

SECTION 631
POWER POLE AND LINES RELOCATION
(Section Added to FP-03)

631.01 **DESCRIPTION** - This work consists of relocating existing power poles that are directly affected by the project to the new locations indicated on the plans or as directed by the CD. The relocation includes all appurtenances such as wires, cross arms, guys, hardware except transformer units. The work also includes adjusting power system facilities such as guy wires and anchors required to meet the new vertical and horizontal alignments of the road indicated on the plans or as required.

631.02 **APPLICABLE DOCUMENT** – The following specifications and standards of the issues listed and referred to in this Section (including addenda, amendments and errata listed) from a part of this specification to the extent required by the references thereto.

AMERICAN NATIONAL STANDARD INSTITUTE

(ANSI -02) Title – National Electrical Safety Code, C2-81D

National Electrical Code 70 – 1984

Commonwealth Utilities Corporation Requirements and / or Standards.

631.03 **MATERIALS** – Unless otherwise specified conform all electrical material, hardware, and accessories to the requirements of the Commonwealth Utilities Corporation.
Concrete – Conform to Subsection 601.02
Backfill Material – Conform to Section 209.

631.04 **CONSTRUCTION REQUIREMENTS** – **The Contractor has the option to perform the work using his resources or have CUC perform the work.**

If the Contractor opted to have CUC perform the work, make a close coordination for the following:

1. To execute the work in a timely manner. This will include but not be limited to the scheduling of work.
2. To make necessary arrangement for the CUC to prepare and complete the work without delay on his operation.
3. To make all necessary arrangements in regards to terms and conditions.

Perform concrete construction according to Section 601, Minor Concrete Structure.

Perform excavation and backfill according to Section 209, Structure Excavation.

631.05 **WORKMANSHIP** – Unless specified or indicated otherwise, workmanship shall conform to the requirements of the latest edition of American National Standard Institute (ANSI – C2) entitled “National Electrical Safety Code”.

- 631.06** **HANDLING OF POLES** – Do not drag poles on the ground or drop abruptly. Pole tongs, cant hooks, and other pointed tools capable of producing indentations more than one (1”) in depth shall not be used in handling the poles.
- 631.07** **POLE SETTING** – In normal firm ground, holes shall be set to the minimum depth according to CUC Standards. As far as practicable, poles shall be set to maintain an even grade. When the average run is level, consecutive poles shall not vary more than five feet (5’) above the ground. To obtain shorter than normal length above ground, the depth of setting shall be increased as required. Where poles are set along the edge of cuts or embankments or where soil is liable to be washed out, special precautions shall be taken to ensure durable foundations, and the setting depth shall be measured from the lower side of the pole. When poles are to be set, holes of ample size shall be dug to allow the easy entrance of the poles, and the size of the hole at the bottom shall be large enough to allow proper use of tampers. The surplus earth shall be placed around the pole in a conical shape and packed tightly so that water will drain away from the pole. Poles on straight runs shall be carefully aligned and set so that they stand as nearly vertical as possible no more than two inches (2”) out of the line with the other poles so that the line post insulators, if used, are at right angle to the direction of the line.
- 631.08** **CROSSARMS** – Install crossarms perpendicular to the line conductors.
- 631.09** **INSULATORS** – Mount Insulators according to CUC Standards.
- 631.10** **POLE LINE HARDWARE** – Install suitable washers under bolt heads and nuts on surfaces other than steel or metal to maintain constant pressure. Where required, install double arming bolts equipped with washers and nuts for each double-arm installation. Use eye bolts, bolt eyes, eye nuts, strain plates, and clevises wherever required to adequately support and protect the poles, crossarm, guy wire and insulators.
- 631.11** **GUYING** – Install guys where required. Unless specified, use steel expanding type guy anchors. The holding power transverse strength, and longitudinal strength of guys shall conform to the requirements of the latest edition of American National Standard Institute (ANSI-C2), for Grade B construction.
- 631.12** **LINE CONDUCTORS** – For 13.8 KV line shall be No. 336 MCM aluminum or as recommended by the CUC. Conductors shall not be trampled on or run over by vehicles. Each reel shall be examined and the wire shall be inspected for cuts, kinks, or other injuries. Injured portions shall be cut out and the conductor spliced. The conductors shall be pulled over suitable rollers or stringing blocks properly mounted on pole, if necessary to prevent binding while stringing.
- 631.13** **SAG AND TENSION IN LINE CONDUCTORS** – Sag and tension in line conductors shall conform to the requirement of the American National Standard Institute (ANSI-C2) latest edition. To conform to the above requirements, initial stringing tensions for slack spans and special conditions are for new conductors that have not been pre-stretched.
- 631.14** **MISCELLANEOUS** – Sufficient, safe, cool drinking water and an adequate first aid kit must be provided on every work truck. Adequate safety equipment and construction tools for the workers shall be provided by the Contractor.
- 631.15** **POLE NUMBERING** – Provide pole numbering according to the requirements of CUC. Secure properly the number to the pole.

- 631.16** **POWER INTERRUPTIONS** – Submit a written request to the CD for approval at least fourteen (14) days before power outage with a maximum power outage times of four (4) hours any time. Scheduled interruptions affecting the same customers on consecutive days are strongly discouraged. All technical assistance estimated revenue losses and use of use of equipment furnished by CUC through the CD or as required to complete the work shall be the Contractor’s responsibility and expense.

- 631.17** **SALVAGED MATERIALS** – All usable salvage materials shall be returned by the Contractor to CUC Warehouse.

- 631.18** **CONSTRUCTION SIGNS** – Furnish and install all necessary construction signs along the work area. Such work shall be as approved or directed by the CD.

- 631.19** **CLEAN-UP** – Remove debris as it accumulates. Do not permit accumulation of debris on the work area. Keep the jobsite a clean and in orderly condition.

- 631.20** **MEASUREMENT** – Measure relocation of power poles by the each including lines and appurtenances, complete and accepted.

- 631.21** **PAYMENT** – The accepted quantities, measured as provided above, will be paid at the contract unit price per unit of measurement for the pay items listed below that are shown on the Bid Schedule. Payment will be full compensation for the work prescribed in this Section.

Pay Item No.	Pay Item	Pay Unit
63101(A)	Relocate Existing Power Poles Including Lines and Appurtenances, Complete-in-place	Each
63101(B)	Relocate Existing Guy Wire Including Appurtenances, complete-in-place	Each
63101(C)	Relocate Existing Telephone Pedestal Including Appurtenances, complete-in-place	Each

END OF SECTION 631