

## Technical Specification 031.01

### Surge Protection

#### 1.0 General

- a) This specification details the surge protection system to be installed on Brunswick County electrical services and sewer pump station control panels to protect the enclosures from transient voltages that may damage or disable electrical equipment.

#### 2.0 Reference Standards

- a) NEC – National Electrical Code
- b) OSHA – Occupational Safety and Health Administration
- c) ANSI – American National Standards Institute
- d) IEEE – Institute of Electrical and Electronics Engineers  
IEEE C62.41: IEEE Recommended Practice for Surge Voltages in Low Voltage AC Power Circuits
- e) NEMA – National Electric Manufacturers Association  
NEMA ICS 1: Industrial Control and Systems General Requirements
- f) Brunswick County Pump Station Standard Details
- g) Brunswick County Technical Specification TS 028.01: General Electrical Information
- h) Brunswick County Technical Specification TS 029.01: Electrical Services
- i) Brunswick County Technical Specification TS 030.01: Grounding and Bonding

#### 3.0 Acceptable Manufacturers

- a) Square D company
- b) General Electric
- c) Siemens
- d) or approved equal

#### 4.0 Submittals

- a) The electrical contractor shall submit shop drawings and other submittals to the Engineer for review and approval prior to beginning work.

#### 5.0 Installation

- a) Electrical services for County buildings and projects other than sewer pump stations – the electrical contractor shall install the transient voltage surge arrestor shown on the approved plans or in the Contract Documents.
- b) County sewer pump station control panels:
  - 1) 277 / 480 VAC, 3- phase panels - install a Square D surge arrestor, 600 VAC, 3 - phase, with LED indicator, part number SDSA3650, per County pump station standard details.

- 2) Other than 277/ 480 VAC pump stations – contact Brunswick County Public Utilities for approved transient voltage surge arrestor to use.

## **6.0 Payment**

- a) No separate payment will be made for surge protection equipment. All costs incurred by the electrical contractor for this work should be included in the unit price or lump sum price for the Electric Service, or to the item of work to which it pertains.