

Use of Diminished Value Expense in Fiber Damage Claims

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Abstract

There have been many discussions and disputes on what expenses can be formally requested on utility damage claims. On fiber damage claims there is one expense that has been overlooked and now needs to be added to the list of current expenses requested when there is proven negligence on damage to a fiber cable. That expense is the value lost, due to the damage, which can not be recovered, more commonly referred to as diminished value.

Introduction

Should diminished value be used as a viable expense in utility damage claims? More specifically, should diminished value be used as a viable expense in fiber cable damage claims? To claim a loss of value to a damaged fiber cable, there would have to be proof that it is less valuable than before the damage. When a fiber cable is damaged and new splices have to be added, the performance or ability to transmit successfully through the fiber cable is reduced. With a reduction in transmit quality the value of the fiber cable to the utility is negatively affected. This loss in transmit quality of a damaged fiber cable, caused by a negligent third party, can be claimed as diminished value. The inclusion of diminished value to a fiber damage claim should be permissible.



Diminished Value

Diminished value is the reduction in value to your fiber facility as a result of property damage caused by the proven negligence of the damager. If your fiber facility is significantly damaged in a third party damage event, your diminished value is the amount of market value you have lost due to the damage and repair to your fiber facility; even if fully repaired, a damaged fiber facility will carry less value than one that was never damaged.

There are three types of diminished value:

Immediate diminished value — the difference in the resale value of a cable facility immediately before being damaged and immediately after being damaged

Inherent diminished value — Quality repairs have been made to the cable facility, but it is still worth less than its pre-accident value because it has a significant damage history

Repair-related diminished value — Additional reduction to the value of the cable facility due to poor-quality repairs and a history of damage

Third-party claims for Diminished Value

Although an insurer's liability is capped at the amount necessary to 'repair or replace' a damaged facility, there is one way a facility owner may be entitled to a diminished value claim: If someone else negligently damages the fiber facility and you make a damage claim on that person's insurance. Now it is a third-party claim and it's possible to get diminished value damages as a third party because you don't have a contract with that insurer. The ISO's diminished-value exclusion form applies only to first-party

physical-damage claims, not to third-party liability claims. Also, in tort claims, the measure of damage is generally calculated as the difference in value before and after the loss, sometimes making diminished value a viable claim. However, there is still a wide variation among state case law in pinpointing when a third-party claimant is entitled to diminished value.

Inherent Diminished Value on Fiber facility damage claims

A fiber-optic system is similar to the copper wire system that fiber-optics is replacing. The difference is that fiber-optics use light pulses to transmit information down fiber lines instead of using electronic pulses to transmit information down copper lines. Light pulses move easily down the fiber-optic line because of a principle known as total internal reflection. "This principle of total internal reflection states that when the angle of incidence exceeds a critical value, light cannot get out of the glass; instead, the light bounces back in. When this principle is applied to the construction of the fiber-optic strand, it is possible to transmit information down fiber lines in the form of light pulses. The Impact of Damage Repairs on a fiber cable can adversely affect the fiber's light transmitting performance. When repairs are made to a damaged fiber cable the integrity of the fiber cable's ability to transmit light pulses is affected. The overall fiber optic system or design has a calculated fiber loss factor in its design. By introducing new splices as a result of the repair, the fiber optic transmission system performance is diminished and the fiber loss factor is increased. If the loss factor increases beyond the original fiber loss factor design the fiber cable loses its capability to perform effectively. The dollar value of this repair loss can be represented by a Diminished Dollar Value.

Diminished Dollar Value

In order to bill for Diminished Value of a damaged fiber cable, the dollar value representing the percent diminished has to be determined. This dollar value can be determined by utilizing three factors; fiber dollar value, fiber length (or mileage factor), and a damage factor (or percent). The fiber dollar value can be the actual paid cost per foot or an average cost per foot, depending on the fiber count of the damaged fiber cable and available cost support documentation. The length of the affected fiber cable can be determined by the length between existing splices from where the damage occurred in the fiber cable designed route.



The damage factor is determined through inherent diminished value because the fiber is still worth less than its pre-accident value because it now has a significant damage history, even though quality repairs have been made to the respective fiber. A fair and reasonable charge of 2 percent, which represents the amount of inherent diminished value, is charged for every .1dB of loss caused by the new repair splices. In each Fusion Splice there is a .5 dB loss. In each Mechanical Splice there is a 1.5 dB loss. The Damage Factor percentage is calculated by the number of splices, times their representing dB Loss, then divided by .1 dB, then multiplied times the 2 percent charge.

Diminished Dollar Value Calculations

To calculate the Fiber Diminished Dollar Value, the following formula is used:
Fiber Dollar Value, times Fiber Length, times the Damage Factor percentage equals Fiber Diminished Dollar Value

The dB loss for the type of transmitter, the margins for aging of the fiber and aging of the transmitter and receiver components, or the incidental twisting and bending of the fiber cable, were not used in this calculation in order to establish a reasonable and fair Diminished Dollar Value.

Example:

2 Fusion splices made to repair damaged fiber cable

3050ft between splices

\$3.434 average cost per ft for a 432 count fiber

Calculations:

$2 \times .5 \text{ dB loss divided by } .1 \text{ dB} \times 2\% = 20\%$

$3050 \times \$3.434 = \$10,473.70 \times 20\% = \$2,094.74$

The Diminished Value is \$2,094.74

Conclusion

Diminished value is a viable expense in utility damage claims. If damage to a facility causes a loss in performance or function then it is less valuable. When new splices are added to repair a damaged fiber facility the performance or ability to transmit successfully through the fiber cable is reduced. The original fiber design is compromised. The damaged facility can not be made whole again. The result is a proven loss of value in the damaged fiber facility to the utility. This loss in value of a damaged fiber cable, caused by a negligent third party, can be claimed as diminished value. The inclusion of diminished value to a fiber damage claim has been proven.