Electric Distribution Engineering Manual 43, Joint Use

43-122 Equipment Mounted on Secondary Pole

Revised August 4, 2020 Required Use

43-122 Equipment Mounted on Secondary Pole

CAUTION

In the Communication Workers Safety Zone do not install any equipment per NESC 238E except luminaires and traffic signals.



- 1. It is recommended to set an additional pole solely to be used for mounting a camera.
- 2. The camera and bracket cannot be mounted on poles with existing streetlight brackets.

- 3. Maintain an open quadrant for climbing space. For climbing considerations, all equipment must be placed on the same side of the pole.
- 4. Only Consumers Energy shall install and maintain equipment when mounted in the supply space. When 40" of clearance is maintained between the secondary and this equipment, qualified electricians or line-workers may install and maintain this equipment.
- 5. The camera or bracket cannot be within 24" of the secondary or communication in any direction. Camera bracket may be mounted 12" below the secondary on the pole provided all other clearances are met.
- 6. Actual contact height is subject to terrain and National Electrical Safety Code (NESC) ground clearance requirements.
- 7. Install wiring and equipment in accordance with local and National Electric Code (NEC). Obtain all required permits and inspections.
- 8. For grounding details, see **section 43-142**.
- 9. The control box should fit in the footprint show in figure 43-122-1. The combined weight of the control box, bracket, and camera should not exceed 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 10. Conductors, other than grounds, installed below eight feet from the ground line must be covered with UL listed nonmetallic duct or molding.
- 11. Do not install on poles with existing communications equipment and/or underground riser cables.



- 1. Only Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space. Only install equipment in the supply space on bucket truck accessible poles.
- 2. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole.
- 3. A five inch offset is required for climbing belts.
- 4. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 5. Install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.
- 6. Consumers Energy will connect equipment ground to the down ground with a split bolt connector. If no ground is present, a down ground must be installed.
- 7. Equipment and/or antennas should fit in the footprint shown in figure 43-122-2. The combined weight for both footprints is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials. Copy saved on: 02/08/2022 | This version is only valid if the revision date matches the online version.

- 8. When testing, if test leads or cables pass near the supply conductors, install molding to prevent contact.
- 9. Actual contact height is subject to NESC ground clearance requirements.
- 10. Conductors, other than grounds, installed below eight feet from the ground-line must be covered with UL listed nonmetallic duct or molding.
- 11. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height 45'.
- 12. Equipment shall be legibly marked with owner's name and telephone number using 3/4" to one inch block letters.
- 13. It is recommended to set an additional pole solely to be used for mounting equipment.
- 14. Equipment shall be approved by Distribution Standards and Materials.
- 15. Raintight dead-front service switches are suitable for use as service equipment.

CAUTION

In the Communication Workers Safety Zone do not install any equipment per NESC 238E except luminaires and traffic signals.



- 1. Install equipment in the primary zone (above the secondary) only as a last resort. Only Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space.
- 2. Maintain 2'-4" minimum clearance from any equipment including antennas to primary conductors and/or terminals.
- 3. When working on equipment, maintain minimum approach distance or de-energize the riser.
- 4. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole. Equipment must be on the opposite side of the primary.
- 5. A five inch offset is required for climbing belts.
- 6. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 7. Install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.
- 8. For grounding details, see section 43-142.

43-122 Equipment Mounted on Secondary Pole

- 9. Equipment and/or antennas should fit in the footprint shown in figure 43-122-3. The combined weight for both footprints is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 10. When testing, if test leads or cables pass near supply conductors, install molding to prevent contact.
- 11. Actual contact height is subject to NESC ground clearance requirements.
- 12. Conductors, other than grounds, installed below eight feet from the ground-line must be covered with UL listed nonmetallic duct or molding.
- 13. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height 45'.
- 14. If a transformer is only needed to power an antenna, a 1/2 kVA transformer may be used.
- 15. Equipment shall be legibly marked with the owner's name and telephone number using 3/4" to one inch block letters.
- 16. It is recommended to set an additional pole solely to be used for mounting equipment.
- 17. Equipment shall be approved by Distribution Standards and Materials.
- 18. Raintight dead-front service switches are suitable for use as service equipment.

CAUTION

In the Communication Workers Safety Zone do not install any equipment per NESC 238E except luminaires and traffic signals



- 1. Only Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space.
- 2. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole.
- 3. A five inch offset is required for climbing belts.

- 4. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 5. Install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.
- 6. For grounding details, see section 43-142.
- 7. Equipment and/or antennas should fit in the footprint shown in figure 43-122-4. The combined weight for both footprints is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 8. Actual contact height is subject to NESC ground clearance requirements.
- 9. Conductors, other than grounds, installed below eight feet from the ground-line must be covered with UL listed nonmetallic duct or molding.
- 10. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height 45'.
- 11. Equipment shall be legibly marked with the owner's name and telephone number using 3/4" to one inch block letters.
- 12. It is recommended to set an additional pole solely to be used for mounting equipment.
- 13. Equipment shall be approved by Distribution Standards and Materials.
- 14. Raintight dead-front service switches are suitable for use as service equipment.

Electric Distribution Engineering Manual 43, Joint Use

43-132 Equipment Attachments

Revised August 4 , 2020

Required Use

43-132 Equipment Attachments



Notes

1. Only Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space. Only install equipment in the supply space on bucket truck accessible poles.

43-132 Equipment Attachments

- 2. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole.
- 3. A five inch offset is required for climbing belts.
- 4. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 5. Install wiring and equipment in accordance with local and National Electrical Code (NEC). Obtain all required permits and inspections.
- 6. Consumers Energy will connect the equipment ground to the down ground with a split bolt connector. If no ground is present, a down ground must be installed.
- 7. Equipment should fit in the footprint shown in **figure 43-132-1**. Maximum allowable weight is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 8. When testing, if test leads or cables pass near supply conductors, install molding to prevent contact.
- 9. Actual contact height is subject to National Electrical Safety Code (NESC) ground clearance requirements.
- 10. Conductors, other than grounds, installed below eight feet from the ground line shall be covered with UL listed nonmetallic duct or molding.
- 11. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height is 45'.
- 12. It is recommended to set an additional pole solely to be used for mounting equipment.
- 13. The antenna and bracket cannot be mounted on poles with existing streetlight brackets.
- 14. Equipment shall be approved by Distribution Standards and Materials.
- 15. Equipment shall be legibly marked with the owner's name and telephone number using 3/4" to one inch block letters.
- 16. Raintight dead-front service switches are suitable for use as service equipment.
- 17. Acceptable bracket length is eight feet or less. See section 43-124 for pole loading.

CAUTION

In the Communication Workers Safety Zone do not install any equipment per NESC 238E except luminaires and traffic signals.



- 1. Install equipment in the primary zone (above the secondary) only as a last resort. Only install equipment in the supply space on bucket truck accessible poles. Only Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space.
- 2. Maintain 2'-4" minimum clearance from any equipment including antennas to primary conductors and terminals.
- 3. When working on equipment, maintain minimum approach distance or de-energize the riser.
- 4. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole. Equipment must be on the opposite side of the primary.
- 5. A five inch offset is required for climbing belts.

43-132 Equipment Attachments

- 6. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 7. Install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.
- 8. Consumers Energy will connect the equipment ground to the down ground with a split bolt connector. If no ground is present, a down ground must be installed.
- 9. Equipment should fit in the footprint shown in **figure 43-132-2**. Maximum allowable weight is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 10. When testing, if test leads or cables pass near supply conductors, install molding to prevent contact.
- 11. Actual contact height is subject to NESC ground clearance requirements.
- 12. Conductors, other than grounds, installed below eight feet from the ground-line shall be covered with UL listed nonmetallic duct or molding.
- 13. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height is 45'.
- 14. It is recommended to set an additional pole solely to be used for mounting equipment.
- 15. The antenna and bracket cannot be mounted on poles with existing streetlight brackets.
- 16. If the transformer is only needed to power the antenna, a 1/2 kVA transformer may be used.
- 17. Equipment shall be approved by Distribution Standards and Materials.
- 18. Equipment shall be legibly marked with the owner's name and telephone number using 3/4" to one inch block letters.
- 19. Raintight dead-front service switches are suitable for use as service equipment.
- 20. Acceptable bracket length is eight feet or less. See section 43-124 for pole loading.
- 21. See figure 26-101-1.

CAUTION

In the Communication Workers Safety Zone do not install any equipment per NESC 238E except luminaires and traffic signals.



- 1. Only Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space.
- 2. Maintain 2'-4" minimum clearance from any equipment including antennas to primary conductors and terminals.
- 3. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole.
- 4. A five inch offset is required for climbing belts.
- 5. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 6. Install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.
- 7. Consumers Energy will connect the equipment ground to the down ground with a split bolt connector. If no ground is present, a down ground must be installed.
- 8. Equipment should fit in the footprint shown in **figure 43-132-3**. Maximum allowable weight is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 9. Actual contact height is subject to NESC ground clearance requirements.
- 10. Conductors, other than grounds, installed below eight feet from the ground line shall be covered with UL listed nonmetallic duct or molding.

- 11. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height is 45'.
- 12. It is recommended to set an additional pole solely to be used for mounting equipment.
- 13. The antenna and bracket cannot be mounted on poles with existing streetlight brackets.
- 14. The antenna or bracket cannot be within 24" of the secondary or communication in any direction. The antenna bracket may be mounted 12" below the secondary on the pole provided all other clearances are met.
- 15. If the transformer is only needed to power the antenna, a 1/2 kVA transformer may be used.
- 16. Equipment must be approved by Distribution Standards and Materials.
- 17. Equipment shall be legibly marked with the owner's name and telephone number using 3/4" to one inch block letters.
- 18. Raintight dead-front services are switch suitable for use as service equipment.
- 19. Acceptable bracket length is eight feet or less. See section 43-124 for pole loading.
- 20. See figure 26-101-1.

CAUTION

In this Communication Workers Safety Zone do not install any equipment per NESC 238E except luminaires and traffic signals.



1. Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space.

- 2. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole.
- 3. A five inch offset is required for climbing belts.
- 4. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 5. Install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.
- 6. Consumers Energy will connect the equipment ground to the down ground with a split bolt connector. If no ground is present, a down ground must be installed.
- 7. Equipment should fit in the footprint shown in **figure 43-132-4**. Maximum allowable weight is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 8. Actual contact height is subject to NESC ground clearance requirements.
- 9. Conductors, other than grounds, installed below eight feet from the ground-line shall be covered with UL listed nonmetallic duct or molding.
- 10. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height is 45'.
- 11. It is recommended to set an additional pole solely to be used for mounting equipment.
- 12. The antenna and bracket cannot be mounted on poles with existing streetlight brackets.
- 13. The antenna or bracket cannot be within 24" of the secondary or communication in any direction. The antenna bracket may be mounted 12" below the secondary on the pole provided all other clearances are met.
- 14. Equipment shall be approved by Distribution Standards and Materials.
- 15. Equipment shall be legibly marked with the owner's name and telephone number using 3/4" to one inch block letters.
- 16. Raintight dead-front service switches are suitable for use as service equipment.
- 17. Acceptable bracket length is eight feet or less. See section 43-124 for pole loading.



- 1. Only Consumers Energy shall install, test, and maintain equipment, unless 40" of clearance is maintained below the supply space.
- 2. Maintain 2'-4" minimum clearance from any equipment including antennas to the primary conductors and terminals.
- 3. Maintain an open quadrant for climbing space. For climbing considerations, all equipment shall be placed on the same side of the pole.
- 4. A five inch offset is required for climbing belts.
- 5. Communications equipment shall not be installed on poles with existing communications equipment and/or underground riser cables.
- 6. Install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.
- 7. Consumers Energy will connect the equipment ground to the down ground with a split bolt connector. If no ground is present, a down ground must be installed.
- 8. Equipment should fit in the footprint shown in figure 43-132-5. Maximum allowable weight is 200 lbs. Exceptions shall be approved by Distribution Standards and Materials.
- 9. Actual contact height is subject to NESC ground clearance requirements. on: 02/08/2022 | This version is only valid if the revision date matches the online version.

- 10. Conductors, other than grounds, installed below eight feet from the ground line shall be covered with UL listed nonmetallic duct or molding.
- 11. Specify the mounting location on the work order drawing. Attachment method must be approved by Consumers Energy. Maximum mounting height is 45'.
- 12. It is recommended to set an additional pole solely to be used for mounting equipment.
- 13. The antenna and bracket cannot be mounted on poles with existing streetlight brackets.
- 14. The antenna or bracket cannot be within 24" of the secondary or communication in any direction. The antenna bracket may be mounted 12" below the secondary on the pole provided all other clearances are met.
- 15. If the transformer is only needed to power the antenna, a 1/2 kVA transformer may be used.
- 16. Equipment shall be approved by Distribution Standards and Materials.
- 17. Equipment shall be legibly marked with the owner's name and telephone number using 3/4" to one inch block letters.
- 18. Raintight dead-front service switches are suitable for use as service equipment.
- 19. Acceptable bracket length is eight feet or less. See section 43-124 for pole loading.
- 20. See figure 26-101-1.



- 1. Billing notification (form 154) required.
- 2. All material and equipment are owned and installed by the customer except as noted.
- 3. Service connection and disconnection is to be made by Consumers Energy.
- 4. Use SAP Type/Mat of ECNC/NSU when creating a service order for underground service to communications equipment cabinet.

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5. The customer is to install wiring and equipment in accordance with local code and NEC. Obtain all required permits and inspections.

Electric Distribution Engineering Manual 43, Joint Use

43-142 Grounding Third party Communication Equipment

Revised August 4, 2020 Required Use

43-142 Grounding Third party Communication Equipment

NOTE The purpose of this section is to show grounding only. For equipment attachment details, see Equipment Attachment Exhibits, **section 43-132**.

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- 1. Install grounds so that an open quadrant is maintained for climbing.
- 2. The third party attacher provides a connection point. Consumers Energy will make the final connection. The exception to this is fiberglass brackets which do not require a ground.
- 3. Consumers Energy will complete the installation of the down ground.

Exhibit A, P.23

- 4. The third party must install a #6 Cu (minimum) down ground, coiling enough wire 40" below the supply space for final connection to equipment in the supply space. The third party also installs the ground rod and connects equipment below the Communication Worker Safety Zone. Consumers Energy can install the third party's entire down ground and ground rod at their request and their cost.
- 5. The third party will install a jumper on their ground in order to be bonded with a Consumers Energy ground. Consumers Energy will make the connection, bond the third party jumper to the Consumers Energy ground.



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- 1. Install grounds so that an open quadrant is maintained for climbing.
- 2. The third party attacher provides a connection point. Consumers Energy will make the final connection. The exception to this is fiberglass brackets which do not require a ground.
- 3. The third party will install a jumper on their ground in order to be bonded with a Consumers Energy ground. Consumers Energy will make the connection, bond the third party jumper to the Consumers Energy ground.
- 4. The third party must install a #6 Cu (minimum) down ground, coiling enough wire 40" below the supply space for final connection to equipment in the supply space. The third party also installs the ground rod and connects equipment below the Communication Worker Safety Zone. Consumers Energy can install the third party's entire down ground and ground rod at their request and their cost.
- 5. Consumers Energy will complete the installation of the down ground.



- 1. The fiberglass brackets do not need to be bonded to the ground.
- 2. Install grounds so that an open quadrant is maintained for climbing.

Exhibit A, P.26

- 3. The third party must install a #6 Cu (minimum) down ground, coiling enough wire 40" below the supply space for final connection to equipment in the supply space. The third party also installs the ground rod and connects equipment below the Communication Worker Safety Zone. Consumers Energy can install the third party's entire down ground and ground rod at their request and their cost.
- 4. The third party will install a jumper on their down ground in order to be bonded with a Consumers Energy ground. Consumers Energy will make the connection, bond the third party jumper to the Consumers Energy ground.