

# Construction Specifications Canada VANCOUVER CHAPTER NEWSLETTER

#### APRIL 2025

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# MARK YOUR CALENDARS

<b>April 10</b> 11:30am Luncheon Meeting Sandman Hotel, Vancouver,BC	<b>PNE Amphitheatre Structure and Design</b> Earle Briggs, Revery Architecture Rober Jackson, Fast + Epp Structural Engineering
<b>May 8</b> 8:00am-12:30pm Seminar VCC, Vancouver, BC	CCDC Seminar – New CCDC 5A, 5B, 17, 30 and CCDC 30 Guide
<b>May 21 - 25</b> St. John's, Newfoundland	<b>CSC National Conference 2025</b> - Rock that Spec

<u>csc-dcc.ca</u>

### **DIRECTOR'S REPORT**



John Alley Vancouver Chapter Director

It's been a whirlwind since our last newsletter! 2024 proved to be a busy year, and 2025 has kicked off at an even faster pace. We've seen a number of changes within our board, and I'd like to extend a warm welcome back to Kim Tompkins FCSC and George McCutcheon CSP, who have generously stepped in to provide their invaluable experience and guidance. Their return is greatly appreciated as we navigate the exciting year ahead.

We also want to express our sincere gratitude to Glenn Chatten, Tammy Diniz, and Omar Abu Holy, who have stepped off the board since our last update. Their contributions have been significant, and we wish them all the best in their future endeavors.

We're eagerly anticipating our upcoming luncheon in April, where we look forward to connecting with all of you. It will be a fantastic opportunity to catch up and discuss the latest developments in our industry. Furthermore, we are very excited to see many of you in May at the CSC National Conference in beautiful St. John's!

Thank you for your continued support of the CSC Vancouver Chapter. We look forward to seeing you soon!

### **CSC MENTORSHIP PROGRAM**

The CSC has just launched a mentorship program for mentees and mentors to connect. The goal with this program is to share the vast knowledge the CSC has in its membership; where seasoned professionals and eager learners can collaborate and share insights. It is a simple and very effective platform to use and we have been getting excellent feedback. The program is open only to CSC members. To register please send an email to David Graham Immediate Past President and I will send you a link. My email address is on the CSC website as well as in the Director of Members. It takes less than 5 minutes to register and connect with someone. Thank you. David Graham Immediate Past President.

### **EXECUTIVE COMMITTEE**



John Alley Chapter Director, Secretary

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#### Reem Fekry, Architect AIBC Architectural Officer

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Kimberly Tompkins, FCSC Interim Acting Chair

Retired



Elena Schneider Newsletter Officer

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Adam Lunn Membership Officer

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#### Hamid Sayyah Marketing Officer

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#### Todd Gerrard, CTR Member at Large

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#### George McCutcheon, CSP Interim Program Officer

Semi-retired

<u>ittps://csc-dcc.ca</u>

### **MEMBERSHIP**

We're thrilled to welcome all the new members who have joined us since January of last year!

Oleksandr Yeremiahin Station one Architects

Sawinder Kaur Thinkspace Architecture Planning Interior Design Inc

Salma Elsherbiny Hilti Corp

Mark Augustynowicz Metro Aluminum Products

Ian Chandler Performance Products International

Bernie Schneider Enterprise Paper Co. Ltd

Elena Schneider Mapei

Molly Gray Acton Ostry Architects

Shirley Stern Neogard Patrick Schilling Patrick Schilling Architecture + Consulting

Satinder Sidhu Clark Wilson LLP

Chun-Wei Chang Sherwin Williams

Mijeong Song WA Architects Ltd

Milan Schuck Sika Canada

Jinfeng (Jane) Ma Francl Architecture Inc

Maureen Norton Keystone Architecture & Planning

Chris Maskell National Floor Covering Association of Canada

Adam Lunn Tremco Commercial Sealants and Waterproofing



# **APRIL LUNCHEON MEETING**

#### PNE Amphitheatre Structure and Design

Presented by Earle Briggs, Revery Architecture and Robert Jackson, Fast + Epp Structural Engineering

11:30am to 1:30pm, April 10, 2025 at the Sandman Inn, 180 W Georgia, Vancouver

With the advent of new mass timber based structural products and connections, and with projects pushing the boundaries of what is possible with wood based construction, there has not been a moment like we are currently in since perhaps the classically designed modern towers of Mies Van der Rohe, when steel and its expression was being explored.

The presentation will highlight the exchange between architectural and structural concepts, at different phases of design, and how they have been brought together to form the construction documents being used to make the new PNE Amphitheatre.

Attendees will hear how the journey from competition entry to concrete buttresses has commenced. 1. Initial concept design for competition and ensuring that it can be built.

2. Working the sizes required for the various elements and tailoring the architecture to suit.

3. Finalizing the material sources, connection details, and how it can be assembled.

4. Innovations along the way, including cold forming of CLT panels to create the curved roof.

Register now on Karelo https://www.karelo.com/register.php?BID=212&BT=10&Ev=22587

### **EDUCATION**

Craft Your Future

At Construction Specifications Canada, we don't just teach; we ignite transformation. Our vibrant community of learners, alumni, and industry trailblazers is dedicated to pushing boundaries and shaping the future of professional growth. With innovative programs co-created with industry titans, we prioritize hands-on learning experiences that empower you to seize your path with flair and finesse.

#### **AVAILABLE COURSES**

CSC offers four courses which will be offered again in the fall, either in person, online, or virtual based on interest, locally and nationally.



For detailed course information and registration, **CLICK HERE**.

#### **2025 ONLINE CLASSES**

Principles of Construction Documentation (PCD) - January 10, 2025 (5 weeks)

Construction Contract Administration (CCA) - November 22, 2024 (5 weeks) / March 7, 2025 (5 weeks)

Specifier (SP) - November 1, 2024 (7 weeks) / March 7, 2025 (7 weeks)

Technical Representative (TR) - November 1, 2024 (5 weeks) / March 7, 2025 (5 weeks)

### **INDUSTRY ORGANIZATIONS**

#### **DIVISION 01**

#### GENERAL REQUIREMENTS

Canadian Construction Documents Committee www.ccdc.org

#### **DIVISION 02**

**EXISTING CONDITIONS** 

Demolition - WorkSafeBC www.worksafebc.com

#### **DIVISION 03**

CONCRETE Cement Association of Canada <u>www.cement.ca</u> Canadian Precast/Prestressed Concrete Institute <u>www.cpci.ca</u>

#### **DIVISION 04**

MASONRY Masonry Institute of British Columbia www.masonrybc.org

DIVISION 05 METALS Canadian Institute of Steel Construction www.cisc-icca.ca

DIVISION 06 WOOD, PLASTICS, AND COMPOSITES Architectural Woodwork Manufacturers Association of Canada www.awmac.com Western Red Cedar Lumber Association www.wrcla.org WoodWorks Wood Products Council www.woodworks.org

#### **DIVISION 07**

#### THERMAL AND MOISTURE PROTECTION

Roofing Contractors Association of BC <u>www.rcabc.org</u> Sheet Metal and Air Conditioning Contractors' National Association <u>www.smacna.org</u> EIFS Council of Canada <u>www.eifscouncil.org</u>

#### **DIVISION 08**

OPENINGS Canadian Steel Door Manufacturers Assoc www.csdma.org Door Hardware Institute www.dhi.org Fenestration & Glazing Industry Alliance www.fen-bc.org

**DIVISION 09 FINISHES** Association of Wall and Ceiling Contractors www.wallandceiling.net **Gypsum Association** www.gypsum.org Master Painters Institute www.mpi.net Carpet and Rug Institute www.carpet-rug.org National Flooring Covering Association of Canada www.nfca.ca National Wood Flooring Association www.nwfa.org Terrazzo, Tile and Marble Association of Canada www.ttmac.com



### NAAWS 4.0 (Sept 2021) Notes for Designers, Specification Writers, and Specification Readers

by George McCutcheon, GIS Certified Inspector

### **Design and Drawing Notes**

It would be good to know everything about everything, but there are limitations to what even the most enthusiastic person can hold onto. While the almost 500 page North American Architectural Woodwork Standards (NAAWS) document (available free online https://awmac.com/getnaaws-4-0) has valuable information throughout, there are a few areas that are good to be acquainted with before you start drawing anything. Not everything that can be imagined, or even that which can be built, is covered in NAAWS, but it is an excellent guide which is the result of many years of accumulated knowledge. Breaking the rules generally means that you would not be able to receive the AWMAC GIS Guarantee but more practically that those portions of the work would likely fail.

The purpose of this article is to provide a few tips for architects and specification writers that will prevent having to do things twice and to avoid leaving things for the contract administrator or contractor to sort out later. One of the more significant shifts in the Finish Carpentry section of the specification is the move of installation for things like Door Hardware and Architectural Wood Casework to their own sections. These tasks are now done by specialty subtrades. Many casework specs have minimal or no installation section. NAAWS includes anchorage to walls but anchorage to floor situations for peninsulas and islands are not covered, with the exception of additional requirements for seismic installations.

Here are a few simple tips before you start drawing, in no particular order of importance, that hopefully serves to make you want to know more.

CASEWORK DOOR SIZES (NAAWS page 164): Casework vertical hinge doors to be maximum width of 610 mm (24 inches) and a maximum height of 2134 mm (84 inches). There may be times that you may need to stretch beyond those sizes, but that work would be exempt from the AWMAC GIS Guarantee.

8	4	1	VERTICAL hinge axis openings will be 24" (610 mm) in width and 84" (2134 mm) in height, and larger doors are more susceptible to warp, which will not be the responsibility of the manufacturer / installer.	
8	4	2	HORIZONTAL hinge axis openings will be 48" (1220 mm) in width and 24" (610 mm) in height.	

IN-WALL BLOCKING OR BACKING (page 50 (not shown) and page 220): Designers often like to indicate backing on elevation drawings in order to ensure that backing is installed with the framing long before the items that require the backing. The coordination of the rough carpentry is usually not a problem but blocking and backing for toilet accessories is commonly included in drawing sets whereas requirements for architectural wood casework cabinets attached to walls are not.



**METAL COUNTERTOP SUPPORTS**: As architects and interior designers, we are in the habit of drawing custom fabricated metal countertop supports for cantilevered counters. Architectural woodwork manufacturers use pre-engineered, premanufactured metal braces (SpeedBrace for example) of various sizes and load strengths to ensure countertops do not deflect more than the allowable permitted by NAAWS (page 232).

Spec Notes

The most important thing to keep in mind when writing specifications for work that is covered by NAAWS is that "if there is a conflict between the contract documents" (drawings and specs) "and these standards, the contract documents shall prevail." NAAWS page 40. It is good to know what parts NAAWS covers better than your specifications and on what parts you may want to overrule NAAWS requirements.

I have included wording that is relatively generic, to fill in a few pieces that might be missing in your specification.

### **Design and Drawing Notes**

#### Part 1 General

Here are a few quick revisions that can be made to Architectural Woodwork specifications to update and tighten up the section. Adapt as required and appropriate to your own specs.

**RELATED REQUIREMENTS:** Include whatever section will include the blocking provided for the architectural woodwork - Rough Carpentry, Miscellaneous Rough Carpentry, or Non-Structural Metal Framing; with the note provision of backing for this section.

".1 Section 06 10 53 - Miscellaneous Rough Carpentry: Wall blocking and backing."

**REFERENCE STANDARDS:** Include ISO-4586 reference for high pressure laminates which is the current reference standard for HPL in NAAWS (page 88). Refer to the table in NAAWS for changes to acronyms and the following two pages for other laminate products (page 89 and 90). CSA-S832 "Seismic risk reduction of operational and functional components (OFCs) of buildings" is not coordinated with NAAWS or architectural woodwork, specifically casework, but may be some day.

".1 ISO 4586 Series:2018 - High-pressure decorative laminates (HPL, HPDL) - Sheets based on thermosetting resins (usually called laminates)."

ADMINISTRATIVE REQUIREMENTS: Include wording to include coordination of locations for required blocking. ".1 Coordination: Coordinate with other work having a direct bearing on work of this section.

.1 Coordinate requirements for blocking and backing with Section 06 10 53 prior to commencing work of that section."

**SUBMITTAL REQUIREMENTS:** NAAWS has a complete list of requirements for the submittal package including shop drawings so it is good to reference NAAWS Section 1 Submittals. There are requirements for drawing scales, one of which I revise to suit larger projects (page 50). NAAWS lists reference drawings scales which are meant to suit the information required to be shown accurately and clearly. The following is a bit of paraphrasing from NAAWS, some of which should probably change.

".1 Shop Drawings: Submit Shop Drawings with schedules conforming to NAAWS requirements.

.1 Shop drawings to incorporate plans, elevations, sections, and details. Provide reference plans at not less than 1:200 scale. Other scales as required by NAAWS.

- .2 Indicate locations of backing required within walls for casework anchorage on elevations.
- .3 Indicate thicknesses, core materials, and facing materials for each type of casework component.

.4 Indicate locations and sizes of cutouts and holes for plumbing fixtures and accessories, electrical boxes, and other items required to be installed in architectural woodwork.

.5 Indicate materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location and schedule of finishes.

.6 Shop drawings to be submitted to the AWMAC Chapter office for review before work commences."

With shop drawing submittals comes the question of whether to include delegated design for wall anchorage and seismic requirements. This is a difficult question as there are no direct and simple answers and as it is often specified, there seems to be a desire to quantify somehow, but there are no test standards that address this directly. CSA-S832 covers seismic risk reduction of operational and functional components of building but does not include built in cabinets, which seems an oversight.

NAAWS requirements for seismic are copied from requirements of the California Building Code, which may serve as some guidance for designers, but is ultimately not applicable to our own codes (page 223).

NAAWS strategy for wall anchorage is very clear with robust anchorage to walls that is backed up by a load test, but no seismic test. The load test covers the strength of the cabinet assembly and the wall anchorage. However, this test is not tied to a CSA or ASTM test and is not referenced in any code requirements. The load test provides some quality assurance for the unit tested. This test and a few others can be found in NAAWS pages 256 to 260. NAAWS does not have a description for anchorage to the floor for casework that is a peninsula, island, or casework base as it requires engineering be done on an individual basis, without seismic concerns (page 220). Engineering for peninsula or island casework is rarely done except when engineering to accommodate seismic forces are considered.

#### QUALITY ASSURANCE:

The question of whether a delegated design engineer is required is a difficult question.

CSA-S832 contains information required for kitchen appliances in a seismic event but does not include adjacent casework. There are no standards that can be referenced for seismic design of casework. It all needs to be done on an individual basis.

CSA-S832 lists various levels of performance objectives in a seismic event including life safety (which is the mandatory and minimum performance level), limited functionality, full functionality, and property protection. If using this criteria is applied to architectural woodwork, one must consider the risk associated with failure of the components. Cabinets hanging off walls probably present a bigger risk than those anchored to walls but sitting on the floor. Cabinets attached to each other and the wall lined up in a row present less risk than a single cabinet anchored to the wall.

**MOCK-UPS:** While it is always important to have a mock-up to review items that are not fully worked out, when it comes to architectural woodwork, asking for a mock-up of a typical upper and lower cabinet is not much more that testing the quality of the woodworker, most of which operate at a very high quality level. The design professional can use the mock-up as more than this, if there are special wood grains being used or complex forms of one kind or another. Have intention with what you want to see in a mock-up. Have the mock-up fabricated before material is ordered by the woodwork manufacturer, possibly before shop drawings are finalized, and much before installation begins.

**ENVIRONMENTAL REQUIREMENTS or SITE CONDITIONS:** Temperature and relative humidity (T+H) are covered in Section 13 of NAAWS and are critical to a successful architectural woodwork installation. There cannot be wild shifts in either humidity or temperature. Be clear about having stable T+H before architectural woodwork is brought to site, during installation, and during remaining construction until handover to Owner. The simple drawing on page 204 indicates the acceptable humidity range for projects in Canada and US.



Temperature range is the same everywhere and is listed on page 205. There is no need for the contract administrators to search for the numbers if they are listed in the spec. This is the easy way to avoid problems of warpage, delamination, and other moisture related damage by controlling the dimensional change of hygroscopic architectural woodwork materials.

"Installation will only occur after materials have been acclimatized for a minimum of 72 hours in climate-controlled site condition between 60-90 degrees Fahrenheit (15.5 – 32 degrees Celsius) inclusive that meet the optimum moisture content and relative humidity requirements of this Section." NAAWS 13.5.1.5

#### Part 2 Products

WOOD CASEWORK: Wood casework core material conforming to NAAWS is either veneer, lumber, particleboard, MDF or a combination thereof, but fronts to doors and drawers are not permitted to be veneer core (page 81). Many institutional clients choose to have veneer core doors fronts and while the installation may meet NAAWS, the panels are not warranted for moisture related defects.

**ANCHORAGE**: Wall anchorage fasteners are listed in NAAWS (page 221) which also indicates the spacing of the fasteners coordinated with the blocking and backing. There are a number of manufacturers that produce this product (for example, Reliable, FastCap <u>https://www.fastcap.com/product/powerhead-wood-screws</u>).

".1 Anchorage Fasteners: Zinc-plated, self-tapping, 75 mm (3 inch) long, #10 wood screw, with [torx] [#2 square] drive, and 14.3 mm (9/16 inch) diameter surface bearing head."

#### METAL SUPPORT BRACKETS:

Include some kind of metal support brackets in your master spec for spec readers that are faced with long cantilevered countertops with no visible supports such as washroom vanities. Many different products with various levels of discreteness, some attached directly to studs at the time of framing, before gypsum board begins, and others mounted directly to the wall. Revise spec wording to suit product (this description for SpeedBrace).

".1 Countertop Brace: Sheet steel, 2.66 mm (12 gauge, 0.105 inch) thick, 525 x 610 mm (21 x 24 inch) folded plate brace; white powder coat finish.

#### Part 3 Installation

**EXAMINATION:** Confirm blocking is in place. This is often done before gypsum board begins by the architectural woodwork manufacturer.

**INSTALLATION:** Wall anchorage is described in good detail, as well as limitations for countertops which is also useful for designers. I am still sitting on the fence as to whether to describe installation procedures or just reference NAAWS. The fastening patterns and specification of surface bearing anchorage fasteners in NAAWS are not difficult to put in the spec and are one of the most common installation errors for a number of different reasons. Listing in the spec also makes it easier for contract administration work. Fasteners for different substrates are only listed in the seismic requirements of NAAWS Section 14. Reference to floor and limited substrates are only listed in the seismic requirements of NAAWS Section 14. NAAWS has very robust anchorage requirements but until it is coordinated with a Canadian standard like CSA-S832 then all portions of architectural woodwork installations that may require engineering for seismic

need to be handled on an individual basis with an engineer's seal and signature.

#### TOLERANCES:

Architectural woodwork to conform to NAAWS Section 15 Tolerances. There is no need to say more as so many situations are covered very clearly all in one place (pages 236 to 250).



The views and opinions expressed in the article above are those of the author, most are grounded in experience. George McCutcheon is a GIS Certified Inspector for the AWMAC British Columbia Chapter.

He is a retired architect and semi-retired specification writer mentoring the next generation of architects and spec writers.

# 2024 / 2025 PROGRAM UPDATE

SEPTEMBER 18 6 - 8pm Drinks and Pizza Port Coquitlam	Axe Throwing with CSC - Social Urban Axe Throwing
OCTOBER 23 3:00 to 7:00pm Trade Show 5:00pm Speaker Presentation Italian Cultural Centre, Vancouver	Oktoberfest Trade Fair 2024 Table top displays, food and drinks including speaker presentation:
	Construction Law: Year in Review Satinder Sidhu, Clark Wilson LLP
DECEMBER 19 11:30am Lunch EXchange Hotel, Vancouver	2024 Construction Year End Review Jeannine Martin, President, VRCA Craig Larkins, Director Advocacy and Engagement, VRCA
JANUARY 16 11:30am Lunch EXchange Hotel, Vancouver	Quality Architectural Woodwork for Architects - Drawing and Specification Requirements Glenda Harskamp, AWMAC with George McCutcheon, GIS Certified Inspector
FEBRUARY 13 11:30am Lunch Hotel Le Soleil, Vancouver	RCABC's Guarantee for Vegetated Roofs: A new future for green roofing in British Columbia James Klassen, RoofStar Technical Advisor, RCABC
FEBRUARY 26-27	BUILDEX VANCOUVER
MARCH 13 11:30am Lunch EXchange Hotel, Vancouver	Standard for Integrated Systems Testing of Fire Protection and Life Safety Systems - CAN/ULC-S1001 Steven Quan, PEng, CCP, PMP, WSP Canada Chris Leaming, AScT, LEED AP, WSP Canada
APRIL 10 11:30am Lunch EXchange Hotel, Vancouver	PNE Amphitheatre Structure and Design Earle Briggs, Principal, Revery Architecture Robert Jackson, Principal, Fast + Epp
MAY 8 8:00am to 12:30pm VCC, Vancouver, BC	CCDC SEMINAR – New CCDC 5A, 5B, 17, 30 and CCDC 30 Guide
MAY date to be confirmed Virtual meeting to be held online	Chapter General Meeting
MAY 15 11:30am Lunch TBD	Building Tour TBD
MAY 21 - 25 St. John's, Newfoundland	CSC National Conference 2025 - Rock that Spec The big event not to be missed, with two full days of presentations in multiple streams and evening social activities to bring everyone together.
TBD	GOLF