

City of Mt. Pleasant Bid Specifications

Island Park Remote Lightning Control System

BID DATE: August 26, 2014

General Bid Description

Provide complete remote lighting control solution for Island Park encompassing the following:

- A. Three (3) softball fields
- B. One (1) tennis/basketball court complex
- C. *Provide optional Bid alternates to include:*
 1. Complete remote lighting control system for two (2) park pavilions at Island Park
 2. Restroom door locking system for two restroom facilities at Island Park encompassing total of four (4) doors.
 3. Switching Cabinets to provide Off-On-Auto manual switching
 4. Electrical system upgrade to include needed contactors w/contactor cabinet(s)

All system hardware, software, and remote connectivity to complete the project must be included. A detailed schedule of monthly use/maintenance fees/costs shall be included in the bid document.

A. Location, Manufactures Standard and Submittals

1. Site Address

- I. 331 N. Main Street, Mt. Pleasant, MI

2. Acceptable Manufactures Standard

- I. The lighting control system shall be UL Listed under UL Industrial Control Equipment.
- II. All lighting control equipment shall be in compliance with FCC Emission Standards specified in Part 15 Subpart J for Class A applications. Each element of the lighting control system is subject to FCC rules and will comply with the rules prior to delivery.

3. Submittals

Submittal documentation shall be furnished by the manufacturer for approval by the owner and must be approved in writing prior to shipment of any equipment from the manufacturer. The submittal shall consist of:

- I. Bill of Materials - An itemized list of materials.
- II. Shop Drawings - Dimensional drawings and product data sheets for equipment provided.
- III. Typical Wiring Diagrams - Typical wiring diagrams showing component connections.
- IV. Control System Summary – Shows switching schedule and circuits that are grouped together.
- V. Site Survey Information – Installing contractor must provide detailed survey for each control unit location.

B. Remote Equipment Control Unit Specifications (RECU)

1. Use wireless technology avoiding ongoing and installation costs of utilizing telephone lines at remote sites and utilize dedicated wireless communication infrastructure avoiding costs associated with installing and maintaining a private wireless infrastructure.
2. Include main power switch for servicing convenience and safety with optional manual OFF-ON-AUTO switching available.
3. Include adequate number zones of control for this project; with separate and individually controlled zones.

4. Zone capabilities - Each controller must be able to control a minimum of six (6) available zones. A zone is a collection of circuits that are controlled together.
5. Individual zone control - Each zone shall be individually controlled; it shall be the responsibility of the lighting control manufacturer to provide a sufficient number of controllers at each location to fulfill the operational requirements as specified for this project.
6. Utilize dry-contact type outputs for switching the control voltage of load relays, locks or gates.
7. Have two outputs per zone for providing delay off capability when safety and egress lighting is required of any zone.
8. Operate all types of contactors, electrically held, mechanically held latching and unlatching; all combined within the same RECU if required.
9. Allow for user settable overrides on an independent basis for each zone.
10. Have an Off-Auto-On switch per zone.
11. Have warn-off capability on a per zone basis for timed use operation and safety. A warning strobe shall indicate end of use prior to end and is adjustable by the user, including a sequencing option for continued use.
12. Be capable of 'direct' control via a cell phone 'texting' commands or WEB access, 24hrs per day/7 days per week without contacting manufacturer.
13. Provide override control via an LCD screen user interface menu at the RECU's, phone, or computer; none of which shall be mutually exclusive of the other (e.g., the user may set an override via telephone, then cancel later at the LCD display and user interface at the RECU's) ; all available 24hrs per day/7 days per week, without contacting manufacturer.
14. Be battery backed-up, with such data remaining in memory for a period of not less than 5 years in the case of a power outage.
15. Automatically adjust for changes in Daylight Saving and sunset and sunrise times, on a stand-alone basis not reliant on the WEB or the manufacturer for time updates.
16. Field replaceable electronic assemblies - All electronic assemblies are to be mounted on panels to allow for easy field maintenance.
17. Future enhancements - As new technologies are developed, manufacturer may incorporate new features and capabilities to the controller. These enhancements to the controller shall be transparent to the end user and will be provided as part of the service and warranty contract.

C. Web Access shall:

1. Provide scheduling, posting and PIN maintenance via the internet and available via any standard web browser.
2. Maintain a connection to the Internet, with the cost of such connection borne by the owner.
3. Have modules for scheduling facility zones (i.e. parks, fields, courts, restrooms etc.), remote control unit definitions, site definitions and users groups, etc.
4. Provide user passcodes and security levels for functions within the control software and for functions within the remote control unit(s).
5. Have capability to set, change and/or cancel scheduled overrides.
6. Be able to use any smartphone or cellular texting to make schedules that may be either one-time date specific or recurring, 24hrs per day/7 days per week.
7. Provide means to adjust current or future schedules affecting schedules at all parks and playing surfaces with virtually a single entry.
8. Be able to schedule the switching and control of virtually any electronic and electrical equipment as a zone.
9. Provide means to make schedules as a one-time date specific, a repeat of a one-time date specific, or recurring.
10. Automatically adjust to daylight saving time adjust for sunrise and sunset time changes.

11. Track schedules made via the WEB, log use and switching cycles per zone and have data available for maintenance, re-lamping and various management reports including, light usage reports (by customer or by facility), hour meter reports, lighting schedules.

D. Warranty:

Manufacturer shall provide a written warranty agreeing to replace any portion of the lighting control equipment that fails due to defect in materials or workmanship. Labor for repairs shall be covered by the manufacturer. Manufacturer must supply warranty contact information in submittals.

E. Installation:

Contractor-Responsibilities

Unless otherwise agreed; successful bidder shall coordinate all work with City's electrician. Successful bidder shall design the electrical system to meet the circuit wiring requirements shown on the Control System Summary / switching schedule provided by the manufacturer. The manufacturer shall supply detailed installation instructions for installation of the control system to the City's electrician.