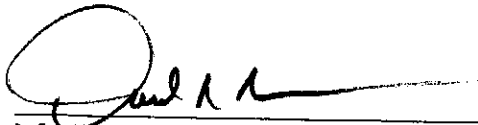
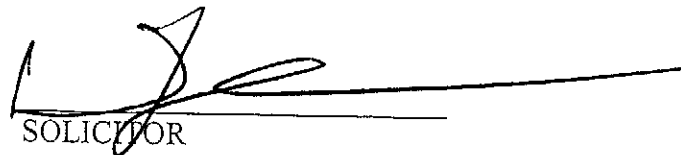


SPECIFICATIONS FOR PURCHASE OF  
TEMPERATURE CONTROL SYSTEM (TCS) AND  
FACILITY MANAGEMENT CONTROL SYSTE (FMCS)  
FOR THE TOWNSHIP OF GLOUCESTER  
COUNTY OF CAMDEN

  
MAYOR  
DEPARTMENT HEAD  
BUSINESS ADMINISTRATOR  
SOLICITOR

BID OPENING DATE:

SPECIFICATIONS # PW 11-13

TOWNSHIP OF GLOUCESTER

COUNTY OF CAMDEN

**NOTICE TO BIDDERS**

**NOTICE** is hereby given that sealed proposals for the:

TEMPERATURE CONTROL SYSTEM (TCS) AND FACILITY MANAGEMENT CONTROL SYSTEM (FMCS)

BID SPECIFICATION NUMBER PW 11-13

will be received not later than 10:00 am prevailing time on June 22, 2011  
at the Municipal Building, 1261 Chews Landing Road, Laurel Springs, New Jersey 08021

PROPOSALS must be addressed to the Township Clerk, P.O. Box 8, Blackwood, New Jersey 08012 and will be opened and read publicly at the time and date, and should be in sealed envelopes marked:

TEMPERATURE CONTROL SYSTEM (TCS) AND FACILITY MANAGEMENT CONTROL SYSTEM (FMCS)

DO NOT OPEN UNTIL June 22, 2011 at 10:00 AM.

PROPOSAL forms, instructions to bidders, specifications and other bidding documents may be examined or obtained at the office of the Township Clerk during normal office hours at the above address.

The Township Council reserves the right to reject any or all proposals in whole or in part, and to waive such informalities as may be permitted by law.

BIDDERS are required to comply with the requirement of P.L. 1975, Chapter 127, and P.L. 1977, Chapter 33.

INFORMATION on Affirmative Action Program requirements is available at the Office of the Township Clerk.

Rosemary DiJosie  
Township Clerk

BID PROPOSAL FORM

\_\_\_\_\_  
(Contract Title and Bid Number, if applicable)

\_\_\_\_\_  
(Description of goods/services being bid)

The undersigned proposes to furnish and deliver the above goods/services pursuant to the bid specification and made part hereof:

\_\_\_\_\_  
Amount in words

\$

\_\_\_\_\_  
Amount in numbers

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Federal I.D. # or Social Security #

\_\_\_\_\_  
Address

\_\_\_\_\_  
Signature of Authorized Agent

\_\_\_\_\_  
Type or Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Date

PROPOSAL FORM/SIGNATURE PAGES

To: Township Council  
Gloucester Township  
1261 Chews Landing Road  
Laurel Springs, NJ 08021

Date: \_\_\_\_\_

Council:

This proposal is submitted in accordance with your advertisement inviting proposals to be received for the project identified as: \_\_\_\_\_.

Having carefully examined the "Advertisement for Bids; Bidding Instruction", General Clauses", "Plans", etc. hereinafter, bulletins applying thereto, and being familiar with the various conditions affecting the work, the undersigned hereby agrees to furnish all materials, perform all labor, and all else necessary to complete the work in strict accordance with the specifications for prices as follows:

In case this proposal is accepted, the undersigned is hereby bound to enter into contract within ten(10) days after receipt of notice of acceptance for above mentioned work, in accordance with such specifications.

Subscribed and Sworn  
before me this \_\_\_\_ day  
of \_\_\_\_\_, 2\_\_\_\_

\_\_\_\_\_  
(Type or Print Name)

Notary public of \_\_\_\_\_

\_\_\_\_\_  
Signature

My commission expires \_\_\_\_\_

(Seal)

## INSTRUCTIONS TO BIDDERS

### NO DEPOSIT OR FEE IS REQUIRED FOR SPECIFICATIONS

#### QUALIFICATIONS OF BIDDERS

All bidders must be prepared to present suitable evidence of their financial standing and to furnish a list of similar work recently completed.

No verbal instructions or information to bidders will be binding. The specifications will be considered as clear and complete unless written attention is called to any discrepancies or incompleteness before the opening of bids. Should any written inquiries be received by the Business Administrator, these inquiries will be answered in the form of bulletins and issued to all bidders. These bulletins shall be considered a part of these specifications.

Bids will be considered as conclusive evidence of complete examination of specifications and samples. It is understood that parties making bids accept all the terms and conditions expressed and contained in the specifications attached to the proposal submitted.

A proposal Form/Signature Page is provided in these specifications. This form must be used in submitting a proposal and all pages of the form must be completely filled out and signed by the bidder.

#### PRESENTATION OF BIDS

Each bid must be enclosed in a sealed envelope and clearly marked on the outside: "BID PROPOSAL \_\_\_\_\_" (see advertisement, page 1), and delivered to the Office of the Township Clerk, 1261 Chews Landing Rd., Laurel Springs, New Jersey 08021.

#### WITHDRAWALS

No proposal may be withdrawn later than 4:30 p.m. prevailing time on the day of the opening of the bids. No modifications or explanations of any bid will be allowed after the same is sealed and delivered to the Township Clerk. The proposals will be opened and read publicly by the Township Council.

The Township Council reserves the right to reject any or all bids or parts thereof as deemed to be in the best interest of the Township and to waive any immaterial informalities as may be permitted by law.

#### FORM OF CONTRACT

The successful bidder will be required to execute a written contract with the Township Council within ten(10) days after notice of the acceptance of their proposal.

### BID BOND

Each bid shall be accompanied by a certified check, cashier's check or bid bond duly executed by the bidder as the principal and having as surety thereon a surety company approved by the Township of Gloucester in the amount not less than ten percent (10%), but in no case in excess of \$20,000.00 or the amount of bid. Any such bid bond shall be without endorsement or conditions. Bid shall also be accompanied with a certificate letter from a surety company stating that it will provide the bidder with the completion bond.

### SURETY BOND

The successful bidder will be required to furnish a surety bond in the amount of one hundred percent (100%) of the contract price, the condition of which shall be in the full and complete execution and performance of each and all of the terms contained in the contract, proposal, specifications and instructions to bidders. The bond shall meet all requirements of the Township Council.

NOTE: Surety bond is automatically required when the contract price exceeds nine hundred ninety nine dollars and ninety nine cents, (\$999.99); when the contract price is under \$999.99, surety bond may be required by the Township Council if they deem it necessary and in the best interest of the Township.

Entire cost of bond(s) shall be paid for by the individuals, firms, or corporations with whom the contract(s) are entered into for the execution of any other purchases, or the furnishing or hiring of any materials or supplies.

WE ARE WAIVING  
THE REQUIREMENT FOR A  
SURETY BOND  
NOT THE BID BOND  
WHICH IS LOCATED ON

PAGE 7

### CONSENT OF SURETY

A performance bond will be required from the successful contractor on this project, and consequent, all bidders shall, with their bid, a certificate in substantially the following form:

TO: \_\_\_\_\_  
(Owner)

RE: \_\_\_\_\_  
(Contractor)

\_\_\_\_\_  
(Project Description)

This is to certify that the

\_\_\_\_\_  
(Surety Company)

will provide to \_\_\_\_\_ a performance bond  
(Owner)

in the full amount of awarded contract in the event that said contractor is awarded a contract for the above project.

\_\_\_\_\_  
(CONTRACTOR)

\_\_\_\_\_  
(Authorized Agent of Surety Company)

Date: \_\_\_\_\_

**CERTIFICATE OF SURETY MUST BE SIGNED BY AN AUTHORISED AGENT  
OR REPRESENTATIVE OF A SURETY COMPANY AND NOT BY THE  
INDIVIDUAL OR COMPANY REPRESENTATIVE SUBMITTING THE BID.**



## SPECIFICATIONS

These specifications are intended to cover the furnishing of all materials and the performance of all work that may be required or necessary for the complete compliance of the contract and the contractor will be required to do all things. Where plans, drawings or schematics accompany certain sections of the specifications, these shall be considered as a part of these specifications.

## INTERPRETATIONS OF SPECIFICATIONS

Should the contractor discover discrepancies in the specifications, the matter shall be immediately brought to the attention of the Township of Gloucester and the discrepancies corrected by written agreement before proceeding further.

All explanation, interpretations and instructions required under these specifications will be given by the Township upon written request from bidders.

Equipment to be furnished (if applicable) shall be new, first-class, or as specifically stipulated in the detailed specifications and shall meet with the approval of the Township Council or their designated representative.

All equipment if applicable, shall conform to the requirements of these specifications and any equipment rejected by the Council as not complying with these specifications shall be immediately removed and replaced with acceptable equipment.

## EXTRA WORK

No extras or additional work will be allowed or paid for unless such extras or additional work is ordered in writing by the Township and the price fixed and agreed before such work is performed.

## ADDITIONS OR DEDUCTIONS

The Council of the Township of Gloucester shall have the right, without invalidating the contract, to make additions to or deductions from the work covered by these specifications and in case such deductions in cost shall be made between the Council and the contractor, but must be agreed to in writing.

## PROTECTION BY CONTRACTOR

The contractor agrees to indemnify and save harmless the Township and their representatives from all suits or actions of every nature and description brought against them or either of them, or on account of the use of patented or copyrighted material, appliances, products, or processes, with legal protection. The contractor shall not transfer or sublet any portion of the work covered by these specifications without written consent of the Township.

## GENERAL CLAUSE

### PROPOSAL FORMS

As noted under "instructions to bidders", attached to these specifications is a "Proposal Form/Signature Form", which must be completely filled out and signed by each bidder.

As these Instructions to Bidders, Specifications, Form of Proposal, Signature Page, General and Special Clauses, etc. all refer to each other and together constitute a whole legal binding agreement and must be returned together as when delivered to bidder.

**NO BID WILL BE ACCEPTED UNLESS SUBMITTED ON THE FORMS FURNISHED HEREIN**

All bids must be sealed, marked and delivered in accordance with the instructions in paragraph 5, and 6. Bids will be opened and read publicly by the Business Administrator at the time and day specified in the Advertisement for Bids. Reading of the bids will take place at the Municipal Building, 1261 Chews Landing Road, Laurel Springs, NJ 08021.

### DELIVERY

In general, deliveries shall be at such time and place as may be fixed by Council and shall not be made except upon definite instructions. See "Specifications" for delivery required under these present specifications.

### DISPOSAL OF MATERIALS, SUPPLIED ETC...NOT APPROVED.

Bidders shall understand that when materials, supplies, etc. have been delivered to the job which do not comply with the specifications and have not been approved, they shall be immediately removed upon notification to the contractor and replaced with material, supplied, etc., in full accordance with the specifications.

### PAYMENTS

Payments shall be made to the contractor within sixty(60) days of receipt of invoice, after inspection and acceptance of the material and/or work and approval of the invoice by the Township Council unless otherwise stipulated by the Township in the form of a contract.

### NUMBER OF WORKING DAYS

The contract shall contain the date which the work shall be completed or shall specify the number of working days to be allowed for its completion and/or delivery of materials equipment and supplies.

### EXEMPTION FROM FEDERAL EXCISE AND NEW JERSEY SALES TAX

The Township of Gloucester is exempt from Federal Excise Taxes and the New Jersey Sales Tax. Net prices as shown in the proposal shall exclude said Federal and State Tax amounts.

NOTE: This provision shall not apply to construction, repair and/or maintenance contracts where bidder purchases supplies, materials, and/or equipment and includes costs thereof in computation of his bid or proposal.

### NEW JERSEY PREVAILING WAGE ACT

All work on this project shall comply with the requirements under the 1963 Revised Statutes of New Jersey Chapter 150, "Prevailing Rate of Wages on Public Contracts".

Current applicable Wage Rate Determination of the State of the New Jersey Department of Labor shall become part of the contract.

### DOMESTIC PRODUCTS

Only manufactured products of the United States, wherever available, shall be used in connection with this undertaking, pursuant to 40A:11-18 of the Revised Statutes of the State of New Jersey.

### PUBLIC DISCLOSURE

Chapter 33 of the Public Laws of 1977 provides that no Corporation or Partnership shall be awarded any State, County, Municipal, or School District contract for the performance of any work or the furnishing of any materials or supplies, unless prior to the receipt of the bid or accompanying the bid of said Corporation or Partnership there is submitted a statement. The statement shall set forth the names and addresses of all stockholders in the Corporation or Partnership who own ten percent (10%) or more of its stock or any class, or of all individual partners in the Partnership who owns a ten percent (10%) or greater interest therein.

### FAILURE TO SUPPLY THIS INFORMATION WITH "FORM OF PROPOSAL" WILL BE CAUSE TO REJECT THE BID

Full firm name of Bidder \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip Code \_\_\_\_\_

Phone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

Signature of Bidder \_\_\_\_\_

**TEMPERATURE CONTROL SYSTEM (TCS)**  
**and**  
**FACILITY MANAGEMENT CONTROL SYSTEM (FMCS)**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Furnish all labor, materials, equipment, and service necessary for a complete and operating Temperature Control System (TCS) and Facility Management system (FMCS), utilizing Direct Digital Controls as as described herein.
- B. All labor, material, equipment and software not specifically referred to herein or on the plans, that is required to meet the functional intent of this specification, shall be provided without additional cost to the Owner.
- C. The Owner shall be the named license holder of all software associated with any and all incremental work on the project(s).
- D. Project consists of replacing the Solidyne DDC control systems for four buildings: Municipal Complex, Old Erial School and Recreation Center. In addition the Library electronic controls to be replaced as part of this project. Including all necessary field devices as needed for proper system control. New system sequence of operation to match existing operation.
- E. It is the responsibility of all bidders to survey existing site conditions for each building.

**1.2 SYSTEM DESCRIPTION**

- A. All controllers supplied for this project shall communicate on a peer-to-peer bus over a single LonTalk open protocol bus.
  - 1. The intent of this specification is to provide a system that is running the Niagara AX™ Open NICS Framework.
  - 2. OPEN NIC STATEMENTS - All NiagaraAX software licenses shall have the following NICS: "accept.station.in=\*"; "accept.station.out=\*" and "accept.wb.in=\*" and "accept.wb.out=\*". All open NIC Statements shall follow Tridium Open NIC specifications
  - 3. System architecture shall fully support a multi-vendor environment and be able to integrate third party systems via existing vendor protocols including, as a minimum, LonTalk, BACnet, and Modbus.
  - 4. System architecture shall provide secure Web access using MS Internet Explorer from any computer on the owner's LAN.
  - 5. All control devices furnished with this Section shall be programmable directly from Tridium's AX™ Workbench upon completion of this project. The use of configurable or programmable controllers that require additional software tools for post-installation maintenance shall not be acceptable.
  - 6. Any control vendor that must provide additional BMS server software shall be unacceptable.
- B. The entire Temperature Control System (TCS) shall be comprised of a network of interoperable, stand-alone digital controllers networked and communicating via LonMark/LonTalk communication protocols

to a Network Area Controller (NAC). Temperature Control System products shall be manufactured by Honeywell.

- C. The Facility Management and Control System (FMCS) shall be comprised of Network Area Controller or Controllers (NAC) within each facility. The NAC shall connect to the owner's local or wide area network, depending on configuration. Access to the system, either locally in each building, or remotely from a central site or sites, shall be accomplished through standard Web browsers, via the Internet and/or local area network.
- D. The Facility Management and Control System (FMCS) as provided in this Division shall be based on the Honeywell WEBs System incorporating the Niagara Framework™. Systems not developed on the Niagara Framework platform are unacceptable.

### 1.3 Quality Assurance

- A. The ATC contractor shall be a Honeywell ACS contractor for a minimum of 3 years. Documents to be provided with the bid to demonstrate qualifications.
- B. The ATC contractor shall have a minimum of three full time electronic service personnel within a 60 mile radius of the project location. One of the three full time electronic service personnel must work within a 30 mile radius of the project location.
- C. The ATC contractor shall have a designated engineering department composed of at least one full time degreed engineer within a 60 mile radius of the project location.
- D. The ATC contractor shall have completed a minimum of twenty projects within the last five years which are at least equal in dollar value and scope to this project. A list of similar projects, dollar volume, scope, contact name and contact number shall be provided by the ATC contractor if asked for by the owner.

### 1.4 SUBMITTAL

- A. Eight copies of shop drawings of the components and devices for the entire control system shall be submitted and shall consist of a complete list of equipment and materials, including manufacturers catalog data sheets and installation instructions for all controllers, valves, dampers, sensors, routers, etc. Shop drawings shall also contain complete wiring and schematic diagrams, software descriptions, calculations, and any other details required to demonstrate that the system has been coordinated and will properly function as a system. Terminal identification for all control wiring shall be shown on the shop drawings. A complete written Sequence of Operation shall also be included with the submittal package.
- B. Submittal shall also include a trunk cable schematic diagram depicting operator workstations, control panel locations and a description of the communication type, media and protocol.
- C. Submittal shall also include a complete point list of all points to be connected to the TCS and FMCS.
- D. Upon completion of the work, provide a complete set of 'as-built' drawings and application software on compact disk. Drawings shall be provided as AutoCAD™ or Visio™ compatible files. Eight copies of the 'as-built' drawings shall be provided in addition to the documents on compact disk.

### 1.5 SPECIFICATION NOMENCLATURE

- A. Acronyms used in this specification are as follows:

FMCS	Facility Management and Control System
TCS	Temperature Control System
NAC	Network Area Controller
IDC	Interoperable Digital Controller
IBC	Interoperable BACnet Controller
GUI	Graphical User Interface
WBI	Web Browser Interface
POT	Portable Operator's Terminal
PMI	Power Measurement Interface
DDC	Direct Digital Controls
LAN	Local Area Network
WAN	Wide Area Network
OOT	Object Oriented Technology
PICS	Product Interoperability Compliance Statement

#### 1.6 AGENCY AND CODE APPROVALS

- A. All products of the TCS and FMCS shall be provided with the following agency approvals. Verification that the approvals exist for all submitted products shall be provided with the submittal package. Systems or products not currently offering the following approvals are not acceptable.
  1. UL-916; Energy Management Systems
  2. C-UL listed to Canadian Standards Association C22.2 No. 205-M1983 "signal Equipment"
  3. CE
  4. FCC, Part 15, Subpart J, Class A Computing Devices

#### 1.7 SOFTWARE LICENSE AGREEMENT

- A. The Owner shall agree to the manufacturer's standard software and firmware licensing agreement as a condition of this contract. Such license shall grant use of all programs and application software to Owner as defined by the manufacturer's license agreement, but shall protect manufacturer's rights to disclosure of trade secrets contained within such software.
- B. The Owner shall be the named license holder of all software associated with any and all incremental work on the project(s). In addition, the Owner shall receive ownership of all job specific configuration documentation, data files, and application-level software developed for the project. This shall include all custom, job specific software code and documentation for all configuration and programming that is generated for a given project and/or configured for use with the NAC, FMCS Server(s), and any related LAN / WAN / Intranet and Internet connected routers and devices. Any and all required IDs and passwords for access to any component or software program shall be provided to the owner. The owner shall determine which organizations to be named in the SI organization ID ("orgid") of all software licenses. Owner shall be free to direct the modification of the "orgid" in any software license, regardless of supplier.

#### 1.8 DELIVERY, STORAGE AND HANDLING

- A. Provide factory-shipping cartons for each piece of equipment and control device. Maintain cartons through shipping, storage, and handling as required to prevent equipment damage. Store equipment and materials inside and protected from weather.

## 1.9 JOB CONDITIONS

- A. Cooperation with Other Trades: Coordinate the Work of this section with that of other sections to ensure that the Work will be carried out in an orderly fashion. It shall be this Contractor's responsibility to check the Contract Documents for possible conflicts between his Work and that of other crafts in equipment location, pipe, duct and conduit runs, electrical outlets and fixtures, air diffusers, and structural and architectural features.

## PART 2 MATERIALS

### 2.1 GENERAL

- A. The Temperature Control System (TCS) and Facility Management Control System (FMCS) shall be comprised of a network of interoperable, stand-alone digital controllers, a computer system, graphical user interface software, printers, network devices, valves, dampers, sensors, and other devices as specified herein. All systems and software within FMCS shall be Year 2000 compliant and shall be supported by compliance documentation from the manufacturer.
- B. The installed system shall provide secure password access to all features, functions and data contained in the overall FMCS.

### 2.2 OPEN, INTEROPERABLE, INTEGRATED ARCHITECTURES

- A. The intent of this specification is to provide a peer-to-peer networked, stand-alone, distributed control system with the capability to integrate ANSI/ASHRAE Standard 135-2001 BACnet, LonWorks technology, MODBUS, OPC, and other open and proprietary communication protocols in one open, interoperable system.
- B. The supplied computer software shall employ object-oriented technology (OOT) for representation of all data and control devices within the system. In addition, adherence to industry standards including ANSI / ASHRAE™ Standard 135-2001, BACnet and LonMark to assure interoperability between all system components is required. For each LonWorks device that does not have LonMark certification, the device supplier must provide an XIF file and a resource file for the device. For each BACnet device, the device supplier must provide a PICS document showing the installed device's compliance level. Minimum compliance is Level 3; with the ability to support data read and write functionality. Physical connection of BACnet devices shall be via Ethernet (BACnet Ethernet/IP,) and/or RS-485 (BACnet MSTP) as specified.
- C. All components and controllers supplied under this Division shall be true "peer-to-peer" communicating devices. Components or controllers requiring "polling" by a host to pass data shall not be acceptable.
- D. The supplied system must incorporate the ability to access all data using standard Web browsers without requiring proprietary operator interface and configuration programs. An Open DataBase Connectivity (ODBC) or Structured Query Language (SQL) compliant server database is required for all system database parameter storage. This data shall reside on a supplier-installed server for all database access. Systems requiring proprietary database and user interface programs shall not be acceptable.
- E. A hierarchical topology is required to assure reasonable system response times and to manage the flow and sharing of data without unduly burdening the customer's internal Intranet network. Systems employing a "flat" single tiered architecture shall not be acceptable.
  - 1. Maximum acceptable response time from any alarm occurrence (at the point of origin) to the point of annunciation shall not exceed 5 seconds for network connected user interfaces.



2. Maximum acceptable response time from any alarm occurrence (at the point of origin) to the point of annunciation shall not exceed 60 seconds for remote or dial-up connected user interfaces.

## 2.3 NETWORKS

- A. The Local Area Network (LAN) shall be a 100 Megabits/sec Ethernet network supporting BACnet, Java, XML, HTTP, and SOAP for maximum flexibility for integration of building data with enterprise information systems and providing support for multiple Network Area Controllers (NACs), user workstations and, if specified, a local server.
- B. Local area network minimum physical and media access requirements:
  1. Ethernet; IEEE standard 802.3
  2. Cable; 100 Base-T, UTP-8 wire, category 5
  3. Minimum throughput; 100 Mbps.

## 2.4 NETWORK ACCESS

- A. Remote Access.
  1. For Local Area Network installations, provide access to the LAN from a remote location, via the Internet. The Owner shall provide a connection to the Internet to enable this access via high speed cable modem, asynchronous digital subscriber line (ADSL) modem, ISDN line, T1 Line or via the customer's Intranet to a corporate server providing access to an Internet Service Provider (ISP). Customer agrees to pay monthly access charges for connection and ISP.

## 2.5 NETWORK AREA CONTROLLER (NAC)

- A. The ATC contractor shall supply all necessary Network Area Controllers (NAC) as part of this contract.
- B. The Network Area Controller (NAC) shall provide the interface between the LAN or WAN and the field control devices, and provide global supervisory control functions over the control devices connected to the NAC. It shall be capable of executing application control programs to provide:
  1. Calendar functions
  2. Scheduling
  3. Trending
  4. Alarm monitoring and routing
  5. Time synchronization
  6. Integration of LonWorks controller data and BACnet controller data
  7. Network Management functions for all LonWorks based devices
- C. The Network Area Controller must provide the following hardware features as a minimum:
  1. One Ethernet Port – 10/100 Mbps
  2. One RS-232 port
  3. One LonWorks Interface Port – 78KB FTT-10A
  4. One RS-485 ports
  5. Battery Backup

6. Flash memory for long term data backup (If battery backup or flash memory is not supplied, the controller must contain a hard disk with at least 1 gigabyte storage capacity)
  7. The NAC must be capable of operation over a temperature range of 32 to 122°F
  8. The NAC must be capable of withstanding storage temperatures of between 0 and 158°F
  9. The NAC must be capable of operation over a humidity range of 5 to 95% RH, non-condensing
- D. The NAC shall provide multiple user access to the system and support for ODBC or SQL. A database resident on the NAC shall be an ODBC-compliant database or must provide an ODBC data access mechanism to read and write data stored within it.
- E. The NAC shall support standard Web browser access via the Intranet/Internet. It shall support a minimum of 32 simultaneous users.
- F. Event Alarm Notification and actions
1. The NAC shall provide alarm recognition, storage; routing, management, and analysis to supplement distributed capabilities of equipment or application specific controllers.
  2. The NAC shall be able to route any alarm condition to any defined user location whether connected to a local network or remote via dial-up telephone connection, or wide-area network.
  3. Alarm generation shall be selectable for annunciation type and acknowledgement requirements including but limited to:
    - a. To alarm
    - b. Return to normal
    - c. To fault
  4. Provide for the creation of a minimum of eight of alarm classes for the purpose of routing types and or classes of alarms, i.e.: security, HVAC, Fire, etc.
  5. Provide timed (schedule) routing of alarms by class, object, group, or node.
  6. Provide alarm generation from binary object "runtime" and /or event counts for equipment maintenance. The user shall be able to reset runtime or event count values with appropriate password control.
- G. Control equipment and network failures shall be treated as alarms and annunciated.
- H. Alarms shall be annunciated in any of the following manners as defined by the user:
1. Screen message text
  2. Email of the complete alarm message to multiple recipients. Provide the ability to route and email alarms based on:
    - a. Day of week
    - b. Time of day
    - c. Recipient
  3. Pagers via paging services that initiate a page on receipt of email message
  4. Graphic with flashing alarm object(s)
  5. Printed message, routed directly to a dedicated alarm printer

- I. The following shall be recorded by the NAC for each alarm (at a minimum):
  - 1. Time and date
  - 2. Location (building, floor, zone, office number, etc.)
  - 3. Equipment (air handler #, accessway, etc.)
  - 4. Acknowledge time, date, and user who issued acknowledgement.
  - 5. Number of occurrences since last acknowledgement.
- J. Alarm actions may be initiated by user defined programmable objects created for that purpose.
- K. Defined users shall be given proper access to acknowledge any alarm, or specific types or classes of alarms defined by the user.
- L. A log of all alarms shall be maintained by the NAC and/or a server (if configured in the system) and shall be available for review by the user.
- M. Provide a "query" feature to allow review of specific alarms by user defined parameters.
- N. A separate log for system alerts (controller failures, network failures, etc.) shall be provided and available for review by the user.
- O. An Error Log to record invalid property changes or commands shall be provided and available for review by the user.

## 2.6 Data Collection and Storage

- A. The NAC shall have the ability to collect data for any property of any object and store this data for future use.
- B. The data collection shall be performed by log objects, resident in the NAC that shall have, at a minimum, the following configurable properties:
  - 1. Designating the log as interval or deviation.
  - 2. For interval logs, the object shall be configured for time of day, day of week and the sample collection interval.
  - 3. For deviation logs, the object shall be configured for the deviation of a variable to a fixed value. This value, when reached, will initiate logging of the object.
  - 4. For all logs, provide the ability to set the maximum number of data stores for the log and to set whether the log will stop collecting when full, or rollover the data on a first-in, first-out basis.
  - 5. Each log shall have the ability to have its data cleared on a time-based event or by a user-defined event or action.
- C. All log data shall be stored in a relational database in the NAC and the data shall be accessed from a server (if the system is so configured) or a standard Web browser.
- D. All log data, when accessed from a server, shall be capable of being manipulated using standard SQL statements.
- E. All log data shall be available to the user in the following data formats:
  - 1. HTML
  - 2. XML
  - 3. Plain Text

4. Comma or tab separated values
- F. Systems that do not provide log data in HTML and XML formats at a minimum shall not be acceptable.
- G. The NAC shall have the ability to archive its log data either locally (to itself), or remotely to a server or other NAC on the network. Provide the ability to configure the following archiving properties, at a minimum:
  1. Archive on time of day
  2. Archive on user-defined number of data stores in the log (buffer size)
  3. Archive when log has reached it's user-defined capacity of data stores
  4. Provide ability to clear logs once archived

## 2.7 AUDIT LOG

- A. Provide and maintain an Audit Log that tracks all activities performed on the NAC. Provide the ability to specify a buffer size for the log and the ability to archive log based on time or when the log has reached its user-defined buffer size. Provide the ability to archive the log locally (to the NAC), to another NAC on the network, or to a server. For each log entry, provide the following data:
  1. Time and date
  2. User ID
  3. Change or activity: i.e., Change setpoint, add or delete objects, commands, etc.

## 2.8 DATABASE BACKUP AND STORAGE

- A. The NAC shall have the ability to automatically backup its database. The database shall be backed up based on a user-defined time interval.
- B. Copies of the current database and, at the most recently saved database shall be stored in the NAC. The age of the most recently saved database is dependent on the user-defined database save interval.
- C. The NAC database shall be stored, at a minimum, in XML format to allow for user viewing and editing, if desired. Other formats are acceptable as well, as long as XML format is supported.

## 2.9 INTEROPERABLE DIGITAL CONTROLLER (IDC)

- A. Controls shall be Honeywell Spyder microprocessor based Interoperable LonWorks Controllers (IDC). Where possible, all Interoperable Digital Controllers shall bear the applicable LonMark™ interoperability logo on each product delivered.
- B. HVAC control shall be accomplished using LonMark™ based devices where the application has a LonMark profile defined. Where LonMark devices are not available for a particular application, devices based on LonWorks shall be acceptable. For each LonWorks device that does not have LonMark certification, the device supplier must provide an XIF file for the device. The controller platform shall provide options and advanced system functions, programmable and configurable using Niagara AX™ Open NICS Framework, that allow standard and customizable control solutions required in executing the "Sequence of Operation".
- C. HVAC control shall be accomplished using LonMark™ based devices where the application has a LonMark profile defined. Where LonMark devices are not available for a particular application, devices based on LonWorks shall be acceptable. For each LonWorks device that does not have LonMark certification, the device supplier must provide an XIF file for the device. Publicly available specifications for the Applications Programming Interface (API) must be provided for each LonWorks / LonMark controller defining the programming or setup of each device. The Division 15 contractor shall

provide all programming, documentation and programming tools necessary to set up and configure the supplied devices per the specified sequences of operation.

- D. The Network Area Controller (NAC) will provide all scheduling, alarming, trending, and network management for the LonMark / LonWorks based devices.
- E. The IDCs shall communicate with the NAC at a baud rate of not less than 78.8K baud. The IDC shall provide LED indication of communication and controller performance to the technician, without cover removal.
- F. All IDCs shall be fully application programmable and shall at all times maintain their LONMARK certification, if so certified. Controllers offering application selection only (non-programmable), require a 10% spare point capacity to be provided for all applications. All control sequences within or programmed into the IDC shall be stored in non-volatile memory, which is not dependent upon the presence of a battery, to be retained.
- G. The TCS contractor supplying the IDC's shall provide documentation for each device, with the following information at a minimum:
  - 1. Network Variable Inputs (nvi's); name and type
  - 2. Network Variable Outputs (nvo's); name and type
  - 3. Network configuration parameters (nci, nco); name and type
- H. It is the responsibility of the TCS contractor to ensure that the proper Network Variable Inputs and Outputs (nvi and nvo) are provided in each IDC, as required by the point charts.
- I. The supplier of any programmable IDC shall provide one copy of the manufacturer's programming tool, with documentation, to the owner.

## 2.10 WEB BROWSER CLIENTS

- A. The system shall be capable of supporting an unlimited number of clients using a standard Web browser such as Internet Explorer™ or Netscape Navigator™. Systems requiring additional software (to enable a standard Web browser) to be resident on the client machine, or manufacture-specific browsers shall not be acceptable.
- B. The Web browser software shall run on any operating system and system configuration that is supported by the Web browser. Systems that require specific machine requirements in terms of processor speed, memory, etc., in order to allow the Web browser to function with the FMCS, shall not be acceptable.
- C. The Web browser shall provide the same view of the system, in terms of graphics, schedules, calendars, logs, etc., and provide the same interface methodology as is provided by the Graphical User Interface. Systems that require different views or that require different means of interacting with objects such as schedules, or logs, shall not be permitted.
- D. The Web browser client shall support at a minimum, the following functions:
  - 1. User log-on identification and password shall be required. If an unauthorized user attempts access, a blank web page shall be displayed. Security using Java authentication and encryption techniques to prevent unauthorized access shall be implemented.
  - 2. Graphical screens developed for the GUI shall be the same screens used for the Web browser client. Any animated graphical objects supported by the GUI shall be supported by the Web browser interface.

3. HTML programming shall not be required to display system graphics or data on a Web page. HTML editing of the Web page shall be allowed if the user desires a specific look or format.
4. Storage of the graphical screens shall be in the Network Area Controller (NAC), without requiring any graphics to be stored on the client machine. Systems that require graphics storage on each client are not acceptable.
5. Real-time values displayed on a Web page shall update automatically without requiring a manual "refresh" of the Web page.
6. Users shall have administrator-defined access privileges. Depending on the access privileges assigned, the user shall be able to perform the following:
  - a. Modify common application objects, such as schedules, calendars, and set points in a graphical manner.
    1. Schedule times will be adjusted using a graphical slider, without requiring any keyboard entry from the operator.
    2. Holidays shall be set by using a graphical calendar, without requiring any keyboard entry from the operator.
  - b. Commands to start and stop binary objects shall be done by right-clicking the selected object and selecting the appropriate command from the pop-up menu. No entry of text shall be required.
  - c. View logs and charts
  - d. View and acknowledge alarms
  - e. Setup and execute SQL queries on log and archive information
7. The system shall provide the capability to specify a user's (as determined by the log-on user identification) home page. Provide the ability to limit a specific user to just their defined home page. From the home page, links to other views, or pages in the system shall be possible, if allowed by the system administrator.
8. Graphic screens on the Web Browser client shall support hypertext links to other locations on the Internet or on Intranet sites, by specifying the Uniform Resource Locator (URL) for the desired link.

## 2.3 OTHER CONTROL SYSTEM HARDWARE

- A. Space Temperature Wall Module. Wall Module shall be Honeywell or equivalent.
  1. Wall module shall have a 20K Ohm NTC thermistor temperature sensor with operating range of 45 to 99 F under a locking cover/enclosure with UL 916 listing designed for mounting on a standard electrical switch box.
- B. Current Sensitive Switches: Solid state, split core current switch that operates when the current level (sensed by the internal current transformer) exceeds the adjustable trip point shall be provided where specified.
- C. Non-Spring Return Low Torque Direct Coupled 35 & 70 lb-in Actuators. Actuators shall be Honeywell or equivalent. Actuators shall be 35 (ML 6161 or ML 7161) or 70 lb-in. (ML6174 or ML 7174) with strokes adjustable for 45, 60, or 90 degree rotation applications and designed for operation between 20 and 125 F.
  1. Each actuator shall also have a minimum position adjustable rotation of 0 to 30 degrees.

2. Actuators shall be for floating or two position (ML 6161 or ML6174) control, or for 4-20 mA or 2-10Vdc (ML7161 or ML7174) input signals.
  3. Analog control actuators shall have a cover mounted direct/reverse acting switch.
  4. Actuator motor shall be magnetically coupled or shall have limit switch stops to disengage power at the ends of the stroke.
  5. Actuators shall be direct connected (no linkages) and provided with a manual declutch for manual positioning.
  6. Actuators shall have NEMA 1 environmental protection rating and be 24 volt and UL listed with UL94-5V plenum requirement compliance.
  7. Minimum design life of actuators shall be for 1,500,000 repositions and 35 lb-in. models shall be designed for 50,000 open-close cycles and 70 lb-in. models shall be designed for 40,000 open-close cycles.
  8. Actuator options shall include 1) Auxiliary feedback potentiometers, 2) open-closed indicator switches, 3) actuator timings of 90 seconds, 3 minutes, or 7 minutes, one or two auxiliary switches, and 4) torque of 35 or 70 lb-in.
- D. Spring Return Direct Coupled Actuators. Actuators shall have torque ratings of 44lb-in. (MS4105, MS7505, MS8105), 88 lb-in. (MS4110, MS7510, MS 8110), or 175 lb-in (MS4120, MS7520, MS8120). Actuators shall be Honeywell or equivalent. Actuators shall be modulating 90 seconds nominal timing or two-position 45 seconds nominal timing types with strokes for 90 degree rotation applications and designed for operation between -40 and 140 F.
1. Each torque rating group shall have optionally selected control types, floating control, 2-position 24 Vac, 2-position line voltage, or analog input which is switch selectable as 0-10Vdc, 10-0 Vdc, 2-10 Vdc, or 10-2 Vdc.
  2. Actuator spring return direction (open or closed) shall be easily reversed in the field, and actuators shall spring return in no greater than 20 seconds.
  3. Actuators shall be direct connected (no linkages), and shall have integral position indication.
  4. Actuators shall have NEMA 2 environmental protection rating, and UL approved and plenum rated per UL873.
  5. Minimum design life of modulating actuators shall be for 1,500,000 repositions and 60,000 spring returns, except 2-position actuators shall be for 50,000 spring returns.
  6. Each actuator shall be provided with a manual power-off positioning lever for manual positioning during power loss or system malfunctions, including a gear-train lock to prevent spring action.
  7. Upon power restoration after gear lock, normal operation shall automatically recur.

## **PART 3 EXECUTION**

### **3.1 INSTALLATION**

- A. All work described in this section shall be performed by a certified Honeywell ACS contractors that have a successful history in the design and installation of integrated control systems. The installing office shall have a minimum of five years of integration experience and shall provide documentation in the submittal package verifying the company's experience. The contractor may be requested to submit

training certificates demonstrating completion of Niagara AX training by their staff. Work must be performed by the bidding contractor's in house staff.

- B. Install system and materials in accordance with manufacturer's instructions, and as detailed on the project drawing set.
- C. Line and low voltage electrical connections to control equipment shown specified or shown on the control diagrams shall be furnished and installed by this contractor in accordance with these specifications.
- D. Equipment furnished by the HVAC Contractor that is normally wired before installation shall be furnished completely wired. Control wiring normally performed in the field will be furnished and installed by this contractor.

### 3.2 WARRANTY

- A. Equipment, materials and workmanship incorporated into the work shall be warranted for a period of one year from the time of system acceptance.
- B. Within this period, upon notice by the Owner, any defects in the work provided under this section due to faulty materials, methods of installation or workmanship shall be promptly (within 48 hours after receipt of notice) repaired or replaced by this contractor at no expense to the Owner

### 3.3 WARRANTY ACCESS

- A. The Owner shall grant to this contractor, reasonable access to the TCS and FMCS during the warranty period.
- B. The owner shall allow the contractor to access the TCS and FMCS from a remote location for the purpose of diagnostics and troubleshooting, via the Internet, during the warranty period.
- C. devices. Any and all required Ids and passwords for access to any component or software program shall be provided to the owner.

### 3.4 ACCEPTANCE TESTING

- A. Upon completion of the installation, this contractor shall load all system software and start-up the system. This contractor shall perform all necessary calibration, testing and de-bugging and perform all required operational checks to insure that the system is functioning in full accordance with these specifications.
- B. This contractor shall perform tests to verify proper performance of components, routines, and points. Repeat tests until proper performance results. This testing shall include a point-by-point log to validate 100% of the input and output points of the DDC system operation.
- C. Upon completion of the performance tests described above, repeat these tests, point by point as described in the validation log above in presence of Owner's Representative, as required. Properly schedule these tests so testing is complete at a time directed by the Owner's Representative. Do not delay tests so as to prevent delay of occupancy permits or building occupancy.
- D. System Acceptance: Satisfactory completion is when this contractor and the Division 16 contractor have performed successfully all the required testing to show performance compliance with the requirements of the Contract Documents to the satisfaction of the Owner's Representative. System acceptance shall be contingent upon completion and review of all corrected deficiencies.

### 3.5 OPERATOR INSTRUCTION, TRAINING

- A. During system commissioning and at such time acceptable performance of the TCS and FMCS hardware and software has been established this contractor shall provide on-site operator instruction to the owner's operating personnel. Operator instruction shall be done during normal working hours and



shall be performed by a competent representative familiar with the system hardware, software and accessories.

- B. This contractor shall provide 24 hours of instruction to the owner's designated personnel on the operation of the TCS and FMCS and describe its intended use with respect to the programmed functions specified. Operator orientation of the systems shall include, but not be limited to; the overall operation program, equipment functions (both individually and as part of the total integrated system), commands, systems generation, advisories, and appropriate operator intervention required in responding to the System's operation.
- C. The training shall be in three sessions as follows:
  - 1. Initial Training: One day session (8 hours) after system is started up and at least one week before first acceptance test. Manual shall have been submitted at least two weeks prior to training so that the owners' personnel can start to familiarize themselves with the system before classroom instruction begins.
  - 2. First Follow-Up Training: One day (8 hours total) approximately two weeks after initial training, and before Formal Acceptance. These sessions will deal with more advanced topics and answer questions.
  - 3. Warranty Follow Up: One day (8 hours total) in no less than 4 hour increments, to be scheduled at the request of the owner during the one year warranty period. These sessions shall cover topics as requested by the owner such as; how to add additional points, create and gather data for trends, graphic screen generation or modification of control routines.

AFFIRMATIVE ACTION COMPLIANCE NOTICE  
N.J.S.A 10:5-31 and N.J.A.C. 17:27

GOODS AND SERVICES CONTRACTS  
(INCLUDING PROFESSIONAL SERVICES)

This form is a summary of the successful bidder's requirement to comply with requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

The successful bidder shall submit to the public agency, after notifications of award but prior to execution of this contract, one of the following three documents as forms of evidence.:

(a) A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned Affirmative Action Program (good for one year from the date of the letter);

**OR**

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4

**OR**

(c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the contractor

The successful vendor may obtain the Affirmative Action Employee Information Report (AA302) from the contraction unit during normal business hours.

The successful vendor(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the vendor copy is retained by the vendor.

The undersigned vendor certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27 and agrees to furnish the required forms of evidence.

The undersigned vendor further understands that his/her bid shall be rejected as non-responsive if said contractor fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

COMPANY: \_\_\_\_\_

SIGNATURE \_\_\_\_\_

PRINT NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

## SUPPLEMENT TO BID SPECIFICATIONS

### NON-DISCRIMINATION

During the performance of a contract, the contractor agrees as follows:

1. The contractor or subcontractor, where applicable, will not discriminate against any employee or applicants for employment because of age, race, creed, color, national origin, ancestry, marital status, or sex. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status or sex. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notice to be provided by the Public Agency Equal Employment Opportunity Officer setting forth provisions of the non-discrimination clause.
2. The contractor or subcontractor, where applicable, will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex.
3. The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has collective bargaining agreement or other contract or understanding a notice, to be provided by the Public Agency Equal Employment Opportunity Officer advising the labor union or workers representative of the contractor's commitments under this act and shall post copies of the notice in a conspicuous place available to employees and applicants for employment.
4. The contractor or subcontractor, where applicable agrees to comply with any regulations promulgated by the Treasurer pursuant to P.L., c.127, as amended and supplemented from time-to-time.
5. The contractor or subcontractor agrees to attempt in good faith to employ minority and female workers consistent with the applicable county employment goals prescribed by section 5.2 of the regulations promulgated by the Treasurer pursuant to P.L. 1975, c. 127 as amended and supplemented from time-to-time or in accordance with a binding determination of applicable county employment goals, determined by the Affirmative Action Office pursuant to section 5.2 of the regulations promulgated by Treasurer pursuant to P.L. 1975, c, 127 as amended and supplemented from time-to-time.

6. The contractor or subcontractor agrees to inform in writing all recruitment agencies, including employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.
7. The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established and by application Federal Law and applicable Federal Court decisions.
8. The contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status or sex and conform with the applicable employment goals consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal Law and applicable Federal Court decisions.

Provisions 4, 5, 6, 7, or 8 not required for subcontractors with (4) or fewer employees or a contractor who has presented evidence of a Federally approved or sanctioned Affirmative Action Program

Submitted By:

---

Name of Firm

---

Signature

---

Title

---

Date

AFFIDAVIT FOR AFFIRMATIVE ACTION

(This Affidavit is part of the Proposal)

STATE OF: \_\_\_\_\_

COUNTY OF: \_\_\_\_\_

being duly sworn, deposes and says that he/she resides at:

\_\_\_\_\_  
\_\_\_\_\_

and that he/she is the \_\_\_\_\_ of \_\_\_\_\_  
who signed the foregoing Proposal of Bids, that during the course of this contract, he/she will agree  
to the Plan for Affirmative Action.

Subscribed and Sworn to

before me on the \_\_\_\_ day

of \_\_\_\_\_ 20 \_\_\_\_

\_\_\_\_\_  
(Notary Public)

\_\_\_\_\_  
My Commission Expires:

(Seal)

GOODS. PROFESSIONAL SERVICES AND  
GENERAL SERVICE CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of the nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. The contractor or subcontractor, where applicable, will send to each labor union or representative or workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with the regulations promulgated by the Treasurer to P.L. 1975, c.127, as amended and supplemented from time-to-time and the Americans with Disabilities Act. The contractor or subcontractor agrees to attempt in good faith to employ minority and female workers consistent with the applicable county employment goals prescribed by N.J.A.C. 17:27-5.2 promulgated by the Treasurer pursuant to P.L. 1975, c.127 as amended and supplemented from time-to-time or in accordance with a binding determination of the applicable county employment goals determined by the Affirmative Action Office pursuant to N.J.A.C. 17:27-5.2 promulgated by the Treasurer pursuant to P.L. 1975, c.127, as amended and supplemented from time-to-time.

The contractor or subcontractor agrees to inform in writing appropriate recruitment agencies in the area, including employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices. The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal Law and applicable Federal Court decisions.

The contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and conform with the applicable employment goals, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal Court decisions. The contractor and its subcontractors shall furnish such reports or other documents to the Affirmative Action Office as may be requested by the office from time-to-time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Affirmative Action Office for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code(NJAC 17:27).

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
(NAME) PRINT OR TYPE

\_\_\_\_\_  
COMPANY NAME:

\_\_\_\_\_  
DATE:

## NON-COLLUSION AFFIDAVIT

State of New Jersey

County of \_\_\_\_\_

SS: \_\_\_\_\_

I, \_\_\_\_\_ residing in \_\_\_\_\_  
(Name of Affiant) (Name of Municipality)

in the County of \_\_\_\_\_ and State of \_\_\_\_\_ of full

age, being duly sworn according to law on my oath depose and say that:

I am \_\_\_\_\_ of the firm of \_\_\_\_\_  
(Title or Position) (Name of Firm)

the bidder making this Proposal for the bid entitled \_\_\_\_\_, and that I  
(Title of Bid Proposal)

executed the said proposal with full authority to do so that said bidder has not, directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the \_\_\_\_\_ relies upon the truth of the statements contained in said Proposal  
(Name of contracting unit)

and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by \_\_\_\_\_.

Subscribed and sworn  
before me this \_\_\_\_\_ day  
of \_\_\_\_\_, 2

\_\_\_\_\_  
(Type or Print Name)

Notary public of \_\_\_\_\_

\_\_\_\_\_  
(Signature)

My Commission expires \_\_\_\_\_

(Seal)



CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT

I, \_\_\_\_\_ of the (City, Town, Township, Borough, etc.)  
of \_\_\_\_\_ in the County of \_\_\_\_\_ and the  
State of \_\_\_\_\_ of full age, being duly sworn according to law on my  
oath depose and say that:

1. I am a(n) owner, partner, shareholder or officer of the company set forth below and am duly authorized to execute this affidavit on its behalf.

(Check Appropriate Statements(s))

\_\_\_\_\_ I own, lease or control the necessary equipment required by the plans, specifications, and advertisements under which bids are asked for.

\_\_\_\_\_ I do not own, lease or control all the necessary equipment required by plans, specifications, and advertisements under which bids are asked for.

If the bidder is not the actual owner or lessee of all the necessary equipment provide the source from which the equipment will be obtained (Attach additional sheets if necessary.)

\_\_\_\_\_  
\_\_\_\_\_  
Attach certification from the owner or person in control of the equipment definitely granting to the bidder the control of the equipment required during such time as may be necessary for the completion of that portion of the contract for which it is necessary.)

Subscribed and sworn

before me this \_\_\_\_\_ day

of \_\_\_\_\_, 2 \_\_\_\_\_

Notary Public of \_\_\_\_\_

My Commission Expires:

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Name of Company)

(Seal)

### PROOF OF BUSINESS REGISTRATION

N.J.S.A. 52:32-44 required that each contractor submit proof of business registration with the bid proposal. Proof of registration shall be a copy of the bidder's Business Registration Certificate(BRC). A BRC is obtained from the New Jersey Division of Revenue. Information on obtaining a BRC is available on the internet at [www.nj.gov/dca/lgs/lpcl/busregis/bus](http://www.nj.gov/dca/lgs/lpcl/busregis/bus) or by phone at (609) 292-1730. N.J.S.A. 52:32-44 imposes the following requirements on contractors and all subcontractors that knowingly provide goods or perform services for a contractor fulfilling this contract:

- 1) The contractor shall provide written notice to its subcontractors and suppliers to submit proof of business registration to the contractor;
- 2) Prior to receipt of final payment from a contracting agency, a contractor must submit to the contracting agency an accurate list of all subcontractors or attest that none was used;
- 3) During the term of this contract, the contractor and its affiliates shall collect and remit and shall notify all subcontractors and their affiliates that they must collect and remit to the Director, New Jersey Division of Taxation, the Use Tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq) on all sales of tangible personal property delivered into this state.

A contractor, subcontractor or supplier who fails to provide proof of business registration or provides false business registration information shall be liable to a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration not properly provided or maintained under a contract with a contracting agency. Information on the law and its requirements is available by calling (609) 292-9292.

NEW JERSEY "BUSINESS REGISTRATION CERTIFICATE" FORM

P.L. 2004 Ch. 57 requires that Business Organization's, be registered with the New Jersey Department of Treasury, Division of Revenue. The definition in the law is as follows:

"Contractor" means a business organization that seeks to enter or has entered into a contract with a contracting agency, to provide goods, services, or a construction project, the cost of which exceeds 15% of the contracting unit's bid threshold.

Please indicate below, for the bidder and all subcontractors listed on the "Subcontractor Declaration" herein, as to their registration with the NJ Department of Treasury, Division of Revenue in accordance with P.L. 2004, Ch57.

Proof of registration is required for all contractor's and named subcontractor's. Proof of registration means a copy of the organization's Business Registration Certificate". No other form can be substituted to fulfill this requirement.

Copies of the Business Registration Certificate shall be submitted and attached to this form.

<u>Name</u>	<u>Not Registered</u>	<u>Registration Number</u>
Bidder_____	_____	_____
(Subcontractor)_____	_____	_____
(Subcontractor)_____	_____	_____
(Subcontractor)_____	_____	_____
(Subcontractor)_____	_____	_____

Subscribed and Sworn  
before me this \_\_\_\_ day  
of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
Notary Public of

My Commission Expires \_\_\_\_\_

(Seal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
(Type or Print Name)

## CONSTRUCTION CONTRACT

During the performance of this contract the contractor agrees as follows:

- 1) The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, or sex. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status or sex. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Equal Employment Opportunity Officer setting forth provisions of this non-discrimination clause.
- 2) The contractor or subcontractor, where applicable, will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex.
- 3) The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Public Agency Equal Employment Opportunity Officer advising the labor union or worker's representative of the contractor's commitments under this act and shall post copies of the notice in a conspicuous place available to employees and applicants for employment.
- 4) The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to P.L. 1975, c 127, as amended and supplemented from time-to-time.
- 5) When hiring workers in each construction trade, the contractor or subcontractor agrees to attempt in good faith to employ minority workers in each construction trade consistent with applicable employment goal prescribed section 7.3 of said regulation; provided however, that the Affirmative Action Office may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provision 1, 2 and 3 as long as the Affirmative Action Office is satisfied that the contractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Affirmative Action Office, that its percentage of active "card carrying" members who are minority workers is equal to or greater than the applicable employment goal prescribed by section 7.3 of the regulations promulgated by the treasurer pursuant to

P.L. 1975, c. 127, as amended and supplemented from time-to-time. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

- A. If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall within(3) days of the contractor award, seek assurance from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the regulations promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as it is supplemented and amended from time-to-time. If the contractor or subcontractor is unable to obtain said assurance from the construction trade union at least five(5) days prior to the commencement of construction work, the contractor or subcontractor agrees directly to attempt to hire minority workers consistent with the applicable employment goal. If the contractors' or subcontractors' prior experience with a construction trade union regardless of whether the union provided said assurance indicates a significant possibility that the trade union will not refer sufficient minority workers consistent with the applicable employment goal by complying with following hiring procedures prescribed under(2); and the contractor or subcontractor further agrees immediately to take said action if it determines or is so notified by the Affirmative Action Office that the union is not referring minority workers consistent with the applicable employment goal.
- B. If the hiring of a work force consistent with the employment goal has not or cannot be achieved for each construction trade by adhering to the procedures of the preceding provision(1), or if the contractor or subcontractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions consistent with the applicable county employment goal:
  - 1. To notify the Public Agency Compliance Office, Affirmative Action Office and at least one minority referral organization of its manpower needs and request the referral of minority workers;
  - 2. To notify any minority workers who have been listed with it as awaiting available vacancies;
  - 3. Prior to commencement of work, to request the local construction trade union if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, to refer workers to fill job openings;

4. To leave standing requests for additional referral of minority workers with the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment service and the other approved referral sources until such time as the work force is consistent with the employment goal;
5. If it is necessary to lay off some of the workers in a given trade on the construction site, to assure consistency with the applicable State and Federal Statutes and Court decisions, that sufficient minority employees remain on the site consistent with the employment and to employ any minority workers laid off by the contractor or any other construction site in the area on which its work force composition is not consistent with any employment goal established pursuant to the regulations implementing P.L. 1975, c. 127;
6. To adhere to the following procedure when minority workers apply or are referred to the contractor or subcontractor:
  - i. If said individuals have never previously received any document or certification signifying a level of qualification lower than that required, the contractor or subcontractor shall determine the qualifications of such individuals and if the contractor's or subcontractor's work force in each construction trade is not consistent with the applicable employment goal, it shall employ such persons which satisfy appropriate qualification standards; provided however, that a contractor or subcontractor shall determine that the individual at least possesses the skills and experience recognized by any workers skills and experience classification determination which may have been made by a Public Agency Compliance Officer, Union, Apprentice Program or a Referral Agency, provided the Referral Agency is acceptable to the Affirmative Action Office and provided further, that if necessary, the contractor shall hire minority workers who qualify as trainees pursuant to subsection 2(k) of these regulations. All of the requirements of the paragraph, however, are limited by the provisions of paragraph (c) below.
  - ii. If the contractor's subcontractor's work force is consistent with applicable employment goals, the name of said minority group individual shall be maintained on a waiting list for first consideration in the event the contractor's or subcontractor's work force is no longer consistent with the applicable employment goal.

- iii. If for any reason said contractor or subcontractor determines said minority group individual is not qualified or if said individual qualifies as an advance trainee or apprentice, said contractor or subcontractor shall inform said individual in writing with the reasons for the determination and maintain copy in its files, and send a copy to the Public Agency Compliance Officer and the Affirmative Action Office.
- 7. To keep a complete and accurate record of all requests made for the referral of works in any trade covered by the contract, and said records shall be kept on forms made available by the Affirmative Action Office and shall be submitted promptly to that office upon request.
- C. The contractor or subcontractor agrees that nothing contained in the preceding provision(3) shall preclude the contractor or subcontractor from complying with hiring all apprenticeship provisions in any applicable collective bargaining agreement and where required by custom or agreement, it shall send journeymen and trainees to the union for referral or to the apprenticeship program for admission, pursuant to such agreement or arrangements; provided, however, that where the practices of a union or apprenticeship program will result in the exclusion or minority persons or the failure to refer minority group persons consistent with the county employment goal, the contractor or subcontractor shall not be required to employ minority advanced trainees and trained in numbers which result in the employment of advanced trainees as percentage of the total work force for construction, trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also the contractor or subcontractor agrees that, in implementing the procedures of the preceding provision (b), it shall, where practicable, employ minority workers residing within the geographical jurisdiction of the residing union.
- D. The contractor agrees to complete monthly Project Manning Reports on forms provided by the Affirmative Action Office or in the form prescribed by the Affirmative Action Office and submit a copy of said form no later than three(3) days after signing a construction contract and said form once a month thereafter for the duration of this contract the Affirmative Action Office and to the Public Agency Compliance Officer. The contractor agrees to cooperate with the Public Agency in the payment of budgeted funds, as if necessary, for on-the-job programs for outreach and training of minority trainees employed on the construction projects.  
Provision 4 and 5 not required for contractors or subcontractors with four(4) or fewer employees or a contractor who has presented evidence of a Federally approved or sanctioned Affirmative Action Program.

CONTRACT FORM

TOWNSHIP OF GLOUCESTER - CAMDEN COUNTY, NEW JERSEY

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, by and between the TOWNSHIP OF GLOUCESTER, COUNTY OF CAMDEN, a Municipal Corporation of the STATE OF \_\_\_\_\_, part of the second part;

The vendor/contractor agrees to sell/construct and the purchaser agrees to buy the following upon the terms and conditions hereinafter set forth.

The vendor/contractor and the purchaser agrees, to be bound by the terms of the Notice to Bidders, Instruction to Bidders General Conditions and Specifications attached hereto and made a part of hereof, and delivery shall be made when and as directed by the purchaser. The vendor/contractor further agrees to furnish a bond with sufficient surety in the amount of \_\_\_\_\_ the amount of this contract, guaranteeing performance of the contract or delivery to be made a part hereof. The purchaser agrees to make payments in accordance with the terms of proposal.

This contract constitutes the entire agreement between the parties hereto and its provisions shall not be changed except in writing, agreeable to both parties. This contract shall expire \_\_\_\_\_.

\_\_\_\_\_  
TOWNSHIP CLERK

(Corporate Seal)  
ATTEST:

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
COMPANY

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
TITLE



## PUBLIC WORKS CONTRACTOR REGISTRATION ACT

N.J.S.A. 34:11-56.25, et seq. Requires that a general or prime contractor and any listed subcontractors name in the contractor's bid proposal shall possess a certificate at the time the bid proposal is submitted. After bid proposals are received and prior to award of contract, the successful contractor shall submit a copy of the contractor's certification along with those of all listed subcontractors at any tier have their certificate prior to starting work on the job.

Under the law a "contractor" is a "person, partnership, association, joint stock company, trust corporation or other legal business entity or successor thereof who enters into a contract" which is subject to the provisions of the New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25, et seq.). It applies to contractors bases in New Jersey or in another state.

## PUBLIC WORKS CONTRACTOR REGISTRATION FORM

C.34:11-56.48, p.l. 1999, Ch. 238 requires that contractors and subcontractors, in certain instances, be registered with the New Jersey Department of Labor, Division of Wage and Hour Compliance. The definition in the law is as follows.

"Contractor means a person, partnership, association, joint stock company, trust, corporation, or other legal business entity or successor thereof who enters into a contract which is subject to the provisions of the "New Jersey Prevailing Wage Act", P.L. 1963, C150 (c.34:11-56.25 et seq.). For the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor of a contractor as defined herein, except that, for the purposes of this act, no pumping station, treatment plant or construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as public building regularly open to and used by the general public or a public institution.

Please indicate below, for the bidder and all subcontractors listed on the "Subcontractor Declaration" herein, as to their registration with the NJ Department of Labor, Division of Wage and Hour Compliance in accordance with P.L. 1999, Ch. 238

<u>NAME</u>	<u>NOT REGISTERED</u>	<u>REGISTRATION #</u>
Bidder _____	_____	_____
(Subcontractor) _____	_____	_____
(Subcontractor) _____	_____	_____
(Subcontractor) _____	_____	_____
(Subcontractor) _____	_____	_____

IF IN THE PROCESS OF REGISTRATION, BUT HAVE NOT YET RECEIVED A REGISTRATION NUMBER, ATTACH PROOF OF APPLICATION FOR CONTRACTOR AND/OR SUBCONTRACTORS.

Registration forms are available by contacting Contractor Registration Unit at (609) 292-9464.

Subscribed and sworn before me this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(Name & Title Type or Print)

My Commission Expires) \_\_\_\_\_ 20\_\_\_\_\_

AMERICANS WITH DISABILITIES ACT OF 1990  
Equal Opportunity for Individuals with disability

The contractor and the Township of Gloucester, do hereby agree that the provisions of Title 11, of the Americans With Disabilities Act of 1990 42 U.S.C. S12101 et seq, which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant there unto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event that the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the owner's grievance procedure, the contractor agrees to abide by any decision of the owner which is rendered pursuant to said grievance procedure. If any action or administrative results in an award of damages against the owner, or if the owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the owner or any of its agents, servants, and employees, the owner shall expeditiously forward or have forwarded to the contractor every demand, complaint, notice summons, pleading, or other process received by the owner or its representatives.

It is expressly agreed and understood that any approval by the owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the owner pursuant to this paragraph.

It is further agreed and understood that the owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractor for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agree that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.