

**Edward Jones**  
**North American Branch Office - Low Voltage Specifications**

**PLEASE USE THE FOLLOWING STANDARD BRANCH OFFICE WIRING SPECIFICATION.**

**Wiring Specifications:**

PHONE/DATA – Category 5E (minimum), 4 pair, 24 AWG

**NOTE:** The contractor should **ONLY** complete Section 1 below unless low voltage work is required to be permitted and inspected (regional requirements), or special circumstances such as drywall ceilings or high ceilings (higher than 9 feet). See Branch Office Specifications (Exhibit A) for further details. The contractor should **ALWAYS** seek approval from the designated Edward Jones leasing manager before proceeding with Section 2. The work typically is done through a preferred national vendor (CBIZ) after the space is turned over to Edward Jones.

**SECTION 1. Telco D-MARC Extension (MPOE TO BOC)**

**Definition of Telco D-MARC extension:** Wire run from the building telephone D-MARC location or building Minimum Point of Entry (MPOE) to the BOC (Branch Office Controller) location:

**Total cables required = (4)** Category 5E (minimum) cables. Run 1 cable (for circuit) into one single gang box at the BOC location. Run the remaining 3 cables (for voice) to the other single gang box at the BOC location (see Diagram A below for further clarification).

**Notes:** Leave 10' of spare cable at both ends to allow for future terminations and label all cables at both ends.

**Pull String – Run a single pull string in all conduit runs at the BOC location**

**SECTION 2. BOC to Workstations, Printer and Future location:**

**Pre-view:**

A typical office will have a total of 9 cables run from the location of the BOC to other locations inside the branch office. They will be Category 5E (minimum), 4 pair, used for data, voice or video distribution. **Label all cables at both ends.**

Leave excess cable hanging out of the wall, **10' at BOC location and 1' at end location. Do not terminate cable unless required for inspection.** Use an appropriate wall plate to pass final electrical inspection. If termination is required to pass the final electrical inspection, all Category 5E (minimum) should be **punched down on Category 5E (minimum) keystone jacks using the 568b standard.** Please contact the Leasing Manager with this information to inform Branch Installation group.

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**Wire run to the BOA (101) area:** Total cable run for this area = 5-Two single gang boxes. Run five Category 5E (minimum), 4 pair, cables and label them (1), (2), (3), (4) and (5) at both ends. Cut the cable at the BOA's area leaving one-foot spare hanging out of wall. Leave 10' of spare cable hanging out of the wall at one of the double gang box locations at the BOC. No less than 10'. These cables are typically used for workstation data, telephone, printer, fax machine and scanner data connections back to the BOC cabinet area.

**If termination is required, terminate 3 cables with blue keystone jacks, 1 cable with white keystone jacks and 1 cable with grey Keystone jacks.**

**Wire run to FA (102A) area:** Total cable run for this area = 2-One Single Gang Box.

Run two Category 5E (minimum), 4 pair, cables and label them (6) and (7) at both ends. Cut the cable at the FA's area leaving one-foot spare hanging out of wall. Leave 10' of spare cable hanging out of the wall at one of the double gang box locations at the BOC. No less than 10'. These cables are typically used for workstation data and telephone connections back to the BOC cabinet area.

**If termination is required, terminate 1 cable with blue keystone jacks and 1 cable with white keystone jacks.**

**Wire run to Future Workstation/Conference (102B) area:** Total cable run for this area = 2, One Single Gang Box. Run two Category 5E (minimum), 4 pair, cables and label them (8) and (9) at both ends. Cut the cable at the Conference room area leaving one-foot spare hanging out of wall. Leave 10' of spare cable hanging out of the wall at one of the double gang box locations at the BOC. No less than 10'.

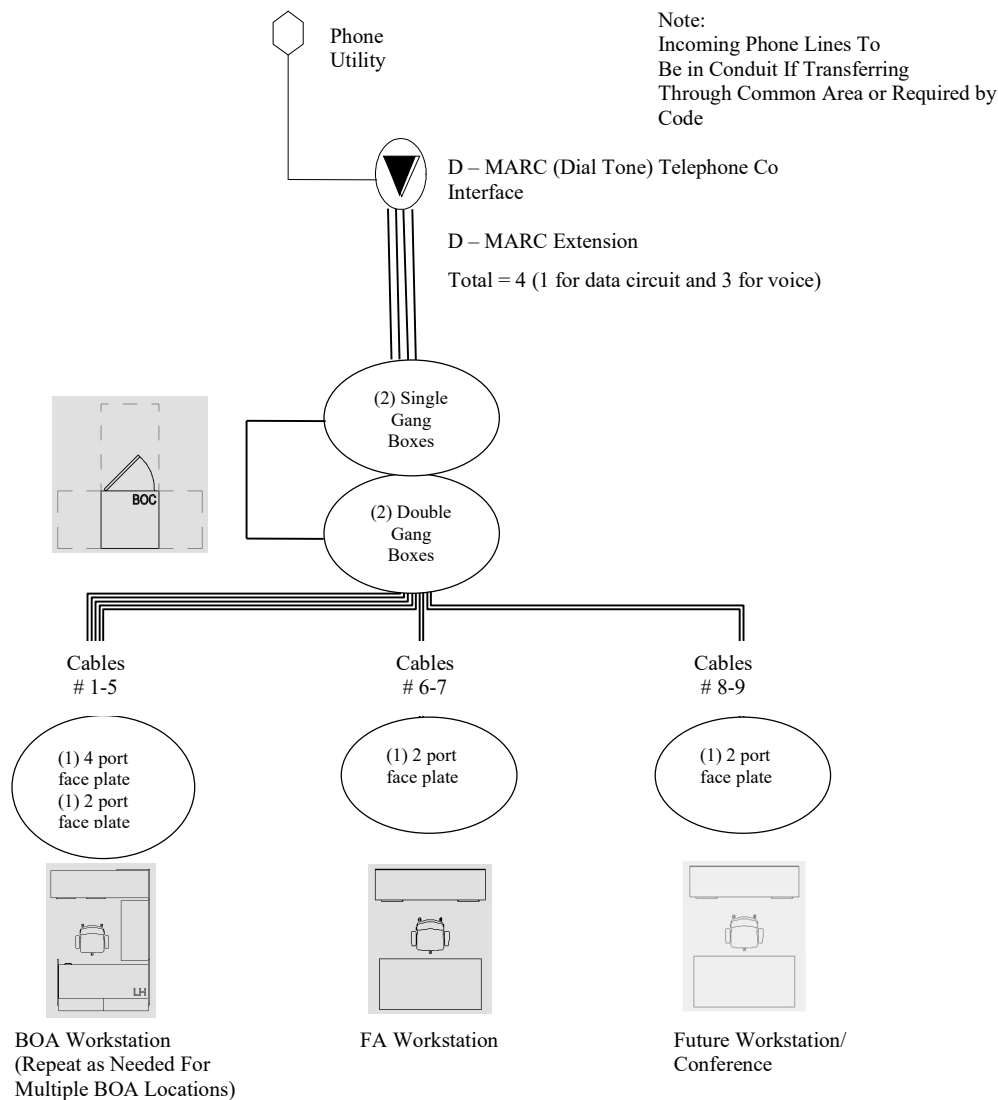
**If termination is required, terminate 1 cable with blue keystone jacks and 1 cable with white keystone jacks.**

**SUPPORT:**

All low voltage cabling shall be supported at 5' intervals using approved hangers, bridle rings, or J-hooks to comply with local code requirements.

**Low Voltage Diagram**

- The diagram that follows is to be used for reference only. Use the Floor Plan for pricing and specifications.
- Conduit required if necessary, for code compliance or installation through common areas.
- If Low Voltage cabling is installed outdoors and not in conduit, the cable must be rated for outdoor installation.



**Desk design varies, may not look the same as shown above.**

## Frequently Asked Questions:

1. **If this work is shown on an existing wall, do I still need to run conduit?** Conduit has to be installed from the single data boxes in 104 to the Dmarc location, but otherwise it only needs to be installed in a new wall. If the wall is existing, the contractor only needs to install the boxes with pull strings to the appropriate locations.
2. **Why do we need conduit in new walls?** Conduit is installed at new walls to facilitate feeding the pull string from above the ceiling into the box location. It is for convenience of pulling these wires and may be eliminated if absolutely necessary.
3. **Can plastic conduit be used instead of metal?** The conduit used must conform to the local building codes and can be either plastic or metal depending on the municipality.
4. **What if the phone lines and data lines come into the building at separate locations?** (1) pull string should be run from the Data source to the box labeled "Future Duplex Data Box" and (1) pull string should be run from the phone source to the box labeled "Active Duplex Phone Box." This information should be relayed to the M-CO technician (low voltage installer).
5. **Where do the pull strings go to?** If the ceiling is an open acoustical grid, the pull strings would run from the box through the wall and end coiled, approximately 3', in the ceiling for the future installer's use.
6. **What if there is a drywall ceiling, where do the pull strings go?** With a drywall ceiling, the pull string will run from the quad/duplex boxes to *each* low voltage location shown on plan with a ▲. Each pull string *must* be labeled with the room number of the box it is run to and the general contractor is responsible for installing the boxes and pull strings for all locations.
7. **Do I have to run the pull strings above the ceiling if there is a basement?** You may run the pull strings through the basement space if the LLD has given permission. This *must* be confirmed prior to installing the strings.
8. **Will the phone board be painted?** This will differ depending on the individual branch and municipality. First, check the finish schedule and see if the room the board is being installed in is called out to be painted, if so, the phone board should be painted as well. *However*, some municipalities will not allow painting the board since it may be required to be Fire Rated and the stamp indicating this must be exposed and not painted over.
9. **What is the ground wire and what is it grounded to?** The ground wire (usually green as shown above) is a loose wire run to the BOC location which will be used to "Ground" our computer equipment once it is installed. This wire runs from the BOC location to the nearest ground source, usually the electrical panel or some other grounded location, and must be installed in order for our BOC to be installed safely in the branch. In the event of an electrical surge, this wire will divert the electric into the ground thus protecting our equipment from damage.
10. **Can I run surface-mounted conduit on top of the phone board if the wall is concrete block or fire-rated?** No, please run conduit on either side of board so that board remains free for placement of future equipment. (see below photo as example)

## Diagram A: Low Voltage requirements at the BOC

### Special Notes:

- Always mount the backboard (minimum 2'-0" W x 3'-0" H FRT plywood) immediately above the low voltage boxes and dedicated ground outlet at 36" a.f.f. to bottom, at the BOC location
- **Conduit is installed inside wall or beside plywood. You must have room for equipment to be installed on plywood.**
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