PART FIVE

LAY POSITION OF SERVICES - GUIDELINES

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Note 1. Part Five does not apply in Manukau City. Reference must be made to Manukau City's District Plan, Chapter 7.

Note 2: This draft includes the following new definitions:

Rural Areas	These are areas that provide for rural residential lifestyle and intensive farming and horticultural uses, where the owners expect a full range of utility services.
Multi-Service Provider	A utility company as already defined in the code – which is responsible for the provision, or coordinating the provision, of more than one service.

5.1 INTRODUCTION

5.1.1 Background

As a result of lightly regulated practices in the past and increasing competition for limited road space this part of the code has been developed as a guide for management of lay position of services during the design and installation of new works.
Lay position of services deals with the position and alignment of services within the road reserve, unless alternatives have been agreed under the co-ordination of works clause 2.2.

5.1.2 Framework

The purpose of the lay position guide is to provide a framework that covers a range of urban and rural situations.
The issue has become increasingly important since recent national reforms have enabled the establishment of a number of utility operators at both bulk and local supply level, that compete in the same area for the supply of services. This trend is expected to continue, together with rapidly changing technological and economic demands that create the need for ongoing improvements and efficiencies.
Restructuring within the utilities sector has resulted in some company mergers, ongoing changes in ownership and the formation of super utility network operators providing an integrated network within a particular area.
Multiple ownership is more common in the electricity, gas and telecommunication industries.
Delays in approvals to install services in roads can be costly for Principal Providers who need to meet market competition and the requirements of their own legislation and supply agreements.
Consequently statutory and operational consideration may need to override these guidelines from time to time.

Lay position solutions apply to four key areas.

a) Greenfield Areas

   Generally applies to new subdivisions. Alignment of services is primarily based on NZ4404 or RCA requirements.

b) Developed Urban Areas

   Areas of steady growth. Space is still available or the space available is not effectively used.

c) Congested Urban Areas

   Areas where little or no space is available in the lay position.

d) Rural Areas

   These are areas that provide for rural residential lifestyle and intensive farming and horticultural uses, where the owners expect a full range of utility services.

5.2 ISSUES AND PRINCIPLES

5.2.1 Issues

Many of the issues associated with frequent applications for road openings such as the disruption, safety and effects on the structural integrity of the roading asset are dealt with specifically throughout the code in the appropriate part.
However, establishing agreed lay positions for services raises additional issues that are addressed here.

The key lay position issues are –

a) The proper treatment and asset management of spare, out of service and unused underground plant and ducts – is a key element, particularly in developed and congested areas.

b) The development of inter-utility agreements by operators to share excess capacity of networks and jointly better utilize their assets.

c) A continuation of the traditional method of allocating lay positions by having agreed positions set out in district plans and engineering requirements for subdivision is a key element in greenfield situations; subject to some modifications to allow for multiple networking for the same type of service and allowance for new entrants after the subdivision is completed.

d) The compliance by developers with the lay positions setout in the Council subdivisional requirements – when the Council considers a change in roading layout and width that affects space for utility services.

e) The provision for multi-service providers as a new type of utility entity, being a utility company as already defined in the code – that is responsible for the provision, or co-ordinating the provision of more that one service. For example a power company that also provides gas and/or telecommunication services.

5.2.2 Principles

The starting point for lay position guidelines is the establishment of principles based on **preferred** network types, layouts – and processes for the treatment of **exceptions**.

The following common approaches and principles apply to the four areas of greenfield, developed, congested and rural. And **where practicable** shall be taken into account when notification is given to install utility services in roads.

a) The road is a valued and limited resource, that has many functions and is shared by stakeholders with different needs.

b) Space for utility services in roads is restricted and must be allocated in a fair and consistent manner based on best practices.

c) To ensure best use of available underground space, multiple duct s shall be installed in a vertical configuration.

d) Generally space will be allocated on the statutory and operational requirements of the utility operator.

e) Agreements between utility operators on trenching and use of spare standby capacity assets shall be encouraged.

f) Where practicable new utility services shall be placed underground.

g) The effects on and the effects of, above ground structures, trees and street furniture shall be considered. Amenity, vehicular/pedestrian safety and access must be considered along with the effects on the underground assets and their operation.

h) Innovative approaches are welcomed.

i) Space shall be maintained for delayed installation and for additional providers.

j) Information on the location of services shall be kept up to date and made available to other Principal Providers and the RCA.

k) A consistent alignment of utility services shall be maintained to ensure that new work does not intrude into space allocated for future use by others. Generally this means parallel to the berm or at right angles to it. Within specified installation and constructional tolerances.

l) The preferred location for bulk services is the carriageway.

m) Disruption to all stakeholders must be minimised.

n) The structural integrity of the road must be maintained.

o) The location and number of transverse connections shall be kept to a minimum.

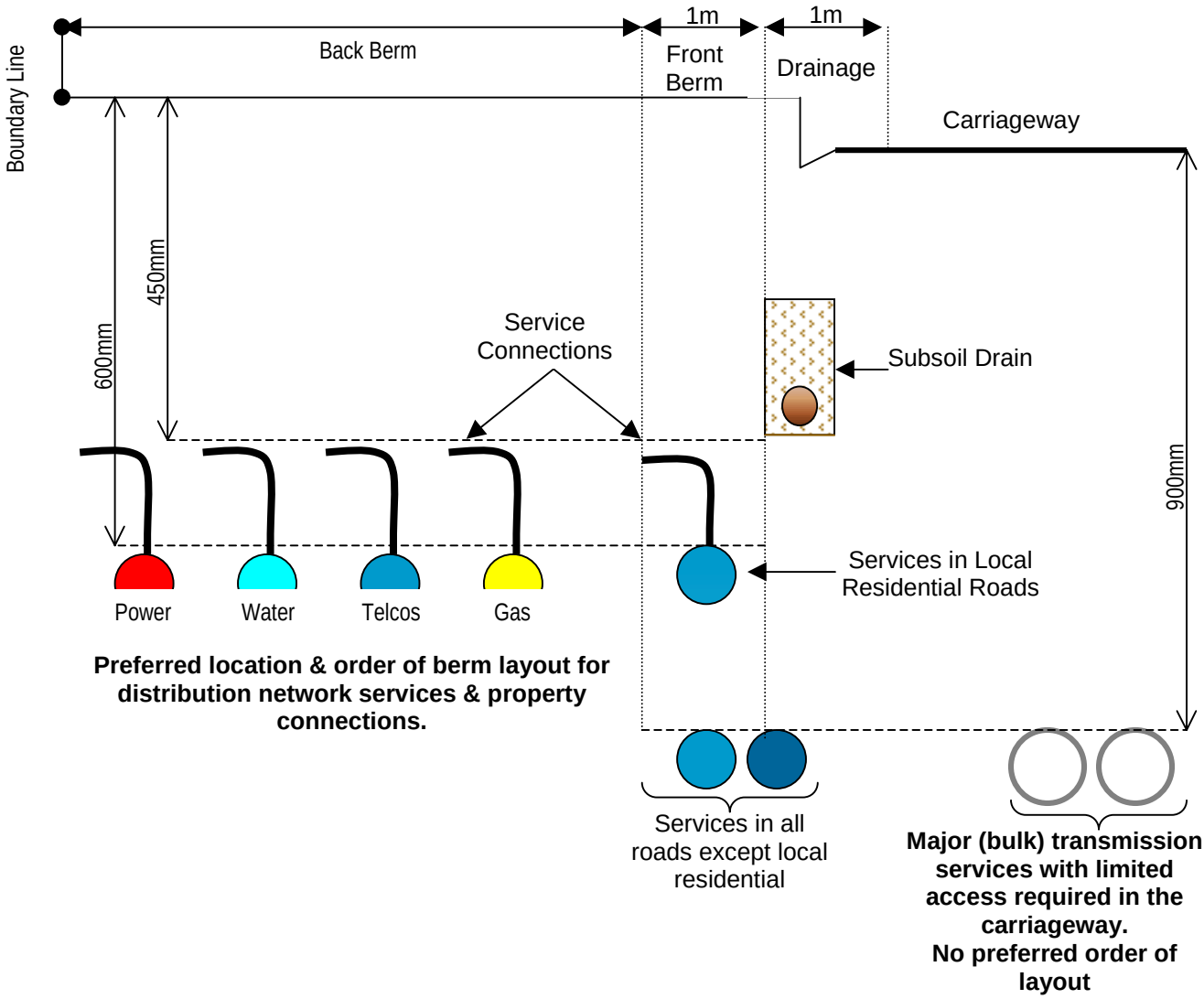
p) The Principle Provider has management responsibilities for the design, installation, operation and maintenance of its services.

q) Exceptions to the above general principles for any reason will be treated on a **case by case basis**.

5.3 PLACEMENT OF SERVICES

5.3.1 Preferred Lay Positions

The minimum lay positions, subject to minimum cover set out in clause 8.4.1 are shown as follows:



Preferred location & order of berm layout for distribution network services & property connections.

Major (bulk) transmission services with limited access required in the carriageway. No preferred order of layout

BACK BERM	Preferred location for all services
FRONT BERM	Services may be located in this area subject to additional cover and tree planting requirements.
DRAINAGE	An allowance for installation of cesspits and subsoil drainage is necessary and other utility services must not be laid within this area. This is the water table in rural roads and applied 1 metre from the kerb line in urban areas.
CARRIAGEWAY	Bulk services may be placed in the carriageway. All other services need the agreement of the RCA.

5.3.2 Utilisation of Existing Utility Assets

All out of service and unused plant/ducts remain as assets of each company and will be managed as set out in their asset management plans.

Each management plan has an inventory of spare, out of service and unused plant/ducts and better utilisation of these assets may yield alternative lay positions.

Where spare and unused ducts are made of durable material and located in stable ground, these may be sold to another utility provided it is used for the same application or another service where safety is not a high priority.

For example, telecommunication cables may run through out of service gas pipes.

However, power cables or gas pipes must not be allowed to run through spare ducts designed and located for telecommunication cables.

Out of service and unused under-ground plant.

Where a utility have unused plant they may be sold on an asset basis.

If the plant consists of under-ground power cables, the purchaser may use the plant, space/route for power only unless dispensation is obtained from the relevant Council and adjacent utilities to install telecommunication duct/cables.

Ducts/pipes with spare capacity.

Where a utility have spare capacity in ducts/pipes, they may offer to another utility subject to usual commercial negotiations, technical compliance and ensure safety in service.

5.3.3 Preferred Network Layouts

There are two basic types of network layouts, being double sided and single sided – both are suitable under the right circumstances and both have disadvantages if used in the wrong situation.

Attempts to have hard and fast rules shown in drawing form has been considered and have proven to be difficult – due to the wide range and diversity of design considerations that need to be evaluated.

Given the partnership nature of this code a more appropriate approach is to base decisions on pre-notification discussions between the RCA and the Principle Provider – taking into account each other's preferences and concerns.