Standard Construction Details (SCDs) – Series 100

TII Publications contains Standard Construction Details (SCDs) for use on National Road schemes in Ireland. This composite document brings together all the Series 100 SCDs from TII Publications current at the date of this document’s publication, into a single location for convenience.

Every effort has been made to keep this composite document updated and available from the TII Publications website (http://www.tiipublications.ie). Please note that the SCD drawings available from the TII Publications website (individually linked below) are the controlled versions for all SCDs.

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**Series 100 Edge of Pavement Details**

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NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. THE MINIMUM DEPTH OF INSTALLATION SHALL BE 1500 mm TO INVERT DEPTH SUBSURFACE LEVEL OR 600 mm TO THE INVERT DEPTH EROSION LEVEL WHERE THERE IS NO CAPPING LAYER THE DRAINS SHALL BE Laid TO THE LOWER OF THESE TWO DEPTHS.
3. Rounding Occurs OVER A 1500 mm LENGTH 250 mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND BATTERY.
4. SET BACK REQUIREMENTS IN ACCORDANCE WITH NRA TO 19.
5. REFER TO RCD/300/20 FOR TRENCH AND S nềnG DETAILS FOR FILTER DRAIN.
6. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 35.
7. THE MAXIMUM DROP SHALL BE IN ACCORDANCE WITH RCD/700/1.
NOT TO SCALE

ROAD CONSTRUCTION DETAILS

EDGE OF PAVEMENT DETAILS

CARRIAGEWAY IN CUTTING
NEAR SIDE VERGE DETAIL WHERE KERBED
& WITH CLOSED DRAINAGE SYSTEM

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ROUNDOFF OCCURS OVER A 150mm LENGTH 750mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND HARDSHOULDER.
3. SET BACK REQUIREMENTS IN ACCORDANCE WITH NRA TO 19.
4. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE ILLUSTRATED IN NRA HD 33.
5. REFER TO RCD/500/10, RCD/500/11 AND RCD/500/12 FOR DRAINAGE SYSTEM.

1500 ROUNDOFF

ROAD RESTRAINT SYSTEM WHERE REQUIRED

FIN OR NARROW FILTER DRAIN

CLOSED CARRIER DRAIN

GULLY

FALL
SURFACE WATER CHANNEL WITHOUT PROTECTION

NOTES:
1. ALL DIMENSIONS ARE IN METRES.
2. THESE DETAILS ALSO APPLY TO ROCO CARRIAGEWAY WITH ADDITION OF SEPARATION
   MEMBRANE AND UNDER CHANNEL DRAINAGE LAYER ALSO APPLIED TO FLEXIBLE CARRIAGEWAY WITH ANY NEEDED MODIFICATIONS.
3. PAVING BETWEEN THE SURFACE WATER CHANNEL AND THE HARDSHOULDER, HARDSTRIPE OR
   CARRIAGEWAY SHALL BE AS DESCRIBED IN APPENDIX 3/5 OR SHOWN ON THE DRAWINGS.
4. DIMENSIONS OF CARRIAGEWAY SHALL BE AS DESCRIBED IN APPENDIX 3/5. GENERAL
   CRITERIA FOR CHANNEL REQUIRE SAFETY BARRIER PROTECTION IS THAT CHANNEL DETAIL
   EXCEEDS 300mm OR THAT CROSS-FALLS EXCEED 1:4 WHERE USED IN CONSTRUCTION WITH
   A THICK SURFACING THE UNDER DRAINAGE DETAIL SHOWN IN RCD/300/43 SHALL APPLY IN
   FULL.
5. NOTWITHSTANDING OTHER TOLERANCES, THE FINISHED LEVEL OF THE CHANNEL SHALL NOT BE MORE THAN THE FINISHED
   LEVEL OF THE CARTILYING PAVING
6. ROAD DESIGN SYSTEMS TO BE AS SHOWN ON THE DRAWINGS AND SCHEDULED IN
   APPENDIX 4/1.
7. DETAIL SHOWS CHANNEL IN VERGE LOCATION, FOR CHANNEL IN CENTRAL RESERVE
   LOCATION, THE COST AND CONCRETE COST MODIFICATIONS FOR SAFETY BARRIER MUST
   NOT CONFORM TO DRAWINGS RCD/500/44 AND RCD/500/41.
8. Rounding occurs over a 1500mm length. 750mm either side of intersection between VERGE AND BITTE.
9. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE MODIFIED IN NRA HD 1.1
10. EXHIBITION OF CAPPING LAYER IN ACCORDANCE WITH RCD/100/3 IS ACCEPTABLE IN LIEU
    OF FIN OR NARROW FILTER DRAIN WHERE BASE OF CAPPING CAN BE EXTENDED TO THE
    EDGE OF EMANKEMENT ABOVE ADJACENT GROUND LEVEL.
11. A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE
    THERE DO NOT HAVE MUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.

SURFACE WATER CHANNEL WITH PROTECTION

KEY:
- SURFACE COURSE
- Binder
- Base Course
- Sub Base
- Capping
- Topsoil

II PUBLICATION NUMBER: CC-SCD-00103

ROAD CONSTRUCTION DETAILS

EDGE OF PAVEMENT DETAILS

CARRIAGEWAY IN CUTTING OR ON EMBANKMENT
NEAR SIDE VERGE DETAIL WITH SURFACE WATER CHANNEL

DRAWING NO.

RCD/100/3

ISSUE DATE

03/15
NOTES:
1. All dimensions are in millimetres.
2. These details also apply to road carriageway with action of separation mechanism and under channel drainage layer also applies to flexible composite carriageway with any necessary modifications.
3. Paving between the surface water channel and the hardshoulder, hardstrip or carriageway shall be as described in Appendix 5/3 or shown on the drawings.
4. Road restraint systems to be as shown on the drawings and specified in Appendix 6/1.
5. Refer to Appendix 3/3 or drainage drawings for dimensions x, y, z.
6. Refer to Appendix 3/3 or drainage drawings for outlet dimensions & number of outlets.
7. Extension of capping layer in accordance with RCD/100/6 is acceptable if split at end of filter drain or narrow filter drain where side of capping can be exposed to edge of embankment at the adjacent ground level.
8. Bonding occurs over a 100mm length. 750mm either side of intersection between verge and surface.
9. Permeated verge-to-edge drainage options are indicated in RCD No 35.
10. A filter drain may be required in lieu of filter or narrow filter drain where there do not have sufficient capacity for subsurface drainage.
11. The minimum drop shall be in accordance with RCD/700/1.

NOT TO SCALE

GRASSED SURFACE WATER CHANNEL

ROAD CONSTRUCTION DETAILS

EDGE OF PAVEMENT DETAILS

CARRIAGEWAY IN CUTTING OR ON EMBANKMENT
NEAR SIDE VERGE DETAIL WITH
GRASSED SURFACE WATER CHANNEL

DRAWING NO. RCD/100/4

Issue Date
03/15
1. All dimensions are in millimetres.
2. 0-12% verge fill required, verge fill material in accordance with NIA 600 requirements.
3. Rounding occurs over a 1500mm length, 750mm either side of intersection between verge and carriageway.
4. Permitted verge edge drainage options are indicated in NIA 600.
5. The maximum drop shall be in accordance with NIA 790/01.
6. The extension of capping shall be continuous longitudinally along the road.
7. Extended capping is only allowable where the base of the extended capping layer is above the adjacent ground level and not subject to undermining invasion.

CARRIAGEWAY ON EMBANKMENT
NEAR SIDE VERGE DETAIL WITH
OVER THE EDGE DRAINAGE DETAIL

TII PUBLICATION NUMBER: CC-SCD-00105
NOT TO SCALE

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ROUNDING OCCURS OVER A 1500MM LENGTH.
   750MM EITHER SIDE OF INTERSECTION BETWEEN VERGE AND RUTTER.
3. SET BACK REQUIREMENTS IN ACCORDANCE WITH NRA TO 10.
4. PRECAST VERSE SIDE EDGE DRAINAGE OPTIONS ARE ILLUSTRATED IN NRA H4.33.
5. REFER TO RCD/550/0/18, RCD/550/11 AND
   RCD/550/14 FOR DETAILED DESIGN.
6. REFER TO RCD/550/40, RCD/550/41 AND
   RCD/550/42 FOR FIN AND NARROW DRAIN
   DETAILS.
7. EXPANSION OF CAPPING LAYER IN ACCORDANCE
   WITH RCD/100/15 IS ACCEPTABLE IN LIEU OF FIN
   OR NARROW FILTER DRAIN WHERE SITE OF
   CAPPING CAN BE EXTENDED TO ENMBANKMENT
   ABOVE ADJACENT GROUND LEVEL.
8. A FILTER DRAIN MAY BE REQUIRED IN LIEU OF
   FIN OR NARROW FILTER DRAIN WHERE THERE DO
   NOT HAVE SUITABLE CAPACITY FOR SUBSURFACE DRAINAGE.

KEY:
- SURFACE COURSE
- BINDER
- BASE COURSE
- SUB BASE
- CAPPING OF
- TOPSOIL

NOTE:
- 1500 ROUNDEING

ROAD CONSTRUCTION DETAILS

EDGE OF PAVEMENT DETAILS

CARRIAGEWAY ON EMBANKMENT
NEARSDIE VERGE DETAIL WITH KERBING
& CLOSED DRAINAGE SYSTEM

DRAWING NO.
RCD/100/6
NOT TO SCALE

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THESE DETAILS ALSO APPLY TO FLEXIBLE COMPOSITE AND RIGID
   COMPOSITE CARRIAGeway WITH NECESSARY MODIFICATIONS. RIGID
   COMPOSITE AS TYPE 25B BUT WITH MINIMUM SURFACING Laid UP
   TO FRONT FACE OF BLOCK AS TYPE 25A, AND WITHOUT THE SEALING
   STRIP. FLEXIBLE COMPOSITE AS TYPE 25A DOWN TO TOP SURFACE
   OF BASE, LOWER DETAILS AS TYPE 25B.
3. THE SEALING STRIP AND VERTICAL PART OF GEOTEXTILE DRAINAGE
   MEMBRANE ARE SHOWN FOR WHEN BLOCK IS CONSTRUCTED BEFORE
   PAVEMENT. THEY SHALL BE FIXED TO PAVEMENT EDGE WHEN
   PAVEMENT CAST BEFORE BLOCK.
4. SEALING STRIP TO BE TO MOWP, CLASS 101.
5. WHERE USED IN CONJUNCTION WITH A THIN SURFACING, THE UNDER
   DRAINAGE SHOWN IN RCD/500/4/5 SHALL APPLY IN FULL.
6. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN
   NRA NO. 33.

TII PUBLICATION NUMBER: CC-SCD-00109

ROAD CONSTRUCTION DETAILS

EDGE OF PAVEMENT DETAILS

COMBINED KERB AND DRAINAGE SYSTEM

NOT TO SCALE

STI CONCRETE
FILL ON CAPPING
GEOTEXTILE DRAINAGE MEMBRANE TO DRAWING RCD/500/4/5
DRAIN TO DRAWING NO RCD/500/4/10, RCD/500/4/1 AND RCD/500/4/2

STI CONCRETE
FILL ON CAPPING
GEOTEXTILE DRAINAGE MEMBRANE TO DRAWING RCD/500/4/5
DRAIN TO DRAWING NO RCD/500/4/10, RCD/500/4/1 AND RCD/500/4/2

STRENGTH CLASS C28/35 CONCRETE
SEALING STRIP (SEE NOTE 3)

TYPE 25A
(FLEXIBLE CARRIAGeway)

TYPE 25B
(RIGID CARRIAGeway)
TYPE 13A  
(CHANNEL BASE FORMED WITHIN SUB-BASE LAYER)

TYPE 13B  
(CHANNEL FORMED ON SUB-BASE LAYER)

TYPE 13C  
(CHANNEL FORMED ON FIRST BASE LAYER)

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. THESE DETAILS ALSO APPLY TO FLEXIBLE COMPOSITE CARRIAGEWAY WITH ANY NEEDED MODIFICATIONS.
3. FOR DETAILS OF CONCRETE CHANNEL SEE DRAWING RCD/500/22.
4. TERRUSIL OR PAVING IN THE CENTRAL RESERVE SHALL BE AS DESCRIBED IN APPENDIX 5/3.
5. NOTWITHSTANDING OTHER TOLERANCES IN THE SPECIFICATION THE FINISHED LEVEL OF THE CHANNEL SHALL NOT BE HIGHER THAN MORE THAN 10mm LOWER THAN THE FINISHED LEVEL OF THE ADJACENT CARRIAGEWAY.
6. WHERE USED IN CONJUNCTION WITH A TERRUSIL SURFACING THE UNDER DRAINAGE DETAIL SHOWN IN RCD/500/10 SHALL APPLY IN FULL.
7. ROAD RESTRAINT BARS NOT SHOWN FOR CLARITY BUT SHALL BE AS DESCRIBED IN APPENDIX 4/1.
8. PERMITTED CENTRAL RESERVE DRAINAGE OPTIONS ARE INDICATED IN NRA NO 53.
LINEAR DRAINAGE CHANNEL ADJACENT BARRIER

SURFACE WATER CHANNEL ADJACENT BARRIER

NOT TO SCALE

TII PUBLICATION NUMBER: CC-SCD-00112

ROAD CONSTRUCTION DETAILS

EDGE OF PAVEMENT DETAILS

CENTRAL RESERVE DETAIL OF SUPERELEVATED CARRIAGEWAYS WITH CONCRETE BARRIER RESTRAINT

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. LINEAR DRAINAGE CHANNELS, SURFACE WATER CHANNELS, GULLIES, ETC. SHALL BE OFFSET A MINIMUM OF 500MM FROM THE TRAFFIC LANE.
3. PERMITTED CENTRAL RESERVE DRAINAGE OPTIONS ARE INDICATED IN NIA NO 33.
4. A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN FOR NARROW FILTER DRAIN WHERE THERE DO NOT HAVE SUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.