



Overhead Clearance Evaluation

TD-2305M-JA12

Publication Date: 3/2013 Rev: 1

Guidance Document References:

TD-2305M – EDPM 2011 Manual

**Engineering Document 022158 – Clearance Tables CPUC
General Order 95**

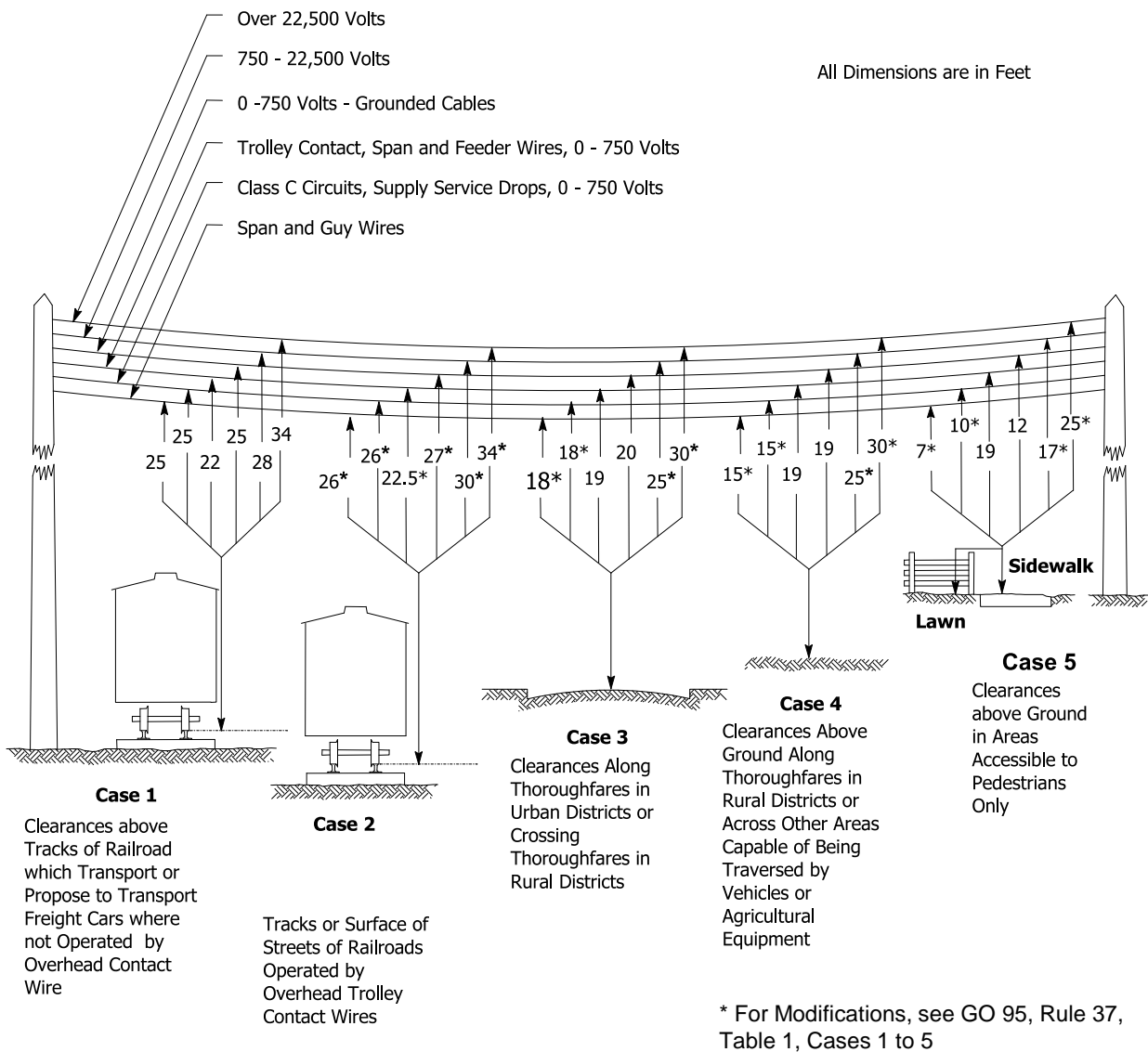
Level of Use:

- ☐ Information
☒ Reference
☐ Continuous

General Information

This job aid contains reference material to help compliance inspectors evaluate conductor clearance issues they visually identify in the field.

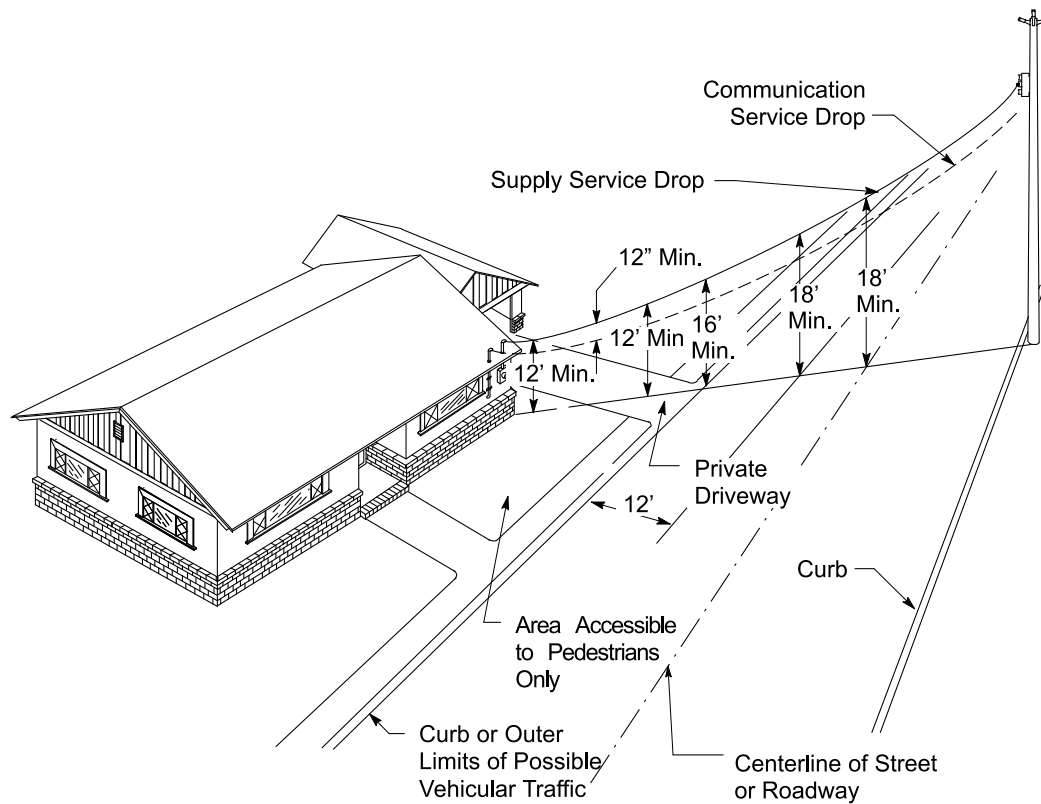
Ground Clearances - General





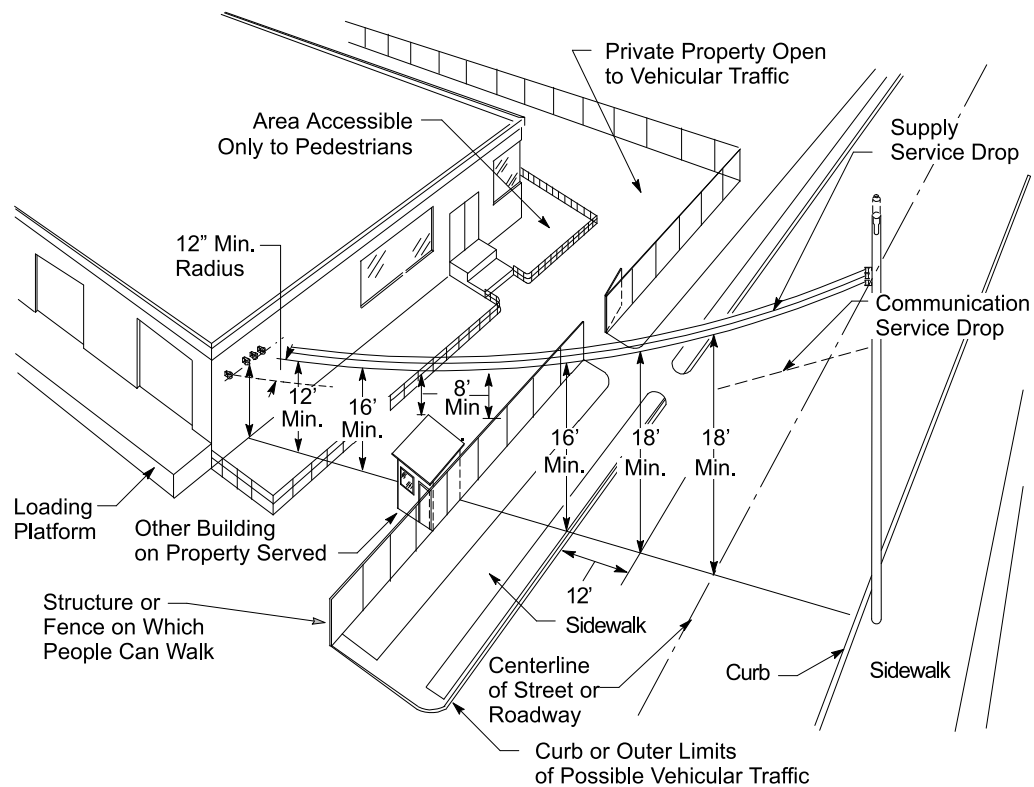
Overhead Conductor Clearances

0-750V Service Drops - Residential



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0-750V Service Drops - Industrial & Commercial



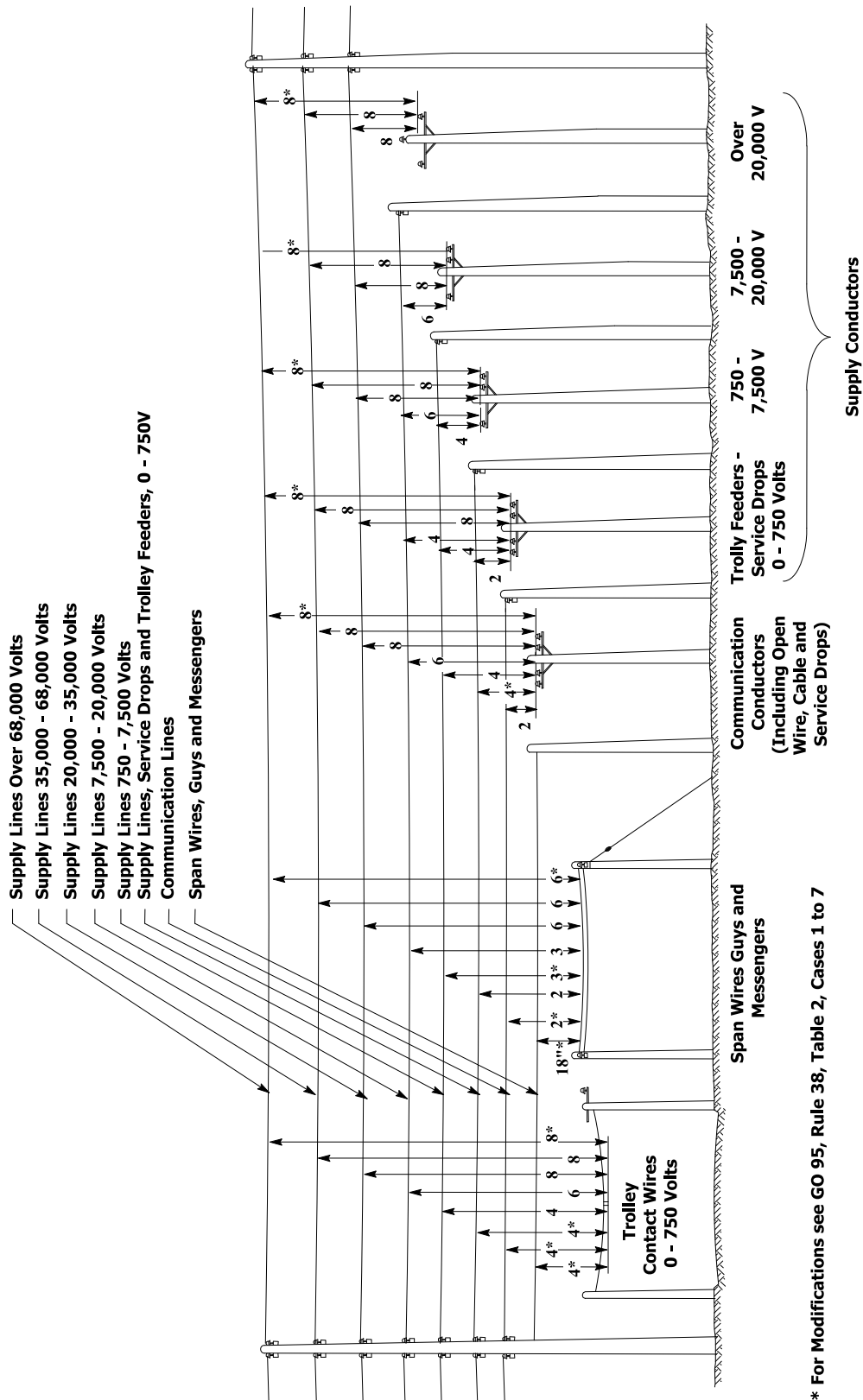


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Conductor to Conductor Clearances - Crossings



* For Modifications see GO 95, Rule 38, Table 2, Cases 1 to 7

All Dimensions are in Feet Unless Otherwise Noted

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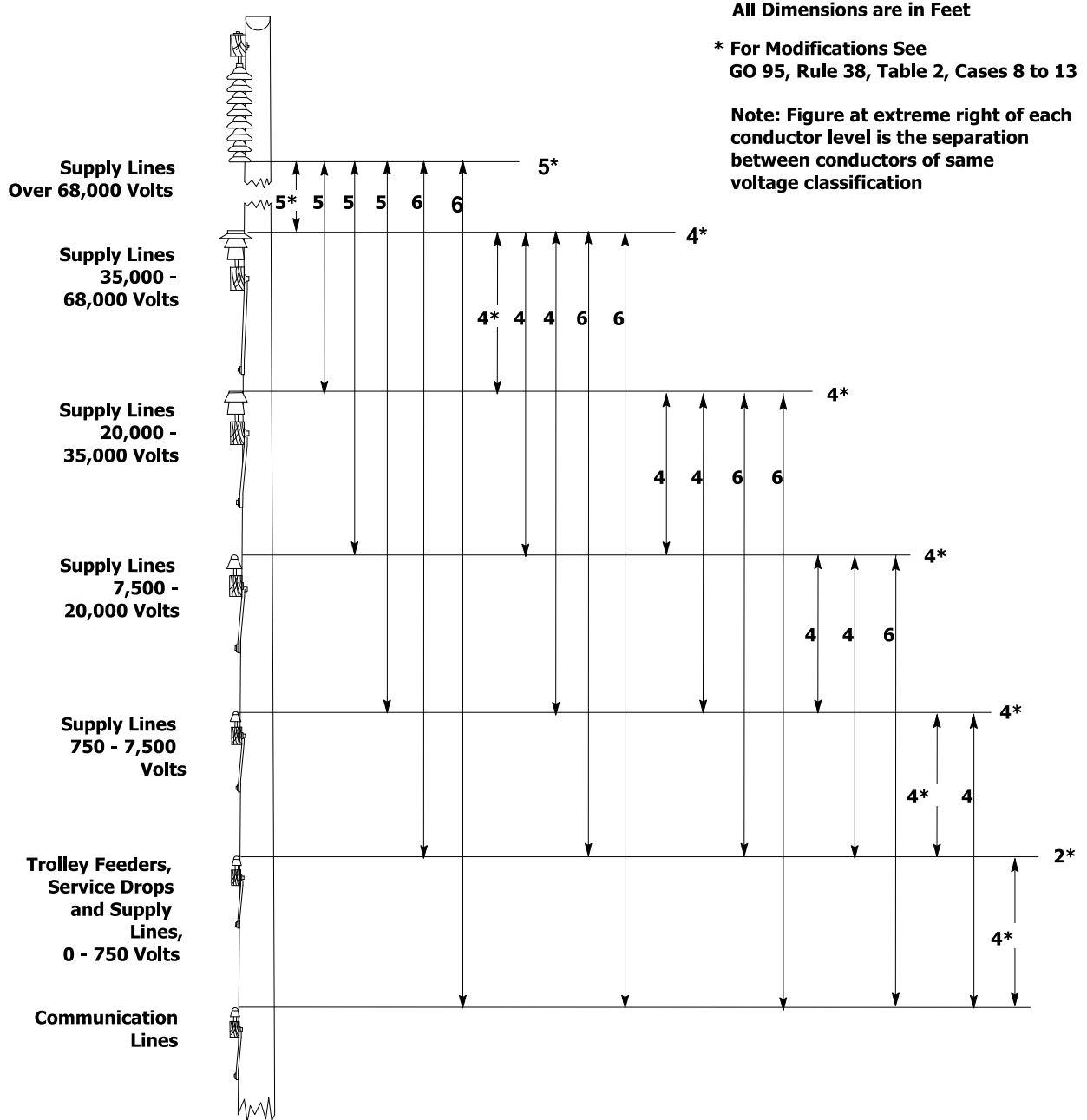


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Conductor to Conductor Clearances – On Same Pole



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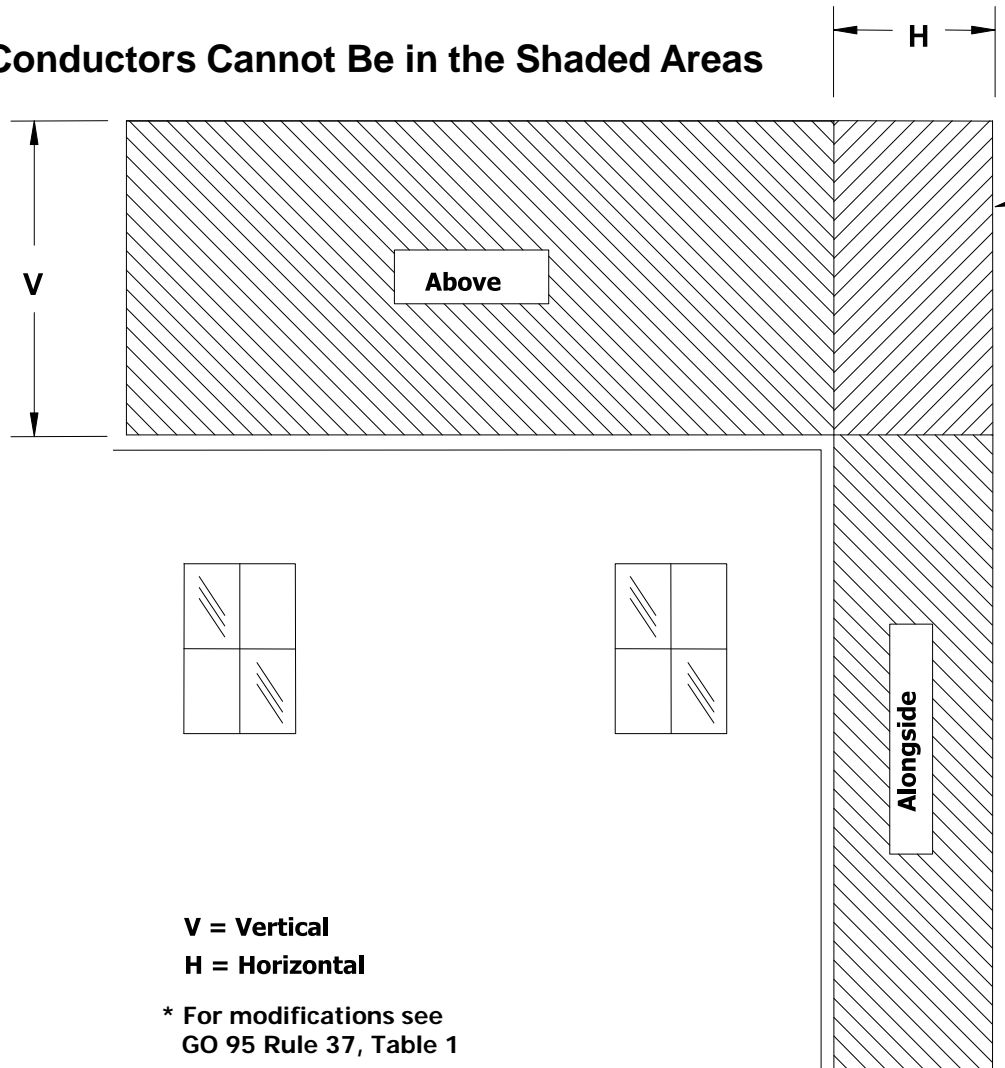
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Conductors Cannot Be in the Shaded Areas



Conductor to Building Clearances

	Conductor Type					
	Guys	Service Drops (not Attached)	0-750 V Spans	750V-22.5kV	22.5 – 300kV	300-550kV
V (Walkable Surface)	8 ft. *	8 ft. *	8 ft.	12 ft.	12 ft.	20 ft. *
V (Non-Walkable Surfaces: Handrails, Chimneys, Patio Covers, etc.)	2 ft.	8 ft. *	8 ft. *	8 ft.	8 ft.	20 ft.
H		3 ft. *	3 ft. *	6 ft.	6 ft. *	15 ft. *



Overhead Conductor Clearances

G.O. 95 Table 1 – Vertical Clearances

Case	Nature of Clearance	Wire or Conductor Concerned						
		A	B	C	D	E	F	G
		Span Wires (Other than Trolley Span Wires) Overhead Guys and Messengers	Communication Conductors (Including Open Wire, Cables and Service Drops), Supply Service Drops of 0 - 750 Volts	Trolley Contact, Feeder and Span Wires, 0 - 5,000 Volts	Supply Conductors of 0 - 750 Volts and Supply Cables Treated as in Rule 57.8	Supply Conductors and Supply Cables, 750 - 22,500 Volts	Supply Conductors and Supply Cables, 22.5 - 300 kV	Supply Conductors and Supply Cables, 300 - 550 kV
1	Crossing above tracks of railroads which transport or propose to transport freight cars (maximum height 15 feet, 6 inches) where not operated by overhead contact wires. (a) (b) (c) (d)	25 Feet	25 Feet	22.5 Feet	25 Feet	28 Feet	34 Feet	34 Feet (kk)
2	Crossing or paralleling above tracks of railroads operated by overhead trolleys. (b) (c) (d)	26 Feet (e)	26 Feet (e) (f) (g)	22.5 Feet (h) (i) (eee)	20 Feet (ii)	25 Feet (o) (ii)	30 Feet (o) (ii)	30 Feet (o) (ii)(kk)
3	Crossing or along thoroughfares in urban districts or crossing thoroughfares in rural districts. (c) (d)	18 Feet (j) (k) (ii)	18 Feet (j) (l) (m) (ii) (aa)	19 Feet (hh)(eee)	20 Feet (ii)	25 Feet (o) (ii)	30 Feet (o) (ii)	30 Feet (o) (ii)(kk)
4	Above ground along thoroughfares in rural districts or across other areas capable of being traversed by vehicles or agricultural equipment.	15 Feet (k)	15 Feet (m) (n) (p)	19 Feet (eee)	19 Feet	25 Feet (o)	30 Feet (o) (p)	30 Feet (o) (kk)
5	Above ground in areas accessible to pedestrians only	8 Feet	10 Feet (m) (q)	19 Feet (eee)	12 Feet	17 Feet	25 Feet (o)	25 Feet (o) (kk)
6	Vertical clearance above walkable surfaces on buildings, (except generating plants or substations) bridges or other structures which do not ordinarily support conductors, whether attached or unattached.	8 Feet (r)	8 Feet (r)	8 Feet	8 Feet	12 Feet	12 Feet	20 Feet (ll)
6a	Vertical clearance above non-walkable surfaces on buildings, (except generating plants or substations) bridges or other structures, which do not ordinarily support conductors, whether attached or unattached	2 Feet	8 Feet (yy)	8 Feet	8 Feet (zz)	8 Feet	8 Feet	20 Feet
7	Horizontal clearance of conductor at rest from buildings (except generating plants and substations), bridges or other structures (upon which men may work) where such conductor is not attached thereto(s) (t)	-	3 Feet (u)	3 Feet	3 Feet (u) (v)	6 Feet (v)	6 Feet (v)	15 Feet (v)

Note: A letter next to a measurement indicates there may be an exception. Refer to G.O. 95 to research.

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G.O. 95 Table 1 – Vertical Clearances (cont'd)

Case	Nature of Clearance	Wire or Conductor Concerned					
		A	B	C	D	E	F
		Span Wires (Other than Trolley Span Wires) Overhead Guys and Messengers	Communication Conductors (Including Open Wire, Cables and Service Drops), Supply Service Drops of 0 - 750 Volts	Trolley Contact, Feeder and Span Wires, 0 - 5,000 Volts	Supply Conductors of 0 - 750 Volts and Supply Cables Treated as in Rule 57.8	Supply Conductors and Supply Cables, 750 - 22,500 Volts	Supply Conductors and Supply Cables, 22.5 - 300 kV
							Supply Conductors and Supply Cables, 300 - 550 kV
8	Distance of conductor from center line of pole, whether attached or unattached (w) (x) (y)	-	15 inches (s) (aa)	15 inches (aa) (bb) (cc)	15 inches (o) (aa)(dd)	15 or 18 inches (o) (dd) (ee) (j)	18 inches (dd)(ee)
9	Distance of conductor from center line of pole, whether attached or unattached (w) (x) (y)	-	3 inches (aa) (ff)	3 inches (aa)(cc) (g)	3 inches (aa) (dd)(gg)	3 inches (dd)(gg) (j)	1/4 Pin Spacing Shown in Table 2 Case 15 (dd)
10	Radial centerline clearance of conductor or cable (unattached) from non-climbable street lighting or traffic signal poles or standards, including mastarms, brackets and lighting fixtures, and from antennas that are not part of the overhead line system.	-	Foot (u) (rr) (ss)	15 inches (bb)(cc)	3 Feet (oo)	6 Feet (pp)	10 Feet (ll)
11	Water areas not suitable for sailboating (tt) (uu) (ww) (xx)	15 Feet	15 Feet	-	15 Feet	17 Feet	25 Feet (kk)
12	Water areas suitable for sailboating, surface area of (tt) (vv) (ww) (xx) (A) Less than 20 acres (B) 20 to 200 acres (C) Over 200 to 2,000 acres (D) Over 2,000 acres	18 Feet 26 Feet 32 Feet 38 Feet	18 Feet 26 Feet 32 Feet 38 Feet	- - - -	18 Feet 26 Feet 32 Feet 38 Feet	20 Feet 28 Feet 34 Feet 40 Feet	27 Feet 35 Feet 41 Feet 47 Feet
13	Radial clearance of bare line conductors from tree branches or foliage (aaa) (ddd)	-	-	18 inches (bbb)	-	18 inches (bbb)	1/4 pin spacing shown in table 2, Case 15(bbb) (ccc)

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G.O. 95 Table 2 – Conductor to Conductor Clearances

Case No.	Nature of Clearance and Class and Voltage of Wire, Cable or Conductor Concerned	Other Wire, Cable or Conductor Concerned										
		Supply Conductors (Including Supply Cables)										
		A	B	C	D	E	F	G	H	I	J	K (kk)
		Span Wires, Guys and Messengers	Trolley Contact Conductors 0 – 750 Volts	Comm. Conductors (Including Open Wire, Cables and Service Drops)	0 – 750 Volts (Including Service Drops) and Trolley Feeders (a)	750 - 7,500 Volts	7,500 - 20,000 Volts	20,000 - 35,000 Volts	35,000 - 75,000 Volts	75,000 - 150,000 Volts	150,000 - 300,000 Volts	300,000 - 550,000 Volts
	Clearance between wires, cables and conductors not supported on the same poles, vertically at crossings in spans and radially where colinear or approaching crossings											
1	Span wires, guys and messengers (b)	18 (c)	48 (d , e)	24 (e)	24 (e)	36(f)	36	72	72	78	78 (gg)	138(hh)
2	Trolley contact conductors, 0 - 750 volts	48 (d , e)	-	48 (d)	48 (d , h)	48	72	96	96	96	96 (gg)	156(hh)
3	Communication conductors	24 (e)	48 (d)	24	48 (i)	48(dd)	72	96	96	96	96 (gg)	156 (hh)
4	Supply conductors, service drops and trolley feeders, 0 - 750 volts (qq)	24 (e)	48 (d , h)	48 (i)	24	48	48	96(oo)	96	96	96 (gg)	156 (hh)
5	Supply conductors, 750 - 7,500 volts (qq)	36 (f)	48	48 (dd)	48	48(h)	72	96(oo)	96	96	96 (gg)	156(hh)
6	Supply conductors, 7,500 - 20,000 volts (qq)	36	72	72	48	72	72	96(oo)	96	96	96 (gg)	156 (hh)
7	Supply conductors, more than 20,000 volts (qq)	72 (g)	96 (g)	96 (g)	96 (g , oo)	96 (g ,oo)	96 (g , oo)	96 (g , oo)	96 (g)	96	96 (gg)	156 (hh)
	Vertical separation between conductors and/or cables, on separate crossarms or other supports at different levels (excepting on related line and buck arms) on the same pole and in adjoining midspans											
8	Communication Conductors and Service Drops	-	-	12 (j, rr)	48 (k , l , m , n , pp)	48(k)	72 (m , n)	72(m)	72	78	87 (gg)	147 (hh)
9	Supply Conductors Service Drops and Trolley Feeders, 0 - 750 Volts	-	-	48 (k , l , m , n , pp)	24 (h , k , m , o)	48(k , m , p)	48 (k , m , p)	72 (m , nn)	72	78	87 (gg)	147 (hh)
10	Supply conductors, 750 – 7,500 volts	-	-	48 (k)	48 (k , m , p)	48 (m , o , r , ee)	48 (m , q)	48 (m , q)	48 (q)	60 (ff)	90 (gg)	150 (hh)

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G.O. 95 Table 2 – Conductor to Conductor Clearances (Cont'd)

Case No.	Nature of Clearance and Class and Voltage of Wire, Cable or Conductor Concerned	Other Wire, Cable or Conductor Concerned										
		Supply Conductors (Including Supply Cables)										
		A	B	C	D	E	F	G	H	I	J	K (kk)
		Span Wires, Guys and Messengers	Trolley Contact Conductors 0 – 750 Volts	Comm. Conductors (Including Open Wire, Cables and Service Drops)	0 – 750 Volts (Including Service Drops) and Trolley Feeders (a)	750 - 7,500 Volts	7,500 - 20,000 Volts	20,000 - 35,000 Volts	35,000 - 75,000 Volts	75,000 - 150,000 Volts	150,000 - 300,000 Volts	300,000 - 550,000 Volts
		Vertical clearance between conductors on related line arms and buck arms										
14	Line arms above or below related buck arms (s , t)	-	-	6	12 (u)	18 (u)	18 (u)	24	48	60 (ff)	90 (gg)	150 (hh)
		Horizontal separation of conductors on same crossarm										
15	Pin spacing of longitudinal conductors vertical conductors and service drops (v , w)	-	-	3 (x)	11½ (h , x)	11½(x)	17½(x)	24 (x)	48	60 (ff)	90 (gg)	150 (hh)
		Radial separation of conductors on same crossarm, pole or structure—incidental pole wiring										
16	Conductors, taps or lead wires of different circuits (v , y , s)	-	-	3 (x)	11½ (h , x)	11½(x)	17½(x)	24 (x)	48	60 (ff)	90 (gg)	150(hh)
16a	Uncovered, grounded, non-dielectric fiber optic cables on metallic structures, in transition (ss)	-	15	15	15	18	18	18	18	24	36	120
17	Conductors, taps or lead wires of the same circuit (v , s , aa)	-	-	3	3	6	6	12	24	60 (ff)	90 (gg)	150 (hh)
		Radial separation between guys and conductors										
18	Guys passing conductors supported on other poles, or guys approximately parallel to conductors supported on the same poles	-	-	3	11½	11½	17½	24	36	36 (ff)	78 (gg)	138(hh)

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