

List of Amendments

New Plymouth District Council, South Taranaki District Council and Stratford District Council

Land Development and Subdivision

Infrastructure Standard (Local Amendments

Version 3) Based on NZS 4404:2010



Te Kaunihera-ā-Rohe o Ngāmotu

**New Plymouth
District Council**



**STRATFORD
DISTRICT COUNCIL**



**South Taranaki
District Council**

INTRODUCTION

New Plymouth District Council (NPDC), South Taranaki District Council (STDC) and Stratford District Council (SDC) have adopted a standard for Land Development and Subdivision Infrastructure which is based on NZS 4404:2010 with local amendments.

This document details only the local amendments to NZS 4404:2010. The clause and figure numbers in this document are those used in the adopted Land Development and Subdivision Infrastructure Standard (Local Amendments Version 3) Based on NZS 4404:2010.

A complete copy of the Land Development and Subdivision Infrastructure Standard (Local Amendments Version 3) Based on NZS 4404:2010 standard incorporating all local amendments is available for purchase from New Plymouth District Council's website.

The following changes can be found throughout the whole document:

- Stratford District Council (SDC) added to standard.
- Local Authority (LA) changed to Territorial Authority (TA).
- Reference to 'pedestrian crossing' or 'pram crossing' changed to 'mobility crossing'.

1. GENERAL REQUIREMENTS AND PROCEDURES

1. Local Amendment – 1.1 Scope: Add paragraph below as first paragraph

This Standard is recommended for adoption by territorial authorities (TAs). It is applicable to greenfield and infill development, as well as brownfield redevelopment projects. The Standard also serves as a basis for technical compliance for the subdivision and development of land where these activities are subject to the Resource Management Act. TAs may develop their own standards for land development or tailor outcomes sought to the particular needs of their local environments through their design guides, district plans, and codes of practice or development engineering manuals. However, it is recommended that NZS 4404 be adopted as the basis for these standards.

1.2.2 Local Amendment – Definitions: Remove definition Local authority (SA).

Local Amendment: Add (LID) after Low impact design and add sentence to end of definition.

... ecological values. LID is synonymous with Water Sensitive Design in the New Plymouth District.

Local Amendment: Add definition for mobility crossing.

Also known as a pram crossing or kerb ramp, is a modified section of kerb, channel, and footpath constructed between a footpath and the carriageway, designed to allow prams, trolleys, wheelchairs, mobility scooters, and similar wheeled devices to transition smoothly from the footpath to the carriageway.

Local Amendment: Add definition for suitably qualified.

A suitably qualified and/or experienced professional who possesses relevant qualification, experience and expertise in the areas of land development or natural hazard (excluding geotechnical) disciplines.

Any professional can undertake the role of the suitably qualified professional where they meet one of the following criteria:

- A Chartered Professional Engineer.*
- A person with relevant qualifications, skills and industry experience, who can demonstrate to Council a track record of undertaking investigation, design, supervision and certification of land development works relating to either natural or man-made hazards (excluding geotechnical) or in land development disciplines, that is acceptable to Council.*

Local Amendment: Add 'percolation' to Swale definition.

A constructed watercourse shaped or graded in earth materials and stabilised with site-suitable vegetation or rocks, for the safe conveyance, percolation and water-quality improvement of stormwater run-off.

Local Amendment: Add definition for vehicle crossing.

The formed section of driveway constructed between the road boundary and the carriageway, designed for the purpose of conveying vehicles over the footpath and/or grass berm to the carriageway.

1.2.3 Local Amendment - Abbreviations: Add SDC.

SDC Stratford District Council

1.3.2 Local Amendment: Replace Historic Places Act with Heritage New Zealand Pouhere Taonga Act and delete and replace clause 1.3.2 with text below.

In addition to the RMA, the Heritage New Zealand Pouhere Taonga Act regulates the modification or destruction of archaeological sites on all land and provides for substantial penalties for unauthorised modification or destruction of these sites.

An archaeological site is defined in the Act as any place in New Zealand (including buildings, structures or shipwrecks) that was associated with pre-1900 human activity, where there is evidence relating to the history of New Zealand that can be investigated using archaeological methods.

The Act makes it unlawful for any person to modify or destroy, or cause to be modified or destroyed, the whole or any part of an archaeological site without the prior authority of HNZPT. This is the case regardless of whether:

- (a) The site is registered or recorded by the council in planning documents;*
- (b) The land on which the site is located is designated;*
- (c) The activity is permitted under the district or regional plan; or*
- (d) A resource or building consent has been granted.*

Approval from HNZPT is required if a site is affected, in addition to any council approval that may be required.

Furthermore, if the site is known to be associated with pre-1900 human activity, or there is reasonable cause to suspect such an association, the developer should consult with HNZPT prior to undertaking any earthworks or ground disturbance. If a previously unknown site is uncovered during earthworks, approval from HZNPT may also be needed before work can continue.

1.4 Local Amendment: Add paragraph to end of clause 1.4.

LID is synonymous with Water Sensitive Design within the New Plymouth District.

1.8.2.2 Local Amendment: Delete clause 1.8.2.2(e)(2).

Assumed datum with easily recognised origin (i.e. Manhole lid and invert level).

1.8.2.5 Local Amendment: Amend clause 1.8.2.5.

The TA may require the design drawings to be in a certain format, suitable for later addition of as-built information and inclusion in the TA asset map base. In particular, electronic plans will be required in the New Plymouth District. Refer to section 1.8.10 for more information.

1.8.5.2 Local Amendment: Add additional wording to 1.8.5.2(d), (g) and new clause 1.8.5.2(l).

- (d) Completed earthworks and prepared subgrade - CBRs (California Bearing Ratio) required, refer to 3.3.3.1;*
- (g) Finished basecourse before the commencement of road sealing (applies in all districts) with NDMs (Nuclear Density Meter) and Benkelman Beam tests (applicable in New Plymouth district only);*
- (l) Water tracer wire continuity testing.*

1.8.10 Local Amendment: Amend clause 1.8.10 (b).

- (b) As-built plans of all infrastructure showing the information set out in Schedule 1D. As-built plans and data must be provided to NPDC electronically in accordance with the requirements of the New Plymouth District Council As-Built Survey and Data Specification;*

Local Amendment: Add sentence to end of clause 1.8.10 (h).

- (h) CCTV inspections as per the New Zealand Pipe Inspection Manual. CCTV inspections of new sewer drains requires a minimum of 10mm flowing water to assess gradients and dips.*

1.8.12 Local Amendment: Replace 1.8.12.

Assets to be vested in the TA can be accepted by the TA notwithstanding any Defects Liability Period relating to those assets not having expired. Even if assets have been accepted by the TA, the

developer shall remain responsible for the maintenance of the asset during the Defects Liability Period and for the rectification of any defects or the carrying out of any required remedial work during such period with all such work to be carried out to the standard required by the TA. The developer shall not be responsible for fair wear and tear during the Defects Liability Period.

1.8.12.3 Local Amendment: Remove words ‘the Authorised Officer of’.

1.8.12.6 Local Amendment: Amend first sentence to read:
The developer shall notify the TA at least 14 days ...

2. EARTHWORKS AND GEOTECHNICAL REQUIRMENTS

2.3.2 Local Amendment: Add a sentence at the end of (a).
... taken into account. LID is synonymous with Water Sensitive Design in the New Plymouth District.

3. ROADS

3.2.4 Local Amendment: Delete clause 3.2.4 (Place and link context).

Local Amendment: Delete Table 3.1 Land use and area type matrix describing typical place and transport context.

Local Amendment: C3.2.4.2 delete four paragraphs after (c) and amend last paragraph as follows
Designers are encouraged to read the One Network Road Classification System in conjunction with this standard to ensure compatibility and consistency.

3.2.5 Local Amendment: Delete clause 3.2.5(b).
Suburban: 400m. A shorter distance shall be considered near centres and major public transport routes.

3.2.6 Local Amendment: Add sentence to end of 3.2.6(e).
... from the roads. LID is considered to be synonymous with Water Sensitive Design within the New Plymouth District.

3.3.1 Local Amendment: Amend paragraph one.
Table 3.2 should be used as the basis for road design. However, road types E11 and H1 only apply within the New Plymouth District. Road designers are not restricted to the road designs illustrated. The purpose of the diagrams is to demonstrate roading designs that allocate sufficient space for the various elements of each roading type.

3.3.1.10 Local Amendment: Delete note at end of clause 3.3.1.10.

3.3.2.1 Local Amendment: Replacing ‘or the use of’ with ‘and’ in paragraph one.
Roads shall be designed to accepted standards generally satisfied by table 3.2 of this Standard *and* the relevant Austroads guides, and guides listed in Referenced Documents and Related Documents for other facilities.

Local Amendment: Amend paragraph three.
In addition to Table 3.2, Figure 3.0b shows a typical cross section of an urban berm indicating road infrastructure, services and utilities.

Local Amendment: Add notes to Figure 3.0a – typical rural road cross section detail.

NOTES –

1. Individual element dimensions are linked to traffic volume in the rural environment. Refer to Table 3.2 for details.

2. *Edge marker post to Motsam guidelines.*
- 3.3.2.2 Local Amendment: Replace Figure 3.0b and rename label to ‘Cross section of urban berm indicating road infrastructure, services and utilities’.**
- Local Amendment: Replace Figure 3.0c and rename label to ‘Common services trench’.**
- 3.3.2.3 Local Amendment: Replace ‘make and move environment’ with agricultural, industrial and warehouse environments’ in clause 3.3.2.3.**
 In some areas the developed road geometry may be constrained, horizontal alignments may involve low radius, or the proportion of commercial vehicles may predominate, such as in *agricultural, industrial, and warehouse environments...*
- Local Amendment: Add Tables 3.1a (Widening on horizontal curves for Primary, Collector and Sub-collector roads (50km/h design speeds) and 3.1b (Widening on horizontal curves for Local roads (less than 50km/h design speeds)).**
- Local Amendment: Replace Table 3.2 – road design standards and add Figures R2, R3, R4, E11 – One Direction, E11 – Bi-directional, E12 (two figures), E13 (two figures), H1 and H2.**
- Local Amendment: Add Figures R2, R3, R4, E11 – One Direction, E11 – Bi-directional, E12 (two figures), E13 (two figures), H1 and H2.**
- 3.3.3 Local Amendment: Delete second paragraph.**
Local Amendment: Move C3.3.3 under first paragraph adding additional sentence.
... methods may be used. Table 3.2a below may be used for R1 and E9 right of ways/private roads.
Local Amendment: Delete and add new Table 3.2a – Pavement design parameters under C3.3.3.
- 3.3.3.2 Local Amendment: Delete fifth paragraph.**
- 3.3.4.1 Local Amendment: Replace clause 3.3.4.1.**
 Where safety barriers for pedestrian and cyclists are necessary, they shall comply with *figure 3.2a Safety Fence and Cycle Chicane* and NZS/AS 1657.
- 3.3.6 Local Amendment: Replace third paragraph of clause 3.3.6**
 Acceptable and alternative on-street car park and loading dimensions should be taken from AS 2890.5, AS/NZS 2890.1 and/or the Austroads guides.
- 3.3.7 Local Amendment: Replace ‘live and play’ with ‘residential and recreational’ in paragraph two.**
 All road intersections in *residential and recreational* areas below arterial class ...
- Local Amendment: Replace ‘make and grow’ with ‘agricultural, industrial and warehouse’ in paragraph three and add sentence at end of paragraph.**
 All intersections in *agricultural, industrial, and warehouse* areas should have a minimum kerb radius of 13.5 m with corner splays of 6 m, or subject to specific design. *Heavy duty kerb and channel shall be used for all radius kerbs at intersections and elsewhere as required by the Standard or as directed by the TA.*
- 3.3.8 Local Amendment: Delete reference to figure 3.4 in second paragraph and include Figure 3.3a.**
Local Amendment: Remove the word ‘mountable’ from the fifth paragraph and add a sixth paragraph.
Standard/mountable profile to be approved by the TA.
- 3.3.11.1 Local Amendment: Delete (h) in second paragraph of clause 3.3.11.1.**
Local Amendment: Replace figure 3.2a – safety fence.
- 3.3.11.4 Local Amendment: Add sentence to end of sixth paragraph clause 3.3.11.4(e).**

- (e) Allow adequate space for the effective operation and maintenance of any form of stormwater management device. *Refer to 3.3.19.5 for swale information and requirements.*

3.3.12 Local Amendment: Add paragraph under paragraph one.

Single sided trail markers are to be located at each end of pedestrian and cyclist accessways and shall be provided by the TA's preferred supplier to ensure the correct information is clearly displayed. The final design shall be subject to TA approval.

Local Amendment: Replace table under requirement for street name blades.

3.3.14 Local Amendment: Add wording to paragraph one.

All road lighting shall be designed and installed in compliance with the recommendations of AS/NZS 1158, *NZTA M30 Specification and Guidelines for Road Lighting Design*, Austroads guides or guidelines adopted by the TA at that time.

Local Amendment: Replace (d) under heading Columns.

(d) Or as approved by the TA.

Local Amendment: Replace (b) under heading Outreach Arm.

(b) Or as approved by the TA.

Local Amendment: Replace paragraph under heading Lamps.

Street light design can be found in the Resources section of the NZTA website under Specification and Guidelines for Road Lighting Design, Accepted Luminaires.

A street lighting design can be undertaken to incorporate the location and predicted height of street trees. Careful consideration needs to be given to the balance between street lights and street trees to ensure effective lighting occurs e.g. trees to be a minimum of 8m clear of streetlights or as approved by the TA.

3.3.15 Local Amendment: Replace figures 3.2d (energy dissipater) and 3.2e (pipe outlet protection).

3.3.16.1 Local Amendment: Add following paragraph below paragraph four.

Spays may be required for safety where right of ways connect with public roads at the discretion of the TA.

3.3.16.2 Local Amendment: Add sentence to end of paragraph five.

.... to a public stormwater main if a stormwater connection has been approved by the TA - refer to clause 4.3.11 for details around the connection to the public system.

3.3.16.3 Local Amendment: Add sentence to end of paragraph three.

... public stormwater main if a stormwater connection has been approved by the TA - refer to clause 4.3.11 for details around the connection to the public system.

Local Amendment: Label for Figure 3.3 changed to read 'Circular turning head: dimensions of no-exit road turning areas'

Local Amendment: New Figure 3.3a - Y Turning: dimensions of no-exit road turning area

Local Amendment: Figure 3.4 replaced, renumbered to Figure 3.3b and word 'private' included in label - Turning areas for private no-exit roads

3.3.17.1 Local Amendment: Figures 3.4 and 3.4g added to list of figures

Figure 3.4 shows a mobility crossing.

Figure 3.4g shows rural vehicle crossings.

Local Amendment: Add the following figures:

Figure 3.4 – Mobility crossing
Figure 3.4g – Rural vehicle crossings

Local Amendment: Replace the following figures:

Figure 3.4a – Standard urban vehicle crossing
Figure 3.4b – Urban slot vehicle crossing
Figure 3.4c – Urban plate vehicle crossing
Figure 3.4d – Standard urban vehicle crossing detail

3.3.17.2 Local Amendment: Replace paragraph 1 with two paragraphs

All shared crossings in the South Taranaki District shall be installed at the time of subdivision, unless otherwise approved by the TA. Other crossings shall be installed at the building consent stage.

All right of ways in the New Plymouth and Stratford districts and anywhere the location is obvious at the design stage shall be installed at the time of subdivision. Other crossings shall be installed at the building consent stage.

Local Amendment: Change ‘10 m’ to ‘6 m’ and add text to end of paragraph four

Crossings shall be provided ... crossing shall be sealed to a minimum distance of 6 m from the edge of the carriageway in accordance with figure 3.4g.

Local Amendment: Replace Figure 3.4g – Rural vehicle crossings.

3.3.19.4 Local Amendment: Add Table 3.2a in paragraph one

Rural roads shall have normal camber (see tables 3.2 and 3.2a) to side drains/water tables ...

Local Amendment: Replace Figure 3.5 – Subsoil drains

3.3.19.5 Local Amendment: Replace paragraph two

Where swales are used they shall be designed by a suitably qualified person in accordance with TA requirements. *Typical details that may be used in swale design are shown in Figure 3.6. Further information to be discussed with the relevant TA can be found in Christchurch City Council’s Rain Garden Design, Construction and Maintenance Manual, May 2016.*

Local Amendment: Replace Figures 3.6(A), 3.6(B) and 3.6(C) with Figure 3.6 – Swale cross section – urban design (for reticulated systems only)

3.3.19.6 Local Amendment: Replace Figure 3.7 – Kerbs and dished channels

3.3.19.7.1 Local Amendment: Replace Figure 3.8 – Typical sump to driveway or right of way

3.3.19.7.1 Local Amendment: Replace the following figures:

Figure 3.8 – Typical sump to driveway or right of way
Figure 3.9 – Flat channel or yard sump

3.3.19.7.2 Local Amendment: Amend measurement for single back entry sump and L/s.

... capacity of the single 600 dia back entry sump with standard grating should be limited to 25 L/s.

3.4.2.2 Local Amendment: Amend depth in paragraph one.

The sub-base layer immediately beneath the basecourse shall have a permeability of at least 10^{-4} m/s for a depth of at least 150 mm.

3.4.3.1 Local Amendment: Delete (d), renumber (e) and (f) to (d) and (e) and add (f)

...
(c) Chip seals of various types, providing the equivalent of two bound chip coatings;

- (d) *Running course, a free flowing stone aggregate with a maximum material size of 19.0mm, is an acceptable road surfacing option for gravel/unsealed roads and rural right of ways carrying out farming activities;*
 - (e) Concrete block pavers; and
 - (f) Stone block surfacing where designed for aesthetic effects.
- Options (d), (e) and (f) are subject to TA approval.

Local Amendment: Make following amendments to Table 3.3

Delete word 'Recommended' in label.

Delete second sentence '2 coat chip seal' in second column of residential turning head.

Replace wording in first column for public carparks.

Add additional row at end of table – all urban local roads in the New Plymouth District.

Table 3.3 - Surfacing standards

Facility	Minimum surfacing
Residential turning head	Segmental concrete pavers, concrete, 30 mm asphaltic concrete.
<i>Off street public carparks (including recessed parking)</i>	Segmental concrete pavers, concrete, 30 mm asphaltic concrete
Commercial and industrial turning head	Segmental concrete pavers, concrete, 50 mm asphaltic concrete
Traffic islands and bus stops	Segmental concrete pavers, concrete, 50 mm asphaltic concrete
<i>All urban local roads in the New Plymouth District</i>	<i>30 mm asphaltic concrete or of a thickness that is fit for purpose subject to TA approval</i>

3.4.4.2 Local Amendment: Delete acceptable and compatible chip sizes for local roads and add include in other roads in paragraph three

Acceptable and compatible chip sizes are:

Local and other roads

First coat: grade 3, second coat: grade 5 or 6.

3.4.4.4 Local Amendment: Change laid thickness measurement

... laid thickness be less than 30 mm.

3.4.11 Local Amendment: Replace wording in headings of first and fourth columns of Table 3.4 – Benkelman beam standards as follows:

First column – replace 'live and play' with 'residential and recreation areas'.

Fourth column – replace 'shop and trade, work and learn, make and move' with 'all other areas'.

3.4.14.1 Local Amendment: Replace 'pedestrian crossings' with 'mobility crossings' –

3.4.15 Local Amendment: Replace first paragraph

Kerb and channel shall be extruded. Cast in situ is only permitted with prior TA approval.

3.4.18 Local Amendment: Delete words 'as appropriate' in first paragraph

The contractor shall give notice to the TA to allow the conduct of all inspections required to facilitate eventual acceptance of the project by the TA.

4. STORMWATER

4.1 Local Amendment: Delete word 'Grassed' at start of second sentence in paragraph two.

4.2.8 Local Amendment: add text to last sentence in paragraph three.

... vegetation control and nuisance control and the manual shall be provided to the TA upon vesting of the stormwater assets.

4.3.4.2 Local Amendment: Replace paragraph three.

Ponding or secondary flow on local roads shall be limited to a velocity such that the carriageway is passable by an 85th percentile vehicle in a 5% AEP design storm avoiding water entering private property.

4.3.4.3 Local Amendment: Replace heading and add two additional paragraphs after paragraph one.

Building Over/Near Pipelines

The location of buildings or structures over or near an existing sewer is subject to the requirements of the relevant TA's bylaws.

No building shall be built over any buried public services whether on public or private land within the New Plymouth district.

4.3.5.1 Local Amendment: Add reference to Stratford District in Table 4.1 – Minimum AEP for design storms.

Local Amendment: Delete Table 4.1A – Rainfall Depth Data and paragraph before table.

Local Amendment: Replace paragraph under C4.3.5.1.

NIWA's High Intensity Rainfall Design Systems (HIRDS) data is the rainfall design dataset to be used with the assumption of RCP 6.0 Scenario for the period 2081-2100.

4.3.7 Local Amendment: Add paragraph under paragraph two.

LID is synonymous with Water Sensitive Design in the New Plymouth District.

4.3.7.6 Local Amendment: Delete (d), (g) and (h), renumber and add new clause at end.

...

- (c) Slopes flatter than 1% may require underdrains;
- (d) Capacity for a 10% AEP event;
- (e) Velocity not greater than 1.5 m/s in a 10% AEP event unless erosion protection is provided;
- (f) Refer to the relevant TA for a list of appropriate species.

Local Amendment: Replace last paragraph.

Typical details that may be used in swale design are shown in Figure 3.6. Further information to be discussed with the relevant TA can be found in Christchurch City Council's Rain Garden Design, Construction and Maintenance Manual, May 2016.

4.3.7.7 Local Amendment: Add sentence to first paragraph.

... attractive design and planting. Further information to be discussed with the relevant TA can be found in Christchurch City Council's Rain Garden Design, Construction and Maintenance Manual, May 2016. Specific matters to be considered ...:

Local Amendment: Replace (i).

- (i) Refer to the relevant TA for a list of appropriate species.

4.3.9.4 Local Amendment: Replace first two bullet points.

- Non trafficable - Road berms, reserves, grassed areas, private property: 600mm
- Trafficable - Carriageway (including shoulder and parking) and right of way: 900mm

4.3.9.7 Local Amendment: Replace second sentence in paragraph three.

... match soil slope, constructing concrete headwalls and wingwalls, planting close to the structure, and ...

4.3.10.6 Local Amendment: Insert new paragraph at beginning of section

All new connections into manholes shall be cut into the precast manhole wall by drilling or saw cutting. Breaking into a manhole by use of a heavy hammer or chisel is not permitted.

4.3.11 Local Amendment: Replace heading and section, including Figures 4.1 – Discharge to a kerb connection and 4.2 – Discharge to a sump

Stormwater Disposal

- a) *Stormwater from Commercial, Industrial and Residential areas shall be directed to on site soakage, such as soakpits, vegetated swales, soakage basins, rainwater tanks, etc as approved by the TA.*
- b) *If ground conditions are unsuitable for on-site disposal or if on-site soakage can only be provided for a portion of the stormwater runoff from a Lot, the following will apply:*
 - i) *Stormwater or excess stormwater shall be directed to manholes on Public mains, or to sumps as shown in Figure 4.2, or to kerb and channel as shown in Figure 4.1 if no Public stormwater reticulation is available as approved by the TA.*
 - ii) *Connection of stormwater to Public drainage will only be permitted where no other options exist and it can be demonstrated by the developer that the public system has sufficient capacity to take the additional flow without adverse effects.*
 - iii) *No discharge to the road reserve, parks, open spaces or to Public stormwater reticulation shall be made without the approval of the TA.*
 - iv) *Each connection shall be capable of serving all buildings and impervious areas within the Lot.*
 - v) *Unless otherwise approved by the TA, the minimum internal diameter of connections shall be:*
 - *100mm for residential lots.*
 - *150mm for commercial and industrial lots and connections serving two residential lots.*
 - *200mm for connections serving three or more residential lots.*
 - vi) *Where the stormwater pipeline is outside the lot to be served, a connection pipeline shall be extended inside the boundary of the lot and marked by a 50mm x 50mm timber stake extended 300mm above ground level and painted green.*
 - vii) *All connections shall be sealed by removable caps until such time as they are required.*
 - viii) *Connections shall be indicated accurately on as-built plans. Locations relative to boundaries, depth to invert and ground level shall be given as a minimum.*
 - ix) *The depth of the property connection shall be a minimum of 600mm at the property boundary.*

4.3.12 Local Amendment: Delete last sentence in paragraph one.

5. WASTEWATER

5.2.1 Local Amendment: Add clause at end of second paragraph.

- o) *Sewer networks must be designed to ensure that the length of sewer laterals is the shortest possible distance, perpendicular to the sewer drain.*

5.3.5.3 Local Amendment: Delete paragraph one and amend C5.3.5.3 to show maximum of dwellings in the Stratford District.

... it is common practice for up to six dwelling units to use the existing connection (maximum of four dwellings in the Stratford District). However, such connections ...

Local Amendment: Insert Table 5.3 – Minimum pipe sizes for wastewater reticulation and property connections, previously deleted

5.3.7.4 Local Amendment: Replace 1.0m with 1.5m in paragraph two.

5.3.7.5 Local Amendment: Replace paragraph one.

In the New Plymouth District pipelines shall have minimum cover of 900mm in all Council owned land and private property.

5.3.7.10 Local Amendment: In paragraph three replace ‘the council’s bylaws’ with ‘each council’s bylaws’ and add additional paragraph.

No building shall be built over any buried public services whether on public or private land within the New Plymouth District.

5.3.8.4 Local Amendment: Add paragraph.

All new connections into manholes shall be cut into the precast manhole wall by drilling or saw cutting. Breaking into a manhole by use of a heavy hammer or chisel is not permitted.

5.3.8.6.3 Local Amendment: Delete 5.3.8.6.3.

5.3.10.1 Local Amendment: Add second paragraph.

Sewer networks must be designed to ensure that the length of sewer laterals is the shortest possible distance, perpendicular to the sewer drain.

5.3.10.3 Local Amendment: Add text to (b).

(b) Extending the public line into the lot and providing a separate connection to each unit *where approved by the TA.*

5.3.10.4 Local Amendment: Add (f).

(f) *Sewer networks must be designed to ensure that the length of sewer laterals is the shortest possible distance, perpendicular to the sewer drain.*

Local Amendment: Replace Figure 5.3 – Point of discharge location – single dwelling with street frontage (NPDC only) and Figure 5.4 – Point of discharge location – sewer on private land.

5.3.10.5 Local Amendment: Replace (i), (j) and (k).

(i) *Service connections shall be located such that each property is able to be serviced by gravity from ground level when the private sewer drains are laid at a slope of 1.25%.*

(j) *For vacant lots the connection shall terminate not less than 1m inside the boundary with a terminal inspection, plugged, watertight and marked with a painted white timber stake.*

(k) *Ramped risers shall be used for laterals greater than 1.2m deep. They shall rise at an angle of 45° until a depth of 1.2m is reached.*

5.3.11.1 Local Amendment: In first sentence of first paragraph and note replace ‘sewage’ with ‘wastewater’.

Local Amendment: Replace Figures 5.5 – Boundary kit detail and 5.6 – Point of discharge locations – private pump stations (sections).

5.3.11.2 Local Amendment: Following changes:

Amend heading to read ‘Small pump stations serving multiple properties’.

Replace ‘sewage’ with ‘wastewater’ in first paragraph.

Add the word ‘Such’ to the beginning of the second paragraph.

Local Amendment: Add text to end of third sentence of (a)(i).

i) *... The pumping station shall include a total emergency storage volume equivalent to 6 hours at design average dry weather flow from the fully developed upstream catchment connected to the pumping station....*

Local Amendment: Replace ‘adopted by’ with ‘vested in in (a)(iv) and add sentence at end.

- iv) *Rising mains which are to be vested in the Council shall have a minimum internal diameter of 100mm. Any piping larger than an internal diameter of 100mm will require specific design with TA approval.*

5.4.2 Local Amendment: Replace ‘agreed’ with ‘Council’ in (d).

5.5.5 Local Amendment: Add two notes to Figure 5.8 – Pipeline support.

6. WATER SUPPLY

6.2.1 Local Amendment: Delete paragraph four.

6.3.6.3 Local Amendment: Replace section.

Water demands vary on a regional basis depending on a variety of climatic conditions and consumer use patterns. The TA should be able to provide historically-based demand information appropriate for design. Where peak demands are required for the design of a distribution system, the value shall be calculated from the following formulae:

Peak Day Demand (over a 12-month period) = Average Day Demand x PF

Unless specified otherwise by the TA:

- (a) *PF = 1.5 for populations over 10,000;*
- (b) *PF = 2 for populations below 2,000.*

Peak Hourly Demand = Average Hourly Demand (on peak day) x PF (over a 24-hour period)

Unless specified otherwise by the TA:

- (a) *PF = 2 for populations over 10,000;*
- (b) *PF = 5 for populations below 2,000.*

6.3.5.4 Local Amendment: Replace section.

The head loss through pipe and fittings at the design flow rate shall be less than:

- (a) *5 m/km for DN ≤150;*
- (b) *3 m/km for DN ≥200.*

6.3.5.5 Local Amendment: Replace ‘40 L/min’ with ‘25 L/min’ under (a)

6.3.5.6 Local Amendment: Replace (a) and (b) with (a), (b) and (c), renumber original (c) to (d) and add sentence at end ‘See also 6.3.11’ and renumber original (d) to (e) and replace ‘100mm’ with ‘150 mm’.

(a) *Commercial and industrial flows*

Industry type (water usage)	Design flow (litre/second/hectare)
<i>Light</i>	<i>0.4</i>
<i>Medium</i>	<i>0.7</i>
<i>Heavy</i>	<i>1.3</i>

(b) *Urban flows (flows in the urban supply area)*

The minimum peak domestic demand shall be specified by the TA, or:

- (i) *Daily consumption of 323 L/p/day;*
- (ii) *Peaking factor of up to 5.*

(c) *Rural flows (flows in the rural supply area)*

- (i) *Daily consumption of 1000 L/lot/day;*
- (ii) *An additional flow of 500 L/ha/day*
- (iii) *Peaking factor of 1.*

(d) *Firefighting demands as specified in SNZ PAS 4509. See also 6.3.11.*

- (e) The network should be designed to maintain appropriate nominated pressures for both peak demand (average daily demand in L/s x peaking factor) and firefighting demand scenarios. These figures should be applied to mains of 150 mm diameter or greater. Mains less than 150 mm in diameter can be sized using the multiple dwellings provisions of AS/NZS 3500.1 Table 3.2.
- 6.3.5.7 Local Amendment: Delete 100 nominal diameter of main DN row in Table 6.2 – Empirical guide for principal main sizing and under second paragraph under table.**
DN 100 water mains may only be used in short right of ways in order to meet firefighting hydrant requirements, subject to TA approval.
- 6.3.5.10 Local Amendment: Delete paragraphs four, five, six and seven.**
Local Amendment: Delete last three rows of Table 6.3a – Service pressure at point of supply.
- 6.3.6.2 Local Amendment: Remove note and replace with paragraph below and add ‘in the New Plymouth District only’ to following paragraph.**
Backflow prevention is required at the point of supply for all connections. Industrial and commercial water connections shall be a minimum of ‘medium risk’. Residential water connections shall be a minimum of ‘low risk non testable’.
- The minimum allowable operating pressure under any conditions, including surge, shall not fall below 100kPa in the New Plymouth District only.*
- 6.3.8.1 Local Amendment: Replace ‘usually’ with ‘to be’ in first sentence of first paragraph.**
 Water mains are *to be* located in the road...
- 6.3.8.2 Local Amendment: Replace (DN) 100 with (DN) 150 in first sentence of first paragraph.**
 A principal water main of not less than nominal internal diameter (DN) 150, fitted with ...
- 6.3.8.4 Local Amendment: Replace paragraph in C6.3.8.4 with following text.**
Water mains and associated assets shall be located in the road reserve where possible. Where this is not possible (all other options have been exhausted) alternative solutions will be approved at the TA’s discretion.
- In the specific case of water mains located in right of ways within the New Plymouth district:*
- *If there are four lots (excluding the lots bordering onto the road boundary) or less, separate connections must be provided for the lots with manifolds and meters at the road boundary.*
 - *Lots bordering onto the road boundary must be provided with separate connections from the water main in the road with manifolds and meters outside the boundaries of these lots.*
 - *Easements must be registered over the water connections in the right of way in favour of the properties they serve.*
 - *Jumbo manifold boxes must be used if two or more connections are provided at the road boundary.*
 - *Each manifold must be tagged with the relevant lot numbers (and street numbers if known, this must be added later once street numbers have been allocated).*
 - *If the developer is concerned about the distance from the proposed dwelling to the manifold in the road then it is recommended that a separate isolation valve be installed for the water supply pipes to that lot closer to the proposed dwelling site. This will enable the householders to shut off their water supply without having to go to the manifold box at the road boundary to do so.*
- If, for site specific reasons (e.g. ensuring adequate pressure at a dwelling), the above can’t be achieved then the TA will consider at its sole discretion the installation of a 63 OD main in a right of way and vestment of this in the Council. In this case an Easement in Gross must be provided.*

If a fire hydrant is required to comply with the NZ Fire Service Firefighting Water Supplies Code of Practice then the Council will own the hydrant and the main up to the hydrant. In this case manifolds may be located in the right of way up to location of the fire hydrant.

6.3.8.9 Local Amendment: Add sentence to end of paragraph one.
... need for future maintenance. Existing AC water mains are to be replaced (full length joint to joint) when being crossed during construction work on new developments.

6.3.8.10 Local Amendment: Add paragraph at end.
Please refer to Figure 5.8 - Pipeline support for pipe bridge design.

6.3.9.2 Local Amendment: Change clearance to wall or building (mm) measurement for <100 (replace 600 with 500) and 100-150 (replace 1000 with 1500).

6.3.10.1 Local Amendment: Delete reference to DN 100 in paragraph one.

6.3.10.2 Local Amendment: Replace (b) and (c).
 (b) DN 100 for *right of ways in residential zones only. Refer to Table 6.2;*
 (c) DN 150 for *residential, industrial and commercial zones.*

6.3.10.3.2 Local Amendment: Replace PN 9 with PN 12 in first sentence of paragraph one.

6.3.11 Local Amendment: Replace paragraphs two and three.
The water reticulation in all residential zoned areas in the New Plymouth District shall be designed to comply with SNZ PAS 4509 to provide water for firefighting to FW2 at a minimum.

The water reticulation in all commercial and industrial zoned areas shall be designed to comply with SNZ PAS4509. However maximum firefighting water supply provided by the council network will be FW3.

6.3.2.10.1 Local Amendment: Replace headings in columns two and three.

	<i>Non trafficable - Road Berms, Reserves and Grassed Areas (including private property)</i>	<i>Trafficable - Carriageway (including shoulders)</i>
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6.3.14.3.4 Local Amendment: Replace Figure 6.1 – branch valve adjacent to main.

6.3.16.2 Local Amendment: Add paragraph under six.
All new water connections within New Plymouth and Stratford Districts require a water meter to be fitted to Council specification.

Local Amendment: Add C6.3.16.2 before Figure 6.3b.
In the case of residential infill development within New Plymouth and Stratford districts i.e. a subdivision where one house already has a connection and a new section(s) will be created adjacent to the existing section:

- *New separate connections must be provided for the new section(s) and a meter(s) installed.*
- *If the existing connection has the old style toby then a new manifold must be installed as part of the development. However no meter is required for this section as the connection itself is not a new connection.*
- *If the existing connection already has the new manifold then no change is needed to this manifold and no meter is required as the connection itself is not a new connection.*

Local Amendment: Replace Figure 6.3b, add '(NPDC only)' to heading and add sentence under heading 'Refer to bylaws for SDC and STDC'.

Local Amendment: Add '(NPDC only)' to heading for Figure 6.3c and add sentence under heading 'Refer to bylaws for SDC and STDC'.

Local Amendment: Add '(NPDC only)' to heading for Figure 6.3d and add sentence under heading 'Refer to bylaws for SDC and STDC'.

6.3.16.4 Local Amendment: Replace Figure 6.3e – Backflow prevention on 150mm dia water main. Local Amendment: Add notes to Figure 6.3f – 20mm NB backflow preventer and '(NPDC only)' to heading.

6.3.17 Local Amendment: Replace 'DN 100' with DN 150' in paragraph one and replace Figure 6.4 – elimination of termination points.

6.3.17.1 Local Amendment: Replace 'DN <100' with 'DN <150' and 'DN 100' with 'DN 150' in paragraph one.

6.5.3.3 Local Amendment: Replace 'detector tape' with 'marking tape' in heading and 'metallic detector tape' with plastic marking tape'.

6.5.3.4 Local Amendment: Replace 'ducted' with 'brought up' and remove words 'through a length of polyethylene pipe' in second paragraph.

The tracer wire shall run continuously between valves and hydrants. At each valve or hydrant the wire shall be *brought up* to surface level ending immediately below the lid, The tracer wire shall be long enough to extend 600 mm minimum above ground level when uncoiled. The excess length shall be neatly coiled in the valve or hydrant box.

Local Amendment: Replace last paragraph

Tracer wire shall be installed on all watermains and rider mains, and service connections to the point of supply.

7. LANDSCAPE

7.3.6 Local Amendment: Replace paragraph one.

In selecting species for planting, take into account the overall composition, low maintenance, and longevity, as well as the need to comply with the TA's planting policies. *Refer to the relevant TA for a list of suitable species for the subject location.*

7.3.10 Local Amendment: Add to second sentence of paragraph two '(a period of not less than 18 months and not exceeding 36 months)'.

... A suitably qualified person shall determine the need for permanent or temporary irrigation and the length of establishment time (a period of not less than 18 months and not exceeding 36 months) where temporary irrigation is required.

7.4.1 Local Amendment: Add 'and grass berms' in second sentence of paragraph two.

... The developer is responsible (and may be bonded) for the routine maintenance and replacement of the planting including dead wooding, weed control, mulching, replacing dead trees, shrubs, plants, *and grass berms* and watering...

7.4.4.6 Local Amendment: Amend heading to read 'Grass planting mixes' and replace paragraph one.

- *Only sports turf specific grass seed that is approved by the Council will be acceptable.*
- *SR 4600 and SR 4650 type grass seed is to be used in all reserve areas at present.*
- *New varieties will be considered as they become available.*

7.4.6.3 Local Amendment: Replace (f) and k).

(f) Final planted depth *to allow 60 - 100 mm mulch* consistent with finished ground level;

- (k) Trees radially mulched to a distance of 500 mm or to drip line, whichever is the greater area and a depth of 60 - 100 mm *unless approved mowing/containment strips are provided*; and

7.4.11.1 Local Amendment: Add sentence to end of paragraph one.

... required by the TA. This maintenance period shall be a period of not less than 18 months and not exceeding 36 months.

Appendix A – Acceptable Pipe and Fitting Materials

Local Amendment: Add Stratford District to first paragraph.

Local Amendment: Add following paragraph under paragraph one.

Please also refer to the New Plymouth District Council website for lists of Acceptable Pipe and Fitting Materials approved for use in New Plymouth, South Taranaki and Stratford.

Local Amendment: Following amendments to the Wastewater approved products New Plymouth District Council December 2009 table:

5.1 – Replace comment with ‘All manholes are to be installed in accordance with this code’.

5.3 – Delete ‘550mm and’ from category/material.

5.4 – Replace comment with ‘All manholes are to be installed in accordance with this code’.

Local Amendment: Following amendments to the Stormwater approved products New Plymouth District Council May 2010 table:

3.1 – Replace comment with ‘All manholes are to be installed in accordance with this code’.

3.2 – Delete ‘550mm and’ from category/material.

3.3 – Replace comment with ‘All manholes are to be installed in accordance with this code’.

Appendix B – Standard Construction Drawings

Rename CM-005 removing reference to ‘mini’ from list of drawings on first page of appendix.

Add ‘Amended’ to end of WS-003 from list of drawings on first page of appendix.

Replace CM-004 – Manholes standard details.

Replace CM-005 – Manholes drop manhole details.

Replace WS-002 – Typical mains construction distribution and transfer mains.

Replace WS-003 – Property services connection to main.

Replace WS-004 – Thrust blocks concrete block details.

Replace WS-005 – Thrust and anchor blocks gate valves and vertical bends.

Replace WW-002 – Property connections buried interface method.

Appendix E

Replace Appendix E – Typical plan and cross section figures from Table 3.2 with Appendix E Water mains in private land (NPDC only).