What's new in the PWGSC National CADD Standard 2011

PWGSC has announced the launch of its 2011 National CADD Standard, replacing the previous 2006 version. Changes have been made to this standard primarily to:

- Adapt the standard to new technologies and new software releases.
- Revise thoroughly the list of layers and abbreviations to better meet the needs of the various disciplines.
- Clarify operational requirements with respect to CADD files.

1. Project Delivery

At project start-up, PWGSC will provide the pertinent CADD base plans to be used as the foundation for new project drawings. All new work created for the project must meet the National CADD Standard irrespective of the condition of any existing files provided at the outset of work.

2. Drafting Standards

2.1 Block Standard

It is now possible to create annotative blocks that can scale themselves automatically to any given scale. However, to avoid confusion, it is strongly recommended to use only one method throughout each project drawing set: the traditional method that lets the user chooses the insertion scale, or the Annotative option that automatically manages the insertion scale.

2.2 Text Style Standard

Text styles for use in drawings must be created using Standard AutoCAD® SHX or the following TTF font files: Arial, Arial Narrow, and StylusBT.

In addition, it is now possible to create annotative text styles that can size themselves automatically to any given scale. As for blocks, it is strongly recommended to use only one method throughout each drawing set: traditional text styles or annotative text styles.

Text style usage should be uniform throughout each project drawing set and limited to a maximum of four different font files per project that are determined in collaboration with PWGSC.

2.3 Dimension Style and Multileader Style Standard

It is now possible to create annotative dimension styles and multileader styles that can size themselves automatically to any given scale. As for blocks and text styles, it is strongly recommended to use only one method throughout each drawing set: traditional dimension styles set with different overall scales to suit different printing scales, or annotative dimension styles that are set up automatically based on the drawing scale. In addition, the multileader style names are now governed by the standard in a similar format to dimension styles.

2.4 Hatch pattern Standard

Only Autodesk® and PWGSC hatch patterns are now allowed in drawings.

2.5 Layering Standard

The list of layers has been revised extensively. The major changes have:

- Created a more logical structure that better represents building systems and facilitates the use of filters in layer names. Several groups have been added, combined, or divided in order to better meet the needs of various types of drawings.
- Eliminated duplication in the use of abbreviations.

Overall Changes that Apply to All Disciplines

New Subdivision Added to Layer List: A new subdivision has been added to the layer list to make it possible to group together subsets of layers that represent building systems or categories of related data. Each subdivision contains a primary layer (underlined in the table in Annex A) and supplementary layers (shown in grey in the same table) that allow information to be subdivided more precisely as required. The use of supplementary layers is optional and depends on a drawing's requirements.

Simplified Equipment/Symbols Categories: The many types of equipment and the layers representing them have been simplified into two categories from the previous multiple categories. Equipment shown in actual size is now associated with an equipment layer (-EQP), and equipment that is represented by symbols and not to scale is associated with a symbols layer (-SYM). This change eliminates several abbreviations and greatly simplifies the list of layers, particularly for electrical systems and mechanical components.

Major Changes by Discipline

Varying degrees of modifications have been made to each discipline. Below is a non-exhaustive list of these changes by discipline.

Architecture: Minor changes have been made to some abbreviations and groups to eliminate duplication and improve logic in the layer structure.

Bridges and Dams Engineering: This discipline now includes information on dams that was previously part of the Marine discipline. The close relationship between bridge and dam structures makes this a logical combination and provides the rationale for this change.

Civil Engineering, Site Design, and Landscape Architecture: This discipline encompasses several very diverse categories ranging from landscape architecture to highway infrastructure. To better meet a broad range of needs, substantial changes have been made with respect to landscaping, the environment, and vegetation.

- Site features are now divided into two separate groups, depending on whether natural or man-made components are involved.
- A new group has been created for vegetation.
- The layer names for storm sewers and sanitary sewers have been modified based on a more logical system that allows better handling of layers with filters.
- The gasses and fuels group has been replaced with four new groups based on fuel type to facilitate the handling of this information.

- Several abbreviations have been renamed to avoid duplication, improve logistics, and make it easier to use filters for layers.

Electrical Systems: This discipline saw no major changes, but several layers have been renamed to contribute to a more logical layer structure, particularly for the circuit diagrams group.

General Information**:** Although it is still possible to create layers for details (DT) in any discipline, detail layers are now listed as a group under the General Information discipline. In addition, the elevations (EV) and sections (ST) groups have been eliminated. Elevations and sections are now included within the details (DT) group, making it easier to handle this information.

Mechanical: The majority of the groups in this discipline have been completely revised. Instead of being divided by graphic elements (pipes, equipment, symbols, ducts), the groups now represent separate mechanical systems, such as heating and cooling, domestic water, control system, HVAC system, etc.

Interior Design: As in the case of Architecture, only a few minor changes have been made to this discipline in order to eliminate duplication.

Legal Surveys: This discipline has been completely revamped and simplified to avoid confusion with the Civil Engineering discipline and to better meet land survey information needs.

Marine: The major change to this discipline is the transfer of the dams' information to the Bridges Engineering discipline. In addition, a few new layers have been added.

Real Property Space Management: Only a few layers in this discipline have been renamed to eliminate duplication and improve the logical structure of the layers.

Structure: Only one minor change has been made to this discipline in order to comply with the logical structure of English-language abbreviations.

3. Layer Modification Tables

Table 1 – New Layer List

Note: In the following table, the new subdivisions are framed, the primary layers are underlined, and the supplementary layers are in grey. The supplementary layers allow information to be represented more precisely. However, it is also acceptable to use only the primary layer.

New Layers	
Layer Name	**Description**
Architecture	
A-DK-BAR	Deck railings
A-DK-OLN	Deck outline
Civil Engineering	
C-EN-CTM	Contamination zone
C-EN-TNK	Holding tank
C-LD-ANT	Antenna
C-LD-FIL	Filling zone
C-RO-ASP	Asphalt road
C-RO-BAR	Barrier
C-RO-GRV	Gravel road
C-RO-JER	Jersey barrier
C-RO-SHO	Shoulders
C-RO-SWK	Sidewalks
C-RO-TRL	Trails, footpaths
C-SA-CLE	Cleanout
C-SA-IND	Industrial sewer
C-SA-PMP	Pumping stations
C-SA-SEP	Septic system
C-SA-SEP-FIL	Septic field filling zone
C-SA-SEP-PIP	Septic field piping
C-SA-SEP-TNK	Septic tank
C-SF-PIT	Borrow pit
C-SF-RMN	Archaeological remnants
C-SF-RMN-ABV	Archaeological remnants above ground
C-SF-RMN-UND	Archaeological remnants underground
C-SW-PMP	Pumping stations
C-TP-TOE	Bank (toe)
C-VG-FLW	Flowers
C-VG-FLW-ANN	Annual flowers
C-VG-FLW-PER	Perennial flowers
C-VG-GCV	Ground cover
C-VG-GCV-DEC	Deciduous ground cover
C-VG-GCV-EVR	Evergreen ground cover
C-VG-GCV-ORN	Ornamental ground cover
C-VG-GRS	Grass area
C-VG-GRS-SED	Seeded grass area
C-VG-GRS-SOD	Sodded grass area

C-VG-SRB	Shrubs
C-VG-SRB-DEC	Deciduous shrubs
C-VG-SRB-EVR	Evergreen shrubs
C-VG-SRB-ORN	Ornamental shrubs
C-VG-TRE	Trees
C-VG-TRE-DEC	Deciduous trees
C-VG-TRE-ORN	Flowering trees, fruit trees
C-VG-VIN	Vines
C-WM-PMP	Pumping stations
Electrical Systems	
E-EW-PAN	Electrical panel for emergency power
E-NP-PAN	Electrical panels
General Information	
G-DT-DIM	Detail, section, elevation dimensions
G-DT-HAT	Detail, section, elevation hatching
G-DT-LIN	Detail, section, elevation linework
G-DT-TXT	Detail, section, elevation annotation, text
Mechanical	
H-CS-WRG	Control wiring
H-DW-HOT-TNK	Domestic hot water tanks
H-DW-ROW	Reverse osmosis water (medical)
H-HC-COT	Cooling tower water
H-HC-COT-RET	Cooling tower water return
H-HC-COT-SUP	Cooling tower water supply
H-PB-CO2	Carbon dioxide gas
H-PB-EQP	Plumbing equipment: pumps, coils motors, grease interceptor, etc.
H-PB-FOI-VEN	Fuel oil vent
H-PB-HEG	Helium gas
H-PB-HYG	Hydrogen gas
H-PB-MEG	Methane gas
H-PB-NIT	Nitrogen gas
H-PB-OXY	Oxygen gas
H-PB-VAC	Cleaning system, vacuum
H-PP-MET	Meters
H-PP-PMP	Pumping stations
H-PP-VAL	Valves
Marine	
M-WF-BEM	Pile caps, beams

Table 2 – Renamed or Deleted Layers

Note: To update layer names according to the new version of the standard, several options are available depending on a drawing's requirements. The symbol ➔ indicates that information represented by the former layer name may be divided into several new layers. The symbol ↗ indicates that the former layer may be renamed either according to the primary layer name (underlined) of the subdivision or according to a supplementary layer name (in grey) if the information must be divided with greater precision.

Renamed or Deleted Layers

Old Name	New Name	Description
Architecture		
A-DR-INT-PAR	A-DR-INT-PRT	Interior doors in a partition wall
A-EM-OLN	A-EM-OLN	General outline
A-EM-COR-OLN ↗	A-EM-OLN-COR	Corridor outline
A-EM-STR-OLN ↗	A-EM-OLN-STR	Staircase outline
A-EM-WAL-OLN ↗	A-EM-OLN-WAL	Wall outline
A-EM-OLN-HAT	A-EM-HAT	General hatching
A-EM-COR-HAT ↗	A-EM-HAT-COR	Corridor hatching
A-EM-STR-HAT ↗	A-EM-HAT-STR	Staircase hatching
A-EM-WAL-HAT ↗	A-EM-HAT-WAL	Wall hatching
A-FL-CTP-PAR	A-FL-CTP-PRT	Countertops on partitions
A-GL-CLN	A-GL-TMP	Under construction lines, temporary aids
A-WD-INT-PAR	A-WD-INT-PRT	Interior windows in a partition wall
A-WL-HED-PAR	A-WL-HED-PRT	Door and window headers on partition
A-WL-INT-LOW-PAR	A-WL-INT-LOW-PRT	Interior partitions - low walls
A-WL-INT-PAR	A-WL-INT-PRT	Interior partition walls
A-WL-WRM	A-WL-WSR-PRT	Washroom partitions
Bridges and Dams Engineering		
B-DK-DDR	B-DK-DRN	Deck drains
B-DK-DEK	B-DK-PLN	Deck plan
B-DK-EXJ	B-DK-JNT	Expansion joints
B-SS-CAT	B-SS-CTW	Catwalks
Civil Engineering, Site Design and Landscape Architecture		
C-BH-MON	C-BH-WEL	Geotechnical or environmental monitoring wells
C-BH-STP	C-BH-SPR	Stratigraphic profiles
C-GF-DPI	C-DI-PIP	Diesel fuel pipelines
C-GF-DSE ➔	C-DI-MAN	Diesel fuel manholes
➔	C-DI-MET	Diesel fuel meters
➔	C-DI-VAL	Diesel fuel valves
C-GF-NPI	C-NZ-PIP	Natural gas pipelines
C-GF-NSE ➔	C-NZ-MAN	Natural gas manholes
➔	C-NZ-MET	Natural gas meters
➔	C-NZ-VAL	Natural gas valves
C-GF-OPI	C-OI-PIP	Oil pipelines
C-GF-OSE ➔	C-OI-MAN	Oil manholes
➔	C-OI-MET	Oil meters
➔	C-OI-VAL	Oil valves

C-GF-PPI		C-PG-PIP	Propane gas pipelines
C-GF-PSE	➔	C-PG-MAN	Propane gas manholes
	➔	C-PG-MET	Propane gas meters
	➔	C-PG-VAL	Propane gas valves
C-HY-DRA		*Deleted*	
C-LD-LWN		C-VG-GRS	Grass area
C-RO-BRG		C-RO-BRD	Bridges, overpasses, etc.
C-RO-CON		C-RO-CNT	Highway construction staging
C-RO-ROD-APP		C-RO-ROD-APX	Drivable road limits' approximate location
C-RW-BRG		C-RW-BRD	Bridges
C-SA-ABN		C-SA-SEW-ABN	Abandoned sanitary sewer lines
C-SA-CMB-MLI		C-SA-SEW-CMB-MLI	Combined main sewer lines
C-SA-CMB-SLI		C-SA-SEW-CMB-SLI	Combined service sewer lines
C-SA-MLI		C-SA-SEW-MLI	Main sanitary sewer lines
C-SA-SLI		C-SA-SEW-SLI	Sanitary service sewer lines
C-SA-DRA		C-SA-CAT	Drainage catch areas
C-SA-JUN		C-SA-SYM	Junction symbols
C-SA-JUN-IDN		C-SA-SYM-IDN	Text description - type of junction
C-SF-ARM	➔	C-LD-TOE	Toe of erosion control, armourstone, riprap, berms
	➔	C-LD-TOP	Crest of erosion control, armourstone, riprap, berms
C-SF-BRG		C-LD-BRD	Foot bridges
C-SF-CON		C-LD-CON	Concrete features, slabs
C-SF-FEN		C-LD-FEN	Fencing
C-SF-RWL		C-LD-RWL	Retaining walls
C-SF-STR		C-LD-STR	Stairs (not attached to buildings)
C-SF-SWK		C-LD-SWK	Sidewalks
C-SF-TRL		C-LD-TRL	Trails, footpaths
C-SF-TUN		C-LD-TUN	Tunnels
C-SM-ABN		C-SW-SEW-ABN	Abandoned storm sewer lines
C-SM-CUL		C-SW-CUL	Culverts
C-SM-DCL		C-SW-DCL	Ditch centre lines
C-SM-DRA		C-SW-CAT	Drainage catchments areas
C-SM-IOT		C-SW-IOT	Storm inlet outlet structure
C-SM-JUN		C-SW-SYM	Junction symbols
C-SM-JUN-IDN		C-SW-SYM-IDN	Junction description text
C-SM-MAN		C-SW-MAN	Catch basins, manholes
C-SM-MAN-IDN		C-SW-MAN-IDN	Manhole description text: elevation, direction
C-SM-MNG		C-SW-MNG	Storm water management pond
C-SM-SEW		C-SW-SEW	Sewer lines system
C-SM-MLI ↗		C-SW-SEW-MLI	Storm main sewer lines
C-SM-SLI ↗		C-SW-SEW-SLI	Storm service sewer lines
C-SM-SUB		C-SW-SUB	Subdrains
C-SM-TXT		C-SW-TXT	Text describing length of sewer, slopes, material

C-SV-CTL		C-SV-CPT	Control points
C-SV-HPT		C-SV-CPT-HOR	Horizontal control points
C-SV-VPT		C-SV-CPT-VER	Vertical control points
C-SV-SET		C-SV-STB	Setbacks
C-SV-STA-EQU		C-SV-STA	Station equation labels
C-SV-STA-LBL ↗		C-SV-STA-IDN	Station labels
C-SV-STA-PTS ↗		C-SV-STA-PTS	Station points
C-TP-BNK		C-TP-TOP	Top of bank
C-TP-SRF-BRK		C-TP-SRF-BRL	Surface model break lines
C-WM-IRR		C-LD-IRR	Irrigation system
C-WM-IRP ↗		C-LD-IRR-PIP	Irrigation system piping
C-WM-IRR ↗		C-LD-IRR-SYM	Irrigation heads, controls, valves
C-WM-JUN		C-WM-SYM	Junction symbols
C-WM-JUN-IDN		C-WM-SYM-IDN	Text describing type of junction
		C-WM-WLI	Water line
C-WM-MLI ↗		C-WM-WLI-MLI	Water main
C-WM-SLI ↗		C-WM-WLI-SLI	Water service line
C-WM-WTR		C-WM-WEL	Water wells
Electrical Systems			
E-CK-CLK		E-CK-REC	Clock locations
E-EL-LCM		E-EL-CLG	Emergency luminaries ceiling-mounted
E-EL-LWS		E-EL-WAL	Emergency luminaries wall-mounted
E-EL-OLB		E-EL-EXT	Emergency outside luminaries attached to buildings, poles
		E-EW-HVD	High voltage wiring
E-EW-HVC ↗		E-EW-HVD-CLG	High voltage in ceiling space
		E-EW-LVD	Low voltage wiring
E-EW-LVC ↗		E-EW-LVD-CLG	Low voltage in ceiling space
E-EW-LVF ↗		E-EW-LVD-FLR	Low voltage under floor
E-EW-WCL		E-EW-CLG	Ceiling-mounted wiring
E-FR-AEP		E-FR-EQP	Equipment: master fire warning panel, alarm, annunciator panels, etc.
E-FR-AID		E-FR-SYM	Electrical FP symbols: pull stations, heat, smoke detectors
E-FR-MFP		E-FR-EQP	Equipment; master fire warning panel, alarm, annunciator panels, etc.
E-FR-VCW		E-FR-VCE-WRG	Emergency voice communication wiring
E-NL-LCM		E-NL-CLG	Luminaries ceiling-mounted
E-NL-LWS		E-NL-WAL	Luminaries in workspace and wall-mounted
E-NL-OLB		E-NL-EXT	Outside luminaries attached to buildings, poles
		E-NW-HVD	High voltage wiring
E-NW-HVW		E-NW-HVD-CLG	High voltage wiring in ceiling space
		E-NW-LVD	Low voltage wiring
E-NW-LVC ↗		E-NW-LVD-CLG	Low voltage wiring in ceiling space
E-NW-LVF ↗		E-NW-LVD-FLR	Low voltage under floor
E-NW-LVW ↗		E-NW-LVD-WOR	Low voltage in workspace
E-SD-COM-ABV	→	E-SD-TEL (*-VID)	Telephone or video lines
	→	E-SD-TEL-ABV	Telephone lines - above grade
	→	E-SD-VID-ABV	Video lines – above grade
E-SD-COM-UND	→	E-SD-TEL (*-VID)	Telephone or video lines
	→	E-SD-TEL-UND	Telephone lines - below grade
	→	E-SD-VID-UND	Video lines – below grade

	E-SD-HVD	High voltage distribution
E-SD-HVO-ABV ↗	E-SD-HVD-ABV	High voltage distribution - above grade
E-SD-HVO-UND ↗	E-SD-HVD-UND	High voltage distribution - below grade
	E-SD-LVD	Low voltage distribution
E-SD-LVO-ABV ↗	E-SD-LVD-ABV	Low voltage distribution - above grade
E-SD-LVO-UND ↗	E-SD-LVD-UND	Low voltage distribution - below grade
	E-SM-EPR	Emergency distribution schematics
E-SM-GEN ↗	E-SM-EPR-GEN	Emergency generation schematics, generators
E-SM-ELT ↗	E-SM-EPR-LTG	Emergency lighting schematics
E-SM-EPR ↗	→ E-SM-EPR-EQP	Emergency power equipment
	→ E-SM-EPR-WRG	Emergency wiring schematics
	E-SM-MMS	Maintenance management system (MMS) tag numbers
E-SM-EPR-MAX ↗	E-SM-EPR-MMS	MMS tag numbers for emergency distribution
E-SM-HVW-MAX ↗	E-SM-HVD-MMS	MMS tag numbers for high voltage distribution
E-SM-NPR-MAX ↗	E-SM-NPR-MMS	MMS tag numbers for normal power distribution
E-SM-NEO	*Deleted*	
E-SM-NEO-MAX	*Deleted*	
E-SM-NPR	→ E-SM-NPR	Normal power distribution schematics
	→ E-SM-NPR-EQP	Normal power distribution equipment
	→ E-SM-NPR-WRG	Normal power wiring
E-SM-NLT ↗	E-SM-NPR-LTG	Normal lighting schematics
General Information		
G-TL-LOG	G-TL-LGO	Logos
Mechanical		
H-PD-SAN	*Deleted*	
H-CS-DAM	H-CS-EQP	Control systems equipment
H-CS-THR	H-CS-SYM	Control system symbols: thermostats, humidistat, sensors,
H-CS-VAV	H-CS-SYM	Control system symbols; thermostats, humidistat, sensors,
H-PD-DCW	H-DW-CLD	Domestic cold water
H-EQ-WPM	H-DW-EQP	Domestic water equipment: pumps, water softeners, filters,
H-PF-FIX	H-DW-FIX	Plumbing fixtures
H-PF-FIX-PAR ↗	H-DW-FIX-PRT	Plumbing fixtures on partitions
H-PD-DHW	H-DW-HOT	Domestic hot water
H-PD-DHR ↗	H-DW-HOT-RCL	Domestic hot water recirculation
H-FD-CEX	H-FP-CEX	Chemical extinguishing system
H-FE-CEX ↗	H-FP-CEX-EQP	Chemical extinguishing equipment
H-FD-CEX ↗	H-FP-CEX-PIP	Chemical extinguishing piping
H-FE-CAB	H-FP-EQP	Fire protection equipment: fire hose cabinet, fire dampers,
H-FE-FDP	H-FP-EQP	Fire protection equipment: fire hose cabinet, fire dampers,
H-FE-SMC	H-FP-EQP	Fire protection equipment: fire hose cabinet, fire dampers,
H-FD-FEX	H-FP-FEX	Foamed extinguishing system
H-FE-FEX ↗	H-FP-FEX-EQP	Foamed extinguishing equipment
H-FD-FEX ↗	H-FP-FEX-PIP	Foamed extinguishing piping
H-FE-FIT	H-FP-SPK	Sprinkler system
H-FE-SPE ↗	H-FP-SPK-EQP	Sprinkler equipment
H-FD-SPP ↗	H-FP-SPK-PIP	Sprinkler piping
H-FE-SPH ↗	H-FP-SPK-SYM	Sprinkler system symbols: sprinkler heads, backflow ...
H-FE-TXT ↗	H-FP-SPK-TXT	Sprinkler system text
H-FE-SSZ ↗	H-FP-SPK-ZNS	Sprinkler system zones

H-FD-STP		H-FP-STP	Standpipe system
H-FE-STE ↗		H-FP-STP-EQP	Standpipe equipment
H-FD-STP ↗		H-FP-STP-PIP	Standpipe piping
H-FE-EXG		H-FP-SYM	Fire protection symbols: Fire extinguisher, hydrants, Siamese connections, etc.
H-FE-FHY		H-FP-SYM	Fire protection symbols: Fire extinguisher, hydrants, Siamese connections, etc.
H-FE-EPE		H-FP-TXT	Fire protection text
		H-HC-CHL	Chilled water
H-PD-CHR ↗		H-HC-CHL-RET	Chilled water return
H-PD-CHS ↗		H-HC-CHL-SUP	Chilled water supply
H-EQ-CNV		H-HC-CNV	Convectors
		H-HC-GLY	Glycol system
H-PD-GLR ↗		H-HC-GLY-RET	Glycol return
H-PD-GLS ↗		H-HC-GLY-SUP	Glycol supply
		H-HC-HWA	Heating water system
H-PD-HWR ↗		H-HC-HWA-RET	Heating water return
H-PD-HWS ↗		H-HC-HWA-SUP	Heating water supply
H-EQ-HYD		H-HC-HYD	Hydronic equipment
H-PD-RAD		H-HC-RAD	Radiant heat tubing
H-EQ-REF		H-HC-REF-EQP	Refrigerant equipment
H-PD-RFG		H-HC-RFG	Refrigerant gas
H-PD-RFL		H-HC-RFL	Refrigerant liquid
		H-HC-STM	Steam
H-EQ-STM ↗		H-HC-STM-EQP	Steam equipment
H-PD-STC ↗		H-HC-STM-RET	Steam condensate (return)
H-PD-STM ↗		H-HC-STM-SUP	Steam supply
H-PD-CMA		H-PB-CMA	Compressed air
H-EQ-CMA		H-PB-CMA-EQP	Compressed air equipment
		H-PB-DWV	Drainage waste and vent system
H-PF-FDR ↗		H-PB-DWV-SYM	Symbols: roof drains, floor drains, etc.
H-PF-RDR ↗		H-PB-DWV-SYM	Symbols: roof drains, floor drains, etc.
H-PD-DRA ↗	➔	H-PB-DWV-VEN	Ventilating circuit, vents
	➔	H-PB-DWV-WST	Drainage circuit
		H-PB-FOI	Fuel oil
H-EQ-FEQ ↗		H-PB-FOI-EQP	Fuel equipment
H-PD-FOR ↗		H-PB-FOI-RET	Fuel oil return
H-PD-FOS ↗		H-PB-FOI-SUP	Fuel oil supply
H-PD-MAN		H-PB-MAN	Access holes
H-PD-NGA		H-PB-NGA	Natural gas
H-PD-PGA		H-PB-PGA	Propane gas
H-PD-FIT		H-PB-SYM	Plumbing symbols: gauges, fittings, valves elbows, unions,
H-PF-BIB		H-PB-SYM	Plumbing symbols: gauges, fittings, valves elbows, unions,
H-FP-MAN		H-PP-MAN	Manholes fuelling stations
H-FP-SER		H-PP-PIP	Fuel and process piping
H-FP-TNK		H-PP-TNK	Fuel tanks
H-DD-COA		H-VA-COA	Combustion air ductwork
H-DE-FAN		H-VA-EQP	Equipment: fans, dampers, coils, filters, etc.
H-EQ-ACE		H-VA-EQP	Equipment: fans, dampers, coils, filters, etc.

	H-VA-EXH	Exhaust air
H-DD-EXH ↗	H-VA-EXH-DUC	Exhaust air ductwork
H-DE-EXH ↗	H-VA-EXH-GRI	Exhaust grilles
H-DD-INS	H-VA-INS	Duct insulation, acoustical lining
	H-VA-OTA	Outside air
H-DD-OUT ↗	H-VA-OTA-DUC	Outside air ductwork
H-DE-OUT ↗	H-VA-OTA-GRI	Outside air grilles
	H-VA-RET	Return
H-DD-RET ↗	H-VA-RET-DUC	Return ductwork
H-DE-RET ↗	H-VA-RET-GRI	Return grills
	H-VA-SUP	Supply
H-DE-SUP ↗	H-VA-SUP-DIF	Supply diffusers
H-DD-SUP ↗	H-VA-SUP-DUC	Supply ductwork
H-DE-VAV	H-VA-VAV	Variable air volume boxes
H-DD-FLU	H-VA-VEN	Flue, vent, breaching
Legal Survey		
L-AZ-ZNP	*Deleted*	
L-AZ-ZNS	L-AZ-ZNS	Zoning surfaces, runway strips, centrelines
L-PL-BDY	L-CF-BDY	Legal surveyed boundary
L-PL-BND	L-CF-OTH	Other parcels/boundaries
L-PL-CEN	*Deleted*	
L-PL-DIM	L-CF-DIM	Parcel segment labelling, bearings, and distance
L-PL-FEA	*Deleted*	*See C-LD-FEN, A-WL-OLD, etc.*
L-PL-FEA-TXT	C-LD-TXT	Descriptive information text
L-PL-LIM	L-CF-EAS	Limited interest estate, easement, right of way
L-PL-LIM-IDN	L-CF-TXT	Parcel labelling, description, property ID, book number, etc.
L-PL-NAT	C-SF-WTR	Natural boundaries, watercourses, shorelines
L-PL-PAR	L-CF-BDY	Legal surveyed boundary
L-PL-PAR-IDN	L-CF-TXT	Parcel labelling, description, property ID, book number, etc.
L-PL-PAR-TXT	L-CF-TXT	Parcel labelling, description, property ID, book number, etc.
L-PL-PPR-IDN	L-CF-TXT	Parcel labelling, description, property ID, book number, etc.
L-PL-SET	L-CF-STB	Setbacks
L-PL-UCD	*Deleted*	
L-SP-CAN	L-SP-CAN	Canadian boundaries
L-SP-CLS	L-SP-CLS	CLSR boundaries, reserves, parks
L-SP-PRO	L-SP-PRO	Provincial boundaries
L-SP-REG	L-SP-REG	Regional and municipality boundaries
L-SV-BEN	L-SV-SYM	Symbols: survey pins, iron bars, etc.
L-SV-BEN-IDN	*Deleted*	
L-SV-CHN	*Deleted*	
L-SV-CLN	L-SV-CLN	Radial ties, traverse lines, control lines
L-SV-CTL	L-SV-SYM	Symbols: survey pins, iron bars, etc.
L-SV-CTL-F	L-SV-SYM	Symbols: survey pins, iron bars, etc.
L-SV-CTL-GPS	L-SV-SYM	Symbols: survey pins, iron bars, etc.
L-SV-CTL-GPS-IDN	L-SV-TXT	Identification text
L-SV-CTL-IDN	L-SV-TXT	Identification text
L-SV-CTL-IDN-F	L-SV-TXT	Identification text
L-SV-GRD	L-SV-GRD	Survey grid

L-SV-HOR	L-SV-SPT	Survey points
L-SV-HPT ↗	L-SV-SPT-ELV	Survey point elevation
L-SV-HPT-IDN ↗	L-SV-SPT-NUM	Survey point number text
L-SV-PNT	L-SV-SPT-PNT	Survey points
L-SV-LIN ↗	L-SV-SPT-TXT	Survey point description
L-SV-MON	L-SV-SYM	Symbols: survey pins, iron bars, etc.
L-SV-MON-F	L-CF-SYM	Symbols: coordinate monument, control point
L-SV-MON-IDN	L-CF-TXT	Parcel labelling, description, property ID, book number, etc.
L-SV-MON-IDN-F	L-CF-TXT	Parcel labelling, description, property ID, book number, etc.
L-SV-PNT	C-SV-PNT	Survey points
L-SV-PNT-GEO	*Deleted*	
L-SV-STA-EQU	C-SV-STA	Station equation labels
L-SV-STA-LBL ↗	C-SV-STA-IDN	Station labels
L-SV-STA-PTS ↗	C-SV-STA-PTS	Station points
L-SV-TRA	L-SV-CLN	Radial ties, traverse lines, control lines
L-SV-VER	C-SV-VER	Vertical alignment
L-SV-VPT	L-SV-SYM	Symbols: survey pins, iron bars, etc.
L-TP-BNK	C-TP-TOP	Top of bank
L-TP-MAJ	C-TP-MAJ	Major contours
L-TP-MIN	C-TP-MIN	Minor contours
L-TP-SPT	C-TP-SPT	Spot elevation
L-TP-SRF	C-TP-SRF	Surface model line work
L-TP-SRF-BRK ↗	C-TP-SRF-BRL	Surface model break lines
L-TP-SRF-TXT↗	C-TP-SRF-TXT	Surface calculation text
Marine		
M-BW-BRM	M-BW-TOP	Crest of breakwater, berms
M-DM-ABU	B-SB-ABU	Abutments
M-DM-APR	B-SB-APR	Approach slabs
M-DM-BAR	B-DK-BAR	Barriers, railings
M-DM-BRG	B-SB-BRG	Bearing
M-DM-DDR	B-DK-DRN	Deck drains
M-DM-DEK	B-DK-PLN	Deck plan
M-DM-EXJ	B-DK-JNT	Expansion joints
M-DM-FTG	B-SB-FTG	Footing
M-DM-GAB	B-SR-GAB	Gabions
M-DM-PIR	B-SB-PIR	Piers
M-DM-REB	B-DK-REB	Deck reinforcing
M-DM-STG	B-DK-STG	Steel grating
M-NV-COR	M-NV-CNL	Navigation channels, corridors
M-SN-MAJ	M-SN-MAJ	Major sea bottom contours
M-SN-MIN	M-SN-MIN	Minor sea bottom contours
M-WF-CAT	M-WF-CTW	Catwalks
M-WF-CRB	M-WF-CWK	Cribwork, ballast floor
Real Property Space Management		
R-FC-AWR	R-FC-WSR-BRF	Accessible washrooms
R-ZN-CLN	R-ZN-CLE	Cleaning zoning

Table 3 – New Abbreviations List

New Abbreviations

Groups

Abbv	Description	Abbv	Description
CF	Cadastral Fabric	NZ	Natural Gas Distribution
DI	Diesel Fuel Distribution	OI	Oil Distribution
DW	Domestic Water	PG	Propane Gas Distribution
EN	Environment	VA	Ventilation and Air Conditioning
HC	Heating and Cooling	VG	Vegetation

Extensions

ANN	Annual flowers	JER	Jersey wall LOW Low
ANT	Antenna	MEG	Methane gas
APC	Approach surface (airport)	MET	Meters
AWP	Acid waste piping (medical)	NIT	Nitrogen (medical)
BIR	Bird hazard (airport)	NUM	Numbers
BRF	Barrier-free	ORN	Ornamental
BRL	Break lines	OTH	Other
BYP	By-pass box	OXY	Oxygen (medical)
CHL	Chilled water	PER	Perennial
CLD	Cold water	PIT	Borrow pit
CMB	Combined sewers	PIV	Post indicator valve
CO2	Carbon dioxide gas	PLA	Plastic
CPT	Control points	PLM	Plume outline
CRT	Certificates, stamps	PMP	Pumping stations
CTM	Contamination	PRI	Primary
COT	Cooling tower	RCL	Recirculation
DEC	Deciduous	RLN	Reference lines
DES	Description	RMN	Remnants (archaeology)
DIF	Diffusers	ROW	RO water or distilled water (medical)
DWV	Drainage waste and vent system	RPL	Reference plan
EAS	Easement	RPS	Real Property information
ELV	Elevation (survey points)	SAF	Life safety
ESC	Escalator	SCD	Secondary
EVR	Evergreen	SED	Seeded area
FLW	Flowers	SEP	Septic (field, tank, etc.)
FOI	Fuel oil	SHO	Shoulder
GCV	Ground cover	SND	Sand
GLY	Glycol	SOD	Sodded
GLZ	Glass, glazing	SPT	Survey points
GPS	Global Positioning System	SRB	Shrubs
GRA	Grading	STA	Stations (survey)
GRE	Grease interceptor	STI	Strip (airport)
GRI	Grilles	TOP	Top of bank, crest of breakwater, berms
GRS	Grass, lawn area	TRS	Transitional surface (airport)
GRV	Gravel	VAC	Vacuum piping
HEG	Helium gas	VAL	Valves
HIG	High	VEN	Vents
HTE	Heating units	VIN	Vines
HWA	Heating water	VPC	Valve pump chamber
HYG	Hydrogen gas	VPT	Viewports
IMP	Imports (Revit families)	WNG	Wing walls
WEL	Well	WOR	Working area
WLI	Water lines IND Industrial		

Table 4 – Renamed or Deleted Abbreviations List

Renamed or Deleted Abbreviations

Groups

Old	New	Description
DD	VA	Ventilation and Air Conditioning
DE	VA	Ventilation and Air Conditioning
DM	*Deleted*	*Dams*
GF	➔ DI	Diesel Fuel Distribution
	➔ NZ	Natural Gas Distribution
	➔ OI	Oil Distribution
	➔ PG	Propane Gas Distribution
RI	PI	Protection Incendie
FD	FP	Fire Protection
FE	FP	Fire Protection
FP	PP	Fuel and Process Piping
SM	SW	Storm Water and Drainage

Extensions

Old	New	Description
ACE	EQP	Air Conditioning Equipment; fans, dampes, coils, filters, etc.
AEP	EQP	Alarm and annunciator panels, buzzer, bells
AID	SYM	Alarm initiation devices: pull stations, heat, smoke detectors
APP	APX	Approximate
ARM	*Deleted*	*Erosion control, armourstone, riprap*
BIB	SYM	Hose bib connector
BNK	TOE	Toe of bank, breakwater, berms
BRG	BRD	Bridges
BRM	TOP	Top of bank, crest of breakwater, berms
CAL	*Deleted*	*Callout blocks*
CAR	*Deleted*	*Carpet*
CAT	CTW	Catwalks
CEN	*Deleted*	*Provincial, national coordinates of parcel centroid*
CHR	CHL-RET	Chilled water return
CHS	CHL-SUP	Chilled water supply
CLN	CLE	Cleaning, clean out
CLN	TMP	Construction Lines, temporary aids
CON	CNT	Construction
CRB	CWK	Cribwork, ballast floor
CSY	CTL	Controls
DAM	EQP	Damper actuators, controllers
DDR	DRN	Deck drains
DHR	HOT-RCL	Domestic hot water recirculation
DHW	HOT	Domestic hot water
DPI	DI-PIP	Diesel fuel pipelines
DSE	➔ DI-MAN	Diesel manholes
	➔ DI-MET	Diesel meters
	➔ DI-VAL	Diesel valves
DRA	*Deleted*	*Drainage*
ELT	EPR-LTG	Emergency lighting schematics
EWR	EPR-WRG	Emergency wiring schematics
EXG	SYM	Fire extinguisher symbols

EXJ		JNT	Expansion joint
FAN		EQP	Fans, dampers, coils, filters and equipment
FDP		EQP	Fire dampers
FDR		DWV-SYM	Drainage, waste and vent symbols
FEA		*Deleted*	*Physical site features; fences, buildings, walls, etc.*
FEQ		FOI-EQP	Fuel Equipment
FIT		SYM	Fittings symbols
FOR		FOI-RET	Fuel oil return
FOS		FOI-SUP	Fuel oil supply
GLR		GLY-RET	Glycol return
GLS		GLY-SUP	Glycol supply
HPT		CPT-HOR	Horizontal control points
HTE		*Deleted*	*Heating units*
HVC		HVD-CLG	High voltage in ceiling space
HVW		HVD	High voltage wiring
HWR		HWA-RET	Heating water return
HWS		HWA-SUP	Heating water supply
IRP		IRR-PIP	Irrigation system piping
JUN		SYM	Junction symbols
LAY		VPT	Paper space metaview boundaries
LBL		IDN	Station equation labels
LCM		CLG	Ceiling-mounted equipment or wiring
LOG		LGO	Logos
LVC		LVD	Low voltage distribution
LVF		LVD-FLR	Low voltage under floor
LVW		LVD-WOR	Low voltage in workspace
LWN		GRS	Lawn area
LWS		WAL	Wall-mounted equipment or wiring
MAX		MMS	Maintenance Management System
MFP		EQP	Master fire warning panel
MON		WEL	Monitoring well
NAT		*Deleted*	*Natural boundaries, watercourses, shorelines*
NEO		*Deleted*	*Neoc wiring and equipment*
NLT		NPR-LTG	Normal lighting schematics
NPI		NZ-PIP	Natural gas pipelines
NSE	➔	NZ-MAN	Natural gas manholes
	➔	NZ-MET	Natural gas meters
	➔	NZ-VAL	Natural gas valves
OLB		EXT	Outside luminaries attached to building
OPI		OI-PIP	Oil pipelines
OSE	➔	OI-MAN	Oil manholes
	➔	OI-MET	Oil meters
	➔	OI-VAL	Oil valves
OUT		OTA	Outside air
PAR		PRT	Wall partition
PIV		*Deleted*	*Natural boundaries, watercourses, shorelines*
PPR		*Deleted*	*Owner identification*
PPI		PG-PIP	Propane gas pipelines
PSE	➔	PG-MAN	Propane gas manholes
	➔	PG-MET	Propane gas meters
	➔	PG-VAL	Propane gas valves
RDR		DWV-SYM	Drainage, waste and vent symbols
RET		RWL	Retaining walls
SAN		*Deleted*	*Sanitary*

SER	PIP	Fuel and process piping
SET	STB	Setbacks
SMC	EQP	Smoke control equipment
SPE	SPK-EQP	Sprinkler equipment
SPH	SPK-SYM	Sprinkler symbol, sprinkler system symbols, sprinkler heads, backflow preventer, etc.
SPP	SPK-PIP	Sprinkler piping
SSZ	SPK-ZNS	Sprinkler system zones
STC	STM-RET	Steam condensate
STE	STP-EQP	Standpipe equipment
STG	STL	Steel grating
STP	SPR	Stratigraphic profiles
THR	SYM	Thermostats symbols
TIL	TBK	Title Blocks
TRA	CLN	Radial ties, traverse lines, control lines
VAV	*Deleted*	*Valve actuators, controllers*
VCW	VCE-WRG	Emergency voice communication wiring
VPT	CPT-VER	Vertical control points
WCL	WAL	Wall mounted equipment or wiring
WPM	EQP	Domestic water tanks, pumps, water softeners
WRM	WSR-PRT	Washroom partitions
ZNP	ZNS-P	Proposed new zoning

4. New Annex C - Pen and Colour Assignment Tables

A new annex containing the regional pen and colour assignment tables (CTB) was added to the PWGSC National CADD Standard.

5. Quality Control of CADD Data

A new annex containing the list of requirements that are subject to a quality control of CADD data was added to the PWGSC National CADD Standard.