

General Guidelines

Conduit Construction for Fiber Optic Use

1. Conduit

- a. Conduit material shall be Schedule 40 Polyvinyl Chloride (PVC) or Schedule 26 High Density Polyethylene (HDPE)
- b. Single conduits shall have a 2 (two) inch minimum diameter. Conduit shall have a pull rope or tape. A #8 stranded trace wire will be installed in the conduit or other trace wire system approved by the City.
- c. Multiple conduits installed as a bundle shall each have a minimum of 1 ¼ inch diameter. Each conduit shall have a pull rope or tape. A single #8 stranded trace wire in one conduit will be installed or other trace wire system approved by the City.
- d. To the greatest extent practical, all conduits will be installed by trenchless methods. Open trench construction over 20 feet in length will require specific approval by the City.
- e. Minimum installation depths shall be per City Standard Detail 120A.
- f. Trenching by rock cutting excavator, “rock wheeling”, is not permitted.

2. Pull Boxes

- a. Pull Boxes and conduit terminations in boxes shall be per City Standard Detail 502. Pull Boxes shall have nominal inside dimensions of 48 inches by 30 inches 24 inches deep.
- b. Pull Boxes will be installed at each end of the conduit installation and at intervals not to exceed 500 feet.
- c. Boxes will be marked “Communications”
- d. Boxes located in sidewalk area within 5 feet of driveways will be traffic rated.
- e. Boxes constructed in the sidewalk area will not be located on or within 5 feet of an intersection curb radius, without approval by the City

3. Manholes

- a. Manholes shall be constructed of polymer concrete or similar material with cast iron frame and covers. Structure shall be rated for continuous highway truck loading. Minimum inside dimensions shall be 36 inches by 60 inches and 36 inches deep. Manhole access shall have a minimum opening of 30 inches.

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- b. Unless otherwise approved by City, manholes will be constructed at a depth so that the top of the manhole cover without grade rings is at no higher an elevation than twelve (12) inches below the nearest lip of gutter. Appropriate grade rings will be used to raise the manhole frame and cover to the appropriate pavement elevation.

- 4. Other
 - a. All work shall be in accordance with the applicable City Standard details or as approved in writing by the City.

 - b. A waterproof durable identification tag will be attached to each fiber optic cable at each point of entry and exit from pull boxes, manholes, or any other location where fiber cable leaves the conduit. The tag will include information regarding ownership of the cable.