**Section 530.400 Underground Facilities – Power and Communication Lines**

a) General

1) Longitudinal lines shall be located as near the right-of-way line as practicable and no more than eight feet from and parallel to the right-of-way line.

2) Installation shall have a minimum cover of 30 inches except communication lines installed by the plowed method shall have a minimum cover of 24 inches.

3) Underground power cables must be grounded in accordance with the National Electrical Safety Code (ANSI C2-1990).

b) Fully Access Controlled Highways

1) Longitudinal Lines

A) New underground power and communications lines longitudinal to the centerline will not be permitted within the access-control lines of fully access-controlled highways under the following conditions:

i) When the installation of the utility would require pavement cuts.

ii) When non-emergency repairs of the utility would require the use of any part of the highway.

iii) When the installation of the utility would endanger or impair other utility facilities already in place.

iv) When the installation of the utility would be above-ground after installation.

v) When the utility would interfere with or impair the present use or future expansion of the highway.

B) When new underground power and communications lines are to be permitted longitudinally to the centerline of fully access-controlled State highways, the following conditions will apply:

i) No above-ground appurtenances will be allowed on State highway right-of-way.

ii) No utility facilities will be allowed between the edge of pavement and the back of abutment of the intersecting roadway at grade separation structures.

iii) Bridge attachments may be allowed as specified in Subpart G.

2) Underground Crossings

 Underground power and communication lines will be permitted to cross fully access-controlled highways under the following conditions:

A) The crossing provides a transmission or distribution service to a general area or an expanding area. No individual service crossings will be permitted to cross a fully access-controlled highway except in cases involving isolated locations such as landlocked areas.

B) The design, materials and construction methods shall be those that can be expected to provide maximum maintenance-free service life.

C) Encasement shall be provided between jacking or bore pits, if the crossing is installed by boring or jacking.

D) Encasement may be eliminated under the following conditions:

i) The crossing is installed by the use of "moles", "whip augers" or other approved methods which compress the earth to make the opening for cable installation.

ii) The installation is by the open trench method. This method is only permitted prior to roadway construction.

E) Above-ground mounted appurtenances to electric power or communication lines within the access-control lines of fully access-controlled highways will normally not be permitted except in cases of extreme need. Where installations are approved, they shall be located within one foot of the right-of-way line or as near as practicable.

c) Conventional Highways

1) Longitudinal Lines

 Underground power and communication lines may be permitted longitudinal to the centerline of conventional State highways under the following conditions:

A) Cable may be installed by trenching or plowing with consideration given to boring to minimizing the damages when crossing improved entrances and side roads.

B) Above-ground appurtenances constructed as component parts of underground communication or electric power lines shall be located within one foot of the right-of-way line or as near as practicable.

2) Underground Crossings

 Underground power and communication lines will be permitted to cross conventional highways under the following conditions:

A) The design materials and construction methods shall be those that can be expected to provide maximum maintenance-free service life.

B) Encasement shall be provided between jacking or bore pits, if the crossing is installed by boring or jacking.

C) Encasement may be eliminated under the following conditions:

i) The crossing is installed by the use of "moles," "whip augers" or other approved methods which compress the earth to make the opening for cable installation.

ii) The installation is by the open trench method. This method is only permitted prior to roadway construction.