

The field inspection resource is used by NY-Sun’s third-party QA Contractor to evaluate the quality of the solar electric installation. NY-Sun approved builders are encouraged to reference this resource throughout the installation process for each project to ensure compliance with the NY-Sun Program rules and requirements.

Overall Observations	Program	Requirements	Defect Category	Code Reference
		PV Modules are UL Listed per NY Sun program requirements.	Minor	NY-Sun Program
		Program compliant means is present for customer to verify system electricity generation.	Minor	NY-Sun Program
		As built system capacity must match the submitted and approved plan.	Incidental	NY-Sun Program
		As built system capacity must match the submitted and approved plan.	Incidental	NY-Sun Program
		Inspected TSRF shall match Program records.	Incidental	NY-Sun Program
		Inspected TSRF shall match Program records.	Incidental	NY-Sun Program
		Existing Service Panel is not a split bus (FPE Stab-Lok, Push-O-Matic etc.,).	Critical	NY-Sun Program
		Array Module Manufacturer must match application.	Incidental	NY-Sun Program
		Array Azimuth (degree) matches application.	Incidental	NY-Sun Program
		Array Module Number matches application.	Incidental	NY-Sun Program
		Array Module Quantity matches application.	Incidental	NY-Sun Program
		Array Tilt (degree) matches application.	Incidental	NY-Sun Program
		All Material and equipment must be new and undamaged, per NY Sun program requirements.	Major	NY-Sun Program
		Installed Battery manufacturer shall match Program records.	Incidental	NY-Sun Program
		Installed Battery model number shall match Program records.	Incidental	NY-Sun Program
		Installed Battery quantity shall match Program records.	Incidental	NY-Sun Program
		Installed Inverter manufacturer shall match Program records.	Incidental	NY-Sun Program
		Installed Inverter quantity shall match Program records.	Incidental	NY-Sun Program
		Installed Inverter model number shall match Program records.	Incidental	NY-Sun Program
		As per Program requirements, any roof damage must be repaired prior to installation.	Minor	NY-Sun Program
		Site address must match site address submitted.	Critical	NY-Sun Program
		Current Transformers are installed and meet Program requirements.	Major	NY-Sun Program
		Energy Storage System Discharge Test is required.	Major	Energy Storage System Program
		Battery storage system includes a manual (system description, operating and safety instructions, maintenance requirements, safe battery handling requirements and recommendations).	Minor	Program requirement

		Requirements	Defect Category	Code Reference
<b>AC Combiner</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		AC Combiner circuit conductors are properly sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		Grounded conductor(s) are insulated from metal enclosure surfaces and the ground terminal inside combiner box.	Major	NEC Article 250.24(A)(5)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	Minor	NEC Article 300.14
		The neutral conductor is connected at its own dedicated terminal isolated from metal enclosure.	Minor	NEC Article 408.41
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
		Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor
	AC conduit is adequately supported.		Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
	Conduit below grade is installed with provisions for movement.		Minor	NEC Article 300.5(J)
	Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.		Incidental	NEC Article 300.7(A)
	Conduit thermal expansion fitting is properly installed to allow for movement.		Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
	Conduit does not meet the conditions to be used as conductor support.		Incidental	NEC Article 300.11(C)
	Electrical		AC Combiner is suitable for environment.	Major
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Equipment must be sufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7

		Requirements	Defect Category	Code Reference
<b>AC Combiner (continued)</b>	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is continuous.	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		AC Combiner is properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
	Labeling	All interactive system points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as the power source and with the rated AC output current and the nominal operating AC voltage.	Incidental	NEC Articles 110.21(B) and/or 690.54
		Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	Incidental	NEC Articles 110.21(B) and 690.13(B)
		Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on or adjacent to the disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.17(E)
		The sum of the ampere ratings of all overcurrent devices on panel boards, both load and supply devices, excluding the rating of the overcurrent device protecting the busbar, shall not exceed the ampacity of the busbar. The rating of the overcurrent device protecting the busbar shall not exceed the rating of the busbar. Permanent warning labels shall be applied to distribution equipment.	Incidental	NEC Articles 110.21(B) and 705.12(B)(2)(3)(c)
		Every circuit and circuit modification shall be legibly identified as to its clear, evident and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others.	Incidental	NEC Articles 110.21(B) and 408.4(A)
		The manufacturer's name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
		Entrances to rooms or other guarded locations that contain live parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter.	Incidental	NEC 110.21(B) and 110.27(C), OSHA 1910.145(F)(7)

		Requirements	Defect Category	Code Reference
<b>AC Combiner (continued)</b>	OCPD	AC Combiner Overcurrent protection is sufficient.	Critical	NEC Article 240.4 and 690.9
		PV Backfed breaker is properly sized at, or above 125% of inverter output current	Major	NEC Article 240.4 and 690.9
		The AC OCPD is properly sized for the expected output current of the PV system.	Major	NEC Article 690.9
		Circuit Breaker shall be installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		PV source circuit, PV output circuit, inverter output circuit and storage battery circuit conductors and equipment shall be protected with an OCPD.	Critical	NEC Articles 690.9 and 690.35(B)
	Structural	Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Combiner box is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>AC Disconnect</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		PV system AC output conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		Grounded conductors are isolated from enclosure and ground terminal.	Major	NEC Article 250.24(A)(5)
		The grounded conductor(s) shall be routed with the ungrounded conductors to each service disconnecting means and shall be connected to each disconnecting means grounded conductor(s) terminal or bus.	Major	NEC Article 250.24(C)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	Minor	NEC Article 300.14
		The neutral conductor is connected at its own dedicated terminal insulated from metal enclosure.	Minor	NEC Article 408.41
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment	Incidental	NEC Article 300.7(A)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
Conduit does not meet the conditions to be used as conductor support.		Incidental	NEC Article 300.11(C)	
The service entrance Flexible Metal Conduit (FMC) or Liquidtight Flexible Metal Conduit (LFMC) shall not exceed 6 feet.		Minor	NEC Article 230.43(15)	

		Requirements	Defect Category	Code Reference
<b>AC Disconnect (continued)</b>	Electrical	AC Disconnect enclosure is suitable for environment.	Major	NEC Articles 314.15 and 110.3(B)
		Disconnect terminals are properly wired.	Minor	NEC Article 110.3(B), (and 240.40 if fusible)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		AC Disconnect is properly rated for expected current load.	Critical	NEC Articles 230.79, 690.17(E) and 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		Means to disconnect equipment such as inverters, batteries and charge controllers from all ungrounded conductors of all sources is required.	Major	NEC Article 690.15
		AC Disconnect is present.	Minor	NEC Article 690.13(A)
		AC Disconnect Switch must break the ungrounded conductor and keeps the grounded conductor properly grounded and unenergized.	Major	NEC Articles 690.13 and 690.17(B)
		Service disconnect is properly rated for the application.	Major	NEC Article 230.79(D)
		Service Disconnects are properly grouped.	Minor	NEC Article 230.72
		Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major
	Grounded conductor(s) terminal lug is properly installed.		Major	NEC Articles 110.3(B) and 250.4
	Grounding electrode conductor must be continuous.		Major	NEC Articles 250.64(C) and 690.47
	Grounding electrode conductor is properly bonded to the main premises grounding electrode system.		Major	NEC Articles 250.64 and 690.47
	Grounding electrode conductor is sufficiently sized.		Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
	AC Disconnect is grounded.		Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
	Equipment grounding conductor is properly sized.		Major	NEC Article 690.45

		Requirements	Defect Category	Code Reference
<b>AC Disconnect (continued)</b>	Labeling	All interactive system points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as the power source and with the rated AC output current and the nominal operating AC voltage.	Incidental	NEC Articles 110.21(B) and/or 690.54
		Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	Incidental	NEC Articles 110.21(B) and 690.13(B)
		Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on or adjacent to the disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.17(E)
		A directory is required at each dc PV system disconnecting means, ac disconnecting means for mini- and micro-inverters, and service disconnecting means showing the location of all dc and ac PV system disconnecting means in the building/ structure.	Incidental	NEC Article 110.21(B) and 705.10
	OCPD	Conductors shall be protected against overcurrent in accordance with their ampacity.	Critical	NEC Article 240.4 and 690.9
		The AC OCPD is properly sized for the expected output current of the PV system.	Major	NEC Article 690.9
		Fused AC Disconnect shall be installed and used in accordance with any instruction included in the listing or labeling and Fuses are present.	Major	NEC Article 110.3(B)
		No overcurrent device shall be connected in series with any conductor that is intentionally grounded.	Major	NEC Articles 240.22 and 690.17(D)
		PV source circuit, PV output circuit, inverter output circuit and storage battery circuit conductors and equipment shall be protected with an OCPD.	Critical	NEC Articles 690.9 and 690.35(B)
		The OCPD is properly sized for the rating of the equipment.	Major	NEC Article 240.3
		Fuses are present and installed in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		Equipment intended to interrupt current at fault levels shall have an interrupting rating sufficient for the current that is available at the line terminals of the equipment.	Major	NEC Articles 110.9, 110.10 and 230.82
		The service overcurrent device shall be an integral part of the service disconnecting means or shall be located immediately adjacent.	Critical	NEC Articles 230.91 and/ or 110.3(B)
	Structural	AC disconnect is installed in accordance with its listing and installation instructions.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
AC Disconnect is installed with the appropriate clearances and protection measures.		Minor	NEC Articles 110.26 and 110.27(A)	

		Requirements	Defect Category	Code Reference
<b>AC Module</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Inverter PV system AC output conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Microinverter output conductor wire splice connectors are rated for environment.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Junction Box splices and connections are secure and of high integrity.	Major	NEC Article 110.14
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		All array conductors are properly connected.	Critical	NEC Articles 110.3(B) and 110.12
		Circuit conductors are properly supported and protected.	Minor	NEC Article 334.30
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Outdoor wire ties/clips are UV and outdoor rated.	Minor	NEC Article 110.3(B)
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials	
	Microinverter grounding electrode conductor (WEEB or Rack) is installed in accordance with manufacturers installation instructions.	Minor	NEC Article 110.3(B)	



		Requirements	Defect Category	Code Reference
<b>AC Module (continued)</b>	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Microinverter grounding electrode conductor (WEEB or Rack) is installed in accordance with manufacturers installation instructions.	Major	NEC Articles 110.3(B) and 690.47
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Microinverter grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Listed means used to ground Microinverter chassis.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
	Labeling	AC modules shall be marked with identification terminals or leads with the ratings shown on the labels.	Incidental	NEC Articles 110.21(B) and 690.52
	Structural	Power electronics are mounted/installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)

		Requirements	Defect Category	Code Reference
<b>DC Combiner</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		DC Combiner (aggregated) output circuit conductors are properly sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		DC Combiner splice components are rated for environment.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		DC Combiner splices and connections are secure and of high integrity.	Major	NEC Article 110.14
		DC string conductors are sized properly.	Critical	NEC Articles 690.8 and/or 310.15
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Indoor DC source circuits are contained in metallic conduit or raceway.	Major	NEC Article 690.31(G)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Combiner box is suitable for environment.	Major	NEC Articles 314.15 and 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Enclosure rating is sufficient for expected current load in accordance with its listing.	Critical	NEC Article 110.3(B)
		DC Combiner is properly identified and listed.	Major	NEC Articles 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7

		Requirements	Defect Category	Code Reference
DC Combiner (continued)	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than 6AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		DC Combiner box is grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Equipment grounding conductor is properly sized.	Major	NEC Article 690.45
	Labeling	Interruption circuit - shall be a type that requires the use of a tool to open will be marked "Do Not Disconnect Under Load"	Incidental	NEC Articles 110.21(B) and 690.33(E)(2)
		Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on or adjacent to the disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.17(E)
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
		A PV power sources shall be labeled at each junction box, combiner box or disconnect and device where energized, ungrounded circuits may be exposed during service.	Incidental	NEC Articles 110.21(B) and 690.35(F)
	OCPD	Combiner string fuse is properly sized.	Major	NEC Article 690.9
		Overcurrent devices used in any DC portion of the PV system shall have the appropriate voltage, current and interrupt ratings.	Major	NEC Article 690.9(C)
		Inverter string fuses are 600 or 1000 VDC rated as required.	Critical	NEC Articles 110.3(B) and 690.9(C)
		DC Combiner string fuse holder is DC rated.	Critical	NEC Articles 110.3(B) and 690.9(C)
		No overcurrent device shall be connected in series with any conductor that is intentionally grounded.	Major	NEC Articles 240.22 and 690.17(D)
		PV source circuit, PV output circuit, inverter output circuit and storage battery circuit conductors and equipment shall be protected with an OCPD.	Critical	NEC Articles 690.9 and 690.35(B)
	Structural	Combiner box is properly secured in place.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Combiner box is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>DC Disconnect</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		DC circuit conductors are properly sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Indoor DC source circuits are contained in metallic conduit or raceway.	Major	NEC Article 690.31(G)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)

		Requirements	Defect Category	Code Reference
<b>DC Disconnect (continue)</b>	Electrical	DC Disconnect enclosure is suitable for environment.	Major	NEC Articles 314.15 and 110.3(B)
		Disconnect is properly wired to ensure that fuses can be de-energized for service.	Minor	NEC Article 110.3(B), (and 240.40 if fusible)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Equipment must be sufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Disconnect is listed for DC use.	Critical	NEC Article 110.3(B) and 690.17
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		Means to disconnect equipment such as inverters, batteries and charge controllers from all ungrounded conductors of all sources is required.	Major	NEC Article 690.15
		Means shall be provided to disconnect all ungrounded DC conductors of a PV system from all other conductors in a building or other structure.	Minor	NEC Article 690.13(A)
		The PV disconnect means shall disconnect all ungrounded conductors.	Major	NEC Articles 690.13 and 690.17(B)
	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than 6AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		DC Disconnect is properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Equipment grounding conductor is properly sized.	Major	NEC Article 690.45

		Requirements	Defect Category	Code Reference
<b>DC Disconnect (continued)</b>	Labeling	Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	Incidental	NEC Articles 110.21(B) and 690.13(B)
		Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on or adjacent to the disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.17(E)
		A permanent label for the direct-current PV power source shall be provided by the installer at the PV disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.53
		A directory is required at each dc PV system disconnecting means, ac disconnecting means for mini- and micro-inverters, and service disconnecting means showing the location of all dc and ac PV system disconnecting means in the building/ structure.	Incidental	NEC Article 110.21(B) and 705.10
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
	OCPD	Disconnect is rated for nominal voltage and current.	Critical	NEC Articles 110.3(B) and 690.17
		Disconnect fuses are DC rated and properly sized for system voltage.	Critical	NEC Articles 110.3(B) and 690.9(C)
	Structural	Disconnect is properly secured in place.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Disconnect is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>Energy Storage</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		Battery DC conductors are protected from accidental contact.	Major	NEC Article 690.71(B)(2)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		Correct flexible cables are used for battery interconnections.	Major	NEC Article 690.74
		Battery DC conductors are properly sized for expected current load.	Major	NEC Articles 400.7(A)(10) and 690.74(A)
		Installed DC Battery cables are properly terminated.	Major	NEC Articles 110.14(A) and 690.74(A)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Conduit is adequately supported.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Indoor DC source circuits are contained in metallic conduit or raceway.	Major	NEC Article 690.31(G)
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)

		Requirements	Defect Category	Code Reference
Energy Storage (continued)	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Means to disconnect equipment such as inverters, batteries and charge controllers from all ungrounded conductors of all sources is required.	Major	NEC Article 690.15
		Working clearances around battery bank shall be maintained.	Minor	NEC Articles 110.26 and 480.9
		Batteries are properly ventilated.	Critical	NEC Article 480.10
		Batteries must be installed on non-conductive supports.	Minor	NEC Articles 480.8 or 690.71(D)
		Battery backup system charge controller(s) properly regulate the battery charging process.	Major	NEC Article 690.72
		DC Disconnect is present for ungrounded conductors of battery banks over 30V.	Major	NEC Articles 480.6 and 690.71
		Battery backup system voltage is limited to 50VDC nominal.	Major	NEC Article 690.71(B)(1)
		Where battery connections are mating dissimilar metals, antioxidant material specified by the battery manufacturers installation instructions shall be used to prevent galvanic reaction/corrosion.	Major	NEC Article 110.3(B) and 480.3(A)
		Electrical connections do not put mechanical strain on battery.	Major	NEC Articles 706.31 and 110.14(A)
		Charge Controller shall be compatible with the Energy Storage manufacturer's electrical ratings and charging specifications.	Major	NEC article 110.3(B) and IFC 2018, 1206.2.4
		Grounding	Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental
Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major		NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97	
Grounded conductor(s) terminal lug is properly installed.	Major		NEC Articles 110.3(B) and 250.4	
Battery enclosure is properly grounded.	Major		NEC Articles 250.4, 250.8, 250.12 and 690.43	
Labeling	PV power systems employing energy storage shall also be marked with the maximum operating voltage, including any equalization voltage and polarity of the grounded circuit conductors.	Incidental	NEC Articles 110.21(B) and/or 690.55	
	The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21	
	The disconnecting means shall be legibly marked in the field and shall include Nominal Energy Storage System Voltage and Maximum Available Short Circuit Current.	Incidental	NEC Articles 110.21(B) and 480.6(D)	



		Requirements	Defect Category	Code Reference
<b>Energy Storage (continued)</b>	OCPD	A listed, current-limiting, overcurrent device shall be installed in each circuit adjacent to the batteries where the available short circuit from a battery or battery bank exceeds the interrupting or withstand rating of other equipment in that circuit.	Major	NEC Articles 690.16 and 690.71(C)
	Structural	Charge controllers and related components mounted/installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Battery Bank is mounted in accordance with its listing and manufacturer instructions.	Major	NEC Article 110.3(B)
		Verify that the attachment of the Energy Storage unit to the wall or floor is per the approved plans. If the wall or floor construction differs from the approved plans a revision is required prior to inspection.	Major	Program requirement
		Rooms or spaces containing Energy Storage Systems shall be separated from other areas of the building by fire barriers with a minimum fire resistance rating of two hours and horizontal assemblies with a minimum fire resistance rating of two hours constructed IAW NY State Uniform Building Code, local laws and ordinances.	Major	IFC 2018 1206.2.8.2, NFP 855 Section 4.3.6
	Program	Battery storage system includes a manual (system description, operating and safety instructions, maintenance requirements, safe battery handling requirements and recommendations).	Minor	Program requirement

		Requirements	Defect Category	Code Reference
<b>Feeder Tap Connection</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Feeder conductors are properly sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Conductors are properly spliced.	Major	NEC Articles 110.3(B) and 110.14
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		The grounded conductor(s) shall be routed with the ungrounded conductors to each service disconnecting means and shall be connected to each disconnecting means grounded conductor(s) terminal or bus.	Major	NEC Article 250.24(C)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
		Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor
	AC conduit is adequately supported.		Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
	Conduit below grade is installed with provisions for movement.		Minor	NEC Article 300.5(J)
	Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.		Incidental	NEC Article 300.7(A)
	Conduit thermal expansion fitting is properly installed to allow for movement.		Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
	The conduit is grounded (when required).		Major	NEC Articles 250.4(A)(3) and 690.43
	Conduit does not meet the conditions to be used as conductor support.		Incidental	NEC Article 300.11(C)
	The service entrance Flexible Metal Conduit (FMC) or Liquidtight Flexible Metal Conduit (LFMC) shall not exceed 6 feet.		Minor	NEC Article 230.43(15)

		Requirements	Defect Category	Code Reference
<b>Feeder Tap Connection (continued)</b>	Electrical	Boxes, conduit bodies and fittings installed in wet locations shall be listed for use in wet locations.	Major	NEC Articles 314.15 and 110.3(B)
		Disconnect is properly wired to ensure that fuses can be de-energized for service.	Minor	NEC Article 110.3(B), (and 240.40 if fusible)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Equipment must be sufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		PV Disconnect is readily accessible.	Minor	NEC Article 690.13(A)
	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is properly bonded to the main premises grounding electrode system.	Major	NEC Articles 250.64 and 690.47
		Grounding electrode conductor is present and sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Enclosure is properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		When a metal water pipe is used as a grounding electrode, there must be a ground jumper present across water meter/filter.	Major	NEC Article 250.53(D)(1)
		The ground rod (electrode) is protected from physical damage or is below/flush with the ground (8ft in contact with the soil).	Minor	NEC Article 250.53(G)
		A metal underground water pipe shall be supplemented by an additional electrode.	Major	NEC Article 250.53(D)(2)
Water pipe electrode supplemented by other electrode.	Major	NEC Article 250.53(D)(2)		

		Requirements	Defect Category	Code Reference
<b>Feeder Tap Connection (continued)</b>	Labeling	Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on or adjacent to the disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.17(E)
		Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources.	Incidental	NEC Articles 110.21(B), 690.64 and 705.12(D)(3)
		A directory is required at each dc PV system disconnecting means, ac disconnecting means for mini- and micro-inverters, and service disconnecting means showing the location of all dc and ac PV system disconnecting means in the building/ structure.	Incidental	NEC Article 110.21(B) and 705.10
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
		Entrances to rooms or other guarded locations that contain live parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter.	Incidental	NEC Articles 110.21(B) and 690.7(E)(3)
		Bipolar photovoltaic systems shall be clearly marked by a permanent, legible warning notice indicating that the disconnection of the grounded conductor(s) may result in overvoltage on the equipment.	Incidental	NEC Articles 110.21(B) and 690.52
	Structural	Feeder connection is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>Ground Mounted</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		DC circuit conductors are properly sized for expected current load. (1.25 x sum of parallel module Isc)	Critical	NEC Article 310.15 and/ or 690.8(B)
		Splice components must be rated for the environment they are installed.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and/ or connectors must be properly secured.	Major	NEC Article 110.14
		DC string conductors meet or exceed ampacity requirements.	Critical	NEC Articles 690.8 and/or 310.15
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		All array conductors are properly connected.	Critical	NEC Articles 110.3(B) and 110.12
		Circuit conductors are properly supported and protected.	Minor	NEC Article 334.30
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Outdoor wire ties/clips are UV and outdoor rated.	Minor	NEC Article 110.3(B)
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		DC PV source circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Indoor DC source circuits are contained in metallic conduit or raceway.	Major	NEC Article 690.31(G)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)

		Requirements	Defect Category	Code Reference
<b>Ground Mounted (continued)</b>	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Means to disconnect equipment such as inverters, batteries and charge controllers from all ungrounded conductors of all sources is required.	Major	NEC Article 690.15
		A Ground Fault Circuit Interrupting (GFCI) Wet Rated (WR) receptacle is required to be installed in a wet/damp location.	Minor	NEC Articles 110.3(B), 210.8(A)(3) and 406.9(B)
	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Grounding hardware is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Manufacturer instructions for grounding hardware quantity must be followed.	Minor	NEC Article 110.3(B)
		Racking system and support structure are properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Module frames must be grounded. WEEBs and other grounding devices must be installed correctly.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Equipment grounding conductor is properly sized.	Major	NEC Article 690.45
		Module grounding hardware must be listed for the purpose.	Major	NEC Articles 110.3(B) and 690.43
	OCPD	Overcurrent protective device present between parallel spliced DC string conductors.	Major	NEC Articles 690.8(B) and 690.9(A)
	Structural	PV Module shall be installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		Ground/pole mount support structure, anchor system, and or footings are installed and used according to manufacturer instructions.	Major	NEC Article 110.3(B)

		Requirements	Defect Category	Code Reference
<b>Junction Box</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Junction Box circuit conductors are properly sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Junction Box splice components are rated for environment.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Junction Box splices and connections are secure and of high integrity.	Major	NEC Article 110.14
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		Grounded conductor(s) are insulated from metal enclosure surfaces and the ground terminal inside Junction Box.	Minor	NEC Article 250.24(A)(5)
		Circuit conductors are properly supported and protected.	Minor	NEC Article 334.30
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor
	Conduit is adequately supported.		Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
	Conduit below grade is installed with provisions for movement.		Minor	NEC Article 300.5(J)
	Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.		Incidental	NEC Article 300.7(A)
	Indoor DC source circuits are contained in metallic conduit or raceway.		Major	NEC Article 690.31(G)
	Conduit thermal expansion fitting is properly installed to allow for movement.		Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
	The conduit is grounded (when required).		Major	NEC Articles 250.4(A)(3) and 690.43
	Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)	

		Requirements	Defect Category	Code Reference
<b>Junction Box (continued)</b>	Electrical	Junction Box is suitable for environment.	Major	NEC Articles 314.15 and 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Junction Box is properly identified and listed.	Major	NEC Articles 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		Junction box must be accessible.	Minor	NEC Article 690.34
	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is continuous.	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Listed means used to ground enclosure.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Equipment grounding conductor is properly sized.	Major	NEC Article 690.45
		Labeling	Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on or adjacent to the disconnecting means.	Incidental
	The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.		Incidental	NEC Article 110.21
	A PV power sources shall be labeled at each junction box, combiner box or disconnect and device where energized, ungrounded circuits may be exposed during service.		Incidental	NEC Articles 110.21(B) and 690.35(F)
	Structural	Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Junction Box is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)
		Roof penetrations are properly sealed and flashed.	Major	NYS Uniform Building Code and NEC Article 110.3(B)



		Requirements	Defect Category	Code Reference
<b>Load Side Connection</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		The grounded conductor(s) shall be routed with the ungrounded conductors to each service disconnecting means and shall be connected to each disconnecting means grounded conductor(s) terminal or bus.	Major	NEC Article 250.24(C)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
		The neutral conductor is connected at its own dedicated terminal insulated from metal enclosure.	Minor	NEC Article 408.41
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
		Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor
	Circuit conduit or raceway is properly supported and secured.		Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
	Conduit below grade is installed with provisions for movement.		Minor	NEC Article 300.5(J)
	Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.		Incidental	NEC Article 300.7(A)
	Conduit thermal expansion fitting is properly installed to allow for movement.		Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
	Conduit does not meet the conditions to be used as conductor support.		Incidental	NEC Article 300.11(C)
	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7

		Requirements	Defect Category	Code Reference
<b>Load Side Connection (continued)</b>	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		GEC is continuous/irreversibly spliced.	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is properly bonded to the main premises grounding electrode system.	Major	NEC Articles 250.64 and 690.47
		Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Enclosure is properly grounded using a listed grounding method.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		When a metal water pipe is used as a grounding electrode, there must be a ground jumper present across water meter/filter.	Major	NEC Article 250.53(D)(1)
		The ground rod (electrode) is protected from physical damage or is below/flush with the ground (8ft in contact with the soil).	Minor	NEC Article 250.53(G)
		A metal underground water pipe shall be supplemented by an additional electrode.	Major	NEC Article 250.53(D)(2)
		Water pipe electrode supplemented by other electrode.	Major	NEC Article 250.53(D)(2)
	Labeling	All interactive system points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as the power source and with the rated AC output current and the nominal operating AC voltage.	Incidental	NEC Articles 110.21(B) and/or 690.54
		Where two sources, one utility and the other an inverter, are located at opposite ends of a busbar that contains loads, a permanent warning label shall be applied to the distribution equipment adjacent to the back-fed breaker from the inverter that displays the following or equivalent wording.	Incidental	NEC Articles 110.21(B), 408.4(A) and 705.12 (D)(2)(3)(b)
		Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources.	Incidental	NEC Articles 110.21(B), 690.64 and 705.12(D)(3)
		A directory is required at each dc PV system disconnecting means, ac disconnecting means for mini- and micro-inverters, and service disconnecting means showing the location of all dc and ac PV system disconnecting means in the building/ structure.	Incidental	NEC Article 110.21(B) and 705.10
		Every circuit and circuit modification shall be legibly identified as to it's clear, evident and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others.	Incidental	NEC Articles 110.21(B) and 408.4(A)
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21

		Requirements	Defect Category	Code Reference
<b>Load Side Connection (continued)</b>	OCPD	Main panel overcurrent protection is sufficient.	Critical	NEC Article 240.4 and 690.9
		PV Backfed breaker is properly sized at, or above 125% of inverter output current.	Major	NEC Article 240.4 and 690.9
		PV Backfed breaker rating size is properly sized to protect circuit conductors.	Critical	NEC Articles 310.15 and/or 690.8(B)
		Back-fed plug in devices shall be secured in place by additional fastener.	Minor	NEC Article 408.36(D)
		Circuit Breaker shall be installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		Load Side connection of a utility-interactive output circuit must be properly located at the point of connection.	Major	NEC Articles 690.64 and 705.12(D)(2)(3)(b)
		Inverter-interactive output circuit load side connection overcurrent protective device must be properly sized.	Critical	NEC Articles 690.64 and 705.12(D)(2)(3)(b)
		Fuses are present and installed in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
	Structural	Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Main Panel is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>Microinverter</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Inverter PV system AC output conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Microinverter output conductor wire splice connectors are rated for environment.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Junction Box splices and connections are secure and of high integrity.	Major	NEC Article 110.14
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		All array conductors are properly connected.	Critical	NEC Articles 110.3(B) and 110.12
		Circuit conductors are properly supported and protected.	Minor	NEC Article 334.30
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Outdoor wire ties/clips are UV and outdoor rated.	Minor	NEC Article 110.3(B)
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Microinverter wiring is installed in accordance with manufacturers installation instructions.	Minor	NEC Article 110.3(B)
	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Microinverter grounding electrode conductor (WEEB or Rack) is installed in accordance with manufacturers installation instructions.	Major	NEC Articles 110.3(B) and 690.47
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Microinverter grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Listed means used to ground Microinverter chassis.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
	Structural	Microinverter is mounted/installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)

		Requirements	Defect Category	Code Reference
Optimizer	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Optimizer output conductor wire splice connectors are rated for environment.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Junction Box splices and connections are secure and of high integrity.	Major	NEC Article 110.14
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		Optimizer PV system DC output conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/or 690.8(A)(3)
		All array conductors are properly connected.	Critical	NEC Articles 110.3(B) and 110.12
		Circuit conductors are properly supported and protected.	Minor	NEC Article 334.30
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Outdoor wire ties/clips are UV and outdoor rated.	Minor	NEC Article 110.3(B)
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Optimizer grounding electrode conductor (WEEB or Rack) is installed in accordance with manufacturers installation instructions.	Minor	NEC Article 110.3(B)
	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Optimizer is properly bonded to the EGC.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
Listed means used to ground Optimizer chassis per manufacturer instructions.		Major	NEC Articles 110.3(B), 250.4 and 690.43	
Structural	Optimizer is mounted/installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)	

**Production  
Meter**

	Requirements	Defect Category	Code Reference
Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
	PV system AC output conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
	Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
	Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
	Grounded conductor(s) are insulated from metal enclosure surface and ground terminal inside meter enclosure.	Minor	NEC Article 250.24(A)(5)
	Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
	Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
	Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
	Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
	Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
	Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
	Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
	Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
	The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
	Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
Electrical	Meter enclosure is suitable for environment.	Major	NEC Articles 314.15 and 110.3(B)
	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
	Meter is installed in accordance with its listing and manufacturer instructions.	Minor	NEC Article 110.3(B)
	Meter is rated for expected current load.	Critical	NEC Article 110.3(B)
Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
	Grounding electrode conductor is continuous.	Major	NEC Articles 250.64(C) and 690.47
	Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
	Grounding means for enclosure installed.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
Structural	Meter Enclosure is properly suited for conditions and mounted to maintain listing.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
	Meter is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>Rapid Shutdown Device</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		DC string conductors are sized properly.	Critical	NEC Articles 690.8 and/or 310.15
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Conduit is adequately supported.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Indoor DC source circuits are contained in metallic conduit or raceway.	Major	NEC Article 690.31(G)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Boxes, conduit bodies and fittings installed in wet locations shall be listed for use in wet locations.	Major	NEC Articles 314.15 and 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Equipment must be sufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		Rapid shutdown device controls conductors of more than 5 feet inside a building and more than 10 feet outside a building.	Major	NEC Article 690.12(1).
		Rapid shutdown device decreases PV output conductors to less than 30 volts within 10 seconds of initiation.	Major	NEC Article 690.12(2)

		Requirements	Defect Category	Code Reference
<b>Rapid Shutdown Device (continued)</b>	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than 6AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Enclosure is properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Equipment grounding conductor is properly sized.	Major	NEC Article 690.45
		Labeling	Labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings or floors. Spacing between labels not to exceed 10 feet (3M).	Incidental
	PV power source labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings or floors. Spacing between labels not to exceed 10 feet (3M).		Incidental	NEC Articles 110.21(B) and 690.31(G)(3)(4)
	The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.		Incidental	NEC Article 110.21
	Each rapid shutdown switch shall be permanently marked to identify it as a photovoltaic rapid shutdown. The sign or placard shall be marked as "PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN"		Incidental	NEC Article 110.21(B) and 690.56(C)
	Structural		Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major
		Rapid Shutdown is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)



		Requirements	Defect Category	Code Reference
<b>Roof Mounted</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		DC Combiner (aggregated) output circuit conductors are properly sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Splice components must be rated for the environment they are installed.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and/ or connectors must be properly secured.	Major	NEC Article 110.14
		DC string conductors meet or exceed ampacity requirements.	Critical	NEC Articles 690.8 and/or 310.15
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor properly identified.	Incidental	NEC Article 200.7
		All array conductors are properly connected.	Critical	NEC Articles 110.3(B) and 110.12
		Circuit conductors are properly supported and protected.	Minor	NEC Article 334.30
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Outdoor wire ties/clips are UV and outdoor rated.	Minor	NEC Article 110.3(B)
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
	As required, conductors are protected from physical damage.	Major	NEC Article 334.15(B)	
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		DC PV source circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Indoor DC source circuits are contained in metallic conduit or raceway.	Major	NEC Article 690.31(G)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)

		Requirements	Defect Category	Code Reference
Roof Mounted (continued)	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Grounding hardware is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Manufacturer instructions for grounding hardware quantity must be followed.	Minor	NEC Article 110.3(B)
		Racking system and support structure are properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Module frames must be grounded. WEEBs and other grounding devices must be installed correctly.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Module grounding hardware must be listed for the purpose.	Major	NEC Articles 110.3(B) and 690.43
		The metal roof panels beneath the array shall be bonded together and to an equipment grounding conductor.	Major	NEC Articles 690.43(B) and 250.110
	Labeling	Interruption circuit - shall be a type that requires the use of a tool to open will be marked "Do Not Disconnect Under Load"	Incidental	NEC Articles 110.21(B) and 690.33(E)(2)
		PV power source labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings or floors. Spacing between labels not to exceed 10 feet (3M).	Incidental	NEC Articles 110.21(B) and 690.31(G)(3)(4)
		Where circuits are embedded in build up, laminate or membrane roofing materials not covered by PV modules and associated equipment, the location of the circuits shall be clearly marked.	Incidental	NEC Articles 110.21(B) and 690.31(G)(I)
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
		A PV power sources shall be labeled at each junction box, combiner box or disconnect and device where energized, ungrounded circuits may be exposed during service.	Incidental	NEC Articles 110.21(B) and 690.35(F)

		Requirements	Defect Category	Code Reference
<b>Roof Mounted (continued)</b>	OCPD	Overcurrent protective device present between parallel spliced DC string conductors.	Major	NEC Articles 690.8(B) and 690.9(A)
	Structural	Module is properly secured to the racking system per manufacturer instructions.	Major	NEC Article 110.3(B)
		Racking system shall be installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		Roof penetrations are properly sealed and flashed.	Major	IBC Section 1503.2, IPC 903, and NEC Article 110.3(B).
		All open vent pipes on roof are free from modules and racking system obstructions.	Major	In violation of IBC 903 and/or vent pipe has been modified in violation IBC 903

		Requirements	Defect Category	Code Reference
<b>String Inverter</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		The neutral conductor is connected at its own dedicated terminal insulated from metal enclosure.	Minor	NEC Article 408.41
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
	Conduit	Circuit conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Indoor DC source circuits are contained in metallic conduit or raceway	Major	NEC Article 690.31(G)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Boxes, conduit bodies and fittings installed in wet locations shall be listed for use in wet locations.	Major	NEC Articles 314.15 and 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		PV array maximum DC string voltage complies with inverter maximum input voltage rating.	Critical	NEC Articles 110.3(B) and 690.7
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		Input string voltage is suitable for inverter rated minimum operating voltage.	Minor	NEC Article 110.3(B)
		A Ground Fault Circuit Interrupting (GFCI) Wet Rated (WR) receptacle is required to be installed in a wet/damp location.	Minor	NEC Articles 110.3(B), 210.8(A)(3) and 406.9(B)

		Requirements	Defect Category	Code Reference
<b>String Inverter (continued)</b>	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than 6AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Array equipment grounding conductor is installed/terminated in inverter according to manufacturer's instruction.	Major	NEC Article 110.3(B)
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Inverter metal enclosure is properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Equipment grounding conductor is properly sized.	Major	NEC Article 690.45
	Labeling	Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	Incidental	NEC Articles 110.21(B) and 690.13(B)
		A label shall appear on the utility interactive inverter or be applied by the installer near the ground fault indicator at a visible location.	Incidental	NEC Article 110.21(B) and 690.5(C)
		A permanent label for the direct-current PV power source shall be provided by the installer at the PV disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.53
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
		Each rapid shutdown switch shall be permanently marked to identify it as a photovoltaic rapid shutdown. The sign or placard shall be marked as "PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN"	Incidental	NEC Article 110.21(B) and 690.56(C)
	OCPD	Inverter string fuses are 600 or 1000 VDC rated as required.	Critical	NEC Articles 110.3(B) and 690.9(C)
		Inverter string fuse size matches module string series fuse rating.	Major	NEC Article 690.9(B)
	Structural	Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Equipment is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
Subpanel	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		PV system AC conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		Grounded conductor(s) are insulated from metal enclosure surface and ground terminal inside meter enclosure.	Minor	NEC Article 250.24(A)(5)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
		The neutral conductor is connected at its own dedicated terminal insulated from metal enclosure.	Minor	NEC Article 408.41
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Boxes, conduit bodies and fittings installed in wet locations shall be listed for use in wet locations.	Major	NEC Articles 314.15 and 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/ splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be sufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		A Ground Fault Circuit Interrupting (GFCI) Wet Rated (WR) receptacle is required to be installed in a wet/damp location.	Minor	NEC Articles 110.3(B), 210.8(A)(3) and 406.9(B)

		Requirements	Defect Category	Code Reference
Subpanel (continued)	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is continuous.	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is bonded to the main premises grounding electrode system.	Major	NEC Articles 250.64 and 690.47
		Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Subpanel is properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
	Labeling	All interactive system points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as the power source and with the rated AC output current and the nominal operating AC voltage.	Incidental	NEC Articles 110.21(B) and/or 690.54
		Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	Incidental	NEC Articles 110.21(B) and 690.13(B)
		The sum of the ampere ratings of all overcurrent devices on panel boards, both load and supply devices, excluding the rating of the overcurrent device protecting the busbar, shall not exceed the ampacity of the busbar. The rating of the main overcurrent device protecting the busbar shall not exceed the rating of the busbar. Permanent warning labels shall be applied to distribution equipment.	Incidental	NEC Articles 110.21(B) and 705.12(B)(2)(3)(c)
		Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources.	Incidental	NEC Articles 110.21(B), 690.64 and 705.12(D)(3)
		Every circuit and circuit modification shall be legibly identified as to its clear, evident and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others.	Incidental	NEC Articles 110.21(B) and 408.4(A)
		The manufacturer's name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21

		Requirements	Defect Category	Code Reference
<b>Subpanel (continued)</b>	OCPD	Subpanel Overcurrent protection is sufficient.	Critical	NEC Article 240.4 and 690.9
		PV Backfed breaker is properly sized at, or above 125% of inverter output current.	Major	NEC Article 240.4 and 690.9
		PV Backfed breaker rating size is properly sized to protect circuit conductors.	Critical	NEC Articles 310.15 and/or 690.8(B)
		Back-fed plug in devices shall be secured in place by additional fastener.	Minor	NEC Article 408.36(D)
		Circuit Breaker shall be installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		PV source circuit, PV output circuit, inverter output circuit and storage battery circuit conductors and equipment shall be protected with an OCPD.	Critical	NEC Articles 690.9 and 690.35(B)
	Structural	Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Subpanel is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)



		Requirements	Defect Category	Code Reference
<b>Supply Side Connection</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		PV system AC conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Service entrance conductors are properly spliced.	Major	NEC Articles 110.3(B) and 110.14
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		The grounded conductor(s) shall be routed with the ungrounded conductors to each service disconnecting means and shall be connected to each disconnecting means grounded conductor(s) terminal or bus.	Major	NEC Article 250.24(C)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
		The service entrance Flexible Metal Conduit (FMC) or Liquid tight Flexible Metal Conduit (LFMC) shall not exceed 6 feet.	Minor	NEC Article 230.43(15)
	Electrical	Disconnect is properly wired to ensure that fuses can be de-energized for service.	Minor	NEC Article 110.3(B), (and 240.40 if fusible)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Equipment must be installed in accordance with it's listing and manufacturers instructions.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		AC Disconnect is in a readily accessible location.	Minor	NEC Article 690.13(A)
		Service disconnect is properly rated for the application.	Major	NEC Article 230.79(D)
		The PV disconnect means shall disconnect all ungrounded conductors.	Major	NEC Articles 690.13 and 690.17(B)
		Service Disconnects are properly grouped.	Minor	NEC Article 230.72

		Requirements	Defect Category	Code Reference
<b>Supply Side Connection (continued)</b>	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is properly bonded to the main premise grounding electrode system.	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Disconnect enclosure is properly grounded using a listed grounding method.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		When a metal water pipe is used as a grounding electrode, there must be a ground jumper present across water meter/filter.	Major	NEC Article 250.53(D)(1)
		The ground rod (electrode) is protected from physical damage or is below/flush with the ground. (8ft in contact with the soil).	Minor	NEC Article 250.53(G)
		A metal underground water pipe shall be supplemented by an additional electrode.	Major	NEC Article 250.53(D)(2)
		Water pipe electrode supplemented by other electrode.	Major	NEC Article 250.53(D)(2)
	Labeling	All interactive system points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as the power source and with the rated AC output current and the nominal operating AC voltage.	Incidental	NEC Articles 110.21(B) and/or 690.54
		If equipment is energized from more than one source, the disconnecting means must be grouped and identified.	Incidental	NEC Articles 110.21(B) and 690.15
		A directory is required at each dc PV system disconnecting means, ac disconnecting means for mini- and micro-inverters, and service disconnecting means showing the location of all dc and ac PV system disconnecting means in the building/ structure.	Incidental	NEC Article 110.21(B) and 705.10
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
		Bipolar photovoltaic systems shall be clearly marked by a permanent, legible warning notice indicating that the disconnection of the grounded conductor(s) may result in overvoltage on the equipment.	Incidental	NEC Articles 110.21(B) and 690.7(E)(3)

		Requirements	Defect Category	Code Reference
<b>Supply Side Connection (continued)</b>	OCPD	The AC OCPD is properly sized for the expected output current of the PV system.	Major	NEC Article 690.9
		Fused AC Disconnect shall be installed and used in accordance with any instruction included in the listing or labeling and Fuses are present.	Major	NEC Article 110.3(B)
		No overcurrent device shall be connected in series with any conductor that is intentionally grounded.	Major	NEC Articles 240.22 and 690.17(D)
		PV source circuit, PV output circuit, inverter output circuit and storage battery circuit conductors and equipment shall be protected with an OCPD.	Critical	NEC Articles 690.9 and 690.35(B)
		Fuses are present and installed in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		Equipment intended to interrupt current at fault levels shall have an interrupting rating sufficient for the current that is available at the line terminals of the equipment.	Major	NEC Articles 110.9, 110.10 and 230.82
		The service overcurrent device shall be an integral part of the service disconnecting means or shall be located immediately adjacent thereto.	Critical	NEC Articles 230.91 and/ or 110.3(B)
	Structural	Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Equipment is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>Xformerless Inverter</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Inverter DC ungrounded conductors are correctly identified.	Incidental	NEC Article 200.7
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Minor	NEC Article 110.3(B) and 110.12
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		All conductors of the same circuit shall be contained within the same raceway.	Minor	NEC Article 300.3(B)
		The neutral conductor is connected at its own dedicated terminal insulated from metal enclosure.	Minor	NEC Article 408.41
		Conductors are properly sized for rated terminals.	Minor	NEC Article 110.3(B)
	Conduit	Circuit conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit below grade is installed with provisions for movement.	Minor	NEC Article 300.5(J)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Incidental	NEC Article 300.7(A)
		Indoor DC source circuits are contained in metallic conduit or raceway.	Major	NEC Article 690.31(G)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The conduit is grounded (when required).	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)

		Requirements	Defect Category	Code Reference
<b>Xformerless Inverter (continued)</b>	Electrical	The Inverter enclosure employs an approved moisture accumulation prevention method.	Major	NEC Articles 314.15 and 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Inverter is installed properly according to the manufacturer installation instructions.	Minor	NEC Article 110.3(B)
		PV array maximum DC string voltage complies with inverter maximum input voltage rating.	Critical	NEC Articles 110.3(B) and 690.7
		Unused openings of electrical equipment shall be properly sealed.	Minor	NEC Articles 110.12(A) or 408.7
		Input string voltage is suitable for inverter rated minimum operating voltage.	Minor	NEC Article 110.3(B)
		A Ground Fault Circuit Interrupting (GFCI) Wet Rated (WR) receptacle is required to be installed in a wet/damp location.	Minor	NEC Articles 110.3(B), 210.8(A)(3) and 406.9(B)
	Grounding	Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Minor	NEC Articles 690.46 and 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
		Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Inverter array frame grounding conductor is installed in accordance with manufacturers instruction.	Major	NEC Article 110.3(B)
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is sufficiently sized.	Major	NEC Articles 250.66, 250.122, 250.166 and 690.47
		Inverter metal enclosure is properly grounded.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Equipment grounding conductor is properly sized.	Major	NEC Article 690.45

		Requirements	Defect Category	Code Reference
<b>Xformerless Inverter (continued)</b>	Labeling	Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	Incidental	NEC Articles 110.21(B) and 690.13(B)
		A permanent label for the direct-current PV power source shall be provided by the installer at the PV disconnecting means.	Incidental	NEC Articles 110.21(B) and/or 690.53
		The manufacturers name, trademark or other descriptive markings must be visible on all electrical equipment and, where required by the code, markings such as voltage, current, wattage or other ratings must be provided. All markings must have sufficient durability to withstand the environment involved.	Incidental	NEC Article 110.21
		A PV power sources shall be labeled at each junction box, combiner box or disconnect and device where energized, ungrounded circuits may be exposed during service.	Incidental	NEC Articles 110.21(B) and 690.35(F)
		Each rapid shutdown switch shall be permanently marked to identify it as a photovoltaic rapid shutdown. The sign or placard shall be marked as "PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN"	Incidental	NEC Article 110.21(B) and 690.56(C)
	OCPD	Inverter string fuses are 600 or 1000 VDC rated as required.	Critical	NEC Articles 110.3(B) and 690.9(C)
		Inverter string fuse size matches module string series fuse rating.	Major	NEC Article 690.9(B)
	Structural	Equipment shall be firmly secured to the surface on which it is mounted and used in accordance with any instruction included in the listing or labeling.	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)
		Equipment is installed with the appropriate clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Requirements	Defect Category	Code Reference
<b>Xformerless Microinverter</b>	Conductors	Conductor insulation type is properly rated for temperature and environmental conditions.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Inverter PV system AC output conductors are appropriately sized for expected current load.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Microinverter output conductor wire splice connectors are rated for environment.	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Junction Box splices and connections are secure and of high integrity.	Major	NEC Article 110.14
		Grounded (neutral) conductor is properly identified.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Incidental	NEC Article 200.7
		All array conductors are properly connected.	Critical	NEC Articles 110.3(B) and 110.12
		Circuit conductors are properly supported and protected.	Minor	NEC Article 334.30
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Minor	NEC Article 338.24
		Outdoor wire ties/clips are UV and outdoor rated.	Minor	NEC Article 110.3(B)
		Conductors entering boxes, conduit bodies, or fittings shall be protected from abrasion.	Minor	NEC Article 314.17
		In exposed work, conductors are protected from physical damage.	Major	NEC Article 334.15(B)
	Conduit	Conduit fittings and connectors are designed and listed for this use.	Minor	NEC Articles 110.3(B), 300.15 and (LFMC-350.6, PVC-352.6, LFNC-356.6, EMT-358.6)
		Circuit conduit or raceway is properly supported and secured.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit does not meet the conditions to be used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Minor	NEC Article 110.14 (for conductors/splice components), NEC Article 344.14 (for RMC) and NEC Article 358.14 (for EMT) for conduit and surrounding materials
		Microinverter grounding electrode conductor (WEEB or Rack) is installed in accordance with manufacturers installation instructions.	Minor	NEC Article 110.3(B)
	Grounding	Where operating voltage is 250V or greater and enclosure knockouts are not listed to carry fault current, metallic conduit is properly bonded to maintain electrical continuity around eccentric and concentric knockouts.	Major	NEC Articles 250.4(A)(5) and 250.64(E). Ground fault path cannot include eccentric or concentric knockouts, per NEC Article 250.97
		Microinverter grounding electrode conductor (WEEB or Rack) is installed in accordance with manufacturers installation instructions.	Major	NEC Articles 110.3(B) and 690.47
		Grounded conductor(s) terminal lug is properly installed.	Major	NEC Articles 110.3(B) and 250.4
Microinverter grounding electrode conductor is sufficiently sized.		Major	NEC Articles 250.66, 250.122, 250.166 and 690.47	
Listed means used to ground Microinverter chassis.		Major	NEC Articles 250.4, 250.8, 250.12 and 690.43	
Structural	Microinverter is mounted/installed in accordance with its listing and manufacturer instructions	Major	NEC Articles 110.3(B), 110.12 and 110.13(A)	