

**NEXT  
GREAT  
CITY**

**EXCAVATION AND  
REINSTATEMENT  
SPECIFICATION**

November 2018



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# Specification for Excavation and Reinstatement of Services under council controlled land

## Amendment Record

Version	Description	Date
1.	Final	August 2012
2.	Update – Page 17 – New schedule 1 Form	March 2015
3.	Redraft	October 2015
4.	Removal of underground services application form Addition of tree asset requirements Changed to new template	November 2018

## 1. SCOPE

The excavation and reinstatement requirements contained in this Specification apply to Council controlled lands which are maintained by the City of Playford (as defined in Clause 3.2 “Council”). All work shall conform to this Specification unless otherwise approved by the City of Playford.

This Specification shall be adhered to when excavating, along or across any to Council controlled lands for service installations, relocation of existing services, drainage or other reasons.

Notwithstanding any variation to certain of the requirements which any Government Authority (Federal or State) may consider it can exercise by virtue of its own or any other enabling legislation with respect to any underground installations, the technical and quality standards of roadwork and materials specified herein are the minimum acceptable within the meaning of words “make good” or “reinstatement” used in most such legislation.

## 2. PURPOSE

To ensure a high and consistent standard of reinstatement is achieved and outline responsibilities of Service Authorities and council on an ongoing basis.

# 3. DEFINITIONS

## 3.1 General

The definitions given in AS1348 “Road and Traffic Engineering – Glossary of Terms” shall apply to all appropriate wording in this Specification.

3.2 “Council” means the City of Playford, City Operations Department.

## 3.3 Works and/or Engineering Departments

“City Operations Department” being the department directly responsible for any form of construction and / or maintenance of Council owned land within the City of Playford.

## 3.4 Service Authority

“Service Authority” means the person, Statutory Authority, Government Department, Corporate body or any other organisation (private, State or Federal) responsible for the excavation and reinstatement referred to in this Specification. Below are examples of, but not limited to, Service Authorities;

- Telstra
- Optus
- SA Water
- SA Power Networks
- APA
- Contractors
- Private individuals

## 3.5 Minor Programmed Works

Works confined to two days duration from commencement to completed reinstatement.

## 3.6 Major Programmed Works

Works exceeding two days duration from commencement to final reinstatement.

## 3.7 Emergency Works

Works requiring immediate action to remedy an unforeseen or sudden occurrence, which creates a risk.

## 3.8 Excavation

“Excavation” refers any disturbance to any surface.

## 3.9 Proper Land Management

Proper Land Management can be referred to as the organisation or regulation of land use activities for a specific purpose in the manner that will support sustained use. Maintenance or improvement of the integrity of the land, water, atmosphere and its aesthetic value is the objective.

## 4. STAGES

### 4.1 Notification of Proposed Works

Notification should be formally given to Council 4 weeks prior to the Major Programmed Works and 10 days prior to Minor Programmed Work commencing, in writing requesting approval for the said works and to include a drawn plan and traffic management plan of the proposal and a suggested timeframe.

### 4.2 Approval Granted

Council will notify the Service Authority of their approval to the said works and to include any alterations, specifications, timeframes and any concerns e.g. Native vegetation, future works and planning requirements.

### 4.3 Undertaking of Works

Council is to be notified 48 hours prior to the commencement of works to enable the relevant inspections to occur to confirm location, compliance to specifications and reinstatement.

### 4.4 Completion of Works

To enable a site inspection by Council, the Service Authority, within 7 days of completion of the works shall notify Council of the completed works and supply Council with a Plan of the finished product showing:

- the location
- the depths of the service
- any reference to on site features such as boundaries, posts, and buildings
- measurements of location and size of services
- any other services depicted
- references to any known easements

# 5. GENERAL

## 5.1 Council Notification

The Service Authority shall notify Council where it carries out excavation on, along or across any Council controlled land, in accordance with the procedures given below.

These procedures also apply to those Service Authorities where enabling legislation (e.g. Waterworks Act and Sewer Act) provides for, or where the Council approves otherwise, the quality, supply and placing of the surfacing by the Service Authority (as in accordance with Clause 8.1 &

8.2 "Asphalt Concrete Surfaced Roads and Spray Bituminous Surfaced Roads.

### 5.1.1 Minor Programmed Works, or;

Where the Service Authority is to undertake final surfacing, at least 48 hours' notice shall be given to Council before any work is commenced.

### 5.1.2 Major Programmed Works

Work shall be in accordance with drawings, specifications and work methods submitted at least four weeks prior to the intended work and approved by the Council before any work is commenced.

Furthermore, the Service Authority shall be responsible for advising Council at least 48 hours before commencement of excavation in order for regular inspections and arrangements for final reinstatement to be made.

### 5.1.3 Emergency Works

Where either the road pavement or shoulder is damaged, or excavation of same is necessary in emergency situations, then the Service Authority shall provide verbal notification to the Council, as soon as practicable after the emergency becomes known, in order that regular inspections and arrangements for final reinstatement and maintenance period commencement can be made.

5.1.4 Attachment of Services to Bridge and Culvert Structures Drawings, including fixture details, are to be submitted to the Council at least six weeks for review prior to commencement of works.

## 5.2 Identification of Completed Work within the Maintenance Period

After completion of the work, and at any time upon request within the maintenance period as set out in Section 9, the Service Authority shall supply the Council with details, including drawings, size, location and date constructed, of their reinstatement.

## 5.3 Safety

The Service Authority shall be responsible for the safety of vehicle, bicycle and pedestrian traffic for the duration of the work and all measures shall be taken and adequate warning given to traffic to ensure safety around the worksite in accordance with the AS1742 "Manual of Uniform Traffic Control Devices", Part 3 as modified by the "Code of Practice for the Installation of Traffic Control devices in SA" available from the Department for Planning, Transport, and Infrastructure.

### Work Health and Safety

The Service Authority shall supply to Council a copy of their Work Health and Safety policies or if none available, agreed to the specific conditions as per the Work Health and Safety policies of the City of Playford.

### Public Liability Insurance

The Service Authority is to show to Council proof of Public Liability insurance to the value of 20 million dollars.

## 5.4 Trenchless Methods

This Specification does not apply to the installation of services where alternatives to open trenching such as thrust boring, tunneling etc. are used. However, plans of the proposed new services still need to be supplied to Council and approved by Council.

## 6. EXCAVATION

### 6.1 Trenching Times

Trenching which is likely to reduce traffic volumes should be avoided before 9.00 a.m. and after 4.00 p.m. on peak flow traffic lanes, unless unavoidable due to emergency circumstances, or otherwise approved by the Council.

6.1.1 Works shall be organised so as to cause minimal disruption to traffic, pedestrians and access to properties at all times. Approximately one half of the carriageway shall remain open to traffic at all times, unless otherwise approved by the Council.

### 6.2 Detector Loops

All the necessary care and precaution shall be taken to prevent damage occurring to the detector loops where excavation is to be undertaken in the vicinity of traffic signals or pedestrian crossings. Where damage occurs, the Service Authority shall lodge an order with the Department for Planning Transport & Infrastructure to cover the cost of repairing detector loops.

### 6.3 Saw Cut

The trench shall be saw cut to the full depth of the existing asphalt surface. Where cement stabilised pavement exists, the pavement shall be saw cut to the full depth (unless restricted by cutting equipment) to minimise damage to the surrounding pavement.

### 6.4 Excavated Material

Unless otherwise approved by the Council, excavated material shall not be reused in the reinstatement of trenches and shall be removed from the site and appropriately disposed.

### 6.5 Trench Width

Minimum trench width shall be 300 mm.

6.5.1 All cut bitumen edges to be overlapped between new and existing asphalt and crack sealed.

6.5.2 Any damage to side of trenches is the responsibility of the contractor to repair.

## 7. GREEN ASSETS

In the urban and rural environment, soil, plants, and trees absorb rain intercepting stormwater runoff that normally carries contaminants.

The effective use of street trees and other forms of green infrastructure to manage stormwater and protect water quality should form a strategic part of our built environment.

Our Green assets bring the natural environment to the city and have many environmental, social, and economic benefits.

Green assets have a soft but tangible and fiscally defensible value to the community and need to be considered and registered in to the fabric of existing and proposed civil methodology and procedure. This should be aimed to maximize on their inclusion, preservation, and protection as a priority to ensure this investment is not wasted.

Inclusion of green assets in the specifications means that cost-saving and mutually beneficial opportunities are identified and capitalized upon through technical review and strong project management.

This is aimed at making the city more livable and is in line with the city and state's strategic objectives.

## 8. BACKFILL

Prior to backfill operations, all loose rubbish and foreign material shall be removed from the excavation. All spaces excavated and not occupied by permanent work shall be backfilled.

Excavations shall be backfilled with Sand Type C to Standard Specifications PM63 or alternatively, approved by the Council clean quarry, pit or dune sand or rubble of plasticity index not exceeding 8.

The backfilling shall be uniformly compacted in horizontal layers nominally not exceeding 150mm thickness to the dry density determined using AS1289, test method 5.2.1 (modified compaction) for:

- (a) not less than 90% up to a level 800 mm below finished level, and/or
- (b) not less than 95% at all levels above 800 mm below finished level

## 9. PAVEMENT REINSTATEMENT

### 9.1 Asphaltic Concrete Surfaced Roads

After completion of the backfill, 20mm crushed rock with 2% cement shall be used to reinstate the excavation to a level not less than 50 mm or more than 75 mm below the existing surface adjoining the excavation (refer to Appendix 3). The crushed rock shall comply with Standard Specification PM32 and with the addition of 2% cement shall be described by a suffix system as PM32, C2.

As an alternative to quarry supplied material, it is permissible to add cement to crushed rock PM32 on site to the following mix: 40 kg of cement (general blend GB) to 1000kg of crushed rock.

The cement treated crushed rock shall be uniformly compacted in horizontal layers not exceeding 150 mm thickness to not less than 98% of the dry density determined using AS1289, test method 5.2.1 (modified compaction).

To ensure maximum performance of the cement treated material, the cement treated material shall be placed and compacted within two hours.

### 9.2 Spray Bituminous Surfaced Roads

After completion of the backfill, 20 mm crushed rock to Standard Specification PM32 shall be used to reinstate the excavation to a level approximately 14 mm below the existing surface adjoining the excavation (refer to Appendix 4). The reinstatement depth may vary slightly with the Average Least Dimension of the final aggregate size selected.

The crushed rock shall be uniformly compacted in horizontal layers not exceeding 150 mm thickness to not less than 98% of the dry density determined using AS1289, test method 5.2.1 (modified compaction).

### 9.3 Unsealed Shoulders

After completion of the backfill, a compacted 300 mm depth of 20 mm screened quarry waste complying with Standard Specification PM11, or an equivalent material approved by Council shall be placed and compacted in two horizontal layers not greater than 150 mm to reinstate the road shoulder to the finished shoulder level and matching cross fall. Compaction shall be to 98% of the dry density determined using AS1289, test method 5.2.1 (modified compaction).

### 9.4 Temporary Pavement Surface

*That portion of a carriageway placed above subgrade for the support of, and to form a running surface for, vehicular traffic . (Care, Control & Management of Roads (Highways))*



On completion of backfill and pavement reinstatement, it shall be the responsibility of the Service Authority, to maintain the open surface of the reinstated excavation until final asphalt or other bituminous surfacing is completed.

A temporary pavement surface shall be provided and maintained by the Service Authority, who shall ensure the surface is in a safe and trafficable condition for all traffic including bicycles, at all times pending final surfacing. The maximum time temporary pavement is allowed before final asphalt is seven (7) days.

### **9.5 Pavement Markings**

The Service Authority is responsible for the reinstatement of any painted pavement markings, raised pavement markers or safety bars, which are removed or damaged during trenching works.

### **9.6 Road Furniture**

*A general term covering covering all signs and devices for the control, guidance and safety of traffic, and the convenience of road users. (Care, Control & Management of Roads (Highways))*

The Service Authority shall replace all road signs, guideposts, guard fence or other road furniture which are temporarily removed or damaged during trenching work, ensuring that all road furniture is made good (including sign mounting heights) and cleaned. This work is to be completed prior to traffic use and road being re-opened to motorists.

### **9.7 Concrete Kerbing**

*For the purposes of this document, a general term to cover kerb, kerb and channel and median kerb (Care, Control & Management of Roads (Highways))*

The Service Authority shall reinstate (in concrete) any concrete kerb and gutter or median type kerb which is removed or damaged during trenching work, ensuring that the kerb profile, conforms with existing. Kerb reinstatement shall be completed by the Service Authority within three days of leaving the worksite and be in accordance with the City of Playford's standard drawings.

### **9.8 Road Drainage Systems**

The Service Authority shall report all instances of damage caused to the road drainage systems i.e. culverts, sumps, subsoil drainage, roadside drainage systems etc. incurred during trenching works, to the Council for inspection. All costs for the repairs shall be borne by the Service Authority.

Once the damage has been assessed by a Council representative and proposed rectification works agreed to, the Service Authority is to undertake these rectification works at their own cost. Once these works are complete they are to be inspected and signed off by a Council representative.

### **9.9 Medians/Traffic Islands/Verges**

The Service Authority shall reinstate medians, traffic islands, and verges to conform to the existing surface treatment.

The Service Authority is responsible for the replacement of any vegetation (e.g. shrubs, median grasses, etc.) which are removed or damaged during trenching works.

### **9.10 Native Vegetation**

The Service Authority shall take into account all relevant information under the Native Vegetation Act and Local Roadside Vegetation Management Plans using Proper Land Management. The terms 'capability' and 'degradation' are often used with regard to proper land management, and the Soil Conservation and Land Care Act 1989 has defined these terms as follows:

Capability: in relation to land, means the ability of the land to sustain a particular use without suffering permanent damage or a reduction in future productivity.

**Degradation:** of land means a decline in the quality of the soil, vegetation, water and other natural resources of the land, resulting from overgrazing, excessive tillage, over clearing, mineral extraction, development of towns, disposal of wastes, road construction, failure to control plant and animal pests or any other human activity on the land.

### 9.11 Footpaths/Driveways

9.11.1 The Service Authority will reinstate in concrete, any path/driveway of the same which is removed or damaged during the works with;

- Concrete to a minimum N20 compressive strength (footpaths) N32 compressive strength (driveway) to a minimum 100mm thickness with SL72 mesh, doweled to existing concrete with 30mm clear cover

9.11.2 The Authority will reinstate with pavers any footpath/driveway that was previously paved; pavers are to conform to existing patterns and must be a minimum of

- 50mm in footpath
- 60mm in driveway

### 9.12 Other Services

It is the responsibility of the Service Authority to arrange for the location of other services, such as Telstra, ETSA, Gas etc.

### 9.13 Sedimentation Control

The Service Authority is to ensure there is minimal dust from works as a result of trenching. If there is extensive trenching the Contractor is to provide a sediment control plan to ensure there is no sediment transport to nearby drainage structures.

## 10. CONFORMITY TESTING

The Service Authority shall submit to Council, copies of laboratory test results to confirm compliance with materials and compaction requirements as specified herein for any reinstatement works carried out, within 14 days of testing if requested by Council.

Testing is not required for emergency work. However the Service Authority will be responsible for any works required during a maintenance period of 12 months.

Testing shall be undertaken by a laboratory registered by the National Association of Testing Authorities (NATA). The arrangement and cost of such testing shall be borne by the Service Authority. It shall be the responsibility of the Service Authority to remove and replace any material used by the Service Authority which does not comply with this Specification.

#### 10.1 Material

All pavement material shall comply with PM32.C2 as appropriate and conformance documentation may be required.

#### 10.2 Compaction

The following minimum frequencies of testing shall apply:

##### (a) Pavement

0 – 50 m<sup>2</sup> – 1 test required

50 – 200 m<sup>2</sup> – minimum 2 tests

over 200 m<sup>2</sup> – 2 tests and an additional test for every 200 m<sup>2</sup> over 200 m<sup>2</sup>.

##### (b) Backfill

No testing required unless otherwise directed by the Council

# 11. MAINTENANCE PERIOD

The Contractor will be responsible for the cost of making good any settlement or other deterioration in the reinstated excavation or other works for a maintenance period of one year from the date of completed reinstatement.

The Service Authority shall indemnify and keep indemnified Council against all claims which may arise due to excavations or settlement of excavations until the maintenance responsibility has transferred to Council.

All costs and charges incurred by the Council for any works necessitated by the Council due to non-compliance with the requirements of this Specification for all installations by the Service Authority are to be borne by the Service Authority until the end of the maintenance period. Should Council be required within the one (1) year maintenance period to undertake remedial work as a result performed by the Service Authority Council will give notice in accordance with the requirements of Section 339 of the Local Government Act, to the Service Authority of its intentions so that the deficient work may be inspected before rectification.

# 12. REFERENCES

- *Care, Control & Management of Roads (Highways)*, Commissioner of Highways
- *Telecommunications Act, 1997* –Schedule 3
- *Electricity Act, 1996*
- *Gas Regulations, 2012*
- *Gas Act, 1997*
- *South Australian Public Health (Wastewater) Regulations, 2013*
- *Water Industry Regulations, 2012*
- *Water Industry Act, 2012*

## CALL

(08) 8256 0333

## VISIT

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