Engineering Standards for Land Development

DRAFT
Background

• Pre July 2014
  • Multiple separate 3-Waters/Roading Specifications

• July 2014
  • Adopted NZS 4404:2010 Land Development & Subdivision Infrastructure
  • General purpose NZ wide Standard
  • Designed to provide flexibility and means of compliance
  • Subject to detailed engineering design solutions
Feedback

• (Post 2014 continued)

• Development Community – Engineers/Surveyors/Landowners
  • NZS4404:2010 too ambiguous
  • Requires too much specific design
  • Not locally relevant eg.
    • Soil conditions
    • Stormwater catchment/Hydrological neutrality

• Transportation/Roading Links/Hub
  • Saleyards in CBD
Changing Environmental Factors
Changing Environmental Factors
Changing Environmental Factors
Roading Under NZS4404:2010

Tables to calculate Roads & Right of Way Widths
<table>
<thead>
<tr>
<th>PLACE CONTEXT</th>
<th>DESIGN ENVIRONMENT</th>
<th>LINK CONTEXT</th>
<th>TYPICAL PLAN AND CROSS SECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Land use</td>
<td>Local attributes</td>
<td>Locally served</td>
</tr>
<tr>
<td>Notes</td>
<td>See Table 3.1</td>
<td>See Table 3.1</td>
<td>See Table 3.1</td>
</tr>
<tr>
<td>Live and play</td>
<td>Access to lifestyle or clustered housing</td>
<td>1 to 3 du or 1 to 6 du</td>
<td>10</td>
</tr>
<tr>
<td>Live and play</td>
<td>Side or rear service access</td>
<td>1 to 20 du</td>
<td>10</td>
</tr>
<tr>
<td>Live and play</td>
<td>Access to houses / townhouses</td>
<td>1 to 20 du</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 3.2 (continued)
## Minimum Standards for Urban Subdivision

Refer to page 30

<table>
<thead>
<tr>
<th>Classification</th>
<th>Type</th>
<th>Traffic Volume</th>
<th>Area Served</th>
<th>Legal Road/ROW Width (minimum)</th>
<th>Carriageway Width (Minimum)</th>
<th>Footpath</th>
<th>Total Berm Width</th>
<th>Max/Min Grade</th>
<th>Normal Camber</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROW / Access Lot</td>
<td>2-3 Lots</td>
<td></td>
<td>3.5m</td>
<td>3.5m (U1)</td>
<td>N/A</td>
<td></td>
<td></td>
<td>12.5%</td>
<td>0.4%</td>
<td>Approved stormwater control</td>
</tr>
<tr>
<td>ROW / Access Lot</td>
<td>4-6 Lots</td>
<td></td>
<td>6.0m (U3) (U4)</td>
<td>5.0m (US)</td>
<td>(U2)</td>
<td>1.0m</td>
<td></td>
<td>12.5%</td>
<td>0.4%</td>
<td>Min kerb and channel one side. Turning Area required</td>
</tr>
<tr>
<td>Local Roads (Public Roads)</td>
<td>Cul-de-sac</td>
<td>Up to 12 Lots or 12 du Max length 150m</td>
<td>16.0m (U3) (U4)</td>
<td>7.0m (US)</td>
<td>1 @ 1.5m</td>
<td>9.0m</td>
<td></td>
<td>12.5%</td>
<td>0.33%</td>
<td>Kerb and Channel both sides. Cul-de-sac turning head required</td>
</tr>
<tr>
<td>Residential &lt;750 vpd</td>
<td>&gt;12 Lots</td>
<td>17.0m</td>
<td>8.0m (US)</td>
<td>2 @ 1.5m</td>
<td>9.0m</td>
<td>12.5%</td>
<td>0.33%</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential &gt;750 vpd</td>
<td>&gt;12 Lots</td>
<td>20.0m</td>
<td>11.0m (US)</td>
<td>2 @ 1.5m</td>
<td>9.0m</td>
<td>10%</td>
<td>0.33%</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
<td>20.0m</td>
<td>11.0m (US)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subject to specific design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial/Business</td>
<td>All roads</td>
<td>20.0m</td>
<td>11.0m (US)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subject to specific design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distributor/Collector</td>
<td>Residential</td>
<td>20.0m</td>
<td>11.0m (US)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subject to specific design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial/Strategic</td>
<td>All roads</td>
<td>22.0m</td>
<td>13.0m (US)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subject to specific design</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Proposed Changes

• Development Concept Plan (DCP)
• Network utilities suppliers
  • Gas/Telecom
  • Future proof ducting

• Increasing minimum footpath widths to 1.5m

• Fire Fighting Capacity
  • Watermains to 150mm minimum
  • Hydrant Location to 95m

• Standard Drawings – Complete set
Where To From Here

• Public Consultation
  • Invite feedback/submission from Surveyors/Developers/Engineers/General Public

• Consultation closes Friday 26th May 2017

• Amended Standards submitted to Council for adoption on 14th June 2017

• Given effect on 1st July 2017*

  *Subject to incorporating amendments to District Plan