

AT&T Switched Ethernet ServiceSM

December 2016



AT&T Switched Ethernet site preparation guide

Introduction:

Meet with the AT&T engineer

- An AT&T engineer will explain to your site contact all customer responsibilities shown on this page
- ① The engineer will reach out to the site contact within 48 hours of your order to schedule a visit
- If you are eligible and have contracted AT&T to provide Entrance Facility Construction*, AT&T will complete items 2-5 on this list. This will occur after you obtain a signed System Permission Form if required according to the building circumstances.
- If you are not eligible or have not selected the AT&T Entrance Facility Construction, you (or your chosen contractor) will be responsible for completing the steps 2-5 on this list.

*The Entrance Facility Construction offer is described beginning on page 10. Your AT&T representative can help you determine if your location is eligible and if so, can include it with your order request.

AT&T (with EFC offer) or Customer will provide Entrance Facility as follows:

Outside conduit specifications

(Property Line to your building)

- Minimum 2" – 4" conduit with pull rope
- ② Minimum 3' sweeping radius

Pull box required when:

- There are 3 or more right angles
- The path is longer than 300'

③ *Dimensions for pull box – 12" x 12" x 18"

Wall mounted backboard

- 4' x 4' x 3/4"
- Fire retardant plywood
- ④ Mounted to studs

Electrical specifications

- AC power outlet on a dedicated fused breaker rated min. 15 amps **OR**
- ⑤ Nominal voltage, 48VDC, +24/-24VDC, 110V
 - Either power option needs to be located within 6 ft. of the AT&T equipment
- **Relay racks / cabinets must be grounded**

Customer will perform the following:

Inside conduit specifications

(Demarcation point to router)

- Needs to be completed prior to installation
- ⑥ You may hire an electrical vendor to complete inside wiring
 - A conduit or cable tray is required, and a clear path for access
 - Minimum 2" conduit

Additional inside wiring

- Inside wiring, unless otherwise noted, is your responsibility; you can do it yourself or hire a vendor
- ⑦ Inside wiring includes:
 - From the demarcation point to your equipment (e.g. router)
 - Note: Incomplete inside wiring is the number one reason for service delays

Note: In some buildings, AT&T may be able to serve your new service from existing AT&T equipment with spare capacity. In such cases no additional site preparation work is required. On or before the due date a technician will be dispatched to provide circuit demarcation and perform test and turn-up activity.



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Site survey:

AT&T will reach out to your local site contact to schedule a site survey, if applicable.

Please provide the local customer site contact information:

- Name / Title
- Phone number / Email

The site contact will work with AT&T to schedule building access, provide the installation address to the ordering team and problem solve, as needed.

Site contact responsibilities:

- Obtaining building access and being familiar with the telecom rooms
- Showing AT&T where the circuit demarcation (demarc) is located. The demarc is inside the building where the service terminates from the street
- Guiding AT&T during the site survey visit, noting further action needed to complete the site requirements (**take notes**)

Site contact responsibilities:

- Overseeing the site build out and confirming the completion dates. The contact should be fully empowered to make decisions
- Informing AT&T of any parking, noise or time restrictions; unloading zones, elevators, asbestos, hazardous materials, etc.
- Providing adequate working space, a clear path and easy access to the backboard, patch panel and power outlets

If in a multi – tenant building:

- Working with the property manager or building owner to determine the location of your company's demarc
- Acting as a liaison and advocate when working with the building owner or manager
- Confirming the demarc is in the same room as the router
- Providing inside wiring if the building's demarc is not in your location or on a different floor than your equipment (e.g. router)



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Site preparation delays

- AT&T will negotiate a project schedule with all parties to enable service completion as close to your desired date as possible
- However, any changes to plans or any delays associated with site preparation can have a corresponding or greater impact to the service delivery date
- Please try to complete the site preparation as soon as possible from the time you place your order. This includes any electrical requirements, the backboard for the network equipment and any applicable extended inside wire. This will help avoid an installation delay

Customer site not ready

- Please contact the AT&T ordering team and your account team representative if delays are anticipated so work forces can be rescheduled
- There are billing implications if the site is not ready in time

What to expect during site survey visit

- The local site contact will meet with the AT&T engineers to walk through what the customer will need to complete before we can install the service
- It's a good idea to take notes and keep the name and contact information of the engineer in case there is a question later
- We will keep the site contact notified if there are any delays on our end, such as special construction, or facility delays



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General requirements

The following pages contain information and a list of general requirements associated with fiber optic-based services. The AT&T engineer or field technician will identify actual requirements for the specific installation during the site survey.

Share this information with your electrical contractor

There are typically four (4) areas of customer obligation to facilitate timely equipment installation and delivery of service:

- Inside path
- Ground
- Power
- Floor space and environmental requirements



For an additional fee, you can hire AT&T or an electrician to complete the inside wiring

Inside path

- The inside path is the wiring that goes from the point where we bring the service to your building (demarc) to your equipment (e.g. router)
- The conduit must be a minimum 2" with a hard plastic corrugated interior duct, with pull rope
- If the building is shared by multiple tenants, the router and the demarc will likely not be in the same location. You will need to work with the building manager or building owner to coordinate the inside wiring
- **Inside wire extensions take time**, so you will want to schedule that as soon as possible. The AT&T engineer will be able to answer any questions

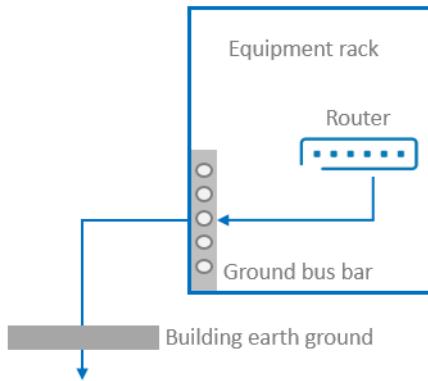


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Grounding

- Grounding your router is your responsibility, we encourage you to consult with your electrical contractor
- AT&T provided equipment, customer relay racks, cabinets and router must be grounded by placing an exposed #6 or larger grounding wire to the building's ground source
- This ground wire will be attached to the closest ground rod (earth ground) or building bus bar available and run to the network terminating equipment location in the room

All equipment requires a properly grounded 110v, 15 amp, 3-prong AC outlet



Improper grounding of equipment will result in service quality and maintenance issues

- A #6 stranded ground is required from your earth electrode system to the equipment room. This would be connected to a grounding bus bar, or otherwise directly connected to different components
- A #6 stranded ground is required from the grounding bus bar to the network terminating equipment
- Specific requirements may also be discussed with the AT&T access engineer or AT&T field technician at the time of the site survey visit



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Power

Network device

- Please provide a dedicated 110V circuit breaker rated at a minimum of 15 amps for the network device that connects your building to the AT&T network. The power cord must not be touching any other cables
- AT&T also supports DC powered installations upon request

Wall Mount (preferred) or Rack Mount

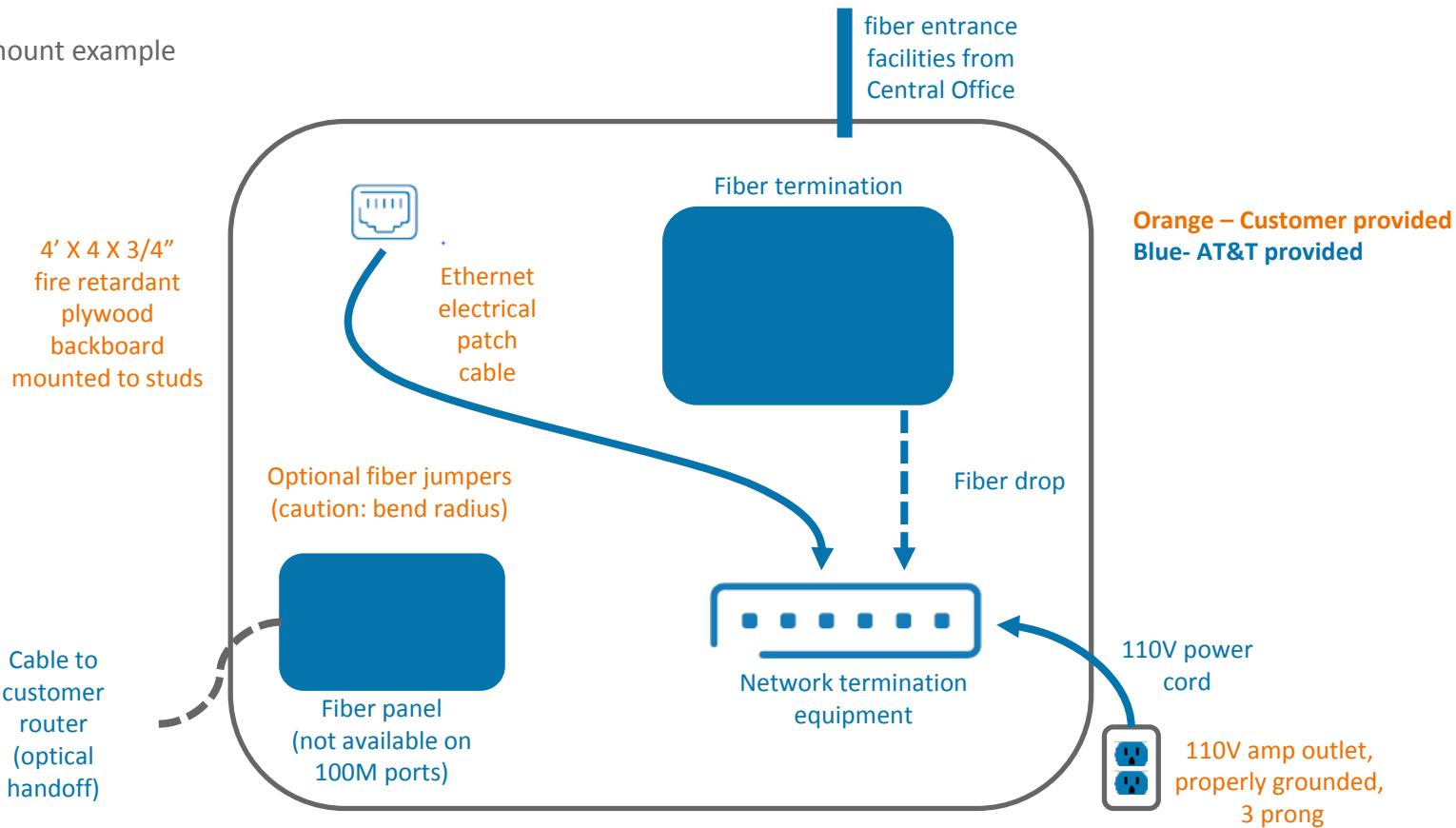
- A 4' x 4' x 3/4', fire retardant backboard, fastened to studs is required
- Operating environment should be between 40 (degrees) F and 85 (degrees) F to 85% relative humidity
- Because of the small size of most network termination equipment, a wall mounted installation is recommended (please see illustration on the next page)
- Another option would be a (customer provided) 19" rack of suitable strength and quality is also acceptable
- The choice for placement should be decided before the order is placed and is subject to confirmation following the site survey
- In a standard fiber installation, transport equipment is placed in a common area with access to the entire building.

Please contact AT&T as soon as the site preparation is complete so that the project schedule can be maintained.



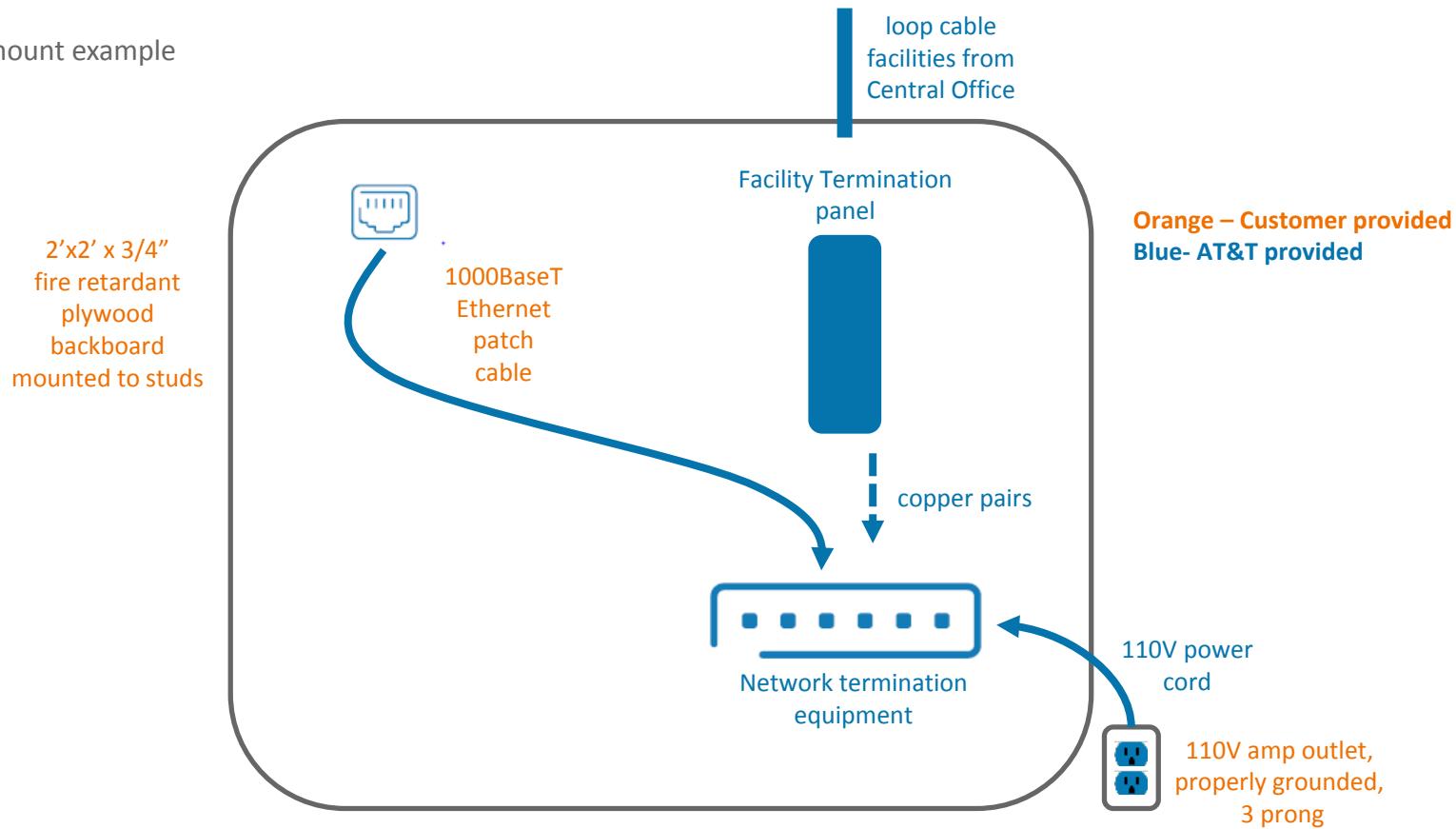
AT&T Switched Ethernet Site Preparation Guide – Basic and PPCoS Ports

Wall mount example



AT&T Switched Ethernet Site Preparation Guide – Broadband Ports

Wall mount example



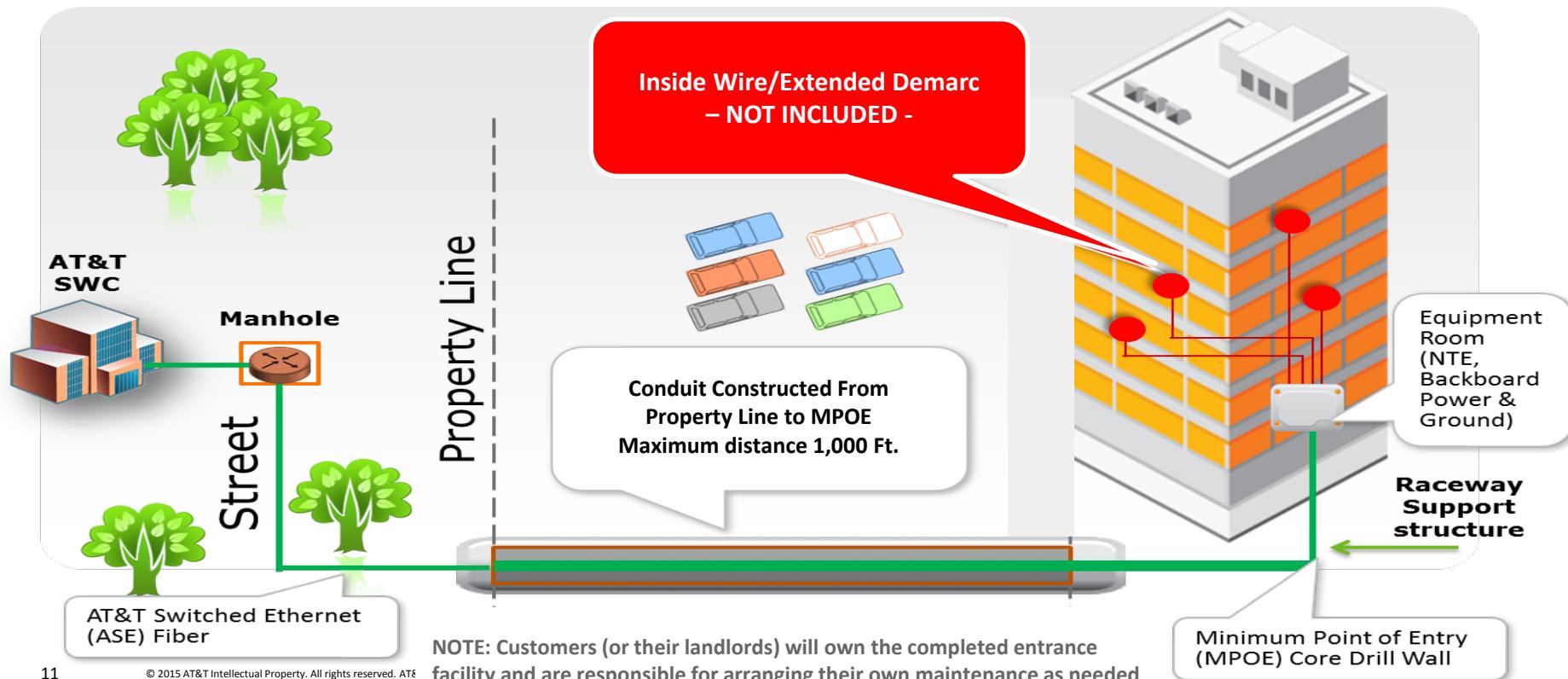
AT&T Provided Entrance Facility Construction



Entrance Facility For AT&T Switched Ethernet Service

Traditionally customers have been responsible for conducting the “Entrance Facility” to enable the provision of fiber based service. With AT&T Switched Ethernet Service, the customer can continue to do this work, or can outsource to a contractor, or can contract with AT&T to do it.

AT&T offers Entrance Facility Construction (EFC) which includes: Conduit, Core Drilling & Weatherproofing, Interior Raceway Support Structure, Backboard and Power Outlet & Ground for AT&T Provided NTE (Network Terminating Equipment)



EFC Customer Eligibility Requirements

- Customer site must be within AT&T ILEC franchise area
- Conduit from property line to Minimum Point Of Entry (MPOE) in customer's building must not be more than 1,000 feet (as measured by AT&T)
- Customers must schedule a site visit to take place within 10 calendar days from the date they are contacted by AT&T engineering for this purpose
- Following the site visit, if the site qualifies for entrance facility work, AT&T will (when necessary) provide a System Permission Form (SPF) to the building/premises owner(s) or authorized representative(s).
- Customers are responsible for ensuring the SPF is signed by the building/premises owner(s) or authorized representative(s) and returned to AT&T within 10 business days after receipt from AT&T in order for AT&T to proceed with Entrance Facility construction.
- Some sites / services are excluded from this offer including diversity, service ordered via Network on Demand process, carrier Point of Presence (POP) locations, residential buildings, and sites which AT&T determines EFC would be unduly expensive or not feasible



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