DEVELOPMENT CODE

June 2009
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PAPAKURA DISTRICT COUNCIL

DEVELOPMENT CODE

JUNE 2009

PART 1: GENERAL REQUIREMENTS AND PROCEDURES

1.1 SCOPE

This part of the code defines terminology used in the code and explains the roles and responsibilities of all parties involved in any development in Papakura District. This part of the code also provides information regarding the documentation requirements, design requirements, quality assurance documentation, completion documentation and information regarding the provision of bonds for uncompleted bonds.

1.2 GENERAL

This code of practice for subdivision and development gives a means of compliance with the objectives and performance criteria of the Papakura District Council's District Plan; which has been prepared in accordance with the provisions of Resource Management Act 1991 (the Act) and recognises the purpose and principles of the Act.

Part 1 of this code concerns matters of general application and general requirements to be observed.

Parts 2 to 9 of this code define requirements relating to particular types of services to be provided, and the means of compliance.

This code recognises that Council and other network operators will become the owners of the roading and other infrastructure that are created and vest in the Council in the subdivision process. Council and other network operators will assume responsibility for ongoing maintenance of these systems. It is therefore imperative that Council is given confidence that the systems are designed and constructed in a manner that ensures that they are fit for purpose at the time of transfer of ownership.

1.3 INTERPRETATION

1.3.1 General

Where any other standard named in this standard has been declared or endorsed in terms of the Standards Act 1988, then:

(a) Reference to the named standard shall be taken to include any current amendments declared or endorsed in terms of the Standards Act 1988; or

(b) Reference to the named standard shall be read as reference to any standard currently declared or endorsed in terms of the Standards Act 1988 as superseding the named standard, including any current amendments to the superseding standard declared or endorsed in terms of the Standards Act 1988. The word "shall" indicates a requirement that is to be adopted in order to comply with a standard or this code.

Definitions

In this Standard, unless inconsistent with the context, the following definitions shall apply:

AEP	Annual Exceedance Probability, which is the probability of exceedance of a given rainfall discharge within a period of one year
CERTIFICATION	Means providing certification and accepting responsibility that works have been constructed in accordance with approved drawings, specifications, and sound engineering practice.
CERTIFYING ENGINEER	Means the chartered engineer appointed by the developer to provide the necessary certifications with respect to design, supervision, and testing required.
CHARTERED ENGINEER	Means an engineer who is registered under the Chartered Professional Engineers of New Zealand Act 2002 who holds a current Annual Practicing Certificate.
COHESIONLESS SOIL	Means a non-plastic soil (sand, gravel) where the strength is derived primarily from interlocking forces between soil grains.
COHESIVE SOIL	Means a plastic soil (clay, silt, organic) where the strength is derived primarily from cohesion between the soil particles.
COLLECTOR ROADS	Locally preferred routes between or within areas of population or activities, generally distributing traffic between the arterial roads and the local road system.
COUNCIL OR TERRITORIAL AUTHORITY	Means Papakura District Council.
DEVELOPER	Means an individual or organization having the financial responsibility for the development project and includes the owner.
DEVELOPER'S REPRESENTATIVE	Means the person, appointed by the developer.
DEVELOPMENT	Means any works that are being undertaken as part of a subdivision and any works that are undertaken on land that is, or will in the future be in public ownership or that the public have or are likely to have access to. Also included are private ways and works that will be vested in the Council on completion.
DEVELOPMENT ENGINEER	Refer Engineer
DIAMETER	Pipe diameters refer to the internal diameter of the pipe.
DISTRICT	Means the District of the Papakura District Council.

DISTRICT ARTERIAL ROADS	Roads connecting the regional arterial routes to industrial or residential zones and can connect one area to another.
DISTRICT PLAN	Means the Papakura District Council's District Plan pursuant to the Resource Management Act 1991 and includes operative and proposed plan changes or variations once notified.
DRAINAGE	Means waste water drainage or stormwater drainage, and "drain" has a corresponding meaning.
EARTHWORKS	Means earthmoving operations, other than quarrying, carried out by any means for development purposes and includes: the disturbance of land surfaces by moving, removing, placing or replacing soil or earth; or by excavation, cutting or filling operations; contouring; road, driveway and access construction.
ENGINEER	Means the Development Engineer, his deputy or assistant or any other officer or other person appointed by the Council to control the engineering work of the District.
FOOTPATH	Means so much of any road, pedestrian accessway or public reserve as is laid out or constructed by authority of the Council primarily for pedestrians; and may include the edging, kerbing and channelling thereof.
GROUND	Is used to describe the material in the vicinity of the surface of the earth whether soil or rock.
HOUSEHOLD UNIT	Means a building or part of a building intended to be used as an independent residence and includes any apartment, townhouse, dwelling house or home unit.
DWELLING	Means a building or part thereof designed and used principally as a self-contained residence.
INDEPENDENT QUALIFIED PERSON (IQP)	Means a specialist approved by the Council and having the appropriate skills and qualification to carry out specific procedures.
LAND DRAINAGE SYSTEM	Refers to the flow of surface and ground water but concentrates mainly on peak surface discharges and their regulation under urban conditions.
LOCAL ROADS	All roads servicing residential and rural development other than District Arterial and Secondary Arterial (Collector) Roads.
LOOSE SOIL	Means cohesionless soil (for example, having a low Standard Penetration resistance, for example, of less than 10 blows per 300 mm). Also refers to uncompacted or poorly compacted fill.

LOW FLOW PATH	Refers to the path taken by runoff resulting from ground water discharge and light rainfall. The low flow path is to be kept to the minimum size consistent with ease of maintenance and may be considered to be 2% to 5% of the primary design flow.
NEIGHBOURHOOD RESERVES	Are public reserves for the local community recreation.
PEDESTRIAN ACCESSWAYS	Are paths between two roads. They do not include paths on road or reserves.
POST CONSTRUCTION SETTLEMENT	Means the settlement of the ground surface which takes place after completion of the construction of the earthworks.
PRIMARY DESIGN FLOW	Is the estimated stormwater runoff selected to provide a reasonable degree of protection to the surrounding land and buildings. In most cases this flow will be piped or contained within relatively narrow confines under public control by reserve or easement.
PRIVATE ROAD	Means any roadway, place, or arcade laid out within a district on private land by the owner thereof intended for the use of the public generally.
PRIVATE WAY	Means any way or passage whatsoever over private land within a district, the right to use which is confined or intended to be confined to certain persons or classes of person, and which is not thrown open or intended to be open to the use of the public generally and includes shared access or right of way.
REGIONAL ARTERIAL ROADS	Roads which form the principal avenues of communication for general traffic movement not catered for by motorways, expressways or rail lines. They predominantly carry through-traffic from one urban area to another.
SANITARY DRAINAGE	Has the same meaning as "sewerage drainage" as referred to in the Local Government Act 1974.
SCHEME PLAN	A plan lodged with Council pursuant to Section 88 of the Resource Management Act.
SECONDARY FLOW PATH	Refers to the path taken by runoff in excess of the primary design flow and should be capable of producing a reasonable degree of protection to the surrounding buildings (normally a 1% AEP flood for commercial, industrial and habitable residential floor levels). A freeboard above the secondary flow level is normally considered advisable when determining allowable floor levels. This is to cater for inaccuracies in flow estimation methods and for possible failure of the primary system.
SOFT SOIL	Means cohesive soil having a low shear strength (for example, less than 25kPa).

SOIL	Means the heterogeneous aggregation of particles comprising either peat, clays, silts, sands, gravels, crushed and re-oriented rock fragments, or a mixture of any of the above. The term excludes rock that is intact rock masses whether highly jointed or not.
SOILS ENGINEER	Means a person who is currently entitled to practice as a registered engineer and has experience in soils engineering acceptable to the Engineer; or such other person as the Engineer may specifically approve as being competent.
GEOTECHNICAL ENGINEER	Means a Chartered Professional Engineer (CPEng) or an engineering geologist with recognized qualifications and experience in geotechnical engineering, and experience related to the development.
STABLE GROUND	Means ground existing in a state which is unlikely to settle, slip, erode or otherwise move to the detriment of superimposed buildings, services, roads or property generally.
STRATEGIC ROADS	Roads, motorways and rail lines which form part of a network of strategic importance nationally, having the highest standards with access control where necessary.
SURVEY PLAN	Means a survey plan of a subdivision in terms of Section 223 of the Resource Management Act 1991 or Section 305 of the Local Government Act 1974 being a plan of a subdivision in form for deposit under the Land Transfer Act 1952 or with the Registrar of Deeds, and includes the title plan under the Survey Regulations 1972.
WALKWAYS	Are all footpaths on reserves and include pedestrian accessways.

DEVELOPER'S REPRESENTATIVE

The developer shall appoint a representative or representatives to undertake the responsibilities of:

(a) Design of the development, arranging and obtaining necessary geotechnical investigation and reports, including preparation of and obtaining the approval of engineering documents by Council;

(b) Supervision of the works;

(c) Certification upon completion that the works have been carried out in accordance with the approved documents and sound engineering practice.

(d) Provide necessary certification to Council to obtain S224c Certificate and acceptance of services to vest in Council.

The developer's representative shall be a Chartered Professional Engineer or Licensed Cadastral Surveyor or an Engineer suitably experienced and approved by Councils Development Control Manager.
Geotechnical investigations, and completion and site stability reports shall be prepared by a Chartered Professional Engineer experienced in geotechnical engineering and who has professional indemnity insurance cover.

1.4 PROCEDURE FOR APPROVAL OF THE DEVELOPMENT AND FOR ITS DESIGN AND CONSTRUCTION

1.4.1 Documents to be Submitted for Approval

Resource consent/subdivision consent is to be obtained prior to submission of engineering plans for approval. It is expected the Developers Representative will ensure the engineering plans are in accordance with the requirements of this code, other applicable standards and good engineering practice prior to submission to Council. And, shall ensure an internal peer review, or office quality assurance measures are carried out prior to submission of plans.

As a condition of granting resource consent for the development, the Council will require engineering documents to be submitted. These documents shall contain sufficient engineering detail to determine that the land is suitable for the proposed use. The documents shall show that adequate provision can and is intended to be made for services such as roads, vehicular access, stormwater drainage, water supply, sewage disposal, power, telephone, and gas reticulations. Council will then evaluate the proposals and set required conditions to be met.

Prior to the lodgement of engineering documents for approval the developers engineer shall meet with the Councils Development Engineer to discuss the proposal and potential issues. The developers engineer is to first ensure the plans are in accordance with the conditions of Resource consent. If the application is not fully complying with the Code the developers engineer is to highlight the areas and provide an explanation.

Council has a dispute resolution process to cover the situation if agreement cannot be reached on engineering design issues. This process can be triggered by the developer.

To satisfy the scheme plan conditions two sets of fully detailed engineering documents suitable for construction purposes shall initially be submitted to Council for approval. These documents shall include:

(a) Engineering drawings, specifications and calculations, covering the following sections of the work to be carried out:

- Earthworks (including silt control plans)
- Roading and site access
- Street Lighting
- Stormwater and Waste water Drainage (including catchment plans)
- Water supply and other services
- Landscaping plans including any proposed planting in roads and reserves and details of any playgrounds.

A full Integrated Transport Assessment (ITA) is to be submitted to Council for consideration for all subdivision creating over 100 lots or development over 1,000m^2 in building area or as may be required by Council.

Please note the engineering drawings, specifications and calculations shall be complete and detailed and in accordance with the recognised design standards. The street lighting for example, shall be sufficiently detailed providing:

- *Plans showing the proposed street light location including offset from the face of the kerb to the face of the pole.*
- *Light pole details including mounting height, outreach, country of origin, coating system and coating system warranty.*
- *Luminaire/lantern details including type, IP rating, country of origin, lamp type/ wattage and the cost of the luminaire, type of coating system and coating system warranty.*
- *Confirmation that the luminaire is fully compliant with AS/NZS 1158 and that spare parts will be available for a minimum of 10 years.*
- *Photometric data for the proposed luminaries and lamps.*
- *Copy of the lighting software report detailing values of the light technical parameters obtained for each area of road element involved. Isolux plots will be required for roundabouts and other traffic management devices.*
- *Details of the name and source of the programme used to generate the design.*
- *Maintenance factors assumed in calculations and maintenance schedule.*

(b) Other reports and documents as considered necessary by the Council (such reports may be required prior to subdivisional consent pursuant to Section 92 of the Resource Management Act 1991 and the District Plan). Documents that may be required by Council include:

- Integrated transport assessment.
- Scheme Plan showing all existing site information and services, and subdivision layout identifying roads, reserves and lots.
- Legal description of land being developed and identification of notes on titles, easements etc.
- Copy of the current 'Certificate of Title'.
- Geotechnical Engineer's report on the suitability of the land for development.
- Environmental impact report.
- Assessment of serviceability of each lot with waste water and stormwater disposal, water supply (domestic and fire), power, telecommunications, vehicle and pedestrian access.
- Assessment of overland flows from upstream catchments.
- Assessment of secondary flowpaths for a 100 year event.
- Copy of any previous relevant consents.
- Records of consultation with other units of Council, including United Water (U.W.I.)

- Records of consultation with other affected parties.
- Report on the selection of road names recommended and complying with the Councils Road naming policy.

Note: Council reserves the right to require peer review of reports and completion certificates where council has no relevant expert or staff to review the information or where there is, in Council opinion, needed for an independent review. The cost of the peer review will be at the developer's expense.

1.4.2 Draughting Standards and Drawings

Drawings
All drawings produced for any development in Papakura District shall be in accordance with NZS 1100 and shall be produced using an electronic medium compatible with Council's computer system. All line types, thicknesses and weights shall be selected so that the drawings can be easily read when printed and copied at A3 size. The following electronic draughting mediums are currently considered compatible with Council's computer system.

Plan Scales
The following scales shall be used:

- Plans: 1 to 500 or 1 to 250
- Longitudinal Sections:
  - horizontal 1 to 500
  - vertical 1 to 100
- Cross Sections: 1 to 100
- Details: As required

Datum
All reduced levels shall be in terms of Land Information New Zealand (LINZ) Datum Auckland Mean Sea Level 1946. Levels in these terms shall be shown on the drawings. On small jobs, if a LINZ Datum is not available within 500m of any part of the work an assumed datum may be used, at the discretion of the Engineer.

A copy of the approved set of documents shall be provided to the contractor by the developer's representative.

The Developers representative shall ensure that a copy of the approved set of documents (plans and covering letters) is available during all observations/inspections.

1.4.3 Approval of Design

Work shall not commence upon the engineering construction of the development unless:

(a) The Council has approved a scheme plan;

(b) A resource consent for the work has been approved, except when no such consent is required: and

(c) The Engineer has subsequently approved the engineering drawings, specifications and calculations for the specific work.

Councils Engineering Plan approval is valid for 12months from date of approval.

1.4.4 Notification of Contracts and Phases of Work

The Developer shall advise the Engineer, in writing, of the names and addresses of contractors to whom it is proposed to award the work, and the nature of the work to be awarded in each case.

The Certifying Engineer shall notify the Councils Development Engineer when the following phases of the work are reached and such other phases as the Certifying Engineer or Development Engineer may determine to enable Councils Development Engineer to observe the works:

- Commencement of work
- Prior to concrete works
- Prepared earthworks and subsoil drainage prior to filling
- Completed earthworks
- Commencement of drainage reticulation
- Commencement of water reticulation
- Drainage and water reticulation prior to backfilling
- Drainage and water reticulation during pressure testing
- Prior to backfilling under channel drains
- Prepared subgrade
- Completed sub-base
- Finished basecourse
- Before the commencement of road sealing

When observations/inspections are requested the works should be of good quality and in accordance with the approved drawings. The developers engineer is to have already ensured the works are to standard.

Work shall not proceed further until observation/inspection has been made. The approval of the Certifying Engineer is required after each stage prior to the commencement of the next stage.

This requirement shall also apply where different sections of the works are commenced and when work is recommenced after a substantial lapse.

1.4.5 Supervision of Work

The developer shall be responsible, both directly and through his representative, to ensure that work is carried out in accordance with the approved documents and sound civil engineering practice.

1.4.6 Connection to Existing Services

Specific approval is necessary to extend new roads beyond the site to connect into existing roads, this will require written consent from the Council Engineer and a road opening notice.

The formation, metalling, kerbing and channelling of new roads shall be extended out beyond the site to connect to existing roads and shall include the provision of stormwater disposal from the existing road. The normal cost of connecting to existing roads and services, including the alteration of the same shall be borne by the developer and shall not be a charge against the Council.

Where extensive works are required, the cost of carrying out these shall be subject of a special agreement between Council and the developer.

Connection of water, drainage and other services to existing systems will be carried out by Council's network utility operator at the cost of the developer, except that at the discretion of the network utility operator connections may be made by the owner, or contractor employed by the owner, if appropriately qualified and under the network utility operator's supervision.

Where a drainage connection has to be carried out within private property not owned by the developer, the developer shall make the necessary arrangements and obtain a written consent to enter from the property owner prior to the work being carried out. A copy of this consent to enter shall be provided to the Engineer prior to the work commencing.

For any proposed deviation from the approved documents due to unforeseen circumstances the developer shall obtain Council's approval by submission of revised engineering documentation. A field amendment may be agreed to for minor deviations if safety issues are of concern. Any other amendment is to be in writing before commencement of amended work.

New services shall be tested by the developer under the supervision of the Certifying Engineer prior to connection.

1.4.7 Testing

Any work required to be tested by or in the presence of the Engineer shall be pre-tested and proved satisfactory to the developer's representative before an official test by the Engineer is requested. Two working days notice shall be given to Council's engineer for official testing or inspections. Note: In the event of tests proving unsatisfactory, subsequent retesting or re-inspections will result in a charge.

Test results are to be provided to Councils Development Engineer are to be final certified documents, not drafts.

1.4.8 Maintenance of Assets

The developer shall be responsible for the maintenance of all the works until they are formally accepted by the Engineer.

1. The roads, footpaths, drainage systems, street lighting, landscaping, reserve planting and any other assets vested in Council as part of a subdivision must be maintained to the standard required by this code and any applicable Resource Consent or other subsequent Council approval for the required maintenance periods after the Section 224(c) Certificate or the Title has been issued.
2. The maintenance period shall commence from the date of issue of the 224c Certificate pursuant to the Resource Management Act 1991, or if Titles have not been issued within four (4) months of the Section 224c Certificate date of issue then the maintenance period will commence from the Title issuing date.
3. The maintenance period shall be six (6) months for roads, including street lights and footpaths, stormwater and sewerage drainage pipe systems and water supply.

4. The maintenance period shall be 24 months for street trees, reserves and landscaping and stormwater quality ponds. Reference should also be made to the specific requirements of the Parks and Reserves Section and the Stormwater Quality Ponds part of the Stormwater Section.

5. On completion of the maintenance period the applicant needs to complete the following requirements:
   - Written confirmation from the Certifying Engineer that the assets have been maintained and are in good condition.
   - Prior to the expiry of the maintenance period the subdivider shall arrange for all berms and reserves on the subdivision to be mown, road carriageway swept and all catchpits cleaned out.
   - Complete a CCTV video inspection of the stormwater pipelines within one (1) month of requesting for the release of the bond, and provide Council with the CCTV video inspection reports and inspection DVD's for approval.
   - Complete Benkelman beam testing of the road within a month of the request for release of the bond, and provide the test results and report to the Development Engineer for approval.
   - If fault, defects, damage, or poor test results are identified, the Certifying Engineer is to provide recommendations for any necessary remedial action.
   - Arrange an inspection of the works to be carried out by the Development Engineer.
   - If the vested asset is not completed by the date stated in the Section 224(c) Certificate but is bonded as an uncompleted item, then the maintenance period shall commence from the date of the uncompleted works bond release.

6. Any faults, defects or damage to any of these works must be remedied at the consent holder's cost.

7. To ensure the performance of the vested assets, the Resource Consent holder must enter into a maintenance bond with Council. This bond must be provided prior to the issue of the Section 224(c) Certificate. The bond must either be a bank bond pursuant to Section 109 of the Resource Management Act 1991 from a registered trading bank or bond agent (to the Council's satisfaction) **or** cash.

   The Council's policy for the level of maintenance bond required for the maintenance of works is 150% of 2.5% of the total construction value of the works under maintenance to Council and a sum of money to cover the cost of CCTV inspections and Benkelman beam tests.

   Any cost incurred by the Council in preparing, checking, assessing and release of any bond shall be met by the Resource Consent holder.

8. If the Resource Consent holder fails to maintain the vested assets, the Council may undertake the works necessary to bring the assets up to the standard required by the Council and the cost of this work may be deducted from the bond. If there is a shortfall in the bond value and the final cost of the works undertaken by Council, these costs shall be recovered from the Resource Consent holder.

   In addition the cost of maintenance of any replacement works for the following 24 months will be deducted from the bond.

   Council will only accept ownership of works and services which have been designed and constructed to a standard which will impose an acceptable level of maintenance responsibility on the Council and its ratepayers.

1.4.9 Completion Documentation

Provision of documentation by the developer on completion of the development shall be in accordance with this clause or as required by the Council.

As-Built plans in accordance with Council's requirements are to be submitted by the developer. The details as constructed shall include, but not be limited to:

(a) Waste water Drainage Reticulation

- Manholes, lid level and invert level to LINZ Datum. Location by distance to two adjoining boundaries, and co-ordinates.
- Diameter, length of pipes laid and, material type and grade.
- House connections and distance from the centre of the downstream manhole cover, or distance to two adjoining boundaries.
- Location of the end of an extended connection.
- Rising main.
- Thrustblocks.
- Pump station including wiring diagrams, pipework details and fully itemised parts inventory and operating manuals.
- Siphon
- Pipes encased or protected.
- Pipes, manholes and pump stations removed or abandoned.

(b) Stormwater Drainage Reticulation:

- Manholes, lid level and invert level to LINZ Datum. Location by distance to two adjoining boundaries, and co-ordinates
- Inlet and Outfall structures, invert levels to LINZ Datum, distance to two adjoining boundaries.
- Diameter, length of pipes laid and, material type.
- Open water table and direction of flow.
- Catchpits.
- Subsoil drains including discharge points.
- House connections and distance from downstream manhole, or distance to two adjoining boundaries.
- Location of the end of an extended connection.
- Pipes and manholes removed or abandoned.
- Driveway pipe crossings.
- Dish drain half pipe.
- Pipes encased or protected.
- Scour protection.
- Stormwater detention ponds.
- Open channels including typical cross-section.
- Secondary overland flow paths including flood levels to LINZ Datum.

(c) Water Reticulation:

- Diameter and material type of pipes laid.
- Distance from boundary of water main.
- Depth of line.(if non-standard)
- Valves (noted for type), hydrant Tees, Branches, and Blank Caps. Location by distance to two adjoining boundaries and co-ordinates.
- Pump stations including wiring diagrams, pipework details and fully itemised parts inventory and operating manuals.

- Bores (as for pump stations)
- Rising mains.
- Thermal pipes.
- House connection and distance to nearest side boundary.

(d) Earthworks:

- Extent of fill.
- Depth of fill in the form of depth contours.
- Subsoil drains including discharge points.
- Buried retaining walls.
- Nature of fill (i.e. compacted etc)

(e) Ducts:

- Location and size of ducts installed for power, telephone, gas, or other services.

(f) Roading:

- Kerb and channel.
- Pavement type, materials and layer thicknesses (including details of any special subgrade or basecourse treatments).
- Footpath.
- Catchpits.
- Retaining walls and materials.
- Median islands.
- Extent of formation.
- Subsoil drains including discharge points.
- Extent of seal.
- Extent and depth of any undercutting.
- Road lighting.
- Edges of formation.
- Driveway pipe crossings.
- Open water table and direction of flow.

(g) As-Built plans are to be submitted showing the following standard items:

- North point.
- Legal boundaries and legal descriptions of lots.
- Road names.
- Bench marks.
- Existing installations to be identified clearly from new work.
- Schedules of Co-ordinates
- Schedules of Service connections.

As-Built plans shall be presented at a scale of 1 to 500 and shall include on each sheet at least two co-ordinate points on the NZTM NZGD 2000.

The Council's list of acceptable datums (in order of preference) are:

1. NZTM NZGD 2000
2. Mt Eden Circuit
3. NZ Map Grid
4. NZ Mt Eden Local Circuit

As-Built plans shall have been submitted to and received the approval of the Engineer prior to the issue a Completion Certificate under Sections 224(c) or 222(1) respectfully of the Resource Management Act 1991.
Two sets of the engineering plans and an engineering specification shall be submitted with all relevant calculations for catchments, pipeflows, structural and pavement designs and any other relevant documents. After approval, one set of plans, suitably endorsed, will be returned to the developer.

A set of prints and one electronic disc of the As-Built plans shall be submitted.

Council's electronic recording system is ESRI which will accept information saved in either:

(a) Shapefile; or

(b) DXF (latest AutoCAD version) format/dwg.

If your system uses a different format, please check with Council prior to submitting.

Electronic As-Built Requirements are detailed in the Appendices of this code.

In addition to the above As-Built plans the developer will also be responsible for the supply and delivery of RAMM data required to update the Council's RAMM database. The developer shall engage the Council's Road Network RAMM Consultant to collect and process this data into the RAMM database. The Road Network Consultant will carry out this task in accordance with the 'Specification for RAMM Updating of Roads' included in Appendix F of this code. Additionally the developer will need to provide the Road Network RAMM Consultant with the following information:

- Pavement aggregate source.
- Sealing chip source and properties including PSV.
- Sealing record sheets.
- Undercut areas.
- Pavement depths and details.
- Construction dates.

1.4.10 Completion Tasks

Prior to the final acceptance, at the completion of the maintenance period, the developer shall have the following works carried out:

(a) Grass to be mown on berms and any reserve within the development
(b) Carriageways swept
(c) Channels and catchpits cleaned out
(d) All gardens and plantings to be mulched and free of weeds
(e) Video stormwater system.

At the completion of the defects liability period, an inspection of the development shall be carried out by the Engineer prior to acceptance. The developer shall arrange a time for the final acceptance inspection with the Engineer at least seven (7) working days in advance so that the Council's relevant maintenance contractors may be invited to attend to familiarise themselves with the new works.

Further testing of works such as road formation, drainage and water supply systems may be required to be carried out in the course of the inspection. Any section of the works that does not comply with the approved plans and specifications or approved variations must be rectified by the developer before the development will be accepted.

1.4.11 Certification on Completion

On completion of the works, and prior to the commencement of the maintenance period, the developers certifying engineer shall certify that the works have been completed in accordance with the requirements of the Papakura District Council District Plan, Papakura District Development Code, the approved plans and sound engineering policies. The Certification shall be completed in the form attached as Appendix B to these documents.

The developer shall provide signed 'Subdivision Assets to Vest in Council' forms for all assets that are to be vested in Council. Copies of the 'Subdivision Assets to Vest in Council' forms are included in Appendix D, these forms are not an exhaustive list of assts to vest, additional pages should be used if necessary.

1.4.12 Approval of Uncompleted Work

Where in the opinion of the Engineer it is desirable, the Engineer may approve uncompleted work, subject to satisfactory bonds being arranged.

1.5 BONDS FOR UNCOMPLETED WORKS

1.5.1 Acceptance of Bond

The Council and the owner may agree to enter into a cash bond or an irrevocable letter of credit for uncompleted work. Council are not required to accept bonds, they are only accepted at council's discretion.

The following sets out the work that needs to be completed before the Council will consider an agreement for completion of works under a cash bond.

(a)	Formation work	Completed
(b)	Kerb and Channel	Completed
(c)	Stormwater Reticulations	Completed
(d)	Carriageway construction and sealing	Completed
(e)	Water Supply	Completed
(f)	Sanitary Drainage Reticulations	Completed
(g)	Street Light Standards	Erected
(h)	Fees and Charges	Paid

Note: The Benkelman Beam deflections of the road formation should comply with the requirements of the engineering plan approval before an agreement under bond will be considered.

1.5.2 Conditions of Accepting Construction Bonds

The Council may accept a cash bond or an irrevocable letter of credit from a bank where:

- The work cannot be completed due to weather conditions
- The work cannot be completed due to a circumstance beyond the control of the developer
- Inability to lay services due to lack of supply
- Where the Council itself cannot complete its works, thus delaying the completions by the owner.

A condition of accepting any bond is that the applicant will cover all costs associated with the bond including but not limited to: administration, processing, site inspection, project management etc.

1.5.3 Application for Bonding

Any application to enter into a bond pursuant to the issue of a completion certificate (except a bond for financial contribution), shall set out the reasons why works cannot be completed, and,

Shall be accompanied by

- Quotes from independent contractors on their company letterhead
- The date by which the work will be completed
- Subdivision reference number(s)

1.5.4 Calculation of Amount of Bond

Where any application for a construction bond has been approved, the amount of the cash bond shall be at least 50% greater than the estimate of the cost of the work. If conditions of consent require the works to be maintained the maintenance amount, (a minimum of 2.5%) of the total value of the total value of the subdivisional construction works shall be added to the bond amount.

The amount added shall depend upon the stated date by which time the applicant considers the work will be completed (to allow for price changes).

1.5.5 Period of Bond

The applicant shall give the date when the uncompleted work will be finished which should not normally exceed six months. The length of time permitted may dictate the amount of the bond. The Council may extend the period of the bond but unless there are special circumstances, not beyond two years.

Extensions of time will require a revision in the amount of the bond.

1.5.6 Condition for Construction Bonds for Works

The owner shall forward a letter to the Council accepting the following conditions:

The owner shall:

(a) Undertake to complete the bonded works within the period stipulated by the Council

(b) Maintain all works until the uncompleted works have been accepted or passed by the Council
(c) Inform any purchaser of any allotment affected by bonded works that the Council is not responsible for the uncompleted works and occupation of any dwelling erected on the allotments may not be permitted until the works are completed
(d) Give right of entry for Council staff or contractors to enter on the land to complete the work, should this be necessary.

1.5.7 Completion by Council

Where the owner fails to complete the work to the satisfaction of Council within the prescribed period, the Council may enter on the land and complete the works and recover the costs from the money held by the Council by way of cash bond or letter or credit. Once the work is completed to the satisfaction of the Council, the balance of a cash bond, if any, will be refunded.

If there is a shortfall of funds the applicant is to pay the balance to Council and the applicant is to meet all cost involved.

8.1.5 Power Transformers, Switching Stations and Other Services

Power, telecom, gas or other service boxes, transformers, valves, switches or similar devises larger than 300mm x 300mm are to be placed within private property clear of Councils stormwater and sewer pipes and access is to be provided by way of an easement over the private property for the Utility Companies.

8.1.6 Conversion to Underground on Existing Roads

Where a proposed development fronts on to an existing road, the conversion of overhead reticulation to underground will in some instances be desirable. Agreement on the feasibility and benefit will first be agreed between the network company and the Council.

8.1.7 Industrial and Commercial Developments

The servicing requirements for industrial and commercial areas are often indeterminate. Close liaison between the developer and the network company is advisable, particularly immediately before cabling is installed so that changes can be incorporated to accommodate extra sites or the requirements of a particular industry.

8.2 LOCATION AND BACKFILLING OF SERVICES

8.2.1 Location

The position of services in the road shall conform to Papakura District Council Drawing R2. All services shall be within 100mm of the recommended location.

8.2.2 Backfilling of Trenches

Trenches shall be built up with an approved backfill material in 150mm layers placed and compacted simultaneously on each side of the pipes, in order to give a balanced loading. Full use shall be made of hand operated compaction tools.