



## APPENDIX A

**FILED**  
10/31/18  
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## Proposed Regulations Table of Contents

| PR                 | Ancillary Revisions  | GO 95 Rule | Title                                       | Page | Proponent    |
|--------------------|----------------------|------------|---------------------------------------------|------|--------------|
| <a href="#">1</a>  |                      | 22.6-A     | Pole Top Extension (Definition)             |      | RC           |
| <a href="#">2</a>  |                      | 44.2       | Additional Construction                     |      | SED          |
| <a href="#">3</a>  |                      | 49.1-C     | Poles, Towers, and other Structures         |      | SED          |
| <a href="#">4</a>  | <a href="#">AR-1</a> | 51.8       | Interference with Fall Protection Equipment |      | RC           |
| <a href="#">5</a>  |                      | 54.7       | Climbing and Working Space                  |      | RC           |
| <a href="#">6</a>  |                      | 54.7-A(3)  | Allowable Climbing Space Obstructions       |      | RC           |
| <a href="#">7</a>  |                      | 54.10-F(3) | Allowable Climbing Space Obstructions       |      | RC           |
| <a href="#">8</a>  |                      | 54.11-G    | Allowable Climbing Space Obstructions       |      | RC           |
| <a href="#">9</a>  |                      | 54.12-F(3) | Allowable Climbing Space Obstructions       |      | RC           |
| <a href="#">10</a> | <a href="#">AR-2</a> | 81.7       | Interference with Fall Protection Equipment |      | RC           |
| <a href="#">11</a> |                      | 84.7-A(5)  | Allowable Climbing Space Obstructions       |      | RC           |
| <a href="#">12</a> |                      | 88.1       | Miscellaneous Equipment                     |      | RC           |
| <a href="#">13</a> |                      | 91.3       | Stepping                                    |      | IBEW<br>1245 |
| <a href="#">14</a> | <a href="#">AR-3</a> | 91.6       | Interference with Fall Protection Equipment |      | RC           |
| <a href="#">15</a> |                      | 93         | Climbing Space                              |      | RC           |
| <a href="#">16</a> |                      | 94.6       | Climbing Space                              |      | RC           |
| <a href="#">17</a> |                      | 94.11      | Pole Overturn Calculation                   |      | RC           |
| <a href="#">18</a> |                      | 94.12      | Personnel Access Above Supply Lines         |      | RC           |
|                    | <a href="#">AR-4</a> |            | Index Revisions                             |      | WRT          |

**A. Information Applicable to all PRs**

**Projected Costs**

An economic cost/benefit analysis has not been performed. It is expected that any internal standards revisions developed by communication carriers or electric supply utilities will have little or no economic impact to communication customers or utility rate payers.

**Potential environmental impacts**

No environmental impacts are anticipated.

**Whether the proposals are exempt from the California Environmental Quality Act (CEQA)**

These proposed regulations are not subject to the California Environmental Quality Act (CEQA) Guidelines because they are not a “project” under CEQA. They are also not subject to the National Environmental Policy Act (NEPA) because their adoption does not constitute action by a federal agency within the meaning of 42 USC § 4332.

PR: 1

## **GO 95 Rule 22.6A – Pole Top Extension**

### Original Rule

**A. Pole Top Extension** means a bracket or structure (exclusive of a poletop pin) attached to a pole and extending above its top to support conductors.

### Proposed revised rule with strikeout/underline

**A. Pole Top Extension** means a bracket or structure (exclusive of a poletop pin) attached to a pole and extending above its top to support conductors or equipment.

### Proposed final rule

**A. Pole Top Extension** means a bracket or structure (exclusive of a poletop pin) attached to a pole and extending above its top to support conductors or equipment.

### Rationale

This rule revision, expanding the definition of ‘pole-top extension’, clarifies that extensions are utilized to support other facilities such as antennas as well as conductors.

### Other relevant information

Editorial note - No other changes were proposed for Rule 22.6 B – F.

**DATE: 9/13/2018      Preliminary Vote**

**PR: 1              GO 95 Rule: 22.6-A**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | x                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       | x                      |            |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | x                      |            |                |           |                |

**DATE: 9/27/2018 - FINAL VOTE**

**PR: 1 GO 95 Rule: 22.6-A**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | X              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

## GO 95 Rule 44.2

### Original Rule

#### **44.2 Additional Construction**

Any entity planning the addition of facilities that materially increases loads on a structure shall perform a loading calculation to ensure that the addition of the facilities will not reduce the safety factors below the values specified by Rule 44.3. Such loading calculations shall be based on existing condition and proposed configuration, information provided under Rule 44.4, conservative values of relevant parameters, industry recognized values of relevant parameters, or any combination thereof. For wood structures more than 15 years old, the loading calculation shall incorporate the results of intrusive inspections performed within the previous five years. Such entity shall maintain these loading calculations for the service life of the pole or other structure for which a loading calculation was made and shall provide such information to authorized joint use occupants and the Commission upon request.

Note: For the purpose of Rule 44.2, a material increase in load is an addition which increases the load on a structure by more than five percent per installation, or ten percent over a 12-month span, of the electric utility's or Communication Infrastructure Provider's current load.

### Pre-workshop - Proposed revised rule with strikeout/underline

#### **44.2 Additional Construction**

Any entity planning the addition of facilities ~~that materially increases loads on a structure shall perform a loading calculation to ensure that the~~ addition of the facilities will not reduce the safety factors below the values specified by Rule 44.3. ~~Such~~ Any loading calculations that the entity performs to assess compliance of the addition with Rule 44.3 shall be based on existing condition and proposed configuration, information provided under Rule 44.4, conservative values of relevant parameters, industry recognized values of relevant parameters, or any combination thereof. For wood structures more than 15 years old, the loading calculation shall incorporate the results of intrusive inspections performed within the previous five years. Such entity shall maintain these loading

calculations for the service life of the pole or other structure for which a loading calculation was made and shall provide such information to authorized joint use occupants and the Commission upon request.

Note: For the purpose of Rule 44.2, ~~a material increase in load is an addition which increases the load on a structure by more than five percent per installation, or ten percent over a 12-month span, of the electric utility's or Communication Infrastructure Provider's current load~~ conservative values are values that would result in equal or lower safety factors compared to use of actual specifications.

*Workshop - Proposed revised rule with strikeout/underline*

**44.2 Additional Construction**

Any entity planning the addition of facilities ~~that materially increases loads on a structure~~ shall ~~perform a loading calculation to~~ ensure that the addition of the facilities will not reduce the safety factors below the values specified by Rule 44.3. ~~Such loading calculations shall be based on existing condition and proposed configuration, information provided under Rule 44.4, conservative values of relevant parameters, industry recognized values of relevant parameters, or any combination thereof. For wood structures more than 15 years old, the loading calculation shall incorporate the results of intrusive inspections performed within the previous five years.~~

If performed, the entity responsible for performing loading calculations for additional construction ~~Such entity~~ shall maintain these loading calculations for the service life of the pole or other structure for which a loading calculation was made and shall provide such information to authorized joint use occupants and the Commission upon request.

Any loading calculations performed for wood structures more than 15 years old shall incorporate the results of intrusive inspections performed within the previous five years.

Note: ~~For the purpose of Rule 44.2, a material increase in load is an addition which increases the load on a structure by more than five percent per installation, or ten percent over a 12-month span, of the electric utility's or Communication Infrastructure Provider's current load.~~



### Proposed final rule

#### **44.2 Additional Construction**

Any entity planning the addition of facilities shall ensure that the addition of the facilities will not reduce the safety factors below the values specified by Rule 44.3.

If performed, the entity responsible for performing loading calculations for additional construction shall maintain these loading calculations for the service life of the pole or other structure for which a loading calculation was made and shall provide such information to authorized joint use occupants and the Commission upon request.

Any loading calculations performed for wood structures more than 15 years old shall incorporate the results of intrusive inspections performed within the previous five years.

#### **Rationale**

Entities adding facilities to an existing structure are expected to meet the safety factors in Rule 44.3 regardless of the amount of increase in load on the structure that the additional facilities cause. In deciding whether or not to perform a loading calculation, the entity should not only consider the amount of increase in load caused by the additional facilities, but also how much more load the structure can handle. This decision should be left to the entity attaching the facilities provided that Rule 44.3 requirements are met at all times. The rule change removes the "material increase" provision and also rearranges the paragraphs in the rule to clarify its intent.

#### **Other relevant information**

None.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 2**

**GO 95 Rule: 44.2**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | x                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       | x                      |            |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | x                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 2**

**GO 95 Rule: 44.2**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

## **GO 95 Rule 49.1 Poles, Towers, and Other Structures**

### Original Rule

#### **C. Setting of Poles**

The depths of pole setting given in Table 6 are applicable to poles set in firm soil or in solid rock.

Where the resultant bearing surface is not sufficient to prevent overturning or excessive movement of the pole at the ground line, and/or the soil is not firm, deeper settings or other special methods shall be used.

Where poles were set in firm soil, but the soil has since been excavated or subjected to erosion, the minimum embedment shall be no less than 90% of the values specified in Table 6.

### Pre-workshop - Proposed revised rule with strikeout/underline

#### **C. Setting of Poles**

(1) The depths of pole setting given in Table 6 are applicable to poles set in firm soil or in solid rock.

Where the resultant bearing surface is not sufficient to prevent overturning or excessive movement of the pole at the ground line, and/or the soil is not firm, deeper settings or other special methods shall be used.

Where poles were set in firm soil, but the soil has since been excavated or subjected to erosion, the minimum embedment shall be no less than 90% of the values specified in Table 6.

(2) A pole-overturning calculation shall be performed before a pole-top installation (including a pole-top extension or a pole-top installation of facilities such as antennas) is added to an existing pole. The pole-overturning calculation shall use a safety factor of 3.0 for Grade A construction, and 2.0 for Grades B and C construction, and incorporate loads for the entire pole structure, including all existing attachments and guys (if any), and all elements of the planned pole-top installation. If needed, deeper settings or other special methods shall be used to provide at a minimum these safety factors. After installation of a pole-top extension or other facilities, the pole-overturning safety factor shall not be

reduced below a safety factor of 3.0 for Grade A construction, and 2.0 for Grades B and C construction.

Note: The purpose of the pole-overturning calculation is to ensure that the pole-overturning moment does not exceed the capacity of the soil, rock or other material in which the pole is embedded to resist the pole-overturning moment.

*Workshop - Proposed revised rule with strikeout/underline*

**C. Setting of Poles**

The depths of pole setting given in Table 6 are applicable to poles set in firm soil or in solid rock.

Where poles were set in firm soil, but the soil has since been excavated or subjected to erosion, the minimum embedment shall be no less than 90% of the values specified in Table 6.

Where, under the loading conditions in Rule 43 and the requirements of Rule 44, the resultant bearing surface is not sufficient to prevent overturning or excessive movement of the pole at the ground line, and/or the soil is not firm, deeper settings or other special methods shall be used.  
~~Where poles were set in firm soil, but the soil has since been excavated or subjected to erosion, the minimum embedment shall be no less than 90% of the values specified in Table 6.~~

*Proposed final rule*

**C. Setting of Poles**

The depths of pole setting given in Table 6 are applicable to poles set in firm soil or in solid rock.

Where poles were set in firm soil, but the soil has since been excavated or subjected to erosion, the minimum embedment shall be no less than 90% of the values specified in Table 6.

Where, under the loading conditions in Rule 43 and the requirements of Rule 44, the resultant bearing surface is not sufficient to prevent overturning or excessive movement of the pole at the ground line, and/or the soil is not firm, deeper settings or other special methods shall be used.

**Rationale**

Currently, the existing language of the rule requires deeper settings or other special methods to be used to prevent pole overturning or excessive movement, but the rule is not clear with respect to the loading conditions that must be accounted for. The rule change adds a reference to Rules 43 and 44 to require that the provision for deeper settings or other special methods must ensure that the pole must be protected against overturning or excessive movement at any load equal to or less than the load it must be protected against for bending failures. In other words, a pole must not overturn at any load less than the load that causes it to break. The rule change also moves some of the existing language for clarity.

**Other relevant information**

Associated with PR 17 deleting 94.11.

Editorial note: No other changes are proposed for Rule 49.1-A, B, D, or Table 6.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 3**

**GO 95 Rule: 49.1C**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | x                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       | x                      |            |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | x                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 3**

**GO 95 Rule: 49.1C**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |



PR: 4

## **GO 95 (New) Rule 51.8 Interference with Fall Protection Equipment**

*Workshop - Proposed new rule with strikeout/underline*

### **51.8 Interference with Fall Protection Equipment**

Electric supply attachments shall not interfere with the effective use of fall protection equipment.

Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:

(1) Surface-mounted equipment that occupies no more than 24 inches of vertical space.

(2) Surface-mounted risers and vertical runs.

(3) Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the surface of the pole, risers, or vertical runs.

*Proposed final rule*

### **51.8 Interference with Fall Protection Equipment**

Electric supply attachments shall not interfere with the effective use of fall protection equipment.

Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:

(1) Surface-mounted equipment that occupies no more than 24 inches of vertical space.

(2) Surface-mounted risers and vertical runs.

(3) Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the surface of the pole, risers, or vertical runs.

**Rationale**

This proposed new Section V rule is one of three specific rule revisions developed for inclusion in GO 95 that are similar to Rule 94.6-C (adopted by D.16-01-046) addressing interference with fall-protection gear. Collectively, this new rule and new rules for Section VIII and Section IX will apply to all pole attachments and allow Rule 94.6-C to be deleted.

**Other relevant information**

See associated PRs 10, 13, 14, 16, and Appendix C.

See also [AR-1](#) revising Section IX Table of Contents and [AR-4](#) revising GO 95 Index.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 4**

**GO 95 Rule: 51.8**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        |            | x              |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        |            | x              |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | X                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      | X                      | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        |            | x              |           |                |
| MID            |                        |            | x              |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        |            | x              |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | X                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 4**

**GO 95 Rule: 51.8**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

PR: 5

## GO 95, Rule 54.7

### Original Rule

#### 54.7 Climbing and Working Space

This rule is not applicable to non-climbable poles. See Rule 22.6–D for definition.

Climbing space shall be maintained from the ground level. Climbing space, measured from center line of pole, shall be provided on one side or in one quadrant of all poles or structures with dimensions as specified in the following:

|                                                                                      | <u>Rules</u>                                                    |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Wood Crossarm Construction                                                           | 54.7–A 1 & 2                                                    |
| Without Wood Crossarms More than 750 Volts<br>(Vertical and Triangular Construction) | 54.11–F                                                         |
| Low Voltage Rack Construction                                                        | 54.9–F                                                          |
| Low Voltage Extended Rack Construction                                               | 54.12–F                                                         |
| Low Voltage Multiconductor Cable with Bare Neutral<br>Construction                   | 54.10–F                                                         |
| Poles Jointly Used                                                                   | 84.7 & 93                                                       |
| Allowable Obstructions of These Climbing Spaces                                      | 54.7–A 3<br>54.9–F<br>54.10–F3<br>54.11–G<br>54.12–F3<br>84.7–E |
| Working Space (All Types of Construction)                                            | 54.7–B                                                          |

The dimensions specified in the above rules may be reduced not more than 2% because of line angles and minor field variations.

The climbing space required by Rules 54.7–A and 54.11–F may be shifted laterally not more than 5 inches. However, the midpoint of the side of the climbing space coinciding with the center line of the pole shall not be more than 5 inches from the center line of the pole, and the minimum distance of any unprotected conductor (or other energized unprotected part) from centerline of pole shall be maintained (See Table 1, Case 8).

Proposed revised rule with strikeout/underline

## 54.7 Climbing and Working Space

This rule is not applicable to non-climbable poles. See Rule 22.6–D for definition.

Climbing space shall be maintained from the ground level. Climbing space, measured from center line of pole, shall be provided on one side or in one quadrant of all poles or structures with dimensions as specified in the following:

|                                                                                      | <u>Rules</u>                                                                          |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Wood Crossarm Construction                                                           | 54.7–A 1 & 2                                                                          |
| Without Wood Crossarms More than 750 Volts<br>(Vertical and Triangular Construction) | 54.11–F                                                                               |
| Low Voltage Rack Construction                                                        | 54.9–F                                                                                |
| Low Voltage Extended Rack Construction                                               | 54.12–F                                                                               |
| Low Voltage Multiconductor Cable with Bare Neutral<br>Construction                   | 54.10–F                                                                               |
| Poles Jointly Used                                                                   | 84.7 & 93                                                                             |
| Allowable Obstructions of These Climbing Spaces                                      | 54.7–A 3<br>54.9–F<br>54.10–F3<br>54.11–G<br>54.12–F3<br>84.7– <del>EA</del> <u>5</u> |
| Working Space (All Types of Construction)                                            | 54.7–B                                                                                |

The dimensions specified in the above rules may be reduced not more than 2% because of line angles and minor field variations.

The climbing space required by Rules 54.7–A and 54.11–F may be shifted laterally not more than 5 inches. However, the midpoint of the side of the climbing space coinciding with the center line of the pole shall not be more than 5 inches from the center line of the pole, and the minimum distance of any unprotected conductor (or other energized unprotected part) from centerline of pole shall be maintained (See Table 1, Case 8).

Proposed final rule

**54.7 Climbing and Working Space**

This rule is not applicable to non-climbable poles. See Rule 22.6–D for definition.

Climbing space shall be maintained from the ground level. Climbing space, measured from center line of pole, shall be provided on one side or in one quadrant of all poles or structures with dimensions as specified in the following:

|                                                                                      | <u>Rules</u>                                                     |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Wood Crossarm Construction                                                           | 54.7–A 1 & 2                                                     |
| Without Wood Crossarms More than 750 Volts<br>(Vertical and Triangular Construction) | 54.11–F                                                          |
| Low Voltage Rack Construction                                                        | 54.9–F                                                           |
| Low Voltage Extended Rack Construction                                               | 54.12–F                                                          |
| Low Voltage Multiconductor Cable with Bare Neutral<br>Construction                   | 54.10–F                                                          |
| Poles Jointly Used                                                                   | 84.7 & 93                                                        |
| Allowable Obstructions of These Climbing Spaces                                      | 54.7–A 3<br>54.9–F<br>54.10–F3<br>54.11–G<br>54.12–F3<br>84.7–A5 |
| Working Space (All Types of Construction)                                            | 54.7–B                                                           |

The dimensions specified in the above rules may be reduced not more than 2% because of line angles and minor field variations.

The climbing space required by Rules 54.7–A and 54.11–F may be shifted laterally not more than 5 inches. However, the midpoint of the side of the climbing space coinciding with the center line of the pole shall not be more than 5 inches from the center line of the pole, and the minimum distance of any unprotected conductor (or other energized unprotected part) from centerline of pole shall be maintained (See Table 1, Case 8).

### **Rationale**

This rule revision corrects an incorrect cross-reference to Rule 84.7-‘E’ that was inadvertently included in Decision (D.) 15-01-005. In Rulemaking (R.) 14-08-012 and resulting D.15-01-005, GO 95 Rule 84.7 was reorganized to create a new 84.7-‘A’ for existing Allowable Climbing Space Obstruction rules and added a new 84.7-‘B’ for (then) new Working Space rules. Due to the reorganization, original 84.7-‘E’ was replaced by 84.7-A5, however, some of the references to 84.7-‘E’ were not refreshed.

### **Other relevant information**

See also PRs 11 and 12, and AR 4 for related editorial revisions.



**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 5**

**GO 95 Rule: 54.7**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           | X                      |            |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | X                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      | X                      |            |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          | X                      |            |                |           |                |
| MID            | X                      |            |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | X                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 5**

**GO 95 Rule: 54.7**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

## **GO 95 Rule 54.7-A Climbing Space (Wood Crossarm Construction)**

### **Original Rule**

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

- (a)** Crossarms and their supporting members.
- (b)** Insulators and their attaching brackets which support line conductors may extend one-half of their diameter into the climbing space.
- (c)** Conductors may extend one-half of their diameter into the climbing space.
- (d)** Suitably protected (covered only by wood, see Rule 22.8):
  - 1) Vertical risers; or
  - 2) Vertical runs; or
  - 3) Ground wires.Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.
- (e)** Guys (except those guys metallically contacting metal pins or deadend hardware as specified in Rule 52.7-D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.
- (f)** Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (g)** Operating rods (e.g. switch rods) may extend one-half their diameter into climbing space.
- (h)** Band(s), limited to 6 inches in total width are allowed in any 24-inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.
- (i)** Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-B.
- (j)** Bolts and their washers. However, bolts bonded to or used for the attachment of deadend hardware of circuits above 750 volts in wood crossarm configuration that project into the climbing space shall be covered with a non-conductive material as specified in Rule 22.8-C. If such bolts are bonded, a positive electrical contact shall be made.

**EXCEPTIONS:** The covering of bolts required by this rule shall not apply to:

- 1) Bolts associated with circuits of more than 7500 volts when located at the top level of a pole.
- 2) Bolts associated with brackets and non-wood crossarms.

*Pre-workshop - proposed revised rule with strikeout/underline*

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

- (a) Crossarms and their supporting members.
- (b) Insulators and their attaching brackets which support line conductors may extend one-half of their diameter into the climbing space.
- (c) Conductors may extend one-half of their diameter into the climbing space.
- (d) Suitably protected ~~(covered only by wood, see Rule 22.8):~~
  - 1) ~~Vertical risers; or~~ Ground wires covered by wood per Rule 22.8-A1.
  - 2) ~~Vertical runs; or~~
  - 23) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such ~~risers, runs, and~~ grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.
- (e) Guys (except those guys metallically contacting metal pins or deadend hardware as specified in Rule 52.7-D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.
- (f) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (g) Operating rods (e.g. switch rods) may extend one-half their diameter into climbing space.
- (h) Band(s), limited to 6 inches in total width are allowed in any 24-inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.
- (i) Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-B.
- (j) Bolts and their washers. However, bolts bonded to or used for the attachment of deadend hardware of circuits above 750 volts in wood crossarm configuration that project into the climbing space shall be covered with a non-conductive material as specified in Rule 22.8-C. If such bolts are bonded, a positive electrical contact shall be made.

**EXCEPTIONS:** The covering of bolts required by this rule shall not apply to:

- 1) Bolts associated with circuits of more than 7500 volts when located at the top level of a pole.
- 2) Bolts associated with brackets and non-wood crossarms.

- (k) Unnecessary impairment of the climbing space is not permitted by the application of this Rule 54.7A3.

Workshop - Proposed strikeout/underline

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

- (a) Crossarms and their supporting members.
- (b) Insulators and their attaching brackets which support line conductors may extend one-half of their diameter into the climbing space.
- (c) Conductors may extend one-half of their diameter into the climbing space.

- (d) Suitably protected ~~(covered only by wood, see Rule 22.8):~~
  - 1) Vertical risers, or runs covered only by wood (see Rule 22.8-B);
  - 2) Vertical runs, or Ground wires covered by wood per Rule 22.8-A1;
  - 3) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

- (e) Guys (except those guys metallically contacting metal pins or deadend hardware as specified in Rule 52.7-D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.
- (f) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (g) Operating rods (e.g. switch rods) may extend one-half their diameter into climbing space.
- (h) Band(s), limited to 6 inches in total width are allowed in any 24-inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.
- (i) Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-B.
- (j) Bolts and their washers. However, bolts bonded to or used for the attachment of deadend hardware of circuits above 750 volts in wood crossarm configuration that project into the climbing space shall be covered with a non-conductive material as specified in Rule 22.8-C. If such bolts are bonded, a positive electrical contact shall be made.

**EXCEPTIONS:** The covering of bolts required by this rule shall not apply to:

- 1) Bolts associated with circuits of more than 7500 volts when located at the top level of a pole.
- 2) Bolts associated with brackets and non-wood crossarms.

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

Proposed final rule

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

- (a) Crossarms and their supporting members.
- (b) Insulators and their attaching brackets which support line conductors may extend one-half of their diameter into the climbing space.
- (c) Conductors may extend one-half of their diameter into the climbing space.
- (d) Suitably protected:
  - 1) Vertical risers or runs covered only by wood (see Rule 22.8-B);
  - 2) Ground wires covered by wood per Rule 22.8-A1;
  - 3) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3)

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

- (e) Guys (except those guys metallically contacting metal pins or deadend hardware as specified in Rule 52.7-D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.
- (f) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (g) Operating rods (e.g. switch rods) may extend one-half their diameter into climbing space.
- (h) Band(s), limited to 6 inches in total width are allowed in any 24-inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.
- (i) Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-B.
- (j) Bolts and their washers. However, bolts bonded to or used for the attachment of deadend hardware of circuits above 750 volts in wood crossarm configuration that project into the climbing space shall be covered with a non-conductive material as specified in Rule 22.8-C. If such bolts are bonded, a positive electrical contact shall be made.

**EXCEPTIONS:** The covering of bolts required by this rule shall not apply to:

- 1) Bolts associated with circuits of more than 7500 volts when located at the top level of a pole.
- 2) Bolts associated with brackets and non-wood crossarms.

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

**Rationale**

This PR addresses conditions related to interference with fall protection equipment. The revision to subpart A3d reorganizes the existing requirement for risers, runs, and bare ground wire located in climbing space to be covered with wood, and modifies an existing requirement to allow protected ground wires (sheathed in polyvinyl material) to be installed in climbing space without being covered by wood moulding. Protected ground wire was first recognized for use in the 2005 edition of GO 95 and the revision to the definition of ‘Protective Covering, Suitable’. Since 2005 utilities have covered protected ground wires with wood when installed in climbing space.

The new ‘reasonable efforts’ statement at the end of the rule was developed during workshop discussions of PRs that sought to add a slightly modified version of existing Rule 84.7-A5f to all of the Section V climbing space rules. Parties agreed that the revised ‘reasonable’ statement served the intended need and should be included as a standalone (unnumbered) sentence in the Section V and Section VIII climbing space rules.

**Other relevant information**

See associated PRs 7, 8, 9 and 11 and Appendix C.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 6**

**GO 95 Rule: 54.7-A3**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           | x                      |            |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        |            |                |           | x              |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | x                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      | x                      |            |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          | x                      |            |                |           |                |
| MID            | x                      |            |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | x                      |            |                |           |                |



**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 6**

**GO 95 Rule: 54.7-A3**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

## **GO 95 Rule 54.10-F Climbing Space**

### **Original Rule**

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

**(a)** Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

**(b)** Suitably protected (covered only by wood, see Rule 22.8):

- 1) Vertical risers; or
- 2) Vertical runs; or
- 3) Ground wires.

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

**(c)** Insulators and their attaching brackets may extend one-half their diameter into the climbing space.

**(d)** Conductors may extend one-half their diameter into the climbing space.

**(e)** Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.

**(f)** Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.

**(g)** Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)

**(h)** Bolts and their washers.

The terminals or terminal fittings of risers or runs shall not be installed within climbing space

*Pre-workshop - Proposed revised rule with strikeout/underline*

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

(a) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

(b) Suitably protected (~~covered only by wood, see Rule 22.8~~):

1) ~~Vertical risers; or~~ Ground wires covered by wood per Rule 22.8-A1.

2) ~~Vertical runs; or~~ \_\_\_\_\_

23) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

(c) Insulators and their attaching brackets may extend one-half their diameter into the climbing space.

(d) Conductors may extend one-half their diameter into the climbing space.

(e) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.

(f) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.

(g) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)

(h) Bolts and their washers.

~~The terminals or terminal fittings of risers or runs shall not be installed within climbing space.~~

(i) Unnecessary impairment of the climbing space is not permitted by the application of this Rule 54.10F3.

Workshop - Proposed strikeout/underline

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

(a) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

(b) Suitably protected ~~(covered only by wood, see Rule 22.8):~~

1) ~~Vertical risers; or runs covered only by wood (see Rule 22.8-B):~~

2) ~~Vertical runs; or Ground wires covered by wood per Rule 22.8-A1;:~~

3) ~~Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).~~

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

(c) Insulators and their attaching brackets may extend one-half their diameter into the climbing space.

(d) Conductors may extend one-half their diameter into the climbing space.

(e) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.

(f) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.

(g) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)

(h) Bolts and their washers.

~~The terminals or terminal fittings of risers or runs shall not be installed within climbing space.~~

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

Proposed final rule

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

(a) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

(b) Suitably protected:

- 1) Vertical riser or runs covered only by wood (see Rule 22.8-B);
- 2) Ground wires covered by wood per Rule 22.8-A1;
- 3) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

(c) Insulators and their attaching brackets may extend one-half their diameter into the climbing space.

(d) Conductors may extend one-half their diameter into the climbing space.

(e) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.

(f) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.

(g) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)

(h) Bolts and their washers.

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

**Rationale**

This PR addresses conditions related to interference with fall protection equipment. The revision to subpart F3b reorganizes the existing requirement for risers, runs, and bare ground wire located in climbing space to be covered with wood, and modifies an existing requirement to allow protected ground wires (sheathed in polyvinyl material) to be installed in climbing space without being covered by wood moulding. Protected ground wire was first recognized for use in the 2005 edition of GO 95 and the revision to the definition of ‘Protective Covering, Suitable’. Since 2005 utilities have covered protected ground wires with wood when installed in climbing space.

The new ‘reasonable efforts’ statement at the end of the rule was developed during workshop discussions of PRs that sought to add a slightly modified version of existing Rule 84.7-A5f to all of the Section V climbing space rules. Parties agreed that the revised ‘reasonable’ statement served the intended need and should be included as a standalone (unnumbered) sentence in the Section V and Section VIII climbing space rules.

**Other relevant information**

See associated PRs 6, 8, 9 and 11 and Appendix C.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 7**

**GO 95 Rule: 54.10-F3**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           | X                      |            |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        |            |                |           | x              |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | X                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      | X                      |            |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          | X                      |            |                |           |                |
| MID            | X                      |            |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | X                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 7**

**GO 95 Rule: 54.10-F3**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |



**GO 95, Rule 54.11- Insulators in Vertical and Horizontal Position Without the Use of Wood Crossarms, More than 750 Volts (Vertical and Triangular Construction)**

*Original Rule*

**G. Allowable Climbing Space Obstructions**

Allowable climbing space obstructions in triangular and vertical configuration without the use of wood crossarms are:

- (1) Crossarms, brackets, and their supporting members.
- (2) Insulators which support line conductors, jumpers, and incidental wires may extend one-half of their diameter into the climbing space.
- (3) Conductors may extend one-half of their diameter into the climbing space.
- (4) Suitably protected (covered only by wood, see Rule 22.8):
  - (a) Vertical risers; or
  - (b) Vertical runs; or
  - (c) Ground wires.

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

- (5) Guys (except those guys which are metallically contacting metal pins or deadend hardware as specified in Rule 52.7- D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4- foot section of climbing space.
- (6) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (7) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.
- (8) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)
- (9) Bolts and their washers. If bolts are bonded, a secure electrical contact shall be made. The covering of bolts and bond wire is not required in triangular and vertical configuration without the use of wood crossarms.

*Pre-workshop - Proposed revised rule with strikeout/underline*

**G. Allowable Climbing Space Obstructions**

Allowable climbing space obstructions in triangular and vertical configuration without the use of wood crossarms are:

- (1) Crossarms, brackets, and their supporting members.
- (2) Insulators which support line conductors, jumpers, and incidental wires may extend one-half of their diameter into the climbing space.
- (3) Conductors may extend one-half of their diameter into the climbing space.
- (4) Suitably protected (~~covered only by wood, see Rule 22.8~~):
  - (a) ~~Vertical risers; or~~ Ground wires covered by wood per Rule 22.8-A1.
  - ~~(b) Vertical runs; or~~
  - (b) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such ~~risers, runs, and~~ grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

- (5) Guys (except those guys which are metallically contacting metal pins or deadend hardware as specified in Rule 52.7– D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4– foot section of climbing space.
- (6) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (7) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.
- (8) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)
- (9) Bolts and their washers. If bolts are bonded, a secure electrical contact shall be made. The covering of bolts and bond wire is not required in triangular and vertical configuration without the use of wood crossarms.
- (10) Unnecessary impairment of the climbing space is not permitted by the application of this Rule 54.11G.

Workshop - Proposed strikeout/underline

**G. Allowable Climbing Space Obstructions**

Allowable climbing space obstructions in triangular and vertical configuration without the use of wood crossarms are:

- (1) Crossarms, brackets, and their supporting members.
- (2) Insulators which support line conductors, jumpers, and incidental wires may extend one-half of their diameter into the climbing space.
- (3) Conductors may extend one-half of their diameter into the climbing space.
- (4) Suitably protected ~~(covered only by wood, see Rule 22.8):~~
  - 1) ~~Vertical risers;~~ or runs covered only by wood (see Rule 22.8-B);
  - 2) ~~Vertical runs; or~~ Ground wires covered by wood per Rule 22.8-A1;
  - 3) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.
- (5) Guys (except those guys which are metallically contacting metal pins or deadend hardware as specified in Rule 52.7– D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4– foot section of climbing space.
- (6) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (7) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.
- (8) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)
- (9) Bolts and their washers. If bolts are bonded, a secure electrical contact shall be made. The covering of bolts and bond wire is not required in triangular and vertical configuration without the use of wood crossarms.

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

Proposed final rule

**G. Allowable Climbing Space Obstructions**

Allowable climbing space obstructions in triangular and vertical configuration without the use of wood crossarms are:

- (1) Crossarms, brackets, and their supporting members.
- (2) Insulators which support line conductors, jumpers, and incidental wires may extend one-half of their diameter into the climbing space.
- (3) Conductors may extend one-half of their diameter into the climbing space.
- (4) Suitably protected:
  - 1) Vertical riser or runs covered only by wood (see Rule 22.8-B);
  - 2) Ground wires covered by wood per Rule 22.8-A1;
  - 3) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

- (5) Guys (except those guys which are metallically contacting metal pins or deadend hardware as specified in Rule 52.7- D). However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4- foot section of climbing space.
- (6) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (7) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.
- (8) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)
- (9) Bolts and their washers. If bolts are bonded, a secure electrical contact shall be made. The covering of bolts and bond wire is not required in triangular and vertical configuration without the use of wood crossarms.

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

**Rationale**

This PR addresses conditions related to interference with fall protection equipment. The revision to subpart G4 reorganizes the existing requirement for risers, runs, and bare ground wire located in climbing space to be covered with wood, and modifies an existing requirement to allow protected ground wires (sheathed in polyvinyl material) to be installed in climbing space without being covered by wood moulding. Protected ground wire was first recognized for use in the 2005 edition of GO 95 and the revision to the definition of ‘Protective Covering, Suitable’. Since 2005 utilities have covered protected ground wires with wood when installed in climbing space.

The new ‘reasonable efforts’ statement at the end of the rule was developed during workshop discussions of PRs that sought to add a slightly modified version of existing Rule 84.7-A5f to all of the Section V climbing space rules. Parties agreed that the revised ‘reasonable’ statement served the intended need and should be included as a standalone (unnumbered) sentence in the Section V and Section VIII climbing space rules.

**Other relevant information**

See associated PRs 6, 7, 9 and 11 and Appendix C.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 8**

**GO 95 Rule: 54.11-G**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           | X                      |            |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        |            |                |           | x              |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | X                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      | X                      |            |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          | X                      |            |                |           |                |
| MID            | X                      |            |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | X                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 8**

**GO 95 Rule: 54.11-G**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

**GO 95, Rule 54.12-F**

Original Rule

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

- (a) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.
- (b) Suitably protected (covered only by wood, see Rule 22.8):
  - 1) Vertical risers; or
  - 2) Vertical runs; or
  - 3) Ground wires.

Such risers, runs and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

- (c) Insulators and their attaching brackets may extend one-half their diameter into the climbing space.
- (d) Conductors may extend one-half their diameter into the climbing space.
- (e) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.
- (f) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.
- (g) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)
- (h) Bolts and their washers.

The terminals or terminal fittings of risers or runs shall not be installed within climbing space.



*Pre-workshop - Proposed revised rule with strikeout/underline*

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

(a) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

(b) Suitably protected (~~covered only by wood, see Rule 22.8~~):

1) ~~Vertical risers; or~~ Ground wires covered by wood per Rule 22.8-A1.

2) ~~Vertical runs; or~~

23) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such ~~risers, runs, and~~ grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

(c) Insulators and their attaching brackets may extend one-half their diameter into the climbing space.

(d) Conductors may extend one-half their diameter into the climbing space.

(e) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.

(f) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.

(g) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)

(h) Bolts and their washers.

~~The terminals or terminal fittings of risers or runs shall not be installed within climbing space.~~

(i) Unnecessary impairment of the climbing space is not permitted by the application of this Rule 54.10F3.

Workshop - Proposed strikeout/underline

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

(a) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

(b) Suitably protected ~~(covered only by wood, see Rule 22.8):~~

1) Vertical risers; or runs covered only by wood (see Rule 22.8-B);

2) ~~Vertical runs; or~~ Ground wires covered by wood per Rule 22.8-A1;

3) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3).

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

(c) Insulators and their attaching brackets may extend one-half their diameter into the climbing space.

(d) Conductors may extend one-half their diameter into the climbing space.

(e) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.

(f) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.

(g) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)

(h) Bolts and their washers.

~~The terminals or terminal fittings of risers or runs shall not be installed within climbing space.~~

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

Proposed final rule

**(3) Allowable Climbing Space Obstructions:** Allowable climbing space obstructions are:

(a) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

(b) Suitably protected:

- 1) Vertical riser or runs covered only by wood (see Rule 22.8-B;
- 2) Ground wires covered by wood per Rule 22.8-A1;
- 3) Ground wires covered by plastic, or other non-conductive material no greater than one-half inch in diameter (see Rule 22.8-A3)

Such risers, runs, and grounds are allowable provided that not more than one is installed in any 4-foot section of climbing space.

(c) Insulators and their attaching brackets may extend one-half their diameter into the climbing space.

(d) Conductors may extend one-half their diameter into the climbing space.

(e) Street light brackets may extend one-half their diameter into climbing space. Associated street light bracket struts are allowed in climbing space.

(f) Operating rods (e.g., switch rods) and their associated hardware may extend one-half their diameter into climbing space.

(g) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.)

(h) Bolts and their washers.

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

**Rationale**

This PR addresses conditions related to interference with fall protection equipment. The revision to subpart F3b reorganizes the existing requirement for risers, runs, and bare ground wire located in climbing space to be covered with wood, and modifies an existing requirement to allow protected ground wires (sheathed in polyvinyl material) to be installed in climbing space without being covered by wood moulding. Protected ground wire was first recognized for use in the 2005 edition of GO 95 and the revision to the definition of ‘Protective Covering, Suitable’. Since 2005 utilities have covered protected ground wires with wood when installed in climbing space.

The new ‘reasonable efforts’ statement at the end of the rule was developed during workshop discussions of PRs that sought to add a slightly modified version of existing Rule 84.7-A5f to all of the Section V climbing space rules. Parties agreed that the revised ‘reasonable’ statement served the intended need and should be included as a standalone (unnumbered) sentence in the Section V and Section VIII climbing space rules.

**Other relevant information**

See associated PRs 6, 7, 8, and 11 and Appendix C.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 9**

**GO 95 Rule: 54.12-F3**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           | X                      |            |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        |            |                |           | x              |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | X                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      | X                      |            |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          | X                      |            |                |           |                |
| MID            | X                      |            |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | X                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 9**

**GO 95 Rule: 54.12-F3**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

## **GO 95, 'New' Rule 81.7 Interference with Fall Protection Equipment**

*Workshop - Proposed new rule with strikeout/underline*

### **81.7 Interference with Fall Protection Equipment**

Communication attachments shall not interfere with the effective use of fall protection equipment.

Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:

(1) Surface-mounted equipment that occupies no more than 24 inches of vertical space.

(2) Surface-mounted risers and vertical runs.

(3) Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the surface of the pole, risers, or vertical runs.

*Proposed final rule*

### **81.7 Interference with Fall Protection Equipment**

Communication attachments shall not interfere with the effective use of fall protection equipment.

Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:

(1) Surface-mounted equipment that occupies no more than 24 inches of vertical space.

(2) Surface-mounted risers and vertical runs.

(3) Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the surface of the pole, risers, or vertical runs.

**Rationale**

This proposed new Section VIII rule is one of three specific rule revisions developed for inclusion in GO 95 that are similar to Rule 94.6-C (adopted by D.16-01-046) addressing interference with fall protection gear. Collectively, this new rule and the new rules for Section V and Section IX will apply to all pole attachments and allow Rule 94.6-C to be deleted.

**Other relevant information**

See associated PRs 4, 13, 14, 16, and Appendix C. See also [AR-2](#) revising Section IX Table of Contents and [AR-4](#) revising GO 95 Index.

See Cal-OSHA Subchapter 5, §2940.6 (b) Fall Protection



**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 10**

**GO 95 Rule: 81.7**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        |            | x              |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        |            | x              |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | X                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      | X                      | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        |            | x              |           |                |
| MID            |                        |            | x              |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        |            | x              |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | X                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 10**

**GO 95 Rule: 81.7**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           |                        | x          |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   |                        | x          |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      |                        | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          |                        | x          |                |           |                |
| MID            |                        | x          |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        |                        | x          |                |           |                |

PR: 11

## **GO 95, 84.7-A Climbing Space and Working Space**

### *Original Rule*

#### **A. Climbing Space**

Climbing space shall be provided on one side or quadrant of all poles or structures supporting communications conductors excepting at the level of the one pair of conductors attached to the pole below the lowest crossarm (Rules 84.4–C1c, 84.4–D1 and 87.4–C3) and the top 3 feet of poles carrying communication conductors only which are attached directly to pole in accordance with the provisions of Rule 84.4–C1c.

The climbing space shall be maintained in the same position on the pole for minimum vertical distance of 4 feet above and below each conductor level through which it passes, excepting that where a cable is attached to a crossarm or a pole with the cable less than 9 or 15 inches from the center line of the pole supporting conductors on line arms (no buck arm construction involved) in accordance with the provisions of Rules 84.4–D1 or 87.4–C3, the 4 foot vertical distance may be reduced to not less than 3 feet.

The position of the climbing space shall not be shifted more than 90 degrees around the pole within a vertical distance of less than 8 feet. Climbing space shall be maintained from the ground level.

The climbing space shall be kept free from obstructions excepting those obstructions permitted by Rule 84.7–E.

### *Workshop - Proposed revised rule with strikeout/underline*

#### **A. Climbing Space**

Climbing space shall be provided on one side or quadrant of all poles or structures supporting communications conductors excepting at the level of the one pair of conductors attached to the pole below the lowest crossarm (Rules 84.4–C1c, 84.4–D1 and 87.4–C3) and the top 3 feet of poles carrying communication conductors only which are attached directly to pole in accordance with the provisions of Rule 84.4–C1c.

The climbing space shall be maintained in the same position on the pole for minimum vertical distance of 4 feet above and below each conductor level through which it passes, excepting that where a cable is attached to a crossarm or a pole with the cable less than 9 or 15 inches from the center line of the pole supporting conductors on line arms (no buck arm construction involved) in accordance with the provisions of Rules

84.4–D1 or 87.4–C3, the 4 foot vertical distance may be reduced to not less than 3 feet.

The position of the climbing space shall not be shifted more than 90 degrees around the pole within a vertical distance of less than 8 feet. Climbing space shall be maintained from the ground level.

The climbing space shall be kept free from obstructions excepting those obstructions permitted by Rule 84.7–~~EA~~5.

### Proposed final rule

#### **A. Climbing Space**

Climbing space shall be provided on one side or quadrant of all poles or structures supporting communications conductors excepting at the level of the one pair of conductors attached to the pole below the lowest crossarm (Rules 84.4–C1c, 84.4–D1 and 87.4–C3) and the top 3 feet of poles carrying communication conductors only which are attached directly to pole in accordance with the provisions of Rule 84.4–C1c.

The climbing space shall be maintained in the same position on the pole for minimum vertical distance of 4 feet above and below each conductor level through which it passes, excepting that where a cable is attached to a crossarm or a pole with the cable less than 9 or 15 inches from the center line of the pole supporting conductors on line arms (no buck arm construction involved) in accordance with the provisions of Rules 84.4–D1 or 87.4–C3, the 4 foot vertical distance may be reduced to not less than 3 feet.

The position of the climbing space shall not be shifted more than 90 degrees around the pole within a vertical distance of less than 8 feet. Climbing space shall be maintained from the ground level.

The climbing space shall be kept free from obstructions excepting those obstructions permitted by Rule 84.7–A5.

## **GO 95, Rule 84.7-A5 Allowable Climbing Space Obstructions**

### **Original Rule**

#### **5. Allowable Climbing Space Obstructions**

- a. Vertical conductors, when in a suitable protective covering attached directly to the surface of the pole, terminal boxes or similar equipment which do not extend more than 5 inches from the surface of the pole, and guys, will not be held to obstruct the climbing space provided not more than two guys (provided they are separated at the pole by a vertical distance of not more than 18 inches) and one other of the above named obstructions are installed in any 4-foot vertical section of climbing space.
- b. Crossarms and their supporting members are allowed in climbing spaces provided that, where buck arms are involved, any arms within climbing spaces are treated as double arms.
- c. A guard arm, a longitudinal run of messenger, cable or insulated wire will not be held to obstruct the climbing space where they are placed in the climbing space because the presence of a building wall or similar obstacle will not permit the cable to be placed on the side of pole opposite the climbing space. Pole steps shall be suitably placed for the purpose of facilitating climbing past the level of terminal box, cable, drop wires and guard arm
- d. Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-B.
- e. Bands limited to 6 inches in total width are allowed in any 24- inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.
- f. Unnecessary impairment of the climbing space is not permitted by the application of this Rule 84.7-E.

### **Pre-workshop - Proposed revised rule with strikeout/underline**

#### **5. Allowable Climbing Space Obstructions**

- a. ~~Vertical conductors, when in a suitable protective covering attached directly to the surface of the pole,~~ The following are allowed when installed in any 4-foot vertical section of climbing space:
  - 1. Terminal boxes or similar equipment which do not extend more than 5 inches from the surface of the pole.

~~and guys, will not be held to obstruct the climbing space provided not more than two guys (provided they are separated at the pole by a vertical distance of not more than 18 inches)~~

~~2. Not more than three Guys having a vertical separation of not less than 24 inches between the highest and lowest guy.~~  
~~and one other of the above named obstructions are installed in any 4-foot vertical section of climbing space.~~

- b. Crossarms and their supporting members are allowed in climbing spaces provided that, where buck arms are involved, any arms within climbing spaces are treated as double arms.
- c. A guard arm, a longitudinal run of messenger, cable or insulated wire will not be held to obstruct the climbing space where they are placed in the climbing space because the presence of a building wall or similar obstacle will not permit the cable to be placed on the side of pole opposite the climbing space. Pole steps shall be suitably placed for the purpose of facilitating climbing past the level of terminal box, cable, drop wires and guard arm
- d. Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-B.
- e. Bands limited to 6 inches in total width are allowed in any 24- inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.
- f. Unnecessary impairment of the climbing space is not permitted by the application of this Rule 84.7-E.

*Workshop - Proposed revised rule with strikeout/underline*

## **5. Allowable Climbing Space Obstructions**

- a. Vertical conductors, when in a suitable protective covering attached directly to the surface of the pole, terminal boxes or similar equipment which do not extend more than 5 inches from the surface of the pole, and guys, will not be held to obstruct the climbing space provided not more than two guys (provided they are separated at the pole by a vertical distance of not more than 18 inches) and one other of the above named obstructions are installed in any 4-foot vertical section of climbing space.
- b. Crossarms and their supporting members are allowed in climbing spaces provided that, where buck arms are involved, any arms within climbing spaces are treated as double arms.

- c. A guard arm, a longitudinal run of messenger, cable or insulated wire will not be held to obstruct the climbing space where they are placed in the climbing space because the presence of a building wall or similar obstacle will not permit the cable to be placed on the side of pole opposite the climbing space. Pole steps shall be suitably placed for the purpose of facilitating climbing past the level of terminal box, cable, drop wires and guard arm
- d. Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-~~BC~~.
- e. Bands limited to 6 inches in total width are allowed in any 24- inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.

~~f. Unnecessary impairment of the climbing space is not permitted by the application of this Rule 84.7-E.~~

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.

## Final Rule

### **5. Allowable Climbing Space Obstructions**

- a.** Vertical conductors, when in a suitable protective covering attached directly to the surface of the pole, terminal boxes or similar equipment which do not extend more than 5 inches from the surface of the pole, and guys, will not be held to obstruct the climbing space provided not more than two guys (provided they are separated at the pole by a vertical distance of not more than 18 inches) and one other of the above named obstructions are installed in any 4-foot vertical section of climbing space.
- b.** Crossarms and their supporting members are allowed in climbing spaces provided that, where buck arms are involved, any arms within climbing spaces are treated as double arms.
- c.** A guard arm, a longitudinal run of messenger, cable or insulated wire will not be held to obstruct the climbing space where they are placed in the climbing space because the presence of a building wall or similar obstacle will not permit the cable to be placed on the side of pole opposite the climbing space. Pole steps shall be suitably placed for the purpose of facilitating climbing past the level of terminal box, cable, drop wires and guard arm
- d.** Pole restoration materials are allowed in climbing space provided pole steps are placed in the restoration area as part of the process. Pole stepping shall be in accordance with Rule 91.3-C.
- e.** Bands limited to 6 inches in total width are allowed in any 24- inch section of climbing space. These limitations are excluded for pole stubbing and pole splicing bands when pole step provisions are installed.

Reasonable efforts shall be made to avoid installing the above listed allowable obstructions within the climbing space.



### **Rationale**

This revision to Rule 84.7-A corrects an incorrect cross-reference to Rule 84.7-‘E’ that was inadvertently included in D.15-01-005. In R.14-08-012 and resulting D.15-01-005, GO 95 Rule 84.7 was reorganized to create a new 84.7-‘A’ for existing Allowable Climbing Space Obstruction rules and added a new 84.7-‘B’ for (then) new Working Space rules. Due to the reorganization, original 84.7-‘E’ was replaced by 84.7-A5; however, some of the references to 84.7-‘E’ were not refreshed.

The new ‘reasonable efforts’ statement at the end of the rule was developed during workshop discussions of PRs that sought to add a slightly modified version of existing Rule 84.7-A5f to all of the Section V climbing space rules. Parties agreed that the revised ‘reasonable’ statement served the intended need and should be included as a standalone (unnumbered) sentence in the Section V and Section VIII climbing space rules.

### **Other relevant information**

See also PRs 5 and 12, and AR 4 for related editorial revisions.

Editorial note – No changes to Rule 84.7-A1, A2, A3, and A4

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 11**

**GO 95 Rule: 84.7-A5**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           | X                      |            |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | X                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | X                      |            |                |           |                |
| IBEW 1245      | X                      | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          | X                      |            |                |           |                |
| MID            | X                      |            |                |           |                |
| Liberty Energy | X                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | X                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 11**

**GO 95 Rule: 84.7-A and 84.7-A5**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | X          |                |           |                |
| BVES           |                        | X          |                |           |                |
| CCTA           |                        | X          |                |           |                |
| Cal Advocates  |                        |            |                |           | x              |
| Charter        |                        | X          |                |           |                |
| CMUA           |                        | X          |                |           |                |
| Comcast        |                        | X          |                |           |                |
| Cox            |                        | X          |                |           |                |
| CPUC-SED       |                        | X          |                |           |                |
| Crown Castle   |                        | X          |                |           |                |
| CTIA           |                        | X          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      |                        | X          |                |           |                |
| Frontier       |                        | X          |                |           |                |
| LADWP          |                        | X          |                |           |                |
| MID            |                        | X          |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | X          |                |           |                |
| PG&E           |                        | X          |                |           |                |
| SCE            |                        | X          |                |           |                |
| SDG&E          |                        | X          |                |           |                |
| SMUD           |                        | X          |                |           |                |
| T-MOBILE       |                        | X          |                |           |                |
| Verizon        |                        | X          |                |           |                |

PR: 12

## GO 95, Rule 88 Miscellaneous Equipment

### Original Rule

#### **88.1 Cable Terminals or Boxes**

Cable terminals or boxes on poles supporting communication conductors may be placed upon any surface of the pole provided such terminals or boxes where placed in the climbing space shall not extend more than 5 inches from the surface of pole, and provisions of Rule 84.7–E for climbing space obstructions are met. This rule is not intended to apply to equipment placed within the top 3 feet of a pole supporting only communication conductors and no crossarms.

### Proposed revised rule with strikeout/underline

#### **88.1 Cable Terminals or Boxes**

Cable terminals or boxes on poles supporting communication conductors may be placed upon any surface of the pole provided such terminals or boxes where placed in the climbing space shall not extend more than 5 inches from the surface of pole, and provisions of Rule 84.7–~~EA~~5 for climbing space obstructions are met. This rule is not intended to apply to equipment placed within the top 3 feet of a pole supporting only communication conductors and no crossarms.

### Proposed final rule

#### **88.1 Cable Terminals or Boxes**

Cable terminals or boxes on poles supporting communication conductors may be placed upon any surface of the pole provided such terminals or boxes where placed in the climbing space shall not extend more than 5 inches from the surface of pole, and provisions of Rule 84.7–A5 for climbing space obstructions are met. This rule is not intended to apply to equipment placed within the top 3 feet of a pole supporting only communication conductors and no crossarms.

### **Rationale**

This revision to Rule 88.1 corrects an incorrect cross-reference to Rule 84.7-‘E’ that was inadvertently included in D.15-01-005. In R.14-08-012 and resulting D.15-01-005, GO 95 Rule 84.7 was reorganized to create a new 84.7-‘A’ for existing Allowable Climbing Space Obstruction rules and added a new 84.7-‘B’ for (then) new Working Space rules. Due to the reorganization, original 84.7-‘E’ was replaced by 84.7-A5, however, some of the references to 84.7-‘E’ were not refreshed.

### **Other relevant information**

See also PRs 5 and 11, and AR 4 for related editorial revisions.

See also [AR-4](#) for revisions to the GO 95 Index.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 12**

**GO 95 Rule: 88.1**

| <b>PARTIES</b> | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|----------------|------------------------|------------|----------------|-----------|----------------|
| AT&T           |                        | x          |                |           |                |
| BVES           | x                      |            |                |           |                |
| CCTA           |                        | x          |                |           |                |
| Charter        |                        | x          |                |           |                |
| CMUA           |                        | x          |                |           |                |
| Comcast        |                        | x          |                |           |                |
| Cox            |                        | x          |                |           |                |
| CPUC-SED       |                        | x          |                |           |                |
| Crown Castle   | x                      |            |                |           |                |
| CTIA           |                        | x          |                |           |                |
| ExteNet        | x                      |            |                |           |                |
| IBEW 1245      | x                      | x          |                |           |                |
| Frontier       |                        | x          |                |           |                |
| LADWP          | x                      |            |                |           |                |
| MID            | x                      |            |                |           |                |
| Liberty Energy | x                      |            |                |           |                |
| PacifiCorp     |                        | x          |                |           |                |
| PG&E           |                        | x          |                |           |                |
| SCE            |                        | x          |                |           |                |
| SDG&E          |                        | x          |                |           |                |
| SMUD           |                        | x          |                |           |                |
| T-MOBILE       |                        | x          |                |           |                |
| Verizon        | x                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 12**

**GO 95 Rule: 88.1**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Cal Advocates     |                        |            |                |           | x              |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      |                        | x          |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          |                        | x          |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           |                        | x          |                |           |                |

## **GO 95, Rule 91 Pole, Towers and Structures**

### Original Rule

#### **91.3 Stepping**

##### **A. Use Of Steps**

**(1) Poles with Vertical Runs or Risers:** All jointly used poles which support supply conductors shall be provided with pole steps if vertical runs or risers are attached to the surface of such poles, unless the conditions described in the following subparagraphs (a), (b) or (c) are met:

**(a) One–Party Poles:** Poles which carry circuits operated and maintained by only one party are not required to be stepped, provided any vertical runs or risers on the surface of such poles are covered by a suitable protective covering (Refer to Rule 54.6–E and Rule 84.6–E) from the ground line to a level not less than 8 ft. above the ground line, or provided that such poles comply with the conditions of Rule 91.3–A1b.

**(b) Communications Runs:** Joint poles with vertical communications runs are not required to be stepped, provided all of the following conditions are met:

- 1) The pole has no pole mounted communication terminals, no risers and no vertical runs (including ground wires) located within the climbing space, and not more than three levels of communication line conductors;
- 2) The communications levels consist only of drop wire in line cable construction, span wire supported cables, and messenger–supported cables;
- 3) The maximum vertical separation between the highest and lowest line communications levels is not more than 30 inches;
- 4) The vertical runs other than ground wires consist entirely of drop wire cables for service drops which extend vertically no more than one foot above and below the communication line levels.

**(c) Supply Runs:** Joint poles with supply vertical runs are not required to be stepped provided all of the following conditions are met:

- 1) All supply circuits on the pole are operated and maintained by only one party.



2) All supply vertical runs other than ground wires are located entirely above the communication levels.

3) No ground wire runs are located within the climbing space except those portions which are located above the communications level.

### **B. Location of Steps**

The lowest step shall not be less than 8 feet from the ground line, or any easily climbable foreign structure from which one could reach or step. Above this point steps shall be placed, with spacing between steps on the same side of the pole not exceeding 36 inches, at least to that conductor level above which only circuits operated and maintained by one party remain. Steps or fixtures for temporary steps shall be installed as part of a pole restoration process. Steps shall be so placed that runs or risers do not interfere with the free use of the steps.

**Exception:** Steps are not required above the uppermost Class C circuit where an Antenna is affixed above supply conductors.

*Proposed revised rule with strikeout/underline*

### **91.3 Stepping**

#### **~~A. Use Of Steps~~**

~~(1) **Poles with Vertical Runs or Risers:** All jointly used poles which support supply conductors shall be provided with pole steps if vertical runs or risers are attached to the surface of such poles, unless the conditions described in the following subparagraphs (a), (b) or (c) are met:~~

~~(a) **One Party Poles:** Poles which carry circuits operated and maintained by only one party are not required to be stepped, provided any vertical runs or risers on the surface of such poles are covered by a suitable protective covering (Refer to Rule 54.6 E and Rule 84.6 E) from the ground line to a level not less than 8 ft. above the ground line, or provided that such poles comply with the conditions of Rule 91.3 A1b.~~

~~(b) **Communications Runs:** Joint poles with vertical communications runs are not required to be stepped, provided all of the following conditions are met:~~

~~1) The pole has no pole mounted communication terminals, no risers and no vertical runs (including ground wires) located within the climbing space, and not more than three levels of communication line conductors;~~

~~2) The communications levels consist only of drop wire in line cable construction, span wire supported cables, and messenger supported cables;~~

~~3) The maximum vertical separation between the highest and lowest line communications levels is not more than 30 inches;~~

~~4) The vertical runs other than ground wires consist entirely of drop wire cables for service drops which extend vertically no more than one foot above and below the communication line levels.~~

~~(c) **Supply Runs:** Joint poles with supply vertical runs are not required to be stepped provided all of the following conditions are met:~~

~~1) All supply circuits on the pole are operated and maintained by only one party.~~

~~2) All supply vertical runs other than ground wires are located entirely above the communication levels.~~

~~3) No ground wire runs are located within the climbing space except those portions which are located above the communications level.~~

**~~B. Location of Steps~~**

~~A. Unless otherwise specified in this Order, pole steps used to ascend and descend joint use wood poles are not required. However, occupants on joint use wood poles are not prohibited from installing and maintaining temporary or permanent steps.~~

~~B. Unless designated non-climbable, joint use nonwood poles shall include provisions for ascending and descending.~~

~~C. Where installed, the lowest step shall not be less than 8 feet from the ground line, or any easily climbable foreign structure from which one could reach or step. Above this point steps shall be placed, with spacing between steps on the same side of the pole not exceeding 36 inches, at least to that conductor level above which only circuits operated and maintained by one party remain. Steps or fixtures for temporary steps shall be installed as part of a pole restoration process. Steps shall be so placed that runs or risers do not interfere with the free use of the steps.~~

~~**Exception:** Steps are not required above the uppermost Class C circuit where an Antenna is affixed above supply conductors.~~

Proposed final rule

**91.3 Stepping**

- A. Unless otherwise specified in this Order, pole steps used to ascend and descend joint use wood poles are not required. However, occupants on joint use wood poles are not prohibited from installing and maintaining temporary or permanent steps.
- B. Unless non-climbable, joint use nonwood poles shall include provisions for ascending and descending.
- C. Where installed, the lowest step shall not be less than 8 feet from the ground line, or any easily climbable foreign structure from which one could reach or step. Above this point steps shall be placed, with spacing between steps on the same side of the pole not exceeding 36 inches, at least to that conductor level above which only circuits operated and maintained by one party remain. Steps or fixtures for temporary steps shall be installed as part of a pole restoration process. Steps shall be so placed that runs or risers do not interfere with the free use of the steps.

**Rationale**

This rule revision improves worker safety by modifying the current rules to make the installation of permanent steps in wood poles optional rather than mandatory. In 2014 Fed-OSHA issued new and revised ‘fall protection’ rules that include requirements for the use of ‘wood pole fall protection devices’. Cal-OSHA adopted near identical rules in 2018. Many of California’s electric utilities revised their wood pole climbing policies and practices in advance of the revisions to Cal-OSHA rules and have found that wood pole steps are an encumbrance to the safe and proper use of wood pole fall protection devices. During the August workshops, one utility described three (recent) serious injuries to line workers involving steps and fall protection equipment. In addition, a member of the GO 95/128 Rules Committee presented Appendix C and demonstrated the use of this equipment. Parties agree that the presence of wood pole steps can impede linemen ascending and descending poles while using required fall protection gear and also agree that although the installation and use of wood pole steps might be warranted in some circumstances, installation should not be required. This revised rule was crafted to enhance safe climbing methods associated with fall protection gear. The proposed final version of Rule 91.3 also retains prior requirements that are applicable to the installation and maintenance of pole steps when/where installed.

**Other relevant information**

During the Sept. 13 workshop meeting, parties agreed to revise the proponent's version of revised rule 91.3-B to strike the word 'designed' as denoted below.

- A. Unless ~~designed~~ non-climbable, joint use nonwood poles shall include provisions for ascending and descending.

Associated PRs 4, 10, 14, and 16. See also Appendix –D.

Applicable Cal-OSHA rules:

See Cal-OSHA Subchapter 5, §2940.6 (b) Fall Protection

See also [AR-3](#) revising Section IX Table of Contents and [AR-4](#) revising GO 95 Index

**DATE: 8/29/2018**

**Preliminary Vote**

**PR: 13**

**GO 95 Rule: 91.3**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              | x                      |            |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Charter           | x                      |            |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               | x                      |            |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      | x                      |            |                |           |                |
| CTIA              | x                      |            |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         | x                      |            |                |           |                |
| Frontier          | x                      |            |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           | x                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 13**

**GO 95 Rule: 91.3**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Cal Advocates     |                        |            |                |           | x              |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      |                        | x          |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          |                        | x          |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           |                        | x          |                |           |                |

## GO 95, 'New' Rule 91.6 Interference with Fall Protection Equipment

*Workshop - Proposed new rule with strikeout/underline*

### **91.6 Interference with Fall Protection Equipment**

Electric supply and communication attachments shall not interfere with the effective use of fall protection.

Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:

(1) Surface-mounted equipment that occupies no more than 24 inches of vertical space.

(2) Surface-mounted risers and vertical runs.

(3) Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the surface of the pole, risers, or vertical runs.

*Proposed final rule*

### **91.6 Interference with Fall Protection Equipment**

Electric supply and communication attachments shall not interfere with the effective use of fall protection equipment.

Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:

(1) Surface-mounted equipment that occupies no more than 24 inches of vertical space.

(2) Surface-mounted risers and vertical runs.

(3) Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the surface of the pole, risers, or vertical runs.

**Rationale**

This proposed new Rule 91.6 is one of three specific rule revisions developed for inclusion in GO 95 that are similar to Rule 94.6-C (adopted by D.16-01-046) addressing interference with fall protection gear. Collectively, this new rule and new rules for Section V and Section VIII will apply to all pole attachments and allow Rule 94.6-C to be deleted.

**Other relevant information**

See associated PRs 4, 10, 13, 16, and Appendix C.

See [AR-3](#) revising Section IX Table of Contents and [AR-4](#) revising GO 95 Index.

See Cal-OSHA Subchapter 5, §2940.6 (b) Fall Protection



**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 14**

**GO 95 Rule: 91.6**

| <b>PARTIES</b>    | <b>NOT PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> |
|-------------------|--------------------|------------|----------------|-----------|
| AT&T              |                    | x          |                |           |
| BVES              |                    |            | x              |           |
| CCTA              |                    | x          |                |           |
| Charter           |                    | x          |                |           |
| CMUA              |                    |            | x              |           |
| Comcast           |                    | x          |                |           |
| Cox               |                    | x          |                |           |
| CPUC-SED          |                    | x          |                |           |
| Crown Castle      | x                  |            |                |           |
| CTIA              |                    | x          |                |           |
| ExteNet           | x                  |            |                |           |
| IBEW 1245         | x                  |            |                |           |
| Frontier          |                    | x          |                |           |
| LADWP             |                    |            | x              |           |
| MID               |                    |            | x              |           |
| Liberty Utilities | x                  |            |                |           |
| PacifiCorp        |                    | x          |                |           |
| PG&E              |                    | x          |                |           |
| SCE               |                    | x          |                |           |
| SDG&E             |                    | x          |                |           |
| SMUD              |                    |            | x              |           |
| T-MOBILE          |                    | x          |                |           |
| Verizon           | x                  |            |                |           |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 14**

**GO 95 Rule: 91.6**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Cal Advocates     |                        |            |                |           | x              |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      |                        | x          |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          |                        | x          |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           |                        | x          |                |           |                |

PR: 15

## GO 95, Rule 93 Climbing Space

### Original Rule

#### **93 Climbing Space**

Climbing space shall be provided on all jointly used poles which support conductors and the provisions of Rules 54.7 and 84.7 are directly applicable to such poles. Climbing space on jointly used poles shall be so correlated between conductor levels that its position in relation to the pole is not changed by more than 90 degrees in a vertical distance of less than 8 feet. Climbing space shall be maintained from the ground level.

### Pre-workshop - Proposed revised rule with strikeout/underline

#### **93 Climbing Space**

Climbing space shall be provided on all jointly used poles ~~which support conductors and~~ in accordance with the provisions of Rules 54.7, 54.9, 54.10, 54.11, 54.12 and 84.7 ~~are directly applicable to such poles.~~

Climbing space on jointly used poles shall be ~~so correlated~~ maintained between conductor levels and equipment of different ownership so that its position in relation to the pole is not changed by more than 90 degrees in a vertical distance of less than 8 feet.

Climbing space shall be maintained from the ground level.

### Workshop - Proposed revised rule with strikeout/underline

#### **93 Climbing Space**

Climbing space shall be provided on all jointly used poles ~~which support conductors and~~ in accordance with the provisions of Rules 54.7, 54.9, 54.10, 54.11, 54.12 and 84.7 ~~are directly applicable to such poles.~~

Climbing space on jointly used poles shall be ~~so correlated~~ maintained ~~between conductor levels and equipment of different ownership~~ so that its position in relation to the pole is not changed by more than 90 degrees in a vertical distance of less than 8 feet.

Climbing space shall be maintained from the ground level.

Proposed final rule

**93 Climbing Space**

Climbing space shall be provided on all jointly used poles in accordance with the provisions of Rules 54.7, 54.9, 54.10, 54.11, 54.12 and 84.7.

Climbing space on jointly used poles shall be maintained so that its position in relation to the pole is not changed by more than 90 degrees in a vertical distance of less than 8 feet.

Climbing space shall be maintained from the ground level.

**Rationale**

This proposed revised rule was developed to align the climbing space description contained in Rule 93 with the other applicable climbing requirements of GO 95. The proposed revisions to this rule improve clarity and applicability. Additional references to Section V ‘climbing space’ rules are added to insure completeness of the instant rule and the second paragraph is modified to include a simplified statement for ensuring the proper positioning of climbing space on joint use poles.

**Other relevant information**

See PR’s 6, 7, 8, and 9.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 15**

**GO 95 Rule: 93**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              | x                      |            |                |           |                |
| CCTA              |                        |            | x              |           |                |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        |            |                |           | x              |
| Cox               |                        |            | x              |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      | x                      |            |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         | x                      |            |                |           |                |
| Frontier          |                        | x          |                |           |                |
| LADWP             | x                      |            |                |           |                |
| MID               | x                      |            |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           | x                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 15**

**GO 95 Rule: 93**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Cal Advocates     |                        |            |                |           | x              |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      |                        | x          |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          |                        | x          |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | X          |                |           |                |
| SMUD              |                        | X          |                |           |                |
| T-MOBILE          |                        | X          |                |           |                |
| Verizon           |                        | X          |                |           |                |

## **GO 95, Rule 94.6 Climbing Space**

### **Original Rule**

- A.** Climbing space above supply lines shall be maintained in accordance with Rule 54.7-A to:
  - (1)** The bottom of the Antenna (including associated support elements) if affixed less than eight inches from the surface of the pole at the top of the pole or pole-top extension.
  - (2)** The top of the pole or pole-top extension if the Antenna (including associated support elements) is affixed more than eight inches from the surface of the pole or pole-top extension.
  - (3)** The bottom of the uppermost Antenna (including associated support elements) if multiple Antennas are present at different levels above supply lines.
  
- B.** Climbing space above communication lines shall be maintained in accordance with Rule 84.7 to:
  - (1)** The bottom of the Antenna (including associated support elements) at the top of the pole or pole-top extension when affixed less than eight inches from the surface of the pole.
  - (2)** The top of the pole or pole-top extension if the Antenna (including associated support elements) is affixed more than eight inches from the surface of the pole or pole-top extension.
  
- C.** Antennas and all associated attachments shall not impair climbing space or interfere with fall restraint and fall protection equipment except as permitted by the application of Rule 54.7 or Rule 84.7.

Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:

- (1)** Surface-mounted equipment that occupies no more than 18 inches of vertical space.
- (2)** Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the pole.
- (3)** Appropriately designed and installed surface-mounted risers.

Proposed revised rule with strikeout/underline

- A. Climbing space above supply lines shall be maintained in accordance with Rule 54.7-A to:
- (1) The bottom of the Antenna (including associated support elements) if affixed less than eight inches from the surface of the pole at the top of the pole or pole-top extension.
  - (2) The top of the pole or pole-top extension if the Antenna (including associated support elements) is affixed more than eight inches from the surface of the pole or pole-top extension.
  - (3) The bottom of the uppermost Antenna (including associated support elements) if multiple Antennas are present at different levels above supply lines.
- B. Climbing space above communication lines shall be maintained in accordance with Rule 84.7 to:
- (1) The bottom of the Antenna (including associated support elements) at the top of the pole or pole-top extension when affixed less than eight inches from the surface of the pole.
  - (2) The top of the pole or pole-top extension if the Antenna (including associated support elements) is affixed more than eight inches from the surface of the pole or pole-top extension.

~~C. Antennas and all associated attachments shall not impair climbing space or interfere with fall restraint and fall protection equipment except as permitted by the application of Rule 54.7 or Rule 84.7.~~

~~Note: Examples of attachments that might not interfere with fall restraint and fall protection equipment include, but are not limited to, the following:~~

- ~~(1) Surface-mounted equipment that occupies no more than 18 inches of vertical space.~~
- ~~(2) Equipment stood off from the pole to maintain a minimum of 4 inches of clear space between the equipment and the pole.~~
- ~~(3) Appropriately designed and installed surface-mounted risers.~~



Proposed final rule

- A. Climbing space above supply lines shall be maintained in accordance with Rule 54.7-A to:
- (1) The bottom of the Antenna (including associated support elements) if affixed less than eight inches from the surface of the pole at the top of the pole or pole-top extension.
  - (2) The top of the pole or pole-top extension if the Antenna (including associated support elements) is affixed more than eight inches from the surface of the pole or pole-top extension.
  - (3) The bottom of the uppermost Antenna (including associated support elements) if multiple Antennas are present at different levels above supply lines.
- B. Climbing space above communication lines shall be maintained in accordance with Rule 84.7 to:
- (1) The bottom of the Antenna (including associated support elements) at the top of the pole or pole-top extension when affixed less than eight inches from the surface of the pole.
  - (2) The top of the pole or pole-top extension if the Antenna (including associated support elements) is affixed more than eight inches from the surface of the pole or pole-top extension.

**Rationale**

Proposed new Rules 51.7, 81.6, and 91.6 are similar to Rule 94.6-C (adopted by D.16-01-046) and address interference with fall protection gear. Collectively, these new Section V, Section VIII, and Section IX rules will apply to all pole attachments and allow Rule 94.6-C to be deleted.

**Other relevant information**

See associated PRs 4, 10, 14, and Appendix C.

See also [AR-3](#) revising Section IX Table of Contents and [AR-4](#) revising GO 95 Index.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 16**

**GO 95 Rule: 94.6**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      | x                      |            |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          | x                      |            |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           | x                      |            |                |           |                |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 16**

**GO 95 Rule: 94.6**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Cal Advocates     |                        |            |                |           | x              |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      |                        | x          |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          |                        | x          |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           |                        | x          |                |           |                |

PR: 17

Original Rule

**94.11 Pole Overturning Calculation**

A pole overturning calculation shall be performed before a pole-top antenna installation is added to a pole. The calculation shall use a safety factor of 3.0 for Grade A construction, and 2.0 for Grades B and C construction, and incorporate loads for the entire pole structure, including all existing attachments and guys (if any), and all elements of the planned pole-top antenna installation. After the installation, the safety factor shall comply with Rule 44.3.

Note: The purpose of this calculation is to ensure that the pole overturning moment does not exceed the capacity of the soil, rock, or other material in which the pole is embedded to resist the pole overturning moment.

Note: Added January 28, 2016 by Decision No. 16-01-046.

Proposed revised rule with strikeout/underline

**~~94.11 Pole Overturning Calculation~~**

~~A pole overturning calculation shall be performed before a pole-top antenna installation is added to a pole. The calculation shall use a safety factor of 3.0 for Grade A construction, and 2.0 for Grades B and C construction, and incorporate loads for the entire pole structure, including all existing attachments and guys (if any), and all elements of the planned pole-top antenna installation. After the installation, the safety factor shall comply with Rule 44.3.~~

~~Note: The purpose of this calculation is to ensure that the pole overturning moment does not exceed the capacity of the soil, rock, or other material in which the pole is embedded to resist the pole overturning moment.~~

~~Note: Added January 28, 2016 by Decision No. 16-01-046.~~

Proposed final

**No rule.**

### **Rationale**

Currently, the existing language of Rule 49.1-C requires deeper settings or other special methods to be used to prevent pole overturning or excessive movement, but is not clear in terms of the loading conditions it must account for. The proposed change to Rule 49.1-C in PR 3 adds a reference to Rules 43 and 44 to require that the provision for deeper settings or other special methods to ensure that the pole must be protected against overturning or excessive movement at any load equal to or less than the load it must be protected against for bending failures. In other words, a pole must not overturn at any load less than the load that causes it to break.

The proposed change to Rule 49.1-C (in PR 3) is applicable to all sole-use and joint-use utility poles and allows Rule 94.11, which addresses only joint use poles supporting antennas, to be deleted.

### **Other relevant information**

See PR 3 and also [AR-3](#) revising Section IX Table of Contents.

**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 17**

**GO 95 Rule: 94.11**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      | x                      |            |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          | x                      |            |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           | x                      |            |                |           |                |

DATE: 9/27/2018

FINAL VOTE

PR: 17

GO 95 Rule: 94.11

| PARTIES           | NOT<br>PRESENT | YES | NEUTRAL | NO | ABSTAIN |
|-------------------|----------------|-----|---------|----|---------|
| AT&T              |                | x   |         |    |         |
| BVES              |                | x   |         |    |         |
| CCTA              |                | x   |         |    |         |
| Cal Advocates     |                |     |         |    | x       |
| Charter           |                | x   |         |    |         |
| CMUA              |                | x   |         |    |         |
| Comcast           |                | x   |         |    |         |
| Cox               |                | x   |         |    |         |
| CPUC-SED          |                | x   |         |    |         |
| Crown Castle      |                | x   |         |    |         |
| CTIA              |                | x   |         |    |         |
| ExteNet           | x              |     |         |    |         |
| IBEW 1245         |                | x   |         |    |         |
| Frontier          |                | x   |         |    |         |
| LADWP             |                | x   |         |    |         |
| MID               |                | x   |         |    |         |
| Liberty Utilities | x              |     |         |    |         |
| PacifiCorp        |                | x   |         |    |         |
| PG&E              |                | x   |         |    |         |
| SCE               |                | x   |         |    |         |
| SDG&E             |                | x   |         |    |         |
| SMUD              |                | x   |         |    |         |
| T-MOBILE          |                | x   |         |    |         |
| Verizon           |                | x   |         |    |         |

PR: 18

## **GO 95, (Renumber) Rule 94.12 to Rule 94.10**

### **Original Rule**

#### **94.12 Personnel Access Above Supply Lines**

Only personnel and contractors who are properly qualified to work in proximity to supply lines shall have access to, and work on, wireless facilities installed above supply lines on the same support structure.

Note: Added January 28, 2016 by Decision No. 16-01-046.

### **Proposed revised rule with strikeout/underline**

#### **94.~~12~~ 10 Personnel Access Above Supply Lines**

Only personnel and contractors who are properly qualified to work in proximity to supply lines shall have access to, and work on, wireless facilities installed above supply lines on the same support structure.

Note: Added January 28, 2016 by Decision No. 16-01-046.

### **Proposed final rule**

#### **94.10 Personnel Access Above Supply Lines**

Only personnel and contractors who are properly qualified to work in proximity to supply lines shall have access to, and work on, wireless facilities installed above supply lines on the same support structure.

Note: Added January 28, 2016 by Decision No. 16-01-046.

### **Rationale**

Previously, Rule 49.11 was incorrectly numbered in D.16-01046. Also, parties reached consensus on revisions to Rule 49.1-C (PR 3) and agreed that Rule 49.11 should be deleted. To accommodate the deletion of 49.11 and correct the previous incorrect numbering of this rule, it is appropriate to correct the numbering of Rule 94.12 to Rule 94.10.

### **Other relevant information**

See also [AR-3](#) revising Section IX Table of Contents.



**DATE: 9/13/2018**

**Preliminary Vote**

**PR: 18**

**GO 95 Rule: 94.12**

| <b>PARTIES</b>    | <b>NOT PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> |
|-------------------|--------------------|------------|----------------|-----------|
| AT&T              |                    | x          |                |           |
| BVES              |                    | x          |                |           |
| CCTA              |                    | x          |                |           |
| Charter           |                    | x          |                |           |
| CMUA              |                    | x          |                |           |
| Comcast           |                    | x          |                |           |
| Cox               |                    | x          |                |           |
| CPUC-SED          |                    | x          |                |           |
| Crown Castle      | x                  |            |                |           |
| CTIA              |                    | x          |                |           |
| ExteNet           | x                  |            |                |           |
| IBEW 1245         |                    | x          |                |           |
| Frontier          | x                  |            |                |           |
| LADWP             |                    | x          |                |           |
| MID               |                    | x          |                |           |
| Liberty Utilities | x                  |            |                |           |
| PacifiCorp        |                    | x          |                |           |
| PG&E              |                    | x          |                |           |
| SCE               |                    | x          |                |           |
| SDG&E             |                    | x          |                |           |
| SMUD              |                    | x          |                |           |
| T-MOBILE          |                    | x          |                |           |
| Verizon           | x                  |            |                |           |

**DATE: 9/27/2018**

**FINAL VOTE**

**PR: 18**

**GO 95 Rule: 94.12**

| <b>PARTIES</b>    | <b>NOT<br/>PRESENT</b> | <b>YES</b> | <b>NEUTRAL</b> | <b>NO</b> | <b>ABSTAIN</b> |
|-------------------|------------------------|------------|----------------|-----------|----------------|
| AT&T              |                        | x          |                |           |                |
| BVES              |                        | x          |                |           |                |
| CCTA              |                        | x          |                |           |                |
| Cal Advocates     |                        |            |                |           | x              |
| Charter           |                        | x          |                |           |                |
| CMUA              |                        | x          |                |           |                |
| Comcast           |                        | x          |                |           |                |
| Cox               |                        | x          |                |           |                |
| CPUC-SED          |                        | x          |                |           |                |
| Crown Castle      |                        | x          |                |           |                |
| CTIA              |                        | x          |                |           |                |
| ExteNet           | x                      |            |                |           |                |
| IBEW 1245         |                        | x          |                |           |                |
| Frontier          |                        | x          |                |           |                |
| LADWP             |                        | x          |                |           |                |
| MID               |                        | x          |                |           |                |
| Liberty Utilities | x                      |            |                |           |                |
| PacifiCorp        |                        | x          |                |           |                |
| PG&E              |                        | x          |                |           |                |
| SCE               |                        | x          |                |           |                |
| SDG&E             |                        | x          |                |           |                |
| SMUD              |                        | x          |                |           |                |
| T-MOBILE          |                        | x          |                |           |                |
| Verizon           |                        | x          |                |           |                |

**Section V**  
**Detailed Construction Requirements for Supply Lines**  
**(Class H, L and T Circuits)**

| Rule                                                    | Page        |
|---------------------------------------------------------|-------------|
| 50. General                                             | V-17        |
| 51. Poles, Towers and Structures                        | V-17        |
| 51.1 Definition                                         | V-17        |
| 51.2 Maintenance and Inspection                         | V-17        |
| 51.3 Material and Strength                              | V-17        |
| 51.4 Clearances                                         | V-17        |
| A. From Railroad Tracks                                 | V-17        |
| 51.5 Dimensions and Settings                            | V-17        |
| 51.6 Marking and Guarding                               | V-17        |
| A. High Voltage Marking of Poles                        | V-17        |
| B. Guarding                                             | V-19        |
| 51.7 Stepping                                           | V-20        |
| <u>51.8 Interference with Fall Protection Equipment</u> | <u>V-21</u> |
| 52. Crossarms                                           | V-21        |
| 52.1 Definition                                         | V-21        |
| 52.2 Maintenance and Inspection                         | V-21        |
| 52.3 Material and Strength                              | V-21        |
| 52.4 High Voltage Marking                               | V-21        |
| 52.5 Metal Crossarms and Brackets                       | V-21        |
| 52.6 Clearance Arms                                     | V-21        |
| 52.7 Hardware                                           | V-21        |
| A. Protection against Corrosion                         | V-21        |
| B. Metal Braces                                         | V-21        |
| (1) For Wood Crossarms                                  | V-21        |
| (2) For Metal Crossarms                                 | V-22        |
| C. Separation from Bond Wires and Ground Wires          | V-22        |
| D. Separation from Metal Pins and Deadend Hardware      | V-22        |

**Section VIII**  
**Detailed Construction Requirements for Communication Lines**  
**(Class C Circuits)**

| Rule                                                                      | Page                           |
|---------------------------------------------------------------------------|--------------------------------|
| 80. General                                                               | VIII-9                         |
| 80.1 Inspection Requirements for Communication Lines                      | VIII-9                         |
| A. Patrol and Detailed Inspections                                        |                                |
| (1) Inspection Requirements for Joint-Use Poles in High Fire-Threat Areas | VIII-9                         |
| (2) Statewide Inspection Requirements                                     | VIII-11                        |
| (3) Definitions                                                           | VIII-11                        |
| (4) Record Keeping                                                        | VIII-12                        |
| B. Intrusive Inspections                                                  | VIII-12                        |
| 81. Poles, Towers and Structures                                          | VIII-13                        |
| 81.1 Definition                                                           | VIII-13                        |
| 81.2 Maintenance and Inspection                                           | VIII-13                        |
| 81.3 Material and Strength                                                | VIII-13                        |
| A. Replacement of Wood Poles in Grade F Construction                      | VIII-13                        |
| 81.4 Clearances                                                           | VIII-13                        |
| A. From Railroad Tracks                                                   | VIII-13                        |
| 81.5 Dimensions and Settings                                              | VIII-13                        |
| 81.6 Stepping                                                             | VIII-13                        |
| <a href="#"><u>81.7 Interference with Fall Protection</u></a>             | <a href="#"><u>VIII-13</u></a> |
| 82. Crossarms                                                             | VIII-14                        |
| 82.1 Definition                                                           | VIII-14                        |
| 82.2 Maintenance and Inspection                                           | VIII-14                        |
| 82.3 Material and Strength                                                | VIII-14                        |
| 82.4 Hardware                                                             | VIII-14                        |
| A. Protection against Corrosion                                           | VIII-14                        |
| B. Metal Back Braces                                                      | VIII-14                        |
| 83. Pins, Deadends and Conductor Fastenings                               | VIII-14                        |
| 83.1 Maintenance and Inspection                                           | VIII-14                        |

|      |                         |         |
|------|-------------------------|---------|
| 83.2 | Material and Strength   | VIII-14 |
| 83.3 | Pin and Deadend Spacing | VIII-14 |

**Section IX**  
**Joint Poles or Poles Jointly Used**

| Rule                                                                     | Page            |
|--------------------------------------------------------------------------|-----------------|
| 90. General                                                              | IX-3            |
| 91. Poles, Towers and Structures                                         | IX-3            |
| 91.1 Joint Use                                                           | IX-3            |
| 91.2 Strength                                                            | IX-3            |
| 91.3 Stepping                                                            | IX-4            |
| <del>A. Use of Steps</del>                                               | <del>IX-4</del> |
| <del>(1) Poles with Vertical Runs or Risers</del>                        | <del>IX-4</del> |
| <del>(a) One-party Poles</del>                                           | <del>IX-4</del> |
| <del>(b) Communications Runs</del>                                       | <del>IX-4</del> |
| <del>(c) Supply Runs</del>                                               | <del>IX-5</del> |
| <del>B. Location of Steps</del>                                          | <del>IX-5</del> |
| 91.4 Hardware                                                            | IX-5            |
| 91.5 Marking                                                             | IX-5            |
| <u>91.6 Interference with Fall Protection Equipment</u>                  | <u>IX-5</u>     |
| 92. Conductors, Cables and Messengers                                    | IX-6            |
| 92.1 Vertical Clearances                                                 | IX-6            |
| A. Between Low-voltage Rack Conductors and Other Conductors              | IX-7            |
| B. Between Cables and Messengers and Other Conductors                    | IX-7            |
| C. Communication Open Wire Conductors                                    | IX-9            |
| D. Circuits Serving Same Party                                           | IX-9            |
| E. Communication Service Drop Attachments                                | IX-9            |
| F. Between Conductors, Cables, Messengers and<br>Miscellaneous Equipment | IX-9            |
| (1) Unenergized Parts of Energized Equipment                             | IX-9            |
| (2) Cable Terminals or Metal Boxes                                       | IX-10           |
| (3) Drip Loops                                                           | IX-11           |
| (4) Transformers or Regulators                                           | IX-11           |
| (5) Street Lighting Equipment                                            | IX-13           |
| (6) Between Grounded Metal Boxes                                         | IX-             |

| Rule                        |                                                                                                         | Page             |
|-----------------------------|---------------------------------------------------------------------------------------------------------|------------------|
| 92.2                        | Police and Fire Alarm Circuits                                                                          | IX-13            |
| 92.3                        | Vertical Runs, Risers, Ground Wires and Hardware                                                        | IX-14            |
| 92.4                        | Grounding                                                                                               | IX-14            |
| A.                          | General                                                                                                 | IX-14            |
| B.                          | Applicability                                                                                           | IX-15            |
| C.                          | Material and Size                                                                                       | IX-15            |
| (1)                         | Grounding Conductors                                                                                    | IX-15            |
| (2)                         | Ground Rods (Ground Electrodes)                                                                         | IX-16            |
| D.                          | Location of Grounds on Exposed Cables with Metallic Shields, Sheaths or Messengers; and on Exposed Guys | IX-16            |
| (1)                         | Exposed Cables and Messengers                                                                           | IX-16            |
| (2)                         | Exposed Guys                                                                                            | IX-16            |
| 93.                         | Climbing Space                                                                                          | IX-17            |
| 94.                         | Antennas                                                                                                |                  |
| 94.1                        | Definition                                                                                              | IX-17            |
| 94.2                        | Maintenance and Inspection                                                                              | IX-17            |
| 94.3                        | General Requirements                                                                                    | IX-17            |
| 94.4                        | Clearances                                                                                              | IX-18            |
| 94.5                        | Marking                                                                                                 | IX-20            |
| 94.6                        | Climbing Space                                                                                          | IX-20            |
| 94.7                        | Stepping                                                                                                | IX-21            |
| 94.8                        | Risers and Vertical Runs                                                                                | IX-21            |
| 94.9                        | De-Energizing                                                                                           | IX-22            |
| <del>94.11</del>            | <del>Pole Overturning Calculation</del>                                                                 | <del>IX-22</del> |
| 94. <del>12</del> <u>10</u> | Personnel Access Above Supply Lines                                                                     | IX-22            |

## AR -4: GO 95, Index revisions

### A

|                                                                   |                                                                                    |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Abandoned Lines                                                   | 31.6                                                                               |
| Accepted Good Practice                                            | 13                                                                                 |
| Allowable Obstructions                                            |                                                                                    |
| Climbing Space                                                    | 54.7-A3, 54.9-F, 54.10-F3, 54.11-G, 54.12-F3, 58.3-A3, 84.7- <del>EA</del> 5, 88.1 |
| Working Space                                                     | 54.7-B2                                                                            |
| Allowable Tension-Definition                                      | 23.7-A                                                                             |
| Alteration or Reconstruction, Commission May Order                | 12.4                                                                               |
| Aluminum Cable, Steel Reinforced                                  | Table 23 (Appendix B)                                                              |
| American Wire Gage (AWG)                                          | 24.2-A                                                                             |
| Anchor Guys (See also Guys)                                       |                                                                                    |
| Attachment, Center of Load                                        | 56.2, 66.2, 86.2, Appendix F - Parts 2 and 3                                       |
| Clearances (See Guy Clearances)                                   |                                                                                    |
| Definition                                                        | 56.1 (See Rules 21.5 and 23.5)                                                     |
| From Transformer Cases                                            | 56.4-F                                                                             |
| Grounding or Grounded                                             | 56.6-D, 66.6, 86.6-C, 92.4                                                         |
| Location of Insulators                                            | 56.7-B, 86.7-B                                                                     |
| Marking (Guarding)                                                | 56.9, 66.7, 86.9                                                                   |
| Safety Factor                                                     | 44, 44.1, Table 4, 49.6-C                                                          |
| Sectionalizing Requirements                                       | 56.6, 86.6                                                                         |
| Size                                                              | 49.6-B, 61.3                                                                       |
| Strength                                                          | 48.4, Table 24                                                                     |
| Use of                                                            | 47.2                                                                               |
| Angle of Deviation                                                | Figure 86 (Appendix G)                                                             |
| Angle Pole Problem                                                | Appendix F - Part 3                                                                |
| Annual Weather Variations, Normal                                 | Table 1 - Note (ddd)                                                               |
| Antennas                                                          |                                                                                    |
| Access, Clearances, Installation, Climbing Space, and Maintenance | 94                                                                                 |
| Apparent Sag-Definition                                           | 23.3-B, Figure 4                                                                   |
| Applicability of Common Neutral Rules                             | 59.2                                                                               |
| Applicability of Rules                                            | 11, 12, 13                                                                         |



|                                               |                          |
|-----------------------------------------------|--------------------------|
| Arcing Shields                                | 104, 114                 |
| Arm Guy (See Guy)                             |                          |
| Arms (See Crossarm)                           |                          |
| Arrangement of Lines                          | 32                       |
| Arresters, Lightning                          | 22.0, 33.3-A, 89.2       |
| Attachment of Protective Covering             | 54.6-I, 84.6-F           |
| Attachment of Conductors                      |                          |
| to Bridges, Buildings, etc.                   | 54.4-H2, 54.4-I, 84.4-F  |
| to Insulators                                 | 54.11-B1                 |
| to Trolley Span Wires                         | 78.1, 78.2               |
| Attachment of Conductors to Surface of Poles  |                          |
| Cables and Messengers, Longitudinal           | 57.4-F, 84.4-D2, 87.4-D2 |
| Communication Conductors, Longitudinal        | 84.4-D2, 92.1-C, 92.1-D  |
| Communication Service Drops                   | 84.8-B2b                 |
| Ground Wires                                  | 54.6-B, 84.6-B           |
| Low Voltage, on Racks (See Rack Construction) |                          |
| Lateral Runs                                  | 54.6-C, 84.6-C           |
| Risers                                        | 54.6-E, 84.6-E           |
| Vertical Configuration                        | 54.4-D6b                 |
| Vertical Runs                                 | 54.6-D, 84.6-D           |
| Without Use of Wood Crossarms                 | 54.11-B                  |
| Attachment to Poles of Span Wires, Foreign    | 34, 78.3                 |
| Autotransformer                               | 24.1                     |
| Avoidance of Conflict                         | 31.3, 31.4               |
| <b><u>B</u></b>                               |                          |
| Backbone                                      | 77, 77.6-b               |
| Backup Plate                                  | 54.6-E1c                 |
| Barriers                                      | 51.6-B, 61.6-A, 61.6-B   |
| Bending, Moduli of Rupture in                 | 48.1, Table 5            |
| Birmingham Wire Gage (BWG)                    | 24.2-B                   |
| Bolts, Covered in Climbing Space              | 54.7-A3, 58.1-B1         |
| Bonds (or Bonding)                            |                          |
| Capacitors or Regulators                      | 58.4-C                   |

|                                                     |                                     |
|-----------------------------------------------------|-------------------------------------|
| Circuits of 7,500 or Less                           | 53.4-B, 103.1-B, 113.1-B            |
| Circuits of More than 7,500 Volts                   | 53.4-A, 63.4, 103.1-B, 113.1-B      |
| Common                                              | 53.4-A3b                            |
| Communication Messengers and Guys                   | 83.4                                |
| Covering of Bond Wires                              | 53.4-A, 53.4-B, 83.4                |
| Grounded                                            | 33.3-A, 52.4-F, 53.4-A3a, 53.4-A3b  |
| Messengers and Cables                               | 57.8, 83.4, 92.4                    |
| Phase-to-phase                                      | 63.4                                |
| Pins and Deadend Hardware                           | 53.4, 63.4                          |
| Separate                                            | 53.4-A3a                            |
| Separation of Bond Wires                            | 52.4-B, 52.7-C                      |
| Transformers                                        | 58.1, 58.2-A3                       |
| Wire Size                                           | 53.4, 63.4                          |
| Boxes                                               |                                     |
| Location and Clearance                              | 54.4-G, 58.6, 84.6-D, 88.1, 92.1-F2 |
| Braces                                              |                                     |
| Metal Back                                          | 52.7-E, 54.7-A3, 84.7-B             |
| Requirements for Use                                | 47.1                                |
| Separation from Other Hardware and Conductors       | 52.7-B, 92.3                        |
| Brackets                                            |                                     |
| Cable                                               | 87.5                                |
| Communication, Open Wire                            | 84.4-C1b                            |
| Service Drop, Clearance                             | 54.8-C2, 84.8-D2                    |
| Strength                                            | Table 4 (Section 4)                 |
| Trolley                                             | 77.6-C                              |
| Bridge                                              |                                     |
| Attachment to                                       | 54.4-H2, 54.4-I, 84.4-F             |
| Clearance of Conductors from Table 1-Cases 6 and 7, | 54.4-H, 54.4-I, 84.4-F              |
| Definition                                          | 20.3                                |
| Bridled Runs                                        | 84.6-D                              |
| Buck Arms                                           |                                     |
| Clearance, Modified                                 | 64.4-C2                             |
| Climbing Space                                      | 54.7-A3, 84.7-B                     |
| Definition                                          | 21.0-B                              |
| Vertical Separation                                 | Table 2-Case 14, 54.4-C2a           |

## C

### Cable

|                                                  |                                       |
|--------------------------------------------------|---------------------------------------|
| Aluminum, Steel Reinforced                       | Table 23 (Appendix B)                 |
| Auxiliary                                        | 77.6-A5, 78.3-C                       |
| Bonding and Grounding                            | 57.8                                  |
| Boxes (See Boxes)                                |                                       |
| Clearance from its Messenger                     | 57.4-D                                |
| Clearances (See Conductor)                       |                                       |
| Covering In Lieu of Guard Arms                   | 57.7, 87.7                            |
| Definition                                       | 20.4, 87.1                            |
| Equalizer                                        | 74.4-G3                               |
| Fastenings                                       | Table 4, 87.5                         |
| Guarding Above Trolley                           |                                       |
| Contact Conductors                               | 57.4-B2, 87.4-B2                      |
| Guarding at Pole Attachments                     | 57.4-F, 57.7, 87.4-C3, 87.7           |
| Hooks, Location of                               | 84.4-C1c, 84.8-B2b                    |
| Lateral and Vertical Runs (See Runs)             |                                       |
| Loading (See also Loading)                       | 49.7B                                 |
| Low Voltage, Multiconductor<br>with Bare Neutral | 54.10                                 |
| Messenger (See Messenger)                        |                                       |
| Neutral Supported (“Triplex”)                    |                                       |
| Service Drop                                     | 54.8-B4b                              |
| Protection                                       | 54.6-D, 54.6-E, 57.7, 84.7-D, 84.6-E, |
| 87.7                                             |                                       |
| Risers (See Risers)                              |                                       |
| Sag                                              | 57.9, 87.8                            |
| Terminals                                        | 54.6-F, 84.6-D, 88.1                  |
| “Triplex” (Neutral Supported Service Drop)       | 54.8-B4b                              |
| Capacitors, Detail of Installation               | 54.4                                  |
| Case Clearances                                  |                                       |
| Capacitors                                       | 58.1-B                                |
| Regulators                                       | 58.1-B                                |
| Switches                                         | 54.4-G, 58.6-A                        |
| Transformers                                     | 58.2-A3                               |

**(@ Index-6)**

Clearances *continued*

Roofs  
Runs  
Service Drop Clearances  
Sign Clearances  
Span Wire Clearances  
Street Lighting  
Tower  
Transformers

Climbing Space

Allowable Obstructions 54.7-A3, 54.9-F, 54.10-F3, 54.11-G,  
54.12-F3, 58.3-A3, 84.7-~~EA~~5, 88.1

Buck Arm Construction 54.7-A2, 84.7-B

Combination Line Arms 54.7-A2

Communication circuits 84.7

Definition 20.7

Joint Poles 93

One Vertical Circuit at Pole Top 54.11-F

Rack Construction 54.9-F

Space Bolts, Dead End, Covered In 54.7-A3

Supply Circuits 54.7

Terminals, Communication, Allowed In 88.1

Through Bolts, Transformer, Covered In 58.1-B3

Trolley Circuits 74.7

Colinear Lines

Definition 22.1-B

Requirements 32.3, 54.4-D3, 56.4-C2, 84.4-D3, 103.5

Combination Arm

Circuits Permitted 32.4, 54.4-C2b, 54.7-A3, 54.8-E

Definition 21.0-A

Marking (See also Marking) 51.6-A

Common Neutral System,  
Requirements for

59

Common Neutral, Tagging of

59.3-F

Communication Requirements

Section VIII

Concrete, Strength of

Table 4, 48.3

**(@ Index-13)**

**F**

Factor of Safety (See Safety Factor)

Fall Protection [51.8, 81.7, 91.6](#)

Fastenings (See Fastenings under various items)

Feeder

|                |                                  |
|----------------|----------------------------------|
| Auxiliary      | 74.3, 74.4-C, 77.6-A5            |
| Common Neutral | 59.3-B, 59.3-D                   |
| Span Wire      | 77.6-A4, 77.6-A5, 77.6-C3, 78.1  |
| Trolley        | 37-Table 1-Col. C, 74.3, 74.4-G3 |

Fence

|                      |                |
|----------------------|----------------|
| Barrier              | 51.6-B, 61.6-B |
| Substation           | 61.6-B         |
| Third Rail Enclosure | 79.4           |

Fiber Conduit 54.8-C2, 77.6-A6, 84.8-D2

Fiber Optic Cable Transitions 87.10

Dielectric Fiber Optic Cable Transitions 87.10-B

Non-dielectric Fiber Optic  
Cable Transitions 87.10-A

Fire Alarm Circuits 20.6-A, 54.8-C1, 92.2

Fittings, Terminal Fixtures 54.6-F, 84.6-D

Decorative Lighting 34, 78.3

Street Lighting 58.5-B, 58.5-D, 92.1-F5

Traffic Signal 58.4

Footings and Foundations 45, 46, 48.5

Foreign Attachments 34, 78.3

**G**

Gains, Pole 49.1-D

Gages, Kinds 24.2

Galvanizing or Corrosion Resisting 49.2-A2, 49.3-A, 49.6-A, 49.7-A, 49.8,  
61.3-A1

Garlands, Decorative 78.3, 78.3-A2

Governmental Agency Control Circuits 92.2

**(@ Index-15)**

Ground Wires *continued*

|                     |                                |
|---------------------|--------------------------------|
| Covering-Definition | 22.8-B, 22.8-E, 54.6-B, 84.6-B |
| Location            | 54.6-B, 84.6-B                 |
| Material            | 49.4-A, 61.3-A2, 84.6-B        |
| Mechanical Strength | 54.6-B, 59.4, 61.3-A2, 84.6-B  |

Guard Arms

|                              |                               |
|------------------------------|-------------------------------|
| Definition                   | 21.0-D                        |
| Material and Size            | 49.2-A, 49.2-B, 57.7          |
| On Joint Poles               | 92.1-A to F1 incl.            |
| Strength                     | 49.2-C, 54.9-E1               |
| Use with Cable and Messenger | 57.4-F, 57.7, 87.4-C3, 87.7-B |
| Use with Grounded Equipment  | 54.6-F, 58.6-B                |
| Use with Low Voltage Racks   | 54.9-E1, 54.9-E2              |

Guarding

|                                      |            |
|--------------------------------------|------------|
| Latticed Steel Poles                 | 51.6-B     |
| Messengers (See Messenger, Guarding) |            |
| Third Rail                           | 79.2, 79.3 |
| Towers                               | 61.6-B     |

Guy (or Guys)

|                                                |                                               |
|------------------------------------------------|-----------------------------------------------|
| Anchor (See Anchor Guy)                        |                                               |
| Arm                                            | 56.7-A, Figure 56-7                           |
| Attached to Grounded Structures                | 66.6                                          |
| Attachment, Center of Load                     | 56.2, 66.2, 86.2                              |
| Branched or Bridle                             | 56.7-A, Figure 56-7                           |
| Bonding                                        | 83.4, 92.4                                    |
| Definition of                                  | 21.5                                          |
| Exposed-Definition                             | 21.5-C, 86                                    |
| Fastenings, Hooks, Shims and Thimbles          | 56.5, 66.5, 86.5                              |
| Grounding or Grounded                          | 56.6-D, 56.6-E, 66.6, 86.6, 92.4              |
| Guarding where Clearance Reduced to Messengers | 56.4-C4, 86.4-C4                              |
| In Climbing Space                              | 52.7-D, 54.7-A3, 84.7- <del>E</del> <u>A5</u> |
| In Proximity-Definition                        | 21.5-D, 56.6, 86.6, Figures 56-2 to 56-10     |
| Lead of Guy, Illustrated                       | Figure 86 (Appendix G)                        |
| Location of Sectionalizing Insulators          | 56.7, 86.7                                    |
| Markers (Guards)                               | 56.9, 66.7, 86.9                              |

**(@ Index-24)**

|                                  |        |
|----------------------------------|--------|
| Normal Sag                       | 23.3-A |
| Notice of Intention to Construct | 31.4   |
| Notification                     | 15.3   |

**Q**

|                                             |                                                               |
|---------------------------------------------|---------------------------------------------------------------|
| Obstructions, Allowable                     |                                                               |
| In Climbing Space                           | 54.7-A3, 54.9-F, 54.10-F3, 54.11-G, 54.12-F3, 58.3-A3, 84.8-E |
| In Working Space                            | 54.7-B2                                                       |
| Open Wire-Definition                        | 20.9-D                                                        |
| Overbuilds                                  | 22.1-B; Figs. 2 and 3 (Appendix G)                            |
| Overhead Ground Wire                        | 61.3-A2, 103.2, 113.2                                         |
| Definition                                  | 21.3-A                                                        |
| Fastenings, Hooks and Shims                 | 56.5, 66.5, 86.5                                              |
| From Transformer Cases                      | 56.4-F                                                        |
| Grounding                                   | 56.6-D, 56.6-E, 66.6, 86.6-C, 86.6-D, 92.4                    |
| In Climbing Space                           | 54.7-A3, 84.7- <del>EA</del> 5                                |
| Location of Sectionalizing Insulators       | 56.7, 86.7                                                    |
| Material                                    | 49.6-A, 66.3                                                  |
| Protection above Trolley Contact Conductors | 56.4-B2, 86.4-B2                                              |
| Sectionalizing Requirements                 | 56.6, 86.6                                                    |
| Size                                        | 49.6-B, 61.3-A3a                                              |
| Strength                                    | 48.4, 49.6-C, 66.3, Table 24 (Appendix B)                     |
| Use of                                      | 47.2, 56.2, 66.2, 86.2                                        |
| Overhead Line Structures-Definition         | 22.1-D                                                        |
| Overhead Guys                               | 21.5-A                                                        |

**P**

|                            |  |
|----------------------------|--|
| Painting (Same as Marking) |  |
|----------------------------|--|

**(@ Index 33)**

|                                             |                                         |
|---------------------------------------------|-----------------------------------------|
| Spliced Poles                               |                                         |
| Definition                                  | 22.6-B                                  |
| Use in Line Crossings, Conflicts            | 101.2                                   |
| Use in Railway Crossings                    | 111.3                                   |
| Splices, Conductor                          |                                         |
| Location of                                 | 103.1-A, 113.1-A                        |
| Strength of                                 | 49.4-C6                                 |
| Spreader Brackets                           | 54.12-D2                                |
| Steel Poles (See Latticed Steel Poles)      |                                         |
| Steel, Poles, Tubular                       | 44, Table 4                             |
| Steel, Structural                           | 48.2                                    |
| Steel Wire, Characteristics of              | Table 21 (Appendix B)                   |
| Steel Wire, Copper Covered                  | Table 22 (Appendix B)                   |
| Stepping                                    |                                         |
| Poles                                       | 51.7, 81.6, 84.7- <del>EA</del> 5, 91.3 |
| Towers                                      | 61.7                                    |
| Strain Insulators (See Insulators)          |                                         |
| Street Lighting                             |                                         |
| Circuit Voltage                             | 58.5-A                                  |
| Classification of Supply Circuits           | 20.6-D                                  |
| Clearance from Metal Boxes                  | 58.5-B3a, 92.1-F5                       |
| Clearances                                  | 58.5-B, 92.1-F5                         |
| Decorative (See Decorative Street Lighting) |                                         |
| Drop Wires                                  | 54.6-A, 58.5-B3a, 92.1-F5               |
| Exceptions                                  | 58.5-F                                  |
| Requirements                                | 58.5                                    |
| Street Railway-Definition                   | 22.9-C                                  |