

RIGHT-OF-WAY UTILITY INSTALLATION & PERMIT MANUAL

For the Installation of Plant within City of Hamilton's Public Right-of-Way

City of Hamilton

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1.0 Introduction

- 1.0-1 This document applies to all utility companies, commissions, agencies, boards, associations, municipal departments, and private or third-party stakeholder applicants proposing to undertake work within City of Hamilton streets.
- 1.0-2 The Utility Installation and Right-of-Way Permit Manual provides for the efficient review of applications, pertaining to utility and any other structure installations that may conflict with utilities within City of Hamilton streets and rights-of-way owned and maintained by the City of Hamilton. The manual also provides standards and processes for the design and installation of utilities within the municipal right-of-way to ensure that required safety criteria and procedures are being followed and adhered to, clearances and separations are maintained, and that physical space is optimally utilized.
- 1.0-3 Adherence to these requirements will protect the interests of the City of Hamilton, the community, and utilities occupying the right-of-way. To this end, all applications are reviewed with consideration to their impact on the physical and social environment and the City's infrastructure. It is important that these objectives are taken into consideration in the planning and design of all work being proposed and carried out within the streets and rights-of-way owned and maintained by the City of Hamilton.
- 1.0-4 The City of Hamilton emphasizes that all utilities and third parties must work together and with the City to achieve the protection of the existing and proposed underground infrastructure and effect initial optimum strategic placements in such a manner as to enable future installations and works. Accordingly, submissions must clearly state why a particular design and placement location was undertaken. Locations chosen for purely economic reasons may not be acceptable.
- 1.0-5 The submissions must also demonstrate the adherence to implementation and enforcement of drawing and construction standards established by the City, circulation of drawings for planned construction to all affected stakeholders and obtaining their individual signoffs for absence of conflict, and to minimum clearances and depths.

2.0 Order of Precedence

- 2.0-1 In the event of any inconsistency or conflict in the contents of the following documents, such documents shall take precedence and govern in the following order:
 - 1. Negotiated and Legislated Agreements, including Municipal Access Agreements (MAA)
 - 2. Municipal Consent Requirement
 - 3. Permit
 - 4. City of Hamilton By-laws

3.0 Permit Application Requirements

3.1 Conditions of Permit Application

- 3.1-1 Permits are issued by the General Manager of Public Works or designate to allow an Applicant to perform work related to the installation and maintenance of plant within the streets.
- 3.1-2 A permit may be required whenever the Applicant's proposed work includes:
 - performing maintenance to existing plant
 - installing new plant
 - making additions or upgrades/alterations to existing plant
 - excavating, directional boring and/or drilling within the right-of-way

Please refer to Appendix H, Permits Required to Perform Work.

- 3.1-3 By submitting an Application to perform work within the public right-of-way, the Applicant agrees to:
 - Indemnify and hold harmless the City of Hamilton and its elected officials, officers, directors, employees, representatives, successors and assigns collectively, the Indemnities for injury or damage including legal costs, howsoever arising, due to the construction, operation and/or maintenance of the work or temporary repairs referred to in this application.
 - Indemnify and hold harmless the Indemnities from all claims and actions resulting from any preserved or perfected lien under the Construction Act (Ontario) in connection with the construction, operation and/or maintenance of the work or temporary repairs referred to in this application. The Applicant shall cause any such lien or claim which may be filed or made to be released, vacated, or otherwise discharged within five days of receiving notice of the lien or claim by the City or otherwise. If the Applicant fails to release, vacate or discharge any such lien or claim, the City may, but is not obligated to, obtain a discharge or release of the lien or claim or otherwise deal with the lien or claim, and the Applicant shall pay all costs and expenses, including legal fees, incurred by the City in so doing.

- Conform to and comply with all applicable laws and regulations including, but not limited
 to, the Occupational Health and Safety Act (OHSA). The Applicant will indemnify and
 hold harmless the City of Hamilton from and against all liability resulting from any and all
 failures to meet the responsibilities referred to in the OHSA, including any fine(s) levied
 against the City of Hamilton as a result of any breach of the responsibilities of the
 employer for the project, to the extent attributable to the Applicant's failure to fulfil its
 obligations.
- Perform all work in accordance with any legislated or negotiated agreements, such as municipal access agreements, applicable bylaws, the permit, and this document.

3.2 Extension of Permit Duration

- 3.2-1 If the work arising out of a permit application will not be completed by the expiry date of the permit (12 months from date of issue), the Applicant will be required to apply for an extension of the permit, all permit extensions shall be subject to an application fee. Any such request for extension must be submitted to the General Manager of Public Works or designate no less than fourteen days prior to the expiry of the existing permit. Only one extension may be granted for any permit.
- 3.2-2 Extension approval shall be at the sole discretion of the General Manager of Public Works or designate based on:
 - a review of the proposed work
 - the progress of the work up to the date of the extension request
 - the performance of the Applicant during the period of the existing permit
 - a review of any potential conflict with other planned or ongoing work which may be affected by the requested extension, and
 - the safety and convenience of the public
- 3.2-3 Expired permits may not be renewed if an application for extension has not been received within seven calendar days of the expiry of the existing permit. The Applicant must submit a new application in accordance with the requirements of this document, including, but not limited to, updated circulations, sign-offs and notifications. Documentation from previous applications will not be accepted.

3.3 Moratorium on Newly Improved Streets

- 3.3-1 To ensure the long-term sustainability of the City's infrastructure, the General Manager of Public Works or designate enforces a moratorium on all newly improved streets.
- 3.3-2 The moratorium ensures that the integrity of the pavement structure is protected and serves to minimize the disruptions and inconvenience to the public resulting from repeated construction activity.

3.3.1 Scope

3.3.1-1 The moratorium applies to the enhancement, maintenance, repair or replacement of existing plant and construction of new plant which may undermine the integrity of the newly improved street infrastructure. Unless otherwise stated the moratorium applies to the whole street, from property line to property line. The expiry of the moratorium shall be measured from December 31 of the calendar year in which the improvement was performed.

3.3.2 Duration

The moratorium shall apply:

- 3.3.2-1 Within **5** years from the date of:
 - maintenance or repair work undertaken on roads, curbs, sidewalks, and boulevards
 - construction, reconstruction, maintenance or repair of embankments, handrails of highway bridges, rail bridges, pedestrian bridges, and culverts
- 3.3.2-2 Within **5** years from the date of:
 - construction or reconstruction of roads, curbs, sidewalks, and boulevards
 - full resurfacing of streets including base repairs
 - construction, reconstruction, maintenance or repair of abutment walls, piers, unwaterproofed bridge approaches, slope protection of highway bridges, rail bridges and pedestrian bridges
 - construction, reconstruction, maintenance or repair of culverts

3.3.2-3 Within 10 years from the date of:

- construction, reconstruction, maintenance or repair of bridge decks, sidewalks, parapet walls, asphalt wearing surface, deck waterproofing, superstructure, bearings, expansion joints, ballast walls, and foundations of highway bridge and pedestrian bridges
- construction, reconstruction, maintenance or repair of decks, parapet walls, superstructure, bearings, expansion joints, ballast walls, and foundations of railway bridges

3.3.3 Exceptions

- 3.3.3-1 While these requirements represent the General Manager's current policy, it is recognized that, under certain circumstances, such as emergency work, providing service to a new customer, or construction identified by the General Manager of Public Works or designate as being necessary to ensure public safety, an exception to the moratorium may be made. Exemptions may be made, at the sole discretion of the General Manager of Public Works or designate, provided that the Applicant has investigated and evaluated all other options and can demonstrate that they are not feasible or practical.
- 3.3.3-2 When such exceptions are granted, the Applicant shall exhaust all trenchless methods available to minimize the number and size of cuts in the street. The City, acting reasonably, may perform more extensive site restoration than would normally be expected, at the Applicant's expense, in order to mitigate the concerns of public inconvenience and the premature degradation and aesthetics of newly improved streets.

3.4 Work Not Requiring Excavation – Utility Temporary Lane and Sidewalk Occupancy

3.4-1 For temporary road occupancy not requiring excavation, consent is required through a Utility Temporary Lane and Sidewalk Occupancy Permit, and requirements for obtaining a permit can be found is section 6.12.

3.5 Work Requiring Excavation - Cut Permit

- 3.5-1 For work involving excavation, consent is required through an excavation permit issued by the appropriate permit office as indicated in <u>Appendix A</u>, <u>Permit Application Offices</u>.
- 3.5-2 Excavation permits will only be issued to Applicants having authority to construct, operate and maintain their plant within City streets, as established through legislation or the terms of a municipal access agreement or encroachment agreement.

3.6 Identification of Planned Work

3.6-1 Applications will be checked against the list of planned capital projects submitted to the HPUCC capital coordination subcommittee. For proposed work that is anticipated to cause a major disruption but was not identified on the list of planned capital projects, the Applicant may be required to submit an explanation of why the project was not identified at the time the list was prepared prior to the application being processed.

3.7 Alignments

- 3.7-1 Wherever possible, installation of plant should follow the alignments shown in the standard right-of-way cross sections in <u>Appendix P</u>, <u>Standard Utility Location ROW Drawings</u>.
- 3.7-2 If any plant is proposed within close proximity to a street line it is the Applicant's responsibility to have the limit marked by an Ontario Land Surveyor under section 2 of the Surveys Act to ensure that the plant is being constructed within the right of way.
- 3.7-3 The City, in its sole discretion, may direct the Applicant to propose an alternate alignment if, in the opinion of the General Manager of Public Works or designate, the proposed alignment is not in the best interests of the efficient and organized usage of the right-of-way.

3.8 Services

3.8-1 Wherever possible, services and service drops shall be designed and constructed directly in front of the customer being serviced in a straight line perpendicular to the road. Where an application shows a service that is not in a straight line perpendicular to the road, the Applicant may be required to submit rationale explaining why this could not be achieved.

3.9 Clearance from Other Plant

- 3.9-1 Horizontal and vertical clearances shall be in compliance with <u>Appendix J</u>, <u>Vertical and Horizontal Clearance Guidelines</u>. The indicated clearances are minimums and shall be interpreted to be measured from the outermost edge of the existing plant to the outermost edge of the proposed plant.
- 3.9-2 Any encasement, steel plating or other non-excavatable material shall be considered to be part of the proposed plant and must meet the required clearance from existing plant.
- 3.9-3 Exemptions from the minimum clearances may be granted, at the discretion of the affected plant owners and the approval of the General Manager, acting reasonably. As a minimum, any consideration for exemption will require written consent from the affected plant owners giving explicit permission to the Applicant to reduce the clearance. To ensure the acceptability of the proposed reduction in clearance, the Applicant may be required to submit a detailed drawing identifying the existing and proposed plant.

3.10 Depth of Cover

- 3.10-1 The depth of cover for all installations shall meet the depths indicated below. Please also refer to drawing in <u>Appendix F</u>, <u>Depth of Cover</u>. Where there is a conflict at the proposed depth of cover, the Applicant shall plan to go deeper to accommodate the existing plant and meet the required clearances.
- 3.10-2 Where an Applicant demonstrates that the depth requirements cannot be met, exceptions may be granted on a case-by-case basis. Applicants <u>must</u> contact the City for such an exemption at the planning stage of their project, prior to submission of a permit application.
- 3.10-3 Under no circumstances shall plant be installed shallower than the minimum depths indicated without specific written consent from the General Manager of Public Works or designate.
- 3.10-4 The depths listed below are minimums. Where deemed necessary to accommodate other existing plant or future work, additional depth of cover may be required at the application review stage or during construction at the sole discretion of the General Manager of Public Works or designate. Anticipate your company's needs and allow the applicable depth.

3.10.1 Curbed Roads

3.10.1-1 For areas under the road, curb, the portion of the boulevard within one metre of the back of curb, and the entire right-of-way within thirty metres of an intersection, the minimum depth of cover shall be 1.0 m.

3.10.2 Uncurbed Roads

3.10.2-1 For the entire right-of-way, from street-line to street-line, on uncurbed roads, the minimum depth of cover shall be **1.0 m** below the road, or **1.2 m** below the lowest point of the adjacent ditch, whichever is deeper.

3.10.3 Boulevards

3.10.3-1 The minimum depth of cover on all streets shall be **1.0 m**.

3.10.4 Tree Protection Zone

3.10.4-1 For any means of construction other than directional boring, the minimum depth of Cover shall be a minimum of **1.5 m** within the Tree Protection Zone (TPZ). If the installation of plant is executed via directional boring, the depth of cover may be reduced to a minimum of **1.2 m**.

- 3.10.4-2 Directional boring {trenchless technology} is required for utility construction within driplines to a minimum depth of **1.2 m** below the grade at the base of the tree {not the road centerline}. When employing trenchless technology, all sending and receiving pits must remain well outside Municipal driplines.
- 3.10.4-3 Soil removed from the sending or receiving pits should not be stored ahead of the pit within the open side of the tree protection fencing but off to the side or behind the excavation. Any roots encountered that are 20 mm or greater in diameter should be cleanly cut with a sharp tool such as side cutters back to the side of the excavation and not left ragged sticking out into the hole. Roots larger than 20 mm requiring removal will require approval from the Manager of Forestry or Horticulture or their designate.
- 3.10.4-4 The bore hole should never go directly beneath the trunk due to downward growing tap roots and should be offset according to the information provided.
- 3.10.4-5 Below are the minimum distances that the closest edge of the sending or receiving pits or the directional bore should be to any face of the tree.

Trunk Diameter (cm)	Min. Offset / Trunk Face (m)
5.0 cm	0.3 m
7.5 cm	0.6 m
12.5 cm	1.5 m
25.0 cm	3.0 m
38.0 cm	3.7 m
50.0 cm or larger	4.6 m

- 3.10.4-6 When encountering Municipal roots <u>outside</u> tree preservation zones, the use of Hydrovac technology is preferable to the use of an Air-Spade. Our objective is to preserve as many roots as feasible using the fan nozzle attachment with a pressure which does not exceed 600 psi.
- 3.10.4-7 If excavation within the tree dripline is required, Forestry and Horticulture review and approval must be obtained prior to commencing work. For further details, please refer to Appendix D, Tree Protection Policy.

3.11 Cancelled Projects

3.11-1 The permit office must be notified of any cancelled projects for which an application has been submitted or a cut permit has been issued. Applicants with an excessive number of existing open permit requests <u>will not</u> be issued additional permits by The City of Hamilton until their backlog of not started work is cleared.

3.12 Structures with Surface Access

- 3.12-1 Any new buried structures which have surface access, with the exception of vaults where the structure roof is monolithic with the sidewalk or flush with the surrounding finish grade shall be constructed with the ability for fine adjustment of their elevation to accommodate future changes to surface grading. The amount of vertical adjustment available for lowering and lifting shall not be less than 300 mm.
- 3.12-2 For buried structures, including, but not limited to, vaults and chambers, the top of the structure shall conform to the minimum depths described above. Where such a structure requires access, it shall be designed so that only the access chimney protrudes to the surface.

3.13 Joint-Builds / Common Trenches

3.13-1 To make effective use of the limited space in the right-of-way, the General Manager of Public Works or designate may request that utility companies planning installations in close proximity to one another, or to service the same customer, enter into an agreement to share a common trench. Where the parties have agreed to construct in a common trench, one of the utility companies shall be designated as the Applicant for purposes of obtaining a cut permit, adherence to permit conditions, completion of restoration, billing process, and submission of location certificates. Joint-builds shall be clearly identified as such, including the names of all participating utility companies, on both the application and the drawings.

3.14 Abandoned / Decommissioned Infrastructure

- 3.14-1 The utility company shall continue to be responsible and liable for all abandoned infrastructure and any issues that arise as a result of that abandoned infrastructure until such time that it has been completely removed from the right-of-way to the satisfaction of the General Manager of Public Works or designate. The utility company shall be responsible for all costs associated with removal of abandoned infrastructure should the City request removal.
- **3.14-2 Note:** This responsibility shall include, but not be limited to, providing all available information for any abandoned or decommissioned plant as part of the Applicant's response to any request for information by the General Manager or other members of the HPUCC. All abandoned plant <u>must</u> be shown on all cut permit application plans.

3.15 Installations on City Owned Lands Other than a Public Highway

3.15-1 Installations on city owned land other than a Public Highway requires the prior approval of the city division that has jurisdiction over that land. The City of Hamilton's Corporate Real Estate Section must also be contacted at RealEstate@hamilton.ca, as the lands in question may not always be Public Works holdings and an easement agreement may be necessary. Any easement documents or licenses that may be required by the General Manager of Public Works or designate for work in these locations shall be submitted with the application.

3.16 Protected Locations & Cultural Heritage Resources

3.16.1 Archaeology

- 3.16.1-1 The City is responsible for archaeology on lands under its ownership, and is obliged to perform due diligence in considering archaeology when carrying out activities resulting in soil disturbances on its properties. Where soil disturbance is proposed, City staff shall use archaeological potential mapping to determine whether some or all of the area to be impacted is within an area of archaeological potential or whether there will be impacts to registered and/or reported archaeological sites. Where areas of archaeological potential or archaeological site(s) will be impacted, the City shall provide recommendations or requirements to the applicant on how to address them.
- 3.16.1-2 Applicants shall consult with Heritage Planning staff to confirm if the property has archaeological potential. Typically, if an area is identified as having archaeological potential, a Stage 1-2 Archaeological Assessment must be completed prior to disturbance taking place. If archaeological resources are identified, further Stage 3 and Stage 4 work may be required. Alternatively, if an area is shown to retain no archaeological potential, no further assessment is required.
- 3.16.1-3 The Province administers archaeology under the authority of the *Ontario Heritage Act*. The legislation stipulates that any archaeology carried out in the Province must be conducted under license granted by the Province to individuals. Work conducted under a license is reviewed by the Province to ensure that the technical standards and guidelines are being met. All archaeological reports shall be submitted to the City of Hamilton for approval concurrent with their submission to the Ministry of Tourism, Culture and Sport.
- <u>3.16.1-4 Note</u>: Should deeply buried archaeological materials be found on the property as a result of the soil disturbance activities, the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTC) should be notified immediately at 416-326-9326. In the event that human remains are encountered during construction, the proponent should immediately contact both MTCS and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Small Business and Consumer Services at 416-326-8392.

3.16.2 Built Heritage and Cultural Heritage Landscapes

- 3.16.2-1 Applicants shall verify with Heritage Planning staff whether the proposed work is located on, or adjacent to, a Protected Heritage Property, and whether a Heritage Permit is required to permit the work.
- 3.16.2-2 Protected Heritage Properties include: individual properties designated under Part IV of the *Ontario Heritage Act*, properties and public rights-of-way located in a Heritage Conservation District designated under Part V of the *Ontario Heritage Act*, and, properties subject to a heritage conservation easement under Part IV of the *Ontario Heritage Act*.
- 3.16.2-3 If a Heritage Permit is not required, the applicant shall take extra care not to disturb any landscaping or architectural features when performing work in the vicinity of a Protected Heritage Property.
- 3.16.2-4 For further information on Cultural Heritage Resources, the applicant should contact a Cultural Heritage Planner in the Development Planning, Heritage and Design Department at CulturalHeritagePlanning@hamilton.ca.

3.17 Changes to Permit

- 3.17-1 Any request for changes to an issued cut permit and the applicable drawings must be reviewed and approved by the City.
- 3.17-2 Depending on the nature and extent of the requested change, the Applicant may be required to:
 - meet with General Manager of Public Works or designate in the field to review proposed change
 - submit, in writing, an explanation of the proposed change
 - submit a revised drawing highlighting the proposed change
 - obtain sign-off from owners of affected plant
 - submit a new application, if applicable, for the revised work
- 3.17-3 As a point of reference, any change in alignment that goes beyond 0.3m of the initial proposed alignment would require drawings to be submitted for review.

Examples:

- If the proposed change in alignment, involves moving closer to an existing utility, then Sign-Off documents will be required from that particular utility company.
- If the proposed plant requires a 0.3 m shift in alignment due to field conditions and if this shift does not cause the proposed plant to fall within the proximity of any existing utilities, sign-off documents are not required.

4.0 Application Streams

4.1 Emergency Work

4.1.1 Scope

4.1.1-1 The requirements and process for emergency work shall apply to work requiring a new excavation and be limited to the repairs or actions required in response to a failure of, or damage to, existing plant that results in, or has the potential to result in, danger to the public, a loss of an essential service, and/or damage to infrastructure or other utility plant.

4.1.2 Requirements

- 4.1.2-1 When emergency work is undertaken, the Applicant shall:
 - Immediately notify the City of Hamilton's Customer Contact Centre at 905-546-CITY (2489). The representative will notify the appropriate City inspector.
 - In the event that EMS or police assistance is required, call 911.
 - Submit a cut permit application, clearly marked emergency, by the next business day to the appropriate district permit office with the field location and details of the repaired or replaced plant.
 - Upon completion of the emergency work, immediately notify the City of Hamilton's Engineering Services section at utility.coordination@hamilton.ca
 - The cut permit application for the emergency work shall include the rationale for classifying the work as emergency work.

4.2 Short-Stream

4.2.1 Scope

Classification of work as short-stream shall be at the discretion of the General Manager of Public Works or designate.

Work to be submitted through the short-stream application process includes the following:

- Exploratory work to investigate subsurface conditions.
- The construction of service drops or subsurface services connecting one or more individual users to the mainline distribution infrastructure, and not requiring the removal, relocation or alteration of adjacent infrastructure.
- Placing or Replacement of 25 poles or less. Replacement of frame and cover for existing underground structure with surface access.
- Any installation that is less than 100 metres of underground infrastructure which includes pipes, conducts, duct structures and wires for short-stream permits.

4.2.2 Submission Requirements

Cut permit applications for work defined as short-stream shall be included in the original municipal consent permit application.

Where the proposed work is not taking place directly in front of the customers' municipal address, the Applicant shall indicate the actual street and location impacted by the work.

The form shall be completed, in its entirety, and include a drawing conforming to the standards outlined in Appendix L, *Permit Drawing Standards*.

Permit applications are to be submitted online using the City's online application portal, located at the following link:

https://municipal-consent-permits-hamilton.hub.arcgis.com/

Fully completed and accurate information included on submissions will ensure timely processing of the applications and permit turnaround times.

For further information and detailed procedures for the application process, please refer to Appendix O, *Work Instruction for MC Application*.

Incomplete or inaccurate applications will not be processed.

4.3 Long-Stream

4.3.1 Scope

In general, work to be submitted through the long-stream application process includes, but is not limited to:

- The construction of new underground or surface infrastructure involving the relocation, removal or alteration of adjacent infrastructure.
- Replacement/Installation of 26 or more poles
- Any work not classified as emergency or short-stream under the definitions provided herein.

Any installation that is more than 100 metres of underground infrastructure which includes pipes, conducts, duct structures and wires for long-stream permits.

4.3.2 Submission Requirements

Permit applications are to be submitted online using the City's online application portal, located at the following link:

https://municipal-consent-permits-hamilton.hub.arcgis.com/

Fully completed and accurate information included on submissions will ensure timely processing of the applications and permit turnaround times.

For further information and detailed procedures for the application process, please refer to Appendix O, *Work Instruction for MC Application*.

4.3.4 Circulation and Sign-Offs

Prior to submitting an application, the Applicant shall circulate drawings of their proposed work to all utility companies, agencies and commissions that may be impacted by the work. As a minimum, the Applicant shall circulate to each member of the Hamilton Public Utilities Coordination Committee (HPUCC), as indicated in <u>Appendix B</u>, <u>Utility Circulations Contacts</u>. For each party circulated to, the Applicant shall attach to their application a completed sign-off form. This form shall confirm that the party receiving the circulation:

- Has marked up the Applicant's drawing or provided the Applicant with an up-to-date location certificate of that party's infrastructure within the limits of the proposed work.
- Has communicated all its requirements to the Applicant.
- Does not object to the proposed work as described in the application.
- Has investigated and declined a joint-build venture with the Applicant.

Unless explicitly noted otherwise by the party providing the sign-off, a sign-off shall expire twelve months after the date it was signed.

4.3.5 Incomplete Applications

Applications that are not in strict conformance with the Municipal Consent Requirements (MCR), particularly with the drawing standards in <u>Appendix L</u>, <u>Permit Drawing Standards</u>, will not be reviewed. The Applicant will be notified by the General Manager and informed of the specific parts of the Utility and Permitting Manual with which the application does not comply.

For the purposes of time tracking, the date of submission shall be the date on which a complete and compliant application is received at the permit office.

4.3.6 Application Review Period

The date of application will be the date on which the complete and compliant application is received at the permit office.

The time required for review of an application will vary depending on the nature, size and complexity of the proposed work and the completeness and clarity of the application form and drawings. Additionally, a high volume of applications at a permit office may occasionally cause delays in the issuance of permits.

4.4 Closures

4.3.1 Scope

Applicants are required to apply for permit closure once all or partial work as part of an approved Municipal Consent Permit has been complete.

4.3.2 Submission Requirements

Permit closure applications are to be submitted online using the City's online application portal, located at the following link:

https://municipal-consent-permits-hamilton.hub.arcgis.com/

Applicants can also access the link from a mobile device by scanning the QR code located on the Municipal Consent permit as noted in *Appendix G, Municipal Consent Permit.*

Permit closure applications can be processed by two separate streams, including:

- Full Closures
- Partial Closures

Full closures applications are to be initiated once all work within scope of an approved Municipal Consent Permit has been complete and the permit is ready to be administratively closed. This process will also initiate any permanent hard surface restoration activities, as required.

Partial closure applications are to be initiated once work has been completed related to a Municipal Consent Permit, and there are permanent hard surface restoration works to be programmed.

For further information and detailed procedures for the application process, please refer to Appendix P, *Work Instruction for MC Closure Application*.

4.5 Disputes

In the event of any dispute regarding the classification of a specific application, the General Manager of Public Works or designate shall make the final determination.

5.0 Above-Ground Plant

5.1 Location

The conditions outlined herein shall apply at all locations; however, in general, more scrutiny will be used in reviewing applications to install above-ground plant:

- on major or minor arterial streets.
- within the downtown central areas, defined in the Hamilton Official Plan which can be found at:

5.2 Justification

Applications or drawings that include proposed above-ground plant shall include an explanation of the reason why this plant cannot be installed below ground.

5.3 Roadside Safety

Any above-grade installations within the right-of-way shall conform to all roadside safety and clear zone design and construction requirements, in accordance to the MTO Roadside Design Manual.

The MTO Roadside Design Manual written by the MTO for use of municipalities throughout Ontario, and can be found at the following link:

https://www.library.mto.gov.on.ca/SydneyPLUS/Sydney/Portal/default.aspx

5.4 Complete Streets

Any above-grade installations within the street shall conform to the Complete Livable Better Streets for Canada Design guidelines: "Complete Streets by Design". These guidelines, which the City of Hamilton helped develop, are available on the Complete Streets for Canada website at: http://completestreetsforcanada.ca/complete-streets-design

5.4 Visibility & Aesthetic Treatments

Permit applications for work defined as short/long-stream that include above-ground plant shall include consideration to reducing the negative visual impact to passing motorists, pedestrians and adjacent property owners while still allowing the Applicant to freely access and properly service the plant and provide its services to its customers.

Utility infrastructure is not to be placed in the day light triangles. Refer to <u>Appendix N</u>, <u>Minimum</u> <u>Requirements for Visibility Clearance</u>.

Applications or drawings shall describe the proposed aesthetic treatment so that the General Manager can evaluate the suitability and potential impact.

Examples of aesthetic treatments include, but are not limited to, placement in locations of minimal visual impact, landscaping around the plant, painting the plant, decorative covers, placement of plant behind existing physical features. The treatment must be supplied and installed during the time of equipment installation. The Applicant shall be responsible for the maintenance of the aesthetic treatment to the satisfaction of the General Manager.

5.5 Notification

The Applicant shall provide written notification to all adjacent properties, and all properties that will face or will have a line of sight to the proposed plant. Such notification shall outline the nature of the work and clearly describe the size, appearance, and location of the proposed plant. The notice shall include the phone number of a contact person at the Applicant's office.

A copy of the notification and a list of the addresses of all residents the notice has been sent to shall be submitted with the application. The General Manager may perform random spot checks on the list to ensure that the notification is being done.

5.6 Business Improvement Areas

If the proposed location of the plant falls within the boundaries of a Business Improvement Area (BIA), the Applicant shall ensure that they notify the BIA and address any objections regarding the proposed plant and its location in the following manner.

The Applicant shall notify the BIA, in writing, and outline the nature of the work, clearly describing the size, appearance and location of the proposed above ground plant. The notification shall include the phone number of a contact person at the Applicant's office and the phone number of the appropriate district permit office.

The notification shall include clear wording to indicate that a response from the BIA outlining the specifics of any objection to the proposed plant.

Where the BIA reasonably objects with the proposed work, and where the Applicant has exhausted all negotiation measures, the General Manager will attempt to work with the Applicant and the BIA to reach a mutually acceptable agreement. If an agreement cannot be reached, the General Manager will advise the Applicant on what escalation measures or other options may be available.

A copy of the notification and the BIA's response, if any, shall be submitted with the full-stream application. The General Manager may contact the BIA to confirm their receipt of the notification.

A listing of Hamilton's BIAs can be found at:

https://www.hamilton.ca/locate-expand/property-search/business-improvement-areas

5.7 Pole Installation Protocol

An incoming permit must outline the location of the proposed pole in relation to:

- · City infrastructure
- ditches, top/bottom of banks
- · driveways, curbs, road edges, sidewalks
- trees, driplines

The permit application drawing must depict guy and anchor locations clearly. In the event of proximity to ditching, pole setting depths must be calculated to allow ditch maintenance.

6.0 Construction Requirements

6.1 Scope

These requirements cover work performed by the Applicant within the City of Hamilton streets and describe the procedures to be followed before, during and after construction work is undertaken.

6.2 Insurance

Liability insurance for the construction, operation and maintenance of plant shall be provided as set out in the authority or agreement under which the Applicant occupies the right-of-way.

6.3 Site Meetings

Prior to the start of work the City of Hamilton may contact the representative specified on the permit as may be required to schedule a site meeting. As a minimum, the site meeting must be attended by at least one representative directly employed by the Applicant and not solely by the Applicant's designated contractor.

6.4 Perimeter Warning Signs

Based on the impact to traffic and area residents, at the sole discretion of the General Manager of Public Works or designate, acting reasonably, advance notice perimeter warning signs may be required. The General Manager of Public Works or designate shall identify the requirement for such signs at the time of the site pre-construction meeting. Where such signs are required, the signs shall be manufactured and installed by the City of Hamilton to the satisfaction of the General Manager of Public Works or designate at the Applicant's cost. Typically, two weeks are required to manufacture and install the signs after the decision that the advance notice signs are required. Work shall not commence until the perimeter warning signs have been in place for at least one week.

Where the Applicant is planning work that will extend over a long period or where it is anticipated that the work will cause major disruption to traffic or residents, the Applicant is advised to contact the district permit office as soon as possible to make arrangements to assess the requirements for signage.

6.5 Scheduling

To minimize disruption to vehicular traffic, the General Manager of Public Works or designate may, in its sole discretion, direct the Applicant to alter the start date of construction. In general, construction activity will not be permitted to occur simultaneously on parallel adjacent arterial roads or collector roads. The Applicant will be notified by the General Manager of Public Works or designate of a conflict with other work, and the requirement to adjust their start date to a mutually agreeable date, at the pre-construction site meeting.

Where such conflicts arise, the General Manager will work with the affected Applicants to coordinate a mutually agreeable schedule. All instances will be evaluated on a case-by-case basis; however, precedence will generally be given to the first Applicant to hold a site meeting and provide a firm start date to the General Manager.

6.6 Locates and Protection of Plant

Prior to the commencement of any excavation, the Applicant shall obtain locates from all owners of underground plant in the work area to determine the location of all such plant and shall comply with any standards and instructions from the plant owners when working near their plant and as required by law. The Applicant shall comply with industry best practices when excavating, shoring, piling, backfilling and compacting around existing plant or as directed by the owner of the plant and the General Manager of Public Works or designate.

6.7 Notification to the City

The Applicant shall strictly adhere to the notification protocol indicated on the permit.

Following completion of the work the Applicant must immediately notify the Permit Office at utility.coordination@hamilton.ca.

6.8 Resident and Business Notification

For all non-emergency work, written notification stating the type and location of the proposed installation, duration of construction and phone number of the utility company undertaking the work shall be delivered to all residences and businesses abutting the work zone a minimum of **48 hours** prior to commencement of work.

When the duration of the project is expected to be greater than seven calendar days, or if access to residences and businesses will be restricted in any way, the Applicant shall notify the local councillor and, where applicable, the Business Improvement Area (BIA) office at least 10 business days prior to commencement of construction. A copy of this notification shall be forwarded to the permit office.

A listing of Hamilton's BIAs can be found at:

www.hamilton.ca/CityDepartments/CorporateServices/Clerks/BIA subcommitteelisting.htm.

6.9 Documents Required to be On-Site

The Applicant shall ensure that, as a minimum, copies of the following documents are kept onsite at all times and shall make these documents available for viewing immediately upon being requested to do so by the General Manager or the Hamilton Police Service:

- Locate Forms
- Approved Permits
- Approved Drawings

6.10 Working Hours

The Applicant shall comply with the City of Hamilton's <u>Noise Bylaw No. 11-285</u> of the Hamilton Municipal Code available on the City of Hamilton website, <u>www.hamilton.ca</u>, under the Frequently Requested By-laws page.

In addition, the Applicant shall ensure the following:

- Equipment shall be maintained in a good working condition that does not leak fluids and prevents unnecessary noise, including but not limited to proper muffler systems, properly secured components and the lubrication of all moving parts.
- Idling of service equipment shall be restricted to the minimum necessary for the proper performance of the specified work.

Work may only take place during the times specified on the permit or as specified by the General Manager. The Applicant should note that the restrictions may vary for different directions of travel on the same street and that work may be prohibited at specific times and dates in order to co-ordinate with or avoid other work or events in the area.

At most locations, typical working hours will be between the hours of 7 a.m.-7 p.m. from Monday to Friday. The applicant shall require written approval from the General Manager to work weekends or holidays. No planned or scheduled occupancies on arterials, collectors, or parkways during the peak hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. This is to ensure that transit, commuter traffic, and goods movement is not negatively impacted during rush-hours.

Specific exceptions to these typical times may be granted or required, at the sole discretion of the General Manager, depending on the circumstances of the individual work.

6.11 Project Information Sign

For work authorized under a street occupation permit, including site services permits, on any portion of the right-of-way, regardless of duration, or when material and equipment are left on-site unattended for any period of time, project information signs shall be prominently displayed. Please refer to Appendix I, *Project Information Sign*.

A project information sign will not be required for work authorized under a street occupation permit only when all of the following conditions are met:

- A work vehicle is parked within 10.0 m of the work area, bearing a sign identifying the name and corporate logo of the Applicant, their designated contractor undertaking the work, where applicable, and a 24 hour emergency contact phone number.
- The emergency contact phone number shall connect the caller to an office and contact person that will answer calls 24 hours a day seven days a week. Connection to a voice mail box is not acceptable.
- The site will not be left unattended for any period of time.

6.11.1 Cut Permits

For work authorized under a cut permit on any portion the right-of-way, regardless of duration, or when material and equipment are left on-site unattended for any period of time, project information signs shall be prominently displayed.

Signs must conform to the requirements of <u>Appendix I, Project Information Sign</u>, and shall clearly identify the name and corporate logo of the Applicant, their designated contractor undertaking the work, where applicable, and a 24 hour emergency contact phone number.

The emergency contact phone number shall connect the caller to an office and contact person that will answer calls 24 hours a day, seven days a week. Connection to a voice mail box is not acceptable.

Signs shall be clearly legible to pedestrians and drivers passing the work site and shall be placed, as a minimum, at each end of a project so that traffic from both directions can easily view the details. For projects that extend across more than one block, additional signs may be required at intermittent intersections crossed by the project.

6.12 Traffic Control & Occupancy Permit Requirements

The Applicant shall provide, place in service, maintain and remove all of the traffic control devices and certified traffic control person as required by all applicable legislation and municipal policies, including but not limited to:

- Ontario Traffic Manual (OTM) Book 7
- Occupational Health and Safety Act (OHSA)
- Ontario Regulation 145/00 for Construction Projects
- Highway Traffic Act (HTA)

Prior to any occupancies on arterials, collectors, or parkways as identified in the City of Hamilton Official Plan, the applicant must gain approval from Right-of-Way Permitting by submitting a Utility Temporary Lane & Sidewalk Occupancy Application a minimum of 48 hrs in advance:

https://municipal-consent-permits-hamilton.hub.arcgis.com/

The Applicant shall also conform to the following minimum requirements:

- The Applicant shall have a copy of the location-specific traffic control plan for the protection of workers and the public on site at all times as per the Ministry of Labour regulations.
- The Applicant must ensure there is no conflict with other occupancies in the area of work by reviewing the Utility Temporary Lane & Sidewalk Occupancy Mapping (link above) and by visiting the site in advance.
- On non-arterial roads, the Applicant may restrict traffic to one lane if a minimum of two
 certified traffic control persons are provided to ensure safe vehicular travel through the
 site or as deemed necessary by the General Manager.
- Vehicular access to commercial properties must be maintained at all times for the duration of the work. Any work across commercial driveways shall be done in a manner that will ensure continuous and unimpeded flow of vehicular traffic.
- All sidewalk cuts shall be backfilled or covered with a non-skid surface having sufficient strength to maintain pedestrian traffic and include warning signs for pedestrians.
- **Sidewalks** shall be maintained at a minimum width of **1.5 m** at all times. Where this cannot be achieved, a temporary sidewalk shall be required.
- **Bicycle lanes** shall be maintained at a minimum width of **1.2 m** at all times. Where this cannot be achieved, and where conditions permit, a temporary bicycle lane may be required.

- All open excavations on roads, when not under construction, are to be covered with non-skid steel plating, counter-sunk and set flush with the surface of the pavement. The counter-sunk plate should overlap the cut by no less than 300 mm on all sides. Appropriate signs shall be posted advising of the presence of the plates. The plates must be secured to the pavement and be of sufficient thickness and strength to support the traffic without movement or bouncing. The plates are to be placed on a layer of burlap to avoid any excessive noise. Asphalt mix shall be used to jam the plate tight into the pavement along all edges.
- Where it is not reasonable to cover an open excavation, the Applicant may request permission from the General Manager to leave the excavation uncovered. Where permission to do so has been granted, the excavation shall have the appropriate barriers, fencing and signage as per applicable legislation in addition to any further requirements imposed by the General Manager.
- For a traffic sign removal or relocation, the Applicant must place a request to TrafficOps@hamilton.ca at least 6 weeks in advance of the required removal or relocation. Under no circumstance is the Applicant to remove or relocate any traffic signs.

6.13 Access to Site

Authorized representatives of the General Manager, having the required personal protective equipment, shall at all times have access to the work site to monitor the progress of the work to whatever extent they deem appropriate and to determine compliance with this manual, permit requirements and any other instructions issued by an authorized representative of the General Manager. The Applicant is cautioned that lack of such compliance may result in a stop work order being issued or cancellation of the permit and that such violations will be documented and kept on file.

The Applicant shall immediately cease the work or any part thereof when directed to do so, verbally or in writing, by an authorized representative of the General Manager, or any other party having proper jurisdiction. Verbal orders shall be followed by written notification within 24 hours stating the reasons for the order to stop work. The work or affected part thereof shall not resume until any such violation has been rectified to the satisfaction of the General Manager.

6.14 Paid Duty Officers

6.14.1 General

In addition to complying with the *Ontario Traffic Manual Book 7-Temporary Conditions (Field Edition)*, the Applicant is required to provide paid duty police officers (PDOs) on site in accordance with the requirements of this document and as stipulated in the Hamilton Police Traffic Service Guidelines for paid duty police, as it is amended.

A *Paid Duty Request* Form can be obtained from any police station or the Hamilton Police Paid Duty Office at 905-546-4366. The form and the current hourly rates of PDO pay, which are provided in the terms of agreement at the back of the form, are updated once every January of the year. For more information, please refer to the following link:

https://hamiltonpolice.on.ca/how-to/book-paid-duty-officer

6.15 Public Convenience and Safety

In carrying out the work, or any portion thereof, the convenience of the public must always be considered and provided for by the Applicant who must not obstruct any street, bike lane, or municipal sidewalk without written permission from the longer or to any greater extent than is absolutely necessary in the opinion of the General Manager and shall in no case tear up or open more of any street than is approved by the General Manager or other body having jurisdiction over such closures or obstructions.

The Applicant is to provide safe, ample and convenient means of approach and entrance to adjoining lanes, driveways, buildings and property, both for vehicles and pedestrians, wherever necessary, and for passing along all roads and sidewalks, and for crossing the same where it is practicable to do so, both during the execution of the work as well as at other times, and for this purpose must construct and maintain, in good and serviceable condition, suitable and convenient platforms, approaches, structures, bridges, crossings or other works as necessary to maintain access.

The Applicant is to ensure that all residents have access to their properties at all times. If access will be blocked for any period of time, the Applicant must make arrangements with the occupants at least 48 hours in advance of any disruption. Particular attention will be required at night to ensure that safe access is maintained for all occupants. The Applicant shall be attentive to the needs of pedestrians that are visually or physically impaired, and the Applicant must be prepared at all times to assist in the safe and comfortable passage of these pedestrians.

The Applicant must find legal parking in the area of the works and shall not at any time park within the approved work occupancy space or on sidewalks and/or bike lanes. Should there not be ample area parking, the applicant should consider shuttling in their workforce.

6.16 Clean Work Site

The Applicant is responsible for maintaining the work site and surrounding area free of dust and mud. The Applicant shall clean the road and sidewalks as required to the satisfaction of the General Manager.

Prior to the start of any construction activity, filter cloth shall be placed between the frames and covers of all catch basins within the immediate area to prevent the entry of construction dirt and debris.

The Applicant shall keep the site and work in as tidy a condition as practicable and to the satisfaction of the General Manager. The Applicant shall not deposit any material on any portion of street, sidewalk, boulevard, grass plot, or other city or public property, without the permission of the General Manager, and shall remove same without delay when and as directed by the General Manager.

Upon completion of the work, the Applicant shall remove all surplus materials as well as any rubbish accumulated on account of the work, make good any defects or damage, and shall leave the site in a condition satisfactory to the General Manager.

Should the Applicant fail to comply with this requirement and maintain the street in a satisfactory condition, the General Manager, acting reasonably, without further notice, may issue a stop work order, cancel the permit, charge the Applicant under applicable bylaws and/or arrange for the site to be cleaned immediately by others. All costs incurred in cleaning the dust and mud resulting from the Applicant's work shall be charged to the Applicant.

6.17 Material and Equipment Delivery and Storage

The Applicant shall plan and schedule the movements of construction and delivery vehicles to, from and within the work site to minimize the interference and interruptions to traffic. Where possible, access routes shall be established to allow vehicles to merge with traffic without crossing traffic lanes.

Storage of materials delivered to the work site shall be considered to be part of the work area and shall conform to the traffic management plan and the provisions of this document.

Stockpiled material and equipment must not obstruct pedestrian or vehicular traffic, obstruct pedestrian or vehicular sight-lines, or be allowed to runoff onto pavement or sidewalks or into storm sewers. Sites for material storage are to be approved by the General Manager at the preconstruction meeting. Material storage must adhere to the City's tree protection practices as outlined in Appendix D, Tree Protection Policy.

Notwithstanding the foregoing, the Applicant shall immediately rectify any situation involving equipment or material that, in the sole opinion of the General Manager, constitutes a hazard to vehicular traffic or to pedestrians.

6.18 Operation of Valves and Hydrants

The Applicant shall not operate watermain valves, service water valves and/or hydrants. If operation of any water supply valves is required, the Applicant should contact the Hamilton Water Customer Service line at 905-546-4426.

6.19 Working Around Trees

Any construction activity in the vicinity of trees shall be carried out in strict compliance with the tree protection policy in <u>Appendix D</u>, <u>Tree Protection Policy</u>, of this document. Such activity includes, but is not limited to, delivery and storage of equipment and material, excavation, backfilling, plant installation, traffic control.

6.20 Working Around Public Transit

The Applicant shall coordinate all staging with any transit commission, school or tour group known to the Applicant that may have a bus stop or travel within the work area by contacting the City of Hamilton's HSROP@hamilton.ca. Special attention shall be given to loading and unloading areas for disabled persons and school buses.

The Applicant shall maintain access to all existing bus stops within the work area. Where it is not practical to maintain access, the Applicant will be responsible for relocation and reinstatement of the bus stops, under the direction of the transit authority or the General Manager, unless other arrangements have been made.

6.21 Working in the Vicinity of Bridges

Any construction activity in the vicinity of bridges shall require the approval and review of Engineering Services. The applicant may contact the structures and expressways unit, prior to their submission to the City, in order to determine the feasibility of their proposed design. The correspondence from the pre-consultation with the Structures and Expressways unit should be included in the submission package to the City, in order to expedite the review process.

In the case where the applicant submits a set of plans that includes proposed work in the vicinity of bridges with pre-consultation with the Structures and Expressways unit, the Utility and Third Party Review group will forward a set of drawings to Engineering Services. The applicant is to note that the turnaround time maybe be significantly higher for such cases based on the complexity of the review.

6.22 Snow Removal and De-Icing

Where the Applicant's work impedes snow removal and de-icing by the City on areas where vehicular and pedestrian traffic are being maintained, as reasonably determined at the sole discretion of the General Manager, the Applicant shall be responsible for providing ice and snow removal services within the limits of the work site. Such areas shall be cleared of ice and snow to the satisfaction of the General Manager.

Should the Applicant fail to complete the required snow removal services and de-icing within the set deadlines, the General Manager, without any notice to the Applicant, may arrange for the snow and ice to be removed by others. All costs incurred by such removal shall be charged to the Applicant.

6.23 Contaminated Soil

If contaminated material is found when excavating, the Applicant shall immediately notify the General Manager and the Ontario Ministry of the Environment and comply with all applicable health and safety requirements. Contaminated material must not be used as backfill and must be disposed of according to ministry requirements at the Applicant's expense.

6.24 Notification of the Location of Unidentified Plant

The Applicant shall immediately notify the General Manager of any plant encountered during the course of excavation which was not identified in any of the pre-construction circulations or locates. The Applicant shall contact all other utility companies and endeavour to determine the owner of the unidentified plant.

The Applicant shall include the location, depth, size and material of the unknown plant, clearly labelled as unidentified existing plant, with the location certificates submitted for that project.

<u>6.25 Trenchless Installations</u>

Where the work is being undertaken using trenchless installation methods, **1.0 m** should be provided as minimum clearance from other utilities and indicated on submission plans. Pilot holes and any other damage to the street infrastructure shall be restored as per the requirements in this document. The location of the pilot holes and the measured depth of the existing plant must be clearly depicted on the location certificate. Please refer to <u>Appendix M</u>, *Minimum Location Certificate Requirements*.

All trenchless installations must daylight all crossing utilities.

6.26 Keyhole Excavation and Reinstatement

Keyhole excavations can be an effective method for daylighting utilities in hard surface pavements, sidewalks, and boulevards within the City road allowance. Keyhole excavations are not exempt from excavation permits or moratoriums.

Pavement and sidewalk cuts for vacuum excavation in keyhole coring shall not be greater than 460 mm in diameter. The surface cut by keyhole coring shall be restored to its original condition with the reinstated core flush and level with the existing surface, and with the structure of the restored surface matching existing concrete surfaces and asphaltic concrete surfaces.

Cutting of existing pavements shall be performed with an approved keyhole-coring saw. The vertical alignment of the keyhole-coring saw shall be perpendicular to the horizon, and the cutting shall be extended to the full depth of the existing structure-asphalt, concrete or asphalt and concrete in a composite pavement. The Applicant is required to remove all materials excavated by keyhole excavation off site at their expense. Management and disposal of excess material shall conform to OPSS 180.

Keyhole cores will not be permitted in flexible pavements where the asphaltic concrete is less than 100 mm thick. Keyhole cores should not be closer than one metre from each other, a joint or any longitudinal or transverse crack greater than 3 mm width.

Unshrinkable fill shall be used within the pavement portion of the road allowance of all hard surfaces in accordance to OPSS.MUNI 1359. Material slip tickets must be provided to City staff at the time of delivery. All underground utility plant, pipes, structures shall be bedded in 300mm of sand prior to backfill.

Bonding material shall be impervious to water penetration at the joint after application. The bonding material is required to securely bond the undamaged keyhole core to the pavement or sidewalk and to fill the annular space at the joint. The applicant must use Utilibond Permanent Pavement Bonding Compound, or an approved equivalent.

Bonding material when mixed shall flow easily and completely fill the annular space around the core to achieve a waterproof, mechanical joint between the keyhole pavement core and the original slab of pavement. The material shall be placed in accordance to the manufacturer's recommendations, including all mixing, handling, and curing practices.

Test results meeting the requirements as outlined below shall be submitted to the City for review and approval prior to it being used.

Compression ASTM C109 or C39

Freeze/Thaw ASTM C666

Set Time ASTM C266

Bond Strength (Slant shear) ASTM C882

Thermal Expansion and Shrinkage ASTM C531

The Applicant must reinstate the keyhole core flush and level to surface, complete with the bonding material immediately or within 48 hours of cutting the existing pavement, unless special permission has been granted by the General Manager. The keyhole core must be restored in the same orientation as originally constructed. For temporary closures, the opening shall be covered with an approved form of an appropriately-sized, circular steel road plate fitted with a collar that, when inserted into the keyhole, will prevent the hole cover from tipping, tilting, bouncing or spinning out of the hole in all kinds of the traffic conditions.

Circular steel plates are not to be used for temporary closures during the winter months (November 1 to April 30). Temporary closures are to be restored using sand backfill and hot mix asphalt until permanent restoration can be completed. All temporary materials are to be fully removed prior to permanent restoration.

All excavated keyhole cores are to be removed, catalogued, and stored safely off-site. Permission must be sought from City staff before the cores are left on site. If the cores are left

on site, they must be kept within the road allowance and away from the pavement and not obstructing pedestrian traffic.

The contractor shall maintain records containing the location and details of all keyhole core repairs. The records shall be made available to the City on request. The Applicant will warrant the keyhole for the life of the pavement surface and shall maintain a rigorous quality control and assurance programs such that each keyhole will be inspected once every 12 months. If the core is found to be defective at any time, the core shall be restored by the City at the Applicants expense. Details and schematics regarding this specification can be referenced to RD-100.03 in the City's Standard Road Drawings.

6.27 City of Hamilton Inspections

City of Hamilton inspectors may, at their discretion, visit construction site locations as may be required, and must be allowed entry. The applicant is required to contact the City to complete mandatory inspections for any adjustments or variances to the original prior to construction, or while encountering conflicts or crossings with other utilities, such as:

- Encroaching existing underground manholes or structures
- 2. Any existing water or sewer mains greater than 300mm

The applicant can request for an inspection by contacting utility.coordination@hamilton.ca.

6.28 Reporting Impact / Damage to Existing Plant

Any impact with existing plant including, but not limited to, the protective coating, support, cathodic protection or the housing of the plant, shall be reported to the General Manager and plant owner immediately. The plant shall remain exposed, with the excavation properly supported, until the plant owner has assessed the damage and made a repair or authorized the Applicant to proceed.

6.29 Non-Compliance

Should any construction begin that is not in strict compliance with the conditions of the permit and this document, the Applicant may be issued a stop-work order and may be required to perform temporary restoration and move all equipment and materials off-site until these requirements are met in-full and the permit may be cancelled, at the sole discretion of the General Manager.

Depending on the severity of the infraction, the issuance of new permits for some or all work by the same Applicant may be withheld or delayed, at the sole discretion of the General Manager, until the infraction has been addressed by the Applicant to the satisfaction of the General Manager.

Chapter #7

7.0 Backfill and Temporary Restoration

7.1 General

All restoration shall be completed at the expense of the Applicant.

Where the Applicant has completed temporary restoration, the permanent repairs shall be completed by the General Manager with all costs charged to the Applicant including the City's administrative cost recovery and, where applicable, a pavement degradation fee. Additional charges shall apply to overdue accounts.

The City will carry out permanent repairs and invoice the Applicant within 18 months of the date of permit expiry. When the repair cannot be completed within 18 months, the City will notify the Applicant with an explanation and a revised completion date.

7.2 Submission and Permit Requirements

For submission and permit requirements to make an installation within the City of Hamilton's streets, refer to the current Municipal Consent Requirements, as amended.

7.3 Traffic Control

Compliance with all City traffic control standards, including the latest editions of the Ontario Traffic Manual (OTM) Book 7 and the Municipal Consent Requirements, is required. Please refer to Appendix E, *Traffic Control*.

7.4 Materials

7.4.1 Supply of Materials

Unless otherwise specified, the Applicant shall supply all materials necessary for the execution and completion of the work.

7.4.2 Management and Disposal of Excess Materials

Management and disposal of excess material shall be according to <a>OPSS 180 and Ontario Regulation 406

7.5 Installation of Plant

7.5.1 Sawcutting of Pavement, Sidewalk, Curb, and Driveway

Unless judged unfeasible, the sawcut area shall have a maximum of four sides that are all parallel or perpendicular to the direction of travel. Sawcuts shall be straight and vertical to the full depth of the asphalt and concrete layers of the pavement.

Sawcutting operations shall be performed with suitable equipment and methods and not with heavy machinery or jackhammers that may cause damage to the surrounding road.

Saw cutting shall stop at, or just short of, corners to avoid overcutting. After sawcutting the edges, removal of pavement materials shall be performed with care to avoid lifting and breaking the road pavement beyond the sawcut borders.

7.5.2 Excavation

During the installation of any Plant, excavation equipment with stabilizers shall be suitably outfitted to prevent damage to the pavement surface or wood or rubber pads shall be placed on the road to support the stabilizers. Any damage to the Street attributable to the Applicant's work shall be repaired, at the Applicant's expense, in conjunction with the utility cut.

Excavation shall not extend beyond the limits of the sawcut area. Care is to be taken to ensure that undermining of the adjacent pavement, curb and sidewalk is minimized. Where the pavement, curb and/or sidewalk are undermined by construction activities or from other causes, these undermined areas shall be filled, and the settled structures shall be restored to their original grades at the expense of the Applicant.

Where necessary, bracing, shoring and/or sheeting shall be used in accordance with the Occupational Health and Safety Regulations, to support the sides of the excavation and to prevent any movement that could damage other services, adjacent pavements, sidewalks, etc. This excavation support system shall be removed as backfilling proceeds to eliminate voids between the fill and adjacent soils. Appropriate restoration of all displaced services to their original positions is the responsibility of the Applicant.

The Applicant shall, at its own expense, provide adequate support and protection of the underground and above ground plant and structures that exist inside the excavation and in the vicinity of the excavated area. Any damage to plant or structures attributable to the Applicant's work shall be repaired to the satisfaction of the City and/or the owner(s) of the damaged plant or structures, at the Applicant's expense, in conjunction with the utility cut.

Except where native cohesive material is to be used for backfill, as permitted by the City and/or under the conditions of this specification, stockpiling of excavated material within City Streets is not permitted under any circumstances for any length of time. All excavated material shall be loaded directly into appropriate haulage trucks and disposed of off-site immediately upon

removal. The Applicant shall remove, transport, and dispose of all excavated materials in accordance with the latest Ontario Environmental Protection Acts and, where appropriate, the Occupational Health and Safety Act.

7.5.2.1 Inspection of Excavation

Prior to backfilling, the Applicant shall inspect the utility cut excavation to ensure the following minimum requirements are met:

- the edges of the pavement have been saw cut in a straight line and to the full depth of the pavement, or if permitted, to partial depth in composite pavement
- the bottom of the trench has been compacted and is free of water before the bedding material is placed
- all loose or wet material at the bottom of the trench has been removed and replaced with suitable bedding materials
- pipe bedding, pipe cover and compaction to the bedding and cover have been carried out to City's or utility agency's requirements
- necessary shoring/bracing meeting Ontario Health and Safety Acts and Regulations has been used to prevent the trench from cave-in and to protect adjacent services, pavement and sidewalk
- undermining of the adjacent pavement and sidewalk has been prevented or repaired

7.5.2.2 Excavation near Trees

Please refer to Appendix D, *Tree Protection Policy*, which includes a copy of SP-97.

7.5.2.3 Protection of Excavation

All excavations must be backfilled to match the adjacent grade or properly protected at the end of each working day.

When temporary plates are used to maintain vehicular, bicycle and pedestrian traffic flow, the plates shall have a skid resistant surface treatment and shall be fastened down to prevent moving. The plates shall be set flush with the surface of the pavement. The recessed plates should overlap the cut by no less than 300 mm on all sides. Asphalt mix shall be used to jam the plates tight into the pavement along all edges to eliminate any vertical edges.

Plates shall be used only as a temporary measure during construction and shall not be used for extended periods of time.

7.6 Existing Material in Trench

Materials excavated during trench construction may be considered for reuse as trench backfill where permitted as per <u>Appendix C</u>, <u>Temporary Backfill Restoration and Compaction Requirements</u>. The materials shall have suitable physical and environmental properties; and the materials should be properly managed during construction.

The excavated materials that may be considered for reuse as backfill include either a suitable existing granular material or a suitable existing cohesive material. The physical properties of the materials shall meet the following requirements:

- the material is free of any obvious objectionable or deleterious materials such as topsoil, organics, wood chips and metal pieces if the material is to be used in trenches located under a pavement
 - Note: material containing topsoil, organics, or wood chips, is acceptable when backfilling within sodded or soil surfaces in the boulevard
- the material is free of large pieces of rock or boulders
- the material is free of shale pieces
- the compaction equipment deployed on site is able to compact the material to its required density
- the material is not considered to be frost susceptible
- the material is not wet, frozen or lumpy

All excavated materials to be reused as trench backfill shall be managed to prevent contamination, and shall be protected to preserve or maintain its moisture condition.

7.6.1 Contaminated Material

Where the excavated material has been identified to be contaminated, the Applicant shall comply with all applicable legislation. Contaminated soil must not be used as backfill and must be disposed of off-site according to the applicable requirements.

When the suitability of excavated material for reuse is in dispute, the City, in its sole discretion, shall determine the suitability of the material based on the physical properties mentioned in this section and as recommended in a report, submitted by the Applicant, from a geotechnical consultant.

7.7 Backfill

Backfilling, compaction, and restoration shall be carried out in accordance with the conditions of this document and <u>Appendix C</u>, <u>Temporary Backfill Restoration and Compaction Requirements</u>.

7.7.1 Equipment

- Vibratory Roller or Propane heated Roller (cold weather) for compacting HMA asphaltic concrete: and
- 2. Insulated Asphalt Hot Box for transporting HMA asphaltic concrete in cold weather

7.7.2 Suitable Backfill Materials

7.7.2.1 Unshrinkable Fill

Unshrinkable Fill shall meet the requirements of OPSS-1359, available on the MTO website:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsSplash.aspx

The supplied Unshrinkable Fill may be tested, and any material that does not meet the requirements will be removed and replaced at the Applicant's expense. All costs associated with the removal and replacement of deficient Unshrinkable Fill shall be borne by the Applicant, including the cost of administration and retesting.

Temporary plating shall be used to support loads from pedestrian and vehicular traffic until the temporary asphalt is laid. Traffic shall not be permitted to travel directly onto the surface of the Unshrinkable Fill.

7.7.2.2 Hot-Mix Asphalt

Hot-Mix Asphaltic Concrete shall meet the requirements of Form 800, *Specifications for Hot-Mix Asphalt*, in the Construction and Materials Specification Manual.

Note: Under no circumstances will temporary cut repairs be accepted if cold-mix asphalt has been used.

7.7.2.3 Imported Granular Materials

Granular materials may be imported for use as trench backfill provided the imported materials meet the requirements of Form 600, *Granular Fill Materials*, in the Construction and Materials Specification Manual.

7.7.3 Backfilling

Bedding and covering material shall be compacted to at least 98% of its Standard Proctor Maximum Dry Density, or in accordance with the Applicant's installation requirements, whichever is greater.

If Unshrinkable Fill is used, backfill trench with Unshrinkable Fill to within 75 mm of the top of the existing surface.

If temporary shoring/bracing has been used to support adjacent infrastructure, it shall be removed in a safe manner continuously as backfilling proceeds.

7.7.3.1 Backfilling in Pavements

If suitable backfill material is to be used, backfilling shall be carried out in uniform lifts not exceeding 150 mm loose thickness with the layer thickness decreased to 100 mm around obstacles. Each lift of suitable backfill material shall be compacted to a minimum of 98% of its Standard Proctor Maximum Dry Density, or in accordance with the Applicant's utility agency installation requirements, whichever is greater.

For temporary restoration of pavements, suitable backfill materials shall be brought to within 75 mm of the top of the existing surface.

The type of backfilling required in utility cuts made in road pavements shall be as follows:

Unshrinkable Fill shall be used for all cuts made in road pavements unless otherwise approved by the City.

The City, in its sole discretion, may allow an Applicant to apply, in writing, for an exemption from using Unshrinkable Fill where a utility cut is to be located at the shoulder area or for backfilling of a wide and deep trench. No such exemptions will be granted on roads for reconstruction or resurfacing within the current construction season as advised by the City.

Where an exemption from using Unshrinkable Fill has been granted, the Applicant or its contractor shall provide Geo-technical Certificates from a geotechnical consultant within 30 days of completion of work certifying that the trench backfill meets the backfill materials requirements and compaction requirements as specified in this specification.

Where suitable native backfill is used, a 400mm layer of Granular 'A', compacted to 98% of its Standard Proctor maximum dry density, shall be placed immediately below the asphalt in flexible pavements and immediately below the concrete base in composite pavements.

7.7.3.2 Backfilling in Boulevards

The use of unshrinkable fill is strictly prohibited for backfilling in boulevards except in the following two scenarios:

- Where cuts are in close proximity to the road and the limits of the excavation encroach into the 1:1 structural prism commencing from the bottom of the adjacent curb, unshrinkable fill shall be used within the envelope of the structural prism.
- Where cuts are made in hard surfaces (curbs, public sidewalks, concrete driveways, and interlocking bricks/flagstone on a concrete base) that are immediately adjacent to the road, unshrinkable fill shall be used under these hard surfaces.

Where an excavation extends beyond the areas described above, the Applicant shall ensure that the unshrinkable fill is contained within the appropriate area.

Note: Notwithstanding the above, unshrinkable fill is strictly prohibited for any excavation within a Tree Protection Zone regardless of the surface treatment.

For areas of sod or soil, refer to drawing in <u>Appendix C</u>, <u>Temporary Backfill Restoration</u> and Compaction Requirements.

For the boulevard areas other than those specifically described above, only suitable native material or Granular B shall be used. Backfill materials shall be placed in lifts not exceeding 200 mm loose thickness and each lift shall be compacted to 95% of its Standard Proctor Maximum Dry Density.

7.7.3.3 Backfilling in Tunnels

Any facility that is placed underground in any method other than open cut trenching shall be considered as tunneling.

In backfilling a tunnel, the final density of the backfill must match or exceed that of the surrounding soil. All voids resulted from tunneling shall be completely backfilled using suitable materials as defined in this specification.

7.8 Restoration

7.8.1 Sodding and Top Soil

Sod shall not be laid when ground is in a frozen condition or when the site is in adverse conditions such as high wind, frozen soil or soil covered with snow, ice or standing water.

All topsoil and sod shall be in accordance with OPSS 802 and 803, as amended by the Construction and Material Specifications Manual and this special provision.

This item shall include all costs to supply and place sod with a minimum 100 mm of topsoil and shall include stakes where required.

The Utility Company shall water and maintain sod for 30 consecutive days after placement to ensure root establishment and sufficient growth. The Utility Company shall have all work schedules for the placement of sod approved by the City prior to commencing work.

Where in the opinion of the City, the Utility Company has failed to provide the required maintenance to ensure root establishment and growth, the Utility Company shall remove, replace, and maintain all sod identified by the City.

7.8.2 Repair Responsibility According to Surface Types

Surface Type	Material	Repair Responsibility	
		Temporary Repair	Permanent Repair
Road Pavement	Asphalt	The Applicant	The City
	Concrete	The Applicant	The City
Sidewalk	Asphalt	The Applicant	The City
	Concrete	The Applicant	The City
Curb	Asphalt	The Applicant	The City
	Concrete	The Applicant	The City
Boulevard	Asphalt	The Applicant	The City
	Concrete	The Applicant	The City
	Interlocking bricks/flagstone on a granular base		The Applicant
	Interlocking bricks/flagstone on a concrete base		The Applicant
	Sod		The Applicant
	Gravel or Soil		The Applicant
Driveway	Asphalt with abutting concrete repair	The Applicant	The City
	Asphalt with no abutting concrete repair	The Applicant	The City
	Concrete	The Applicant	The City
	Interlocking bricks/flagstone on a granular base		The Applicant
	Interlocking bricks/flagstone on a concrete base		The Applicant

Notes: • Any repairs on private property shall be the responsibility of the Applicant. • All work performed by the Applicant or its contractor shall be carried out in accordance with the City standards and applicable specifications. • Permanent restoration of areas with decorative or specialized surfaces, landscaping, and subsurface treatments such as patterned/impressed concrete shall be the responsibility of the City at the Applicant's expense as part of the restoration of the work.

7.9 Temporary Repair

Unless otherwise specified, backfill material shall be brought to within 75 mm below the existing surface. The remainder of the trench shall be filled with compacted hot-mix asphalt as a means for temporary pavement restoration.

Unless otherwise specified, all temporary repairs shall be hot mix asphalt. The hot mix asphalt shall be mechanically compacted as per the requirements indicated in <u>Appendix C</u>, <u>Temporary Backfill Restoration and Compaction Requirements</u>, and neatly match the finished grade of the existing pavement or sidewalk.

Temporary utility cut repairs shall be marked by Applicant using paint applied with a stencil. The marking shall bear the identified code and/or name assigned by the City to the Applicant and the calendar year that the temporary repair was performed. The marking shall be placed adjacent to the cut, outside the area of the temporary repair.

7.9.1 Deficiencies

Upon being notified that the temporary restoration has not been carried out to the satisfaction of the General Manager, the Applicant shall rectify the deficiencies immediately. The General Manager may, in its sole discretion, accept a request from the Applicant for another timeline where justified by the nature and extent of work required. If the deficiencies are not rectified by the required deadline, the General Manager may undertake remedial restoration, which may include complete excavation of the cut, and charge back all associated expenses, including mobilization costs, to the Applicant.

7.9.2 Emergency Repairs

Notwithstanding the above, if deficiencies in the temporary or permanent repair performed by the Applicant pose a safety hazard, the General Manager, in its sole discretion, may immediately undertake remedial restoration, which may include complete excavation of the cut, and charge back all associated expenses, including mobilization costs, to the Applicant.

7.10 Quality Assurance

7.10.1 Warranty

The Applicant will warrant the utility cut repairs it undertakes for 2 years in accordance with the Repair Responsibility table on page 50 of this chapter. The Applicant shall maintain a rigorous control and assurance program such that each utility cut repair will be inspected once every 12 months.

CHAPTER #8

8.0 Location Certificates

8.1 Preparation and Submission

Location certificates shall comply with the requirements outlined in <u>Appendix M, Minimum Location Certificate Requirements</u>, within 90 days of the date of permit expiry, the Applicant shall submit location certificates electronically to the City's Geomatics and Corridor Management section.

8.2 Non-Compliance with Location Certificate Requirements

If the Applicant does not submit a compliant location certificate within 90 days of project completion, the General Manager may, in its sole discretion, arrange for a locator and survey crew to identify, locate and prepare a drawing accurately depicting the location of the Applicant's infrastructure. All costs associated with this work shall be charged to the Applicant. The issuance of new permits may be withheld or delayed, at the sole discretion of the General Manager, until the required location certificates have been submitted.

8.3 Accountability for Inaccurate Location Certificates

The submitted location certificates may be used for management of the right-of-way and for future designs. In the event that the actual constructed plant location differs from that shown on the location certificate, the Applicant will be held 100% responsible, and shall absolve all other occupiers of the street of any responsibility for all damages, liabilities, relocation costs, redesign costs and subsequent delay costs resulting from the Applicant's failure to provide an accurate location certificate.

8.4 Underground Structures

All underground structures, chambers, manholes, large valves, and like shall have electronic survey data collected and provided as part of the location certificate. Datapoints shall be collected for the perimeter of the structure, and any entering or exiting pipe or duct structures greater than 0.5m. Survey data shall be collected using the following datums:

NAD83 orig.

CGVD28:78 Adjustment (vertical datum)

Glossary

Alignment - A location specified or approved by the General Manager for locating equipment on, over, along, across, under, or in a street.

Applicant - A person applying for a permit or other consent under these requirements. This shall be extended, where applicable, to include the Applicant's direct employees and its agents, consultants, and contractors.

Book 7 - *Ontario Traffic Manual, Book 7 - Temporary Conditions (Field Edition)* was developed to show how to apply traffic control devices in temporary construction, maintenance, and utility work zones, to help ensure worker safety, motorist safety, and motorist mobility. It has been prepared to assist works in the field by illustrating the appropriate signing and the channelization required for the most common types of roadway work operations.

Boulevard - That part of a public street that is not used, or intended to be used, for vehicle travel by the general public, and that is situated between the travelled portion of the road and the adjoining property line.

City - The City of Hamilton the corporation - and will be referred to as the City for the purposes of this document.

Commissioner - The Commissioner of Transportation and designated staff and any appointed engineering firm and/or appointed testing firm for the Contract.

Contraction Joint - A cut or formed joint to regulate the location and degree of cracking in the plane of the pavement.

Deep Trench - A trench deeper than 1.2 m

Dripline of a Tree - The area defined by the outermost circumference of a tree canopy where water drips from and onto the ground.

Emergency Work - Work within a street that must be completed immediately due to health or safety concerns or because the provision of essential services is endangered.

Equipment - Includes any machinery, vehicles, construction materials, poles, cables, pipes, conduits, ducts, pedestals, antennas, towers, wires, amplifiers, vaults, maintenance holes, hand holes, support structures or other appurtenances or ancillary facilities, structures or devices used to provide any public utility, including telecommunications, electrical energy, steam energy or water and waste water utility services.

Essential Services - Energy (including, but not limited to, natural gas, steam, and electricity), water, sanitary sewage, traffic control, and the following communication services: 911 service, communications for financial transactions, business networks, and Internet.

Expansion Joint - A physical separation between the concrete and appurtenances, or between parts of the sidewalk or raised median, which allows both horizontal and vertical movement.

Excavating - The breaking, digging up, tearing up, tunneling, boring, coring, cutting into or removing any portion of the surface or subsurface of the street, including pavement, sidewalk, curbs, gutter, or landscaping.

General Manager - The person appointed by the City from time to time as the general manager of Transportation Services and his or her successors or his or her duly authorized representative.

Hamilton Public Utilities Coordinating Committee (HPUCC) - the organization, or any successor organization, comprised of member utility companies and the City who own and operate equipment in City streets.

HSR - The Hamilton Street Railway.

Intersection - The area embraced within the prolongation or connection of the lateral curb lines or, if none, then of the lateral boundary lines of two or more streets or private driveways that join one another at an angle, whether or not one street or private driveway crosses the other.

Location Certificate - A drawing prepared according to the General Manager's specifications that, in the General Manager's opinion, is sufficient to accurately establish the location, elevation and distance of any equipment constructed, installed, or reconstructed within a street.

Mainline - Any plant that is not a service or service drop.

Municipal Access Agreement (MAA) - A legal agreement, approved by City Council, which contains provisions for granting consent to a person to do work in the streets upon compliance by such person with all other applicable municipal requirements.

Municipal Consent Requirements (MCR) - This document, specifying the requirements for the installation of plant within city of Hamilton streets.

Narrow Trench - The width of a trench is less than or equal to 350 mm

Native Material - Excavated material for placement into the exact location from which it was removed.

Municipal Address - The city, street, and number on the street by which a property is known. **OHSA** - Occupational Health and Safety Act for the province of Ontario.

Permanent Repair - The process whereby a cut and/or excavation is reinstated to a condition which requires no further repair.

Permit - Written authorization granted by the General Manager under the provisions of this document.

Person - One or more individuals, partnerships, corporate bodies, unincorporated organizations, governments, government agencies, trustees, executors, administrators, or other legal representatives, other than the City or its legal representatives.

Plant - Any poles, cables, pipes, conduits, ducts, pedestals, regulators, antennas, towers, wires, amplifiers, vaults, maintenance holes, hand holes, support structures and or other appurtenances or ancillary facilities or structures used for the provision of telecommunications, internet, energy, water, waste water, steam, fuel and/or other materials. Any encasement, steel plating or other non-excavatable material shall be considered to be part of the plant.

Road - The portion of the street designed, improved, and ordinarily used by vehicle traffic.

Service / Service Drop - A cable, pipe, conduit, or any other plant that provides service directly to a customer.

Shallow Trench - The depth of trench is less than or equal to 1.2 m

Sidewalk - That part of a public street located within the boulevard that is improved for the exclusive use of pedestrians.

Street - A common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, any part of which is intended for or used by the general public for the passage of vehicle and includes the area between the lateral property lines thereof. The terms City's public road allowance, right-of-way and highway shall have the same meaning as street as established or dedicated as a public highway under section 26 of the Municipal Act, 2001.

Street Line - The property line indicating the boundary of the right-of-way and private property.

Suitable Backfill Material - The native materials or imported granular materials that can be used as utility trench backfill materials in lieu of Unshrinkable Fill as defined in this specification.

Temporary Repair - The process whereby a cut and/or excavation is reinstated as a temporary measure pending completion of a permanent repair.

Trunk - A watermain with an inside diameter equal to or greater than 400 millimetres; a storm sewer with an inside diameter equal to or greater than 750 millimetres; a sanitary or combined sewer with an inside diameter equal to or greater than 375 millimetres; any attachment to the aforementioned watermains/sewers including, but not limited to, maintenance holes, appurtenances, valve chambers, cathodic protection or other features.

Unshrinkable Fill - A self-compacting cement treated aggregate with flowable consistency and controlled low strength properties that meet the requirements of OPSS-1359, *Specification for Unshrinkable Fill*.

Utility Company - A company owning, operating, and maintaining plant in the public right-of-way.

Work - Includes any excavating in streets, and the installing, repairing, replacing, extending, or operating and maintaining of any equipment, structure or device located on, over, along, across, under, or in streets.

Appendices

APPENDIX A

Permit Application Offices

Address

City of Hamilton Public Works | Engineering Services Geomatics & Corridor Management 100 King Street West, 2nd Floor Hamilton, ON L8P 1A2

Main Contact

Manager, Geomatics and Corridor Management

General Email

utility.coordination@hamilton.ca