PART 3: ROADS

3.1 Scope

3.2 General

~~**3.2.1 Objective**~~

3.2.2 Related ~~Relevant~~ standards and guideline ~~documents~~

Add the following new paragraph:

The developer shall comply with the WDC policy and procedures for the excavation and reinstatement of works within road reserve; ~~this was historically referred to as the Street Opening Policy, which has been replaced with~~:

- National Code of Practice for Utility Operators' Access to Transport Corridors ex NZUAG

  ~~Commonly referred to as "The Code"~~

~~Temporary Traffic Management:~~

- New Zealand Transport Agency ~~Transit New Zealand~~ Code of Practice for Temporary Traffic Management (CoPTTM) ~~, and~~

~~Road Controlling Authorities draft *Local Roads Supplement to TNZ CoPTTM*~~

Commented [SC1]: Update of reference documents

~~**3.2.3 Roading hierarchy and design**~~

~~**Add the following new paragraph:**~~

~~Subdividers/developers should obtain a specific determination from the WDC, on a proposed/current road's status, before proceeding with detailed designs for roads.~~

~~Where local roads are cul de sac's, they shall not exceed 300 metres in length in urban areas without specific approval from WDC. Cul de sac's of this length shall be designed in terms of "Residential" roads in Table 3.1. This approval will only be given where the proposal has been subject to specific design attention, including an analysis of alternative layouts.~~

Commented [SC2]: Moved to 3.2.4.2

~~Where urban roads run generally parallel at a separation of 200 metres or less, and where the topography permits, they shall be connected by lateral roads at a spacing of no less than 600 metres.~~

Commented [SC3]: Now 3.2.5

~~The completed roading design may be required to be subject to an independent safety audit by a qualified and approved traffic safety professional, at the developers expense, with the audit report made available to WDC at the time that the design plans are submitted to WDC for approval.~~

Commented [SC4]: Now 3.2.7

~~WDC's approved Long Term Road Hierarchy Network Plan is covered in the District Plan.~~

Commented [SC5]: Moved to 3.2.4.2

~~**3.2.4 Traffic management plan**~~

3.2.4.2 Link context

Add the following new paragraph:

Subdividers /developers should obtain a specific determination from WDC, on a proposed/current road's status, before proceeding with detailed designs for roads.

Where local roads are cul de sac's, they shall not exceed 300 metres in length in urban areas without specific approval from WDC. Cul de sac's of this length shall be designed in terms of "Urban" roads in Table 3.2. This approval will only be given where the proposal has been subject to specific design attention, including an analysis of alternative layouts.

WDC's approved Long Term Road Hierarchy Network Plan is covered in the District Plan.

Commented [SC6]: From 3.2.3

Add the following new clause:

WDC reserves the right to determine whether a road is deemed to be public or private. In most cases a road will be deemed public if it serves 7 or more dwelling units.

Commented [SC7]: From 3.2.8

C3.2.4.2: Add to the end of the paragraph in (c):

Motorways are not included in this Standard.

Commented [SC8]: Was C3.2.6

~~**Add the following new sentence:**~~

~~The Traffic Effect Assessment documentation is shown in Appendix F.~~

Commented [SC9]: Deleted

3.2.5 Network connectivity ~~Public transport~~

Add the following new paragraph:

Where urban roads run generally parallel at a separation of 200 metres or less, and where the topography permits, they shall be connected by lateral roads at a spacing of no less than 600 metres

Commented [SC10]: From 3.2.3

~~**3.2.6 Classification of urban roads**~~
3.2.7 Road safety audit ~~Classification of rural roads~~

Add the following new paragraph:

The completed roading design may be required to be subject to an independent safety audit by a qualified and approved traffic safety professional, at the developer's expense, with the audit report made available to WDC at the time that the design plans are submitted to WDC for approval.

Commented [SC11]: From 3.2.3

~~**3.2.8 Public or Private Road**~~

~~**Add the following new clause:**~~

~~WDC reserves the right to determine whether a road is deemed to be public or private. In most cases a road will be deemed public if it serves 7 or more dwelling units.~~

Commented [SC12]: Now 3.2.4.2

3.3 Design

~~**3.3.1 Minimum requirements**~~
~~**3.3.2 Road geometric design**~~
~~**3.3.2.1 Design parameters**~~
~~**3.3.3.2 Sight distance**~~

~~**Table 3.1 Road design standards – Urban (speed limit ≤ 70 km/h)**~~
~~**Note: Table 3.1 has been amended and moved to Appendix L.**~~

~~**Table 3.2 Road design standards – Rural (speed limit up to 100 km/h)**~~
~~**Table 3.3 Safe speeds on horizontal curves**~~
~~**Table 3.4 Superelevation run-off**~~

~~**Table 3.5 Widening of curves for urban kerbed streets**~~
~~**Table 3.6 Vertical curve lengths**~~

~~**Table 3.7 Road and Street Name Signs**~~

~~**3.3.3 Pavement structural design**~~
~~**3.3.3.1 CBR design method for rigid and flexible pavements**~~
~~**3.3.3.2 CBR tests**~~
~~**3.3.4 Safety provision on hills**~~

~~**Figure 3.1 Parameter relationship**~~

~~**3.3.5 Traffic calming in residential streets**~~

3.3.6 Parking, passing and loading

The requirements of Chapter 12 of the District Plan shall be met.

Commented [SC13]: New provision

3.3.7 Intersection and alignment design

Add to the end of the 2nd paragraph:

All residential road intersections of collector/collector class and below shall have a minimum kerb radius at intersections of 9 m. Such intersections shall also have the lot corners splayed by a minimum of 6 m along both boundaries.

Add the following new clauses:

Design of roundabouts shall comply with the TNZ Manual of Traffic Signs and Markings Part 2 and Austroads Guide to Traffic Engineering Practice Part 6: Roundabouts as amended for New Zealand conditions.

Commented [SC14]: Was in 4404:2004, but removed from 4404:2010.

3.3.8 No exit roads ~~Roundabouts~~

Add to the start of the 2nd paragraph, & add to the end of the paragraph:

Subject to design…….

Where the head of a cul-de-sac is also a low point it shall be provided with a double sump with individual leads from each sump.

Commented [SC15]: Was in 4404:2004, but removed from 4404:2010.

~~**Figure 3.2 Car park dimensions**~~
~~**Figure 3.3 Minimum traffic sight lines at non-signalized intersections**~~

~~**3.3.9 Cul-de-sac heads**~~
~~**3.3.10 Bus bays**~~
~~**3.3.11 Special road and footpath provisions near places of assembly**~~
3.3.11.~~12~~ Footpaths, pedestrian accessways, cycleways, berms

The requirements of Chapter 12 of the District Plan shall be met.

Commented [SC16]: New addition

Add the following new sentences:

The berm shall incorporate not less than 100 mm compacted thickness of loam topsoil placed over a base material capable of allowing root penetration and sustaining growth.

Stormwater disposal and lighting shall be provided to all pedestrian accessways.

Commented [SC17]: Was in 4404:2004, but removed from 4404:2010.

~~**3.3.12.1 Urban**~~

~~**Figure 3.4 Dimensions of cul-de-sac turning areas**~~
~~**Figure 3.5 Turning areas for cul-de-sacs**~~
~~**Figure 3.6 Bus bays: 3.0 m and 3.5 m**~~
~~**Figure 3.7 Pedestrian accessway cycle barriers**~~

~~**Figure 3.8 Footpath construction – typical sections**~~

~~**Replace this Drawing**~~

~~See updated drawing at the back of this document RD-WDC-019.~~

Commented [SC18]: Figure no longer exists

~~**3.3.12.2 Rural**~~

3.3.11~~12~~.23 Cycle~~ways~~ paths

Add the following new paragraph:

~~Cycleways to conform to WDC's cycle strategy.~~

Cycleways shall conform to AustRoads, NZ Cycle Network and Route Planning Guide and WDC's Shared Pathways Strategy.

Commented [SC19]: Update reference document

3.3.11~~12~~.34 Footpath and cycle~~way~~ path surfacing

Add the following new sentence:

In residential areas the acceptable surfacing for footpaths shall be concrete.

Coloured concrete and stamped concrete shall not be used.

Add to the end:
Typical details are shown in Subdivision Supplement to NZS4404:2010, WDC drawing RD-WDC-019 AA.

Commented [SC20]: Update in reference documents

3.3.11.4 Berms

Add the following new paragraphs at the end:

In rural areas, the combination of carriageways and shoulders shall be of adequate width to allow safe passage and stopping of bicycles, pedestrians and motorized traffic.

In no case shall berms provide less than 2 m width between the road side channel and road reserve boundary.

Rural berms shall be topsoiled to the same standards as urban berms unless they make use of already grassed undisturbed ground.

Commented [SC21]: Was in 4404:2004, but removed from 4404:2010.

3.3.12~~13~~ Traffic signs, marking ~~services, signage~~ and road furniture

Add the following new clause:

All road markings and traffic signs shall comply with the TNZ Manual of Traffic Signs and Markings

Commented [SC22]: Was in 4404:2004, but removed from 4404:2010.

Add to the 1st sentence last paragraph:

……..requirements and shall comply with NZS4121:2001 Design for Access and Mobility.

Commented [SC23]: New addition

Add the following new clause:

All road markings and traffic signs shall comply with the TNZ Manual of Traffic Signs and Markings

Add the following new clause:

Road and Street Name Signs
Road and street name blades shall comply with Table 3.7.

Posts shall be either:

100mm by 100mm rough-sawn H4 treated timber posts painted white or, 60mm diameter round fluted aluminium posts powder-coated white.

Table 3.7: Road and Street Name Signs

RTL Street Name Blade Specifications Manual PART 2 WELLINGTON

WANGANUI DISTRICT COUNCIL
STREET NAME BLADE - NO ARROW

EXTRUSION			
BLADE DEPTH:	200mm	TYPE:	Signfix - Powder Coated
BLADE LENGTHS:	1200mm max for double sided (2 x Single sided for lengths over 1200mm)		
ENDS:	Square	COLOUR:	White
LEGEND			
LETTER STYLE:	Highway Series D	SPACINGS:	End of Blade to Street Name = 70mm Street Name to Rd St etc = 70mm (min) Rd St etc to end of blade = 70mm
LETTER HEIGHT:	120mm		
ARROW:	Nil	LOGO:	Nil
COLOUR:	White	CONDENSING*:	80%
REFLECTIVITY:	HI	SPACING*:	-55%
BACKGROUND			
REFLECTIVITY:	HI	HEIGHT:	200mm
COLOUR:	Blue EC Film	BORDER:	Nil
RTL CODES			
CS33 305-316 Single Sided		CS33 405-416 Double Sided	
NOTES			
Spacing and condensing modified 20th July to match the Wellington made blades			

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3.3.134 Trees and landscaping
Add the following new sentence:

No building, fence or vegetation on any property shall be erected or permitted to grow in a manner which adversely affects visibility at any road intersection, including access to lots.

3.3.145 Road lighting

Add the following new clauses:

All new lighting should be LED lighting and agreed to by Council with regards to the appropriate lighting category as per AS/NZS 1158.3.1:2005 – Part 3.1.

Lighting poles options shall be as follows:

a) A 7.3m CSP suburban type with a 1m curved outreach, or equivalent alternative, and ground planted

b) A 10.0m CSP pole with a 3.0m curved outreach, or equivalent alternative, and ground planted

c) A 10.0m CSP pole with 3.0m curved outreach, or equivalent alternative, with a shear base.

d) Poles shall retain a stainless steel finish, ie. not painted any colour.

Commented [SC24]: From 3.3.15.1

Commented [SC25]: New addition

~~**3.3.15.1 General**~~

~~Developers shall be responsible for design and installation of street lighting and all associated cabling for all new development areas.~~

Commented [SC26]: Deleted

~~All new lighting should be LED lighting and agreed to by Council with regards to the appropriate lighting category as per AS/NZS 1158.3.1:2005 – Part 3.1.~~

~~Lighting poles options shall be as follows:~~

~~a) A 7.3 CSP suburban type with a 1m curved outreach, or equivalent alternative, and ground planted~~
~~b) A 10.0m CSP pole with a 3.0m curved outreach, or equivalent alternative, and ground planted~~
~~c) A 10.0m CSP pole with 3.0m curved outreach, or equivalent alternative, with a shear base.~~

Commented [SC27]: Now in 3.3.14

3.3.14~~5~~.2 Urban Street Lighting

In addition to recognising the relative requirements of the roading hierarchy, the lighting design shall focus on potential hazard areas, such as intersections, pedestrian crossings, public transport waiting areas and other points of community gathering. Street lighting shall be provided on all public roads as well as pedestrian and cycle accessways. If developers wish to light private rights of way, then the costs of installing, operating and maintaining such lights shall be at the expense of the developer and/or the subsequent owners.

3.3.14~~5~~.3 Rural Street Lighting

Developers in rural areas, where new development creates a hazard, shall provide street lighting. Such areas may include (but are not necessarily limited to) new road junctions, additional loading on existing junctions, or areas of substandard geometry or width.

Each case is to be judged on its merits, but it is important that the lighting system provides an unambiguous message to rural drivers. To this end, single lanterns are not considered adequate warning of a rural intersection.

3.3.145.4 Other Utilities

For urban and peri urban areas, underground cabling is the ~~preferred~~ method of installation. Refer also to the WDC's District Plan requirements.

~~**3.3.156 Bridges and culverts**~~

3.3.167 Private ways, private roads and other private accesses ~~Non public accesses (urban and rural)~~

Add to the start of the clause:

The requirements of Chapter 12 of the District Plan shall be met.

Commented [SC28]: New addition

Add to the end of the first paragraph:

For rear lots or multi-unit or comprehensive developments the provisions of 3.3.18 (Fencing) apply. For individual lots, whether urban, rural, or rural residential, the designer shall show that it is possible to form an access to each lot, that can be safely traversed by normal road going vehicles.

Commented [SC29]: Was in 4404:2004, but removed from 4404:2010.

Add to the end of the first line of the first sentence, 2nd paragraph:

as part of the buildings and on all commercial/industrial accessways, this shall be noted…..

Commented [SC30]: Was in 4404:2004, but removed from 4404:2010.

~~**3.3.18 Multi-unit non public accesses (urban and rural)**~~

~~**Add the following clause to (n)**~~

~~All weather non-permeable surface is acceptable for rural accesses.~~

3.3.179 Crossings

The requirements of Chapter 12 of the District Plan shall be met.

Add the following new clause:

Property Access

New vehicle crossings, and existing vehicle crossings serving a new activity, shall meet the design standards in NZ Transport Agency – Planning Policy Manual when all the following circumstances exist:

i) The road is a National route, (State Highway) primary arterial or secondary arterial (as defined on the Planning Maps); and

ii) The road has a speed limit of 100km/hr or more at the access location; and

iii) The activity concerned is a high traffic generating activity which, for the purpose of this standard, shall be defined as an activity which generates more than 30 car equivalent movements per day (24 hour period) averaged over a normal week, where:

- 1 car to and from the site = 2 car equivalent movements
- 1 truck to and from the site = 6 car equivalent movements
- 1 truck and trailer to and from the site = 10 car equivalent movements
- 1 single residential dwelling = 8 car equivalent movements

NZ Transport Agency – Planning Policy Manual – For Integrated Planning and Development of State Highways – Appendix 5B.3; Accessway geometric design should be used in the above circumstances.

Generally, Diagrams D & E will be used depending on Table App 5B/4 – Accessway types.

NZ Transport Agency standards for State Highway access design aims, to allow most new crossing places to be permitted activities, which requiring specific access design only in relation to high traffic generating activities seeking access to high speed arterial roads. The alternative of not having any controls over access for high traffic generating activities to high speed arterials is not appropriate for traffic safety and efficiency reasons. At the other extreme, the alternative of requiring a resource consent for all new accesses to state highways (regardless of nature and location of activity) is also not considered to be necessary or appropriate).

Note: That the WDC have rural vehicle crossings drawings which apply for vehicle movements less than 30 on minor rural roads.

Note: NZ Transport Agency approval is required for access onto State Highways under section 51 of the Government Roading Powers Act 1989.

Commented [SC31]: From 3.3.22.2

~~**Add the following new clause:**~~

3.3.17~~9~~.1 Urban Crossings

Add the following new clause:

The width of the vehicle crossing shall be defined as the width at the property boundary.

Replace the 2nd to last sentence of the 3rd paragraph with:

All crossings shall be surfaced with concrete.

Replace last sentence, 3rd paragraph with:

Drawing series RD-WDC-001AA to RD-WDC-013AA shows acceptable details of vehicle crossings
~~Drawings RD-WDC-001, RD-WDC-002, RD-WDC-003, RD-WDC-004, RD-WDC-0005 and RD-WDC-006 show acceptable details of vehicle crossings.~~

Commented [SC32]: Update drawing numbers

Insert at end of the 5th paragraph:

……..,, NZS 4121 for disabled persons access and shall incorporate tactile tiles.

3.3.17~~9~~.2 Rural Crossings

Add the following new clause:

The width of the vehicle crossing shall be defined as the width at the property boundary.

Refer RD-WDC-010AA Maximum breakover angles for vehicular access to property

C3.3.19.4 For more information on drainage in urban streets refer to Part 4 of this Standard

~~**Figure 3.9 Maximum breakover angles for vehicular access to property**~~

~~**Figure 3.10 Standard light duty vehicle crossing detail**~~

~~**Replace this Drawing**~~

~~See updated drawing at the back of this document in Appendix A.~~

~~**3.3.20 Fencing**~~
~~**3.3.21 Road drainage**~~
~~**3.3.21.2 Subsurface drains**~~
~~**3.3.21.3 Side drains/water tables**~~

~~**Figure 3.11 Under kerb drainage and rural subsoil drainage**~~

3.3.19~~21~~.~~6~~4 Kerbs and channels

~~**Replace the first paragraph with the following:**~~

~~Where kerbs and channels are to be provided on carriageways they should comply with figure 3.12. Mountable kerb will not be allowed where it will impinge on pedestrians, utility services or safety. Footpaths may need strengthening if mountable kerb is used. See Drawing RD-WDC-021~~

Commented [SC33]: Now contained in 4404

~~C3.3.19.4~~

Formatted: Not Highlight

~~For more information on drainage in urban streets refer to Part 4 of this Standard~~

~~**3.3.21.5 Sumps**~~
3.3.19~~21~~.~~75~~.1 Integration of road run-off with development stormwater system ~~Sump location~~

Add the following to the end of (a):

Unless the specific capacity of a sump intake is known or derived from first principles, the design capacity of a single back entry sump with standard grating shall be limited to about 28 L/s;

Add the following to the end of (c):

At all low points double sumps shall be used as a minimum.

Commented [SC34]: Was in 4404:2004, but removed from 4404:2010.

~~**Figure 3.12 Kerbs and dished channels**~~
~~See supporting Drawing in Appendix A.~~

~~See updated drawing at the back of this document for standard and mountable kerb and channel RD-WDC-021~~

Commented [SC35]: Deleted.

~~**Figure 3.13 Typical sump to driveway or right of way**~~
~~**Figure 3.14 Flat channel or yard sump**~~
~~**Figure 3.15 Hillside sump**~~

~~**Replace this Drawing**~~

~~See updated drawing CM-WDC-005, 006 and 007 in Appendix A.~~

Commented [SC36]: Deleted

~~**Figure 3.16 Add-on back-entry sump for hillside situations**~~
~~**Figure 3.17 An alternative sump for hillside situations**~~
~~**Figure 3.18 Special entry to double sump in hillside channel**~~
~~**Figure 3.19 Double back-entry sump for road low points**~~

~~**3.3.21.5.2 Side-entry sumps**~~
~~**3.3.21.5.3 Sump gratings**~~
~~**3.3.21.5.4 Sump leads**~~

3.3.19.7.2 Design

Add the following to the end of 3.3.19.7.2:

Side-entry systems associated with traditional grated sumps significantly improve sump intake as they are less prone to blockage from debris. They are the preferred type of sumps for normal use. They should generally be detailed to provide a trap to limit the ability of solid or floatable debris entering the stormwater systems.

They shall not be used without debris control in commercial or industrial areas or in areas where long lengths of set down kerb may compromise the side entry.

Commented [SC37]: Was in 4404:2004, but removed from 4404:2010.

3.3.19~~21~~.7.5 Secondary flow provisions

Add the following new sentence:

Secondary flow paths shall ~~to~~ be shown on subdivision drawings.

Commented [SC38]: Re-word

~~**3.3.22 Add the following new clause:**~~

~~**3.3.22.1 Loading**~~

~~**a** Loading bays shall be designed and located so as to provide a safe position for loading and unloading of goods and providing access and egress without affecting any road or service lane.~~

~~**b** Loading bays shall be designed and located so as to:~~

~~i. Promote use of the loading bay rather than the road side for loading and unloading of goods;~~

~~ii. Minimise conflicts between traffic entering and leaving the site.~~

~~**c** The areas of the loading bay(s) shall be sufficient in size to cater for the largest expected vehicle, plus manoeuvring space around that vehicle.~~

~~*(Standards (a) to (c) above aim to ensure that the safe and efficient operation of roads is not impeded by the location of stationery service vehicles nor the manoeuvring of such vehicles. It is preferable that vehicle movement, to and from sites be in a forward direction where possible.)*~~

Commented [SC39]: Deleted

~~**3.3.22.2 Property Access**~~

~~New vehicle crossings, and existing vehicle crossings serving a new activity, shall meet the design standards in NZTA – Planning Policy Manual when all the following circumstances exist:~~

~~i. The road is a National route, (State Highway) primary arterial or secondary arterial (as defined on the Planning Maps); and~~

ii. The road has a speed limit of 100km/hr or more at the access location; and

iii. The activity concerned is a high traffic generating activity which, for the purpose of this standard, shall be defined as an activity which generates more than 30 car equivalent movements per day (24 hour period) averaged over a normal week, where:

- 1 car to and from the site = 2 car equivalent movements
- 1 truck to and from the site = 6 car equivalent movements
- 1 truck and trailer to and from the site = 10 car equivalent movements
- 1 single residential dwelling = 8 car equivalent movements

***NZTA** – Planning Policy Manual – For Integrated Planning and Development of State Highways – Appendix 5B.3; **Accessway geometric design** should be used in the above circumstances.*

Generally, Diagrams D & E will be used depending on Table App 5B/4 – Accessway types.

NZTA standards for State Highway access design aims, to allow most new crossing places to be permitted activities, which requiring specific access design only in relation to high traffic generating activities seeking access to high speed arterial roads. The alternative of not having any controls over access for high traffic generating activities to high speed arterials is not appropriate for traffic safety and efficiency reasons. At the other extreme, the alternative of requiring a resource consent for all new accesses to state highways (regardless of nature and location of activity) is also not considered to be necessary or appropriate).

Note: *That the WDC have rural vehicle crossings drawings which apply for vehicle movements less than 30 on minor rural roads.*

Note: NZTA approval is required for access onto State Highways under section 51 of the Government Roading Powers Act 1989.

Commented [SC40]: Now at 3.3.17

3.3.22.3 Separation Distance Between Accesses

Roads where speed limit is less than 70 km/hr:

In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between accesses (either single or combined) on the same side of the road shall be:

i. not less than 7.5 metres for residential land uses,
ii. not less than 15 metres for all other land uses.

In relation to any road not covered by the paragraph above, there is no minimum standard for the minimum distance between accesses.

Roads where speed limit is 70 km/hr or more:

In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between successive accesses (regardless of the side of the road on which they are located) shall be not less than:

i. 40 metres for 70 km/hr roads,
ii. 100 metres for 80-90 km/hr roads,

~~iii. 200 metres for 100 km/hr roads.~~

~~In relation to any road not covered by the paragraph above, there is no minimum standard for the minimum distance between accesses.~~

~~Separation Distance Between Accesses and Intersections:~~

~~*Roads where speed limit is less than 70 km/hr:*~~

~~**k** In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between an access and a road intersection shall be 15 metres.~~

~~**l** In relation to any road not covered by (k) above, the minimum distance between an access and a road intersection shall be 10 metres, except that where the road intersects with a national route, primary arterial or secondary arterial, the minimum distance shall be 15 metres.~~

~~**m** The measurement of distances shall be taken from the nearest corner junction point of the road reserve boundaries at the intersection (or their projection in respect of "T" intersections) and shall be measured to the nearest edge of the access to the intersection.~~

~~*Roads where speed limit is 70 km/hr or more:*~~

~~**n** In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between an access and a road intersection shall be 100 metres.~~

~~**o** In relation to any road not covered by (n) above, the minimum distance between an access and a road intersection shall be 30 metres.~~

~~**p** The measurement of distances shall be taken from the intersection of the centrelines of the intersecting roads.~~

~~*(Standards (k) to (p) above aim to ensure that vehicle crossings are not located unduly close to road intersections, for traffic safety and efficiency reasons. The separation distance required increases with the speed environment and the nature of the road concerned.)*~~

Commented [SC41]: Deleted

3.4 Construction

3.4.1 Introduction

Add the following new sentence:

Construction work in the public road reserve shall comply with the 'National Code of Practice for Utility Operators' Access to Transport Corridors'. ~~WDC's Street Opening Policy~~.

Commented [SC42]: Update document reference

Add the following new paragraph:

3.4.1.1 Plant Pest Control

To minimize the potential for establishment, control of weeds that should not be tolerated on site because of their aggressiveness or persistence, identification and controls are required. WDC working with Horizons Regional Council will identify

plant pests requiring specific control measures. Adequate site biosecurity is required for machinery and materials brought onto the site to ensure that weed propagules do not enter the site. This involves cleaning machinery prior to bringing it on to the site and ensuring that other materials brought onto the site, including gravels, are free of seeds and vegetation. Using locally sourced gravel and soils, or other materials where possible may reduce the potential for the introduction of new weeds to the area.

Commented [SC43]: New addition

~~**3.4.2 Materials for flexible pavements**~~
~~**3.4.2.1 Transition layer**~~
~~**3.4.2.2 Sub-base**~~

~~**3.4.2.3 Basecourse**~~

~~(a) Shall apply in Wanganui, this precludes the use of shellrock.~~

Commented [SC44]: Now 3.4.8, provision deleted

3.4.3 Road Surfacing

Clause (d) & (e) subject to specific approval.

~~**3.4.4 Road surfacing materials**~~

3.4.4.1 First and second coat chip seals

Replace first sentence with:

The first coat seal shall consist of a grade 4 and 6 two coat seal.

Two seal coats shall be applied by the developer. The second seal coat shall be applied between 12 and 18 months after the first coat. The type of each seal coat shall be agreed with Council's Infrastructure Group prior to the work commencing.

~~**3.4.4.2 Double wet lock coat**~~
~~**3.4.4.3 Hot laid asphaltic concrete surfacing**~~
~~**3.4.4.4 Other asphaltic mixes**~~

~~**3.4.4.5 Concrete**~~

~~**Replace 1st paragraph, second sentence with:**~~

~~Concrete of not less than 30MPa 28 day strength shall be used for any road.~~

Commented [SC45]: Now in 4404

~~**Replace last sentence with:**~~

~~Concrete of not less than 20MPa 28-day strength shall be used for kerbs and channel and crossing slabs.~~

Commented [SC46]: Now in 4404

~~**3.4.4.6 Concrete pavers**~~
3.4.5 Subgrade checking

Install 1st paragraph:

The subgrade shall be inspected by the designer to assess the suitability of the exposed subgrade for the proposed design. Where necessary the design shall be modified and soft spots removed before sub-base placement is commenced.

Commented [SC47]: Was in 4404:2004, but removed from 4404:2010.

~~**3.4.6 Spreading and compaction of metal course aggregates**~~

~~**3.4.7 Sub-base**~~

~~**Replace the last sentence of the second paragraph with:**~~

~~Sub-base shall be constructed in accordance with TNZ B/2 Specification.~~

Commented [SC48]: Deleted, now in 4404

~~**3.4.8 Basecourse**~~
~~**3.4.9 Maintenance of basecourse**~~
~~**3.4.10 Basecourse preparation for surfacing**~~
~~**3.4.11 Deflection testing prior to surfacing**~~

Commented [SC49]: Was 3.2.4.3

~~**3.4.12 Surfacing specification**~~

~~**Replace second sentence with:**~~

~~Asphaltic concrete construction shall comply with TNZ Specification P/9P.~~

Commented [SC50]: Deleted, now in 4404

~~**3.4.13 Bitumen application rate**~~
~~**3.4.14 Footpaths**~~

3.4.14.1 Concrete
Penultimate paragraph. **Delete second sentence.**

~~**3.4.14.2 Asphaltic concrete**~~

3.4.14.3 Concrete pavers

Add the following new sentence:

Block paving shall not be used.

3.4.14.4 Surface finish, tolerances

Add the following new sentence:

Coloured concrete and stamped concrete shall not be used.

3.4.15 Kerb and channel

Replace the first paragraph with the following:

Where kerbs and channels are to be provided on carriageways they should comply with RD-WDC-021AA.

Footpaths may need strengthening if mountable kerb is used. See Drawing RD-WDC-021

Commented [SC51]: Was 3.2.21.4 – updated figures and drawings

Add the following new sentence:

Coloured concrete and stamped concrete shall not be used.

~~**3.4.16 Berms and landscaping**~~
~~**3.4.17 Road surface tolerances and texture**~~

Commented [SC52]: Now 3.4.3.2

3.4.178 Surface finish and tolerances on kerbs, paths and accessways

Add the following new sentence:

Coloured concrete and stamped concrete shall not be used.

~~**3.4.18.1 Kerbs and channel**~~
3.4.17~~18~~.2 Paths, accessways

Add the following sentence as sentence 1, paragraph 1:

Concrete paths and accessways shall be laid with construction joints at not more than 3 m centres.

Add the following % to sentence 2, paragraph 3:

Crossfalls of 3% shall be provided.

Commented [SC53]: Was in 4404:2004, but removed from 4404:2010.
Change from 3-4% to just 3%

~~**3.4.19 Progress inspections**~~
~~**3.4.20 Installation of traffic services, road furniture, benchmarks**~~

3.4.20~~21~~ As-built and completion documentation

Add the following new paragraph:

On completion of the physical works, and before acceptance of the works by WDC, the developer shall submit a full set of As-Built drawings of the works to Council in accordance with 1.8.10 ~~1.5.2.1~~.

The As-Built drawings shall include the full detail required by WDC to inventory, locate and maintain the works, along with the manuals necessary to operate plant, signals or other devices.

As-Built drawings may take the form of construction drawings modified to account for amendments or refinements in the field, but shall be clearly labelled as "As-Built" and certified as an accurate post-construction record.

See WDC Land Development and Subdivision Engineering Document 2012 Appendix J: Schedule 1D As-Built Plans and Documents for WDC requirements. ~~See Appendix J: Schedule 1D As-Built Plans and Documents for WDC requirements.~~

Commented [SC54]: Change in reference document