



Evaluating Conditions of Non-ADSS Lashed Fiber Cable in Transmission Line

PPE:

Standard T-Line PPE,
including:

- Hard Hat
- Safety Glasses
- Gloves
- FR clothing

Tools:

- Binoculars
- Camera

Guidance Document References:

[TD-1001M, "Electric Transmission Preventative Maintenance Manual"](#)

Level of Use:

- ☐ Information
- ☒ Reference
- ☐ Continuous

Purpose:

This job aid provides steps for evaluation of non-all dielectric self-supporting (non-ADSS) lashed fiber cable in transmission lines and consistent decision-making process.

The Qualified Company Representative (QCR) should use this job aid to evaluate the condition of non-ADSS lashed fiber cable, confirm proper application, select the appropriate condition level representing the deterioration level, and consistently assign the priority code.

Condition Codes:

Inspect the structure using the form to record issues. Determine the condition of each item. Consider all conditions to determine the appropriate Priority Code for any notification, if required.

- 5 = Heavy Damage with Safety Concerns
- 4 = Heavy Damage
- 3 = Moderate Damage
- 2 = Light Damage
- 1 = No Visible Damage

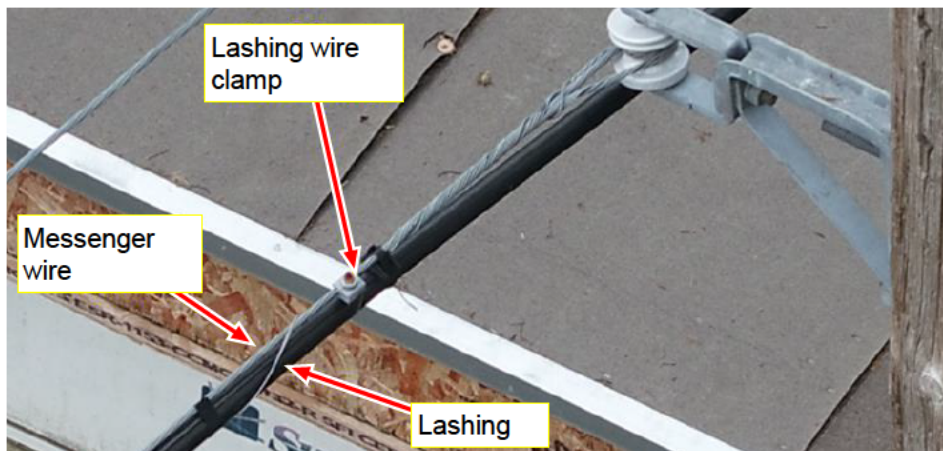
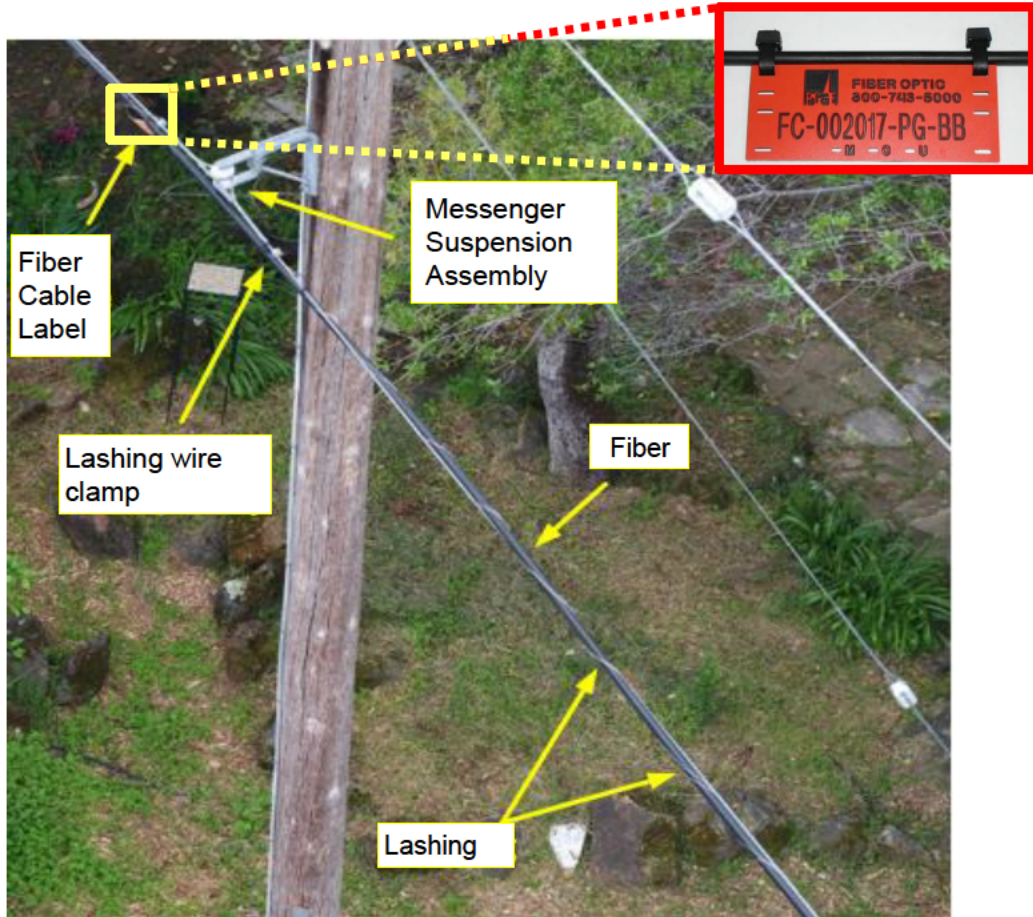
If the damage on the non-ADSS cable creates an imminent threat, the QCR must immediately notify the supervisor and the IT Emergency Network Operating Center (ENOC) at [REDACTED] (24x7).

Non-ADSS Lashed Fiber Cable Inspections

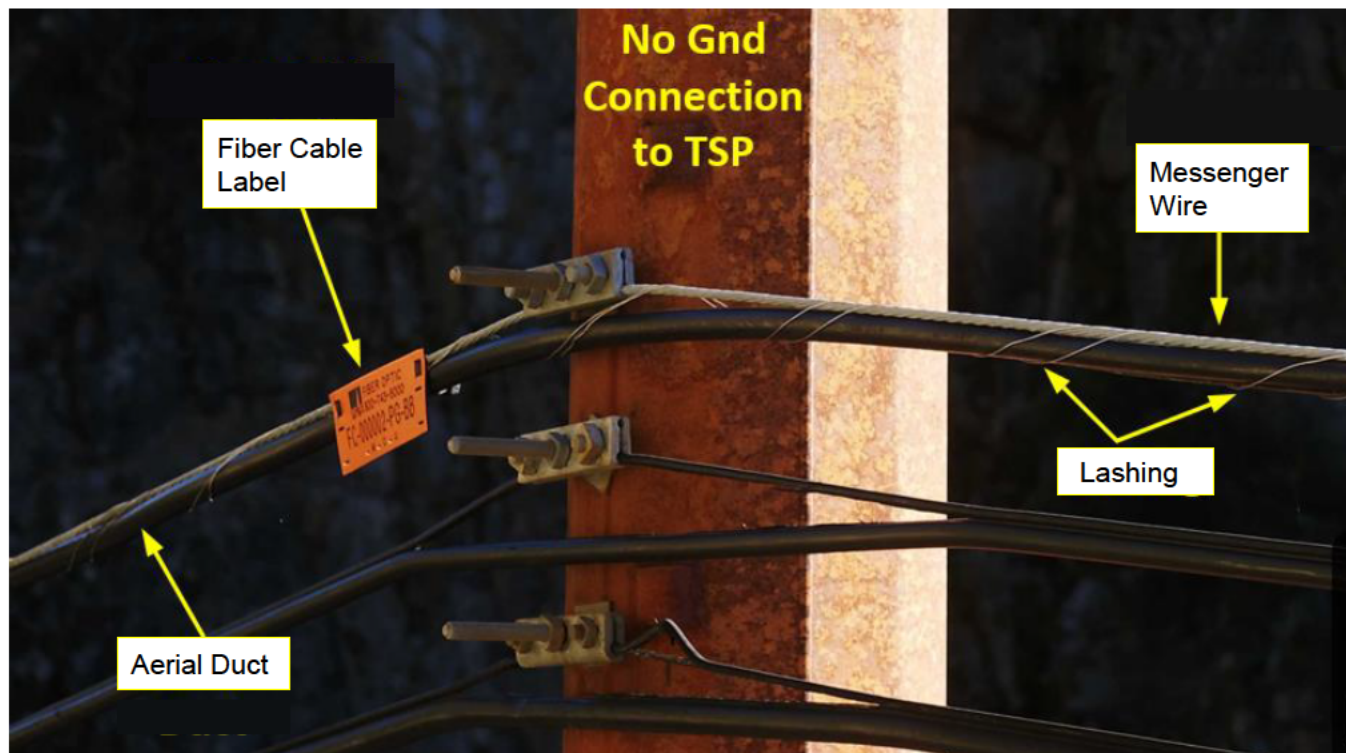
- On joint transmission/distribution poles, broken lashing/messenger wire may be at risk of flipping up into the electric conductors during a high-wind event. Fix any loose/broken lashing wire/messenger wire immediately.
- It is possible, the fiber cable might be abandoned in place – contact IT for confirmation. If this is the case, the section in question can be cut out. IT coordinates with the Electric department for the complete removal of the abandoned route.
- IT lashed copper cables are also installed in the “below-conductor” position, just like fiber cables. Fix any broken lashing/messenger wires immediately.
- Both IT fiber and copper cables are labeled with an orange Standard Cable label, as shown below. Fiber cables are identified by the leading prefix of “FC,” while copper cables are identified with the prefix of “CC.”
- The IT standard for labeling was implemented in 2004. Fiber and copper cables installed before 2004, may not be labeled.
- In accordance with California Public Utilities Commission (CPUC) General Order (G.O.) 95, PG&E fiber cables are to have a fiber label affixed to the cable at every wood pole, light duty steel pole, or tubular steel pole, when installed in the “below-conductor” position. Only one label is required at each structure; a label is not needed on each side of the structure. Below are examples of the two types of labels currently in use.



Examples of Correct Non-ADSS Lashed Fiber Cable Installation

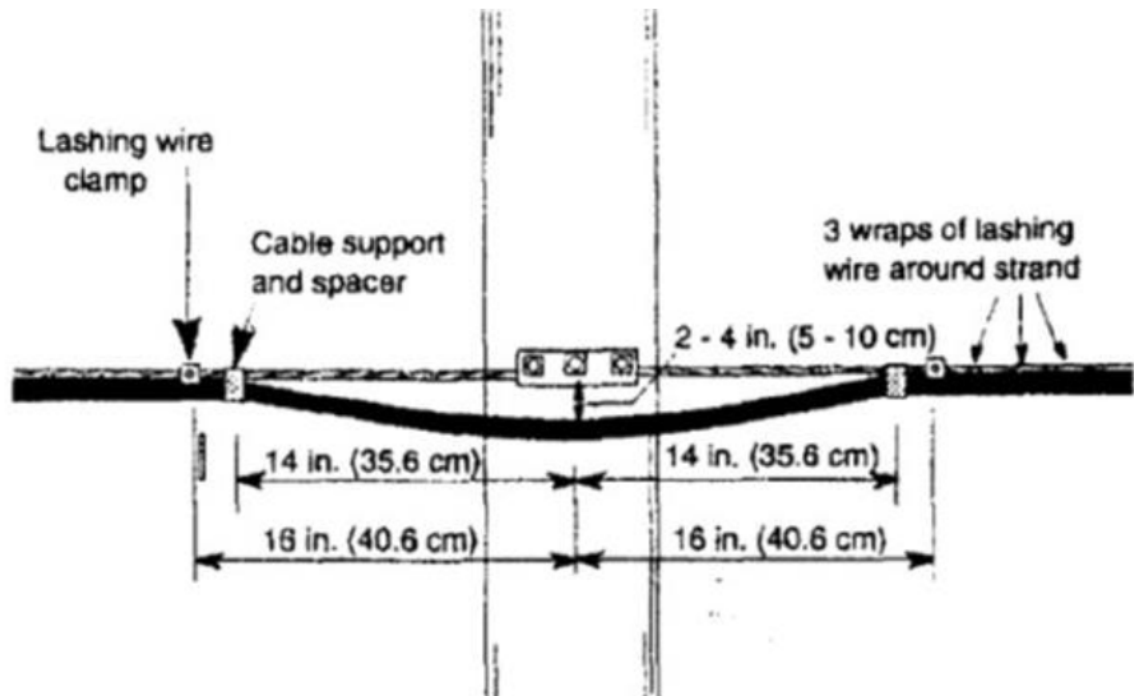


Examples of Correct Non-ADSS Lashed Fiber Cable Installation



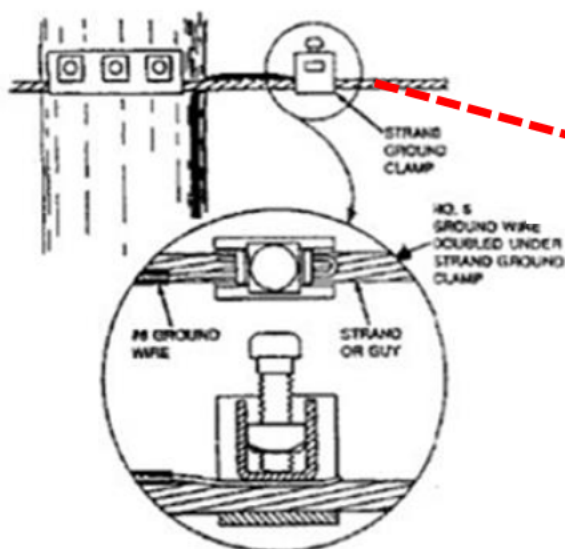
Non-Grounded Assembly

Aerial Cable Messenger Diagram



CPUC G.O. 95 Grounding Requirements

- Minimum G.O. 95 requirements state that the messenger wire is grounded at each end of the run, and a minimum of intermediate points spaced not exceeding 800 feet apart.



Maclean 438ALC Tap

Non-ADSS Lashed Fiber Cable Condition Levels and Impact

Condition 5

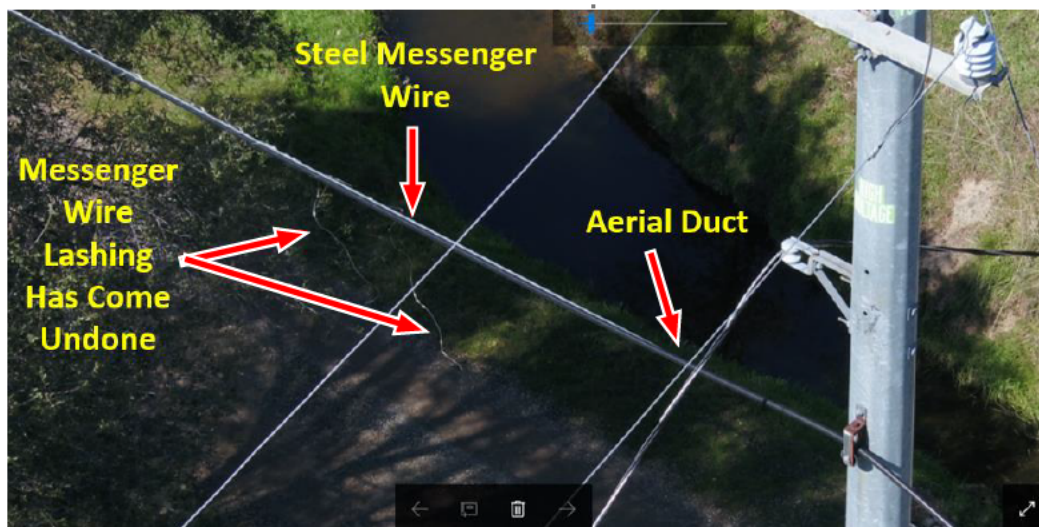
Broken Lashing Wire on Lashed Fiber/Aerial Duct.

- A crew will need to be dispatched to make safe, until the cable can be re-lashed.



Action:

1. Initiate SAP Notification, Priority Code A.
2. T-Line makes the situation safe by securing the broken lashing, so that it is no longer a threat to flip up into the conductors.
3. If cable removal is the only option to make safe, contact IT immediately, so that IT can notify the appropriate lines of business and 3rd party customers of the emergency outage.
 - Notify IT by calling the ENOC at [REDACTED].
 - Document the date, time, and the name of the person at the ENOC who took the call.
 - Capture this information in the comments field of the SAP Notification.
3. Take close-up photos of the condition found.



Non-ADSS Lashed Fiber Cable Condition Levels and Impact

Condition 5

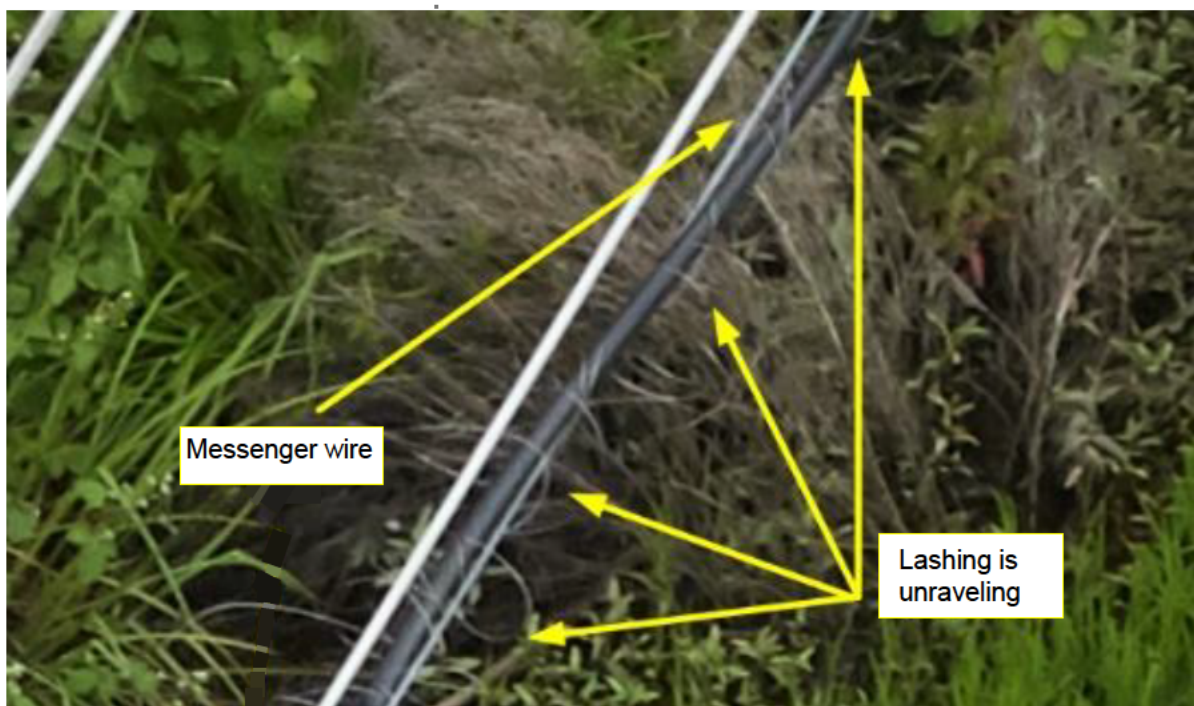
Broken Lashing Wire on Lashed Fiber/Aerial Duct (not in frame of image)

In the image below, the lashing has become extremely loose, to the point where it is unraveling. When the lashing has come this loose, that means that there is a break in the lashing somewhere nearby. The actual break may not be shown in the drone image, as it may be farther out into the span.

A crew will need to be dispatched to locate the break and make safe, till the cable can be re-lashed.

Action:

1. Initiate SAP Notification, Priority Code A.
2. T-Line makes the situation safe by securing the broken lashing, so that it is no longer a threat to flip up into the conductors.
3. If cable removal is the only option to make safe, contact IT immediately, so that IT can notify the appropriate lines of business and 3rd party customers of the emergency outage.
 - Notify IT by calling the ENOC at [REDACTED].
 - Document the date, time, and the name of the person at the ENOC who took the call.
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3. Take close-up photos of the condition found.



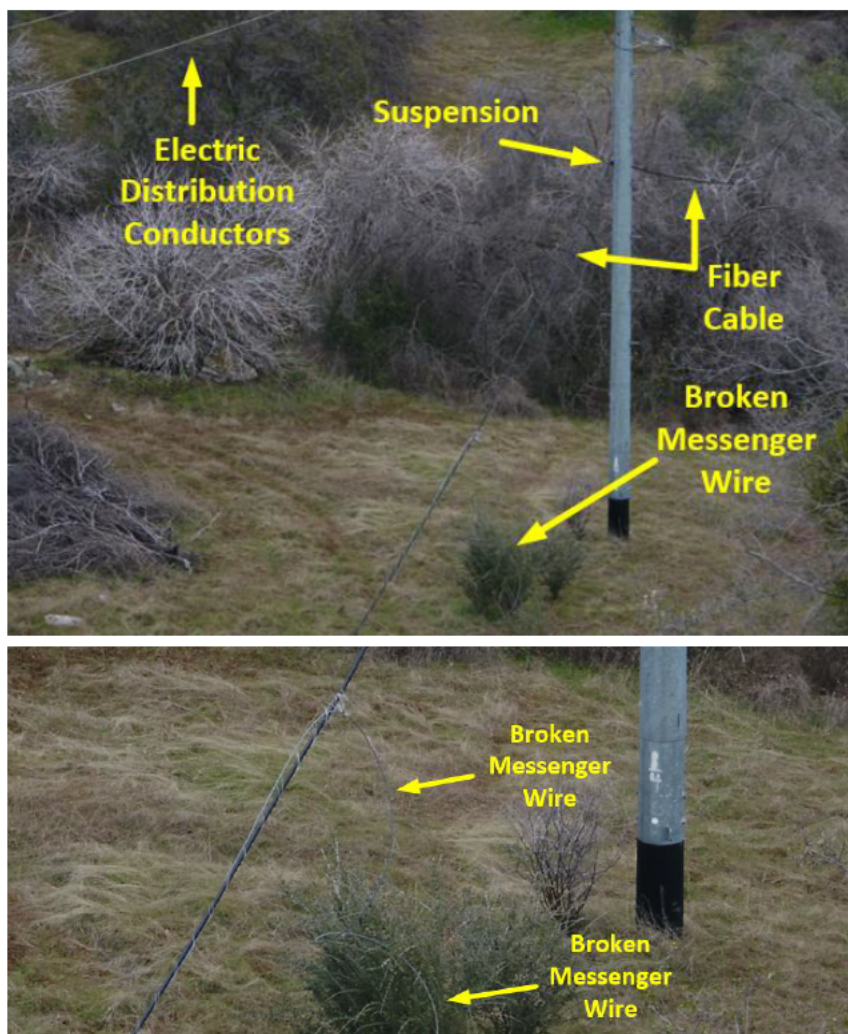
Non-ADSS Lashed Fiber Cable Condition Levels and Impact

Condition 5

Broken Messenger Wire on Lashed Fiber/Aerial Duct.

Action:

1. Initiate SAP Notification, Priority Code A.
2. T-Line makes the situation safe by securing the broken messenger, so that it is no longer a threat to flip up into the conductors.
3. If cable removal is the only option to make safe, contact IT immediately, so that IT can notify the appropriate lines of business and 3rd party customers of the emergency outage.
 - Notify IT by calling the ENOC at [REDACTED].
 - Document the date, time, and the name of the person at the ENOC who took the call.
 - Capture this information in the comments field of the SAP Notification.
4. Take close-up photos of the condition found.



Non-ADSS Lashed Fiber Cable Condition Levels and Impact

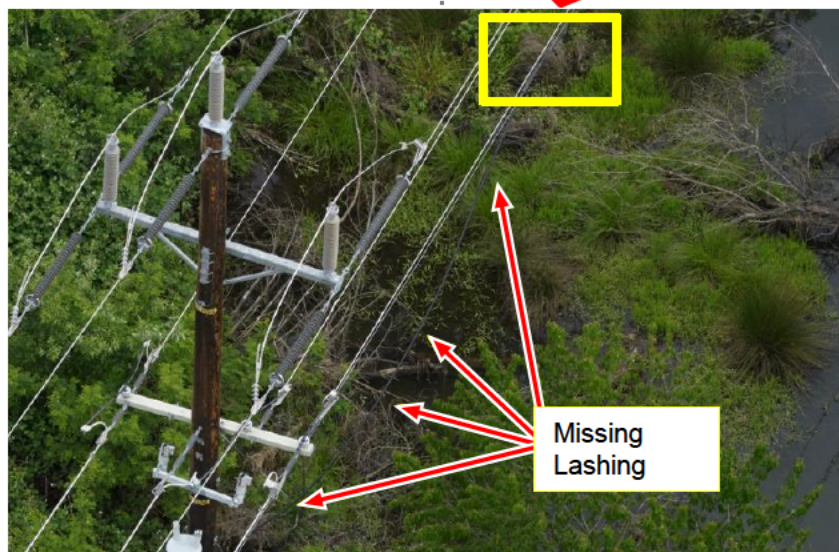
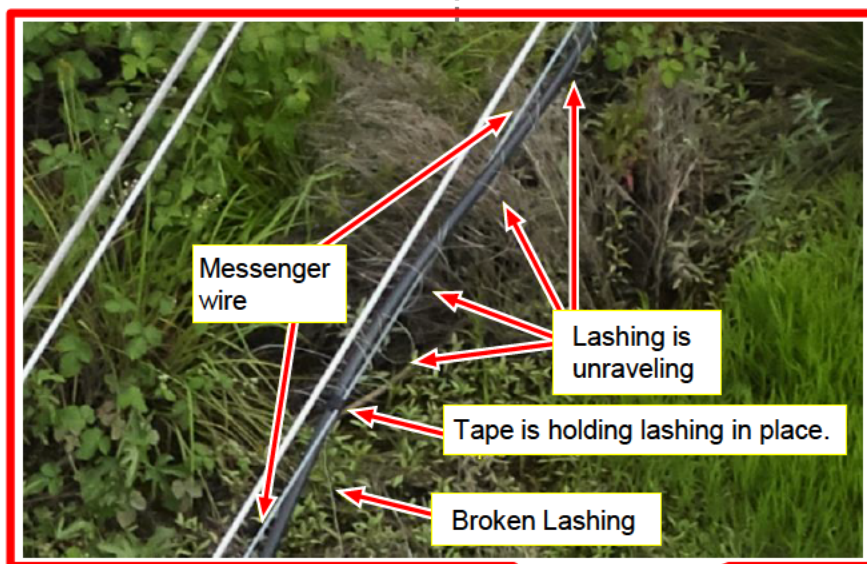
Condition 4

Broken Lashing Secured with Tape on Lashed Fiber/Aerial Duct.

In the image below, the lashing is broken. It appears that tape was applied to hold the lashing in place. The condition of that tape is unknown. Cable to be re-lashed.

Action:

1. Initiate SAP Notification, Priority Code E.
2. Fix no later than 3 months.
3. Electric crew to coordinate with IT for cable to be re-lashed.
4. Take close-up photos of the condition found.



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Non-ADSS Lashed Fiber Cable Condition Levels and Impact

Condition 4

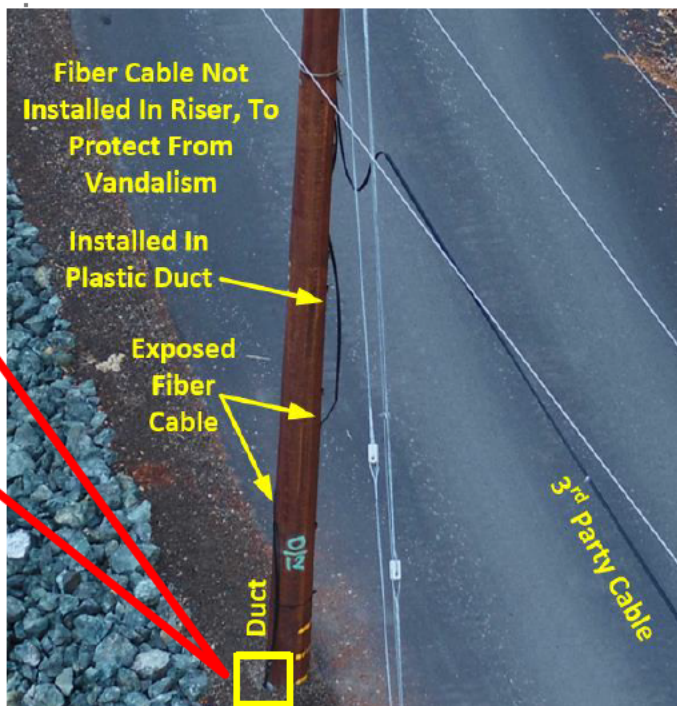
Missing Riser/Exposed Conduit Entrance

In this example, the fiber cable is installed through a plastic tubing, with a gap of the tubing missing in the middle. The tubing does not provide adequate protection from vandalism.

The fiber cable should be installed under a u-mold or inside a rigid steel conduit riser. In both cases, the underground conduit transition would be covered up, not exposed as shown below.

Action:

1. Initiate SAP Notification, Priority Code E.
2. Fix no later than 3 months.
3. Electric crew to install u-mold over fiber cable, to cover up cable and conduit.
4. Add down-lead clamps, as necessary, spaced out no more than 5 feet apart.
5. Take close-up photos of the condition found.



Non-ADSS Lashed Fiber Cable Condition Levels and Impact

Condition 4

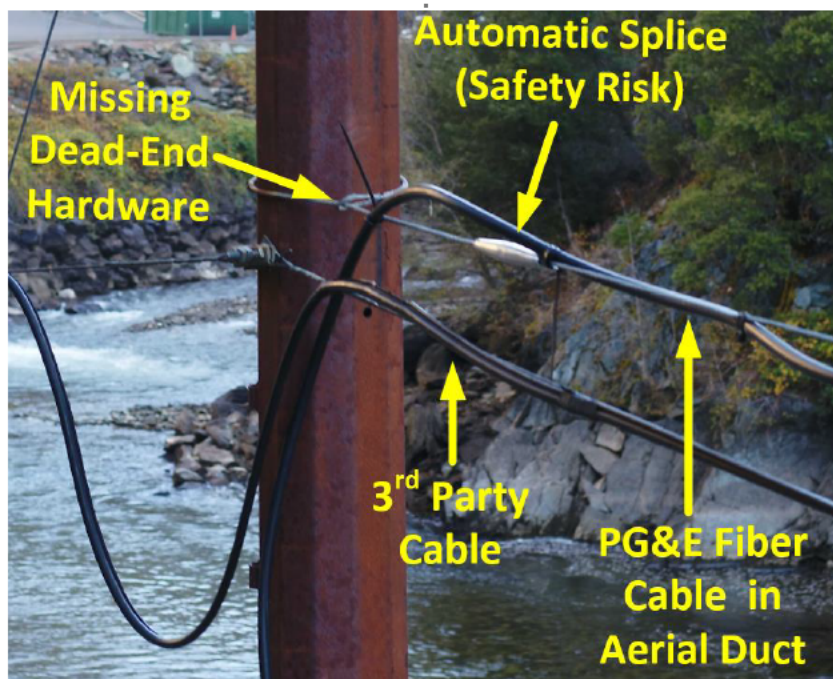
Automatic Splice (Safety Risk)

In the image below, the messenger should be attached to the TSP with the appropriate dead-end hardware for a messenger wire and not an automatic splice.

If the automatic splice is not sized correctly, the messenger wire could slip out, causing the messenger wire and cable to fall to the ground. This is a common problem with automatic splices used in this type of application.

Action:

1. Initiate SAP Notification, Priority Code E.
2. Fix no later than 3 months.
3. Electric crew to install temporary messenger dead-end, tied back to the structure.
4. Electric crew to coordinate with IT on permanent solution.
5. Take close-up photos of the condition found.



Non-ADSS Lashed Fiber Cable Condition Levels and Impact

Condition 4

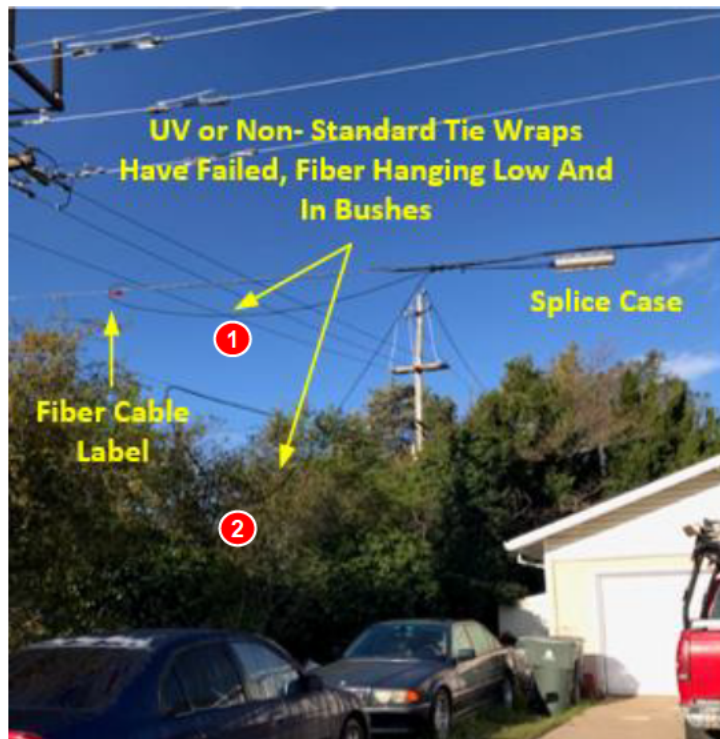
Missing Tie Wraps, Low Hanging Fiber.

In the image below, for both Scenarios 1 and 2, the fiber cables are hanging low due to the failed ty-wraps.

At this time, they do not present an immediate safety risk, but they need to be addressed before the condition worsens.

Action:

1. Initiate SAP Notification, choose Priority Code E.
2. Fix as follows:
 - Scenario 1: Not to exceed 12 months.
 - Scenario 2: Not to exceed 3 months.
3. If the situation needs to be escalated, T-Line can make the situation safe by securing the fiber cable, splice case, lashing, and/or messenger, so that it is no longer a safety threat.
4. If cable removal is the only option to make safe, contact IT immediately, so that IT can notify the appropriate lines of business and 3rd party customers of the emergency outage.
 - Notify IT by calling the ENOC at [REDACTED].
 - Document the date, time, and the name of the person at the ENOC who took the call.
 - Capture this information in the comments field of the SAP Notification.
5. Take close-up photos of the condition found.





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Condition 4

Loose Lashing on Lashed Fiber/Aerial Duct.

Loose Lashing (as long as it is intact and not broken) does NOT present an A-Tag condition.

This would be considered a E-Tag condition. Images of this condition are not available currently.

Action:

1. Initiate SAP Notification, Priority Code E.
2. Fix no later than 12 months.
3. Electric crew to coordinate with IT for cable to be re-lashed.
4. Take close-up photos of the condition found.

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Non-ADSS Lashed Fiber Cable Condition Levels and Impact

Condition 2

Missing Fiber Label

- In accordance with CPUC G.O. 95, the fiber cable is to have a label affixed to it at every structure location.
- Only one label is needed to be attached to the cable, on either side of the structure.
- The label must have "PG&E" and a phone number imprinted on it.
- Either of the two fiber labels shown below is acceptable.



Action:

1. Initiate SAP Notification, Priority Code F.



End of Instructions