November 2009



CONSTRUCTION SPECIFICATION FOR MAINTENANCE OF TRAFFIC

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TS 1.00.01 SCOPE

This specification covers the requirements for the provision of all labour, equipment and material necessary for the construction and maintenance, to a standard satisfactory to the Contract Administrator, of the following:

- 1) Temporary traffic lanes.
- 2) Temporary access to private driveways and side streets.
- 3) Temporary pedestrian facilities (sidewalks) for the convenience of the public.
- 4) Temporary bicycle facilities.
- 5) Site fence, crowd control barrier or other barrier as specified to separate work areas from those used by the public.
- 6) Paid Duty Police Officers, Traffic Control Persons, signs, barricades, delineators, lights and other traffic control devices in conformance with the latest edition of the Ontario Ministry of Transportation (MTO) Ontario Traffic Manual Book 7 "Temporary Conditions" and Occupational Health and Safety Act (OHSA).

TS 1.00.02 REFERENCES

This specification refers to the following specifications and publications:

Ontario Provincial Standards

OPSS 553 – Concrete Barriers

OPSS 1352 - Precast Concrete Barriers

City of Toronto Standard Specifications

TS 310 – Construction Specification for Hot Mixed, Hot Laid Asphaltic Concrete Paving

TS 501 – Amendments to OPSS 501 – Construction Specification for Compacting

TS 1010 – Amendments to OPSS 1010 – Material Specification for Aggregates – Granular A, B, M, and Select Subgrade Material

City of Toronto Standard Drawings

T-216.02-12 – Crowd Control Barrier

Canadian Government Specifications Board

CGSB 1-GP-181 M - Coating: Zinc Rich, Organic, Ready Mix

Toronto Police Service

Guidelines for Paid Duty Police

Ontario Ministry of Transportation

Ontario Traffic Manual Book 7 "Temporary Conditions"

TS 1.00.03 DEFINITIONS

For the purposes of this specification the following definitions apply:

Crushed Aggregate: means pieces of aggregate having at least one well-defined face resulting from fracture. Particles with smooth faces and rounded edges, or with only small chips removed, are not considered crushed.

HL, **Hot Mix**, **Mixture**, **Mix**: means hot mix, hot laid asphaltic concrete.

HL Types: means the hot mixes specified in Table 1 of TS 310.

TS 1.00.04 SUBMISSIONS AND DESIGN REQUIREMENTS

TS 1.00.04.01 Hot Mix Asphalt

All submission and design requirements for hot mix asphalt shall be as specified in TS 310, except that trial batches will not be required.

TS 1.00.05 MATERIALS

TS 1.00.05.01 HL 3F (Fine) Asphalt

All HL 3F (FINE) asphalt shall meet the requirements of TS 310.

TS 1.00.05.02 HL 8 Asphalt

All HL 8 asphalt shall meet the requirements of TS 310.

TS 1.00.05.03 Crushed Aggregate

All crushed aggregate shall be Granular 'A' and shall meet the requirements of TS 1010.

TS 1.00.05.04 Site Fence

All site fence shall consist of steel 'T' posts, top wire and plastic fencing.

Steel 'T' posts shall be 50 x 50 x 2400 mm metal stakes primed with one brush coat of black zinc rich paint to CGSB 1-GP-181 M.

The fencing shall be constructed of heavy duty, high visibility, orange plastic and shall be a minimum of 1.2 m high.

The top wire shall be stranded wire with a minimum diameter of 4.1 mm or 8 gauge.

TS 1.00.05.05 Crowd Control Barrier

The crowd control barrier shall be in accordance with T-216.02-12 and shall be similar to those supplied by Mark-All Services Incorporated for their Type 'B' Crowd Control Barrier with smooth rounded corners (551 Piercey Road, Bolton, Ontario, L7E 5B5, 905-951-2700) or approved equivalent.

The crowd control barrier shall be painted yellow and have a solid piece of reflective tape placed along the top rail. The reflective tape shall be a minimum 600 mm in length and shall be centred on the top rail.

TS 1.00.05.06 Temporary Barrier

All temporary barriers shall be of the type listed below or as directed by the Contract Administrator.

- 1) Precast concrete barrier, with an I-Lock connection, meeting the requirements of OPSS 1352.
- 2) Triton barrier as manufactured by Energy Absorption Systems Inc. (One East Wacker Drive, Chicago, Illinois, 60601 (312) 467-6750). The local supplier of Triton barrier is Lecol Co. Ltd. (689 Warden Avenue, Units 15 & 16, Scarborough, Ontario, M1L 4R6 (416) 694-4420) or approved equivalent.

TS 1.00.06 EQUIPMENT – Not Used

TS 1.00.07 CONSTRUCTION

TS 1.00.07.01 General

All temporary construction and temporary traffic maintenance shall be carried out to the satisfaction of the Contract Administrator and in accordance with the temporary traffic management plan conformed to the requirements of Ontario Traffic Manual and Ontario Manual of Uniform Traffic Control Devices. The Contract Administrator will give written notification of any deficiencies, and the Contractor shall initiate repairs within 24 hours.

The City of Toronto reserves the right to contract with others to complete any repairs that have not been initiated within 24 hours of written notification. All costs for such repairs will be deducted from monies owing under the contract.

All concrete, asphalt and contaminated aggregate, used for maintenance items, shall be excavated and disposed of, off the site. All material deemed reusable, by the Contract Administrator, shall be graded into and compacted to form part of the roadway subbase or other temporary work. No additional payment will be made for the rehandling of this material.

TS 1.00.07.02 Site Meetings

Regular site meetings will be held every week or every two weeks, or as required by the Contract Administrator, to discuss traffic management and progress of work. Attendance will be required by at least one representative from the Contractor.

The Contractor shall be responsible for the following:

- 1) Coordinating and organizing attendance of subcontractors responsible for any work to be discussed as part of the agenda.
- 2) Informing the Contract Administrator, in advance of the meeting, of all items to be added to the agenda.
- 3) Ensuring that the Contractor representatives in attendance have the required authority to commit the Contractor to actions agreed upon.

TS 1.00.07.03 Temporary Traffic Lanes

At least two paved lanes of a minimum width of 3.05 m each shall be kept open to traffic at all times. Where additional width is available, it should be used to provide wider curb lanes. Any portions of such lanes which, in the opinion of the Contract Administrator, are required outside the edge of the existing pavement shall consist of 75 mm of HL 8 hot mix asphalt over a 225 mm thickness of graded crushed aggregate, compacted to meet the requirements of TS 501.

Prior to the placing of the stone and asphalt layers, selected excavated material from either roadway or sewer excavations shall be used to fill ditches or other low areas and shall be compacted to 100% of the Standard Proctor Maximum Dry Density.

TS 1.00.07.04 Side Streets

The Contractor shall maintain two-way traffic on side streets wherever possible. If necessary and subject to the approval of the City, traffic on side streets may be reduced to one lane for a limited period of time. If the side street is to be reduced to one lane, there must be a qualified Traffic Control Person (TCP) or a Pay Duty Police Officer (PDPO) present from the time of lane reduction until the side street is open to two-way traffic. The requirements for a PDPO are as described in TS 1.00.07.11.03 of this specification.

TS 1.00.07.05 Private Driveways

The Contractor shall maintain access to driveways wherever possible. Driveways greater than 6.0 metres in width shall have access maintained at all times. Construction shall be scheduled to allow temporary access to either half of the driveway. Such temporary access shall consist of a layer of well compacted crushed aggregate placed to a minimum thickness of 150 mm and a minimum width of 3 m, or as specified in the Contract Documents.

TS 1.00.07.06 Temporary Sidewalks

The Contractor shall provide and maintain safe and convenient facilities for pedestrian traffic through the areas under construction. These facilities shall provide for a dry, hard, even surface at all time. Such temporary sidewalks shall consist of a layer of well compacted crushed aggregate placed to a minimum thickness of 100 mm, and a layer of well compacted smooth asphalt surface placed on top to a minimum thickness of 75 mm. A minimum vertical clearance of 2.5m shall be provided.

Wheelchair access shall be maintained at all times.

All pedestrian traffic shall be separated from the construction area by means of a temporary site fence or pedestrian control barrier. If the erection of a temporary site fence or pedestrian control barrier is not feasible, the Contractor shall seek approval from the City to use traffic control barrels (TC 54).

The Contractor shall provide sufficient signs to direct pedestrians around all sidewalk detours.

TS 1.00.07.07 Bicycle Facilities

The Contractor shall provide and maintain safe and convenient facilities for bicycle traffic areas under construction. Where a bicycle lane or path exists within the work area, temporary facilities shall be provided. Such temporary bicycle facilities shall consist of a layer of well compacted, crushed aggregate placed to a minimum thickness of 100 mm, a layer of well compacted smooth asphalt surface placed on top to a minimum thickness of 75 mm, and a minimum width of 1.5 m for one way traffic and a minimum width of 2.5 m for two way traffic. A minimum vertical clearance of 2.5 m shall be provided.

Cyclists shall be directed to use traffic lanes, follow a detour or use pedestrian facilities after dismounting. All information with regard to the cyclists shall be supplied and maintained by the Contractor.

TS 1.00.07.08 Site Fence

The Contractor shall supply and maintain a continuous site fence to separate the travelled portion of the road or pedestrian area from the area under construction when specified.

Fence posts shall be spaced at a maximum of 3 m apart. Sleeves shall be placed in the concrete base on the first half of the pavement to be constructed, so that the posts are clear of the excavation for the second half. The site fence shall be removed following the completion of the road base and the sleeves shall be filled with concrete of the same type as used for the construction of the concrete road base. The construction area shall then be isolated from the public sections by the use of approved delineators, as specified in the latest edition of the MTO-Ontario Traffic Manual Book 7 "Temporary Conditions".

The Contractor may, subject to the approval of the City, substitute approved delineators as specified in the latest edition of the MTO Ontario Traffic Manual Book 7 "Temporary Conditions", for the site fence.

The top wire shall be threaded through the top portion of the fence, every 3 or fewer holes and drawn taut by machine. The top wire shall not be tightened by hand. The top wire shall be securely fastened to each post using standard tie wire. Every 100 mm or at every corner or break in the fence, the top wire shall be fastened to the bottom of the next post, to provide stability.

TS 1.00.07.09 Crowd Control Barriers

Unless otherwise specified, all costs associated with the requirements of crowd control barrier throughout the contract for any reason shall be borne by the Contractor.

Crowd control barriers shall be placed between the construction areas and the pedestrian traffic. The triangular base shall be facing the construction area to minimize any obstructions to the pedestrian traffic.

Adjacent sections shall be connected at all times and pulled taut to form a continuous unbroken chain. Sections at the ends of each chain shall be secured to a section of site fence or a solid structure, such as a pole or sign. Crowd control barriers shall prevent pedestrian traffic from gaining access to the construction area.

Construction areas shall be completely isolated from pedestrian traffic, at all times.

For contracts with multiple staging, the Contractor may be required to relocate the barrier sections from one stage to the next. The Contractor may also be required to relocate sections of the crowd control barrier on a daily basis to facilitate construction access or to temporarily increase the work area. The cost of relocation of crowd control barrier between stages throughout the contract is included as part of the item for staging requirements unless a separate pay item is provided in the contract documents for the relocation of crowd control barrier.

TS 1.00.07.10 Temporary Barrier

Temporary barriers shall be placed between the construction areas and the vehicular traffic, as detailed on the contract drawings or as directed by the Contract Administrator. Triton barriers require a "clear zone", as specified by the manufacturer, between the construction area and the vehicular traffic.

Preparation of the base, if necessary, shall meet the requirements of OPSS 553, except that the slope of the foundation for the Triton Barrier shall not exceed 5% when measured perpendicular to the barrier.

Supplying, placing, relocation and removal of the temporary concrete barriers shall meet the requirements of OPSS 553.

End treatments for temporary concrete barrier shall be as specified in the contract or as directed by the Contract Administrator.

The supply, placing, relocation and removal of the Triton barrier shall be according to the manufacturer's "Triton Barrier Application Manual."

TS 1.00.07.11 Traffic Control Plan, Traffic Protection Plan, Paid Duty Police Officers, Traffic Control Persons, Signs, Barricades, and Other Traffic Control Devices

TS 1.00.07.11.01 Traffic Control Plan

The Contractor shall develop a Traffic Control Plan as stipulated in the MTO Ontario Traffic Manual Book 7 "Temporary Conditions". The Traffic Control Plan will include detours, staging sequences, vehicle access and egress from worksite, temporary barriers, and removal of old pavement markings for complex projects. For minor projects, the Contractor may select the appropriate typical layouts from Book 7.

The Contractor Administrator and/or the appropriate Transportation Services Representative shall review The Traffic Control plan. Any changes to the Traffic Control Plan should be approved by the Contractor Administrator and/or the Transportation Services Representative.

TS 1.00.07.11.02 Traffic Protection Plan

The Contractor shall develop a Traffic Protection Plan for the protection of workers in the work zone, as required by Regulations 213/91 and 145/00 under the Occupational Health and Safety Act (OHSA). The Traffic Protection Plan shall conform to the requirements of all pertinent acts and regulations. The Contractor shall submit the Traffic Protection Plan to the City for record before the construction begins. All traffic protection measures shall be carried out to the satisfaction of the Contract Administrator and in accordance with the traffic protection plan submitted.

TS 1.00.07.11.03 Traffic Control Persons and Traffic Control Devices

The Contractor shall provide, place in service, maintain and remove all of the traffic control devices and TCPs as required by the MTO Ontario Traffic Manual Book 7 "Temporary Conditions", and as per Occupational Health and Safety Act (OHSA) and Ontario Regulation 145/00 for Construction Projects and shall conform to the Traffic Control Plan. The Contractor shall ensure that sufficient traffic control devices and TCPs are always readily available to meet all the traffic control requirements on site. No claims will be considered for Contractor's loss due to the unavailability of TCPs and any traffic control devices.

In addition, the Contractor shall provide, place in service and maintain and remove special construction signs, where appropriate, to advise of rough surface, raised maintenance covers, timber decking, steel plates, narrow lanes and detours for motor vehicles, bicycles, and pedestrians on all approaches to and within the areas under construction.

The maintenance of all signs, barricades and other traffic control devices is a continuous, 24-hour-a-day obligation. The Contractor must provide a contact that will be available at all times, throughout the duration of the project.

The Contract Administrator will issue a verbal and/or a written warning to the Contractor when the Contractor is found failing to protect the site in accordance with Ontario Traffic Manual Book 7 "Temporary Conditions". Upon receipt of the warning, the Contractor shall rectify all traffic control deficiencies to the satisfaction of the Contract Administrator without delay.

If the Contractor fails to rectify the deficiencies immediately, the City of Toronto's Transportation Services or their representative will provide the remedial measures on their own. All costs, including all overhead and office costs incurred in the remedial actions will be deducted from the final payment to the Contractor.

TS 1.00.07.11.04 Paid Duty Police Officer (PDPO)

TS 1.00.07.11.04.01 General

Unless otherwise specified, all costs associated with the requirements of Paid Duty Police Officers throughout the contract for any reason shall be borne by the Contractor.

In addition to complying with the Ontario Traffic Manual Book 7 "Temporary Conditions", the Contractor is required to provide Paid Duty Police Officers on site in accordance with the requirements as stipulated in the Toronto Police Service Guidelines for Paid Duty Police, as it is amended. The cost of Paid Duty Police Officers on site throughout the contract is included as part of the pay item for Maintenance of Traffic unless a separate pay item is provided in the contract documents for Paid Duty Police Officers.

The City of Toronto's Transportation Services has authority over and governs the issuance of permits for construction on all City roads. The Toronto Police Service, in conjunction with Transportation Services Road inspectors/Municipal Construction Inspectors, enforces this authority on behalf of Transportation Services.

TS 1.00.07.11.04.02 Criteria to Determine the Need for PDPO

The following criteria outline the requirements for Paid Duty Police Officers as stated in the Toronto Police Service Guidelines for Paid Duty Police:

- 1) A Paid Duty Police Officer is required if more than one lane or direction of traffic flow is to be controlled.
- 2) Paid Duty Police Officer will be required in signalized intersections when the left turn lane has been eliminated and/or turning movements cannot be made in a safe manner.
- 3) Paid Duty Police may be required when pedestrians' movements cannot be made safely.
- 4) The need for Paid Duty Police at minor signalized intersections and pedestrian crossovers will be site specific.
- 5) Paid Duty Police is required during paving and milling operations within 30m of a signalized intersection pursuant to a site meeting with the Transportation Services Representative and the Toronto Police Construction Liaison Officer (416)-808-1951.
- 6) At some signalized intersections, a decision will be required on the use of two or more officers. A listing is available from Toronto Police Traffic Services Construction Liaison Officer (416)-808-1951 which highlights those signalized intersections at which two or more paid Duty Police Officers may be required.
- 7) A static barrier (i.e. crowd control barrier) may be acceptable to close crosswalks at a signalized intersection depending on the pedestrian and vehicle volumes. This would be discussed at a site meeting. Yellow 'Caution Tape' is not recognized as an acceptable barrier.
- 8) Traffic Control Persons (TCPs) are only to control a single lane of one-way traffic flow (as per Ontario Health and Safety Act). A TCP can control pedestrian movements off the traveled portion of the roadway. A TCP can also control pedestrian movements at a signalized intersection if the signal indications are clearly visible and the TCP is not required to stop traffic.

TS 1.00.07.11.04.03 Emergency Service

On-duty officers, subject to the following identified criteria, will be utilized by any of the City Works, Hydro, Consumers Gas, etc. including Guild Electric while performing Emergency Service at locations, including intersections. In the event that police assistance is required in such instances, a call shall be directed to the Toronto Police Service Communications Centre at (416) 808-2222.

Emergency Service is deemed to be any unscheduled maintenance where:

- 1) Public safety or health is threatened
- 2) Immediate action is required
- 3) The public is without essential service.

Examples: sewer or watermain break, electrical failure, leaking of gas distribution system.

At any emergency work site, a representative of the required utility must respond to the site as soon as possible to assess the situation and make a determination regarding necessary repairs and time frames required to complete the repairs. Police officers shall document and forward to the Unit Commander or Traffic Service any circumstances where a representative of the required utility fails to attend the location within 1.5 hours of the call being received by the Service.

In circumstances where the required work can be completed within 3 hours of the Toronto Police Service receiving a request to attend a location, a regular on-duty police officer will protect the site, subject to the exigencies of the Service. A large scale emergency may preclude the attendance of an on-duty officer. If the repair is to take more than 3 hours, a Paid Duty Police Officer shall be ordered immediately and the regular on-duty officer shall stay on site until the arrival of the Paid Duty Police Officer.

TS 1.00.07.11.04.04 Scheduled Maintenance and Construction Work

All scheduled maintenance and construction requests will be staffed by Paid Duty Police Officers. All paid duties required under this specification shall be arranged through the Central Paid Duty Office.

The contractor is responsible for providing Paid Duty Police Officers, as required, on all City projects and capital projects.

Paid Duty Police shall ensure the Contractor produces a valid permit, issued by the City, for the required work and that the Contractor works within the parameters outlined in the permit prior to any work being commenced.

A filled out Paid Duty Request Form shall be faxed, along with a valid road cut permit issued by the City, to the Central Paid Duty Office (416) 808-5042. Calls for further assistance can be directed to the Central Paid Duty Office (416) 808-5048. In certain circumstances, a request for PDPO can be made in person at 53 Division, 75 Eglinton Avenue West, if necessary.

A Paid Duty Request Form can be obtained from any police station or the Toronto Police Central Paid Duty Office at 416-808-5048. The form and the current hourly rates of PDPO pay, which are provided in the terms of agreement at the back of the form, are updated once every January of the year. The Paid Duty Request Form can also be obtained at the following link: http://www.torontopolice.on.ca/publications/

Due to Toronto Police centralizing the paid duty services in May 2005, a contact name in the Toronto Police is not available anymore.

TS 1.00.07.11.04.05 Determining the Actual Need for PDPO

The need for Paid Duty Police Officers for construction and maintenance (Utility Cut permit related) work on City roads generally follows the criteria in TS 1.00.07.11.04.02, and has to be determined on a case-by-case basis. The Transportation Services representative shall determine the actual need for PDPOs according to site conditions and in consultation with the Contract Administrator, the Contractor and the Toronto Police Traffic Services Construction Liaison Officer (416)-808-1951.

The criteria provided in TS 1.00.07.11.04.02 do not preclude the need for a site meeting to discuss traffic safety related issues, hours of work, etc, with the Transportation Services and Toronto Police representative and other agencies.

The actual need for PDPOs shall be determined at the pre-construction meeting and site meetings. Transportation Services representatives and the Toronto Police Construction Liaison Officer shall be invited to the pre-construction and site meetings. It is at their discretion to decide if they will attend the meeting.

City Contract Administrators and Inspectors shall monitor the use of PDPOs at the site and intervene whenever the presence of PDPOs is deemed necessary or not warranted based on the conditions specified in this specification.

TS 1.00.07.11.04.06 Transportation Services Representatives

The Contractor is required to contact the appropriate District staff to determine the need for Paid Duty Police Officer and on any other aspect of the emergency that requires immediate action. The following are the Transportation Services Contacts in each District.

- Toronto & East York District Work Zone Traffic Coordinator
- Etobicoke and York District
 Work Zone Traffic Coordinator
- North York District
 Work Zone Traffic Coordinator
- 4) Scarborough District Supervisor, Sign Installation & Pavement Markings

TS 1.00.07.11.04.07 Disputing the Need for a PDPO on site

If a dispute arises with regular police on patrol over the need for PDPO, a police supervisor or the Toronto Police Traffic Services Construction Liaison Officer shall mediate the dispute. No claims for delay, resulting from these matters, will be considered by the City.

TS 1.00.07.11.04.08 Work Instructions to PDPO

In addition to the brief description of PDPO's duties provided by a Contractor in a Paid Duty Request Form, the Contractor shall provide the PDPO with detailed written work instructions. The instructions shall be related to the specific site and handed to the PDPO at the time of his/her arrival to the site.

TS 1.00.07.11.04.09 Change and Cancellation

The contractor shall notify the Central Paid Duty Office immediately about any change, cancellation, or a need for additional PDPO. Any changes or cancellations shall be made in accordance with the City of Toronto Police Policy.

Police requires a minimum cancellation time of eight hours prior to the scheduled start time. Failure to give sufficient notification will result in Contractor paying a minimum payment of three hours per PDPO, along with all associated fees and taxes.

PDPOs maximum working period is twelve hours in a twenty-four hour period. The Contractor shall make bookings of additional PDPOs in a timely manner, when necessary.

TS 1.00.07.11.04.10 Reimbursing PDPO

The Contractor shall be responsible to pay the Toronto Police Service for services provided by PDPOs in the contract in accordance with the Police Service Agreement, based upon the hourly wage rate in effect at the time.

The Contractor shall record PDPOs names, badge numbers and hours of work and provide City Contract Administrators and Inspectors with a summary sheet outlining the events of PDPO arrangement and copies of corresponding invoices.

TS 1.00.07.11.04.11 Relocating Legally Parked Vehicles and Parking Enforcement

The procedure to relocate legally parked vehicles due to construction activities shall be discussed at the pre-construction meeting. The Contractor shall follow the Toronto Police Service procedure entitled "Procedure for Construction Companies Relocating Legally Parked Vehicles" to relocate legally parked vehicles in the construction zone.

Legally parked vehicles may be relocated to accommodate construction using one of the six Toronto Police contract tow companies provided in the Toronto Police Service procedure. The Contractor shall assume the towing costs.

The relocation will only be carried out in the presence of either a parking enforcement officer or the Paid Duty Police Officer working with the Contractor that day. The officer must be present to record the vehicle's information. The vehicles relocated from one legal parking location will be relocated to another legal location nearby.

Parking enforcement can be requested by calling either Parking Enforcement East in the east end of the city at Tel # 416-808-6600 or Parking Enforcement West in the west end of the city at Tel # 416-808-1600.

TS 1.00.07.11.05 Mass Transit

The Contractor shall coordinate all staging with any transit commission (TTC, GO, etc.), school or tour group, that may have a bus stop or travel, within the construction limits. Special attention shall be given to loading and unloading areas for disabled persons and school buses.

The Contractor shall provide access to all existing bus stops. The relocation and reinstatement of the bus stops shall be performed by the Contractor, under the direction of the transit authority or the City.

All costs associated with relocating and providing temporary bus stops shall be borne by the Contractor, except for any temporary ramps or accesses which will be paid for under the appropriate items.

There will be no additional payment for any delays caused by the Contractor having to stage his work around the transit commissions.

TS 1.00.07.12 Maintenance of Temporary Work

Until the final course of asphalt and the permanent pavement markings have been placed, the travelled portion of the road shall be considered as temporary traffic lanes.

Temporary traffic lanes shall be maintained so that there are no irregularities exceeding 35 mm. All crosswalks shall be ramped using temporary HL 3F (Fine) asphalt to provide smooth transitions between the base asphalt and the top surface of the crosswalk. Utility frames and covers, valve boxes, etc. shall be covered over with a steel plate or maintained flush with the surface of the asphalt. After final adjustment to finish grade, the appurtenances shall be ramped as described above. Prior to the placement of the final course of hot mix asphalt, the ramps must be removed without disturbing the base to allow the final course asphalt to be placed to its full depth.

The cost of any necessary patching of temporary traffic lanes or regarding of temporary access to driveways and side streets or regarding of temporary sidewalks or bicycle facilities shall be paid for at the unit prices in the Contract for stone and asphalt under the general heading "Maintenance of Traffic." If no such items exist, no separate payment will be made and all costs associated with this temporary work shall be factored into other related pay items.

Should the Contractor fail to correct any unsatisfactory condition upon notification from the City staff to do so, the City may proceed to maintain the project and deduct the entire cost of such maintenance from monies due to the Contractor.

TS 1.00.07.13 Maintenance of Temporary Accesses

The Contractor shall provide safe, convenient and free of obstacles temporary vehicular, wheel chair and pedestrian access to driveways, sidewalks, storefronts, bicycle facilities, bus stops, bus shelters and other public amenities in and around the area of construction at all time during construction.

The Contractor shall, at their expense, supply labour, equipment and materials to remove all obstacles, including the removal of snow and ice and applying road salt and sand on the temporary accesses when there is an accumulation of snow or ice on the ground.

Should the Contractor fail to maintain or, in the opinion of the Contract Administrator, not expedient to maintain the temporary accesses to the satisfaction of the City, the City may, not withstanding section GC 4.06, 4.07 and 4.08 of the City of Toronto General Conditions of Contract, take the appropriate action to remove the obstacles and deduct the total costs of such action from the monies due to the Contractor.

TS 1.00.08 QUALITY ASSURANCE

The City staff will make inspections, as required, and the Contractor will be notified of any deficiency in writing. Repairs shall be carried out in conformance with TS 1.00.07 of this specification.

TS 1.00.09 MEASUREMENT FOR PAYMENT

TS 1.00.09.01 Crushed Aggregate Type 'A' for Maintenance of Traffic

HL 3F (Fine) Asphalt for Maintenance of Traffic

HL 8 Asphalt for Maintenance of Traffic

Measurement for the above item(s) shall be by mass in tonne (t).

TS 1.00.09.02 Site Fence

Measurement for the above item shall be made in metres, of the maximum length of site fence required to be in place at any one time during the life of the contract.

TS 1.00.09.03 Relocate Site Fence

Measurement for the above item shall be made in metres for the length of site fence relocated.

TS 1.00.09.04 Crowd Control Barrier

Measurement for the above item shall be per metre for the maximum number of barrier sections required to be in place at any one time during the life of the contract.

TS 1.00.09.05 Relocate Crowd Control Barrier

Measurement for the above item shall be per metre of barrier section relocated.

TS 1.00.09.06 Temporary Precast Concrete Barrier Temporary Triton Barrier

Measurement for the above item(s) shall be made in metres, of the maximum length of barrier required to be in place at any one time during the life of the contract.

TS 1.00.09.07 Relocate Temporary Precast Concrete Barrier Relocate Temporary Triton Barrier

Measurement for the above item shall be made in metres for the length of barrier relocated.

TS 1.00.09.08 Traffic Control Plan, Traffic Protection Plan, Paid Duty Police Officers, Traffic Control Persons, Signs, Barricades and Other Traffic Control Devices

Measurement for the above item shall be by lump sum. Contractors shall determine the lump sum amount and submit the amount in their bids.

TS 1.00.10 BASIS OF PAYMENT

TS 1.00.10.01 General

The following items may or may not appear in the contract. If these items do not appear in the contract then the cost of temporary work required under this specification should be factored into other pay items by the Contractor.

No separate payment shall be made for the provision of temporary drainage works. Payment for this work shall be deemed to be included in the unit prices bid for the other items.

No additional payment will be made for any rehandling required incorporating any reusable material into the final or temporary works.

No additional payment will be made for the replacement of any item that has become damaged as a result of the Contractor's actions or by any other means.

TS 1.00.10.02 Crushed Aggregate Type 'A' for Maintenance of Traffic - Item HL 3F (Fine) for Maintenance of Traffic – Item HL 8 for Maintenance of Traffic – Item

Payment at the contract price for the above item(s) shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not be limited to, the supply, placing and compacting of granular materials and hot mix asphalt to construct road detours and temporary ramps, the removal, placing and compacting of all reusable materials and any excavation required for the construction of all detours.

The removal of all temporary asphalt and contaminated aggregate, by whatever means, shall be paid for under the item 'General Excavation'.

TS 1.00.10.03 Site Fence - Item

Payment at the contract price for the above item shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not limited to, the supply, erection, maintenance and removal of all site fence and the reparations to the concrete road base, if required.

TS 1.00.10.04 Relocate Site Fence - Item

Payment at the contract price for the above item shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not limited to, the relocation of all site fences.

TS 1.00.10.05 Crowd Control Barrier - Item

Payment at the contract price for the above item shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not limited to, the supply, erection, maintenance, and removal of all crowd control barriers.

TS 1.00.10.06 Relocate Crowd Control Barrier - Item

Payment at the contract price for the above item shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not limited to, the relocation of all crowd control barriers.

TS 1.00.10.07 Temporary Precast Concrete Barrier – Item Temporary Triton Barrier – Item

Payment at the contract price for the above item shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not limited to, the supplying, placing, maintenance, relocation and removal of all temporary concrete barriers, including tapered end treatments. All other end treatments will be paid for under the appropriate item(s).

TS 1.00.10.08 Relocate Temporary Precast Concrete Barrier – Item Relocate Temporary Triton Barrier – Item

Payment at the contract price for the above item shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not limited to, the relocation of all temporary concrete barriers, including tapered end treatments. All other end treatments will be paid for under the appropriate item(s).

TS 1.00.10.09 Traffic Control Plan, Traffic Protection Plan, Paid Duty Police Officers, Traffic Control Persons, Signs, Barricades and Other Traffic Control Devices - Item

Payment at the contract price for the above item shall be full compensation for all labour, equipment, materials and incidentals to do the work. Payment shall include, but not be limited to, the production of Traffic Control Plan, Traffic Protection plan, all costs associated with the supply of Paid Duty Police Officers, Traffic Control Persons, the supply, placing, maintenance and removal of all signs, barricades and other traffic control devices that are not covered in other pay items of the contract.

The Contractor shall provide support documents to the Contract Administrator on the use of Paid Duty Police Officers and the supply of various traffic control measures related to the contract, including, but not limited to, the invoices charged to the Contractor by the Toronto Police Service. The City will only pay the invoices and other traffic control related charges that are proved to be actually provided in the contract. Payment shall be evenly distributed over the duration of the contract.