ACS1010 Access roads and pathways

Contents

ACS1010.1 Scope

This specification covers the construction and materials for access roads and pathways in private land, parks, and reserves. It does not cover roads and footpaths in highway corridors which shall comply with the Auckland Transport Code of Practice (ATCOP).

ACS1010.2 Materials

ACS1010.2.1 Basecourse

Basecourse for footpaths and access tracks shall be GAP40 granular material complying with Auckland Council Standard Specification ACS510 Earthworks Table 1.

ACS1010.2.2 Bedding sand

Bedding sand shall comply with NZS3116, Clause 309, Sand Category III.

ACS1010.2.3 Jointing sand

Jointing sand shall comply with NZS3116, Clause 311.1.

ACS1010.2.4 Jointing mortar

Jointing mortar shall comply with NZS4210.

ACS1010.2.5 Asphalt

Asphaltic concrete for footpaths and access tracks shall comply with NZTA M10 mix designation DG7 or DG10.

ACS1010.2.6 Concrete

Concrete for footpaths and access tracks shall comply with Auckland Council Standard Specification *ACS610 Concrete Construction*, with a minimum 28-day compressive strength of 20 MPa.

ACS1010.2.7 Clay/concrete pavers

Clay and concrete pavers shall comply with AS/NZS 4455.2. Table 1: Minimum paver requirements indicates the minimum requirements for pavers, according to NZS 3116, Table 1 for particular applications, unless otherwise specified.

Table 1: Minimum paver requirements

Application	NZS 3116 Table 1 Classification
Footpaths in reserves	3 – Public footpaths – high impact
Footpaths in highway corridors	3 – Public footpaths – high impact
Access roads in reserves	4 – Roads - minor
Car parks	4 – Roads - local
Maintenance hardstanding areas	4 – Roads - local

ACS1010.2.8 Storage of materials

Materials shall be stored strictly in accordance with the manufacturer's requirements.

ACS1010.3 Tolerances

The horizontal position tolerance for footpaths and access tracks, at any point along the length of the installation, shall be within ±30 mm from the specified design. Notwithstanding this, any new section of footpath or access track shall align exactly with any existing paving.

The subgrade shall be +0 mm, -20 mm for level at a point and within 15 mm departure from a 3 m straight edge. Notwithstanding this, the subgrade shall not pond water.

The vertical position tolerance for footpaths and access tracks, at any point along the length of the installation, shall be within ±10 mm from the specified design. The surface shall not pond water. The deviation from a 3 m straightedge shall not exceed 8 mm and the difference between adjacent pavers and/or any existing paving shall not exceed 2 mm.

Asphalt and concrete surface layer thicknesses shall be within -0 mm to +10 of the specified thickness.

ACS1010.4 Subgrade preparation

The subgrade shall be shaped and trimmed to the specified profile and levels and compacted to provide uniform support to the pavement. The compacted subgrade shall be checked for strength and any weak areas and organic material shall be removed and replaced with well-compacted GAP40.

For asphaltic concrete and paver footpaths and access roads, where the subgrade has a CBR<3, it shall either be improved until the CBR meets or exceeds 3.0% or the basecourse thickened as agreed with the Engineer.

ACS1010.5 Basecourse

Unless otherwise specified, the basecourse shall be 200 mm thick, well-compacted GAP40 and achieve >95% MDD and <8% air voids.

For pavers, 30 mm of compacted bedding sand shall be placed on the basecourse.

ACS1010.6 Laying bedding sand

Bedding sand shall be laid loose with screeds over the prepared basecourse to a thickness that will achieve a compacted thickness of 30 mm unless otherwise specified.

Temporary screed boards shall be used where screed widths exceed 5 m.

During laying, the bedding sand shall be at a uniform water content and shall be protected against compaction or traffic until the pavers have been laid.

A minimum extent of bedding sand shall be laid ahead of paver laying to avoid compaction problems. Bedding sand shall not be allowed to remain without pavers being laid overnight.

ACS1010.7 Surfacing

ACS1010.7.1 General

Chamber lids are to be re-levelled to match the cross-fall. They should be flush with the surrounding surface area. A step of no more than 5 mm is permissible.

ACS1010.7.2 Concrete

All new concrete footpath construction must have one layer of centrally placed 665 mesh installed, in the following locations:

a) Within 1.5 m of any service cover or manhole located in the footpath

b) Within 3 m of any vehicle crossing.

All concrete must be membrane or water cured for 5 days prior to usage. The footpath must be protected from vehicular wheel loads during the initial 28-day concrete curing period.

Control joints (transverse) must be established at a spacing of no greater than 3 m intervals. Saw cut joints, if used, are to be to a depth of 1/3 of the thickness of the footpath. Saw cuts are to be made no later than two days after the concrete has been cast. In order to prevent trips/falls – there must be no lips/steps greater than 5 mm at slab joints.

To prevent cracking at: re-entrant corners, restraints caused by manhole chambers and restraints caused by light poles etc., the slab must include diagonal 16 mm diameter stitching bars at each corner. Bars are to be 900 mm long fitted centrally into the slab depth.

ACS1010.7.3 Asphaltic concrete

Edging must be a minimum of 100 mm by 25 mm H4 treated timber edge boards. These are to be staked at a maximum spacing of 500 mm with 30 mm by 30 mm H4 pegs with a minimum length of 225 mm.

The surface on which the asphalt is to be placed shall be dry.

Asphalt shall not be placed when the pavement surface temperature is less than 5°C.

The air voids shall be within the range 3% to 5%. A hand-operated roller weighing not less than 135 kg, or a self-propelled roller shall be used. Areas inaccessible to a roller shall be compacted with hand operated hot tampers.

ACS1010.7.4 Clay/concrete pavers

Pavers shall be laid together, to the specified pattern, on the screeded bedding layer.

Joint widths shall be in the range of 2 mm – 4 mm. Where pavers have raised spacer nibs, the above joint widths shall apply to the portions of the pavers that are not raised.

The pavers shall be settled into the sand bedding and compacted by not less than two passes of a heavy-duty plate compactor (300-600 kg static weight and 30 – 65 kN centrifugal force). Compaction shall follow as close as possible to the laying face but not within 1 m.

Any paver damaged during compaction shall be replaced.

ACS1010.7.4.1 Sand jointing

Jointing sand shall be sufficiently dry to run freely. As soon as practicable after compaction, jointing sand shall be swept across the pavers and worked into the joints by further passes of the compactor. Joints must be completely filled with dense sand.

ACS1010.7.4.2 Mortar jointing

Mortar joints shall only be used where specified in the Particular Specifications or Drawings. Requirements for placing mortar shall comply with the Particular Specifications.

ACS1010.8 Aesthetic treatments

Aesthetic treatments including surface finishes, dies and screeds shall be as specified in the Particular Specifications or on the Drawings.