

**SPRING 2022**  
SUMMARY OF UPDATES



# NMS

●●● Canadian National Master Construction Specification



National Research  
Council Canada

Conseil national de  
recherches Canada

Canada 

## Summary of updates

The **2022-04 NMS publication** includes: technical updates to over 300 design and construction specification Sections with content and guidance for net zero carbon building operation and climate resiliency.

### Design Specifications

SECTION	TITLE	STATUS
1020	Project Brief	Editorial Edits
1030	Project Criteria	Editorial Edits
A1010	Standard Foundations	Editorial Edits
A1020	Special Foundations	Editorial Edits
A2010	Walls for Subgrade Enclosures	Editorial Edits
A4010	Standard Slabs-On-Grade	Editorial Edits
A4020	Structural Slabs-On-Grade	Editorial Edits
B1010	Floor Construction	Editorial Edits
B1020	Roof Construction	Editorial Edits
B2010	Exterior Walls	Editorial Edits
B2020	Exterior Windows	Editorial Edits
B2050	Exterior Doors and Grilles	Editorial Edits
B2080	Exterior Wall Appurtenances	Editorial Edits
B3010	Roofing	Editorial Edits
B3020	Roof Appurtenances	Editorial Edits
B3040	Traffic Bearing Horizontal Enclosures	Editorial Edits
B3060	Horizontal Openings	Editorial Edits
B3080	Overhead Exterior Enclosures	Editorial Edits
C1070	Suspended Ceiling Construction	Editorial Edits
C2010	Wall Finishes	Editorial Edits
C2050	Ceiling Finishes	Editorial Edits
D1010	Vertical Conveying Systems	Editorial Edits
D2010	Domestic Water Distribution	Editorial Edits
D2020	Sanitary Drainage	Editorial Edits
D2030	Building Support Plumbing Systems	Editorial Edits
D2050	General Service Compressed-Air	Editorial Edits
D3010	Facility Fuel Systems	Editorial Edits
D3020	Heating Systems	Editorial Edits
D3030	Cooling Systems	Editorial Edits
D3050	Facility HVAC Distribution Systems	Editorial Edits
D3060	Ventilation	Editorial Edits
D5020	Electrical Service and Distribution	Editorial Edits
D5030	General Purpose Electrical Power	Editorial Edits
D5040	Lighting	Editorial Edits
D5080	Miscellaneous Electrical Systems	Editorial Edits
D6010	Data Communications	Editorial Edits
D6060	Distributed Communications and Monitoring	Editorial Edits

D7010	Access Control and Intrusion Detection	Editorial Edits
D7030	Electronic Surveillance	Editorial Edits
D7050	Detection and Alarm	Editorial Edits
D8010	Integrated Automation Facility Controls	Editorial Edits
E1010	Vehicle and Pedestrian Equipment	Editorial Edits
E1030	Commercial Equipment	Editorial Edits
E1040	Institutional Equipment	Editorial Edits
E1060	Residential Equipment	Editorial Edits
E1070	Entertainment and Recreational Equipment	Editorial Edits
E1090	Other Equipment	Editorial Edits
G3050	Site Energy Distribution	Editorial Edits
G4010	Site Electrical Distribution Systems	Editorial Edits
G4050	Site Lighting	Editorial Edits
G5010	Site Communications Systems	Editorial Edits
Z1040	Quality Requirements	Editorial Edits

## Construction Specifications

SECTION	TITLE	STATUS
00 01 10	Table of Contents	Updated
01 33 29	Sustainable Design Reporting	Editorial Edits
01 35 21	LEED Requirements	Editorial Edits
01 35 35	DND Fire Safety Requirements	Updated
01 47 13	Sustainable Requirements: Concept Design	Updated
01 47 15	Sustainable Requirements: Construction	Updated
01 47 19	Sustainable Requirements: Operation	Updated
01 71 00	Examination and Preparation	Updated
02 22 10	Existing Building Condition Assessments	Editorial Edits
02 25 29.23	Roofing Investigations - Thermographic	Editorial Edits
02 27 13	Thermographic Assessment - Building Envelope	Editorial Edits
03 11 19	Insulating Concrete Forming	Renamed and Updated
	Formerly: Insulating Concrete forms	
03 20 00	Concrete Reinforcing	Editorial Edits
03 30 00	Cast-In-Place Concrete	Editorial Edits
03 30 00.09	Cast-In-Place Concrete - Short form	Editorial Edits
03 37 26	Underwater Placed Concrete	Editorial Edits
03 41 00	Precast Structural Concrete	Editorial Edits
03 41 36	Precast Structural Post-Tensioned Concrete	Editorial Edits
03 45 00	Precast Architectural Concrete	Editorial Edits
03 48 00	Precast Concrete Specialties	Editorial Edits
04 05 19	Masonry Anchorage and Reinforcing	Updated
04 05 23	Masonry Accessories	Updated
04 20 00.08	Masonry for Minor Works	Updated
04 21 13	Brick Masonry	Updated
04 21 19	Clay Tile Masonry	Updated
04 22 00	Concrete Unit Masonry	Updated
04 23 00	Glass Unit Masonry	Updated

04 43 13	Marble Veneer Cladding	Updated
04 43 16	Granite Veneer Cladding	Updated
04 43 19	Collected Stone Veneer Cladding	Updated
04 43 23	Quarried Stone Veneer Cladding	Updated
04 43 26	Dimension Stone Veneer Cladding	Editorial Edits
04 71 13	Calcium Silicate Manufactured Brick Masonry	Updated
04 71 13.13	Prefaced Calcium Silicate Manufactured Brick Masonry	Updated
04 73 13	Calcium Silicate Manufactured Stone Masonry	Updated
05 12 23	Structural Steel for Buildings	Updated
05 14 00	Structural Aluminum Framing	Renamed and Updated
	Formerly: Structural Aluminum for Buildings	
05 21 00	Steel Joist Framing	Updated
05 31 00	Steel Decking	Updated
05 41 00	Structural Metal Stud Framing	Updated
06 17 00	Shop-Fabricated Structural Wood	Editorial Edits
07 03 30.16	Conservation Treatment for Period Board Roofing	Updated
07 03 31.26	Conservation Treatment for Period Slate Shingles	Updated
07 03 32.16	Conservation Treatment for Period Concrete Roof Tiles	Updated
07 03 33.13	Conservation Treatment for Period Sod Roofing	Updated
07 03 41.13	Conservation Treatment for Period Metal Roof Panels	Updated
07 08 13	Building Enclosure Performance Testing	Updated
07 11 13	Bituminous Dampproofing	Updated
07 12 13	Built-Up Asphalt Waterproofing	Updated
07 13 52	Modified Bituminous Sheet Waterproofing	Updated
07 13 53	Elastomeric Sheet Waterproofing	Updated
07 14 13	Hot Fluid-Applied Rubberized Asphalt Waterproofing	Updated
07 16 19	Metal Oxide Waterproofing	Updated
07 17 13	Bentonite Panel Waterproofing	Updated
07 21 13	Board Insulation	Updated
07 21 16	Blanket Insulation	Updated
07 21 23	Loose-Fill Insulation	Updated
	Formerly: Loose - Fill Insulation	
07 21 26.13	Blown Insulation - Cellulose	Updated
07 21 29	Sprayed Insulation	Renamed and Updated
	Formerly: Sprayed Insulation - Polyurethane Foam	
07 24 10.01	Exterior Insulation and Finish Systems - Panelized	Updated
07 24 23	Direct-Applied Finish Systems	Renumbered Renamed and Updated
Formerly: 07 24 10.03	Formerly: Exterior Finish - Direct Applied	
07 26 00	Vapour Retarders	Updated
07 27 00.01	Air Barriers - Descriptive Or Proprietary	Updated
07 27 00.02	Air Barriers - Performance	Updated
07 42 13.13	Formed Metal Wall Panels	Renumbered Renamed and Updated
Formerly: 07 42 13.23	Formerly: Metal Composite Material Wall Panels	
07 42 43	Composite Wall Panels	Updated

07 42 46	Cementitious Wall Panels	Renamed and Updated
	Formerly: Fibre Reinforced Cementitious Wall Panels	
07 46 19	Steel Siding	Updated
07 46 23	Wood Siding	Renamed and Updated
07 51 00	Built-Up Bituminous Roofing	Updated
07 52 00	Modified Bituminous Membrane Roofing	Updated
07 53 23	Ethylene Propylene Diene Monomer Roofing	Updated
07 55 63	Vegetated Protected Membrane Roofing	Updated
07 56 13	Hot Fluid-Applied Rubberized Asphalt Roofing	Updated
	Formerly: Hot Fluid Applied Rubberized Asphalt Roofing	
07 61 00	Sheet Metal Roofing	Updated
07 62 00	Sheet Metal Flashing and Trim	Updated
07 71 29	Manufactured Roof Expansion Joints	Updated
07 72 33	Roof Hatches	Updated
07 84 00	Firestopping	Renamed and Updated
	Formerly: Fire Stopping and Smoke Seals	
07 92 00	Joint Sealants	Updated
07 95 13	Expansion Joint Cover Assemblies	Updated
08 03 11	Historic - Period Wood Doors	Updated
08 03 14.33	Conservation Treatment for Period Stile and Rail Wood Doors	Updated
08 03 51.23	Conservation Treatment for Period Steel Windows	Updated
08 03 52	Conservation Treatment for Period Wood Windows	Updated
08 10 69	Storm Doors and Frames	Renumbered Renamed and Updated
Formerly: 08 11 69	Formerly: Metal Storm Doors and Frames	
08 11 00	Metal Doors and Frames	Editorial Edits
08 11 16	Aluminum Doors and Frames	Updated
08 11 19	Stainless-Steel Doors and Frames	Updated
08 11 73	Sliding Metal Fire Doors	Renumbered Renamed and Updated
Formerly: 08 13 73	Formerly: Sliding Metal Doors	
08 14 00	Wood Doors	Renumbered Renamed and Updated
Formerly: 08 14 16	Formerly: Flush Wood Doors	
08 14 73	Sliding Wood and Plastic Doors	Editorial Edits
08 31 00	Access Doors and Panels	Updated
08 33 00	Overhead Coiling Doors and Grilles	Updated
08 36 13.16	Sectional Metal Doors	Updated
08 36 13.19	Sectional Plastic Doors	Updated
08 36 19	Multi-Leaf Vertical Lift Doors	Updated
08 36 19.13	Multi-Leaf Vertical Lift Wood Doors	Updated
08 36 19.16	Multi-Leaf Vertical Lift Metal Doors	Updated
08 38 16	Flexible Traffic Doors	Updated
08 42 26.33	Swinging All Glass Entrances	Updated
08 42 29	Automatic Entrances	Updated
08 44 13	Glazed Aluminum Curtain Walls	Updated

08 44 23	Structural Sealant Glazed Curtain Walls	Updated
08 50 00	Windows	Updated
08 62 00	Unit Skylights	Updated
08 71 00	Door Hardware	Updated
08 80 00	Glazing	Updated
08 87 23.16	Security Films	Updated
08 90 00	Louvres and Vents	Updated
09 30 13	Ceramic Tiling	Updated
09 54 23	Linear Metal Ceilings	Editorial Edits
09 58 00	Integrated Ceiling Assemblies	Editorial Edits
09 64 23	Wood Parquet Flooring	Updated
09 64 29	Wood Strip and Plank Flooring	Updated
09 65 16	Resilient Sheet Flooring	Updated
14 12 00	Electric Dumbwaiters	Updated
14 20 03	Freight Elevators	Updated
14 20 06	Passenger Elevators	Updated
14 31 00	Escalators	Updated
14 32 00	Moving Walks	Updated
14 42 00	Wheelchair Lifts	Updated
14 43 19	Suspended Powered Platforms	Editorial Edits
14 43 21	Platform Lifts - Hydraulic	Editorial Edits
22 10 10	Plumbing Pumps	Editorial Edits
22 11 16	Domestic Water Piping	Editorial Edits
22 15 00	General Service Compressed - Air Systems	Editorial Edits
22 33 00	Electrical Domestic Water Heaters	Editorial Edits
22 42 13	Commercial Water Closets, Urinals, and Bidets	Editorial Edits
22 42 16	Commercial Lavatories and Sinks	Editorial Edits
22 42 19	Commercial Bathtubs and Showers	Editorial Edits
22 47 00	Drinking Fountains and Water Coolers	Editorial Edits
23 05 00	Common Work Results for HVAC	Editorial Edits
23 05 05	Selective Demolition for Heating, Ventilating, and Air Conditioning (HVAC)	Editorial Edits
23 05 13	Common Motor Requirements for HVAC Equipment	Editorial Edits
23 05 15	Common Installation Requirements for HVAC Pipework	Editorial Edits
23 05 19	Meters and Gauges for HVAC Piping	Editorial Edits
23 05 19.13	Thermometers and Pressure Gauges - Piping Systems	Editorial Edits
23 05 33	Heat Tracing for HVAC Piping	Editorial Edits
23 05 93	Testing, Adjusting and Balancing for HVAC	Editorial Edits
23 05 93.13	Testing, Adjusting and Balancing of Fume Hoods	Editorial Edits
23 05 94	Pressure Testing of Ducted Air Systems	Editorial Edits
23 07 13	Duct Insulation	Editorial Edits
23 07 16	HVAC Equipment Insulation	Editorial Edits
23 07 19	HVAC Piping Insulation	Editorial Edits
23 08 00	Commissioning of HVAC	Editorial Edits
23 08 13	Performance Verification HVAC Systems	Editorial Edits
23 08 16	Cleaning and Start-Up of HVAC Piping Systems	Editorial Edits
23 09 33	Electric and Electronic Control System for HVAC	Editorial Edits



23 09 43	Pneumatic Control System for HVAC	Editorial Edits
23 11 13	Facility Fuel Oil Piping	Editorial Edits
23 11 23	Facility Natural Gas Piping	Editorial Edits
23 11 26	Facility Liquid-Petroleum Gas Piping	Editorial Edits
23 21 13.01	Hydronic Systems: Copper	Editorial Edits
23 21 13.02	Hydronic Systems: Steel	Editorial Edits
23 21 13.03	Press Joint Piping Systems Hydronic Systems	Editorial Edits
23 21 16	Hydronic Piping Specialties	Editorial Edits
23 21 23	Hydronic Pumps	Editorial Edits
23 22 13	Steam and Condensate Heating Piping	Editorial Edits
23 22 13.13	High Pressure Steam and Condensate Heating Piping Systems	Editorial Edits
23 22 16	Steam Specialties	Editorial Edits
23 22 23	Steam Condensate Pumps	Editorial Edits
23 23 00	Refrigerant Piping	Editorial Edits
23 33 53	Duct Liners	Editorial Edits
23 34 00	HVAC Fans	Editorial Edits
23 34 00.13	Domestic Fans	Editorial Edits
23 34 23.13	Packaged Roof and Wall Exhausters	Editorial Edits
23 35 16	Engine Exhaust Systems	Editorial Edits
23 36 00	Air Terminal Units	Editorial Edits
23 37 13	Diffusers, Registers and Grilles	Editorial Edits
23 37 20	Louvres, Intakes and Vents	Editorial Edits
23 38 13	Commercial Kitchen Hoods	Editorial Edits
23 38 17	Perchloric Acid Fume Hood and Exhaust System - Stainless Steel	Editorial Edits
23 38 18	Perchloric Acid Fume Hood and Exhaust System - Plastic	Editorial Edits
23 52 00	Heating Boilers	Editorial Edits
23 54 13	Electric-Resistance Furnaces	Editorial Edits
23 54 16	Fuel-Fired Furnaces	Editorial Edits
23 56 13.13	Heating Solar Flat- Plate Collectors	Editorial Edits
23 57 00	Heat Exchangers for HVAC	Editorial Edits
23 64 13	Absorption Water Chillers	Editorial Edits
23 64 16	Centrifugal Water Chillers	Editorial Edits
23 64 19	Reciprocating Water Chillers	Editorial Edits
23 64 26	Rotary-Screw Water Chillers	Editorial Edits
23 65 10	Condensers, Coolers and Cooling Towers	Editorial Edits
23 65 16	Natural Draft Cooling Towers	Editorial Edits
23 72 00	Air-To-Air Energy Recovery Equipment	Editorial Edits
23 73 00.13	Air Handling - Built-Up	Editorial Edits
23 73 00.16	Air Handling Units - Packaged	Editorial Edits
23 74 00	Packaged Outdoor HVAC Equipment	Editorial Edits
23 81 23	Computer Room Air Conditioning	Editorial Edits
23 81 40	Air and Water Source Unitary Heat Pumps	Editorial Edits
23 82 00.13	forced Air Heaters	Editorial Edits
23 82 00.16	Incremental Heating and Cooling Units	Editorial Edits
23 82 16.14	Electric-Resistance Air Coils	Editorial Edits
23 82 19	Fan Coil Units	Editorial Edits
23 82 23	Unit Ventilators	Editorial Edits

23 82 33.13	Residential Convectors	Editorial Edits
23 82 33.16	Commercial Convectors	Editorial Edits
23 82 33.19	Cabinet Convector Heaters	Editorial Edits
23 82 36	Finned Tube Radiation Heaters	Editorial Edits
23 82 39	Unit Heaters	Editorial Edits
23 82 39.26	Liquid Heaters	Editorial Edits
23 83 00	Radiant Heating Units	Editorial Edits
23 83 00.13	Radiant Heaters - Electric Infrared	Editorial Edits
23 83 13	Radiant Heating Electric Cables	Editorial Edits
23 83 13.19	Radiant Heating Electric Cables - Snow Melting	Editorial Edits
23 83 13.23	Radiant Heating Electric Cables - Floor Warming	Editorial Edits
23 84 13	Humidifiers	Editorial Edits
25 01 11	EMCS: Start-Up, Verification and Commissioning	Editorial Edits
25 01 12	EMCS: Training	Editorial Edits
25 05 01	EMCS: General Requirements	Editorial Edits
25 05 02	EMCS: Submittals and Review Process	Editorial Edits
25 05 03	EMCS: Project Record Documents	Editorial Edits
25 05 54	EMCS: Identification	Editorial Edits
25 05 60	EMCS: Field Installation	Editorial Edits
25 08 20	EMCS: Warranty and Maintenance	Editorial Edits
25 10 01	EMCS: Local Area Network (LAN)	Editorial Edits
25 10 02	EMCS: Operator Work Station (OWS)	Editorial Edits
25 30 01	EMCS: Building Controllers	Editorial Edits
25 30 02	EMCS: Field Control Devices	Editorial Edits
25 90 01	EMCS: Site Requirements, Applications and Systems Sequences of Operation	Editorial Edits
26 05 80	Fractional Horsepower Motors	Editorial Edits
26 05 81	Motors: 0.746 to 149 KW	Editorial Edits
26 06 31	Diesel Electric Generating Units Appendix A - Technical Data form	Editorial Edits
26 08 00	Commissioning of Electrical	Editorial Edits
26 09 23.01	Metering and Switchboard Instruments	Editorial Edits
26 09 23.02	Lighting Control Devices - Photoelectric	Editorial Edits
26 09 23.03	Lighting Control Devices - Incandescent Dimming	Editorial Edits
26 09 24	Lighting Control Devices - Low Voltage	Editorial Edits
26 09 43	Network Lighting Controls	Editorial Edits
26 11 00.01	Outdoor Substation to 15 KV	Editorial Edits
26 11 13.01	Unit Substation to 15 KV	Editorial Edits
26 18 39.01	Motor Controllers - 2000 to 5000 V (Non-Hazardous)	Editorial Edits
26 32 13.01	Power Generation Diesel	Editorial Edits
26 32 13.02	Power Generation to 30 KW	Editorial Edits
26 32 13.03	Installation of Electric Power Generating Equipment	Editorial Edits
26 32 13.04	Diesel Electric Generating Units (Liquid Cooled)	Editorial Edits
26 32 13.05	Diesel Electric Generating Units (Air Cooled)	Editorial Edits
26 32 13.07	Diesel Electric Generating Units Appendix B Factory Test	Editorial Edits
26 33 16	Battery Racks	Editorial Edits
26 33 43	Battery Chargers	Editorial Edits
26 33 53	Static Uninterruptible Power Supply	Editorial Edits



26 50 00	Lighting	Editorial Edits
26 52 00.01	Lighting - Central Emergency System	Editorial Edits
26 52 13.13	Emergency Lighting	Editorial Edits
26 52 13.16	Exit Signs	Editorial Edits
31 09 16.01	Pile Driving Templates	Editorial Edits
31 62 16.16	Steel H Piles	Editorial Edits
31 62 16.19	Unfilled Tubular Steel Piles	Editorial Edits
31 62 19	Timber Piles	Editorial Edits
32 12 16.02	Asphalt Paving for Building Sites	Editorial Edits
32 12 36.16	Coal Tar Seal Coats	Editorial Edits
33 14 16	Site Water Utility Distribution Piping	Editorial Edits

An aerial photograph of a city grid, likely Ottawa, Canada, with a solid purple overlay. The image shows a dense network of streets and building footprints. The purple color is uniform across the entire image, creating a monochromatic effect.

National Research Council Canada  
1200 Montreal Road  
Ottawa, Ontario K1A 0R6