

PROCEDURAL MEMORANDUM TO CONSULTANTS FOR BOREHOLE PERMIT APPLICATION - LAND DEVELOPMENT DIVISION

Boreholes are essential sources of information for subsurface work. Examples of information collected from boreholes may include geotechnical data collection (ex., design drawings) and environmental assessments (ex., soil relocation, soil characterization environmental monitoring). Borehole Permits are required for any of the examples described above.

The City of Victoria will issue Borehole Permits pursuant to the City's "[Sidewalks, Streets and Boulevard Bylaw](#)", and "[Streets and Traffic Bylaw](#)". The Borehole Permit process consists of applying for a permit via the City's website, meeting the permit Conditions of Approval, as well as following drilling, contamination migration, and restoration requirements.

PERMIT REQUIREMENTS: The applicant must apply for the Borehole Permit and submit and/or obtain the information presented under the Conditions of Approval.

Apply for a Borehole Permit via your MyCity account. Available here: [Borehole Permit | Victoria](#).

CONDITIONS OF APPROVAL

GENERAL REQUIREMENTS:

1. Scoping document: A letter detailing the scope of work proposed, including but not limited to the purpose [i.e., geotechnical or environmental based - as conducted by a Qualified Professional (QP)], the sampling program (location, number and depth of proposed boreholes), the type of data to be analyzed (i.e., sediment loading, soil characterization for relocation, monitoring wells for given activity), utility locates engagement, proposed drilling equipment, traffic control requirements, schedule of work (estimated drilling investigation dates and report completion), anticipated duration of the monitoring program where applicable, and schedule for remediation.
 - a. The scoping document must include:
 - Identification of the entity taking on the Qualified Professional (QP) requirements, signed and dated by the QP.
 - Reference to the City provided Purchase Order and/or Work Order.
 - b. NOTE: The scoping document is NOT a Procurement document or Proposal.
 - c. As it relates to soil relocation, the scoping document must refer to the inclusion of a Soil Characterization Report and appropriate receiving site documents, as prepared by a QP. This includes identification of required notifications to be submitted to the Ministry of Environment and Parks (ENV). Refer to PROCEDURAL MEMORANDUM TO CONSULTANTS - SOIL RELOCATION REQUIREMENTS: SOIL CHARACTERIZATION REPORT, RECEIVING SITES, AND NOTIFICATIONS for soil characterization report,

- receiving site, and notification requirements.
- d. As it relates to restoration, material for borehole backfill must be stated in the scoping document. If not confirmed at the time of Borehole Permit application, this information must be communicated to City staff prior to restoration execution.
2. Location Plan: A metric dimensioned/detailed Location Plan at a scale of 1:200 showing the location and depth of all proposed boreholes and all existing municipal infrastructure and utilities. Note that work is limited to the locations shown on the approved plan.
 - a. If the work is associated with a Building Permit application the borehole locations shall be depicted on the latest Civil site servicing plan.
 - b. If prepared by a Qualified Professional (i.e., Engineers and Geoscientists British Columbia, Architectural Institute of British Columbia, etc.), the applicant must ensure Location Plans and/or Site Servicing Plans are authenticated and in compliance with applicable professional association standards.
 3. A copy of comprehensive General Liability insurance policy (\$5,000,000 minimum) with the City of Victoria named as co-insured on the policy.
 4. Proof of the current Workers' Compensation Board registration along with proof of up-to-date assessment payment prior to commencement of work.
 5. A completed Contractor's Permit application. The required fee is \$35.
 6. Obtain a Street Occupancy Permit. The required fee is \$xx.
 7. Damage Deposit of \$2,000 for up to and including 4 boreholes and \$500 for each additional borehole.
 - a. The Security Deposit will be held until acceptance of the final decommissioning of all boreholes, and satisfactory completion of all surface restoration to City of Victoria standards.
 - b. The damage deposit will be returned to the provider of said damage deposit.
 8. The applicant is responsible for any Borehole Permit-related discharges to City storm drain systems. All discharges must be compliant with the City's Sanitary Sewer and Stormwater Utilities Bylaw and the associated Codes of Practice Program. If it is determined borehole activities will result in discharges to City systems, the City of Victoria Code of Practice Registration Form (Microsoft Word - Schedule C Registration.doc) must be submitted and approved by the City prior to starting the activities (refer to www.victoria.ca/stormwater).
 9. Where disturbance or temporary soil storage from borehole activities may result in sediment-laden runoff, especially near water bodies, or when work occurs near environmentally sensitive areas¹, the applicant is responsible for ensuring an Erosion and Sediment Control (ESC) Plan is in place, as completed by an ESC Professional. If deemed applicable by City staff during project permit review, an Erosion and Sediment Control Assurance Statement may be required².
 10. Ensure Development Permit required archaeological sites have been addressed prior to borehole activities. The applicant is responsible for ensuring compliance with the *BC Heritage Conservation Act*, including steps to determine whether a site is an archeological site. It is against the law to alter an archeological site without first obtaining a permit to do so from the Provincial Government. Contact B.C.'s Archaeology Branch for information.

¹ Environmentally sensitive areas are places that have special environmental attributes worthy of retention or special care. These areas are critical to the maintenance of productive and diverse plant and wildlife populations. Examples include Cecilia Ravine Park, Bowker Creek, woodlands, wetlands, shorelines, and herbaceous meadows. Refer to the City's Ecological Management section of the Official Community Plan and contact City Environmental Specialists for support.

² Engineers and Geoscientists BC, College of Applied Biologists, BC Institute of Agrologists. (2024). Joint Professional Practice Guidelines for Erosion and Sediment Control. Version 1.0. See Appendix A Erosion and Sediment Control Assurance Statement. Website: [Erosion and Sediment Control](https://www.erosionandsedimentcontrol.ca)

DRILLING REQUIREMENTS:

1. The applicant must ensure that all Prime Contractor regulations under BC Workers Compensation Board and Occupational Health and Safety Legislation are followed.
2. Obtain a complete Underground Check including BC One Call and have all required plans from all existing municipal infrastructure and third-party utilities (i.e., BC Hydro, Rogers, Fortis Gas, etc.) on site during the drilling. Utility locating companies may be required to confirm the accuracy of existing drawings and plans that may be out of date. The regulation and control of traffic in the vicinity of the work shall be in accordance with the standards contained in the latest edition of the "Traffic Management Manual for Work on Roadways" (see [2020 Traffic Management Manual for Work on Roadways - Province of British Columbia](#)) and conditions outlined in the Street Occupancy Permit. All associated costs are the responsibility of the Contractor.
3. Report any damage to any infrastructure that occurs during drilling immediately to the appropriate authority.
4. The Contractor shall be responsible for any damage which occurs due to their operations and shall make good such damage at their expense.
5. Drilling shall occur at City approved borehole locations only, as shown on the provided Borehole Permit Location Plan in the approved Borehole Permit package.
 - a. A revised application must be submitted for any additional boreholes.
6. The applicant must ensure the contractor is compliant with the City's "Sanitary Sewer and Stormwater Utilities Bylaw" Codes of Practice Program (refer to #8 under Conditions of Approval), including adequate mitigation measures for water run-off and slurry in accordance with Schedule "G" of City ["Sanitary Sewer And Stormwater Utilities Bylaw"](#).
7. If deemed required by City Staff or the Applicant, an on-site meeting with City staff prior to commencing work shall be arranged.
8. Borehole related reports and associated documents must be available to the City upon request.

CONTAMINATION MIGRATION REQUIREMENTS:

Contamination migration happens when a contaminated substance³ spreads from a site or parcel of land to the surrounding area (see [Contamination migration - Province of British Columbia](#)). Examples of migration may include a vehicle or heating oil tank spill or leak spreading hydrocarbons in the soil potentially impacting water sources and local vegetation; or volatile organic compounds (VOCs) from stockpiled or exposed contaminated soil become airborne and spreading to surrounding areas causing air quality issues and health problems for nearby residents. Below are City requirements for addressing potential contamination migration during permitted borehole activities.

1. If during any stage of borehole related activities there is reason to believe that one or more substances have migrated onsite or offsite (to a neighboring parcel) and is causing (or are likely causing) contamination of that parcel (including works under the Borehole Permit), the Responsible Person⁴ must immediately address the situation. This includes:
 - Contacting a QP to investigate the affected areas.
 - Notifying affected parties and the provincial ministry and submitting applicable notifications

³ A "substance" refers to any chemical, physical, or biological entity that can cause contamination in soil, water, air, or other environmental media and includes naturally occurring substances as well as those introduced through human activities ([Contaminated Sites Regulation](#))

⁴ The Responsible Person is legally accountable for the contamination at a site and includes current and past owners, operators, and anyone who has contributed to the contamination ([Table of Contents - Contaminated Sites Regulation](#), [Contaminated Sites Regulation](#))

and statements of disclosure.

2. As deemed by the QP, any soil from permitted boreholes is to be tested as per Provincial Regulations and kept on private property until adequately disposed of. Additional testing, soil relocation and remediation plans may be required by the QP. If the identified soils are to be temporarily stored on site, the applicant must ensure an ESC Plan is completed by an ESC Professional. An Erosion and Sediment Control Assurance Statement may be required (see #8 under Conditions of Approval).
3. The Responsible Person must notify the following entities within 15 days of becoming aware of the migration:
 - The affected neighboring parcel owner(s).
 - The City of Victoria including the Land Development Section [(250) 361-0300 or Eng-BHP-Applications@Victoria.ca] and the stormwater and environmental management staff contact ((ASteele@Victoria.ca).
 - The Ministry of Environment (see [Contaminated sites guidance and resources - Province of British Columbia](#)).
4. The Responsible Person must provide a Notification of Likely or Actual Migration (NOM), consistent with sections 57 and 60.1 of the *Environmental Management Act* (EMA) Contaminated Sites Regulation (CSR). Refer to Site remediation forms - Province of British Columbia.
5. The Responsible Person may be required to provide a Site Disclosure Statement (see [Identifying and disclosing sites that may be contaminated - Province of British Columbia](#)) as required under and the EMA and CSR, and the City's subdivision and land development requirements (see [Subdivision & Land Development | City of Victoria](#)). If deemed required by City Staff or the Applicant, an on-site meeting with City staff prior to commencing work shall be arranged.

RESTORATION REQUIREMENTS:

1. If the proposed borehole work is not associated with environmental monitoring, decommissioning and restoration of City property shall occur in the following way:
 - a. For roads:
 - Backfill the borehole with either concrete, Controlled Density Fill (CDF), or appropriate material as recommended by the QP and approved by the City.
 - Mill asphalt and match existing thickness for overlay with a minimum thickness of 75mm directly atop the borehole.
 - Hot-Mix asphalt shall be used and considered "permanent restoration".
 - If Cold-Mix asphalt is used, it shall be considered "temporary restoration".
 - NOTE: If Cold-Mix asphalt is used, the Damage Deposit provided shall be held until such time as permanent restoration is conducted and satisfactorily inspected to City standards.
 - Restore grade to original condition.
 - In addition to the Master Municipal Construction Documents Standard Detail Drawings (MMCDs), refer to examples of City Supplementary Standard Detail (SD) drawings SD G5a and SD G5b, attached, for supporting information.
 - b. For sidewalks:
 - Backfill the borehole with either concrete, CDF, or appropriate material as recommended by the consultant and approved by the City.
 - Full panel restoration is required to match existing adjacent concrete. This will be considered "permanent restoration".
 - If the sidewalk is asphalt, Hot-Mix asphalt shall be used and considered "permanent restoration".

- NOTE: If Cold-Mix asphalt is used, the Damage Deposit provided shall be held until such time as permanent restoration is conducted and satisfactorily inspected to City standards.
 - Restore grade to original condition.
 - See City Standard SD C15 *Typical Separated Sidewalk Details*, attached, for additional information.
 - c. For boulevards:
 - Backfill the borehole using native material and have the top 150mm backfilled with topsoil and reseeded. The backfill material shall be done in lifts to account for settlement.
 - d. Refer to City Standard SD P2 *Guidelines for Working Around City Trees* before starting work around trees.
 - e. For all drawings as prepared by a QP (i.e., Engineers and Geoscientists British Columbia, Architectural Institute of British Columbia etc.), they must be authenticated and in compliance with the applicable professional association standards.
 - f. When restoration work is complete, notify the City Permit Manager at Eng-BHP-Applications@Victoria.ca. The City Permit Manager will conduct a final site inspection within 3 business days. If the restoration is satisfactory to City standards, the damage deposit will be returned to the Depositor.
 - NOTE: An inspection is required prior to returning the Damage Deposit.
2. To decommission boreholes with environmental monitoring wells and/or soil vapor probes, the applicant must provide:
- a. For environmental monitoring related boreholes, a written declaration of decommissioning to the City's Engineering Department (Eng-BHP-Applications@Victoria.ca) including:
 - Method of decommissioning.
 - Where casting is used, remove the casting at grade, if set.
 - Drill the casing out over its complete depth, if installed.
 - Follow the steps in point 1 for backfill and final restoration as per the existing surface treatment.
 - Timeline of work.
 - b. Applicable permits/fees to be procured.
3. If the contractor fails to satisfactorily decommission the boreholes, monitoring wells and/or soil vapor probes following the end of the monitoring phase, the City may complete the decommissioning using the Damage Deposit to cover the cost of the restoration work. Any cost of the work greater than the deposit held shall be paid by the Applicant through invoice(s) issued by the City.

CLOSING

These procedural checklists have been prepared to provide applicants and City staff with a general list of criteria that must be considered when making and reviewing an application to complete boreholes in the City Right of Way.

For all Borehole Permit, allow a minimum of 10 business days to process and review and complete the application submission.

Upon receipt of the above information, City staff will review it for completion and will respond with any

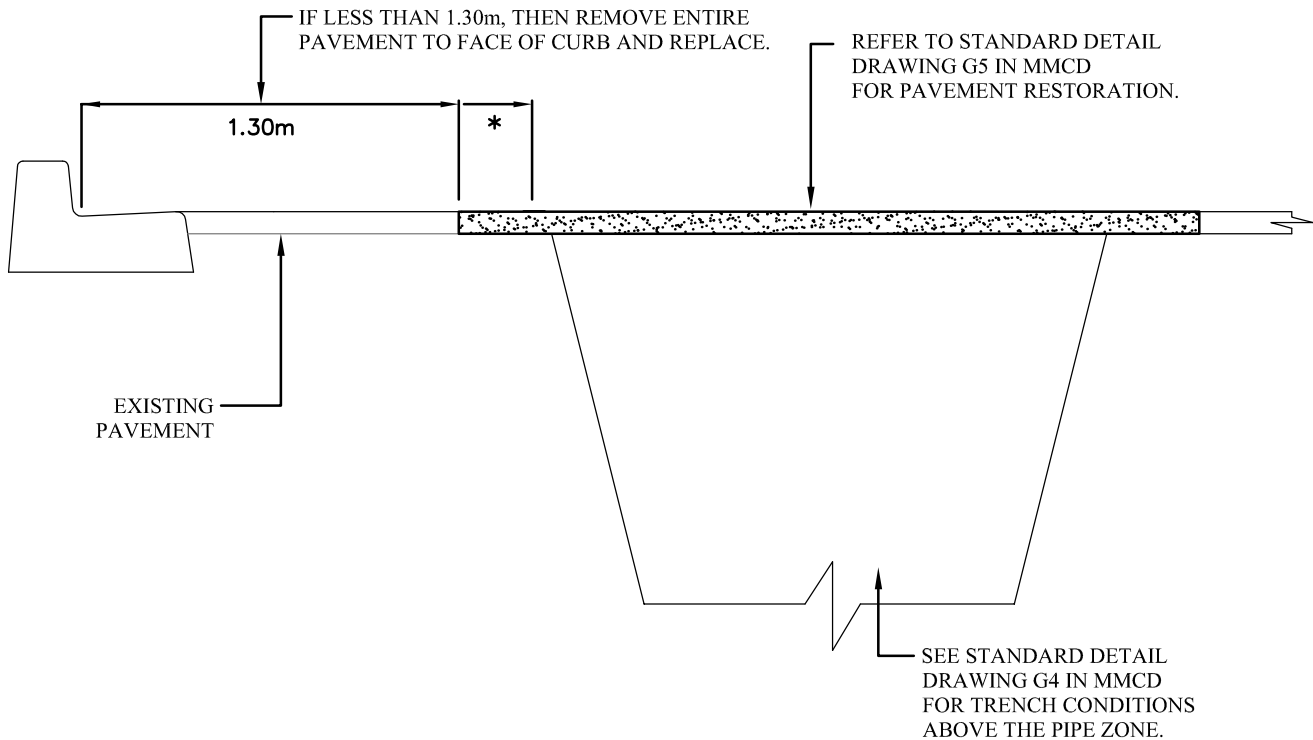
deficiencies or the approved permit package within 10 business days. No work shall commence until the Borehole Permit is issued by the Director of Engineering or an authorized representative.

Note: All fees and Security deposit required prior to the issuance of the Permit.

NOTE: *The City of Victoria accepts no responsibility for the accuracy of the submission with respect to foreign utilities, or City of Victoria infrastructure.*

Upon the issuance of this permit the contractor releases, indemnifies and saves the City of Victoria against all claims, demands, losses, damages and lien claims of every kind arising out of or in any way connected with the contractor's work.

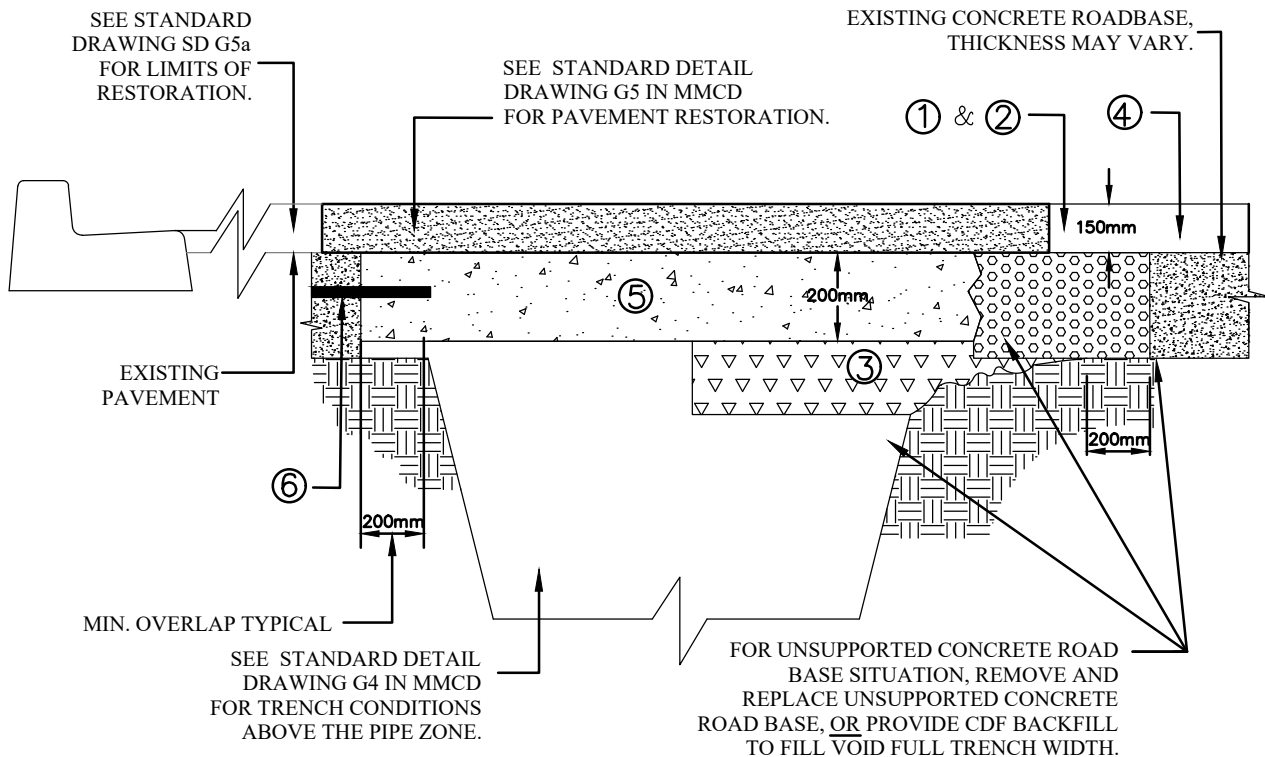
If you require any further assistance, contact the Land Development Section at (250) 361-0300 or at Eng-BHP-Applications@Victoria.ca.



NOTES:

MUNICIPALITY MAY REQUEST FURTHER ASPHALT REMOVAL DEPENDING ON PAVEMENT CONDITONS. REFER TO CONTRACT DRAWINGS AND DETAILS

* WHERE BIKE LANES EXIST, TO THE BIKE LANE PAVEMENT MARKING.



NOTES:

1. IF PAVEMENT THICKNESS IS 150mm OR LESS, REPLACE CONCRETE ROAD BASE UP TO EXISTING PAVEMENT LOWER LEVEL.
2. IF PAVEMENT THICKNESS IS GREATER THAN 150mm REPLACE CONCRETE ROAD BASE UP TO A LEVEL OF 150mm BELOW THE SURFACE OF EXISTING PAVEMENT.
3. COMPACTION TEST REPORT REQUIRED CONFIRMING BACKFILL MATERIALS AND SHOWING COMPACTION TO A DENSITY NOT LESS THAN 95% MODIFIED PROCTOR DENSITY AS PER MMCD GUIDELINES.
4. MUNICIPALITY MAY REQUEST FURTHER ASPHALT REMOVAL DEPENDING ON PAVEMENT CONDITIONS.
5. RESTORE CONCRETE ROAD BASE TO 200mm THICKNESS OR MATCH EXISTING.
6. IF EXISTING CONCRETE ROAD BASE IS SAWCUT, DOWELS SHALL BE REQUIRED. INSERT 30mm x 450mm EPOXY COATED PRE-FORMED TIE BARS SPACED AT 600mm CENTRES. DRILL 35mm HOLES ON 600mm CENTRES, 225mm DEEP, INTO EXISTING CONCRETE, AND GROUT THE BARS USING A QUICK SETTING MORTAR. REFER TO CONTRACT DRAWINGS FOR DETAILED SPECIFICATIONS.

CONCRETE MIX TO USE:

- OCEAN'S 40 MPa RAPID STRENGTH GAIN MIX (MIX CODE: 3PT 20 at 48)
- BUTLER'S 40 MPa RAPID STRENGTH GAIN MIX (MIX CODE: N402)
- ALTERNATE CONCRETE SUPPLIER PERMITTED AS LONG AS CONCRETE PERFORMANCE SPECIFICATIONS ARE MET. CONTRACTOR TO SUBMIT MIX DESIGN SHOP DRAWINGS FOR APPROVAL BY CITY ENGINEER.
- ACCELERANT IS ALLOWED WITH THESE MIX CODES. A COPY OF THE CONCRETE SLIP SHALL BE SUBMITTED TO THE CITY'S REPRESENTATIVE. CONCRETE SHALL REACH A MINIMUM OF 15MPa PRIOR TO PAVING. TRENCH SHALL BE SAFELY AND SECURELY STEEL PLATED WHILE CONCRETE CURES.

TRENCH RESTORATION FOR CONCRETE ROAD BASE

REVISIONS

DRAWING NUMBER:

SD G5b

GUIDELINES FOR WORKING AROUND CITY TREES

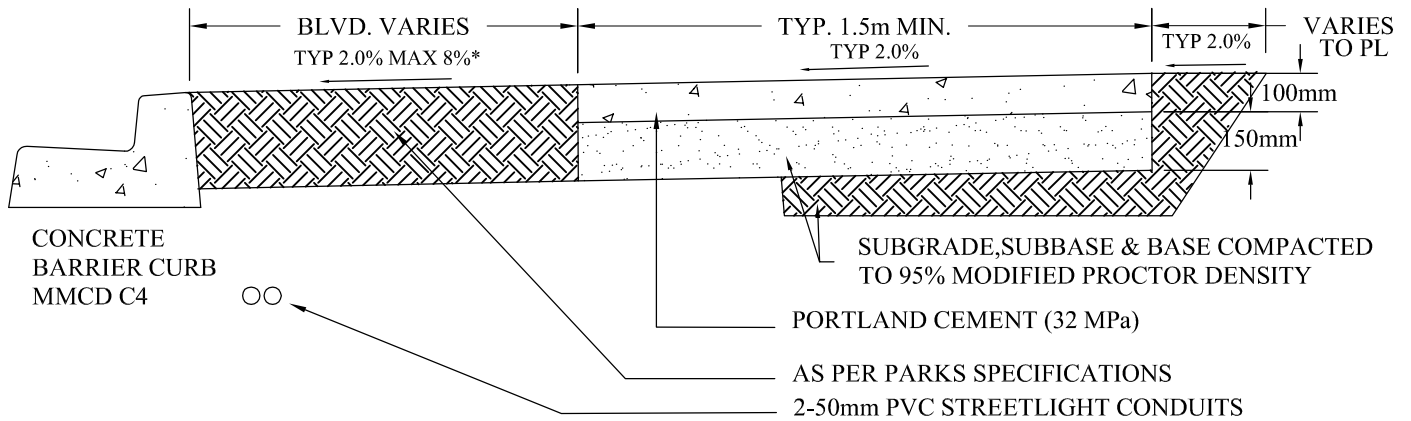
The City of Victoria and it's residents highly value their city trees. These trees remove toxins from the air, produce oxygen, reduce ground water erosion, aid in climate control, provide wildlife habitat, and increase property value. City trees grow in difficult conditions and are easily injured. Small injuries to the roots, trunk or branches can take years to heal or may even result in the tree dying or having to be removed

Before starting work around trees please contact the Parks Division at 250-361- 0600 or MIKE #3605 and a City arborist will be happy to meet on site to assist in developing a tree protection plan and discuss possible options.

You can also help protect our trees by following these guidelines.

PLEASE:

- Drive or park equipment on an established road or driveway. If you must drive or work within 5 meters of a tree, please protect the roots by covering them with plywood or another suitable material.
- Protect the tree's branches and trunk when operating equipment in the vicinity.
- Fuel equipment on a hard surface and not near trees.
- Contact a city arborist when excavating or trenching within 5 meters of a tree.
- Wash off cement debris or any other toxic material on a hard surface away from all trees.
- Store debris or building material on hard surfaces. If you must use the grass area under the tree please stay 5 meters away from all trees or protect the roots by covering them with plywood or another suitable material
- Do not fasten anything to trees.
- Contact a city arborist if roots need to be cut or removed.
- Report all tree damage to Parks.



SEPARATED SIDEWALK CURB & GUTTER

NOTES:

1. REMOVE ALL SOD AND ORGANIC MATERIALS FROM PROPOSED SIDEWALK LOCATION. BACKFILL ANY LOW AREAS .

2. BOULEVARD FROM PROPERTY LINE TO CURB TO SLOPE TO CURB.

* MAXIMUM SLOPE MAY BE VARIED AT THE DIRECTION OF THE CITY ENGINEER