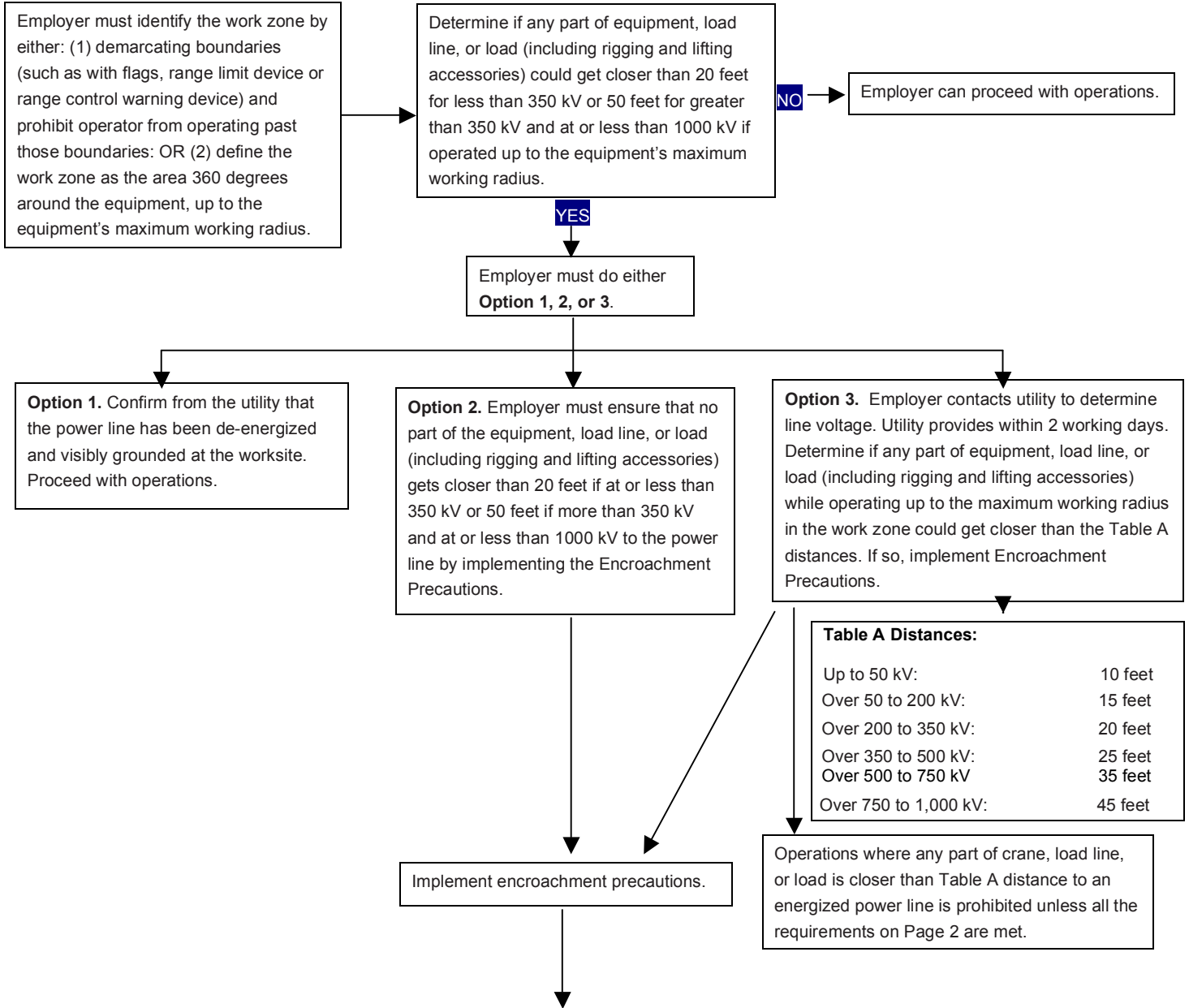


OSHA REGULATIONS

OSHA Cranes/ Derricks in Construction Section 1926.1408 and 1926.1409

This is a high level outline only. Refer to www.osha.gov for all requirements.



Encroachment Prevention Precautions required for Options 2 or 3:

1. Conduct a planning meeting with operator and other workers to review the location of power lines and steps to prevent encroachment.
2. Tag lines, if used, must be non-conductive.
3. Erect and maintain elevated warning line, barricade, or line of signs, in view of the operator, equipped with flags at 20 feet from the power line if at or less than 350 kV or 50 feet if more than 350 kV and at or less than 1000 kV (if using Option 2) or the distance shown in Table A if using Option 3. If operator is unable to see the elevated warning line, a dedicated spotter (B) must be used in addition to implementing one of A, C, D, or E below.

In addition to the items above, implement at least one of these:

- A. Use a proximity alarm set to give operator sufficient warning to prevent encroachment.
- B. Use a dedicated spotter who is in continuous contact with the operator.
- C. Use a device that automatically warns the operator to stop (range control warning device to prevent encroachment).
- D. Use a device that automatically limits range of movement, set to prevent encroachment.
- E. Use an insulating link between the end of the load line and the load.

Power Line Safety requirements for getting closer than the Table A distances Section 1926.1410

| Table A Distances: | |
|-----------------------|---------|
| Up to 50 kV: | 10 feet |
| Over 50 to 200 kV: | 15 feet |
| Over 200 to 350 kV: | 20 feet |
| Over 350 to 500 kV: | 25 feet |
| Over 500 to 750 kV: | 35 feet |
| Over 750 to 1,000 kV: | 45 feet |

Operations where any part of crane, load line, or load (including rigging and lifting accessories) is closer than Table A distance to an energized power line is prohibited unless all requirements on this page are met.

Employer determines that it is infeasible to work without breaching Table A distances.

Employer determines after consulting with utility that it is infeasible to de-energize and ground or relocate the power line.

Utility or registered professional engineer (PE) determines the minimum clearance distance that must be maintained to prevent electrical contact.

Planning meeting with employer and utility or PE to be held to determine procedures that will be followed.

If so equipped, the automatic reclosing features must be made inoperative by the utility if the design permits before work begins.

Employer is required to have utility install line hose or cover up except where unavailable for the voltage.

Documented procedures must be developed and kept on site. Equipment user and utility or PE meet to review procedures to prevent encroachment.

Utility or PE and employers of employees involved in the work must identify one person to direct implementation of procedures.

If procedures are ineffective, the employer shall stop work OR have utility de-energize and visibly ground or relocate the lines.

- Employer is also required to do these items.**
- Dedicated spotter shall be used.
 - Elevated warning line or barricade in view of operator equipped with flags shall be installed.
 - Insulating link shall be installed between end of load line and load.
 - Non-conductive rigging shall be used.
 - If equipment has device that automatically limits range of movement, it must be used.
 - Tag lines must be non-conductive.
 - Barricades set up 10 feet around crane to prevent personnel from entering the work area.
 - Workers, other than operator, must be prohibited from touching load line.
 - Only essential personnel are permitted in area.
 - Equipment must be grounded.