

ELECTRIC UTILITY SAFETY CONE ZONE PROGRAM

San Luis Valley, Colorado

Contact:

Jim Clare

San Luis Valley Rural Electric Coop

San Luis Valley, CO

Problem Statement:

Performing various tasks near or around electric utilities is dangerous and can lead to serious injury or death when contact is made with a power line. A program was established to help with the identification and protection of the public and workers in the area of accidental contact with overhead electric utilities and underground electric utilities.

Discussion of Solution:

After a fatal contact accident at a jobsite while conducting a paving operation, Electric Safety Cone Zone was developed to help with the prevention of accidental contact of electric utility lines. There are 3 important parts to the program that make this possible and workable. The first is to communicate the availability of this resource to the people that are or may become involved with a power line contact. Second, is the implementation of the program once it has been communicated to those in the area at risk. Third, is the equipment used which is simple to acquire and set-up such as the 28" traffic cones and reflective sleeves.

When overhead electric lines or underground electric lines cross the path of any operation or the lines run parallel within 15 feet of the operation, the Cone Zone is put into operation for the safety of workers and public. Once the Cone Zone is put into effect, all workers in the area should pay special attention while working in the immediate area of the electric utility hazards.

Once the equipment is in place, it should help detour contacts with the three hazard alert items used to warn of hazards. Those are the Signal Word Panel, Message Panel, and the Safety Symbol Panel. These are a part of the warning sleeve that fits over the cone. Not only does the hazard alert item help but also the reflective lime green colored sleeve catches your attention, day and night. The program can also be expanded to let the utility do an on-site "Job Safety Analysis" of the work area and communicate with the people who would be working in the area. This would help to give a clear view of the program and the dangers that could happen from an accidental contact. The program is also set up to not just warn of overhead utilities, but to give attention to an area that has underground utilities.

Labor, Equipment, & Materials Used:

28" tall traffic cones are used that are covered with a reflective and lime-green color sleeve developed specifically for this project which are about \$30 each. The wording WARNING OVERHEAD UTILITIES or WARNING UNDERGROUND POWER CABLES with an arrow on the signage pointing to the hazard area is used.

Items of the program that make it functional are listed below:

- A letter explaining the program is sent out to local contractors, various farm agencies and the County Road and Bridge contacts from participating utilities.
 - Any serviceman or electric utility employee has the authority to implement the program if they see an area of concern during their travels throughout the utility's service area.
 - Any construction, farm/ranch, maintenance or contracting firm has the option to request the safety cone zone program from any utility using the system in the area.
 - Once an area is identified, do an onsite safety review (Job Safety Analysis) of hazards and concerns with the entity doing work in the area of the safety cone zone if requested. Ask how hazards will be managed with the work crew prior to work commencing.
 - State laws prohibiting work within a certain distance of overhead electric lines should be obeyed. The Utility Notification Center in your state should be called before any work is started around underground utilities.
 - The program restricts the raising of dump beds or any type of construction or farm equipment while in the Cone Zone area which would be 10 feet either side of the most extreme part of the overhead utility facility in relation to the road. Underground utilities would require the working approach distance as stated by the Utility Notification Center.
 - Employees or personnel shall not have any physical contact (from equipment to ground) with any equipment while it is moving under an overhead line or digging in the immediate area of underground utilities.
 - Night time operations are marked the same as daytime operation markings. Additional markers, lights and spotters are suggested.
 - Inform working entity that in case of broken line to stay clear and contact utility immediately as line may or may not become energized.
 - A standard to initiate the program would be if an electric utility crosses over or under the area of work or runs within 15 ft parallel to the work area.
 - If an object or piece of equipment of high profile must be moved under an overhead line make sure a spotter has been appointed and if the safe distance of less than 10 feet will be reached the utility should be at the site to direct the operation in a safe manner. Also the utility could apply protective cover-up if considered necessary for the location.
-
- _Notify entity working in the area if equipment does come in contact

with over head line or underground cable, the operator is to stay on the equipment and that workers in the area are to stay clear of the equipment that has come in contact with the electric line until the electric utility has arrived.

- _Inform the entity if the operator must clear the equipment because of fire or other emergency; make sure they understand to jump clear of the equipment with both feet together. Make sure to never contact the equipment and ground at the same time. Once off of the equipment, hop away keeping both feet together and hand and arms close to one's side.
- _Inform the entity if equipment is operational and can be moved without doing further damage to the line, poles or underground wire, do so. Do not step off of the equipment as long as it is in contact with the electric line until the utility arrives.

Savings & Benefits:

With thousands of contacts each year, it was felt that it is good safety sense to promote prevention of accidental contacts of electric utility high voltage lines, above or below the ground. The program emphasizes safety by promoting the Do Not Exceed the 10 foot approach distance while working in the zone area. This includes but not limited to raising dump beds, loaders, forklifts farm equipment, backhoes, excavators, irrigation equipment or other equipment/hazards in the zone area. It is hoped that this useful safety resource can be promoted state wide as an option for utility hazard recognition to prevent accidental contact with high voltage lines. Cone Zone is very visual with the cones and sleeves and can be verbal when promoted with an onsite visit to help workers understand the dangers of electricity. All of this can save lives.



