

# Conduit Service Requirements



Alberta residential up to 2 units

## Entrance Requirements

TELUS Communications Inc. will provide a 21 mm (3/4") HDPE conduit stubbed at the property line. Upon excavation of the service connection point and associated trench TELUS Communications Inc. (at their cost) will extend the 21 mm (3/4") conduit to the service entrance location at the side of the home, by emailing [3100218@telus.com](mailto:3100218@telus.com) with the address and required placing date at least 3 business days in advance.

## TELUS' Responsibility

Upon receiving the email to [3100218@telus.com](mailto:3100218@telus.com), a TELUS contractor will be dispatched free of charge. A continuous section of HDPE (High Density Polyethylene) SDR 13.5 orange service conduit will be extended to the side of the house. At the base of the foundation the HDPE will be fed through a TELUS supplied rigid sweeping 90° bend and extend up through the builder provided 35 mm (1-1/4") rigid Schedule 40 conduit to a height above of the foundation wall. The internal HDPE pipe will be capped and the rope tied off.

## Builder Requirements

In order to accommodate the 21 mm (3/4") conduit it is requested that the builder/ owner do the following:

1. Provide a suitable pathway "trench" as stipulated by TELUS from the property line to the service entrance location at the side of the home.
2. The service trench is required to be free of all construction materials at a minimum depth of 1 meter. Where communications and power service conductors are to be buried in a common trench, CEC (Canadian Electrical Code) Rule 60-602 must apply.
3. Where there is a grade change, the service trench is required to be sloped (not stepped) this will avoid any pinching or constriction of the service conduit. If sloping cannot be achieved, the use of native fill underneath the service conduit or planking, is acceptable.
4. Supply and install a 35 mm (1-1/4") LB and a 35 mm (1-1/4") Schedule 40 conduit to a minimum of 300 mm (12") below finished grade.
5. On the side of the house a horizontal separation between Electrical and TELUS conduits must be a minimum 200 mm (8") and in addition a horizontal separation between TELUS and Cable TV must be a minimum of 250 mm (10") apart. This will allow termination boxes to be placed at same height above grade and maintain box separation.
6. Upon excavation of the service trench the builder will notify TELUS by sending an email to [3100218@telus.com](mailto:3100218@telus.com). The service conduit will be extended free of charge. The trench is not to be backfilled until conduit extension has been completed.
7. The TELUS contractor will extend the 21 mm (3/4") conduit up through the provided Schedule 40 and LB. In the event that the contractor completes his install prior to the installation of the Schedule 40 the builder will slide the 35 mm (1-1/4") over the 21 mm (3/4") conduit leaving the top of the 21 mm (3/4") conduit accessible in the LB.
8. Before backfill ensure that the service trench is free of construction material and the service conduit is placed so that kinking or pinching will be avoided, only native loose backfill is to be placed directly on the service conduit (avoid large rocks or frozen soil). Ensure there is 500 mm (20") of fill coverage before tamping — do not tamp within 500 mm (20") of the conduit.

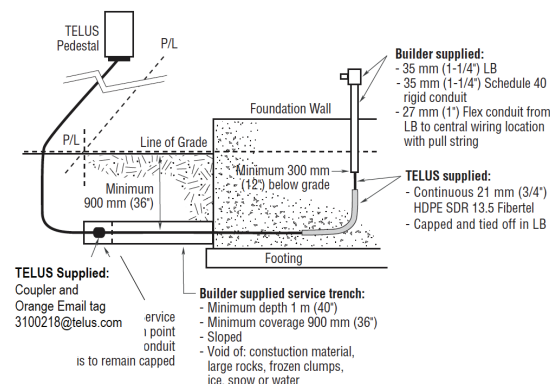
## In-Home Conduit Routing to Central Wiring Location

TELUS' primary requirement is to have a clear and unobstructed raceway from the outside wall to the panel location.

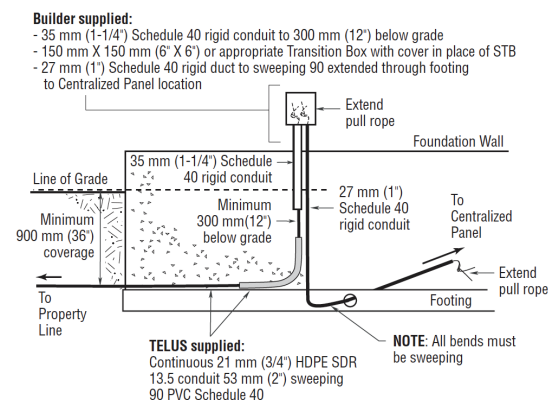
TELUS' conduit must come above grade at the side of the house and cannot be placed as a continuous underground run with direct entry into the basement for two specific reasons:

1. In the event that the street or pedestal location was to flood; the conduit could act as a direct route for water to enter into the house.
2. In the event the duct is damaged on private property; TELUS would have no direct access into the house to provide temporary services.

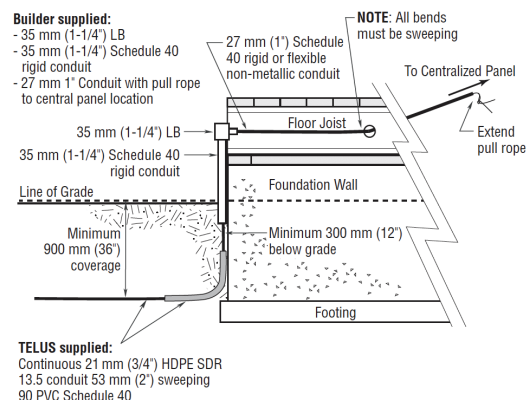
### 1.1 Conduit from Pedestal



### 1.2 Alternative Routing for Centralized Panel – below Footing



### 1.3 Alternative Routing for Centralized Panel – through Floor Joist



## Enclosure to Inside of Home

- The owner/builder to provide and install a non-metallic “Flexible or Rigid” conduit (complete with a string) from the LB to the inside wire Star Configuration (Main Panel) inside the home. Conduit is the preferred option and if conduit is not installed, additional services to the homeowner may not be possible.
- No Internal Conduit Pathway: If the builder decides NOT to provide a non-metallic conduit between the LB and the central wiring location inside the home, then,
- pre-wire 2 CAT 6 cables along with a single Bend Insensitive Fibre (BIF) (ITU-T-G657 compliant, indoor or outdoor rated) and the No. 6 AWG green insulated ground wire between the external LB and the inside wire Star Configuration inside the home leaving 2 m (6-1/2') of slack at each end.
- When using rigid conduit, a maximum of four (4) sweeping 90° bends for a total of 360° is allowable.
- Extend the pull string from the 27mm (1") conduit in the LB to the center of the Star Configuration inside the home.

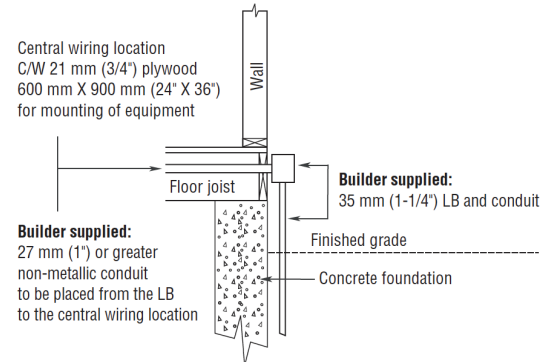
## Pre-Wire and Panel/Backboard Area Central Wiring Requirements

- The inside wiring should be done in a “Star Configuration” where the individual set runs from each telephone jack and TV location collect at a common location within the home (See Figure 2.2).
- The centre of the star is to be in a heated environment where there is no risk of the ambient air temperature falling below 0° (zero) Celsius.
- **A garage is NOT a suitable location.**
- Builder/owner will provide one (1) duplex 15A non-switched power receptacle dedicated to home networking, communication and entertainment equipment; installed in a multimedia enclosure at this location. **The use of a multimedia enclosure or smart panel is not mandatory although it is recommended.**
- Owner/builder will provide patch panels for Voice / Data / Coax.
- If a multimedia enclosure is not used, a wall space area of 600 mm X 900 mm (24" X 36") is required to accommodate all equipment along with one (1) duplex 15A non-switched power receptacle dedicated.

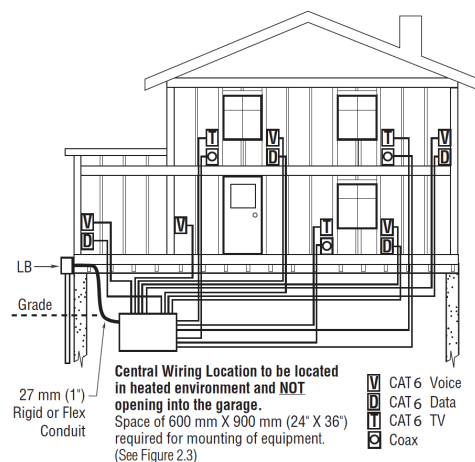
## Builder/Owner to Supply and Terminate

- Voice / Data / Coax patch panel style termination strips at the backboard location.
- All CAT 6 inside wire to each location where the home builder/owner would like Voice, Data and TV (i.e., If all 3 services are required in one location, then 3 CAT 6 would be required at this location).
- Voice set runs to have W-BL, W-O and W-GR terminated on RJ11 wall outlets and all 4 pairs terminated at the backboard location on the Voice module.
- Data and TV runs to be terminated on RJ45 wall outlets and all 4 pairs terminated at the backboard location on the Data module according to the TIA-568A standard and labelled at both ends.
- Verification testing to be completed on all set runs.
- TELUS prefers using CAT 6 cable for TV but can use Coax cables.

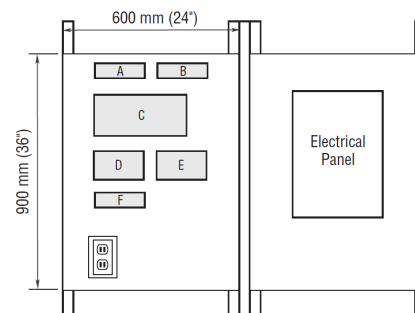
### 2.1 Outside to Inside Transition



### 2.2 Central Wiring Requirements



### 2.3 Central Wiring Location – Detailed View



Please call **310-2255** for more information about products and services offered by TELUS or visit [telus.com/bics](http://telus.com/bics)

TELUS and the TELUS logo are trademarks of TELUS Corporation, used under licence.  
© 2013 TELUS. 13\_00134\_P730



For more information please call **310-4DEV (4438)**  
or email [4dev@telus.com](mailto:4dev@telus.com)

[telus.com/Build](http://telus.com/Build)