

**AMERICAN ASSOCIATION OF INSURANCE SERVICES  
INLAND MARINE GUIDE  
RADIO AND TELEVISION TOWERS AND EQUIPMENT  
UNDERWRITING**

**COVERED PROPERTY**

The Inland Marine radio and television coverage form is designed to cover broadcasting towers and transmitting and receiving equipment. Coverage is also provided for recordings on tapes or disks and mobile equipment that is used away from the covered location.

**RISK SELECTION**

To underwrite radio and television towers and equipment risks, obtain the following information:

**General**

The following information should be obtained for radio and television broadcasting risks:

1. description of operations (e.g. cable operation, public television);
2. construction, occupancy, protection, and exposure features for each scheduled location;
3. schedule of values, including a breakdown of values by location and a breakdown of building or tower values;
4. description of protective devices or equipment that are intended for the protection of studio equipment ( e.g. automatic fire suppression system, alarms, heat detectors).

**Towers**

The value and height of each tower should be obtained.

If a tower is over 300 feet in height or \$250,000 in value, the following additional information should be obtained:

1. Who is the tower manufacturer?
2. What are the designated wind and ice loads?

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3. What is the age of the tower?
4. Is the tower being used for the purpose for which it was designed?
5. What are the potential exposures to flood and earthquake?
6. Is there a maintenance program in effect?
7. Is the area fenced?
8. Is lightning protection provided?

## **KEY HAZARDS**

### **Studio and Transmission Equipment**

#### **Fire**

Although the fire hazard rating for radio and television stations is low, it is important to understand that the potential for a large loss may exist. A catastrophic loss may be possible because of a high concentration of values and because electronic equipment is easily damaged by smoke, heat, and water.

The following additional exposures are associated with some locations or operations and controls should be addressed accordingly:

1. Due to the large tracts of land needed for towers, locations may be in unprotected locations or areas of poor accessibility.
2. Fuel may be stored for emergency power generators.
3. If a station produces programs, a large concentration of combustible theatrical property may be present. Also the painting of sets and stages may be involved.

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## **Theft**

Tapes and small equipment are considered target items for theft. Tape libraries and equipment storage rooms should be protected by restricting access to these areas. Strict inventory control should be maintained.

## **Collapse of a Tower**

Studio equipment can be located miles from the tower. However, the transmitter building is often located nearby. If the building is close to the tower, a tower collapse could damage the building and the transmitting equipment.

## **Towers**

A tower is usually the key element in any radio or television risk because it is a very difficult item to repair or replace. Tower losses are rarely small and when combined with loss of income they can be catastrophic.

The following are the key hazards that should be evaluated for towers:

### **Wind**

The greatest cause of tower losses is from collapse, resulting from the stresses (load) on the tower by wind.

**Design and Construction** -- The most important factor in preventing a wind induced collapse is designing and constructing a tower to withstand expected local wind conditions, including severe weather conditions. To determine a tower's suitability for local wind conditions, the tower's designated wind load, as established by the Electronic Industries Association (EIA), should be obtained.

The designated wind load of a tower should be equal to or greater than the expected wind load for the location.

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**Hurricanes and Tornadoes** -- If a tower is in a hurricane prone area, resistance to hurricane force winds should be built into the tower design. However, it is impractical to design a tower that can withstand the force of a tornado. The narrow path of a tornado is unpredictable and the associated winds are extremely intense. Hurricanes cover a wide area and they do not generate the same level of intensity as a tornado. Detailed tower information should be obtained for risks located within:

1. one mile of the Atlantic Ocean or Gulf of Mexico; or
2. an area designated by the EIA as a Zone C.

**Modifications and Alterations** -- Modification or alterations to a tower can reduce the ability of the structure to resist the wind loads that it was originally built to withstand. If a tower application states that a tower has been modified or altered, a tower engineering consultant should verify that the tower retains its original structural integrity.

## **Lightning**

Towers should be grounded and properly equipped with lightning arresters and surge suppressor.

## **Icing**

Towers located in areas of known icing problems should be designed for the extra load caused by the ice. De-icing equipment is recommended but should not be required. De-icing equipment is placed only on the antennas, not on the tower itself. Currently it is not feasible for an entire tower to have de-icing equipment. De-icing an entire tower requires too much power and it makes the tower difficult to maintain.

## **Collision**

A tower should have suitable lighting and markings to warn approaching aircraft. Lighting and markings should be in accordance with Federal Aviation Administration requirements.

Guy anchors should not be exposed to heavily traveled roadways. Anchors should be protected from vehicle collision.

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## **Fire**

The site around a tower should be properly maintained by clearing away all plant or tree growth. Broadcast towers can be damaged or destroyed by the spread of grass or forest fire.

## **Mobile Equipment**

The loss potential to mobile equipment is greatest when the equipment is in a mobile broadcasting vehicle. If values exceed \$100,000, the following over-the-road exposures should be evaluated:

### **Fire**

The presence of combustible materials (e.g. carpeting, plastic containers) can increase the potential for a total fire loss. Vehicles should be equipped with hand-held fire extinguisher.

### **Collision and Overturn**

Collision and overturn are serious hazards for equipment in vehicles. The reporting of news events may require travel at excessive speeds or in congested areas. The larger the radius of operation, the greater the exposure there is to collision and overturn.

### **Hazardous Locales**

Mobile equipment is frequently sent to the scene of disasters (e.g. riots, floods). As a result, the use of a higher deductible for mobile equipment should be considered if there is a history of transit or remote location losses.

### **Theft**

Tapes, cameras, and video recorders in vehicles can be targets for theft. The potential for theft can be reduced by:

1. parking vehicles in enclosed and well lighted lots;
2. equipping vehicles with theft alarms; and
3. not leaving vehicles unattended while at remote locations.

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**ENDORSEMENTS**

The following endorsements can modify the radio and television tower and equipment coverage form.

**Loss of Income**

Coverage for loss of income can be added by endorsement. When adding loss of income coverage the following elements of a contingency plan should be evaluated:

1. Does the insured have emergency access to other studio facilities?
2. Does the broadcaster have a network hookup or tie-in? A hookup may enable the insured to quickly resume normal operations.
3. Does the studio have mobile broadcasting equipment to facilitate continued broadcasting operations?
4. Is there an agreement to use the equipment of another broadcaster in the event of a loss? These agreements are often reciprocal and should be in writing. Additionally:
  - a. equipment should be compatible with operational needs; and
  - b. the arrangement should be reviewed periodically to keep the information on the equipment current.
5. Is data collected on critical equipment; if so, is it periodically updated? Collection of this information can speed up the ordering of replacement items.

**Cable Lines**

If coverage for cable lines is provided the following information should be obtained:

1. The value and distance of above ground cable lines;
2. The value and distance of below ground cable lines.

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Cable lines are used to connect a cable system to individual cable subscribers. The lines can be hung along existing telephone poles or they can be buried in the ground. Control of cable line hazards can be addressed through the use of separate deductibles and adequate pricing.

## **Above Ground Lines**

Localized damage to above ground cable lines can be caused by damage to one or two telephone poles. Localized damage is usually the result of a building fire adjacent to a pole, vehicle collision, or a lightning strike. Widespread or catastrophic damage to above ground lines is usually caused by climatic events (i.e. snow, sleet/ice, wind). These events can result in damage to large sections of cable or to several locations that are part of a cable system.

## **Underground Lines**

Localized damage to underground lines is usually caused by accidental digging, excavating, or drilling by contractors. Catastrophic damage can be caused by an earthquake.

## **LOSS CONTROL**

The following is a list of possible questions that can be addressed during a loss control survey.

This list is NOT intended to represent a comprehensive and exhaustive treatment of loss control issues that relate to radio and television towers and equipment risks. UNDERWRITERS SHOULD CONSIDER additional questions that address concerns about specific types of risks.

### **Loss Control Survey -- Equipment**

Construction, occupancy, protection, and exposure issues should be described and addressed when a survey is requested for a location that contains broadcasting equipment.

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**Loss Control Survey -- Towers**

The following are loss control issues that should be described and addressed when a survey is requested for a broadcast tower risk:

1. Is the tower designed, manufactured, and erected by qualified firms? A qualified firm is a licensed company, actively involved in the design, manufacture, or erection of towers.
2. Based on Electronics Industries Association (EIA) designated wind zones, are towers designed in accordance with the requirements of the EIA or the American National Standards Institute (ANSI)? Did the original design take into account potential wind and ice combinations?

A review should be made of a copy of the original construction specifications or other verifiable evidence.

3. Is the tower being used for the purpose for which it was designed? If a tower was altered or modified, has a tower consultant verified that the tower retains its original structural integrity?
4. Are there any potentially severe exposures from adjacent buildings, roadways, or other towers?
5. Is there a preventive maintenance program for the tower? Including:
  - a. checks for corrosion and rust;
  - b. checks for loose connections, mechanical defects, and condition of all foundations (tower base and guy line);
  - c. tower security;
  - d. painting within the past five years.



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6. If the broadcaster does not perform maintenance, is a tower maintenance contract in force with a licensed professional contractor? See 5. a.-d. above for items that should be included in the maintenance program.
7. Is fencing appropriate for the exposures?
8. Has adequate lightning protection been installed?
9. Does tower lighting and markings meet FCC standards?

**Loss Control Survey -- Loss of Income**

The following are loss control issues that should be described and addressed when a survey includes loss of income:

1. Access to other studio facilities?
2. Network hookup or tie-in?
3. Mobile broadcasting equipment to facilitate continued broadcasting operations?
4. Agreement to use the equipment of other broadcasters in the event of a loss?
5. Is data collected on critical equipment?