

# Major building works – Overview of updates – Tranche 4 - 2023

## Updated work sections

Updates have been rolled out for the second tranche of updated worksections for the specifications for Major Building Works.

The following worksections have been updated:

- 32 General Electrical Requirements
- 33 Wiring and Accessories
- 34 Generators
- 35 Liquid Fuels
- 36 Photovoltaic Installations
- 37 Uninterruptible Power Supply (UPS)
- 38 Switchboards
- 39 Luminaires
- 40 Communications
- 41 Master Antenna TV
- 42 Fire Detection
- 43 Lightning and Surge Protection
- 44 Electronic Security and Access Control
- 69 Referenced Documents

FEEDBACK; If you have any suggestions for improvement, such as additional or modified text for the Master Specification for Major Building Works, please contact the Manager Specification Services, e- mail to [specification.services@nt.gov.au](mailto:specification.services@nt.gov.au)

## Updates

- All updated worksections have Australian Standards etc, and Definitions, presented in tables.
- References to the National Construction Code are to the 2019 edition until the 2022 edition is adopted in the Northern Territory, unless a different edition is explicitly cited.
- References to BCA changed to NCC.
- Minor editorial changes to clarify requirements, and to update URLs.

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DIPL Internal worksection reference number	CLAUSE	TOPIC	CHANGE
32		<b>GENERAL ELECTRICAL REQUIREMENTS</b>	
			Minor editorial changes.
	#.2	Quality	Approval also required for generator and for fuel installation contractor
	#.3	Inspection	Additions to list of inspections
	#.4.1	Contractor's submissions – Shop drawings	Emergency lighting deleted. Fuel system, generator schematic, room layout added.
	#.4.4	Contractor's submissions – Product data	Additional items in list

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<b>33</b>		<b>WIRING AND ACCESSORIES</b>	
			Minor editorial changes.
			Minor changes to clarify requirements.
	#.1.2	Standards	Two NEMA Standards added to list
	#.2.3	Contractor's submissions – Protection grading study	Clarification on when this is required.
	#.3.1	Wiring system installation – Installation methods	Deep wall boxes specified for outlets with USB socket or data socket
	#.4.4	Power cables – Support of fire resisting cables	Fire resistant support systems and accessories specified
	#.6.1	Wiring enclosures and cable support - Conduits	Requirements for UV exposed conduits made explicit
	#.7.4	Metallic conduits and fittings – Galvanized water pipe	Sub-clause deleted
	#.8.3	Non-metallic conduits and fittings – Conduits in slabs	High compression corrugated conduit deleted – Light duty rigid PVC specified
	#.10.1	Cable supports – General requirements	New sub-clause
	#.10.4	Cable supports – Cable baskets	Requirements for cuts made explicit
	#.10.5	Cable supports – Cable trays	Requirements made explicit
	#.10.7	Cable supports – Single spine cable baskets, trays or ladders	Requirements made explicit
	#.10.8	Cable supports – Fixing to building structure	Requirements made explicit
	#.10.9	Cable supports – Access	Requirements made explicit
	#.10.12	Cable supports – Cable protection	Requirements made explicit
	#.12.2	Underground cables - Trenches	Requirements made explicit
	#.15.2	Accessories – Lighting and socket outlet switches	Inductive and fluorescent lighting loads deleted – LED lighting loads added
	#.15.9	Accessories – Ceiling sweep fans	Stainless steel for outdoor fans specified
<b>34</b>		<b>GENERATORS</b>	
			Minor editorial changes.
	#.2.2	Contractor's submissions – Products and materials	Requirements for generators and for spare parts and servicing made explicit
	#.4.3	Products - Engines	Local test switch specified for building load tests. Engine specifications expanded.
	#.4.8	Products - Batteries and chargers – Starting batteries	AGM batteries specified
	#.6.1	Completion – Pre-commissioning tests	Operational trial time and power settings changed

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<b>35</b>		<b>LIQUID FUELS</b>	
			Minor editorial changes.
	#.1	General	Requirement to keep paths of travel for people clear of obstructions made explicit
	#.3.1	Service tanks / day tanks - Construction	Overflow drainage, ventilation, and monitoring equipment specified
	#.3.3	Service tanks / day tanks – Collection trays	Leak detection specified
	#.5.5	Fuel pumps – Drip tray	Leak detection specified
	#.11.6	Piping and accessories - Underground piping	Bedding and backfill material specified
	#.14	Fuel transfer and fuel polishing equipment	Requirements made explicit
<b>36</b>		<b>PHOTOVOLTAIC INSTALLATIONS</b>	
			Minor editorial changes.
	#.1.4	General – System components	Charge controller added to list
	#.2.4	Contractor submissions – Technical data	Changed to Hold Point. Extra items added to list. One item expanded.
	#.4.3	Photovoltaic module – PV Module	New sub-clause name. Efficiency requirement changed. Warranted output added.
<b>37</b>		<b>UNINTERRUPTIBLE POWER SUPPLY (UPS)</b>	
			Minor editorial changes.
<b>38</b>		<b>SWITCHBOARDS</b>	
			Minor editorial changes.
			New citations of Australian Standards
	#.3.4	Contractor’s submissions – Product data for proprietary assemblies	Requirement for data to be submitted as shop drawings
	#.3.6	Contractor’s submissions – Protection grading study	New information on when required and qualifications author must have
	#.6.7	Custom built switchboards - Separation	Form 4a added as an option
	#.6.8	Custom built switchboards – Spare facilities	Percentage spare space increased and made uniform for all 3 items – now 30%
	#.6.12	Custom built switchboards - Layout	Additional spatial requirements for large mains cables highlighted. Fused switch units deleted from list of mounting heights.
	#.6.27	Custom built switchboards - Doors	Removable panels option available.
	#.6.29	Custom built switchboards – Escutcheon plates	Requirements for surge protection devices added

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DIPL Internal worksection reference number	CLAUSE	TOPIC	CHANGE
	#.6.31	Custom built switchboards – Name plate labelling	New sub-clause
	#.11.13	Conductors for switchboards - Terminations	Terminals and busbars to be separated.
<b>39</b>		<b>LUMINAIRES</b>	
			Minor editorial changes.
	#.1.2	General - Standards	Standards related to fluorescent lighting deleted
	#.2.3	Contractor's submissions - Samples	RFT author must select Required or Not required
	#.2.4	Contractor's submissions – Data sheets	New sub-clause - Data sheets separated from samples
	#.4	Fluorescent lamps	Clause deleted
	#.5	Fluorescent lamp ballasts	Clause deleted
	#.5.2	LED luminaires	Efficacy increased to 100 lumens/watt or greater
	#.5.3	LED lamp replacement modules	Reference to fluorescent lamps deleted
	#.8.1	Lighting control - Requirement	Motion sensors to be Dual Technology
	#.8.3	Lighting control – Digital control system	RFT author must select Required or Not required
	#.8.4	Lighting control – Remote monitoring	RFT author must select Required or Not required
	#.9.3	Accessories – Lighting switches	Reference to fluorescent lamp deleted
	#.9.9	Accessories – Motion detector switches	Dual technology specified – PIR deleted
	#.11.3	Supports – Surface mounted luminaires	Fluorescent deleted
<b>40</b>		<b>COMMUNICATIONS</b>	
			Minor editorial changes.
	#.7.2	Cables – Horizontal cable	U/FTP specified
	#.9	Telecommunications outlets	Deep wall boxes specified for masonry walls
	#.10.6	Execution – Cable installation	Standard applicable and support specified. Each loom to have 24 cables or less.
<b>41</b>		<b>MASTER ANTENNA TV</b>	
			Minor editorial changes.
<b>42</b>		<b>FIRE DETECTION</b>	
			Minor editorial changes. Changes to some terms. Some text added for clarity and to make requirements explicit.

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	#.1.4	Requirement	Certification requirements made explicit
	#.1.5	Co-ordination of works	New clause. Contractor's obligation to co-ordinate all works made explicit
	#.5	Alarm Signalling Equipment	New clause
	#.23	Block Diagram	NTFRS NTFAST approval required.
	#.25	MASD	New Witness Point
	#.26.1	Commissioning Tests	New Witness Point
	#.26.3	Commissioning – Hot smoke tests	New Hold Point. New Witness Point.
<b>43</b>		<b>LIGHTNING AND SURGE PROTECTION</b>	
			Minor editorial changes.
	#.3.4	Lightning protection products - Downconductors	Strong preference for copper strip/cable independent downconductors. Use of slab reinforcement steel deleted.
	#.4.5	Lightning protection installation - Downconductors	Strong preference for copper strip/cable independent downconductors. Use of slab reinforcement steel deleted.
	#.6.1	Surge protection devices - General	Status indicators to be visible
<b>44</b>		<b>ELECTRONIC SECURITY AND ACCESS CONTROL</b>	
			Minor editorial changes.
			New citations of Australian Standards
<b>69</b>		<b>REFERENCED DOCUMENTS</b>	
			References updated