# Wood Pole Installation

**Notes:**

1) Poles shall be handled with care, so as not to damage the wood or preservative treatment.
2) Poles shall be lifted off the pole hauler/trailer at designated structure locations and not rolled or dragged along the ground.
3) Lifting slings that do not damage the poles shall be used. Pole tongs are not permitted.
4) The butt of a pole shall not be cut. Pole tops shall be cut only if approved by the designer and line supervisor.
5) Poles shall be set exactly vertical and in line with each other wherever possible. At angles in the line and at points of excessive strain (such as permanent dead-ends), the pole shall be guyed. The pole shall also be given a rake against the strain at the bottom, so that the top of the pole will be in line. The rake shall be one foot for every thirty (30) feet of pole height above the ground line. Refer to DCS-OH-GC-06-300 for pole raking.
6) When unusual conditions are encountered or for angle poles that cannot be properly back guyed, consult the designer about manner of installation. Refer to DCS-OH-GC-06 for unguyed poles.

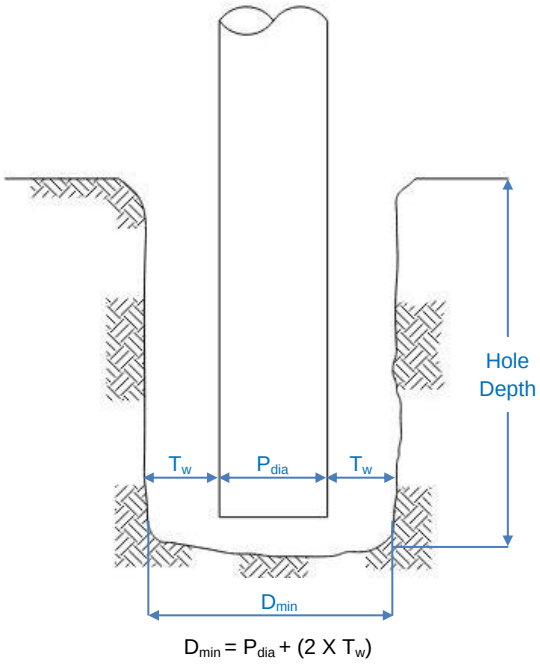
Table 1 is the setting depth of all poles under ordinary conditions. In general, the rule is to set the pole at a depth equal to 10% of the total length of the pole plus 2 feet. Poles may be set deeper when required to increase soil resistance against the pole.

Table 2 is the calculated pole butt diameter based on height and class (ANSI O5.1) using a 0.21/ft circumference taper. The minimum size auger hole diameter shall be the measured pole butt diameter, plus at least twice the working width of the tamping tool.

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**TABLE 1: STANDARD DEPTH SETTING**

| Pole Length (ft.) | Hole Depth (ft.) |
|---|---|
| 35 | 6’-0” |
| 40 | 6’-0” |
| 45 | 6’-6” |
| 50 | 7’-0” |
| 55 | 7’-6” |
| 60 | 8’-0” |
| 65 | 8’-6” |




$D_{min} = P_{dia} + (2 \times T_w)$

Figure 1

$D_{min}$ = Minimum Pole Hole Diameter (in.)
$P_{dia}$ = Pole Butt Diameter (in.)
$T_w$ = Tamping Tool Working Width (in.)

**TABLE 2: POLE BUTT DIAMETER (ANSI O5.1)**

| | Pole Class | | | |
|---|---|---|---|---|
| | 3 | 2 | 1 | H-1 |
| Pole Length (ft) | Butt Diameter (in.) | | | |
| 35 | 11.5 | N/A | N/A | N/A |
| 40 | 12.0 | 13.0 | 14.0 | N/A |
| 45 | 12.5 | 13.5 | 14.5 | N/A |
| 50 | 13.0 | 14.0 | 15.0 | 16.0 |
| 55 | 13.5 | 14.5 | 15.5 | 16.5 |
| 60 | 14.0 | 15.0 | 16.0 | 17.0 |
| 65 | 14.5 | 15.5 | 16.5 | 17.5 |



Internal Use

7) When a pole cannot be immediately set, a hole covering will be placed to prevent any disturbances of the hole (see Figure 2).
8) All holes are to be dug straight down. All backfill is to be power tamped and compacted in 1-foot lifts. If the excavated material is found to be unsuitable for use as backfill, use bank run gravel or a well-graded crushed stone with #1 crushed stone as maximum size.
9) On side hills, hole depth shall be measured from the downhill side of hole. Pole in sloping ground shall be set to the depth in Figure 3.
10) In cases where a new pole is more than 5 feet taller than the existing adjacent pole, the immediately adjacent poles should be changed so that there is no more than a 5-foot height difference from pole to pole to prevent uplift.
    a. The new adjacent pole(s) being set shall be the correct height for the area but framed to comply with the 5' height difference rule.
    b. For example, a new 50' recloser pole will be set in an area with 40' poles.
        i. If the correct height pole for this area is 45', the pole next to the recloser pole on each side must be replaced with a 45' pole, framed as a 45' pole. The other 40' poles may remain in service. The poles heights comply with the 5' height difference rule between the three poles one each side (Recloser pole: 50', 2nd pole: 45', 3rd pole: 40').
        ii. If the correct height pole for this area is 50', the pole next to the recloser pole on each side must be replaced with a 50' pole, framed as a 45' pole. The other 40' poles may remain in service. The pole framings comply with the 5' height difference rule between the three poles one each side (Recloser pole: framed at 50', 2nd pole: framed at 45', 3rd pole: framed at 40').

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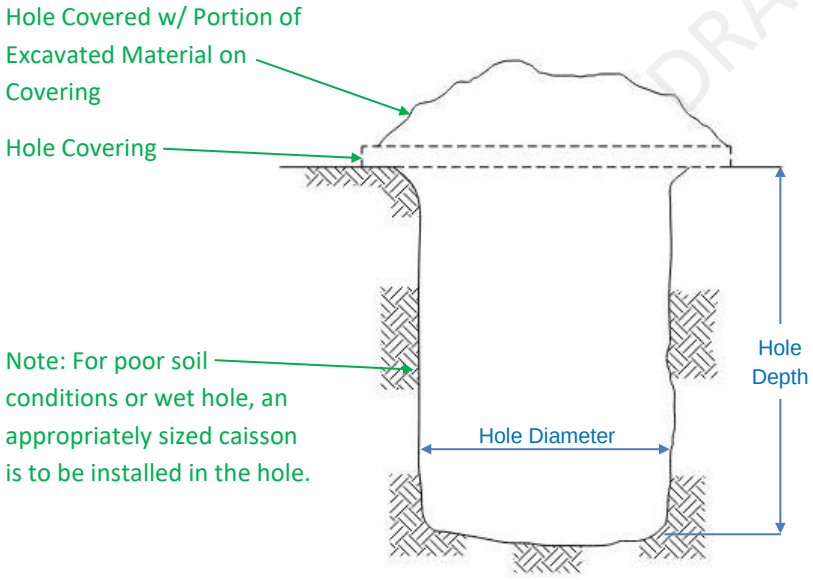



Figure 2

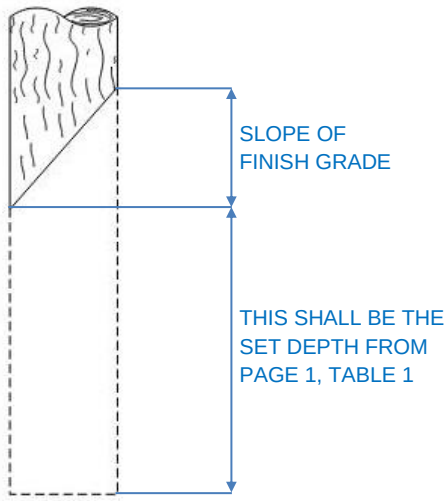
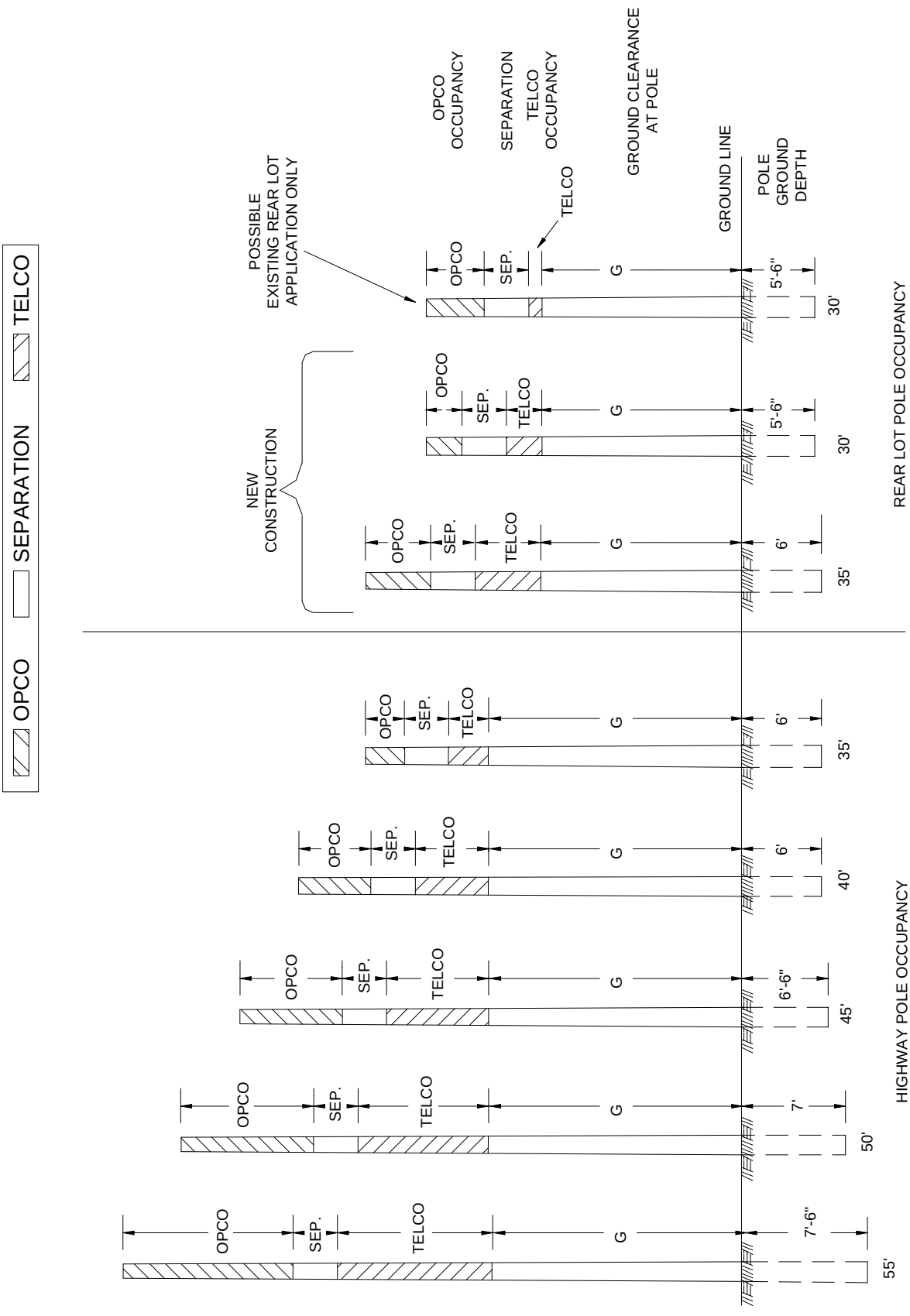



Figure 3

| AVANGRID ENGINEERING | DISTRIBUTION CONSTRUCTION STANDARDS | Wood Pole Installation |
|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | DSN: GY | DR: CR | **Page 2 of 2 in this DCS** | |
| | | | | | CK: | ES | MACRO #: | |
| | | | UPDATES TO STANDARD DRAWING AND MACROS | | APP: | XX | DCS #: | REV. |
| REV. | DATE | BY | DESCRIPTION | APP. | DATE: | 01/23/24 | **DCS-OH-GC-02-230** | **0** |




| NYSEG / RGE | | ELECTRIC DISTRIBUTION OH CONSTRUCTION STANDARDS MANUAL | | | |
|---|---|---|---|---|---|
| Designed BY: DR | Approved By: JMH | Date: 1/29/07 | Rev.: 0 | **Joint Pole Occupancy** | **5-000** Sheet 1 of 2 |

## Joint Pole Dimensions

| | OPCO Space | | Separation | TelCo Space | | Ground Clearance(G) | |
|---|---|---|---|---|---|---|---|
| | NYSEG | RG&E | | NYSEG | RG&E | NYSEG | RG&E |
| Pole Size | | | | | | | |
| | | | Rear Lot | | | | |
| 30' | | 3'-4" | 3'-4" | | 2'-8" | | 15' |
| 35' | 5'-9" | 5'-9" | 3'-4" | 4'-11" | 4'-11" | 15' | 15' |
| | | | Highway | | | | |
| 35' | 4'-3" | 3'-9" | 3'-4" | 2'-7" | 2'-11" | 18'-10" | 19' |
| 40'/35' | 9'-3" | 8'-9" | 3'-4" | 2'-7" | 2'-11" | 18'-10" | 19' |
| 40'/40' | 6'-9" | 6'-3" | 3'-4" | 5'-1" | 5'-5" | 18'-10" | 19' |
| 45'/35' | 13'-9" | 13'-3" | 3'-4" | 2'-7" | 2'-11" | 18'-10" | 19' |
| 45'/40' | 11'-3" | 10'-9" | 3'-4" | 5'-1" | 5'-5" | 18'-10" | 19' |
| 45'/45' | 9'-0" | 8'-6" | 3'-4" | 7'-4" | 7'-8" | 18'-10" | 19' |
| 50'/35' | 18'-3" | 17'-9" | 3'-4" | 2'-7" | 2'-11" | 18'-10" | 19' |
| 50'/40' | 15'-9" | 15'-3" | 3'-4" | 5'-1" | 5'-5" | 18'-10" | 19' |
| 50'/45' | 13'-6" | 13'-0" | 3'-4" | 7'-4" | 7'-8" | 18'-10" | 19' |
| 50'-50' | 11'-3" | 10'-9" | 3'-4" | 9'-7" | 9'-11" | 18'-10" | 19' |
| 55'/35' | 22'-9" | 22'-3" | 3'-4" | 2'-7" | 2'-11" | 18'-10" | 19' |
| 55'/40' | 20'-3" | 19'-9" | 3'-4" | 5'-1" | 5'-5" | 18'-10" | 19' |
| 55'/45' | 18'-0" | 17'-6" | 3'-4" | 7'-4" | 7'-8" | 18'-10" | 19' |
| 55'/50' | 15'-9" | 15'-3" | 3'-4" | 9'-7" | 9'-11" | 18'-10" | 19' |
| 55'/55' | 13'-6" | 13'-0" | 3'-4" | 11'-10" | 12'-2" | 18'-10" | 19' |