

PART I - GENERAL

<u>1.1 Related Work</u>	.1	Playground Sand	:	Section 02861
	.2	Topsoil and Finish Grading	:	Section 02212
	.3	Sodding	:	Section 02938

- 1.2 Scope of Work
- .1 The contractor is to supply, deliver, and install the City of Mississauga “Standard” play structures and stand-alone equipment. The latest approved list of pre-qualified manufacturers who supply this “Standard” shall be obtained from the City of Mississauga, Community Services Department. The list outlines prequalified manufacturers and their inventory of approved playground models. Only Mississauga “Standard” play equipment supplied by pre-qualified suppliers will be accepted by the City of Mississauga.
- .2 The City of Mississauga “Standard” play structures and stand-alone equipment are reviewed annually and may be subject to change without notice. Consultants are to ensure that the approved working drawings are updated to reflect current standards for the year of tender. Changes in play structure standards may necessitate changes to the playground area including, but not limited to, reconfiguration of the safety surface area, relocation of benches, and realignment of associated pathways.

The following note is to be placed on all approved working drawings for parks containing a playground(s):

“The City of Mississauga “Standard” play structures and stand-alone equipment are reviewed annually and may be subject to change without notice. A written letter of verification that the play equipment illustrated on this drawing meets the “Standard” for the year of tender, shall be obtained from the City and is to accompany these drawings in the tender package. Should the play equipment illustrated on this drawing not meet the “Standard” for the year of tender, a revised drawing of this area is to be provided by the consultant and is to be accompanied by the City’s letter of verification in the tender package”.

- .3 Co-ordinate work in this section with work in all other sections.

1.3 Special Instructions

- .1 The contractor must have a representative who will be able to attend site meetings throughout the duration of the contract period, and who will have the authority to provide daily ongoing direction for all work crews.
- .2 It is the responsibility of the successful contractor to notify all agencies that may be affected by the installation of any services or work within this contract and obtain all necessary permits, approvals, stakeouts, and locates.
- .3 The contractor is responsible for obtaining and/or verifying all required utility locations prior to the digging of post holes.
- .4 Community Services requires a detailed layout drawing of the "Standard" play structure to be installed as a result of the park construction tendering process. This drawing is to be submitted for review and information prior to construction. The drawing should include the manufacturer's name and model numbers, dimensions, fall heights, safety zones, setbacks as well as contextual park information.

1.4 Guarantee

- .1 All workmanship and material is to be guaranteed for a period of two years, from the date of Preliminary Acceptance of the project and all work must be performed to the satisfaction of Community Services.
- .2 Warranties for specific items installed under this contract beyond that of the two years shall be clearly identified in the required operation manuals submitted for each project.
- .3 The contractor shall guarantee the material and installation for a minimum period of two years from date of Preliminary Acceptance of all work.

The contractor shall provide the City with an indemnification from the manufacturer of the creative play structures or equipment supplied and installed by the contractor wherein the manufacturer shall indemnify and save harmless the City from and against all claims, demands, loss, costs, damages, actions, suits or other proceedings by whomsoever made, brought or prosecuted in any manner based upon, occasioned by, or attributed to, the design of

the overall configuration, components and the structural details of said creative play structures for the life of the creative play structures. "Life" shall mean until such time as material alterations are made to the overall creative play structures design.

The contractor shall not be responsible for the cost of replacements of correctly installed components resulting from vandalism during the guarantee period.

The contractor will be responsible for the cost of replacements at each site of components or work vandalized prior to Preliminary Acceptance by the City of all work at that site.

PART II - PRODUCTS

- 2.1 Approved Equipment** .1 Supply and install City of Mississauga "Standard" play structures and stand-alone equipment as supplied by City of Mississauga, Community Services Department approved pre-qualified manufacturers.
- .2 Materials shall be supplied from a manufacturer who has successfully completed the City' s review and pre-qualification process. All materials shall be subject to Community Services Department approval. In accordance with the Corporate Report adopted by the City of Mississauga Council on May 27, 1998 in Resolution 154-98, a current list of approved manufactures and their approved play equipment can be obtained from the Community Services Department. Submit product data from the manufacturer upon request to the Community Services Department.
- .3 All materials are to be delivered to the site free from any damage and are to be installed as soon as possible after delivery.
- .4 The Community Services representative reserves the right to reject any equipment which in his opinion is sub-standard or does not appear to adhere to CAN/CSA-Z614-98 "Children's Playspaces and Equipment".
- .5 All structures delivered and installed must conform in all respects to the provisions contained in the latest version of CAN/CSA-Z614-98 "Children' s Playspaces and Equipment".

Components which are found to not conform will be replaced or made to conform at the contractor' s expense.

- .6 All equipment, drawings, and installations relating to the Supplier' s products referenced as City of Mississauga 'Standards', must be certified by a professional engineer licenced to practice in a Canadian province as to the structural integrity and adherence to CSA National Standard CAN/CSA-Z614-98 'Children' s Playspaces and Equipment' prior to installation. In their proposals to the City of Mississauga, approved suppliers have submitted documentation attesting to this requirement in relation to the City of Mississauga 'Standards'. These certifications, together with the "drawings of record" are available for viewing at the City of Mississauga Community Services Department.
- .7 All approved playground equipment supplied under contract to the City of Mississauga as City Standards shall abide by and comply with the true intent and meaning of the structural certifications and shall not relieve the supplier or contractor of their responsibilities to provide playground equipment and installations to the full extent of sound and proper engineering practice and construction standards.
- .8 All additional submittals and required documentation relating to the supplier' s products and contractor installations acquired under contract to the City of Mississauga shall also meet the same structural and design standards referenced above and practised in the industry.
- .9 As noted in 1.2.1, City of Mississauga 'Standard' only relates to specific products as supplied by each approved supplier and is characteristically used to identify the specific product for use in the City of Mississauga.
- .10 The City of Mississauga bears no responsibility for the structural correctness of the approved design standards and it is the responsibility of the contractor and the supplier to not only meet the requirements of CAN/CSA-Z614-98, but to also ensure and employ proper, sound engineering practice and construction standards in the execution of the work to be complete in every respect.

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- 2.2 Wood Components .1 Wood components shall not be accepted under any circumstance other than as an edge restraint.
- 2.3 Metal Components .1 All metal hardware shall be hot dipped galvanized or cadmium plated and shall be of heavy duty construction.
- .2 All galvanized pipe shall be minimum 38 mm (1 ½") outside diameter unless otherwise noted. Exposed ends of pipe will be flush or will have a maximum of a 19 mm (¾") extension. Exposed ends of pipe must be fitted with protective plastic caps.
- .3 Swing bearing hangers shall be galvanized and a heavy duty standard type. The bearing shall be maintenance free and the bearing fastener shall be peened to ensure security. Bearing hanger assembly will not allow for inconsistencies in the end product.
- .4 Slides of metal construction must be stainless steel of minimum 16 gauge thickness. No sharp edges or corners shall be exposed. Slides of metal construction must have centre break/crease. Continuous weld to be used on slide bed.
- .5 Swing top rails shall be fabricated of minimum 6 gauge heavy duty pipe and will conform to the current Mississauga standards for the year of tender and CSA National Standard CAN/CSA-Z614-98 "Children's Playspaces and Equipment" Section 9 Structural Integrity.
- .6 Swing chains on bench and belt swings shall be minimum 6 mm (¼") hot dipped galvanized chain, electric welded. Swing chains on baby swings shall be minimum 5 mm (3/16") hot dipped galvanized chain, electric welded.
- .7 "S" hooks are not approved by the City of Mississauga.
- .8 Metal stairs shall have drainage holes and have no sharp edges or corners exposed. All stair stringers must have folded or rounded edges.
- .9 All welded steel components must meet CSA standard W59.
- 2.4 Plastic Components .1 All pipe ends must be fitted with protective plastic caps.

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- .2 All plastic components must be either a minimum of 19 mm (3/4") thick, high density Permalene formulated for high colour retention, fire resistance and vandal resistance OR shall be double wall rotationally moulded, and formulated for high colour retention, fire resistance and vandal resistance.
- .3 All plastic play elements will allow for clear site lines through the structure. Solid panels and tubes will not be permitted.
- 2.5 Rope Elements .1 All rope and netting elements are to be fire resistant and constructed with interior steel cable.
- 2.6 Tire Swings .1 Tire swings are not an approved standard in the latest version of the new City of Mississauga "Standard" play structures and stand-alone equipment.
- 2.7 Belt Swings .1 Belt swings shall be heavy duty vandal proof moulded bench seat swings. The entire bench shall be completely inlaid with spring steel and moulded rubber shall extend minimum 13 mm (1/2") all around the spring steel.
- .2 The City of Mississauga reserves the right to choose the seat type on a site by site basis.
- .3 The chains for belt swings must be minimum 6 mm (1/4") hot dipped galvanized chains, electric welded.
- 2.8 Baby Swings .1 Baby swings shall be a heavy duty belt type swing with chromed safety T-bar. When deformed, seats shall not take on a kink.
- .2 The chains for baby swings must be minimum 5 mm (3/16") hot-dipped galvanized chain, electric welded or approved equal.
- 2.9 Spring Animals .1 Spring animals shall be pre-qualified and of heavy duty metal bodies on a spring assembly. All edges are to be rounded. All assemblies are to be tamper proof. Spring animals will be set into minimum 300 mm (12") diameter concrete footing poured to a depth of 1219 mm (4') below sub grade.
- 2.10 Fasteners .1 A limited number of fastener types are to be used and all fasteners are to be tamper proof and vandal resistant.

- .2 All metal hardware shall be hot dipped galvanized, cadmium plated or equivalent and shall be of heavy duty construction.
- .3 All threaded bolts and fasteners are to be treated with a coloured locking compound, Lock Tight #262 or approved equal, and to be peened hammered to prevent removal. Excess thread to be removed and cut filed smooth.
- 2.11 Accessories
- .1 The contractor will provide 1 set of any special tools per playground which may be required for providing ongoing maintenance to any components.
- .2 The contractor will provide 2 copies of installation instructions or drawings and parts catalogues in accordance with the format required in the contract documents.
- All manufacturer responsibilities under CSA National Standard CAN/CSA-Z614-98 "Children's Playspaces and Equipment" - Section 8 ("instructions and procedures for the installation of each play structure provided as well as a complete parts list").
- .3 The contractor / supplier will provide the Community Services representative with a repair kit for **each** of the playgrounds installed which will include but, not be limited to:
- a) approved fibreglass repair kit where fibreglass components are used;
 - b) spare parts hardware and respective tool for removal;
 - c) appropriate quantities of touch-up paint.

PART III - EXECUTION

- 3.1 Workmanship
- .1 All playground equipment shall be installed by a reputable company employing skilled labourers in this type of installation having a minimum of (5) five years, proven experience in this type of work.
- 3.2 Construction Procedure
- .1 It is the contractor's responsibility to bar access to the construction and the playground site under repair and/or under construction in accordance with CAN/CSA-Z614-98 "Children's Playspaces and Equipment". To "bar access" shall include, but not be limited to, the contractor providing, erecting and maintaining at his own

expense a minimum of one (1) construction notification sign and temporary hoarding preventing public access to the area under construction. The entire work site of the playground installation or other excavations must be enclosed by snow fence hoarding for the duration of playground construction. The hoarding must be erected and in place before site construction commences. The erection and maintenance of the hoarding is the sole responsibility of the general contractor. All snow fencing must be kept in good repair and removed only after the completion of the playgrounds. Where this is not adequately performed, Community Services representative may engage such forces as are necessary to complete the hoarding at the contractor's expense. If in the opinion of the Community Services representative, the general safety of the public or preservation of the existing environment or work in progress is in jeopardy, additional protection may be requested at the expense of the contractor.

- .2 The successful vendor will provide Community Services with detailed erection drawings, including as-builts of the playground upon request.
- .3 Contractor will be responsible for the protection and maintenance of all playground equipment during construction until all completion requirements have been fulfilled in every respect and the **City of Mississauga Inspection (Owner's Inspection)** has been performed and Preliminary Acceptance has been given for the entire park development.
- .4 The contractor will respond to emergencies immediately, otherwise the City of Mississauga will engage forces to do so at the contractor's expense.

3.3 Inspection Requirements

- .1 Prior to commencing work for the playground, the contractor shall review, with the City of Mississauga representative, the site layout and his proposed construction methods to be employed in relation to the approved schematic layout drawings. The review shall illustrate the contractor's proposed cut and fill, rough grading, subsurface drainage and berm construction operations. The contractor is advised that adjustments to suit the site conditions and ensure the full and proper installation may be required.
- .2 **Contractor / Supplier Inspection:** Upon completion of the

playground and site works and prior to the equipment being used, both the contractor and the supplier shall inspect the play environment in accordance with all the requirements of the CAN/CSA-Z614-98, especially final inspection. Upon completion of this inspection the contractor / supplier shall correct any deficiencies that may be found contrary to the CSA Standard.

- .3 **City of Mississauga Inspection (Owner's Inspection):** The Community Services representative and a designated City of Mississauga Playground Inspector will perform the final inspection to confirm all issues regarding CAN/CSA-Z614-98 have been met. The contractor shall be advised of the City's findings and should there be evidence to the contrary, the contractor shall immediately take whatever precautionary and corrective actions as required. **The City of Mississauga accepts no liability for the playground and will not issue any preliminary acceptance of same until the 'Owner's Inspection' has been performed.**

3.4 Installation
Scheduling

- .1 Unless otherwise agreed to on a site-by-site basis by the Community Services Department representative, the playground installation is to be completed within 7 working days of commencing the equipment installation. Installation shall include component installation, perimeter installation and sand installation.
- .2 The contractor will leave the playground construction area in a safe and secure state to bar access in accordance with section 3.2.1 of this specification document. Failure to comply could result in City forces completing the necessary work at the contractor's expense.

3.5 Installation

- .1 The subsurface area within the playground perimeter to be fine graded to drain at 1.5% (min) to subsurface drain system by contractor. All subgrades are to be graded accordingly to drain to the sub-drain system while allowing for the structure to be installed to line and level.
- .2 Post holes must not be left uncovered.
- .3 Posts shall be set in concrete in a hole of a minimum of 1219 mm (4') in depth below finished subgrade and a minimum of 356 mm (14") in diameter. Where vertical members are less than 150 mm

(6") in diameter, 300 mm (12") footings can be used. Concrete shall be set a minimum of 300 mm (12") below sand grade. Concrete shall be a minimum of 25 MPa. A minimum 300 mm (12") length of sono tube shall form the top of the concrete footing. Top of sono tube shall be 150 mm (6") below sub grade so that top of concrete footing has 150 mm (6") of backfill after installation. Post holes shall be inspected by Community Services representative before pouring footings. Community Services representative shall be given minimum 24 hrs. notice of need for inspection meeting.

- .4 All posts shall be suitably braced and protected to avoid any movement until concrete footings have set. Posts found not to be plumb, regardless of the cause, must be removed and reset plumb.
- .5 When a post and stringer system is utilized, all new welds must be cleaned and treated with a rust inhibiting paint. The contractor shall not be allowed to plumb the playground structure with the use of shims.
- .6 The edge restraint system will be installed as per the approved drawings and in accordance with Standard Playground Sod Berm Edge Detail # 02861-1 when applicable.
- .7 Surplus and excavated materials and debris shall be removed immediately from site by the contractor.
- .8 Play equipment must be set to allow for the addition of a minimum 300 mm (12") minimum depth of clean, Mississauga playground sand around the entire structure.
- .9 Equipment which has been substantially installed cannot be left over weekends without provision of protective sand surface.

3.6 Clean Up

- .1 Dispose of all rubbish and surplus materials and leave the site in a neat and presentable condition, prior to preliminary acceptance.
- .2 Restore all surfaces used to access the site to their original condition. All sodded areas which have been damaged or disturbed are to be re-sodded.

END OF SECTION 02863