Local Government
Infrastructure Design Association

STANDARD DRAWINGS
APPENDIX 'G' - IDM VERSION 5.3

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NOTES:
1. REFER TO AS 2678-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS.
2. REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FOR THE RECOMMENDED USE OF KERBS AND CHANNELS.
3. CONCRETE SHALL BE NORMAL CLASS N25 STANDARD STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS 1379: REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
4. BEDDING TO BE COMPACTED CLASS 3 F.C.R. UNLESS OTHERWISE DIRECTED. (REFER SD110)
5. INCREASE OVERALL KERB PROFILE (DEPTH OF CONCRETE):
   a) 30mm FOR COMMERCIAL PROPERTIES
   b) 80mm WITH L8TM TRENCH MESH FOR INDUSTRIAL PROPERTIES (MESH TO HAVE 40mm COVER)
6. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB.
7. CONCRETE SPONGE FINISHED ON LAYBACK.
8. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING
   - 75mm MINIMUM DEPTH
9. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS.
10. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB MINIMUM.
11. LINE OF KERB IS USED TO DETERMINE CARRIAGEWAY WIDTHS.

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL KERB PROFILES 'B' TYPE, 'SM' TYPE & 'M' TYPE

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Local Government Infrastructure Design Association

SD 100

LAST UPDATED 20/03/2015

NOT TO SCALE
TYPICAL INDUSTRIAL KERB PROFILES
'B' TYPE & 'M' TYPE

NOTES:
1. REFER TO AS 2876-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS.
2. REFER TO AUSTROADS GUIDE TO ROAD DESIGN 2016 PART 3: GEOMETRIC DESIGN FOR THE RECOMMENDED USE OF KERBS AND CHANNELS.
3. CONCRETE SHALL BE NORMAL CLASS N25 STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS 1379. REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
4. BEEDING TO BE COMPACTED CLASS 3 F.C.R. UNLESS OTHERWISE DIRECTED.
5. INCREASE OVERALL KERB PROFILE (DEPTH OF CONCRETE):
   a) 80mm FOR COMMERCIAL PROPERTIES
   b) 80mm WITH L8TM TRENCH MESH FOR INDUSTRIAL PROPERTIES (MESH TO HAVE 40mm COVER)
6. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB.
7. CONCRETE SPONGE FINISHED ON LAYBACK.
8. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING - 75mm MINIMUM DEPTH
9. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS.
10. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB MINIMUM.
11. LINE OF KERB IS USED TO DETERMINE CARRIAGEWAY WIDTHS.

ALL MEASUREMENTS IN MILLIMETRES

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SD 105
NOT TO SCALE

LAST UPDATED 26/02/2020
TYPICAL KERB BEDDING DETAIL

NOTES:

1. BEDDING TO BE COMPACTED CLASS 3 F.C.R. 20mm BEDDING TO 97% MMD OR EXTENSION OF ROAD PAVEMENT LAYERS, WHICHERVER IS GREATER, UNLESS OTHERWISE DIRECTED.

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL KERB BEDDING

LINE OF KERB

ALL SET OUT TAKEN TO BACK OF KERB UNLESS OTHERWISE SPECIFIED

100mm MIN

APPROVED SUBGRADE

150

KERB BEDDING TO EXTEND PAST B.O.K.

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SD 110

SCALE 1:10

LAST UPDATED 12/03/2020
TYPICAL SECTION FOR INDUSTRIAL

NOTES:

1. REFER TO AS. 2678-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS.
2. REFER TO AUSTROADS GUIDE TO ROAD DESIGN 2016 PART 3: GEOMETRIC DESIGN FOR THE RECOMMENDED USE OF KERBS AND CHANNELS.
3. CONCRETE SHALL BE NORMAL CLASS 32MPa STANDARD STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS. 1379. REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
4. BEDDING TO BE COMPACTED CLASS 3 F.C.R. UNLESS OTHERWISE DIRECTED. (REFER SD110)
5. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB.
6. CONCRETE SPONGE FINISHED ON LAYBACK.
7. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING - 75mm MINIMUM DEPTH
8. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS.
9. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB MINIMUM.
10. LINE OF KERB IS USED TO DETERMINE CARRIAGEWAY WIDTHS.

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL INDUSTRIAL KERB LAYBACK

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SD 115

SCALE 1:10

LAST UPDATED 12/03/2020
Typical Section for Residential

NOTES:
1. REFER TO AS. 2876-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS
2. BEDDING TO BE COMPACTED CLASS 3 F.C.R. 20mm BEDDING TO 97% MMD OR EXTENSION OF ROAD PAVEMENT LAYERS, WHICH EVER IS GREATER. UNLESS OTHERWISE DIRECTED
3. INCREASE DEPTH OF CONCRETE 80mm FOR COMMERCIAL PROPERTIES (D’ + 80mm)
   CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB
4. CONCRETE SPONGE FINISHED ON LAYBACK
5. CONSTRUCTION JOINTS LOCATED
   - 2500 mm MAXIMUM SPACING
   - 75mm MINIMUM DEPTH
6. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS
7. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB.
8. FOR TYPICAL INDUSTRIAL KERB LAYBACK SEE DRAWING SD115.

All measurements in millimetres

Last Updated 26/02/2020

Layback for 'B2' & 'B3' Kerbining

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Scale 1:10

SD 120
**TYPICAL SECTION**

**NOTES:**

1. REFER TO CONCRETE AS. 2876-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS.
2. 100mm MINIMUM COMPACTED DEPTH OF CLASS 3, 20mm F.C.R. BEDDING TO 97% MMD OR EXTENSION OF ROAD PAVEMENT LAYERS, WHICH EVER IS GREATER, UNLESS OTHERWISE DIRECTED.
3. WEARING COURSE ASPHALT TO BE MINIMUM 30mm COMPACTED DEPTH OF TYPE N, 10mm NOMINAL SIZE (U.N.O.)
4. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING - 75mm MINIMUM DEPTH
5. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB.
6. CONCRETE SHALL BE NORMAL CLASS N25 STANDARD STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS. 1379. REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
7. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB.

ALL MEASUREMENTS IN MILLIMETRES
NOTES:

ALL KERB ADAPTORS ARE TO BE AN APPROVED PROPRIETARY PRODUCT CONSTRUCTED FROM EITHER HEAVY DUTY UPVC OR HOT DIPPED GALVANIZED MILD STEEL. KERB IS TO BE NEATLY SAW CUT & KERB ADAPTOR EPOXIED INTO POSITION.
NOTES:

1. THE DRAINS SHALL BE LAID ON A GRADE PARALLEL TO THE FINISHED SURFACE.
2. FOR FLUSHOUT RISER DETAILS REFER TO STANDARD DRAWINGS SD525 & SD530.
3. WHERE THE SUBGRADE IS CLASSIFIED AS BEING EXPANSIVE, SUBSURFACE PAVEMENT DRAINS SHALL BE DESIGNED TO BE CONTAINED WHOLLY WITHIN THE CAPPING LAYER. IN ADDITION, NO PART OF THE SUBSURFACE DRAINAGE TRENCH SHALL BE LOCATED WITHIN 150 MM OF THE UNDERLYING SUBGRADE. IF NECESSARY, THE CAPPING LAYER MAY HAVE TO BE THICKENED TO SATISFY THIS REQUIREMENT.
4. WHERE REQUIRED BY PAVEMENT DESIGN, CAPPING LAYER OF LOW PERMEABILITY PLACED IMMEDIATELY BELOW THE PAVEMENT SUB-BASE TO MINIMISE CHANGES IN THE MOISTURE CONTENT IN THE MATERIAL BELOW THE CAPPING LAYER (REFER NOTE 3 & 4)

ALL MEASUREMENTS IN MILLIMETRES

SUBSOIL DRAINAGE

NOT TO SCALE

LAST UPDATED 26/02/2020
PEDESTRIAN CROSSING

SECTION A-A

NOT TO SCALE

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL ARRANGEMENT PLAN

NOTES:

1. LOCATION OF CROSSINGS TO BE CASE BY CASE & TO BE APPROVED BY COUNCIL.
2. CROSSING GENERALLY TO BE LOCATED AT TANGENT POINTS.
3. CONCRETE TO BE SMOOTH TROWELLED FINISH ON TRAY.
4. CONCRETE TO BE FINE SOFT HAIR BROOM FINISH ON LAYBACK.
5. MINIMUM CONCRETE STRENGTH TO BE 25 MPA.
6. BEDDING TO BE COMPACTED CLASS 3 (OR BETTER) F.C.R. UNLESS OTHERWISE DIRECTED.
7. IF SPLAY IS NOT REQUIRED FOOTPATH IS TO CONTINUE THROUGH TO LAYBACKS.
8. TGSI’S (TILES), WHERE REQUIRED, ARE TO BE INSTALLED TO AS1428.4
9. WHERE ANY NEW CONCRETE ABUTS EXISTING CONCRETE INSTALL R160 DOWELS IN 125mm THICK CONCRETE OR R100 DOWELS IN 75mm THICK CONCRETE DOWELS @ MAX 600 CTS.
10. REFER SD 205, SD270 FOR FURTHER FOOTPATH DETAILS.

LEGEND:

EXPANSION JOINT

WEAKENED PLANE JOINTS

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX GRADE.

NOTE:

LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX GRADE.

1. LOCATION OF CROSSINGS TO BE CASE BY CASE & TO BE APPROVED BY COUNCIL.
2. CROSSING GENERALLY TO BE LOCATED AT TANGENT POINTS.
3. CONCRETE TO BE SMOOTH TROWELLED FINISH ON TRAY.
4. CONCRETE TO BE FINE SOFT HAIR BROOM FINISH ON LAYBACK.
5. MINIMUM CONCRETE STRENGTH TO BE 25 MPA.
6. BEDDING TO BE COMPACTED CLASS 3 (OR BETTER) F.C.R. UNLESS OTHERWISE DIRECTED.
7. IF SPLAY IS NOT REQUIRED FOOTPATH IS TO CONTINUE THROUGH TO LAYBACKS.
8. TGSI’S (TILES), WHERE REQUIRED, ARE TO BE INSTALLED TO AS1428.4
9. WHERE ANY NEW CONCRETE ABUTS EXISTING CONCRETE INSTALL R160 DOWELS IN 125mm THICK CONCRETE OR R100 DOWELS IN 75mm THICK CONCRETE DOWELS @ MAX 600 CTS.
10. REFER SD 205, SD270 FOR FURTHER FOOTPATH DETAILS.

ALL MEASUREMENTS IN MILLIMETRES

LEGEND:

EXPANSION JOINT

WEAKENED PLANE JOINTS

NOTE:

LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX GRADE.

NOTE:

LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX GRADE.
NOTES:

1. 'D' = DEPTH OF CONCRETE FOOTPATH
   TYPICAL RESIDENTIAL 'D' = 125mm THICK (25 MPa)
   TYPICAL INDUSTRIAL / COMMERCIAL 'D' = 150mm (32MPa)
2. WEAKENED PLANE JOINTS (W.P.J) TO BE MADE WITH T-IRON (OR CONCRETE SAW WITHIN 24 Hrs OF POUR).
3. REFER TO IDM CLAUSE 13.3 FOR ADDITIONAL REQUIREMENTS

ALL MEASUREMENTS IN MILLIMETRES
TYPICAL HOT MIX ASPHALT FOOTPATH

NOTES:

1. 'D' = DEPTH OF ASPHALT FOOTPATH
   TYPICAL ASPHALT FOOTPATH DEPTH 'D' = 130mm
   VARIED 'D' MAY OCCUR DEPENDANT ON APPROVED PAVEMENT MAKE UP
2. IF SURFACE DRAINAGE REDIRECTION IS NECESSARY DUE TO REVERSE FALL
   OF ADJACENT AREAS REPLACE TIMBER EDGE WITH CONCRETE DISHED
   CHANNEL AS PER SD205 'SECTION C-C' (COUNCIL APPROVAL REQUIRED)

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL HOT MIX ASPHALT FOOTPATH

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SD 206

NOT TO SCALE

LAST UPDATED 26/02/2020
NOTES:

1. 'D' = DEPTH OF CONCRETE FOOTPATH
   - TYPICAL RESIDENTIAL 'D' = 125mm THICK (25 MPa)
   - TYPICAL INDUSTRIAL / COMMERCIAL 'D' = 150mm (32 MPa)

2. APPROVED PROPRIETARY JOINTS CAN BE USED WITH COUNCIL APPROVAL.

ALL MEASUREMENTS IN MILLIMETRES
**NOTES:**

1. ‘D’ DENOTES DEPTH OF CONCRETE PAVEMENT

**ALL MEASUREMENTS IN MILLIMETRES**

**REINFORCED CONCRETE PAVEMENT ISOLATION JOINT**

**SD 220**

**Scale 1:10**

**LAST UPDATED 12/03/2020**

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**Local Government Infrastructure Design Association**

TYPICAL FUTURE CONSTRUCTION JOINT

5 x 40mm DEEP SAW CUT TO BE CUT WITHIN 24 HOURS OF BEING POURED

VERTICAL FACE TO BE FORMED WITH AN APPROVED METHOD

CONTINUOUS SLAB REINFORCEMENT

REINFORCEMENT BAR AT 300 CTS TO BE BENT DOWN TO GROUND LEVEL FOR SAFETY AFTER CONSTRUCTION OF JOINT

N16 for 125mm, N20 for 150mm x 800mm LONG

REINFORCED CONCRETE PAVEMENT

TYPICAL JOINT DETAILS

SD 225

SCALE 1:10

ALL MEASUREMENTS IN MILLIMETRES
NOTES:

1. CROSS REFERENCES:
   INDUSTRIAL CROSSINGS - SD236 / SD250
   RURAL CROSSINGS - SD255 / SD260
   IDM - SECTION 12.9.1. AND 12.9.2.
   2. THIS DRAWING DETAILS DIMENSIONS FOR STANDARD RESIDENTIAL CROSSINGS ONLY.
   3. CROSSING WIDTHS EXCEEDING THE MAXIMUM ALLOWABLE WILL REQUIRE APPLICATION TO COUNCIL FOR SPECIAL CONSIDERATION.
   4. JOINTS AND DOWEL BARS ARE REQUIRED ON EITHER SIDE OF THE CROSSING AT THE INTERFACE WITH THE FOOTPATH. PROVISION SHALL BE MADE IN EXISTING CONCRETE SECTIONS BY DRILLING HOLES TO A MINIMUM DEPTH OF 150mm AND INSERTING R16 DOWEL BARS.
   5. AN APPROVED JOINT FILLER SHALL BE PLACED ON EITHER SIDE OF THE CROSSING AGAINST FOOTPATH SLABS. DOWEL BARS ARE TO HAVE AN APPROVED BOND BREAKER APPLIED TO THE END OF THE BAR INSERTED INTO THE EXISTING CONCRETE FOOTPATH SECTIONS REFER SD220.
   6. ADDITIONAL WEAKENED PLANE JOINTS REQUIRED IF DISTANCE FROM BACK OF KERB TO FOOTPATH IS GREATER THAN 3000 AND SHALL BE PLACED AT THE MIDPOINT OF THE DISTANCE.
   7. THE MAXIMUM NUMBER OF CROSSINGS, WHERE ANY CROSSING EXCEEDS 3.5 METRES WIDTH, SHALL BE ONE (1) CROSSING WITH THE MAXIMUM WIDTH OF THAT CROSSING TO BE 7.2 METRES. CROSSINGS TO ADJACENT PROPERTIES SHALL BE EITHER FULLY COMBINED, AND OF MAXIMUM WIDTH OF 7.2 METRES, OR ELSE HAVE A MINIMUM SEPARATION AS APPROVED BY COUNCIL.
   8. FOOTPATHS OF 75mm THICKNESS ARE ACCEPTABLE ONLY WHERE THE LOTS ARE DEVELOPED ALREADY AND THE RISK OF SITE CONSTRUCTION DAMAGE IS NEGLIGIBLE. WHERE GREENFIELD SITES AND FUTURE HOUSING IS STILL TO BE DONE, THEN THE DEPTH OF THE FOOTPATH SHALL BE 125mm THROUGHOUT.

ALL MEASUREMENTS IN MILLIMETRES

RETROFIT RESIDENTIAL VEHICLE CROSSING DETAIL

LAST UPDATED 26/02/2020

SD 235
NOT TO SCALE
NOTES:

1. CROSS REFERENCES:
   INDUSTRIAL CROSSINGS - SD115 / SD250
   RURAL CROSSINGS - SD255 / SD260
   IDM - SECTION 12.9.1. AND 12.9.2.

2. THIS DRAWING DETAILS DIMENSIONS FOR STANDARD RESIDENTIAL CROSSINGS ONLY.

3. CROSSING WIDTHS EXCEEDING THE MAXIMUM ALLOWABLE WILL REQUIRE APPLICATION TO COUNCIL FOR SPECIAL CONSIDERATION.

4. JOINTS AND DOWEL BARS ARE REQUIRED ON EITHER SIDE OF THE CROSSING AT THE INTERFACE WITH THE FOOTPATH. PROVISION SHALL BE MADE IN EXISTING CONCRETE SECTIONS BY DRILLING HOLES TO A MINIMUM DEPTH OF 150mm AND INSERTING R16 DOWEL BARS.

5. AN APPROVED JOINT FILLER SHALL BE PLACED ON EITHER SIDE OF THE CROSSING AGAINST FOOTPATH SLABS. DOWEL BARS ARE TO HAVE AN APPROVED BOND BREAKER APPLIED TO THE END OF THE BAR INSERTED INTO THE EXISTING CONCRETE FOOTPATH SECTIONS REFER SD220.

6. ADDITIONAL WEAKENED PLANE JOINTS REQUIRED IF DISTANCE FROM BACK OF KERB TO FOOTPATH IS GREATER THAN 3000 AND SHALL BE PLACED AT THE MIDPOINT OF THE DISTANCE.

7. FOOTPATHS AFFECTED BY NEW CROSSING TO BE REPLACED WITH NEW 150mm THICK (MIN.) REINFORCED 32 MPA CONCRETE AS STATED ON DETAIL.

ALL MEASUREMENTS IN MILLIMETRES

RETROFIT INDUSTRIAL VEHICLE CROSSING DETAIL

Infrastructure Design Manual Standard Drawings


LOCAL GOVERNMENT INFRASTRUCTURE DESIGN ASSOCIATION

SD 236

LAST UPDATED 26/02/2020

NOT TO SCALE
NOTE:
1. FOR GRADES STEEPER THAN 1 IN 10 REFER CLAUSE 12.9.1.4.
   LAYBACK & CROSSOVER, TO BE CONSTRUCTED IN PLAIN CONCRETE ONLY
   (NO COLOURED CONCRETE BEYOND PROPERTY BOUNDARY)
2. T.O.K. DENOTES TOP OF KERB
3. FOR STEEP TERRAIN CONTACT THE COUNCIL FOR GUIDANCE.
4. REFER SD235 FOR DETAILS TO RETROFIT VEHICLE CROSSING INTO EXISTING.

LEGEND:
- EXPANSION JOINT
- WEAKENED PLANE JOINTS

ALL MEASUREMENTS IN MILLIMETRES

NEW RESIDENTIAL SINGLE VEHICLE CROSSING DETAIL

SD 240

NOT TO SCALE
NEW RESIDENTIAL SHARED / DOUBLE VEHICLE CROSSING DETAILS FOR ADJACENT PROPERTIES

SECTION A-A (REVERSE FALL)  
(ONLY TO BE USED WITH COUNCIL APPROVAL)

NOTE:
1. FOR GRADES STeeper THAN 1 IN 10 REFER CLAUSE 12.9.1.4
   LAYBACK & CROSSOVER, TO BE CONSTRUCTED IN PLAIN CONCRETE
   ONLY (NO COLOURED CONCRETE BEYOND PROPERTY BOUNDARY)
2. T.O.K. DENOTES TOP OF KERB
3. FOR STEEP TERRAIN CONTACT THE COUNCIL FOR GUIDANCE.
4. REFER SD235 FOR DETAILS TO RETROFIT VEHICLE CROSSING INTO EXISTING.

LEGEND:
- EXPANSION JOINT
- WEAKENED PLANE JOINTS

ALL MEASUREMENTS IN MILLIMETRES

SD 245
NOT TO SCALE

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NEW INDUSTRIAL VEHICLE CROSSING DETAIL

SECTION A-A

NOTE:
1. T.O.K. DENOTES TOP OF KERB
2. WHERE THERE ARE EXPANSIVE SOILS AN ADDITIONAL LAYER OF REINFORCEMENT MAY BE REQUIRED AT 80mm COVER FROM THE BOTTOM OF THE SLAB.
3. FOR STEEP TERRAIN CONTACT THE COUNCIL FOR GUIDANCE.
4. FOR GRADES STEEPER THAN 1 IN 10 REFER TO CLAUSE 12.9.1.4.
5. REFER SD236 FOR DETAILS TO RETROFIT INDUSTRIAL VEHICLE CROSSING INTO EXISTING.

ALL MEASUREMENTS IN MILLIMETRES

PLAN

PROPERTY / BUILDING LINE

LIP OF KERB

FOOTPATH / PROPERTY / BUILDING LINE

FOOTPATH

LEGEND:

EXPANSION JOINT

WEAKENED PLANE JOINTS

SD 250

NOT TO SCALE

LOCAL GOVERNMENT INFRASTRUCTURE DESIGN ASSOCIATION

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LAST UPDATED 26/02/2020

Infrastructure Design Manual Standard Drawings
**TYPICAL CLEAR ZONE WIDTHS**

(REFER NOTE 8)

NOTES:

1. THIS ARRANGEMENT IS INTENDED FOR RURAL LOW DENSITY RESIDENTIAL & FARMING ACCESS WAYS.
2. COUNCIL RESERVES THE RIGHT TO DIRECT THE USE OF CULVERT END WALL TYPE.
3. THIS IS A TYPICAL CROSSING PLAN. SLIGHT VARIATIONS MAY OCCUR AFTER INSPECTION AND APPROVAL OF LOCATION BY COUNCIL.
4. PRIOR TO THE CONSTRUCTION, THE CROSSING LOCATION SHALL BE APPROVED BY COUNCIL.
5. ALL WORKS TO BE COMPLETED TO THE SATISFACTION OF COUNCIL.
6. MAINTENANCE OF THE CROSSOVER REMAINS THE RESPONSIBILITY OF THE LAND OWNER.
7. INSTALL LOW PROFILE HEAD WALLS OUTSIDE CLEAR ZONE & DRIVEABLE END WALLS WITHIN CLEAR ZONE. NO CULVERT TO BE WITHIN 3m OF EDGE OF SEAL.
8. THE CLEAR ZONE TABLE SHOWN IS A GUIDE ONLY AND FOR FURTHER ACCURATE CLEAR ZONE GUIDELINES REFER TO AUSTROADS ‘GUIDE TO ROAD DESIGN - PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS’ TABLE 4.1: ‘CLEAR ZONES DISTANCES FROM EDGE OF THROUGH TRAVELLED WAY’
9. TABLE DRAINS ARE NOT TO BE CLOSER THAN 1.0m FROM FENCE LINES OR SERVICES.
10. CROSSING PAVEMENT TO BE SEALED WHERE ABUTS A SEALED ROAD.
11. GATE OFFSET DIMENSIONS:

<table>
<thead>
<tr>
<th>STANDARD VEHICLE TYPE</th>
<th>MINIMUM GATE OFFSET FROM EDGE OF THROUGH LANE (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR (5.0m)</td>
<td>8.2</td>
</tr>
<tr>
<td>RIGID TRUCK (12.0m)</td>
<td>12.5</td>
</tr>
<tr>
<td>SEMI (19.0m)</td>
<td>22</td>
</tr>
<tr>
<td>B-DOUBLE (25.0m)</td>
<td>28</td>
</tr>
</tbody>
</table>

ALL MEASUREMENTS IN MILLIMETRES
NOTES:

1. COUNCIL RESERVES THE RIGHT TO DIRECT THE USE OF CULVERT END WALL TYPE.
2. THIS IS A TYPICAL CROSSING PLAN. SLIGHT VARIATIONS MAY OCCUR AFTER INSPECTION AND APPROVAL OF LOCATION BY COUNCIL.
3. PRIOR TO THE CONSTRUCTION, THE CROSSING LOCATION SHALL BE APPROVED BY COUNCIL.
4. ALL WORKS TO BE COMPLETED TO THE SATISFACTION OF COUNCIL.
5. MAINTENANCE OF THE CROSSOVER REMAINS THE RESPONSIBILITY OF THE LAND OWNER.
6. DRIVEABLE ENDWALLS TO BE USED WITHIN 1.5m OF THE EDGE OF SEAL OR IF DESIGN SPEED IS GREATER THAN 60KM/H.
7. REFER SD255 FOR ADDITIONAL CLEAR ZONE DETAILS.
8. TABLE DRAINS ARE NOT TO BE CLOSER THAN 1.0m FROM FENCE LINES OR SERVICES.
9. CULVERT TO BE LOCATED AT LEAST 600mm FROM EDGE OF SEAL.
10. MAXIMUM DRIVEWAY WIDTH MAY BE INCREASED UPON COUNCIL APPROVAL.

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL SWALE DRAIN VEHICLE CROSSING
( FRINGE URBAN OR RURAL RESIDENTIAL ENTRANCE )
TYPICAL SEMI OR B DOUBLE VEHICLE CROSSING
(RURAL ENTRANCE)

NOTES:
1. THIS ARRANGEMENT IS INTENDED FOR RURAL / FARMING ACCESS WAYS THAT REQUIRE SEMI / B DOUBLE ACCESS.
2. PAVED AREAS TO BE A MINIMUM OF 150mm DEPTH COMPACTED GRAVEL.
3. COUNCIL RESERVES THE RIGHT TO DIRECT THE USE OF CULVERT END WALL TYPE.
4. THIS IS A TYPICAL CROSSING PLAN. SLIGHT VARIATIONS MAY OCCUR AFTER INSPECTION AND APPROVAL OF LOCATION BY COUNCIL.
5. PRIOR TO THE CONSTRUCTION, THE CROSSING LOCATION SHALL BE APPROVED BY COUNCIL.
6. ALL WORKS TO BE COMPLETED TO THE SATISFACTION OF COUNCIL.
7. MAINTENANCE OF THE CROSSOVER REMAINS THE RESPONSIBILITY OF THE LAND OWNER.
8. REFER SD 255 FOR CLEAR ZONE OFFSET DETAILS.
9. DRIVEABLE ENDWALLS TO BE USED INSIDE CLEARZONE.
10. TABLE DRAINS ARE NOT TO BE CLOSER THAN 1.0m FROM FENCE LINES OR SERVICES.
11. COUNCIL MAY REQUIRE THAT CROSSING PAVEMENT BE SEALED DEPENDING ON SITE LOCATION AND SPECIFICS.
12. GATE OFFSET DIMENSIONS:

<table>
<thead>
<tr>
<th>POINT No.</th>
<th>OFFSET DISTANCE FROM EDGE OF SEAL (m)</th>
<th>OFFSET DISTANCE FROM ACCESS CENTRELINE (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>2.0</td>
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</tbody>
</table>

LEGEND:
- TYPICAL EXISTING ACCESS
- RECOMMENDED ACCESS SPLAY
- AREA TO BE SEALED

ALL MEASUREMENTS IN MILLIMETRES

16m (MIN) LENGTH OF 375Ø (MIN) CLASS 4 RCP WITH A MINIMUM COVER OF 200mm AND DRIVEABLE END WALLS (BOTH ENDS) WHERE REQUIRED WITHIN CLEAR ZONE


Local Government
Infrastructure Design Association

Infrastructure Design Manual Standard Drawings


NOT TO SCALE

LAST UPDATED 26/02/2020
EXISTING 75mm FOOTPATH TO BE REMOVED AND REPLACED WITH 125mm THICK SL72 REINFORCED 25 MPA CONCRETE

PLACE SL72 MESH CENTRAL TO 25 MPA CONCRETE PAVING USING BAR CHAIRS.

WHERE ANY NEW CONCRETE ABUTS EXISTING CONCRETE INSTALL R16Ø DOWELS IN 125mm THICK CONCRETE OR R10Ø DOWELS IN 75mm THICK CONCRETE DOWELS @ 600 CTS MAX

NOTE:
1. T.O.K. DENOTES TOP OF KERB

1500 (MIN.) LANDING

0.75m

15m MAX

WHERE ANY NEW CONCRETE ABUTS EXISTING CONCRETE INSTALL R16Ø DOWELS IN 125mm THICK CONCRETE OR R10Ø DOWELS IN 75mm THICK CONCRETE DOWELS @ 600 CTS MAX

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX LONGITUDINAL GRADE.

PLACE SL72 MESH CENTRAL TO 25 MPA CONCRETE PAVING USING BAR CHAIRS.

1500 (MIN.) LANDING

0.75m

15m MAX

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX LONGITUDINAL GRADE.

1500 (MIN.) LANDING

0.75m

15m MAX

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX LONGITUDINAL GRADE.

5% LONGITUDINAL GRADE

125mm THICK 25 MPA CONCRETE

100mm MIN COMPACTED DEPTH "CLASS 3" 20mm FCR BEDDING TO 97% MMDD

SL72 MESH SUPPORTED BY BAR CHAIRS AT 1.2m SPACING

SL72 MESH SUPPORTED BY BAR CHAIRS AT 1.2m SPACING

NOTE:
1. T.O.K. DENOTES TOP OF KERB

LEGEND:
EXPANSION JOINT
WEAKENED PLANE JOINTS

NOTES:
1. LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX GRADE.
2. NEW FOOTPATH SHALL HAVE 2.5% CROSSFALL AWAY FROM THE PROPERTY LINE.
3. NEW FOOTPATH LEVEL SHALL MATCH INTO THE EXISTING LEVELS.
4. NEW FOOTPATH SHALL BE 125mm THICK 25 MPa CONCRETE ON A BASE OF MIN. 100mm THICK, MECHANICALLY COMPACTED CLASS 3 FCR.
5. FOOTPATH GRADES ARE APPROXIMATE AND REQUIRE CONFIRMATION ON SITE.
6. FOOTPATH CROSS OVERS SHALL BE CONSTRUCTED AS PER THE TYPICAL LAYBACK CONFIGURATION
7. USE OF LONGER TRANSITIONS AT FLATTER GRADES PRODUCES A MORE USER FRIENDLY VISUALLY APPEALING OUTCOME

1500 (MIN.) LANDING

0.75m

15m MAX

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX LONGITUDINAL GRADE.

PLACE SL72 MESH CENTRAL TO 25 MPA CONCRETE PAVING USING BAR CHAIRS.

1500 (MIN.) LANDING

0.75m

15m MAX

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX LONGITUDINAL GRADE.

PLACE SL72 MESH CENTRAL TO 25 MPA CONCRETE PAVING USING BAR CHAIRS.

1500 (MIN.) LANDING

0.75m

15m MAX

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX LONGITUDINAL GRADE.

PLACE SL72 MESH CENTRAL TO 25 MPA CONCRETE PAVING USING BAR CHAIRS.

1500 (MIN.) LANDING

0.75m

15m MAX

NOTE:
LANDING ZONE TO BE A MIN. 1.5m IN THE DIRECTION OF TRAVEL AT 2% MAX LONGITUDINAL GRADE.
TRENCHING BACKFILL
(TRENCHES WITHIN 1m OF COUNCIL ASSETS)

NOTES:
2. BITUMEN ROAD SURFACE SHALL BE CUT WITH A SAW.

150mm MIN OR TO EDGE OF DAMAGED WEARING COURSE

COUNCIL APPROVED TOPSOIL AND SEeded.

ORDINARY EARTH FROM EXCAVATION WHICH Contains NO MORE THAN 20% ROCK FRAGMENTS (150mm MAX SIZE) TO BE COMPACTED IN LAYERS NO GREATER THAN 150mm. COMPACTION TO BE MINIMUM 92% MODIFIED A.A.S.H.O.

AUTHORITY’S MARKER TAPE

AUTHORITY SERVICE ZONE INCLUDING ATTACHMENTS AND APPENDAGES

GRANULAR BEDDING PLASTIC INDEX LESS THAN 3

ANY UNSUITABLE MATERIAL TO BE REMOVED FROM FLOOR OF TRENCH

150mm COMPACTED DEPTH CLASS 3 F.C.R.

APPROVED GRANULAR BACKFILL RAMMED OR ROLLED IN 150mm LAYERS TO 98% MODIFIED DENSITY RATIO.

AUTHORITY’S MARKER TAPE

AUTHORITY SERVICE ZONE INCLUDING ATTACHMENTS AND APPENDAGES

GRANULAR BEDDING PLASTIC INDEX LESS THAN 3

ANY UNSUITABLE MATERIAL TO BE REMOVED FROM FLOOR OF TRENCH

NOT TO SCALE

SURFACING TO MATCH EXISTING

150mm MIN OR TO EDGE OF DAMAGED WEARING COURSE

WEARING SURFACE

300mm COMPACTED DEPTH CLASS 2 F.C.R. IN 2 x 150mm LAYERS. TOP (BASE) COMPACTED TO 98% MODIFIED DENSITY RATIO. LOWER (SUB BASE) LAYER COMPACTED TO 98% MODIFIED DENSITY RATIO.

CLASS 3 F.C.R. (OR APPROVED EQUIVALENT MATERIAL). BACKFILL AND COMPACTED MECHANICALLY IN 150mm LAYERS USING VIBRATING RAMMER TO 98% MODIFIED DENSITY RATIO.

NOTES:
2. BITUMEN ROAD SURFACE SHALL BE CUT WITH A SAW.
SIDE ENTRY
JUNCTION
HAUNCHED
UNHAUNCHED
PIT
TYPE
GRATED
INLET CATCH
SHAFT CONFIGURATIONS
PIT WITH HAUNCHED BASE

BASE TO BE HAUNCHED IF NECESSARY TO FIT LARGE PIPES

INTERNAL PIT DIMENSIONS

FACE OF KERB
BACK OF KERB

PLAN
SIDE ENTRY PIT

PLAN
JUNCTION PIT, GRATED PIT AND INLET CATCH PIT

STANDARD PIT LISTING

<table>
<thead>
<tr>
<th>PIT TYPE</th>
<th>COVER TYPE</th>
<th>SD DRG. NO.</th>
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</thead>
<tbody>
<tr>
<td>UNHAUNCHED (450Ø MAX)</td>
<td>CAST IRON CONCRETE FIBREGLASS</td>
<td>SD405</td>
</tr>
<tr>
<td>HAUNCHED</td>
<td>CAST IRON CONCRETE FIBREGLASS</td>
<td>SD410</td>
</tr>
<tr>
<td>JUNCTION</td>
<td>CAST IRON CONCRETE FIBREGLASS</td>
<td>SD425, SD426</td>
</tr>
<tr>
<td>GRATED</td>
<td>MILD STEEL/CAST IRON</td>
<td>SD441</td>
</tr>
<tr>
<td>SIDE ENTRY</td>
<td>CAST IRON CONCRETE FIBREGLASS</td>
<td>SD430, SD431, SD435, SD440, SD445, SD450</td>
</tr>
<tr>
<td>DEPRESSED GRATE</td>
<td>MILD STEEL/CAST IRON</td>
<td>SD455</td>
</tr>
<tr>
<td>INLET CATCH</td>
<td>CONCRETE</td>
<td>SD460</td>
</tr>
</tbody>
</table>

NOTES:
REFER SPECIFIC STANDARD DRAWINGS FOR FULL DIMENSIONS.

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL PIT DIMENSIONING AND SETTING OUT DETAIL

LAST UPDATED 26/02/2020

SD 400
NOT TO SCALE
UNHAUNCHED PITS (450Ø MAX. PIPE)

SD 405

Notes:
1. Minimum pit sizes:

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>Base Dimensions W</th>
</tr>
</thead>
<tbody>
<tr>
<td>450Ø &amp; UPWARDS</td>
<td>UP TO 450Ø</td>
</tr>
<tr>
<td>450Ø &amp; UPWARDS</td>
<td>UP TO 450Ø</td>
</tr>
<tr>
<td>450Ø &amp; UPWARDS</td>
<td>600</td>
</tr>
<tr>
<td>450Ø &amp; UPWARDS</td>
<td>900</td>
</tr>
</tbody>
</table>

2. Pipes greater than 450mm dia. may require haunching. Refer to SD410.
3. For details of specific pits, refer to pit schedule.
4. Pit reinforcement shall have 300mm min laps. Clear cover to be 50mm min. Corner return reinforcement may be fabric or equivalent bars.
5. For top of pit details, refer to specific design pit schedule and relevant standard drawings.
6. Precast pits with thinner walls and less steel may be accepted where the manufacturer can demonstrate that the pits have adequate capacity to support a combination of the following loads: lateral loads - earth pressure with 210 kN surcharge - hydrostatic pressure - compaction pressure (25 kPa min) - vertical load 210 kN
7. Subsoil / pavement drain holes to be sealed if not used.
8. Where no subsoil drain installed, or where gravel backfill is used, or where expansive clays are present; install 1m long subsoil drain at the bottom of the pit.
9. Concrete strength f’c = 25MPa. (Min) at 28 days.

All measurements in millimetres

Infrastructure Design Manual Standard Drawings

Local Government Infrastructure Design Association

Last Updated 26/02/2020

SD 405

Not to Scale
HAUNCHED PITS

SD 410

PITS UP TO 3600mm DEPTH

NOTES:

1. PIPES LESS THAN 525mm DIA. MAY NOT REQUIRE HAUNCHING. REFER SD405.
2. PITS WITH HAUNCHING IN TWO DIRECTIONS REQUIRE SPECIAL STRUCTURAL DESIGN.
3. FOR DETAILS OF SPECIFIC PITS, REFER TO PIT SCHEDULE.
4. PIT REINFORCEMENT SHALL HAVE 300mm MIN LAPS. CLEAR COVER TO BE 50mm MIN. CORNER RETURN REINFORCEMENT MAY BE FABRIC OR EQUIVALENT BARS.
5. FOR TOP OF PIT DETAILS, REFER TO SPECIFIC DESIGN PIT SCHEDULE AND RELEVANT STANDARD DRAWINGS.
6. PRECAST PITS WITH THINNER WALLS AND LESS STEEL MAY BE ACCEPTED WHERE THE MANUFACTURER CAN DEMONSTRATE THAT THE PITS HAVE ADEQUATE CAPACITY TO SUPPORT A COMBINATION OF THE FOLLOWING LOADS:
   - LATERAL LOADS - EARTH PRESSURE WITH 210kN SURCHARGE
   - HYDROSTATIC PRESSURE
   - COMPACTION PRESSURE (25 kPa MIN)
   - VERTICAL LOAD - 210 kN
7. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.
8. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT, INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
9. CONCRETE STRENGTH FC = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

PRECAST PIT

INTERNAL PIT DIMENSIONS

CORNER DETAILS

REINFORCEMENT DETAILS

PLAN VIEW

PLAN VIEW

HAUNCHED PITS

SD 410

NOT TO SCALE
**MIN. WALL THICKNESS FOR REINFORCEMENT IN MASS CONCRETE PITS (CAST IN-SITU)**

- **PLAN**
- **SECTION**

**ALL MEASUREMENTS IN MILLIMETRES**

**LAST UPDATED 20/03/2015**

**NOT TO SCALE**

**Infrastructure Design Manual Standard Drawings**

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website

www.designmanual.com.au

**Local Government Infrastructure Design Association**
NOTES:

1. HEAVY DUTY COVERS TO BE USED WHEN SUBJECT TO TRAFFICABLE LOADS (AS3996 CLASS D - 240kN) OR APPROVED EQUIVALENT. MEDIUM DUTY COVERS TO BE USED IN OFF ROAD USE (AS3996 CLASS B - 80kN) OR APPROVED EQUIVALENT.

2. CONCRETE STRENGTH F'c = 25MPa. (MIN) AT 28 DAYS.

3. JUNCTION PIT IN ROAD RESERVE TO HAVE MINIMUM INTERNAL PIT DIMENSIONS OF 600 x 900.

4. FOR TOP OF PIT DETAILS AND CHAMBER DIMENSIONS, REFER TO SPECIFIC DESIGN PIT SCHEDULE AND RELEVANT STANDARD DRAWINGS.

5. WHERE PIT AT LOW POINT CONSTRUCT 100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.

MINIMUM PIT SIZES (EASEMENTS)

<table>
<thead>
<tr>
<th>PIT SIZE</th>
<th>PIT DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1000</td>
<td>600 x 600</td>
</tr>
<tr>
<td>&gt;1000</td>
<td>600 x 900</td>
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</tbody>
</table>

MINIMUM PIT SIZES (ROAD RESERVE)

<table>
<thead>
<tr>
<th>PIT SIZE</th>
<th>PIT DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL PITS</td>
<td>600 x 900</td>
</tr>
</tbody>
</table>

ALL MEASUREMENTS IN MILLIMETRES

JUNCTION PIT IN ROAD RESERVE

Infrastructure Design Manual Standard Drawings


Local Government Infrastructure Design Association

LAST UPDATED 12/03/2020

SD 420

NOT TO SCALE
JUNCTION PIT WITH CONCRETE COVER (NON TRAFFICABLE AREAS)

NOTES:
1. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.
2. FOR TOP OF PIT DETAILS AND CHAMBER DIMENSIONS, REFER TO SPECIFIC DESIGN PIT SCHEDULE AND RELEVANT STANDARD DRAWINGS.
3. LIDS TO BE SPLIT FOR CHAMBERS GREATER THAN 1050 x 1050mm

REINFORCED CONCRETE OR EQUIVALENT COVER WITH APPROVED LIFTING ANCHORS. REFER TO PIT SCHEDULE FOR DETAILS.

FINISHED SURFACE LEVEL

REINFORCEMENT MESH TO BE PLACED CENTRALLY.

REINFORCEMENT DETAILS

<table>
<thead>
<tr>
<th>PIT LENGTH L' OR WIDTH W</th>
<th>REINFORCEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP TO 1200</td>
<td>SL92</td>
</tr>
<tr>
<td>1201 TO 1800</td>
<td>RL918</td>
</tr>
<tr>
<td>1801 TO 2400</td>
<td>RL1218</td>
</tr>
</tbody>
</table>

MINIMUM PIT SIZES (EASEMENTS)

<table>
<thead>
<tr>
<th>PIT DEPTH</th>
<th>PIT SIZE</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>&gt;1000</td>
<td>600 x 900</td>
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</table>

MINIMUM PIT SIZES (ROAD RESERVE)

<table>
<thead>
<tr>
<th>PIT DEPTH</th>
<th>PIT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL PITS</td>
<td>600 x 900</td>
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</table>

ALL MEASUREMENTS IN MILLIMETRES

PLAN

SECTION A-A

FLOW

FLOW

REINFORCEMENT MESH TO BE PLACED CENTRALLY.

LAST UPDATED 26/02/2020

SD 425

NOT TO SCALE
LIGHT WEIGHT FIBREGLASS LID OR EQUIVALENT, REFER TO PIT SCHEDULE FOR DETAILS.

PIT LENGTH 'L'
REFER PIT SCHEDULE

FINISHED SURFACE LEVEL
150 x 150mm CONC. SURROUND

REINFORCEMENT MESH TO BE PLACED CENTRALLY.

Section A-A

NOTES:

1. CONCRETE STRENGTH F’C = 25MPa, (MIN) AT 28 DAYS.
2. FOR DEPTHS OF INVERT GREATER THAN 1.5m WALL THICKNESS TO BE 200mm AND BASE TO BE 900 x 900mm.
3. SL92 REINFORCING MESH FOR PITS GREATER THAN 1.2m IN DEPTH
4. PIT LID TO BE LIGHT WEIGHT FIBREGLASS TYPE, OR APPROVED EQUIVALENT. PROVIDE REBATE IN PIT WALL FOR LID LOCKING.
5. IF PIT IS TO BE CONSTRUCTED INSIDE AN EASEMENT THE WORDS "NOT TO BE COVERED OR BUILT OVER" ARE TO BE STAMPED IN LID WITH A MIN TEXT HEIGHT OF 50mm.
6. FOR TOP OF PIT DETAILS AND CHAMBER DIMENSIONS, REFER TO SPECIFIC DESIGN PIT SCHEDULE AND RELEVANT STANDARD DRAWINGS
7. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.

ALL MEASUREMENTS IN MILLIMETRES

JUNCTION PIT WITH NON-CONCRETE COVER
(NON TRAFFICABLE AREAS)

SD 426
LAST UPDATED 26/02/2020


Local Government Infrastructure Design Association
CAST IRON COVER WITH EXTENDED CONCRETE SURROUND OR APPROVED EQUIVALENT COVER TO BE INSTALLED TO MANUFACTURERS SPECIFICATIONS.

NOTES:
1. REFER TO SD100 FOR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.
3. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
4. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.
5. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.

120mm DIA HOLE IN SIDE WALLS TO ACCOMMODATE SUBSOIL PAVEMENT DRAINS IN BOTH SIDES. (SEE NOTE 4)

REINFORCEMENT MESH TO BE PLACED CENTRALLY.

REINFORCEMENT DETAILS

<table>
<thead>
<tr>
<th>PIT LENGTH 'L' OR WIDTH 'W'</th>
<th>REINFORCEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP TO 1200</td>
<td>SL92</td>
</tr>
<tr>
<td>1201 TO 1600</td>
<td>RL918</td>
</tr>
<tr>
<td>1801 TO 2400</td>
<td>RL1218</td>
</tr>
</tbody>
</table>

NOT TO SCALE

SIDE ENTRY PIT 900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'B2'

ALL MEASUREMENTS IN MILLIMETRES

LAST UPDATED 26/02/2020
NOTES:

1. PIT TO BE CONSTRUCTED IN 2 STAGES. STAGE 2-TOP 500mm OF PIT IN CONJUNCTION WITH KERB AND CHANNEL.
2. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.
3. AT LOW POINT TRANSITION 600mm BOTH SIDES.
4. CONCRETE STRENGTH F'C = 25MPa, (MIN) AT 28 DAYS.
5. FIBREGLASS PIT LIDS WITH EA FRAME AND LIGHTWEIGHT LOCKING LID OR APPROVED EQUIVALENT CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH AS3996 MAY BE USED INSTEAD OF CONCRETE.
6. PRECAST LINTEL TO MATCH REQUIRED KERB TYPE (SM2, B2)
7. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT, INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
8. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.

ALL MEASUREMENTS IN MILLIMETRES

900 x 600mm SIDE ENTRY PIT PIPES UP TO 450mmØ
(PRECAST CONCRETE LINTEL)

LAST UPDATED 26/02/2020

SD 431

NOT TO SCALE
NOTES:
1. REFER TO SD100 FOR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa, (MIN) AT 28 DAYS.
3. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
4. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.
5. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.

ALL MEASUREMENTS IN MILLIMETRES

SIDE ENTRY PIT900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2'


SD 435

Local Government Infrastructure Design Association

Infrastructure Design Manual Standard Drawings

LAST UPDATED 26/02/2020

NOT TO SCALE
NOTES:

1. REFER TO SD100 FOR KERB DETAILS.
2. CONCRETE STRENGTH FC = 25MPa. (MIN) AT 28 DAYS.
3. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
4. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.
5. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.

ALL MEASUREMENTS IN MILLIMETRES

SIDE ENTRY PIT 900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2-M'

LAST UPDATED 26/02/2020

SD 440

NOT TO SCALE
NOTES:

1. FOR DEPTH OF INVERT GREATER THAN 1.5m, MIN. WALL & BASE THICKNESS TO BE 200mm AND BASE TO BE CORBELLED OUT TO 900x900mm.
2. MIN. INTERNAL PIT DIMENSION = EXTERNAL PIPE Ø + 150mm. FOR PIPE Ø GREATER THAN 450mm CORBEL PIT TOP TO A MIN. OF 600mm.
3. SL82 REINFORCING IS REQUIRED FOR PITS GREATER THAN 1200 DEEP.
4. PIT LID TO BE LIGHTWEIGHT FIBREGLASS TYPE, OR APPROVED EQUIVALENT. GRATE & FRAME TO BE HINGED.
5. CONCRETE STRENGTH SHALL BE 25MPa AT 28 DAYS.
6. WHERE NO AG PIPES EXIST, SEAL STUBS WITH GEOFABRIC.
7. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
8. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.
9. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.

ALL MEASUREMENTS IN MILLIMETRES
NOTES:

1. REFER TO SD100 FR KERB DETAILS.
2. CONCRETE STRENGTH F'c = 25MPa. (MIN) AT 28 DAYS.
3. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
4. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED
5. WHERE PIT AT LOW POINT CONSTRUCT 100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.

ALL MEASUREMENTS IN MILLIMETRES

DOUBLE SIDE ENTRY PIT 1900mm INLET WITH APPROVED COVER & CONCRETE SURROUND FOR 'B2'

SD 445


LAST UPDATED 26/02/2020

Infrastructure Design Manual Standard Drawings

Local Government Infrastructure Design Association
NOTES:

1. REFER TO SD100 FR KERB DETAILS.
2. CONCRETE STRENGTH F’C = 25MPa. (MIN) AT 28 DAYS.
3. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.
4. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
5. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.

SECTION A-A

REINFORCEMENT DETAILS

<table>
<thead>
<tr>
<th>PIT LENGTH L’ OR WIDTH W’</th>
<th>REINFORCEMENT</th>
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<tbody>
<tr>
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</tr>
</tbody>
</table>

ALL MEASUREMENTS IN MILLIMETRES

DOUBLE SIDE ENTRY PIT 1900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2'

SD 450

NOT TO SCALE
NOTES:
1. CONCRETE STRENGTH F'c = 25MPa. (MIN) AT 28 DAYS.

NOTES:
1. HEAVY DUTY COVERS TO BE USED WHEN SUBJECT TO TRAFFICABLE LOADS (AS3996 CLASS D - 240kN) OR APPROVED EQUIVALENT.
MEDIUM DUTY COVERS TO BE USED IN OFF ROAD USE (AS3996 CLASS B - 80kN) OR APPROVED EQUIVALENT.
2. CONCRETE STRENGTH F'c = 25MPa. (MIN) AT 28 DAYS.
**INLET CATCH PIT**

**REINFORCEMENT DETAILS**

<table>
<thead>
<tr>
<th>PIT LENGTH 'L' OR WIDTH 'W'</th>
<th>REINFORCEMENT</th>
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<tr>
<td>UP TO 1200</td>
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<td>1201 TO 1800</td>
<td>RL918</td>
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<tr>
<td>1801 TO 2400</td>
<td>RL1218</td>
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</table>

**NOTES:**

1. PLACEMENT OF PIT WITHIN ROAD RESERVE / MUNICIPAL RESERVE SUBJECT TO COUNCIL APPROVAL.
2. REFER TO PIT SCHEDULE FOR CORRECT PIT ORIENTATION.
3. CONCRETE STRENGTH F'c = 25MPa. (MIN) AT 28 DAYS.
4. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT, INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
5. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED.

**PLAN**

SCALE 1:25

**SECTION A-A**

SHAPE BASE AS SHOWN

SEE NOTE 4

**SECTION B-B**

40mm N.B. GALVANISED HEAVY WEIGHT PIPE CAST INTO PIT WALLS

120mm DIA HOLE IN SIDE WALLS TO ACCOMMODATE SUBSOIL PAVEMENT DRAINS IN BOTH SIDES. (SEE NOTE 5)

REINFORCEMENT MESH TO BE PLACED CENTRALLY.

REINFORCEMENT MESH TO BE PLACED CENTRALLY.

CONCRETE COVER WITH APPROVED LIFTING ANCHORS & F81 MESH PLACED CENTRALLY. GATIC COVER OR APPROVED EQUIVALENT TO BE USED IN ROAD RESERVES OR OPENING ON BOTH SIDES.

**ALL MEASUREMENTS IN MILLIMETRES**

**LAST UPDATED 26/02/2020**

**SD 460**

NOT TO SCALE
SEE NOTE 3

CHANNEL INVERT 40mm
DEEPER ACROSS
THROAT OF PIT

120mm DIA HOLE IN
SIDE WALLS TO
ACCOMMODATE
SUBSOIL PAVEMENT
DRAINS IN BOTH
SIDES. (SEE NOTE 4)

SECTION A-A

SEE NOTE 3

NOTES:
1. REFER TO SD100 FOR KERB DETAILS.
2. CONCRETE STRENGTH F’C = 25MPa. (MIN) AT 28 DAYS.
3. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL
   BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT;
   INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
4. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED
5. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE
   WITH CONSTRUCTION WORKS TO DRAIN WATER FROM
   PAVEMENT.

NOT TO SCALE

SD 475

FIRST UPDATED 26/02/2020

Infrastructure Design Manual Standard Drawings


Local Government Infrastructure Design Association
1. REFER TO SD100 FR KERB DETAILS.
2. CONCRETE STRENGTH FC = 25MPa, (MIN) AT 28 DAYS.
3. CLASS D LOADING IS REQUIRED FOR LID.
4. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT, INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
5. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED

NOTES:

ALL MEASUREMENTS IN MILLIMETRES

SD 480

NOT TO SCALE

LAST UPDATED 26/02/2020
NOTES:

1. FOR USE AS UPSTREAM PIT ONLY
2. MAXIMUM PIT DEPTH 1000mm
3. APPROVED GRATE & SURROUND TYPE TO MATCH KERB
4. GRATE & SURROUND TO BE CLASS 'D' ("BICYCLE SAFE")
5. CONCRETE STRENGTH SHALL BE 25MPa AT 28 DAYS.
6. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.

ALL MEASUREMENTS IN MILLIMETRES
STAGE ONE

STAGE TWO

INSERT T30
COVER INSERT TAPER ON SIDE LIFTING HOLE/S TO BE PROVIDED

TRAFFICABLE PIT LID TO BE CONCRETE TYPE, OR APPROVED EQUIVALENT MUST BE USED

PIT TO BE CONSTRUCTED IN TWO STAGES.
STAGE 2 - TOP 500mm OF PIT IN CONJUNCTION WITH KERB AND CHANNEL.

120mm DIA HOLE IN SIDE WALLS TO ACCOMMODATE SUBSOIL PAVEMENT DRAINS IN BOTH SIDES. (SEE NOTE 3)

SECTION A-A

NOTES:
1. CONCRETE STRENGTH F'c = 25MPa (MIN) AT 28 DAYS
2. WHERE NO SUBSOIL DRAIN INSTALLED, OR WHERE GRAVEL BACKFILL IS USED, OR WHERE EXPANSIVE CLAYS ARE PRESENT; INSTALL 1m LONG SUBSOIL DRAIN AT THE BOTTOM OF THE PIT.
3. SUBSOIL / PAVEMENT DRAIN HOLES TO BE SEALED IF NOT USED

ALL MEASUREMENTS IN MILLIMETRES

Infrastructure Design Manual Standard Drawings

Not to Scale
NOTES:

1. EDGE CONCRETE AROUND PERIMETER OF GRATE.
2. TOP OF GRATE 50mm BELOW EDGE OF PATH.
3. DO NOT CAST IN OR BOND GRATE TO CONCRETE PIT TO ALLOW EASY ACCESS TO PIT.
4. CONCRETE TO BE SMOOTH TROWELLED FINISH.
5. GRATE FRAME TO BE OILED IF INSTALLED IN WET CONCRETE.
6. CONCRETE STRENGTH FC = 25MPa, (MIN) AT 28 DAYS

ALL MEASUREMENTS IN MILLIMETRES
MODIFIED EXISTING PIT TO GRATED PIT IN VEHICLE CROSSING / LAYBACK

GRATE & SURROUND TO BE CLASS D "BICYCLE SAFE" IN ACCORDANCE WITH AUSTRALIAN STANDARDS. GRATES MATCHING THE PROFILE OF THE EXISTING KERB AND CHANNEL AND LAYBACK ARE PREFERRED.

NOTE:
EXISTING PIT MUST BE REMOVED AND REBUILT UNLESS EXISTING PIT IS CHECKED & CERTIFIED AS TRAFFICABLE TYPE.

PLAN

SECTION A-A

NOT TO SCALE

LOCAL GOVERNMENT INFRASTRUCTURE DESIGN ASSOCIATION

INFRASTRUCTURE DESIGN MANUAL STANDARD DRAWINGS

A COPY OF THE INFRASTRUCTURE DESIGN MANUAL CAN BE VIEWED ON THE DESIGN MANUAL WEBSITE WWW.DESIGNMANUAL.COM.AU
**NOTES:**

1. **BECAUSE THE RELATION OF THE BATTER TO THE TOP OF THE ENDWALL IS ESSENTIAL FOR THE SAFETY OF THE MOTORIST THE DETAILS AS SHOWN IN SECTION A-A MUST BE ADHERED TO DURING CONSTRUCTION.**

2. **REINFORCEMENT, F82 UNLESS OTHERWISE SPECIFIED, SHALL BE CONTINUOUS AROUND CORNERS AND LOCATED AS SHOWN ON SECTIONS A-A AND B-B. CLEAR COVER 50 MIN. LAPS: FABRICS 300 MIN, BARS 25 X BAR DIAMETER MIN.**

3. **DISTRIBUTION BARS 12 DIA AT 200 CENTRES.**

4. **CONCRETE STRENGTH SHALL BE 32MPa. (MIN) AT 28 DAYS. STANDARD STRENGTH GRADE OR HIGHER COMPLYING WITH THE REQUIREMENTS OF AS 1379. EXPOSURE CLASSIFICATION UP TO AND INCLUDING B1.**

5. **EXPOSED EDGES SHALL HAVE 20 x 20 CHAMFERS.**

6. **COMPACTION PRESSURE BEHIND WALLS NOT TO EXCEED 15 kPa. (1.5 TONNE VIBRATORY ROLLER OR 300 kg VIBRATING PLATE WITHIN 0.5m OF WALL).**

7. **ENDWALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT PROVISIONS OF AS 3600.**

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**DIMENSIONS**

<table>
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<tr>
<th></th>
<th>TYPE 1 *SLOPE AT 1.5:1</th>
<th>TYPE 2 *SLOPE AT 2:1</th>
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<td>394</td>
<td>1804</td>
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* THEORETICAL SLOPE OF WINGWALL MEASURED AT RIGHT ANGLES TO THE ROADWAY.

**NOTES**

1. APPROXIMATE ONLY

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**REINFORCED CONCRETE WINGWALL (IN-SITU)**

Local Government
Infrastructure Design Association


**SD 497**

LAST UPDATED 26/02/2020

NOT TO SCALE
NOTES:

1. COMPACITION PRESSURE BEHIND ENDWALLS IS NOT TO EXCEED 12.5kPa. REFER (1.5 TONNE VIBRATORY ROLLER).
2. A MAXIMUM PIPE SIZE OF 375Ø FOR THIS ENDWALL ARRANGEMENT.
3. NOT TO BE USED WHERE GENERAL VEHICULAR TRAFFIC IS PRESENT, (MAINTENANCE OR EMERGENCY VEHICLES EXCEPTED AS ALLOWED BY SD 260).
4. ALTERNATIVELY PRECAST ENDWALL MAY BE USED WHERE APPROVED BY COUNCIL.
5. CONCRETE STRENGTH F'c = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

CONCRETE ENDWALL FOR PIPES UP TO 375mmØ (WALKWAYS, PATHS & TRACKS)

SD 498

NOT TO SCALE
TYPICAL BEACHED CATCH DRAIN

TYPICAL GRASS CATCH DRAIN SECTIONS

TYPICAL MOUNDED CATCH DRAIN
(ERODABLE TERRAIN)

TYPICAL CATCH DRAIN AT TOE OF BATTER

NOTES:
1. CATCH DRAINS SHALL BE CONSTRUCTED WHERE INDICATED ON ALIGNMENT PLANS.
2. CATCH DRAINS LOCATION RELATIVE TO THE BATTER SHALL BE DETERMINED BY THE COUNCIL REPRESENTATIVE.
3. CATCH DRAINS SHALL BE GRADED TO CULVERTS OR EXISTING LOW POINTS.
4. CATCH DRAINS SHALL BE LINED WITH TOPSOIL OR HYDROMULCH AS SHOWN.
5. REFER SD460 FOR INLET CATCH PIT DETAILS.

ALL MEASUREMENTS IN MILLIMETRES
NOTES:

1. LOCATION OF HOUSE DRAINS WITHIN PROPERTY BOUNDARY TO BE MARKED WITH AN APPROVED TAPE TIED TO EXTEND THROUGH FINISHED SURFACE FOR EASY LOCATION BY BUILDERS.
2. REFER TO PLUMBING CODE OF AUSTRALIA FOR ALL PIPE LAYING AND JOINTING REQUIREMENTS.
NOTES:

1. LOCATION OF HOUSE DRAINS WITHIN PROPERTY BOUNDARY TO BE MARKED WITH AN APPROVED TAPE TIED TO EXTEND THROUGH FINISHED SURFACE FOR EASY LOCATION BY BUILDERS.
2. 20mm CLASS 3 F.C.R. BACKFILL COMPACTED TO 98% MODIFIED DENSITY RATIO TO BE USED UNDER ROAD PAVEMENT.
3. CONCRETE KERB TO BE STAMPED WHEN CURING WITH THE LETTER 'D' ADJACENT THE HOUSE DRAIN CONNECTION POINT.
4. REFER TO PLUMBING CODE OF AUSTRALIA FOR ALL PIPE LAYING AND JOINTING REQUIREMENTS.

FINISHED SURFACE LEVEL

OUTFALL DIRECT TO PIPE
(UNDER ROAD PAVEMENT)

OUTFALL DIRECT TO DRAINAGE PIT
(STREET DRAINAGE)

FAUCET TO BE INSTALLED INTO PIT WALL DURING CONSTRUCTION TO SUIT 150Ø PIPE

DESIGN MINIMUM GRADE 1:100
ABSOLUTE MINIMUM GRADE 1:150

50mm COMPACTED DEPTH OF APPROVED BEDDING SAND

100 MIN PIPE SIZE

TEMPORARY CAP

REFER SD515

FINISHED SURFACE LEVEL

ROAD RESERVE

CARRIAGEWAY

PROPERTY LINE

ROAD RESERVE

CARRIAGEWAY

PROPERTY LINE
NOTES:
1. REFER TO PLUMBING CODE OF AUSTRALIA FOR ALL PIPE LAYING AND JOINTING REQUIREMENTS.
   TAPE TIED TO EXTEND THROUGH FINISHED SURFACE FOR EASY LOCATION BY BUILDERS.
2. LOCATION OF HOUSE DRAINS WITHIN PROPERTY BOUNDARY TO BE MARKED WITH AN APPROVED TAPE.
   PROPERTY CONNECTION POINT TO BE CAPPED.

100Ø MIN PIPE SIZE (DESIRABLE MINIMUM)
150Ø SN6 SWJ U-PVC RISER FOR INSPECTION OPENING
150Ø SWJ RISER FOR INSPECTION OPENING

1.500 MIN. FINISHED LEVEL TO I.O.
150Ø SN6 SWJ U-PVC T-JUNCTION

SUB-BASE PAVEMENT LAYER
PROPERTY LINE
PROPERTY CONNECTION
FUTURE PROPERTY CONNECTION

THE LETTER 'D' IS TO BE IMPRINTED IN THE FACE OF KERB (40mm HIGH)
REINSTATE WITH SEEDED TOPSOIL TO 100mm DEPTH
THE INSPECTION SHAFT TO TEMPORARILY EXTEND 300 ABOVE FINISHED SURFACE LEVEL (WITH PUSH ON CAP) DURING CONSTRUCTION PHASE OF WORKS.

LINE OF KERB
LINE OF KERB

150Ø SWJ U-PVC T-JUNCTION
CONNECT TO STORMWATER PIPE WITH 150Ø CONCONECT OR APPROVED EQUIVALENT TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

100Ø MIN PIPE SIZE
1500MM PIPE SIZE
OFFSET TAPER
REDUCER
300 MIN.
600 BELOW TOP OF KERB (DESIRABLE MINIMUM)
300 MIN.

NOT TO SCALE
LAST UPDATED 26/02/2020
NOTES:

1. LOCATION OF HOUSE DRAINS WITHIN PROPERTY BOUNDARY TO BE MARKED WITH AN APPROVED TAPE TIED TO EXTEND THROUGH FINISHED SURFACE FOR EASY LOCATION BY BUILDERS.
2. REFER TO PLUMBING CODE OF AUSTRALIA FOR ALL PIPE LAYING AND JOINTING REQUIREMENTS.

STREET DRAIN CONNECTION
(45° TO PIPE WHERE COVER LIMITED)

INSPECTION SHAFT TO TEMPORARILY EXTEND 300 ABOVE FINISHED SURFACE LEVEL (WITH PUSH ON CAP) DURING CONSTRUCTION PHASE OF WORKS.

THE LETTER 'D' IS TO BE IMPRINTED IN THE FACE OF KERB (40mm HIGH)

REINSTATE WITH SEEDED TOPSOIL TO 100mm DEPTH

PROPERTY LINE

FINISHED SURFACE

100 Ø SEWER SN6 U-PVC 'T' JUNCTION

150Ø CONNECT TO STORMWATER PIPE WITH 'CONCONECT' OR APPROVED EQUIVALENT. TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.

100Ø MIN PIPE SIZE

PROPERTY CONNECTION POINT TO BE CAPPED.

SUB-BASE PAVEMENT LAYER

150Ø SEWER CLASS M-PVC "Y" JUNCTION

150Ø CONNECT TO STORMWATER PIPE WITH 'CONCONECT' OR APPROVED EQUIVALENT. TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.

NOT TO SCALE

TYPICAL CROSS SECTION

ALL MEASUREMENTS IN MILLIMETRES


Local Government Infrastructure Design Association

Infrastructure Design Manual Standard Drawings

NOT TO SCALE

SD 516

LAST UPDATED 26/02/2020
EASEMENT DRAIN CONNECTION

CAST IN 1.0m (MIN) 100Ø SN6 SWJ U-PVC PROPERTY CONNECTION STUB AT 1 IN 100 GRADE (MIN). STUB TO BE CAPPED IF FOR FUTURE CONNECTION.

NOTES:
1. TOP OF GRATE 40mm (min) BELOW FINISHED SURFACE.
2. DO NOT BOND GRATE TO CONCRETE TO ALLOW EASY ACCESS TO PIT.
3. CONCRETE TO BE SMOOTH TROWELLED FINISH.
4. GRATE FRAME TO BE OILED IF INSTALLED IN WET CONCRETE.
5. CONCRETE STRENGTH FC = 25MPa. (MIN) AT 28 DAYS
6. SEAL UP AND MAKE GOOD PIPE CONNECTION / INSERTION TO PIT.
7. PROPERTY CONNECTION MIN 100Ø PIPE AS PER IDM CLAUSE 16.10.2 (PIPE DIAMETERS).

ALL MEASUREMENTS IN MILLIMETRES

Infrastructure Design Manual Standard Drawings


Local Government Infrastructure Design Association

SD 520

LAST UPDATED 26/02/2020

NOT TO SCALE
FLUSHOUT RISER COVER
(REFER SD530)

150 DEEP CONCRETE APRON
REINFORCED WITH SL81

EDGE OF SHOULDER OR BACK OF KERB.

JOINS SUBSOIL DRAIN

TYPICAL FLUSHOUT RISER PLAN

TYPICAL FLUSHOUT RISER SECTION

ALL MEASUREMENTS IN MILLIMETRES

Infrastructure Design Manual Standard Drawings
A copy of the Infrastructure Design Manual can be viewed on the Design Manual website
www.designmanual.com.au

Local Government Infrastructure Design Association

FLUSHOUT RISER DETAIL

SD 525
NOT TO SCALE

LAST UPDATED 20/03/2015
FLUSHOUT RISER COVER DETAIL

LIFTING POINT

6 Ø MS WELD RING (260 Ø)

10 Ø GALVANISED MS ROD 310 LONG

SECTION

CONCRETE PLUG

ALL MEASUREMENTS IN MILLIMETRES

 getLast updated 20/03/2015

Infrastructure Design Manual Standard Drawings

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www.designmanual.com.au

SD 530

NOT TO SCALE
**NOTES:**

1. FOR USE ON PIPE AT GRADES OF 1 IN 10 OR GREATER.
2. TO BE CONSTRUCTED AT A MAXIMUM OF 10m CTRS.
3. CONCRETE STRENGTH TO BE 25MPa.

ALL MEASUREMENTS IN MILLIMETRES
TYPICAL ROAD PROFILES RURAL

FOR DIMENSIONS (A) (B) & (C) REFER TO IDM DESIGN GUIDELINES
CLAUSE 12.4 TABLE 6 - 'RURAL ROAD CHARACTERISTICS'.

BASE & SUB-BASE DEPTH OF MATERIAL TO BE SPECIFIED IN ACCORDANCE WITH IDM DESIGN GUIDELINES

FOR DIMENSIONS (A) (B) & (C) REFER TO IDM DESIGN GUIDELINES
CLAUSE 12.4 TABLE 6 - 'RURAL ROAD CHARACTERISTICS'.

BASE & SUB-BASE DEPTH OF MATERIAL TO BE SPECIFIED IN ACCORDANCE WITH IDM DESIGN GUIDELINES

TYPICAL CROSS SECTION
SEAL E ROAD

TYPICAL CROSS SECTION
GRAVEL ROAD

TYPICAL OPEN TABLE DRAINS

NOTE: INVERT OF 'TRAPEZOIDAL' TABLE DRAINS TO BE BELOW THE BASE OF PAVEMENT.

NOTE: INVERT OF 'V' TABLE DRAINS TO BE BELOW THE BASE OF PAVEMENT.

ALL MEASUREMENTS IN MILLIMETRES
NOTES:
1. REFER TO IDM DESIGN GUIDELINES: SECTION 12.3, TABLE 2 - 'URBAN ROAD / STREET CHARACTERISTICS'.
2. PROFILES TO BE USED FOR LOW DENSITY RESIDENTIAL ZONES - RURAL ONLY. FOR LOW DENSITY RESIDENTIAL ZONES - URBAN SEE PROFILES FOR URBAN ROADS.
NOTES:
1. REFER TO IDM DESIGN GUIDELINES: SECTION 12.4, TABLE 6 - 'RURAL ROAD CHARACTERISTICS'
2. PROFILES TO BE USED FOR LOW DENSITY RESIDENTIAL ZONES - RURAL ONLY. FOR LOW DENSITY RESIDENTIAL ZONES - URBAN SEE PROFILES FOR URBAN ROADS.
NOTES:
1. REFER TO IDM DESIGN GUIDELINES: SECTION 12.4, TABLE 6 - RURAL ROAD CHARACTERISTICS.
2. PROFILES TO BE USED FOR LOW DENSITY RESIDENTIAL ZONES - RURAL ONLY. FOR LOW DENSITY RESIDENTIAL ZONES - URBAN SEE PROFILES FOR URBAN ROADS.

RURAL LIVING ACCESS ROAD

RURAL LIVING COLLECTOR ROAD

LOW DENSITY RESIDENTIAL ACCESS ROAD
NOTE:
REFER TO IDM DESIGN GUIDELINES: SECTION 12.3, TABLE 2 - 'URBAN ROAD / STREET CHARACTERISTICS'.

TYPICAL ROAD PROFILES
COMMERCIAL STREET / INDUSTRIAL STREET

Infrastructure Design Manual Standard Drawings

Local Government Infrastructure Design Association


NOT TO SCALE
NOTES
1. MINIMUM DEPTH OF COVER TO ALL UTILITY SERVICES WITH THE EXCEPTION OF
2. TELECOMMUNICATIONS SERVICES TO BE 600mm.
   TELECOMMUNICATIONS SERVICES ARE TO HAVE A MINIMUM DEPTH OF COVER
   OF 450mm. REFER TABLE AS FOR FURTHER DETAILS.
3. MINIMUM DEPTH OF COVER SHALL BE BELOW THE NATURAL SURFACE LEVEL, WITH THE EXCEPTION OF
   WHERE UNDERGROUND SERVICES PASS UNDER OR IN CLOSE VICINITY TO OPEN DRAINS.
4. WHEN PASSING UNDER OR IN CLOSE PROXIMITY TO OPEN DRAINS, MINIMUM DEPTH OF COVER FOR
   UNDERGROUND
5. SERVICES SHALL BE BELOW BED OF DRAIN LEVEL.
6. FOR LOW DENSITY RESIDENTIAL INCORPORATING KERBS AND CHANNEL, REFER TO FIGURE 1 FOR DETAILS.

PREFERRED SERVICE LOCATIONS FOR RURAL ACCESS STREETS

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website
www.designmanual.com.au

LOCAL GOVERNMENT
INFRASTRUCTURE DESIGN ASSOCIATION

SD 625

NOT TO SCALE
RESERVE WIDTH AS SPECIFIED BY THE RELEVANT AUTHORITY

1. MINIMUM DEPTH OF COVER TO ALL UTILITY SERVICES WITH THE EXCEPTION OF TELECOMMUNICATIONS SERVICES TO BE 0.6m. TELECOMMUNICATIONS SERVICES ARE TO HAVE A MINIMUM DEPTH OF COVER OF 0.9m. REFER TABLE AS FOR FURTHER DETAILS.
2. LIGHT POLE STANDARD OFFSET TO BE 800mm FROM BACK OF KERB TO FACE OF POLE UNLESS THERE IS A CONFLICT WITH UNDERGROUND SERVICES.
3. THE PREFERRED SEWER LOCATION IS OUTSIDE OF THE ROAD RESERVE, WHERE IT IS NECESSARY FOR THE SEWER TO BE WITHIN THE ROAD RESERVE, IT SHALL BE LOCATED AS INDICATED ON THE CROSS SECTIONS.
4. WHERE STORM WATER ASSETS BELONG TO MELBOURNE WATER AND ARE GREATER THAN 750mm IN DIAMETER, CONTACT SHOULD BE MADE WITH MELBOURNE WATER TO DETERMINE ITS REQUIRED LOCATION IN RELATION TO STREET TREES.
5. LOCATIONS OF STREET TREES, STREET LIGHTS, DRIVEWAYS AND PROPERTY BOUNDARIES ARE SHOWN INDICATIVELY ONLY.

NOTES

LEGEND

SD 630

A PREFERRED SERVICE LOCATIONS FOR RESIDENTIAL ACCESS STREETS

LOCAL GOVERNMENT

INFRASTRUCTURE DESIGN ASSOCIATION

WWW.DESIGNMANUAL.COM.AU

LAST UPDATED 04/04/2016

ELEVATION

PLAN VIEW

(ALL CROSS ROAD UTILITY INFRASTRUCTURE OMITTED FOR CLARITY)
NOTES

1. MINIMUM DEPTH OF COVER TO ALL UTILITY SERVICES WITH THE EXCEPTION OF TELECOMMUNICATIONS SERVICES TO BE 0.9m. TELECOMMUNICATIONS SERVICES ARE TO HAVE A MINIMUM DEPTH OF COVER OF 0.45m. REFER TABLE AS FOR FURTHER DETAILS.

2. WHERE STORM WATER ASSETS BELONG TO MELBOURNE WATER AND ARE GREATER THAN 750mm IN DIAMETER, CONTACT SHOULD BE MADE WITH MELBOURNE WATER TO DETERMINE ITS REQUIRED LOCATION IN RELATION TO STREET TREES.

3. LOCATIONS OF STREET TREES, STREET LIGHTS, DRIVEWAYS AND PROPERTY BOUNDARIES ARE ShOWN INDICATIVELY ONLY.

LEGEND

- ELECTRICITY
- GAS
- SEWER
- WATER
- RW
- RAW WATER
- SWD
- TELECOMMUNICATIONS
- STORM WATER

BOUNDARY

PLAN VIEW

(ALL CROSS ROAD UTILITY INFRASTRUCTURE OMITTED FOR CLARITY)

PREFERRED SERVICE LOCATIONS FOR COLLECTOR ROAD LEVEL 1

SD 635

NOT TO SCALE
PREFERRED SERVICE LOCATIONS FOR COLLECTOR ROAD LEVEL 2

Infrastructure Design Manual Standard Drawings


Local Government
Infrastructure Design Association

SD 640
NOT TO SCALE