ROADS INFRASTRUCTURE MANAGEMENT

WAYLEAVE STANDARDS

VERSION 4.0

SEPTEMBER 2025

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

DOCUMENT INFORMATION

RIM Wayleave Standards

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Applications

Application Type	*Platform*	*Link*
Wayleaves	WMS	https://wayleave.capetown.gov.za
Wayleave Permit-to-Work Miscellaneous Permits	RIM District	RIM Boundaries & Contact List Map

RECORD OF REVISIONS AND AMENDMENTS

Version	Release Date	Description
1.0	Oct 2018	Release of Document
2.0	Aug 2023	Revised Trench Reinstatement Details Drawings. Requirements regarding open trenching for road crossings. Revised City standards, i.e. "Standards and Guidelines for Road & Stormwater (previously *Minimum Standards for Civil Engineering Services in Townships*). Incorporation of "Moling" requirements (as per Addendum 1 & 2) into this document.
3.0	Feb 2024	Revised definition of "Engineer" to "Civil Engineering Professional", in order to include professional Engineers, Technologists and Technicians. Addition of *Addendum 3: Aerial Fibre Deployment In Middle- And Low-Income Areas*
4.0	Sep 2025	Extended defects liability period for drilling, moling and open trenching. Expansions to trench reinstatement requirements. Trench reinstatement for footways amended. Revised CIDB contractor requirements. Document expansion to include various civil works. Temporary Road Closure requirements added. Revised Financial Requirements. Secondary Contractor requirements added.

Abbreviations & Definitions

- **Active Mobility:** Refers to the transport of people through human physical activity. The most common forms of active mobility are walking and cycling.
- **CAPEX:** Capital Expenditure
- **CIDB:** Construction Industry Development Board
- **Carriageway**: The portion of road assigned to the movement of vehicles, including any shoulders or auxiliary lanes.
- **Carriageway Crossing:** Also known as vehicular access way or driveway; An entrance or exit way, or a combined entrance and exit way, between a land unit and an abutting road.
- **City of Cape Town IS&T** – City of Cape Town Information System and Technology
- **Civil Engineering Professional:** A Civil Engineering practitioner registered with ECSA as a professional Engineer (Pr Eng), Technologist (Pr Tech Eng) or Technician (Pr Techni), appointed by the Network Licensee, Service Owner and/or Developer.
- **Closed Access Network:** where the operator for that network (or infrastructure owner) does not allow other Service Providers to sell services over their network.
- **Contractor**: In construction, a contractor is an organisation (or sometimes a person), appointed to perform certain tasks or to carry out a specific scope of work. In certain instances, a Contractor will be required to be registered with the CIDB.
- **Day:** A day shall be a calendar day
- **ECSA:** Engineering Council of South Africa
- **ECNS:** Electronic Communications Network Service Licensee (here after referred to a Network Licensee) – A registered company that has obtained a licence to provide a telecommunications network under the approval of the Independent Communications Authority of South Africa (ICASA).
- **FTTH:** Fibre-to-the-Home will typically involve more density of products / fibre with trenching on both sides of the road, where wall boxes, boundary boxes are installed on property boundary walls through erf connections.
- **FTTB/S:** Fibre-to-the-Business and/or –Site/Tower will typically involve trenching on one side of the road, with deeper trenches, fewer manholes and no erf connections.
- **ICASA:** Independent Communications Authority of South Africa
- **Miscellaneous Permit:** A permit that is issued for projects where the proposed scope does not require a wayleave application (and permit-to-work). Validity and time frames are clearly specified. No work may commence without a signed permit issued.
- **OPEX:** Operational Expenditure
- **Open Access Network** refers to a network where the operator of that network (or the infrastructure owner), offers the network infrastructure to a range of service providers on an OPEN ACCESS basis. These Service Providers can then provide various services (internet, data and voice) over the fibre infrastructure to the end user.
- **Permit-to-Work:** A permit-to-work follows after a wayleave approval has been granted and specifies the work to be done with time frames; where risk and strict controls have already been identified and approved. It forms an essential part of asset management and no work may commence without this signed document.
- **Permit Holder**: A permit holder is an individual or entity that has been granted a permit (Permit-To-Work or Miscellaneous Permit), authorizing them to engage in a specific activity or undertake works which have been applied for. The aforementioned occurs under certain conditions, within a designated area and timeframe. The Permit Holder is responsible for adhering to the terms and conditions outlined in the permit. For telecoms, the Permit Holder is typically the Service Owner and/or Network Licensee.

- **Primary network:** Main (bulk) telecommunications network linking up different areas/regions. Normally follows major road routes and individual property connections are not common. (Most commonly FTTB/S routes)
- **RIM:** Road Infrastructure Management department, forming part of the Urban Mobility Directorate
- **Secondary network:** Telecommunications network distributing through individual areas or zones. Normally follow larger ring/block roads and individual property connections are not common. (Most commonly FTTB/S routes)
- **Service Owner:** The Service Owner is accountable for the specific service provided, which includes both the infrastructure and/or network service.
- **TELECOMS**: Refers to underground telecommunication services.
- **Tertiary network:** Telecommunications network providing connection to individual properties. Normally follow smaller roads to provide individual property connections. Commonly referred to as "Fibre-to-Home, Last Mile, etc." and generally consists of smaller diameter cables and ducts.
- **The City**: The City of Cape Town
- **UM:** Urban Mobility Directorate or any successor
- **Wayleave:** A wayleave is the right obtained to cross land, where access to property is granted by the land owner / asset holder. The City (i.e. local authority) is responsible to administrate public owned land and need to give permission to all parties before they may install utility services or infrastructure, even if supplied by the City. This enables the responsible use of public assets, by coordinating service installation, minimizing service clashes or collateral damage due to new installations or construction activities.
- **WMS**: Refers to the City's electronic "Wayleave Management System".

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1 INTRODUCTION

1.1 Purpose of Document

When any type of works is undertaken inside the municipal road reserve, including on or in close proximity to roads and stormwater services/infrastructure, it is important to establish and ensure consistency regarding the standard of workmanship and protection of services/infrastructure, pedestrians, cyclists and motorists.

This Document aims to provide a clear guideline to the process and standards that all applicants must comply with when working in the City's road reserves or on or in close proximity to roads and stormwater services/infrastructure, whether it involves the provision of new civil infrastructure, telecommunication services or the temporary use of the road reserve.

This document covers the following:

a) General conditions of compliance (Fundamental Principals);

b) Process Flow: The process to be followed for the application and approval for Wayleaves and Permits-to-Work; The document will also briefly cover works that do not require a wayleave application, namely miscellaneous permits.

c) Technical Specifications: The required standards for the construction/installation of civil services/infrastructure or for the installation of telecoms.

This Document is intended to be a "Dynamic Document" and will be regularly updated in consultation with the relevant Stakeholders. The latest available version of this Document will be applicable on the date that an application is made for wayleaves.

Where it appears that the requirements of this Document are different from other City of Cape Town standard specifications, or complying with the specifications contained herein could result in danger to the public or construction workers or damage to existing infrastructure, then clarification shall be sought from the District Head: Road Infrastructure Management (RIM) (*see **RIM Boundaries & Contact List Map***), Urban Mobility (UM), prior to undertaking the work.

Where municipal stormwater services are present outside the public road reserve (i.e. traversing private property), works undertaken in "close proximity" will be regarded as follows:

- Underground service *(e.g. conduit)* : any activity occurring within the reservation width, as depicted in the figure below
- Aboveground service *(e.g. open channel)* : Within 2m of the outer edge of the service

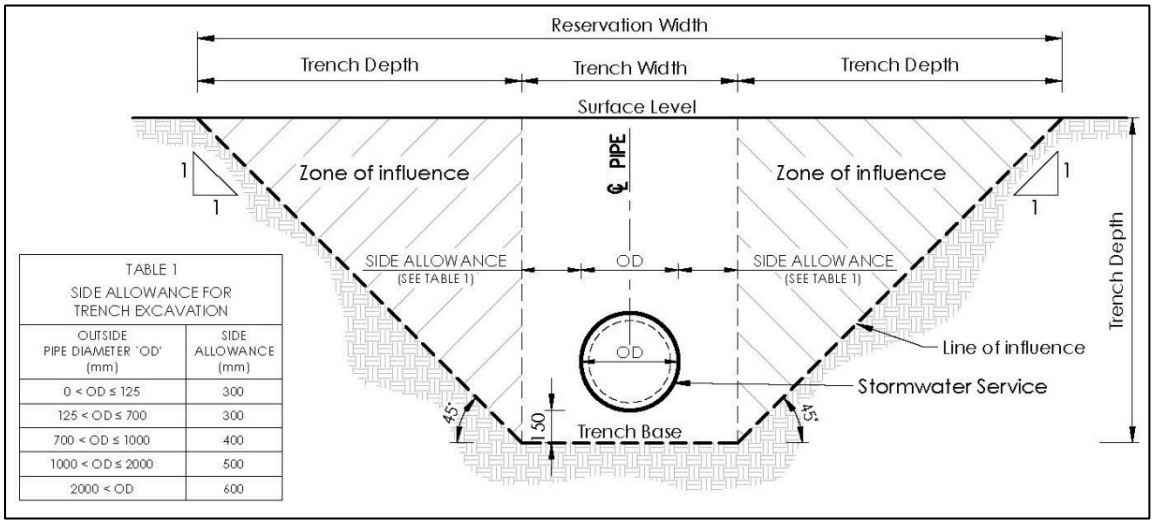


TABLE 1
SIDE ALLOWANCE FOR TRENCH EXCAVATION

OUTSIDE PIPE DIAMETER 'OD' (mm)	SIDE ALLOWANCE (mm)
0 < OD ≤ 125	300
125 < OD ≤ 700	300
700 < OD ≤ 1000	400
1000 < OD ≤ 2000	500
2000 < OD	600

Figure 1-1: Reservation Width for Underground Stormwater Conduit

1.2 Legal aspects

Wayleaves and permits (to work) are required in terms of the City's *Wayleaves By-law (2025)* and *Wayleaves Policy*.

In terms of section 11(1) of the City's *Streets, Public Places and Prevention of Noise Nuisance By-Law (2007)*, written permission is required from the City to permit any type of excavation within the public road reserve.

Below is a comparison regarding the Constitution and Municipal By-Laws vs Electronic Communications Act pertaining to telecoms:

a) It is part of a local authority's competencies in terms section 155 (6&7) of the constitution (Part B - Schedule 4&5) to ensure that infrastructure and services are delivered in a sustainable manner to all people. These services are defined in Schedule 4 and 5 of the constitution and place a moral and social responsibility on the local authority.

b) In terms of section 155(4) of the constitution local authorities must provide these services in a sustainable manner. This infrastructure consists of amongst other water-, sewer-, stormwater-, electricity-, road-, and public transport networks. These infrastructure networks all makes use of the available space in the public road reserves, which requires coordination and regulation to ensure services are not compromised.

c) The road reserves are acquired at a large cost to the City and to ensure that the City delivers on its constitutional requirements. Private services in a public road reserve must be coordinated within the available space restriction the road reserves and surroundings impose.

d) The current drive for the rapid deployment of fibre networks by more than 400 license holders issued a license by ICASA, requires a coordinated effort to manage the services of all infrastructure and service providers. Each provider wants to lay claim to an exclusive space in the road reserve that suits their business model, but the available space simply cannot accommodate the large number of telecommunication providers active in the City as well as the more than 7 City departments responsible for the provision of essential services in the same space.

e) This reiterates the need to allocate a dedicated space to different infrastructure providers to ensure that not only telecommunication services, but also critical services like water, sewer, roads, stormwater and electricity is provided in a sustainable manner.

f) Failing this the City could find itself in a situation where it is extremely well connected, but maintenance and expansion to their own infrastructure to meet economic growth is sterilized.

g) These requirements are made in terms of the City's powers under the common law and section 11(1) of the Streets, Public Places and Prevention of Noise Nuisance By-Law, 2007.

h) These requirements apply to a holder of an ECNS licence under the Electronic Communications Act 36 of 2005 in respect of the installation of an electronic communications facility in a road reserve of the City, unless on application the City grants a deviation.

1.3 Detail Drawings

Detail drawings applicable to this document are listed below:

Drawing N°	Title	Rev
WLP-MOL-01	Duct Installation by means of Mole Piercing Device	A
WLP-TR-01	Shallow Trench Reinstatements in Road Reserves: Roadways	A
WLP-TR-02	Shallow Trench Reinstatements in Road Reserves: Pedestrian Footways & Verges	A

2 PROCESS FLOWS

There are three primary phases with regards to the wayleave process, namely:

1) Preliminary Planning Phase
2) Wayleave/Permit Application Phase
3) Execution and Close-Out Phase

The ***RIM Wayleaves and Permits Flow Diagram*** illustrates the various phases in more detail and provides guidance for the determination of the applicable route.

2.1 Preliminary Planning Phase (Existing Service Enquiry)

During the Planning Phase, the as-built information can be obtained from the relevant Directorates and external parties, in an effort to determine a viable route for the newly proposed infrastructure. Such requests are typically submitted by the Service Owner or the appointed Civil Engineering Professional. This Phase is not compulsory and may not be required for all projects.

A spatial information request (for planning purposes) can be submitted via the City's Wayleave Management System (https://wayleave.capetown.gov.za/) in order to obtain information on as-built or existing services/infrastructure.

During this Phase, no formal wayleave application is made and no fees are charged, except when the applicant needs to introduce trial holes or other invasive investigations. Where the aforementioned is required, the following shall be noted:

- Any trial hole up to a depth of 600mm can be approved via the Miscellaneous Permit application. However, the UM: RIM Department reserves the right to require a wayleave application for any type of trial hole request (regardless of the depth and/or position). Refer to ***Miscellaneous Permit Application Form (Form RSW-WLP-01A)***.
- Any trial hole exceeding a depth of 600mm must be approved through a wayleave application. Refer to ***Wayleave Application Requirements*** *appendix*.

2.2 Wayleave/Permit Application and Approval

The Wayleave Application process includes the official submission of the wayleave application via the City's Wayleave Management System (WMS) (https://wayleave.capetown.gov.za/). At this stage the proposed route or location/position of the service/infrastructure should have been determined. The application is generally submitted by either the Service Owner or the appointed Civil Engineering Professional, but application may also be submitted by a proxy.

The wayleave submission requirements will depend on the size and scope of the proposed works. The ***Wayleave Application Requirements*** appendix provides a detailed breakdown of the project size criteria, including the submission requirements thereof. All documents listed in the aforementioned appendix must be prepared and submitted with the wayleave application.

A wayleave Administration Fee will be levied as part of the WMS procedure, in terms of the Council Approved Tariffs. The fee is payable directly after the application has been accepted by the WMS. The wayleave application review is subject to confirmation of receipt of the applicable administration fee.

Thereafter, during the circulation phase, it will be determined whether a supervision fee and/or a refundable deposit is applicable. Where open trenching in a roadway is required and supported by the RIM department, a non-refundable roadway trench fee will also be payable prior to approval of the wayleave. Once all the necessary fees and/or deposits have been paid and the various line departments have approved the wayleave application, a Wayleave Approval pack will be issued.

It must be noted that certain types of work (as described in the ***Wayleave Application Requirements*** appendix) will not require a wayleave application. In such instances, a Miscellaneous Permit application (***Form RSW-WLP-01A***) can be made. Such applications are submitted directly to the relevant RIM District Office (*see* ***RIM Boundaries & Contact List Map***) for. A small administration fee is applicable to miscellaneous permit applications. Depending on the type of work or intended use of the road reserve, a refundable deposits may also be levied.

The various fees, charges and deposits are further discussed in Section 3.8.

Applications for Emergency Works shall be submitted outside the WMS, directly to the relevant RIM District Office (*see* ***RIM Boundaries & Contact List Map***). However, such applications shall adhere to the requirements of the "Emergency Applications" (as amended) document published on the Wayleave Management System's Document Repository.

2.3 Permit, Project Execution and Closure

No work (or use of the road reserve) will be permitted to commence until the necessary Permit(s) has been issued.

For Wayleave applications, once the Wayleave Approval pack has been issued, a permit-to-work (PtW) must be applied for directly from the relevant RIM District Office (*see* ***RIM Boundaries & Contact List Map***). The PtW will clearly specify the Permit Holder, which will be the party responsible for the works. The Permit Holder should be specified as follows:

- Telecoms installations - The service owner
- Other civil works - The contractor undertaking the works

The Permit-to-work will be completed and signed-off (by the RIM Official) at the start-up meeting on site.

For Miscellaneous Permit applications, the miscellaneous permit (which will either be a minor construction works permit or a temporary use permit) will be issued electronically by the RIM District Office once all the necessary fees/deposits have been paid and the required documentation submitted by the applicant.

During this Phase, additional costs can be incurred by the applicant in terms of unplanned open trenching or penalties. These charges can be determined in advance if known, or otherwise will be calculated by the City's RIM Official, during the completion inspection.

Once all the requirements have been adhered to, the ***Permit Close-Out Form*** (***Form RSW-WLP-04***) must be completed and signed by all the relevant parties. Any refundable deposits due can be requested after the aforementioned has been issued.

2.4 Secondary Contractor within same workspace

Even though it is generally preferred that only one contractor undertakes construction works in a specific area or portion of road reserve, a scenario may arise where a second contractor (Contractor #2) intends to carry out works in an area where there is an active Permit Holder.

Should the above occur, a permit may be issued to Contractor #2, provided that the following requirements are met:

1) Contractor #2 (or service owner) must approach the active Permit Holder and an agreement must be reached between the two parties that covers the following:
   a) Active Permit Holder will permit Contractor #2 to carry out the works within the area of the active permit.
   b) The nature of the works must be detailed.
   c) The active Permit Holder will not hold the City liable for any delays experienced due to the works of Contractor #2.
   d) The liability in terms of public safety and public liability claims, arising from the works of Contractor #2, must be resolved between the two parties. The City will not be held responsible or liable in this regard.
   e) If the works entails trench sharing for telecoms purposes, it must be detailed, including the proposed methodology thereof.
   f) The agreement must be sign by both parties.

2) Once the abovementioned agreement has been reached and signed by all the necessary parties, Contractor #2 (or the authorised applicant) must submit a wayleave application or miscellaneous permit application, depending on the scale and nature of the works. The signed agreement must be submitted with the aforementioned application.
   - In the case of a wayleave application, once the wayleave application has been approved, the applicant must apply for a Permit-To-Work from the relevant RIM District Office (*see **RIM Boundaries & Contact List Map***).
3) In the Permit-To-Work or Miscellaneous Permit, a conditions will be included that stipulates that Contractor #2 shall adhere to the requirements of the signed agreement. This condition should clearly detail the parties involved in the agreement and the date it was signed.

3 GENERAL CONDITIONS OF COMPLIANCE (FUNDAMENTAL PRINCIPALS)

3.1 Governance

Unless stated otherwise in this document, the requirements of City Policies, Strategies, Plans and/or guideline documents shall be adhered to at all times. The aforementioned include, but are not limited to:

- ***Standards and Guidelines for Roads & Stormwater***
- *Carriageway Crossing Guidelines*
- City's *Wayleave Policy*

Any discrepancies to be referred to the compilers of this document or the relevant RIM District Head.

3.2 Appointment of ECSA Registered Civil Engineering Professional

The appointment of an ECSA registered Civil Engineering Professional shall be dependent on the size and scope of the works, as prescribed in the ***Wayleave Application Requirements*** appendix. Where an ECSA registered Civil Engineering Professional is required, the below shall apply.

External Applications	The appointment of an ECSA registered Civil Engineering Professional to oversee the proposed works shall be dependent on the size and scope of the works, as prescribed in the ***Wayleave Application Requirements*** appendix. The appointed Civil Engineering Professional must have sufficient competency in Road Construction and Materials, in order to advise (amongst others) regarding the requirements for trench backfill, layer works, surfacing, installation of stormwater conduits, construction of stormwater infrastructure, kerbs and channel laying, etc. A template is available regarding the appointed of said professional (***Appointment of ECSA registered Civil Engineering Professional***), which must be included with the wayleave application.
Internal Applications	The appointed Civil Engineering Professional or the City Project Manager shall oversee the installation of the works inside the road reserve, forming part of a Contract and/or planned works (CAPEX or OPEX).

3.3 Appointment of CIDB Registered Contractors

The appointment of a CIDB registered contractor shall be dependent on the size and scope of the works, as prescribed in the ***Wayleave Application Requirements*** appendix. Where a CIDB registered contractor is required, proof of CIDB Registration shall be submitted at the Start-up (Kick-Off) Meeting, as required by the ***Start-Up Meeting Checklist*** (see ***Form RSW-WLP-02***). A template for the aforementioned appointment is available for use (see ***Template - Appointment of CIDB Contractor***).

Applications to clearly specify/indicate the main (primary/principal) contractor. The aforementioned may be a contractor with a CIDB class other than CE. However, where civil works are applicable, the applicant shall provide proof of appointment of the required CE class contractor (i.e. subcontractor) to undertake the civil works (specifically where trench reinstatements or the construction of road layer works are applicable).

The CIDB grading shall align with the requirements of CIDB in terms of the Works Capabilities grading system.

Table 3-1: CIDB Grading System

Works Capability	
Designation	**Maximum value of work** *(contractor is considered capable of performing)*
1	R 500 000
2	R 1 000 000
3	R 3 000 000
4	R 6 000 000
5	R 10 000 000
6	R 20 000 000
7	R 60 000 000
8	R 200 000 000
9	R No Limit

Note: Grading as at time of publication of this document. Latest grading to be confirmed on CIDB website.

For internal applications, internal Directorates shall provide the UM: RIM Department with details of the relevant Term/Framework Tender that will be utilised for the implementation of the works and reinstatement of such.

3.4 Permit Approval and Validity

No work in a City of Cape Town road reserve, or work on or in close proximity to City service/infrastructure, may commence unless:

a) Application has been made for wayleaves, or a Miscellaneous Permit, in accordance with this document;

b) For Wayleave Applications, the Wayleave Approval Pack has been issued by the City's Wayleave Management System.

c) For Wayleave applications, the Wayleave Permit-to-Work has been issued to the Permit Holder (typically the Service Owner or appointed Civil Engineering Professional). The aforementioned will be completed and signed-off at the start-up meeting on site.

For Miscellaneous Permit applications, the Miscellaneous Permit has been issued to the Permit Holder. The aforementioned is typically issued electronically.

Should an application be rejected for any valid reason or lapse in validity, work may not commence and a new application shall be submitted for approval.

The following shall be noted regarding validity time frames:

- Wayleave Approval - 12 Months from date of approval
- Permit-To-Work (Wayleave) - 6 Months from date of issue.
  Should the project / proposed works exceed the time frames listed above, the Permit Holder may request an extension of time from UM: RIM
- Miscellaneous Permit - Typically 6 months from date of issue for minor construction work (may vary). Temporary Use permits will generally have shorter or specific validity periods.

3.5 Temporary Road Closure for Construction Purposes

In certain instances, the nature of the works (or use of the road reserve) may require that the road reserve be closed on a temporary basis. The temporary road closure will either be full or partial, as defined below:

- ❖ Full closure - The removal of public right of way over any part of a street which extends the full width of the road reserve
- ❖ Partial Closure - The removal of public right of way over any part of a street which may or may not extend the full width of the road reserve, limiting access to certain movements or certain categories of road user, e.g. lane closures, diagonal closures at intersections, conversion to one-way flow etc.

All temporary road closure shall comply with the City's *Policy Relating to the Closure of Municipal Roads* (approved 2002).

Temporary Road Closure Permit

A temporary road closure will be granted by means of a *Temporary Road Closure Permit (TRCP)*, which can be obtained by submitting a Miscellaneous Permit application via the applicable RIM District Office (*see **RIM Boundaries & Contact List Map***).

The need for a TRCP will depend on the type of closure and class of:

- Full road closures will always require a TRCP.
- For partial closures, a TRCP shall be required for Class 1, 2, 3, 4 and 5 commercial/industrial roads.
- Partial closures on Class 5 residential streets, where the impact is minor in nature (i.e. partial closure for a few hours), may be incorporated into the relevant construction permit (permit-to-work or minor construction works permit) or temporary use permit. Notwithstanding the aforementioned, the City may require a TRCP on class 5 residential streets where the traffic and/or residential access impact is significant (e.g. pipe replacement projects).

The intended dates and duration for the temporary road closure shall be specified on the application form. The *TRCP* will subsequently stipulate the dates (and in some instances the times) that the temporary road closure may be undertaken. Should changes occur in this regard, the RIM District Office shall be contacted for guidance and/or amendment of the *TRCP*.

Public Participation

The public (residents, property owners and road users) shall be notified of the proposed temporary road closure. The table below details the typical public participation requirements for temporary road closures.

Table 3-2: Public Participation requirements for temporary road closures

Road Class	Public Participation		
	Extent	**Medium**	**Duration**
1, 2, 3	Residents/owners of property on the road and general advertisement for higher classes of road	Notices placed in post boxes. Advertisement placed in media (at least local newspapers, but radio recommended).	**Full and partial closures < 1 day** Notices: 3 days in advance Advertisement: 3 days in advance **Full and partial closures > 1 day** Notices: 3 days in advance Advertisement: 5 days in advance
4 , 5	Residents/owners of property on the road (with general advertisement in some cases for industrial and commercial roads).	Notices placed in post boxes. Media advertisement for industrial and commercial roads.	**Full closure < 1 day** Notices: 2 days in advance **Full closure > 1 day** Notices: 3 days in advance Advertisement: 3 days in advance **Partial closure > 1 day** Notices: 2 days in advance

Adopted from Table 2B of the Road Closure Policy, for Roadworks
For emergency works, residents/owners to be notified and temporary road signage used for duration of works.

Even though partial closures less than 1 day have no specific requirements in terms of public participation, it is encourage that affected properties be notified of the intended closure. The aforementioned will especially be beneficial where the closure is in close proximity to institutions (e.g. schools) or business areas.

Should the nature or duration of the temporary closure be of such significance, the RIM District reserves the right to impose more extensive and stringent public participation requirements. Proof of public participation and/or community engagement may also be required, prior to the issuing of the TRCP. Such requirements will be determined and communicated during the application stage.

Traffic Management Plan

All temporary road closure applications (full or partial) shall be accompanied by a traffic management plan (TMP), which must be compiled in accordance with the South African Road and Traffic Signs Manual (Volume 2 Chapter 13). Once the City has assessed the TMP, it must be stamped and signed off by Traffic Services. No permit can be issued without a stamped TMP.

The following to be noted regarding TMPs:

On Class 1, 2 & 3 Roads (Major Roads)

- The TMP for a temporary road closure along a higher order road must be assessed and supported by the City's *Transport Network Development* (TND) Branch.
- The TMP will still be submitted to the relevant RIM District, who will then send the TMP to the TND Branch for assessment and support.
- Depending on the complexity of the TMP, the TND Branch can require up to 2 weeks to complete the assessment. Applicants should take note of said assessment period and incorporate it into their programme accordingly.
- Once TND Branch has supported the TMP, it must be sent to Traffic Services to be stamped. After the TMP has been stamped by Traffic Services, RIM will proceed with the finalisation of the permit.

On Minor Roads (Class 4 & 5)

- The TMP for a temporary road closure along a middle to lower order road will be assessed by the RIM district.
  - *If a temporary road closure will occur on a Class 4 road, and the route is of key importance, RIM may request assistance from TND Branch regarding input on the TMP.*
- Once TMP assessment is completed, it must be sent to Traffic Services to be stamped. After the TMP has been stamped by Traffic Services, RIM will proceed with the finalisation of the permit.

Communication Department

For instances where the impact of the temporary road closure is severe, far reaching and/or detours will be required (e.g. full closure of a road for an extended period or closure of a mobility route), the City's *Communication* Branch should be consulted to provide guidance regarding the public participation process and compilation of the applicable notices and/or advertisements that must be distributed.

Fees

A *TRCP* will generally be issued in addition to construction permits (permit-to-work or minor construction works permit) or temporary use permits, with the exemption of certain partial temporary road closures on class 5 residential street (as described under the "*Temporary Road Closure Permit*" subsection earlier). As part of the construction and temporary use permit application, fees are levied for the administration and supervision functions, including roadway trench fees, and refundable deposits. It is thus not deemed necessary to charge any fees for a *TRCP*, since the latter only pertains to the permission granted for the temporary close of the road reserve and not the intended activity inside of or use of the road reserve.

3.6 Dilapidation Report

Prior to the commencement of the proposed construction works or use of the road reserve, the Permit Holder shall compile photographic evidence of the condition of the adjacent infrastructure (road, kerbs, channels, stormwater catchpits, etc.), i.e. dilapidation report. The aforementioned shall be used to assess any damages that are inspected after the Works or Use are completed. If no such evidence/record is compiled, any damages observed after completion will be assumed to have been caused by the applicant.

3.7 Trenching vs. Directional Drilling

3.7.1 General requirements

All road crossings shall be done by trenchless technology methods (such as horizontal directional drilling, pipe cracking, etc.)

Thrust boring will not be allowed.

No open trenching or micro trenching will be allowed in the roadway without the written permission of the UM: RIM Department.

Any damage done to the City's infrastructure shall be repaired and made good by the Permit Holder (or its appointed contractor), to the satisfaction of the relevant affected Directorate within the City of Cape Town, as well as UM: RIM Department.

3.7.2 Open Trench Requirements in Roadways

Trench Authorisation

Certain instances may arise where site conditions do not allow for trenchless technology methods to be utilised for the installation of underground services inside roads~~,~~ inside road verges or sidewalks. In such instances, open trenches will only be allowed with the written permission of the UM: RIM Department, provided that backfilling occurs on the same day and reinstatement is carried out within 7 days, in accordance with this document.

Where trenchless technology methods are not possible, an application shall be submitted to the UM: RIM Department for open trenching inside the roadway. The aforementioned will either entail trenching along the road (longitudinal trench following the road alignment) or a trenched road crossing. The following shall be submitted as part of the application/submission documents:

1) An application/cover letter, which shall include the following;
   a) locality plan;
   b) Description and list of all the proposed open trench locations;
   c) Wayleave Reference Number;
   d) Applicant's name, address and contact details;
   e) Client's name, address and contact details.

2) Drawing(s), illustrating the proposed road open trenches.
   - For cable and telecom providers, an additional 160mm diameter spare duct shall be installed in each trench, equipped with a draw wire and end caps.

3) A schedule of quantities of all the proposed road open trenches. The schedule shall include
   - The number of crossings (where applicable),
   - Length of the trenches
   - The type of road. The roads shall be differentiated according to its class, i.e. Major (Class 2/3/4) and Minor (Class 4/5).
   - The trench length shall be measured in linear meter (m). For road crossings. The length shall be measured from 500mm behind the kerb face or road edge (where no roadway kerb is present).

4) Technical motivation/report, detailing the reasons why trenchless technology methods are not feasible. The following shall be included (whichever are applicable):
   - ❖ Description of each service encountered, along with the surveyed depth, position in the road reserve and size/diameter.

- For road crossings:
  - Drill Plan of the proposed road crossing(s) (plan view and cross section), illustrating the depth and position of all surveyed services, including the proposed drill path and conflict with the aforementioned services.
  - Description of the space constraints on site to accommodate the drill plant and equipment.
- Date stamped photographs, with descriptions, to assist with assessment of application.

5) Any associated letters, such as a signed letter from the drilling company, bulk water letter, other service department letters, etc.

6) Reinstatement detail of the road layer works, for all the relevant road classes.

7) A Traffic Management Plan, in accordance with the South African Road Traffic Signs Manual (Volume 2 Chapter 13), stamped and signed off by Traffic Services.

8) Proposed construction programme, which shall include the following dates:

- Commencement of works (*it must be noted that open trenching will only be allowed between 09h00 -15h30 on weekdays and weekends. No construction will be allowed during peak traffic hours*);
- Re-instatement start;
- End date.

9) Method Statement.

Once the application has been approved, the following will be applicable:

- An invoice will be generated for a non-refundable roadway trench fee, which must be paid in advance, in accordance with the tariffs approved by Council.
- A permission letter for open trenching will be issued to the applicant, including the specifications for trench reinstatement.

In certain instances, specifically at intersections, where open trenching is approved, the City may require the provision of a spare duct/sleeve, for future use.

3.8 Telecommunication Services/Infrastructure

3.8.1 "One Trench" or Co-building Methodology

All Network Licensees and/or Service Owners will have to make use of the same space allocation ("One Trench") for telecommunication services in the road reserve. The maximum permissible space allocation per route for all networks will be 1.0m wide and no telecommunication infrastructure may transgress the maximum permissible space allocation. Once the first licensee has installed services, further licensees must install their services so that a width of no more than 1.0m is occupied by all telecommunication services.

Should the first meter not be available for telecommunication services, then the next meter shall be investigated. The Network Licensee or appointed Civil Engineering Professional shall determine a viable position for the services, as close to the road reserve boundary as possible and **no trenching within 1.0m of the road kerb will be allowed, unless approved in advance by the UM: RIM Department**.

All Network Licensees applying for wayleaves for a specific route must contact all other active Network Licensees within the City of Cape Town to afford them the opportunity to share trenches or co-build along the route. Documentary proof that all service providers have been contacted must be submitted together with the wayleave application. If no response from a Network Licensee is received within 7 days, evidence that the opportunity to share the trench/co-build has been delivered to the Network Licensee's nominated contact person will suffice to confirm that:

a) The Network Licensee has been notified of the pending work and have been given the opportunity to indicate any cables that they might have in the area to the current applicant;

b) The Network Licensee has been given the opportunity to share trenches/co-build.

Should a Network Licensee elect to share a trench with the first applicant, the service providers must reach a mutual agreement, upfront, on the cost apportionment.

3.8.2 Trench positions and Ducts

Further to the "One Trench" and 1.0m dedicated space for Telecoms, the primary and secondary networks must generally be installed on one side of the road. The tertiary networks may be allowed on both sides of the road, in order to minimize road crossings. Irrespective of the network category, no network may be installed outside the space allocated for networks.

No service will be allowed longitudinally in the roadway. Services may only be installed in the verges and only if there is sufficient space. Where no sufficient space along a route exists, alternative routes must be determined.

Where any road crossing is made via open trenching, an additional Class 10 HDPE duct of minimum 160mmØ must be provided for the City to avoid future road damage. The cost of the aforementioned will be for the account of the Permit Holder. The position of ducts must be clearly marked on the roadway kerbs, as set out in the latest version of the City's "***Standards and Guidelines for Roads & Stormwater***" (as amended).

Where existing ducts have been installed for the City and are available under roads, such ducts shall only be used for road crossings after obtaining permission from the City's UM: RIM Department.

Positioning of telecommunication infrastructure may not compromise future expansion of the City's infrastructure or available space in the road reserve. Where the Permit Holder (Service Owner) has deviated from the approved position within the road reserve and expansion of existing infrastructure is required, the Permit Holder shall relocate such services at their own cost.

3.9 Financial Requirements

The processing of a wayleave or miscellaneous permit application, including the proposed works or use to be undertaken, may entail the payment of certain fees, charges and/or deposits. The aforementioned will be levied in accordance with the latest Council Approved Tariffs.

Where an Applicant is required to make a payment(s) as part of the wayleave and/or permit application process, the fees/charges/deposits shall be based on the Approved Council Tariffs as at the date of payment and not on the date the application was submitted.

3.9.1 EXTERNAL Applications

Administrative Fees

A wayleave Administration Fee will be levied for all wayleave applications. The fee is levied through the WMS and is payable directly after the application has been verified. The wayleave application review is subject to confirmation of receipt of the applicable administration fee.

For Miscellaneous Permit Applications, a small administration fee is applicable. The fee is levied directly by UM:RIM department during the application phase.

Supervision Fees

During the wayleave application circulation phase, it will be determined whether a supervision fee is payable. The aforementioned will depend on the nature and size of the proposed works.

Supervision fees are generally not applicable to Miscellaneous Permits.

Refundable Deposit

A Refundable Deposit is payable when open trenching is proposed inside the road reserve (which includes the road, sidewalk and verge) or when aboveground infrastructure and/or shallow construction related activities are proposed.

The deposit will be applicable for wayleave applications. For Miscellaneous Permit Applications, depending on the type of work or intended use of the road reserve, a refundable deposits may also be levied.

Some Service Owners have annual bank guarantees in place in lieu of frequent monetary transactions. These bank guarantees are in lieu of the Refundable Deposits called for on each approved wayleave application. Should the Service Owner not have a bank guarantee in place, payment must be made upfront, prior to wayleave approval being granted.

Service Owners are required to make use of the City's approved pro-forma bank guarantee, which can be obtained from the UM: RIM Department.

The onus is on the Service Owner to initiate a request for the refunding of the deposit, once the ***Permit Close-Out Form*** (***Form RSW-WLP-04***) has been signed off by the UM: RIM Department.

Non-refundable payment (Roadway Trench Fee)

A Non-refundable payment (Roadway Trench Fee) is charged in the event of open trenching inside the roadway (supported by the RIM department). This will be charged in addition to the amount charged for the Refundable Deposit.

The Fee is charged per "m" (i.e. per meter length) of disturbed roadway and is dependent on the class of road where trenching is proposed, which will be either a Local Road (Class 5 & 4) or Metro Road (Class 3 & 2). It must be noted that this amount payable is NOT covered by the Bank Guarantee and must be paid up front, prior to wayleave approval being granted.

In the event that planned trenchless technology methods are unsuccessful due to site conditions and where open excavation was done in the roadway, fees will be charged according to the approved Council Tariffs. The final Non-refundable amount payable will be determined after reconciliation has been done at the end of the project, prior to the ***Permit Close-Out Form*** (***Form RSW-WLP-04***) being issued.

Penalty

Penalty fees will be charged for any unauthorized work inside the road reserve, regardless of whether the City later issues a wayleave or permit-to-work.

Exemptions

For external applications where the final bulk infrastructure will become the property of the City, some of the abovementioned fees (or all, depending on the project), may be exempted. The aforementioned exemption refers to projects where the infrastructure provided forms part of bulk municipal services upgrades or new bulk municipal services. Applications for link services or new service/erf connections (i.e. from the development to the available municipal system) will still be subject to the payment of the relevant fees.

3.9.2 INTERNAL Applications

All internal Directorates/Departments, City or State Funded Projects (National or Provincial), where the infrastructure will be taken over by the City, may be exempted from paying the abovementioned fees, deposits and/or penalties.

All Internal Directorates/Departments shall provide the UM: RIM Department with details of the **relevant Framework Tender** available to facilitate the implementation of the works and reinstatement of such. A **WBS and Cost Centre number** must also be provided.

3.10 Unauthorised Work

Any unauthorised work in the road reserve and any installation of underground services or devices before the City issues a wayleave and permit, will be regarded as a contravention of the City's *Wayleaves By-Law,* as well as the City's *Streets, Public Places and Prevention of Nuisance By-Law*. Works will be ordered to cease in accordance with the aforementioned, until such time as the necessary permissions and documentation have been obtained and approvals issued (by the relevant City service departments).

Penalties will be levied as per section 3.9 above.

Failure to rectify any unauthorised and/or defective work may result in the issuance of new wayleaves being halted for the particular service provider.

3.11 Defects Liability Period

The Permit Holder shall be responsible for all defects resulting from the works for a period of one (1) year after the ***Permit Close-Out Form*** (***Form RSW-WLP-04***) has been signed off by the UM: RIM Department.

An extended defects liability period of five (5) years will be applicable for any works involving open trenching, directional drilling or moling, under surfaced footways and roadways.

The Permit Holder must do remedial works within 14 days of being notified by the City. The cost of the aforementioned will be for the Permit Holder's account. Furthermore, the Permit Holder will be held liable for any claims as a result of such failure.

3.12 Indemnification

All Permit Holders must indemnify the City against any third party liability claims resulting from their works or presence of infrastructure in a public road reserve.

3.13 Relocation of services

Where services were not installed in accordance with approved plans, the relocation of such services (to correct positions) must be done by the Permit Holder at their cost.

Where telecommunication services/infrastructure (cables, ducts, manholes, etc.) are installed outside the 1.0m space (directly next to the road reserve boundary, as detailed in Section 3.8.1 above), any relocation required to install/construct municipal services must be done by the Permit Holder within a reasonable time and for their account, on written request by the municipality.

4 TECHNICAL SPECIFICATIONS AND REQUIREMENTS

4.1 New Services and Infrastructures

All new services/infrastructure and works shall be constructed or carried out in accordance with the approved drawings/plans/sketches. The aforementioned includes, but are not limited to:

- Construction of pedestrian footways and cycle paths,
- Routine road maintenance operations (such as resurfacing, mill-and-replace, road rehabilitation/reconstruction),
- Road widening or road upgrades, construction of new roadways, construction of transport stop or parking embayment or refuse embayment,
- Installation of underground services (such as water mains, sewer mains, stormwater conduits) and associated structures (such a manholes, catchpits, headwalls, etc.),
- Installation of fencing or signage or landscaping.

Unless stated or required otherwise, all new services and infrastructure shall comply with the requirements as set out in the latest version of the City's "***Standards and Guidelines for Roads & Stormwater***" (as amended).

4.2 Typical trenching and backfill requirements

Open trenching shall adhere to the requirements of Section 3.7.

Trench reinstatements shall be strictly carried out in accordance with the requirements as specified on the relevant ***trench reinstatement drawings*** (i.e. ***Drawings WLP-TR-01 and WLP-TR-01***).

The design depth of excavation of the trenches shall be at least the depth given on the ***trench reinstatement drawings***. Deviations from the depth requirement will only be considered where it is not possible to comply with this requirement, due to the presence of other services. The appointed Civil Engineering Professional shall advise the revised depth of the ducts after consultation with the UM: RIM District Head.

All excavation work shall be done strictly in accordance with the requirements of the Wayleaves Approval Pack and the Permit-to-Work. Excavations shall typically be done by hand. **Excavation using mechanical means will only be allowed where confirmation in writing from all service owners has been obtained.**

Trenching may only be done in roads where written approval has been granted by the UM: RIM District Head. Where RIM has supported trenching inside a roadway for the installation of an underground service, the following shall apply:

Longitudinal trenching (i.e. parallel with the road)

Longitudinal trenching within the roadway is strictly prohibited and shall only be considered when all alternative methods have been thoroughly evaluated and conclusively deemed impossible due to site-specific constraints.

Where longitudinal trenching is supported by RIM, the following shall apply:

- Excavations shall not occur closer than 200mm from the roadway channel and/or kerb, in order to prevent disruption to the channel/kerb alignment and subsequent ponding. Should any kerbs/channel be damaged/disturbed, it shall be repaired/reinstated and inspected by a RIM City official prior to the reinstatement of the trench.
- Where trenching is done through speed humps, a pre-manufactured template shall be used for the reinstatement of the speed hump, in order to ensure the original/correct profile is achieved. The speed hump shall be reinstated for the full lane width.

Lateral trenching (road crossings)

- Lateral trenches within the roadway must be reinstated on the same day. The base layer shall be constructed up to the final road level, in order to accommodate traffic (i.e. ensure trafficable flow without compromising vehicular safety). When the surfacing is undertaken, the top layer of the base shall be remove to the required depth and the reinstatement of the road surface shall proceed as required in terms of Section 4.3.

General

- No trenching will be allowed in concrete roads.
- Trenching reinstatements on major roads (Class 2 & 3) shall be discussed with the RIM District Head.

All disturbed surfaces within the verge of the road reserve must be made safe the same day.

Material from the trenches shall be excavated in layers and the different material types (where suitable) shall be set aside for backfilling of the trench. The material shall be backfilled in the same depth ranges from which it was excavated. Alternatively, suitable imported material may be used. Clay shall not be used as backfill material.

Excavated materials shall not be stored in the road reserve for longer than 7 days and shall not impede vehicular traffic or active mobility flow/movement in any way.

After the required reinstatement(s) is complete, the site (roadway, channels, sidewalks and verges) shall be cleared/cleaned of any debris and/or materials. All surplus material shall be removed from site and disposed of at approved locations.

The depth and quality of the layer works, which are replaced, shall be determined by the Civil Engineering Professional and be at least equal to or greater than the existing layer works given in ***trench reinstatement drawings***. Where shallow trenches are proposed for FTTH networks, the layer works that are replaced must be at least equal to that of the existing layer works.

The layer works shall be compacted in layers of thickness equal to the existing layers, but not more than 150mm per lift, unless the remainder of a lift is less than 75mm.

The density and material quality of all layers shall be tested in accordance with the appointed Civil Engineering Professional's quality control processes, in terms of the TMH1, where there are no SANS 3001 standards.

The density to which the layers are compacted shall be at least those indicated on the drawing given in the ***trench reinstatement drawings***.

The Dynamic Cone Penetration (DCP) and Roller-Compacted Concrete Density (RCCD) test results for each layer shall be better than those given in the table below and the calibrated Nuclear gauge (Troxler) results must be submitted and be measurable against a standard specification.

Table 4-1: Density according to DCP and RCCD tests

Backfill Layer	Below surfaced roadway (every 5m)		Below sidewalks (every 20m)		Unmade Verge (every 40m)
	DCP mm/blow	RCCD mm/ blows	DCP mm/blow	RCCD mm/blows	DCP mm/blow
50mm – 200mm	< 5	< 18	< 10	< 40	<30
200mm – 350mm	< 10	< 45	< 20	< 80	<50
350mm – 500mm	< 15	< 75	< 30	< 100	
500mm >	< 30		< 30		

Table 4-2: DPC / RCCD Acceptance Requirements

Lot size	Minimum number of tests to pass tor acceptance
8	6
10	8
12	10
14	12
16	14
20	16
>20	80%

Should Water Bound Macadam or Penetration Macadam be encountered, the road shall be reinstated with the same type of layers and the same layer thicknesses.

Stormwater conduits shall be laid with a 'Class B' bedding. Bedding sand and a sand blanket for the cables/ducts shall be used in accordance with the typical cross sections.

All backfill material shall be compacted at Optimum Moisture Content (OMC).

Water from the City may be used to achieve OMC, provided that a metered standpipe is obtained from the City.

Danger tape shall be provided, as indicated on the ***trench reinstatement drawings***.

4.3 Reinstatement Requirements

The reinstatement requirements for the various surface treatments/conditions are detailed below.

4.3.1 Asphalt-surfaced Areas

The following shall apply for the reinstatement of asphalt-surfaced areas:

a) Trench reinstatement in asphalt sidewalk:

i) After reinstatement of layer works, the asphalt surface layer shall be neatly cut to produce a straight line. The final cut lines shall be straight, parallel and perpendicular to the direction of movement, in order to achieve a square block finish.

ii) Where the width of the sidewalk is less than 1.5m, the entire width of the surfacing shall be replaced.

iii) Where the width of the sidewalk exceeds 1.5m:

- The minimum reinstatement width shall be 1.5m, provided that there is only one scar and the remainder of the sidewalk (i.e. strip not reinstated) is more than 500mm.
- Where the remainder of the sidewalk is less than 500mm wide, it shall be replaced simultaneously with the trench asphalt.

iv) The abovementioned requirements, relating to the reinstatement width, shall also apply to the reinstatement of micro-trenching.

b) Trench reinstatement in asphalt roadways:

i) The asphalt reinstatement shall be done for the full width of the lane, regardless of where the longitudinal asphalt joint of the trench is located. The aforementioned is to ensure that no asphalt joint is situated inside the lane.

ii) The cutting of longitudinal asphalt joint to be done on the same day that the resurfacing is scheduled.

iii) During the application of tack and prime coats, the channels and kerbs shall be adequately protected/covered.

c) Final reinstatement of any works must be completed within 10 days after trench backfill.

d) No collapsing or sagging, as a result of the works, will be accepted. Any settlement at the end of the defects liability period shall be rectified to City Standards.

4.3.2 Concrete-surfaced Areas

The following shall apply for the reinstatement of concrete-surfaced areas, other than roadways:

a) After reinstatement of layer works, the existing concrete edges shall be neatly cut to produce a straight line. The final cut lines shall be straight, parallel and perpendicular to the direction of movement, in order to achieve a square block finish.

b) Reinstatements located in pedestrian footpaths shall have a slip-resistant surface finish.

c) Instances may arise where the reinstatement (of the previous concrete surface) with an asphalt pavement structure is preferred. The RIM District should always be contacted prior to the reinstatement of concrete surfaces, in order to ascertain the reinstatement requirements.

d) Final reinstatement of any works must be completed within 10 days after trench backfill.

4.3.3 Block Paved Areas

The following shall apply for the reinstatement of areas where segmented paving (concrete or clay) is applicable:

a) Where trenches are excavated through block-paved areas, the blocks shall be carefully removed and stacked and shall not be cut.

b) When reinstating the block surface, blocks and cuttings shall be carefully replaced to match the existing pattern. Jointing sand (no cement) shall be broomed into the joints for the full depth of the blocks, prior to undertaking the final compaction of the block surface, using a vibratory plate compactor and a rubber tyre pneumatic roller in areas with heavy vehicular traffic.

c) The paving pattern of the reinstated block surface must be visually equal to or better than the existing block paving.

d) After compaction, the replaced blocks shall tie into the existing blocks within a tolerance of 3mm.

e) The jointing sand shall be topped-up after 3 months.

f) Final reinstatement of any works must be completed within 10 days after trench backfill.

g) No collapsing or sagging, as a result of the works, will be accepted. Any settlement at the end of the defects liability period shall be rectified by removing the blocks, re-compacting the fill and base layers and replacing the block surface.

4.3.4 Carriageway Crossings (Driveways)

The following shall apply for the reinstatement of carriageway crossings (CWC) (commonly known as driveways):

a) CWC should be constructed in accordance with City standards and approved materials, which include asphalt, segmented block paving and concrete.

b) The same surface finish to be implemented in the reinstatement, in order to tie-in with the existing appearance and functionality, provided that standard approved materials were used. Where a CWC was constructed from non-standard materials, the Permit Holder should endeavour to reinstate with the same or similar materials, provided that the materials and surface finish do not pose a safety risk to the public, specifically pedestrians. The City shall endeavour, but shall not be obliged, to use the same or similar materials for future maintenance.

c) Reinstatements shall be carried out in straight lines. The final reinstatement lines shall be straight, parallel and perpendicular to the direction of movement, in order to achieve a square block finish.

d) Where any strip of existing surface treatment, between the road edge/kerb line and trench, is less than 300mm wide, it shall be replaced simultaneously with the trench reinstatement.

e) Final reinstatement of any works must be completed within 10 days after trench backfill.

f) No collapsing or sagging, as a result of the works, will be accepted. Any settlement at the end of the defects liability period shall be rectified to City Standards.

4.3.5 Unmade (non-surfaced/grassed vegetation covered) areas

The following shall apply for the reinstatement of unmade (non-surfaced and/or grassed vegetation covered) areas:

a) Trench widths and depths shall be the same as for surfaced areas.

b) Bedding sand and bedding blanket shall be the same as for trenches in surfaced areas.

c) The excavated material, which is used for backfill, must be compacted to match the density of the adjacent undisturbed areas, but with a minimum of 93% of MDD (Maximum Dry Density) up to 100mm from the top of the trench.

d) Reinstate surface (final 100mm) as per existing surface. Once the backfill is compacted, carefully replace the grass / vegetation, ensuring no depressions in the surface along the trench route. Grass should be firm and compacted into place using a heavy roller.

e) Final reinstatement must be completed on the same day.

4.3.6 Unsuccessful Drill Operations

In the event that directional drilling is unsuccessful, the drill tunnel must be filled / pumped with an appropriate material. The filler will typically be bentonite. Should any specific site conditions (e.g. high water table) raise a concern that the tunnel might collapse, the tunnel shall be filled with a drill grout. The filling material shall be submitted to the UM: RIM Department for approval prior to the commencement of any drill operations.

4.4 Specifications and Requirements for Telecoms

4.4.1 Telecoms Manholes

All manholes and structures provided for Telecoms services shall adhere to the following:

a) Only brick built manholes (preferred in areas of heavy traffic) or prefabricated GRP manholes will be allowed.

b) Brick manholes shall have walls constructed from NFX bricks using stretcher or Flemish bond and shall be 220/230mm thick.

c) All manhole covers and frames must comply with the relevant SANS specification and shall have a minimum load bearing capacity of 400kN.

d) Manhole sizes on primary networks may not exceed 900mm external dimension;

e) Manhole sizes on secondary networks may not exceed 600mm external dimension;

f) Boundary chamber sizes on tertiary networks may not exceed 300mm external dimension;

g) All manholes and structures must be accommodated in the space allocated for the trench (1.0m);

h) No above ground structures that could interfere with sight distance will be allowed on splays or within 25m of a splay;

i) No above ground structures will be allowed in pedestrian access ways or at pedestrian crossings;

j) At intersections and access points, above- or underground structures shall not be provided in such a manner that it impedes active mobility movement (pedestrians and cyclists) and universal access measures. This shall include, but no be limited to, allowing sufficient space for impaired users, not preventing pedestrian access ramps and dropped kerbs from being constructed to the required standard, etc.

k) The minimum permissible spacing for manholes shall be 45m c/c after all Network Licensees have installed their infrastructure. A maximum of two (2) manholes at any given position will be allowed. Therefore the design must consider existing and future Network Licensee's;

l) All manhole/boundary chamber covers must bear the name of the company in embossed letters, to clearly define the different service provider's infrastructure.

4.4.2 Telecoms Boundary Boxes

Boundary boxes for Telecoms services shall adhere to the following:

a) Boundary boxes must be robust and durable and may not exceed 300mm in dimension;

b) The new boundary box must be placed next to the existing Telkom AJB (Manhole);

c) Only one boundary box per two (2) erven will be allowed for house connections. Where a second network provider services the same property, a maximum of two (2)boundary boxes per position will be allowed;

d) Boundary boxes for house connections may be placed in the road reserve verge, but shall not be further than 200mm from the erf boundary. Boundary boxes may be mounted on walls with the permission of the property owner.

4.4.3 Micro-trenching

Micro-trenching refers to the practice of cutting/excavating thin trenches, in order to install telecommunication services.

Even though micro-trenching is considered a cost-effective and relative speedy process, with minimal disruption, it has its disadvantages – the shallow depth of the service is exposed to potential damage from surface activities; can impact existing and future erf link services (e.g. water connections); can complicate the installation of future telecoms services inside the shared allocated space.

The installation of telecoms services by means of micro-trenching is therefore generally not allowed. However, where permission has been granted by UM: RIM Department, the following shall be adhered to:

a) The Service Owner or the appointed Civil Engineering Professional shall submit a specific design and specification for the micro-trenching to be evaluated and approved. This design must be surfacing specific to existing conditions. All specifications must be generic and should not specify proprietary products by name, as this may be applied City-wide on concept.

b) Micro trenching will only be allowed in verges, where the investigation (test holes or ground penetrating radar, etc.) indicates that no services will be damaged by micro-trenching. **Micro-trenching will not be allowed in roads**.

c) All micro trenching allowed in sidewalks/verges will share the same 1.0m space allocated to telecommunication services, irrespective of methodology followed (being 1.0m from the property boundary), unless otherwise approved.

d) Where possible, the micro-trench should be within 400mm from the property boundary, wall or fence.

e) Micro-trenching will not be allowed directly behind the road kerb and no trench will be allowed closer than 300mm behind the kerb.

f) Trenchless technology must be done at road crossings. Open trenching will only be considered if all other viable options has been investigated and proved impractical or impossible.

g) The relevant planning and design process prescribed must still be followed and all surfaces shall be scanned using Ground Penetrating Radar to determine the existing underground services. Where risk of damaging such services exists, open trench methodology must be used.

h) The minimum depth from the top of the surface layer to invert of the trench is 300mm.

i) The minimum permissible cover to any cable/duct installed by micro trenching must be 200mm.

j) The maximum permissible width for the micro-trench shall be 50mm. Where an asphalt surface is disturbed or a breakout occurred, the width of the surface cut shall be increased to at least 150mm to replace the surfacing layer.

k) The reinstatement must be in a straight continuous line and should include the breakout width of the connection boxes and/or widest breakout point. Only one scar will be allowed. Where the remaining section of sidewalk is less than 1.0m, the full width of the sidewalk must be reinstated.

l) The positioning of connections boxes and the placement thereof must be indicated on the drawing and must carry the approval of the relevant property owner.

m) A-frame project boards displaying at least the name and cell phone number of the contractor and appointed Civil Engineering Professional must be erected at least at both ends of the project during the full duration of the operation.

The table below illustrates acceptable and unacceptable micro-trenching operations.

Table 4-3: Micro trenching

 **Not acceptable**	 **Not acceptable**	 **Not acceptable**
 **Acceptable** (inside 1m from boundary)	 **Acceptable** (inside 1m from boundary)	 **Acceptable** (one scar, portion left over less than 1m)

4.4.4 Telecoms Road Crossings

Where trenching is approved for telecoms road crossings, the UM: RIM District Head (see ***RIM Boundaries & Contact List Map***) must be contacted, in order to confirm whether the provision of a spare duct/sleeve, for future use, will be required.

4.4.5 Extent of Area Installations

Wayleave applications for the installation of telecoms services for large areas, such as suburbs (and in some instances allotments), will not be supported. Areas should rather be realistic and manageable. The wayleave application must clearly define the extent of the area of installation, preferably using main roads.

Applicants are encouraged to liaise with the relevant RIM District (see ***RIM Boundaries & Contact List Map***) prior to submitting a wayleave application for such larger scale installations, in order to discuss the extent of the intended installation area.

4.5 Moling

Moling shall be carried out in accordance with:

- Moling under roadways: Section 5
- Linear (Stitch) Moling under Sidewalks: Section 6.

4.6 Traffic/Pedestrian Accommodation

Trenching or construction works inside the roadway will require a temporary road closure permit. The process pertaining to temporary road closures is described in Section 3.5 for further discussion.

When construction takes place, traffic shall always be accommodated in accordance with the *South African Road Traffic Signs Manual* Volume 2 Chapter 13*(SARTSM-Vol2-Ch13)*.

The following types of accommodation plans are typically required:

- Where vehicular traffic is impacted, a traffic accommodation plan (also known as a Traffic Management Plan, i.e. TMP) shall be compiled, in accordance with SARTSM-Vol2-Ch13.
- Where pedestrian movement or safety is affected, a pedestrian accommodation plan (also known as a Pedestrian Management Plan, i.e. PMP).
    - Safe pedestrian movement shall be accommodated at all times and works shall be clearly delineated at all times.
    - Where pedestrians are required to use opposite sidewalks, the deviation of pedestrian must be clearly communicated by means of signage and delineated to ensure the safety of pedestrians.

The TMP and/or PMP is generally compiled by the appointed contractor. Where a Civil Engineering Professional is appointed, the TMP and/or PMP should be submitted to the aforementioned for comment. Thereafter, the TMP and/or PMP must be submitted to the Traffic Authority for comment/approval prior to the issuing of the Permit by RIM.

The Traffic Authority shall be given 2 weeks to inspect and comment on/sign the TMP. The TMP shall minimize disruption to traffic and the Civil Engineering Professional (if applicable) shall reject a TMP that causes unnecessary or undue disruption of traffic and pedestrians.

The signed/stamped TMP (by the Traffic Authority) shall be submitted to the UM: RIM Department for final approval/acceptance.

The Traffic Authority shall be invited to the start-up meeting and shall be advised of the construction start date. No work may commence until the TMP has been signed and traffic is accommodated in accordance with the plan.

Vehicular- and pedestrian access to affected properties must be ensured at all times or as agreed to by the Permit Holder and the affected owner or lessee.

Information signage must be erected during the construction period, indicating the name of the Permit Holder (name of company) and contact details of the appointed Civil Engineering Professional and Contractor.

4.7 Health & Safety, Environmental

The Permit Holder must ensure that all legislative and contractual requirements, in terms of Occupational Health and Safety and Environmental Authorization, are adhered to for the full duration of the project.

4.8 As-Built Information

Internal and External Civil Applications

Where new municipal infrastructure/services are installed, or new infrastructure/services installed inside the road reserve, the as-built drawings/information must be submitted after completion of works. Where a professional Civil Engineering Professional is appointed, the as-built information must be certified by the aforementioned. Alternative, the Permit Holder will be required to certify the as-built information. All requirements, as set out in the latest version of the City's "***Standards and Guidelines for Roads & Stormwater***", must be adhered to.

TELECOMS Applications

Detailed as-built data, in accordance with the ***Permit Close-Out Form*** (***Form RSW-WLP-04***), shall be submitted by the appointed Civil Engineering Professional (or Permit Holder, where a Civil Engineering Professional is not appointed) prior to the signing of the ***Permit Close-Out Form***. Where required, submission of new applications must accompany as-built drawings of the complete network installed by the particular network provider to evaluate the route and space allocation for the new route applied for.

4.9 General

Any silting of roads or drainage infrastructure, resulting from the works, shall be cleaned to the satisfaction of the UM: RIM Department.

The minimum vertical or horizontal clearance between existing and new municipal services shall not be less than 300mm.

Where possible, a clearance/separation of 1m is required from medium voltage (MV) electrical services and 1.5m for high voltage (HV) services.

5 MOLING UNDER ROADWAYS

5.1 Introduction

This section provide an overview of the technical and administrative requirements where moling (for telecoms services) is proposed under public roads.

For a more details and comprehensive understanding, refer to "*Technical Procedure for the Installation of Optic Fibre Ducts in Middle- and Low-Income Areas*", dated March 2021 (hereafter referred to as Addendum 1).

Should there be any discrepancies between this document and Addendum 1, the provisions of this document shall prevail.

5.2 Areas of Application

The use of moling for the installation of ducts across roads requires homogeneous ground conditions, such as sandy areas. The proposed method will thus only be used in such areas.

The use of this method is proposed only for lower order (Class 5) roads. Class 1 to Class 4 roads will still be crossed using the directional drilling method.

Moling will only be used on Class 5 roads, as defined in the latest version of the City's "***Standards and Guidelines for Roads & Stormwater****"-document*. According to the aforementioned,

Where the groundwater table is too high, i.e. when groundwater table is within 1m from the road surface, the method should not be used to cross the road. Visual confirmation and documentation of the groundwater depth must be completed prior and during the entire planning and construction process.

5.3 Planning Process and Submission Requirements

For the proposed method of installation to be used, certain planning and installation procedures must be followed, which includes:

- **a)** Identify the area where the installation is to be desired.
- **b)** Determine the class and widths of the various roads within the area – verify the widths on site.
- **c)** Obtain as-built drawings of the roads, as well as existing services plans from the City of Cape Town, Telkom and other service providers.
- **d)** Conduct a geotechnical investigation - the extent thereof to be agreed with the City of Cape Town. Should the as-built drawings indicate that the in-situ material is sand, a geotechnical investigation is not required.
- **e)** The geotechnical investigation, including groundwater depth, if visible, should be conducted within fourteen (14) days of the commencement of the works.
- **f)** Based on the class and widths of the roads and the geotechnical report, a proposal can be put forward along which roads the moling method is considered feasible.
- **g)** Indicate on submission plan the roads where the moling method will be used and the roads where the moling method will not be used.
- **h)** Obtain possible future services from the City of Cape Town.
- **i)** Conduct a site visit to confirm existing services and, if required, a survey to confirm the location of the services.
- **j)** Each crossing must have a drill plan, showing existing services/clearances, proposed drill path and dimensions of the road.
- **k)** Prepare an Optic Fibre Network Layout plan for the area, indicating all existing and future services. This plan should indicate on a typical cross-section of the road the required minimum spacing between the various services, i.e. horizontally and vertically.
- **l)** Aerial photography must be included in every application.
- **m)** Compile a proposal for the reinstatement and testing of water-, sewer- and electrical services, the various pavement types for roads, sidewalks, verges, lawns, paving etc., within the application area.
- **n)** Prepare Traffic Accommodation Plans for typical construction scenarios.

o) Submit the Layout Plan and Traffic Accommodation Plan to the City of Cape Town, with the necessary Method Statement for the installation of the network for approval.

p) On approval, amend, if required, the plans and/or Method Statement as per the approval.

q) Inform the City of Cape Town and the residents in the area of the intended installation at least one (1) week before commencement of construction. This will be done on the day of the kick-off meeting. The project management team will deliver a notification to each property in the area. The notification will contain an emergency number and a brief scope of the works as well as the anticipated construction dates.

r) Conduct the installation as per the Method Statement, to be submitted based on the requirements contained in this report and ensure the following documents are compiled:

- ***Drilling/Moling Checklist*** (refer to ***Form RSW-WLP-03***)
- Close-out Report, containing, inter alia, cube strengths, Troxler-tests, DCP's, etc.
- Conduct a completion inspection (CAC – Civil Acceptance Certificate) with the representative of the City of Cape Town, the contractor and the person responsible for monitoring of construction. This certificate to be signed by all three parties. The defects liability period starts at the date of signing of the CAC.
- ***Permit Close-Out Form (RSW-WLP-04)***.
- Provide "As Built"-plans to the City of Cape Town. The City of Cape Town "As Built" specification should be adhered to. As-built plans should provide for x, y, z of all optic fibre lines along the road, as well as at the start and end of each and every duct crossing the road and the size thereof.
- After the defects liability period of twenty-four (24) months, a final inspection must be held and a Final Approval Certificate (FAC) be issued in accordance with SAICE's General Conditions of Contract for Construction Works, Third Edition (2015) (second print).

5.4. Technical Data

The information below was compiled in order to ensure that the method of installation will not compromise the structural integrity of the road.

5.4.1 Cross-Sections

Based on the City's Standards, the following cross-section scenarios exist for Class 5 roads:

- 12m Road Reserve, with a 6.4m road width,
- 10m Road Reserve, with a 5.5m road width,
- 8m Road Reserve, with a 5m road width.

With reference to the above cross-sections, the following shall be noted regarding the cross section requirement relating to proposed moling operations:

a) It was assumed that the roads are all constructed with the centerline of the road in the middle of the road reserve.

b) From the cross-sections, it was established that for an 8m road reserve with a 5m road width would not provide sufficient space for the operation of the moling device. Therefore, the moling method can thus not be supported or considered for approval for Class 5 roads with a road reserve width of 8m and a road width of 5m.

However, the dimension of each road should be verified on site, as part of the planning process, in order to confirm whether sufficient space for the moling device is available. The critical cross-section where the moling device can still be used is a 5.5m road width road in a 10m road reserve. The cross section for the aforementioned scenario can be found in ***Drawing WLP-MOL-01*** attached. Since other cross-sections provide more space for moling operations, details for the aforementioned are not provided.

c) The minimum vertical or horizontal clearance between existing and new municipal services shall be not less than 300mm.

d) Typically, the depth of the pavement layers of a Class 5 road.

e) Typically, the depth of the pavement layers of a Class 5-road does not exceed 490 mm. It shall thus be ensured, by the service provider, that the duct for the optic fibre crossing the road is installed at a minimum depth of 600mm (preferably 1m) below the lowest point of the road surface level, measured from the top of the duct. The minimum cover on services, in relation to the lowest surface level of the road, should be shown on all drawings.

5.4.2 Entry and Exit Pits

The following shall apply to entry and exit pits:

a) The entry hole required to accommodate the moling device is 1.2m x 0.5m (length x width) – the 1.2m being perpendicular to the road.

b) The excavation of the pit is carried out directly behind the backing of the roadway kerb. The pit should preferably be 1m deep (depending on other services), with a minimum of 600mm below the lowest point of the road surface (thus deeper than the layer works, as described previously).

c) In order to prevent collapsing of the side walls:

- **i)** Shoring, consisting of shutter ply board of 18mm in thickness, must be placed directly behind the backing and also on the erf boundary side, parallel to the road.
- **ii)** The board behind the backing should have an opening large enough to accommodate the moling device of 63mm diameter.
- **iii)** The two boards should be propped, to ensure the boards are stable.
- **iv)** The above procedure is repeated on the opposite side of the road.

d) Where a boundary wall exists, it must be ensured that the opening for the moling device is not at the position of a boundary wall column, in order to ensure the foundation of the column is not undermined.

e) The compressor pipe should be marked from the front of the moling device, in order to indicate the distance the moling device has penetrated under the road.

f) A measuring stick, indicating the depth of the pit, should be available at every pit, in order for personnel monitoring the construction, as well as CoCT officials visiting the site, to check the depth of the pit. See Figure 5-1 below. Attention is drawn to the shutter board with the hole (to accommodate the moling device), props and measuring stick.

Figure 5-1: Pit for moling process

5.4.3 Reinstatement Requirements

The reinstatement for entry and exit pits, including road crossings (where approved), shall be carried out as detailed in the ***trench reinstatement drawings.***

The backfilling of drill pits shall be inspected by a City official prior to surfacing.

Danger tape shall be provided, as indicated on the abovementioned drawings.

5.4.4 Minimum Spacing for duct crossings

The minimum spacing between underground crossings shall not be less than 50m.

Should this spacing not be achievable, due to site conditions, the service provider must include a motivation in the application for a reduction in spacing, which can be discussed with the District Head (*see **RIM Boundaries & Contact List Map***).

5.4.5 Traffic Accommodation

In order to ensure no/insignificant impact of traffic load on the moling process and device, traffic shall be accommodated as indicated in ***Drawing WLP-MOL-01***.

Only one-way traffic should be allowed to cross the area where the moling process is in operation. The aforementioned should happen in the middle of the road, thus 1.25m from the front of the kerbs in the case of a 5.5m road in a 10m road reserve.

Delineators should be placed to allow a thoroughfare of 3.0m wide.

5.4.6 Remedial Measures in the event of a failure

In the unlikely event that the moling process fails, the following will be applicable:

- The moling device shall be removed, if possible, and trenching by hand done according to normal City of Cape Town requirements.
- The City of Cape Town shall be informed immediately and the necessary steps taken to ensure the trenching, placing of the duct and the backfilling of the trench is completed the same day.
- In such cases, only a Road Crossing fee (as per Council Approved Tariffs) will be charged to the Service Provider. No Penalty Fee will be applicable.

The cavity caused by the moling process must be repaired by one of the following options:

- Option 1: Filling the void with low strength soil-cement. The soil-cement should typically have a cement content of around 4% by dry mass of soil. The hardened mixture should have an unconfined compressive strength of between 0.5MPa and 1.0MPa at 7 days. The fines/sand must be non-plastic. The water-cement ratio should be between 3 and 4. If the soil-cement slurry is to be pumped, bentonite may be added to improve the flow characteristics of the slurry through the delivery hose. (Note: Slump 0 mm - should be workable enough to flow through pipe). or
- Option 2: Reconstruction of the works, from the void up to the surfacing, following payment of road crossing fee and to the requirements and specifications set by the City.

Where damage to the road surface occurs, reconstruction of the entire affected area will be required. The reinstatement will be carried out in accordance with the specification in Section 4.6.

5.4.7 Duct Markings

The duct(s) crossing the road to be marked on the kerbs by means of a grinded slot(s), equal to the number of ducts installed. The painting of the duct markings must be confirmed with the City. Where painting is required, the colour shall generally be green, unless advised otherwise by the City.

5.4.8 Site supervision

The monitoring of the construction shall be conducted by a suitably qualified person (minimum of a technical diploma) with at least five (5) years relevant experience in the field of installation of optic fibre networks, the construction of surfaced/paved sidewalks and reinstatement of roads/sidewalks.

The person signing off the works shall be a registered Civil Engineering Professional with ECSA, with at least five (5) to ten (10) years relevant experience in the field of installation of optic fibre networks and the construction of surfaced/paved sidewalks and reinstatement of roads/sidewalks.

5.5 Other Factors to Consider

5.5.1 Other Service Providers in the Same Area

A concern is the number of other service providers that may also want to deploy a network in the same area.

The duct provided across the roads (50mm dia.) will be able to accommodate several other service providers if it is only the fibre that needs to be installed in the duct. No additional ducts would however fit within this duct.

The service provider must accommodate a second- and, if needed, a third service provider in the duct, on condition that a commercial agreement is entered into.

Failing such an agreement, any future crossings by other applicants will only be considered either above or below the existing crossings. However, such crossings would still have to comply with the standards of the CoCT.

5.5.2 Possible Damage to Fibre

When existing services are upgraded or replaced, within proximity to existing optic fibre networks, which could cause possible damage to the optic fibre network, the City of Cape Town should inform the relevant service provider timeously (at least 2 weeks before commencement of such works) of the proposed upgrade/replacement of existing services. This will allow the service provider to plan for possible damage to the optic fibre network and attempt to minimize possible damage or loss of service to clients.

In the event of emergency work and subsequent damage to fibre, the Service Provider should be notified as soon as possible, so such damage to mitigate recovery action.

All of above will all be conducted at no cost nor liability to the City of Cape Town.

5.5.3 Bank Guarantees

During the planning of the optic fibre network, the number of the road crossings should be optimized, in order to keep the number of crossings to a minimum.

Service providers will have to provide an approved Bank Guarantee to cover all moling activities. Where providers have such guarantees in place in lieu of Refundable Deposits, it will cover the newly approved moling method.

Alternatively, a Refundable Deposit will be payable prior to commencement of any works, in line with Council approved tariffs.

5.6 Continuous Process Evaluation

The proposal to install telecommunication ducts in areas with homogeneous ground conditions (as described in Section 5.2) using a mole piercing device (moling), will be based on a 95% success rate criteria. The aforementioned denotes that a minimum of 95/100 road crossings must be performed without causing any damage or deformation to the City's network.

Where moling is proposed and the early indication is that the success rate of 95% will not be achieved, due to any factor, the applicant must stop the process and address the causes of failure with the City prior to continuing any work. Where it is then deemed that the proposed methodology will not achieve the 95% success rate target, the City reserve the right to cancel all permits and wayleaves.

Subsequent to the above, the applicant will then be required to submit a new design, utilising the prescribed open trench /directional drilling criteria.

Where it becomes indicative that the targeted 95 % success rate will not be possible in the greater area, the conventional method will be prescribed by the City for the rest of the area, in order to avoid further damage to any infrastructure

6 LINEAR (STITCH) MOLING UNDER SURFACED FOOTWAYS

This section provide an overview of the technical and administrative requirements where linear (stitch) moling (for telecoms services) under surfaced footways is proposed.

For a comprehensive understanding, refer to "*Linear (Stitch) Moling on Surfaced Sidewalks In Middle- and Low-Income Areas*", dated September 2022 (hereafter referred to as Addendum 2).

Should there be any discrepancies between this document and Addendum 2, the provisions of this document shall prevail.

6.1 Introduction

6.1.1 Background

Successful and affordable provision of fibre to lower income areas within the City of Cape Town has been achieved following the approval of the "moling" method.

Where ADDENDUM 1 largely describes the installation procedure and technical specifications for moling under public roads, Addendum 2 describes the procedure and specifications for moling under formalized footways/sidewalks.

A typical fibre installation within a formalized road reserve with narrow adjacent erf frontages of 8-12m, will include moling of either a single or double driveway and then conventional trenching between driveways. Moling of driveways is generally deployed in order to minimize resident disruption.

In order to further minimize disruption to residents and reduce installation cost, a method commonly referred to as stitch moling has been effectively been deployed in lower living standards measure (LSM) areas.

6.1.2 Stitch / Linear Moling

Stitch Moling is an impact moling process that allows the installation of a duct or cable over distances beyond that of a single bore, i.e. typically 8-10m. It involves the excavation of launch / reception pits at regular intervals, over the total distance, and launching (or 'stitching') the impact mole from pit to pit, eventually covering the total length of the required bore. The aforementioned process aims to minimise the reinstatement extent and is especially effective under formalized surfaces, in lower-income residential areas with narrow frontages, areas with homogenous and compressible soils and locations where it is not possible to get larger equipment, such as horizontal directional drilling (HDD), in place.

6.2 Technical Data

6.2.1 Depth of Linear Moling Deployment

Where a duct is installed within the sidewalk, whether by means of open-trenching or linear moling, the duct shall be placed at a **minimum depth of 500mm, from surface level to top of duct**.

Where this minimum depth cannot be achieved, due to existing services or other site conditions, prior approval needs to be obtained from the relevant Urban Mobility, Road Infrastructure Management official.

6.2.2 Entry and Exit Pits

6.2.2.1 Minimum Distance

Since linear moling aims to minimise the reinstatement extent, the intention is to mole from the start of an erf to the start of the following erf, which will **cover a minimum distance of 8 – 10m**.

As per Figure 6-1 below, the green block will act as the first entry launch pit and as the distribution point to provide Erf 1 and 2 with the fibre service (illustrated by the red lines). The blue block between Erf 2 and 3 will act as the exit pit and, simultaneously, as the new entry launch pit to mole to the second green block to provide the service to Erf 3 and 4.

A safe moling distance is between 7 to 10 meters. Therefore, there must be an exit/entry launch pit as indicated by the blue block. Cognisance must also be taken that in some instances, water meters and electrical kiosks may be present between the entry and exit pits. In such instances, these will have to be exposed, in order to eliminate damages to the services.

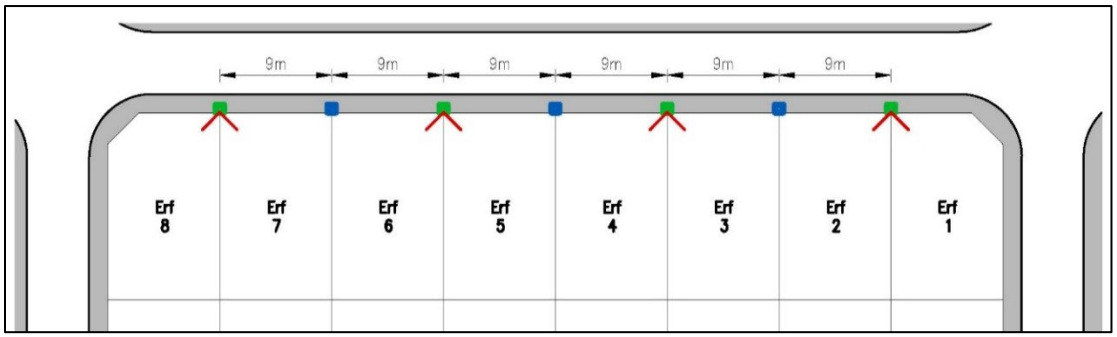


Figure 6-1: Spacing between entry and exit pits

6.2.2.2 Pilot Holes (Service Identification)

Pilot holes/pits shall be excavated, in order to identify/determine the location and depth of the existing services on the sidewalks/verges. In principle, the pilot holes can be located at the same positions as the moling entry and exit pits.

However, in some instances electrical cables may not be installed in a straight line. In such an event, additional pilot holes are required, in order to minimise damages to the underground services. Therefore, the requirement for additional pilot holes will be based on the position of existing services.

6.2.2.3 Servicing Both Sides of the Roads

The same principal as indicated above will be maintained for linear moling on both sides of the road. The minimum spacing for duct crossings across the roadway will be maintained as under Section 5.4.4.

6.2.2.4 Reinstatement Standards

The reinstatement of entry and exit pits, including pilot holes, shall be carried out as prescribed in Section 4.2 and 4.3 and in accordance with the ***trench reinstatement drawings***. Danger tape shall be provided, as indicated on the abovementioned drawings.

In addition to the above, the minimum linear length for reinstating a stitched molled entry/exit point shall not be less than 1m.

Where a pilot hole and/or open trenching is found between an entry and exit pit, the full linear length of the area between the entry and exit pit must be reinstated.

The backfilling of entry and exit pits shall be inspected by a City official prior to surfacing.

6.3 Public Participation / Community Involvement

A community meeting with community leaders/councillors must be held before wayleave submission, in order to ensure buy-in/support from the community in terms of the visual impact on the surfaced sidewalks. Proof of such meetings and outcome thereof must be included in the wayleave submission. A visual presentation needs to be done, to show the community the end product.

7 AERIAL FIBRE DEPLOYMENT

This section provide an overview of the technical and administrative requirements where aerial deployment of fibre services are proposed.

For a comprehensive understanding, refer to "*Aerial Fibre Deployment In Middle- And Low-Income Areas*", dated September 2023 (hereafter referred to as Addendum 3).

Should there be any discrepancies between this document and Addendum 3, the provisions of this document shall prevail.

7.1 Introduction

7.1.1 Background

The provision of affordable fibre to lower income areas within the City of Cape Town (CoCT) has been attained following the approval of Addendum 1 and 2 to supplement the initial "Wayleave Process and Standards for the Installation of Services in Road Reserves" (October 2018).

Addendum 1 addresses the installation procedure, as well as the technical specifications for moling under public roads. It excludes the detail around the installation of the infrastructure underneath the formal sidewalks, using moling as an alternative to open trenching.

Addendum 2 provides more detail on the moling process, where it includes a typical fibre installation within a formalised sidewalk with narrow adjacent erf frontages of 8 to 12m. This allows moling of either single or double driveway and conventional trenching between driveways to minimise disruptions to residents and reduce installation costs.

Addendum 3 aims to provide a context for the aerial deployment of optic fibre networks using mid-blocks.

7.1.2 Concept

Fibre in a duct solution does have major aesthetic advantages; once installed, they are invisible, leaving no mark on the landscape. Unlike aerial installations, they are less affected by most adverse weather such as high winds and rain. However, underground installations can be vulnerable to flood damage and need to be re-trenched to access the service in order to perform any repairs or maintenance. Re-trenching to access a specific service could also impact existing service and pose an inconvenience to commuters. Aerial installations are less invasive and can be significantly more economical than underground installations.

Aerial Deployment can be a very effective solution under various conditions, such as:

- Aerial fibres are typically much faster and less expensive to deploy than buried networks.
- The planned route may be undulating, rocky or both, making digging less appealing.
- All-Dielectric Self Supporting (ADSS) cables can be erected near power transmission lines. This allows for pole sharing, which of course, reduces installation costs and speeds-up deployment.
- Accessibility into households located in the informal parts of communities, where homes are built in clusters, with high density and arbitrarily defined, is more achievable by aerial installation than the underground alternative.

7.1.3 Design

The following standards and guidelines were used to develop and inform the aerial optical fibre network architecture:

Table 7-1: Relevant Documentation available for Fibre Networks

Design Item	Standard Documentation
Civil Works	• SANS 1200 suit • SANS 754-2017: Eucalyptus poles, cross-arms and spacers for power distribution and communications systems • SANS 10280: Overhead power lines for conditions prevailing in South Africa
Fibre Cables	• ITU G.652.D, G.657.A1 and G.657.A2 • For ADSS – IEEE 1222.
Fibre Materials	• IEC Standard equivalents (Standard 3,4,5)
SANS (Fibre)	• SANS 8774:2019 (Edition 1): Installation of Fibre Optic Cables • SANS 8775:2020 (Edition 1): Testing of Fibre Optic Cables • SANS 60793-1-1:2008 (Edition 3): Measurement methods and test procedures • SANS 60793-2:2008 (Edition 4): Product Specifications • SANS 60794-1-1:2019 (Edition 3): Generic Specifications
City of Cape Town Standards and Guidelines	• Standards and Guidelines for Roads & Stormwater (latest version). • RIM Wayleave Standards (latest version)
Urban Transport Guidelines	• UTG 7 – Geometric Design of Urban Local Residential Streets, published in 1989.

The installation of the aerial fibre will be in accordance with the technical standards and specifications outlined in Section 2.1 above.

The proposed overhead roll-out is based on the mid-block to mid-block design (old Telkom rollouts) with the following reasoning: (refer to Section 3.3 for electrical services where it is proposed to deploy higher than the current electrical services)

- Poses lower risk than trenching along roads, in road reserves where there are existing services like water, sewer, stormwater, etc. might possibly be damaged during construction.
- The design concept assists with staying out of the road reserve.
- Much more cost effective when compared to the costs of trenching.

7.2 Technical Data

7.2.1 Installation of All-Dielectric Self-Supporting (ADSS) Cable

ADSS is a special Outside Plant (OSP) cable that is designed to sustain larger tension loads over long periods of time. ADSS cables do not need any additional support as it is small, lightweight and easy to install. Because it is non-conductive, it can be installed on towers or poles nearer electric wires, making it especially popular with electrical utilities. It can also be installed on long spans in one go (up to 500m for transmission lines) so it is easier to install in rugged or rural areas where it is difficult to install a messenger wire first. Technology has also evolved more, and Mini-ADSS cables are also now on the market making the aerial deployment faster than before.

Cable dimension and specifications are regulated by ITU G.652.D, G657.A1 and G657.A2 standards that are compliant with (IEC) standards, with a maximum span length between 75m and 80m (this is dependant of the manufacturer). The table below provides a list of available cable sizes and their dimensions.

Table 7-2: Cable dimensions

Cable Size	Diameter (mm)
288F	17.1
144F	15.8
96F	10.4
48F	11.2
24F	10.4
12F	9.6

The sag at 80m for ADSS cables are set 1.07% with a vertical sag distance of 0.85m.

7.2.2 Minimum Clearance Requirements

Considering the sag of the ADSS cables, it is important to check and set out the minimum vertical clearance requirements as a standard and consider the clearance requirements of other existing services, like electrical overhead cables. This is considered and discussed below.

From the latest version of the City's "Standards and Guidelines for Roads & Stormwater", the minimum vertical clearance requirement is 5m for existing structures.

Section 7.3 of the Urban Transport Guideline (UTG7) also makes provision for a minimum vertical clearance requirement of 5.1m for "any point in a roadway to an overhead structure or cable" (Urban Transport Guidelines, 1989).

Taking into account the sag for the ADSS cable from Section 3.1 above, where the sag over an 80m span is set at 1.07% and vertical sag is 0.85m. On a 7.5m pole (that is, 9m pole planted at a depth of 1.5m based on SANS 754-2017), the vertical clearance height will be a minimum of 6.65m above the roadway, which is considerably higher than the minimum vertical clearance requirements set out in the guidelines by the CoCT and UTG7.

It is important to also note that the ADSS is based on short span cable, so in effect, the minimum clearance requirements will be met with considerable leeway.

7.2.3 Existing Electrical Services

Section 7.4 of the SANS 10280 provides for the minimum electrical clearances. See Figure 3 for an extract from the SANS 10280 on the minimum vertical clearances for the ground and to communication (telecom) lines.

According to SANS 10280 Section 7.4, the minimum vertical clearance for communication lines is 0.6m and 3m to poles or structures for electrical cables of a voltage up to 1.1kV.

The electrical distribution overhead is normally done on a 7m pole – based SANS 754 at a pole depth of 1.2m, above ground. This equates to a 5.8m ground clearance, where electrical sag would still need to be considered. This means that there is sufficient clearance between the existing electrical line and the new proposed aerial fibre line which would meet the 0.6m minimum clearance criteria as set in the standards.

7.2.4 Horizontal Directional Drilling and Trenching

All road crossings shall be done by trenchless technology methods (such horizontal directional drilling (HDD)).

HDD and trenching shall be carried out in accordance with requirements as contained in the latest version of the City's ***RIM Wayleave Standards*** (i.e. this document).

7.3 Deployment Methodology

7.3.1 Contractual Arrangements

The Design Guidelines in Section 7.1.3 showcases the use of Civil Engineering Specifications and Standards. Leveraging civil engineering knowledge would be required to ensure that all the existing services are documented and that the required specifications are done in accordance with civil works and adhered to during construction.

This means that the implementation process would follow standard civil engineering construction and contract deployment (CIBD contracts) practices, which includes a formal engineering approach to quality assurance, where a registered Civil Engineering Professional must sign-off and provide the necessary certification.

Considering above, the appointment of a professional registered person with ECSA and relevant CIDB registered Contractor will form part of the minimum submission requirements for medium to large Wayleave Applications.

7.3.2 Point of Presence

The Point of Presence (POP) is the interfacing point between the access network and the core network (backhaul back to the data centre, which runs back via the high-speed undersea fibre cables). This is typically contained in a privately owned building or a facility on private property, with written permission from the property owner and a rental agreement.

The backhaul fibre optic cable runs from a backhaul provider's manhole to the Fibre Network Operator's (FNO) manhole. The FNO's manhole is located in the private property boundary, just outside of the POP. The backhaul fibre is routed to the POP via ducts and trunking to start the access network from the POP. The access network's fibre cable is routed back to the FNO's manhole, into an underground galvanised bend and up a galvanised conduit attached to the first pole of the network. From this pole, the fibre cable is aerially deployed to the rest of the network.

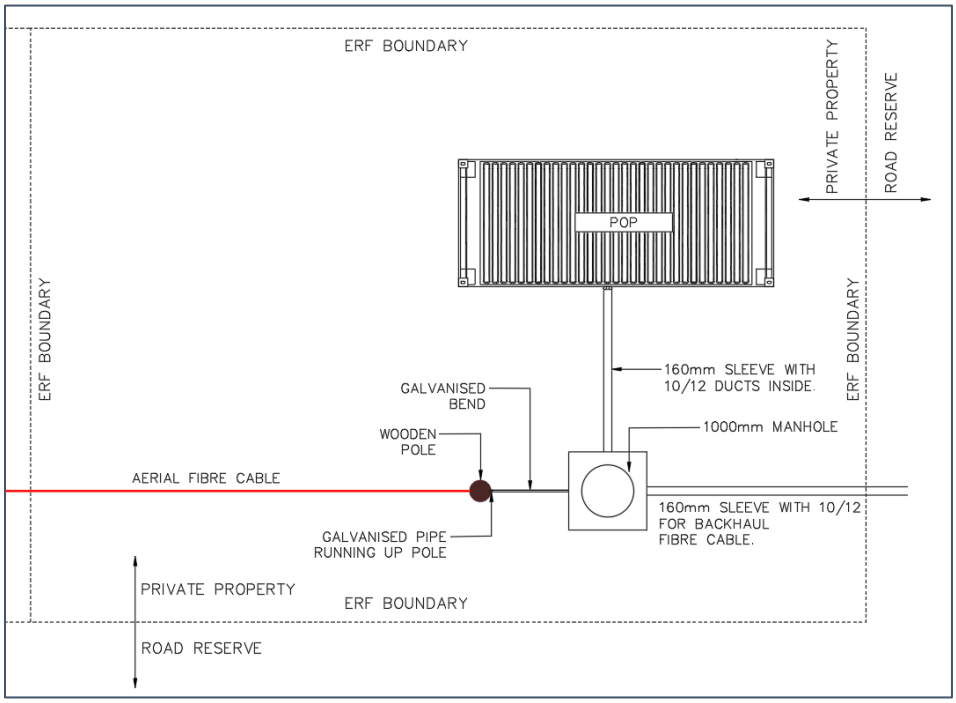


Figure 7-1: Point of Presence Diagram

7.3.3 Midblock Deployment

Refer to Section 7.4 for community engagement, as this is an essential part of the mid-block deployment.

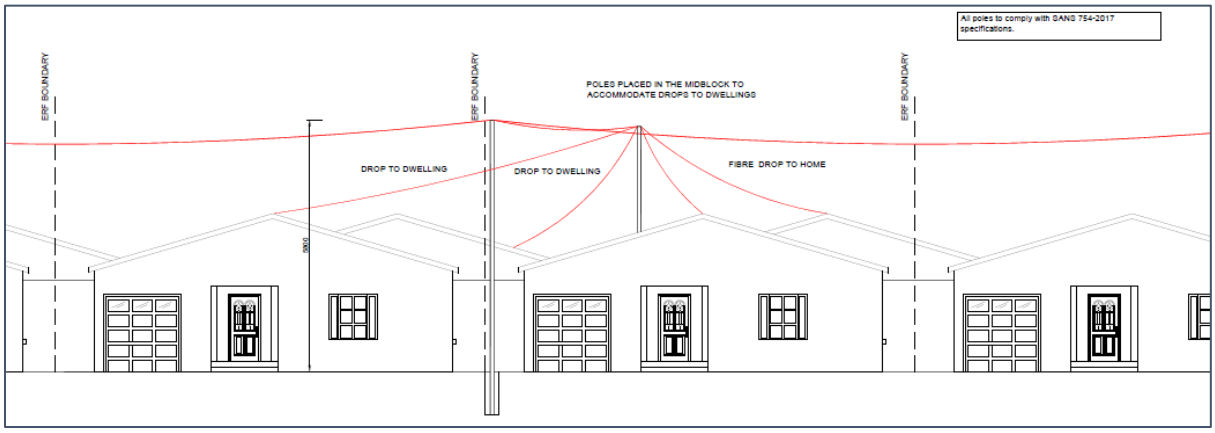


Figure 7-2: Point of Presence Diagram

A typical midblock pole with all fittings contains the following: See Figure 7-2.

- Drop dome joint
- Loop dome joint
- Feeder cable
- Halo
- Slack bin/bracket
- Drop cables

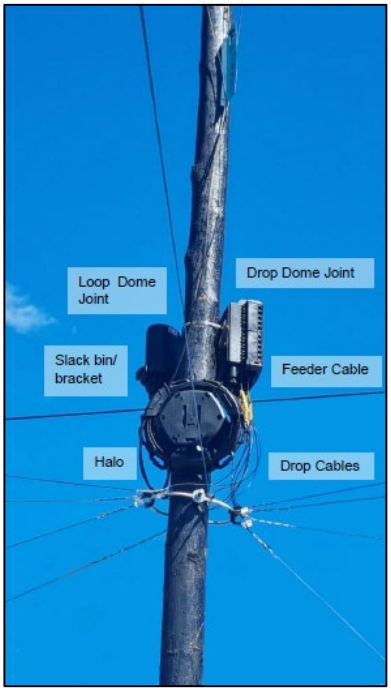


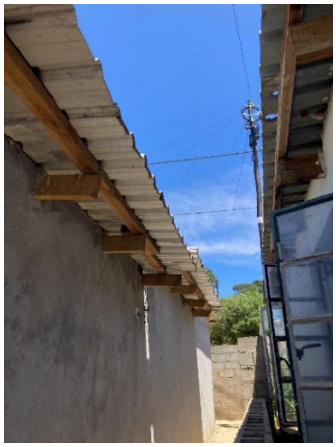
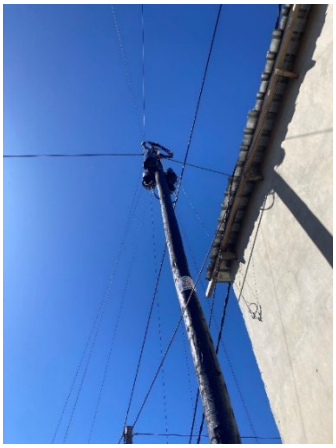
Figure 7-3: Typical Midblock Pole with All Fittings

Midblock poles supporting feeder cables only will not contain:

- Drop dome joint
- Halo
- Drop cables

See images below for typical drop to the home from a midblock pole.

Table 7-2: Examples of Drop from Midblock to Homes

Example 1	Example 2	Example 3
		

7.3.4 Road Crossings

All roads shall be crossed underground, in accordance with the latest version of the City's *RIM Wayleave Standards*.

The order of preference for road crossings, as outlined in the relevant standards and guidelines, is as follows:

1) Horizontal Direction Drilling (HDD).
2) Open trenches – in situations where site conditions are unsuitable for HDD.
3) In circumstances where underground road crossings are not possible, the CoCT should be engaged on a case-by-case basis with alternative solutions.

7.3.4.1 Transition from Pole to Road Crossing to Pole

The figure below illustrates a typical scenario of the transition from aerial to underground to aerial via manholes and ducts. The aerial optic fibre cable will transition underground via the slack bin into a galvanised pipe, strapped to the pole and into a galvanised pipe bend, into an access chamber and through an underground sleeve to cross the road.

With aerial fibre deployment, the strategy is to maintain all construction works within private boundaries with no manholes in road reserves. However, in scenarios where this is not possible, this will be evaluated on a case-by-case basis. The figure below illustrates a typical man-hole deployment. Manholes sizes range from 300mm to 1000mm, based on distribution requirements. Duct sizes are typically 110mm sleeves.

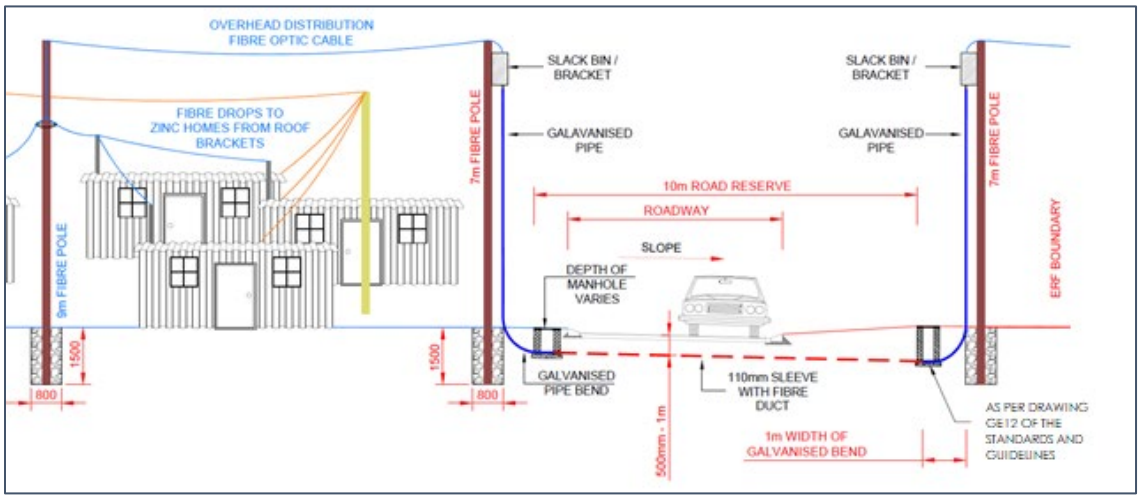


Figure 7-4: Aerial to Underground Road Crossing Transition

7.3.5 Sharing of Infrastructure

Based on the CoCT requirements, all poles planned for use of aerial fibre deployment, shall be a shared facility and open and accessible for use by other service providers. The City will not allow the installation of multiple aerial network infrastructure in the same area, by different service providers. Hence, if there is existing infrastructure erected in the area, it must be shared, in order to reduce congestion and visual impact.

The poles planned for use for aerial fibre generally have capacity to accommodate additional service providers. If other service providers also want to enter the market, the first service provider will allow the other to make use of their pole positions, to string their own network, on condition that they will comply to the technical requirements as prescribed by the City and reach agreement market related commercial terms.

7.4 Public Participation/ Community Involvement and Visual Impact

Public participation provides an important opportunity and platform to engage with the local community and their representatives. As part of the City's requirements, a list of requirements is detailed in Addendum 2.

For midblock aerial fibre networks, it will be important to engage the community and property owners around the visual impact, as well as get permission to plant poles, where necessary.

7.5 Typical Concepts and Illustrations

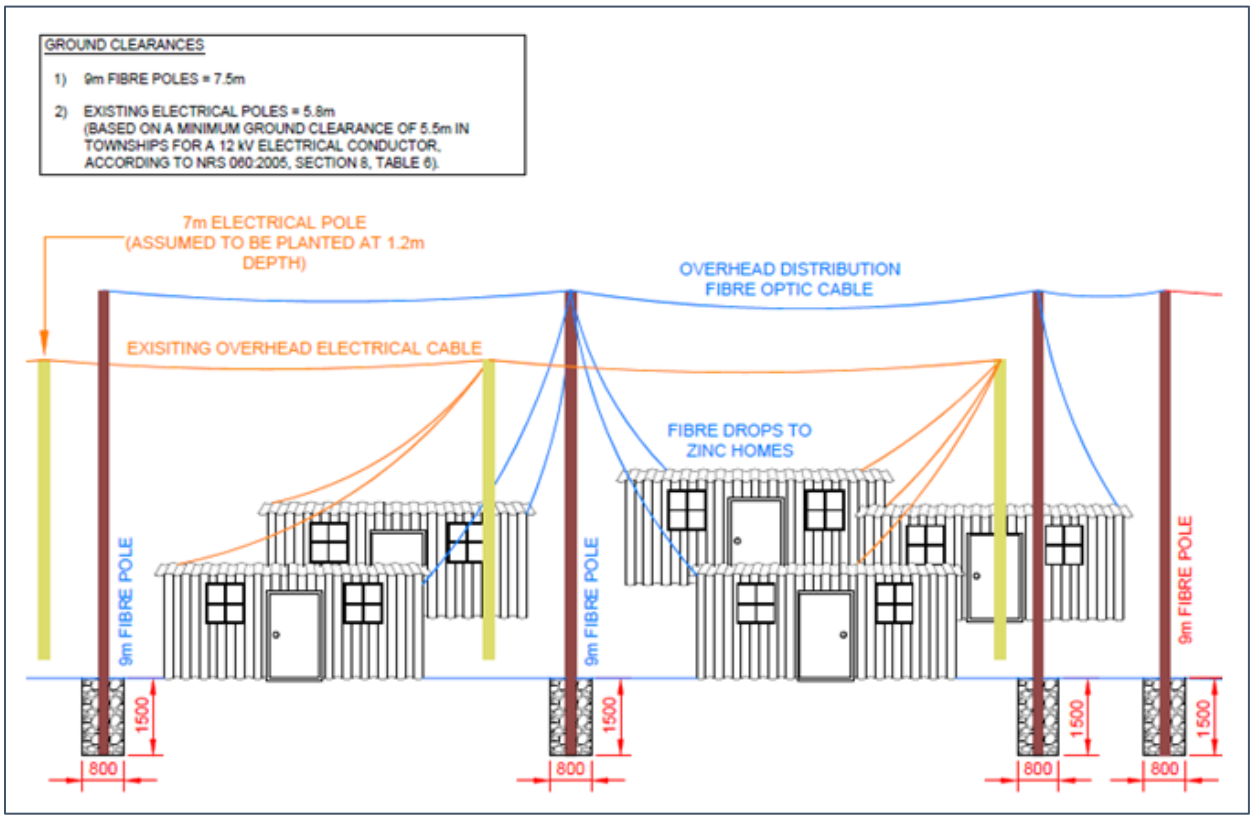


Figure 7-5: Typical Informal Area Concept with Aerial Fibre above Electrical Drops from Poles

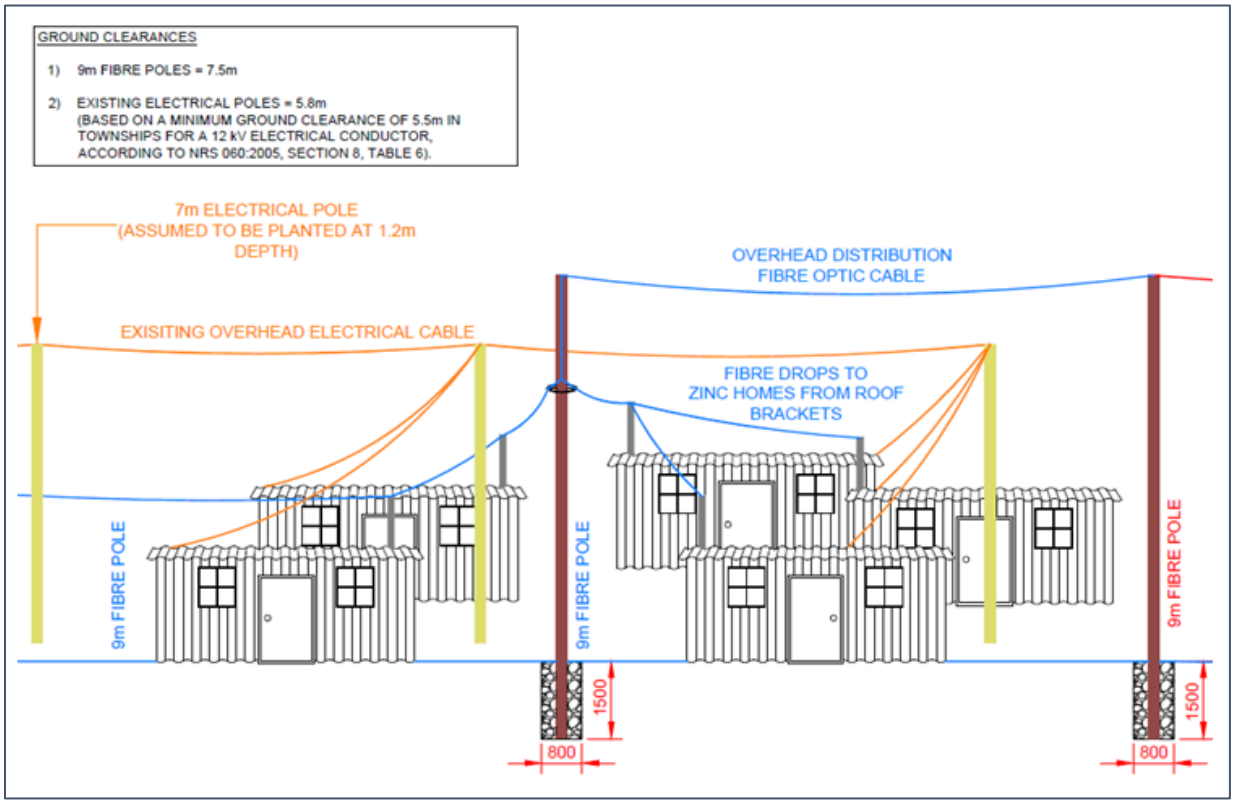


Figure 7-6: Typical Informal Area Concept with Aerial Fibre above Electrical Drops from Brackets

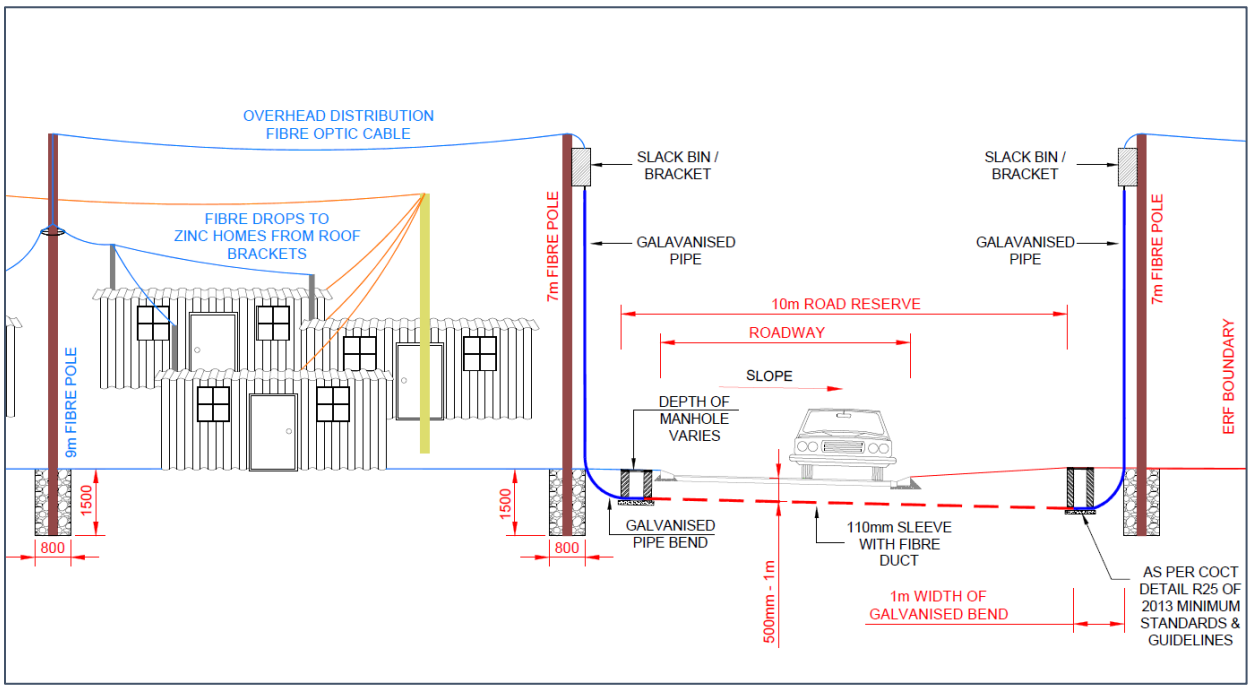


Figure 7-7: Typical Aerial Fibre to Underground Transition for Road Crossings

8 LIST OF SUPPORTING DOCUMENTS

The below is considered accurate at the time of publication.

The latest Appendices, Templates and Forms can be downloaded from online resources link at

➔ https://resource.capetown.gov.za/cityassets/Media%20Centre%20Assets/RIM_Wayleave_Standards_Appendices.zip

LIST OF DETAIL DRAWINGS *(download link)*

Drawing N°	Title	Rev
WLP-MOL-01	Duct Installation by means of Mole Piercing Device	A
WLP-TR-01	Shallow Trench Reinstatements in Road Reserves: Roadways	A
WLP-TR-02	Shallow Trench Reinstatements in Road Reserves: Pedestrian Footways & Verges	A

LIST OF APPENDICES *(download link)*

Flow Diagram: *RIM Wayleaves and Permits*

Map: *RIM Boundaries & Contact List*

Wayleave Application Requirements

LIST OF CITY TEMPLATES *(download link)*

Appointment of ECSA registered Civil Engineering Professional

Appointment of CIDB registered Contractor

LIST OF FORMS *(download link)*

Form RSW-WLP-01A - *Miscellaneous Permit Application Form*

Form RSW-WLP-01B - *Wayleave Application Form (Emergency Work)*

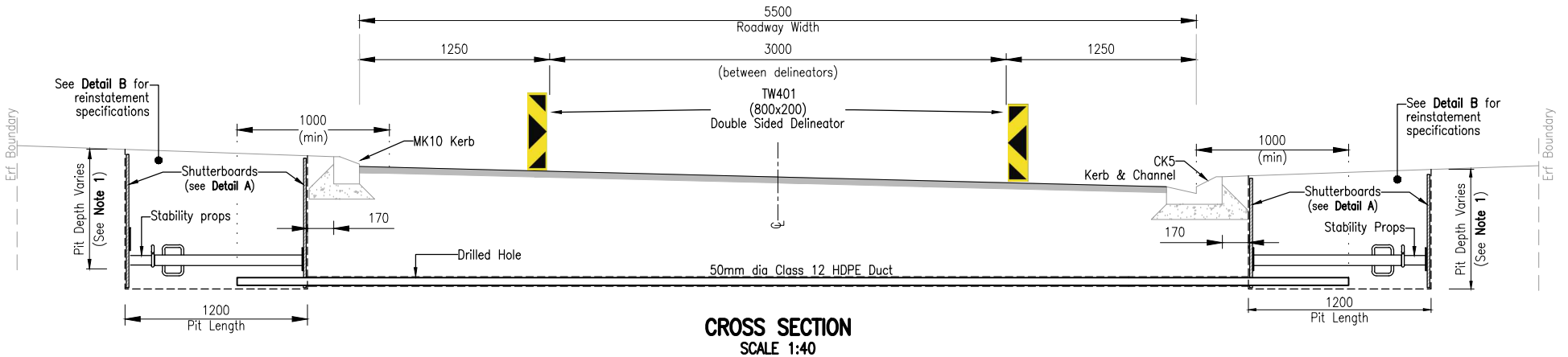
Form RSW-WLP-02 - *Start-up (Kick-Off) Meeting Checklist*

Form RSW-WLP-03 - *Drilling-Moling Checklist*

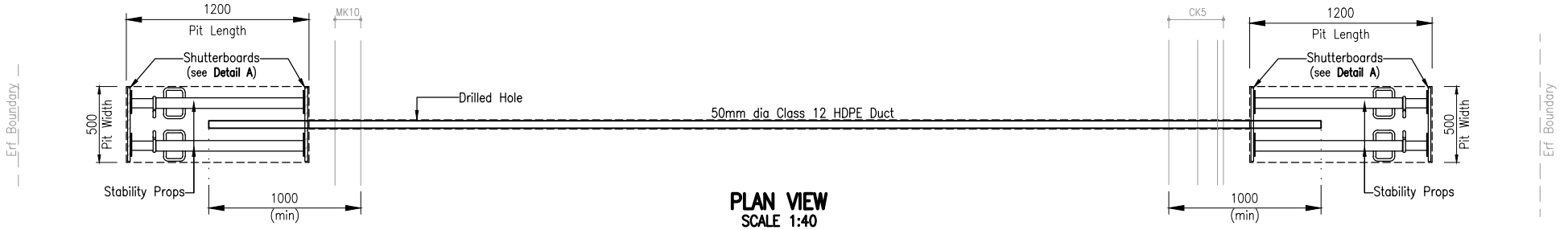
Form RSW-WLP-04 - *Permit Close-Out Form*

Request for Refund

DETAIL DRAWINGS



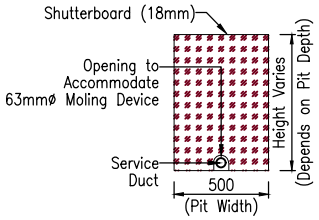
CROSS SECTION
SCALE 1:40



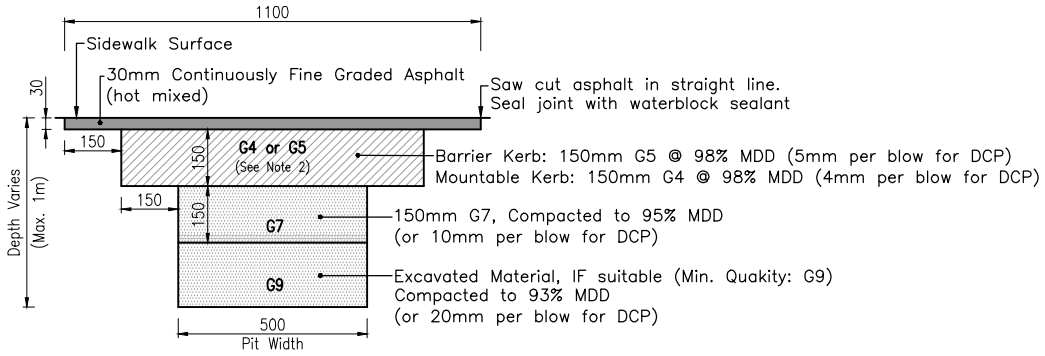
PLAN VIEW
SCALE 1:40

NOTES:

1. a pit depth of 1m is preferred, with a minimum depth of 600mm (provided that the moling is underneath the road layer works).
2. The granular layer will depend on the type of roadway kerb present.
   - Barrier Kerb = G5
   - Mountable Kerb = G4



DETAIL A: SHUTTERBOARD
SCALE 1:40



DETAIL B: PIT REINSTATEMENT
SCALE 1:40

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

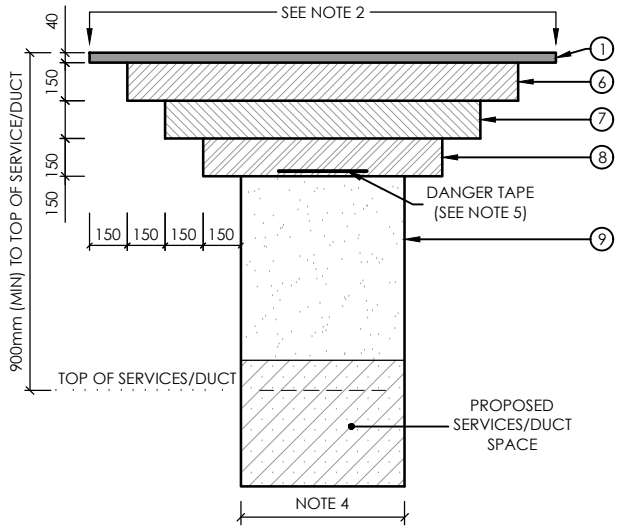
CITY OF CAPE TOWN
URBAN MOBILITY

TITLE

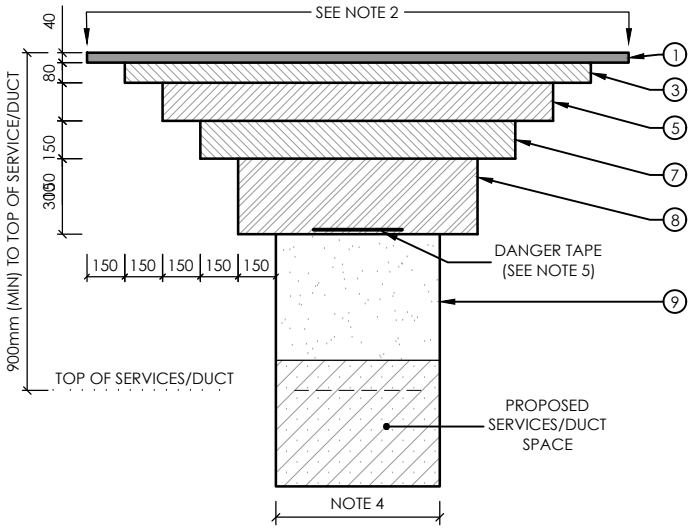
DUCT INSTALLATION BY MEANS OF MOLE PIERCING DEVICE

RIM WAYLEAVES & PERMITS

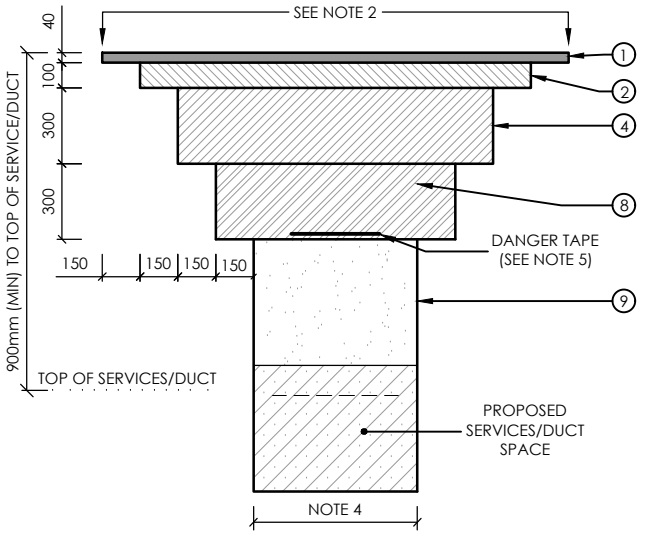
SCALE	PAPER
SHOWN	A4
DRAWING No.	REV
WLP-MOL-01	A



TYPE A1
CLASS 5B-D ROADS
(LOCAL RESIDENTIAL STREETS)



TYPE A2
CLASS 5A & 4 ROADS
(LOCAL COMMERCIAL STREETS & COLLECTORS)



TYPE A3
CLASS 2 & 3 ROADS
(ARTERIALS)

NOTES:

1. The specified layer works should be considered as a guideline. Once the existing layer works of the roadway have been determined, the engineer shall submit a final layer works reinstatement proposal to the Approval Authority.
2. Asphalt surface layers shall be mechanically saw cut prior to the breaking up of the existing layers and again before the placing of the final asphalt layer.
3. Asphalt Joints:
   - 3.1. Joint shall be cut in straight lines, parallel or at right angles to the centerline, using a mechanical saw cut.
   - 3.2. Longitudinal asphalt joints shall not be positioned in any vehicle wheel-paths. Joints shall be positioned on the lane marking (or max. 150mm offset therefrom)..
   - 3.3. Cut edges of asphalt joints shall receive a coat of rubberized bitumen emulsion along the entire vertical face, prior to the asphalt being placed.
   - 3.4. Refer to SGRSW Section 8.1 for further details.
   - 3.5. All "cold" asphalt joints to be properly sealed with a waterproofing sealant to prevent the ingress of water. the sealant shall be undiluted and brush-applied at 0.7l/m^2, at a minimum width of 100mm.
4. Trench width shall depend on the required service to be installed.
   - 4.1. For stormwater, sewer and water services, sufficient side allowance shall be provided, to ensure adequate compaction.
   - 4.2. For service ducts, refer to SGRSW Chapter 13 for the various duct type requirements and specifications.
5. The provision of danger tape may be required for electrical and telecommunication services. provision thereof to be discussed/confirmed with the service owner.
6. Reinstatements not covered in this drawing shall be discussed and approved by the Approval Authority.

ROAd layer works:

1. 40mm Continuously Graded Asphalt Surfacing (93% Max. Voidless Density)
2. 100mm Continuously Graded BTB (93% Max. Voidless Density)
3. 80mm Continuously Graded BTB (93% Max. Voidless Density)
4. 300mm C3/C4 Cement Stabilized Subbase, constructed in two layers of 150mm (97% MDD)
5. 150mm G3 Base (100% MDD)
6. 150mm G4 Base (100% MDD)
7. 150mm G5 subbase (98% MDD)
8. G7 Selected Layer, constructed in 150mm layers (95% MDD, 100% for Sand) (or 10mm/blow for DCP testing)
9. Excavated material (if suitable - minimum G9 quality), compacted in 150mm layers (93% MDD, 100% for Sand) (or ≤20mm/blow for DCP testing)

NOTES:

- Agregate sand or granular material, all of non-conhesive nature and free from all organic material of which the grading analyses shows 100% passing a 13,2mm sieve and not more than 5% passing a 0,075mm sieve.
- Bips ps nder type for asphalt layers (surfacing & base) shall be specified in final proposal.

ROAD CLASSES

CLASS 2 : MAJOR ARTERIAL
CLASS 3 : MINOR ARTERIAL
CLASS 4 : COLLECTOR
CLASS 5A : LOCAL COMMERCIAL STREET
CLASS 5B-D : LOCAL RESIDENTIAL STREETS

SHEET INDEX:

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

CITY OF CAPE TOWN
URBAN MOBILITY

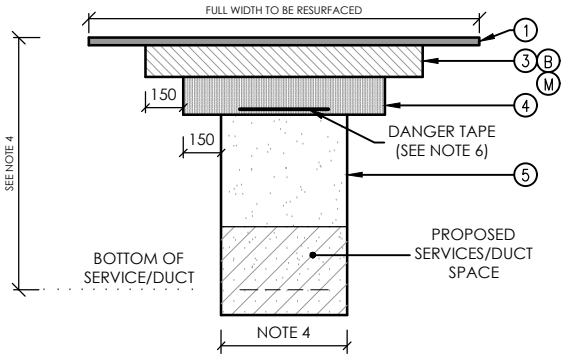
TITLE

SHALLOW TRENCH REINSTATEMENT IN ROAD RESERVES
ROADWAYS

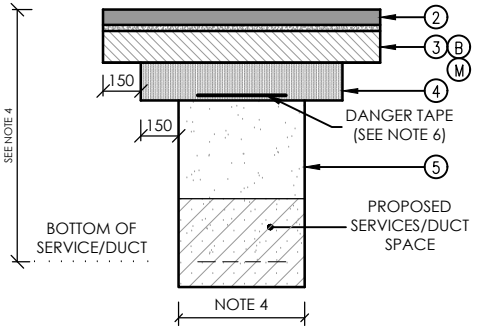
RIM WAYLEAVES & PERMITS

SHEET 1

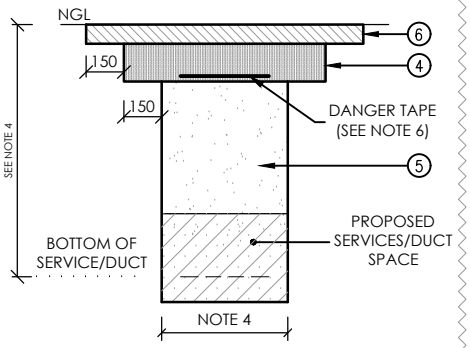
SCALE	PAPER
N.T.S.	A4
DRAWING No.	REV
WLP-TR-01	A



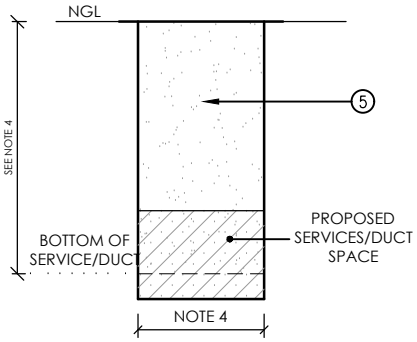
TYPE B1:
PEDESTRIAN FOOTWAY
(ASPHALT)



TYPE B2:
PEDESTRIAN FOOTWAY
(SEGMENTED PAVING)



TYPE B3:
STABILISED GRAVEL WC



TYPE B4:
UNMADE VERGE

NOTES:

1. The specified layer works should be considered as a guideline. Once the existing layer works of the roadway have been determined, the engineer shall submit a final layer works reinstatement proposal to the Approval Authority.
2. Where the width of the footway is less than 2m, the entire width of the surfacing shall be replaced (only applicable to asphalt footways).
3. Asphalt joints:
   3.1. All joints shall be saw cut prior to the placing of the new asphalt layer.
   3.2. All joints shall be cut perpendicular across the footway (no diagonal joints shall be accepted).
   3.3. All "cold" asphalt joints to be properly sealed with a waterproofing sealant to prevent the ingress of water. the sealant shall be undiluted and brush-applied at 0.7l/m^2, at a minimum width of 100mm.
4. Trench width shall depend on the required service to be installed.
   4.1. For stormwater, sewer and water services, sufficient side allowance shall be provided, to ensure adequate compaction.
   4.2. For service ducts, refer to SGRSW Chapter 13 for the various duct type requirements and specifications.
5. Trench depth:
   5.1. Shall be limited to 1m for telecommunication services.
   5.2. Where unstable ground conditions exist, shoring/protection should be applied in order to protect adjacent structures.
6. The provision of danger tape may be required for electrical and telecommunication services. The provision thereof to be discussed/confirmed with the service owner.
7. Reinstatements not covered in this drawing shall be discussed and approved by the Approval Authority.
8. The reinstatement of the granular layer for pedestrian footways adjacent to roadways shall depend on the type of roadway kerb present, i.e.:
   - Barrier Kerb present : G5 Layer
   - Mountable kerb present : G4 Layer

   Footways that are offset/separated from roadways shall be reinstated with a G5 layer.

PEDESTRIAN FOOTWAY LAYER WORKS:

(1)	30mm Continuously Fine Graded Asphalt Surfacing	
(2)	Concrete/Clay Paving Blocks on 20mm Sand	
(3)(B)	150mm G5 compacted to 98% MDD (or 5mm/blow for DCP testing)	See Note 8
(3)(M)	150mm G4 compacted to 98% MDD (or 4mm/blow for DCP testing)	
(4)	150mm G7 compacted to 95% MDD (100% for sand) (or 10mm/blow for dcp testing)	
(5)	Excavated Material (if suitable - minimum G9 quality), compacted in 150mm layers (93% MDD, 100% for sand) (or 20mm/blow for DCP testing)	
(6)	75mm Stabilised Gravel Wearing Course (3-4% cement by mass)	

NOTES:

- Aggregate sand or granular material, all of non-conhesive nature and free from all organic material of which the grading analyses shows 100% passing a 13,2mm sieve and not more than 5% passing a 0,075mm sieve.
- Binder type for asphalt surfacing shall be specified in final proposal.

SHEET INDEX:

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

CITY OF CAPE TOWN
URBAN MOBILITY

TITLE

SHALLOW TRENCH REINSTATEMENT IN ROAD RESERVES
PEDESTRIAN FOOTWAYS AND VERGES

RIM WAYLEAVES & PERMITS

SHEET 2

SCALE	PAPER
N.T.S.	A4
DRAWING No.	REV
WLP-TR-02	A

APPENDICES

FLOW DIAGRAM

RIM Wayleaves and Permits

September 2025

Wayleaves and Permits

- Preliminary Planning Phase
- Wayleave/Permit Application Phase
- Execution and Close-Out Phase

1 2 3 4

Wayleave Management System (WMS)
https://wayleave.capetown.gov.za

RIM District Office Contact List
https://resource.capetown.gov.za/cityassets/Media%20Centre%20Assets/Road_Reserves_Wayleave_Appendices.zip

---

Does the project require existing services information for planning and design purposes?

Yes

1

Applicant to submit a "Planning Information" request via the City's *WMS*

Requested information is issued to applicant (electronic format)

Are trial holes or other invasive investigation (CCTV, etc.) required?

No

Yes

Apply for Miscellaneous Permit or Wayleave
(For Project Sze Criteria, refer to *Wayleave Application Requirements*)

Trial Holes < 600mm deep or CCTV

Trial Holes > 600mm deep

2 **Apply for Miscellaneous Permit directly from relevant RIM District**

3 **Applicant to submit a "Wayleave" application via the City's *WMS***

Invoicing and Payment
(Admin fee, Refundable Deposit, Roadway Trench Fee)

Miscellaneous Permit / Wayleave Permit-to-Work issued

A

Proceed with planning and investigation

A

Is the use of the Road Reserve required (i.e. no construction works to or inside the RR)?

Yes

2

Apply for a Miscellaneous Permit directly from relevant RIM District

Invoicing and Payment
(Admin fee, Refundable deposit)

Miscellaneous Permit issued

4

Start-up (Kick-Off) Meeting
Inspection with RIM Official prior to commencement

Ad-hoc inspection with RIM Official (if required/requested)

Close-Out inspection with RIM Official

Complete ***Permit Close-Out Form***

Request for Refund deposit (if applicable)

Construction Works inside road reserve or in proximity to City services/infrastructure

Check Project Size Matrix to determined application type

Minor Construction Works

Small, Medium or Large Project Size

3

Applicant to submit a "Wayleave" application via the City's WMS

Admin Fee Invoicing & Payment

Application Accepted

Circulate to Line Departments

Line Department Assessment

Review

Determine Fees:
- Supervision Fees
- Refundable Deposit
- Roadway Trench Fee

Invoicing & Payment

Approve application and Stipulate Conditions

Issue Wayleave Approval Pack (subject to approval from other line departments)

Applicant apply for a Permit-To-Work from the relevant RIM District

Wayleave Permit-to-Work issued

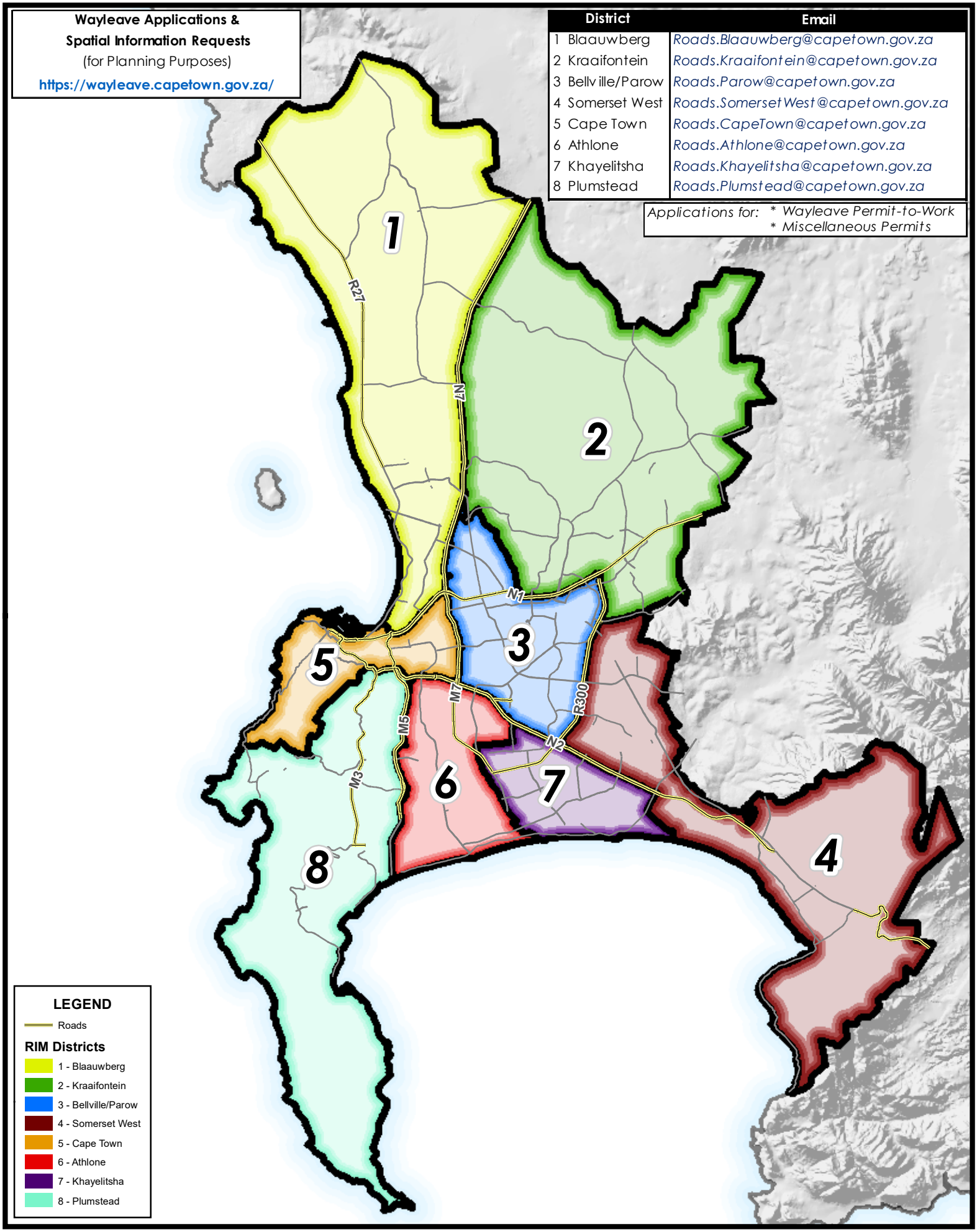
Temporary Road Closures requires a separate **Miscellaneous Permit Application** 2

Open Roadway Trenching requires a separate **application and approval from RIM District Office** 3

Wayleave Applications &
Spatial Information Requests
(for Planning Purposes)
https://wayleave.capetown.gov.za/

District	Email
1 Blaauwberg	Roads.Blaauwberg@capetown.gov.za
2 Kraaifontein	Roads.Kraaifontein@capetown.gov.za
3 Bellville/Parow	Roads.Parow@capetown.gov.za
4 Somerset West	Roads.SomersetWest@capetown.gov.za
5 Cape Town	Roads.CapeTown@capetown.gov.za
6 Athlone	Roads.Athlone@capetown.gov.za
7 Khayelitsha	Roads.Khayelitsha@capetown.gov.za
8 Plumstead	Roads.Plumstead@capetown.gov.za

Applications for: * *Wayleave Permit-to-Work*
* *Miscellaneous Permits*



LEGEND
Roads
RIM Districts
1 - Blaauwberg
2 - Kraaifontein
3 - Bellville/Parow
4 - Somerset West
5 - Cape Town
6 - Athlone
7 - Khayelitsha
8 - Plumstead

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

URBAN MOBILITY
Roads Infrastructure Management

Title

Roads Infrastructure Management
District Boundaries & Contact List
(for RIM Wayleave Standards)

N
1:400 000
0 1.5 3 6 9 12 km

Publish Date: 29 Sep 2025
Compiled: Daneel du Toit

A4

WAYLEAVE APPLICATION REQUIREMENTS

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Project Size Criteria

Table 1 provides a detailed breakdown the project size criteria, including the type of works included and excluded.

Table 1: Project Size Criteria

Work Type	Project Size and Inclusions/Exclusions			
	No Wayleave Required *(form part of Miscellaneous Permit)*	**Small**	**Medium** *(Excludes Class 2 & 3 Roads)*	**Large**
Civils and Retained	• Construction of new carriageway crossing (CWC) • Alteration of existing CWC • Universal access measures (dropped kerbs, access ramps, tactile paving, etc.) • Laying of kerbs and channels, including shallow road cutting/removal • Pothole and/or Patch Repairs • Traffic Calming measures • Construction of pedestrian footway not exceeding 50m in length, but where no additional services, such as SW infrastructure, are included. • Repair of existing pedestrian footway • Traffic Calming measures • Landscaping (shallower than 600mm), hardening, surfacing of road verge and/or median. • Installation of bollard(s) • Installation of fencing, where poles and footings are shallower than 600mm • New signage (footings not exceeding a depth of 600mm from surface) • Trial holes (shallower than 600mm) • Installation of rainwater pipe/channel crossing verge/sidewalk, leading runoff towards roadway • Temporary Use (of Road Reserve)	• Exclude any civil or related works within the roadway • Construction of pedestrian footway not exceeding 50m in length, but where additional services (such as SW infrastructure) are included. • Landscaping exceeding 600mm in depth). • Installation of fencing where poles and footings are exceeding 600mm in depth • New signage (footings exceeding a depth of 600mm from surface) • Trial holes (exceeding 600mm in depth) and/or near existing services • Road Resurfacing (overlay or mill-and-replace)	• Include any civil or related works within the roadway, which do not exceed 20m in length and/or 20m² in area • Construction of pedestrian footway exceeding 50m in length and where additional services, such as SW infrastructure, are included • Road rehabilitation / reconstruction • Construct parking embayment, transport stop embayment or refuse embayment	• Include any civil or related works within the roadway, which exceed 20m in length and/or 20m² in area • Road widening/upgrades or additional turning lanes at an intersection • Road rehabilitation / reconstruction • Construct parking embayment, transport stop embayment or refuse embayment
Trenches	N/A	• Exclude any works proposed within a roadway • Include any trenching within the road reserve where: – No road crossings are applicable – Open trenching not exceeding 50m in length (on sidewalk / verge); • Include mating, linear stitching or equivalent up to 50m in length (on sidewalk / verge).	• Include any trenching within the road reserve where: – Road crossings are applicable – Open trenching exceed 50m in length (on sidewalk / verge); – Mating, linear stitching or equivalent exceeding 50m, up to 500m, in length (on sidewalk/verge) • Include any trenching proposed within the roadway, which do not exceed 20m in length (Open excavation and/or directional drilling or equivalent)	• Include any trenching within the road reserve where: – Road crossings are applicable – Open trenching exceed 500 m in length (on sidewalk / verge) – Mating, linear stitching or equivalent exceeding 500m (on sidewalk/verge) • Include any trenching proposed within the roadway, which exceed a maximum distance of 20m (Open excavation and/or directional drilling or equivalent)
EMERGENCY WORK: Shall adhere to the requirements of the "Emergency Applications" (as amended) document published on the Wayleave Management System's Document Repository				

Submission Document Description

Table 2 provides details regarding the various types of submissions documents, including the information that must be included and the format thereof.

Table 2: Submission Document Description

Document	Information/format required
Application letter	On applicant's letterhead and signed by an authorized person Indicate: • Contact details (address/tel/cell/e-mail) • Project details and scope
Locality Plan	pdf / shape file
Proposed Works Plan	Sketch Plan or Works Plan. PDF format
Engineering Plans (x3 copies)	• Proposed services to scale and dimensioned from either erf boundary or kerb line (1:500) • Details of proposed services. Type, size and levels (IL and CL for civil services) • Existing and proposed structures indicated to scale and dimensioned • Include engineering plan approval letter (if applicable) • Existing fibre of all service providers along full route (for Telecoms applications)
For services installation associated with Development	Final Notification letter of approval (LUM applications)
Confirmation that all Fibre Network Licencees have been contacted regarding trench sharing & existing services	
Appointment of ECSA Registered Engineer	As per ***Template - Appointment of ECSA registered Civil Engineering Professional***
Appointment of CIDB Registered Contractor	As per ***Template -Appointment of CIDB registered Contractor***
Construction Programme	Start and End Date, Works Duration, Works Breakdown
Additional requirements for open Trenching in roadway *(where applicable)*	Motivation, traffic management plan, reinstatement details, drill plan (if applicable), payment of roadway trench fee up-front. *Sometimes open trench can be foreseen (for example a sewer connection or new treated effluent line, etc.) and other times it becomes evident after the contractor has started work on site*
Term Tender applicable for reinstatement	WBS Number / Cost Centre Number. *Applicable to Internal applications to ensure proper reinstatement and recovery of costs associated with damage or repair of works.*

Document Submission Requirements

Table 3 stipules which documents are required for the various project types.

Table 3: Document Submission Requirements

Document [2]	Required for Submission Project Size [1]		
	Small	Medium	Large
Application letter	✓	✓	✓
Locality Plan	✓	✓	✓
Proposed Works Plan	✓	×	×
Proposed Engineering Plans	×	✓	✓
LUM Final Notification letter of approval or approved building plan *(where applicable)*	✓	✓	✓
Confirmation that all Fibre Network Licencees have been contacted regarding trench sharing & existing services	✓	✓	✓
Appointment of ECSA Registered Civil Engineering Professional	×	✓	✓
Appointment of CIDB Registered Contractor	✓ [3]	✓	✓
Construction Programme	×	×	✓
Term Tender applicable for reinstatement (internal applications)	×	✓	✓
Additional requirements for open Trenching in roadway *(where applicable)*	×	✓	✓

[1] Refer to Table 1 regarding details on the Project Size Criteria
[2] Refer to Table 2 regarding details on the various submission documents
[3] The requirement may be waived by UM:RIM based on the nature of the application

For **Emergency Works:** Applications shall adhere to the requirements of the "Emergency Applications" (as amended) document published on the *Wayleave Management System's* Document Repository.

Confirmation of quantities regarding proposed Works

Table 4 specifies the required information, in order to perform the refundable and non-refundable payment calculations. To be completed by the applicant.

Table 4: Confirmation of quantities regarding proposed Works:

Type of Work Proposed	Unit	Quantity
Non-Refundable Works (Roadway Trench Fee)		
Local Road trenching	m	
Major Road trenching	m	
Refundable Works (Reinstatements)		
Trenching in the following areas/surfaces:		
In roadway - asphalt	m²	
In roadway – concrete	m²	
In footway – asphalt	m²	
In footway – concrete	m²	
In footway – block/brick	m²	
In verge – gravel / natural	m²	
In verge - grass	m²	
Provision of above-ground infrastructure and/or shallow construction related activities in the following areas/surfaces:		
In roadway - asphalt	m²	
In roadway – concrete	m²	
In footway – asphalt	m²	
In footway – concrete	m²	
In footway – block/brick	m²	
In verge – gravel / natural	m²	
In verge - grass	m²	

WAYLEAVE APPLICATION REQUIREMENTS

Table 1 provides a detailed breakdown the project size criteria, including the type of works included and excluded.

Table 1: Project Size Criteria

Work Type	Project Size and Inclusions/Exclusions			
	No Wayleave Required *(form part of Miscellaneous Permit)*	**Small**	**Medium** *(Excludes Class 2 & 3 Roads)*	**Large**
Civils and Related	• Construction of new carriageway crossing (CWC) • Alteration of existing CWC • Universal access measures (dropped kerbs, access ramps, tactile paving, etc.) • Laying of kerbs and channels, including shallow root cutting/removal • Pothole and/or Patch Repairs • Traffic Calming measures • Construction of pedestrian footway not exceeding 50m in length, but where no additional services, such as SW infrastructure, are included. • Repair of existing pedestrian footway • Traffic Calming measures • Landscaping (shallower than 600mm), hardening, surfacing of road verge and/or median. • Installation of bollard(s) • Installation of fencing, where poles and footings are shallower than 600mm • New signage (footings not exceeding a depth of 600mm from surface) • Trial holes (shallower than 600mm) • Installation of rainwater pipe/channel crossing verge/sidewalk, leading runoff towards roadway • Temporary Use (of Road Reserve)	• Exclude any civil or related works within the roadway • Construction of pedestrian footway not exceeding 50m in length, but where additional services (such as SW infrastructure) are included. • Landscaping (exceeding 600mm in depth) • Installation of fencing where poles and footings are exceeding 600mm in depth • New signage (footings exceeding a depth of 600mm from surface) • Trial holes (exceeding 600mm in depth) and/or near existing services • Road Resurfacing (overlay or mill-and-replace)	• Include any civil or related works within the roadway, which do not exceed 20m in length and/or 25m² in area • Construction of pedestrian footway exceeding 50m in length and where additional services, such as SW infrastructure, are included • Road rehabilitation / reconstruction • Construct parking embayment, transport stop embayment or refuse embayment	• Include any civil or related works within the roadway, which exceed 20m in length and/or 25m² in area • Road widening/upgrades or additional turning lanes at an intersection • Road rehabilitation / reconstruction • Construct parking embayment, transport stop embayment or refuse embayment

Trenches	N/A	• Exclude any works proposed within a roadway
		• Include any trenching within the road reserve where:
		  ○ No road crossings are applicable
		  ○ Open trenching not exceeding 50m in length (on sidewalk / verge)
		• Include moling, linear stitching or equivalent up to 50m in length (on sidewalk / verge)
			• Include any trenching within the road reserve where:
			  ○ Road crossings are applicable
			  ○ Open trenching exceed 50m in length (on sidewalk / verge)
			  ○ Moling, linear stitching or equivalent exceeding 50m, up to 500m, in length (on sidewalk/verge)
			• Include any trenching proposed within the roadway, which do not exceed 20m in length (Open excavation and/or directional drilling or equivalent)
				• Include any trenching within the road reserve where:
				  ○ Road crossings are applicable
				  ○ Open trenching exceed 500 m in length (on sidewalk / verge)
				  ○ Moling, linear stitching or equivalent exceeding 500m (on sidewalk/verge)
				• Include any trenching proposed within the roadway, which exceed a maximum distance of 20m (Open excavation and/or directional drilling or equivalent)

EMERGENCY WORK: Shall adhere to the requirements of the "**Emergency Applications**" (as amended) document published on the *Wayleave Management System*'s Document Repository				

Table 2 provides details regarding the various types of submissions documents, including the information that must be included and the format thereof.

Table 2: Submission Document Description

Document	Information/format required
Application letter	On applicant's letterhead and signed by an authorized person Indicate: • Contact details (address/tel/cell/e-mail) • Project details and scope
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Term Tender applicable for reinstatement	WBS Number / Cost Centre Number. *Applicable to Internal applications to ensure proper reinstatement and recovery of costs associated with damage or repair of works.*

Table 3 stipules which documents are required for the various project types.

Table 3: Document Submission Requirements

Document [2]	Required for Submission		
	Project Size [1]		
	Small	Medium	Large
Application letter	✓	✓	✓
Locality Plan	✓	✓	✓
Proposed Works Plan	✓	✗	✗
Proposed Engineering Plans	✗	✓	✓
LUM Final Notification letter of approval or approved building plan (*where applicable*)	✓	✓	✓
Confirmation that all Fibre Network Licencees have been contacted regarding trench sharing & existing services	✓	✓	✓
Appointment of ECSA Registered Civil Engineering Professional	✗	✓	✓
Appointment of CIDB Registered Contractor	✓ [3]	✓	✓
Construction Programme	✗	✗	✓
Term Tender applicable for reinstatement (internal applications)	✗	✓	✓
Additional requirements for open Trenching in roadway (*where applicable*)	✗	✓	✓

[1] *Refer to Table 1 regarding details on the Project Size Criteria*

[2] *Refer to Table 2 regarding details on the various submission documents*

[3] *The requirement may be waived by UM:RIM based on the nature of the application*

For **Emergency Works**: Applications shall adhere to the requirements of the "Emergency Applications" (as amended) document published on the *Wayleave Management System*'s Document Repository.

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In footway – concrete	m²	
In footway – block/brick	m²	
In verge – gravel / natural	m²	
In verge - grass	m²	
Provision of above-ground infrastructure and/or shallow construction related activities in the following areas/surfaces:		
In roadway - asphalt	m²	
In roadway – concrete	m²	
In footway – asphalt	m²	
In footway – concrete	m²	
In footway – block/brick	m²	
In verge – gravel / natural	m²	
In verge - grass	m²	

TEMPLATES

(…provided separately…)

Forms

(…provided separately…)