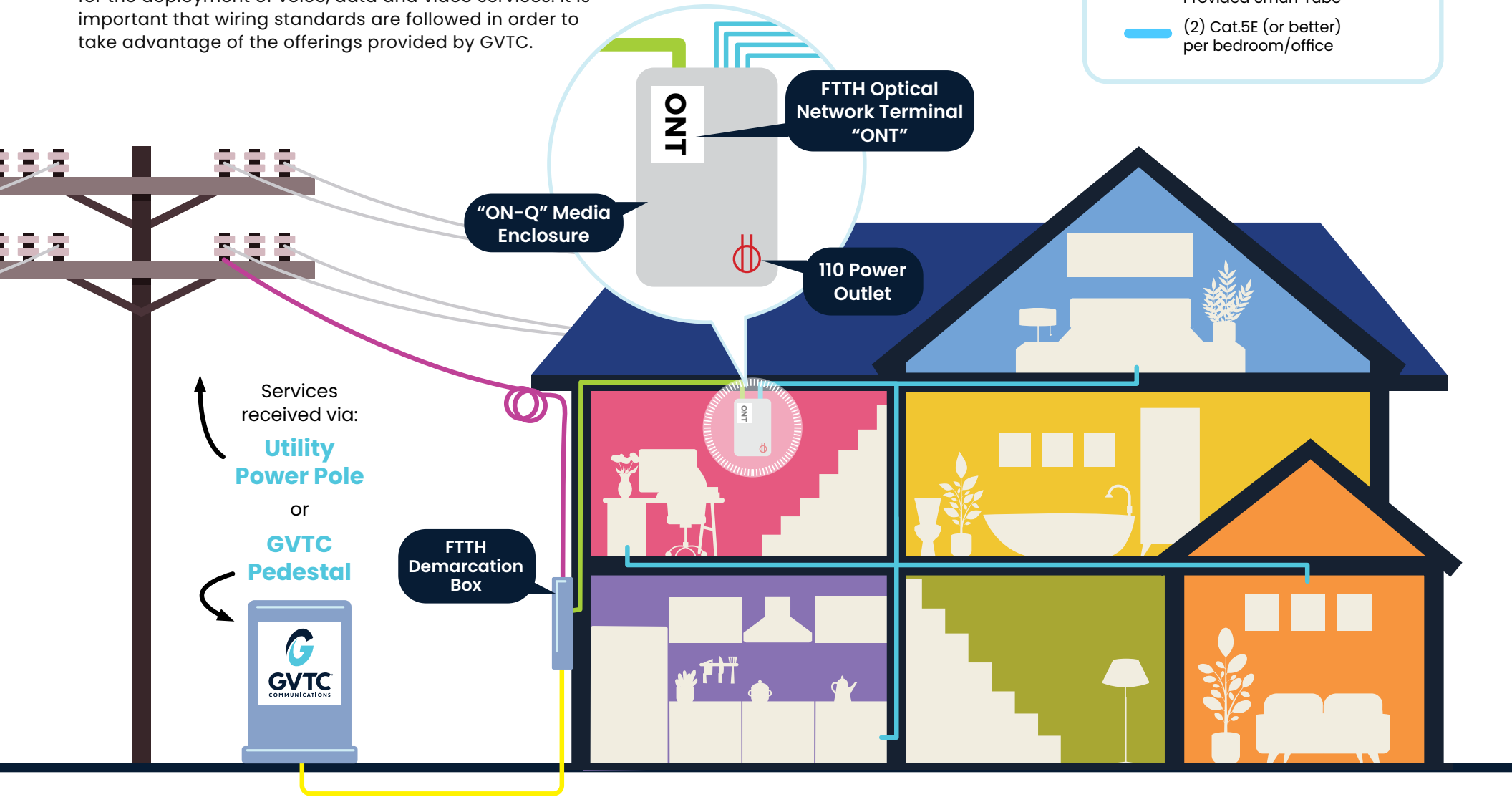
FTTH Fiber-to-the-Home

Structured Wiring Standards for new Homes

GVTC's desire is to ensure that new homes constructed in its service area have a structured wiring system that will allow for the deployment of voice, data and video services. It is important that wiring standards are followed in order to take advantage of the offerings provided by GVTC.

FTTH Diagram Key

- GVTC Buried Service Drop-in Builder Provided Conduit
- GVTC Aerial Service Drop (With Service Loop)
- Micro Fiber in Builder Provided Smurf Tube
- (2) Cat.5E (or better) per bedroom/office



Running wires through existing walls isn't possible after the application of foam insulation.

gvtc.com | 800-367-4882

GVTC COMMUNICATIONS

STEPS TO BE COMPLETED BY GVTC

Buried/Underground Services

1. Service drop to be connected in GVTC pedestal.
2. Service drop to be pulled through builder provided conduit. Please visit our support page at **gvtc.com/FTTH** for conduit requirements.
3. Service drop to be connected to GVTC Micro Fiber in Fiber to the Home **FTTH** demarcation box.
4. Micro Fiber to be pulled through builder provided Smurf Tube in to builder provided **ON-Q** media enclosure.
5. Micro Fiber to be connected to GVTC provided **FTTH** optical network terminal **ONT/Router** and powered by builder provided **110v/AC** outlet in **ON-Q** media enclosure.
6. Builder provided CAT.5E, or better cables, to be connected **Hardwired** to **ONT/Router** Max. 4 **Hardwired** internet connections to bedrooms/office.

Aerial/Overhead Services

1. Service drop to be connected and attached at Utility Power Pole.
2. Service drop to be attached at fascia/soffit board adding service loop.
3. Service drop to be connected to GVTC Micro Fiber in Fiber to the Home **FTTH** demarcation box.
4. Micro Fiber to be pulled through builder provided Smurf Tube in to builder provided **ON-Q** media enclosure.
5. Micro Fiber to be connected to GVTC provided **FTTH** optical network terminal **ONT/Router** and powered by builder provided **110v/AC** outlet in **ON-Q** media enclosure.
6. Builder provided CAT.5E, or better cables, to be connected **Hardwired** to **ONT/Router** Max. 4 **Hardwired** internet connections to bedrooms/office.

FACILITIES ENTRANCE

Each home will have a cable placed to it by GVTC. An existing conduit is required to place the cable. This cable will terminate at the side of the home in a FTTH Demarction Box.

DISTRIBUTION BOX

We strongly recommend that each home have a ON-Q media enclosure. The ON-Q medi enclosure will serve as the hub for the home network. The ON-Q should be able to accommodate dual 110 outlets and other electronics for the data, television and telephony network.

HOME NETWORK OPTIONS

Depending on the sophistication of the home buyer, other network options need to be considered including:

- Spare conduit from FTTH Demarcation Box to ON-Q media enclosure
- Spare conduit from ON-Q media enclosure to Attic for future wiring needs
- Wireless Network – would not take the place of the wired network but would be seen as an enhancement to wired network
- Entertainment Options
- Security Options

YOUR NETWORK

These specifications allow all homeowners in the GVTC service area to have structured wiring to accommodate advanced telecommunication services.

Your builder, along with their structured wiring contractor, can customize a system to meet your unique needs.

DISTRIBUTION CABLING

Common area rooms are required to have a multimedia port that will terminate (2) CAT5E cables (for voice and data). RJ11 Jacks will be used for voice termination and RJ45 jacks for data termination. This allows for maximum flexibility for future services.

Other rooms may have different configurations based upon homeowner needs. Each cable must be home run back to the ON-Q media enclosure with no daisy-chained or looped wiring. An additional CAT5E cable must also be run for IP and Interactive Video systems.

HOUSEKEEPING AND STANDARDS

- Each cable will be labeled at the jack location and also at the termination point at the ON-Q media enclosure
- Cabling will be installed to EIA/TIA 568A standards or 568B
- Other standards that are referenced in this document include:
  - TIA 570 Residential telecommunications cabling standard
  - FCC Part 68 of Title 47
  - IEEE 802.3 standards

- The structured wiring contractor will provide documentation to the homeowner including the wiring system overview, wiring diagram and any tests completed.

FOR MORE INFORMATION CALL
800-367-4882

GVTC COMMUNICATIONS