

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT TECHNICAL POLICY

POLICY NO.: Technical Policy, TECH-029

EFFECTIVE DATE: December 30, 2010

POLICY NAME: Electrical facilities that are considered “critical facilities”

PURPOSE: To clarify Chapter 16.26.055 of the Ordinance to identify which private electrical facilities should be considered “critical facilities” for the purposes of designing the facility to remain operational during the 500-year flood, as well as to establish which components of these facilities are required to be elevated to this higher standard in order to be compliant.

BACKGROUND: The Board of Directors for the Regional Flood Control District recently adopted revisions to the Floodplain Ordinance including adding a provision that regulates “critical facilities” to a higher standard. This action was taken in order to increase the reliability of certain basic services during times of extreme flooding, reduce risk to emergency responders, and reduce potential hazards associated with hazardous materials contaminating floodwaters or damaging property and improvements downstream. In addition to the actual floodplain management benefits that will be achieved through the implementation of this provision, the provision will assist in improving the Districts rating through the FEMA Community Rating System which will assist the residents of Pima County, generally, through greater rebates on the purchase of flood insurance.

During the outreach phase of the Ordinance revision process, Tucson Electric Power (TEP) indicated that they were concerned regarding the broadness of the definition of the term “critical facility” and how it might be applied to their infrastructure. Understanding the concern, the District and TEP agreed that it would be mutually beneficial to define which TEP facilities would be subject to this higher standard.

POLICY: Section 16.26.055.A.4 of the Ordinance establishes that public and private utility facilities, such as, but not limited to power, water and wastewater treatment, and communications, that are vital to maintaining and restoring normal services to flooded areas, before, during, and after a flood, should be considered “critical facilities”. This provision can be interpreted very broadly to include every component of a utility. This is not the Districts intent. The District is interested in identifying those facilities that would cause significant disruption of service, should they be impacted by flooding. The following categories of facilities fall are considered critical and shall be regulated to the higher standard:

- 1) Those facilities that are used to restore the electrical system during a system blackout (i.e. Blackstart facilities)
- 2) Those facilities that are sole providers of electricity to a particular area, and whose load cannot be transferred to other facilities within the system.
- 3) Those facilities that are necessary to ensure overall system reliability and whose disruption could cause a cascading effect of blackouts.

Although the remaining facilities are not considered critical, including transmission tower structures, the District *recommends* consideration of the 500-flood when design facility protection.

When elevation of a facility to the 500-year water surface is required, the Ordinance language primarily discusses elevation of the lowest floor of structures in order to ensure that interior of the structure remains dry. However, the relevant compliance points for electrical facilities are not so straightforward. There are portions of certain electrical utility facilities that can be inundated while maintaining consistent and reliable service. The following components shall be considered the compliance points for elevation purposes, when proposed in a Special Flood Hazard Area.:

1. FLOOR OF CONTROL SHELTER
2. BASE OF STATION SERVICE TRANSFORMER
3. BASE OF BREAKER CONTROL CABINET
4. BASE OF TRANSFORMER CONTROL CABINET

APPROVED BY:

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12/31/18

Date

Original Policy Approved:
Date(s) Revised: