Outside Plant Construction Worldwide Differences and Similarities

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Placement Methods

Aerial-

Generally cables are placed on poles or between buildings

Underground-

Cables are placed in conduits between pulling points such as manholes, handholes, pull boxes, building entrances, etc.

Direct Buried-

Cables are placed “directly” in the ground between points of access such as pedestals, cross connect boxes, or buildings

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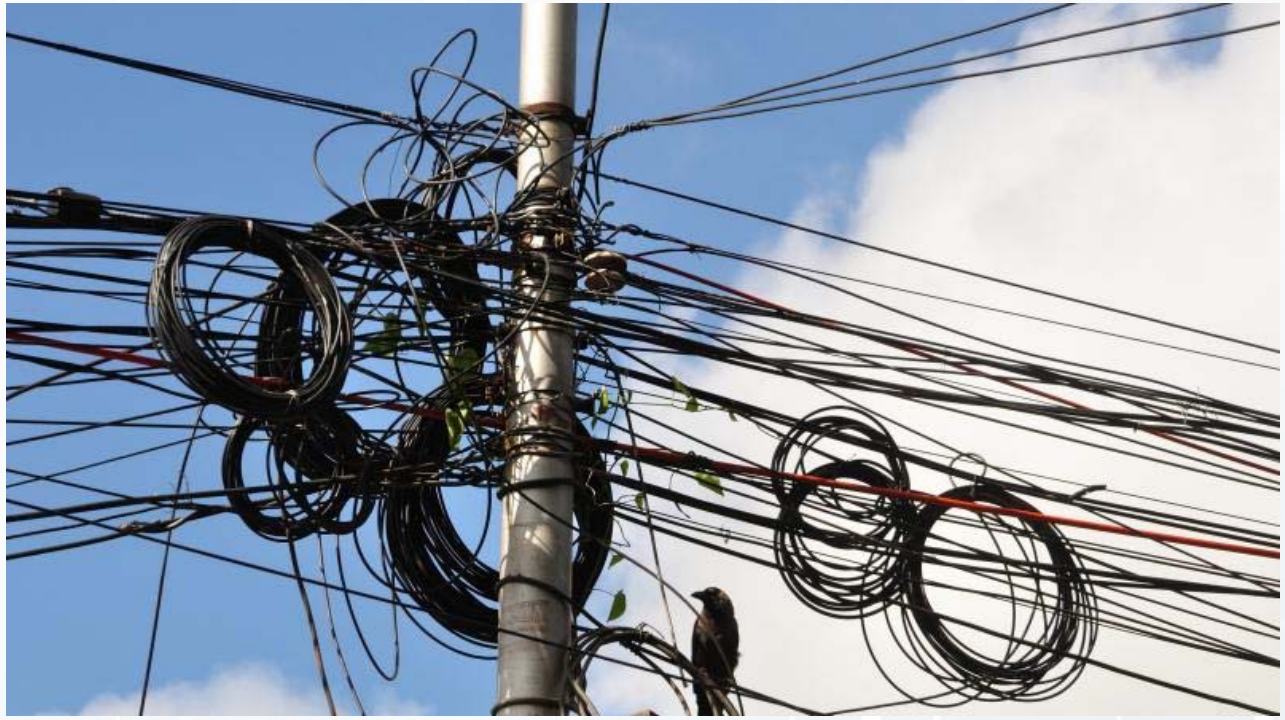

AERIAL CABLING

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Underground Cable Placement

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Trenching to place direct buried cable

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Similarities-

- Most countries use those three installation methods.
- However, many countries use the term “buried cable” rather than “direct buried”
- In addition, some countries consider buried cables to be “underground” cables
- What’s important about terms? Consistency !

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Differences

- Methods for placing buried cables vary from the following:

✓ Chain driven trenchers
✓ Backhoes
✓ Plows
✓ Horizontal Directional Drilling (HDD)
✓ Foot activated excavation devices

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Similarities

- Existing utilities “should” be located prior to doing any excavation
- Proper clearances over roads, driveways, sidewalks, etc. should be maintained
- Historical areas should be treated accordingly
- Environmental concerns should be considered
- All dielectric fiber optic cables should have some method to be located such as tracer wire, metallic warning tape, etc.

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Differences

- Minimum placement depths range from 609.6mm (24”) to 914.4mm (36”) to 990.6mm (39”) for fiber optic cables
- Concrete encasement may or may not be used to protect underground cables
- Sizes of outside plant copper cables vary significantly
- New copper cables are not placed in some countries

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Similarities

- Fiber optic cables are being placed to provide voice, data, video, energy management systems, security, building automation, etc.
- Fiber optic cable splicing is much easier than ever before
- Testing equipment for both copper and fiber is much more sophisticated

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Differences

- Poles can vary from typical wood poles, to concrete, to steel and can be round, square, rectangle, or multi-sided in shape
- Manholes can be concrete, glass reinforced plastic, fiber glass, or perhaps other composite materials

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Similarities

- ✓ Outside plant construction is inherently dangerous
- ✓ Outside plant design should rarely, if ever, be designed from your desk. Field surveys are a must
- ✓ Outside plant should be designed with the future in mind

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And finally,

Why is the acronym for outside plant, OSP?

Why isn't it OP since "outside" is one word?

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THANK YOU VERY MUCH

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