Private Way Guidance Document

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Thanks is extended to Glenn Broadbent as a technical expert who contributed significantly to the development of this Private Way Guidance Document.

Future revisions

Auckland Council intends to provide future revisions to this guideline periodically in response to changes in legislation, policies, technologies, national standards, and feedback from the industry. Feedback on GD12 can be sent to privatewaysgd12@aucklandcouncil.govt.nz using the feedback form on the Auckland Design Manual website.

Note: Reference is made to the Proposed Plan Change 79, Auckland Unitary Plan Operative in Part in this document. Once the Plan change 79 has been finalised, this document will be updated to ensure that reference is aligned to the Auckland Unitary Plan E27 Transport and E38 Subdivision.

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List of definitions

AEP	Annual Exceedance Probability
All-weather surface	A surface that will not deteriorate, move or be negatively affected through changes in weather conditions and storm events. Examples include concrete, asphalt or other paving specifically designed for vehicles. It does not include aggregate or other soils.
AUP	Auckland Unitary Plan
Bedding/Base Course	The granular layers below the final finished surface and sub-base, if applicable
CAR	Corridor access request
CBR	California Bearing Ratio
Drainage	All drainage associated with access such as, but not limited to, catchpits, leads, swales or table drains and treatment devices
Engineer / Suitably qualified and experienced person	Where referenced in this document as per the Auckland Unitary Plan: • A Suitably Qualified and Experienced Person is defined as "a person who can provide sufficient evidence to demonstrate their suitability and competence" • Engineer means the applicant's suitably qualified and experienced person responsible for the design and certification of the private way, and • Registered professional surveyor
Heavy vehicle	A vehicle with a gross vehicle mass of more than 3500 kg
LTNZ	Land Transport New Zealand
Private way	An accessway serving multiple owners, dwellings or lots and where access is shared and maintained by property owners. This can be applied in various ways, e.g. right of way (ROW) easement as servient/ dominant tenements, commonly or jointly owned access lots. The private way is to provide unimpeded access.
Regulatory Engineer (RE)	The Engineer acting on behalf of Auckland Council
RMA	Resource Management Act
ROW	Right of Way
STMS	Site Traffic Management Supervisor
Sub-base	The granular layer above the subgrade. Commonly used materials are GAP 65 and GAP 40[1]
Subgrade	Prepared ground surface prior to application of granular layers/pavement
TMP	Traffic Management Plan as in accordance with NZTA's Code of Practice for Temporary Traffic Management

[1] Note: All granular layers should be laid at a thickness no less than two and a half times the maximum stone size.

1.0 Introduction

This document concerns the technical elements of residential (urban, commercial and rural) footpaths and berms for private ways serving multiple owners, dwellings or lots.

Reference should also be made to the controls and regulations set out within the Auckland Unitary Plan (AUP), Local Government Act, Resource Management Act (RMA) and the Building Act.

1.1 Aim of this document

The aim of this document is to provide minimum requirements and guidance for the design and construction of private ways for Engineers as defined below.

The objectives are to ensure that:

- Private ways provide for safe and effective access to dwelling and parking areas for vehicles, emergency and maintenance vehicles, children and pedestrians
- Private ways are constructed to a suitable standard to ensure durability and avoiding nuisance to users and the general public
- Environmental changes, such as stormwater and contaminant runoff, are adequately managed.

1.2 Reference documents

NZS 3109:1997	Concrete construction
NZS 3114:1987	Specification for concrete surface finishes
NZS 4431:1989	Code of practice of earth fill for residential development
NZS 4404:2010	Land development and subdivision Infrastructure
AS/NZS 1170	Structural design actions

2.0 General design considerations

The design and construction of all private ways is to comply with and meet the requirements of the AUP, the Local Government Act and applicable NZ Standards, Resource or Building Consents.

Engineering Plan approval from Auckland Council, Regulatory Engineering, is required for all private ways. Refer Section 7.0, Consenting.

Alternative standards or materials may be acceptable but are at the discretion of the Regulatory Engineer and are to be presented with supporting information. For this document, concrete is the preferred material. All others such as asphaltic concrete, permeable pavers, cobblestone, chip seal, etc. are considered alternatives requiring specific design and approval.

2.1 Health and Safety

All construction work needs to meet the requirements of the Health & Safety at Work Act (2015)[2].

Where works are required in the road reserve, a Corridor Request Access (CAR) and a Traffic Management Plan (TMP) will be required. The TMP is to be set up and maintained by a certified Site Traffic Management Supervisor.

Safety-in-design needs to be addressed and is generally covered in this document, e.g. grades, batters, requirement for barriers, surfaces on steep grades, road name blades etc. However, the reader is to refer to other codes, where required.

Road name blades are required for those developments that result in five lots or greater. Access to restricted sites (such as gated communities) need to ensure emergency services have 24-hour access. Consideration for physical impairment in design must be taken to provide safe and effective access and egress.

2.2 Environmental considerations

Low impact and sustainable design (e.g. use of swales and vegetated strips for runoff and water quality, permeable paving) needs to be considered as part of private way implementation. Designers are encouraged to consider private ways that reduce impervious surfaces and promote green spaces.

[2] For all inspections, the Regulatory Engineer is to follow the requirements of the SWMS process, complete & submit all applicable forms, and update SAP accordingly. The Regulatory Engineer must have a current Site Safe card before entering construction sites.

The Designer should refer to The Countryside Living Toolbox, GD01 (Stormwater Management Devices in the Auckland Region) and other applicable documents such as manufacturers' specifications.

For construction and earthworks, the Engineer needs to ensure all applicable codes and measures are followed. The Designer should check the area of earthwork and volume thresholds that may trigger a land use consent. GD05 (Erosion and Sediment Control Guide for Land Disturbing Activities) is to be followed to minimise the effects of any associated earthworks.

Silt sedimentation controls must be in place prior to commencement of works. The site must be stabilised immediately, including adequate grass strike, upon completion.

Subdivision conditions and consent notices need to be applied to ensure residents' societies/body corps are aware of their obligation for satisfactory long-term, safe operation and maintenance of private ways.

2.3 Stormwater control

All private way surfaces are to be designed and built to collect stormwater and dispose of it via a suitable system such as swale drains, dish channels, water tables or kerb and channel.

Design is required to address the following:

- Prevention of scour and erosion
- Catering for the private way and contributing catchment
- Application of crossfall to ensure surface water is collected and discharged to catchpits
- Specific design of catchpit locations and spacings.

Secondary overland flow paths may require that the private way conveys runoff exceeding a 10% Annual Exceedance Probability (AEP) event. The consent notice needs to ensure the flow path is maintained as designed and remains unobstructed. The Designer is to ensure flows are directed away from buildings and neighbouring properties (including the road reserve). This can be achieved by (but not limited to) the use of crossfalls and strip drains.

Where water may flow over the private way (or footpath if integral with the private way) in a 1% AEP storm, the depth of flowing water must not exceed 200 mm, and a velocity of 1 m/s. The Designer must provide flood markers and consider the use of permeable wheel restraints, and adequate fencing/guardrails over the full length of the area where potential overtopping can occur.

Reference is to be made to the SWCOP (Stormwater Code of Practice) Chapter 4 on the Auckland Design Manual website.

2.4 Service strips

Service strips are required and vary in width depending on the number of sites (see Table 1 below). Unless otherwise approved, service strips are to be topsoiled and grassed, or be located underneath the footpath, to the satisfaction of the Regulatory Engineer. For further detail on service strips, refer to Section E38.8.1.2 of the AUP and Table 1 in Section 3.5 below.

2.5 Retaining walls

Building consents are required for retaining walls that involve a surcharge from either vehicle loading and/or any other surcharge e.g., back slope.

2.6 Waste management

If waste collection is to be by kerbside collection from the public road corridor, at the Resource Consent Stage, design approval for safe collection of waste from the street instead of kerbside will be required from Auckland Transport.

If removal of waste is within the designated private way, the method of waste removal needs to be assessed early at the Site Design/Resource Consent Stage to ensure a safe and effective method of refuse, recycling and food scraps collection is implemented. It is also noted that specific design approval will be required from Waste Solutions within Auckland Council[3].

Developments using on-site collection must include:

1) Adequate on-site manoeuvring/turning space and loading areas to ensure vehicles can enter and exit the site in a forward direction (refer to Transport Rule E27.6.4.3A).
2) The waste collection area is not to be at a grade more that 1:8 or no more than 12.5%.
3) A space of at least 1 m^2 per dwelling in an accessible location for the waste collection vehicle to access individual bins from the private way, is to be designed and constructed to the satisfaction of the Regulatory Engineer.
4) An accessible location for the collection of communal bins by a collection vehicle within the private way.

It is important that the private way is engineered to carry the weight of and width of the necessary vehicles to gain access to the waste collection without being impeded or impeding hydrants, or other infrastructure such as swales, raingardens, etc.

[3] Note: The consent application number together with the design should be emailed to wastesplanconsent@aucklandcouncil.govt.nz

The acceptable solutions in the NZ Building Code C/AS1 Part 6 uses the following dimensions for fire appliance access, and which is also applicable to waste collection vehicles:

1. Be able to withstand a minimum laden weight of 25 tons with a single axle load of 8 ton serving the property, whichever is the lower.
2. Be trafficable in all-weather/s.
3. Have a minimum width of 4.0 m.
4. Provide a clear passageway of no less than 3.5 m in width and 4.0 m in height at site entrances, internal entrances and between buildings.

It should be noted that the NZ Building Code does not require fire vehicles to be able to turn around on the site. It is however, (where waste collection is to be from within the private way), a requirement for waste collection vehicles to turn around and have safe turning points provided. This would not be required where the private way has an unimpeded one-way entry and exit on to the road carriage way.

2.7 Heavy vehicle access

Where heavy vehicles, such as waste removal, commercial activity or construction, will need to pass over a private way, specific design and approval will be required. A new standard titled "Heavy Vehicle Access" has been created in the AUP plan change (Refer E27.6.3.4A) which covers:

- Provide sufficient space to avoid reversing
- Provide pedestrian access
- Provide tracking curves as per Land Transport New Zealand (LTNZ) RTS18 guidelines.

2.8 Bridges, culverts and fords

All bridges and cast-in-situ box culverts will require a Building Consent under the Building Act 2004. Precast box culverts and other culverts over 1 m diameter may be subject to a Building Consent under the Building Act 2004. This includes all culverts over 1 m in diameter, where a restraint or handrail is required by consent.

Bridges and culverts under private ways are likely to be subject to a Resource Consent. The Designer needs to check AUP requirements.

Culverts shall be designed by the Engineer and in accordance with the National Environmental Standards for Freshwater for the passage of fish in all perennial streams or in any other location where the presence of fish is likely.

Bridge design shall conform to the technical requirements of the NZ Bridge Manual. All bridges shall have a minimum 500 mm clearance above the 1% AEP flood level.

For existing bridges on private ways, a recent certification by a suitably qualified Engineering Professional shall be provided to the Regulatory Engineer.

All fords must be constructed with 20 MPa concrete[4] at a minimum of 150 mm thick for a minimum of 5 m beyond the extent of the 1% AEP event to limit scour where flows cross the private way.

Where a private way is intended to cross a defined flood plain, the effects of the proposed private way is required to be modelled by the Engineer. The impacts indicated by the model and consequent assessment of effects will be used to determine the vertical alignment of the private way. Consideration must be given to:

a) Effects of heading up

b) Embankment stability

c) Overtopping

d) Scour of both embankment and stream.

2.9 Footpaths in private way

The AUP provides guidance for where footpath access is required. Refer to Section E27.6.6 (see Appendix A1.0 for further details). The Designer needs to consider pedestrian safety by vertical or horizontal separation from vehicle access. See standard Auckland Transport kerb design for details at https://at.govt.nz/media/1982218/kerb-design.pdf.

Footpaths are to be designed with a cross fall of 3% and constructed of an all-weather slip resistant surface and be a minimum width of 1.35 m for 10-19 dwellings and 1.8 m for 20 and more.

Service covers, grates etc. need to be located outside the designated footpath area. Where this cannot be achieved, mitigation measures shall be provided. For alternative materials, specific approval will be required.

Concrete used in footpaths shall be of at least 20 MPa and 100 mm thick unless it can be demonstrated that the footpath has sufficient separation (vertical or horizontal) where it may be 75 mm thick. Control joints to be in accordance with Section 4.2 below.

Pram and wheelchair crossing or other access points to the private way shall be constructed in accordance with ACCOP Chapter 3 (Transport).

[4] The designer should be familiar with the requirements of NZS 3101 and where required may need to increase the MPa of the concrete.

Pedestrian access required by E38.8.1.2 (Auckland Unitary Plan Operative in Part – Proposed Plan Change 79) must meet all the following:

Note 1

(3) Accessways serving six or more rear sites must provide separated pedestrian access

(4) The pedestrian access required by E38.8.1.2 (3) must meet all of the following:

(a) have a minimum width of 1.3 5 m

(b) can include the service strip; and

(c) the requirements of Table E27.6.4.3.3 and Figure E27.6.4.3.1; and

(d) the requirements of Table E27.6.6.2.

(5) Accessways exceeding 30 m in length must meet the speed management measures specified by Table E27.6.4.3.3.

2.10 Lighting & electrical

Where there is a requirement by the Resource Consent, lighting is to be provided in the private way. This is in accordance with E27.6.3.7 (see Appendix B1.0) where there are ten or more parking spaces/dwellings. The lighting shall comply with the conditions of consent and be covered by Engineering Approval. For guidance see Section E24.6.2 of the AUP (see Appendix C1.0).

All lighting is to comply with AS/NZS1158.3.1:2020 *Australian/New Zealand Standard Lighting for roads and public spaces (Part 3.1: Pedestrian Area (Category P) lighting – Performance and design requirements.*

Provision for electric vehicles may be required, refer to E27.6.7.

3.0 Geometry

The formed/constructed width of the private way shall be in accordance with Section E27 of the AUP. Widths and minimum inside radius of curves shall be 6.5 m as per the table in Section 3.5. Passing bays, queuing spaces and associated detail are covered later in the document.

3.1 Crossfalls

Crossfalls on sealed surfaces should be 3% and for aggregate surfaces, 5-6%. In all situations, the private way shall be constructed at grades to ensure water does not pond on the surface.

3.2 Gradients

The maximum longitudinal gradient is not to exceed 1 vertical to 5 horizontal and shall be detailed as follows:

- Not be steeper than 1 in 5 along the shortest route, e.g. internal radius
- The first 4 m of vehicle access (from the road boundary) (and in the case of heavy vehicles, the first 6 m access) shall be not steeper than 1 in 20
- Water tables and swales should not be less than 1 in 100
- Manoeuvring areas shall be no steeper than 1 in 8
- For curved ramps and private way, the gradient is measured along the inside radius (refer to Figure E27.6.4.4.1 [pg.3]).

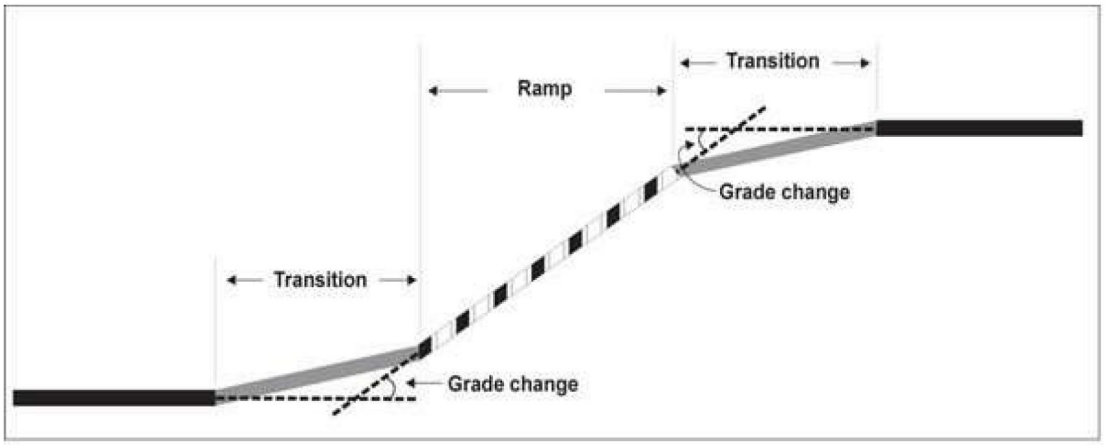
Where a private way is steeper than 1 in 6, Auckland Council's Regulatory Engineer is to be invited to the site to undertake a check of the gradient, and other elements (such as shading, safety and alternatives), prior to design approval. The Regulatory Engineer is to also carry out a check of the gradients and geometry before pouring concrete or placement of other surfaces. Where gradients are approved to be steeper than 1 in 6, as-built plans (including long section) are to be provided to confirm the built grade.

3.3 Grade transitions

Grade transitions shall be in accordance with E27.6.4.4.2 of the AUP:

> " *To avoid the underside of the car striking the ground, as illustrated in Figure E27.6.4.4.2, access with a change in gradient exceeding 1 in 8 (greater than 12.5% change) at the summit or a 1 in 6.7 (15% change) at a sag must include transition sections to achieve adequate ground clearance, refer to Figure E27.6.4.4.3 below. Typically, a transition section requires a minimum length of 2 m".*

Figure E27.6.4.4.3 Gradient transition

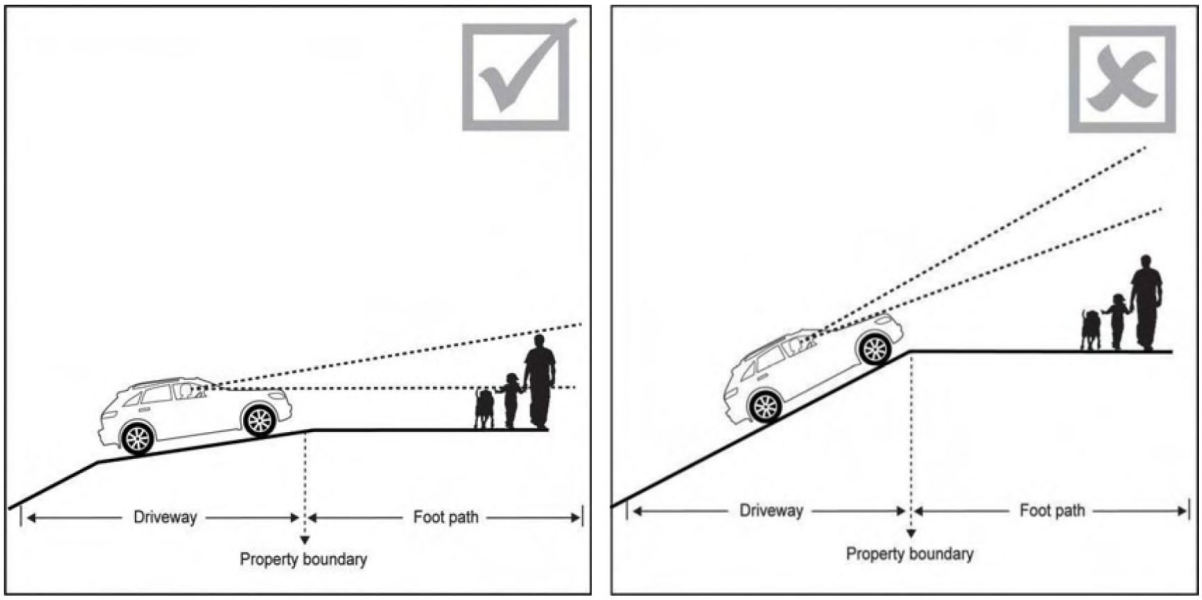


3.4 Visibility on private ways

Refer to AUP Section E27.6.4.4 *"Gradient of Vehicle Access"*. See Figure E27.6.4.4.4. also shown below.

The Designer needs to consider the operational safety of the finished access. Part of the assessment should include (but not be limited to) such things as heights of pedestrians (both on the public road and the access itself), manoeuvring, reversing, grades, curves and the like.

Figure E27.6.4.4.4 Illustrating the benefits of a level platform



Correct Incorrect

Reverse manoeuvring is discouraged, (refer to Section E27.6.3.4 of the Unitary Plan):

E27.6.3.4 Reverse manoeuvring

(1) Sufficient space must be provided on the site, so vehicles do not need to reverse off the site or onto or off the road from any site where any of the following apply:

(a) four or more parking spaces are served by a single access;

(b) there is more than 30 m between the parking space and the road boundary of the site; or

(c) access would be from an arterial road or otherwise within a Vehicle Access Restriction covered in Standard E27.6.4.1 or

(d) vehicle access is required in accordance with E27.6.3.4.A.

Egress from the private way to the public road requires assessment for sightlines to ensure safety to road users and residents alike. See RTS6: https://www.nzta.govt.nz/resources/road-traffic-standards/rts.html for assessment guidance. Further assessment may be required under Austroads.

3.5 Widths

There will be governing factors determining the width of the private ways – boundaries, provisions for passing, bends, utility areas, parking, pedestrians, and possibly such things as speed calming by narrowing.

See Table 1 for direction on appropriate widths in relation to proposed sites/ parking spaces for urban areas.

Table 1: Access to rear sites - Urban

	Total number of rear sites served		
	1	2-3	4-10
Minimum legal width	3.0 m	3.5 m	6.975
Minimum formed width	2.5 m	3.0 m	5.5 m
Minimum service strip	0.5 m	0.5 m	1.0 m
Maximum length	5 0m	50 m	100 m
Maximum gradient	1 in 4	1 in 5	
Minimum vertical clearance from buildings or structures	3.8 m		
Minimum inside turning radius for bends	6.5 m		

Source: Table E38.8.1.2.1 Access to rear sites (E38 of AUP)

3.6 Passing bays

Passing bays shall be provided in accordance with Table 2.

Table 2: Passing bay requirements

Zone		Length of access	Width of access	Max intervals between passing bays	Passing bay width
(T147)	Rural	Exceeds 100 m	Less than 5.5 m	100 m	Increase formed width of access to 5.5 m over a 15 m length (to allow vehicles to safely pass each other)
(T148)	All other zones	Exceeds 50 m		50 m	Increase formed width of access to 5.5 m over 7 m with 45º tapers

Source: Table E27.6.4.3.1 from the Auckland Unitary Plan.

The Unitary Plan states that "*the formed width is permitted to be narrowed to 2.75 m if there are clear sight lines along the entire access and passing bays at 50 m intervals are provided. Increase formed width of access to 5.5 m over 7 m with 45º tapers.*"

The AUP specifies minimum width at the site boundary. A two-way crossing at the road boundary is required for 10 or more parking spaces. Refer Table E27.6.4.3.2 of the AUP.

Passing bays should be designed to avoid queuing onto a legal road or obstruct the entry to or exit from the site. Passing bay gradients shall not exceed 1 in 8. In considering passing bay location, the Designer should give specific attention to such places as around bends and over vertical curves or where visibility is obscured.

4.0 Pavement types and design

4.1 Subgrade, subbase, bedding

The CBR[5] of the subgrade is to be determined during the design phase to establish the structural pavement and required depth of granular layers. The subgrade is to be inspected by the Engineer to ensure consistency prior to subbase or bedding material. The subgrade needs to be formed to shed moisture in the granular layers, typically 3% either as a single crossfall or in a crown type formation.

4.2 Concrete surfacing

Private ways are to be constructed in concrete unless one of the alternatives as defined in Section 4.3 below has been approved.

All concrete is to be 20 MPa and constructed in accordance with NZS 3109:1997, with a broom finish[6]. Specific design may be required for private ways where axle loads are above standard residential requirements. The following notes in Figure 1 below are to be followed:

[5] California Bearing Ratio

[6] Note: High friction surfacing may be required in certain situations such as steep grades or highly vegetated areas, to be determined by specific design.

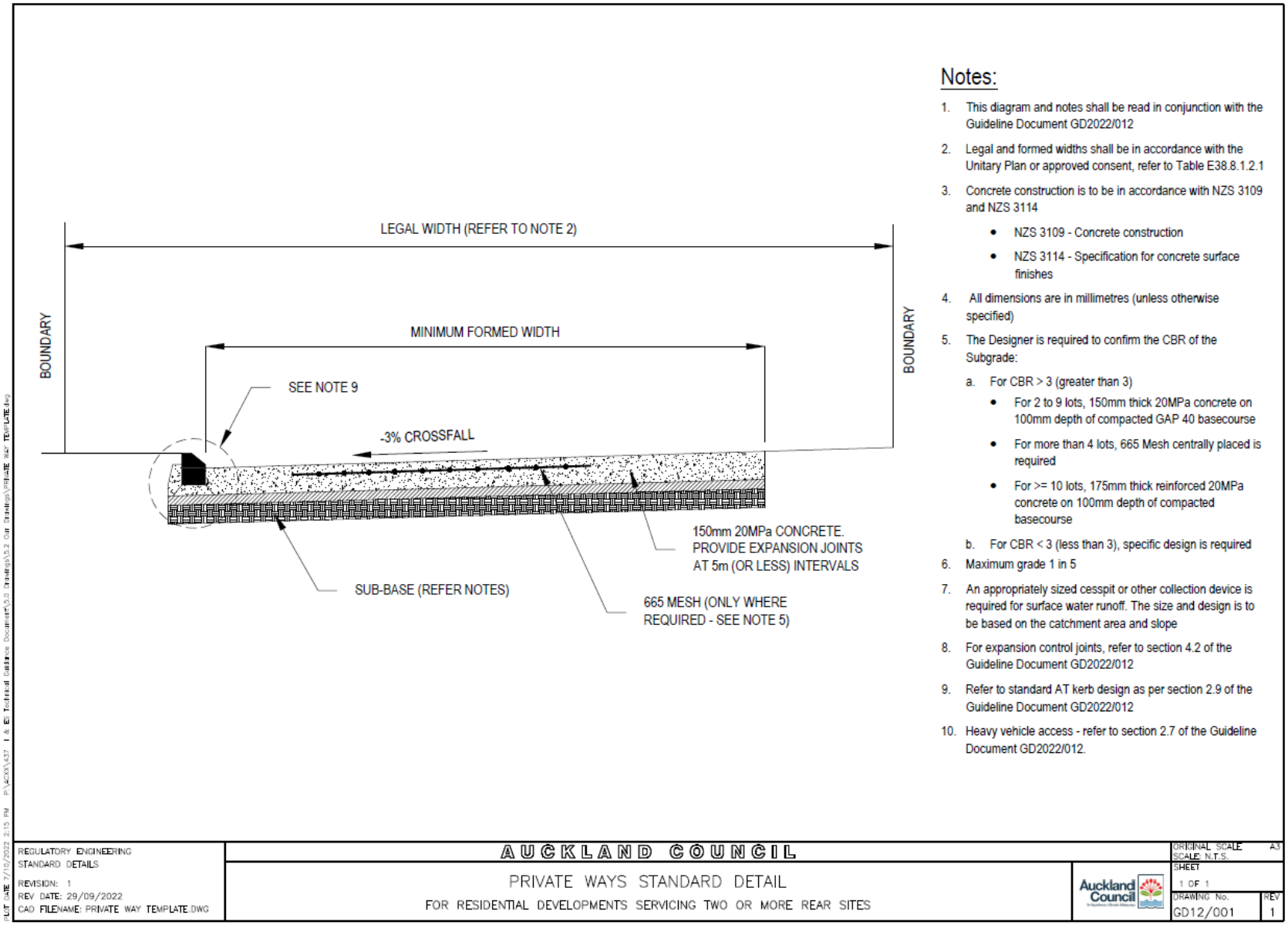


Figure 1: Private ways standard detail

Control Joints

The minimum depth of trowelled joints or a sawcut using a wet conventional saw should be at least 1/4 of the slab depth.

Joints are commonly spaced at distances equal to 24 times the slab thickness, e.g. 3.6 m for a 150 mm thick concrete private way. Joint spacing that is greater than 4.5 m requires the use of load transfer devices (dowels or diamond plates), and this will require a specific design. Contraction joints may be tooled into the concrete surface at the time of placement.

4.3 Alternative surfacing

The options below will require specific design by the applicant's Engineer and approval by the Regulatory Engineer.

4.3.1 Asphalt or chipseal

The Designer needs to provide details including:

- **Subgrade strength:** (CBR) to derive the pavement layers, i.e. material specifications and thickness
- **Pavement**: A cross-section will be provided; confirmation of the pavement design will be required prior to applying the specific aggregate layers
- **Surface treatment**: e.g. two coat chipseal, grade 4 and 6, with CAT70 emulsion or specific asphaltic concrete mix design. Asphaltic concrete surfaces shall comply with ACCOP Chapter 3 (Transport)[7].

4.3.2 Pavers/cobblestones

Pavers and/or cobblestone are considered an alternative method and specific design will be required in accordance with the manufacturer's specifications.

4.3.3 Permeable paving

The use of permeable paving, although generally supported, will require specific design in accordance with manufacturers' specifications. It is recommended to refer to Section C2.0 (pervious pavement) of Auckland Council's technical guidance document: GD01: Stormwater Management Devices in the Auckland Region.

[7] Note At the time of writing, Auckland Transport does not have a pavement or surfacing section in ACCOP but does refer to Chapter 16 of the ATCOP.

5.0 Construction

A copy of the approved plans, details and other approvals or permissions, as may be required, are to be held on site when works and inspections are being undertaken.

If works within the road reserve are necessary, e.g. grade changes to accommodate a crossing/private way and any associated changes to the berm or street environment, they require permission from Auckland Transport. A CAR is required along with an approved TMP.

All topsoil and unsuitable materials are to be excavated and disposed of in an approved manner clear of the works.

The Engineer is to:

- Check the subgrade and identify any known soft areas for remediation and establish CBR to confirm pavement design
- Ensure all service connections and ducts are installed
- Check that basecourse is well compacted
- Ensure all set-out is accurate and in accordance with the approved plans is set out accurately to ensure adequate depth and cross-fall and that, if required, reinforcing is placed as required
- Boxing is to match the depth of the concrete pavement e.g. 150mm x 25mm for private way and 100mm x 25mm for footpaths
- Undertake quality control checks for materials, compaction, bedding, and ensure that all concrete used is of appropriate mix and strength from a certified supplier
- Gradient: if greater than 1 in 6, the Regulatory Engineer is to inspect prior to Engineering Approval, and construction. An as-built (including long-section) will be required
- Check that a CAR has been obtained from Auckland Transport where required
- Ensure control joints are provided (see Section 4.2 above)
- Reinstatement: Ensure all topsoiling and seeding where required is reinstated to both berms and service strips and where boxing has been removed. Reinstatement includes filling of service trenches and checking that catchpits and other stormwater devices are cleared, ensuring all silt has been removed.

6.0 Rural /countryside living zones

In all countryside living and rural zones (except as provided by Section 4.3), rural private ways shall be constructed of 150 mm of 20 MPa concrete as shown on Auckland Council Drawings. (See Section 4.2).

In addition:

- The maximum grade of any rural or countryside living private way is not to exceed 1 in 5.
- The carriageway width will be set by consent conditions. As a general rule, the width shall be not less than 3 m exclusive of channels, serving up to five 5 titles, and 5.5 m exclusive of channels, serving 6 or more titles.
- Rural private ways are to be as per Table 2 above (E27.6.4.3.1 of the Auckland Unitary Plan), see Section 3.6, and are to have passing bays at least every 100 m where visibility is available from one passing bay to the next. If visibility cannot be achieved, further assessment will be required. Passing bays shall be 15 m by 5.5 m wide (inclusive of 45^0 tapers). Passing bays shall be constructed to the same standard as the carriageway.
- Where the road fronting the private way is sealed, the vehicle crossing and the first 20 m within the private way shall be formed and sealed to prevent aggregate migration to the road. The Designer needs to allow for queuing and sightlines.

In rural zones, other than countryside living zones, metalled rural private ways may be constructed where the following criteria are met:

- Private way serves 4 or less titles or dwellings
- Private way does not serve, adjoin or cross land presently developed for horticultural purposes
- The private way is accessed by a metalled public road which is unlikely to be sealed within 10 years, or if it is accessed by a sealed road; the first 20 m within the boundary needs to be constructed in concrete
- Does not exceed a maximum grade of 1 in 8 (12.5%).

Metalled rural private ways, where approved:

- Must be constructed to a minimum width, exclusive of featheredge and water tables, of 3 m
- Must have subgrade and pavement depths and materials that are to be specifically designed on confirming CBR
- Must have a minimum depth of pavement of 200 mm dependent on subgrade strength
- Be formed with GAP 40 or GAP 65 with a dressing course of 50 mm GAP 20; no layers must be no less than 2.5 times maximum stone size: e.g. GAP40 ≈ 100 mm thick.
- Have a crossfall of 6%
- Grades exceeding 12.5% and all areas prone to flooding must be concreted. Where flooding is concerned beyond the 1% AEP extent.

Where the private way (or sections of) exceeds a grade of 1 in 8, it will need to be constructed in concrete.

Refer to the General Guidance Table 3 below:

Table 3: General guidance for rural/countryside living

Zone	No. of H.U.s	Formed Width	Maximum longitudinal grade	Drainage	Crossfall Required	Comments
Countryside Living	1 to 5 6 or more	3m 5.5 m	1 in 5	Channel and catchpit Water tables swales	3%	Concrete formation only
Rural	1 to 5 6 or more	3 m 5.5 m	Concrete: 1 in 5 Metalled 1 in 12.5	Water tables Swales Sheet flow*	4 to 6%	Culverts at no greater than 60 m intervals

*Note sheet flow may be permitted but requires specific design by the Engineer.

7.0 Consenting

7.1 Applications

Vehicle access that is to serve two or more residential dwellings or lots, will require an Engineering Approval application to be submitted to Auckland Council for approval by a Regulatory Engineer.

Appendix D1.0 shows the typical elements that Auckland Council's Regulatory Engineer will check and seek information on. All of these elements are to be checked and confirmed correct by the applicant's Engineer, prior to inviting the Regulatory Engineer to site to carry out their necessary inspections. The Regulatory Engineer may require additional information.

7.2 Drawings

The application plans must show:

- A plan of the site, the private way, drainage and other relevant information
- A long section of the entire length of the private way extending to the centreline of the road
- Cross sections at 20 m centers showing general landform to a boundary or including other features, e.g. batters
- Existing services to be shown on the long section and plans including public drains crossing under the private way are to be accurately shown
- Where the private way exceeds 1 in 6, an as-built plan (plan and long section) will be required.

Appendices

Appendix A1.0 Design and location of pedestrian access in residential zones

Appendix A1.1 Extracted from E27.6.6: Design and location of pedestrian access in residential zones

1. Any pedestrian access, in residential zones, serving two or more dwellings, where there is no vehicle access must:
    a) have a minimum formed access width of 1.8 m;
    b) provide passing bays in accordance with Table E27.6.6.1 (Table 4 below);
    c) meet the maximum gradient, in accordance with Table E27.6.6.2 (Table 5 below);
    d) provide artificial lighting in accordance with Standard E24.6.2;
    e) have a surface treatment which is firm, stable and slip resistant in any weather conditions;
    f) provide direct access to the dwellings from a public footpath;
    g) be unobstructed for its full length; and
    h) where the pedestrian access includes steps, provide a step-free option as specified in NZS 4121:2001 Design for access and mobility: Buildings and associated facilities.
2. Any pedestrian access in residential zones that is adjacent to a vehicle access serving 10 or more parking spaces or 10 or more dwellings (except for dwellings which have separate pedestrian access provided directly from the front door to the road), whichever is the greater, must:
    a) meet the minimum pedestrian access width and separation specified in Table E27.6.6.3 (Table 6 below);
    b) not exceed the maximum gradient, specified in Table E27.6.6.2 (Table 5 below)
    c) have a surface treatment which is firm, stable and slip resistant in any weather conditions;
    d) be unobstructed for its full length; and
    e) where the pedestrian access includes steps, provide a step-free option as specified in NZS 4121:2001 Design for access and mobility: Buildings and associated facilities.

3. Any pedestrian access in residential zones that is adjacent to a vehicle access serving, to up to nine dwellings (except for dwellings which have separate pedestrian access provided directly from the front door to the road), which require heavy vehicle access in accordance with E27.6.3.4A must:

    a) meet the minimum pedestrian access width and separation specified in Table E27.6.6.3 (Table 6 below);

    b) meet the maximum gradient, specified in Table E27.6.6.2 (Table 5 below);

    c) provide artificial lighting in accordance with Standard E24.6.2;

    d) have a surface treatment which is firm, stable and slip resistant in any weather conditions;

    e) be unobstructed for its full length; and

    f) where the pedestrian access includes steps, a step-free option must be provided as specified in NZS 4121:2001 Design for access and mobility: Buildings and associated facilities.

Table 4: Pedestrian access passing bay requirements (AUP Table E27.6.6.1)

Length of access	Maximum interval between passing bays	Passing bay width
Exceeds 50 m	50 m	Increase formed width of pedestrian access to 2.5 m over a 3.5 m length (to allow pedestrians and cyclists to safely pass each other)

Source: Table E27.6.6.1 pedestrian access passing bay requirements (AUP E27)

Table 5: Maximum pedestrian access gradient requirements (AUP Table E27.6.6.2)

Maximum pedestrian access gradient	Required rest area at either end of the gradient
Up to 1 in 33.3 (3%)	No rest area required
Between 1 in 33.3 (3 %) and 1 in 20 (5 %)	Rest area with a minimum length of 1.2 m and with a maximum gradient of 1 in 33.3 (3 %) must be provided at intervals not exceeding 45 m
Between 1 in 20 (5 %) and 1 in 12.5 (8 p%)	Rest area with a minimum length of 1.2 m and with a maximum gradient of 1 in 33.3 (3 %) must be provided at intervals not exceeding 9 m

Source: Table E27.6.6.2 Maximum pedestrian access gradient requirements (AUP E27)

Table 6: Pedestrian access requirements adjacent to a vehicle access (AUP Table E27.6.6.3)

Location of site frontage		Number of parking spaces or dwellings served by a vehicle access	Minimum formed pedestrian access width and separation
(T156A)	Residential zones	Any development where all dwellings have separate pedestrian access provided directly from the front door to the road	No pedestrian access required adjacent to the vehicle access
(T156B)		Serves 1-9 parking spaces or 1-9 dwellings, whichever is the greater	No pedestrian access required adjacent to the vehicle access
(T156C)		Serves 1-9 parking spaces or 1-9 dwellings, whichever is the greater	No pedestrian access required adjacent to the vehicle access
(T156C)		Serves 10 to 19 parking spaces or 10 to 19 dwellings, whichever is the greater, excluding any dwellings which have separate pedestrian access provided directly from the front door to the road	1.35 m which must be vertically separated from trafficable areas and designed to be clear of obstructions, as shown in Figure E27.6.4.3.1
(T156D)		Serves 20 or more parking spaces or 20 or more dwellings, whichever is the greater, excluding any dwellings which have separate pedestrian access provided directly from the front door to the road	1.8 m which must be vertically separated from trafficable areas and designed to be clear of obstructions, as shown in Figure E27.6.4.3.1 and connected to every dwelling
(T56E)		Serves 1-9 dwellings and requires heavy vehicle access in accordance with E27.6.3.4A	1.35 m which must be vertically separated from trafficable areas and designed to be clear of obstructions

Table E27.6.6.3 Pedestrian access requirements adjacent to a vehicle access *(AUP E27)*

Note 1: Works within the legal road, such as connections to public footpaths, require prior approval from Auckland Transport as the road controlling authority. This approval is separate and additional to any land use or subdivision approval required.

Appendix B1.0 Lighting

Appendix B1.1 Extracted from E27.6.3.7 Lighting

4. Lighting is required where there are 10 or more parking spaces which are likely to be used during the hours of darkness. The parking and manoeuvring areas and associated pedestrian routes must be adequately lit during use in a manner that complies with the rules in Section E24 Lighting.
5. Lighting is required, in residential zones serving two or more dwellings where there is no vehicle access or where there are 10 or more parking spaces or 10 or more dwellings (except for dwellings which have separate pedestrian access provided directly from the front door to the road). Pedestrian access must be adequately lit during the hours of darkness in a manner that complies with the rules in Section E24 Lighting.

Appendix C1.0 Artificial lighting standards for pedestrian access in residential zones

Appendix C1.1 Extracted from 6.2. Artificial lighting standards for pedestrian access in residential zones

1. Any pedestrian access serving two or more dwellings where there is no vehicle access or where there are 10 or more parking spaces or 10 or more dwellings (excluding dwellings which have separate pedestrian access provided directly from the front door to the road) must:

    a) have lighting limits measured and assessed in accordance with Australian/New Zealand Standard Lighting for roads and public spaces (Part 3.1: Pedestrian Area (Category P) lighting – Performance and design requirements Lighting for Roads and Public Spaces (AS/NZS1158.3.1)

    b) must be lit to the appropriate P category for pedestrian access as set out in AS/NZS1158.3.1

    c) meet the minimum P subcategories specified in Table 24.6.2.1 (Table 7 below):

Table 7: Minimum P sub-categories (AUP Table 24.6.2.1)

Access	P Subcategory
Pedestrian access only	PR3
Pedestrian access adjacent to vehicle access	PR2
Connecting elements, steps, stairwells and ramps	PA3
Parking spaces	PC2
Vehicle access for 4-9 parking spaces or dwellings	PR5
Vehicle access for 10-19 parking spaces or dwellings	PR4
Vehicle access for 20 or more parking spaces or dwellings	PR2

Source: *Table 24.6.2.1 Minimum P subcategories of AUP E24.*

    d) All light fittings must not project any light at or above the height of their light source.

    e) All light emitted from light fittings must have a correlated colour temperature of 3000K (Kelvin) or less.

    f) Spill light and glare from the lighting must meet the specifications of E24.6.1(8).

    g) The lighting must have automatic daylight controls such that the lights are on during the hours of darkness. Automatic presence detection or sensor lighting is to be avoided and where proposed must be supported by a safety assessment.

    h) Lighting must be supplied from a common electrical supply which cannot be disabled.

Appendix D1.0 Checklist for Regulatory Engineer – Typical elements

It is important to ensure driveways are built to a high quality.

In many cases the accessway will serve a similar purpose as a road and it's important all accessways are built in a manner that is fit for purpose and suitable for future users.

Regulatory Engineer to check	✓
Confirm Engineer or surveyor will ensure concrete or concrete wash (from driveway, truck and tool clean) does not enter public drains or waterways. Confirm how this will be achieved.	
Design is appropriate for site	
Compliance with approved drawing	
Subgrade slopes to provide drainage	
Formed width	
How site subgrade strength and CBR was established and if subbase thickness shown in design still appropriate	
Subgrade, firm and well compacted	
Gradient, if greater than 1 in 6, the Regulatory Engineer is to inspect prior to Engineering Approval, and construction. An as-built (including long-section) will be required	
Boxing to ensure correct concrete depth will be poured	
Confirm 50 mm AP20 or GAP20 placed if using standard design	
If reinforcing is to be used, confirm Engineer (CPEng, REA) or Surveyor (RPSurv.) will be on site to ensure the reinforcing is correctly placed. All mesh to be placed on bar chairs or similar	
Check proposed stormwater disposal method is appropriate for the site.	
Confirm Engineer or surveyor will ensure correct concrete mix and strength is used and correct depth poured and ensure concrete or concrete wash does not enter public drains or waterways.	
Check contraction joints have been placed in accordance with the approved plans.	
Check they have road opening notice (RON) from Auckland Transport (AT) for vehicle crossing (if vehicle crossing is to existing AT road).	
If it appears a Traffic Management Plan (TMP) is required, check that the formal TMP document is on site.	
Any other necessary checks to ensure that the finished driveway is suitable for its intended use and no detrimental effects will occur to other property during or after construction that may be attributable to the driveway construction. (e.g. drainage, appropriate safety barriers, mirrors, etc.)	

Appendix E1.0 Appendices

Links for the following appendices are:

Application form for Private Way

Lodgment checklist

Statement of Certification form for Private Way

Private Ways Standard Details drawing Figure 1 on Section 4.2 above (concrete and rural metaled)

Find out more: phone 09 301 0101

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or visit www.aucklandcouncil.govt.nz and www.aucklanddesignmanual.co.nz

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