

Senior Communications Cable Worker - 3801

Task List

Overhead Line Tasks

1. Sets crossarms and appurtenant equipment for overhead lines in place using hand tools, rigging, and various fasteners such as screws, lags, and bolts, reaching the work site by bucket truck or by climbing the pole using a line mechanic's belt and gaffs in order to provide support for overhead lines.
2. Installs ground rods and wires by driving ground rod into ground, connecting the ground wire, and stapling on molding in order to allow electric currents to travel from messenger to ground rod, reduce outside interference, and prevent shock.
3. Replaces guy lines as needed by bolting bracket to pole, connecting line to ground anchor, and using a strand vice and hoist to tension the line in order to provide support for overhead lines at corners or dead ends.
4. Bands cable to messenger in splice area using cable support bands and spacers in a graduated sequence from splice case to where cable and messenger meet in order to relieve stress from cable.
5. Takes up slack across damaged area of guy line with a hoist and grips, cuts off damaged area using bolt cutters, and installs a strand link or preform in order to repair a guy line.
6. Sets up plastic or steel conduit risers, one on top of another, places a weather head at the top, and nails them to the power pole in order to have a casing for underground to overhead cable.

Substructure Tasks

7. Tests atmosphere in manhole using testers such as a gas-tech, oxygen meter, or explosometer and documents readings in log books in order to determine oxygen and explosive gas levels for safe entry into manhole.
8. Checks for presence of asbestos in substructures and ensures that workers wear respirators and required protective clothing (moon suits) when working in areas where asbestos is found in order to provide safe working conditions.
9. Reports presence of friable asbestos to the owner of the facility in which asbestos is found by giving written notice in order to comply with legal requirements.
10. Pumps water using the portable pump in order to clear manhole of water.

Cable Pulling and Splicing

11. Pulls cable through underground conduits or overhead pole runs using a rod and rodding machine, string, rope, and a mechanical winch, depending on the size of cable and condition of the ducts, in order to install cables.
12. Sets up cable reel on feeding end of run so cable feeds from top of reel in order to have cable properly situated for run.
13. Splices two wires by:
 - cutting outer layers (sheath) off the ends of both cables using a cable knife in order to expose inner wires.
 - separating groups of 25 pairs of wires by color.
 - placing the ends of line color wires of cables to be spliced through a splicing tool (pic-a-bound with connector).
 - squeezing splicing tool which cuts off excess wire and crimps two pieces of wire
 - inspecting splice by visual observation and by putting tension on the splicein order to form one continuous cable or repair damaged cable.
14. Covers spliced area with a splice case in order to seal and weatherproof spliced cable.
15. Splices load coils to cable in order to counteract natural capacitance of cable and improve frequency response.
16. Transposes communication wires at various intervals on open wire communications lines during installation in order to eliminate inductive effects.

Gas Filled Cables

17. Applies gas pressure to splice case or to cable after splice using a hose and schrader valve in order to assure splice case is gas tight.
18. Seals cable ends using a damming or sealing compound in order to make cable ends gas or water tight.
19. Installs a valve near cable end using a knife to puncture sheath, a file to roughen area, and scotch coat, rubber tape, and electrical tape in order to have a test point available.
20. Tests for leaks and their general location by graphing readings of pressure taken at intervals along the line.
21. Uses an ultrasonic leak detector or sprays cable with soap solution while on a bucket truck in order to find exact location of leak.

Fiber-optic Cables

22. Pulls inner ducts in conduit using a pulling rope with a swivel attachment so that the inner duct does not twist in order to provide ducts for fiber-optic cables.
23. Attaches grips or connectors to fiber-optic cable and pulling line in preparation for pulling cable.
24. Pulls fiber-optic cable through inner duct using appropriate lubricant and taking care not to exceed tension limits or bending radii in order to avoid damage to installed cable.
25. Splices fiber-optic cable by making a loop in the line (if overhead), matching fiber pairs, removing cladding, leaving the ends, inserting ends of fibers in the splicing machine, operating the machine to fuse the fibers, using the correct length of cable when replacing damaged cable, and testing the splice by transmitting a signal in order to ensure that the signal is transmitted at the required decibel level.
26. Splices fiber-optic cable using mechanical connectors by matching fiber pairs, removing cladding, cleaving and polishing ends, inserting into connector, and applying epoxy or fastening cover if necessary, and testing the splice by transmitting a signal in order to ensure that the signal is transmitted at the required decibel level.
27. Tests fiber-optic cable for breaks using the optical time domain reflectometer or optical power meter to check effectiveness of transmission and locate trouble sites.
28. Connects fiber-optic cable to connectors in terminal boxes by preparing the ends as for splicing and inserting them into appropriate connectors in order to have lines ready for use when equipment is connected to terminal box.
29. Collects broken pieces of fiber optic cable fibers using tweezers and sticks the pieces to tape in order to prevent injury to workers.

Cable Terminals

30. Mounts terminal blocks to a backboard using a screwdriver and screws or bolts and a wrench in order to have a location for termination of wires.
31. Fastens fanning strips, jumper rings, and cable clamps to backboard in order to prepare terminal block for wire termination.
32. Attaches ends of wire pairs to appropriate points in terminal boxes using lugs, soldering joints, punch blocks, or wire wraps in order to have lines ready for use when equipment is connected to terminal box.
33. Bolts call boxes to stands or poles and connects telephone wires to designated pairs on terminal blocks or stand terminals in order to install call boxes.

Sheathed Cable

34. Repairs lead-sheathed cable by removing damaged sections of sheath, splicing cable if necessary, and soldering a lead sleeve in place or installing a splice case in order to maintain cable in usable condition.
35. Repairs plastic-sheathed cable by removing damaged sections of sheath, splicing cable if necessary, and roughening plastic surrounding the cut area, applying adhesive and DR rubber tape, and covering the rubber tape with vinyl tape or installing a splice case in order to maintain cable in usable condition.

Testing

36. #Uses various testing devices for communications lines and appurtenant equipment such as, multimeter, fault locator Time Domain Reflectometer (TDR), and Optical Time Domain Reflectometer (OTDR), transmission Test Instrument (TTI), line mechanic's test set (AKA Butt set), line amplifier, tone generator, cable pair identification set 3m 945 depending on the circumstances in order to test cable of opens, shorts, grounds, continuity, crosses, loss of decibels, noise levels, and/or frequency levels.

Safety

37. Conducts safety meetings with crews in order to disseminate safety related information.
38. Sets up proper safety devices such as cones, sign trucks, and flag stands, and designates an observer when necessary in order to assure a safe working environment.
39. Wears appropriate safety equipment, such as hard hats and red vests, in order to assure personal protection.
40. Looks around work area periodically and watches subordinates perform tasks in order to assure the safety of self, co-workers, and the public.

General

41. Reads work orders which explain job to be done, location, distance of run, jumping, and pairs to be used in order to perform job in the manner it was engineered.
42. Receives trouble reports over phone, radio, or on a print out in order to find out nature of problem, location, and facility.
43. Looks up circuit information in map books or circuit books in order to determine circuit routing.
44. Explains and demonstrates procedures to Communication Cable Workers and Assistant Communication Cable Workers, and instructs them on equipment use in order to train employees.

45. Acts as evaluator to see that Department of Motor Vehicle requirements for licensed drivers, regular inspection of heavy trucks and equipment, and familiarization of operators with equipment are met.
46. Assigns jobs to crews based on the capability of crew members and time demands of job in order to assure all jobs are completed in the most effective and safest manner.
47. Reads materials list on job order and checks each crew in order to ensure the crew is equipped with the proper equipment and tools before leaving the job site.
48. Writes short summaries on activity reports in order to document activities, conditions found, and remedies required for repair.
49. Write material and supply requests and sends to purchasing officer in order to assure an inventory of needed materials is available for use at all times.
50. Measures distances using measuring devices such as a tape measure, premarked cables, duct measuring string, or duct rod in order to determine precise locations of work sites (e.g. from ground to crossarm, lengths, widths, and/or heights of various objects) during work activities.
51. Submits written bids including the date, time, length of time circuits are to be deenergized, and affected circuits to bid dispatcher, gets approval for OK TO from the bid dispatcher, gets OK TO from load dispatcher, and turns in OK TO when job is finished in order to provide a safer work environment when working close to power lines.
52. Discusses job procedures and possible problems with groups such as engineers, overhead and underground crews, phone company representatives, and water system workers in order to ensure that jobs are performed correctly and to coordinate activities of different groups.
53. Fills out time keeping logs including all codes which describe types of time used in order to assure appropriate accounting of time.
54. Coordinates the crew's activities during an out-of-town assignment including
 - arranging for transportation;
 - arranging for lodging;
 - assuring all of the crew is accounted for during work time;in order to ensure activities on out-of-town jobs are properly scheduled and run smoothly.