§ 1926.1409 Power line safety (over 350 kV).

The requirements of §1926.1407 and §1926.1408 apply to power lines over 350 kV except:

(a) For power lines at or below 1000 kV, wherever the distance “20 feet” is specified, the distance “50 feet” must be substituted; and

(b) For power lines over 1000 kV, the minimum clearance distance must be established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

§ 1926.1410 Power line safety (all voltages)—equipment operations closer than the Table A zone.

Equipment operations in which any part of the equipment, load line, or load (including rigging and lifting accessories) is closer than the minimum approach distances specified in Table A of §1926.1408 to an energized power line is prohibited, except where the employer demonstrates that all of the following requirements are met:

(a) The employer determines that it is infeasible to do the work without breaching the minimum approach distance under Table A of §1926.1408.

(b) The employer determines that, after consultation with the utility owner/operator, it is infeasible to deenergize and ground the power line or relocate the power line.

(c) Minimum clearance distance.

(1) The power line owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution determines the minimum clearance distance that must be maintained to prevent electrical contact in light of the on-site conditions. The factors that must be considered in making this determination include, but are not limited to: Conditions affecting atmospheric conductivity; time necessary to bring the equipment, load line, and load (including rigging and lifting accessories) to a complete stop; wind conditions; degree of sway in the power line; lighting conditions, and other conditions affecting the ability to prevent electrical contact.

(2) Paragraph (c)(1) of this section does not apply to work covered by subpart V of this part; instead, for such work, the minimum clearance distances specified in §1926.950 Table V–1 apply. Employers engaged in subpart V work are permitted to work closer than the distances in §1926.950 Table V–1 where both the requirements of this section and §1926.952(c)(3)(i) or (ii) are met.

(d) A planning meeting with the employer and utility owner/operator (or

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**TABLE A—MINIMUM CLEARANCE DISTANCES**

<table>
<thead>
<tr>
<th>Voltage (nominal, kV, alternating current)</th>
<th>Minimum clearance distance (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 50</td>
<td>10</td>
</tr>
<tr>
<td>over 50 to 200</td>
<td>15</td>
</tr>
<tr>
<td>over 200 to 350</td>
<td>20</td>
</tr>
<tr>
<td>over 350 to 500</td>
<td>25</td>
</tr>
<tr>
<td>over 500 to 750</td>
<td>35</td>
</tr>
<tr>
<td>over 750 to 1,000</td>
<td>45</td>
</tr>
<tr>
<td>over 1,000</td>
<td></td>
</tr>
</tbody>
</table>

(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

**Note:** The value that follows “to” is up to and includes that value. For example, over 50 to 200 means up to and including 200kV.
registered professional engineer who is a qualified person with respect to electrical power transmission and distribution) is held to determine the procedures that will be followed to prevent electrical contact and electrocution. At a minimum these procedures must include:

(1) If the power line is equipped with a device that automatically reenergizes the circuit in the event of a power line contact, before the work begins, the automatic reclosing feature of the circuit interrupting device must be made inoperative if the design of the device permits.

(2) A dedicated spotter who is in continuous contact with the operator. The dedicated spotter must:
   (i) Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to: A line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the dedicated spotter and a building corner ahead of the dedicated spotter).
   (ii) Be positioned to effectively gauge the clearance distance.
   (iii) Where necessary, use equipment that enables the dedicated spotter to communicate directly with the operator.
   (iv) Give timely information to the operator so that the required clearance distance can be maintained.

(3) An elevated warning line, or barricade (not attached to the crane), in view of the operator (either directly or through video equipment), equipped with flags or similar high-visibility markings, to prevent electrical contact. However, this provision does not apply to work covered by subpart V of this part.

(4) Insulating link/device.
   (i) An insulating link/device installed at a point between the end of the load line (or below) and the load.
   (ii) For work covered by subpart V of this part, the requirement in paragraph (d)(4)(i) of this section applies only when working inside the §1926.950 Table V–1 clearance distances.
   (iii) For work covered by subpart V of this part involving operations where use of an insulating link/device is infeasible, the requirements of §1910.269(p)(4)(iii)(B) or (C) may be substituted for the requirement in (d)(4)(i) of this section.
   (iv) Until November 8, 2011, the following procedure may be substituted for the requirement in paragraph (d)(4)(i) of this section: All employees, excluding equipment operators located on the equipment, who may come in contact with the equipment, the load line, or the load must be insulated or guarded from the equipment, the load line, and the load. Insulating gloves rated for the voltage involved are adequate insulation for the purposes of this paragraph.
   (v) Until November 8, 2013, the following procedure may be substituted for the requirement in (d)(4)(i) of this section:
      (A) The employer must use a link/device manufactured on or before November 8, 2011, that meets the definition of an insulating link/device, except that it has not been approved by a Nationally Recognized Testing Laboratory, and that is maintained and used in accordance with manufacturer requirements and recommendations, and is installed at a point between the end of the load line (or below) and the load; and
      (B) All employees, excluding equipment operators located on the equipment, who may come in contact with the equipment, the load line, or the load must be insulated or guarded from the equipment, the load line, and the load through an additional means other than the device described in paragraph (d)(4)(v)(A) of this section. Insulating gloves rated for the voltage involved are adequate additional means of protection for the purposes of this paragraph.

(5) Nonconductive rigging if the rigging may be within the Table A of §1926.1408 distance during the operation.

(6) If the equipment is equipped with a device that automatically limits range of movement, it must be used and set to prevent any part of the equipment, load line, or load (including rigging and lifting accessories) from breaching the minimum approach distance established under paragraph (c) of this section.
§ 1926.1411 Power line safety—while traveling under or near power lines with no load.

(a) This section establishes procedures and criteria that must be met for equipment traveling under or near a power line on a construction site with no load. Equipment traveling on a construction site with a load is governed by §§1926.1408, 1926.1409 or 1926.1410, whichever is appropriate, and §1926.1417(u).

(b) The employer must ensure that:

(1) The boom/mast and boom/mast support system are lowered sufficiently to meet the requirements of this paragraph.

(2) The clearances specified in Table T of this section are maintained.

(3) The effects of speed and terrain on equipment movement (including movement of the boom/mast) are considered so that those effects do not cause the minimum clearance distances specified in Table T of this section to be breached.

(4) Dedicated spotter. If any part of the equipment while traveling will get closer than 20 feet to the power line, the employer must ensure that a dedicated spotter who is in continuous contact with the driver/operator is used. The dedicated spotter must:

(i) Be positioned to effectively gauge the clearance distance.