

FIELD INSPECTION REFERENCE – 2023 NEC

NY-Sun - Residential/Non-Residential



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.

		Task	Nonconformance Description	Defect Category	Reference
Overall Observations	Program	Existing service panel is not a split bus (FPE Stab-Lok, Push-O-Matic etc.,).	Existing panelboard does not meet Program compliance.	Critical	Program requirement
		PV modules, inverter(s) or racking are UL Listed (or equivalent) as per NY Sun program requirements.	PV modules, inverter(s) or racking are not UL Listed (or equivalent) and do not meet NY Sun Program requirements.	Major	Program requirement
		All material and equipment must be new and undamaged, per NY Sun program requirements.	Material and/ or equipment appear to be damaged or used.	Major	Program requirement
		As per Program requirements, any roof damage must be repaired prior to installation.	Visible roof damage present and/or roof is in poor condition, in violation of NY Sun program requirements.	Minor	Program requirement
		Program compliant means is present for customer to verify system electricity generation.	Customer is not able to verify system production.	Minor	Program requirement
		Site address must match site address submitted.	Site address does not match the address submitted.	Incidental	Program requirement
		Inspected TSRF shall match Program records.	TSRF does not match Program records.	Incidental	Program requirement
		Array azimuth (degree) matches application.	Array azimuth (degree) does not match application.	Incidental	Program requirement
		Array tilt (degree) matches application.	Array tilt (degree) does not match application.	Incidental	Program requirement
		As built system capacity must match the submitted and approved plan.	System capacity does not match Program records.	Incidental	Program requirement
		Array module quantity matches application.	Array module quantity does not match application.	Incidental	Program requirement
		Array module manufacturer must match application.	Array module manufacturer does not match application.	Incidental	Program requirement
		Array PV module model number matches application.	Array module model number does not match application.	Incidental	Program requirement
		Installed inverter quantity shall match Program records.	Installed inverter quantity does not match Program records.	Incidental	Program requirement
		Installed inverter manufacturer shall match Program records.	Installed inverter manufacturer does not match Program records.	Incidental	Program requirement
Installed inverter model number shall match Program records.	Installed inverter model number does not match Program records.	Incidental	Program requirement		

		Task	Nonconformance Description	Defect Category	Reference
Overall Observations (continued)	Program (continued)	Installed battery quantity shall match Program records.	Installed battery quantity does not match Program records.	Incidental	Program requirement
		Installed battery manufacturer shall match Program records.	Installed battery manufacturer does not match Program records.	Incidental	Program requirement
		Installed battery model number shall match Program records.	Installed battery model does not match Program records.	Incidental	Program requirement
AC Combiner	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		A grounded conductor shall not be connected to normally non-current-carrying metal parts of equipment, to equipment grounding conductor(s), or be reconnected to ground on the load side of the service disconnecting means.	The grounded conductor(s) (neutral) are connected to the ground terminal and/or bonded to the metal frame of the enclosure.	Major	NEC Article 250.24(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	The length of the free conductors within the enclosure does not meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Conduit below grade is installed with provisions for movement.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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)

		Task	Nonconformance Description	Defect Category	Reference
AC Combiner (continued)	Conduit (continued)	Conduit is adequately supported.	Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be sufficiently rated for expected voltage and/or current.	AC combiner is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Equipment is suitable for environment.	AC combiner is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	AC combiner is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	AC combiner is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment is properly grounded.	AC combiner is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4

		Task	Nonconformance Description	Defect Category	Reference
AC Combiner (continued)	Grounding (continued)	Grounding electrode conductor is sufficiently sized.	Grounding electrode conductor (GEC) is missing or undersized.	Major	NEC Articles 250.66 and 690.47
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
	Labeling	Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	PV disconnect label is missing, incomplete, or unsuitable for the environment. Label: PV SYSEYEM DISCONNECT (or equivalent)	Incidental	NEC Articles 110.21(B) and 690.13(B)
		Entrances to rooms or other guarded locations that contain live parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter.	Warning label identifying exposed live parts is missing, incomplete, or not suitable for the environment. Label: WARNING TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL	Incidental	NEC 110.21(B) and 110.27(C), OSHA1910.145(f)(7)
		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.	PV circuit breaker(s) is/ are not identified.	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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		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.	AC combiner warning label indicating presence of multiple power sources is missing, incomplete, or not suitable for environment. Label: WARNING THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR	Incidental	NEC Articles 110.21(B) and 705.12(B)(3)
		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.	Disconnect Switch warning label is missing, incomplete, or not suitable for the environment. Label: WARNING ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.	Incidental	NEC Articles 110.21(B) and 690.13(B)

		Task	Nonconformance Description	Defect Category	Reference
AC Combiner (continued)	OCPD	Equipment overcurrent protection is installed as required and sized in accordance with NEC Article 240.4	AC combiner overcurrent protection is missing or not correctly sized to protect circuit conductors.	Critical	NEC Article 240.4
		Circuit Breaker shall be installed and used in accordance with any instruction included in the listing or labeling.	Circuit Breaker is not installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		PV Backfed breaker is properly sized at, or above 125% of inverter output current.	PV Backfed breaker is undersized.	Major	NEC Article 240.4
		The AC OCPD is properly sized for the expected output current of the PV system.	The AC OCPD is not properly sized for the expected output current of the PV system.	Major	NEC Article 240.4
	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.	AC combiner is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	AC combiner box is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
AC Disconnect	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		A grounded conductor shall not be connected to normally non-current-carrying metal parts of equipment, to equipment grounding conductor(s), or be reconnected to ground on the load side of the service disconnecting means.	The grounded conductor(s) (neutral) are connected to the ground terminal and/or bonded to the metal frame of the enclosure.	Major	NEC Article 250.24(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		If an ac system operating at 1000 volts or less is grounded at any point, 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. A main bonding jumper shall connect the grounded conductor(s) to each service disconnecting means enclosure. The grounded conductor(s) shall be installed in accordance with 250.24(D)(1) through (D)(4).	Grounded (neutral) conductor is not routed with the ungrounded conductors and/ or properly bonded to PV service disconnect enclosure using a listed grounding bus or terminal, or the grounded conductors are not properly bonded to the Grounding Electrode Conductor (GEC).	Major	NEC Article 250.24(D)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12

		Task	Nonconformance Description	Defect Category	Reference
AC Disconnect (continued)	Conductors (continued)	All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	The length of the free conductors within the enclosure does not meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44

		Task	Nonconformance Description	Defect Category	Reference
AC Disconnect (continued)	Conduit (continued)	The service entrance Flexible Metal Conduit (FMC) or Liquid tight Flexible Metal Conduit (LFMC) shall not exceed 6 feet.	The service entrance FMC or LFMC conduit exceed 6 feet.	Minor	NEC Article 230.43(15)
		Conduit does not meet the conditions to be used as conductor support.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be sufficiently rated for expected voltage and/or current.	AC disconnect is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Disconnecting means shall be provided to disconnect ac PV modules, fuses, dc-to-dc converters, inverters, and charge controllers from all conductors that are not solidly grounded.	Required disconnect is not present.	Major	NEC Article 690.15
		Equipment intended to interrupt current at other than fault levels shall have an interrupting rating at nominal circuit voltage at least equal to the current that must be interrupted.	Disconnect is incorrectly rated for service entrance use and/or does not have a minimum current rating of 60A.	Major	NEC Article 230.79(D)
		Equipment is suitable for environment.	AC disconnect is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		The PV system disconnecting means shall simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring systems.	The PV disconnect does not simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring systems.	Major	NEC Article 690.13(E)
		AC Disconnect is present and readily accessible.	A PV disconnecting means is not in a readily accessible location.	Minor	NEC Article 690.13(A)
Disconnect terminals are properly wired.	Disconnect terminals are wired backwards, not in accordance with its listing and manufacturer instructions. Ensure supply and load side of disconnect 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.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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		

		Task	Nonconformance Description	Defect Category	Reference
AC Disconnect (continued)	Electrical (continued)	Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	AC disconnect is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is continuous.	"The grounding electrode conductor (GEC) is not continuous or irreversibly spliced. Allowable means of splicing the GEC include compression crimp or exothermic welding processes."	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is sufficiently sized.	Grounding electrode conductor (GEC) is missing or undersized.	Major	NEC Articles 250.66 and 690.47
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
	Labeling	Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	PV disconnect label is missing, incomplete, or unsuitable for the environment. Label: PV SYSEM DISCONNECT (or equivalent)	Incidental	NEC Articles 110.21(B) and 690.13(B)
		Permanent plaques, labels, or directories shall be installed at each service equipment location, or at an approved readily visible location.	Permanent plaque or directory denoting location of all power sources and location of disconnects on premises at each service equipment location is missing, incomplete, or unsuitable for the environment.	Incidental	NEC Article 110.21(B) and 705.10

		Task	Nonconformance Description	Defect Category	Reference
AC Disconnect (continued)	Labeling (continued)	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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		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.	Disconnect Switch warning label is missing, incomplete, or not suitable for the environment. Label: WARNING ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.	Incidental	NEC Articles 110.21(B) and 690.13(B)
	OCPD	Equipment overcurrent protection is installed as required and sized in accordance with NEC Article 240.4	AC disconnect overcurrent protection is missing or not correctly sized to protect circuit conductors.	Major	NEC Article 240.4
		Fuses are present and installed in accordance with any instruction included in the listing or labeling.	Fuses are not installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		No overcurrent device shall be connected in series with any conductor that is intentionally grounded, unless the overcurrent device opens all conductors of the circuit, including the grounded conductor, and is designed so that no pole can operate independently.	Grounded conductors are fused.	Major	NEC Articles 240.22
		The AC OCPD is properly sized for the expected output current of the PV system.	The AC OCPD is not properly sized for the expected output current of the PV system.	Major	NEC Article 240.4
		The OCPD is properly sized for the rating of the equipment.	The OCPD is not properly sized for the rating of the equipment.	Major	NEC Article 240.3
	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.	AC disconnect is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	AC disconnect box is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)

		Task	Nonconformance Description	Defect Category	Reference
DC Combiner	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Splice components are rated for environment.	Splice components (e.g., wire nuts) are not rated for environment. Where raceways are installed in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and connections are secure and of high integrity.	Splices/connections are not secure.	Major	NEC Article 110.14
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	The length of the free conductors within the enclosure does not meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)

		Task	Nonconformance Description	Defect Category	Reference
DC Combiner (continued)	Conduit (continued)	Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be sufficiently rated for expected voltage and/or current.	DC combiner is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Equipment is suitable for environment.	DC combiner is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	DC combiner is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43

		Task	Nonconformance Description	Defect Category	Reference
DC Combiner (continued)	Grounding (continued)	Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
		Where not routed with circuit conductors, equipment grounding conductors smaller than 6AWG shall be protected from physical damage.	Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Articles 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
	Labeling	A permanent readily visible label indicating the highest maximum dc voltage in a PV system, calculated in accordance with 690.7, shall be provided.	A permanent readily visible label indicating the highest maximum dc voltage in a PV system, calculated in accordance with 690.7 is not present.	Incidental	NEC Articles 690.7(D)
		Interruption circuit - shall be a type that requires the use of a tool to open will be marked "Do Not Disconnect Under Load"	Warning label to not disconnect under load is missing, incomplete, or unsuitable for the environment. Label: WARNING DO NOT DISCONNECT UNDER LOAD or NOT FOR CURRENT INTERRUPTING	Incidental	NEC Articles 110.21(B) and 690.33(D)(2)
		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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		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.	Disconnect Switch warning label is missing, incomplete, or not suitable for the environment. Label: WARNING ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.	Incidental	NEC Articles 110.21(B) and 690.13(B)
	OCPD	DC Combiner string fuse holder is DC rated.	DC Combiner string fuse holder is not DC rated.	Critical	NEC Article 110.3(B)
		Inverter string fuses are 600 or 1000 VDC rated as required.	Inverter string fuses are not rated for use in application.	Critical	NEC Articles 110.3(B) and 690.9(B)
		PV source circuit, PV output circuit, inverter output circuit and storage battery circuit conductors and equipment shall be protected with an OCPD.	Ungrounded conductors are NOT protected by an OCPD.	Critical	NEC Article 690.9

		Task	Nonconformance Description	Defect Category	Reference
DC Combiner (continued)	OCPD (continued)	Combiner string fuse is properly sized.	DC Combiner String fuse is undersized for expected current (1.56 x sum of parallel module short circuit currents (Isc)).	Major	NEC Article 690.9
		No overcurrent device shall be connected in series with any conductor that is intentionally grounded, unless the overcurrent device opens all conductors of the circuit, including the grounded conductor, and is designed so that no pole can operate independently.	Grounded conductors are fused.	Major	NEC Articles 240.22
		Overcurrent devices used in any DC portion of the PV system shall have the appropriate voltage, current and interrupt ratings.	The DC OCPD does not have the appropriate voltage, current or interrupt 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.	DC combiner is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	DC combiner is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
DC Disconnect	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	The length of the free conductors within the enclosure does not meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24

		Task	Nonconformance Description	Defect Category	Reference
DC Disconnect (continued)	Conductors (continued)	Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Disconnect is listed for DC use.	DC Disconnect is not listed for DC use.	Critical	NEC Article 110.3(B) and 690.15
		Equipment must be sufficiently rated for expected voltage and/or current.	DC disconnect is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Disconnecting means shall be provided to disconnect ac PV modules, fuses, dc-to-dc converters, inverters, and charge controllers from all conductors that are not solidly grounded.	Required disconnect is not present.	Major	NEC Article 690.15
		Equipment is suitable for environment.	DC disconnect is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)

		Task	Nonconformance Description	Defect Category	Reference
DC Disconnect (continued)	Electrical (continued)	Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		The PV system disconnecting means shall simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring systems.	The PV disconnect does not simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring systems.	Major	NEC Article 690.13(E)
		Disconnect is properly wired to ensure that fuses can be de-energized for service.	Disconnect terminals are wired backwards, not in accordance with its listing and manufacturer instructions. Ensure supply and load side of disconnect 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.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Means shall be provided to disconnect all ungrounded DC conductors of a PV system from all other conductors in a building or other structure.	A PV disconnecting means is not in a readily accessible location.	Minor	NEC Article 690.13(A)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	DC disconnect is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4

	Task	Nonconformance Description	Defect Category	Reference	
DC Disconnect (continued)	Grounding (continued)	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	
		Where not routed with circuit conductors, equipment grounding conductors smaller than 6AWG shall be protected from physical damage.	Minor	NEC Articles 250.120(C)	
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119	
	Labeling	"A permanent readily visible label indicating the highest maximum dc voltage in a PV system, calculated in accordance with 690.7, shall be provided by the installer at one of the following locations: (1) DC PV system disconnecting means (2) PV system electronic power conversion equipment (3) Distribution equipment associated with the PV system"	DC power source information label is missing, incomplete, or unsuitable for the environment. Label: MAXIMUM VOLTAGE_____	Incidental	NEC Articles 110.21(B) and 690.7(D)
		Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	PV disconnect label is missing, incomplete, or unsuitable for the environment. Label: PV SYSTEM DISCONNECT (or equivalent)	Incidental	NEC Articles 110.21(B) and 690.13(B)
		Permanent plaques, labels, or directories shall be installed at each service equipment location, or at an approved readily visible location.	Permanent plaque or directory denoting location of all power sources and location of disconnects on premises at each service equipment location is missing, incomplete, or unsuitable for the environment.	Incidental	NEC Article 110.21(B) and 705.10
		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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		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.	Disconnect Switch warning label is missing, incomplete, or not suitable for the environment. Label: WARNING ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.	Incidental	NEC Articles 110.21(B) and 690.13(B)

		Task	Nonconformance Description	Defect Category	Reference
DC Disconnect (continued)	OCPD	Disconnect fuses are DC rated and properly sized for system voltage.	Fuses in DC Disconnect are not DC rated and/or not rated for applicable system voltage.	Critical	NEC Articles 110.3(B) and 690.9(B)
		Disconnect is rated for nominal voltage and current.	DC Disconnect is insufficiently rated for expected voltage and current.	Critical	NEC Article 110.3(B) and 690.15(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.	DC disconnect is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	DC disconnect is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
Energy Storage	Conductors	Battery DC conductors are properly sized for expected current load.	Flexible battery DC conductors are smaller than 2/0 AWG.	Major	NEC Article 480.12
		Battery DC conductors are protected from accidental contact.	Battery DC conductors are not properly guarded from accidental contact.	Major	NEC Articles 110.27
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Correct flexible cables are used for battery interconnections.	Flexible Battery DC conductors are not listed as hard service use and/or moisture resistant.	Major	NEC Article 480.12
		Installed DC battery cables are properly terminated.	Flexible, fine stranded cables are not properly terminated.	Major	NEC Article 480.12
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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)

		Task	Nonconformance Description	Defect Category	Reference
Energy Storage (continued)	Conduit (continued)	Conduit is adequately supported.	Circuit conduit or raceway lacks adequate support.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Batteries are properly ventilated.	Batteries/enclosures do not contain ventilation equipment to prevent excessive accumulation of gas pressure and/or gas ignition.	Critical	NEC Article 480.10(A)
		DC Disconnect is present for ungrounded conductors of battery systems over 60 volts DC.	Battery systems operating over 60 volts DC must include a DC disconnect for the ungrounded conductor(s).	Major	NEC Articles 480.7(A)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Provisions shall be provided to control the charging process of the ESS. All adjustable means for control of the charging process shall be accessible only to qualified persons.	Charge controller is missing or improperly installed to prevent overcharging or damaging batteries.	Major	NEC Article 706.23
		Where battery connections are mating dissimilar metals, antioxidant material specified by the battery manufacturers installation instructions shall be used to prevent galvanic reaction/corrosion.	Suitable antioxidation material between Electrochemically dissimilar metals in direct physical contact appears to be missing, which will cause galvanic reaction/corrosion.	Major	NEC Article 110.3(B) and 480.4(A)
		Batteries must be installed on non-conductive supports.	The battery supporting structure must be non-conductive and substantial.	Minor	NEC Article 480.9
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
Working clearances around battery bank shall be maintained.	Working clearances are not maintained around the battery bank.	Minor	NEC Articles 110.26 and 480.10(C)		

		Task	Nonconformance Description	Defect Category	Reference
Energy Storage (continued)	Grounding	Equipment is properly grounded.	Battery enclosure is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
	Labeling	The disconnecting means shall be legibly marked in the field. A label with the marking shall be placed in a conspicuous location near the battery if a disconnecting means is not provided.	Energy Storage System DC Disconnect information label is missing, incomplete, or unsuitable for the environment. Label: NOMINAL ESS VOLTAGE_____ MAXIMUM AVAILABLE SHORT CIRCUIT CURRENT_____ DATE THE CALCULATION WAS PERFORMED_____	Incidental	NEC Articles 110.21(B) and 480.7(F)
		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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
	OCPD	A circuit conductor connected at one end to a supply with integral fault protection, where the conductor is rated for the maximum circuit current from that supply, and also connected to sources having an available maximum circuit current greater than the ampacity of the conductor, shall be protected from overcurrent at the point of connection to the higher current source.	Circuits adjacent to battery bank are not properly protected with a listed overcurrent device that would protect them from battery short circuit currents which exceed the interrupt/withstand ratings of devices attached to those circuits.	Major	NEC Article 706.31
	Structural	Equipment is installed with the appropriate clearances.	Battery Bank is not mounted in accordance with its listing and manufacturer instructions. Battery manufacturer specifications for mounting must be followed.	Major	NEC Articles 110.26 and 110.27(A)

		Task	Nonconformance Description	Defect Category	Reference
Energy Storage (continued)	Structural (continued)	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.	Charge controllers and related components are not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		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.	Energy Storage attachment differs from approved plans.	Major	Program requirement
Energy Storage Tier 1		Energy Storage Systems (ESS) shall be listed and labeled in accordance with UL 9540.	The Energy Storage System is not listed and labeled in accordance with UL 9540.	Major	2025 Residential Code of NYS R330.2
		Individual units shall be separated from each other by not less than 3 feet (914 mm) except where other separation distances are specified by the ESS listing and the manufacturer's installation instructions.	Individual ESS units are not separated from each other by a minimum of 3 feet (914 mm), or separation distances do not comply with the manufacturer's instructions.	Major	2025 Residential Code of NYS R330.3.1
		Individual ESS units installed outdoors or on the exterior side of exterior walls located not less than 3 feet (914 mm) from doors and windows directly entering the dwelling unit, except where smaller separation distances are permitted by the UL 9540 listing and manufacturer's installation instructions.	Individual ESS units installed outdoors on exterior walls do not have a minimum 3 feet distance from doors and or windows.	Major	2025 Residential Code of NYS R330.4.3

		Task	Nonconformance Description	Defect Category	Reference
Energy Storage (continued)	Energy Storage Tier 1 (continued)	<p>ESS shall be installed only in the following locations:</p> <ol style="list-style-type: none"> 1. Detached garages and detached accessory structures. 2. Attached garages separated from the dwelling unit living space in accordance with Section R302.6. 3. Outdoors or on the exterior side of exterior walls located not less than 3 feet (914 mm) from doors and windows directly entering the dwelling unit, except where smaller separation distances are permitted by the UL 9540 listing and manufacturer's installation instructions. 4. Enclosed utility closets, basements, storage or utility spaces within dwelling units with finished or noncombustible walls and ceilings. Walls and ceilings of unfinished wood-framed construction shall be provided with not less than 5/8-inch (15.9 mm) Type X gypsum wallboard. Openings into the dwelling shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 13/8 inches (35 mm) in thickness, or doors with a 20-minute fire protection rating. Doors shall be self-latching and equipped with a self-closing or an automatic-closing device. Penetrations through the required gypsum wallboard into the dwelling shall be protected as required by Section R302.11, Item 4. <p>ESS shall not be installed in sleeping rooms, or closets or spaces opening directly into sleeping rooms.</p>	Installation locations do not comply with 2025 Residential Code of NYS R330.4	Major	2025 Residential Code of NYS R330.4
		<p>Individual ESS units shall have a maximum rating of 20 kWh. The aggregate rating of the ESS shall not exceed:</p> <ol style="list-style-type: none"> 1. 40 kWh within utility closets, basements and storage or utility spaces. 2. 80 kWh in attached or detached garages and detached accessory structures. 3. 80 kWh on exterior walls. 4. 80 kWh outdoors on the ground. <p>ESS installations exceeding the permitted individual or aggregate ratings shall be installed in accordance with Section 1207 of the Fire Code of New York State.</p>	ESS unit(s) exceed the maximum rating of 2025 Residential Code of NYS R330.5	Major	2025 Residential Code of NYS R330.5

		Task	Nonconformance Description	Defect Category	Reference
Energy Storage (continued)	Energy Storage Tier 1 (continued)	Rooms and areas within dwelling units, basements and attached garages in which ESS are installed shall be protected by smoke alarms in accordance with Section R310. A heat detector, listed and interconnected to the smoke alarms, shall be installed in locations within dwelling units and attached garages where smoke alarms cannot be installed based on their listing.	Smoke alarms are not installed or interconnected throughout areas where ESS are installed. Or Where ESS are installed in an area where smoke alarms cannot be installed in accordance with their listing, an interconnected listed heat alarm was not installed or was not connected to the smoke alarm system.	Major	2025 Residential Code of NYS R330.7
		Where an ESS is installed in the normal driving path of vehicle travel within a garage, impact protection complying with Section R330.8.3 shall be provided. The normal driving path is a space between the garage vehicle opening and the interior face of the back wall to a height of 48 inches (1219 mm) above the finished floor. The width of the normal driving path shall be equal to the width of the garage door opening.	The Energy Storage System is not installed in the garage with required clearances or impact protection.	Major	2025 Residential Code of NYS R330.8.1
		Indoor installations of ESS that produce hydrogen or other flammable gases during charging shall be provided with mechanical ventilation in accordance with Section M1307.4.	Indoor installations of ESS that include batteries that produce hydrogen or other flammable gases during charging do not include exhaust ventilation.	Major	2025 Residential Code of NYS R330.9
		The following documentation and labeling shall be provided: 1. A copy of the manufacturer's installation, operation, maintenance and decommissioning instructions shall be provided to the owner or placed in a conspicuous location near the ESS equipment. 2. A label on the installed system containing the contact information for the qualified maintenance and service providers.	The required documentation and/ or labeling is not present.	Minor	2025 Residential Code of NYS R330.11
		ESS that have the potential to release toxic or highly toxic gas during charging, discharging and normal use conditions shall not be installed within one- and two-family dwellings and townhouses.	ESS that have the potential to release toxic or highly toxic gas during charging, discharging, and normal use conditions were not installed outdoors.	Major	2025 Residential Code of NYS R330.12

		Task	Nonconformance Description	Defect Category	Reference
Energy Storage (continued)	Energy Storage Tier 1 (continued)	<p>ESS located outdoors shall be separated by a minimum of 10 feet (3048 mm) from the following exposures:</p> <ol style="list-style-type: none"> 1. Lot lines. 2. Public ways. 3. Buildings. 4. Stored combustible materials. 5. Hazardous materials. 6. High-piled stock. 7. Other exposure hazards. <p>Exceptions: (Material based on NFPA 855 2023 Ed.)</p> <ol style="list-style-type: none"> 1. Clearances are permitted to be reduced to 3 feet (914 mm) where a 1-hour free-standing fire barrier suitable for exterior use and extending 5 feet (1524 mm) above and 5 feet (1524 mm) beyond the physical boundary of the ESS installation is provided to protect the exposure. 2. Clearances to buildings are permitted to be reduced to 3 feet (914 mm) where noncombustible exterior walls with no openings or combustible overhangs are provided on the wall adjacent to the ESS and the fire-resistance rating of the exterior wall is a minimum of 2 hours. 3. Clearances to buildings are permitted to be reduced to 3 feet (914 mm) where a weatherproof enclosure constructed of noncombustible materials is provided over the ESS, and it has been demonstrated that a fire within the enclosure will not ignite combustible materials outside the enclosure based on large-scale fire testing complying with Section 1207.17. 	Minimum separation for ESS units located outdoors has not been met.	Major	2025 Fire Code of NYS 1207.8.3
Feeder Tap Connection	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are properly spliced.	Service Entrance conductor splices (Taps) are not installed in accordance with its listing.	Major	NEC Articles 110.14(B) and 230.46

		Task	Nonconformance Description	Defect Category	Reference
Feeder Tap Connection (continued)	Conductors (continued)	If an ac system operating at 1000 volts or less is grounded at any point, 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. A main bonding jumper shall connect the grounded conductor(s) to each service disconnecting means enclosure. The grounded conductor(s) shall be installed in accordance with 250.24(D)(1) through (D)(4).	Grounded (neutral) conductor is not routed with the ungrounded conductors and/ or properly bonded to PV service disconnect enclosure using a listed grounding bus or terminal, or the grounded conductors are not properly bonded to the Grounding Electrode Conductor (GEC).	Major	NEC Article 250.24(D)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
		Conduit	The conduit is grounded (when required).	The conduit is not grounded.	Major
		Conduit below grade is installed with provisions for movement.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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)

		Task	Nonconformance Description	Defect Category	Reference
Feeder Tap Connection (continued)	Conduit (continued)	Conduit is adequately supported.	Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44
		The service entrance Flexible Metal Conduit (FMC) or Liquid tight Flexible Metal Conduit (LFMC) shall not exceed 6 feet.	The service entrance FMC or LFMC conduit exceed 6 feet.	Minor	NEC Article 230.43(15)
		Conduit does not meet the conditions to be used as conductor support.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be sufficiently rated for expected voltage and/or current.	Equipment is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
	"Feeders and Feeder Taps.Where the power source output connection is made to a feeder, the following shall apply: (1) The feeder ampacity is greater than or equal to 125 percent of the power-source output circuit current. (2) Where the power-source output connection is made at a location other than the opposite end of the feeder from the primary source overcurrent device, that portion of the feeder on the load side of the power source output connection shall be protected by one of the following: a. The feeder ampacity shall be not less than the sum of the rating of the primary source overcurrent device and 125 percent of the power-source output circuit current. b. An overcurrent device at the load side of the power source connection point shall be rated not greater than the ampacity of the feeder. (3) For taps sized in accordance with 240.21(B)(2) or (B)(4), the ampacity of taps conductors shall not be less than one-third of the sum of the rating of the overcurrent device protecting the feeder plus the ratings of any power source overcurrent devices connected to the feeder."	The Feeders and/ or Feeder Taps did not comply with NEC Article 705.12 (1), (2) or (3).	Major	NEC Article 705.12	

		Task	Nonconformance Description	Defect Category	Reference
Feeder Tap Connection (continued)	Electrical (continued)	Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		AC Disconnect is present and readily accessible.	A PV disconnecting means is not in a readily accessible location.	Minor	NEC Article 690.13(A)
		Disconnect is properly wired to ensure that fuses can be de-energized for service.	Disconnect terminals are wired backwards, not in accordance with its listing and manufacturer instructions. Ensure supply and load side of disconnect 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.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	A metal underground water pipe shall be supplemented by an additional electrode.	The required supplemental grounding electrode is not present (water pipe primary).	Major	NEC Article 250.53(D)(2)
		Equipment is properly grounded.	Enclosure is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is properly bonded to the main premise grounding electrode system.	"The grounding electrode conductor (GEC) is not continuous or irreversibly spliced. Allowable means of splicing the GEC include compression crimp or exothermic welding processes."	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is sufficiently sized.	Grounding electrode conductor (GEC) is missing or undersized.	Major	NEC Articles 250.66 and 690.47
		Water pipe electrode supplemented by other electrode.	Water pipe electrode is not supplemented by other electrode.	Major	NEC Article 250.53(D)(2)

		Task	Nonconformance Description	Defect Category	Reference
Feeder Tap Connection (continued)	Grounding (continued)	When a metal water pipe is used as a grounding electrode, there must be a ground jumper present across water meter/filter.	No ground jumper is present across water meter/filter.	Major	NEC Article 250.53(D)(1)
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
		The ground rod (electrode) is protected from physical damage or is below/flush with the ground (8ft in contact with the soil).	The ground rod (electrode) is not protected from physical damage or is not below/flush with the ground (8ft in contact with the soil).	Minor	NEC Article 250.53(A)(4)
	Labeling	Entrances to rooms or other guarded locations that contain live parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter.	Warning label identifying exposed live parts is missing, incomplete, or not suitable for the environment. Label: WARNING TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL	Incidental	NEC 110.21(B) and 110.27(C), OSHA1910.145(f)(7)
		Permanent plaques, labels, or directories shall be installed at each service equipment location, or at an approved readily visible location.	Permanent plaque or directory denoting location of all power sources and location of disconnects on premises at each service equipment location is missing, incomplete, or unsuitable for the environment.	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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		The sum of the ampere ratings of all overcurrent devices on panelboards, 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.	WARNING: EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.	Incidental	NEC Articles 110.21(B), 690.59 and 705.12(B)(3)
		Equipment is installed with the appropriate clearances.	Equipment is not mounted in accordance with its listing and manufacturer instructions. Battery manufacturer specifications for mounting must be followed.	Minor	NEC Articles 110.26 and 110.27(A)
	Structural				

		Task	Nonconformance Description	Defect Category	Reference
Floating PV	Conductors	All array conductors are properly connected.	Array conductors found disconnected or improperly connected, which may be causing portions of the array to be inoperable and/or pose a shock hazard.	Critical	NEC Articles 110.3(B) and 110.12
		Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/or 690.8(B)
		All electrical connections not intended for operation while submerged are located at least 12 in above the deck of a floating or fixed structure but not below the electrical datum plane on fixed structures .	All electrical connections not intended for operation while submerged are not located at least 12 in above the deck of a floating or fixed structure but not below the electrical datum plane on fixed structures.	Major	NEC Article 682.12(A)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductor splices are properly sealed	Conductor splices, within junction boxes identified for wet locations, using sealed wire connector systems listed and identified for submersion have not been used for floating structures where located above the waterline but below the electrical datum plane.	Major	NEC Article 682.12(A)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		PV equipment floating on or attached to structures floating on bodies of water shall utilize wiring methods that allow for any expected movement of the equipment.	PV equipment floating on or attached to structures floating on bodies of water do not have wiring methods that allow for any expected movement of the equipment.	Major	NEC Article 690.4(G)
		Splice components are rated for environment.	Splice components (e.g., wire nuts) are not rated for environment. Where raceways are installed in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and connections are secure and of high integrity.	Splices/connections are not secure.	Major	NEC Article 110.14
Submersible or floating equipment are cord-and plug-connected, using extra-hard usage cord, as designated in Table 400.4 and listed with a "W" suffix.	Submersible or floating equipment are not cord-and plug-connected, using extra-hard usage cord, as designated in Table 400.4 and listed with a "W" suffix.	Major	NEC Article 628.13(C)		

		Task	Nonconformance Description	Defect Category	Reference
Floating PV (continued)	Conductors (continued)	Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Outdoor wire ties/clips are UV and outdoor rated.	Outdoor wire ties/clips are not UV and/or outdoor rated.	Minor	NEC Article 110.3(B)
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		All conductors of the same circuit shall be contained within the same raceway. All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Above ground conductor management system is installed at the highest elevation above grade possible or a minimum of 36 inches above grade	Above ground cable management system is not installed at the highest elevation above grade possible or a minimum of 36 inches above grade	Incidental	Program Requirement
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
	Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7	
	Conduit	The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit below grade is installed with provisions for movement.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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.	Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	Minor	NEC Articles 300.7(B), 352.44 and tables 352.44 and 355.44

		Task	Nonconformance Description	Defect Category	Reference
Floating PV (continued)	Conduit (continued)	Conduit does not meet the conditions to be used as conductor support.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Disconnecting means shall be provided to disconnect ac PV modules, fuses, dc-to-dc converters, inverters, and charge controllers from all conductors that are not solidly grounded.	Required disconnect is not present.	Major	NEC Article 690.15
		Electrical distribution equipment located on land serving feeders shall be located appropriately from shoreline and electrical data plane.	Electrical distribution equipment located on land serving feeders are not located appropriately from shoreline and electrical data plane. The equipment serving feeders must be located no closer than 5 ft horizontally from the shoreline, and live parts of the equipment are elevated a minimum of 12 in above the electrical datum plane or located no closer than the shoreline, and live parts of the equipment are located a minimum of 10 ft above the electrical datum plane.	Major	NEC Article 682.10, 682.5(2)
		Electrical equipment and transformers, including their enclosures, shall be specifically approved for the intended location. No portion of an enclosure for electrical equipment not identified for operation while submerged shall be located below the electrical datum plane. (In land areas not subject to tidal fluctuation, the electrical datum plane shall be a horizontal plane 2 ft above the highest water level for the area occurring under normal circumstances)	Electrical equipment and transformers, including their enclosures, are not specifically approved for the intended location or a portion of an enclosure for electrical equipment not identified for operation while submerged is located below the electrical datum plane.	Major	NEC Article 682.10, 682.5(2)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	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.	GFCI-WR is not installed where required.	Minor	NEC Articles 110.3(B), 210.8(A)(3) and 406.9(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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

		Task	Nonconformance Description	Defect Category	Reference
Floating PV (continued)	Electrical (continued)	Enclosures installed in wet locations are weatherproof and raceways or cables entering above the level of uninsulated live parts have fittings listed for wet locations.	Enclosures installed in wet locations are not weatherproof and/or raceways or cables entering above the level of uninsulated live parts have fittings listed for wet locations.	Minor	NEC Article 312.2
		Equipment is suitable for environment.	Enclosure type is not rated for the environment they are installed.	Minor	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Raceways, cable trays, cablebus, auxiliary gutters, cable armor, boxes, cable sheathing, cabinets, enclosures, elbows, couplings, fittings, supports, and support hardware are of materials suitable for the environment in which they are to be installed.	Raceways, cable trays, cablebus, auxiliary gutters, cable armor, boxes, cable sheathing, cabinets, enclosures, elbows, couplings, fittings, supports, and support hardware are not of materials suitable for the environment in which they are to be installed.	Minor	NEC Article 300.6
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	Racking or support structure is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounding hardware is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		Module frames must be grounded. WEEBs and other grounding devices must be installed correctly.	Module grounding hardware is not properly installed to effectively ground module frames. Solid contact between the listed grounding device and bare metal of the module frames, at designated grounding points, is required for a solid ground bond.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Module grounding hardware must be listed for the purpose.	Grounding hardware used is not listed for use in this application and must be replaced with listed grounding hardware suitable for outdoor use and resistant to galvanic reaction with racking and module frame materials.	Major	NEC Articles 110.3(B) and 690.43
		Manufacturer instructions for grounding hardware quantity must be followed.	There are an insufficient number of grounding clips installed on array modules.	Minor	NEC Article 110.3(B)
Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.		Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Article 250.120(C)	
Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).		Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119	

		Task	Nonconformance Description	Defect Category	Reference
Floating PV (continued)	Labeling	Above ground conductor management signage shall meet the requirements in NEC 110.21(B) and shall read as follows: DANGER - HIGH VOLTAGE. Lettering shall be a minimum of 2.5 inches tall. The signage is mounted ~4 feet above grade, located at the midpoint between rows. Where above ground conductor management systems are installed along array rows but not under the array, signage is required every 25 feet.	The signage does not meet the requirements in NEC 110.21(B) and/or have lettering a minimum of 2.5 inches tall and/or mounted ~4 feet above grade, located at the midpoint between rows. Where above ground cable management system are installed along array rows but not under the array, signage is not installed every 25 feet	Incidental	NEC 110.21(B)
		Interruption circuit - shall be a type that requires the use of a tool to open will be marked "Do Not Disconnect Under Load"	Warning label to not disconnect under load is missing, incomplete, or unsuitable for the environment. Label: WARNING DO NOT DISCONNECT UNDER LOAD or NOT FOR CURRENT INTERRUPTING	Incidental	NEC Articles 110.21(B) and 690.33(D)(2)
		PV equipment floating on or attached to structures floating on bodies of water shall be identified as being suitable for the purpose.	PV equipment floating on or attached to structures floating on bodies of water are not identified as being suitable for the purpose.	Incidental	NEC Article 690.4(G)
	OCPD	Overcurrent protective device present between parallel spliced DC string conductors.	Overcurrent protective device between parallel spliced DC string conductors is missing.	Major	NEC Article 690.9(A)
	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.	PV module and related components are not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Ground/pole mount support structure, anchor system, and or footings are installed and used according to manufacturer instructions.	Racking system mechanical connections not made correctly and/or racking not installed per manufacturer instructions.	Major	NEC Article 110.3(B)
Ground Mounted Array	Conductors	All array conductors are properly connected.	Array conductors found disconnected or improperly connected, which may be causing portions of the array to be inoperable and/or pose a shock hazard.	Critical	NEC Articles 110.3(B) and 110.12
		Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12

		Task	Nonconformance Description	Defect Category	Reference
Ground Mounted Array (continued)	Conductors (continued)	Splice components are rated for environment.	Splice components (e.g., wire nuts) are not rated for environment. Where raceways are installed in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and connections are secure and of high integrity.	Splices/connections are not secure.	Major	NEC Article 110.14
		All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Outdoor wire ties/clips are UV and outdoor rated.	Outdoor wire ties/clips are not UV and/or outdoor rated.	Minor	NEC Article 110.3(B)
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Conduit below grade is installed with provisions for movement.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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)

		Task	Nonconformance Description	Defect Category	Reference
Ground Mounted Array (continued)	Conduit (continued)	Conduit is adequately supported.	Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Disconnecting means shall be provided to disconnect ac PV modules, fuses, dc-to-dc converters, inverters, and charge controllers from all conductors that are not solidly grounded.	Required disconnect is not present.	Major	NEC Article 690.15
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	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.	GFCI-WR is not installed where required.	Minor	NEC Articles 110.3(B), 210.8(A)(3) and 406.9(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	Racking or support structure is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounding hardware is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4

		Task	Nonconformance Description	Defect Category	Reference
Ground Mounted Array (continued)	Grounding (continued)	Module frames must be grounded. WEEBs and other grounding devices must be installed correctly.	Module grounding hardware is not properly installed to effectively ground module frames. Solid contact between the listed grounding device and bare metal of the module frames, at designated grounding points, is required for a solid ground bond.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Module grounding hardware must be listed for the purpose.	Grounding hardware used is not listed for use in this application and must be replaced with listed grounding hardware suitable for outdoor use and resistant to galvanic reaction with racking and module frame materials.	Major	NEC Articles 110.3(B) and 690.43
		Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Articles 250.120(C)
		Manufacturer instructions for grounding hardware quantity must be followed.	There are an insufficient number of grounding clips installed on array modules.	Minor	NEC Article 110.3(B)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
	Labeling	Interruption circuit - shall be a type that requires the use of a tool to open will be marked "Do Not Disconnect Under Load"	Warning label to not disconnect under load is missing, incomplete, or unsuitable for the environment. Label: WARNING DO NOT DISCONNECT UNDER LOAD or NOT FOR CURRENT INTERRUPTING	Incidental	NEC Articles 110.21(B) and 690.33(D)(2)
	OCPD	Overcurrent protective device present between parallel spliced DC string conductors.	Overcurrent protective device between parallel spliced DC string conductors is missing.	Major	NEC Article 690.9(A)
	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.	PV module and related components are not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Ground/pole mount support structure, anchor system, and or footings are installed and used according to manufacturer instructions.	Racking system mechanical connections not made correctly and/or racking not installed per manufacturer instructions.	Major	NEC Article 110.3(B)
Inverter	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)

		Task	Nonconformance Description	Defect Category	Reference
Inverter (continued)	Conductors (continued)	All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)

		Task	Nonconformance Description	Defect Category	Reference
Inverter (continued)	Conduit (continued)	Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	PV array maximum DC string voltage complies with inverter maximum input voltage rating.	DC input voltage exceeds inverter maximum input rating.	Critical	NEC Articles 110.3(B) and 690.7
		Equipment is suitable for environment.	Inverter is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Input string voltage is suitable for inverter rated minimum operating voltage.	Input string voltage is below the manufacturer minimum input voltage rating of the inverter.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	Inverter is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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

		Task	Nonconformance Description	Defect Category	Reference
Inverter (continued)	Grounding (continued)	Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Articles 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
	Labeling	"A permanent readily visible label indicating the highest maximum dc voltage in a PV system, calculated in accordance with 690.7, shall be provided by the installer at one of the following locations: (1) DC PV system disconnecting means (2) PV system electronic power conversion equipment (3) Distribution equipment associated with the PV system"	DC power source information label is missing, incomplete, or unsuitable for the environment. Label: MAXIMUM VOLTAGE_____	Incidental	NEC Articles 110.21(B) and 690.7
		A rapid shutdown switch shall have a label located on or no more than 1 m (3 ft) from the switch that includes the following wording: RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM	"Rapid Shutdown label is missing, incomplete, or unsuitable for the environment. Label: RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM. The label shall be reflective, with all letters capitalized and having a minimum height of 9.5 mm (3/8 in.), in white on red background."	Incidental	NEC Article 110.21(B) and 690.12(D)(2)
		Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	PV disconnect label is missing, incomplete, or unsuitable for the environment. Label: PV SYSEYEM DISCONNECT (or equivalent)	Incidental	NEC Articles 110.21(B) and 690.13(B)
		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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		OCPD	Inverter string fuses are 600 or 1000 VDC rated as required.	Inverter string fuses are not rated for use in application.	Critical
	Inverter string fuse size matches module string series fuse rating.		Inverter string fuse size exceeds module 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.	Inverter is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12

		Task	Nonconformance Description	Defect Category	Reference
Inverter (continued)	Structural (continued)	Equipment is installed with the appropriate clearances.	Inverter is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
Junction Box	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		A grounded conductor shall not be connected to normally non-current-carrying metal parts of equipment, to equipment grounding conductor(s), or be reconnected to ground on the load side of the service disconnecting means.	The grounded conductor(s) (neutral) are connected to the ground terminal and/or bonded to the metal frame of the enclosure.	Major	NEC Article 250.24(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		Splice components are rated for environment.	Splice components (e.g., wire nuts) are not rated for environment. Where raceways are installed in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and connections are secure and of high integrity.	Splices/connections are not secure.	Major	NEC Article 110.14
		Circuit conductors are properly supported and secured.	Circuit conductors are sagging and/or not supported and secured.	Minor	NEC Article 110.12
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		The length of the free conductors within the enclosure shall meet or exceed 6" requirement.	The length of the free conductors within the enclosure does not meet or exceed 6" requirement.	Minor	NEC Article 300.14
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7		

		Task	Nonconformance Description	Defect Category	Reference
Junction Box (continued)	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment is suitable for environment.	Junction box is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Junction box is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Junction box is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)

		Task	Nonconformance Description	Defect Category	Reference
Junction Box (continued)	Electrical (continued)	Junction box must be accessible.	Junction box is not accessible.	Minor	NEC Article 690.34
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	Junction box is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is continuous.	"The grounding electrode conductor (GEC) is not continuous or irreversibly spliced. Allowable means of splicing the GEC include compression crimp or exothermic welding processes."	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is sufficiently sized.	Grounding electrode conductor (GEC) is missing or undersized.	Major	NEC Articles 250.66 and 690.47
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
		Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Articles 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
Labeling	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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21	

		Task	Nonconformance Description	Defect Category	Reference
Junction Box (continued)	Labeling (continued)	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.	Disconnect Switch warning label is missing, incomplete, or not suitable for the environment. Label: WARNING ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.	Incidental	NEC Articles 110.21(B) and 690.13(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.	Junction box is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Roof penetrations are properly sealed and flashed.	Roof penetrations are not properly sealed and flashed to prevent moisture from entering rooftop per roof manufacturer instructions.	Major	IBC Section 1503.2, IPC 903, and NEC Article 110.3(B)
		Equipment is installed with the appropriate clearances.	Junction box is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
Load Side Connection	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		If an ac system operating at 1000 volts or less is grounded at any point, 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. A main bonding jumper shall connect the grounded conductor(s) to each service disconnecting means enclosure. The grounded conductor(s) shall be installed in accordance with 250.24(D)(1) through (D)(4).	Grounded (neutral) conductor is not routed with the ungrounded conductors and/ or properly bonded to PV service disconnect enclosure using a listed grounding bus or terminal, or the grounded conductors are not properly bonded to the Grounding Electrode Conductor (GEC).	Major	NEC Article 250.24(D)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12

		Task	Nonconformance Description	Defect Category	Reference
Load Side Connection (continued)	Conductors (continued)	Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	A metal underground water pipe shall be supplemented by an additional electrode.	The required supplemental grounding electrode is not present (water pipe primary).	Major	NEC Article 250.53(D)(2)
Equipment is properly grounded.		Equipment is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43	

		Task	Nonconformance Description	Defect Category	Reference
Load Side Connection (continued)	Grounding (continued)	Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		Water pipe electrode supplemented by other electrode.	Water pipe electrode is not supplemented by other electrode.	Major	NEC Article 250.53(D)(2)
		When a metal water pipe is used as a grounding electrode, there must be a ground jumper present across water meter/filter.	No ground jumper is 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).	The ground rod (electrode) is not protected from physical damage or is not below/flush with the ground (8ft in contact with the soil).	Minor	NEC Article 250.53(A)(4)
	Labeling	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.	PV circuit breaker(s) is/ are not identified.	Incidental	NEC Articles 110.21(B) and 408.4(A)
		Permanent plaques, labels, or directories shall be installed at each service equipment location, or at an approved readily visible location.	Permanent plaque or directory denoting location of all power sources and location of disconnects on premises at each service equipment location is missing, incomplete, or unsuitable for the environment.	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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		The sum of the ampere ratings of all overcurrent devices on panelboards, 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.	WARNING: EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.	Incidental	NEC Articles 110.21(B), 690.59 and 705.12(B)(3)
		Where two sources, one a primary power source and the other another power source, 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.	PV Backfed breaker PV disconnect label is missing, incomplete, or unsuitable for the environment. WARNING POWER SOURCE OUTPUT. DO NOT RELOCATE THIS OVERCURRENT DEVICE.	Incidental	NEC Articles 110.21(B), 408.4(A) and 705.12 (B)(2)

		Task	Nonconformance Description	Defect Category	Reference
Load Side Connection (continued)	OCPD	Inverter-interactive output circuit load side connection overcurrent protective device must be properly sized.	Inverter(s) output exceeds the sum of 125% of the inverter(s) output circuit and the rating of the OCPD exceeds 120% of the busbar ampacity rating.	Critical	NEC Article 705.12(B)(4)
		Main panel overcurrent protection is sufficient.	Overcurrent protection is not correctly sized to protect circuit conductors.	Critical	NEC Article 240.4
		Circuit Breaker shall be installed and used in accordance with any instruction included in the listing or labeling.	Circuit Breaker is not 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.	Inverter(s) output is not located on the opposite end of the busbar from the utility feed termination.	Major	NEC Article 705.12(B)(4)
		The AC OCPD is properly sized for the expected output current of the PV system.	The AC OCPD is not properly sized for the expected output current of the PV system.	Major	NEC Article 240.4
		Back-fed plug in devices shall be secured in place by additional fastener.	Back-fed plug in overcurrent protection devices shall be secured in place by additional fastener.	Minor	NEC Article 408.36(D)
	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.	Equipment is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
Structural	Equipment is installed with the appropriate clearances.	Equipment is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)	
Microinverter	Conductors	All array conductors are properly connected.	Array conductors found disconnected or improperly connected, which may be causing portions of the array to be inoperable and/or pose a shock hazard.	Critical	NEC Articles 110.3(B) and 110.12
		Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		Splice components are rated for environment.	Splice components (e.g., wire nuts) are not rated for environment. Where raceways are installed in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).	Major	NEC Articles 110.3(B), 110.11, and 110.14

		Task	Nonconformance Description	Defect Category	Reference
Microinverter (continued)	Conductors (continued)	Splices and connections are secure and of high integrity.	Splices/connections are not secure.	Major	NEC Article 110.14
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Outdoor wire ties/clips are UV and outdoor rated.	Outdoor wire ties/clips are not UV and/or outdoor rated.	Minor	NEC Article 110.3(B)
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 does not meet the conditions to be used as conductor support.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Equipment must be installed in accordance with its listing and manufacturer's instructions.	Microinverter is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Microinverter is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)

		Task	Nonconformance Description	Defect Category	Reference
Microinverter (continued)	Grounding	Equipment is properly grounded.	Microinverter chassis is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		Grounding electrode conductor is sufficiently sized.	Grounding electrode conductor (GEC) is missing or undersized.	Major	NEC Articles 250.66, and 690.47
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
	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.	Microinverter and related components are not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
Optimizer	Conductors	All array conductors are properly connected.	Array conductors found disconnected or improperly connected, which may be causing portions of the array to be inoperable and/or pose a shock hazard.	Critical	NEC Articles 110.3(B) and 110.12
		Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		Splice components are rated for environment.	Splice components (e.g., wire nuts) are not rated for environment. Where raceways are installed in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and connections are secure and of high integrity.	Splices/connections are not secure.	Major	NEC Article 110.14
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
Outdoor wire ties/clips are UV and outdoor rated.	Outdoor wire ties/clips are not UV and/or outdoor rated.	Minor	NEC Article 110.3(B)		

		Task	Nonconformance Description	Defect Category	Reference
Optimizer (continued)	Conductors (continued)	Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 does not meet the conditions to be used as conductor support.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
	Electrical	Equipment must be installed in accordance with its listing and manufacturer's instructions.	Optimizer is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Optimizer is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
	Grounding	Equipment is properly grounded.	Optimizer chassis is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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

		Task	Nonconformance Description	Defect Category	Reference
Optimizer (continued)	Grounding (continued)	Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Articles 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
	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.	Optimizer and related components are not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
Production Meter	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		A grounded conductor shall not be connected to normally non-current-carrying metal parts of equipment, to equipment grounding conductor(s), or be reconnected to ground on the load side of the service disconnecting means.	The grounded conductor(s) (neutral) are connected to the ground terminal and/or bonded to the metal frame of the enclosure.	Major	NEC Article 250.24(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
Circuit conduit or raceway is properly supported and secured.		Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)	

		Task	Nonconformance Description	Defect Category	Reference
Production Meter (continued)	Conduit (continued)	Conduit below grade is installed with provisions for movement.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be sufficiently rated for expected voltage and/or current.	Meter and/ or the enclosure is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Equipment is suitable for environment.	Meter and/ or the enclosure is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Meter and/ or the enclosure is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Meter and/ or the enclosure is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)

		Task	Nonconformance Description	Defect Category	Reference
Production Meter (continued)	Grounding	Equipment is properly grounded.	Meter enclosure is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounding electrode conductor is continuous.	"The grounding electrode conductor (GEC) is not continuous or irreversibly spliced. Allowable means of splicing the GEC include compression crimp or exothermic welding processes."	Major	NEC Articles 250.64(C) and 690.47
		Grounding electrode conductor is sufficiently sized.	Grounding electrode conductor (GEC) is missing or undersized.	Major	NEC Articles 250.66, and 690.47
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
	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.	Meter enclosure is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	Meter enclosure is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
Rapid Shutdown Device	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24

		Task	Nonconformance Description	Defect Category	Reference
Rapid Shutdown Device (continued)	Conductors (continued)	Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	Minor	NEC Articles (LFMC-350.30, PVC-352.30, EMT-358.30, Metal Trough-376.30)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be sufficiently rated for expected voltage and/or current.	Rapid shutdown device is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Equipment is suitable for environment.	Rapid shutdown device is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Rapid shutdown device is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		PV system circuits installed on or in buildings shall include a rapid shutdown function to reduce shock hazard for firefighters in accordance with 690.12(A) through (D).	Rapid shutdown device did not meet the requirement specified in the 2023 NEC Article 690.12 (A) through (D).	Major	NEC Article 690.12(B)(2)(2)

		Task	Nonconformance Description	Defect Category	Reference
Rapid Shutdown Device (continued)	Electrical (continued)	Where circuits identified in 690.12(A) are required to meet the requirements in 690.12(B), an initiation device(s) shall be provided and shall initiate the rapid shutdown function. The device's "off" position shall indicate that the rapid shutdown function has been initiated for all PV systems connected to that device. For one-and two-family dwellings, an initiation device(s), where required, shall be located at a readily accessible outdoor location.	A PV system Rapid Shutdown initiation device is not present, located outdoors or indicate the device is in the "off" position as required.	Major	NEC Article 690.12(C)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Rapid shutdown device is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment grounding conductor is properly sized.	Equipment grounding conductor is undersized.	Major	NEC Articles 250.122 and 690.45
		Equipment is properly grounded.	Rapid shutdown device is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
		Where not routed with circuit conductors, equipment grounding conductors smaller than 6AWG shall be protected from physical damage.	Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Articles 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119

		Task	Nonconformance Description	Defect Category	Reference
Rapid Shutdown Device (continued)	Labeling	A rapid shutdown switch shall have a label located on or no more than 1 m (3 ft) from the switch that includes the following wording: RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM	Rapid Shutdown label is missing, incomplete, or unsuitable for the environment. Label: RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM. The label shall be reflective, with all letters capitalized and having a minimum height of 9.5 mm (3/8 in.), in white on red background.	Incidental	NEC Article 110.21(B) and 690.12(D)(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). They shall be affixed to (1) Exposed raceways, cable trays, and other wiring methods (2) Covers or enclosures of pull boxes and junction boxes (3) Conduit bodies in which any of the available conduit openings are unused"	Photovoltaic power source label for conduit and/ or wiring systems is missing, incomplete, or unsuitable for the environment. Label: WARNING PHOTOVOLTAIC POWER SOURCE or SOLAR PV DC CIRCUIT	Incidental	NEC Articles 110.21(B) and 690.31(D)(2)
		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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
	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.	Rapid shutdown device is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	Rapid shutdown device is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
	Roof Mounted Array	Conductors	All array conductors are properly connected.	Array conductors found disconnected or improperly connected, which may be causing portions of the array to be inoperable and/or pose a shock hazard.	Critical
Conductors are appropriately sized for expected current.			Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
Conductor insulation type is properly rated for temperature and environmental conditions.			Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
In exposed work, conductors are protected from abrasion or any other physical damage.			Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12

		Task	Nonconformance Description	Defect Category	Reference
Roof Mounted Array (continued)	Conductors (continued)	Splice components are rated for environment.	Splice components (e.g., wire nuts) are not rated for environment. Where raceways are installed in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).	Major	NEC Articles 110.3(B), 110.11, and 110.14
		Splices and connections are secure and of high integrity.	Splices/connections are not secure.	Major	NEC Article 110.14
		All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Outdoor wire ties/clips are UV and outdoor rated.	Outdoor wire ties/clips are not UV and/or outdoor rated.	Minor	NEC Article 110.3(B)
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	Indoor DC source circuits are contained in metallic conduit or raceway.	DC source circuits are not contained in metallic conduit/raceway when indoors.	Major	NEC Article 690.31(D)(1)
		The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)

		Task	Nonconformance Description	Defect Category	Reference
Roof Mounted Array (continued)	Conduit (continued)	Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
	Grounding	Equipment is properly grounded.	Racking or support structure is not bonded to an equipment grounding conductor (EGC).	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounding hardware is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
		Module frames must be grounded. WEEBs and other grounding devices must be installed correctly.	Module grounding hardware is not properly installed to effectively ground module frames. Solid contact between the listed grounding device and bare metal of the module frames, at designated grounding points, is required for a solid ground bond.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43

		Task	Nonconformance Description	Defect Category	Reference
Roof Mounted Array (continued)	Grounding (continued)	Module grounding hardware must be listed for the purpose.	Grounding hardware used is not listed for use in this application and must be replaced with listed grounding hardware suitable for outdoor use and resistant to galvanic reaction with racking and module frame materials.	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.	Metal roof (component likely to become energized) is not properly grounded. Every metal panel beneath array must be bonded together, and to an equipment grounding conductor.	Major	NEC Articles 690.43(B) and 250.110
		Manufacturer instructions for grounding hardware quantity must be followed.	There are an insufficient number of grounding clips installed on array modules.	Minor	NEC Article 110.3(B)
		Where not routed with circuit conductors, equipment grounding conductors smaller than #6 AWG shall be protected from physical damage.	Exposed equipment grounding conductor is smaller than #6AWG and is not protected from physical damage.	Minor	NEC Articles 250.120(C)
		Equipment grounding conductor is identified as bare, green, or green with continuous yellow stripe(s).	Equipment grounding conductor (EGC) is not properly identified as either bare, green, or green with continuous yellow stripe(s).	Incidental	NEC Article 250.119
	Labeling	Interruption circuit - shall be a type that requires the use of a tool to open will be marked "Do Not Disconnect Under Load"	Warning label to not disconnect under load is missing, incomplete, or unsuitable for the environment. Label: WARNING DO NOT DISCONNECT UNDER LOAD or NOT FOR CURRENT INTERRUPTING	Incidental	NEC Articles 110.21(B) and 690.33(D)(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). They shall be affixed to (1) Exposed raceways, cable trays, and other wiring methods (2) Covers or enclosures of pull boxes and junction boxes (3) Conduit bodies in which any of the available conduit openings are unused"	Photovoltaic power source label for conduit and/ or wiring systems is missing, incomplete, or unsuitable for the environment. Label: WARNING PHOTOVOLTAIC POWER SOURCE or SOLAR PV DC CIRCUIT	Incidental	NEC Articles 110.21(B) and 690.31(D)(2)
		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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
	OCPD	Overcurrent protective device present between parallel spliced DC string conductors.	Overcurrent protective device between parallel spliced DC string conductors is missing.	Major	NEC Article 690.9(A)

		Task	Nonconformance Description	Defect Category	Reference
Roof Mounted Array (continued)	Structural	All open vent pipes on roof are free from modules and racking system obstructions.	PV module and/or racking system obstructs open vent pipe(s) on roof.	Major	In violation of IBC 903 and/or vent pipe has been modified in violation IBC 903
		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.	PV module is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Roof penetrations are properly sealed and flashed.	Roof penetrations are not properly sealed and flashed to prevent moisture from entering rooftop per roof manufacturer instructions.	Major	IBC Section 1503.2, IPC 903, and NEC Article 110.3(B)
Source Connection	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		If an ac system operating at 1000 volts or less is grounded at any point, 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. A main bonding jumper shall connect the grounded conductor(s) to each service disconnecting means enclosure. The grounded conductor(s) shall be installed in accordance with 250.24(D)(1) through (D)(4).	Grounded (neutral) conductor is not routed with the ungrounded conductors and/ or properly bonded to PV service disconnect enclosure using a listed grounding bus or terminal, or the grounded conductors are not properly bonded to the Grounding Electrode Conductor (GEC).	Major	NEC Article 250.24(D)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		Service entrance conductors are properly spliced.	Service Entrance conductor splices (Taps) are not installed in accordance with its listing.	Major	NEC Articles 110.14(B) and 230.46
		The service conductors connected to the power production source service disconnecting means shall be sized in accordance with 705.28 and not be smaller than 6 AWG copper or 4 AWG aluminum or copper-clad aluminum.	Service entrance conductors not are not sized in accordance with 705.28.	Major	NEC Article 705.11(B)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12

		Task	Nonconformance Description	Defect Category	Reference
Source Connection (continued)	Conductors (continued)	Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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)
		The service entrance Flexible Metal Conduit (FMC) or Liquid tight Flexible Metal Conduit (LFMC) shall not exceed 6 feet.	The service entrance FMC or LFMC conduit exceed 6 feet.	Minor	NEC Article 230.43(15)
		Conduit does not meet the conditions to be used as conductor support.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	A disconnecting means in accordance with Parts VI through VII of Article 230 shall be provided to disconnect all ungrounded conductors of a power production source from the conductors of other systems.	A Service Disconnect is not present or does not disconnect all ungrounded conductors of a power production source from the conductors of other systems.	Major	NEC Article 705.11(D)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	NEC Article 110.3(B)
		Service disconnect is properly rated for the application.	Disconnect is incorrectly rated for service entrance use and/or does not have a minimum current rating of 60A.	Major	NEC Article 230.79(D)

Source Connection (continued)	Task	Nonconformance Description	Defect Category	Reference
Electrical (continued)	The PV system disconnecting means shall simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring systems.	The PV disconnect does not simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring systems.	Major	NEC Article 690.13(E)
	AC Disconnect is present and readily accessible.	A PV disconnecting means is not in a readily accessible location.	Minor	NEC Article 690.13(A)
	Disconnect is properly wired to ensure that fuses can be de-energized for service.	Disconnect terminals are wired backwards, not in accordance with its listing and manufacturer instructions. Ensure supply and load side of disconnect 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.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
	Service Disconnects are properly grouped.	Service Disconnects are not properly grouped together.	Minor	NEC Article 230.72
	Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
Grounding	A metal underground water pipe shall be supplemented by an additional electrode.	The required supplemental grounding electrode is not present (water pipe primary).	Major	NEC Article 250.53(D)(2)
	All metal enclosures, metal wiring methods, and metal parts associated with the service connected to a power production source shall be bonded in accordance with Parts II through V and VIII of Article 250.	Ground hardware is not present or installed according to its listing.	Major	NEC Articles 110.3(B), 705.11(E) and 250.4
	Equipment is properly grounded.	Disconnect is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
	Grounding electrode conductor is properly bonded to the main premise grounding electrode system.	"The grounding electrode conductor (GEC) is not continuous or irreversibly spliced. Allowable means of splicing the GEC include compression crimp or exothermic welding processes."	Major	NEC Articles 250.64(C) and 690.47

		Task	Nonconformance Description	Defect Category	Reference
Source Connection (continued)	Grounding (continued)	Grounding electrode conductor is sufficiently sized.	Grounding electrode conductor (GEC) is missing or undersized.	Major	NEC Articles 250.66, and 690.47
		Water pipe electrode supplemented by other electrode.	Water pipe electrode is not supplemented by other electrode.	Major	NEC Article 250.53(D)(2)
		When a metal water pipe is used as a grounding electrode, there must be a ground jumper present across water meter/filter.	No ground jumper is present across water meter/filter.	Major	NEC Article 250.53(D)(1)
		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.	Ferrous conduit and enclosures containing the grounding electrode conductor (GEC), when installed, are not electrically continuous or appropriately bonded to GEC.	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
		The ground rod (electrode) is protected from physical damage or is below/flush with the ground. (8ft in contact with the soil).	The ground rod (electrode) is not protected from physical damage or is not below/flush with the ground (8ft in contact with the soil).	Minor	NEC Article 250.53(A)(4)
	Labeling	Permanent plaques, labels, or directories shall be installed at each service equipment location, or at an approved readily visible location.	Permanent plaque or directory denoting location of all power sources and location of disconnects on premises at each service equipment location is missing, incomplete, or unsuitable for the environment.	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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
	OCPD	The service overcurrent device shall be an integral part of the service disconnecting means or shall be located immediately adjacent thereto.	The OCPD is missing, improperly installed or improperly located.	Critical	NEC Articles 230.91 and/ or 110.3(B)
		Equipment intended to interrupt current at fault levels shall have an interrupting rating at nominal circuit voltage at least equal to the available fault current at the line terminals of the equipment.	The Service Disconnect interrupt current fault level is not equal to or greater than the available fault current at the line terminals of the main service equipment.	Major	NEC Articles 110.9, 110.10 and 230.82(6)
		Fused AC Disconnect shall be installed and used in accordance with any instruction included in the listing or labeling and Fuses are present.	Fused AC Disconnect is not mounted/ installed in accordance with its listing and manufacturer instructions, and/ or fuses are not present.	Major	NEC Article 110.3(B)
		Fuses are present and installed in accordance with any instruction included in the listing or labeling.	Fuses are not installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)

		Task	Nonconformance Description	Defect Category	Reference
Source Connection (continued)	OCPD (continued)	No overcurrent device shall be connected in series with any conductor that is intentionally grounded, unless the overcurrent device opens all conductors of the circuit, including the grounded conductor, and is designed so that no pole can operate independently.	Grounded conductors are fused.	Major	NEC Articles 240.22
		The AC OCPD is properly sized for the expected output current of the PV system.	The AC OCPD is not properly sized for the expected output current of the PV system.	Major	NEC Article 240.4
	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.	Disconnect is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	Disconnect is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)
Subpanel	Conductors	Conductors are appropriately sized for expected current.	Conductors are undersized for expected current.	Critical	NEC Article 310.15 and/ or 690.8(B)
		A grounded conductor shall not be connected to normally non-current-carrying metal parts of equipment, to equipment grounding conductor(s), or be reconnected to ground on the load side of the service disconnecting means.	The grounded conductor(s) (neutral) are connected to the ground terminal and/or bonded to the metal frame of the enclosure.	Major	NEC Article 250.24(B)
		Conductor insulation type is properly rated for temperature and environmental conditions.	Conductor insulation type is not rated for environment (e.g., USE-2, THWN-2, THW-2, RHW-2) and/or applicable temperatures.	Major	NEC Articles 300.9, 310.10, 310.15(A)(3) and 334.12(B)(4)
		In exposed work, conductors are protected from abrasion or any other physical damage.	Conductors are not adequately protected from abrasion or any other physical damage.	Major	NEC Article 110.12
		All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, conduit body, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord.	The conductors of the same circuit are not routed in the same raceway.	Minor	NEC Article 300.3(B)
		Conductors are properly sized for rated terminals.	Installed conductor size is not listed for use with this terminal lug.	Minor	NEC Article 110.3(B)
		Conductors shall be properly and firmly supported in a safe and permanent manner.	Conductors are not properly and firmly supported in a safe and permanent manner.	Minor	NEC Article 110.12
		Single conductor(s) connected correctly to the terminal or lug in accordance with its listing.	Single conductor(s) are not connected correctly to the terminal or lug.	Minor	NEC Article 110.3(B) and 110.14(A)
		Wire cannot be bent at a tighter radius than 5x the diameter of the conductor.	Conductors are bent too tightly and cannot be installed with a bend radius less than 5 times the conductor diameter.	Minor	NEC Article 334.24, 338.24

		Task	Nonconformance Description	Defect Category	Reference
Subpanel (continued)	Conductors (continued)	Grounded (neutral) conductor is properly identified.	Grounded conductor is not properly identified as white or gray.	Incidental	NEC Article 200.6(A)&(B)
		Ungrounded conductor(s) are properly identified.	Ungrounded conductor cannot be marked using white, gray, or white striped conductors to avoid confusion with grounded conductor markings.	Incidental	NEC Article 200.7
	Conduit	The conduit is grounded (when required).	The conduit is not grounded.	Major	NEC Articles 250.4(A)(3) and 690.43
		Circuit conduit or raceway is properly supported and secured.	Circuit conduit or raceway lacks adequate support.	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.	Conduit below grade is not installed with provisions for movement (e.g., frost sleeve) due to settlement and frost heaving.	Minor	NEC Article 300.5(J)
		Conduit fittings and connectors are designed and listed for this use.	Conduit fittings and connectors are not designed or 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 thermal expansion fitting is properly installed to allow for movement.	Thermal expansion fitting not present on raceways and conduit to compensate for expansion and contraction.	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.	Conduit was used as conductor support.	Incidental	NEC Article 300.11(C)
		Conduit penetrations internally sealed to prevent condensation between conditioned and unconditioned environment.	Conduit is missing an approved internal sealant at penetrations between conditioned and unconditioned spaces to prevent condensation.	Incidental	NEC Article 300.7(A)
	Electrical	Equipment must be sufficiently rated for expected voltage and/or current.	Subpanel is insufficiently rated for expected voltage and/or current.	Critical	NEC Article 110.3(B)
		Equipment is suitable for environment.	Subpanel is not suitable for environment or excessive moisture found in enclosure.	Major	NEC Articles 314.15 and 110.3(B)
		Equipment must be installed in accordance with its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard and/ or will result in a measurable shortfall in energy savings.	Major	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.	GFCI-WR is not installed where required.	Minor	NEC Articles 110.3(B), 210.8(A)(3) and 406.9(B)

		Task	Nonconformance Description	Defect Category	Reference
Subpanel (continued)	Electrical (continued)	Dissimilar metals must not be in contact and prevented from undergoing galvanic reaction.	Electrochemically dissimilar metals are in direct physical contact, which may lead to a 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 its listing and manufacturer's instructions.	Equipment is not installed in accordance with its listing and manufacturer instructions. This non-conformance requires modifications to address but is not expected to pose a substantial risk of system failure or hazard.	Minor	NEC Article 110.3(B)
		Unused openings of electrical equipment shall be properly sealed.	Unused openings are not closed or sealed.	Minor	NEC Articles 110.12(A) or 408.7
	Grounding	Equipment is properly grounded.	Subpanel is not properly grounded using a listed grounding method. Enclosure must be grounded with equipment listed for the purpose and that is solidly connected to the enclosure body.	Major	NEC Articles 250.4, 250.8, 250.12 and 690.43
		Grounded conductor(s) terminal lug is properly installed.	Ground hardware is not installed according to its listing.	Major	NEC Articles 110.3(B) and 250.4
	Labeling	Each PV system disconnecting means shall be permanently marked as to identify it as a photovoltaic system disconnect.	PV disconnect label is missing, incomplete, or unsuitable for the environment. Label: PV SYSEM DISCONNECT (or equivalent)	Incidental	NEC Articles 110.21(B) and 690.13(B)
		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.	PV circuit breaker(s) is/ are not identified.	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.	The manufacturer's labels are obscured.	Incidental	NEC Article 110.21
		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.	AC Combiner warning label indicating presence of multiple power sources is missing, incomplete, or not suitable for environment. Label: WARNING THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR	Incidental	NEC Articles 110.21(B) and 705.12(B)(3)

		Task	Nonconformance Description	Defect Category	Reference
Subpanel (continued)	Labeling (continued)	The sum of the ampere ratings of all overcurrent devices on panelboards, 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.	WARNING: EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.	Incidental	NEC Articles 110.21(B), 690.59 and 705.12(B)(3)
	OCPD	Circuit Breaker shall be installed and used in accordance with any instruction included in the listing or labeling.	Circuit Breaker is not installed and used in accordance with any instruction included in the listing or labeling.	Major	NEC Article 110.3(B)
		The AC OCPD is properly sized for the expected output current of the PV system.	The AC OCPD is not properly sized for the expected output current of the PV system.	Major	NEC Article 240.4
	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.	Subpanel is not mounted/ installed in accordance with its listing and manufacturer instructions.	Major	NEC Articles 110.3(B), 110.12
		Equipment is installed with the appropriate clearances.	Subpanel is not properly guarded against accidental contact and/or physical damage or does not have sufficient working clearances.	Minor	NEC Articles 110.26 and 110.27(A)