TDC NET

TECHNICAL OPERATIONS MANUAL

Document ID: SOP-001
Title: Cable Fault Resolution Procedures
Category: Cable Fault
Equipment Types: Cisco cBR-8, Arris E6000
Applicable Fault Codes: 812.3, 813.1, 814.2
Last Updated: 2025-10-04

CABLE FAULT RESOLUTION - ERROR CODE 812.3

SAFETY FIRST:

1. Ensure proper PPE (hard hat, safety vest, gloves)
2. Check for electrical hazards before accessing equipment
3. Notify traffic control if working near roadways

DIAGNOSTIC STEPS:

1. Verify fault code 812.3 on Cisco cBR-8 router display
2. Check signal levels using spectrum analyzer
- Forward path: Should be -7 to +7 dBmV
- Return path: Should be 16 to 54 dBmV

3. Perform cable continuity test using TDR (Time Domain Reflectometer)
4. Identify fault location within 2-meter accuracy

REPAIR PROCEDURE:

1. Isolate affected cable segment
2. If underground cable:
- Contact utility marking service (mandatory)
- Use cable locator to trace exact path
- Excavate carefully using hand tools near cable

3. If aerial cable:

- Inspect for physical damage, animal interference
- Check guy wires and support structures

4. **Replace damaged cable section with approved splice kit**
5. **Test signal integrity before restoration**
6. **Document GPS coordinates of repair location**

VERIFICATION:

1. **Confirm error code 812.3 clears from system**
2. **Test downstream signal levels at customer premises**
3. **Verify no packet loss over 15-minute test period**
4. **Update network topology database**

ESTIMATED TIME: 4-8 hours depending on access complexity REQUIRED SKILLS: Cable splicing certification, TDR operation TOOLS REQUIRED: TDR, spectrum analyzer, splice kit, excavation tools

---