

SPECIAL PROVISIONS – CONTRACT ITEMS SUPPLEMENTARY

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A8. CONSTRUCTION SIGNS, TRAFFIC CONTROL & TRAFFIC MANAGEMENT PLAN

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, GC7.06 and OPSS 706, the following shall also apply:

Interference with normal flow of traffic shall be kept to a minimum. The Contractor shall be prepared to supply and erect any barricades and signs which may be required for complete control of both pedestrians and vehicular traffic including competent flag persons in accordance with Ontario Manual of Uniform Traffic Control Devices. The Contractor shall further provide a traffic control plan in accordance with the most recent amendments to the Occupational Health and Safety Act. The lump sum price shall be deemed to have included this provision.

The Contractor shall also be responsible for supplying their hired help with any necessary safety and/or protective equipment required to perform the work safely.

A minimum of one lane of traffic shall be maintained at all times during construction. Two lanes of traffic shall be maintained at all other times. The Contractor's proposed sequencing and staging of works and operations is to make due allowance for this requirement. Work within intersections shall also be staged such that a minimum of one lane of traffic is maintained on the cross streets.

On **All Streets**, one lane of traffic may be closed to traffic during construction, in accordance with the "Traffic Control Manual for Roadway Work Operations". At all other times, all lanes of traffic shall be maintained. Road closures of any kind will only be allowed on an exception basis, and only upon approval of the Project Manager. The Contractor must submit potential road closure requests to the City, in writing, at least one (1) week prior to implementation, for review and approval. Allowances for such operations must be made in the Contractor's Traffic Control and Management Plan; all associated costs will be the Contractor's responsibility.

It is of critical importance that all planned construction activities be coordinated with the City's Operational, Traffic, Parking and Transit Departments. Notification on at least a weekly basis of planned works (schedule) will be required to ensure that the necessary detour signage, parking accommodations, bus routing and maintenance activities account for the active work zones within the project area. The Contractor must also work closely with the City's Construction Inspector and Contract Administrator to keep affected property owners informed of potential impacts to their businesses and residences and to minimize disruption to access and servicing of properties by planned construction activities.

Winter Maintenance

The successful Contractor will be responsible for winter control maintenance in compliance with Provincial minimum maintenance standards for snow clearing, storage and removal, salting and sanding activities within the construction work zones during the

course of the contract, including maintaining the sidewalks within the project area. All unit prices bid will be deemed to have included allowance for these provisions.

Property Access

Pedestrian access to all businesses and residences is to be maintained at all times whenever possible. Access closures are to be scheduled at least two (2) business days in advance between the City, the Contractor and the Business owner and/or Residents, including the type and form of any temporary access provisions. Any disruption to pedestrian access is to be kept to a minimum duration.

On **Regional Roads**, the Contractor will be required to backfill all their trench cut and install temporary restoration in accordance with the Regional Municipality of Niagara specifications at the end of the day's operations so that all lanes of two-way traffic can be maintained at night. All hazards and obstructions shall be properly barricaded and delineated with flashers in accordance with the Ontario Manual of Uniform Traffic Control Devices.

Communications

It will be the Contractor's responsibility to inform the various businesses and residences of, and/or the placement of no parking signs the day before, in order to reduce/eliminate any problems with parked vehicles that may interfere with their operations. Access to the abutting businesses and residences must be maintained at all times.

The Contractor shall advise the Police Department, Fire Department and Niagara Emergency Medical Service on a daily basis, with current status of the construction as it pertains to the passage of traffic within the contract limits.

The Contractor shall co-ordinate with Niagara Falls Transit to ensure minimum interruption to their bus schedules on **all streets**. Niagara Transit, school buses and garbage service vehicles will be given priority to maintain their schedule.

The Contractor shall also maintain/provide existing pedestrian access at all times to the businesses and residents during all phases of construction in an acceptable manner.

The traffic control signage requirements shall include the following:

Supply, locate, erect, operate, maintain, relocate as necessary and remove all necessary traffic signs, construction signs, including delineators, barricades and flashing lights, in accordance with the Ontario Traffic Manual (OTM) Book 7 and the latest edition of the "Traffic Control Manual for Roadway Work Operations - Field Edition".

The Contractor is responsible for the installation, daily maintenance and removal of all construction signage throughout the contract.

Regulatory signs and street name signs cannot be removed without approval from the City.

Any existing signs removed by the Contractor to accommodate construction shall be kept operational by placement on a temporary support.

All regulatory signs and street name signs will be replaced permanently by City forces.

Basis for Payment

In addition to the payment provisions noted in the Niagara Peninsula Standard Contract Document, the final ten percent (10%) of the lump sum price bid for this item will be held until project completion and will be paid as part of the Completion payment. The lump sum price bid shall be deemed to include full compensation for all the provisions noted herein.

A9. CONTINGENCY ALLOWANCE

The Contractor shall include in their tender the indicated contingency allowance in the Form of Tender.

Basis for Payment

Payment from this item will only be made for additional work approved in writing by the Contract Administrator. Work completed before receipt of written approval will not be compensated.

B1. TEST PITS (PROVISIONAL ITEM)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, the following shall also apply:

Exploratory test holes shall be at locations and depths as directed by the Contract Administrator and must be witnessed by the Contract Administrator or assigned delegate.

Backfill shall be Granular 'A', compacted to 100% Standard Proctor Maximum Dry Density. Alternatively, clear stone may be used as backfill material where hydrovac excavation equipment is used. Disposal of the excavated material shall be in accordance with Special Provisions – Contract Items Supplementary, Item B2.

The purpose of these test holes shall be to verify existing underground infrastructure where a design change is required or as determined by the Contract Administrator.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials, equipment and Granular 'A' backfill, necessary to complete the work.

This item is provisional. Prior written approval must be provided by the Contract Administrator. Compensation will not be considered if written approval is not sought in advance.

B2. EARTH EXCAVATION

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, OPSS.MUNI 206 and OPSS.MUNI 510, the following shall also apply:

Work under this item will also include the removal of asphalt, concrete, brick pavers and excavations of full road allowance widths as described herein.

The Contractor is responsible for sawcutting, excavating, separating and delivering any concrete or asphalt material to an approved recycling facility. Thickness of the concrete and asphalt will vary; however, no additional compensation will be made for the various depths. The removal of interlocking brick pavers shall also include removal of any concrete and/or granular base.

All asphalt and concrete must be sawcut. Sawcutting shall be to the limits shown on the construction drawings or as directed by the Contract Administrator.

Roadway excavation shall be inclusive of all required excavation from property line to property line on all roadways and include any additional quantities, as shown on the contract drawings.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials and equipment including sawcutting, and disposal of surplus or unsuitable excavated materials, necessary to complete the work as noted on the contract drawings or as directed by the Contract Administrator.

B3. GRANULAR MATERIAL

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, OPSS 314, 401 and 402, the following shall also apply:

All granular materials shall conform to the requirements of OPSS.MUNI 1010.

The unit price bid shall be complete compensation for the supply, hauling, placement, grading and compaction to the specified Standard Proctor Maximum Dry Density of Granular 'A'.

This item will be utilized for the Granular 'A' material for bedding, cover and backfill of all items for the water distribution system, sanitary sewer and storm sewer system when specified in the contract or indicated on the contract drawings. Only virgin Granular 'A' will be accepted for pipe bedding and cover.

This item will be utilized for the Granular 'A' under roads for base repairs and shall be placed at a depth specified in the contract and may be used for other purposes/as deemed necessary by the Contract Administrator. Only virgin Granular 'A' will be accepted for road base.

Granular 'A' must be installed on all road and sidewalk trenches to the existing grade to provide safe access.

The Contractor will be responsible for maintaining granular surfaces until the restoration work is carried out. The Contractor must include in this unit price bid all labour and equipment to remove the excess granular from the trenches prior to final restoration, and delivery of the granular to a location specified by the Contract Administrator. The Contractor is responsible to remove the granular in a manner that avoids contamination of the granular with asphalt, concrete or native material. Any contaminated material shall be removed at the Contractor's expense. Any cost for these requirements must be included in the unit price bid for the granular.

The unit price bid for this item shall include the fine grading and compaction of the sub-base immediately preceding the placement of granular road base material. No roadway granular is to be placed until the subgrade elevation has been checked by the City's Inspector.

Payment for all material quantities shall be determined by net weight as recorded by a Government certified weigh scale. The supplier will be responsible for providing suitable scales for all materials to be weighed. Weigh bills (tickets), shall be provided for each load of granular in accordance with SPGS G32.

Weigh tickets received after the monthly Progress Payment has been finalized, for deliveries made within that month's Progress Payment period **will NOT be accepted.**

The onus shall be on the Contractor to ensure that the City's Inspector is furnished with all weigh tickets on a daily basis, since these will form the method of measurement.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

Recycled Material

Recycled concrete (RCM) and asphalt (RAP) will not be permitted on this project.

Under no circumstances will recycled material of any kind be permitted for use as pipe bedding, pipe cover or road base material.

Recycled Granular

Consideration may be given for the use of recycled granular for deep trench backfill.

Where recycled material is imported as a substitution for virgin granular material, the cost savings will be shared between the Contractor and the Owner.

The successful Contractor shall submit a written proposal to utilize recycled granular to the Contract Administrator at the pre-construction review meeting. The Contractor must include with the written proposal certified copies of laboratory testing results confirming that the proposed recycled granular material conforms to the provisions of OPSS.MUNI 1010 for both composition (physical properties) and gradation as specified for Granular 'A'.

The City reserves the right to undertake any additional confirmatory testing it deems necessary, prior to approving the use of recycled material on this project. Therefore, access to the Contractor's recycled material stockpile(s) is to be made available for sampling and testing by a QA/QC testing company retained by the City to verify compliance with the above noted provision. The provisions of NPSCD General - Item G8 will apply to payment for testing in this regard.

Basis for Payment

Measurement for payment for recycled granular will be by the tonne (t).

Payment for all recycled granular quantities shall be determined by net weight as recorded by a Government certified weigh scale. The supplier will be responsible for supplying suitable scales for all recycled granular to be weighed. Triplicate numbered weigh bills shall be provided by the representative for each load of material as soon as delivery has been accepted.

Tenderers shall note that weigh bills for recycled granular materials will only be accepted for payment when delivery is made in the presence of the City's Inspector. Tenderers are advised to familiarize themselves with the Inspector's normal work hours.

All weigh tickets pertaining to all materials paid for by weight must show either "Tare and Net" or "Gross and Net" weights, if printimatic tickets are used. If printimatic tickets are not used, then the "Gross", "Net" and "Tare" must be given, otherwise the tickets will not be considered for payment.

No deliveries of recycled material to the site are to be made until written approval is received from the Contract Administrator. Approval will be subject to confirmation that the material complies with quality criteria and that cost savings will be shared between the Contractor and the Owner.

B6. SUBDRAIN (PROVISIONAL)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 405, the following shall also apply:

The unit price bid shall include coring into all structures as required for the connection of the subdrains, regardless of the concrete thickness. The unit price bid shall also include all labour, materials and/or equipment necessary to make the subdrain connection to the outlet structure and to existing subdrain with a manufactured PVC subdrain coupling connector.

It is the Contractor's responsibility to satisfy themselves as to the existing conditions and make allowance in their unit price bid, accordingly.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

This item is provisional. Prior written approval must be provided by the Contract Administrator. Compensation will not be considered if written approval is not sought in advance.

B8. CONCRETE CURB & GUTTER

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 353, the following shall also apply:

The unit prices bid shall also include the following:

- Supply and installation of steel rods as shown on Dwg. NFS-B03 at all catchbasin and curb repair sections.
- Any type of curb and/or gutter – match existing specifications.
- Required excavation to accommodate new installation, if not otherwise included in Contract Item B2, Earth Excavation.
- Topsoil and sod restoration shall be included in the price for curbs at a minimum width of 0.6m (one roll of sod). Clearing the area of debris, grading, rolling and watering shall also be included. Topsoil and sod restoration shall be in accordance with the Special Provisions - Contract Items Supplementary B21.
- All asphalt removal (including temporary asphalt curbs/infills), disposal and restoration with HL8 HS minimum width 0.3m and a thickness of 75mm
- All required Granular "A" material and compaction. Granular 'A' supply and placement shall be in accordance with Special Provisions - Contract Items Supplementary B3.
- Item B8h) will include supply and install of 2.4m long Precast Concrete Curb per OPSD 603.020, including all labour and materials required to anchoring into pavement. This item is for the Niagara Falls Humane Society parking lot overlay.

Restoration work shall be carried out within five (5) days after the sidewalk/curb has been placed. Payment for this item shall be made at 50% upon completion of the concrete work with the remaining 50% upon completion of the restoration to the satisfaction of the Contract Administrator.

The Contractor shall take due precaution to protect fresh concrete from being damaged, marred or defaced, particularly at driveway entrances. In the event that the fresh concrete is marred or damaged in any way, the Contractor shall breakout and replace the damaged sections. Patching or grinding of damaged, marred or defaced concrete will not be accepted. The unit price bid shall be deemed to have made due allowance for this requirement.

A total tolerance (or elevation variance) of 3mm will be accepted as a reasonable variance from the specified curb and gutter elevations. If the total tolerance is exceeded, the Contractor shall, at their own expense, remove and replace the concrete curb and gutter to the satisfaction of the Contract Administrator, at no additional cost to the contract.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B9. CONCRETE SIDEWALKS

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document and OPSS 351, the following shall also apply:

The unit price bid shall include all necessary equipment, materials and labour to excavate to subgrade, form, finish and cure 32 MPa concrete sidewalks to the specified thickness, on a 125mm granular base.

Granular 'A' (at a depth of 125mm) for sidewalk base shall be **included** in the unit price bid for item B9 Concrete Sidewalks. Granular 'A' supply and placement shall be in accordance with Special Provisions - Contract Items Supplementary B3.

Topsoil and sod restoration shall be included in the price for sidewalks at a minimum width of 0.6m (one roll of sod). Clearing the area of debris, grading, rolling and watering shall also be included. Topsoil and sod restoration shall be in accordance with the Special Provisions - Contract Items Supplementary B21.

Restoration work shall be carried out within five (5) days after the sidewalk/curb has been placed. Payment for this item shall be made at 50% upon completion of the concrete work with the remaining 50% upon completion of the restoration to the satisfaction of the Contract Administrator.

Commercial and industrial driveways shall also include wire mesh and an allowance to pour the drives in two (2) sections to allow access at all-time. As an alternative to two (2) separate concrete pours, the Contractor may elect to use 'High Early Strength Concrete' at no additional cost to the contract provided approval from the businesses is provided.

The unit price bid shall also include provisions for cold weather work as noted in OPSS 351.

A flat obstacle free surface is desired, therefore, do not apply a trowel finish at the joints or provide 'Dummy' joints.

Expansion joints shall be set in place prior to pouring and shall be full depth, spaced 30.0m c/c maximum. Contraction joints shall be spaced 2.5m c/c maximum and are to be saw cut to 1/4 thickness of the slab. The City will not accept any variance in the joint

spacing beyond a 50mm tolerance from that specified. Panels with a greater variance will be removed and replaced at the Contractor's expense.

Private concrete sidewalks will be constructed to match the existing or minimum 125mm depth, whichever is greater, and paid for under this item.

The Contractor is to adjust the sidewalk crossfall where required to allow for positive drainage from the driveway and housewalks. Where the new sidewalk has caused ponding, the Contractor shall remove and replace the sidewalk at no additional cost to the contract. The Contractor shall include the supply and installation of a bond breaker (either plastic or tar paper) when a new sidewalk is installed adjacent to the concrete curb. An expansion joint at this location is not required.

The Contractor shall take due precaution to protect the finished surface of freshly laid concrete sidewalk from being damaged, marred or defaced. In the event that the freshly placed concrete is marred or damaged in any way, the Contractor shall break out and replace the damaged sections. Patching or grinding of damaged, marred or defaced concrete will not be accepted. The unit price bid shall be deemed to have allowed for this contingency.

The unit price bid shall include drop sidewalk ramps at driveways as per OPSD 310.050 and at crossings.

Tactile warning plates shall be supplied and installed within concrete sidewalks at all road crossings in accordance with SPCS Item B34 and NPSCD Section 7 Standard Drawings.

Basis for Payment

Excavation to accommodate a grade difference greater than 75mm between an existing sidewalk elevation and the replacement sidewalk shall be paid for separately under the appropriate item in the Schedule of Quantities and Unit Prices, specifically Item B2 Earth Excavation.

Tactile Warning Surfaces shall be paid for under the appropriate item in the Schedule of Quantities and Unit Prices, specifically Item B34.

B10. SAWCUTTING PAVEMENT -BASE REPAIRS (PROVISIONAL ITEM)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents, the following shall also apply:

This item shall also apply to additional sawcutting of asphalt and/or concrete where approved by the Contract Administrator and not otherwise referenced within the contract, the Special Provisions – Contract Items Supplementary specifications or noted on the contract drawings.

Basis for Payment

Measurement for payment will be made per linear metre as measured in the field. Payment will be made at the unit price bid in the Schedule of Quantities and Unit Prices.

All other sawcutting costs shall be included in the appropriate item as specified in NPSCD General - Item G13.

This item is provisional and requires prior written approval by the Contract Administrator. Compensation will not be provided if written approval is not sought in advance.

B11. ASPHALT MILLING

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents, the following shall also apply:

Payment for item B11a will be made for any milling of areas that require butt joints at paving limits, butt joints for driveways, etc. as well as any milling that is required for asphalt boulevards.

Payment for item B11b will be made for any milling completed at a depth of 40mm to help shape the road surface. This will also include milling done for the entire width of the road.

Payment for item B11c will be made for any milling to remove ramps at crosswalks, catchbasins, manholes, driveway ends, etc., prior to paving.

It will be the contractor's responsibility to verify if traffic signal loops are present. If traffic signal loops are present on any of the streets, the contractor will be required to coordinate their work with the Regional Traffic Department prior to milling. The City will pay the Region directly for any associated costs.

Asphalt millings shall be delivered to the Municipal Works Service Centre at 3200 Stanley Ave, as directed by the Contract Administrator at no additional cost to the contract. Deliveries to the Service Centre must be made between 8:00 am - 4:00 pm, Monday to Friday. Should the Contract Administrator opt not to receive the asphalt millings, the Contractor shall remove and dispose of the millings at an approved facility at no additional cost to the contract.

The unit price bid shall be deemed to have made due allowance for this requirement.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B13. ADJUSTMENT OF APPURTENANCES

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 408, the following shall also apply:

Payment for these works shall include the adjustment of existing (and remaining) maintenance holes, catchbasins, ditch inlets, valve chambers and/or valve boxes located within the road allowance. No payment will be made under this item for newly constructed appurtenances.

Under no circumstances shall HDPE adjustment units be used on this contract.

The unit price bid shall include all materials, equipment and labour necessary to ensure that the final elevation of each appurtenance matches the final elevation of the proposed asphalt works.

All structures are to be set to finished asphalt elevation.

All costs associated, including the supply and installation of new frames, covers and grates, new valve/curb boxes, precast adjustment units, mortar or concrete, placement and compaction of Granular 'A' (as required) and Hot Mix Asphalt (as required), as well as any excavation and/or the breaking out of concrete within the road base, shall be deemed to have been included in the unit price bids under this item.

Replace Existing Valve/Curb Boxes

This item may be used where an existing valve and/or curb box cannot be successfully adjusted in the field and only upon written prior approval from the Contract Administrator.

No separate or additional payment will be made for the supply of materials and/or labour required to adjust new valve or curb boxes. Any and all costs associated with the adjustment of these valve and curb boxes shall be deemed to be included in the appropriate unit prices.

Replace Existing Maintenance Hole/Valve Chamber Frame & Cover, Catchbasin/Ditch Inlet Frame & Grate

Unless specifically identified on the contract drawings and in the Schedule of Quantities and Unit Prices any replacement of existing 'frame and covers' or 'frame and grates' must receive written prior approval from the Contract Administrator. Payment will not be entertained where the Contractor has failed to secure this approval.

Hinged catchbasin covers shall open away from the roadway.

Maintenance Hole/Valve Chamber frames and covers within the roadway in need of replacement as deemed by the Contract Administrator shall be replaced with a **self-adjusting frame and cover** from either East Jordan Iron Works (Product No. 00302201) or Bibby-Ste-Croix (Auto Stable C-50MONT.) Follow manufacturer's installation recommendations. MH top elevation shall be set to blend with the surrounding grades.

Replacing the 'frame and cover' or 'frame and grate' of an existing (and remaining) maintenance hole/valve chamber or catchbasin/ditch inlet shall include the salvage and delivery of the existing frame and cover/grate to the City's Service Centre at no additional cost to the contract.

No separate or additional payment will be made for the supply of materials and/or labour required to adjust new frames and covers/grates on existing (and remaining) maintenance holes/valve chambers or catchbasins/ditch inlets. Any and all costs associated with the adjustment of these frames, covers and grates shall be deemed to be included in the appropriate unit prices.

Salvaged Materials

Salvaged frames, covers and grates and valve/curb boxes shall be delivered to the City's Service Centre at 3200 Stanley Ave, as directed by the Contract Administrator at no additional cost to the contract. Deliveries to the Service Centre must be made between 8:00 am - 4:00 pm, Monday to Friday.

Basis for Payment

The unit price bid shall include all materials, equipment and labour necessary to ensure that the final elevation of each appurtenance matches the final elevation of the proposed asphalt works.

Where materials are to be salvaged and delivered to the City's Service Centre, 50% of the unit price bid shall be paid upon removal of the item and the remainder shall be paid upon receipt of the item at the Service Centre.

B14. SUPPLY AND PLACE HOT MIX ASPHALT

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 310, the following shall also apply:

Clause 14.09 of the NPSCD for price adjustment provisions is not applicable under this contract.

All materials shall conform to the requirements of OPSS.MUNI 1003 and OPSS 1150.

No extra payments will be made for any hand work involved in spreading or compacting the hot mix asphalt around radius, intersections, trench areas, areas between the existing asphalt and new gutters, curbs.

The unit price bid for Item B14a)i. shall include any hand work required to form a temporary asphalt curb to match the concrete curb and gutter at catchbasin sections where the concrete curb and gutter is not installed, or for any other reason deemed necessary by the Contract Administrator.

The unit price bid for Item B14a)i. shall also include the provision of placement of temporary ramping at wheelchair depressions, catch basins, manholes, driveways, at the limits of construction and other areas as instructed by the Contract Administrator.

The unit price bid for Item B14a)ii. HL8 HS shall include fine grading and compacting the granular base immediately prior to the placement of the base asphalt. This item will be used for the placement of HL8 HS in areas that require base asphalt repairs and granular

base repairs. The thickness of HL8 HS asphalt shall be placed to match the existing pavement thickness or at a minimum thickness of 75mm and is to be placed immediately after milling where base repairs are required.

If, due to delays, asphalt paving occurs in cold weather, there shall be no additional compensation for any heating, environmental charges or joint heating equipment that may be required to complete the work.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B15. ASPHALT WALKWAYS & DRIVEWAYS

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, OPSS 311, OPSS 314, and Special Provisions – Contract Items Supplementary, Item B14, the following shall also apply:

Existing asphalt driveway depths are to be matched if thickness is greater than that specified in the Niagara Peninsula Standard Contract Document, which are deemed to be the minimum requirement.

The unit price bid for this item shall be complete compensation for the preparation and additional handwork that may be required to restore driveway aprons and driveways, as necessary, and as directed by the Contract Administrator.

The unit price bid shall include all Granular 'A' required to complete the driveway restoration.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has created or caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

The Contractor must take all due precaution not to disturb any areas outside the limits required to complete the proposed works safely. Areas disturbed outside these limits will be repaired in accordance with the specifications outlined in this contract at the Contractor's own expense and solely at the discretion of the Contract Administrator.

Winter Work

The Contractor shall make due allowance in the unit price bid for the additional effort required to maintain asphalt driveways during winter construction.

The extent of the driveway restoration will be in accordance with the initial sawcut limit as approved by the Contract Administrator, prior to the asphalt driveway removal. Any subsequent asphalt damage, maintenance and/or repair will be the Contractor's

responsibility at no additional cost to the contract. Once any part of the asphalt is removed to facilitate construction, the Contractor must inspect the driveway on a daily basis to remove any broken asphalt pieces and maintain an even granular surface so as to minimize the risk of damage to pedestrians, vehicles, snowploughs and/or snow blowers.

Curb boxes are to be set flush with the finished driveway surface.

Cleanouts in asphalt shall be adjusted to the finished asphalt grade complete with a flat cleanout cap flush with the finished surface.

Basis for Payment

The unit price bid shall include all necessary labour, materials and equipment to complete the work in accordance with the specifications of this contract including, but not limited to, sawcutting, removals, disposals, surface preparation, backfilling, grading, compaction, bond breaker and tack coat.

In addition to the above, the unit price bid will cover any required restoration work between the contract limits (property line) and building face, where directed by the Contract Administrator.

Payment for supply and placement of Hot Mix Asphalt shall be paid for separately under the appropriate item in the Schedule of Quantities and Unit Prices.

B16. CONCRETE PAVEMENT & DRIVEWAYS

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document and OPSS 350, the following shall also apply:

Existing concrete driveway depths are to be matched if thickness is greater than that specified in the Niagara Peninsula Standard Contract Document, which are deemed to be the minimum requirement.

The unit price bid for this item shall be complete compensation to restore private driveways and driveways adjacent to sidewalk removals or as otherwise noted on the contract drawings or directed by the Contract Administrator.

The unit price bid shall include all Granular 'A' required to complete the driveway restoration.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has created or caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

The Contractor must take all due precaution not to disturb any areas outside the limits required to complete the proposed works safely. Areas disturbed outside these limits will

be repaired in accordance with the specifications outlined in this contract at the Contractor's own expense and solely at the discretion of the Contract Administrator.

Curb boxes are to be set flush with the finished driveway surface.

Cleanouts in concrete shall be adjusted to the finished concrete grade complete with a flat cleanout cap flush with the finished surface.

Basis for Payment

The unit price bid shall include all necessary labour, materials and equipment to complete the work in accordance with the specifications of this contract including, but not limited to, sawcutting, removals, disposals, surface preparation, backfilling, grading, compaction, and bond breaker.

In addition to the above, the unit price bid will cover any required restoration work between the contract limits (property line) and building face, where directed by the Contract Administrator.

B17. ADJUST PAVING (STONE) BRICK DRIVEWAY

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, the following shall also apply:

As per the Niagara Peninsula Standard Contract Document, the Contractor shall replace any paving stones broken or damaged as a result of removal or stolen from the stockpile, at no additional cost to the contract.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

The unit price bid shall include all Granular 'A' required to complete the driveway restoration.

Should paving stones be left over and the property owner would like to keep the extra paving units, the Contractor is to stockpile the paving stones in a safe manner and secure place for the owner. If the property owner does not wish to keep the extra paving units, they will become the property of the Contractor for his reuse and/or disposal. Paving stones shall not be removed from site without the permission of the property owner. Any stones that are removed from site without the property owner's permission are to be replaced by the Contractor at no additional cost to the contract.

Basis for Payment

The unit price bid for this item shall be complete compensation to restore sidewalks, driveway aprons and driveways, as necessary, and as directed by the Contract Administrator.

The unit price bid shall include the cost to supply and place a 50mm limestone screening bedding and a sharp course granular sand between the pavers.

In addition to the above, the unit price bid will cover any required restoration work between the contract limit (property line) and building face, where directed by the Contract Administrator.

Payment shall be as stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B18. GRANULAR DRIVEWAYS

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document and OPSS 314, the following shall also apply:

The Contractor is to note that the granular driveway thicknesses specified in the NPSCD are minimum requirements. Existing driveway depths are to be matched if greater.

All granular driveways are to be compacted to 100% Standard Proctor Maximum Dry Density.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

Basis for Payment

The unit price bid for this item shall be complete compensation to restore driveway aprons and driveways, as necessary, and as directed by the Contract Administrator.

Payment shall be as stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B21. TOPSOIL AND SOD

In addition to the conditions stipulated in the Niagara Peninsula Contract Document, OPSS 802 and OPSS 803, the following shall also apply:

All areas to be sodded shall be graded to provide proper drainage. Any areas on private property shall also be included.

All unnecessary damage to front lawns, boulevards or grass areas caused by the Contractor's carelessness shall be reinstated at his/her own expense.

Topsoil

Topsoil shall be a PREMIUM BLEND, weed free, and naturally sterilized through composting.

The blend shall consist of:

- 50% Triple Mix (30% mixture of topsoil, sands, and shredded wood mulch/30% mixture of black organic compost and manure/30% mixture of peat loam); and
- 50% Premium Topsoil (50% mixture of topsoil, sands, and shredded wood mulch/ 25% mixture of black organic compost/ 25% mixture of composted cow manure).

In general, the resulting topsoil mix should meet the following parameters:

pH:	6.5 – 7.5
Potassium:	100 – 120 ppm
Phosphorous:	15 – 30 ppm
Magnesium:	100 – 120 ppm
Organic Matter:	≥ 3%

Unless otherwise specified, the minimum depth of applied Premium Blend Topsoil shall be 100 mm.

Basis for Payment

Measurement for payment shall be square metre of area topsoiled and sodded.

The unit price bid shall include all materials, equipment and labour necessary to complete the work and shall include grading and the supply and application of fertilizer and water necessary to ensure growth within the one year maintenance period.

B30. BASE REPAIRS – GENERAL – PROVISIONAL ITEM

The unit price bid per square metre of base repair shall include the following:

- Local Roads:
 - Excavation of the road base and earth to a depth of 450mm, including fine grading and compaction of the sub-grade.
 - Supply and placement of 450mm depth of granular A material including grading and compaction to 100% Standard Proctor Density.
 - Contractor is responsible for additional materials required due to over excavating.

Where the contractor has excavated beyond the limits or depth indicated, there shall be no additional compensation for the excavation, disposal or restoration.

B37. LINE PAINTING

In addition to the conditions stipulated in OPSS 710 the following shall also apply:

This specification covers the requirements for the application of pavement markings onto the surface course asphalt and shall include surface preparation, pre-marking and placement of markings that will remain visible until such time that the top lift of asphalt is applied; typically the following construction season.

Line painting requirements on **all streets** will require coordination and consultation with the City’s Manager of Transportation Engineering. All coordination for pre-marking and field reviews of proposed markings will be the contractor’s responsibility.

Markings that are faded will be required to be reapplied at no additional charge to the contract to ensure the safety of the motoring public.

Only traffic paint approved by the Ministry of Transportation of Ontario shall be used.

- Organic Solvent Based Traffic Paint shall be in accordance with OPSS 1712;
- Water-Borne Traffic Paint shall be in accordance with OPSS 1716; and
- Traffic Paint Reflectorizing Glass Beads shall be in accordance with OPSS 1750.

Spray equipment shall be used for the application of the both the solvent based or water-borne traffic paint, specifically a self-propelled lane line marking machine capable of producing top quality marking with true edges free from waviness or variations and conforming to the MUTCD. The equipment shall also be provided with a glass bead dispenser to apply overlay glass beads at the recommended rate.

The pavement surface must be at least 5°C (for solvent based paint) or 10°C (for water borne paint) and the paint temperature shall be between 40°C and 70°C at the time of application.

The rate of application for overlay glass beads per litre of traffic paint shall be:

% Volume Solids of Traffic Paint	Glass Beads Required (kg)
40-56	0.7
57-70	0.8

Only traffic markings containing 150g/l of VOC’s or less will be permitted between May 1, through to October 15. Therefore, the type of paint used will be determined by the date of application.

Pavement pre-marking shall be undertaken by the Contractor and approved by the Owner prior to the application of permanent markings. The unit price bid shall be deemed to have made allowance for these processes.

It is the Contractor's responsibility to coordinate a field review of the pre-markings through the City's Manager of Transportation Engineering directly.

Mathew Bilodeau, C.E.T.

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Transportation Services;
905-356-7521, ext. 5204
mbilodeau@niagarafalls.ca

Basis for Payment

The unit price bid shall be full compensation for all necessary labour, materials and equipment to complete the work in accordance with the specifications.

PROVISIONAL ITEMS

NOTE: Provisional items have been included within this contract in an effort to receive competitive pricing in the unlikely event that they may be required during construction. These items may be related to any infrastructure works (Roads/Sewer/Watermain) within the specific Section of the Schedule of Quantities and Unit Prices and as such have been separated within these supplementary specifications.

All Provisional Items must be approved by the Contract Administrator.

P1. 32MPA CONCRETE

This concrete shall have minimum 28 day strength of 32 MPa. The price indicated in the Schedule of Quantities and Unit Prices per cubic metre (m³) shall include supply and placement of concrete in trench at any depth for whatever purpose as directed by the Contract Administrator.

P2. USE OF REGIONAL POLICE FOR TRAFFIC CONTROL

At any intersection within the project limits and any of the cross streets within the project limits, in the interest of the safe movement of both vehicular and pedestrian traffic, the City or Region may require the use of Regional Police forces to undertake Traffic Control during certain Contractor operations. The need for utilization of Regional Police forces will be solely judged by the City, in consultation with the Contractor and/or Region as applicable.

This issue will be reviewed along with the Contractor's Traffic Control and Management Plan during the Pre-Construction Review Meeting. The scheduling and coordination of this work will be undertaken by the Contractor and the unit price bid shall be deemed to have made due allowance for this requirement.

P4. UNSHRINKABLE FILL

The provisions of OPSS 1359 apply as amended herein.

All unshrinkable fill materials shall conform to the requirements of OPSS.MUNI 1350.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials and equipment necessary to supply and place unshrinkable fill for whatever purpose as directed by the Contract Administrator.

P5. 19MM CLEAR STONE

All 19mm clear stone materials shall conform to the requirements of OPSS.MUNI 1010.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials and equipment necessary to complete the work for supplying and placing the 19mm clear stone as shown on the contract drawings or as directed by the Contract Administrator.

Payment will be by the tonne, based on submitted weigh tickets for same.

P6. CONSTRUCTION OF ASPHALT SPEED HUMPS

Speed humps shall be constructed as per the appended drawings. Location of speed humps within the project areas will be specified by the Contract Administrator.

Basis for Payment

The unit price bid shall include all necessary labour, materials and equipment to complete the work in accordance with the specifications of this contract including, but not limited to, sawcutting, removals, disposals, surface preparation, backfilling, grading, compaction, bond breaker and tack coat.

Payment for supply and placement of Hot Mix Asphalt shall be paid for separately under the appropriate item in the Schedule of Quantities and Unit Prices.

P10. SURVEYING OF EXISTING AND PROPOSED GRADES

The unit price bid is to include all labour, materials, traffic control devices and equipment required to properly survey sections of roadway, sidewalk, curbs, driveways and any other areas as required or as directed by the Contract Administrator, to verify surface drainage conditions and correct existing issues prior to asphalt paving.

Surveying may also be required for any reason deemed necessary by the Contract Administrator.

Any discrepancies or issues discovered during surveying are to be brought to the attention of the Inspector and Contract Administrator.

The Contract Administrator may request a sketch, grade sheet or CAD point file following the completion of a survey. The unit price bid shall include any costs associated with providing a copy of the survey information, grade sheets, sketches or CAD point files. This information is to be provided within two (2) days of completing the survey.

This item is provisional. Prior written approval must be provided by the Contract Administrator. Compensation will not be considered if written approval is not sought in advance.