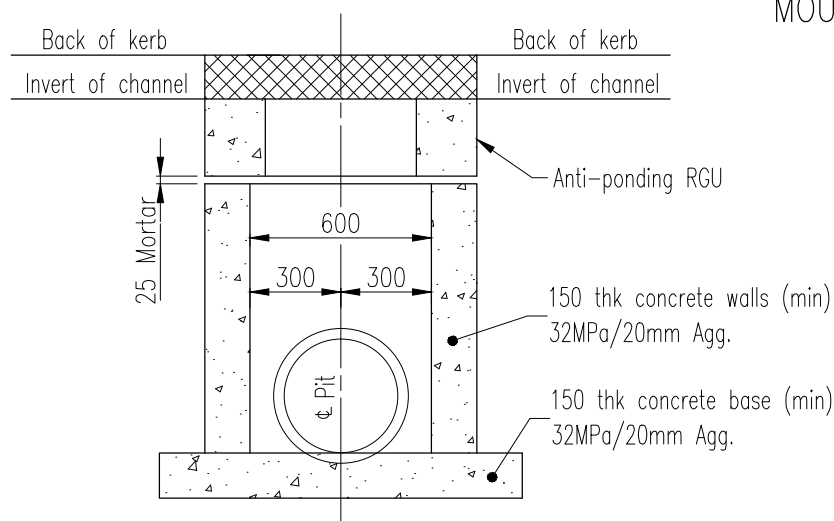
PLAN
BARRIER KERB AND CHANNEL



PLAN
MOUNTABLE KERB AND CHANNEL



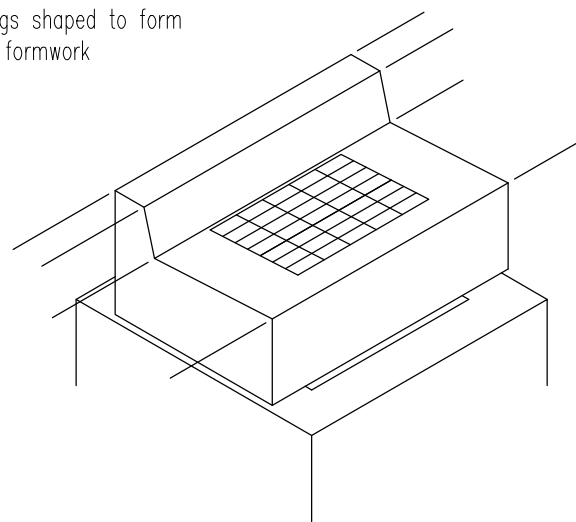
SECTION A-A



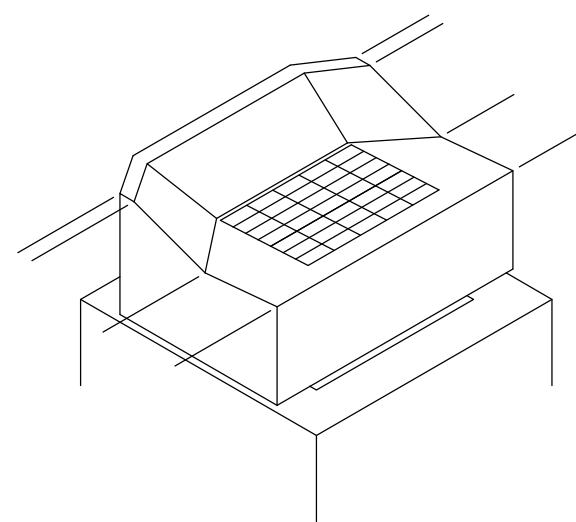
SECTION B-B

NOTES:

1. Precast anti-ponding road gully units to be 0.9m wide C-M Concrete Products or similar approved.
2. Reference point/setout point is on line of lip of kerb and channel at centre of grate. alternate reference point/setout point is geometric centre of chamber.
3. Pipe ends to be trimmed flush with internal wall and repaired so as to provide required concrete cover to pipe reinforcing.
4. Cut surfaces of concrete drainage components shall be given two coats of a tar epoxy paint.
5. The plane of the top of pit is to be constructed level when measured at right angles and parallel to the line of the lip of channel.



PERSPECTIVE
BARRIER KERB AND CHANNEL



PERSPECTIVE
MOUNTABLE KERB AND CHANNEL

APPLICABILITY TABLE							
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Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS	DATE
E IRC ADDED	12/2016
D GRC AND LSC ADDED	09/2014
C MRC ADDED	04/2011
B REFERENCE TO LSC REMOVED	01/2011
A POST AMALGAMATION REVIEW	01/2010

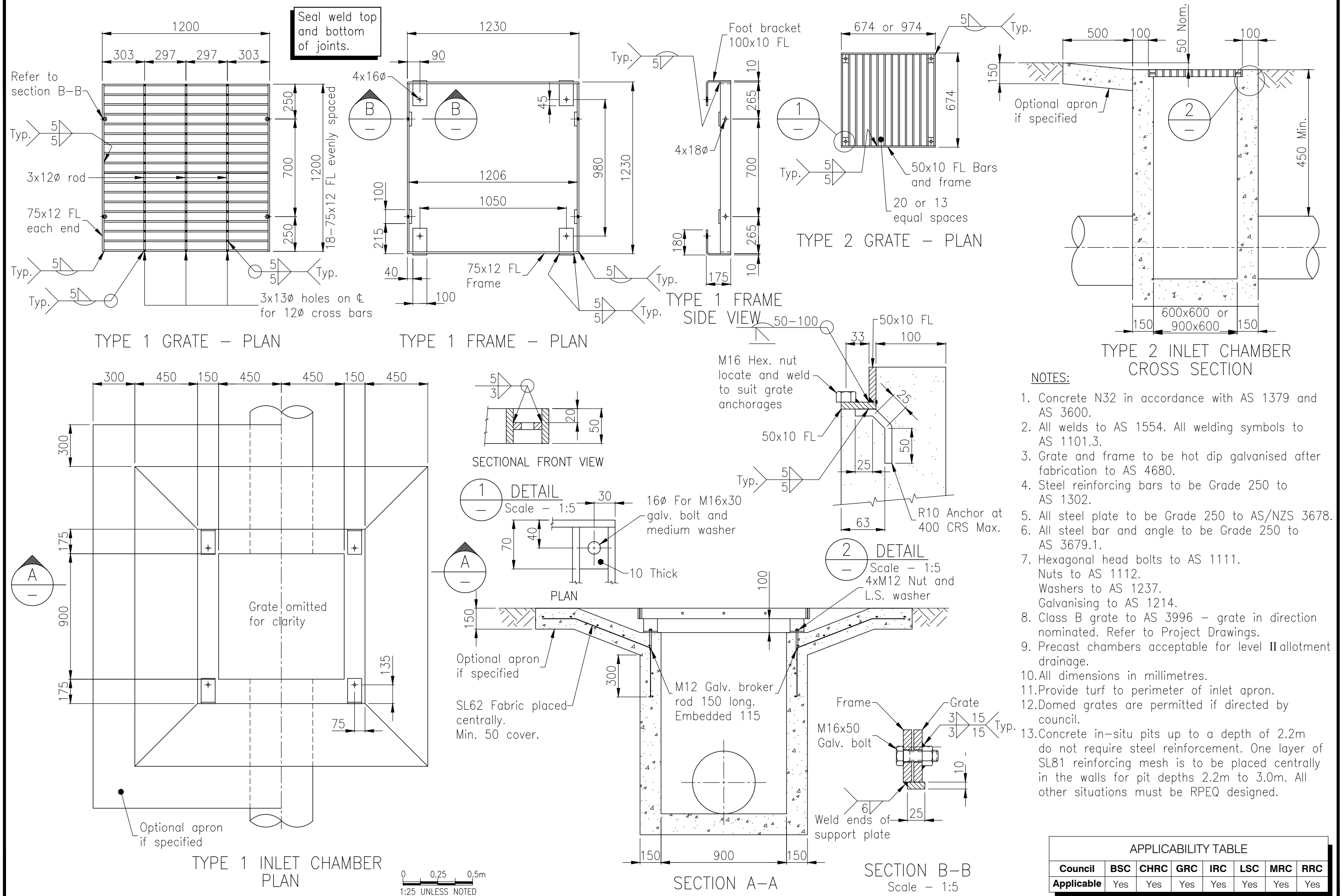
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**PRECAST ANTI-PONDING INLET
INSTALLATION DETAILS**

DRAINAGE				
STANDARD DRAWING				
CMDG-D-021				
REV.	A	B	C	D



REVISIONS		DATE
F	NOTE 13 ADDED.	03/2017
E	IRC ADDED	12/2016
D	GRC AND LSC ADDED	09/2014
C	MRC ADDED	04/2011
B	NOTE 12 ADDED RE. DOMED GRATES	07/2010
A	POST AMALGAMATION REVIEW	01/2010

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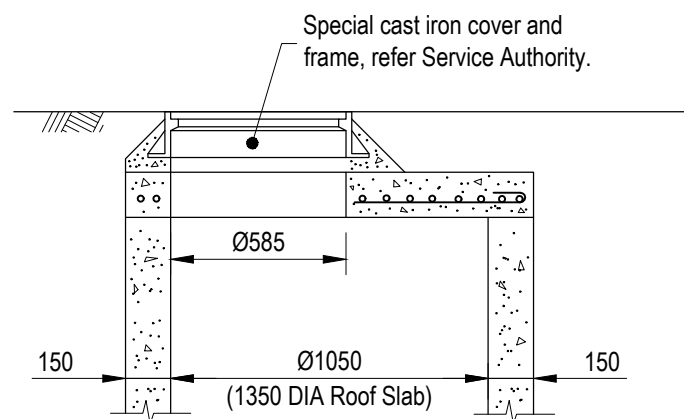
FIELD INLET DETAILS

DRAINAGE

STANDARD DRAWING

CMDG-D-022

REV. A B C D E F

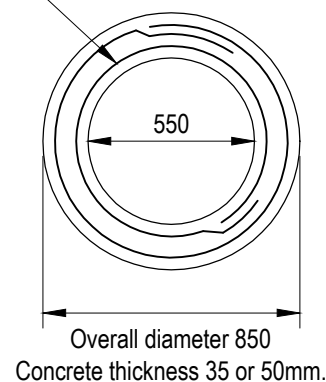


SECTION
ALTERNATIVE 1
1050 DIA MH.

INVERT GRADE DIMENSION 't' (MIN)

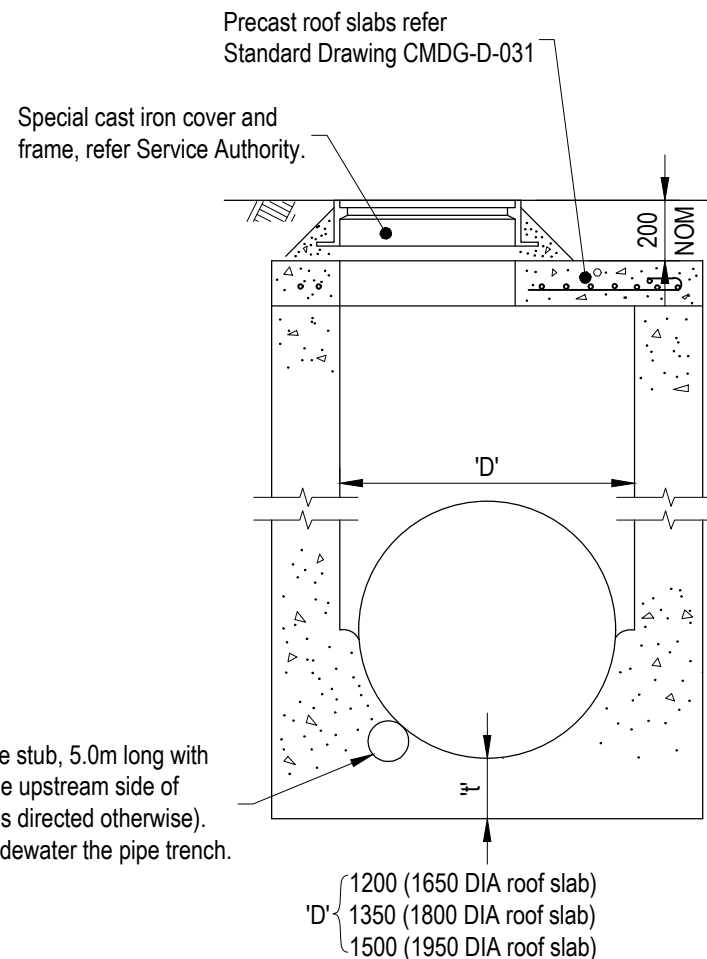
Access Chamber DIA	FLOOR THICKNESS 't'	
	INLET	OUTLET
1050	175	150
1200	250	225
1350	250	225
1500	250	225

2 R6 bars, Grade 400 to AS ISO 1302, placed centrally in ring with 40 side cover. Lap 250.



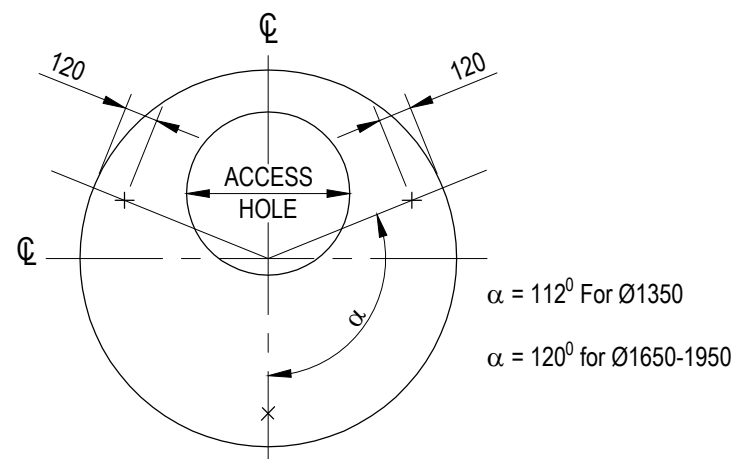
PLAN
ROOF RING

For use in raising covers and frames of existing access chambers.

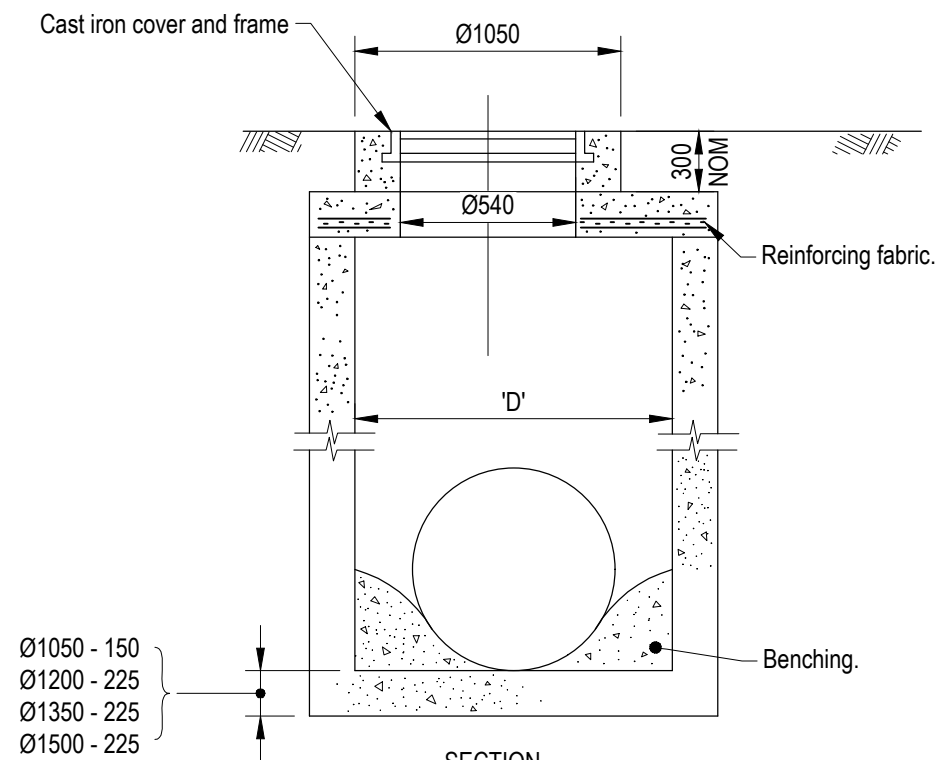


TYPICAL SECTION

ACCESS CHAMBER DETAILS



LIFTING ANCHOR LOCATIONS
(Refer Note 4)



SECTION
ALTERNATIVE 2

NOTES:

- Structural concrete N32, benching N20 in accordance with AS 1379 and AS 3600.
- Alternatives: For access hole location refer Service Authority, For turret type refer Service Authority.
- Refer Project Drawings for size and level of culverts, and chamber cover level.
- Lifting anchors to be SWIFTLIFT or equivalent, 1.8 tonne, galvanized to AS 4680 and fitted to manufacturer's specifications.
- All dimensions in millimetres.
- Concrete in-situ pits up to a depth of 2.2m do not require steel reinforcement. One layer of SL81 reinforcing mesh is to be placed centrally in the walls for pit depths 2.2m to 3.0m. All other situations must be RPEQ designed.

APPLICABILITY TABLE

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

REVISIONS	DATE
F NOTE 1 REINFORCING DETAILS AMENDED	12/2017
E NOTE 6 ADDED	03/2017
D IRC ADDED	12/2016
C GRC AND LSC ADDED	09/2014
B MRC ADDED	04/2011
A POST AMALGAMATION REVIEW	01/2010

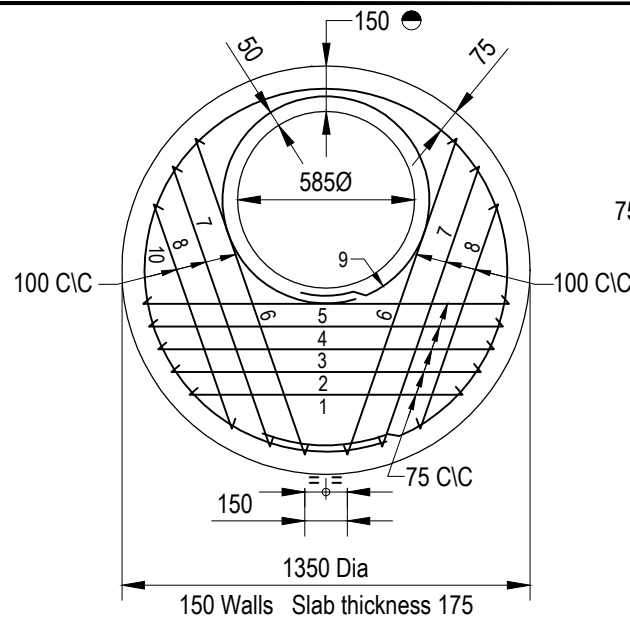
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ACCESS CHAMBER DETAILS DIA 1050 TO 1500

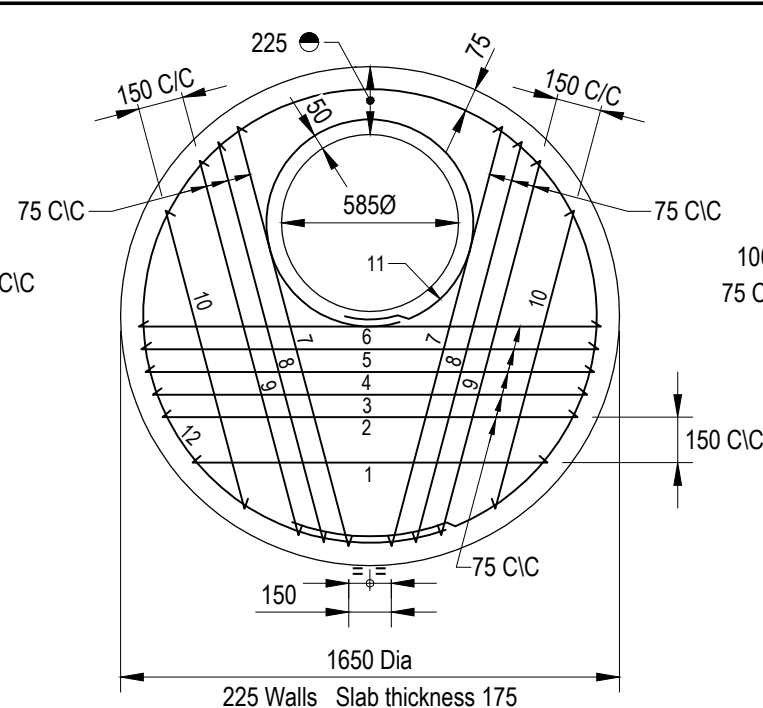
DRAINAGE						
STANDARD DRAWING						
CMDG-D-030						
REV.	A	B	C	D	E	F



BAR No.	SHAPE	a/b	OVERALL LENGTH	No. OFF	TOTAL LENGTH
1		937	1175	1	1175
2		1030	1255	1	1255
3		1125	1350	1	1350
4	a	1175	1400	1	1400
5		1225	1450	1	1450
6		1125	1350	2	2700
7		1000	1225	2	2450
8		812	1050	2	2100
9	b	685	2550	1	2550
10		1200	4200	1	4200
TOTAL					20630

Steel Mass: 19kg
Concrete: 0.20m³
Total Mass: 508kg

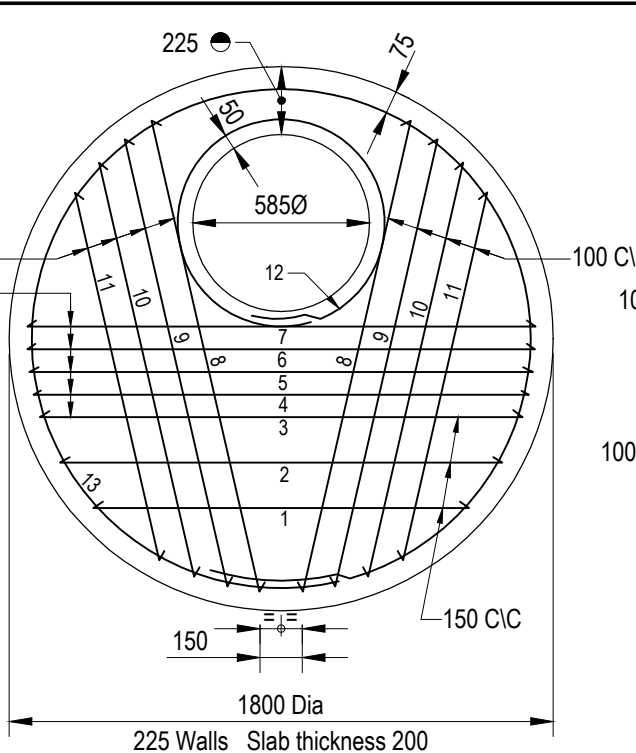
1050 DIA ACCESS CHAMBER



BAR No.	SHAPE	a/b	OVERALL LENGTH	No. OFF	TOTAL LENGTH
1		1200	1425	1	1425
2		1400	1625	1	1625
3		1450	1675	1	1675
4		1500	1725	1	1725
5	a	1520	1745	1	1745
6		1537	1775	1	1775
7		1450	1675	2	3350
8		1375	1600	2	3200
9		1300	1525	2	3050
10		1050	1275	2	2550
11	b	685	2550	1	2550
12		1500	5150	1	5150
TOTAL					23200

Steel Mass: 27kg
Concrete: 0.33m³
Total Mass: 818kg

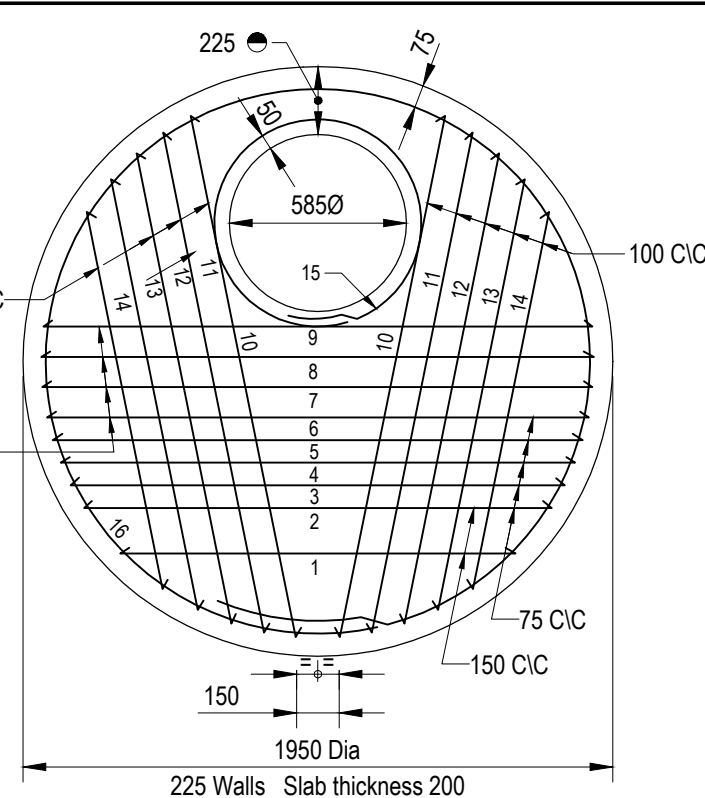
1200 DIA ACCESS CHAMBER



BAR No.	SHAPE	a/b	OVERALL LENGTH	No. OFF	TOTAL LENGTH
1		1275	1500	1	1500
2		1488	1725	1	1725
3		1612	1850	1	1850
4		1645	1870	1	1870
5	a	1675	1900	1	1900
6		1675	1900	1	1900
7		1675	1900	1	1900
8		1600	1825	2	3650
9		1525	1750	2	3500
10		1412	1650	2	3300
11		1262	1500	2	3000
12	b	685	2550	1	2550
13		1650	5625	1	5625
TOTAL					34270

Steel Mass: 31kg
Concrete: 0.45m³
Total Mass: 1138kg

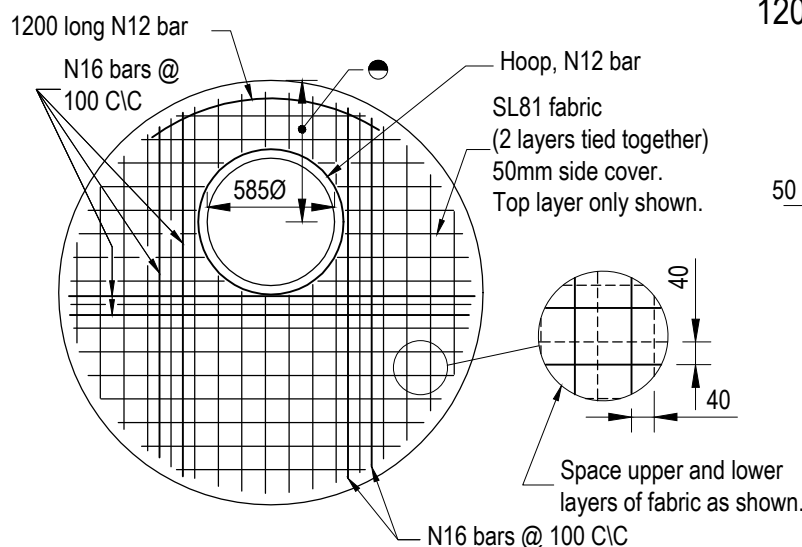
1350 DIA ACCESS CHAMBER



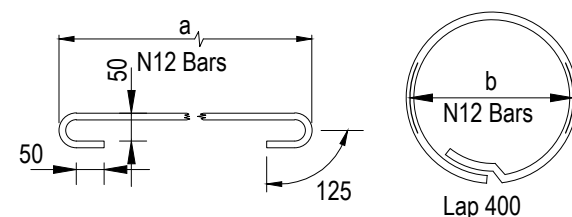
BAR No.	SHAPE	a/b	OVERALL LENGTH	No. OFF	TOTAL LENGTH
1		1337	1575	1	1575
2		1575	1800	1	1800
3		1645	1870	1	1870
4		1712	1950	1	1950
5		1756	1980	1	1980
6	a	1800	2025	1	2025
7		1825	2050	1	2050
8		1837	2075	1	2075
9		1825	2050	1	2050
10		1762	2000	2	4000
11		1700	1925	2	3850
12		1600	1825	2	3650
13		1462	1700	2	3400
14		1275	1500	2	3000
15	b	685	2550	1	2550
16		1800	6100	1	6100
TOTAL					43925

Steel Mass: 39kg
Concrete: 0.55m³
Total Mass: 1360kg

1500 DIA ACCESS CHAMBER



FABRIC REINFORCEMENT ALTERNATIVE



REINFORCEMENT DIMENSIONS

FABRIC REINFORCED SLAB

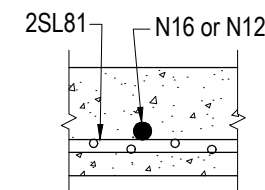
NOM DIA	ROOF THICKNESS
1050	175
1200	175
1350	200
1500	250

LEGEND:

- Offset to access hole varies:
 - Hole in line with chamber wall, or
 - Hole offset from wall 460mm

NOTES:

- Concrete N40 in accordance with AS 1379 and AS 3600.
- Reinforcement cover 30 MIN (bottom cover).
- Reinforcement: SL81 Fabric to AS/NZS 4671.
Bars N12 and N16, Grade 400 to AS ISO 1302.
- Refer Std Dwg No. CMDG-D-030 (Access Chamber Details - Dia 1050 to 1500) for lifting anchor locations and details.
- Roof design based on Austroads bridge code, W7 wheel load, dynamic factor 0.4.
- All dimensions in millimetres.



ROOF SECTION

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 12/2016
C	GRC AND LSC ADDED 09/2014
B	MRC ADDED 04/2011
A	POST AMALGAMATION REVIEW 01/2010

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ACCESS CHAMBER ROOF SLAB DIA 1050 TO 1500

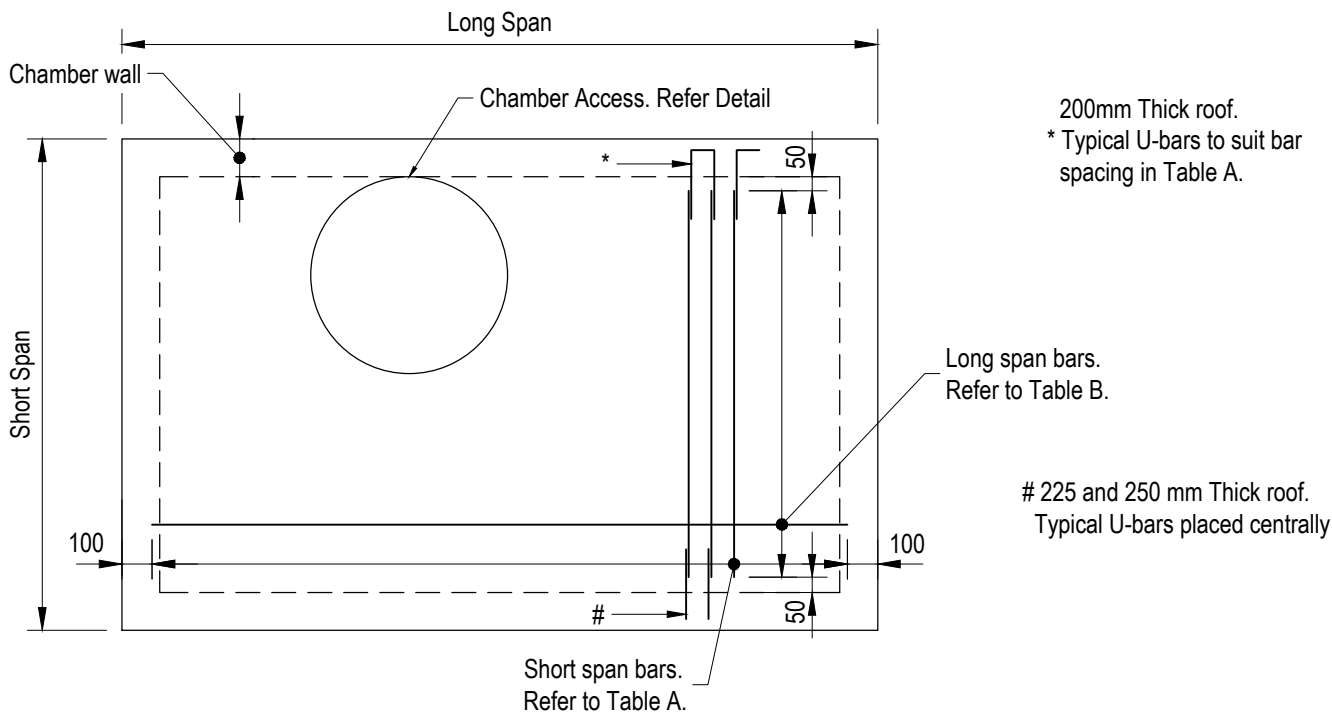
DRAINAGE							
STANDARD DRAWING							
CMDG-D-031							
REV.	A	B	C	D	E		

	LONG SPAN										SLAB	
	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	DEPTH	
SHORT SPAN	1200	N12 AT 150	N16 AT 200	N16 AT 200	N16 AT 200	N16 AT 175	N16 AT 175	N16 AT 175	N16 AT 150	N12 AT 150	N16 AT 150	200
	1400		N12 AT 150	N16 AT 200	N16 AT 200	N16 AT 175	N16 AT 175	N16 AT 150	N16 AT 150	N16 AT 150	N16 AT 150	200
	1600			N12 AT 150	N16 AT 200	N16 AT 200	N16 AT 175	N16 AT 150	N16 AT 150	N16 AT 150	N16 AT 150	200
	1800				N12 AT 150	N16 AT 200	N16 AT 200	N16 AT 200	N16 AT 175	N16 AT 175	N16 AT 175	225
	2000					N12 AT 150	N16 AT 200	N16 AT 200	N16 AT 200	N16 AT 175	N16 AT 175	225
	2200						N12 AT 150	N16 AT 200	N16 AT 200	N16 AT 175	N16 AT 175	225
	2400							N16 AT 200	N16 AT 200	N16 AT 200	N16 AT 175	225
	2600								N16 AT 200	N16 AT 200	N16 AT 175	250
	2800									N16 AT 200	N16 AT 175	250
3000										N16 AT 175	250	

TABLE A: SHORT SPAN BARS

	LONG SPAN										SLAB DEPTH
	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	
SHORT SPAN	1200	N12 AT 150	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	200
	1400		N12 AT 150	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	200
	1600			N12 AT 150	N12 AT 150	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	200
	1800				N12 AT 150	N12 AT 150	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	225
	2000					N12 AT 150	N12 AT 200	N12 AT 200	N12 AT 200	N12 AT 200	225
	2200						N12 AT 150	N12 AT 150	N12 AT 150	N12 AT 200	225
	2400							N16 AT 200	N12 AT 150	N12 AT 150	225
	2600								N16 AT 200	N16 AT 200	250
	2800									N16 AT 200	250
	3000									N16 AT 175	250

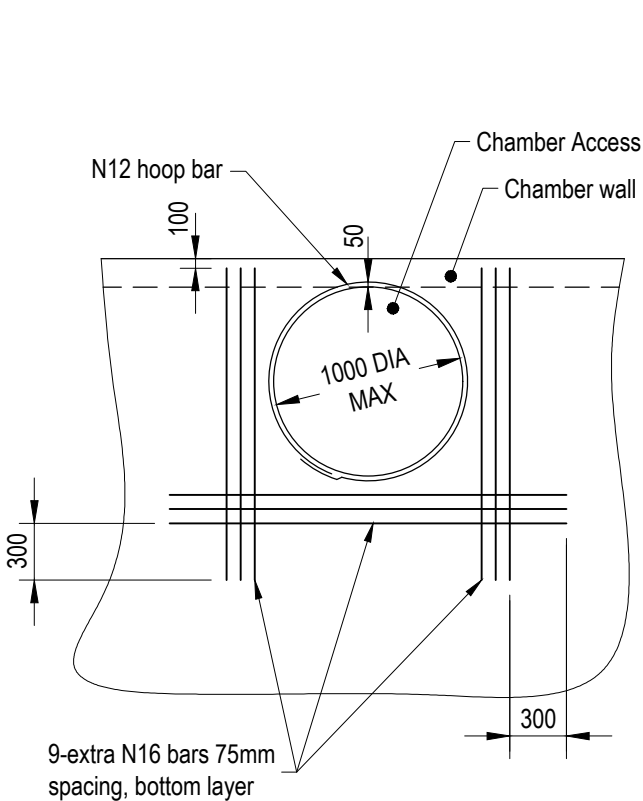
TABLE B: LONG SPAN BARS



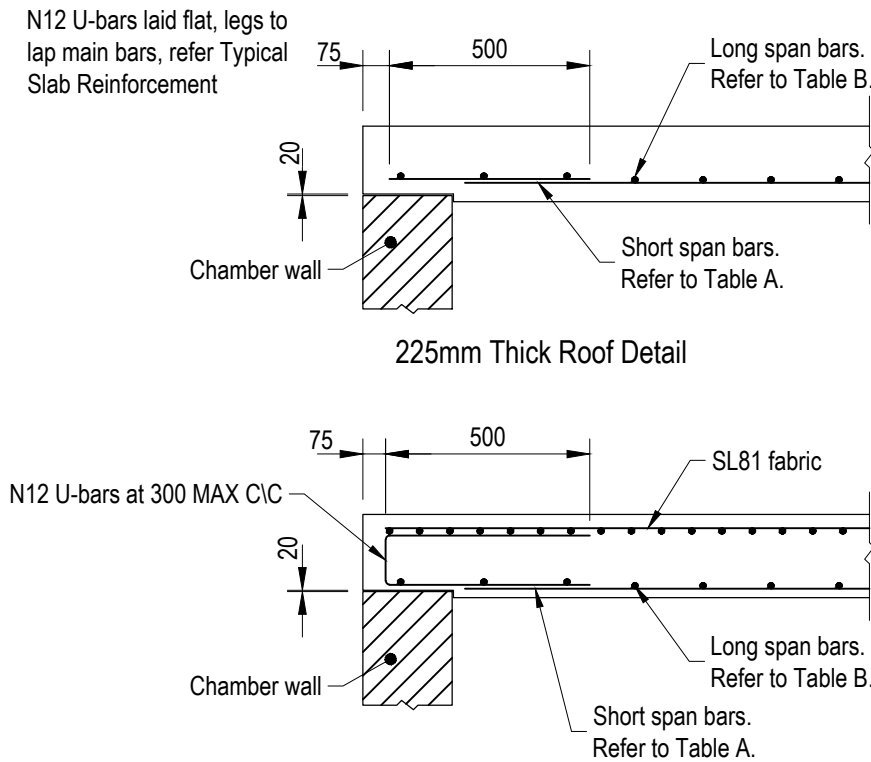
TYPICAL SLAB REINFORCEMENT

NOTES:

- Concrete N32/20 in accordance with AS 1379 and AS 3600.
- Reinforcement :- SL81 fabric to AS/NZS 4671
Bars N12 and N16 Grade 400 to AS ISO 1302.
- All laps in reinforcement shall be :- N12 - 300, N16 - 400.
- Form work in accordance with AS 3610.
- Designed to AustRoads Bridge Code, W7 wheel load, dynamic factor 0.4.
- Maximum fill over roof slab shall be 3000mm.
- Reinforcement cover 45 min.
- Refer Service Authority for access hole diameter to be adopted.
- Refer project drawings for details of chamber walls and floors.
- All dimensions in millimetres.



SLAB REINFORCEMENT
AROUND CHAMBER ACCESS



250mm Thick Roof Detail

TYPICAL SECTIONS

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	12/2016
C GRC AND LSC ADDED	09/2014
B MRC ADDED	04/2011
A POST AMALGAMATION REVIEW	01/2010

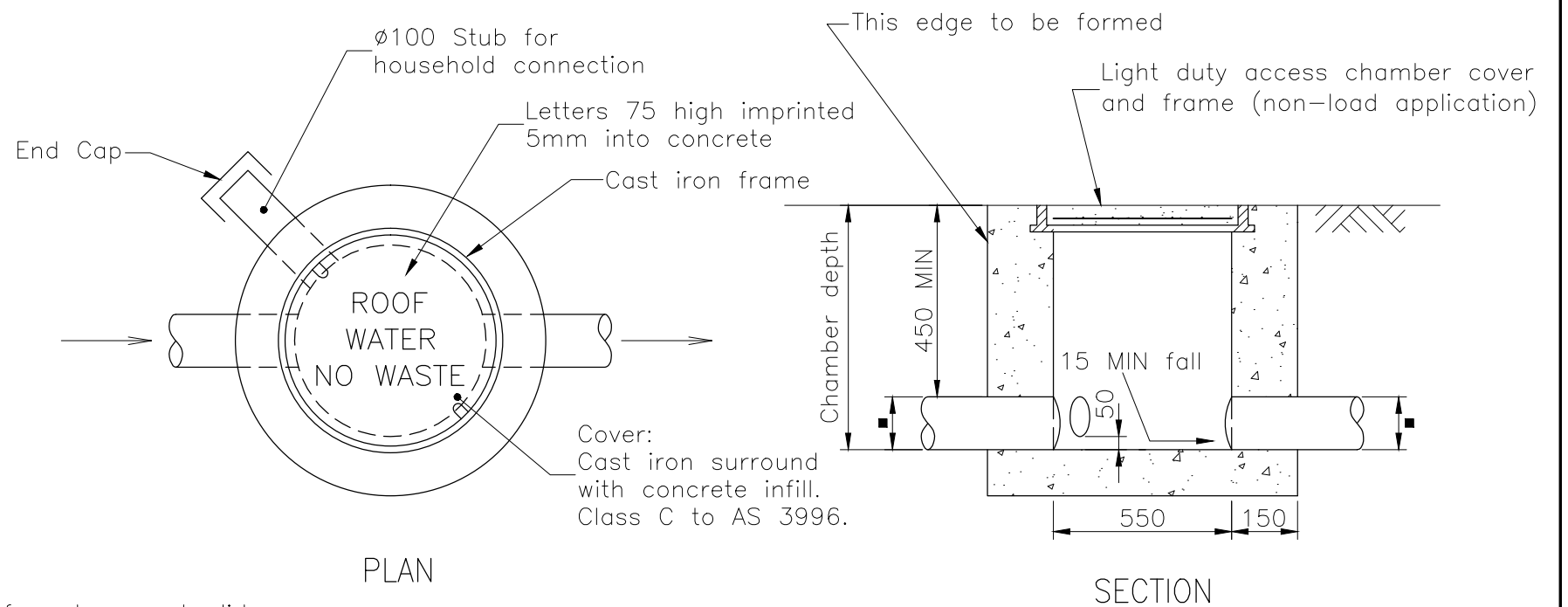
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Maranoa Regional Council (MRC)
Rockhampton Regional Council (RRC)

ACCESS CHAMBER ROOF SLAB
RECTANGULAR

DRAINAGE				
STANDARD DRAWING CMDG-D-032				
REV.	A	B	C	D



TYPE 1
CAST INSITU

NOTES:

- Roofwater systems are to be connected to stormwater gullies or access chambers. Where the system is to be connected to kerb and channel one property can be connected via a 100 Class 12 uPVC pipe or a 100x75 galvanized R.H.S. to a kerb adaptor. A maximum of two properties can be connected via a 200x75 galvanized R.H.S.
- The pipe materials and joint types shall be as follows:

MATERIAL	AUST STD	JOINT TYPE	RESTRICTIONS
Fibre reinforced, Class 2	AS 4139-2003	Rubber ring	N/A
Concrete, Class 2	AS 1342	Rubber ring	N/A
uPVC, sewer Class 12	AS/NZS 1260	Solvent welded	Not to be used in easements
- Minimum cover to roofwater pipes to be 450mm except where less cover is necessary to discharge to kerb and channel.
- Access chamber depths and minimum diameters shall be as follows:

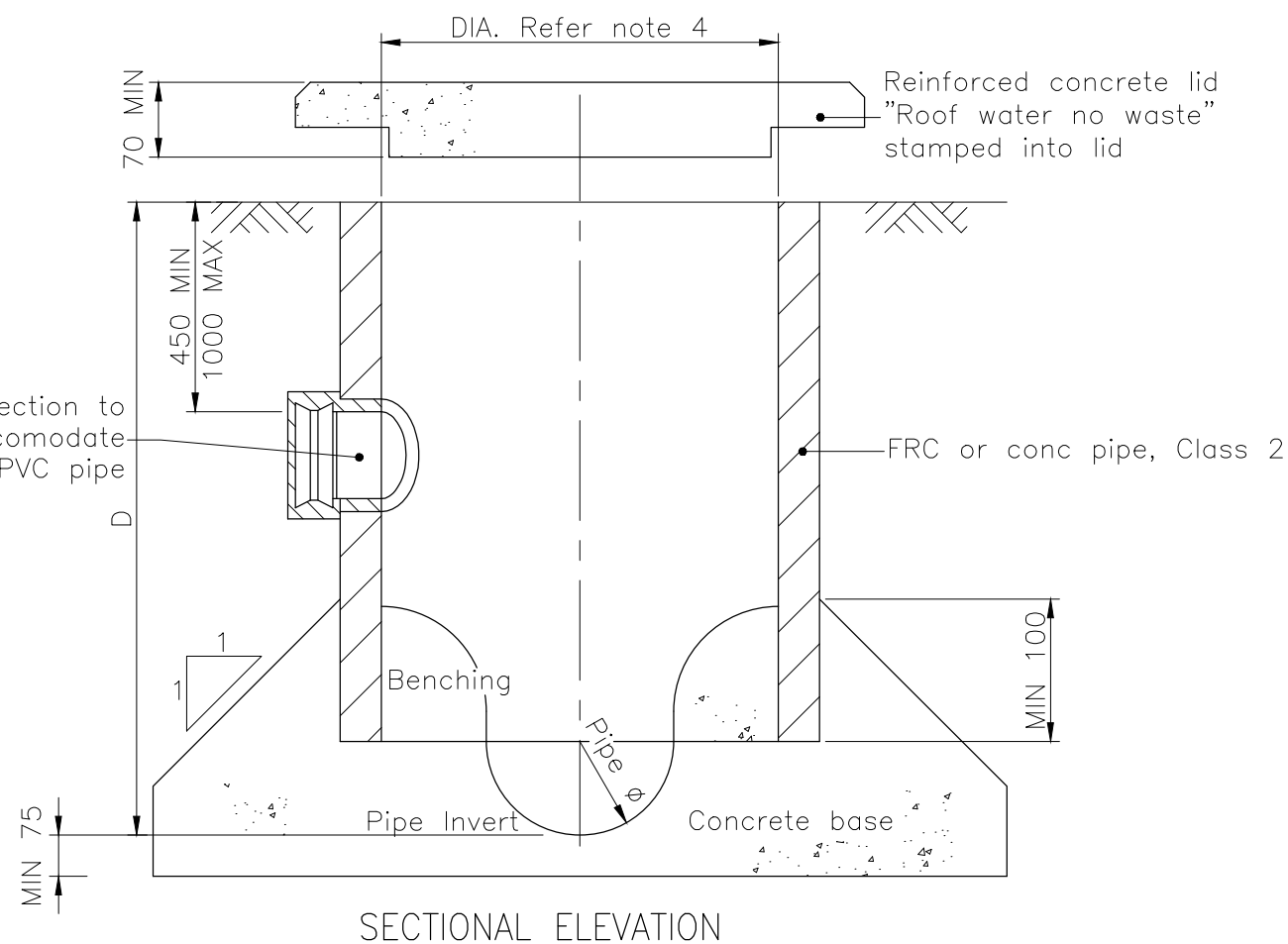
DEPTH	DIAMETER (MIN)
≤750mm	600Ø
>750mm	900Ø
- Alternative designs, materials and methods of construction will be considered for approval including precast roofwater chambers available from various manufacturers. Alternative precast units will require to be bedded and encased in 150 thick concrete (Grade N32) up to 150 above crown of the inlet pipe with all subsequent backfill compacted to 95% MDD (modified compaction to AS 1289) to ensure stability and robustness.
- Alternative covers and frames proposed for approval must be circular, and be designed as Class C to AS 3996.
- Concrete, base N32, cover infill N32, in accordance with AS 1379 and AS 3600.
- The roofwater drainage system shall be shown on the stormwater drainage plans for the development.
- The following AS CONSTRUCTED information shall be submitted to Superintendent:
 - Offsets of the main line to property boundary
 - The locations of access chambers and Y junctions measured from the property boundary.
- Where individual lots can be directly discharged to the kerb and channel, kerb adaptors shall be used.
- All dimensions in millimetres.

APPLICABILITY TABLE

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

LEGEND:

- Refer project drawings for pipe diameter and type
- Refer Std Dwg No. SD-D-031 (Access Chamber Roof Slabs - Dia 1050 to 1500) for roof design at 900Ø chambers.



TYPE 2
PRECAST/INSITU

Capricorn Municipal Development Guidelines

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

ROOFWATER INSPECTION CHAMBER

DRAINAGE

STANDARD
DRAWING

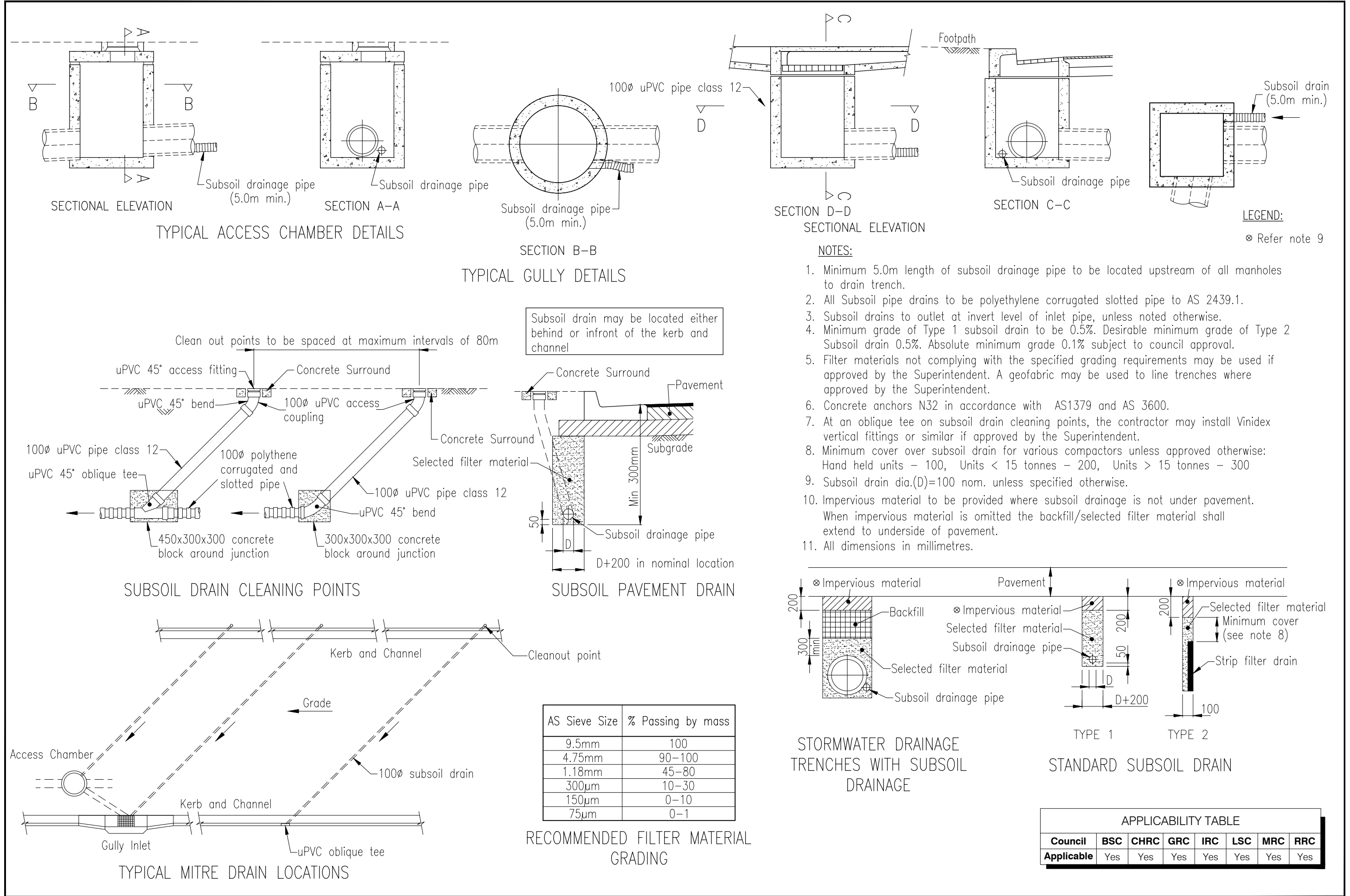
CMDG-D-033

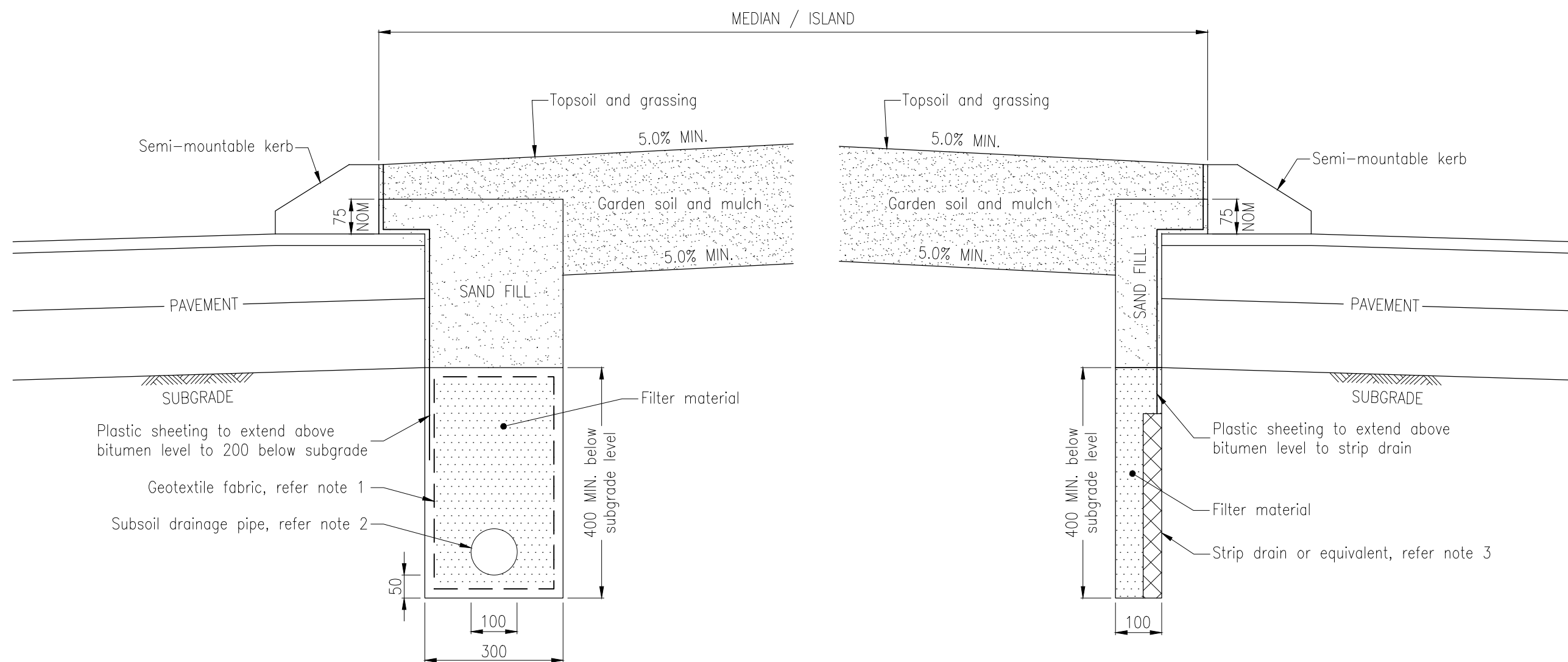
REV. A B C D

REVISIONS	DATE
D IRC ADDED	12/2016
C GRC AND LSC ADDED	09/2014
B MRC ADDED	04/2011
A POST AMALGAMATION REVIEW	01/2010

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AS Sieve Size	% Passing by mass
9.5mm	100
4.75mm	90–100
1.18mm	45–80
300µm	10–30
150µm	0–10
75µm	0–1

RECOMMENDED FILTER MATERIAL GRADING

NOTES:

1. Geotextile surround proprietary product, U.V. stabilised, non-woven, type flow rate > 50 l/m/sec, $G > 1300$ and E.O.S. < 200µm.
2. 100Ø Subsoil drainage pipe – corrugated slotted polyethylene, connect to drainage system at 0.5% minimum grade.
3. Strip drain – proprietary product, deep-fin plastic core, 120 Kpa minimum crush strength, 40mm minimum thickness, fully enclosed by a non woven geotextile, connect to drainage system at 0.5% desirable minimum grade, 0.1% absolute minimum grade subject to Council approval.
4. All dimesions in millimetres.
5. Plastic sheeting to be 200µm minimum

APPLICABILITY TABLE

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

REVISIONS		DATE
F	IRC ADDED	12/2016
E	GRC AND LSC ADDED	09/2014
D	MRC ADDED	04/2011
C	NOTE 3 AMENDED	01/2011
B	NOTE 5 ADDED. SHEETING EXTENDED UP KERB	07/2010
A	POST AMALGAMATION REVIEW	01/2010

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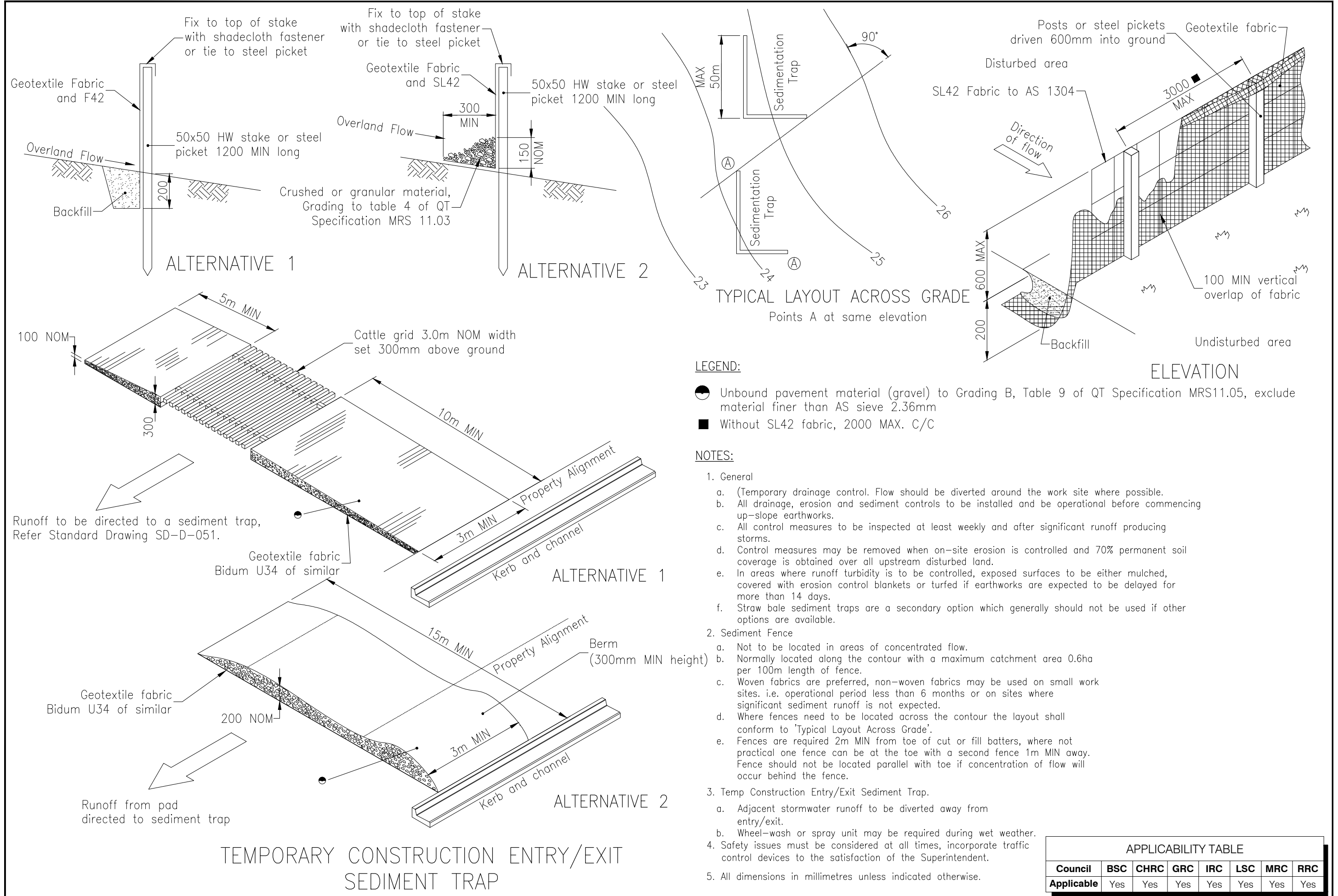
**SUBSOIL DRAINAGE DETAILS
AT MEDIANS/ISLANDS**

DRAINAGE

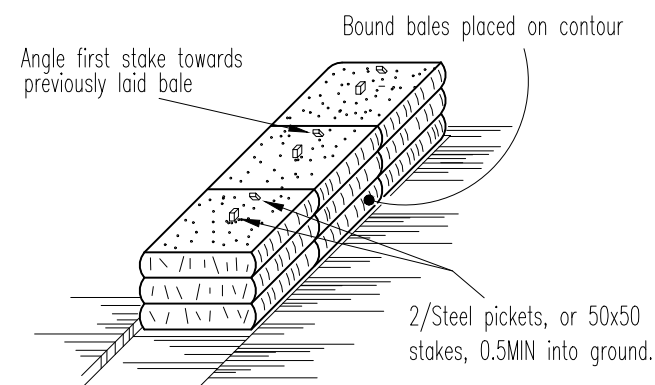
STANDARD
DRAWING

CMDG-D-041

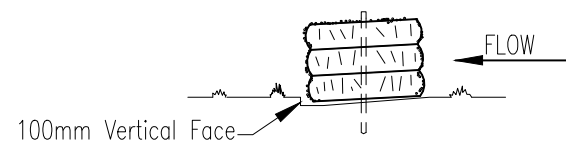
REV. A B C D E F



REVISIONS		DATE	DISCLAIMER.		Capricorn Municipal Development Guidelines		SEDIMENT CONTROL DEVICES		DRAINAGE	
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D	IRC ADDED	12/2016			Banana Shire Council (BSC)	Livingstone Shire Council (LSC)	ENTRY/EXIT SEDIMENT TRAP		CMDG-D-050	
C	GRC AND LSC ADDED	09/2014			Central Highlands Regional Council (CHRC)	Maranoa Regional Council (MRC)				
B	MRC ADDED	04/2011			Gladstone Regional Council (GRC)	Rockhampton Regional Council (RRC)				
A	POST AMALGAMATION REVIEW	01/2010			Isaac Regional Council (IRC)				REV. A B C D	

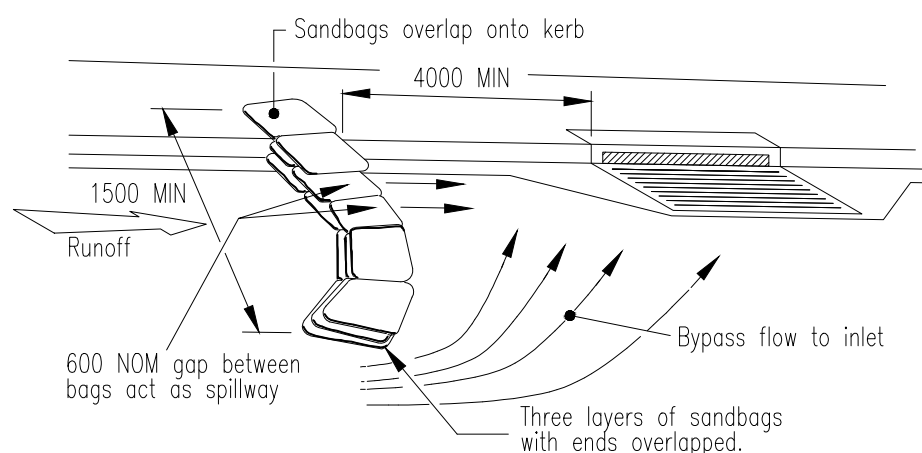


ANCHORING DETAIL

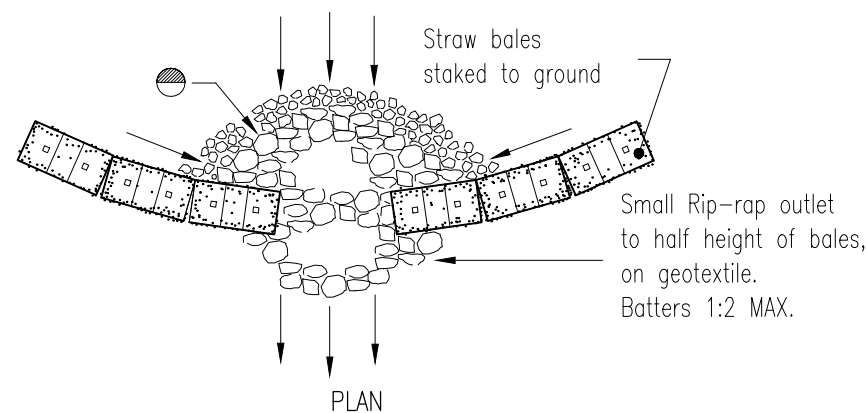


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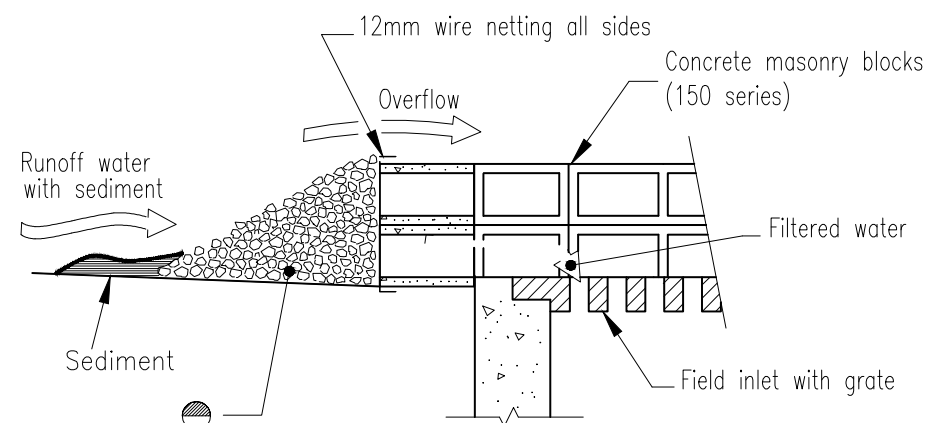
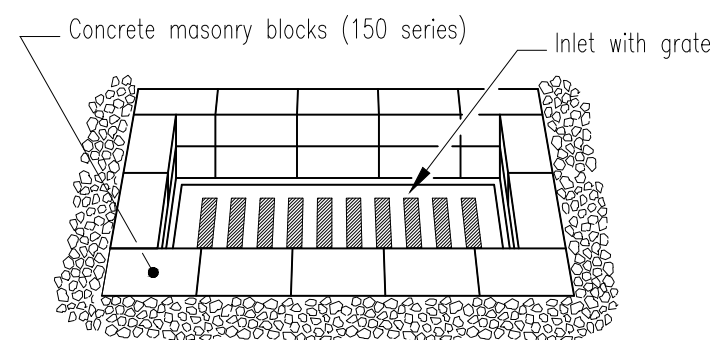
STRAW BALE BANK SEDIMENT CONTROL



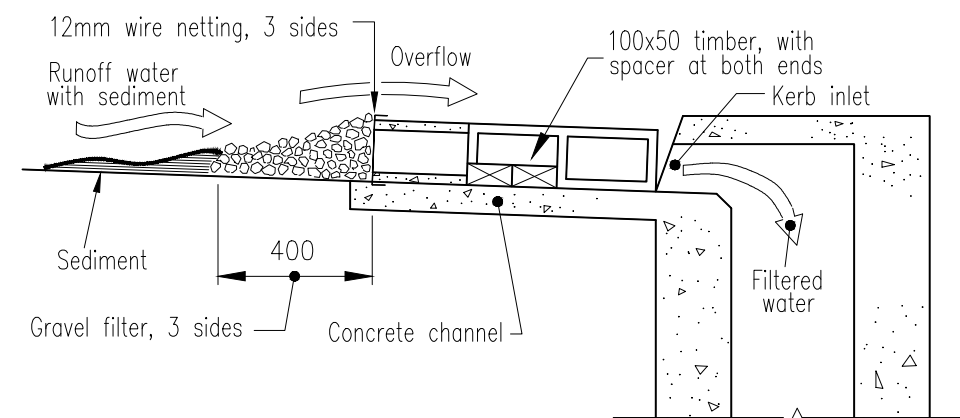
ON GRADE KERB INLET SEDIMENT TRAP



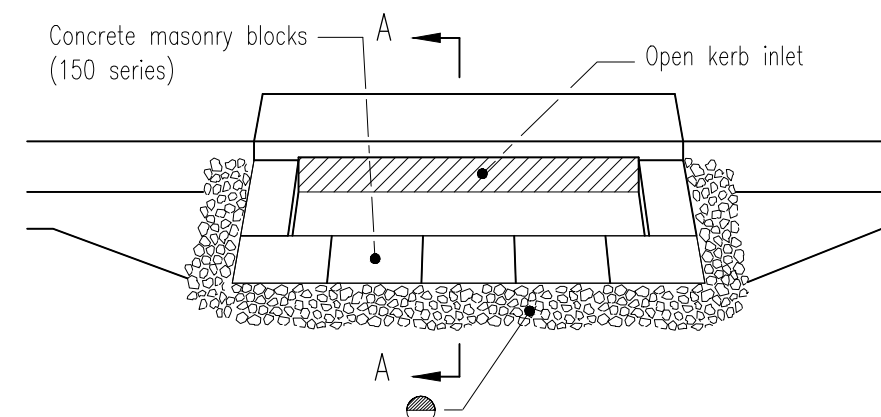
STRAW BALE AND STONE TRAP SEDIMENT CONTROL – CONCENTRATED FLOW



FIELD INLET SEDIMENT TRAP

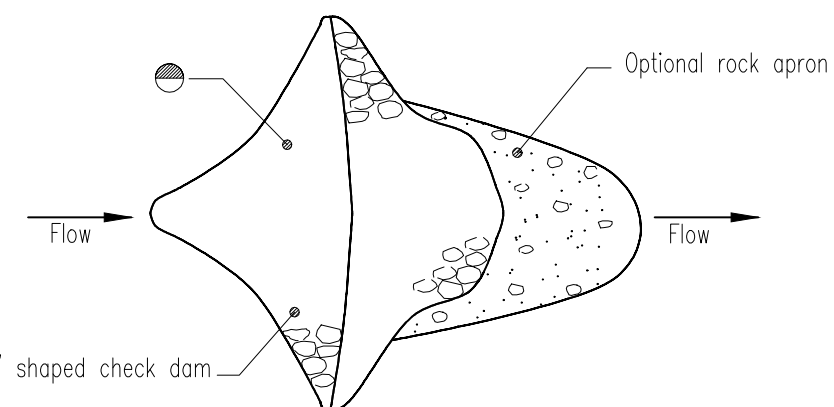


SECTION A-A

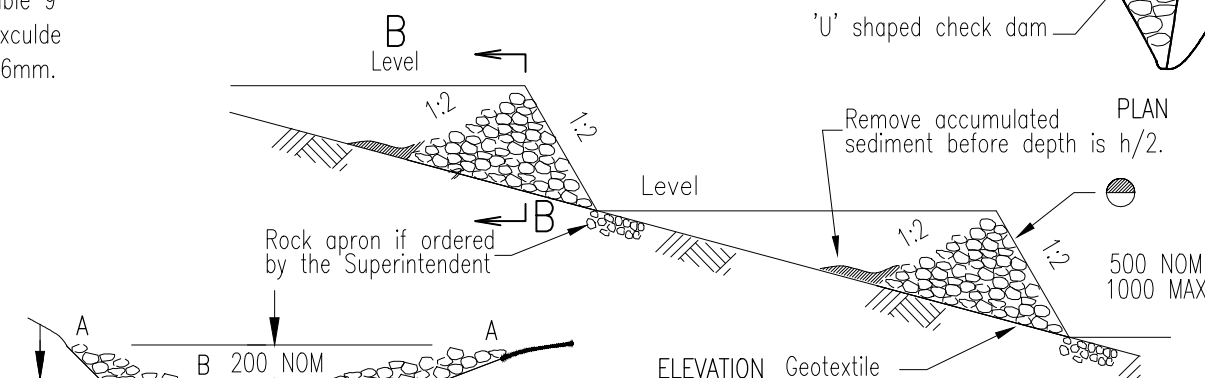


SAG INLET SEDIMENT TRAP

A stabilised bypass 'overland flow path' should exist adjacent to inlet in genuine sags.



'A' to be higher than 'B' to prevent sediment bypass



CHECK DAMS FLOW CONTROL

SECTION B-B

NOTES:

- Field Inlet
 - A stabilised bypass overland flow path should exist adjacent to the field inlet.
 - Water level control perimeter banks may be required.
 - Blocks to be restrained by a horizontal timber rail at block joint height fixed to timber stakes at corners.
- Check Dams
 - Catchment area limited to 4 ha.
 - Use in minor open drains only, (velocity control), sediment collection is a secondary purpose.
- Straw Bale Banks
 - Bales shall be placed at the toe of a slope or on the contour, in a row with ends tightly abutting the adjacent bales.
 - Each bale shall be embedded in the soil a minimum of 100mm on the downstream side and placed so the bindings are horizontal.
 - Bales shall be securely anchored in place with either two stakes or steel pickets driven through the bale. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together.
 - Inspections shall be frequent and repair or replacement shall be made promptly as needed. Replace at least 3 monthly.
- Safety issues must be considered at all times, incorporate traffic control devices to the satisfaction of the Superintendent.
- All dimensions in millimetres.

LEGEND:

- Gravel filter, refer Grading B, Table 9 of QT Specification MRS11.05, exclude material finer than AS sieve 2.36mm.

REVISIONS	DATE
D IRC ADDED	12/2016
C GRC AND LSC ADDED	09/2014
B MRC ADDED	04/2011
A POST AMALGAMATION REVIEW	01/2010

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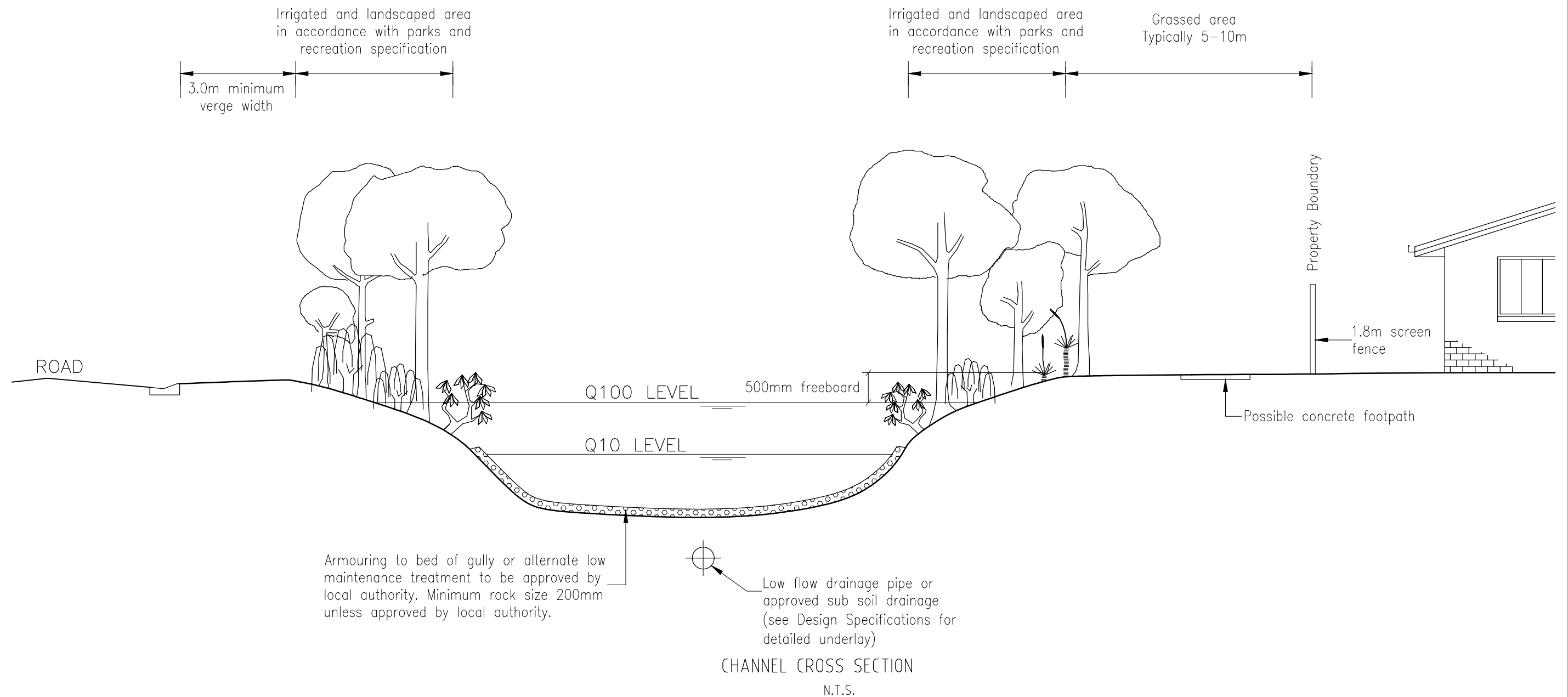
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SEDIMENT CONTROL DEVICES KERB AND FIELD INLETS, CHECK DAMS & STRAW BALE BANK

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

REV. | A | B | C | D |



NOTES:

1. The desired treatment is for the road to be provided along the bank of the gully.
2. The above solutions are indicative of councils requirements but alternate proposals will be considered on the basis of merit and sound engineering practice.

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				REQUIRED TREATMENTS TO OPEN CHANNELS				DRAINAGE	
E	IRC ADDED		12/2016	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: <div>Banana Shire Council (BSC)</div> <div>Central Highlands Regional Council (CHRC)</div> <div>Gladstone Regional Council (GRC)</div> <div>Isaac Regional Council (IRC)</div> <div>Livingstone Shire Council (LSC)</div> <div>Maranoa Regional Council (MRC)</div> <div>Rockhampton Regional Council (RRC)</div>				STANDARD DRAWING CMDG-D-060					
D	GRC AND LSC ADDED		09/2014												
C	MRC ADDED		04/2011												
B	ARI REFERENCE TO LOW FLOW DRAINAGE PIPE REMOVED		01/2011												
A	POST AMALGAMATION REVIEW		01/2010												
REV.			A											B	C