

CITY OF DURBAN

STANDARD ENGINEERING SPECIFICATION

PART "EF"

KERBS AND HAUNCHES

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PART EF

KERBS AND HAUNCHES

EF.1 **SCOPE**

This specification covers the manufacture and supply of precast concrete kerbs and extruded asphalt and concrete haunches.

EF.2 **INTERPRETATIONS**

Definitions for this specification are included in Part AB : General Specifications.

EF.3 **MATERIALS**

EF.3.1 Concrete

The grade of concrete for all cast in-situ work shall be grade 20/13 as specified in Part "C" : Concrete Works.

EF.3.2 Polysulphide Sealer

The sealer shall conform to B.S.4254 of 1967 - Two part polysulphide based sealants for the building industry, as amended.

EF.4 **PLANT**

Plant shall be approved extruded haunching machines.

EF.5 **CONSTRUCTION**

EF.5.1 Precast Kerb and Cast-In-Situ Channel

EF.5.1.1 Manufacture

All kerbs shall be precast, supplied in 1 m lengths and shall conform to the requirements of S.A.B.S. 927 of 1969 - Precast concrete kerbs and channels as published in General Notice 463 dated 9 July 1982.

If the curve radius is less than 25 m, but greater than 2 m, the maximum permissible length of kerb shall be 300 mm. Where the kerb radius is less than 2 m the kerb and channel shall be cast-in-situ.

It is essential that moulds are manufactured and braced from a material which will not warp or distort after repeated use.

EF.5 CONSTRUCTION (CONT'D)

EF.5.1 Precast Kerb and Cast-In-Situ Channel (Cont'd)

EF.5.1.2 Laying and Jointing

Kerbs and in-situ channels shall be laid on a concrete foundation true to line and level to the dimensions shown on the contract drawings. The correct grade and line shall be maintained by use of an approved cord or line. The Contractor shall place sufficient pegs to ensure that the kerbs are laid on a true curve and NOT in a series of chords. Levels shall be adhered to strictly, particularly when graded channels are required between inlets. Kerbs shall be laid with a 13 mm gap and this joint shall be filled with cement mortar and the outside face of the joint shall be struck with a semi-circular jointer.

In addition, suitable expansion joints 13 mm in width shall be provided at $\pm 18,0$ m centres through kerb, channel and supporting concrete. This joint shall consist of a compressible material and polysulphide filler which shall match the colour of the concrete.

Contraction joints shall be formed through the channel only at 2,0 m centres opposite joints in the kerbing.

The precast items and cast-in-situ channels shall be protected from damage from the remaining road construction operations.

EF.5.1.3 Classification of Kerbs

Kerbs are classified according to four main types as follows :

(a) Barrier kerb with channel/fillet

This type of kerb shall be used where the longitudinal grade of the road is greater than 0,5% (1 to 200). The 'show' on the kerb shall be kept constant between inlets.

(b) Barrier kerb with graded channel

This type of kerb shall be used when the crossfall of the road is towards the kerb and where the longitudinal grade of the road is less than 0,50% (1 in 200). In this instance channels shall be graded between inlets by varying the 'show' on the kerb from a minimum at the apex point to a maximum at the inlet, thereby ensuring a minimum grade of 0,50% (1 in 200) in the channel.

(c) Mountable kerb and channel/fillet

This type of kerb shall be used for traffic islands where exposed nosings would create a hazard. The change to standard barrier kerb shall be effected by special transition kerb stones.

EF.5 **CONSTRUCTION (CONT'D)**

EF.5.1 Precast Kerb and Cast-In-Situ Channel (Cont'd)

EF.5.1.3 Classification of Kerbs (Cont'd)

(d) Scoop kerb and channel/fillet

This type of kerb shall be used to provide vehicle entrances and pedestrian crossings. The change to standard barrier kerb shall be effected by special transition kerb stones.

EF.5.2 Extruded Asphalt Haunch

Where specified, the Contractor shall construct by machine a suitably moulded asphalt haunch on the edge of the hardened surface. The haunch shall consist of dense hot asphalt as specified in Part "EG" to dimensions as shown on the drawings and finished true to the line and level of the road. The asphalt haunch shall be laid on a tack coat applied at the rate of 0,3 l/m².

EF.5.3 Extruded Concrete Haunch

Where specified, the Contractor shall construct by machine a suitably moulded concrete haunch on the edge of the hardened surface.

The haunch shall be constructed to dimensions shown on the drawings and finished true to the line and level of the road. Contraction joints shall be formed every 2 m and expansion joints every 6 m on straight sections and every 2 m on curves having a radius less than 50 m shall be formed as specified in clause EF.5.1.2.

The finish to the haunch shall be smooth and if necessary, the Contractor may be required to steel trowel the concrete haunch to attain the smooth finish.

The haunch shall be protected from damage from the remaining road construction operations.

EF.6 **TOLERANCES**

EF.6.1 Precast Kerb and Cast-In-Situ Channel

The maximum tolerance shall be a line and level difference of ± 3 mm in 3 m.

EF.6.2 Asphalt and Concrete Haunches

The tolerances in level shall conform to those specified for the smoothness of the wearing course.

Horizontal alignment shall not depart from the design line by more than 10 mm and the rate of deviation from the design line or level shall not exceed 1%.

EF.7 **TESTING**

The Contractor shall supply samples of the precast units free of charge to the Physical Environment Service Unit, Materials Laboratory, Old Fort Road, Durban for testing.

EF.8 **MEASUREMENT AND PAYMENT**

EF.8.1 Precast Kerb and Cast-In-Situ Channel

The unit of measurement shall be the metre (m) and the rate shall cover the supply of all precast items, including transporting, loading, laying and jointing (including all expansion joints and sealer), cast-in-situ concrete foundation, including mixing, laying, float finishing, setting out of kerb and channel, all supervision, plant, testing, labour, equipment, materials, protection and incidentals necessary to complete the work as specified.

N.B. (a) Excavation for kerb and channel is not included

(b) When transition kerb is specified, it shall be measured and paid for under items for mountable kerb and channel and scoop kerb and channel in the Schedule of Quantities.

EF.8.2 Asphalt and Concrete Haunches

The unit of measurement for the haunches shall be the metre (m) and the rate shall cover laying, supervision, protection, labour, plant, supply of all material and application of tack coat.