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Gatineau, Québec K1A 0S5

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Revision to a Request for Supply Arrangement - Révision à une demande pour un arrangement en matière d'approvisionnement

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Furniture Division/Division des ameublements
11 Laurier St. / 11, rue Laurier
6B1, Place du Portage
Gatineau
Québec
K1A 0S5

Title - Sujet Furniture for Work Spaces - Ongoing	
Solicitation No. - N° de l'invitation E60PQ-140003/B	Date 2016-07-21
Client Reference No. - N° de référence du client E60PQ-140003	Amendment No. - N° modif. 006
File No. - N° de dossier pq416.E60PQ-140003	CCC No./N° CCC - FMS No./N° VME
GETS Reference No. - N° de référence de SEAG PW-\$\$PQ-956-70828	
Date of Original Request for Supply Arrangement 2016-04-21 Date de demande pour un arrangement en matière d'app. originale	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2099-04-22	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
Address Enquiries to: - Adresser toutes questions à: Clouthier, Chantal	Buyer Id - Id de l'acheteur pq416
Telephone No. - N° de téléphone (613) 415-8469 ()	FAX No. - N° de FAX () -
Delivery Required - Livraison exigée	
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	
Security - Sécurité This revision does not change the security requirements of the solicitation. Cette révision ne change pas les besoins en matière de sécurité de l'invitation.	

Instructions: See Herein

Instructions: Voir aux présentes

Acknowledgement copy required Accusé de réception requis	Yes - Oui <input type="checkbox"/>	No - Non <input type="checkbox"/>
The Offeror hereby acknowledges this revision to its Offer. Le proposant constate, par la présente, cette révision à son offre.		
Signature	Date	
Name and title of person authorized to sign on behalf of offeror. (type or print) Nom et titre de la personne autorisée à signer au nom du proposant. (taper ou écrire en caractères d'imprimerie)		
For the Minister - Pour le Ministre		

Amendment 006

This amendment is raised to answer questions and to modify the specifications. The period for asking technical questions is now closed.

1- **Delete:** Annex A-1.2 – Category 6 – Specifications for Support Space Furniture

Replace with: Annex A-1.2 (below)

2- **Answer Suppliers questions.**

Question 45:

Annex A-1.2, 12.1.5.2 a): Why is the diameter of the upholstered stool limited to 508mm (20in) and without a range? The dimensions allow for a small square or large rectangular stool, but are very specific for the round, please allow for additional sizes.

Answer 45:

Refer to Q#20

Question 46:

Annex A-1.2, 12.1.5.2 a): The widths and depths allowed results in very few sizes for square stools (445mm w x 445mm d to 483mm w x 483mm d), please review and revise sizes permitted.

Answer 46:

No changes regarding widths and depths at this time but may consider the request at a later date.

Question 47:

Annex A-1.2, 12.1.5.2 a) states the height of stools must be 381mm to 686mm (15" to 27"), but b) notes the seat height must be between 432mm and 508mm (17" and 20"), please clarify.

Answer 47:

Delete:

12.1.5.2

- a) Overall Dimension – 508 mm (20 in.) in diameter, or 445 mm to 686 mm wide x 343 mm to 483 mm deep x 381 mm to 686 mm high (17½ in. to 27 in. W x 13½ in. to 19 in. D x 15 in. to 27 in. H) ±25.4 mm (1 in.)

Insert:

12.1.5.2

- a) Overall Dimension – 508mm **to 610 mm** (20 in. **to 24 in.**) in diameter, or 445 mm to 686 mm wide x 343 mm to 483 mm deep x 381 mm to 686 mm high (17½ in. to 27 in. W x 13½ in. to 19 in. D) ±25.4 mm (1 in.)

Question 48:

Annex A-1.2, 12.2.2.1 e): the requirement for the backrest to be one continuous rounded surface that wraps around the back to incorporate the armrest limits suppliers to one style of chair and the number of suppliers who can provide these chairs. Please revise the specification to allow for chairs with arms integrated into the frame.

Answer 48:

No changes at the present time.

Question 49:

In an attempt to include more options on the Category 6 Product List spreadsheet (example nearly 1000 lines for lounge chair with tablet arm) the product mix has become random and exclusive rather than inclusive, for instance: There are items in the spreadsheet such a lounge chair with swivel base; Back handle/cup holder /shelf at base; tablet arm, yet the standard options of this chair on four casters is not available. Will PSPC consider revising the Category Product List to be more generic so that it can be more inclusive or add additional options?

Answer 49:

No changes at this time but will review for refresh period.

Question 50:

Annex A-1.2, 12.1.1.2 a): Lists individual units between 24"w and 75"w, but Category 6 Product List spreadsheet does not lists these sizes individually. Please confirm how a supplier can provide pricing for these individual sizes and how an IU can request them?

Answer 50:

The section on Ganging Banquette will be amended.

Question 51:

Category 6 spreadsheets list seating frames in both metal and hardwood options. What if a frame consists of both metal and wood or does not have an exposed frame? Will other frame options not be acceptable? Can an IU select the seating based on a non-functional option such as frame style?

Answer 51:

When the option is for metal or solid hardwood frame these options relates to exposed frame and no changes will be made at this time.

Yes an IU can select the seating base based on a non-functional option such as the exposed finish of the chair frame.

Question 52:

Category 6 spreadsheet requests seating with Crypton fabric (Crypton is a trademarked name). We have fabric options with similar properties as Crypton, will this be acceptable?

Answer 52:

No changes at this time but further review will be made for possible changes at refresh period.

Question 53:

Category 6 spreadsheet requests seating with both vinyl and leather-like upholstery, please describe the difference between these two options.

Answer 53:

Leather like – material is to have a leather grain appearance

Leatherette, or simulated leather, is a synthetic texture made with vinyl, but with a softer feel to match leather as closely as possible.

The difference is the leather like will have more grain to appear like leather vs vinyl will have a smoother texture

Question 54:

The Category 6 spreadsheet seems to indicate that chairs with tablet arms can only be offered if they include "Back handle, cup holder and shelf at base". Please verify if this is true. IF so, how do we provide a shelf on a swivel base? Our version has four casters or four glides, the four caster option will allow the chair to swivel (please note you haven't defined how a swivel base is constructed). Please confirm if our version is acceptable.

Answer 54:

No changes will be done at this time, future consideration maybe done at a later date.

Question 55:

The Category 6 spreadsheet seems to indicate that an IU can select seating based on features that do not affect the performance or aesthetic of the chair. For example, a chair can be chosen based on the back and seat "with Velcro attachment" or "Fixed Cushions". Please confirm.

Answer 55:

The Velcro attachment or Fixed Cushions are options made available to the IU.

Question 56:

Category 6 spreadsheet Line 448 – How can you have a centre metal column and a centre grommet on the same table?

Answer 56:

Please refer to answer #7

Question 57:

Annex A-1.2, 7.21: Is a regular backing to create a balance construction accepted instead of costly veneer? The backing will provide the same function of balancing construction.

Answer 57:

As stated in the architectural woodwork quality standards – v2.0 – 2005 section 400B-T-2 , balanced construction for cabinet components – HPDL cabinet fabrication shall incorporate balanced construction – refer to page 152 of the AWMAC standards

Delete:

7.21 All veneered particleboard parts must be veneered on both sides to provide balanced construction.

Insert:

7.21 All veneered particleboard parts must be veneered on the exposed surface and constructed of balanced construction on both sides to prevent warping.

Question 58:

Category 6 Spreadsheet Lines 18683 to 19006 seems to be exactly the same items as the previous lines 18449 to 18682. Can you confirm? If there is a difference, what is it?

Answer 58:

Please refer to the latest version of the catalogue.

Question 59:

Category 6 Spreadsheet Line 19023 and following lines, lectern mounted on desk: On which desk would it be installed? Is the desk a part of the item, do we need to include the desk in the pricing?

Answer 59:

Please refer to article 11.3.2 – Lecterns; sub section 11.3.2.2 b) The height of desk-mounted lecterns must range from 406 mm (16 in.) to 508 mm (20 in.).

Note: the desk is NOT included

Question 60:

Under section 9.26 Tabletops

it states:

9.26.1 The under surface of the table must be predrilled to accept the installation of mounting hardware and attachments.

9.26.2 All hardware must be installed with metal-to-metal connection.

9.26.3 Tabletops must be manufactured of particleboard or medium density fiberboard.

9.26.4 ~~Table surfaces must be predrilled to accept the installation of mounting hardware and attachments~~

Please be advised that generally for conference/meeting room tables, tops are attached using metal plate and wood screws (common industry practice). Metal to metal connections with pre-drilled hardware are generally done on systems furniture and casegoods.

Please also be advised that this method (metal plate with wood screws) our products meets and exceeds ANSI/BIFMA x5.5 requirement. Therefore, is it acceptable for us to submit product with this method of construction for tables?

Answer 60:

The Technical Authority wishes to do some further research into this matter.

Question 61:

In the Annex A-1.2 Specification for Support Space Furniture under **Description (f) of 11.2.7 Multi-Media Tables**, it reads:

“Bar-height tables must be between 1016 and 1118 mm (40 and 44 in.) when measured from the floor to the top of the work surface.”

There has been significant research conducted on how Multi-Media Tables support the Workplace. Having seated and a standing height encourages movement and the wellbeing of users but the heights of 40 and 44” are very prescriptive. The limited heights that have been requested would eliminate many of the multi-media tables on the market by leading manufacturers. As such we respectfully request that the range be adjusted to allow a variance of (+/- 2 in).

Answer 61:

Delete:

11.2.7.1 f) Bar-height tables must be between 1016 and 1118 mm (40 and 44 in.) when measured from the floor to the top of the work surface.

Insert:

11.2.7.1 f) Bar-height tables must be between 1016 and 1118 mm (40 and 44 in.) **with a tolerance of +/-50.8 mm (+/- 2 in)** when measured from the floor to the top of the work surface.

Question 62:

In the Annex A-1.2 Specification for Support Space Furniture under **9.22 Power Outlets and Data Module** – The requirement calls for a 12 ft. cord minimum with no hardwire. We request that a standard option allow for hardwired power units and channels.

Answer 62:

No changes at this time, may review for refresh period.

Question 63:

In the Annex A-1.2 Specification for Support Space Furniture under **11.3.1.2 (b) Dimension - Meeting Room Furniture** - Credenza height must range from 28" to 42". We respectfully request that the range be of +/- 1 inch.

Answer 63:

Delete:

11.3.1.2 b) Credenza height must range from 711 mm (28 in.) to 1067 mm (42 in.).

Insert:

11.3.1.2 b) Credenza height must range from 711 mm (28 in.) to 1067 mm (42 in.) **with a tolerance of +/- 25.4 mm (1+/- inch).**

Question 64:

In the Annex A-1.2 Specification for Support Space Furniture under **11.3.4.2 (c) Dimension - Mobile Carts** – The height must range from 22" to 38" - We respectfully request that the range be of +/- 1 inch.

Answer 64:

Delete:

11.3.4.2 c) The height must range from 559 mm (22 in.) to 965 mm (38 in.).

Insert:

11.3.4.2 c) The height must range from 559 mm (22 in.) to 965 mm (38 in.) **with a tolerance of +/- 25.4 mm (+/-1 inch).**

Question 65:

Amendment No. 003 Questions & Answers 23 & 28 - Multiple suppliers have indicated that the thickness of foam is unusual for this type of chair. Why won't PSPC allow for industry standard product when it will provide more purchasing options which is beneficial to the Crown?

Answer 65:

Delete:

8.1.4.3

Insert:

8.1.4.3 Seat must be of foam construction or other industry standards and must meet ANSI/BIFMA x 5.4 Lounge and Public Seating Tests.

Question 66:

Annex A-1.2, 11.3.1.1 i): Please explain what this means? "Spring loaded tip-down stops...."

Answer 66:

Please refer to AWMAC section 400, page 157, it's a stop that prevents the drawer from getting off the rails.

Question 67:

Annex A-1.2, 6.1.9 Adhesives: This requirement is impossible to achieve: the 65psi minimum is over the internal bond of a particle board (M2 grade we use: 58psi). The particle board construction breaks before the adhesive fails between the substrate and the plastic laminate. Please remove this requirement.

Answer 67:

6.1.9 Adhesives¹ – The adhesives used to apply plastic laminates must achieve a tensile strength of 449 kPa (65 psi) when tested in accordance with ASTM C297/C297M. The test must be performed using the core material, adhesive, and laminate representative of those that will be used in the finished product.

Insert:

6.1.9 Products must comply with the current version of CAN/CGSB 44.227 with the following exception :

Section 6.1.2 – Adhesives: The tensile strength achieved must be 58 PSI instead of 65."

Question 58:

Category Product List Line 19073: what are the needed dimensions? Dimensions for this items are not noted in the catalog.

Answer 58:

Removed line # 19073 from the catalogue. See latest version of the Product Catalogue.

Question 59:

Category Product List Lines 19092 to 19097 seems to be exactly the same as per lines 19080 to 19085. Please clarify.

Answer 59:

Duplicate has been removed. See latest version of the Product Catalogue.

Question 60:

Category Product List Lines 19098 to 19103 seems to be exactly the same as per lines 19086 to 19091. Please clarify.

Answer 60:

Duplicate has been removed. See latest version of the Product Catalogue.

Question 61:

Category Product List Credenzas, starting at line 18431: ask for a 2 drawer credenza, but widths are up to 60"w. Are more than 2 drawers to be provided for wider units?

Answer 61:

No changes at the present time.

Question 62:

Annex A-1.2, 11.2.12.1 b: There are no 90 degree or corner tables/surfaces in the product list, this is typically required in training applications where modular wiring has to go around and corner and especially when modesty panels are involved as modesties become a barrier. Please add 90 degree and corner surfaces/tables to the Category Product Lists.

Answer 62:

No changes at the present time but will review for the refresh period.

Question 63:

Annex A-1.2, 9.22.1: power modules requested with 4 outlets + 4 data seems to be a general note applicable on all Collaborative, Meeting and Training tables (9.0 section). However, if you go into each table type section, there is other and contradictory information, for instance:

Kitchenette point 11.1.4.1: ask 3 duplexes (6 outlets)

-11.1.4.2 seems to describe a hardwire system instead of a plug cord.

-Meeting room 11.2.6.1, no particular requirement on outlet quantity but at C) "be designed to allow for future expansions to plug-in outlets...". This would not be possible with a plug-in power module, does it refer to a hardwire system?

-Training table point 11.2.16.1 a) asks "at least 2 power input"...

-Also, on point 11.2.15.1, a, b seems to indicate "daisy-chain" power bars. C indicate "No hard-wire".

-6.1.8.1 and 6.1.8.2, in Power & Data, testing requirement: those 2 points are referring to a Hardwire system.

Answer 63:

11.2.6.1 pertains to Meeting room tables and for outlet requirement please refer to article 9.22 Power Outlets and data Module.

Power and data modules or spheres must be designed to allow for future expansions to plug-in outlet or data requirements.

The Power and data modules or spheres must allow to be replaced with new technology.

New amendment to article 9.22 will allow for article 11.2.16.1 a), 11.2.15.1 a & b and for 6.1.8.1 and 6.1.8.2.

Delete:

9.22 Power Outlets and Data Module

Insert:

9.22 Power Outlets and Data Module – unless otherwise stated.

All other terms and conditions remain unchanged.

**ANNEX A-1.2 – CATEGORY 6
SPECIFICATIONS FOR SUPPORT SPACE FURNITURE**

a) SCOPE

- a. This specification details the technical requirements that apply to the furniture for Support Spaces purchased by the federal government.
- b. These specifications must be read in conjunction with article 3.0 of this annex. All products must meet the most recently published standards publications and testing requirements in effect at date of arrangement in response to the Request for Supply Arrangement (RFSa).
- c. Support Spaces is to support the furniture requirements found in Office and Support Space Allocations section as detailed in the latest Government of Canada Workplace 2.0 – Fit-up- Standards – 2012 and must be read in conjunction with this latest version. All products must be read in conjunction with Work Spaces Product and Service Catalogue – Category 6 found at Annex B.
- d. The supplier is responsible for supplying all necessary hardware, connectors, supports, components (including electrical components) and wall mounts etc. required for furniture installation.
- e. All products must be new.

b) TERMINOLOGY

For the purpose of this specification, the following definitions apply. All definitions, unless otherwise stated, are original to this document.

- a. Acceptable Test Facility – An acceptable test facility is defined as a laboratory that is accredited by a nationally recognized body such as the Standards Council of Canada or the A2LA (American Association for Laboratory Accreditation), or is listed in the Canadian General Standards Board (CGSB) Laboratory Acceptance Program for the applicable scope of testing requested.
- b. Breathable Material – Breathable material is defined as any knit, woven, or knotted material or open texture material (i.e. mesh).
- c. Casework¹ – When referring to “casework” within this specification it is regarding furniture components related to ends (gables), divisions, fixed shelves, tops, and door/drawer fronts. Any exposed surfaces excluding work surface tops for - Meeting Room Furniture specifically related to lecterns, credenzas, wall hung presentation cabinets, mobile carts, wardrobe cabinets, storage cabinets.
 - i. Exposed Parts¹ – surface is visible when:
 - 1. Drawer fronts and doors are closed
 - 2. Cabinets and shelving are open
 - 3. Cabinet tops and sides also known as exterior casework
 - 4. Front edges of casework or body members
 - ii. Semi-Exposed Parts¹ – surface is visible when:
 - 1. Drawers/doors are in the open position
 - 2. All front edges of shelving and interior casework behind doors.
 - iii. Concealed Surfaces¹ – Surfaces are concealed when:

¹ Architectural Woodwork Institute. *Architectural Woodwork Quality Standards: Illustrated*. 8th ed. (Centreville, VA: Architectural Woodwork Institute, 2005), 400: 122.

1. Surfaces are not visible after installation
 2. Bottom of cabinets are less than 762mm (30") above the floor finish
 3. Back of cabinet
- d. Collaborative Spaces – Collaborative spaces vary in size and quantity depending on the floor layout, function and space available. Collaborative spaces create environments to help people connect and collaborate, all while encouraging teamwork and idea sharing. Collaborative spaces provides touchdown spots.
 - e. Kitchenettes – Kitchenettes are designed to accommodate multiple functions and may be used as informal meeting, work or resource areas as well as coffee/lunch facilities or recycling centers.
 - f. Large Table – A large table is defined as a table having a seating capacity of 13 or more people.
 - i. Large tables may consist of more than one section or as multiples of small and/or medium tables.
 - g. Medium Table – A medium table is defined as a table having a seating capacity of 7 to 12 people.
 - h. Meeting Rooms – The following definition of “meeting rooms” is republished from the Government of Canada Workplace 2.0 Fit-up Standards.

Meeting Rooms

Meeting rooms provide enclosed spaces for meetings, presentations and collaborative work. The following table summarizes provisions for meeting rooms for various population ranges on a floor.

# of FTEs per floor	Size of Meeting Room			Total
	Small 14 m ² seats 6	Medium 30 m ² seats 12	Large 60.0 m ² seats 20+	

* The large meeting room consists of 2 medium sized meeting rooms divided by a retractable wall to maximize flexibility.²

- i. Quiet Rooms – These are spaces intended for the shared use of personnel who normally occupy open workstations. They provide a private environment for telephone calls, work requiring a high level of concentration, or similar functions.
- j. Reception Waiting Areas – Reception waiting areas may consist of a hard walled reception area or may take the form of a workstation that accommodates some guest seating.
- k. Small Table – A small table is defined as a table having a seating capacity of up to 6 people.
- l. Sphere – A sphere is an electrical accessory installed onto the tabletop that provides power and data to the Identified User(s) in all directions of the table. It can be either field-installed or installed at the manufacturing facility. This accessory does not have a cover. The sphere must not interfere with the table supports or the wire management when installed.
- m. Tablet Arm – A tablet arm refers to a surface attached to a chair that has the primary function of supporting tasks such as writing and short-term handling of reference material. These surfaces typically do not have independent support legs and are not intended to support a person’s weight.

² Real Property Branch, Public Works and Government Service of Canada, *Government of Canada Workplace 2.0 Fit-Up Standards*, (Ottawa, ON: Government of Canada, 2012), A-37.

- n. Tabletops – When making references to “tabletops”, this specification will be referring to the surface forming the top of meeting, training, multimedia, bar height tables and kitchenette tables.
- o. Tailored Appearance – Tailored appearance refers to lounge seating having simple, straight lines and a neat appearance.
- p. Waterfall Edge – A waterfall edge refers to a chair seat construction method where the seat front is sculpted downward in a rounded or eased fashion to reduce or eliminate pressing against nerves in the back of the thigh.

2.17 Self edge: Self edge is identified as being a method of finishing the edges of a horizontal surface. Tops made of particle board as a substrate and sheet of laminate are adhered with contact adhesive, edge of tops are covered by strips of same laminate.

c) PUBLICATIONS

The following publications are referenced herein:

- a. American National Standards Institute (ANSI) / Business and Institutional Furniture Manufacturers Association (BIFMA)³;
 - i. ANSI/BIFMA X5.1 - Office Chairs
 - ii. ANSI/BIFMA X5.4 - Lounge Seating
 - iii. ANSI/BIFMA X5.5 – Desk Products
 - iv. ANSI/BIFMA X5.6 - Panel Systems
 - v. ANSI/BIFMA X5.9 – Storage Units
- b. American National Standards Institute (ANSI) / Hardwood Plywood & Veneer Association (HPVA) / National Particleboard Association (NPA);
 - i. ANSI/HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood⁴
 - ii. ANSI/NPA A208.1 – Particleboard⁵
 - iii. ANSI/NPA A208.2 – Medium Density Fiberboard (MDF) for Interior Applications⁵
 - iv. ANSI Z97.1 - Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test (includes errata)⁶
- c. American National Standards Institute (ANSI) / National Electrical Manufacturers Association (NEMA)⁷
 - i. ANSI/NEMA LD 3 - High-Pressure Decorative Laminates (HPDL)
- d. American Association of Textile Chemists and Colorists (AATCC)⁸
 - i. AATCC EP001-EP-1 – Grey Scale for Color Change
- e. Association for Contract Textiles (ACT)⁹

³ For the most current versions of all ANSI/BIFMA Product Safety and Performance Standards and Guidelines, please see [BIFMA's website](#).

⁴ For the most current version of the American National Standard for Hardwood and Decorative Plywood please see [HPVA's website](#).

⁵ For the most current versions of all ANSI Standards Sponsored by the Composite Panel Association (including those authored by the National Particleboard Association) please see [CPA's website](#).

⁶ For the most current version of ANSI Z97, please see [ANSI's webstore](#).

⁷ For the most current version of the ANSI/NEMA HPDL Standard, please see [NEMA's website](#).

⁸ For the most current version of the Grey Scale for Color Change evaluation procedure, please see [AATCC's webstore](#).

- i. ACT Voluntary Performance Guidelines for Upholstery
- f. ASTM International (formerly American Society for Testing and Materials)¹⁰
 - i. ASTM C297/C297M - Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
 - ii. ASTM D523- Standard Test Method for Specular Gloss
 - iii. ASTM D3359 - Standard Test Methods for Measuring Adhesion by Tape Test
 - iv. ASTM D3363 - Standard Test Method for Film Hardness by Pencil Test
 - v. ASTM D3574 – Standard Test Method for Flexible Cellular Materials – Slab, Bonded, and Molded Urethane Foams.
 - vi. ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
- g. Business and Institutional Furniture Manufacturers Association (BIFMA)¹¹
 - i. BIFMA G1 – Ergonomics Guideline for Furniture Used in Office Work Spaces Designed for Computer Use
 - ii. BIFMA PD-1 - Mechanical Test Standards - Compiled Definitions
- h. California Department of Consumer Affairs¹²
 - i. California Technical Bulletin 117 - Requirements, Test Procedure and Apparatus for Testing the Flame Retardance of Resilient Filling Materials Used in Upholstered Furniture
- i. Canadian Standards Association Group (CSA Group)¹³
 - i. CAN/CSA-ISO 9241-5-00 - Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs), Part 5: Workstation Layout and Postural Requirements
 - ii. C22.2 No. 9.0 - General Requirements for Luminaires
 - iii. C22.2 No. 12 - Portable Luminaires
 - iv. CAN/CSA C22.2 No.203- Modular Wiring Systems for Office Furniture
- j. Canadian General Standards Board (CGSB)¹⁴
 - i. CAN/CGSB 12.1-M, Type 2 - Tempered Glass
- k. International Organization for Standardization (ISO)/ International Electrotechnical Commission (IEC)¹⁵
 - i. ISO/IEC 17025 - General Requirements for the Competence of Testing and Calibration Laboratories
 - ii. ISO 9001 – Quality Management Systems – Requirements

⁹ For the most current versions of ACT's Guidelines for Upholstery, please see [ACT's website](#).

¹⁰ For the most current versions of ASTM International's Standards Publications please see [ASTM's website](#).

¹¹ For the most current versions of any BIFMA standard, please see [BIFMA's webstore](#).

¹² For the most current versions of California State's Department of Consumer Affairs' Flammability Technical Bulletins, please see the [Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation \(BHFTI\) website](#).

¹³ For the most current versions of the Canadian Standards Association Group's (CSA Group) standards, please see the [CSA Group webstore](#).

¹⁴ For the most current versions of the Canadian General Standards Board's (CGSB) Standards, please see the [Federal Organization's online catalogue](#).

¹⁵ For the most current versions of the International Organization for Standardization's- and International Electrotechnical Commission's- Standards, please see [ISO's online standards catalogue](#).

- I. U.S. Army NATICK Research, Development and Engineering Center NATICK/TR-89/044 - 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics¹⁶
 - m. The Government of Canada Workplace 2.0 Fit-up Standards¹⁷
 - n. Architectural Woodwork Institute - Architectural Woodwork Manufacture Association of Canada (AWMAC) – 2005 AWI/AWMAC – 8th Edition Quality Standards Illustrated (now replaced by Architectural Woodwork Standards 2nd Edition - 2014)¹⁸
 - o. References to the above publications and test methods therein are to be consulted to-, and be considered regulatory from-, the most recently issued version or revision unless otherwise noted.
- d) CATEGORY 6 – Support Space Furniture is comprised of the following Products
- a. Collaborative Tables, Meeting and Training Room Furniture
 - i. Tables
 - 1. Bar Height Tables
 - 2. Coffee Tables
 - 3. Kitchenette Tables with End Gables
 - 4. Meeting Room Tables
 - 5. Multi Media Tables
 - 6. Side Tables
 - 7. C-shaped Side Tables
 - 8. Training Room Tables
 - 9. Table Trolleys
 - ii. Meeting Room Furniture
 - 1. Credenza
 - 2. Lectern
 - 3. Mobile Carts
 - 4. Wardrobe and Storage Cabinets
 - 5. Wall Hung Presentation Cabinets
 - b. Collaborative Seating and Screens
 - i. Soft Seating

¹⁶ Gordon, Claire C., Thomas Churchill, Charles E. Clauser, Bruce Bradtmiller, John T. McConville, Ilse Tebbetts, and Robert A. Walker. 1989. "1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics." Natick, MA.

¹⁷ Public Works and Government Services Canada. 2012. "Government of Canada Workplace 2.0 Fit-Up Standards." Ottawa, ON: Government of Canada.

Note: For the most current versions of the Government of Canada's Real Property Requirements, please see [Public Works and Government Services Real Property Publications List](#).

¹⁸ Architectural Woodwork Institute, Architectural Woodwork Manufacturers Association of Canada, and Woodwork Institute of California. 2014. *Architectural Woodwork Standards*. Edited by Stanley R. Gustafon. 2nd ed. Potomac Falls, VA; High River, AB; West Sacramento, CA: Adopted and Published jointly by the Architectural Woodwork Institute, Architectural Woodwork Manufacturers Association of Canada, and the Woodwork Institute of California.

- 1. Ganging Banquette Seating
 - 2. Lounge Chairs
 - 3. Modular Benching Units
 - 4. Sofas
 - 5. Upholstered Stools
- ii. Kitchenette Seating
 - 1. Bar Stools
 - 2. Kitchenette Chairs
- iii. Lounge Screens
 - 1. Upholstered Screens
 - 2. White Boards

e) TEST REPORTS

- a. Test reports must not be more than five years old from the date the test was performed with the exception of the fabric tests applicable to the ACT Voluntary Performance Guidelines.
- b. All tests must be completed by an acceptable test facility.
- c. Revised Test Standard(s): Reference is made to the testing standards listed within this annex and to the requirement that all products offered in the SA have successfully passed the referenced testing standards. If the referenced test standards change, the products must successfully pass the revised test standard(s). Only the tests that have been revised must be performed, and, this testing must occur within nine months from the date of the revised test Standard(s).
 - i. Product Changes – When physical changes are made to products already tested against the above referenced test standards, the changed product(s) must also be tested within nine months from the date of the product change. The applicable tests and the applicable test standards will be those deemed by an Acceptable Test Facility.
 - ii. For all test reports that are not specific to the products in the Supply Arrangement, the Supplier must provide an explanation to government of Canada as to why the “worst-case condition” applies to the products. The definition of “worst-case condition” can be found in BIFMA PD-1.

f) TESTING REQUIREMENTS

The product offering must meet all the testing requirements as listed below:

- a. Collaborative Tables, Meeting and Training Room Furniture
 - i. Flammability – All foam and fabric must comply with the requirements of California Technical Bulletin 117.
 - ii. Upholstery – All upholstery must meet the requirements of the Association for Contract Textiles (ACT) Voluntary Performance Guidelines for Upholstery in the following categories: Wet & Dry Crocking, Physical Properties, Flammability, and Colorfastness to Light. In addition, upholstery must meet the heavy-duty rating for abrasion resistance.
 - iii. Deflection - Tables and Meeting Room Furniture must meet the acceptance levels as described in ANSI/BIFMA X5.5.

1. Deflection – Table surfaces must deflect no more than its overall length (L) divided by 180 (L/180) when tested in accordance with the requirements detailed for bar height, kitchenette, meeting, training and multi-media tables.
2. Horizontal Surface Deflection for bar height-, kitchenette-, meeting-, training- and multi-media- tables – when tested in accordance with the functional load distribution requirements specified in ANSI/BIFMA X5.5. Average the height of the end points and subtract the height of the center. The resultant dimension is the deflection.
3. Surface Deflection for credenzas, storage cabinets, wardrobe cabinets – The surface deflection of storage cabinet shelves must be no more than the shelf length (L) divided by 180 (L/180) when tested in accordance with the functional load distribution requirements specified in ANSI/BIFMA X5.5 and ANSI/BIFMA X5.9.
4. Force Stability - Attached privacy screens must be tested for force stability as specified in ANSI/BIFMA X5.5.

iv. Lecterns must be tested and meet the acceptance levels as described in ANSI/BIFMA X5.5.

v. Disengagement – Attached privacy screens must not tip over or shift from their original position when tested in accordance with ANSI/BIFMA X5.9.

vi. All storage products must be tested and meet the acceptance levels as described in ANSI/BIFMA X5.9.

vii. All vertical table surfaces finished in laminate, excluding side tables must meet and pass the performance testing for Low Pressure Laminate detailed by the Performance Testing Requirements for Finishes.

viii. Power and Data

1. All electrical systems and components must comply with CAN/CSA C22.2 No. 203.
2. Power receptacles must be certified to CAN/CSA C22.2 No. 203 and be 15 amperes.
3. Task light fixtures must comply with CSA C22.2, No. 9.0.

6.1.9 Products must comply with the current version of CAN/CGSB 44.227 with the following exception:

Section 6.1.2 – Adhesives: The tensile strength achieved must be 58 PSI instead of 65."

b. Finishes - Including metals, laminate and wood veneer must be tested and meet the performance testing requirements detailed in the Performance Testing Requirements for Finishes herein.

i. The product offering for Collaborative Tables, Meeting and Training Room furniture must meet and pass all the Performance Testing Requirements for Finishes detailed below;

1. Meeting, training, kitchenette, bar height tables and multimedia- table-top surface finishes must meet the performance requirements for high-pressure laminate or wood veneers.
2. Side/Coffee Tables – the surface finish must meet the performance requirements for low-pressure laminate or wood veneer.
3. All other surfaces – All other components for Collaborative Tables, Meeting and Training Room, must meet the performance requirements for low-pressure laminate, metal or wood veneer.

ii. Performance Testing Requirements for Finishes

4. High- and Low- Pressure Laminate

- a. Gloss – The 60° specular gloss of surfaces, when tested in accordance with ASTM D523, must not exceed 45 units.
- b. Colour Stability – The finish, after exposure, when tested in accordance with ANSI/NEMA LD 3, section 3, must not show a change in colour greater than grey scale 4 contrast by reference to AATCC EP001.

2. High-Pressure Laminate

- a. Impact Resistance – There must be no cracking when tested in accordance with ANSI/NEMA LD 3, with the following exceptions:
 - i. The ball drop height must be 762 mm (30 in.).
 - ii. The test substrate must be the material to be used for the manufacturer's work surfaces.
 - iii. Trim and edging that may project onto the surface are exempt from these requirements.
- b. Performance Requirements for Finishes - Abrasion Resistance – The loss of finish, when tested in accordance with ASTM D4060 using a CS-10 wheel with a 1000 g load, must not exceed 0.02 g at 500 cycles.
- c.

3. Low-Pressure Laminate

- a. Impact Resistance – There must be no cracking when tested in accordance with ANSI/NEMA LD 3, with the following exceptions:
 - i. The ball drop height must be 254 mm (10 in.).
 - ii. The test substrate must be the material to be used for the manufacturer's work surfaces.
 - iii. Trim and edging that may project onto the surface are exempt from these requirements.
- b. Performance Requirements for Finishes - Abrasion Resistance – The loss of finish, when tested in accordance with ASTM D4060 using a CS-10 wheel with a 1000 g load, must not exceed 0.04 g at 500 cycles.

4. Wood Veneer

- a. Gloss – The 60° specular gloss of surfaces, when tested in accordance with ASTM D523, must not exceed 45 units.

5. Metal

- a. Finish Hardness – The finish, when tested in accordance with ASTM D3363's "scratch hardness" method, must not be less than H.
 - b. Abrasion Resistance – The loss of finish, when tested in accordance with ASTM D4060 using a CS-10 wheel with a 1000 g load, must not exceed 0.04 g at 500 cycles.
 - c. Colour Stability – The finish, after exposure, when tested in accordance with NEMA LD 3, section 3, must not show a change in colour greater than grey scale 4 contrast by reference to AATCC EP001.
 - d. Paint Adhesion – The adhesion rating of the painted metal finish must be at least 4B, when tested in accordance with ASTM D3359, Method B.
- c. Upholstery – All upholstery must meet the requirements of the Association for Contract Textiles (ACT) Voluntary Performance Guidelines for Upholstery in the following categories: Wet & Dry Crocking, Physical Properties, Flammability, and Colorfastness to Light. In addition, upholstery must meet the heavy-duty rating for abrasion resistance.
- d. Polyurethane Foam – Foams must have the Indentation Force Deflection (IFD) (at 25%) between 155.7 – 177.9 N (35–40 lbf) and a density greater than 32 kg/m³ (2 lbs/ft³) when tested in accordance with ASTM D3574.
- i. When tested in accordance with ASTM D3574 - Dynamic Fatigue Test I-3 by Constant Force Pounding, procedure B, the cushioning material's loss of force support at 40% IFD (Indentation Force Deflection) must not exceed 23% for seat applications and 33% for backrest applications.
- e. All soft seating must meet the acceptance criteria provided in ANSI/BIFMA X5.4 when tested in accordance with the appropriate tests from the referenced standard.
- f. All kitchenette chairs and bar stools must meet the acceptance criteria provided in ANSI/BIFMA X5.1 when tested in accordance with the appropriate tests from the referenced standard.
- g. All lounge screens must meet the acceptance criteria provided in ANSI/BIFMA X5.6 when tested in accordance with the appropriate tests from the referenced standard.

g) GENERAL REQUIREMENTS

All Collaborative Tables, Meeting and Training Room Furniture materials must meet the performance testing requirements detailed below:

- a. Particleboard – Particleboard must conform to ANSI/NPA A208.1 grade M2 or greater when used as a substrate.
- b. Medium Density Fiberboard (MDF) – When medium density fiberboard (MDF) is used as a substrate, the core must conform to ANSI/NPA A208.2.
- c. Solid Wood, Veneer, or Painted Wood – Solid wood, wood veneer, and painted wood must be certified by the Forest Stewardship Council (FSC) and requires an FSC Chain of Custody certificate. The wood must be free of open knots.
 - i. Wood veneer must be provided in Cherry, Maple, Oak and Walnut in the manufacturer's standard line of wood veneer.
- d. Engineered Composite Panels – When the substrate for work surfaces, shelving, or any other component is a composite wood product (i.e. particle board, medium density fiberboard, plywood) that contains urea-formaldehyde-based resins, the substrate must be fully encapsulated on all six sides.

- e. Hardwood Plywood - must conform to ANSI/HPVA HP-1, Birch species, architectural grade. Use particleboard core with Type II bond, balanced construction, to minimize warping.
- f. Drawer Sides and Backs – wood drawers must be of single species solid lumber as per AWMAC, section 100-G-1 hardness rating of medium or better.
 - a) 7-ply all hardwood veneer core plywood, no voids; no edge band required.
 - b) High pressure decorative laminate on 7-ply veneer core substrate.
 - c) Edge banded HPDL or thermos-set decorative overlay on particleboard core.
- g. Drawer Bottoms – Veneer core panel product, “B” face hardwood veneer or thermos-set decorative overlay panel product or hardboard (smooth side visible inside).
- h. All wood trims, wood drawers, wood pulls etc. require finishing such as transparent stained or opaque finish fully ready for use.
- i. Wood cabinetry manufacturing must comply to AWMAC to the latest version;
 - a) Minimum Nominal and Material for Cabinet Components
 - b) Flush Wood Exposed and semi-exposed Materials,
 - c) Edge Treatment of Exposed and Semi-exposed Panel Products,
 - d) Flush Wood Cabinet Doors and Drawer Fronts.
 - e) Stile and Rail Wood Doors, Drawer Fronts, and Exposed Materials,
 - f) Stile and Rail Workmanship,
 - g) Stile and Rail Machining and Joinery,
 - h) Drawer Sides and Backs,
 - i) Drawer Bottom Materials,
 - j) Drawer Construction Techniques/Supports,
 - k) Concealed 35mm Cup Hinge Installation,
 - l) Adjustable Shelf Techniques/Supports,
 - m) Joinery of Case Body Members,
 - n) Joinery of Face Frames and Trims,
 - o) Smoothness of Exposed Surfaces,
 - p) Selection for Grain and Color.
- j. All exposed and semi-exposed casework, doors/drawers and tops must be finished in the same material unless otherwise noted.
- k. Tabletop finishes for training and meeting room tables must be provided in high-pressure laminate or wood veneer. Laminate finish must be properly adhered onto a substrate and the under surface must have equally balanced backer.
- l. For tables with laminate top, the colour of the exposed edge finish must match the colour of the tabletop finish.
- m. For tables with veneer top, the colour of the exposed edge must match the colour of the tabletop finish.
- n. Table bases and all other furniture must be provided in high- or low-pressure laminate, wood, wood veneer, metal, or a combination of the aforementioned finishes.
- o. For tabletops, the finish of the surface must meet the performance requirements for high-pressure laminate.
- p. Edges – edges must be finished in PVC or Polypropylene, solid wood edge band. All edge banding must be free of de-lamination, bubbles, and all adhesive or processing residues.
- q. Exposed and semi-exposed edges must be treated by applying edge bandings.

- i. Body Members – material must be the same as components or of a compatible PVC.
 - ii. Exposed Shelves – material must be of the same as exposed body members or of a compatible PVC.
 - iii. Semi-Exposed Shelves – material must be the same as cabinet interior, shelf, or of a compatible PVC.
 - iv. Doors and Drawer Fronts - material must be the same as exposed or of a compatible PVC.
 - r. Coffee and Side Tables – the finish of the surface must meet, at minimum, the performance requirements for low-pressure laminate or wood veneer.
 - s. Meeting Room Furniture – Semi-exposed finish on the casework, drawer and doors must be finished in like materials and thicknesses on both sides as the exposed finishes to prevent warping.
 - t. Surfaces must have a laminate bonded to all exposed single- and double- faced sides.
 - ~~u.~~ All veneered particleboard parts must be veneered on the exposed surface and constructed of balanced construction on both sides to prevent warping.
 - v. Substrates must be made of particleboard, MDF (medium density fiberboard) or hardwood plywood.
 - w. Veneer surfaces must have a multi-layer backer sheet applied to the underside, if not laminated on both sides.
- h) MATERIALS - Collaborative Seating and Screens
- a. Soft Seating
 - i. Seat and Back
 - 1. Appearance - The seat and back must be fully upholstered with stitch detailing for a tailored appearance.
 - 2. Springs and Webbing – Sinuous springs or drop-in coil springs webbing must be used. Equal or better alternative which meets and pass the tests as stated in section 6 will be acceptable.
 - 3. Foam – Seat must be of foam construction or other industry standards and must meet ANSI/BIFMA x 5.4 Lounge and Public Seating Tests.
 - ii. Upholstery must be fabric with recycled content, vinyl, leather-like, or Crypton.
 - 1. Fabric upholstery must be made of stain-resistant fabric.
 - 2. Patterns must align at the seams and corners, both vertically and horizontally.
 - 3. Upholstery seams must be double-stitched or top-seamed and be perfectly straight.
 - iii. Tablet Arms – Tablet arms must be wood veneer or laminate with coordinating edge material.
 - iv. Side Tables – Side tables for modular benching units must be wood veneer or laminate.
 - v. Legs/Bases – Legs and bases must be metal or solid hardwood.

- b. Kitchenette Seating
 - i. Frames and Legs – Frames and legs must be metal.
 - ii. Seat and Back – The seat and back must be wood veneer, bent plywood, perforated or non-perforated molded plastic and/or polyamide, upholstered, or any combination of these materials.
 - iii. Foam – Foam must be a minimum of 63.5 mm (2.5 in.) in thickness.
 - iv. Upholstery – Upholstery must meet the criteria below;
 - 1. Upholstery must be fabric with recycled content, vinyl, leather-like, or Crypton. Fabric upholstery must be made of stain-resistant fabric.
 - 2. Patterns must align at the seams and corners, both vertically and horizontally.
 - v. Lounge Screens – Lounge screens must meet the criteria below;
 - 1. Frames – Frames must be metal.
 - 2. Upholstery – Screens must be upholstered in either fabric or breathable material (for example, mesh).
 - vi. White Boards – Each side of the screen must either be a white board, a tackable fabric surface or a combination of the two.
- i) COMPONENTS - Collaborative Tables Meeting and Training Room Furniture
 - a. All laminate and PVC edges must be machine flush, filed, sanded, or buffed to remove machine and processing marks (i.e. sharp corners removed). Cleanup at easing must be such that no overlap of member eased is visible. Chip out of the laminate must be invisible when viewed.
 - ~~b.~~ Edges – For work surface edges designed for a user to rest the forearm or wrist must have a radius of at least 3mm (0.12 in.).
 - c. Workmanship – The finished products must be uniform in quality, style, material, and workmanship and must be clean and free of any defects that may affect appearance, serviceability, or safety. When assembled in any of the manufacturer's recommended configurations, there must be no unfinished edges or surfaces other than stainless steel when viewed in normal-use positions. Metal edges, corners, and parts that may, or will, come in contact with the user must be rounded or covered with protective caps. Lubricated parts, excluding drawers, must be protected against accidental contact with the user, the user's clothing, or documents. Wood core surfaces must have a balanced construction to minimize warping.
 - d. Wood and Wood Veneer – Furniture surfaces and edges must be smoothly sanded and free of blemishes or defects such as tool or machine marks, sanding marks, surplus glue, raised grain, de-lamination, or water marks. Wood face veneers must be tightly joined, properly matched, and similar in grain pattern or colour throughout the tabletop surface. The natural characteristics of wood and veneer are acceptable although all visible solid wood must be free of open knots.
 - e. Meeting and Training Room Tables¹⁹ - must be provided in three sizes; small, medium and large tables.
 - i. All tables, with the exception of multi-media tables, must have a fixed height measuring $730 \pm 25.4 \text{ mm}$ ($28.7 \pm 1.0 \text{ in.}$) from the floor to the under surface of the tabletop.

¹⁹ Canadian General Standards Board, *Free-Standing Office Desk Products and Components*, 2008th ed., CAN/CGSB-44.227 (Ottawa, ON: Standards Council of Canada, 2008), 6.1.2.

- ii. Tabletops must be edged with PVC edging or solid hardwood edging for laminate tops, and at least 25.4mm (1 in.) solid hardwood edging for wood veneer tops.
 - iii. The top must be a minimum of 19 mm (3/4 in.) in thickness and must be made of particleboard, MDF or hardwood plywood with a veneer or laminate surface.
- f. Veneers must be selected with careful attention to pattern grain matching and symmetry (as applicable).
- g.
 - Tables must be supported by legs, bases, or end gables. Legs must not be shared in multiple table for side-by-side configurations.
- h. Exposed joints must be neatly executed, rigid, tight and flush with no tool, machine or cross-sanding marks.
- i. The factory finish must be smooth and free of snags, runs, orange peel and overspray.
- j. Metals – All exposed aluminum components must be anodized, painted, or otherwise treated to prevent oxidation.
- k. Welds – All welds must be structurally sound and free of cracks and surface voids. They must be clean, smooth, uniform in appearance, and free of scale, flux, trapped foreign matter, and any other inclusions that may be detrimental to the application of the primer or final finish.
- l. Safety – Fixed, movable, as well as adjustable parts must be constructed so that they cannot unintentionally become loose or dislodged or cause personal injury.
- m. Table Edges – There must be a minimum of three types of edge details available and the colour must match the tabletop finish. Self-edging is not acceptable for meeting, training, kitchenette and multimedia tables.
- n. All tables must be supplied with hardware to complete the installation.
- o. All connections into particleboard core must have metal-to-metal connectivity.
- p. All tables must be level and square.
- q. Clearance Under Work Surfaces – meeting, training, kitchenette and multimedia tables.
- r. Tables – There must be a clearance envelope under all tables of 610 mm (24 in.) in depth or greater, which must meet the requirements of BIFMA G1 for the 95th percentile male, except that the depth at toe level must be 584 mm (23 in.).
- s. For height-adjustable work surfaces, the range of adjustments must include the clearance envelope for the 95th percentile male.
- t. Glides – All furniture, except for mobile tables, must be equipped with four corrosion-resistance glides on the legs. The glides must not exceed the width of the base and must have a vertical adjustment of at least 25.4 mm (1 in.), with a tolerance of -6.35 mm (-0.25 in.). Glides must be secured and must not become loose or detached while in use. They must also be accessible and removable for adjustment or replacement.
- u. Power Outlets and Data Module – unless otherwise stated.
 - i. The power and data module must be recessed in the tabletop and have flip-up access doors that pivot, retract, or pop up to conceal and protect the module. The module must provide four receptacles and four data covers.
 - ii. Each data module is composed of a cover and a jack adapter. Data jacks are supplied by other Suppliers and are not covered under this specification.
 - iii. Power outlets and data covers must be supplied and must be easily accessible by the Identified Users.

- iv. The module must have a 15-ampere cord that is at least 3.7 m (12 ft.) long with a plug.
- v. Hardwired connection is not acceptable.
- v. Cable Management
 - i. The power and data cable management assembly must be concealed in a trough or wire tray and must be easily accessible by the Identified Users.
 - ii. An additional system of cable management must be provided with a flexible casing to conceal the cables from the floor to the power and data at the table surface.
- w. Seating Calculations – All seating calculations for category 6 are based on the use of a 58.42 cm (23 in.) wide chair. Allow an additional 10.16 cm (4 in.) between chairs.
- x. Supports or Table Bases
 - i. Table surfaces must be supported by either legs or bases.
 - ii. Legs must not be shared in multiple-table configurations.
 - iii. Fixed supports must be provided with a leveling mechanism with a vertical adjustment of at least 25.4 mm (1 in.), with a tolerance of -6.35 mm (-0.25 in.).
 - iv. Table Bases – The table base must not be less than half the size of the table top. The leg spread of the base must not be narrow to cause the table to tip, the base must be properly weighted to avoid tipping.
- y. Tabletops
 - i. The under surface of the table must be predrilled to accept the installation of mounting hardware and attachments.
 - ii. All hardware must be installed with metal-to-metal connection.
 - iii. Tabletops must be manufactured of particleboard or medium density fiberboard.
 - iv. Table surfaces must be predrilled to accept the installation of mounting hardware and attachments.
- z. Casework or shelves in semi-exposed conditions must have edge band which match the casework or shelf.
- j) COMPONENTS – Collaborative Seating and Screens
 - a. The finished products must be stable; be uniform in quality, style, material, and workmanship; and be clean and free of defects that may affect appearance, serviceability, or safety.
 - b. All components must be level and square.
 - c. Veneer for exposed parts must be clear, sound, and smoothly sanded without obvious scratches, marks, or splits.
 - d. Soft Seating
 - i. The covering of soft seating products must be properly positioned, clean, and well-tailored in appearance. All excess covering must be neatly trimmed and any surplus removed.
 - ii. All edges and corners of the back and seat frame must be eased or rounded to prevent damage, abrasion, and wear and tear of the fill and cover materials.
 - iii. Seam allowances must be maintained and seams properly sewn so that no raw edges, runoffs, broken or skipped stitches, twists, pleats, or puckers result. Top and bottom threads must be adjusted to the upholstery materials with proper tension

so that there will be no looped stitches, puckering of materials, or cracking when the cover is stretched to fit the finished product.

iv. The seam must line up with the edges of the surfaces.

v. All directional or patterned fabrics (e.g. stripes, geometrics, textured) must be installed respecting the consistency/repetition and direction of the given pattern.

vi. The covering must be securely attached with tacks and/or staples, and fastening devices must be positioned so as not to be visible.

vii. All seat bottoms must be covered with cambric and the covering must be finished without exposed edges.

viii. Armrest profiles must be straight on the exterior and have a tailored appearance.

ix. Sofas must accommodate two or three adults.

e. Kitchenette Seating

i. Kitchenette seating must be uniform in quality, clean, and free of any defects that may affect appearance and serviceability.

ii. External surfaces must be smooth and all edges must be rounded and beveled. All accessible surfaces must be free of sharp edges, burrs, and any other safety hazards.

iii. Waterfall edge – When measured without compression, the vertical height of the seat front edge curve must not be less than 40 mm (1.6 in.) and the radius of the front edge curve must not be less than 40 mm (1.6 in.) or greater than 120 mm (4.7 in.).

iv. Kitchenette chairs with four legs and without arms must be stackable and have a minimum stacking capability of 10 chairs.

f. Lounge Screens

i. Upholstery seams must be straight and aligned with the frame. There must be no puckering or pulling in the upholstery fabric or mesh.

ii. The upholstery fabric or mesh must be replaceable using commonly available tools.

k) DETAILED REQUIREMENTS

a. Tables

i. Bar-Height Tables

1. Description

- a. Round
- b. Straight-edge, or self-edge profile
- c. Post leg with round pedestal base, post leg with round pedestal base and footrest, cylindrical base, square base, or 3-point base

2. Dimension

- a. Must be 762 mm (30 in.) or 914 mm (36 in.) in diameter ± 25.4 mm (± 1 in.)
- b. Height of Table Surface: 1041mm to 1092mm (41 in. to 43 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor.

3. Finishes

- a. High-pressure laminate (HPL) surface
- b. Metal post legs
- c. Metal base
- d. Metal 3-point base

ii. Coffee Tables

1. Description

- a. Rectangular
- b. Straight-edge profile, or self-edge
- c. Four legs, end gables, or mobile

2. Dimension

- a. Rectangular Table – 457 mm to 610 mm deep (18 in. to 24 in. D) x 914 mm to 1219 mm wide (36 in. to 48 in. W) ± 25.4 mm (± 1 in.)
- b. Height of Table Surface – Must be between 356 mm and 533 mm (14 in. and 21 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor

3. Finishes

- a. Laminate or wood veneer surface
- b. Metal legs or base
- c. Laminate or wood veneer end gables

iii. Kitchenette Tables with End Gables

1. Description

- a. Rectangular
- b. Straight-edge profile, self-edge, post-formed
- c. Full table depth end gables
- d. With or without power/data management
- f) Seated Height.
- g) Bar Height.

2. Dimension

- a. Must be 1524 mm to 2438 mm wide (60 in. to 96 in.) x 762 mm to 1219 mm deep (30 in. to 48 in.) ± 25.4 mm (± 1 in.).
- b. Seated Height of Table Surface – Must be between 738 mm and 787 mm (29 in. and 31 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor.
- c) Bar Height of Table Surface - Must be between 914mm and 1067mm (36 in. and 42 in.) inclusively ± 12.7 mm ($\pm 1/2$ in.) above finished floor.

3. Finishes

- a. High-pressure laminate (HPL) surface.
- b. Full end gables must be laminate or wood veneer.

iv. Data and Electrical Requirements for Kitchenette Tables with Full End Gables

1. Kitchenette tables with power and data capability must have a minimum of three (3) duplex or pairs of power outlets and four (4) RJ45 data outlets accessible from either side of the table.

2. Power, Data, and Cable Management

- a. Kitchenette tables with full end gables must have continuous horizontal power, data, and cable management components that run the entire length of the table under the surface and are concealed from view. The power, data, and cable management must be pre-wired and capable of being ganged/joined and connected from one table to another at the short end.
- b. Power and data connections must be supplied from the floor. All connections and cables must be contained and controlled in a flexible casing/spine from the floor to any location from the underside of the table. Casings must be flexible white/off-white translucent plastic or metal to match the table frame and the full end gables.

v. Kitchenette tables with full end gables must be provided either with fully integrated one-touch flip-top power and data access units that are flush with the surface or with a slot or trough with fixed faceplates and tops that are fully integrated with the power and data outlets and are flush with the surface. Both option must be located along the centerline of the table.

b. Meeting Room Tables

i. Small Tables

1. Description

- a. Table shapes must be round, square and rectangular.
- b. The option of ganging several small tables together to create a large meeting table must be provided.
- c. Ganging hardware and power connectivity are required.

2. Dimension

- a. Small round tables must range from 762 mm (30 in.) to 1524 mm (60 in.) in diameter.
- b. Small square tables must range from 762 mm (30 in.) x 762 mm (30 in.) to 1524 mm (60 in.) x 1524 mm (60 in.) in size.
- c. Small rectangular tables must range from 610 mm (24 in.) to 762 mm (30 in.) wide x 1219 mm (48 in.) to 1524 mm (60 in.) long.
- d. A tolerance of 152.4 mm (6 in.) is acceptable for small round, square, and rectangular tables.

ii. Medium Tables

1. Description

- a. Table shapes must be rectangular.
- b. Ganging hardware and power connectivity are required.

2. Dimension

- a. Medium rectangular tables must range from 762 mm (30 in.) to 914 mm (36 in.) wide x 1828 mm (72 in.) to 3048 mm (120 in.) long.

iii. Large Tables

1. Description

- a. Must have a racetrack-shaped, boat-shaped, or oval top.
- b. Table tops must be provided in at least two pieces, to ensure they will fit into service elevators.

2. Dimension

- a. Large tables must range from 1067 mm (42 in.) to 1524 mm (60 in.) wide by at least 3658 mm (144 in.) long.

iv. Supports/ Table bases

1. Description

- a. Table supports must be provided with wire management attached to the legs, through the bases, and installed under the table surface by means of a trough or tray.
- b. Legs and bases must be provided in either a four-post table leg design with or without lockable casters, a three-point base or four-point base, a disk base design with a central post, or a panel base design with three or four panels.
- c. Drum bases must be provided for round, racetrack-shaped, boat-shaped and oval table tops.
- d. The quantity of bases is the responsibility of the manufacturer based on function and stability and must meet and pass ANSI/BIFMA X5.5.
- e. Panel bases must be provided for square, rectangular, racetrack-shaped, boat-shaped and oval table tops. The quantity of bases is the responsibility of the manufacturer based on function and stability, and must meet and pass ANSI/BIFMA X5.5.
- f. All tables must have glides, small table must have the option of having lockable casters on four-post table legs.

2. Dimension

- a. Must be manufacturer's standards.

v. Finishes

1. Description

- a. Table finishes must be pressure laminate, wood veneer, metal, or a combination of the aforementioned finishes.
- b. Tabletops must be finished in high-pressure laminate and wood veneer.
- c. Table base/supports must be provided in metal, laminate or solid wood, wood veneer or a combination of those finishes.

vi. Power and Data

1. Description

- a. Tables measuring from 1372 mm (54 in.) to 2134 mm (84 in.) in length must be provided with at least one recessed or surface-mounted power/data module with wire management.
- b. Tables measuring 2438 mm (96 in.) or longer must be provided with two recessed or surface-mounted power/data modules with wire management.
- c. Power and data modules or spheres must be designed to allow for future expansions to plug-in outlet or data requirements.

vii. Multi-Media Tables

1. Description

- a. Surface Area Shapes – Multi-media tables must be rectangular or D-shaped.
- b. Multi-media tables must be provided in three types: mobile easels/carts, monitor support mount, and table/monitor units. All types must meet article 11.2.7.1 and all its sub sections
 - i) Mobile easels/carts supports the monitors and is independent from the table.
 - ii) Monitor support mount is when the monitor support is mounted onto the table.
 - iii) Table/monitor units is when the table and monitor support is one unit.
- c. Single and Double Monitors – Multi-media tables must accommodate the placement of both a single monitor and double monitors.
- d. Height – Multi-media tables must be provided in two heights: seated-height and bar-height.
- e. Seated-height tables must be 730 ± 25.4 mm (28.7 ± 1.0 in.) when measured from the floor to the top of the work surface.
- f. Bar-height tables must be between 1016 and 1118 mm (40 and 44 in.) with a tolerance of ± 50.8 mm (± 2 in) when measured from the floor to the top of the work surface.
- g. Bases – Multi-media table bases must accommodate cable or wire management.
- h. Monitor Supports – Monitor supports must accommodate flat screens ranging from 813 mm (32 in.) to 1524 mm (60 in.) in size, and must accommodate the placement of a single and double monitor.
- i. Monitor supports must provide wire management to connect with the table wire management.
- j. Power/Data and Cable Management – Power/data and communication connection from the monitor supports to the tabletop must be provided to the Identified Users for teleconference functions.
- k. Multi-media tables must be designed to accommodate equipment such as flat-screen monitors, switchers, sensors, and Universal Serial Bus (USB) programmable and wireless transmitters. However, the equipment does not form part of these specifications.

2. Dimension

- a. The depth must be provided in three sizes: 1219 mm (48 in.), 1372 mm (54 in.), and 1524 mm (60 in.). The width must range from 1524 mm (60 in.) to 3048 mm (120 in.). A tolerance of ± 50.8 mm (± 2 in.) is acceptable for both the depth and width.

3. Finishes

- a. High Pressure Laminate top
- b. Metal legs or laminate base
- c. PVC or equivalent edge, no self-edge.

viii. Side Tables

1. Description

- a. Square or round
- b. Straight-edge, or self-edge profile.
- c. Four legs, end gables, base, or mobile

2. Dimension

- a. Square Table – 457 mm to 610 mm deep (18 in. to 24 in. D) x 457 mm to 610 mm wide (18 in. to 24 in. W) ± 25.4 mm (± 1 in.)
- b. Round Table – 457 mm to 610 mm (18 in. to 24 in.) in diameter
- c. Height of Table Surface – Must be between 356 mm and 533 mm (14 in. and 21 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor

3. Finishes

- a. Laminate or wood veneer surface
- b. Metal legs or base
- c. Laminate or wood veneer end gables

ix. C-shaped Side Tables

1. Description

- a. Side table to have a “C” shape configuration
- b. Straight-edge, or self-edge profile.
- c. Vertical support must be the same width as the table top and base.

2. Dimension

- a. Must be 356 mm to 610 mm wide x 495 mm to 610 mm deep (14 in. to 24 in. W x 19½ in. to 24 in. D) ± 25.4 mm (± 1 in.)
- b. Round Glass Top – Minimum 356 mm (14 in.) in diameter
- c. Height of Table Surface – Must be between 500 mm and 660 mm (19.7 in. and 26 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor

3. Finishes

- a. Plywood, bent plywood, laminate, or wood veneer
- b. Stainless Steel frame
- c. C-shaped side tables must be made of plywood, bent plywood, laminate, wood veneer, or a steel frame supporting a glass top.
- d. Glass tops must be frosted or back-painted glass.

x. Training Room Tables

1. Description

- a. Training tables must be modular and capable of accommodating frequent reconfigurations by the Identified Users without the use of the manufacturer's proprietary tools.
- b. Shapes – Training tables must be rectangular, trapezoidal, and/or half-moon.
- c. Flip-Top Tables – Flip-top tables must be collapsible and lockable in an upright position and must be designed to nest within each other for ease of storing when not in use.
- d. Folding Tables – Folding table supports must be collapsible underneath the tabletop and must be designed not to unfold without assistance.

2. Dimension

- a. The depth of the Rectangular Tables must be provided in three sizes; 610 mm (24 in.) and/or 762 mm (30 in.) and/or 914 mm (36 in.).
- b. The length of the Rectangular Tables must be provided in six sizes; 914 mm (36 in.), 1067 mm (42 in.), 1219 mm (48 in.), 1372 mm (54 in.), and 1524 mm (60 in.) and 1829 mm (72 in.).
- c. The depth of the Trapezoidal Tables must be provided in three sizes, 610 mm (24 in.) and/or 762 mm (30 in.) and/or 914 mm (36 in.).
- d. The length of the Trapezoidal Tables must be provided in four sizes, 1219 mm (48 in.), 1372 mm (54 in.), 1524 mm (60 in.), and 1829 mm (72 in.).
- e. The depth of a Half-Moon Tables must be provided in three sizes, 610 mm (24 in.) and/or 762 mm (30 in.) and/or 914 mm (36 in.).
- f. The length of a Half-Moon Tables must be provided in three sizes, 1219 mm (48 in.), 1524 mm (60 in.), and 1829 mm (72 in.).
- g. A tolerance of ± 76 mm (± 3 in.) is acceptable for both depth and length.

3. Finishes

- a. High Pressure laminate tops
- b. Metal legs
- c. PVC or equivalent edges

xi. Training Tables Supports

1. Description

- a. Tabletops must be supported by four metal legs or by C- or T-shaped metal legs with or without casters.
- b. The supports must have accessories that provide wire management.
- c. Casters must be lockable.

2. Dimension

- a. Manufacturer's standards.

3. Finishes

- a. Painted metal.

xii. Hardware

1. Description

- a. All tables must be designed to accommodate being butted against one another end-to-end or side-to-side.
- b. All tables must be supplied with ganging or linking devices to ensure they can be joined together in horizontal positions at 45 and/or 90 and/or 180 degrees to each other while still allowing for the provision of power and data connectivity across the entire multi-table configuration.

2. Dimension

- a. Manufacturer's standards.

3. Finishes

- a. Painted metal.

xiii. Privacy Screens

1. Description

- a. For training tables requiring privacy screens, attachment devices must not damage the table when the privacy screen is being installed or removed from the table.
- b. The overall height of a privacy screen measuring from the floor to the top of the screen must not exceed 1372 mm (54 in.).
- c. Hardware to secure a screen to the tabletop does not need to be concealed but must be compatible with the table's supports and wire management.

2. Dimension

- a. Sizes – Privacy screens length must range from 610 mm (24 in.) to 1524 mm (60 in.). The Privacy screens height must range from 152 mm (6 in.) to 610 mm (24 in.) with an increment allowance of 25.4mm (1 in.) but cannot exceed 610mm (24 in.).

3. Finishes

- a. Privacy screens must be provided in fabric, plexiglas or tempered safety glass.
- b. Plexiglas or tempered safety glass must be provided in a clear, frosted, or tinted finish.
- c. When tempered safety glass is used, it must meet either the CAN/CGSB 12.1, Type 2 standard or the ANSI Z97.1 standard.
- d. Fabric must be manufactured from 100% recycled material and meet the requirements and acceptance levels of Wrapped Panels and Upholstered Walls cited in the Association for Contract Textiles (ACT) Voluntary Performance Guidelines.

xiv. Modesty Panels

1. Description

- a. Modesty panels must be flush with the edge of the work surface or be recessed.
- b. Modesty panels must provide wire management.
- c. Modesty panels must provide leg privacy and extend across the width of the table to which it is mounted without interfering with the supports.

2. Dimension

- a. The modesty panel width must correspond with the work surface width to allow for a good installation without any interference with the table top supports.
- b. The height of the modesty panel must be full height and allow for a floor clearance which provides wire access from wall power/data to equipment.

3. Finishes

- a. Modesty panels must be provided in laminate, metal, and/or wood veneer.

- b. The finishes must be tested and meet the performance testing requirements of low-pressure laminate, wood veneer and metal listed under Testing Requirements of this Annex.

xv. Cable Management and Electrical and Data Connectivity for training room tables

1. Description

- a. Tables must be provided with concealed cable management and allow for power and data connectivity across the entire multi-table configuration when tables are ganged together.
- b. All power and data connections must be inherent in the table design.
- c. Tables must be pre-wired and provide removable connections to floor monuments.

xvi. Power Modules for training room tables

1. Description

- a. Power modules must be recessed into the tabletop and provide at least two power inputs and two data inserts.
- b. Spheres – Spheres must be used on small tables instead of grommets. In addition, spheres must provide both power and data, or provide just power to four sides, i.e. either provide two power inputs and two data inserts, or provide four power inputs.

xvii. Table Trolleys for training room tables

1. Description

- a. Trolleys must be provided for moving and storing training tables. They must be easily moved by the Identified User, and must support at least four or more collapsed tables.
- b. Trolleys must have lockable casters.
- c. Trolleys are not required for Nesting Flip-Top Tables.

c. Meeting Room Furniture

i. Credenzas

1. Description

- a. Credenzas must have open shelves, shelving with doors, drawers, or any combination of the aforementioned features for storage.
- b. Credenza doors and drawers must be lockable.
- c. Credenzas must provide access to power and data through grommets at the back.
- d. Ventilation must be provided as an option.
- e. Hardware must be supplied and installed as part of the assembly of the furniture and must meet industry standard.
- f. Drawers - slides must be a combination metal and roller bearing.
- g. Drawers must at least extend three-quarter.
- h. File drawers must extend fully.
- i. Spring loaded tip-down stops shall be provided on all drawers.
- j. File drawers must have a minimum inside clear height to allow the use of hanging folders on a system stand or integral rails.

2. Dimension

- a. Credenzas must range from 762 mm (30 in.) to 1524 mm (60 in.) in width and from 508 mm (20 in.) to 610 mm (24 in.) in depth. The tolerance is ± 51 mm (± 2 in.).
- b. Credenza height must range from 711 mm (28 in.) to 1067 mm (42 in.). With a tolerance of ± 25.4 mm (± 1 inch).

3. Finishes

- a. The casework must be finished in laminate or wood veneer
- b. The semi exposed parts must be finishes in laminate or wood to complement the casework finishes.

ii. Lecterns

1. Description

- a. Freestanding lecterns must be of a fixed or mobile unit design with open shelves, shelving with doors, drawers, or any combination of the aforementioned features for storage.
- b. Mobile lecterns must have lockable casters and must be designed to be easily moveable.
- c. Lecterns with and without power and data access are both acceptable.
- d. The top surfaces of lecterns must be designed to support the placement of documents and/or notebooks and must have a lip or edge to prevent items from rolling or slipping off the surface.

2. Dimension

- a. The height of freestanding lecterns must range from 1067 mm (42 in.) to 1219 mm (48 in.).
- b. The height of desk-mounted lecterns must range from 406 mm (16 in.) to 508 mm (20 in.).
- c. Both freestanding and desk-mounted lecterns must be provided with a depth ranging from 406 mm (16 in.) to 610 mm (24 in.) and a width ranging from 432 mm (17 in.) to 762 mm (30 in.).

3. Finishes

- a. The casework must be finished in laminate, wood veneer or metal or in a combination of these finishes.
- b. Semi exposed parts must be finished in laminate or wood veneer or solid wood to compliment the casework finishes.

iii. Task Light Fixtures for Lecterns

1. Description

- a. Freestanding light fixtures and surface clamp-on LED task light fixtures must have a height-adjustable stem, a horizontally and vertically pivoting light head, and a minimum lamp life of 35,000 hours.

iv. Mobile Carts

1. Description

- a. Mobile carts must be provided for storing and transporting equipment such as projectors, computers, or supplies related to meetings.

- b. Mobile carts must be easily moveable and casters must be provided to facilitate mobility on carpet or hard-surface floors.
- c. Mobile carts must have lockable casters and lockable doors.
- d. Mobile carts must have open shelves, shelving with doors, drawers, or any combination of the aforementioned features for storage.

2. Dimension

- a. The depth must range from 406 mm (16 in.) to 610 mm (24 in.).
- b. The width must range from 432 mm (17 in.) to 914 mm (36 in.).
- c. The height must range from 559 mm (22 in.) to 965 mm (38 in.) with a tolerance of +/- 25.4 mm (+/-1 inch).

3. Finishes

- a. The casework must be finished in laminate or wood veneer
- b. The semi exposed parts must be finishes in laminate or wood to complement the casework finishes.

v. Wardrobe and Storage Cabinets

1. Description

- a. Doors are optional but must be the hinged or receding type if provided.
- b. Wardrobe and storage cabinets with doors must have lockable doors.
- c. A hanging rod and a hat shelf that extends across the full width of the cabinet interior must be provided.
- d. Room for hanging more than one full-length garment must be provided.
- e. Storage cabinets must provide at least three adjustable shelves that extend across the full width of the cabinet interior.

2. Dimension

- a. The width must be provided in three sizes; 610 mm (24 in.), 762 mm (30 in.), and 914 mm (36 in.).
- b. The depth must range from 610 mm (24 in.) to 762 mm (30 in.).
- c. The height must range from 1676 mm (66 in.) to 1829 mm (72 in.).

3. Finishes

- a. The casework must be finished in laminate or wood veneer.
- b. The semi exposed part must be finished in laminate or finished wood.

vi. Wall-Hung Presentation Cabinets

1. Description

- a. Wall-hung presentation cabinets must include wall-hanging hardware and instructions for a secure installation.
- b. Wall-hung presentation cabinets must have a full-size whiteboard that extends the full width of the cabinet, with erasable markers and an eraser provided, and must have two doors that close firmly to cover the whiteboard when the cabinet is not in use.
- c. The two doors must be part of the presentation feature when opened, i.e. the inside of one door must be a tackable surface,

and the inside of the other door must provide the mechanism required for hanging a large flip chart paper pad. A paper pad must be provided.

2. Dimension

- a. The width must be provided in two sizes; 914 mm (36 in.) and 1219 mm (48 in.).
- b. The height must be provided in two sizes; 914 mm (36 in.) and 1219 mm (48 in.).

3. Finishes

- a. Casework exposed parts must be finished in laminate, wood veneer or metal or a combination of the aforementioned finishes.
- b. The semi exposed parts must be finished to compliment the exposed parts.

vii. Locks

1. Description

- a. Locks for drawers and doors must be key-operated.
- b. Locks must be either the pin tumbler type or the wafer type, and must have a corrosion-resistant finish.
- c. Locks and cylinders must be designed to allow for easy installation or replacement.

l) DETAILED REQUIREMENTS - Collaborative Seating and Screens

a. Soft Seating

i. Ganging Banquette Seating (With or Without High Back Screen)

1. Description

- a. Base Style – Must have a minimum of four legs with glides
- b. Leg Shape – Must be rectilinear, square, or other options
- c. Glides – Must be non-marking adjustable glides or glides suitable for carpets
- d. Bolster – Must be with or without bolster
- e. Arms – Must be without arms
- f. Front Edge of Seat – Must have a waterfall edge
- g. Ganging – Must have ganging capability
- h. Features for Seating With High Back Screen – Add-on screen to create privacy, or privacy screen that surrounds three sides, or square corner unit (without back/screen) to create an L shape.

2. Dimension

- a. Overall Width – overall seat arrangement width must be 1676 mm to 1905 mm (66 in. to 75 in.) ± 12.7 mm ($\pm 1/2$ in.). Individual units must be capable of being ganged together to create the total overall width. Individual Dimension must range between 610 mm and 1905 mm wide (24 in. and 75 in. W) ± 12.7 mm ($\pm 1/2$ in.).
- b. Overall Seat Depth – Must be between 483 mm and 584 mm (19 in. and 23 in.) ± 12.7 mm ($1/2$ in.).
- c. Overall Height for Seating Without High Back Screen – Must be between 737 mm and 1321 mm (29 in. and 52 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor.

- d. Overall Height for Seating With High Back Screen – Must be between 1092 mm and 1372 mm (43 in. and 54 in.) -25.4 mm (-1 in.) above finished floor.
- e. Seat Height – Must be between 406 mm and 508 mm (16 in. and 20 in.) ± 25.4 mm (± 1 in.) above the finished floor.

ii. Lounge Chairs (With or Without Tablet Arm)

1. Description

- a. Base Style – Must have four legs with glides, two casters and two legs or four casters of which two must be locking
- b. Leg Shape – Must be rectilinear, square, or other options
- c. Glides – Must have non-marking adjustable glides or glides suitable for carpets
- d. Armrests – Must be with or without arms
- e. Back and Seat Cushions – Must be fixed or have Velcro attachment
- f. Tablet Arm – If provided, must be fixed (R or L) or universal
- g. Features – Must be swivel base or swivel with auto-return mechanism, shelf at the base, back handle, cup holder, or a combination of these features
- h. Additional Features for Chairs With Tablet Arm – Tablet arm with a 360° turning radius or the ability to move in and out

2. Dimension

- a. Overall Dimension for Chairs without Tablet Arm – 787 mm to 915 mm wide (31 in. to 36 in. W) x 711 mm to 762 mm deep (28 in. to 30 in. D) x 686 mm to 762 mm high (27 in. to 30 in. H) ± 12.7 mm ($\pm 1/2$ in.)
- b. Overall Dimension for Chairs with Tablet Arm – 711 mm to 813 mm wide (28 in. to 32 in. W) x 610 mm to 806 mm deep (24 in. to 31 $\frac{3}{4}$ in. D) x 737 mm to 806 mm high (29 in. to 31 $\frac{3}{4}$ in. H) ± 12.7 mm ($\pm 1/2$ in.)
- c. Seat Height – Must be between 406 mm and 508 mm (16 in. and 20 in.) ± 12.7 mm ($\pm 1/2$ in.) above the finished floor.

iii. Modular Benching Units (With or Without Square Side Table)

1. Description

- a. Base Style – Must have legs with glides or a base
- b. Leg Shape – Must be rectilinear, square, or other options
- c. Glides – Must be non-marking adjustable glides or glides suitable for carpets
- d. Features – Must have a backrest
- e. Units with Square Side Table – Over all dimensions must include a bench with one side table that must be attached to or integrated with the bench

2. Dimension

- a. Overall Dimension – 635 mm to 2642 mm wide (25 in. to 104 in. W) x 483 mm to 876 mm deep (19 in. to 34.5 in. D) ± 12.7 mm ($\pm 1/2$ in.)
- b. Seat Height – Must be between 381 mm and 508 mm (15 in. and 20 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor
- c. Side Table Depth and Height – Must fully align with bench unit in depth and seat height.

- d. Individual Dimension must range between 610 mm and 2642 mm wide (24 in. and 104 in. W) ± 12.7 mm ($\pm 1/2$ in.).

iv. Sofas

1. Description

- a. Base Style – Must have a minimum of four legs with glides
- b. Leg Shape – Must be rectilinear, square, or other options
- c. Glides – Must be non-marking adjustable glides or glides suitable for carpets
- d. Armrests – Must be with or without arms
- e. Back and Seat Cushions – Must be fixed or have Velcro attachment

2. Dimension

- a. Overall Dimension for Sofas That Seat Two Adults –1295 mm to 1829 mm wide (51 in. to 72 in. W) x 660 mm to 762 mm deep (26 in. to 30 in. D) x 686 mm to 762 mm high (27 in. to 30 in. H) ± 12.7 mm ($\pm 1/2$ in.)
- b. Overall Dimension for Sofas That Seat Three Adults –1651 mm to 2134 mm wide (65 in. to 84 in. W) x 660 mm to 762 mm deep (26 in. to 30 in. D) x 686 mm to 762 mm high (27 in. to 30 in. H) ± 12.7 mm ($\pm 1/2$ in.)
- c. Seat Height – Must be between 406 mm and 508 mm (16 in. and 20 in.) ± 12.7 mm ($\pm 1/2$ in.) above finished floor

v. Upholstered Stools

1. Description

- a. Seat Shape – Solid round, square, or other shapes
- b. Base Style – Must be with base or legs, or with non-visible base or non-visible legs
- c. Casters – Must be with or without casters
- d. Casters must be lockable.

2. Dimension

- a. Overall Dimension – 508 mm to 610 mm (20 in. to 24 in.) in diameter, or 445 mm to 686 mm wide x 343 mm to 483 mm deep x 381 mm to 686 mm high (17½ in. to 27 in. W x 13½ in. to 19 in. D x 15 in. to 27 in. H) ± 25.4 mm (1 in.)
- b. Seat Height – Must be between 432 mm and 508 mm (17 in. and 20 in.) ± 12.7 mm ($\pm 1/2$ in.) above the finished floor

b. Kitchenette Seating

i. Bar Stools

1. Description

- a. Back and Seat – Must be one piece
- b. Base Style – Must have sled base or four legs
- c. Leg Style – Must be rectilinear, square, or other options
- d. Arms – Must be with or without arms
- e. Footrest – Must have a footrest

2. Dimension

- a. Seat Height – Must be between 711 mm and 813 mm (28 in. and 32 in.) ± 12.7 mm ($\pm 1/2$ in.) above the finished floor.

ii. Kitchenette Chairs With or Without Arms

1. Description

- a. Base Style – Must be pedestal base, X base, four legs, or sled base
- b. Leg Style – Must be rectilinear, square, round, or other options
- c. Casters – With or without casters
- d. Casters must be lockable.
- e. Backrest for Chairs With Arms – Backrest must be one continuous rounded surface that wraps around the back to incorporate the armrest
- f. Back and Seat for Chairs Without Arms – Back and seat must be one piece

2. Dimension

- a. Seat Depth – Must be between 406 mm and 508 mm (16 in. and 20 in.) ± 12.7 mm ($\pm 1/2$ in.)
- b. Seat Height – Must be between 432 mm and 508 mm (17 in. and 20 in.) ± 12.7 mm ($\pm 1/2$ in.) above the finished floor
- c. Armrest Height for Chairs With Arms – Must not interfere with tables with surface height between 737 mm and 787 mm (29 in. and 31 in.) ± 12.7 mm ($\pm 1/2$ in.) above the finished floor

c. Lounge Screens

i. Upholstered Screens

1. Description

- a. Shape – Must be a single straight screen, an L-shaped screen, or a combination of two straight screens with a linking mechanism to create an L shape
- b. L-shaped Screens – Must be available in left- and right-hand versions
- c. Casters and Glides – Legs must have adjustable glides with a minimum 12.7 mm (1/2 in.) adjustment, or have casters or lockable casters
- d. Frames – Must be metal rods welded together with metal bottom support plate(s), or have legs with threaded holes for adjustable glides or casters
- e. Frames must be self-supporting and must not tip over.

2. Dimension

- a. Overall Dimension for L-shaped Screens – Must be 915 mm to 1067 mm wide x 915 mm to 1067 mm deep x maximum 1372 mm high (minimum 36 in. to 42 in. w x 36 in. to 42 in. d x maximum of 54 in. h) + 51 mm / - 76 mm (+ 2 in. / - 3 in.)
- b. Overall Dimension for Straight Screens – Must be 915 mm to 1067 mm wide x maximum 1372 mm high (36 in. to 42 in. w x maximum 54 in. h) ± 51 mm (± 2 in.)

ii. White Boards

1. Description

- a. Surface – Must have a dry erase surface
- b. Storage – Must have an integrated marker tray and eraser storage
- c. Casters – Must have lockable casters

2. Dimension

- a. Overall Dimension – Must be a minimum of 915 mm to 1680 mm wide x 1321 mm to 1900 mm high (36 in. to 66 in. w x 51 in. to 75 in. h) ± 51 mm (± 2 in.)

m) QUALITY ASSURANCE

- a. Suppliers must have a recognized quality management system in place at the manufacturing facility or conform to ISO 9001:2008 (Quality Management Systems – Requirements, currently superseded by ISO 9001:2015).

n) PREPARATION FOR DELIVERY

- a. Marking – Support Space Furniture must be permanently and legibly marked with the following information:
 - i. Manufacturer's product code;
 - ii. The product name;
 - iii. Manufacturer's trade mark;
 - iv. The contract number;
 - v. The invoice number;
 - vi. Any additional information traceable for warranty purposes; and
 - vii. All products must be marked on the under surface, inside drawers or inside doors in such a way as to not be visible for users but readily accessible.
- b. Labelling – The Supplier must comply with federal textile labelling legislation that applies to the textile component parts of lounge seating, kitchenette seating or lounge screens.

o) MAINTENANCE

- a. Instructions for recommended repair and maintenance procedures must be available for all products.