#### 1.1 REFERENCES

- .1 Canada Green Building Council (CaGBC)
  - .1 LEED Canada Reference Guide for Green Building Design and Construction 2009

### 1.2 SUBMITTALS

- .1 In accordance with Section 01 33 00 Submittal Procedures.
- .2 Indicate size and description of components, base material, surface finish inside and out, hardware, attachment devices, description of rough-in-frame.

## 1.3 CLOSEOUT SUBMITTALS

.1 Provide maintenance data for maintenance equipment for incorporation into maintenance manual specified in Section 01 78 00 - Closeout Submittals.

#### 1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 Waste Management and Disposal.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4 Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5 Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.

## Part 2 Products

### 2.1 ACCEPTABLE PRODUCTS

- .1 Hose Reel
  - .1 Acceptable Manufacturer:
    - .1 Reelcraft Industries, Inc. 2842 E. Business HWY 30, Columbia City, Indiana, USA, 46725, Telephone 1-800-444-3134 (or approved equal in accordance with B7).
  - .2 Acceptable Product:
    - .1 Item # 3900-31-16, Nordic Series Electric Hose Reel (or approved equal in accordance with B7).

- .1 Electric Hose reel complete with a 3-way hose guide and 250' (76m) hose @ 1" (25mm) I.D., wall bracket.
- .2 Provide shut-off valve and back-flow prevention (see mechanical).
- .3 Provide Backflow Preventer to be of a type and size as required by the Authority Having Jurisdiction. To be installed at the highest point in the piping system (see mechanical)
- .4 Quantity: 1
- .2 Roller Hose Guide Assembly
  - .1 Acceptable Manufacturer:
    - .1 Reelcraft Industries, Inc. 2842 E. Business HWY 30, Columbia City, Indiana, USA, 46725, Telephone 1-800-444-3134 (or approved equal in accordance with B7).
  - .2 Acceptable Product:
    - .1 Item # HR 1059, Roller Hose Guide Assembly (or approved equal in accordance with B7).
      - .1 Quantity: 1

### 2.2 SUBSTITUTIONS

.1 Refer to Section B7 – Substitutes of Bid Opportunity 748-2013.

### Part 3 Execution

# 3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

#### 3.2 INSTALLATION

- .1 Install component in accordance with manufacturer's instructions.
- .2 Train user staff in operation and maintenance of above equipment.

#### 1.1 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM).
  - .1 ASTM A167-[99], Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
  - .2 ASTM A500-[03], Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
  - .3 ASTM D3963/D M-87, Structural Specification for Epoxy Reinforcing Steel.
  - .4 ASTM A36, Non-exposed Structural Components.
  - .5 ASTM A123, Standard Specification for Zinc Coating Hot Dip Galvanizing of Iron and Steel Products.
  - .6 ASTM Z325, Bolts, Nuts and Washers.
- .2 American National Standards Institute
  - .1 ANSI A39.1-1969, Safety Requirements for Window Cleaning.
- .3 American Society of Mechanical Engineers
  - .1 ASME A120.1-1996, Safety Requirements for Powered Platforms for Building Maintenance.
  - .2 ASME Addenda A120.1a-1997 and A120.1b-1999.
- .4 American Welding Society
  - .1 AWS D1.1, Structural Welding Code.
- .5 Aluminum Association
  - .1 AA 5AS-30, Specifications for Aluminum Structures.
- .6 Canadian Standards Association (CSA International).
  - .1 CAN/CSA-Z91-02 (Safety Code for Window Cleaning Operations).
  - .2 CAN/CSA- Z271-98 (Safety Code for Suspended Elevating Platforms).
  - .3 CSA G40.21-M1987, M350W and M300W (Structural Quality Steels).
  - .4 CAN/CSA-G40.20/G40.21-[98], General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
  - .5 CAN/CSA-G164-[M92(R1998)], Hot Dip Galvanizing of Irregularly Shaped Articles.
  - .6 CAN/CSA-W47.1-[92(R2001)], Certification of Companies for Fusion Welding of Steel Structures.
  - .7 CAN/CSA-W55.3-[65(R1998)], Resistance Welding Qualification Code for Fabricators of Structural Members Used in Buildings.
  - .8 CAN/CSA W59-M1989, Welded Steel Construction Metal ARC Welding.
  - .9 CSA G164-M1981, Hot Dip Galvanizing of Irregularly Shaped Articles.
- .7 Master Painters Institute (MPI).

- .1 Architectural Painting Specification Manual.
- .8 The Society for Protective Coatings (SSPC).
  - .1 SP -2, Hand-Tool Cleaning.
- .9 Canada Green Building Council (CaGBC)
  - .1 LEED Canada Reference Guide for Green Building Design and Construction 2009

### 1.2 SUBMITTALS

- .1 Submit control submittals in accordance with Section 01 33 00 Submittal Procedures.
- .2 Submit shop drawings & data sheets indicating materials, products, shapes, thickness, finishes, fabrication details, anchors, connections and relation to adjacent Work.
- .3 Shop drawings to show roof layout indicating location and spacing of anchors and horizontal lifeline, including dimensions, detail drawings of securement to structure, design details, and similar data. Drawings to bear stamp of Professional Engineer licensed in the Province of Manitoba.
- .4 Provide professional sealed documents and certifications for the system that shall be designed by a qualified and experienced Professional Engineer. Drawings are provided only as a diagrammatic aid for the general definition of the scope of Work.
- .5 Submit Test Reports and substantiating engineering data and test results of previous tests which purport to meet performance criteria, and other supportive data.
- .6 Upon completion of project, provide the City with Log Book for mandatory annual inspection.
- .7 Upon completion of project, provide the City with roof plan showing layout of safety anchor system.

#### 1.3 QUALITY ASSURANCE

- .1 Manufacturer Qualifications: company specializing in manufacturing products specified in this section with an expected minimum five years documented experience.
- .2 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements
- .3 Coordinate design with all applicable codes.
- .4 Design structural support framing components and Site inspect the installation under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the Province of Manitoba.
- .5 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.
- .6 Co-ordinate the Work with installation of roofing assembly and sheet metal Work.

# 1.4 WELDERS' QUALIFICATIONS

- .1 Welding qualifications to be in accordance with CSA B51.
- .2 Employ qualified and licensed welders possessing certificates for each procedure to be performed from authority having jurisdiction.
- .3 Each welder to possess identification symbol issued by authority having jurisdiction.
- .4 Certification of companies for fusion welding of steel structures to be in accordance with CSA-W47.1.
- .5 Manufacturer Qualifications: company specializing in manufacturing Products specified in this section with minimum three [3] years' experience.

### 1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 Waste Management and Disposal.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4 Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5 Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.

## 1.6 SITE CONDITIONS

- .1 Prior to start of Work verify existing Site conditions.
- .2 Verify dimensions, tolerances, and method of attachment with other Work.

## 1.7 WARRANTY

- .1 Roof Anchors: 20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Manufacturer's installation instructions.
- .2 Horizontal Lifeline Anchors: 20 year warranty (lifetime on all stainless steel) against defects in materials and/or manufacture when installed in accordance with Manufacturer's installation instructions.

### Part 2 Products

#### 2.1 ACCEPTABLE MANUFACTURERS AND PRODUCTS

- .1 Fall Arrest Roof Anchors:
  - .1 Acceptable Manufacturer

- .1 Thaler Metal Industries Ltd, 3857 Nashua Drive, Mississauga, Ontario L4V 1R3, Tel: 1-800-387-7217 (or approved equal in accordance with B7).
- .2 Acceptable Product for OWSJ:
  - .1 Thaler FARA-6NS "fixed eye" fall arrest roof anchors for bolt around OWSJ (or approved equal in accordance with B7).
    - .1 Galvanized forged 1018 steel eye with urethane insulated hollow hot dipped galvanized ASTM 500C steel post (Schedule 80 HSS) 4.5" (114 mm) dia. x 26" (660 mm) high welded to 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate; 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) under-joist plate and 0.25" x 4" x 4" (6 mm x 102 mm x 102 mm) HSS crosstube assembly; four 0.75" (19 mm) Type 304 s.s. bolts with lock washers and nuts;
    - .2 SJ-37, 7" (178 mm) high New-Standard STACK JACK flashing of .064" (1.6 mm) mill finish 1100-0T alloy aluminum to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and bituminous painted deck flange.
- .3 Acceptable Product for wood beams:
  - .1 Thaler FARA-3 "fixed eye" fall arrest roof anchors for bolt around beam (or approved equal in accordance with B7).
    - .1 Galvanized forged 1018 steel eye with Type 304 stainless steel U bolt roof anchor to CSA Z91-M90 with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (Schedule 80 HSS) 4.5" (114 mm) dia. x 24" (610 mm) high welded to 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate: four 0.75" (19 mm) Type 304 s.s. bolts and 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) under-beam plate, lock washers and nuts;
    - .2 SJ-37(9), 9" (229 mm) high New-Standard STACKJACK flashing of .064" (1.6 mm) mill finish 1100-0T alloy aluminum to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and bituminous painted deck flange.
- .2 Horizontal Lifeline Anchors:
  - .1 Acceptable Manufacturer
    - .1 Thaler Metal Industries Ltd, 3857 Nashua Drive, Mississauga, Ontario L4V 1R3, Tel: 1-800-387-7217 (or approved equal in accordance with B7).
  - .2 Acceptable Product for OWSJ:
    - .1 Thaler K-700 EASY SLIDER Horizontal Lifeline fall protection system (or approved equal in accordance with B7).
      - .1 To CSA-Z91-02 with: 3-1/2" (89 mm) dia. urethane insulated Schedule 80 HSS anchor posts, hot dipped galvanized ASTM 500, 3.5" (89 mm) dia. x 24" (610 mm) high, welded to 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate: four 0.75" (19 mm) Type 304 s.s. bolts and 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) under-beam plate, lock washers and nuts;
      - .2 Fastening method:
        - .1 Provide Thaler K-FARA-6-700 for bolt around OWSJ.

- .3 Stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner, intermediate brackets, corner pieces); Type 304 s.s. cable 3/8" (10 mm) dia. 7 x 19 structure);
- .4 Full body harnesses with integral shock absorber (by others);
- .5 SJ-34, 7" (178 mm) high New-Standard STACK JACK Flashing of .064" (1.6 mm) mill finish 1100-0T alloy aluminum to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and bituminous painted deck flange.
- .6 Include the following:
  - .1 1 End anchor w/ tensioner,
  - .2 1 End anchor w/ energy absorber
  - .3 2 316L stainless steel shuttles
- .3 Acceptable Product for wood beams:
  - .1 Thaler K-700 EASY SLIDER Horizontal Lifeline fall protection system (or approved equal in accordance with B7).
    - .1 To CSA-Z91-02 with: 3-1/2" (89 mm) dia. urethane insulated Schedule 80 HSS anchor posts, hot dipped galvanized ASTM 500, 3.5" (89 mm) dia. x 24" (610 mm) high, welded to 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate: four 0.75" (19 mm) Type 304 s.s. bolts and 0.75" x 8" x 8" (19 mm x 203 mm x 203 mm) under-beam plate, lock washers and nuts;
    - .2 Fastening method:
      - .1 Provide Thaler K-FARA-3-700 for bolt around beams.
    - .3 Stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner, intermediate brackets, corner pieces); Type 304 s.s. cable 3/8" (10 mm) dia. 7 x 19 structure);
    - .4 Full body harnesses with integral shock absorber (by others);
    - .5 SJ-34, 7" (178 mm) high New-Standard STACK JACK Flashing of .064" (1.6 mm) mill finish 1100-0T alloy aluminum to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and bituminous painted deck flange.
    - .6 Include the following:
      - .1 1 End anchor w/ tensioner
      - .2 1 End anchor w/ energy absorber,
      - .3 2 Intermediate anchors
      - .4 2 316L stainless steel shuttles

## 2.2 SUBSTITUTIONS

.1 Refer to Section B7 – Substitutes of Bid Opportunity 748-2013.

### Part 3 Execution

#### 3.1 EXAMINATION

- .1 Report to the Contractor in writing, defects of Work prepared by other trades and other unsatisfactory Site conditions. Verify Site dimensions, tolerances, and method of attachment with other Work.
- .2 Commencement of Work will imply acceptance of prepared Work.
- .3 For roofs employing tapered insulation systems, height adjustments may be necessary i.e. ensure anchor eye is minimum 9" (229 mm) above roof surface.

## 3.2 PREPARATION

.1 Supply and install steel items required to be attached to steel framing as clean uncoated metal, with setting templates to appropriate sections.

#### 3.3 INSTALLATION – FALL ARREST ANCHORS

- .1 Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
- .2 For Modified Bituminous membrane roofing:
  - Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of Mod-Bit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

### .3 Precautions:

.1 Apply an asphaltic or other type protective coating to aluminum STACKJACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on Site, allow 24 hours for drying before applying roof membrane.

# 3.4 INSTALLATION – HORIZONTAL LIFELINE ANCHORS

- .1 Install anchors or equipment in accordance with manufacturer's printed instructions, shop drawings and as specified.
- .2 Ensure anchors or equipment is installed under the direct supervision of a Professional Engineer.
- .3 Where necessary, provide protection against deterioration due to contact of dissimilar materials.
- .4 Where bolting is used for fastening anchors, no fewer than two threads is to be exposed and the nut is to be positively locked by deforming threads, welding, pinning or equivalent method.

# 3.5 FIELD QUALITY CONTROL

- .1 Comply with the requirements of Section 01 45 00 Quality Control.
- .2 All anchor Work to be inspected by a Professional Engineer upon completion of Work.
- .3 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
- .4 Maximum Variation from Level: 3 mm.

#### 3.6 ADJUSTING AND FINAL INSPECTION

- .1 Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.
- .2 Provide necessary documentation certifying system is acceptable for service (Engineer's Certificate of Acceptance).

### 3.7 PROTECTION AND CLEANING

- .1 Protect finished Work from damage.
- .2 Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

#### 1.1 REFERENCES

- .1 Canada Green Building Council (CaGBC)
  - .1 LEED Canada Reference Guide for Green Building Design and Construction 2009

### 1.2 SUBMITTALS

.1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 – Submittal Procedures.

## 1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver handle, store and protect equipment in accordance with Section 01 61 00 Common Product Requirements.
- .2 Deliver equipment only after interior finishes are complete.

#### 1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 Waste Management and Disposal.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4 Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5 Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.

### 1.5 WARRANTY

.1 Provide manufacturers standard warranty for all appliances listed.

### Part 2 Products

## 2.1 APPLIANCES

- .1 All appliances listed below to be provided by the City and installed by Contractor.
  - .1 All Refrigerator/Freezer:
    - .1 Frigidaire 17 cu. ft. Convertible Freezer/Refrigerator
      - .1 Model# FKCH17F7H W
      - .2 Colour: White

- .3 Dimensions: 32" W x 65 7/8" H x 26 5/8" D (813 mm W x 1673 mm H x 676 mm D)
- .4 Certifications:
  - .1 Energy Star: Yes
- .5 Quantity: 2
- .2 Cooler:
  - .1 Russell Food Equipment Ltd.
    - .1 Model# SE42SXG Slider
    - .2 Colour: Stainless steel and glass
    - .3 Dimensions: 47.5" W x 78" H x 31" D (1210 mm W x 1980 mm H x 790 mm D)
    - .4 Electrical Requirements: 115V/60Hz/6.8A NEMA 5-15P
    - .5 Certifications:
      - .1 UL Listed: Yes
    - .6 Quantity: 1
- .3 Built-in Cooktop:
  - .1 Frigidaire Gallery Series Built-in Cooktop
    - .1 Model# FGIC3067M B
    - .2 Colour: Black
    - .3 Dimensions: 30.75" W x 4.375" H x 21.5" D (781 mm W x 111 mm H x 546 mm D)
    - .4 Certifications:
      - .1 ADA Compliant: Yes
    - .5 Quantity: 1
- .4 Wall Oven:
  - .1 Kenmore MD 27" Single Electric Wall Oven
    - .1 Model# C970-41562
    - .2 Colour: White
    - .3 Dimensions: 26.87" W x 31.12 H x 25.37 D (682 mm W x 790 mm H x 644 mm D)
    - .4 Quantity: 2

### Part 3 Execution

### 3.1 INSTALLATION

- .1 Install appliances in correct locations as per manufacturer's instructions and make connections.
- .2 Check appliance to ensure proper operation.
- .3 Appliances having any damage or scratches will not be accepted.

Section 11 31 00 APPLIANCES Page 3 of 3

#### 1.1 REFERENCES

- .1 Canada Green Building Council (CaGBC)
  - .1 LEED Canada Reference Guide for Green Building Design and Construction 2009

### 1.2 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 Submittal Procedures.
- .2 Indicate size and description of components, base material, surface finish inside and out, hardware, attachment devices, description of rough-in-frame.

## 1.3 CLOSEOUT SUBMITTALS

.1 Provide maintenance data for gymnasium equipment for incorporation into maintenance manual specified in Section 01 78 00 - Closeout Submittals.

#### 1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 Waste Management and Disposal.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4 Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5 Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.

## Part 2 Products

### 2.1 ACCEPTABLE PRODUCTS

- .1 Side Folding Basketball Backstop
  - .1 RS 119 HD Backstop, as supplied by Royal Stewart Ltd. (or approved equal in accordance with B7).
    - .1 Frame shall be made of 2" (51 mm) square tubing and mounted to the wall by means of ¼" x 4" (6 mm x 102 mm) steel plates 35" (889 mm) on center.
    - .2 Stabilizing bars shall be made using 2" (50 mm) tubing and run from the front of the backstop frame up to the wall in a 30-degree angle.
    - .3 Stabilizers shall be hinge mounted to allow for minor adjustment. Cable bracing shall not be permitted.

- .4 Backstop shall have a built-in spring-loaded locking bar. Release handle shall be supplied.
- .5 Backstop shall be painted flat black.
- .6 Wall bolts shall be supplied as indicated on the shop drawing for installation by others.
- .7 Accessories to be supplied:
  - .1 Manual Adjust-a-Goal
- .8 Locate as shown on drawings.
- .9 Quantity: 2

## .2 Front Mount Breakaway Goal

- .1 RS 2000 Front Mount Breakaway Goal, as supplied by Royal Stewart Ltd. (or approved equal in accordance with B7).
  - .1 Goal shall be constructed with an enclosed positive lock mechanism to hold rim in solid playing position.
  - .2 Goal shall be designed so that any possible entrapment areas have been eliminated.
  - .3 Goal shall have official size 18" ring of 5/8" diameter steel with continuous no-tie net attachment, full wing brace design, and a durable orange powder coated finish.
  - .4 Anti-whip net and hardware shall be included.
  - .5 Hole spacing shall be 5" x 5".
  - .6 Goal shall meet NCAA and high school specifications.
  - .7 Locate as shown on drawings.
  - .8 Quantity: 2

### .3 Glass Fan Backboard

- .1 RS 96 Glass Fan Backboard, as supplied by Royal Stewart Ltd. (or approved equal in accordance with B7).
  - .1 48" (1220 mm) x 72" (1829 mm) x  $\frac{1}{2}$ " thick glass backboard with fired in target border.
  - .2 Steel frame and goal mounting plate with baked on powder coat finish.
  - .3 Locate as shown on drawings.
  - .4 Quantity: 2

#### .4 Floor Sockets:

- .1 RS 308 S Floor Sockets (for use on synthetic floors), as supplied by Royal Stewart Ltd. (or approved equal in accordance with B7).
  - .1 Sockets shall consist of bottom steel sleeves with 3" (915 mm) ID.
  - .2 Accessories:
    - .1 RS 108 R, 5" bronze ring and RS 108 C cap per socket.
- .2 RS 108 S Storage Room Sockets, as supplied by Royal Stewart Ltd. (or approved equal in accordance with B7).
  - .1 Sockets shall consist of steel sleeves with 1.93" (49 mm) ID to be installed in storage room.
- .3 Quantities: as indicated.

- .5 Game Line Drawings:
  - .1 Successful gymnasium equipment Contractor shall supply game line drawings on 1/4" scale showing all game lines and socket locations.
  - .2 Game lines shall be as follows:
    - .1 One (1) Main Court Basketball 6" (150 mm) wide black lines.
    - .2 One (1) Main Court Volleyball 2" (50 mm) wide green lines.
    - .3 Three (3) Cross Court Badminton 1 ½" (38 mm) wide white lines.

## 2.2 SUBSTITUTIONS

.1 Refer to Section B7 – Substitutes of Bid Opportunity 748-2013.

## Part 3 Execution

# 3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

### 3.2 INSTALLATION

- .1 Install component in accordance with manufacturer's instructions.
- .2 Train user staff in operation and maintenance of above equipment.