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PART 1 : GENERAL

1.0 GENERAL

These standard technical specifications set out the standards for materials and construction that are required by Hamilton City Council.

These standard technical specifications apply to all works that are for Council whether by way of direct contract to Council or as part of a development where the infrastructural assets will become part of the Council network following completion.

The Manual also applies to the four of Hamilton's neighbouring district councils, namely **Waikato, Waipa, Otorohanga and Waitomo** who adopted or intend to adopt in conjunction with proposed Plan changes, this Manual as their own engineering standards in 2006. These councils have added a rural supplement as Volume 5 to outline the variances and/or additional design standards or technical specifications for subdivisional and contract works within these districts.

Therefore wherever the term "Hamilton City Council" or any other reference to specifications or requirements of the Hamilton City Council are referred to in this Manual, these should also be interpreted as meaning the requirements of the relevant district council in which the works are being carried out, except where indicated otherwise in Volume 5. Any ambiguities between volumes should be addressed to the relevant district council."

2.0 HEALTH & SAFETY

All work being carried out either as a direct contract to Council, or as part of a subdivision development shall be completed in such a manner that it complies in every aspect with the Health & Safety in Employment Act 1992 and its amendments.

Prior to any work commencing, it is necessary that an "approved" Health & Safety Plan be provided.

Where the work extends onto the existing road network, the Contractor shall provide and maintain an approved temporary traffic management scheme in accordance with the NZTA Code of Practice for Temporary Traffic Management.

3.0 EXISTING UTILITY NETWORK SERVICES

3.1 Works of any nature may encounter utility network services whether overhead or underground. The following specifications set out minimum requirements and guidelines. The contract documents will set out the respective responsibilities of the parties.

3.2 General

The Contractor shall at all times have a full set of up to date service plans for the entire site. These service plans shall be produced by each service authority and shall include the key for all symbols used on their plans.

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The service authorities are:

- Natural Gas Corporation of NZ
- WEL Networks Ltd (WEL)
- Telecom New Zealand Limited
- TelstraClear
- Water & Waste Services Unit, Hamilton City Council
- Project Services, Hamilton City Council (traffic signal cables and private cables)

A full set of these plans should also be readily available for the Engineer to refer to when required.

3.3 Existing Utility Services

The Contractor shall, before starting any excavation work, obtain all necessary consents for excavating in the region of any service. The Contractor shall be bound by the Special Restraints imposed on work methods as set down below:

Special Restraints for:

(1) Underground Electricity Power Cables

- a) All cables and slabs are to be located by hand-digging. If requested by the Contractor, supervision of deep excavation (i.e. below 0.4m) will be provided by the controlling electrical lines company at the Contractor's expense. 48 hours notice must be given to ensure adequate supervision can be provided.
- b) 11,000 & 33,000 volt cables, or covering slabs are to be located by hand-digging. The Contractor is advised to request supervision from the controlling electrical lines company when working within 2.0m horizontal distance of a 11,000 or 33,000 volt cable.

When requested, supervision will be provided by the controlling electrical lines company at the Contractor's expense. 48 hours notice must be given to ensure adequate supervision can be provided.

- c) No cables are to be moved by anyone without authorisation from the appropriate electrical supply authority or the owner of the cables where they are privately owned.

Note

Hamilton City Council and WEL Networks Ltd accept no liability for Contractors working in the vicinity of WEL's cables. The Contractor involved in the work shall be responsible for the location of the cables in the affected area of work.

Hamilton City Council and WEL Networks Ltd do not automatically require supervision of work near cables of any voltage - the decision to request supervision is that of the Contractor.

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The Contractor shall follow any instructions from the controlling electrical authority with regard to work near cables of any voltage.

(2) Telecom Coaxial Cables

Telecom provide a free plan and cable location service by telephoning 124.

- a) Supervision by Telecom staff is required when excavating within 2.0m of the position of a coaxial cable, as determined by a pipe locator and recorded with pegs at intervals of 4.0m, or within 2.0m of fibre-optic cable.
- b) Machinery can be used up to 0.5m from the cable when the cable has been located by hand at intervals of not greater than 2.0m. The machinery is to be operated away from the cable.

(3) Gas Mains

- a) Mains up to 400 KPa pressure - when working closer than 0.3m vertical or 0.6m horizontal, mains are to be located by hand-digging.
- b) Mains over 400 KPa pressure - when working closer than 0.5m vertical or 1.0m horizontal mains are to be located by hand-digging under supervision of Gas Distribution Authority and continuous supervision during construction is required.

48 hours notification is required in all cases except genuine cases of emergency.

3.4 Service Covers

3.4.1 General

During construction no rollers or compactors or any other equipment which may cause damage shall be used over service boxes.

After construction or rehabilitation of the pavement courses and prior to final compaction and surfacing, all surface covers shall be adjusted in level so as to be generally flush with the finished surfaces. In some cases service covers are already hidden or buried and these shall be located, from the service plans, uncovered and adjusted. Service covers shall be so located as to allow access for their intended purpose.

Note

During the course of construction, all surface openings of underground services must be maintained clear of spoil and readily accessible at all times.

3.4.2 Water Supply Covers

Water covers include, but are not limited to, the following:

- Toby boxes - usually circular and found in berm areas
- Fire hydrants - found in berms and carriageways (yellow)
- Valve boxes - usually marked "V"

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- Air bleed boxes - similar to fire hydrant boxes (painted white)
 - Manholes (housing large valves enclosed in chambers)
- These covers shall be adjusted by the Contractor in accordance with the Standard Technical Specification (Volume 3).

The adjustments shall be made according to Standard Details and must be to the correct level as any subsequent adjustment required will be at the Contractor's expense.

The Water & Waste Services Unit of the Hamilton City Council will inspect the adjustment work. 24 hour notification to inspect is required.

3.4.3 *Water Supply Marker Posts*

Marker posts are installed in the berms to mark the following:

- . Hydrants (District areas only, no longer required within the Hamilton City Boundary)
- . Valves
- . Air bleed boxes

The Contractor shall ensure that any marker post damaged or removed during the course of the work is replaced and/or reinstated in the correct location as soon as possible at the Contractor's cost.

3.4.4 *Telecom Service Covers and Above-ground Structures*

Such structures include, but are not limited to, the following:

- . Aluminium or glass reinforced plastic (G.R.P) cabinets
- . Aluminium oval shaped covers - usually in berm areas
- . Fibre cement manholes - usually in the berms
- . Manholes with steel or concrete lids - in berms and in carriageways
- . Cable protection up poles

These will be adjusted by Telecom New Zealand Ltd. This work is to be arranged by the Contractor after liaison with the Engineer and the Contractor shall give adequate notice to the authority when they require this work to be carried out. The Contractor shall ensure that the adjustment is to correct level as any subsequent adjustment will be at the Contractor's expense.

3.4.5 *Gas Service Covers*

Gas valve boxes include, but are not limited to, the following:

- . unmarked approx 100 x 100 sized lids
- . marked "HCC" Gas"
- . marked "NGW"

These service covers will be adjusted by Natural Gas Corporation of N.Z. This work is to be arranged by the Contractor and the Contractor shall give adequate (48 hour) notice to the Authority of when they require this work to be carried out. The Contractor shall ensure

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that adjustment is to the correct level. Natural Gas Corporation of NZ do not charge for one time adjustment, provided that the correct notice requirements have been met.

3.4.6 *Electrical Above-ground Structures*

Such structures include, but are not limited to, the following:

- . Pillar boxes - usually in the berms near the boundary
- . Transformer cabinets
- . Cable protection up poles

These will be adjusted by WEL Networks Ltd. This work is to be arranged by the Contractor after liaison with the Engineer and the Contractor shall give adequate notice to the authority when they require this work to be carried out. The Contractor shall ensure adjustment is to the correct level and location as any subsequent adjustment will be at the Contractor's expense.

Note

Where earthing straps for transformer boxes are damaged or no longer in contact with the ground, the Contractor shall report this to WEL Networks Ltd.

3.4.7 *Stormwater and Sanitary Sewer Covers and Structures*

Such structures include, but are not limited to, the following:

- . Manholes
- . Gully traps
- . Pump Station structures
- . Pump Station electrical cabinets

The adjustment of manholes shall be carried out by the Contractor after liaison with the Engineer and notification to the Water & Waste Services Unit of Hamilton City Council at least 48 hours prior to commencement of work. No debris shall be allowed to enter the sewers during this work.

For all other structures that may need adjusting, liaison should be with the Water & Waste Services Unit.

3.4.8 *Traffic Signal Toby Boxes*

The adjustment of all traffic signal toby boxes shall be carried out by the Contractor after liaison with the Engineer.

3.4.9 *Survey Standard Covers*

The adjustment of all survey standard covers shall be carried out by the Contractor after liaison with the Engineer.

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3.4.10 *Other Surface Openings and Structures*

The Contractor shall arrange for the adjustment of all other surface openings and structures. These works shall be carried out by the appropriate service authority.

3.4.11 *Payment*

Unless noted otherwise, the Contractor shall have allowed for all adjustments, costs and attendances.

3.5 **Traffic Detector Loops**

Traffic Detector Loops shall not require protection and may be ripped or excavated out once approval is gained from the Engineer. However, the Contractor shall give the Engineer at least two working days notice when the loops are to be disrupted.

Reinstatement of loops shall be carried out at the Contractor's expense, and shall be undertaken by either the Council's Traffic Signals Maintenance Contractor or the Contractor with written approval of the Transportation Unit Manager, Hamilton City Council.

Cables linking detector loops and the signal controller are not to be removed unless approved by the Engineer. It shall be noted that these cables are typically 100-200mm below ground surface and located immediately behind the kerb & channel.

4.0 **CATCHPITS**

Special care shall be taken to prevent catchpit chambers being filled, or catchpit grates being blocked, with any rubble, topsoil, sealing chip, asphalt, concrete or other spoil created during the works. The Contractor shall ensure that all catchpit chambers are clean and all grates are open and clear at all times, and at the end of the works the Contractor shall clean all catchpits.