

December 2012, rev 00

27 5313 – Clock Systems

PART 1. GENERAL

1.01 Summary

A. Section Includes:

1. Discussion of Owner's existing campus-wide Master clock system.
2. Secondary indicating clocks.

B. Description:

1. The clock system continually synchronizes clocks throughout the facility.
2. Time system is a synchronized master-satellite time system.
3. Clocks are synchronized to within 10 milliseconds 6 times per day; the system has an internal oscillator that maintains plus or minus one second per day between synchronizations so that clock accuracy shall not exceed plus or minus 0.2 seconds.
4. The system has an internal clock so that failure of the GPS signal shall not cause the clocks to fail in indicating time.
5. The system incorporates fail-safe design so that failure of any component shall not cause failure of the system. Upon restoration of power or repair of failed component the system resumes normal operation without the need to reset the system or any component thereof.
6. Clock locations shall be as indicated.

C. NIST: The National Institute of Science and Technology

D. UTC: Universal Time Coordinated. The precisely measured time at zero degrees longitude; a worldwide standard for time synchronization.

1.02 Performance Requirements

- A. Perform an area survey to ensure signal reception and connectivity from the master system to the area where installation is being considered.

1.03 Submittals

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes (including available colors) for each product indicated and describe features and operating sequences, both automatic and manual, for the following:

1. Indicating clocks.

2. Time clocks

- B. Operating License: Submit evidence of application for additional operating licenses as may be required prior to installing the equipment. Furnish the license or, if the license has not been received, a copy of the application for the license to the Owner prior to operating equipment. When license is received, deliver original license to Owner.
- C. Manufacturer's Instructions: Submit complete installation, set-up, and maintenance instructions.

1.04 Quality Assurance

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

PART 2. PRODUCTS

2.01 Clocks

- A. Manufacturer:
 - 1. Primex Wireless (<http://www.primexwireless.com>)
- B. Product: Provide Primex Wireless; Traditional Series Clocks #14330 (2-sided clock), #14306 (Small clock), and #14339 (Large clock).
 - 1. Operation: Electric, with auto-adjust for Daylight Savings Time.
 - 2. Construction: High impact polycarbonate frame and lens.
 - 3. Mounting: Wall, as indicated in drawings.
 - 4. Frame color: Black
- C. Selection of other styles and models of the Primex series shall be submitted in writing to the Capital Architecture Planning and Safety (CAPS) office.

2.02 Time Clocks

- A. Commeg Systems, Inc. (<http://www.commeg.com>)
- B. Product: Provide Commeg Systems, Inc.; TimePro Series Maximus Biometric Clock with attached printer to coordinate with University system.

- C. Selection of other styles and models of the Commeg Systems series shall be submitted in writing to the Capital Architecture Planning and Safety (CAPS) office.

PART 3. EXECUTION

3.01 Installation

- A. Install batteries as necessary.
- B. Set clock in accordance with manufacturer's instructions.
- C. Observe clock until valid signals are received and clock adjusts to correct time.
- D. Install the clock on the wall in the indicated location, hanging method and suitable fasteners as approved by the clock manufacturer.

3.02 Field Quality Control

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installation, including connections.
- B. Perform tests and inspections.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

3.03 Adjusting

- A. Program system according to Owner's requirements. Set system so signal devices operate on Owner-required schedules and are activated for durations selected by Owner. Program equipment-control output circuits to suit Owner's operating schedule for equipment controlled.

3.04 Demonstration

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain clock-and-program-control system components.

End of Division 27 5313



This section of the NIU Design and Construction Standards establishes minimum requirements only. It should not be used as a complete specification.