

QUEENSLAND
CONSTRUCTION
SPECIFICATION

C229

KERB REPLACEMENT

**DEVELOPMENT CONSTRUCTION SPECIFICATION
C229 - KERB REPLACEMENT**

TABLE OF CONTENTS

CLAUSE	PAGE
GENERAL	1
C229.01 SCOPE	1
C229.02 REFERENCE DOCUMENTS	1
C229.03 PROVISION FOR TRAFFIC.....	1
C229.04 PROPRIETARY PRODUCTS	1
CONSTRUCTION	1
C229.05 FOOTPATH AND ROAD PAVEMENT PREPARATION	1
C229.06 REMOVAL AND DISPOSAL	1
C229.07 FOUNDATION.....	2
C229.08 KERB.....	2
C229.09 BACKFILLING AND RESTORATION	2
C229.10 ADJUSTMENT TO GULLY PITS	3
SPECIAL REQUIREMENTS	3
C229.11 RESERVED.....	3
MEASUREMENT AND PAYMENT	4
C229.13 PAY ITEMS	4

DEVELOPMENT CONSTRUCTION SPECIFICATION

C229 - KERB REPLACEMENT

GENERAL

C229.01 SCOPE

The work to be executed under this Specification consists of the removal and disposal of existing kerb and the construction of new kerb and associated works.

Requirements for quality control and testing, including maximum lot sizes and minimum test frequencies, are cited in the Specification Part for Quality Requirements.

C229.02 REFERENCE DOCUMENTS

Documents referenced in this Specification are listed in full below whilst being cited in the text in the abbreviated form or code indicated.

(a) Council Specifications

- 201 - Control of Traffic
- 271 - Minor Concrete Works

(b) Australian Standards

- AS 2876 - Concrete kerbs and channels (gutters) - Manually or machine placed
- AS 1289.5.4.1 - Compaction control test - Dry density ratio, moisture variation and moisture ratio

C229.03 PROVISION FOR TRAFFIC

The Contractor shall construct the Works with the least possible obstruction to traffic, both vehicular and pedestrian.

The Contractor shall submit a Traffic Guidance Scheme and carry out all activities for controlling traffic, both vehicular and pedestrian, in accordance with the Specification for CONTROL OF TRAFFIC.

C229.04 PROPRIETARY PRODUCTS

Unless shown on the Drawings, proprietary products may only be used with the approval of the Superintendent. Where specified, they must be used strictly in accordance with the manufacturer's instructions.

CONSTRUCTION

C229.05 FOOTPATH AND ROAD PAVEMENT PREPARATION

Prior to the excavation and removal of existing kerb, the footpath, driveways and road pavement shall be saw-cut where shown on the Drawings or as directed by the Superintendent to provide a neat, straight, clean cut so as to minimise damage and disturbance to the remainder of the footpath and road pavement.

Damage or disturbance to the footpath, driveways and/or road pavement resulting from the work shall be restored by the Contractor to the pre-construction to the satisfaction of the Superintendent. All costs associated with any restoration work shall be borne by the Contractor.

C229.06 REMOVAL AND DISPOSAL

The Contractor shall demolish and remove the existing redundant kerb and excavate to the level shown on the drawings in accordance with the Specification for MINOR CONCRETE WORKS.

Care shall be exercised in the removal of kerb so as to prevent damage to any existing services, including existing house stormwater drainage pipes. Damage occurring to stormwater drainage pipes and/or other services shall be restored to the pre-construction condition to the satisfaction of the Superintendent. All costs associated with the restoration work shall be borne by the Contractor.

All excavated material and demolished kerb shall be removed from site and legally disposed of by the Contractor to a site approved by the Superintendent.

Under no circumstances shall excavated material be disposed of privately to any person or to any site not authorised by the Superintendent.

C229.07 FOUNDATION

Before placing any kerb, the foundation material shall be shaped and compacted to a firm base. Other than kerb constructed on pavement courses, the relative compaction shall be in accordance with the requirements of AS 2876. Where placed on pavement courses, the foundation shall be compacted to the requirements of the respective pavement course. The foundation material in all cases will be subject to Superintendent's approval. This action constitutes a **HOLD POINT**. The Superintendent's approval of the foundation material is required prior to the release of the hold point.

C229.08 KERB

Kerb may be constructed in fixed forms, by extrusion or by slip forming in accordance with AS 2876.

The foundation, concrete quality, curing and testing details shall be in accordance with AS 2876.

The top and face of the finished kerb shall be true to line and the top surface shall be of uniform width, free from humps, sags or other irregularities.

When a straight edge 3m long is laid on top of or along the face of the kerb, the surface shall not vary more than 5mm from the edge of the straight edge, except at kerb laybacks, grade changes or curves or at gully pits requiring gutter depression.

Unless shown otherwise on the Drawings, contraction joints, shall be formed every 3m length for a minimum of 50 per cent of cross sectional area. The joint shall be tooled 20mm in depth to form a neat groove of 5mm minimum width.

Unless shown otherwise on the Drawings, expansion joints, 15mm in width for the full depth of the kerb, shall be constructed at intervals not exceeding 15m and where the kerb abuts against pits, retaining walls, overbridges and at both sides of kerb laybacks for vehicular or pedestrian access. Expansion joints shall consist of a preformed jointing material of bituminous fibreboard or equivalent approved by the Superintendent.

Where kerbs are cast adjacent with a concrete pavement the same type of contraction, construction and expansion joints specified in the concrete base shall be continued across the kerb.

All existing house stormwater outlets shall be reconnected and extended where necessary through the new kerb as shown on the Drawings

Opposite all driveways, where shown on the Drawings or where directed by the Superintendent, barrier kerb shall be discontinued to provide for vehicular or pedestrian access. At such locations, kerb laybacks shall be constructed in accordance with the Drawings. Footpath crossovers shall be constructed to meet laybacks as shown on the Drawings, or reinstated to match existing materials where not otherwise shown.

Where applicable the top of gully pits shall be reconstructed, or precast units adjusted, to suit new kerb profile in accordance with Specification for MINOR CONCRETE WORKS.

C229.09 BACKFILLING AND RESTORATION

Backfill material behind the kerb shall consist of granular material, free of organic material, clay and rock in excess of 50mm diameter, or material as approved by the Superintendent." Key words "Backfill Material.

After the new kerb has been constructed and not earlier than three days after placing, the spaces on both sides of the kerb shall be backfilled and reinstated in accordance with the Drawings, or as instructed by the Superintendent, free draining and free from surface undulations and trip hazards and in accordance with any surface treatment shown on the Drawings.

Backfill material behind the kerb shall be compacted in layers not greater than 150mm thick, to a relative compaction of 95 per cent when tested in accordance with AS 1289.5.4.1, for standard compactive effort. The whole of the work shall be finished in a neat and workmanlike manner.

Pavement material adjacent to new kerb shall be backfilled in accordance with the Drawings or as directed by the Superintendent.

C229.10 ADJUSTMENT TO GULLY PITS

In the event that adjustment of line or level of the kerb requires adjustments in gully pits the Contractor shall undertake any necessary partial demolition and shall re-construct such sections of the gully pits as are necessary to match the design standard of the existing gully pit.

Any new wall sections in concrete or brick shall be securely fixed to the retained wall section. The procedure shall be outlined in writing for Superintendent's approval 24 hours prior to commencement of demolition work.

In all cases the hydraulic capacity of the original gully pit shall be retained or improved. Cavity shapes shall be regular and oriented so as not to impede flow into and out of the pit.

SPECIAL REQUIREMENTS

C229.11 RESERVED

The limits and tolerances applicable to the various clauses in this Specification are summarised in Table 229.1 below:

Item	Activity	Limits / Tolerances	Spec Clause
1	Kerb		
	a) Compaction of Foundation	to AS 2876	229.07
	b) Level of gutter surface	Level $\leq \pm$ 10mm of design level	229.08
	c) Surface uniformity	Deviation kerb surface from 3m straight edge \leq 5mm	229.08
	d) Contraction Joints		
	i)Area	\geq 50% of CS area	229.08
	ii)Groove Width	\geq 5 mm	229.08
	e) Expansion Joint Interval	\geq 15mm	229.08
2	Backfill behind Kerb		
	a) Layer thickness	\leq 150mm	229.09
	b) Compaction	\geq 95% (standard compaction)	229.09

Table 229.1 - Summary of Limits and Tolerances

MEASUREMENT AND PAYMENT

C229.13 PAY ITEMS

Payment shall be made for all the activities associated with completing the work detailed in this Specification on a Schedule of Rates basis in accordance with Pay Items 229(a) and 229(b).

A lump sum price for any of these items shall not be accepted.

If any item, for which a quantity of work is listed in the Schedule of Rates, has not been priced by the Contractor, it shall be understood that due allowance has been made in the prices of other items for the cost of the activity which has not been priced.

Excavation, removal and disposal of existing kerb and the reconstruction of drainage structures is measured and paid in this Specification and not in the Specification for MINOR CONCRETE WORKS.

Control of pedestrian and vehicular traffic is measured and paid in accordance with the Specification for CONTROL OF TRAFFIC.

Pay Item 229(a) KERB

The unit of measurement shall be the linear metre measured along the length of the kerb including kerb laybacks and perambulator ramps.

The schedule rate shall include all operations involved in the removal and disposal of existing kerb, excavation, forming, compaction of foundations, provision of base, concreting, expansion and contraction joints, backfilling and compaction adjacent to the completed kerb, and making good adjacent surfaces as shown on the Drawings.

Separate pay items shall be included for each type of kerb specified.

Pay Item 229 (b) ADJUSTMENTS TO GULLY PITS

The unit of measurement shall be "each" for the drainage structures scheduled.

The schedule rate shall include all operations involved in cutting back, adjustment, concreting and backfilling.