



DEVELOPMENT CONSTRUCTION SPECIFICATION

C101

GENERAL

Amendment Record for this Specification Part

This Specification is Council's edition of the AUS-SPEC generic specification part and includes Council's primary amendments.

Details are provided below outlining the clauses amended from the Council edition of this AUS-SPEC Specification Part. The clause numbering and context of each clause are preserved. New clauses are added towards the rear of the specification part as special requirements clauses. Project specific additional script is shown in the specification as italic font.

The amendment code indicated below is 'A' for additional script 'M' for modification to script and 'O' for omission of script. An additional code 'P' is included when the amendment is project specific.

Amendment Sequence No.	Key Topic addressed in amendment	Clause No.	Amendment Code	Author Initials	Amendment Date
<i>EXAMPLE</i> 1	<i>Provision for acceptance of nonconformance with deduction in Payment</i>	<i>XYZ.00</i>	<i>AP</i>	<i>KP</i>	<i>2/6/97</i>
1	Standards and Test Methods Clause (4) "on the site if so specified" Removed. "by the Supervising Engineer" inserted.	C101.04	M	JM	14/2/01
2	Testing and survey Clause (1) "Council" removed "Principal Certifier" inserted	C101.06	M	JM	14/2/01
3	Setting out of works Clause (1) "Permanent" removed. "Bench" inserted. Second sentence removed.	C101.09	MO	JM	14/2/01
4	Site Meetings Clause (2) "Council" removed. "Principal Certifier" inserted. Second sentence removed.	C101.10	MO	JM	14/2/01
5	Work-as-Executed Drawings	C101.11	MA	JM	14/2/01

	<p>Clause (2)(3)"red ink" removed</p> <p>"Boxes" inserted</p> <p>Clause (4) inserted</p>				
6	<p>Work as Executed Drawings</p> <p>Clause (4) inserted</p>	C101.11	A	JM	14/2/01
7	<p>Protection of the Environment</p> <p>Clause (1) "Constructions" inserted</p> <p>"development" inserted</p> <p>"Protection of the Environment Operations Act" inserted.</p> <p>"Environmental Offences and Penalties Act" inserted. "and their respective regulations as amended" inserted.</p> <p>Clause (2) "in accordance with specification – Control of Erosion and Sedimentation C211</p>	C101.14	A	JM	14/2/01
8	<p>Protection of the Environment</p> <p>Clause (4) "2nd building" removed. "Local Government" removed.</p> <p>"Environmental Planning and Assessment" inserted.</p>	C101.14	MO	JM	14/2/01
9	<p>Protection of the Environment</p> <p>Clause (5) "in accordance with Specification – Control of Erosion and Sedimentation C211" inserted.</p>	C101.14	A	JM	14/2/01
10	<p>Blasting</p> <p>Clause (1) "C213" inserted.</p>	C101.16	A	JM	14/2/01
11	Site Facilities	C101.19	A	JM	10/12/01
12	Access	C101.20	A	JM	10/12/01
13	Notice Boards	C101.21	A	JM	10/12/01

SPECIFICATION C101 : DEVELOPMENT CONSTRUCTION - GENERAL**PROJECT SPECIFIC INFORMATION****C101.01 LOCATION AND DESCRIPTION OF PROJECT**

EXAMPLE (TO BE COMPLETED BY COMPILER)

1. *The Works comprise the construction of a subdivision at North Arm Grove, Dubbo, Lots 16-90, D.P. 2315, in the Parish of Cork, City of Dubbo, NSW.*
2. *The subdivision involves the construction of five roads and the provision of services to 68 residential building sites.*
3. *Access to the subdivision is to be from Hastings Road and Gosford Circuit.*

C101.02 EXTENT OF WORK

1. Works under this Contract comprise the supply of labour, materials and plant to construct the Works. It includes but is not limited to the following items of construction which shall be carried out in their entirety in strict accordance with and to the true intent and purpose of, the Conditions of Contract, these Technical Specifications, the Drawings listed herein, and under the supervision of the Superintendent.

EXAMPLE (TO BE COMPLETED BY COMPILER)

(a) General

- *Provision for control, protection and safety of traffic during construction including notifications to and obtaining approvals from Authorities.*
- *Notification of all appropriate property owners adjoining the works.*
- *Setting out the Works.*
- *Erosion and sedimentation control of the Works, including stockpile areas.*
- *Site clearing and grubbing. Topsoil to stockpile.*
- *Site regrading.*
- *Topsoil spreading and revegetation to disturbed areas.*

(b) Roadworks

- *Earthworks, including excavation and embankment construction.*
- *Stormwater drainage, including kerb and gutter, pipes, pits and headwalls.*
- *Sub-surface drainage.*
- *Pavement, consisting of unbound granular subbase and base, bituminous primer seal, and asphaltic concrete wearing surface.*
- *Guardfence.*
- *Signposting and linemarking.*
- *Ancillary works, including medians, paved footpath, turfing and landscaping.*

(c) Structures

- Crib retaining wall
- Bridge, single span, comprising driven prestressed concrete piles, prestressed concrete bridge beams, and cast-in-situ reinforced concrete headstocks and deck.

(d) Provision of Services

- Water supply, including pumping station.
- Sewerage services, including pumping station.

(e) Work by Others

- Provision of electricity and gas services to the subdivision will be undertaken by the relevant authorities.
- The excluded work will be the responsibility of the Principal and Utility Authorities. Attention is drawn to the Conditions of Contract regarding the obligation of the Contractor to co-ordinate the works with any simultaneous and/or adjacent work by others. The Contractor shall liaise with these Contractors and Authorities to avoid disruption, delays and possible conflict.

C101.03 SUBSURFACE CONDITIONS**EXAMPLE (TO BE COMPLETED BY COMPILER)**

1. A geotechnical investigation was carried out during February 1992 for design purposes. A copy of the report from this geotechnical investigation is available for the information of the Contractor upon request to the Superintendent.
2. The Contractor's attention is drawn to the General Conditions of Contract Clause "Site Conditions". The Contractor should make his own assessment of the in-situ moisture content likely to be encountered at the actual time work is to be carried out.

Contractor to Inform Himself**GENERAL REQUIREMENTS****C101.04 DRAWINGS**

1. The Drawings which form part of the Contract Documents are bound in a separate volume.

C101.05 STANDARDS AND TEST METHODS

1. Unless otherwise specified in the Contract, and where applicable, materials and workmanship shall be in accordance with the relevant standard of the Standards Association of Australia.
2. A standard applicable to the Works shall be the edition last published 14 days prior to the closing date for tenders unless otherwise specified.
3. Overseas standards and other standard documents named in the Specification shall be applicable in the same manner as Australian Standards to relevant materials and workmanship.
4. Copies of any standards quoted or referred to in the Specification shall be kept by the Supervising Engineer.

Australian Standards**Overseas Standards****Copies to be kept on Site**

5. Where no suitable AS test methods are available, those of the relevant State Road Authority shall be used. These are designated T123 etc.

Other Test Methods

C101.06 TESTING AND SURVEY

1. All testing and survey as required by the Technical Specifications shall be arranged and carried out by the Contractor and all test results and survey records made available to the Superintendent and Principal Certifier. The cost of all such testing and survey shall be borne by the Contractor.

Contractor's Cost

2. The minimum frequency of testing and survey shall be in accordance with either the Specification for QUALITY SYSTEM REQUIREMENTS or QUALITY CONTROL REQUIREMENTS as appropriate for quality assurance or quality control contracts respectively. The appropriate requirements for this Contract are cited on the Form of Tender.

Minimum Frequency

C101.07 WORKING AREAS

1. The Principal will not be responsible for the safe-keeping of any of the Contractor's plant, equipment, tools, materials or other property. The Contractor may provide, and pay for, any security fencing considered necessary around any office, workshop or storage area, subject to the Superintendent's approval.

Security

2. If existing fencing is cut or altered by the Contractor, the Contractor shall provide and maintain temporary fencing to the satisfaction of the Superintendent during the Contract to prevent unauthorised entry into the property, and shall reinstate the fencing and remove temporary fencing on completion of the work.

Temporary Fencing

C101.08 SMOOTH JUNCTIONS

1. Construction work carried out under this Contract adjacent to or adjoining existing works, shall make smooth junctions with the existing work.

C101.09 SETTING OUT THE WORKS

1. The Superintendent will provide Bench Marks as shown on the Drawings.

Provision of Marks

2. Before any of the given survey marks on the base lines or the various control lines are affected by the works, the Contractor shall transfer such survey marks to side positions clear of operations and shall note, and inform the Superintendent in writing, of the extent of such movement.

Transfer of Marks

3. The Contractor shall give the Superintendent not less than two full working days' notice of the intention to perform any portion of the relocation of survey control, establishment of recovery pegs, or setting out or levelling, so that suitable arrangements can be made for checking of the work by the Superintendent. If no such notification is given and a control mark is disturbed or destroyed, then the cost of re-establishing the control shall be borne by the Contractor.

Notice for Relocation

Contractor's Cost

4. The Contractor shall provide and fix adequate recovery pegs in suitable locations adjacent to the elements of work to enable location and construction to be checked.

Recovery Pegs

5. All pegs and profiles placed by the Contractor shall be removed on completion of work unless otherwise directed by the Superintendent.

Removal

C101.10 SITE MEETINGS

1. Regular site meetings will be held for the purpose of discussion of the progress and co-ordination of the work under the Contract and any matters of doubt regarding the intent or interpretation of the Drawings or the Specification. The Contractor shall arrange for relevant sub-contractors or their responsible representatives to be present at these meetings. The meetings will be held at a time nominated by the Superintendent.

Representation

2. The Superintendent shall also give the Principal Certifier 48 hours notice of the date, time and location of the meetings.

Advice to Council

3. The Superintendent or Superintendent's Representative shall chair site meetings, keep minutes of the proceedings and shall provide copies of the minutes for the Contractor, all present at the meeting and others concerned with the matters discussed.

Responsibility for Minutes

C101.11 WORK-AS-EXECUTED DRAWINGS

1. The Contractor shall supply the Superintendent with fully marked-up and certified Work-as-Executed Drawings for the whole of the Contract prior to issue of the Final Certificate. Prints or reproducibles of the Contract Drawings will be supplied by the Principal free of charge for this purpose.

Submission

2. Work-as-Executed Drawings for Roadworks shall show in boxes all changes to the Contract Drawings and actual values of all levels shown on the Drawings. The Drawings shall be signed by a Surveyor and certified by the Contractor.

Roadworks

3. Work-as-Executed Drawings for Bridgeworks shall show in boxes all changes to the Contract Drawings, including variations to levels, dimensions, concrete, reinforcement, prestressing and other materials, all non-conformances accepted without rectification, suppliers and model numbers of bearings and proprietary joints and type of barrier railings installed where both steel and aluminium alternatives are detailed. The Drawings shall be certified by the Contractor.

Bridgeworks

4. The Supervising Engineer shall submit to Council the Works-as-Executed drawings on an 89mm computer diskette in DXF file format suitable for incorporation with Council's land mapping system "Mapinfo". The Works-as-Executed drawings shall detail the subdivision in layers. The layers required by Council should include:

- (i) Lot layout
- (ii) Easement layout
- (iii) Road layout
- (iv) Water supply layout
- (v) Sewerage layout
- (vi) Stormwater drainage layout
- (v) Miscellaneous items

The Works-as-Executed drawings shall be based on the integrated survey grid (ISG 56.2) co-ordinates for all lines and points. All levels provided shall use Australian Height Datum (AHD).

The Works-as-Executed drawing in this form shall be submitted to Council prior to the release of the Subdivision Certificate by Council.

C101.12 ITEMS TO BE SUPPLIED BY THE PRINCIPAL

1. Items listed in the Schedule of Items to be supplied by the Principal (TBS Items) will be supplied and delivered free on truck by the Principal free of cost to the Contractor at points to be nominated. The Contractor shall give the Superintendent notice of the time he requires delivery of TBS Items in accordance with the Requirements of the Technical Specification or as specified below.

Delivery

2. If any TBS Item is found to be damaged or defective the Contractor shall so inform the Superintendent within 2 days of taking delivery of such item. If the Contractor does not report damage or defect, it shall be deemed that the TBS Item was free from damage or defect when received. The Contractor shall then be responsible for any replacement or making good as may be directed by the Superintendent.

Damage or Defect

3. The Contractor shall be responsible for the storage, protection and insurance of all TBS Items received.

Contractor's Responsibility

C101.13 SCHEDULE RATES

1. Requirements in respect of all matters specified in this General Specification shall be considered as incidental to the Works and no separate Rates shall be provided in the Schedule in respect thereof.

No Separate Rates

ENVIRONMENTAL REQUIREMENTS

C101.14 PROTECTION OF THE ENVIRONMENT

1. All construction work shall be carried out in such a manner as to avoid nuisance and/or damage to the environment. The Contractor shall comply with the requirements of the conditions of development approval imposed by Kempsey Shire Council, the Environment Protection Authority, the Protection of the Environment Operations Act, the Environmental Offences and Penalties Act, the Clean Waters Act, the Clean Air Act, the Noise Control Act and the Bushfire Act and their respective regulations as amended. . No variation in costs or extensions of time will be considered due to these requirements. **Conformance to Acts**
2. The Contractor shall plan and carry out the Works to avoid erosion, contamination and sedimentation of the site and its surroundings in accordance with Specification – Control of Erosion and Sedimentation C211. **Erosion Control**
3. Herbicides and other toxic chemicals shall not be used on the site without the prior written approval of the Superintendent. **Herbicides and Toxic Chemicals**
4. No noise or smoke or other nuisance, which in the opinion of the Superintendent is unnecessary or excessive shall be permitted by the Contractor in the performance of the Works under this Contract. Should work outside customary working hours be approved, the Contractor shall not use, during such period, any plant, machinery or equipment which in the opinion of the Superintendent is causing or is likely to cause a nuisance to the public. No noisy works and/or works likely to disturb nearby residents shall be undertaken during the hours precluding such activity as specified by Council in accordance with the requirements for development consent approval made under the Environmental Planning and Assessment Act and the Noise Control Act. **Noise, Smoke or Other Nuisances**
5. The Contractor shall ensure that fugitive dust from disturbed areas is minimised by a method approved by the Superintendent in accordance with Specification – Control of Erosion and Sedimentation C211. **Dust Control**

C101.15 DRAINAGE OF WORKS

1. The control and management of stormwater drainage through the site will be important during construction of the Works. **Stormwater Control**
2. The Contractor shall provide for the effectual diversion of surface water from the Works and provide and ensure proper flushing for storm and subsoil water across and beyond the Works at all times. The flow of stormwater and drainage along existing gutters and water tables shall not be interrupted. **Stormwater Diversion**
3. The Contractor shall provide efficient pumping equipment on site and shall keep trenches and excavations dewatered at all times during construction. **Pumping**
4. All permanent retention basins, and temporary erosion and sedimentation control shall be completed prior to commencement of earthworks.

C101.16 BLASTING

1. Blasting will not be permitted without the specific approval of the Council. If such approval is given then blasting shall be carried out strictly in accordance with the Specification - EARTHWORKS. C213

C101.17 LIMITS ON NOISE

1. The Contractor shall only use plant that have effective residential class silencers fitted to all engine exhaust, have engine covers fitted, are maintained in good order, and in addition meet the following requirements.

Plant with Silencers

- (a) On purchase have met the NAASRA Specification for Noise levels of plant and equipment, or
- (b) Have a Maximum Noise level (L_{AMAX}) less than 80 dB(A) when measured at a distance of 7 metres.

2. Notwithstanding the requirements contained in the General Conditions of Contract, operational hours of plant, including the entry and/or departure of heavy vehicles, shall be restricted to 7 a.m. to 5 p.m. Monday to Saturday and at no times on Sundays or public holidays. Work outside of the hours specified shall not be undertaken without the prior approval of the Superintendent.

Working Hours

3. Notwithstanding noise emission limits on plant, noise emanating from the construction site when measured at any noise sensitive location (such as a residential premise), as determined by the Environment Protection Authority shall not exceed an L10 sound pressure level (noise level exceeded for 10% of the sample time) the greater of:

Maximum Noise Levels

- (a) Short term (period of up to 1 month) 65dBA or 20dBA above ambient
- (b) Medium term (period of 1 month up to 6 months) 55dBA or 10dBA above ambient
- (c) Long term (any period of more than 6 months) 50dBA or 5dBA above ambient

4. The monitoring positions and time period for monitoring purposes shall be set by the EPA with the time period generally based on a series of 10 to 15 minute measurements which shall be averaged over the entire daily working period for the activity concerned.

Monitoring

5. The Contractor will be responsible for any damage and compensation payments as a result of non observance of the above requirements. No claim by the Contractor arising out of these requirements will be considered by the Principal.

Contractor's Responsibility**C101.18 LIMITS ON GROUND VIBRATION**

1. It is the intent of this Specification that ground vibration levels, transmitted from operating items of plant in the vicinity of residential premises shall not exceed levels that are close to the lower level of human perception inside the premise nor will cause structural damage to the building.

Levels

2. Vibration (RMS Z-Axis) generated by construction works shall not exceed

Limits

Curve 4 - for the period of 1 month or less

Curve 2 - for the period of more than 1 month

as defined in British Standard BS6472 "Evaluation of Human Exposure to Vibration in Buildings (1 HZ to 80 HZ)" when measured inside nearby residential premises.

3. Ground vibrations generated by construction works shall not exceed a peak particle velocity (V_R max) limit of 5 mm/sec when measured within one metre of any residential premise.

Peak Particle Velocity

4. The Contractor shall be responsible for any damage and compensation payments as a result of non-observance of the above requirements. No claim by the Contractor will be considered by the Principal.

Contractor's Responsibility

SPECIAL REQUIREMENTS

C101.19 SITE FACILITIES

1. A first aid kit shall be provided and maintained by the contractor on the site of the work during the whole period when workmen are on the site. The kit shall be kept in a location readily accessible from the place of work.

First Aid Equipment

2. A shelter and change shed for workmen suitably floored and weatherproof, of sufficient size to allow one square metre of accommodation per person and fitted with seats and fly proof food cupboard shall be provided by the contractor. No materials other than tools of trade shall be stored in the shed. The shed shall be kept clean at all times.

Shelter and Change Accommodation

3. Toilet sheds shall be provided, constructed and maintained in accordance with the following:-

Sanitary Convenience

- (a) One closet shall be provided on every work site where not more than twenty persons are employed at the one time, and one additional closet for each additional twenty persons or part thereof are employed.
- (b) Closets shall be situated so as to be readily accessible from the place of work, but shall be far enough removed to avoid nuisance.
- (c) Closets shall be soundly constructed and roofed with weatherproof material. The floor of each closet shall be well drained and constructed of approved material, which shall be impervious to water. Every closet shall be well ventilated. Each closet shall have a hinged door capable of being fastened both on the inside and outside.
- (d) Closets shall be maintained in a clean condition and regularly serviced.

4. A water tank or tanker shall be provided and kept supplied with sufficient quantities of clean cold water. Adequate provision shall be made for the supply of boiling water for meals and washing of utensils.

Water Supply

5. Washing facilities shall be supplied in accordance with the following:-

Washing Facilities

- (a) One wash basin shall be provided for each ten persons.
- (b) Washing facilities shall be situated conveniently close to the change shed.
- (c) Drainage shall be provided for the suitable disposal of waste water.
- (d) Duckboards shall be provided underfoot where necessary or desirable.
- (e) Washing facilities shall be kept in a clean condition at all times.

6. Where the work is of a minor nature and the provisions of these sub-clauses are considered to be unnecessary, the contractor may apply to the council in writing for permission not to comply with any or all of the provisions of the aforementioned sub-clauses and the decision of the council thereon shall be final.

Work of a Minor Nature

7. The contractor shall provide on the site, in a location where directed by the council an approved prefabricated office not less than 4m x 2.4m x 2.4m high to ceiling with lockable door and separate from any other buildings on the site.

Site Office

The office shall be fitted with a wall desk bench on one long side. A stool shall also be provided. The contractor shall arrange the electrical installation to the office and pay all costs associated with the electrical connection.

The contractor is to maintain this office during the period of contract and allow for all necessary cleaning.

The office and equipment is for the sole use of the supervisor or other appointed officers but shall remain the property of the contractor who shall remove the office and equipment from the site on completion of the contract.

Where nominated, the contractor shall allow for the installation of a telephone in the site office for the period of the contract and shall pay all costs of installation and rental. The telephone shall be for the use of the supervisor and appointed officers.

C101.20 ACCESS

Where an existing access, be it vehicular or pedestrian, is interrupted during civil construction works the contractor shall arrange for temporary access to be provided to the satisfaction of council. Upon completion of the works the permanent access is to be provided or reinstated in accordance with the approved plans and to the satisfaction of council.

Temporary Access

C101.21 NOTICE BOARDS

Notice boards are to be supplied and erected by the developer in a central position at the entrance to the development and shall have black lettering 100mm high on white background and indicate the following:-

Notice Boards

- (a) The Estate name.
- (b) Developers name and company name.
- (c) Contractors name.
- (d) Supervisors name.

The cost of supply and erection shall be borne by the developer.

SPECIFICATION C101 - GENERAL

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