

COUNTY OF BOONE - MISSOURI



**REQUEST FOR PROPOSAL
FOR
NETWORKED FIRE ALARM DETECTION AND NOTIFICATION SYSTEM FOR
THE BOONE COUNTY JAIL**

**RFP #47-02OCT12
Release Date: September 4, 2012**

**Submittal Deadline:
October 2, 2012
not later than 9:15 a.m. Central Time
Location: Boone County Purchasing
613 E. Ash Street, Room 110
Columbia, MO 65201**

**MANDATORY PRE-PROPOSAL CONFERENCE
Thursday, September 13, 2012
10:00 a.m. Central Time
Location: Boone County Sheriff Department
2121 County Drive
Columbia, MO 65202**

Scope of Work Prepared by:
Malicoat – Winslow Engineers, P.C.
Freddie Malicoat, P.E.
5649 N. Clearview Road
Columbia, Missouri 65202
Phone: (573) 875-1300
Fax: (573) 875-1305



**Boone County Purchasing
613 E. Ash Street, Room 110
Columbia, Missouri 65201**

**Melinda Bobbitt, CPPB, Director
Phone: (573) 886-4391 Fax: (573) 886-4390
E-mail: mbobbitt@boonecountymo.org**



NOTICE OF REQUEST FOR PROPOSAL

Boone County is accepting Request for Proposals for the following:

PROPOSAL #: 47-02OCT12 – Networked Fire Alarm Detection and Notification System for the Boone County Jail

Sealed proposals will be accepted until **9:15 a.m. on Tuesday, October 2, 2012** in the Boone County Purchasing Office, Room 110, 613 E. Ash Street, Columbia, MO 65201.

A **mandatory** pre-proposal conference has been scheduled for Thursday, September 13, 2012, at 10:00 A.M. at the Boone County Sheriff Department, Conference Room, 2121 County Drive, Columbia, Missouri 65202.

Request for Proposals are available in the Purchasing Office and requests for copies may be made by phone (573) 886-4391; fax (573) 886-4390 or e-mail: mbobbitt@boonecountymo.org or can be obtained on our web page: <http://www.showmeboone.com>.

Melinda Bobbitt, CPPB
Director of Purchasing

Insertion: Tuesday, September 4, 2012
COLUMBIA MISSOURIAN



1. INTRUCTIONS AND GENERAL CONDITIONS

1.1 **Delivery of Proposals:** Sealed proposals, subject to Instructions and General Conditions and any special conditions set forth herein, will be received at the Boone County Purchasing office until the proposal closing date and time indicated herein for furnishing the County with services as detailed in the following request for proposal.

- a) **Proposal Closing:** All proposals shall be **delivered before 9:15 A.M., Central Time, on Tuesday, October 2, 2012** to:

Boone County Purchasing Department
Melinda Bobbitt, CPPB, Director
613 E. Ash Street, Room 110
Columbia, Missouri 65201

- b) The County will not accept any proposals received after 9:15 A.M. and will return such late proposals to the Offeror.
- c) **Proposal Opening:** Proposals will be opened during a Boone County Commission meeting on October 2, 2012 after 9:30 a.m. in the Boone County Government Building, Commission Chambers, 801 E. Walnut, Columbia, MO.
- d) The County will not accept any proposals received after 9:15 A.M. and will return such late proposals to the Offeror.
- e) Offerors must submit one (1) original, and six (6) copies of the proposal (total of seven). Proposals will be opened publicly, but only names of Offerors will be read aloud. All proposal responses will be considered public information, and following contract execution or rejection of all proposal responses, all responses will become a part of public record and will be released to any person who requests it.
- f) Proposals must be submitted in a sealed envelope identified with the proposal number and date of closing. List the proposal number on the outside of the box or envelope and note "Response to Request for Proposal enclosed."
- g) If you do not care to submit a proposal, please return the *No Bid Response Page* and note your reason. No fax or electronic transmitted proposals will be accepted.
- h) If you have obtained this proposal document from our Web Page or from a source other than the Boone County Purchasing Department, please check with our office prior to submitting your proposal to ensure that you have a complete package. The Purchasing Department cannot be responsible for providing addenda if we do not have you on our Vendor list for this proposal. You may check our web site for addenda at www.showmeboone.com, then select "Purchasing", then "Current Bid Opportunities".



2. INTRODUCTION AND GENERAL INFORMATION

2.1 Introduction:

2.1.1 This document constitutes a request for sealed proposals for **47-02OCT12 – Networked Fire Alarm Detection and Notification System for the Boone County Jail** as set forth herein.

2.1.2 Organization – This document, referred to as a Request for Proposal (RFP), is divided into the following parts:

- 1) Instructions and General Conditions
- 2) Introduction and General Information
- 3) Scope of Services
- 4) Contract Terms and Conditions for Awarded Contractor
- 5) Proposal Submission Information
- 6) Response/Pricing Page
- 7) Signature and Identity of Offeror
- 8) Work Authorization Certification
- 9) Debarment Certification
- 10) Standard Terms and Conditions
- 11) Prior Experience
- 12) Statement of Offeror's Qualifications
- 13) Boone County Jail Fire Alarm Specification
- 14) Boone County Jail Security Intercom System Specification
- 15) Annual Wage Order #19
- 16) Affidavit Compliance with the Prevailing Wage Law
- 17) Affidavit of Compliance with OSHA
- 18) "No Bid" Response Form

2.2. Guideline for Written Questions:

2.2.1 **All questions** regarding this Request for Proposal should be submitted in writing no later than **1:00 p.m., September 26, 2012**. All questions must be mailed, faxed or e-mailed to the attention of Melinda Bobbitt, CPPB, Director of Purchasing. All such questions will be answered in writing, and such answers will be provided to all parties having obtained a Request for Proposal packet by the County by posting the addendum on the County Web site at www.showmeboone.com (Select Purchasing, then Current Bid Opportunities).

Submit questions to:

- a. Melinda Bobbitt, CPPB
Director of Purchasing
613 E. Ash Street, Room 110
Columbia, Missouri 65201
Phone: (573) 886-4391
Fax: (573) 886-4390
E-mail: mbobbitt@boonecountymo.org

- 2.2.2 In the event that it becomes necessary to revise any part of this RFP, written addenda will be issued. Any addendum to this RFP is valid only if in writing and issued by the Boone County Purchasing Department. Verbal conversations or agreements with any officer, agent, or employee of the County which modify any terms or obligations of this RFP are invalid.

2.3. Mandatory Pre-Proposal Conference

- 2.3.1. To assist interested Offerors in preparing a thorough proposal, a **mandatory** pre-proposal conference has been scheduled for **Thursday, September 13, 2012, at 10:00 a.m.** in the Sheriff Department Conference Room 2121 County Drive, Columbia, Missouri 65202. A site visit will immediately follow. The purpose of the meeting will be to address any questions or concerns regarding the proposal.
- 2.3.2. Please note this is a **mandatory** pre-proposal conference. Proposal responses will only be accepted by the County from Offerors that attend the pre-proposal conference. Proposal responses will be considered non-responsive from any Offeror that does not attend the mandatory pre-proposal conference. Offerors **MUST** attend since information relating to this RFP and specific requirements for working on this project will be discussed in detail. Offerors should bring a copy of the RFP since it will be used as the agenda for the pre-proposal conference.
- 2.3.3. Offerors are strongly encouraged to advise the Purchasing Department of Boone County within five (5) days of the scheduled pre-proposal conference of any special accommodations needed for disabled personnel who will be attending the conference so that these accommodations can be made.

2.4. Bonds:

2.4.1. Performance Bond and Labor and Material Payment Bond: Upon award of the Contract, the successful Contractor shall furnish a Performance Bond and a Labor and Material Payment Bond, each in an amount equal to the full Contract price, guaranteeing faithful compliance with all requirements of the Contract Documents and complete fulfillment of the Contract, and payment of all labor, material, and other bills made in carrying out this Contract.

2.4.2. Bid Bond: A Bid Bond or Certified Check made payable to Boone County, in the amount of 5% of the Base Bid(s) shall accompany the proposal response as a guarantee that the Offeror, if awarded the Contract, will furnish a satisfactory Performance and Payment Bond; execute the contract; and proceed with the work. Upon failure to do so, the Offeror shall forfeit the deposit or amount of the Bid Bond as liquidated damages, and no mistakes or errors on the part of the Offeror shall excuse the Offeror or entitle the Offeror to a return of the deposit or Bid Bond.

2.5. Owner's Tax Exemption Status

The Owner of this project, County of Boone, is a sales tax exempt entity. Because of this, construction materials purchased for and used on this project are eligible for exemption from Missouri sales tax. All bidders acknowledge and agree that its lump sum price to the County of Boone, excludes Missouri sales and use taxes and that the proposed contract sum does not include any Missouri sales taxes for which the County of Boone receives an exemption.

To enable the County of Boone to take advantage of its tax-exempt status, purchase of materials and equipment by the Contractor for its work on this project shall be made under and pursuant to the tax

exempt purchase procedure authorized by Missouri Statutes. This procedure includes, among other requirements, the issuance of project exempt certificates to all Contractors who use those certificates to effect tax exempt purchases.

2.6. Insurance Requirements: The vendor receiving a contract award shall provide an Insurance Certificate to the Purchasing Department at time of contract execution with the following levels of insurance.

2.6.1. The Contractor shall not commence work under this contract until they have obtained all insurance required under this paragraph and such insurance has been approved by the County, nor shall the Contractor allow any subcontractor to commence work on their subcontract until all similar insurance required of subcontractor has been so obtained and approved. All policies shall be in amounts, form and companies satisfactory to the County which must carry an A-6 or better rating as listed in the A.M. Best or equivalent rating guide. Insurance limits indicated below may be lowered at the discretion of the County.

2.6.2. **Compensation Insurance** - The Contractor shall take out and maintain during the life of this contract, **Employee's Liability and Worker's Compensation Insurance** for all of their employees employed at the site of work, and in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. Worker's Compensation coverage shall meet Missouri statutory limits. Employers' Liability limits shall be \$1,000,000.00 each employee, \$1,000,000.00 each accident, and \$1,000,000.00 policy limit. In case any class of employees engaged in hazardous work under this Contract at the site of the work is not protected under the Worker's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide Employers' Liability Insurance for the protection of their employees not otherwise protected.

2.6.3. **Comprehensive General Liability Insurance** - The Contractor shall take out and maintain during the life of this contract, such comprehensive general liability insurance as shall protect them and any subcontractor performing work covered by this contract, from claims for damages for personal injury including accidental death, as well as from claims for property damages, which may arise from operations under this contract, whether such operations be by themselves or for any subcontractor or by anyone directly or indirectly employed by them. The amounts of insurance shall be not less than \$2,000,000.00 combined single limit for any one occurrence covering both bodily injury and property damage, including accidental death. If the Contract involves any underground/digging operations, the general liability certificate shall include X, C, and U (Explosion, Collapse, and Underground) coverage. If providing Comprehensive General Liability Insurance, then the Proof of Coverage of Insurance shall also be included.

2.6.4. **COMMERCIAL Automobile Liability** - The Contractor shall maintain during the life of this contract, automobile liability insurance in the amount of not less than \$2,000,000.00 combined single limit for any one occurrence, covering both bodily injury, including accidental death, and property damage, to protect themselves from any and all claims arising from the use of the Contractor's own automobiles, teams and trucks; hired automobiles, teams and trucks; and both on and off the site of work.

2.6.5. **BUILDER'S RISK** - The Contractor shall maintain during the life of this contract, builder's risk insurance coverage to cover damage to materials and equipment on the site, in the total amount of the contract.

2.6.6. **Proof of Carriage of Insurance** - The Contractor shall furnish the County with Certificate(s) of Insurance which name the County as additional insured in an amount as required in this contract,

contain a description of the project or work to be performed, and requiring a thirty (30) day mandatory cancellation notice. In addition, such insurance shall be on occurrence basis and shall remain in effect until such time as the County has made final acceptance of the facility contracted.

2.7. Indemnity Agreement: To the fullest extent permitted by law, Contractor shall indemnify, hold harmless and defend the County, its directors, agents, and employees from and against all claims arising by reason of any act or failure to act, negligent or otherwise, of Contractor, (meaning anyone, including but not limited to consultants having a contract with Contractor or subcontractor for part of the services), of anyone directly or indirectly employed by Contractor, or of anyone for whose acts the Contractor may be liable, in connection with providing these services. This provision does not, however, require Contractor to indemnify, hold harmless, or defend the County of Boone from its own negligence.

2.8. Criminal Background Verification - Boone County requires all employees of all Contractors be subjected to a Criminal Background Check. The Background Check for all Contractors' employees will be administered by Boone County. Each Contractor **MUST fill out Identification Application for each employee.** An identification badge will be issued to each Contractor employee authorized to access the site of the work.



3. SCOPE OF SERVICES

3.1. Project Description:

The County of Boone – Missouri, hereafter referred to as *the County*, hereby solicits formal written proposals from qualified Offerors to provide the furnishing, delivery, installation, set-up, testing, training and maintenance for a **Networked Fire Alarm Detection and Notification System for the Boone County Jail** located in Columbia, Missouri.

3.2. Background Information:

3.2.1. This will replace the Boone County Jail intercom system currently in place.

3.2.3. Additional information about the County of Boone – Missouri can be obtained from the following internet web site at: <http://www.showmeboone.com>

3.2.4. Although an attempt has been made to provide accurate and up-to-date information, the County of Boone – Missouri does not warrant or represent that the background information provided herein reflects all relationships or existing conditions related to this Request for Proposal.

3.3. Scope of Services: Provided by Malicoat – Winslow Engineers, P.C. See attached Boone County Jail Fire Alarm Specification (pages 32 – 46) and Boone County Jail Security Intercom System Specification (pages 47 – 66).

3.4. Or Equal: Offeror shall propose acceptable model or an approved equal for any proposed equipment. Determination of equality is solely Boone County's responsibility. For additional information about bidding "or equal", see Boone County Jail Security Intercom System Specification, 1.1 Summary, paragraph B (page 47).

3.5. Offeror must clearly state in writing any restrictions or deviations from these specifications. In the absence of such statement, the County will assume that all items/services offered are in strict compliance with the technical and financial requirements, contract terms and conditions as described in these specifications. The proposal of the Contractor will be included as part of the final contract.

3.6. Warranty and Guarantee: Offeror shall submit with their proposal response a complete description of any and all warranties offered as part of the resulting contract. At a minimum, Offeror agrees to the following:

Contractor warrants and guarantees to Owner and Engineer that all work will be in accordance with the Contract Documents and will not be defective. All materials provided by Contractor shall be new material of high quality which shall give long life and reliable operation. The workmanship shall be of high quality in every detail. Prompt notice of all defects shall be given to Contractor. All defective work, whether or not in place, may be rejected, corrected, or accepted as follows:

Correction or Removal of Defective Work

If required by Engineer, Contractor shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by Engineer, remove it from the site and replace it with non-defective Work. Contractor shall bear all direct, indirect, and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals made necessary thereby).

One Year Correction Period

If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work, or if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work removed and replaced and all direct, indirect, and consequential costs of removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) will be paid by the Contractor. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

3.7. Manuals: The Contractor must supply the user documentation/operating manuals necessary to operate the equipment/software provided.

3.8. Delivery and Installation: Firm delivery and installation schedules are essential in the performance of the contract to be awarded hereunder. Offerors shall set forth in their proposal the number of days in which delivery and installation will be fully complete in strict accordance with the specifications on the Response/Pricing Page. A timely delivery schedule with an installation and training schedule shall be stated on the Response Page. Delivery date should be within thirty days from date of purchase order unless stated otherwise.

Note: Contractor shall not ship or install equipment without a properly executed purchase order.

3.9. Delivery Terms: FOB Destination with Inside Delivery to designated room. All deliveries shall be made FOB Destination with freight charges included and prepaid. The seller pays and bears the freight charges.

3.10. Completion Date and Liquidated Damages: The Offeror hereby agrees to complete the work described herein and specified before the completion date of **April 1, 2013**, and to allow a deduction of \$250.00 dollars per working day from the final payment as liquidated damages for each day that completion is delayed beyond the specified completion date. Time is of the essence of this contract.

3.11. Billing and Payment: All invoices must be submitted to the Boone County Facilities Maintenance Department, 613 E. Ash Street, Room 107, Columbia, MO 65201. Payment will be made within 30 days after receipt of a correct and valid invoice following installation and acceptance of equipment. Purchase Order number should appear on invoice.

3.12. Prevailing Wage: PREVAILING WAGE RATES – The contract shall be based upon payment by the Contractor of wage rates not less than the prevailing hourly wage rate for each craft or classification of workers engaged on the work as determined by the Industrial Commission of Missouri on behalf of the Department of Labor and Industrial Relations. The Contractor shall comply with all requirements of the

prevailing wage law of Missouri, Revised Statutes of Missouri, Sections 290.210 to 290.340 including the latest amendments thereto.

Current prevailing wage order #19 is to be used. The prevailing wage law does not prohibit payment of more than the prevailing rate of wages nor does it limit the hours of work which may be performed by any worker in any particular period of time. The current prevailing wage is available on our website at www.showmeboone.com/purchasing.

3.13. OSHA: Each Contractor and Subcontractor shall file with the County, upon completion of the project and prior to final payment thereof, an affidavit stating that he has fully complied with the provisions and requirements of the Prevailing Wage Law and OSHA Training Requirements.

3.13.1. OSHA PROGRAM REQUIREMENTS

The Contractor is familiar with the requirements of 292.675 RSMo. The Contractor shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees, subcontractors or others acting on behalf of Contractor on-site which meets the requirements of 292.675 RSMo.

3.13.2. The Contractor and each subcontractor shall keep accurate records of those employees who are working on-site and a record of each such employee's completion of the OSHA program.

3.13.3. The Contractor shall forfeit as a penalty to the County the sum of Two Thousand Five Hundred Dollars (\$2,500.00) plus One Hundred Dollars (\$100.00) for each employee employed by the Contractor or subcontractor, for each calendar day, or portion thereof, such employee is found to be employed in violation of 292.675 RSMo. Said amounts shall be withheld from all sums and amounts due under this provision when making payments to the Contractor.

3.14. Overhead Power Line Safety Act: The Contractor is aware of the provisions of the Overhead Power Line Safety Act, 319.075 to 319.090 RSMo, and agrees to comply with the provisions thereof. Contractor understands that it is their duty to notify any utility operating high voltage overhead lines and make appropriate arrangements with said utility if the performance of contract would cause any activity within ten feet of any high voltage overhead line. To the fullest extent permitted by law, Contractor shall indemnify, hold harmless and defend the County, its directors, officers, agents, and employees from and against all claims, damages, losses and expenses (including but not limited to attorney's fees) arising by reason of any act or failure to act, negligent or otherwise, of Contractor, of any subcontractor (meaning anyone, including but not limited to consultants having a contract with contractor or a subcontract for part of the services), of anyone directly or indirectly employed by contractor or by any subcontractor, or of anyone for whose acts the contractor or its subcontractor may be liable, in connection with any claims arising under the Overhead Power Line Safety Act. Contractor expressly waives any action for Contribution against the County on behalf of the Contractor, any subcontractor (meaning anyone, including but not limited to consultants having a contract with contractor or a subcontract for part of the services), anyone directly or indirectly employed by contractor or by any subcontractor, or of anyone for whose acts the contractor or its subcontractor may be liable, and agrees to provide a copy of this waiver to any party affected by this provision.

3.15. SALES/USE TAX EXEMPTION – County will provide the Contractor with a completed Missouri Project Exemption and Missouri Tax Exemption letter for Boone County, Missouri and the Contractor shall be responsible for furnishing the exemption certificate and tax exemption letter to all authorized subcontractors and suppliers providing materials incorporated in the work. All invoices issued for purchases for such materials, supplies, and taxable rentals shall be in the name of Boone County and contain the project number assigned by Boone County for the contract awarded. It shall be the responsibility of the

Contractor to insure that no sales or use taxes are included in the invoices and that the County pays no sales/use taxes from which it is exempt. The Contractor shall be responsible for obtaining revised exemption certificates and revised expiration dates if the work extends beyond the estimated project completion date or a certificate expiration date. The Contractor shall also be responsible for retaining a copy of the project exemption certificate for a period of five years and for compliance with all other terms and conditions of section 144.062 RSMo. Not otherwise herein specified. The Contractor agrees not to use or permit others to use the project exemption certificate for taxable purchases of materials or rentals and supplies not directly incorporated into or used in the work to which it applies and agrees to indemnify and hold the County harmless from all losses, expenses and costs including litigation expenses and attorney fees resulting from the unauthorized use of such project exemption certificates.

3.16. Subcontractors, Suppliers and Others

Contractor shall not employ any Subcontractor, Supplier, or other person or organization (including those acceptable to Owner and Engineer as indicated below), whether initially or as a substitute, against whom Owner or Engineer may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other person or organization to furnish or perform any of the Work against whom the Contractor has a reasonable objection.

If the Owner requires identity of certain Subcontractor, Suppliers, or other persons or organizations (including those who are to furnish the principal items of material and equipment) to be submitted to Owner in advance of the specified date prior to the Effective Date of the Agreement for acceptance by Owner and Engineer and if Contractor has submitted a list thereof in accordance with the project Specifications, Owner's or Engineer's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier, or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case Contractor shall submit an acceptable substitute, the Contract Price will be increased by the difference in the cost occasioned by such substitution and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by Owner or Engineer of any such Subcontractor, Supplier, or other person or organization shall constitute a waiver of any right of Owner or Engineer to reject defective Work.



4.0. CONTRACT TERMS AND CONDITIONS FOR AWARDED CONTRACTOR

4.1. **Contract Period:** The initial term of the resulting contract agreement for the proposed **equipment/software** from this Request for Proposal will begin at the time of contract award and end on the date supplied by the Offeror for firm pricing for equipment (on Response/Pricing Page). **The maintenance** portion of the Contract Agreement should be from equipment installation through **December 31, 2013**. The maintenance agreement may be renewed by the Purchasing Director for up to an **additional five (5) one-year periods**. Maintenance prices are subject to adjustment thereafter per pricing proposed on Response Page, effective on the renewal date, and must remain firm through the end of the renewal period.

4.2. **Contract Documents:** The successful Offeror shall be obligated to enter into a written contract with the County within 30 days of award on contract forms provided by the County. If Offeror desires to contract under their own written agreement, any such proposed agreement shall be submitted in blank with their response. County reserves the right to modify any proposed form agreement or withdraw its award to a successful Offeror if any proposed agreement contains terms and conditions inconsistent with its request or are unacceptable to county legal counsel.

4.3. **Provisions for Termination:** The contract may be terminated by the County for any of the following reasons or under any of the following circumstances.

4.3.1. Due to a material breach of any term or condition of this agreement.

4.3.2. If in the opinion of Boone County, delivery of products / services are delayed or products / services delivered are not in conformity with the contract documents.

4.3.3. If appropriations are not made available and budgeted for in any calendar year.

4.3.4. Boone County reserves the right to cancel all or any part of orders if delivery is not made or work is not started as guaranteed. In case of delay, the Contractor **MUST** notify the County.

4.4. In case of any default by the Contractor, the County may procure the product or service from other sources and hold the Contractor responsible for any damages incurred including, but not limited to, excess cost or handling charge. The County shall have the right to remove any Contractor who defaults on any contract with the County from all Bidders' lists.

4.5. The successful Contractor is prohibited from assigning, transferring, conveying, subletting, or otherwise disposing of this agreement or its rights, title or interest therein, or its power to execute such agreement to any other person, company or corporation without the prior consent and approval in writing by the County.

4.6. Award will be made by written notification from the Purchasing Director. This written notice shall be deemed to result in a binding contract which shall be governed by the laws of the State of Missouri as adopted and in force on the date of the agreement.

4.7. Contractor agrees to furnish equipment and service, and to perform the delivery of equipment and service within the stated completion schedule, and in strict compliance with requirements stated in the RFP Document.

4.8. Contractor proposes and agrees to accept, as full compensation for furnished service, the price submitted in response to the RFP document or subsequent Best and Final Offer(s). All related costs associated with providing the services specified shall be considered by both County and Contractor to be included within the quoted price. The County shall not pay, nor be liable for, any additional cost including, but not limited to taxes, insurance, interest, penalties, termination payments, attorney fees, liquidation damages, etc.

4.9. Contractor agrees that no modification of any provision contained in the contract shall be made, or construed to be made, unless such modification is mutually agreed to by both parties and incorporated in a written amendment to the contract approved by the Purchasing Director.

4.10. Contractor shall provide and install equipment that meets or exceeds the specifications contained in this RFP.

4.11. The Contractor must provide any additional equipment necessary, at no cost to the County, if the awarded equipment does not meet the specifications outlined in this document. The County shall determine whether the specifications are adequately met.

4.12. Attached Standard Terms and Conditions for Contracts shall apply to the contract award.

4.13. Payments: The successful Contractor will be allowed payment in accordance with the following schedule:

No later than 45 days after receipt of invoice from the Contractor, the County will make partial payment to the Contractor on the basis of a duly certified approved estimate of the cost of materials delivered to the site and work performed at the site during the preceding calendar month by the Contractor, but the County will retain 10 percent of the amount of each such estimate. No later than 45 days after final tests and acceptance final payment shall be due.

The Contractor shall, by affidavit, submit to the Engineer a sworn certification to the County that all bills and claims properly due and chargeable against the work have been satisfied and that the laws relating to the payment of prevailing wage rates have been complied with and shall release the County of Boone from all further claims, which certificate must bear the written endorsement of the Surety on the bond. The acceptance by the Contractor of the final payment shall constitute a release and waiver of any and all rights and privileges under the terms of the Contract; further, the acceptance by the Contractor of final payment shall relieve the County from any and all claims or liabilities on part of the County relating to or connected with the Contract.

The cost of all licenses and permits and other expenses and costs incidental to the fulfillment of this Contract will be paid by the Contractor, and the total amount of such costs will be included in the total cost of the work.

Assignments: No money due at the time or which may become due, and no claim of any character because of any performance or breach of the Contract shall be assigned or transferred to any other person so as to bind or affect the County without the written consent of the Surety and the County.

The Contractor shall pay for all materials, supplies, services, and equipment as follows:

1. For all transportation and utility service not later than the 20th day of the calendar month following that in which the services are rendered, and
2. For all materials, tools, and other expendable equipment to the extent of 90 percent of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the project, and the balance of the cost thereof not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used.

4.14. Extra and/or Additional Work and Changes: If any extra and/or additional work is to be done or any change in the plans and specifications is deemed necessary, the County may issue to the Contractor a written change order directing that such extra and/or additional work be done or that such change be made, and the Contract shall be modified accordingly. Compensation to the Contractor will be calculated as an addition to or deduction from the Contract price, based upon such written terms as may be established by the owner, either (a) by an acceptable lump sum proposal of the Contractor, (b) on a cost-plus limited basis not to exceed a specified limit, or (c) on basis of bid or mutually agreed upon unit prices. In the event that none of the foregoing methods are agreed upon with the Contractor, the County may perform the work with its own forces or under separate contract with another contractor.

4.15. County's Right to Withhold Certain Amounts and Make Application Thereof: The County shall have the right to withhold from payments due to the Contractor, in addition to the retained percentages herein elsewhere provided for, such amount or amounts as may be necessary to pay just claims against the Contractor for labor and services rendered and materials furnished in or about the work covered by this Contract, or for liquidated damages. The County is by this Contract appointed the agent of the Contractor to apply such retained amounts to the payment of any of the foregoing.

4.16. Patents: The Contractor shall protect the County against suits for patent infringement on material, equipment, and methods used.

4.17. Discharge of Employees: Owner reserves the right to require the removal from the site of the Work any employee of the Contractor or any subcontractor if, in the judgment of the Owner, such removal is necessary to protect the interest of the Owner, upon written notice from the Owner.

4.18. Assignment of Contract: No assignment by the Contractor of any principal construction contract or any part thereof or of the funds to be received thereunder by the Contractor, will be recognized unless such assignment has had the approval of the County and the Surety has been given due notice of such assignment in writing. In addition to the usual recitals in assignment contracts, the following language must be set forth:

"It is agreed that the funds to be paid to the assignee under this assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said Contract in favor of all persons, firms, or corporations rendering such services or supplying such materials."

4.19. Accident Prevention: Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment, and all hazards shall be guarded or eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction, 8th Edition, 1999, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws. Current standards of the Occupational Safety and Health Act shall be applied.

4.20. Legal Requirements: The Contractor shall do all work in such manner as to comply with all County ordinances, and laws of the County, State, and Nation as apply to the work herein outlined. The Contractor shall also obtain all necessary licenses and permits and keep necessary records as required.

4.21. Equal Opportunity: The County of Boone is an equal opportunity affirmative action employer, pursuant to federal and state law, and all respondents submitting bids shall be considered to be EEO/AA employers in compliance with federal and state laws, unless otherwise stipulated by the bidders herein.

4.22. Domestic Purchasing Policy: Contractors are encouraged to select and use materials manufactured, assembled, or produced in the United States in the performance of this contract whenever the quality and price are comparable with other goods.

By submission of this bid, the vendor certifies that they are in compliance with section 34.353 and, if applicable, section 34.359 (“Missouri Domestic Products Procurement Act”) of the Revised Statutes of Missouri, 1987.



5. PROPOSAL SUBMISSION INFORMATION

5.1. RESPONSE TO PROPOSAL

5.1.1. Submission of Proposals:

5.1.1.1. When submitting a proposal, the Offeror should include the **original and six (6) additional copies**.

a. The Offeror shall submit the proposal to:

Boone County Purchasing Department
Attn: Melinda Bobbitt, CPPB, Director of Purchasing
613 E. Ash Street, Room 110
Columbia, MO 65201

b. The proposal responses must be delivered no later than **9:15 a.m. on October 2, 2012**. Proposals will not be accepted after this date and time.

5.1.1.2. To facilitate the evaluation process, the Offeror is encouraged to organize their proposal as described below and in section 5.1.4.

- a. Each distinctive section should be titled with paragraph number and all material related to that category should be included therein.
- b. The signed response page from the original RFP and all signed amendments should be placed at the beginning of the proposal response.
- c. The Proposal must, at a minimum, address all mandatory and desired services, equipment, materials, etc. Responses shall fully describe how the service will be performed and what hardware/software (if any) is required at the County to access the service.

5.1.1.3. The Offeror is cautioned that it is the Offeror's sole responsibility to submit information related to the evaluation categories, and that the County is under no obligation to solicit such information if it is not included with the proposal. The Offeror's failure to submit such information may cause an adverse impact on the evaluation of the proposal. Any Offeror whose responses deviate from the outlined specifications may automatically be disqualified.

5.1.1.4. Offeror's Contacts: Offerors and their agents (including subcontractors, employees, consultants, or anyone else acting on their behalf) must direct all of their questions or comments regarding the RFP, the evaluation, etc. to the buyer of record indicated on the first page of this RFP. Offerors and their agents may not contact any County employee other than the buyer of record regarding any of these matters during the solicitation and evaluation process. Inappropriate contacts are grounds for suspension and/or exclusion from specific procurements.

Offerors and their agents who have questions regarding this matter should contact the buyer of record.

5.1.2. Competitive Negotiation of Proposals: The Offeror is advised that under the provisions of this Request for Proposal, the County reserves the right to conduct negotiations of the proposals received or to award a contract without negotiations. If such negotiations are conducted, the following conditions shall apply:

- 5.1.2.1. Negotiations may be conducted in person, in writing, or by telephone.
- 5.1.2.2. Negotiations will only be conducted with potentially acceptable proposals. The County reserves the right to limit negotiations to those proposals, which received the highest rankings during the initial evaluation phase.
- 5.1.2.3. Terms, conditions, prices, methodology, or other features of the Offeror's proposal may be subject to negotiation and subsequent revision. As part of the negotiations, the Offeror may be required to submit supporting financial, pricing and other data in order to allow a detailed evaluation of the feasibility, reasonableness, and acceptability of the proposal.
- 5.1.2.4. The mandatory requirements of the Request for Proposal shall not be negotiable and shall remain unchanged unless the County determines that a change in such requirements is in the best interest of the entities.

5.1.3. Evaluation and Award Process:

- 5.1.3.1. Boone County will select an evaluation team to review responses and to make a formal recommendation for award to the County Commission. After determining a responsible Offeror and a responsive proposal through the determination that the proposal satisfies the mandatory requirements stated in the Request for Proposal, the evaluation team will use both objective analysis and subjective judgment in conducting a comparative assessment of the proposal in accordance with the evaluation criteria stated below:
 - a. **Method of Performance:** available features; ease of use; warranty offered; suitability of purpose; quality; maintenance service proposed; timeliness of delivery and installation if applicable; or any other criteria identified by County.
 - b. **Experience/Expertise:**
 - c. **Cost:** equipment may be evaluated based on life cycle costs (such as energy consumption); maintenance costs; actual costs for equipment and/or software if applicable.
- 5.1.3.2. After an initial evaluation process, a question and answer interview may be conducted with the Offeror, if deemed necessary by the County. Offeror may be asked to make an oral presentation of their proposal to the evaluation team at a designated Boone County location. Attendance cost shall be at the Offeror's expense. All arrangements and scheduling will be coordinated by the County.

5.1.4. Evaluation:

- 5.1.4.1. Experience and reliability of the Offeror's organization are considered subjectively in the evaluation process. Therefore, the Offeror is advised to submit any information, which documents successful and reliable experience in past performances, especially those performances related to the requirements of this RFP.
- 5.1.4.2. The Offeror should provide the following information related to previous and current contracts of the Offeror's organization and any proposed subcontractors which are similar to the requirements of this RFP (This information may be shown on the reference form attached to this RFP or in a similar manner):
 - a. Name, address, and telephone number of client/contracting agency and a representative of that agency who may be contacted for verification of all information submitted;
 - b. Dates and locations of the service/contract; and
 - c. A brief, written description of the specific equipment installed and prior services performed and requirements thereof.
- 5.1.4.3. The Offeror should submit a copy of all licenses, certifications, accreditation, and/or permits, which may be required by state, federal, and/or local law, statute, or regulation in the course of conduct of the Offeror's business. If not submitted with the proposal, the County reserves the right to request and obtain a copy of any license or certification required to perform the defined services prior to contract award.
- 5.1.4.4. Offeror must state if they are an authorized service representative for equipment proposed. Offeror shall provide a list of qualifications of the Offeror and/or the staff of the Offeror's organization who will be involved in providing service (if applicable). List shall include number of certified technicians.
- 5.1.4.5. Proposals will be subjectively evaluated based on the Offeror's distinctive plan for performing the requirements of the RFP. Therefore, the Offeror should present a written narrative, which demonstrates the method or manner in which the Offeror proposes to satisfy these requirements. The language of the narrative should be straightforward and limited to facts, solutions to problems, and plans of action.
- 5.1.4.6. Where the words "shall" or "must" are used, they signify a mandatory requirement and will heavily impact the Offeror's final response rating and will be used to determine responsiveness of Offeror.
- 5.1.4.7. Where the words "should", "may" or "desired" are used, they signify that the feature or capacity is desirable but not mandatory; therefore, the specifications in question may possess minimal impact on the Offeror's final response rating.
- 5.1.4.8. The method by which the proposed method of performance is written will be left to the discretion of the Offeror. However, the Offeror should address each specific paragraph and subparagraph of the Specifications by paragraph and page number as an item for discussion. Immediately below these numbers, write descriptions of how, when, by whom, with what, to what degree, why, where, etc, the requirements will be satisfied.

5.1.5. Rejection / Withdrawal of Proposals Response:

Rejection of Proposals The County reserves the right, at its discretion, to reject any or all proposals or parts thereof. The County reserves the right to waive defects or informalities, to negotiate with Offeror's and to accept the proposal deemed to be in the best interest of the County.

Withdrawal of Proposals Proposals may be withdrawn on written request from the Offeror at the address shown in the solicitation prior to the time of acceptance.

Negligence on the part of the Offeror in preparing the proposal confers no right of withdrawal after the time fixed for the acceptance of the proposals.

5.1.6. Validity of Proposal Response:

Offerors agree that proposals will remain firm for a period of ninety (90) calendar days after the date specified for the return of proposals.

5.1.7. Bidding Indemnification

By submitting a Proposal Response, each Offeror agrees to waive any claim it has or may have against the Owner, the Architect/Engineer and Project Manager and their respective employees, arising out of or in connection with the administration, evaluation or recommendation of any proposal award

5.1.8. Proposal Response Expense

Any expense or costs incurred by the Offeror in the preparation of and response to the Proposal Documents will be at the sole cost and expense of the Offeror.



6. Response/Pricing Page

In compliance with this Request for Proposal and subject to all the conditions thereof, the Offeror agrees to furnish the services/equipment/supplies requested and proposed and certifies he/she has read, understands, and agrees to all terms, conditions, and requirements of this proposal and is authorized to contract on behalf of the Offeror named below. (Note: This form must be signed. All signatures must be original).

Company Name: _____

Address: _____

Telephone: _____ Fax: _____

Federal Tax ID (or Social Security #): _____

Print Name: _____ Title: _____

Signature: _____ Date: _____

E-Mail Address: _____

Pricing – The County is providing this Response Form for summarized pricing. Please attach a more detailed listing outlining the equipment, labor, installation, and training with all costs. Costs shall include cost of equipment, add-on features cost, software (if applicable) cost, training cost, labor, a minimum of five years of equipment maintenance broken out per year, warranty and any other costs to this page. Fee proposal shall include full itemized pricing information. As appropriate, items should include professional fees, materials, out of pocket expenses, sub-consultant fees and any other costs anticipated by the Offeror to satisfy the purpose of this Request for Proposal.

6.1. **Pricing**

Unit Price

6.1.1. **Project Total** \$ _____

6.1.2. **Full Service Maintenance:** Offeror's proposal response shall provide maintenance of systems and equipment per paragraph 1.5 – Maintenance Service (page 48). Please provide maintenance pricing:

Date of installation through December 31, 2013 \$ _____

6.1.3. Alternate Number 1: Maintenance Service Contract (5 year) \$ _____

6.1.4. Alternate Number 2: Fire Alarm Annunciation \$ _____

6.1.5. Equipment shall be delivered and installed _____ calendar days after receipt of Purchase Order and Notice to Proceed (completion date must be by April 1, 2013).

6.1.6. List all Sub-Contractors that will be utilized on this project:

6.1.7. Describe warranty on equipment and labor:

6.1.8. List any deviations to the original specifications:

6.1.9. Training shall be provided to Boone County staff within _____ days of installation.

6.1.10. State date that pricing is firm through for the equipment proposed in your proposal response:

6.1.11. Will you honor the submitted prices for purchase by other entities in Boone County who participate in cooperative purchasing with Boone County, Missouri? _____ Yes _____ No

6.1.12. **Provide a contact person** who will be responsible for coordinating the efforts and personnel of all parties involved in the response, to include, but not be limited to, oral presentations, demonstrations, site visits and responses to request for clarification, if any. Provide the following:

- Name:**
- Organization:**
- Address:**
- E-mail:**
- Phone Number:**
- Fax:**

6.1.13. **Identification of Bidders/Offerors:** How were you notified or heard about this bid/proposal?

- _____ newspaper advertisement
- _____ Boone County Electronic Bid Notification
- _____ other, please list: _____

SIGNATURE AND IDENTITY OF OFFEROR

The undersigned states that the correct LEGAL NAME and ADDRESS of (1) the individual Offeror, (2) each partner or joint venture (whether individuals or corporations, and whether doing business under fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention of binding himself to become the responsible and sole Contractor) he is the agent of, and duly authorized in writing to sign for the Offeror or Offerors; and that he is signing and executing this (as indicated in the proper spaces below) as the proposal of a:

sole individual partnership joint venture
 corporation, incorporated under laws of the state of _____

Dated _____, 20____
Name of individual, all partners, or joint venturers:

Address of each:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

doing business under the name of:

Address of principal place of business in Missouri:

(If using a fictitious name, show this name above in addition to legal names.)

(If a corporation - show its name above)

ATTEST:

(Secretary)

(Title)

NOTE: If the Bidder is doing business under a FICTITIOUS NAME, the Proposal shall be executed in the legal name of the individual, partners, joint venturers, or corporation, with the legal address shown, and the REGISTRATION OF FICTITIOUS NAME filed with the Secretary of State, as required by Section 417.200 to 417.230, RS Mo. shall be attached. If the Bidder is a CORPORATION NOT ORGANIZED UNDER THE LAWS OF MISSOURI, it shall procure a CERTIFICATE OF AUTHORITY TO DO BUSINESS IN MISSOURI, as required by Section 351.570 and following, RS Mo. A CERTIFIED COPY of such Registration of Fictitious Name or Certificate of Authority to do Business in Missouri shall be filed with the Engineer

INSTRUCTIONS FOR COMPLIANCE WITH HOUSE BILL 1549

House Bill 1549 addresses the Department of Homeland Security's and the Social Security Administration's E-Verify Program (Employment Eligibility Verification Program) that requires the County to verify "lawful presence" of individuals when we contract for work/service; verify that contractor has programs to verify lawful presence of their employees when contracts exceed \$5,000; and a requirement for OSHA safety training for public works projects.

The County is required to obtain certification that the Offeror awarded the attached contract participates in a federal work authorization program. To obtain additional information on the Department of Homeland Security's E-Verify program, go to:

http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm

Please complete and return form *Work Authorization Certification Pursuant to 285.530 RSMo* if your contract amount is in excess of \$5,000. Attach to this form the *E-Verify Memorandum of Understanding Confirmation Page that you received after enrolling*. The link for that form is: <http://www.uscis.gov/files/nativedocuments/save-mou.pdf>

Additional information may be obtained from:

<http://www.uscis.gov/files/nativedocuments/MOU.pdf>

If you are an Individual/Proprietorship, then you must return the attached *Certification of Individual Bidder*. On that form, you may do one of the three options listed. Be sure to attach any required information for those options as detailed on the *Certification of Individual Bidder*. If you choose option number two, then you will also need to complete and return the attached form *Affidavit*.

**WORK AUTHORIZATION CERTIFICATION
PURSUANT TO 285.530 RSMo
(FOR ALL PROPOSAL RESPONSES IN EXCESS OF \$5,000.00)**

County of _____)
State of _____)SS.

My name is _____, I am an authorized agent of _____
_____(Offeror). This business is enrolled and participates in a federal work authorization program for all employees working in connection with services provided to the County. This business does not knowingly employ any person that is an unauthorized alien in connection with the services being provided. Documentation of participation in a federal work authorization program is attached hereto.

Furthermore, all subcontractors working on this contract shall affirmatively state in writing in their contracts that they are not in violation of Section 285.530.1 and shall not thereafter be in violation. Alternatively, a subcontractor may submit a sworn affidavit under penalty of perjury that all employees are lawfully present in the United States.

Affiant Date

Printed Name

Subscribed and sworn to before me this ___ day of _____, 20__.

Notary Public

Attach to this form the *E-Verify Memorandum of Understanding Confirmation Page* that you received after enrolling

AFFIDAVIT

(Only Required for Individual Bidder Certification Option #2)

State of Missouri)
)SS.
County of _____)

I, the undersigned, being at least eighteen years of age, swear upon my oath that I am either a United States citizen or am classified by the United States government as being lawfully admitted for permanent residence.

Date

Signature

Social Security Number
or Other Federal I.D. Number

Printed Name

On the date above written _____ appeared before me and swore that the facts contained in the foregoing affidavit are true according to his/her best knowledge, information and belief.

Notary Public

My Commission Expires:

CERTIFICATION OF INDIVIDUAL BIDDER

Pursuant to Section 208.009 RSMo, any person applying for or receiving any grant, contract, loan, retirement, welfare, health benefit, post secondary education, scholarship, disability benefit, housing benefit or food assistance who is over 18 must verify their lawful presence in the United States. Please indicate compliance below. Note: A parent or guardian applying for a public benefit on behalf of a child who is citizen or permanent resident need not comply.

- ____ 1. I have provided a copy of documents showing citizenship or lawful presence in the United States. (Such proof may be a Missouri driver’s license, U.S. passport, birth certificate, or immigration documents). Note: If the applicant is an alien, verification of lawful presence must occur prior to receiving a public benefit.

- ____ 2. I do not have the above documents, but provide an affidavit (copy attached) which may allow for temporary 90 day qualification.

- ____ 3. I have provided a completed application for a birth certificate pending in the State of _____. Qualification shall terminate upon receipt of the birth certificate or determination that a birth certificate does not exist because I am not a United States citizen.

Applicant

Date

Printed Name

(Please complete and return with Proposal Response)

Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98 Section 98.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988, Federal Register (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS FOR CERTIFICATION)

- (1) The prospective recipient of Federal assistance funds certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective recipient of Federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Name and Title of Authorized Representative

Signature

Date

STANDARD TERMS AND CONDITIONS

1. Responses shall include all charges for packing, delivery, installation, etc., (unless otherwise specified) to the Boone County Department identified in the Request for Bid and/or Proposal.
2. The Boone County Commission has the right to accept or reject any part or parts of all bids, to waive technicalities, and to accept the offer the County Commission considers the most advantageous to the County. Boone County reserves the right to award this bid on an item-by-item basis, or an "all or none" basis, whichever is in the best interest of the County.
3. Bidders must use the bid forms provided for the purpose of submitting bids, must return the bid and bid sheets comprised in this bid, give the unit price, extended totals, and sign the bid.
4. When products or materials of any particular producer or manufacturer are mentioned in our specifications, such products or materials are intended to be descriptive of type or quality and not restricted to those mentioned.
5. Do not include Federal Excise Tax or Sales and Use Taxes in bid process, as law exempts the County from them.
6. The delivery date shall be stated in definite terms, as it will be taken into consideration in awarding the bid.
7. The County Commission reserves the right to cancel all or any part of orders if delivery is not made or work is not started as guaranteed. In case of delay, the Contractor must notify the Purchasing Department.
8. In case of default by the Contractor, the County of Boone will procure the articles or services from other sources and hold the Bidder responsible for any excess cost occasioned thereby.
9. Failure to deliver as guaranteed may disqualify Bidder from future bidding.
10. Prices must be as stated in units of quantity specified, and must be firm. Bids qualified by escalator clauses may not be considered unless specified in the bid specifications.
11. No bid transmitted by fax machine or **e-mail** will be accepted. **U.S. mail only.**
12. The County of Boone, Missouri expressly denies responsibility for, or ownership of any item purchased until same is delivered to the County and is accepted by the County.
13. The County reserves the right to award to one or multiple respondents. The County also reserves the right to not award any item or group of items if the services can be obtained from a state or other governmental entities contract under more favorable terms.
14. The County, from time to time, uses federal grant funds for the procurement of goods and services. Accordingly, the provider of goods and/or services shall comply with federal laws, rules and regulations applicable to the funds used by the County for said procurement, and contract clauses required by the federal government in such circumstances are incorporated herein by reference. These clauses can generally be found in the Federal Transit Administration's Best Practices Procurement Manual – Appendix A. Any questions regarding the applicability of federal clauses to a particular bid should be directed to the Purchasing Department prior to bid opening.

15. In the event of a discrepancy between a unit price and an extended line item price, the unit price shall govern.
16. Should an audit of Contractor's invoices during the term of the Agreement, and any renewals thereof, indicate that the County has remitted payment on invoices that constitute an over-charging to the County above the pricing terms agreed to herein, the Contractor shall issue a refund check to the County for any over-charges within 30-days of being notified of the same.

PRIOR EXPERIENCE

(References of similar services for governmental agencies are preferred)

1. Prior Services Performed for:

Company Name:

Address:

Contact Name:

Telephone Number:

Date of Contract:

Length of Contract:

Description of Prior Services (include dates):

2. Prior Services Performed for:

Company Name:

Address:

Contact Name:

Telephone Number:

Date of Contract:

Length of Contract:

Description of Prior Services (include dates):

3. Prior Services Performed for:

Company Name:

Address:

Contact Name:

Telephone Number:

Date of Contract:

Length of Contract:

Description of Prior Services (include dates):

STATEMENT OF OFFEROR'S QUALIFICATIONS

(File with Response Form)

1. Number of years in business: _____ If not under present firm name, list previous firm names and types of organizations.

2. Contracts on hand: (Complete the following schedule)

Item	Purchaser	Amount of Contract	Percent Completed
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

3. General type of product sold and manufactured:

4. There has been no default in any contract completed or un-completed except as noted below:

(a) Number of contracts on which default was made: _____

(b) Description of defaulted contracts and reason therefore:

5. List banking references:

6. Upon request will you within 3 (three) days file a detailed confidential financial statement?

Yes _____ No _____

Dated at _____

this _____ day of _____, 20 _____.

Name of Organization(s)

By _____
(Signature)

(Title of person signing)

BOONE COUNTY JAIL FIRE ALARM SPECIFICATION

SECTION 13850 (28 31 00)

NETWORKED FIRE ALARM SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Expandable emergency evacuation fire alarm system.

1.2 RELATED SECTIONS

- A. Section 13800 – Building Automation and Control.
- B. Section 13900 (21 00 00) – Fire Suppression.
- C. Section (27 15 00) – (Communications Horizontal Cabling).

1.3 REFERENCES

- A. Electrical Industries Association (EIA):
 - 1. EIA-232-D – Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange
 - 2. EIA-485 –
- B. National Fire Protection Association (NFPA):
 - 1. NFPA 13 – Installation of Sprinkler Systems.
 - 2. NFPA 70 – National Electrical Code (NEC).
 - 3. NFPA 72 – National Fire Alarm Code.
 - 4. NFPA 90A – Standard for the Installation of Air Conditioning and Ventilating Systems.
 - 5. NFPA 101 – Life Safety Code.
 - 6. NFPA 5000 – Building Construction and Safety Code.
- C. Underwriters Laboratories (UL):
 - 1. UL 268 – Standard for Smoke Detectors for Fire Alarm Signaling Systems.
 - 2. UL 864 – Standard for Control Units and Accessories for Fire Alarm Systems.
 - 3. UL 1971 – Standard for Signaling Devices for the Hearing Impaired.

1.4 SYSTEM DESCRIPTION

- A. A new intelligent reporting, Style 6 networked, fully peer-to-peer, microprocessor-controlled fire detection and notification system shall be installed in accordance with the specifications and as indicated on the Drawings.
- B. Each Signaling Line Circuit (SLC) and Notification Appliance Circuit (NAC): Limited to only 80 percent of its total capacity during initial installation.

C. Basic Performance:

1. Network Communications Circuit Serving Network Nodes: Wired using single twisted non-shielded 2-conductor cable or connected using approved fiber optic cable between nodes in Class B configuration.
2. Signaling Line Circuits (SLC) Serving Addressable Devices: Wired Class B.
3. Notification Appliance Circuits (NAC) Serving Strobes and Horns: Wired Class B.
4. Alarm Signals Arriving at Control Panel: Not lost following primary power failure until alarm signal is processed and recorded.
5. Network Node Communications:
 - a. Communicated between panels on single pair of copper wires or fiber optic cables.
 - b. To enhance system survivability, ability to operate on loss of Command Center, short or open of entire riser at Command Center shall be demonstrated at time of system acceptance testing.
 - c. Systems that are not capable of providing true Style 7 riser performance shall not be acceptable.
6. Signaling Line Circuits (SLC):
 - a. Reside in remote panels.
 - b. SLC modules shall operate in peer-to-peer fashion with all other panels in system.
 - c. On loss of Command Center, each remaining panel shall continue to communicate with remainder of system, including all SLC and control functions. Systems that provide a "Degraded" mode of operation upon loss of Command Center or short in riser shall not be acceptable.
7. NAC Circuits: Arranged such that there is a minimum of 1 audible device per fire alarm zone.
8. Notification Appliance Circuits (NAC), and Control Equipment: Arranged such that loss of any 1 NAC circuit will not cause loss of any other NAC circuit in system.
9. NAC Circuits:
 - a. Electrically supervised for open and short circuit conditions.
 - b. If short circuit exists on NAC circuit, it shall not be possible to activate that circuit.

D. Basic System Functional Operation: When fire alarm condition is detected and reported by 1 of the system alarm initiating devices, the following functions shall immediately occur:

1. System Alarm LEDs: Flash.
2. Local Piezo-Electric Signal in Control Panel: Sound at a pulse rate.
3. Touch screen LCD Graphic Annunciator with up to 512 user defined messages to display location of alarm.
4. Historical Log: Record information associated with fire alarm control panel condition, along with time and date of occurrence.
5. System output programs assigned via control-by-event equations to be activated by particular point in alarm shall be executed, and the associated system outputs (alarm notification appliances and/or relays) shall be activated.
6. Strobes flash synchronized continuously.
7. Audible devices sound continuous Temporal pattern until system is reset.

E. Fire Alarm System Functionality:

1. Provide complete, electrically supervised distributed, analog/addressable fire alarm and control system, with analog initiating devices.
2. Fire Alarm System:
 - a. Incorporate E3 Series multiprocessor-based control panels, with Intelligent Loop Interface (ILI-MB-E3), and RPT-E3 repeater modules communicating over peer-to-peer token ring network with capacity of up to 64 nodes.

3. Each ILLI-MB-E3 Node: Incorporate 2 Signaling Line Circuits (SLC), with capacity to support up to 159 analog addressable detectors and 159 addressable modules per SLC.
4. All data transmits over single pair of wires or fiber optic cable.
5. Each Network Node: Incorporate Boolean control-by-event programming, including as a minimum AND, OR, NOT, and Timer functions.
6. Control Panels: Capability to accept firmware upgrades via connection with laptop computer, without requirement of replacing microchips.
7. Network:
 - a. Based on peer-to-peer token ring technology operating at 625 K baud, using Style 6 configuration.
 - b. Capability of using twisted-pair wiring, pair of fiber optic cable strands up to 200 microns, or both, to maximize flexibility in system configuration.
8. Each Network Node:
 - a. Capability of being programmed off-line using Windows-based software utilized by fire alarm system manufacturer. Capability of being downloaded by connecting laptop computer into any other node in system. Systems that require system software to be downloaded to each transponder at each transponder location shall not be acceptable.
 - b. Capability of being grouped with any number of additional nodes to produce a "Region", allowing that group of nodes to act as 1, while retaining peer-to-peer functionality. Systems utilizing "Master/Slave" configurations shall not be acceptable.
 - c. Capability of annunciating all events within its "Region" or annunciating all events from entire network, on front panel LCD without additional equipment.
9. Each SLC Network Node: Capability of having integral DACT (digital alarm communicator transmitter) that can report events in either its region, or entire network to single central station monitoring account.
10. Each Control Panel: Capability of storing its entire program, and allow installer to activate only devices that are installed during construction, without further downloading of system.
12. Password Protection: Each system shall be provided with 4 levels of password protection with up to 16 passwords.

1.5 SUBMITTALS

- A. Include sufficient information, clearly presented, to determine compliance with the specifications and the Drawings.
- B. Equipment Submittals:
 1. Cover Page: Indicate the following:
 - a. Project name and address.
 - b. Engineered systems distributor's name and other contact information.
 - c. Installing contractor's name and other contact information.
 - d. Date of equipment submittals. Indicate on revised submittals the original submittal date and revised submittal date.
 2. Table of Contents: Lists each section of equipment submittal.
 3. Scope of Work Narrative: Detail indented scope of work.
 4. Sequence of Operations: Use matrix or written text format, detailing activation of each type of device and associated resulting activation of the following:
 - a. Control panel.
 - b. Annunciator panels.
 - c. Notification appliances.

- d. Building fire safety functions, including elevator recall, elevator power shutdown, door lock release, door holder release, HVAC unit shutdown, smoke evacuation system activation, and stair pressurization fan activation.
 - 5. Bill of Material: Indicate for each component of system the following:
 - a. Quantity.
 - b. Model number.
 - c. Description.
 - 6. SLC Circuit Schedule: Detail address and associated description of each addressable device. Clearly provide information that indicates number of both active and spare addresses.
 - 7. Battery Calculations: Show load of each of, and total of, components of system along with standby and alarm times that calculations are based on. Show calculated spare capacity and size of intended battery.
- C. Shop Drawings:
- 1. Cover Page: Indicate the following:
 - a. Project name and address.
 - b. Engineered systems distributor's name and other contact information.
 - c. Installing contractor's name and other contact information.
 - d. Date of equipment submittals. Indicate on revised submittals the original submittal date and revised submittal date.
 - 2. Floor Plans:
 - a. Provide separate floor plan for each floor.
 - b. If a floor plan must be split using match lines to fit on the page, provide match lines and match line references that refer to sheet number that shows area on opposite side of match line.
 - c. Prepare using AutoCAD.
 - d. Prepare to scale 1/8 inch = 1'-0", unless otherwise required by the Architect or Engineer.
 - e. Show equipment and device locations.
 - f. Show wiring information in point-to-point format.
 - g. Show conduit routing, if required by the AHJ.
 - 3. Title Block: Provide on each sheet and include, at a minimum, the following:
 - a. Project name.
 - b. Project address.
 - c. Sheet name.
 - d. Sheet number.
 - e. Scale of drawing.
 - f. Date of drawing.
 - g. Revision dates, if applicable.
 - 4. Control Panel: Provide sheet that details exterior and interior views of control panel and clearly shows associated wiring information.
 - 5. Annunciator Panels: Provide sheet that details exterior and interior views of annunciator panels and clearly shows associated wiring information.
- D. Certification: Submit with equipment submittals and shop drawings, letter of certification from major equipment manufacturer, indicating proposed engineered system distributor is an authorized representative of major equipment manufacturer.
- E. Project Record Drawings:
- 1. Submit complete project record drawings within 14 calendar days after acceptance test.

2. Project record drawings shall be similar to shop drawings, but revised to reflect changes made during construction.

F. Operation and Maintenance Manuals:

1. Submit complete operation and maintenance manuals within 14 calendar days after acceptance test.
2. Operation and maintenance manuals shall be similar to equipment submittals, but revised to reflect changes made during construction.
3. Include factory's standard installation and operating instructions.

1.6 QUALITY ASSURANCE

A. Codes and Standards:

1. NFPA: System shall comply with the following NFPA codes and standards:
 - a. NFPA 13.
 - b. NFPA 70.
 - c. NFPA 72.
 - d. NFPA 90A.
 - e. NFPA 101.
 - f. NFPA 750.
 - g. NFPA 5000.
2. ADA: System shall conform to American with Disabilities Act (ADA).

B. To ensure reliability and complete compatibility, all items of fire alarm system, including control panels, power supplies, initiating devices, and notification appliances, shall be listed by Underwriters Laboratories Inc. (UL) and shall bear "UL" label.

C. Fire Alarm Control Panel Equipment: UL-listed under UL 864 Ninth Edition.

D. Equipment, Programming, and Installation Supervision:

1. Provide services of approved Engineered systems distributor of Gamewell-FCI for equipment, programming, and installation supervision.
2. Provide proof of factory training within 14 calendar days of award of the Contract.

E. Software Modifications:

1. Provide services of Gamewell-FCI factory-trained and authorized technician to perform system software modifications, upgrades, or changes.
2. Provide use of all hardware, software, programming tools, and documentation necessary to modify fire alarm system software on-site.
3. Modification includes addition and deletion of devices, circuits, zones, and changes to system operation and custom label changes for devices or zones.
4. System structure and software shall place no limit on type or extent of software modifications on-site.
5. Modification of software shall not require power-down of system or loss of system fire protection while modifications are being made.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
- C. Handling: Protect materials from damage during handling and installation.

1.8 COORDINATION

- A. Coordinate the Work of this section with the Work of other sections, including sprinkler systems, HVAC systems, and security/door locking systems.

1.9 WARRANTY

- A. Warranty Period for System Equipment: 1 year from date of final acceptance.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Gamewell-FCI, Honeywell Fire Systems, 12 Clintonville Road, Northford, Connecticut 06472. Phone (203) 484-7161. Fax (203) 484-7118. Website: www.gamewell-fci.com.
- B. References to manufacturer's model numbers and other information is intended to establish minimum standards of performance, function, and quality. Equivalent equipment from Gamewell may be substituted for the specified equipment, as long as minimum standards are met. No other manufacturers, other than Gamewell-FCI, FCI, and Gamewell will be considered for use on this project.
- C. Substitute equipment proposed as equal to equipment specified shall meet or exceed requirements of this section. For equipment other than Gamewell-FCI E3 Series Expandable Emergency Evacuation Fire Alarm System, provide proof that such substitute equipment equals or exceeds features, functions, performance, and quality of specified equipment. This proof shall be provided by submission of a copy of specification with each copy of the submittals that has had each paragraph marked as either compliant or non-compliant along with a letter from engineering manager or product manager at factory that certifies information presented as either compliant or non-compliant including a detailed explanation of each paragraph identified as non-compliant. In order to ensure that the Owner is provided with a system that incorporates required survivability features, this letter shall also specifically certify that the system is capable of complying with the test requirements of this section.

2.2 DISTRIBUTED NETWORKED FIRE ALARM SYSTEM

- A. Distributed Networked Fire Alarm System: Gamewell-FCI E3 Series Expandable Emergency Evacuation Fire Alarm System.

2.3 CONTROL PANEL HARDWARE

- A. Intelligent Control Panel: Supply user interface, including LCD or touch-screen 1/4 VGA display Intelligent Loop Interface Modules (ILI-MB-E3), manual switching, Control Panel shall consist of the following units and components:
1. System Cabinet (B-, C-, or D-Size Cabinet) with associated inner door.
 2. Power Supply Module (PM-9) with batteries.
 3. 80-Character LCD Display (LCD-E3).
 4. Intelligent Loop Main Board Interface (ILI-MB-E3).
 5. Intelligent Loop Supplemental Interface (ILI-S-E3).
 6. DACT (DACT-E3).
 7. Network Repeater (RPT-E3).
 9. 1/4 VGA touch-screen display (NGA).
 10. Auxiliary Switch Module (ASM-16).
- B. System Cabinet:
1. Surface or semi-flush mounted with texture finish.
 2. Consist of back box, inner door, and door.
 3. Available in at least 3 sizes to best fit project configuration.
 4. Houses 1 or more PM-9 Power Supply Modules, 1 or more ILI-MB-E3 or ILI-S-E3 assemblies, and other optional modules as specified.
 5. Construction: Dead-front steel construction with inner door to conceal internal circuitry and wiring.
 6. Wiring: Terminated on removable terminal blocks to allow field servicing of modules without disrupting system wiring.
- C. Power Supply Module (PM-9): Use latest technologies to provide power to the Control Panel and incorporate the following features:
1. Power-saving switching technology using no step-down transformers.
 2. 9-amp continuous-rated output to supply up to all power necessary under normal and emergency conditions.
 3. Integral battery charger with capacity to charge up to 55 amp-hour batteries while under full load.
- D. Batteries:
1. Sufficient capacity to provide power for entire system upon loss of normal AC power for a period of 24 hours with 15 minutes of alarm signaling at end of this 24-hour period, as required by NFPA 72, Local Systems.
- E. LCD Display Module (LCD-E3):
1. LCD Display: 80-character RS-485 based textual annunciator with capability of being mounted locally or remotely. Provides audible and visual annunciation of all alarms and trouble signals. Provide dedicated LEDs for:
 - a. AC Power On: Green.
 - b. Alarm: Red.
 - c. Supervisory: Yellow.
 - d. System Trouble: Yellow.
 - e. Power Fault: Yellow.
 - f. Ground Fault: Yellow.

- g. System Silenced: Yellow.
 - 2. 80-Character Alphanumeric Display: Provide status of all analog/addressable sensors, monitor and control modules. Display shall be liquid crystal type (LCD), clearly visible in dark and under all light conditions.
 - 3. Panel shall contain 4 functional keys:
 - a. Alarm Acknowledge.
 - b. Trouble Acknowledge.
 - c. Signal Silence.
 - d. System Reset/Lamp Test.
 - 4. Panel shall contain 3 configuration buttons:
 - a. Menu/Back.
 - b. Back Space/Edit.
 - c. OK/Enter.
 - 5. Panel shall have 12-key telephone-style keypad to permit selection of functions.
- F. Intelligent Loop Interface (ILI-MB-E3): System shall be of multiprocessor design to allow maximum flexibility of capabilities and operation. Intelligent Loop Interface shall be capable of mounting in stand-alone enclosure as specified.
- 1. Field Programmable: System shall be capable of being programmed by Field Configuration Program (FCP), allowing programming to be downloaded via portable computer from any node on network.
 - 2. RS-232C Serial Output: Supervised RS-232C serial port shall be provided to operate remote printers and/or video terminals, accept downloaded program from portable computer, or provide 80-column readout of all alarms, troubles, location descriptions, time, and date. Communication shall be standard ASCII code operating from 1,200 to 115,200 baud rate.
 - 3. RS-485 Serial Output: Each ILI-MB-E3 shall incorporate RS-485 bus via ribbon harness for connection of modules inside same cabinet, and via 4-wire quick connector for connection of modules up to 3,000 feet from cabinet. Each ILI-MB-E3's RS-485 bus shall support up to 16 ASM-16 auxiliary switch modules, 6 LCD-E3 main annunciators, and 5 LCD-7100 annunciators.
 - 4. Peer-to-Peer Panel Configuration: All Loop Interface Modules shall incorporate own programming, log functions, Central Processor Unit, and control-by-event (CBE) programming. If any loop driver becomes disabled, each remaining loop driver shall continue to communicate with remainder of network and maintain normal operation.
 - 5. Control-by-Event (CBE) Program: ILI-MB-E3 shall be capable of programming using Boolean logic including AND, OR, NOT, and TIMING functions to provide complete programming flexibility.
 - 6. Alarm Verification: Smoke detector alarm verification shall be standard option while allowing other devices such as manual stations and sprinkler flow to create immediate alarm. This feature shall be selectable for smoke sensors that are installed in environments prone to nuisance or unwanted alarms.
 - 7. Alarm Signals: All alarm signals shall be automatically latched or "locked in" at control panel until operated device is returned to normal and control panel is manually reset. When used for sprinkler flow, "SIGNAL SILENCE" switch may be bypassed, if required by AHJ.
 - 8. Electrically Supervised:
 - a. Each SLC and NAC circuit shall be electrically supervised for opens, shorts, and ground faults. Occurrence of fault shall activate system trouble circuitry, but shall not interfere with proper operation of other circuits.
 - b. Yellow "SYSTEM TROUBLE" LEDs shall light and system audible sounder shall steadily sound when trouble is detected in system. Failure of power, open or short

circuits on SLC or NAC circuits, disarrangement in system wiring, failure of microprocessor or any identification module, or system ground faults shall activate this trouble circuit. Trouble signal shall be acknowledged by operating "TROUBLE ACKNOWLEDGE" switch. This shall silence sounder. If subsequent trouble conditions occur, trouble circuitry shall resound. During alarm, all trouble signals shall be suppressed with exception of lighting yellow "SYSTEM TROUBLE" LEDs.

9. Drift Compensation – Analog Smoke Sensors: System software shall automatically adjust each analog smoke sensor approximately once each week for changes in sensitivity due to effects of component aging or environment, including dust. Each sensor shall maintain its actual sensitivity under adverse conditions to respond to alarm conditions while ignoring factors which generally contribute to nuisance alarms. System trouble circuitry shall activate, display units that requires maintenance.
10. Analog Smoke Sensor Test: System software shall automatically test each analog smoke sensor a minimum of 3 times daily. Test shall be recognized functional test of each photocell (analog photoelectric sensors) and ionization chamber (analog ionization sensors) as required annually by NFPA 72. Failure of sensor shall activate system trouble circuitry, display "Test Failed" indication, and identify individual device that failed.
11. Off-Premises Connection:
 - a. Fire Alarm System: Connect via leased telephone lines to central station or remote station.
12. Central Station Option: Fire alarm control panel shall provide Digital Alarm Communicator Transmitter (DACT) for signaling to central station. DACT shall contain "Dialer-Runaway" feature preventing unnecessary transmissions as result of intermittent faults in system and shall be Carrier Access Code (CAC) compliant, accepting up to 20-digit central station telephone numbers. Fire department shall be consulted as to authorized central station companies serving municipality. Fire alarm system shall transmit both alarm and trouble signals, with alarm having priority over trouble signal. Contractor shall be responsible for all installation charges and Owner will be responsible for line lease charges.
13. Network Annunciator Option: Each ILI-MB-E3 and associated display shall provide option of being configured as network annunciator. Options for annunciation shall default as regional annunciator with capability of selecting global annunciation to provide system-wide protection and Acknowledge, Silence, and Reset capabilities.
14. Redundant History Log: Each ILI-MB-E3 shall contain full 4100 event history log supporting local and network functions. If a main processor or network node is lost the entire log shall be accessible at any other Loop Interface board. This shall be demonstrated by removing power from Command Center followed by extraction of history log from any loop driver location, including Command Center or Transponder.
15. LEDs Indicator and Outputs: Each ILI-MB-E3 Loop Interface shall incorporate as a minimum the following diagnostic LED indicators:
 - a. Power: Green.
 - b. Alarm: Red.
 - c. Supervisory: Yellow.
 - d. General Trouble: Yellow.
 - e. Ground Fault: Yellow.
 - f. Transmit: Green.
 - g. Receive: Green.
16. Auxiliary Power Outputs: Each ILI-MB-E3 Loop Interface shall provide the following supply outputs:

- a. 24 VDC non-resettable, 1 amp. maximum, power limited.
 - b. 24 VDC resettable, 1 amp. maximum, power limited.
17. Microprocessor: Loop interface shall incorporate 32-bit RISC processor. Isolated “watchdog” circuit shall monitor microprocessor and upon failure shall activate system trouble circuits on display. Microprocessor shall access system program for all control-by-event (CBE) functions. System program shall not be lost upon failure of both primary and secondary power. Programming shall support Boolean logic including AND, OR, NOT, TIME DELAY functions for maximum flexibility.
 18. Auto Programming: System shall provide for all SLC devices on any SLC loop to be pre-programmed into system. Upon activation of auto programming, only devices that are present shall activate. This allows for system to be commissioned in phases without need of additional downloads.
 19. Environmental Drift Compensation: System shall provide for setting Environmental Drift Compensation by device. When detector accumulates dust in chamber and reaches unacceptable level but yet still below allowed limit, control panel shall indicate maintenance alert warning. When detector accumulates dust in chamber above allowed limit, control panel shall indicate maintenance urgent warning.
 20. NON-FIRE Alarm Module Reporting: Non-reporting type ID shall be available for use for energy management or other non-fire situations. NON-FIRE point operation shall not affect control panel operation nor shall it display message at panel LDC. Activation of NON-FIRE point shall activate control by event logic, but shall not cause indication on control panel.
 21. 1-Man Walk Test:
 - a. System shall provide both basic and advanced walk test for testing entire fire alarm system. Basic walk test shall allow single operator to run audible tests on panel. All logic equation automation shall be suspended during test and while annunciators can be enabled for test, all shall default to disabled state. During advanced walk test, field-supplied output point programming shall react to input stimuli, such as CBE and logic equations. When points are activated in advanced test mode, each initiating event shall latch input. Advanced test shall be audible and shall be used for pull station verification, magnet activated tests on input devices, input and output device, and wiring operation/verification.
 - b. Test feature is intended to provide for certain random spot testing of system and is not intended to comply with requirements of testing fire alarm systems in accordance with NFPA 72, as it is impossible to test all functions and verify items such as annunciation with only 1 person.
 22. Signaling Line Circuits: Each ILI-MB-E3 module shall provide communication with analog/addressable (initiation/control) devices via 2 signaling line circuits. Each signaling line circuit shall be capable of being wired Class B, Style 4 or Class A, Style 6. Circuits shall be capable of operating in NFPA Style 7 configuration when equipped with isolator modules between each module type device and isolator sensor bases. Each circuit shall communicate with a maximum of 159 analog sensors and 159 addressable monitor/control devices. Unique 40-character identifier shall be available for each device. Devices shall be of the Velocity series with capability to poll 10 devices at a time with a maximum polling time of 2 seconds when both SLCs are fully loaded.
 23. Notification Appliance Circuits: 2 independent NAC circuits shall be provided on ILI-MB, polarized and rated at 2 amperes DC per circuit, individually over current protected and supervised for opens, grounds, and short circuits. They shall be capable of being wired Class B, Style Y or Class A, Style Z.
 24. Alarm Dry Contacts: Provide alarm dry contacts (Form C) rated 2 amps at 30 VDC (resistive) and transfer whenever system alarm occurs.

25. Supervisory Dry Contacts: Provide supervisory dry contacts (Form C) rated 2 amps at 30 VDC (resistive) and transfer whenever system supervisory condition occurs.
26. Trouble Dry Contacts: Provide trouble dry contacts (Form C) rated 2 amps at 30 VDC (resistive) and transfer whenever system trouble occurs.

H. Auxiliary Switch Module (ASM-16):

1. Each ASM-16 has 16 programmable push-button switches.
2. Each push-button switch has 3 associated status LEDs (red, yellow, and green), configurable to indicate any combination of functions.
3. Flexible switch configurations to allow auxiliary functions.
4. An insertable label to identify function of each switch and LEDs combination.
5. Provide capability to communicate with up to 16 ASM-16 modules locally, or up to 3,000 feet from the Control Panel

J. Network Repeater Module RPT-E3:

1. Intelligent Network Interface shall provide interconnection and protection of remote Control Panels. Repeater shall regenerate and condition token passing, 625 K baud signal between units. Repeater shall be available in wire, fiber, or wire/fiber configurations as determined by field conditions.
2. Fiber configurations shall use "ST"-type connectors and be able to operate with up to 200-micron multi-mode fiber, but optimize for 62.5/125. Interface shall have jumper to allow selection of ground detection of wiring when used in wire mode. Interface shall have integral LEDs to display current status of board.

M. Network Graphic Annunciator (NGA): Networked, 1/4 VGA, touch-screen annunciator with the following characteristics:

1. Custom Graphics: Panel shall permit uploading of custom bit-mapped graphic to display screen. Graphic shall display when all systems are normal.
2. Intuitive Functions: In alarm or trouble condition, annunciator shall display only information pertaining to event, including control switches.
 - a. Trouble Condition: Display shall indicate cause of trouble. Only controls available to operator shall be Acknowledge and Reset functions.
 - b. Alarm Condition: Display shall indicate cause of alarm. Only controls available to operator shall be Acknowledge, Silence, and Reset functions.

2.4 SUPPLEMENTAL NOTIFICATION APPLIANCE CIRCUIT (HPF24)

A. Supplemental Notification Appliance Circuit (HPF24) shall be Model HPF24S8 offering 8.0 amps (6.0 amps continuous) of regulated 24-volt power. HPF24 shall include the following features:

1. Integral Charger: Charge up to 18.0 amp-hour batteries and support 60-hour standby.
2. 2 Input Triggers. Input trigger shall be Notification Appliance Circuit (from fire alarm control panel) or relay.
3. Surface-mount back box.
4. Ability to delay AC fail delay in accordance with applicable NFPA requirements.
5. Power limited circuitry in accordance with applicable UL standards.
6. Operates as sync follower or a sync generator

2.6 SYSTEM PERIPHERALS

A. Addressable Devices – General:

1. Provide address-setting means using rotary-decimal switches.
 2. Use simple to install and maintain decade-type (numbered 0 to 15) address switches by using standard screwdriver to rotate 2 dials on device to set address. Devices which use binary address set via dipswitch packages, handheld device programmer, or other special tools for setting device address shall not be acceptable.
 3. Detectors: Analog and addressable. Connect to fire alarm control panel's Signaling Line Circuits.
 4. Addressable Thermal and Smoke Detectors: Provide 2 status LEDs. Both LEDs shall flash under normal conditions, indicating detector is operational and in regular communication with control panel, and both LEDs shall be placed into steady illumination by control panel, indicating alarm condition has been detected. If required, flashing mode operation of detector LEDs can be programmed off via fire control panel program.
 5. Fire Alarm Control Panel: Permit detector sensitivity adjustment through field programming of system. Sensitivity can be automatically adjusted by panel on time-of-day basis.
 6. Using software, detectors shall automatically compensate for dust accumulation and other slow environmental changes that may affect their performance. Detectors shall be listed by UL as meeting calibrated sensitivity test requirements of NFPA 72, Chapter 7.
 7. Detectors shall be ceiling-mounted and shall include separate twist-lock base with tamper-proof feature.
 8. Following bases and auxiliary functions shall be available:
 - a. Standard base with remote LED output.
 - b. Sounder base rated at 85 dBA minimum.
 - c. Form-C relay base rated 30 VDC, 2.0 A.
 - d. Isolator base.
 9. Detectors shall provide test means whereby they will simulate alarm condition and report that condition to control panel. Such test shall be initiated at detector itself by activating magnetic switch or initiated remotely on command from control panel.
 10. Detectors shall store internal identifying type code that control panel shall use to identify type of device (ION, PHOTO, THERMAL).
- B. Addressable Manual Stations (MS-7AF):
1. Manual Fire Alarm Stations: Non-code, non-break glass type, equipped with key lock so they may be tested without operating handle.
 2. Operated Station: Visually apparent, as operated, at a minimum distance of 100 feet (30.5 m) from front or side.
 3. Stations shall be designed so after actual activation, they cannot be restored to normal except by key reset.
 4. Manual stations shall be constructed of Lexan with clearly visible operating instructions provided on cover. The word FIRE shall appear on front of stations in raised letters, 1.75 inches (44 mm) or larger.
 5. Addressable manual stations shall, on command from control panel, send data to panel representing state of manual switch and addressable communication module status.
- C. Intelligent Thermal Detectors (ATD-RL2F): Intelligent addressable devices rated at 135 degrees F (58 degrees C) and have rate-of-rise element rated at 15 degrees F (9.4 degrees C) per minute. Connect via 2 wires to fire alarm control panel signaling line circuit.
- D. Intelligent Photoelectric Smoke Detectors (ASD-PL2F): Use photoelectric (light-scattering) principal to measure smoke density and shall, on command from control panel, send data to panel representing analog level of smoke density.

- E. Intelligent Duct Smoke Detectors (ADPF):
 - 1. In-Duct Smoke Detector Housing: Use on-board intelligent photoelectric detector, which provides continuous analog monitoring and alarm verification from panel.
 - 2. When sufficient smoke is sensed, alarm signal is initiated, and appropriate action taken to shut down or change over air handling systems to help prevent rapid distribution of toxic smoke and fire gases throughout areas served by duct system.
 - 3. Duct Smoke Detectors Mounted Above Ceiling or Otherwise Obstructed from Normal View: Provide with remote alarm indicator.
 - 4. Each Detector: Install in either supply side or return side duct in accordance with local mechanical code.

- F. Addressable Dry Contact Monitor Modules (AMM-2F):
 - 1. Provide to connect 1 supervised IDC zone of conventional alarm initiating devices (any N.O. dry contact device) to 1 of the fire alarm control panel SLCs.
 - 2. Mount in standard deep electrical box.
 - 3. IDC Zone: Suitable for Style B operation.

- G. Addressable Control Modules (AOM-2SF):
 - 1. Provide to supervise and control operation of 1 conventional NAC of compatible, 24-VDC powered, polarized audio/visual notification appliances or UL-listed polarized relays for fan shutdown and other auxiliary control functions.
 - 2. Mount in standard 4-inch (101.6-mm) square, 2-1/8-inch (54-mm) deep electrical box or to surface-mounted back box.
 - 3. Control Module NAC: Wire for Style Z or Style Y (Class A/B) with up to 1 amp of inductive signal or 2 amps of resistive signal operation. Relay coil shall be magnetically latched to reduce wiring connection requirements and to ensure 100 percent of all auxiliary relay or NACs shall be energized at same time on same pair of wires.
 - 4. Audio/Visual Power: Provide by separate supervised power circuit from main fire alarm control panel or from supervised, UL-listed remote power supply.

- H. Addressable Relay Modules (AOM-2RF):
 - 1. Available for HVAC control and other building functions. Relay shall have 2 Form C sets of contacts that operate in tandem and are rated for a minimum of 2.0 amps resistive or 1.0 amps inductive. Relay coil shall be magnetically latched to reduce wiring connection requirements and to ensure 100 percent of all auxiliary relay or NACs shall be energized at same time on same pair of wires.
 - 2. Mount in standard 4-inch (101.6-mm) square, 2-1/8-inch (54-mm) deep electrical box or to surface-mounted back box.

- I. Horns:
 - 1. Operate on 24 VDC or with field-selectable outputs.
 - 2. Have two selectable tone options of temporal 3 and non-temporal continuous pattern.
 - 3. Have at least 2 audibility options

- J. Strobes:
 - 1. Compliance: ADA and UL 1971.
 - 2. Maximum Pulse Duration: 0.2 second.
 - 3. Strobe Intensity: UL 1971.
 - 4. Flash Rate: UL 1971.
 - 5. Strobe Candela Rating: Determine by positioning selector switch on back of device.

- K. Horn/Strobes:
 - 1. Operate on 24 VDC
 - 2. Have two selectable tone options of temporal 3 and non-temporal continuous pattern.
 - 3. Have at least 2 audibility options
 - 4. Maximum Pulse Duration: 0.2 second.
 - 5. Strobe Intensity: UL 1971.
 - 6. Flash Rate: UL 1971.
 - 7. Strobe Candela Rating: Determine by positioning selector switch on back of device.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas and surfaces to receive fire alarm system.
 - 1. Notify Architect of conditions that would adversely affect installation or subsequent use.
 - 2. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

- A. Install fire alarm system in accordance with NFPA 72, NFPA 70, state and local codes, manufacturer's instructions, and as indicated on the Drawings.
- B. Conceal conduit, junction boxes, and conduit supports and hangers in finished areas. Conceal or expose conduit, junction boxes, and conduit supports and hangers in unfinished areas.
- C. Do not install smoke detectors before system programming and test period. If construction is ongoing during this period, take measures to protect smoke detectors from contamination and physical damage.
- D. Flush-mount fire detection and alarm system devices, control panels, and remote annunciators in finished areas. Flush-mount or surface-mount fire detection and alarm system devices, control panels, and remote annunciators in unfinished areas.
- E. Ensure manual stations are suitable for surface mounting or semi-flush mounting as indicated on the Drawings. Install not less than 42 inches, nor more than 48 inches, above finished floor measured to operating handle.

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Provide service of competent, factory-trained technician authorized by manufacturer to technically supervise and participate during pre-testing and acceptance testing of system.
- B. Testing:
 - 1. Conduct complete visual inspection of control panel connections and test wiring for short circuits, ground faults, continuity, and insulation before energizing cables and wires.
 - 2. Close each sprinkler system control valve and verify proper supervisory alarm at Control Panel.
 - 3. Verify activation of flow switches.
 - 4. Open initiating device circuits and verify that trouble signal actuates.
 - 5. Open signaling line circuits and verify that trouble signal actuates.

6. Open and short notification appliance circuits and verify that trouble signal actuates.
7. Ground initiating device circuits and verify response of trouble signals.
8. Ground signaling line circuits and verify response of trouble signals.
9. Ground notification appliance circuits and verify response of trouble signals.
10. Check installation, supervision, and operation of intelligent smoke detectors.
11. Introduce on system each of the alarm conditions that system is required to detect. Verify proper receipt and proper processing of signal at Control Panel and correct activation of control points.
13. Consult manufacturer's manual to determine proper testing procedures when system is equipped with optional features. This is intended to address such items as verifying controls performed by individually addressed or grouped devices, sensitivity monitoring, verification functionality, and similar.

C. Acceptance Testing:

1. Before installation shall be considered completed and acceptable by AHJ, a complete test using as a minimum, the following scenarios shall be performed and witnessed by representative approved by Engineer. Monitoring company and/or fire department shall be notified before final test in accordance with local requirements.
2. Contractor's job foreman, in presence of representative of manufacturer, representative of Owner, and fire department shall operate every installed device to verify proper operation and correct annunciation at control panel.
3. Open signaling line circuits and notification appliance circuits in at least 2 locations to verify presence of supervision.
4. Completely disconnect main Control Panel from rest of network. Activate initiating device. All control outputs supported by transponder SLC circuits shall operate under project programming mode. Default or degrade mode programming shall not be acceptable.
5. When testing has been completed to satisfaction of both Contractor's job foreman and representatives of manufacturer and Owner, a notarized letter co-signed by each attesting to satisfactory completion of said testing shall be forwarded to Owner and fire department.
6. Leave fire alarm system in proper working order and, without additional expense to Owner, replace defective materials and equipment provided within 1 year (365 days) from date of final acceptance by the owner.

3.4 DEMONSTRATION

- A. Provide instruction as required for operating fire alarm system.
- B. Provide hands-on demonstrations of operation of fire alarm system components and functions.

END OF SECTION

BOONE COUNTY JAIL SECURITY INTERCOM SYSTEM SPECIFICATION

SECTION 17005 SECURITY INTERCOM SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. This section will describe the interaction between the proposed intercom system and the existing Security Automation System. The intercom system is to integrate into the existing control functions:
 - 1. Door monitoring and control
 - 2. Fire Alarm Annunciation - Bid Alternate # 2
 - 3. Touch Screen Stations
 - 4. CCTV Camera Control
- B. All bids shall be based on the equipment specified herein. The catalog numbers and model designations are those of Telecor, Inc., Mississauga, Ontario, Canada and are considered to be the accepted Base Bid. Any bidder proposing to substitute equipment of another manufacturer must have prior approval from the Engineer, and, as a minimum will be required to demonstrate the compatibility of their system to provide all required features and demonstrate compatibility to the CorsairHMI Control System, (the Owners Security Control System).
- C. Intercom Suppliers will be required to submit a copy of their Open Architecture Interface Protocol to the Security Automation System Integrator. A review by the Security Automation System Integrator will determine if the protocol is acceptable for the existing PLC system.
- D. Provide all labor, equipment, materials, and supervision to install, program, calibrate, adjust, document, and test the total system as required herein and on the drawings.

1.2 SYSTEM DESCRIPTION

- A. Intercom Control, Monitoring and Annunciation
 - 1. The Security Automation System shall have a serial connection to the Intercom System to allow bi-directional communication. The Security Automation System will have the ability through the intercom system :
 - a. Display stations that are calling on the touchscreen station
 - b. Connect to a call-in station to initiate the call
 - c. Paging of selected zones
 - d. Place an unlimited number of stations on "hold".
 - e. Call and connect to any station on any master intercom system in the facility
 - f. Silently listen to any station

1.3 SUBMITTALS

- A. Submit in accordance with Division 1 requirements.
- B. Product data for each type of product specified.
- C. Shop drawings, detailing Security Automation System including but not limited to the following:

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- I. System riser diagram - including all interconnecting wiring, sizing and color codes. Include manufacturers wire type where required.
- D. All software files shall be turned over to the owner at completion.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who is a factory authorized service representative to perform the work in this section.
- B. Electrical Component Standard: Components and installation shall comply with NFPA 70, "National Electric Code."
- C. EIA Compliance: Comply with the Electronics Industries Association standards.
- D. Compliance With Local Requirements: Comply with the applicable building code, state and local ordinances, and regulations and the requirements of the authority having jurisdiction.
- E. NFPA Compliance: Provide systems conforming to the requirements of the NFPA 101, "Life Safety."
- F. UL Listing and Labeling: Provide components specified in this Section that are listed and labeled by UL.
- G. Nationally Recognized Testing Laboratory Listing and Labeling (NRTL): Provide system and components specified in this section that are listed and labeled by an NRTL. The term "NRTL" shall be defined in OSHA Regulation 1910.7.
- H. Single Source Responsibility: Obtain components from a single integrator who assumes responsibility for compatibility for system components furnished.

1.5 MAINTENANCE SERVICE

- A. Maintenance Service Contract: Provide maintenance of systems and equipment for a period of 12 months commencing with Substantial Completion, using factory-authorized service representatives.
 - 1. Basic Services: Two routine maintenance visits at times coordinated with the Owner. In addition, respond to service calls within 24 hours of notification of system trouble. Adjust and replace defective parts and components with original manufacturer's replacement parts, components, and supplies.
 - 2. Additional Services: Perform services within the above 12-month period not classified as routine maintenance or as warranty work when authorized in writing. Compensation for additional services must be agreed upon in writing prior to performing services.
 - 3. Renewal of Maintenance Service Contract: Alternate # 1, provides for a service contract to provide contract maintenance and repair services for an additional five-year term. Owner will be under no obligation to accept maintenance service proposal.

PART 2 - PRODUCTS

2.1 SYSTEM INTEGRATOR

- A. Only the listed systems Integrators are allowed to bid this section.
1. Corsair Controls, Inc., Highland, Illinois, (618) 654-8322
 2. Midwest Electronics, Columbia, Missouri, (573) 443-5343

2.2 SYSTEM REQUIREMENTS

- A. General: Provide a complete and fully functional Security Intercom System using materials and equipment of types, sizes, and rating, as required to meet performance requirements. Use materials and equipment that comply with referenced standards and manufacturers' standard design and construction, in accordance with published product information. Coordinate the features of all materials and equipment so they form an integrated system, with components and interconnections matched for optimum performance of specified functions.
- B. Provide as part of the contract five (5) new System Controllers and associated hardware as shown on the attached drawings.
- C. Provide as part of the contract four (4) new embedded computers and 22" touch monitors to replace the existing Security Control Computers. The requirements for the computer are in Section 2.3 of the specifications. Provide one additional set of computer hardware for Owners spare parts stock.
- D. Provide as part of the contract an Uninterruptable Power Supply for each of the installed Security Computers and each Intercom Controller. The unit shall be provided to allow 20 minutes of backup power to operate the system. The intercom must allow station to station conversation during power outage, emergency paging is not required.
- E. Modular components of the system shall be UL listed or recognized.

2.3 EQUIPMENT AND MATERIALS

2.3.1 INTERCOM EQUIPMENT

- A. System Controller
1. The Security Intercom Controller shall be a Telecor model T3-SC. It shall be a microprocessor-based unit, containing the resident processor, memory, control, power supply and audio circuitry required for the Security Communication System.
 2. The Controller shall be a modular design for use with associated device Termination Board Units (TBUs) and Master Control Consoles. The system shall accommodate up to 31 TBUs and up to 31 Master Control Consoles.
 3. The Controller shall provide for two-way voice communications between Control Consoles and Intercom Stations. Call-ins from Intercom Stations shall be able, through programming, to contact any of the Control Consoles and Console Groups connected in a networked system.
 4. The Controller shall provide an integral intercom station audio amplifier of 4 Watts and shall be capable of being configured to provide up to 60 Watts of intercom audio power.

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5. The Controller shall provide programmable privacy, whereby an Intercom Station shall be able to enter privacy mode through programming. The Controller shall allow the privacy to be overridden for individual Intercom Stations by select personnel or in the event of a critical situation.
6. Each Intercom Station connected to the Controller shall have the capability of being independently electronically adjusted for Talk Level and Listen Response through programming. This shall eliminate the need to physically re-tap speaker transformers and shall provide for optimum listen intelligibility at the Console. Adjustments shall be able to be made and heard in real time. Adjustments to one intercom station shall not affect other stations in the system. Automatic gain control on intercom speech shall assure a constant speech level.
7. The intercom call-in lines shall be continuously supervised by the Controller, whereby if a failure occurs, it shall be reported immediately.
8. The Controller shall provide an independent paging channel that shall allow Consoles or external microphones connected to a Controller to initiate paging announcements separate and isolated from the intercom bus. This shall allow pages and intercom communication in the System to be carried out simultaneously. An unlimited number of Page Zones shall be created from Consoles, Console Groups, Intercom Stations, and Paging Speaker Circuits on Paging and Intercom TBU's and from other Page Zones.
9. The Controller shall be compatible with Telecor model AMS Audio Monitoring System, which monitors each intercom and speaker location for noise level patterns. Individual intercom station noise level shall be monitored continuously and digitally analyzed for sound patterns that match any of five preset programmable criteria. Each station's criteria shall be individually programmed to allow for different acoustic conditions and room functions. Programming shall be done on a PC or laptop computer. Whenever unusual sounds are detected in a room, an alarm shall be inflated to the designated Console. Speakers (not just speaker lines) shall also be monitored for faults using real-time low background noise level detection.
10. The Controller shall be equipped with an RS-232 port designed to interface to any serial data device that has an RS-232 port, such as a Programmable Logic Controller (PLC) or PC. This shall allow for integration between the Security Communication System and PLC controlled systems in a facility such as CCTV, Environmental and Door Control. With integration, the Security Communication System shall control these other systems, while in turn; these other systems shall execute functions of any Controller. Integration shall allow remote Computer Touch Screens or custom Graphic Panels to be used for the execution of System functions. The Controller shall be capable of executing pre-existing Integration PLC Programming from earlier installations of other manufacturers. All systems activity shall be transmitted in standard ASCII Code.
11. With integration, the Controller shall remain fully operational independent of other systems, so that the PLC or PC is not required to handle or keep track of any intercom and paging functions.
12. Up to 250 Controllers shall have the ability to be linked together in a Distributed Ethernet Network. This shall allow individual Systems to communicate with one another while allowing each System to maintain independent operation within its designated location. Network flexibility shall allow for control of any individual System to be transferred to another System during emergency takeovers, night time operation or periods of low activity.
13. Controllers shall be capable of being networked together into Ethernet LANs using Category 5 (CAT-5) or higher cable.
14. All user-programmable data shall be stored in non-volatile FLASH memory to prevent memory loss during a power failure. Systems that require external computers to operate shall not be acceptable.

15. Controllers in a networked system shall require only one program file to be uploaded for automatic and simultaneous distribution to all Controllers in the system via local PC, modem or Internet connection.
16. The Controller design shall allow backwards capability such that upgrades may be made to older systems without the need for their total replacement.

B. Control Console Master Station

1. The Desk Top Console shall be a Telcor model MCC-450 or approved equal. The Console shall be a microprocessor-based desktop unit that provides communications and control of the Security Communication System. It shall be designed as a traditional telephone-style control console and include a handset, microphone, speaker, backlit LCD display and keypad controls.
2. The Console shall include an 8 line x 24 character LCD Backlit Display that shows applicable Menus and Prompts to aid in call processing and system functions. The Menu or Prompt displayed by the Console shall be determined by the function being carried out.
3. The Console shall include a standard 12 key dial pad and 30 Function, Selection and Scroll Keys with LED prompting to process calls, navigate and select functions using the Display Menus. With LED prompting, a Key shall light up when its stated function can be activated. The Keys shall fall into three categories: Context Sensitive, Fixed and Scroll. Context Sensitive Keys shall point to specific lines or functions on the Display Menu. The function of a Context Sensitive Key shall change depending on the current Display Menu. Fixed Keys shall have listed beside them a permanent stated function. Scroll Keys shall allow the Menu to be scrolled up, down, left or right.
4. The Console shall allow the operator to establish two-way voice communications with an Intercom Station or another Console using hands free or handset operation. In addition to having the capability to place calls and answer call-ins, the Console shall include the ability to hold and transfer calls, forward call-ins and queue call-ins for later or selective answering.
5. The MCC-450 call queue shall be dynamic and shall have a capacity of up to 254 call-ins. The Display shall show queued calls in groups of six.
6. The CALLS Menu shall be displayed for multiple incoming call-ins, which shows call-ins in groups of six in priority order and then in the chronological order in which they were made. The user shall be able to scroll through the CALLS Menu and answer call-ins out of sequence. To aid in call processing, the user shall be able to display extra information about the call-in and the Station or Console that made the call-in. The Console shall also include a feature to display specific Response Text, which provides instructions to the user when a call-in of a certain priority is received, such as a medical emergency call-in.
7. The Console shall offer special dialing features that aid in call processing. A Directory of all dial-able stations including Intercom Stations, Consoles, Page Zones and Dry Contact Stations, shall be accessed with the Console. The user shall apply filters to the Directory, which speeds up the search process by showing only certain types of Stations belonging to certain Systems. With the Speed Dial feature, a number shall be immediately dialed with the press of a single keypad button. Redialing of the last Intercom Station, Console, Page Zone or Dry Contact Station shall be immediately dialed with the press of a single keypad button. With the Assisted Dialing feature, a description of the Station shall appear when the Station number is being entered, which shall help prevent the dialing of wrong numbers.
8. Additional Console features shall be available to the operator through the System. An All-Call, Zone or Multiple Zone Page shall be made on the Controller's independent paging channel. Similarly, the Console shall be able to monitor a station or zone and quickly switch to paging mode. With the Sequential Audio Listening feature, multiple stations or zones shall be monitored in a continuous, sequential order. If the System

- includes Intercom Stations and Supervised Intercom TBUs, any speaker line and call line faults shall be displayed on the Console.
- 9. When a T3-SC Communication System is integrated with a PLC and touchscreen or graphics panel, the MCC450 Control Console shall be able to maintain and control two-way intercom and paging communications in the event that the PLC and/or touchscreen or graphics panel have failed or gone off line.
- 10. Access to a System with a MCC-450T Console shall be protected by user identification and user-assigned passwords.
- 11. The MCC-450 Console shall be connected to the System via a wall mount Telecor model CR-45 Console Receptacle Plate, Each CR-45 shall be equipped with a 6-pin RJ-11 Receptacle Connector for easy connection to the MCC-450 cable and RJ-11 connector assembly. The CR-45 units shall be located at security operators' stations and other strategic locations throughout a facility.
- 12. The Console Receptacle Plate shall contain fault protection circuitry that provides isolation between the CR-45 RJ-11 connector and the field cable thereby eliminating the possibility of damage to other Consoles, data buses and cabling in the event of Console failure or RJ-11 connector damage.
- 13. The Console Receptacles shall contain a microprocessor and be individually numerically addressable within a System such that the Console Receptacle Plate is the physical console location and not the MCC-450 itself. This shall allow any MCC-450 Console to be plugged into any Console Receptacle and be immediately recognized by the Controller without the need for additional programming. The Console Receptacle Plate shall monitor the power consumption of the MCC-450 connected to it.

C. Intercom Station Termination Board Units

- 1. The Intercom TBU shall be a Telecor model(s) T3-TBU-11 or approved equal. The Intercom TBU shall perform the switching of intercom and program audio to Intercom Stations in the Security Communication System. It shall also detect call-in annunciation from Intercom Stations and Call Switches.
- 2. The T3-TBU-11 shall support 25 Intercom Stations and the T3-TBU-13 shall support 10 Intercom Stations. Talkback or monitored paging Speakers may be used as intercoms stations.
- 3. Each station port on the Intercom TBU shall be capable of supporting 4 separate call-in devices for the purpose of annunciating different priority levels and/or signaling different Consoles. A port shall be able to detect open circuit, voltage levels 1, 2, 3 and closed circuit conditions. The voltage levels shall be set by resistors installed onto the switch contact circuits. Any one of the 5 conditions shall be capable of being programmed as the inactive condition, which shall allow the remaining 4 to be used for signal detection including the supervision of call switches for short or open circuits and ground faults. Testing for these conditions shall be conducted automatically and reported each time the speaker line is used or may be conducted manually by the operator.
- 4. The Intercom TBU shall provide the ability to monitor both an Intercom Station's and a monitored Speaker's immediate area for listening and talkback purposes with the Security Communication System's master control consoles. Speakers terminated as intercoms to the Intercom TBU for audio monitoring shall be paged at a maximum of 4 Watts.
- 5. The Intercom TBU shall have the ability to analyze an unlimited amount of press and press-and-hold patterns on each port. Patterns shall be created through software and shall be specific to one call-in device or shall involve multiple call-in devices on the port. Different patterns may be used to signal different Control Consoles.
- 6. The Controller shall provide programmable suspend call-in, whereby the ability for selected Intercom Stations to be placed in a call-in blocked mode shall be enabled through programming. The Controller shall have the ability to be configured to suspend

call-ins for a specified period of time and to override suspend call-in for individual Intercom Stations by select personnel or in the event of a critical situation.

D. Paging Termination Board Units

1. The Paging TBU shall be a Telecor model(s) T3-TBU-20 and T3-TBU-22 or approved equal. The Paging TBU shall provide termination and switching facilities for Paging Circuits in the Security Communication System. The T3-TBU-20 shall support 5 Paging Circuits and the T3-TBU-22 shall support 10 Paging Circuits.
2. The Paging TBU shall be capable of switching 50 Watts on each Paging Circuit and each Paging TBU shall support a total of 250 Watts. Switching relays shall be rated for 20 x 10⁶ operations minimum.
3. Paging Circuits shall be individually connected onto 0.156" header pins provided on the edge of the Paging TBU using the appropriate insulation displacement connectors. A Paging Circuit shall utilize the independent paging channel provided by the Controller. The independent paging channel shall be separate from the intercom bus, so pages and intercom communication in the System shall be carried out simultaneously.
4. A second audio amplifier shall be able to connect to the "OFF" bus of the Paging TBU. This shall provide another independent channel to distribute audio programs to all Paging Circuits. Alternatively, an emergency page signal from an ancillary system shall be capable of being distributed to all Paging Circuits. The operation of the independent channel shall be in a "fail safe" mode, whereby should the Intercom System be powered off; the audio shall be transmitted to all Paging Circuits.
5. Paging TBU models T3-TBU-18 and T3-TBU-19 shall provide the ability to monitor a speaker zone's immediate area for listening and talkback purposes with the Security Communication System's Control Consoles when the speaker zone requires more than 4 Watts of paging power.

E. Multi Channel Intercom Termination Board Units

1. The Multi Channel Intercom Termination Board Units shall be a Telecor model T3-TBU-15C for 4-wire intercom stations, The Multi-Channel Intercom Station T3-TBU-15C shall route intercom calls to an available channel in a two-channel System.
2. The system shall be capable of providing up to a total of eight intercom channels to the same pool of room stations and monitored Speakers. Multiple intercom channels shall allow different communication Control Consoles to conduct simultaneous communication to the same group of room stations and monitored Speakers, thereby giving an area the ability to support higher call traffic. Communication shall be non-restrictive, whereby any Intercom Stations and monitored Speakers in the pool can be involved in a call regardless of the status of any other Intercom Station and monitored Speakers in the pool.
3. In a Multi-Channel System, the first two channels shall be the primary and secondary redundant channels. The primary channel shall be utilized to route calls between Control Consoles and room stations in the pool. If the first channel cannot be utilized to route calls or becomes disabled, the second channel shall have the ability to automatically take over the routing of calls. This redundancy feature shall ensure that communications remain intact.
4. Communication between a Control Console and any Intercom Station and monitored Speakers in the pool shall be conducted via a direct path and shall not utilize any audio network that exists between the Control Consoles.
5. The Multi-Channel Intercom Station TBU shall provide the ability to monitor both an Intercom Station's and monitored Speaker's immediate area for listening and talkback purposes with the Security Communication System's master control consoles. Speakers terminated as intercoms to the Intercom TBU for audio monitoring shall be paged at a maximum of 4 Watts.

6. The Multi-Channel Intercom Station TBU shall have the ability to analyze an unlimited amount of press and press-and-hold patterns on each port. Patterns shall be created through software and shall be specific to one call-in device or shall involve multiple call-in devices on the port. Different patterns may be used to signal different Control Consoles.
 7. The Controller shall provide programmable privacy, whereby the ability of an Intercom Station to enter privacy mode shall be enabled through programming. The Controller shall have the ability to be configured to allow privacy to be overridden for individual Intercom Stations by select personnel or in the event of a critical situation.
 8. The Controller shall provide programmable suspend call-in, whereby the ability for selected Intercom Stations to be placed in a call-in blocked mode shall be enabled through programming. The Controller shall have the ability to be configured to suspend call-ins for a specified period of time and to override suspend call-in for individual Intercom Stations by select personnel or in the event of a critical situation.
- F. Transfer Network Termination Boards (TNB)
1. The Transfer Network Board shall be a Telecor model T3-TNB-ENET or approved equal. The Transfer Network Boards shall be designed to interconnect a series of Controllers into a distributed network allowing the distribution of audio and data between Controllers.
 2. The T3-TNB-ENET shall be designed for use in Ethernet Networks of up to 250 inter-communicating Controllers in a network.
 3. The Transfer Network Boards shall mount directly onto the Controller motherboard and network cabling shall be connected using RJ-45 pluggable connectors. The Network Cabling shall be CAT-5 or higher cable.
- G. Distributed Network
1. Individual Security Communication Systems shall be capable of being linked together in a Distributed Network to form an extensive communications and security platform. A Distributed Network shall allow individual Systems to communicate with one another while allowing each System to maintain independent operation within its designated location. Network flexibility shall allow for control of any individual System to be taken over by or transferred to another System during emergencies, during night time operation or periods of low activity.
 2. Communications from one Controller to another shall be initiated from any Console in the Network. Consoles shall have access to any dial-able station on the Network, which includes Intercom Stations, Consoles, Console Groups, Page Zones and Dry Contact Stations.
 3. A Distributed Network shall allow for Centralized Paging. With Centralized Paging, Consoles or external microphones connected to a System shall initiate paging announcements selectively to other Controllers or on an all-call basis to all locations. A pair of audio channels shall be included on each System to provide for independent and simultaneous paging and intercom communications.
 4. Any remote device with an RS232 port such as a PLC or PC shall be able to connect with any one Controller in the network. This single connection shall allow integration between the Systems on the network and other systems in a facility such as Door Control. With integration, the Systems shall control these other systems, while in turn, these other systems shall execute functions of any System. When integrating, it shall not matter which Controller on the network the RS232 device is connected to.
 5. With a Distributed Network, up to 250 separate Controllers with supporting Consoles and TBUs shall share audio and data communications with each other.

6. A hardwired Distributed Network shall be created with the connection of Controllers via Telecor model T3-TNB-series Transfer Network Boards (TNBs). The connection of TNBs forms a Network, which shall allow for the transmission of audio and data between the Controllers. If a Controller should fail, the Network shall remain intact, ensuring reliable communications and control are maintained between the remaining Controllers. Because the Network is distributed, any new Controller to be added shall be connected onto the Network via its own TNB. The network shall be created using Category 5 (CAT-5) or higher cable.
- H. Power Supplies
1. The auxiliary Power Supply Units shall be Telecor model T3-PSU-1 or approved equal. The Power Supply Units shall have universal AC input with auto sensing of 120/220 VAC. The DC output shall have overcurrent limiting and short circuit protection. The Power Supply Units shall be UL 60950 approved.
 2. The T3-PSU Power Supply Units shall be available in models to provide 5 V, 24 V and a combination of both. The 5 V outputs shall be continuous while the 24 V may be continuous or switched, model dependent. Switched 24 V shall be regulated by signals from the Controller.
 3. The T3-PSU-1 shall be a switched 24 VDC, 4 A power supply for use in powering T3-TBU's in systems that exceed the power provided by the Controller's internal power supply module. It shall be remotely switched on when the system is powered up, allowing the TBUs to be powered up in a controlled sequence.
 4. The Power Supply Units shall be enclosed in cases constructed of 18-gauge cold rolled steel with a rust-preventative zinc plate finish. A conduit knock-out shall be provided for a 1/2" conduit fitting. The Power Supply Units shall be designed for various mounting positions.
- I. Paging Amplifiers
1. The Paging Amplifier shall be a Telecor model TEL-60 or approved equal. The amplifier shall deliver an audio output of 60 Watts RMS at less than 0.05% harmonic distortion. Hum and noise levels shall be more than 80 dB below rated output. Frequency response shall be 40 - 15,000 Hz \pm 1 dB. Frequency response shall be 20 - 20,000 Hz \pm 1 dB when used with the optional Telecor T2 Extended Range Output Transformer.
 2. The amplifier shall be provided with both 600 Ω balanced and 10k Ω unbalanced inputs. The input sensitivity shall be selectable between 100 mV and 1 V by means of a rear panel selector switch. A "low cut" switch shall be provided on the rear panel to attenuate low frequency signals below 100 Hz. The output shall be transformer isolated, with 4 Ω , 8 Ω , +25 V and +70 V constant voltage taps.
 3. The input level shall be adjustable by means of an input attenuator. The attenuator shall be recessed and shall be adjusted by means of a screwdriver, thereby avoiding casual or accidental setting changes. A security cover for the attenuator shall also be provided.
 4. The amplifier shall incorporate a 27 dB range VU meter with 10 LED's providing a 3 dB resolution scale in the display. A "CLIP" LED indicator shall be employed to indicate excessive input levels or an overloaded output condition.
 5. The amplifier shall incorporate current limiting protection circuitry that activates whenever the amplifier is overloaded by overdriving, by connection to an excessive load or by a short circuit, limiting current to the speaker load. A warning LED shall illuminate to indicate the presence of an overload condition. When activated, the current limiting protection circuitry shall gradually lower amplifier output to safe operation levels until the cause of the overload or short is corrected thereby protecting the amplifier while still allowing audio output.

6. The amplifier shall incorporate thermal sensors to detect an excessive heat build-up and shall gradually lower amplifier output to safe operation levels to prevent any damage to internal components. The heat sink temperature shall be monitored and a warning LED shall illuminate to indicate an unusual temperature rise. When activated, the heat sensing protection circuitry shall gradually lower amplifier output to safe operation levels until the cause of the excessive heat is corrected thereby protecting the amplifier while still allowing audio output.

J. Audio Monitoring System (AMS)

1. The Audio Monitoring System shall be a Telecor AMS or approved equal. The Audio Monitoring System shall be designed to provide audio surveillance with the ability to generate an alarm when sound at a monitored location exceeds preset audio parameters.
2. The system shall use intercom stations or speakers as microphones to monitor an area.
3. The system shall be capable of monitoring up to 100 stations (100 channel capacity) per AMS system. When the system is optionally configured to provide additional relay contacts for the control of auxiliary devices, the system shall monitor up to 50 stations (50 channel capacity).
4. The system shall monitor up to 5 preset audio patterns for alarm recognition (known as "Alarm Conditions"). The system shall monitor for all 5 Alarm Conditions simultaneously. Alarm Conditions shall be unique to each channel.
5. The system shall have an Alarm Condition that consists of a defined audio level and a specified time interval. Additional parameters of pattern recognition shall include audio levels with repeated intervals and audio patterns that are relative to both fixed and varying ambient noise conditions.
6. The system shall monitor for the following 5 distinct Alarm Conditions:
 - a. Alarm Condition 1: The system shall monitor for audio rising above an absolute amplitude (dB) for a fixed duration (sec).
 - b. Alarm Condition 2: The system shall monitor for audio rising above an absolute amplitude (dB) and amplitude relative to ambient noise (dB) for a fixed duration (sec).
 - c. Alarm Condition 3: The system shall monitor for audio rising above an absolute amplitude (dB) for a fixed duration (sec). Alarm Condition 3 shall have different programmed variables from Alarm Condition 1.
 - d. Alarm Condition 4: The system shall monitor for audio rising above an absolute amplitude (dB) and relative amplitude (dB) for a fixed duration (sec). Alarm Condition 4 shall monitor for audio with repeated intervals (1 to 10) that occur within a certain amount of time (sec).
 - e. Alarm Condition 5: The system shall monitor for audio falling below an absolute amplitude (dB) for a fixed duration (sec).
7. The system shall have a dynamic range of 60 dB for each channel and shall detect noise patterns within that range.
8. The Audio Monitoring System shall have each channel calibrated independently to compensate for variations in speaker sensitivity, which may be affected by size, design, tapping or cabling line loss
9. The Audio Monitoring System shall not employ a "Day - Night Switch" but shall be programmed to automatically register changes in ambient noise while maintaining constant monitoring of the pre-set parameters and their relationship to the changing ambient thereby eliminating the need for operator adjustments between daytime and night-time settings.
10. In applications where the Audio Monitoring System is used in conjunction with an intercom system, the Audio Monitoring System shall, upon the detection of an alarm, initiate a call to a Control Console. The call shall be clearly identified from other types of calls made to the communications system. The location of the call shall be displayed on

Consoles equipped with caller ID displays and the intercom system shall be capable of establishing two-way communications with the alarmed locations. When the conversation is completed, the intercom system shall automatically reset and cancel the alarm activation on the Audio Monitoring System.

11. The Audio Monitoring System shall provide the facility for external contacts to disable individual channels. Channels that are disabled shall be displayed on the front panel by uniquely illuminating the corresponding channel LED.
 12. The Audio Monitoring System shall incorporate a false alarm cancel feature. If an alarm is determined to be false, activation of a switch shall cancel the alarm and automatically reprogram the amplitude variable for the alarm condition. This shall desensitize that channel from similar audio conditions in the future.
 13. The Audio Monitoring System shall provide multiple methods of cancelling an alarm, which include accessing the front panel, self-cancelling after a predetermined elapsed time or by accessing the room through the intercom system
 14. The Audio Monitoring System shall provide an RS-232 serial data port for the connection of a PC. It shall be possible from the PC to provide the following features and functions:
 - a. Uploading and downloading of user-programmable software to facilitate remote software changes.
 - b. Executing on-site or off-site diagnostics using standard modems.
 - c. Continuous activity logging and reporting of events with the date and time of occurrence, the channel that initiated the alarm, the specific alarm parameter that triggered the alarm and the amount of time that was required to respond to the alarm.
 - d. Displaying a graph of the audio levels (SPL) from any of the channels on a video monitor. The image shall be displayed in real-time and pause in the event of an alarm to enable detailed analysis of the audio patterns. The duration and amplitude of the audio parameters shall be measured in seconds and decibels. The user shall position cursors at specific points, which shall be controlled from the computer keyboard.
- K. Intercom Station Audio Adjustment
1. The Security Communication System shall have the ability to electronically adjust the Talk Level and Listen Response for each Intercom Station.
 2. Adjusting the Talk Level shall determine the volume heard at the Intercom Station, which shall eliminate the need to physically re-tap Intercom Station speakers. Adjusting the Listen Response shall improve the intelligibility of voice communications heard at the Console by shaping the characteristics of each Intercom Station to the acoustical environment of its location
 3. The Talk Level and Listen Response shall have the ability to be electronically adjusted locally for each Intercom Station rather than globally. This shall enable rooms with divergent acoustical conditions to provide optimum sound quality. Adjustments shall be conducted with the Editor application, which shall allow a connection with the Controller to hear the results in real-time.
 4. To adjust the Talk Level of audio going to Intercom Station speakers, the Editor software shall include an Intercom Talk Level slide control. Raising or lowering the slide control shall increase or decrease the audio level.
 5. The Listen Sensitivity for each Intercom Station shall have the ability to be adjusted. This shall allow intelligibility to be further improved by taking into account the variables that affect listen quality, such as voice levels, distances between the users and the intercom, and locations with high ambient noise levels
 6. The Intelligibility Control Circuitry (ICC) in the Controller shall gently and unobtrusively raise the low level audio and compress the high level audio. The Listen Sensitivity control shall set the "target" output level and the Controller shall gently boost signals that drop

below the target and smoothly lower those that rise above it. Operation shall be configurable and then automatic and completely transparent.

7. To deal with ambient noise, the Intelligibility Control Circuitry (ICC) shall employ an automatic gain control to effectively raise the intercom audio above the noise floor. By properly setting the Listen Sensitivity, the listen level shall be automatically adjusted relative to the user's voice rather than the background noise.
8. Listen Sensitivity control shall be used for speakers in quiet or large rooms where the occupant is located far away from the Intercom Station. In such rooms, raising the Listen Sensitivity shall provide additional gain, allowing the occupant to be heard. Automatic gain shall be employed to provide a constant audio level should the speech level increase.
9. Should the audio of the speaker increase for any reason, compression shall be employed to provide a constant level to the listener at the Control Console.
10. For Intercom Stations that have similar acoustical environments, the Intercom Station Template of the Editor shall be used. With the Intercom Station Template, the Talk Level and Listen Response of all existing and future Intercom Stations shall be adjusted simultaneously as a global pool of stations. An Intercom Station shall still have the ability to be adjusted independent of the Template without affecting those in the global pool.

L. System Editor Software

1. The T3-SC Editor shall be a Windows®-based software application for configuring a Security Communication System. The Editor shall provide a Tree-View Control that displays items in a hierarchical order for selecting parameters and options when configuring a Security Communication System.
2. The Editor shall provide a high level of flexibility in the Security Communication System through the method in which Controller functions, which are designated as Actions, are executed. These Actions shall be programmed to execute with the activation of an input, dry contact or other Controller functions such as answering a call-in, which shall be designated as Triggers
3. The Editor shall offer the following Actions: System Command Actions to execute all other System functions, and Serial Port Message Actions to send serial messages to a Remote Device, such as a PLC or PC
4. The Security Communication System shall easily integrate with other systems, such as a PLC or PC. Integration shall allow the System to control other System functions, while allowing other systems to execute Security Communication System functions.
5. Serial Port Message Actions shall be created to be issued during System operations, enabling the System to control remote system functions. The construction of Serial Port Messages shall be based on the format the remote system uses to execute functions. For the remote system to control system functions, it shall send serial messages to the Controller. By creating Inbound Commands with the Editor, these serial messages shall be accepted by the Controller and cause it to execute the appropriate function.

2.3.2 COMPUTER EQUIPMENT

A. Embedded Computers

1. Provide four (4) new embedded computers to replace the existing Security Control Computers in the control rooms that operate the security system. The specifications are designed around the Advantech UNO-2171 embedded computer: part number UNO-2171-P12BE
 - a. Specifications: Pentium M 1.4GHz processor, 1GB RAM, Two RS232 & Two RS232/422/485, Two 10/100Base-T RJ-45 ports, Two USB, Windows XP, No fans or spinning media allowed.

2. Provide one (1) new SPARE embedded computer to be placed in storage as a backup, configured and ready for drop-in replacement in the existing Security Control Computers System. The specification are designed around the Advantech UNO-2171 embedded computer: part number UNO-2171-P12BE as shown above

B. Monitors

1. Provide four (4) new Touch Monitors to replace the existing Security Control monitors in the control rooms that operate the security system. The specification are designed around the Touch Systems, Inc Model W series: part number W122990R-UM
 - a. Specifications: 22" widescreen desktop touch monitor, 5-wire resistive touch technology, wide aspect ratio, DVI VGA video outputs.
2. Provide one (1) spare Touch Monitors to be placed in storage as a backup and ready for drop-in replacement in the existing Security Control Computers System. The specification are designed around the Touch Systems, Inc Model W series: part number W122990R-UM

C. Uninterruptable Power Supply

1. Provide APC Back-UPS Pro 1000 uninterruptable power supplies (UPS) for each Security Control computer and for each Telecor Controller, total of eight (8) supplies.
 - a. Line Interactive UPS, 670watts, 1000VA, 120 input, Output 120vac, interface port DB-9, RS-232

C. Media Converters and Switches

1. Provide one (1) Managed Ethernet Switch with Three Fiber ports. The specification are designed around the Moxa Model EDS series: part number EDS-408A-3M-SC.
 - a. Specifications: Entry level managed ethernet switch with five 10/100 BaseT(X) ports and three 100Based FX multimode ports with SC connectors, 0 to 60 degrees C operating temperatures.
2. Provide three (3) Unmanaged Ethernet Switch with Two Fiber ports. The specification is designed around the Moxa Model EDS series: part number EDS-208A-MM-SC.
 - a. Specifications: Unmanaged Ethernet switch with six 10/100 BaseT(X) ports and two 100Based FX multimode ports with SC connectors, -10 to 60 degrees C operating temperatures.
3. Provide two (2) Serial-to-Fiber Media Converters. The specification is designed around the Moxa Model ICF series: part number ICF-1150-M-SC.
 - a. Specifications: Industrial RS-232/422/485 to multimode fiber converter, SC connector, 2 KV isolation, 0 to 60 degrees C operating temperatures.

2.3.3 Enclosures

A. Custom Enclosure

1. The Intercom equipment will be housed in secure enclosures as shown in the contract drawings. The enclosure will be wall/floor mounted allowing all field connects to be made to a fixed stable surface. The EIA rack mount equipment will be housed inside the enclosure on a swinging rack to allow serviceability to the rear of the equipment. **NO** EIA stand alone rack enclosures will be allowed. All equipment must be serviceable from the front of the enclosure.

PART 3 - EXECUTION

SECURITY AUTOMATION SYSTEM

17005-13

3.1 EXAMINATION

- A. Examine conditions, with the Installer present, for compliance with requirements and other conditions affecting the performance of the intercommunication system work.
- B. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install system in accordance with NFPA 70 and other applicable codes. Install equipment in accordance with manufacturer's written instructions.
- D. Wiring Within Enclosures: Provide adequate length of conductors. Bundle, lace, and train the conductors to terminal points with no excess. Provide and use lacing bars or tie wraps.
- E. Splices, Taps, and Terminations: Make splices, taps and terminations on terminal strips in junction, pull, and outlet boxes, terminal cabinets and equipment enclosures.

3.3 TESTING AND DEMONSTRATION

- A. The security automation system, excluding field devices, shall be assembled complete and 100% tested in the security automation system integrator's facility. This includes all applicable equipment cabinets, graphics, touchscreens, and any other component deemed necessary by the engineer to be demonstrated. All software for all systems shall be programmed and tested.
- B. The testing shall include attachment and proper operation of a typical field device to each and every point of field device connection. While testing is demonstrated to the engineer and owner, the engineer may randomly choose field device connection points to be connected and operated. Because the system shall be 100% tested, these field devices shall operate properly.
- C. The security automation system integrator shall notify the engineers and owners 30 days prior to shipment of the equipment that the test is ready and shall coordinate with them to organize the date of the demonstration.

3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Provide services of a factory authorized service representative to supervise the field assembly and connection of components and testing, and adjustment of the system.
- C. Testing: Upon completion notify the Architect a minimum of 5 days in advance, of acceptance test performance schedule and conduct tests in his presence. Provide a written record of test results. This process shall be known as the "system validation".
- D. Operational Test: Perform an operational system test to verify conformance of system to these specifications.

- E. *Inspection: Make observations to verify that units and controls are properly labeled, and interconnecting wires and terminals are identified.*
- I. *Retesting: Rectify deficiencies indicated by tests and completely retest work affected by such deficiencies at Contractor's expense. Verify by the system test that the total system meets the Specifications and complies with applicable standards.*

3.6 COMMISSIONING

- A. Train Owner's maintenance personnel in the procedures and schedules involved in operating, programming, troubleshooting, servicing, and preventative maintenance of the system.
- B. Schedule training with Owner through the Architect, with at least seven days advance notice.

List of existing Intercom Call In Stations

"A" Building	Call In Location	Type	Address Number
	A069 Intercom	Threshold	10691
	A070 Intercom	Threshold	10701
	A075 Intercom	Threshold	10751
	A077 Intercom	Threshold	10771
	A078 Intercom	Threshold	10781
	A084 Intercom	Threshold	10841
	A085 Intercom	Threshold	10851
	A086 Intercom	Threshold	10861
	A087 Intercom	Threshold	10871
	A058A Intercom	Intercom	10451
	A058B Intercom	Intercom	10501
	A117 Intercom	Intercom	10601
	A059 Intercom	Intercom	10602
	A064 Intercom	Intercom	10603
	A062 Intercom	Intercom	10604
	A065 Intercom	Intercom	10651
	A068 Intercom	Threshold	10681
	A079A Intercom	Intercom	10002
	A079B Intercom	Intercom	10741
	A083A Intercom	Intercom	10831
	A088 Intercom	Intercom	10881
	A090B Intercom	Intercom	10901
	A099 Intercom	Threshold	10991
	A100 Intercom	Threshold	11001
	A098A Intercom	Intercom	10581
	A091 Intercom	Intercom	10921
	A115 Intercom	Intercom	11151
	A116 Intercom	Intercom	10001
	A079A Intercom	Intercom	10791
	A072 Intercom	Intercom	10721
	A113 Intercom	Intercom	11161
	Garage Entry Intercom	Intercom	10005
	A116 Intercom	Intercom	10001
	A080A Intercom	Intercom	10003

"D" Building	Call In Location	Type	Address Number
	D124 Intercom	Threshold	41241
	D105 Intercom	Intercom	41051
	D125 Intercom	Threshold	41251
	D132 Intercom	Intercom	41321
	D101 Intercom	Intercom	41011
	D118 Intercom	Intercom	41181
	D128 Intercom	Threshold	41281
	D106 Intercom	Intercom	41061
	D127 Intercom	Threshold	41271
	D140 Intercom	Intercom	41401
	D123 Intercom	Intercom	41231
	D134 Intercom	Intercom	41341
	D130 Intercom	Threshold	41301
	D102 Intercom	Intercom	41021
	D104 Intercom	Intercom	41041
	Outdoor Rec	Page Spkr	40001
	Dayroom D140	Page Spkr	40002
	Dayroom D118	Page Spkr	40003
	Dayroom D134	Page Spkr	40004
	Dayroom D105	Page Spkr	40005
	Dayroom D123	Page Spkr	40006

SECURITY AUTOMATION SYSTEM

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"B" Building			
	B145 Intercom	Threshold	21451
	B144 Intercom	Threshold	21441
	B143 Intercom	Threshold	21431
	B142 Intercom	Threshold	21421
	B141 Intercom	Threshold	21411
	B140 Intercom	Threshold	21401
	B235 Intercom	Threshold	22351
	B234 Intercom	Threshold	22341
	B233 Intercom	Threshold	22331
	B232 Intercom	Threshold	22321
	B231 Intercom	Threshold	22311
	B230 Intercom	Threshold	22301
	B138 Intercom	Threshold	21381
	B137 Intercom	Threshold	21371
	B136 Intercom	Threshold	21361
	B135 Intercom	Threshold	21351
	B227 Intercom	Threshold	22271
	B226 Intercom	Threshold	22261
	B225 Intercom	Threshold	22251
	B224 Intercom	Threshold	22241
	B130 Intercom	Threshold	21301
	B129 Intercom	Threshold	21291
	B128 Intercom	Threshold	21281
	B127 Intercom	Threshold	21271
	B219 Intercom	Threshold	22191
	B218 Intercom	Threshold	22181
	B217 Intercom	Threshold	22171
	B216 Intercom	Threshold	22161
	B122 Intercom	Threshold	21221
	B121 Intercom	Threshold	21211
	B120 Intercom	Threshold	11201
	B119 Intercom	Threshold	21191
	B213 Intercom	Threshold	22131
	B212 Intercom	Threshold	22121
	B211 Intercom	Threshold	22111
	B210 Intercom	Threshold	22101
	B110 Paging	Page Spkr	21102
	B108 Paging	Page Spkr	21082
	B139 Paging	Page Spkr	21392
	B133 Paging	Page Spkr	21332
	B126 Paging	Page Spkr	21262
	B117 Paging	Page Spkr	21172
	B115 Intercom	Threshold	20041
	B114 Intercom	Threshold	20031
	B123 Intercom	Intercom	21231
	B104A Intercom	Intercom	21131
	B103B Intercom	Intercom	21041
	B104B Intercom	Intercom	21001
	B139A Intercom	Intercom	21391

SECURITY AUTOMATION SYSTEM

17005-18

B133A Intercom	Intercom	21331
B126A Intercom	Intercom	21261
B124 Intercom	Intercom	21043
B117A Intercom	Intercom	21171
B110 Intercom	Intercom	21101
B108 Intercom	Intercom	21081
B105 Intercom	Intercom	21051
B103B Intercom	Intercom	21042
B103A Intercom	Intercom	21031
B102A Intercom	Intercom	21021
B101 Intercom	Intercom	21011
B103A Intercom	Intercom	21002
B103C Intercom	Intercom	20001
B203 Intercom	Threshold	20012
B204 Intercom	Threshold	20022
B205 Intercom	Threshold	20032
B206 Intercom	Threshold	20042
B112 Intercom	Threshold	20011
B113 Intercom	Threshold	20021
Kitchen Intercom	Intercom	11111
Kitchen Intercom	Intercom	11071
Kitchen Intercom	Intercom	11141
B Sallyport Intercom	Intercom	21241
B Sallyport Intercom	intercom	21242

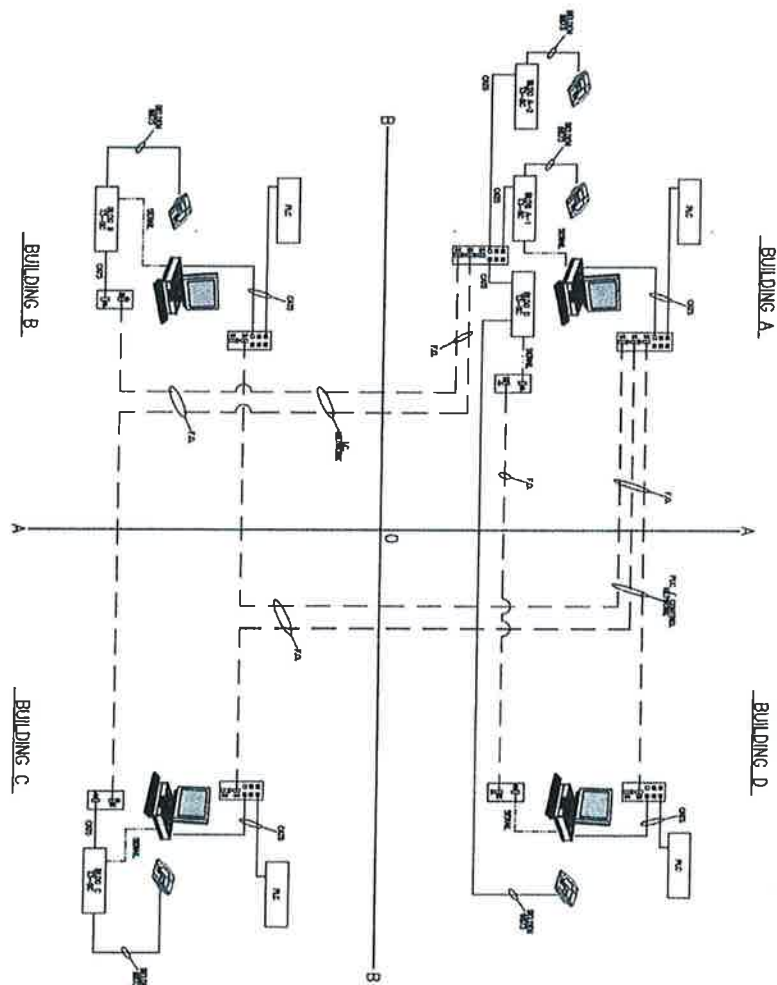
SECURITY AUTOMATION SYSTEM

17005-19

"C" Building			
	C141 Intercom	Threshold	31411
	C140 Intercom	Threshold	31401
	C139 Intercom	Threshold	31391
	C138 Intercom	Threshold	31381
	C234 Intercom	Threshold	32341
	C233 Intercom	Threshold	32331
	C232 Intercom	Threshold	32321
	C231 Intercom	Threshold	32311
	C133 Intercom	Threshold	31331
	C132 Intercom	Threshold	31321
	C131 Intercom	Threshold	31311
	C130 Intercom	Threshold	31301
	C226 Intercom	Threshold	32261
	C225 Intercom	Threshold	32251
	C224 Intercom	Threshold	32241
	C223 Intercom	Threshold	32231
	C126 Intercom	Threshold	31261
	C125 Intercom	Threshold	31251
	C124 Intercom	Threshold	31241
	C123 Intercom	Threshold	31231
	C220 Intercom	Threshold	32201
	C219 Intercom	Threshold	32191
	C218 Intercom	Threshold	32181
	C217 Intercom	Threshold	32171
	C117 Intercom	Threshold	31171
	C116 Intercom	Threshold	31161
	C115 Intercom	Threshold	31151
	C114 Intercom	Threshold	31141
	C212 Intercom	Threshold	32121
	C211 Intercom	Threshold	32111
	C210 Intercom	Threshold	32101
	C209 Intercom	Threshold	32091
	C111 Intercom	Threshold	31111
	C110 Intercom	Threshold	31101
	C109 Intercom	Threshold	31091
	C108 Intercom	Threshold	31081
	C206 Intercom	Threshold	32061
	C205 Intercom	Threshold	32051
	C204 Intercom	Threshold	32041
	C203 Intercom	Threshold	32031
	C103A Intercom	Intercom	31033
	C100 Intercom	Intercom	31003
	C101C Intercom	Intercom	30001
	C101A Intercom	Intercom	31021
	C101B Intercom	Intercom	31011
	C106A Intercom	Intercom	21061
	C113 Intercom	Intercom	31131
	C112 Intercom	Intercom	33113
	C120 Intercom	Intercom	33121

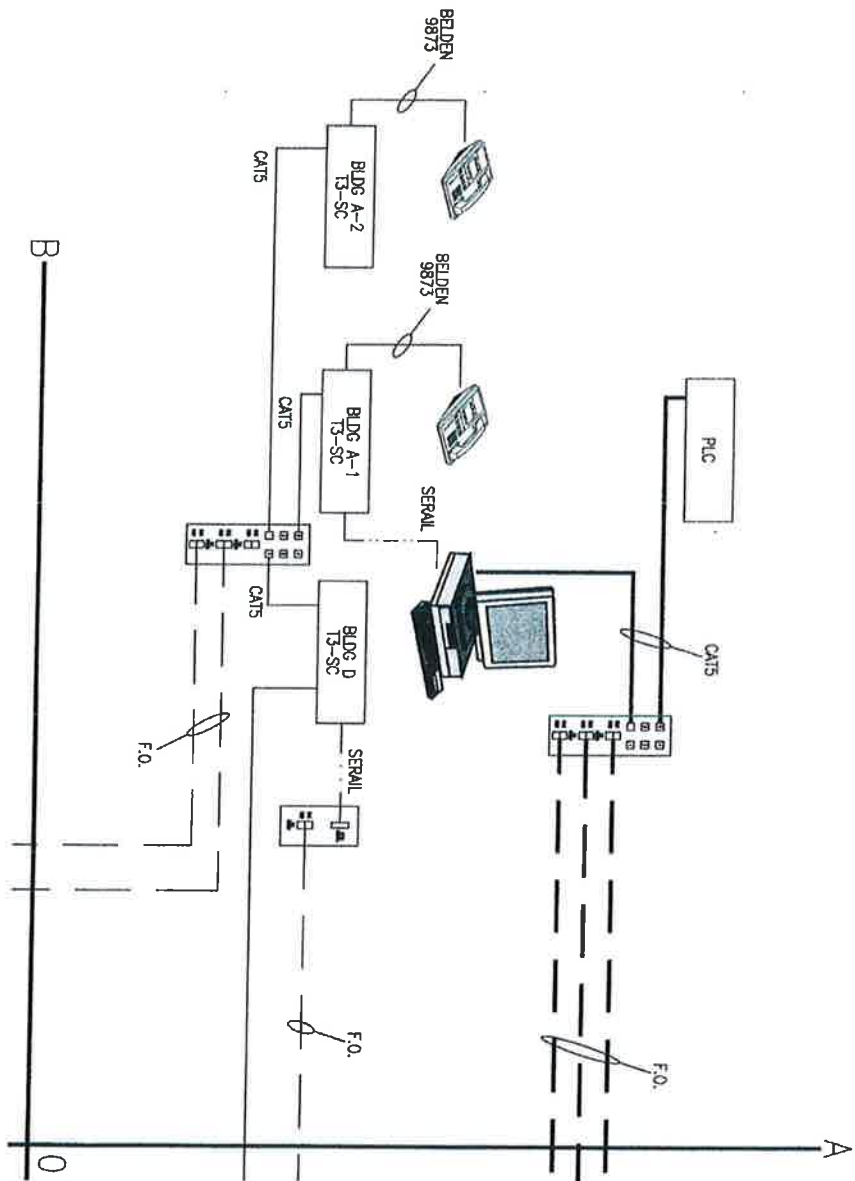
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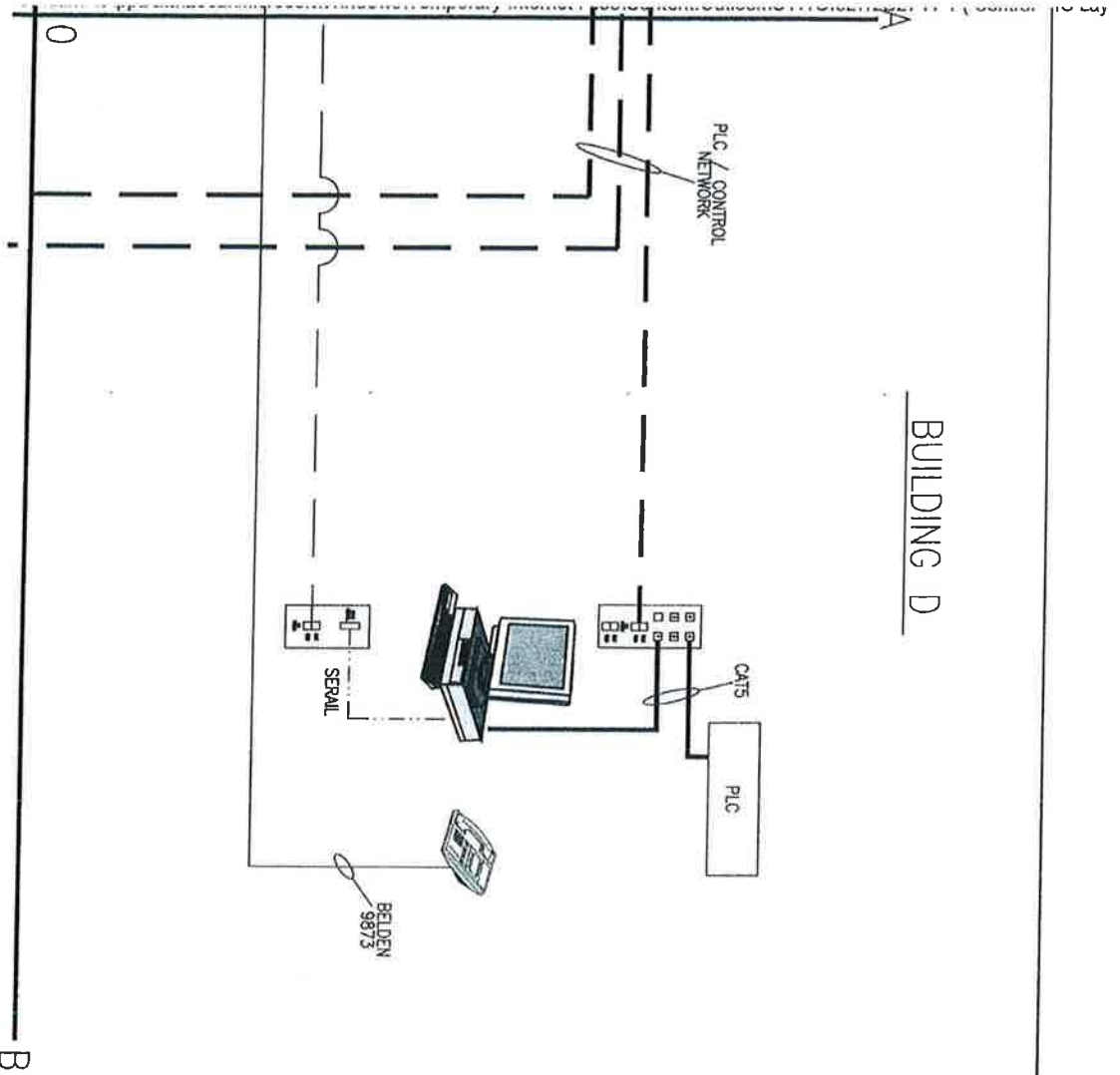


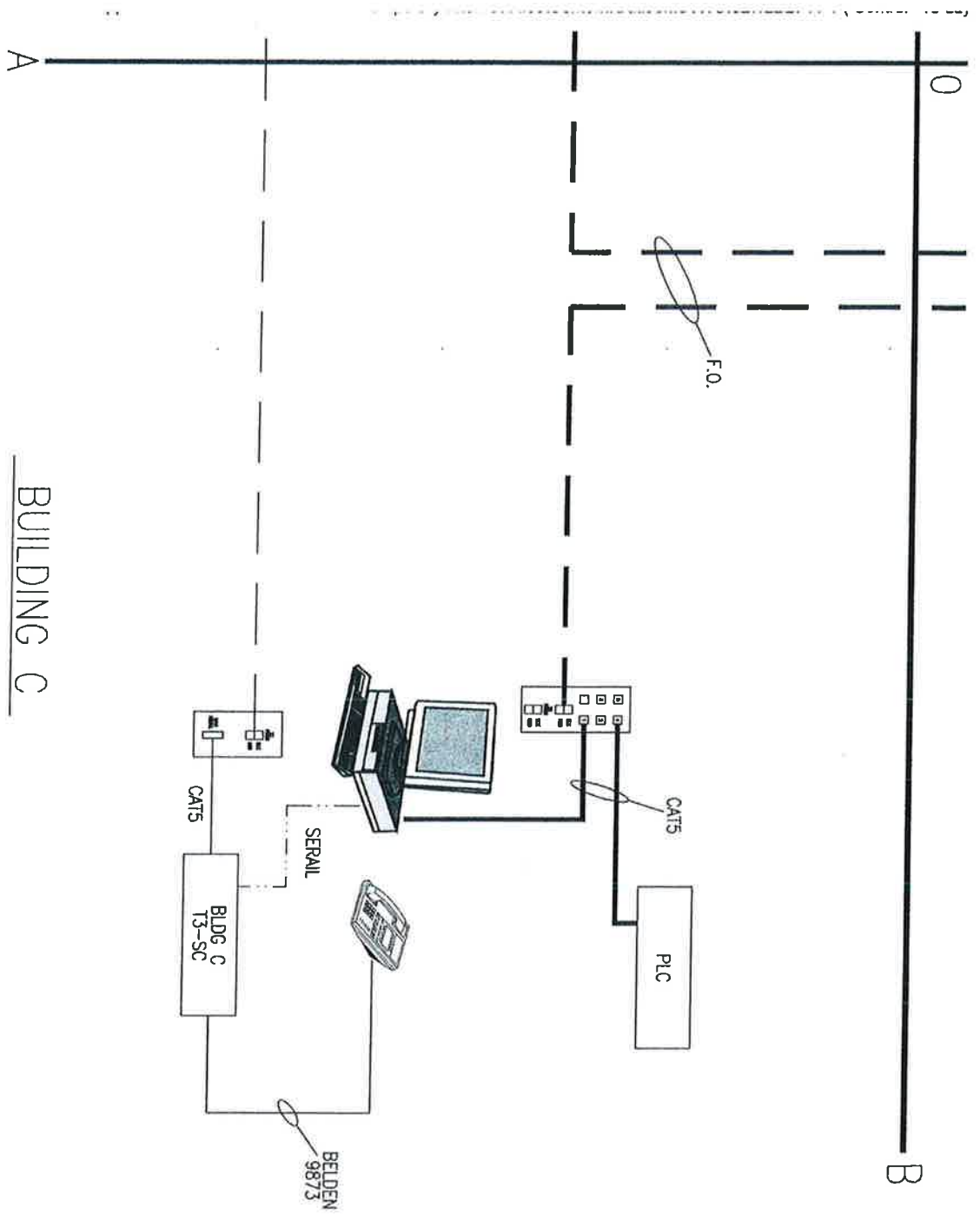
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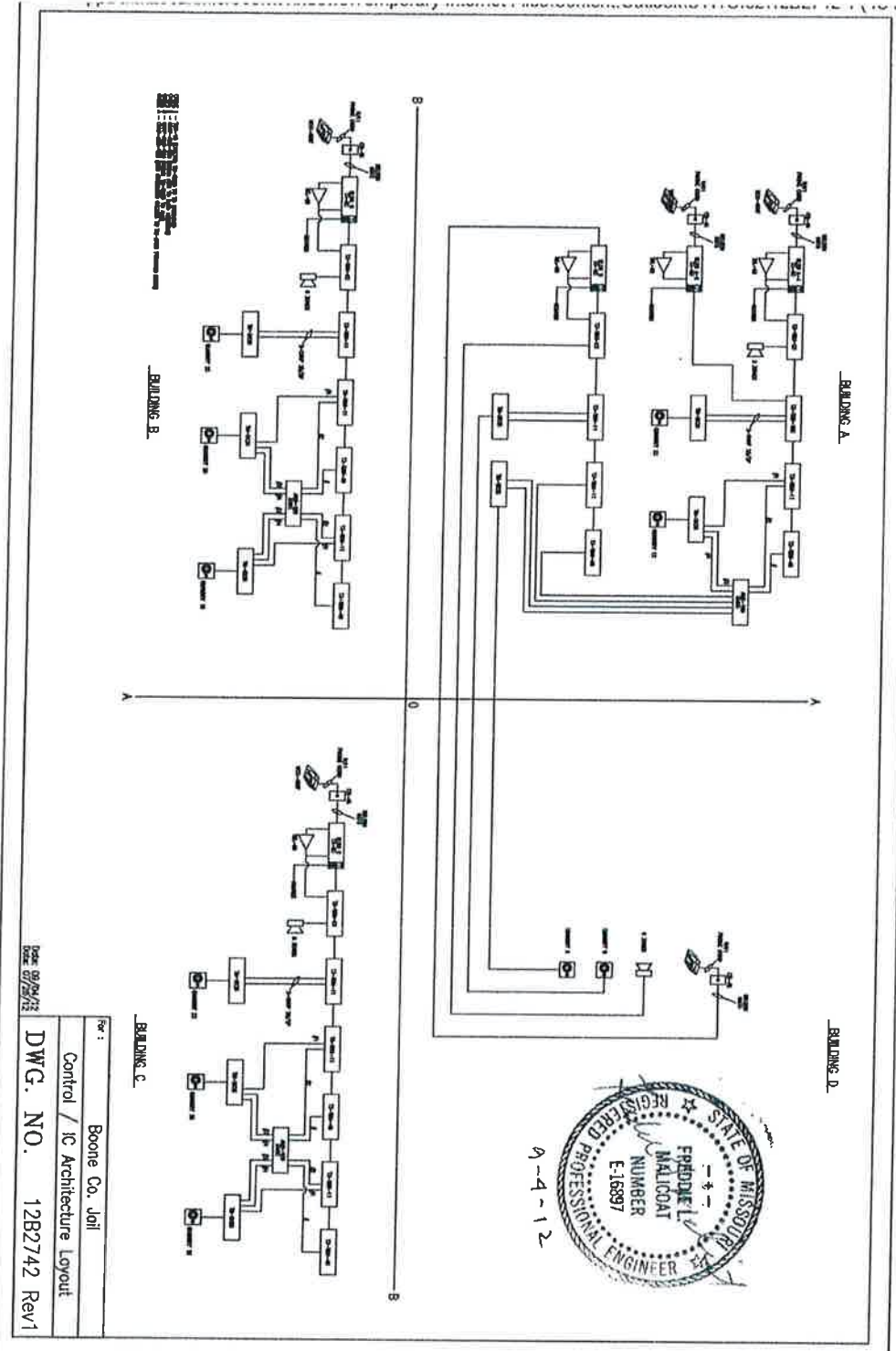
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	Control / IC Architecture Layout
DWG. NO.	12B2741 rev1



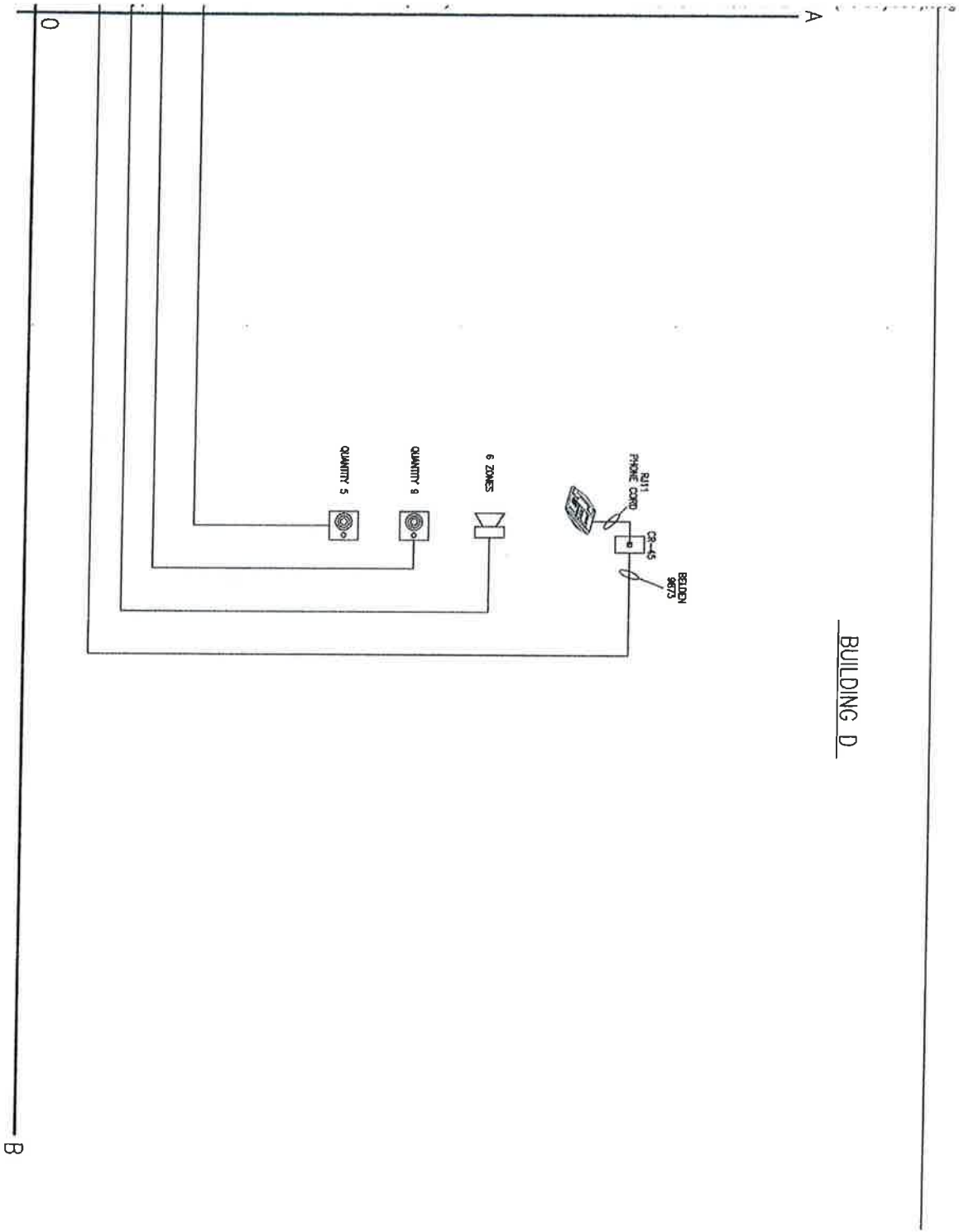
BUILDING A







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 DWG. NO. 12B2742 Rev1
 Date 09/29/12
 Date 09/29/12



BUILDING D

Missouri Division of Labor Standards

WAGE AND HOUR SECTION



JEREMIAH W. (JAY) NIXON, Governor

Annual Wage Order No. 19

Section 010
BOONE COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by _____
Carla Buschjost, Director
Division of Labor Standards

This Is A True And Accurate Copy Which Was Filed With The Secretary of State: March 9, 2012

Last Date Objections May Be Filed: April 9, 2012

Prepared by Missouri Department of Labor and Industrial Relations

Building Construction Rates for
BOONE County

Section 010

OCCUPATIONAL TITLE	** Date of Increase	*	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Asbestos Worker (H & F) Insulator			\$30.76	55	60	\$18.81
Boilermaker			\$32.31	57	7	\$25.80
Bricklayer and Stone Mason			\$28.20	59	7	\$14.33
Carpenter			\$24.09	60	15	\$12.40
Cement Mason			\$25.43	9	3	\$10.45
Electrician (Inside Wireman)			\$30.42	28	7	\$12.18 + 13%
Electrician (Outside-Line Construction/Lineman)			\$36.36	43	45	\$5.00 + 44.5%
Lineman Operator			\$31.39	43	45	\$5.00 + 44.5%
Groundman			\$24.27	43	45	\$5.00 + 44.5%
Communication Technician			\$30.42	28	7	\$12.18 + 13%
Elevator Constructor		a	\$42.195	26	54	\$23.305
Operating Engineer						
Group I			\$25.81	86	66	\$21.43
Group II			\$25.81	86	66	\$21.43
Group III			\$24.56	85	66	\$21.43
Group III-A			\$25.81	85	66	\$21.43
Group IV			\$23.58	85	66	\$21.43
Group V			\$26.51	85	66	\$21.43
Pipe Fitter		b	\$34.25	91	69	\$23.18
Glazier		c	\$27.35	122	76	\$14.22 + 5.2%
Laborer (Building):						
General			\$20.81	42	44	\$11.54
First Semi-Skilled			\$22.81	42	44	\$11.54
Second Semi-Skilled			\$21.81	42	44	\$11.54
Lather			USE CARPENTER RATE			
Linoleum Layer and Cutter			USE CARPENTER RATE			
Marble Mason			\$20.62	124	74	\$12.68
Millwright			\$26.09	60	15	\$12.35
Ironworker			\$27.51	11	8	\$19.84
Painter			\$20.80	18	7	\$10.92
Plasterer			\$24.29	94	5	\$12.12
Plumber		b	\$34.25	91	69	\$23.18
Pile Driver			\$25.09	60	15	\$12.35
Roofer & Waterproofer			\$28.05	12	4	\$12.99
Sheet Metal Worker			\$29.25	40	23	\$13.85
Sprinkler Fitter - Fire Protection			\$30.52	33	19	\$17.02
Terrazzo Worker			\$27.48	124	74	\$14.32
Tile Setter			\$20.62	124	74	\$12.68
Truck Driver-Teamster						
Group I			\$24.50	101	5	\$9.30
Group II			\$25.15	101	5	\$9.30
Group III			\$24.65	101	5	\$9.30
Group IV			\$25.15	101	5	\$9.30
Traffic Control Service Driver			\$26.415	22	55	\$9.045

Fringe Benefit Percentage is of the Basic Hourly Rate

Attention Workers: If you are not being paid the appropriate wage rate and fringe benefits contact the Division of Labor Standards at (573) 751-3403.

*SEE FOOTNOTE PAGE

ANNUAL WAGE ORDER NO. 19

3/12

**BOONE COUNTY
OVERTIME SCHEDULE - BUILDING CONSTRUCTION**

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 ½) shall be paid for all work in excess of forty (40) hours per work week.

NO. 9: Means the regular workday starting time of 8:00 a.m. (and resulting quitting time of 4:30 p.m.) may be moved forward to 6:00 a.m. or delayed one hour to 9:00 a.m. All work performed in excess of the regular work day and on Saturday shall be compensated at one and one-half (1½) times the regular pay. In the event time is lost during the work week due to weather conditions, the Employer may schedule work on the following Saturday at straight time. All work accomplished on Sunday and holidays shall be compensated for at double the regular rate of wages. The work week shall be Monday through Friday, except for midweek holidays.

NO. 11: Means eight (8) hours shall constitute a day's work, with the starting time to be established between 6:00 a.m. and 8:00 a.m. from Monday to Friday. Time and one-half (1½) shall be paid for first two (2) hours of overtime Monday through Friday and the first eight (8) hours on Saturday. All other overtime hours Monday through Saturday shall be paid at double (2) time rate. Double (2) time shall be paid for all time on Sunday and recognized holidays or the days observed in lieu of these holidays.

NO. 12: Means the work week shall commence on Monday at 12:01 a.m. and shall continue through the following Friday, inclusive of each week. All work performed by employees anywhere in excess of forty (40) hours in one (1) work week, shall be paid for at the rate of one and one-half (1½) times the regular hourly wage scale. All work performed within the regular working hours which shall consist of a ten (10) hour work day except in emergency situations. Overtime work and Saturday work shall be paid at one and one-half (1½) times the regular hourly rate. Work on recognized holidays and Sundays shall be paid at two (2) times the regular hourly rate.

NO. 18: Means the regular work day shall be eight (8) hours. Working hours are from six (6) hours before Noon (12:00) to six (6) hours after Noon (12:00). The regular work week shall be forty (40) hours, beginning between 6:00 a.m. and 12:00 Noon on Monday and ending between 1:00 p.m. and 6:00 p.m. on Friday. Saturday will be paid at time and one-half (1½). Sunday and Holidays shall be paid at double (2) time. Saturday can be a make-up day if the weather has forced a day off, but only in the week of the day being lost. Any time before six (6) hours before Noon or six (6) hours after Noon will be paid at time and one-half (1½).

NO. 22: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 26: Means that the regular working day shall consist of eight (8) hours worked between 6:00 a.m., and 5:00 p.m., five (5) days per week, Monday to Friday, inclusive. Hours of work at each jobsite shall be those established by the general contractor and worked by the majority of trades. (The above working hours may be changed by mutual agreement). Work performed on Construction Work on Saturdays, Sundays and before and after the regular working day on Monday to Friday, inclusive, shall be classified as overtime, and paid for at double (2) the rate of single time. The employer may establish hours worked on a jobsite for a four (4) ten (10) hour day work week at straight time pay for construction work; the regular working day shall consist of ten (10) hours worked consecutively, between 6:00 a.m. and 6:00 p.m., four (4) days per week, Monday to Thursday, inclusive. Any work performed on Friday, Saturday, Sunday and holidays, and before and after the regular working day on Monday to Thursday where a four (4) ten (10) hour day workweek has been established, will be paid at two times (2) the single time rate of pay. The rate of pay for all work performed on holidays shall be at two times (2) the single time rate of pay.

**BOONE COUNTY
OVERTIME SCHEDULE - BUILDING CONSTRUCTION**

NO. 28: Means a regular workday shall consist of eight (8) hours between 7:00 a.m. and 5:30 p.m., with at least a thirty (30) minute period to be taken for lunch. Five (5) days a week, Monday through Friday inclusive, shall constitute a work week. The Employer has the option for a workday/workweek of four (4) ten (10) hour days (4-10's) provided:

- The project must be for a minimum of four (4) consecutive days.
- Starting time may be within one (1) hour either side of 8:00 a.m.
- Work week must begin on either a Monday or Tuesday. If a holiday falls within that week it shall be a consecutive work day. (Alternate: If a holiday falls in the middle of a week, then the regular eight (8) hour schedule may be implemented).
- Any time worked in excess of any ten (10) hour work day (in a 4-10 hour work week) shall be at the appropriate overtime rate.

All work outside of the regular working hours as provided, Monday through Saturday, shall be paid at one & one-half (1½) times the employee's regular rate of pay. All work performed from 12:00 a.m. Sunday through 8:00 a.m. Monday and recognized holidays shall be paid at double (2) the straight time hourly rate of pay. Should employees work in excess of twelve (12) consecutive hours they shall be paid double time (2X) for all time after twelve (12) hours. Shift work performed between the hours of 4:30 p.m. and 12:30 a.m. (second shift) shall receive eight (8) hours pay at the regular hourly rate of pay plus ten (10%) percent for seven and one-half (7½) hours work. Shift work performed between the hours of 12:30 a.m. and 8:00 a.m. (third shift) shall receive eight (8) hours pay at the regular hourly rate of pay plus fifteen (15%) percent for seven (7) hours work. A lunch period of thirty (30) minutes shall be allowed on each shift. All overtime work required after the completion of a regular shift shall be paid at one and one-half (1½) times the shift hourly rate.

NO. 33: Means the standard work day and week shall be eight (8) consecutive hours of work between the hours of 6:00 a.m. and 6:00 p.m., excluding the lunch period Monday through Friday, or shall conform to the practice on the job site. Four (4) days at ten (10) hours a day may be worked at straight time, Monday through Friday and need not be consecutive. All overtime, except for Sundays and holidays shall be at the rate of time and one-half (1½). Overtime worked on Sundays and holidays shall be at double (2) time.

NO. 40: Means the regular working week shall consist of five (5) consecutive (8) hour days' labor on the job beginning with Monday and ending with Friday of each week. Four (4) 10-hour days may constitute the regular work week. The regular working day shall consist of eight (8) hours labor on the job beginning as early as 7:00 a.m. and ending as late as 5:30 p.m. All full or part time labor performed during such hours shall be recognized as regular working hours and paid for at the regular hourly rate. All hours worked on Saturday and all hours worked in excess of eight (8) hours but not more than twelve (12) hours during the regular working week shall be paid for at time and one-half (1½) the regular hourly rate. All hours worked on Sundays and holidays and all hours worked in excess of twelve (12) hours during the regular working day shall be paid at two (2) times the regular hourly rate. In the event of rain, snow, cold or excessively windy weather on a regular working day, Saturday may be designated as a "make-up" day. Saturday may also be designated as a "make-up" day, for an employee who has missed a day of work for personal or other reasons. Pay for "make-up" days shall be at regular rates.

**BOONE COUNTY
OVERTIME SCHEDULE - BUILDING CONSTRUCTION**

NO. 42: Means eight (8) hours between the hours of 8:00 a.m. and 4:30 p.m. shall constitute a work day. The starting time may be advanced one (1) or two (2) hours. Employees shall have a lunch period of thirty (30) minutes. The Employer may provide a lunch period of one (1) hour, and in that event, the workday shall commence at 8:00 a.m. and end at 5:00 p.m. The workweek shall commence at 8:00 a.m. on Monday and shall end at 4:30 p.m. on Friday (or 5:00 p.m. on Friday if the Employer grants a lunch period of one (1) hour), or as adjusted by starting time change as stated above. All work performed before 8:00 a.m. and after 4:30 p.m. (or 5:00 p.m. where one (1) hour lunch is granted for lunch) or as adjusted by starting time change as stated above or on Saturday, except as herein provided, shall be compensated at one and one-half (1½) times the regular hourly rate of pay for the work performed. All work performed on Sunday and on recognized holidays shall be compensated at double (2) the regular hourly rate of pay for the work performed. When working a five 8-hour day schedule and an Employer is prevented from working forty (40) hours, Monday through Friday, or any part thereof by reason of inclement weather (rain or mud), Saturday or any part thereof may be worked as a make-up day at the straight time rate. The Employer shall have the option of working five eight (8) hour days or four ten (10) hour days Monday through Friday. If an Employer elects to work five (5) eight (8) hour days during any work week, hours worked more than eight (8) per day or forty (40) hours per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an Employer elects to work four (4) ten (10) hour days in any week, work performed more than ten (10) hours per day or forty (40) hours per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an Employer is working ten (10) hour days and loses a day due to inclement weather, they may work ten (10) hours Friday at straight time. All hours worked over the forty (40) hours Monday through Friday will be paid at time and one-half (1½) overtime rate. Overtime shall be computed at half-hour intervals. Shift Work: Two (2) or three (3) shifts shall be permitted, provided such shifts are scheduled for a minimum of three (3) consecutive days. The second shift shall begin at 4:30 p.m. and end at 12:30 a.m. with one-half (1/2) hour for lunch between 7:30 p.m. and 9:00 p.m. and shall received eighty (8) hours' pay. The third shift shall begin at 12:30 a.m. and end at 8:00 a.m. with one-half (1/2) hour for lunch between 3:30 a.m. and 5:00 a.m. and shall received (8) hours' pay. There shall be at least one (1) foreman on each shift on jobs where more than one shift is employed, provided that there are two (2) or more employees on second and on the third shifts. All shifts shall arrange to interchange working hours at the end of each week. When three shifts are used, the applicable rate must be paid from Saturday at 8:00 a.m. until the following Monday at 8:00 a.m. When three shifts are employed, the second and third shifts shall contain at least one-half (1/2) as many employees as the first shift.

NO. 43: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1½) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1½) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Work performed outside the regularly scheduled working hours and on Saturdays, Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

NO. 55: Means the regular work day shall be eight (8) hours between 8:00 a.m. and 4:30 p.m. The first two (2) hours of work performed in excess of the eight (8) hour work day, Monday through Friday, and the first ten (10) hours of work on Saturday, shall be paid at one & one-half (1½) times the straight time rate. All work performed on Sunday, observed holidays and in excess of ten (10) hours a day, Monday through Saturday, shall be paid at double (2) the straight time rate.

NO. 57: Means eight (8) hours per day shall constitute a day's work and forty (40) hours per week, Monday through Friday, shall constitute a week's work. The regular starting time shall be 8:00 a.m. If a second or third shift is used, the regular starting time of the second shift shall be 4:30 p.m. and the regular starting period for the third shift shall be 12:30 a.m. These times may be adjusted by the employer. The day shift shall work a regular eight (8) hours shift as outlined above. Employees working a second shift shall receive an additional \$0.25 above the regular hourly rate and perform seven and one-half (7½) hours work for eight (8) hours pay. Third shift employees shall be paid an additional \$0.50 above the regular hourly rate and work seven (7) hours for eight (8) hours pay. When circumstances warrant, the Employer may change the regular workweek to four (4) ten-hour days at the regular time rate of pay. All time worked before and after the established workday of eight (8) hours, Monday through Friday, and all time worked on Saturday shall be paid at the rate of time and one-half (1½) except in cases where work is part of an employee's regular Friday shift. All time worked on Sunday and recognized holidays shall be paid at the double (2) time rate of pay except in cases where work is part of an employee's previous day's shift. For all overtime hours worked \$25.77 of the fringe benefits portion of the prevailing wage shall be paid at the same overtime rate at which the cash portion of the prevailing wage is to be paid. The remaining \$1.24 of the fringe benefit portion of the prevailing wage may be paid at straight time.

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OVERTIME SCHEDULE - BUILDING CONSTRUCTION**

NO. 59: Means that except as herein provided, eight (8) hours a day shall constitute a standard work day, and forty (40) hours per week shall constitute a week's work. All time worked outside of the standard eight (8) hour work day and on Saturday shall be classified as overtime and paid the rate of time and one-half (1½). All time worked on Sunday and holidays shall be classified as overtime and paid at the rate of double (2) time. The Employer has the option of working either five (5) eight hour days or four (4) ten hour days to constitute a normal forty (40) hour work week. When the four (4) ten-hour work week is in effect, the standard work day shall be consecutive ten (10) hour periods between the hours of 6:30 a.m. and 6:30 p.m. Forty (40) hours per week shall constitute a week's work, Monday through Thursday, inclusive. In the event the job is down for any reason beyond the Employer's control, then Friday and/or Saturday may, at the option of the Employer, be worked as a make-up day; straight time not to exceed ten (10) hours or forty (40) hours per week. When the five day eight (8) hour work week is in effect, forty (40) hours per week shall constitute a week's work, Monday through Friday, inclusive. In the event the job is down for any reason beyond the Employer's control, then Saturday may, at the option of the Employer, be worked as a make-up day; straight time not to exceed eight (8) hours or forty (40) hours per week. The regular starting time (and resulting quitting time) may be moved to 8:00 a.m. or delayed to 9:00 a.m. Make-up days shall not be utilized for days lost due to holidays.

NO. 60: Means the Employer shall have the option of working five 8-hour days or four 10-hour days Monday through Friday. If an Employer elects to work five 8-hour days during any work week, hours worked more than eight (8) per day or forty (40) per week shall be paid at time and one-half (1½) the hourly wage rate plus fringe benefits Monday through Friday. **SATURDAY MAKE-UP DAY:** If an Employer is prevented from working forty (40) hours, Monday through Friday, or any part thereof by reason of inclement weather (rain or mud), Saturday or any part thereof may be worked as a make-up day at the straight time rate. It is agreed by the parties that the make-up day is not to be used to make up time lost due to recognized holidays. If an Employer elects to work four 10-hour days, between the hours of 6:30 a.m. and 6:30 p.m. in any week, work performed more than ten (10) hours per day or forty (40) hours per week shall be paid at time and one half (1½) the hourly wage rate plus fringe benefits Monday through Friday. If an Employer is working 10-hour days and loses a day due to inclement weather, the Employer may work ten (10) hours on Friday at straight time. All hours worked over the forty (40) hours Monday through Friday will be paid at time and one-half (1½) the hourly wage rate plus fringe benefits. All Millwright work performed in excess of the regular work day and on Saturday shall be compensated for at time and one-half (1½) the regular Millwright hourly wage rate plus fringe benefits. The regular work day starting at 8:00 a.m. (and resulting quitting time of 4:30 p.m.) may be moved forward to 8:00 a.m. or delayed one (1) hour to 9:00 a.m. All work accomplished on Sundays and recognized holidays, or days observed as recognized holidays, shall be compensated for at double (2) the regular hourly rate of wages plus fringe benefits. **NOTE:** All overtime is computed on the hourly wage rate plus an amount equal to the fringe benefits.

NO. 66: Means the regular work week shall consist of five (5) days, Monday through Friday, beginning at 8:00 a.m. and ending at 4:30 p.m. The regular work day beginning time may be advanced one or two hours or delayed by one hour. However, the Employer may have the option to schedule his work week from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate. If the Employer elects to work from Monday through Thursday and is stopped due to circumstances beyond his control, inclement weather or holiday, he shall have the option to work Friday at the straight time rate of pay to complete his forty (40) hours. If an employee declines to work Friday as a make-up day, he shall not be penalized. All overtime work performed on Monday through Saturday shall be paid at time and one-half (1½) of the hourly rate plus an amount equal to one-half (½) of the hourly Total Indicated Fringe Benefits. All work performed on Sundays and recognized holidays shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits.

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OVERTIME SCHEDULE - BUILDING CONSTRUCTION**

NO. 91: Means eight (8) hours shall constitute a day's work commencing at 7:00 a.m. and ending at 3:30 p.m., allowing one-half (½) hour for lunch. The option exists for the Employer to use a flexible starting time between the hours of 6:00 a.m. and 9:00 a.m. The regular workweek shall consist of forty (40) hours of five (5) workdays, Monday through Friday. The workweek may consist of four (4) ten (10) hour days from Monday through Thursday, with Friday as a make-up day. If the make-up day is a holiday, the employee shall be paid at the double (2) time rate. The employees shall be paid time and one-half (1½) for work performed on Saturdays, before the regular starting time or after the regular quitting time or over eight (8) hours per work day (unless working a 10-hour work day, then time and one-half (1½) is paid for work performed over ten (10) hours a day) or over forty (40) hours per work week. Work performed on Sundays and recognized holidays shall be paid at the double (2) time rate of pay. **SHIFT WORK:** When it is necessary for the project to operate in shifts, there will be three (3) eight (8) hour shifts commencing at 8:00 a.m. Shift work must continue for a period of not less than three (3) consecutive work days, two (2) days which must be regular work days (Monday through Friday). In the event the second or third shift of any regular work day shall fall into a Saturday or a holiday, such extension into a Saturday or holiday shall be considered as part of the previous workday and employees shall be paid at the regular shift rate. The first day shift shall work a regular eight (8) hour day at regular rates. The second shift shall be eight (8) hours regular time pay plus \$2.50 per hour premium for eight (8) hours work. Third shift will be for eight (8) hours regular time pay plus \$3.00 per hour premium for eight (8) hours work.

NO. 94: Means eight (8) hours shall constitute a day's work between the hours of 8:00 a.m. and 5:00 p.m. The regular workday starting time of 8:00 a.m. (and resulting quitting time of 4:30 p.m.) may be moved forward to 6:00 a.m. or delayed one (1) hour to 9:00 a.m. All work performed in excess of the regular work day and on Saturday shall be compensated at one and one-half (1½) times the regular pay. In the event time is lost during the work week due to weather conditions, the Employer may schedule work on the following Saturday at straight time. All work accomplished on Sunday and holidays shall be compensated at double the regular rate of wages.

NO. 101: Means that except as provided below, eight (8) hours a day shall constitute a standard work day, and forty (40) hours per week shall constitute a week's work, which shall begin on Monday and end on Friday. All time worked outside of the standard work day and on Saturday shall be classified as overtime and paid the rate of time and one-half (1½) (except as herein provided). All time worked on Sunday and recognized holidays shall be classified as overtime and paid at the rate of double (2) time. The regular starting time of 8:00 a.m. (and resulting quitting time of 4:30 p.m.) may be moved forward to 8:00 a.m. or delayed one (1) hour to 9:00 a.m. The Employer has the option of working either five (5) eight-hour days or four (4) ten-hour days to constitute a normal forty (40) hour work week. When a four (4) ten-hour day work week is in effect, the standard work day shall be consecutive ten (10) hour periods between the hours of 6:30 a.m. and 6:30 p.m. Forty (40) hours per week shall constitute a week's work Monday through Thursday, inclusive. In the event the job is down for any reason beyond the Employer's control, then Friday and/or Saturday may, at the option of the Employer, be worked as a make-up day; straight time not to exceed ten (10) hours per day or forty (40) hours per week. Starting time will be designated by the employer. When the five (5) day eight (8) hour work week is in effect, forty (40) hours per week shall constitute a week's work, Monday through Friday, inclusive. In the event the job is down for any reason beyond the Employer's control, then Saturday may, at the option of the Employer, be worked as a make-up day; straight time not to exceed eight (8) hours per day or forty (40) hours per week. Make-up days shall not be utilized for days lost due to holidays.

NO. 122: Means forty (40) hours between Monday and Friday shall constitute the normal work week. Work shall be scheduled between the hours of 6:00 a.m. and 6:30 p.m., with one-half hour for lunch. Work in excess of eight (8) hours per day and forty (40) hours per week, and on Saturdays, shall be paid at the rate of one and one-half times the normal rate. Due to inclement weather during the week, Saturday shall be a voluntary make up day.

NO. 124: Means eight (8) hours shall constitute a day's work on all classes of work between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. The pay for time worked during these hours shall be at the regular wage rate. The regular workweek shall be Monday through Friday. Employment from 4:30 p.m. to 12:00 midnight, Monday through Friday, shall be paid for at one and one-half (1½) times the regular hourly rate. From 12:00 midnight until 8:00 a.m. on any day shall be paid for at twice the regular hourly rate. All time worked on Sundays and the recognized holidays shall be paid at the rate of double (2) time. It is understood that forty (40) hours shall constitute a regular workweek, (5-8's) Sunday Midnight through Friday Midnight, understanding anything over eight (8) hours is one and one-half (1½) times the hourly wage rate.

**BOONE COUNTY
HOLIDAY SCHEDULE – BUILDING CONSTRUCTION**

NO. 3: All work done on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day (November 11), Thanksgiving Day, and Christmas Day shall be compensated at the double (2) time rate of pay. When any of these holidays fall on a Sunday, the following Monday shall be observed. No work shall be performed on the days set forth except in cases of emergencies to protect life or property.

NO. 4: All work done on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas Day shall be paid at the double time rate of pay. If any of the above holidays fall on Sunday, Monday will be observed as the recognized holiday. If any of the above holidays fall on Saturday, Friday will be observed as the recognized holiday.

NO. 5: All work that shall be done on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay.

NO. 7: The following days are assigned days and are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. If a holiday falls on a Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This is applied to protect Labor Day. When a holiday falls during the normal workweek, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week. However, no reimbursement for these eight (8) hours is to be paid to the workman unless worked. If workman are required to work the above enumerated holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work.

NO. 8: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day, or the days observed in lieu of these holidays, shall be paid at the double time rate of pay.

NO. 16: All work accomplished on the recognized holidays of New Year's Day, Decoration Day (Memorial Day), Independence Day (Fourth of July), Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, or days observed as these named holidays, shall be compensated for at double (2) the regular hourly rate of wages plus fringe benefits. If a holiday falls on Saturday, it shall be observed on the preceding Friday. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day, Christmas Day, Decoration Day or Independence Day except to preserve life or property.

NO. 19: All work done on New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day shall be paid at the double time rate of pay. The employee may take off Friday following Thanksgiving Day. However, the employee shall notify his or her Foreman, General Foreman or Superintendent on the Wednesday preceding Thanksgiving Day. When one of the above holidays falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double (2) time rate. When one of the holidays falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double (2) time rate.

NO. 23: All work done on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day and Sundays shall be recognized holidays and shall be paid at the double time rate of pay. When a holiday falls on Sunday, the following Monday shall be considered a holiday.

NO. 44: All work done on New Year's Day, Memorial Day, Independence Day, Veteran's Day, Thanksgiving Day, and Christmas Day shall be paid at the double time rate of pay. If a holiday falls on a Sunday, it shall be observed on the Monday following. If a holiday falls on a Saturday, it shall be observed on the preceding Friday. No work shall be performed on these days except in emergency to protect life or property. All work performed on these holidays shall be compensated at double the regular hourly rate for the work performed. Overtime shall be computed at half-hour intervals.

NO. 46: All work performed on New Year's Day, Memorial Day, Fourth of July, Veteran's Day, Thanksgiving Day, Labor Day, Christmas Day, or days celebrated as such, shall be paid at the double time rate of pay. When a National holiday falls on Sunday, Monday shall be observed as the holiday. When a National holiday falls on Saturday, the preceding Friday will be observed as the holiday.

**BOONE COUNTY
HOLIDAY SCHEDULE – BUILDING CONSTRUCTION**

NO. 54: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay. When a holiday falls on Saturday, it shall be observed on Friday. When a holiday falls on Sunday, it shall be observed on Monday.

NO. 55: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 60: All work performed on New Year's Day, Armistice Day (Veteran's Day), Decoration Day (Memorial Day), Independence Day (Fourth of July), Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. No work shall be performed on Labor Day except when triple (3) time is paid. When a holiday falls on Saturday, Friday will be observed as the holiday. When a holiday falls on Sunday, the following Monday shall be observed as the holiday.

NO. 66: All work performed on Sundays and the following recognized holidays, or the days observed as such, of New Year's Day, Decoration Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Whenever any such holidays fall on a Sunday, the following Monday shall be observed as a holiday.

NO. 69: All work performed on New Year's Day, Memorial Day, July Fourth, Labor Day, Veteran's Day, Thanksgiving Day or Christmas Day shall be compensated at double (2) their straight-time hourly rate of pay. Friday after Thanksgiving and the day before Christmas are also holidays, however, if the employer chooses to work the normal work hours on these days, the employee will be paid at straight-time rate of pay. If a holiday falls on a Saturday, the holiday will be observed on Saturday; if a holiday falls on a Sunday, the holiday will be observed on the following Monday.

NO. 74: All work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) time of the hourly rate of pay. In the event one of the above holiday's falls on Saturday, the holiday shall be celebrated on Saturday. If the holiday falls on Sunday, the holiday will be celebrated on Monday.

NO. 76: Work performed on Holidays shall be paid at the rate of two times the normal rate. Holidays are: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, Christmas Day. If a holiday falls on a Sunday, it shall be celebrated on the following Monday, if it falls on Saturday, it shall be celebrated on the preceding Friday.

OCCUPATIONAL TITLE	* Date of Increase	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Carpenter		\$29.52	7	16	\$12.35
Millwright		\$29.52	7	16	\$12.35
Pile Driver		\$29.52	7	16	\$12.35
Electrician (Outside-Line Construction/Lineman)		\$36.36	9	12	\$5.00 + 42.5%
Lineman Operator		\$31.39	9	12	\$5.00 + 42.5%
Lineman - Tree Trimmer		\$22.68	32	31	\$5.00 + 23%
Groundman		\$24.27	9	12	\$5.00 + 42.5%
Groundman - Tree Trimmer		\$16.72	32	31	\$5.00 + 23%
Operating Engineer					
Group I		\$24.89	21	5	\$21.33
Group II		\$24.54	21	5	\$21.33
Group III		\$24.34	21	5	\$21.33
Group IV		\$20.69	21	5	\$21.33
Oiler-Driver		\$20.69	21	5	\$21.33
Laborer					
General Laborer		\$25.16	2	4	\$10.92
Skilled Laborer		\$25.76	2	4	\$10.92
Truck Driver-Teamster					
Group I		\$26.57	22	19	\$9.85
Group II		\$26.73	22	19	\$9.85
Group III		\$26.72	22	19	\$9.85
Group IV		\$26.84	22	19	\$9.85
Traffic Control Service Driver		\$26.415	28	27	\$9.045

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate sheet.

For additional information regarding the application of the Lineman Tree Trimmer and the Groundman Tree Trimmer subcategories of the occupational title of Electrician (Outside-Line Construction/Lineman), see the Labor and Industrial Relations Commission Order of June 21, 2012, in the Matter of Objection Nos. 122-237.

**REPLACEMENT PAGE
BOONE COUNTY
OVERTIME SCHEDULE – HEAVY CONSTRUCTION**

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 ½) shall be paid for all work in excess of forty (40) hours per work week.

NO. 2: Means a regular workweek shall be forty (40) hours and will start on Monday and end on Friday. The Employer shall have the option of working five 8-hour days or four 10-hour days Monday through Friday. If an Employer elects to work five 8-hour days during any workweek, hours worked more than eight (8) per day or 40 per week shall be paid at time and one-half the hourly rate Monday through Friday. If an Employer elects to work four 10-hour days in a week, work performed more than ten (10) hours per day or 40 hours per week shall be paid at time and one-half the hourly rate Monday through Friday. When working a five 8-hour day schedule and an Employer is prevented from working forty (40) hours Monday through Friday, or any part thereof, by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. If an Employer is working a four 10-hour day schedule and loses a day due to inclement weather, he may work 10 hours Friday at straight time. All hours worked over the 40 hours Monday through Friday will be paid at 1 ½ overtime rate. A workday shift is to begin at the option of the Employer, between 6:00 a.m. and not later than 9:00 a.m. However, the project starting time may be advanced or delayed if required. If workmen are required to work the enumerated holidays or days observed as such or Sundays, they shall receive double (2) the regular rate of pay for such work. Overtime shall be computed at one-half (1/2) hour intervals. Shift: The Contractor may elect to work one, two or three shifts on any work. When operating on more than one shift, the shifts shall be known as the day shift, swing shift, and graveyard shift as such terms are recognized in the industry. When two shifts are worked on any operation, the shifts will consist of eight (8) or ten (10) hours exclusive of lunchtime. When three shifts are worked the first day or day shift will consist of eight (8) hours exclusive of lunchtime. The second or swing shift shall consist of seven and one-half (7 1/2) hours work for eight hours pay, exclusive of lunchtime, and the third or the graveyard shift shall consist of seven (7) hours work for eight (8) hours pay, exclusive of the lunchtime. All time in excess of normal shifts shall be considered overtime. Multiple shift (the two or three shift) operation will not be construed on the entire project if at any time it is deemed advisable and necessary for the Employer to multiple shift a specific operation. However, no shift shall be started between midnight and six a.m. except the graveyard shift on a three-shift operation, or except in an unusual or emergency situation. If an Employer starts a shift between midnight and 6 a.m. except the graveyard shift on a three-shift operation, he shall reimburse all employees for the entire shift at the double time rate. Completion of the second shift on a two-shift operation or completion of the graveyard shift on a three-shift operation that carries over into Saturday morning, shall be at the straight time rate. Overtime shall be computed at ½ hour intervals.

NO. 7: Means the regular work week shall start on Monday and end on Friday, except where the Employer elects to work Monday through Thursday, ten (10) hours per day. All work over ten (10) hours in a day or forty (40) hours in a week shall be at the overtime rate of one and one-half (1½) times the regular hourly rate. The regular work day shall be either eight (8) or ten (10) hours. If a job can't work forty (40) hours Monday through Friday because of inclement weather or other conditions beyond the control of the Employer, Friday or Saturday may be worked as a make-up day at straight time (if working 4-10's). Saturday may be worked as a make-up day at straight time (if working 5-8's). Make-up days shall not be utilized for days lost due to holidays. A workday is to begin at the option of the Employer but not later than 11:00 a.m. except when inclement weather, requirements of the owner or other conditions beyond the reasonable control of the Employer prevent work. Except as worked as a make-up day, time on Saturday shall be worked at one and one-half (1½) times the regular rate. Work performed on Sunday shall be paid at two (2) times the regular rate. Work performed on recognized holidays or days observed as such, shall also be paid at the double (2) time rate of pay.

NO. 9: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1½) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1½) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Work performed in the first eight (8) hours on Saturday shall be paid at the rate of one and eight tenths (1.8) the regular straight time rate. Work performed outside these hours and on Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

**REPLACEMENT PAGE
BOONE COUNTY
OVERTIME SCHEDULE – HEAVY CONSTRUCTION**

NO. 21: All work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day shall be paid for at double (2) the straight-time rate of pay. Any of the above listed holidays falling on Sunday, shall be observed on the following Monday and paid for at double (2) the straight-time rate of pay. Any of the above listed holidays falling on Saturday shall be observed on the previous Friday, and paid for at double (2) the straight-time rate of pay. If any of the above listed holidays fall on Friday, Saturday, Sunday, or Monday, creating a three-day weekend, then the entire three (3) days (either Friday, Saturday, and Sunday – If the holiday falls on Friday or Saturday; or Saturday, Sunday, and Monday – if the holiday falls on Sunday or Monday) shall be paid for at double (2) the straight-time rate of pay.

NO. 22: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 8:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interested parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 25: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 8:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 28: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 8:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 32: Means the overtime rate shall be time and one-half the regular rate for work over forty (40) hours per week. Sundays and Holidays shall be paid at double the straight time rate.

**REPLACEMENT PAGE
BOONE COUNTY
HOLIDAY SCHEDULE – HEAVY CONSTRUCTION**

NO. 4: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, or observed as such, shall be paid at the double time rate of pay. When a Holiday falls on a Sunday, Monday shall be observed. No work shall be performed on Labor Day, except in case of jeopardy to life or property. This is applied to protect Labor Day.

NO. 5: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. If a holiday falls on a Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward a forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workman unless worked. If workmen are required to work the above recognized holidays or days observed as such, or Sundays, they shall receive double (2) the regular rate of pay for such work. The above shall apply to the four 10's Monday through Friday work week. The ten (10) hours shall be applied to the forty (40) hour work week.

NO. 12: All work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, or days celebrated as such, shall be paid at the double time rate of pay. When one of the foregoing holidays falls on Sunday, it shall be celebrated on the following Monday. When one of the foregoing holidays falls on Saturday, it shall be celebrated on the Friday before the holiday.

NO. 16: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on Sunday, it shall be observed on the following Monday. If a holiday falls on Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid to the worker unless worked. If workers are required to work the above recognized holidays or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 19: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 27: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 31: All work performed on New Year's Day, Presidents' Day, Veterans' Day, Good Friday, Decoration Day, Fourth of July, Labor Day, Christmas Eve Day, Christmas Day, Thanksgiving Day and Day after Thanksgiving or days celebrated for the same.

**AFFIDAVIT COMPLIANCE WITH THE PREVAILING WAGE LAW
(Return at Completion of Project)**

Before me, the undersigned Notary Public, in and for the County of _____

State of _____, personally came and appeared (name and title)

_____ of the (name of company)

_____ (a corporation) (a partnership) (a proprietorship)

and after being duly sworn did depose and say that all provisions and requirements set out in Chapter 290 Sections 290.210 through and including 290.340, Missouri Revised Statutes, pertaining to the payment of wages to workmen employed on public works projects have been fully satisfied and there has been no exception to the full and complete compliance with said provisions and requirements and with Wage Determination NO. _____ issued by the Division of Labor Standards on the _____ day of _____, 20____, in carrying out the Contract and work in connection with

(name of project) _____ located at

(name of institution) _____ in _____ County,

Missouri and completed on the _____ day of _____, 20____.

Signature

Subscribed and sworn to me this _____ day of _____, 20____.

My commission expires _____, 20____.

Notary Public



“No Bid” Response Form

Boone County Purchasing
613 E. Ash Street, Room 110
Columbia, MO 65201

Melinda Bobbitt, CPPB, Director
(573) 886-4391 – Fax: (573) 886-4390

“NO BID RESPONSE FORM”

NOTE: COMPLETE AND RETURN THIS FORM ONLY IF YOU DO NOT WANT TO SUBMIT A PROPOSAL RESPONSE

If you do not wish to respond to this RFP request, but would like to remain on the Boone County vendor list **for this service/commodity**, please remove form and return to the Purchasing Department by mail or fax.

If you would like to FAX this “No Bid” Response Form to our office, the FAX number is (573) 886-4390.

RFP: 47-02OCT12 – Networked Fire Alarm Detection and Notification System for the Boone County Jail

Business Name: _____

Address: _____

Telephone: _____

Contact: _____

Date: _____

Reason(s) for Not Submitting Proposal Response :

