

DEPARTMENTAL INPUT
CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

☐ New Contract ☐ OTR ☒ Legacy ☐ Bid Waiver ☐ Emergency Previous Contract/Project No. **SS2605-3/15-1**
☐ Re-Bid ☐ Other: Consolidation of two contracts LIVING WAGE APPLIES: ☐ YES ☐ NO

Requisition No./Project No.: **RQID1500022** Term of contract **66** Months **1** 60 month(s) with **OTR**

Requisition /Project Title: **Siemens Building Management Systems Maintenance Services**

Description: **Miami-Dade County, hereinafter referred to as the County is contracting for purchase of regular maintenance, repairs,, technical support, software upgrades, parts and components, training, emergency, and monitoring services for the Siemens building management system installed at various County buildings.**

Issuing Department: **ISD** Contact Person: **Yuly Chaux** Phone: **305-375-4263**
Estimate Cost: **\$ 11,263,153 – initial term** GENERAL FEDERAL OTHER
Funding Source: **Mixed funding**

ANALYSIS

Commodity Codes: **910-17** **Contract/Project History of previous purchases three (3) years**
Check here ☐ if this is a new contract/purchase with no previous history.
EXISTING **2ND YEAR** **3RD YEAR**

Contractor **Siemens**

Small Business Enterprise:

Current Contract Value:

Comments:

Continued on another page (s): ☐ Yes ☐ No

RECOMMENDATIONS

	Set-aside	Sub-contractor goal	Bid preference	Selection factor
SBE				

Basis of recommendation:

Signed: **Yuly Chaux-Ramirez** Date sent to SBD: **2/24/16**
Date returned to ISD-PM:

Siemens Building Management Systems Maintenance Services
Contract No. L

THIS AGREEMENT IS MADE AND ENTERED INTO BY AND BETWEEN MIAMI-DADE COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA, HAVING ITS PRINCIPAL OFFICE AT 111 N.W. 1ST STREET, MIAMI, FLORIDA 33128 (HEREINAFTER REFERRED TO AS THE "COUNTY"), AND SIEMENS INDUSTRY INC., A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF FLORIDA, HAVING ITS PRINCIPAL OFFICE AT 10111 BUSINESS DRIVE, MIRAMAR, FL 33025 (HEREINAFTER REFERRED TO AS THE "CONTRACTOR").

WITNESSETH:

WHEREAS, the Contractor has offered to provide maintenance services, on-call technical support services, parts and components, training and emergency services for Siemens Building Management Systems (hereinafter referred to as the "BMS"), that shall conform to the Scope of Services (Appendix A); and all associated addenda and attachments, incorporated herein by reference; and the requirements of this Agreement; and,

WHEREAS, the County desires to procure from the Contractor such Siemens Building Management Systems (BMS) Maintenance Services for the County, in accordance with the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties hereto agree as follows:

ARTICLE 1. DEFINITIONS

The following words and expressions used in this Agreement shall be construed as follows, except when it is clear from the context that another meaning is intended:

- a) The words "Contract" or "Agreement" to mean collectively these terms and conditions, the Scope of Services (Appendix A), Buildings and Equipment (Appendix B), Task List (Appendix C), Price Schedule (Appendix D), all other appendices and attachments hereto, all amendments issued hereto, and all associated addenda.
- b) The words "Contract Date" to mean the date on which this Agreement is effective.
- c) The words "Contract Manager" to mean Miami-Dade County's Director, Internal Services Department, or the duly authorized representative designated to manage the Contract.
- d) The word "Contractor" to mean Siemens Industry and its permitted successors and assigns.
- e) The word "Days" to mean Calendar Days.
- f) The word "Deliverables" to mean all documentation and any items of any nature submitted by the Contractor to the County's Project Manager for review and approval pursuant to the terms of this Agreement.
- g) The words "directed", "required", "permitted", "ordered", "designated", "selected", "prescribed" or words of like import to mean respectively, the direction, requirement, permission, order, designation, selection or prescription of the County's Project Manager; and similarly the words "approved", "acceptable", "satisfactory", "equal", "necessary", or words of like import to mean respectively, approved by, or acceptable or satisfactory to, equal or necessary in the opinion of the County's Project Manager.
- h) The words "Extra Work" or "Additional Work" to mean additions or modifications to the amount, type or value of the Work and Services as required in this Contract, as directed and/or approved by the County.
- i) The words "Project Manager" to mean the County Mayor or the duly authorized representative designated to manage the Project.
- j) The words "Scope of Services" to mean the document appended hereto as Appendix A, which details the work to be performed by the Contractor.
- k) The word "subcontractor" or "subconsultant" to mean any person, entity, firm or corporation, other than the employees of the Contractor, who furnishes labor and/or materials, in connection with the Work, whether directly or indirectly, on behalf and/or under the direction of the Contractor and whether or not in privity of Contract with the Contractor.
- l) The words "Work", "Services" "Program", or "Project" to mean all matters and things required to be done by the Contractor in accordance with the provisions of this Contract.
- m) The word "system" to mean the required software, hardware, and components required to provide the County with the Siemens Building Management System.

ARTICLE 2. ORDER OF PRECEDENCE

If there is a conflict between or among the provisions of this Agreement, the order of precedence is as follows: 1) these terms and conditions, 2) the Scope of Services (Appendix A), 3) and any associated addenda and attachments thereof.

ARTICLE 3. RULES OF INTERPRETATION

- a) References to a specified Article, section or schedule shall be construed as reference to that specified Article, or section of, or schedule to this Agreement unless otherwise indicated.
- b) Reference to any agreement or other instrument shall be deemed to include such agreement or other instrument as such agreement or other instrument may, from time to time, be modified, amended, supplemented, or restated in accordance with its terms.
- c) The terms "hereof", "herein", "hereinafter", "hereby", "herewith", "hereto", and "hereunder" shall be deemed to refer to this Agreement.
- d) The titles, headings, captions and arrangements used in these Terms and Conditions are for convenience only and shall not be deemed to limit, amplify or modify the terms of this Contract, nor affect the meaning thereof.

ARTICLE 4. NATURE OF THE AGREEMENT

- a) This Agreement incorporates and includes all prior negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained in this Agreement. The parties agree that there are no commitments, agreements, or understandings concerning the subject matter of this Agreement that are not contained in this Agreement, and that this Agreement contains the entire agreement between the parties as to all matters contained herein. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written. It is further agreed that any oral representations or modifications concerning this Agreement shall be of no force or effect, and that this Agreement may be modified, altered or amended only by a written amendment duly executed by both parties hereto or their authorized representatives.
- b) The Contractor shall provide the services set forth in the Scope of Services, and render full and prompt cooperation with the County in all aspects of the Services performed hereunder.
- c) The Contractor acknowledges that this Agreement requires the performance of all things necessary for or incidental to the effective and complete performance of all Work and Services under this Contract. All things not expressly mentioned in this Agreement but necessary to carrying out its intent are required by this Agreement, and the Contractor shall perform the same as though they were specifically mentioned, described and delineated.
- d) The Contractor shall furnish all labor, materials, tools, supplies, and other items required to perform the Work and Services that are necessary for the completion of this Contract. All Work and Services shall be accomplished at the direction of and to the satisfaction of the County's Project Manager.
- e) The Contractor acknowledges that the County shall be responsible for making all policy decisions regarding the Scope of Services. The Contractor agrees to provide input on

policy issues in the form of recommendations. The Contractor agrees to implement any and all changes in providing Services hereunder as a result of a policy change implemented by the County. The Contractor agrees to act in an expeditious and fiscally sound manner in providing the County with input regarding the time and cost to implement said changes and in executing the activities required to implement said changes.

ARTICLE 5. CONTRACT TERM

The Contract shall become effective on the date stated and shall continue through the last day of the sixty-sixth (66) month. The County, at its sole discretion, reserves the right to exercise the option to renew this Contract for a period for sixty (60) additional months. The County reserves the right to exercise its option to extend this Contract for up to one hundred-eighty (180) calendar days beyond the current Contract period and will notify the Contractor in writing of the extension. This Contract may be extended beyond the initial one hundred-eighty (180) calendar day extension period by mutual agreement between the County and the Contractor, upon approval by the Board of County Commissioners.

ARTICLE 6. NOTICE REQUIREMENTS

All notices required or permitted under this Agreement shall be in writing and shall be deemed sufficiently served if delivered by Registered or Certified Mail, with return receipt requested; or delivered personally; or delivered via fax or e-mail (if provided below) and followed with delivery of hard copy; and in any case addressed as follows:

(1) to the County

a) to the Project Manager:

Miami-Dade County
Attention: David Garcia
Phone: (305) 375-4217
Fax: (305) 375-4232
E-mail: dgarcia@miamidade.gov

and,

b) to the Contract Manager:

Miami-Dade County
Internal Services Department, Procurement Management Division
111 N.W. 1st Street, Suite 1300
Miami, FL 33128-1974
Attention: Yuly Chaux-Ramirez
Phone: (305) 375-4263
Fax: (305) 375-4407
E-mail: ychaux@miamidade.gov

(2) To the Contractor

Siemens Industry, Inc.
3021 N. Commerce Parkway
Miramar, FL 33025
Attention: Edward Lanzillo
Phone: 954205-3416

Fax: 954-364-6767
E-mail: eddie.lanzillo@siemens.com

Either party may at any time designate a different address and/or contact person by giving notice as provided above to the other party. Such notices shall be deemed given upon receipt by the addressee.

ARTICLE 7. PAYMENT FOR SERVICES/AMOUNT OBLIGATED

The Contractor warrants that it has reviewed the County's requirements and has asked such questions and conducted such other inquiries as the Contractor deemed necessary in order to determine the price the Contractor will charge to provide the Work and Services to be performed under this Contract. The compensation for all Work and Services performed under this Contract, including all costs associated with such Work and Services, shall be in the total amount as specified in Appendix D – Price Schedule. The County shall have no obligation to pay the Contractor any additional sum in excess of this amount, except for a change and/or modification to the Contract, which is approved and executed in writing by the County and the Contractor.

All Services undertaken by the Contractor before County's approval of this Contract shall be at the Contractor's risk and expense.

With respect to travel costs and travel-related expenses, the Contractor agrees to adhere to Section 112.061 of the Florida Statutes as they pertain to out-of-pocket expenses, including employee lodging, transportation, per diem, and all miscellaneous cost and fees. The County shall not be liable for any such expenses that have not been approved in advance, in writing, by the County.

ARTICLE 8. PRICING

Pricing for the initial thirty (30) months shall remain fixed and firm as indicated in Appendix D-Price Schedule.

The contractor may request a price adjustment to the rates as listed within Appendix D – Price Schedule to commence on Year 3 (31st Month of the contract), and may continue to request price adjustments on an annual basis. The County may consider an adjustment to price based on changes on the following pricing index, and shall be no less than 1% and no greater than 3% percent per year.

Index:

Consumer Price Index(CPI): All Urban Consumers (Current Series)

Area: Miami-Fort Lauderdale, FL

Item: All items less medical care

Annual change: 12-Month Percent Change for the month of August.

It is the Contractor's responsibility to request any pricing adjustment under this provision. For any adjustment to commence on the first day of the next one year period, the contractor's request for adjustment should be submitted to the Internal Services Department, Procurement Management Division 90 days prior to December 1st. The request should not be in excess of the relevant pricing index change. If no adjustment request is received from the Contractor, the County will assume that the Contractor has agreed that prices for the next year will remain the same.

The County reserves the right to accept, reject, and negotiate lower pricing for the additional year based on market research information or other factors that influence price.

ARTICLE 9. METHOD AND TIMES OF PAYMENT

The Contractor agrees that under the provisions of this Agreement, as reimbursement for those actual, reasonable and necessary costs incurred by the Contractor, which are directly attributable or properly allocable to the Services, the Contractor may bill the County as indicated in Appendix D – Price Schedule. All invoices shall be taken from the books of account kept by the Contractor, shall be supported by copies of payroll distribution, receipt bills or other documents reasonably required by the County, shall show the County's contract number, and shall have a unique invoice number assigned by the Contractor. It is the policy of Miami-Dade County that payment for all purchases by County agencies and the Public Health Trust shall be made in a timely manner and that interest payments be made on late payments. All firms, including Small Business Enterprises, providing goods and services to the County, shall receive payment to maintain sufficient cash flow. In accordance with Florida Statutes, Section 218.74 and Section 2-8.1.4 of the Miami-Dade County Code, the time at which payment shall be due from the County or the Public Health Trust shall be forty-five (45) days from receipt of a proper invoice. Billings from prime Contractors under services and goods contracts with the County or Public Health Trust, that are Small Business Enterprise contract set-aside, bid preference or contain a subcontractor goal, shall be promptly reviewed and payment made by the County or Trust on those amounts not under dispute within fourteen (14) calendar days of receipt of such billing by the County or the Trust pursuant to Sections 2-8.1.1.1.1 and 2-8.1.1.1.2 of the Miami-Dade County Code. All payments due from the County or the Public Health Trust, and not made within the time specified by this section shall bear interest from thirty (30) days after the due date at the rate of one percent (1%) per month on the unpaid balance. Further, proceedings to resolve disputes for payment of obligations shall be concluded by final written decision of the County Mayor, or his or her designee(s), not later than sixty (60) days after the date on which the proper invoice was received by the County or the Public Health Trust.

In accordance with Miami-Dade County Implementing Order 3-9, Accounts Receivable Adjustments, if money is owed by the Contractor to the County, whether under this Contract or for any other purpose, the County reserves the right to retain such amount from payment due by County to the Contractor under this Contract. Such retained amount shall be applied to the amount owed by the Contractor to the County. The Contractor shall have no further claim to such retained amounts which shall be deemed full accord and satisfaction of the amount due by the County to the Contractor for the applicable payment due herein.

Invoices and associated back-up documentation shall be submitted in duplicate by the Contractor to the County as follows:

Miami-Dade Fire Rescue Department
Finance Bureau
9300 NW 41 Street
Miami, FL 33178

Miami-Dade Seaport Department
Accounts Payable
1015 N America Way, 2nd Floor
Miami, FL 33132

For Internal Services Department, invoices shall be submitted electronically, via e-mail, to the Department's BMS Superintendent. For all other building/facilities, the invoices shall be sent to

respective Building Managers.

The County may at any time designate a different address and/or contact person by giving written notice to the other party.

ARTICLE 10. INDEMNIFICATION AND INSURANCE

The Contractor shall indemnify and hold harmless the County and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorneys' fees and costs of defense, which the County or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this Agreement by the Contractor or its employees, agents, servants, partners principals or subcontractors. The Contractor shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the County, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. The Contractor expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by the Contractor shall in no way limit the responsibility to indemnify, keep and save harmless and defend the County or its officers, employees, agents and instrumentalities as herein provided.

Upon County's notification, the Contractor shall furnish to the Internal Services Department, Procurement Management Division, Certificates of Insurance that indicate that insurance coverage has been obtained, which meets the requirements as outlined below:

1. Worker's Compensation Insurance for all employees of the Contractor as required by Florida Statute 440.
2. Public Liability Insurance on a comprehensive basis in an amount not less than \$300,000 combined single limit per occurrence for bodily injury and property damage. **Miami-Dade County must be shown as an additional insured with respect to this coverage.**
3. Automobile Liability Insurance covering all owned, non-owned, and hired vehicles used in connection with the Services, in an amount not less than \$300,000 combined single limit per occurrence for bodily injury and property damage.

The company must be rated no less than "A-" as to management, and no less than "Class VII" as to financial strength by A.M. Best Company, Oldwick, New Jersey, or its equivalent, subject to the approval of the County Risk Management Division.

OR

The company must hold a valid Florida Certificate of Authority as shown in the latest "List of All Insurance Companies Authorized or Approved to Do Business in Florida", issued by the State of Florida Department of Financial Services and are members of the Florida Guaranty Fund.

The mailing address of Miami-Dade County as the certificate holder must appear on the certificate of insurance as follows:

**Miami-Dade County
111 N.W. 1st Street**

**Suite 1300
Miami, Florida 33128-1974**

Compliance with the foregoing requirements shall not relieve the Contractor of this liability and obligation under this section or under any other section in this Agreement.

Award of this Contract is contingent upon the receipt of the insurance documents, as required, within ten (10) business days. If the insurance certificate is received within the specified timeframe but not in the manner prescribed in this Agreement, the Contractor shall have an additional five (5) business days to submit a corrected certificate to the County. If the Contractor fails to submit the required insurance documents in the manner prescribed in this Agreement within fifteen (15) business days, the Contractor shall be in default of the contractual terms and conditions and award of the Contract may be rescinded, unless such timeframe for submission has been extended by the County.

The Contractor shall be responsible for ensuring that the insurance certificates required in conjunction with this Section remain in force for the duration of the contractual period of the Contract, including any and all option years or extension periods that may be granted by the County. If insurance certificates are scheduled to expire during the contractual period, the Contractor shall be responsible for submitting new or renewed insurance certificates to the County at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates which cover the contractual period, the County shall suspend the Contract until such time as the new or renewed certificates are received by the County in the manner prescribed herein; provided, however, that this suspended period does not exceed thirty (30) calendar days. Thereafter, the County may, at its sole discretion, terminate this contract.

ARTICLE 11. MANNER OF PERFORMANCE

- a) The Contractor shall provide the Services described herein in a competent and professional manner satisfactory to the County in accordance with the terms and conditions of this Agreement. The County shall be entitled to a satisfactory performance of all Services described herein and to full and prompt cooperation by the Contractor in all aspects of the Services. At the request of the County, the Contractor shall promptly remove from the project any Contractor's employee, subcontractor, or any other person performing Services hereunder. The Contractor agrees that such removal of any of its employees does not require the termination or demotion of any employee by the Contractor.
- b) The Contractor agrees to defend, hold harmless and indemnify the County and shall be liable and responsible for any and all claims, suits, actions, damages and costs (including attorney's fees and court costs) made against the County, occurring on account of, arising from or in connection with the removal and replacement of any Contractor's personnel performing services hereunder at the behest of the County. Removal and replacement of any Contractor's personnel as used in this Article shall not require the termination and or demotion of such Contractor's personnel.
- c) The Contractor agrees that at all times it will employ, maintain and assign to the performance of the Services a sufficient number of competent and qualified professionals and other personnel to meet the requirements to which reference is hereinafter made. The Contractor agrees to adjust its personnel staffing levels or to replace any its personnel if so directed upon reasonable request from the County, should the County make a

determination, in its sole discretion, that said personnel staffing is inappropriate or that any individual is not performing in a manner consistent with the requirements for such a position.

- d) The Contractor warrants and represents that its personnel have the proper skill, training, background, knowledge, experience, rights, authorizations, integrity, character and licenses as necessary to perform the Services described herein, in a competent and professional manner.
- e) The Contractor shall at all times cooperate with the County and coordinate its respective work efforts to most effectively and efficiently maintain the progress in performing the Services.
- f) The Contractor shall comply with all provisions of all federal, state and local laws, statutes, ordinances, and regulations that are applicable to the performance of this Agreement.

ARTICLE 12. EMPLOYEES OF THE CONTRACTOR

All employees of the Contractor shall be considered to be, at all times, employees of the Contractor under its sole direction and not employees or agents of the County. The Contractor shall supply competent employees. Miami-Dade County may require the Contractor to remove an employee it deems careless, incompetent, insubordinate or otherwise objectionable and whose continued employment on County property is not in the best interest of the County. Each employee shall have and wear proper identification.

ARTICLE 13. INDEPENDENT CONTRACTOR RELATIONSHIP

The Contractor is, and shall be, in the performance of all work services and activities under this Agreement, an independent contractor, and not an employee, agent or servant of the County. All persons engaged in any of the work or services performed pursuant to this Agreement shall at all times, and in all places, be subject to the Contractor's sole direction, supervision and control. The Contractor shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the Contractor's relationship and the relationship of its employees to the County shall be that of an independent contractor and not as employees and agents of the County.

The Contractor does not have the power or authority to bind the County in any promise, agreement or representation other than specifically provided for in this Agreement.

ARTICLE 14. AUTHORITY OF THE COUNTY'S PROJECT MANAGER

- a) The Contractor hereby acknowledges that the County's Project Manager will determine in the first instance all questions of any nature whatsoever arising out of, under, or in connection with, or in any way related to or on account of, this Agreement including without limitations: questions as to the value, acceptability and fitness of the Services; questions as to either party's fulfillment of its obligations under the Contract; negligence, fraud or misrepresentation before or subsequent to acceptance of the Contractor's Proposal; questions as to the interpretation of the Scope of Services; and claims for damages, compensation and losses.
- b) The Contractor shall be bound by all determinations or orders and shall promptly comply with every order of the Project Manager, including the withdrawal or modification of any

previous order and regardless of whether the Contractor agrees with the Project Manager's determination or order. Where orders are given orally, they will be issued in writing by the Project Manager as soon thereafter as is practicable.

- c) The Contractor must, in the final instance, seek to resolve every difference concerning the Agreement with the Project Manager. In the event that the Contractor and the Project Manager are unable to resolve their difference, the Contractor may initiate a dispute in accordance with the procedures set forth in this Article. Exhaustion of these procedures shall be a condition precedent to any lawsuit permitted hereunder.
- d) In the event of such dispute, the parties to this Agreement authorize the County Mayor or designee, who may not be the Project Manager or anyone associated with this Project, acting personally, to decide all questions arising out of, under, or in connection with, or in any way related to or on account of the Agreement (including but not limited to claims in the nature of breach of contract, fraud or misrepresentation arising either before or subsequent to execution hereof) and the decision of each with respect to matters within the County Mayor's purview as set forth above shall be conclusive, final and binding on parties. Any such dispute shall be brought, if at all, before the County Mayor within 10 days of the occurrence, event or act out of which the dispute arises.
- e) The County Mayor may base this decision on such assistance as may be desirable, including advice of experts, but in any event shall base the decision on an independent and objective determination of whether Contractor's performance or any Deliverable meets the requirements of this Agreement and any specifications with respect thereto set forth herein. The effect of any decision shall not be impaired or waived by any negotiations or settlements or offers made in connection with the dispute, whether or not the County Mayor participated therein, or by any prior decision of others, which prior decision shall be deemed subject to review, or by any termination or cancellation of the Agreement. All such disputes shall be submitted in writing by the Contractor to the County Mayor for a decision, together with all evidence and other pertinent information in regard to such questions, in order that a fair and impartial decision may be made. Whenever the County Mayor is entitled to exercise discretion or judgement or to make a determination or form an opinion pursuant to the provisions of this Article, such action shall be fair and impartial when exercised or taken. The County Mayor, as appropriate, shall render a decision in writing and deliver a copy of the same to the Contractor. Except as such remedies may be limited or waived elsewhere in the Agreement, Contractor reserves the right to pursue any remedies available under law after exhausting the provisions of this Article.

ARTICLE 15. MUTUAL OBLIGATIONS

- a) This Agreement, including attachments and appendices to the Agreement, shall constitute the entire Agreement between the parties with respect hereto and supersedes all previous communications and representations or agreements, whether written or oral, with respect to the subject matter hereto unless acknowledged in writing by the duly authorized representatives of both parties.
- b) Nothing in this Agreement shall be construed for the benefit, intended or otherwise, of any third party that is not a parent or subsidiary of a party or otherwise related (by virtue of ownership control or statutory control) to a party.
- c) In those situations where this Agreement imposes an indemnity obligation on the Contractor, the County may, at its expense, elect to participate in the defense if the County

should so choose. Furthermore, the County may at its own expense defend or settle any such claims if the Contractor fails to diligently defend such claims, and thereafter seek indemnity for costs from the Contractor.

ARTICLE 16. QUALITY ASSURANCE/QUALITY ASSURANCE RECORD KEEPING

The Contractor shall maintain, and shall require that its subcontractors and suppliers maintain, complete and accurate records to substantiate compliance with the requirements set forth in the Scope of Services. The Contractor and its subcontractors and suppliers, shall retain such records, and all other documents relevant to the Services furnished under this Agreement for a period of three (3) years from the expiration date of this Agreement and any extension thereof.

ARTICLE 17. AUDITS

The County, or its duly authorized representatives or governmental agencies, shall until the expiration of three (3) years after the expiration of this Agreement and any extension thereof, have access to and the right to examine and reproduce any of the Contractor's books, documents, papers and records and of its subcontractors and suppliers which apply to all matters of the County. Such records shall subsequently conform to Generally Accepted Accounting Principles requirements, as applicable, and shall only address those transactions related to this Agreement.

Pursuant to Section 2-481 of the Miami-Dade County Code, the Contractor will grant access to the Commission Auditor to all financial and performance related records, property, and equipment purchased in whole or in part with government funds. The Contractor agrees to maintain an accounting system that provides accounting records that are supported with adequate documentation, and adequate procedures for determining the allowability and allocability of costs.

ARTICLE 18. CONSENT OF THE COUNTY REQUIRED FOR ASSIGNMENT

The Contractor shall not assign, transfer, convey or otherwise dispose of this Agreement, including its rights, title or interest in or to the same or any part thereof without the prior written consent of the County.

ARTICLE 19. SUBCONTRACTUAL RELATIONS

- a) If the Contractor will cause any part of this Agreement to be performed by a Subcontractor, the provisions of this Contract will apply to such Subcontractor and its officers, agents and employees in all respects as if it and they were employees of the Contractor; and the Contractor will not be in any manner thereby discharged from its obligations and liabilities hereunder, but will be liable hereunder for all acts and negligence of the Subcontractor, its officers, agents, and employees, as if they were employees of the Contractor. The services performed by the Subcontractor will be subject to the provisions hereof as if performed directly by the Contractor.
- b) The Contractor, before making any subcontract for any portion of the services, will state in writing to the County the name of the proposed Subcontractor, the portion of the Services which the Subcontractor is to do, the place of business of such Subcontractor, and such other information as the County may require. The County will have the right to require the Contractor not to award any subcontract to a person, firm or corporation disapproved by the County.
- c) Before entering into any subcontract hereunder, the Contractor will inform the Subcontractor fully and completely of all provisions and requirements of this Agreement

relating either directly or indirectly to the Services to be performed. Such Services performed by such Subcontractor will strictly comply with the requirements of this Contract.

- d) In order to qualify as a Subcontractor satisfactory to the County, in addition to the other requirements herein provided, the Subcontractor must be prepared to prove to the satisfaction of the County that it has the necessary facilities, skill and experience, and ample financial resources to perform the Services in a satisfactory manner. To be considered skilled and experienced, the Subcontractor must show to the satisfaction of the County that it has satisfactorily performed services of the same general type which is required to be performed under this Agreement.
- e) The County shall have the right to withdraw its consent to a subcontract if it appears to the County that the subcontract will delay, prevent, or otherwise impair the performance of the Contractor's obligations under this Agreement. All Subcontractors are required to protect the confidentiality of the County's and County's proprietary and confidential information. Contractor shall furnish to the County copies of all subcontracts between Contractor and Subcontractors and suppliers hereunder. Within each such subcontract, there shall be a clause for the benefit of the County in the event the County finds the Contractor in breach of this Contract, permitting the County to request completion by the Subcontractor of its performance obligations under the subcontract. The clause shall include an option for the County to pay the Subcontractor directly for the performance by such Subcontractor. Notwithstanding, the foregoing shall neither convey nor imply any obligation or liability on the part of the County to any subcontractor hereunder as more fully described herein.

ARTICLE 20. ASSUMPTION, PARAMETERS, PROJECTIONS, ESTIMATES AND EXPLANATIONS

The Contractor understands and agrees that any assumptions, parameters, projections, estimates and explanations presented by the County were provided to the Contractor for evaluation purposes only. However, since these assumptions, parameters, projections, estimates and explanations represent predictions of future events the County makes no representations or guarantees; and the County shall not be responsible for the accuracy of the assumptions presented; and the County shall not be responsible for conclusions to be drawn therefrom; and any assumptions, parameters, projections, estimates and explanations shall not form the basis of any claim by the Contractor. The Contractor accepts all risk associated with using this information.

ARTICLE 21. SEVERABILITY

If this Agreement contains any provision found to be unlawful, the same shall be deemed to be of no effect and shall be deemed stricken from this Agreement without affecting the binding force of this Agreement as it shall remain after omitting such provision.

ARTICLE 22. TERMINATION AND SUSPENSION OF WORK

- a) The County may terminate this Agreement if an individual or corporation or other entity attempts to meet its contractual obligation with the County through fraud, misrepresentation or material misstatement.
- b) The County may, as a further sanction, terminate or cancel any other contract(s) that such individual or corporation or other entity has with the County and that such individual,

- corporation or other entity shall be responsible for all direct and indirect costs associated with such termination or cancellation, including attorney's fees.
- c) The foregoing notwithstanding, any individual, corporation or other entity which attempts to meet its contractual obligations with the County through fraud, misrepresentation or material misstatement may be debarred from County contracting for up to five (5) years in accordance with the County debarment procedures. The Contractor may be subject to debarment for failure to perform and all other reasons set forth in Section 10-38 of the County Code.
 - d) In addition to cancellation or termination as otherwise provided in this Agreement, the County may at any time, in its sole discretion, with or without cause, terminate this Agreement by written notice to the Contractor.
 - e) In the event that the County exercises its right to terminate this Agreement, the Contractor shall, upon receipt of such notice, unless otherwise directed by the County:
 - i. stop work on the date specified in the notice ("the Effective Termination Date");
 - ii. take such action as may be necessary for the protection and preservation of the County's materials and property;
 - iii. cancel orders;
 - iv. assign to the County and deliver to any location designated by the County any non-cancelable orders for Deliverables that are not capable of use except in the performance of this Agreement and has been specifically developed for the sole purpose of this Agreement and not incorporated in the Services;
 - v. take no action which will increase the amounts payable by the County under this Agreement; and
 - f) In the event that the County exercises its right to terminate this Agreement, the Contractor will be compensated as stated in the payment Articles herein for the:
 - i. portion of the Services completed in accordance with the Agreement up to the Effective Termination Date; and
 - ii. non-cancelable Deliverables that are not capable of use except in the performance of this Agreement and has been specifically developed for the sole purpose of this Agreement, but not incorporated in the Services.
 - g) All compensation pursuant to this Article are subject to audit.

ARTICLE 23. EVENT OF DEFAULT

- a) An Event of Default shall mean a breach of this Agreement by the Contractor. Without limiting the generality of the foregoing, and in addition to those instances referred to herein as a breach, an Event of Default shall include the following:
 - i. the Contractor has not delivered Deliverables on a timely basis;
 - ii. the Contractor has refused or failed to supply enough properly skilled staff personnel;
 - iii. the Contractor has failed to make prompt payment to subcontractors or suppliers for any Services;
 - iv. the Contractor has become insolvent (other than as interdicted by the bankruptcy laws), or has assigned the proceeds received for the benefit of the Contractor's creditors, or the Contractor has taken advantage of any insolvency statute or

- debtor/creditor law or if the Contractor's affairs have been put in the hands of a receiver;
- v. the Contractor has failed to obtain the approval of the County where required by this Agreement;
 - vi. the Contractor has failed to provide "adequate assurances" as required under subsection b below;
 - vii. the Contractor has failed in the representation of any warranties stated herein.
- b) When, in the opinion of the County, reasonable grounds for uncertainty exist with respect to the Contractor's ability to perform the Services or any portion thereof, the County may request that the Contractor, within the timeframe set forth in the County's request, provide adequate assurances to the County, in writing, of the Contractor's ability to perform in accordance with the terms of this Agreement. Until the County receives such assurances, the County may request an adjustment to the compensation received by the Contractor for portions of the Services which the Contractor has not performed. In the event that the Contractor fails to provide to the County the requested assurances within the prescribed timeframe, the County may:
- i. treat such failure as a repudiation of this Agreement; and
 - ii. resort to any remedy for breach provided herein or at law, including but not limited to, taking over the performance of the Services or any part thereof either by itself or through others.
- c) In the event the County shall terminate this Agreement for default, the County or its designated representatives may immediately take possession of all applicable equipment, materials, products, documentation, reports and data.

ARTICLE 24. NOTICE OF DEFAULT - OPPORTUNITY TO CURE

If an Event of Default occurs in the determination of the County, the County may so notify the Contractor ("Default Notice"), specifying the basis for such default, and advising the Contractor that such default must be cured immediately or this Agreement with the County may be terminated. Notwithstanding, the County may, in its sole discretion, allow the Contractor to rectify the default to the County's reasonable satisfaction within a thirty (30) day period. The County may grant an additional period of such duration as the County shall deem appropriate without waiver of any of the County's rights hereunder, so long as the Contractor has commenced curing such default and is effectuating a cure with diligence and continuity during such thirty (30) day period or any other period which the County prescribes. The default notice shall specify the date the Contractor shall discontinue the Services upon the Termination Date.

ARTICLE 25. REMEDIES IN THE EVENT OF DEFAULT

If an Event of Default occurs, the Contractor shall be liable for all damages resulting from the default, including but not limited to:

- a) lost revenues;
- b) the difference between the cost associated with procuring Services hereunder and the amount actually expended by the County for re-procurement of Services, including procurement and administrative costs; and

- c) such other direct damages.

The Contractor shall also remain liable for any liabilities and claims related to the Contractor's default. The County may also bring any suit or proceeding for specific performance or for an injunction.

ARTICLE 26. PATENT AND COPYRIGHT INDEMNIFICATION

- a) The Contractor shall not infringe on any copyrights, trademarks, service marks, trade secrets, patent rights, other intellectual property rights or any other third party proprietary rights in the performance of the Work.
- b) The Contractor warrants that all Deliverables furnished hereunder, including but not limited to: equipment, programs, documentation, software, analyses, applications, methods, ways, processes, and the like, do not infringe upon or violate any copyrights, trademarks, service marks, trade secrets, patent rights, other intellectual property rights or any other third party proprietary rights.
- c) The Contractor shall be liable and responsible for any and all claims made against the County for infringement of patents, copyrights, service marks, trade secrets or any other third party proprietary rights, by the use or supplying of any programs, documentation, software, analyses, applications, methods, ways, processes, and the like, in the course of performance or completion of, or in any way connected with, the Work, or the County's continued use of the Deliverables furnished hereunder. Accordingly, the Contractor at its own expense, including the payment of attorney's fees, shall indemnify, and hold harmless the County and defend any action brought against the County with respect to any claim, demand, cause of action, debt, or liability.
- d) In the event any Deliverable or anything provided to the County hereunder, or portion thereof is held to constitute an infringement and its use is or may be enjoined, the Contractor shall have the obligation to, at the County's option to (i) modify, or require that the applicable subcontractor or supplier modify, the alleged infringing item(s) at its own expense, without impairing in any respect the functionality or performance of the item(s), or (ii) procure for the County, at the Contractor's expense, the rights provided under this Agreement to use the item(s).
- e) The Contractor shall be solely responsible for determining and informing the County whether a prospective supplier or subcontractor is a party to any litigation involving patent or copyright infringement, service mark, trademark, violation, or proprietary rights claims or is subject to any injunction which may prohibit it from providing any Deliverable hereunder. The Contractor shall enter into agreements with all suppliers and subcontractors at the Contractor's own risk. The County may reject any Deliverable that it believes to be the subject of any such litigation or injunction, or if, in the County's judgment, use thereof would delay the Work or be unlawful.

ARTICLE 27. CONFIDENTIALITY

- a) All Developed Works and other materials, data, transactions of all forms, financial information, documentation, inventions, designs and methods obtained from the County in connection with the Services performed under this Agreement, made or developed by the Contractor or its subcontractors in the course of the performance of such Services, or the results of such Services, or which the County holds the proprietary rights, constitute

Confidential Information and may not, without the prior written consent of the County, be used by the Contractor or its employees, agents, subcontractors or suppliers for any purpose other than for the benefit of the County, unless required by law. In addition to the foregoing, all County employee information and County financial information shall be considered Confidential Information and shall be subject to all the requirements stated herein. Neither the Contractor nor its employees, agents, subcontractors or suppliers may sell, transfer, publish, disclose, display, license or otherwise make available to others any part of such Confidential Information without the prior written consent of the County. Additionally, the Contractor expressly agrees to be bound by and to defend, indemnify and hold harmless the County, and their officers and employees from the breach of any federal, state or local law in regard to the privacy of individuals.

- b) The Contractor shall advise each of its employees, agents, subcontractors and suppliers who may be exposed to such Confidential Information of their obligation to keep such information confidential and shall promptly advise the County in writing if it learns of any unauthorized use or disclosure of the Confidential Information by any of its employees or agents, or subcontractor's or supplier's employees, present or former. In addition, the Contractor agrees to cooperate fully and provide any assistance necessary to ensure the confidentiality of the Confidential Information.
- c) It is understood and agreed that in the event of a breach of this Article damages may not be an adequate remedy and the County shall be entitled to injunctive relief to restrain any such breach or threatened breach. Unless otherwise requested by the County, upon the completion of the Services performed hereunder, the Contractor shall immediately turn over to the County all such Confidential Information existing in tangible form, and no copies thereof shall be retained by the Contractor or its employees, agents, subcontractors or suppliers without the prior written consent of the County. A certificate evidencing compliance with this provision and signed by an officer of the Contractor shall accompany such materials.

ARTICLE 28. PROPRIETARY INFORMATION

As a political subdivision of the State of Florida, Miami-Dade County is subject to the stipulations of Florida's Public Records Law.

The Contractor acknowledges that all computer software in the County's possession may constitute or contain information or materials which the County has agreed to protect as proprietary information from disclosure or unauthorized use and may also constitute or contain information or materials which the County has developed at its own expense, the disclosure of which could harm the County's proprietary interest therein.

During the term of the contract, the Contractor will not use directly or indirectly for itself or for others, or publish or disclose to any third party, or remove from the County's property, any computer programs, data compilations, or other software which the County has developed, has used or is using, is holding for use, or which are otherwise in the possession of the County (hereinafter "Computer Software"). All third-party license agreements must also be honored by the contractors and their employees, except as authorized by the County and, if the Computer Software has been leased or purchased by the County, all hired party license agreements must also be honored by the contractors' employees with the approval of the lessor or Contractors thereof. This includes mainframe, minis, telecommunications, personal computers and any and all information technology software.

The Contractor will report to the County any information discovered or which is disclosed to the Contractor which may relate to the improper use, publication, disclosure or removal from the County's property of any information technology software and hardware and will take such steps as are within the Contractor's authority to prevent improper use, disclosure or removal.

ARTICLE 29. PROPRIETARY RIGHTS

- a) The Contractor hereby acknowledges and agrees that the County retains all rights, title and interests in and to all materials, data, documentation and copies thereof furnished by the County to the Contractor hereunder or furnished by the Contractor to the County and/or created by the Contractor for delivery to the County, even if unfinished or in process, as a result of the Services the Contractor performs in connection with this Agreement, including all copyright and other proprietary rights therein, which the Contractor as well as its employees, agents, subcontractors and suppliers may use only in connection with the performance of Services under this Agreement. The Contractor shall not, without the prior written consent of the County, use such documentation on any other project in which the Contractor or its employees, agents, subcontractors or suppliers are or may become engaged. Submission or distribution by the Contractor to meet official regulatory requirements or for other purposes in connection with the performance of Services under this Agreement shall not be construed as publication in derogation of the County's copyrights or other proprietary rights.
- b) All rights, title and interest in and to certain inventions, ideas, designs and methods, specifications and other documentation related thereto developed by the Contractor and its subcontractors specifically for the County, hereinafter referred to as "Developed Works" shall become the property of the County.
- c) Accordingly, neither the Contractor nor its employees, agents, subcontractors or suppliers shall have any proprietary interest in such Developed Works. The Developed Works may not be utilized, reproduced or distributed by or on behalf of the Contractor, or any employee, agent, subcontractor or supplier thereof, without the prior written consent of the County, except as required for the Contractor's performance hereunder.
- d) Except as otherwise provided in subsections a, b, and c above, or elsewhere herein, the Contractor and its subcontractors and suppliers hereunder shall retain all proprietary rights in and to all Licensed Software provided hereunder, that have not been customized to satisfy the performance criteria set forth in the Scope of Services. Notwithstanding the foregoing, the Contractor hereby grants, and shall require that its subcontractors and suppliers grant, if the County so desires, a perpetual, irrevocable and unrestricted right and license to use, duplicate, disclose and/or permit any other person(s) or entity(ies) to use all such Licensed Software and the associated specifications, technical data and other Documentation for the operations of the County or entities controlling, controlled by, under common control with, or affiliated with the County, or organizations which may hereafter be formed by or become affiliated with the County. Such license specifically includes, but is not limited to, the right of the County to use and/or disclose, in whole or in part, the technical documentation and Licensed Software, including source code provided hereunder, to any person or entity outside the County for such person's or entity's use in furnishing any and/or all of the Deliverables provided hereunder exclusively for the County or entities controlling, controlled by, under common control with, or affiliated with the County, or organizations which may hereafter be formed by or become affiliated with the

County. No such License Software, specifications, data, documentation or related information shall be deemed to have been given in confidence and any statement or legend to the contrary shall be void and of no effect.

ARTICLE 30. VENDOR REGISTRATION/CONFLICT OF INTEREST

a) Vendor Registration

The Contractor shall be a registered vendor with the County – Internal Services Department, Procurement Management Division, for the duration of this Agreement. In becoming a Registered Vendor with Miami-Dade County, the Contractor confirms its knowledge of and commitment to comply with the following:

- 1. Miami-Dade County Ownership Disclosure Affidavit**
(Section 2-8.1 of the County Code)
- 2. Miami-Dade County Employment Disclosure Affidavit**
(Section 2-8-1(d)(2) of the County Code)
- 3. Miami-Dade Employment Drug-free Workplace Certification**
(Section 2-8.1.2(b) of the County Code)
- 4. Miami-Dade Disability and Nondiscrimination Affidavit**
(Section 2-8.1.5 of the County Code)
- 5. Miami-Dade County Debarment Disclosure Affidavit**
(Section 10.38 of the County Code)
- 6. Miami-Dade County Vendor Obligation to County Affidavit**
(Section 2-8.1 of the County Code)
- 7. Miami-Dade County Code of Business Ethics Affidavit**
(Section 2-8.1(i) and 2-11(b)(1) of the County Code through (6) and (9) of the County Code and Section 2-11.1(c) of the County Code)
- 8. Miami-Dade County Family Leave Affidavit**
(Article V of Chapter 11 of the County Code)
- 9. Miami-Dade County Living Wage Affidavit**
(Section 2-8.9 of the County Code)
- 10. Miami-Dade County Domestic Leave and Reporting Affidavit**
(Article 8, Section 11A-60 11A-67 of the County Code)
- 11. Subcontracting Practices**
(Ordinance 97-35)
- 12. Subcontractor /Supplier Listing**
(Section 2-8.8 of the County Code)
- 13. Environmentally Acceptable Packaging**

(Resolution R-738-92)

14. W-9 and 8109 Forms

(as required by the Internal Revenue Service)

15. FEIN Number or Social Security Number

In order to establish a file, the Contractor's Federal Employer Identification Number (FEIN) must be provided. If no FEIN exists, the Social Security Number of the owner or individual must be provided. This number becomes Contractor's "County Vendor Number". To comply with Section 119.071(5) of the Florida Statutes relating to the collection of an individual's Social Security Number, be aware that the County requests the Social Security Number for the following purposes:

- *Identification of individual account records*
- *To make payments to individual/Contractor for goods and services provided to Miami-Dade County*
- *Tax reporting purposes*
- *To provide a unique identifier in the vendor database that may be used for searching and sorting departmental records*

16. Office of the Inspector General

(Section 2-1076 of the County Code)

17. Small Business Enterprises

The County endeavors to obtain the participation of all small business enterprises pursuant to Sections 2-8.2, 2-8.2.3 and 2-8.2.4 of the County Code and Title 49 of the Code of Federal Regulations.

18. Antitrust Laws

By acceptance of any contract, the Contractor agrees to comply with all antitrust laws of the United States and the State of Florida.

b) Conflict of Interest

Section 2-11.1(d) of Miami-Dade County Code requires that any County employee or any member of the employee's immediate family who has a controlling financial interest, direct or indirect, with Miami-Dade County or any person or agency acting for Miami-Dade County, competing or applying for a contract, must first request a conflict of interest opinion from the County's Ethics Commission prior to their or their immediate family member's entering into any contract or transacting any business through a firm, corporation, partnership or business entity in which the employee or any member of the employee's immediate family has a controlling financial interest, direct or indirect, with Miami-Dade County or any person or agency acting for Miami-Dade County. Any such contract or business engagement entered in violation of this subsection, as amended, shall be rendered voidable. For additional information, please contact the Ethics Commission hotline at (305) 579-2593.

ARTICLE 31. INSPECTOR GENERAL REVIEWS

Independent Private Sector Inspector General Reviews

Pursuant to Miami-Dade County Administrative Order 3-20, the County has the right to retain the

services of an Independent Private Sector Inspector General (hereinafter "IPSIG"), whenever the County deems it appropriate to do so. Upon written notice from the County, the Contractor shall make available to the IPSIG retained by the County, all requested records and documentation pertaining to this Agreement for inspection and reproduction. The County shall be responsible for the payment of these IPSIG services, and under no circumstance shall the Contractor's prices and any changes thereto approved by the County, be inclusive of any charges relating to these IPSIG services. The terms of this provision apply to the Contractor, its officers, agents, employees, subcontractors and assignees. Nothing contained in this provision shall impair any independent right of the County to conduct an audit or investigate the operations, activities and performance of the Contractor in connection with this Agreement. The terms of this Article shall not impose any liability on the County by the Contractor or any third party.

Miami-Dade County Inspector General Review

According to Section 2-1076 of the Code of Miami-Dade County, Miami-Dade County has established the Office of the Inspector General which may, on a random basis, perform audits on all County contracts, throughout the duration of said contracts. The cost of the audit for this Contract shall be one quarter (1/4) of one (1) percent of the total contract amount which cost shall be included in the total contract amount. The audit cost will be deducted by the County from progress payments to the Contractor. The audit cost shall also be included in all change orders and all contract renewals and extensions.

Exception: The above application of one quarter (1/4) of one percent fee assessment shall not apply to the following contracts: (a) IPSIG contracts; (b) contracts for legal services; (c) contracts for financial advisory services; (d) auditing contracts; (e) facility rentals and lease agreements; (f) concessions and other rental agreements; (g) insurance contracts; (h) revenue-generating contracts; (i) contracts where an IPSIG is assigned at the time the contract is approved by the Commission; (j) professional service agreements under \$1,000; (k) management agreements; (l) small purchase orders as defined in Miami-Dade County Administrative Order 3-38; (m) federal, state and local government-funded grants; and (n) interlocal agreements. ***Notwithstanding the foregoing, the Miami-Dade County Board of County Commissioners may authorize the inclusion of the fee assessment of one quarter (1/4) of one percent in any exempted contract at the time of award.***

Nothing contained above shall in any way limit the powers of the Inspector General to perform audits on all County contracts including, but not limited to, those contracts specifically exempted above. The Miami-Dade County Inspector General is authorized and empowered to review past, present and proposed County and Public Health Trust contracts, transactions, accounts, records and programs. In addition, the Inspector General has the power to subpoena witnesses, administer oaths, require the production of records and monitor existing projects and programs. Monitoring of an existing project or program may include a report concerning whether the project is on time, within budget and in conformance with plans, specifications and applicable law. The Inspector General is empowered to analyze the necessity of and reasonableness of proposed change orders to the Contract. The Inspector General shall have the power to audit, investigate, monitor, oversee, inspect and review operations, activities, performance and procurement process, including but not limited to project design, specifications, proposal submittals, activities of the Contractor, its officers, agents and employees, lobbyists, County staff and elected officials to ensure compliance with contract specifications and to detect fraud and corruption.

Upon written notice to the Contractor from the Inspector General or IPSIG retained by the Inspector General, the Contractor shall make all requested records and documents available to the Inspector General or IPSIG for inspection and copying. The Inspector General and IPSIG

shall have the right to inspect and copy all documents and records in the Contractor's possession, custody or control which, in the Inspector General's or IPSIG's sole judgment, pertain to performance of the contract, including, but not limited to original estimate files, change order estimate files, worksheets, proposals and agreements form and which successful and unsuccessful subcontractors and suppliers, all project-related correspondence, memoranda, instructions, financial documents, construction documents, proposal and contract documents, back-charge documents, all documents and records which involve cash, trade or volume discounts, insurance proceeds, rebates, or dividends received, payroll and personnel records, and supporting documentation for the aforesaid documents and records.

ARTICLE 32. LOCAL, STATE, AND FEDERAL COMPLIANCE REQUIREMENTS

Contractor agrees to comply, subject to applicable professional standards, with the provisions of any and all applicable Federal, State and the County orders, statutes, ordinances, rules and regulations which may pertain to the Services required under this Agreement, including, but not limited to:

- a) Equal Employment Opportunity (EEO), in compliance with Executive Order 11246 as amended and applicable to this Contract.
- b) Miami-Dade County Florida, Department of Small Business Development Participation Provisions, as applicable to this Contract.
- c) Environmental Protection Agency (EPA), as applicable to this Contract.
- d) "Conflicts of Interest" Section 2-11 of the County Code, and Ordinance 01-199.
- e) Miami-Dade County Code Section 10-38 "Debarment".
- f) Miami-Dade County Ordinance 99-5, codified at 11A-60 et. seq. of Miami-Dade Code pertaining to complying with the County's Domestic Leave Ordinance.
- g) Miami-Dade County Ordinance 99-152, prohibiting the presentation, maintenance, or prosecution of false or fraudulent claims against Miami-Dade County.

The Contractor shall hold all licenses and/or certifications, obtain and pay for all permits and/or inspections, and comply with all laws, ordinances, regulations and building code requirements applicable to the work required herein. Damages, penalties, and/or fines imposed on the County or Contractor for failure to obtain and maintain required licenses, certifications, permits and/or inspections shall be borne by the Contractor. The Project Manager shall verify the certification(s), license(s), permit(s), etc. for the Contractor prior to authorizing work and as needed.

Notwithstanding any other provision of this Agreement, Contractor shall not be required pursuant to this Agreement to take any action or abstain from taking any action if such action or abstention would, in the good faith determination of the Contractor, constitute a violation of any law or regulation to which Contractor is subject, including but not limited to laws and regulations requiring that Contractor conduct its operations in a safe and sound manner.

ARTICLE 33. NONDISCRIMINATION

During the performance of this Contract, Contractor agrees to not discriminate against any employee or applicant for employment because of race, color, religion, ancestry, national origin, sex, pregnancy, age, disability, marital status, familial status, sexual orientation, gender identity

or gender expression, status as victim of domestic violence, dating violence or stalking, or veteran status, and on housing related contracts the source of income, and will take affirmative action to ensure that employees and applicants are afforded equal employment opportunities without discrimination. Such action shall be taken with reference to, but not limited to: recruitment, employment, termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on the job training.

By entering into this Contract, the Contractor attests that it is not in violation of the Americans with Disabilities Act of 1990 (and related Acts) or Miami-Dade County Resolution No. R-385-95. If the Contractor or any owner, subsidiary or other firm affiliated with or related to the Contractor is found by the responsible enforcement agency or the County to be in violation of the Act or the Resolution, such violation shall render this Contract void. This Contract shall be void if the Contractor submits a false affidavit pursuant to this Resolution or the Contractor violates the Act or the Resolution during the term of this Contract, even if the Contractor was not in violation at the time it submitted its affidavit.

ARTICLE 34. CONFLICT OF INTEREST

The Contractor represents that:

- a) No officer, director, employee, agent, or other consultant of the County or a member of the immediate family or household of the aforesaid has directly or indirectly received or been promised any form of benefit, payment or compensation, whether tangible or intangible, in connection with the award of this Agreement.
- c) There are no undisclosed persons or entities interested with the Contractor in this Agreement. This Agreement is entered into by the Contractor without any connection with any other entity or person making a proposal for the same purpose, and without collusion, fraud or conflict of interest. No elected or appointed officer or official, director, employee, agent or other consultant of the County, or of the State of Florida (including elected and appointed members of the legislative and executive branches of government), or a member of the immediate family or household of any of the aforesaid:
 - i) is interested on behalf of or through the Contractor directly or indirectly in any manner whatsoever in the execution or the performance of this Agreement, or in the services, supplies or work, to which this Agreement relates or in any portion of the revenues; or
 - ii) is an employee, agent, advisor, or consultant to the Contractor or to the best of the Contractor's knowledge any subcontractor or supplier to the Contractor.
- c) Neither the Contractor nor any officer, director, employee, agency, parent, subsidiary, or affiliate of the Contractor shall have an interest which is in conflict with the Contractor's faithful performance of its obligation under this Agreement; provided that the County, in its sole discretion, may consent in writing to such a relationship, provided the Contractor provides the County with a written notice, in advance, which identifies all the individuals and entities involved and sets forth in detail the nature of the relationship and why it is in the County's best interest to consent to such relationship.
- d) The provisions of this Article are supplemental to, not in lieu of, all applicable laws with respect to conflict of interest. In the event there is a difference between the standards applicable under this Agreement and those provided by statute, the stricter standard shall apply.

- e) In the event Contractor has no prior knowledge of a conflict of interest as set forth above and acquires information which may indicate that there may be an actual or apparent violation of any of the above, Contractor shall promptly bring such information to the attention of the County's Project Manager. Contractor shall thereafter cooperate with the County's review and investigation of such information, and comply with the instructions Contractor receives from the Project Manager in regard to remedying the situation.

ARTICLE 35. PRESS RELEASE OR OTHER PUBLIC COMMUNICATION

Under no circumstances shall the Contractor without the express written consent of the County:

- a) Issue or permit to be issued any press release, advertisement or literature of any kind which refers to the County, or the Work being performed hereunder, unless the Contractor first obtains the written approval of the County. Such approval may be withheld if for any reason the County believes that the publication of such information would be harmful to the public interest or is in any way undesirable; and
- b) Communicate in any way with any contractor, department, board, agency, commission or other organization or any person whether governmental or private in connection with the Services to be performed hereunder except upon prior written approval and instruction of the County; and
- c) Except as may be required by law, the Contractor and its employees, agents, subcontractors and suppliers will not represent, directly or indirectly, that any product or service provided by the Contractor or such parties has been approved or endorsed by the County.

ARTICLE 36. BANKRUPTCY

The County reserves the right to terminate this contract, if, during the term of any contract the Contractor has with the County, the Contractor becomes involved as a debtor in a bankruptcy proceeding, or becomes involved in a reorganization, dissolution, or liquidation proceeding, or if a trustee or receiver is appointed over all or a substantial portion of the property of the Contractor under federal bankruptcy law or any state insolvency law.

ARTICLE 37. GOVERNING LAW

This Contract, including appendices, and all matters relating to this Contract (whether in contract, statute, tort (such as negligence), or otherwise) shall be governed by, and construed in accordance with, the laws of the State of Florida. Venue shall be Miami-Dade County.

ARTICLE 38. COUNTY USER ACCESS PROGRAM (UAP)

a) User Access Fee

Pursuant to Section 2-8.10 of the Miami-Dade County Code, this Contract is subject to a user access fee under the County User Access Program (UAP) in the amount of two percent (2%). All sales resulting from this Contract, or any contract resulting from the solicitation referenced on the first page of this Contract, and the utilization of the County Contract price and the terms and conditions identified herein, are subject to the two percent (2%) UAP. This fee applies to all Contract usage whether by County Departments or by any other governmental, quasi-governmental or not-for-profit entity.

The Contractor providing goods or services under this Contract shall invoice the Contract price and shall accept as payment thereof the Contract price less the 2% UAP as full and complete payment for the goods and/or services specified on the invoice. The County shall retain the 2% UAP for use by the County to help defray the cost of the procurement program. Contractor participation in this invoice reduction portion of the UAP is mandatory.

b) Joint Purchase

Only those entities that have been approved by the County for participation in the County's Joint Purchase and Entity Revenue Sharing Agreement are eligible to utilize or receive County Contract pricing and terms and conditions. The County will provide to approved entities a UAP Participant Validation Number. The Contractor must obtain the participation number from the entity prior to filling any order placed pursuant to this Section. Contractor participation in this joint purchase portion of the UAP, however, is voluntary. The Contractor shall notify the ordering entity, in writing, within three (3) business days of receipt of an order, of a decision to decline the order.

For all ordering entities located outside the geographical boundaries of Miami-Dade County, the Contractor shall be entitled to ship goods on an "FOB Destination, Prepaid and Charged Back" basis. This allowance shall only be made when expressly authorized by a representative of the ordering entity prior to shipping the goods.

The County shall have no liability to the Contractor for the cost of any purchase made by an ordering entity under the UAP and shall not be deemed to be a party thereto. All orders shall be placed directly by the ordering entity with the Contractor and shall be paid by the ordering entity less the 2% UAP.

c) Contractor Compliance

If a Contractor fails to comply with this Article, that Contractor may be considered in default by the County in accordance with Article 24 of this Contract.

ARTICLE 39. FIRST SOURCE HIRING REFERRAL PROGRAM

Pursuant to Section 2-2113 of the Code of Miami-Dade County, for all contracts for goods and services, the Contractor, prior to hiring to fill each vacancy arising under a County contract shall (1) first notify the South Florida Workforce Investment Board ("SFWIB"), the designated Referral Agency, of the vacancy and list the vacancy with SFWIB according to the Code, and (2) make good faith efforts as determined by the County to fill a minimum of fifty percent (50%) of its employment needs under the County contract through the SFWIB. If no suitable candidates can be employed after a Referral Period of three to five days, the Contractor is free to fill its vacancies from other sources. Contractor will be required to provide quarterly reports to the SFWIB indicating the name and number of employees hired in the previous quarter, or why referred candidates were rejected. Sanctions for non-compliance shall include, but not be limited to: (i) suspension of contract until Contractor performs obligations, if appropriate; (ii) default and/or termination; and (iii) payment of \$1,500/employee, or the value of the wages that would have been earned given the noncompliance, whichever is less. Registration procedures and additional information regarding the FSHRP are available at <https://iapps.careersourcesfl.com/firstsource/>.

ARTICLE 40. PUBLIC RECORDS AND CONTRACTS FOR SERVICES PERFORMED ON BEHALF OF A PUBLIC AGENCY

The Contractor shall comply with the state of FL Public Records Law, s. 119.0701, F.S., specifically to: (1) keep and maintain public records that ordinarily and necessarily would be required by the public agency in order to perform the service; (2) provide the public with access to public records on the same terms and conditions that the public agency would provide the records and at a cost that does not exceed the cost provided in Chapter 119, F.S., or as otherwise provided by law; (3) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (4) meet all requirements for retaining public records and transfer, at no cost, to the public agency all public records in possession of the Contractor upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the public agency in a format that is compatible with the information technology systems of the public agency. If the Contractor does not comply with a public records request, the public agency shall enforce contract provisions in accordance with the contract.

ARTICLE 41. SURVIVAL

The parties acknowledge that any of the obligations in this Agreement will survive the term, termination and cancellation hereof. Accordingly, the respective obligations of the Contractor and the County under this Agreement, which by nature would continue beyond the termination, cancellation or expiration thereof, shall survive termination, cancellation or expiration hereof.

ARTICLE 42. DELIVERY AND TRAVEL

The County shall not be liable to pay for any shipping, freight, delivery, or travel charges.

ARTICLE 43. WARRANTY ON SERVICES, PARTS, AND EQUIPMENT

All warranties express and implied, shall be made available to the County for goods and services covered by this Agreement. All goods and services furnished shall be fully guaranteed by the Contractor against factory defects. At no expense to the County, the Contractor shall correct any and all apparent and latent defects that may occur within the manufacturer's standard warranty.

Contractor warrants all parts, equipment, and services performed under this Agreement against defects in material and workmanship for one (1) year from the date a Service was performed or a part was provided, regardless of whether the Contractor is under contract with the County at the time of defect.

All costs incidental to repair or replacement under this warranty agreement, including but not limited to any packaging, shipping, or travel costs, shall be borne exclusively by the Contractor. When a product under warranty is replaced, a new full warranty period for that product will commence again from the date the replacement was provided.

All deliverables shall be new. If no new parts are available through any source of distribution, refurbished parts can be provided. All deliverables provided are warranted for their merchantability and fit for the contractual purpose.

In the event any of the materials supplied to the County by the Contractor are found to be defective and do not conform to specifications the materials may be returned to the vendor at the vendor's expense and the contract cancelled or the County may require the vendor to replace the

materials at the Contractor's expense. Acceptance of any or all parts of the Services by the County does not waive any conditions established by the warranty.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the contract date herein above set forth.

Contractor

Miami-Dade County

By: _____

By: _____

Name: _____

Name: Carlos A. Gimenez

Title: _____

Title: Mayor

Date: _____

Date: _____

Attest: _____
Corporate Secretary/Notary Public

Attest: _____
Clerk of the Board

Corporate Seal/Notary Seal

Approved as to form
and legal sufficiency

Assistant County Attorney

APPENDIX A - SCOPE OF SERVICES

Miami-Dade County, hereinafter referred to as the County is contracting for purchase of regular maintenance, repairs,, technical support, software upgrades, parts and components, training, emergency, and monitoring services for the Siemens building management system installed at various County buildings.

The Contractor shall provide dedicated account management to coordinate the delivery of the aforementioned services.

1. QUALIFICATIONS OF PERSONNEL

1.1. Technicians

The Contractor shall provide qualified technicians with the following qualifications during the term of the Contract, including extensions and renewals, thereof to perform all services and to work on System 600 and Apogee hardware, software and firmware:

- a. The technicians shall have completed the Siemens Industry factory training.
- b. Technicians shall have a minimum of 5 years of experience on System 600 and Apogee automation equipment
- c. Contractor shall ensure that the system technicians are proficient in troubleshooting, problem solving, and performing preventive maintenance on the System 600 and latest Apogee technology.

1.2. Engineering Personnel

The Contractor shall provide qualified engineers proficient in studying, analyzing and preparing written reports on such matters as, but not limited to: equipment performance, conservation of energy, and modifications to temperature control systems.

2. MAINTENANCE SERVICES

The contractor shall provide maintenance services for system 600, Apogee and pneumatic as specified below, as part of the annual maintenance fee listed in Appendix D – Price schedule.

2.1. Overview

The Contractor shall provide the services below on the System 600, Apogee and pneumatic equipment:

- a. The Contractor shall provide 24 hour, 7 day per week, on-line and on-site emergency service on an as needed basis. The County Project Manager will notify the Contractor for the services as needed. Emergency services during normal business hours (Monday through Friday from 8:00 a.m. to 5:00 p.m.) are included as part of the maintenance fee. In the event an emergency occurs, and requires the Contractor to respond after normal business hours, the Contractor shall bill the County the premium rate, which is the difference between overtime and normal hourly rates as specified in Appendix D – Price Schedule.

- b. The Contractor's contact information for Apogee support on a 24 hours, 7 day per week basis, outside of the local office is the following:
Name: Customer Support Services
Address Irving, Texas
Telephone Number: 800-959-0911/800-832-6569
- c. The Contractor shall have a call-in service available to the County including the telephone number and sequence of events when an emergency call is placed to the Contractor.
- d. The Contractor must provide recommendations for improved system performance in the form of the latest procedural or product improvements. These will be presented on computer generated service orders after each visit.
- e. The Contractor shall leave sample service order with the County after each visit with procedural or product cost saving recommendations.
- f. The Contractor must provide the latest Insight software upgrades (as confirmed by Siemens Industry factory) with 8 hours of training (for County staff) on a yearly basis as part of this Contract.
- g. To minimize the possibility of Apogee downtime, the Contractor must carry local stock of Apogee components. The Contractor must also be able to deliver any part or component by next day.
- h. The Contractor must provide the latest technical manual updates on Apogee (as confirmed and authorized by Siemens Industry factory) on a yearly basis as part of this Contract.

2.2. On-line Systems Troubleshooting and Diagnostics

- a. The Contractor shall provide system and software troubleshooting and diagnostics via modem / internet connection. The Contractor shall furnish, and install the necessary on-line service equipment to enable the Contractor's local office to remotely log-on to the County's system via regular voice grade dial up phone line or via internet (if permitted by the County).
- b. Operator Support: The Contractor shall provide consultation to assist the operator(s) in identifying, verifying and resolving problems found in executing the tasks for which they have received training from Siemens.
- c. Account Management: The Contractor shall provide dedicated account management to coordinate the delivery of service, offer technical assistance for system programs and engineered control strategies, and implement the quality assurance program.

2.3. Hardware Service For System 600 and Apogee

The Contractor shall provide the following services as necessary to keep the system in peak operating condition:

- a. **Corrective Maintenance and Component Replacement:** The Contractor shall repair or replace failed or worn components to maintain system in peak operating condition with new or reconditioned components of compatible design. Components that are suspected of being faulty may be repaired or replaced in advance to prevent system failure at no additional cost to the County.
- b. **Parts Life Cycle:** The Contractor shall provide a written notification to the County for the obsolescence of any part as soon as the obsolescence bulletin is released from the Contractor's Headquarters. It is also the responsibility of the contractor to provide written notice with the estimated end of the service part cycle. In the event any part as listed in Appendix B or added through any subsequent supplemental agreement becomes obsolete, the Contractor shall be responsible for providing service to the part, including replacements for no less than seven (7) years from the date referenced in the bulletin.
- c. **Response Window:** The Contractor shall respond to the request from the County Monday through Friday, 8:00 a.m. – 5:00 p.m. The Contractor shall provide emergency service, between scheduled preventive maintenance calls, Monday through Friday 8:00 a.m. - 5:00 p.m. to minimize downtime. Emergencies will be determined by Miami-Dade County.
- d. **On-Line Response Within 2 Hours:** The Contractor shall respond via modem / internet connection within 2 hours of the notification by the County for corrective maintenance during the emergency response window specified. If remote diagnosis determines a site visit is required to complete troubleshooting procedures, be on-site within the response time selected below.
- e. **On-Site Response Within 4 Hours:** The Contractor shall be on-site to provide emergency service within 4 hours of the request by the County. Non-emergency calls, as determined by Miami-Dade County will be incorporated into the next scheduled preventive maintenance visit. For work done in hours excluding hours between Mondays through Friday 8:00 a.m. to 5:00 p.m.; Miami-Dade County will pay the premium rate, which is the difference between the regular labor rate and the overtime labor rate.
- f. **Schedule Preventive Maintenance:** The Contractor shall perform preventive maintenance throughout the year in accordance with a program of standard maintenance routines as determined by the County, equipment application and location, and the manufacturer's recommendations, in conjunction with the approval from the County. The Contractor will be required to submit for approval a schedule to follow by items to be inspected per Appendix C – Task List. The schedule shall allow for all items listed in Appendix B to be physically inspected once per year. A report with a list of equipment that has been inspected shall be submitted to the County per visit.
- g. **Monthly System Integrity Tests:** The Contractor shall conduct system integrity tests through a series of point checks, point commanding techniques, selective disabling, system wide function tests and examination and analysis of standard report logs by a trained systems specialist or field engineer.

- h. Firmware Revisions: The Contractor shall develop, furnish and install firmware revisions to maintain or improve present performance within the functional capabilities of the County's system. The Contractor shall notify the County of any available revisions, and the County shall determine if and when needed.

2.4. Software Services

The Contractor shall provide the following services as necessary to keep the system in peak operating condition:

- a. Software Revisions: The Contractor shall develop, furnish and install software revisions to maintain or improve present performance within the functional capabilities of the County's system. The Contractor shall provide this service on all the operating and applications software packages currently comprising the system.
- b. Monthly Diagnostic Tests: The Contractor shall perform database diagnostic tests, analyze the results and maintain the system database for optimum building control performance within the functional limits of the system.
- c. On-Line Response Within 2 Hours: The Contractor shall respond via modem / internet connection within 2 hours of the notification by the County for corrective maintenance during the emergency response window specified. If remote diagnosis determines a site visit is required to complete troubleshooting procedures, be on-site within the response time selected below.
- d. On-Site Response Within 4 Hours: The Contractor shall be on-site to provide emergency service within 4 hours of the request by the County. Non-emergency calls, as determined by Miami-Dade County will be incorporated into the next scheduled preventive maintenance visit. For work done in hours excluding hours between Mondays through Friday 8:00 a.m. to 5:00 p.m.; Miami-Dade County will pay the premium rate, which is the difference between the regular labor rate and the overtime labor rate.

3. List of Buildings/Facilities

A. List of buildings covered under the maintenance services described in Section 2.

- 1. Medical Examiners Building
- 2. Courthouse Center
- 3. Stephen P. Clark Center
- 4. South Dade Courthouse Annex
- 5. South Dade Government Center
- 6. Data Processing Center
- 7. Gerstein Justice Building
- 8. Hickman Building
- 9. Graham Building
- 10. Cultural Center
- 11. Miami-Dade Courthouse
- 12. Caleb Center

13. Miami-Dade 140 West Flagler Building
14. North Dade Justice Building
15. Miami-Dade Public Defender
16. Miami Dade Permit Building
17. Miami Dade Elections
18. Miami-Dade Fire Rescue
19. WASD Douglas
20. WASD Hialeah Preston

B. List of buildings with customized services

21. Port of Miami 1080/1050 Building – See Paragraph 8.
22. Miami-Dade Police HQ – See Paragraph 6.
23. Central Support Facility – Paragraphs 2 and 11 are applicable to this building.
24. North District Chiller Plant – Paragraphs 2 and 12 are applicable to this building.

4. Addition/Deletion of Facilities/Buildings and/or devices

The County reserves the right to add or delete a building/facility from the Contract at any time during the term of this contract including any extensions or renewals thereof. The Contractor shall not provide service, upon receipt of notice from the County, and shall not bill the County for the facilities/buildings that are being deleted from the Contract.

The County also reserves the right to add or delete devices from this Contract at any time during the term of this Contract including any extensions or renewals thereof. The prices for additions/deletions of devices will be adjusted annually.

5. Additional Services

For parts that may no longer be available in future (as listed in Appendix B); the County will negotiate price for that building where parts are no longer supported. The Contractor shall install replacement parts, if parts are no longer available through any source of distribution, at a discount of 15% (on Time and Material), in addition to the 55% discount on current published list part and 25% discount on labor as specified in Appendix D.

The County may request additional services (including smoke evacuation certification, testing and repair services) during the term of the Contract. The scope of services and rates for these additional services will be determined at a later date. The Contractor shall not commence work until a Notice-To-Proceed/work order is issued by the County or a supplemental agreement is executed by the County.

The County may request the Contractor to submit a proposal to upgrade the parts (e.g. panels etc.). Upon receipt of the request from the County, the Contractor shall submit a detailed proposal to the County. The County reserves the right to negotiate the proposal submitted by the Contractor. The negotiated scope of services and prices will be incorporated into the contract via issuance of supplemental agreements by the County as specified in Article 7 of the Contract.

The County may request NFPA certification services and repair services for smoke evacuation systems. The Contractor will conduct an evaluation of HVAC equipment associated with the Smoke Evacuation Systems on annual basis, if requested by the County. The Contractor will conduct a preliminary Smoke Test and a final Smoke Test (to be certified by an engineer) and shall provide report and certificate to the County.

6. Special Service for Miami-Dade County Police Headquarters Facility

The Police Headquarters facility is located at 9105 NW 25th Street, Miami, Florida 33172. This Contract covers the annual inspections of the 217 pneumatic variable air volume boxes. Material coverage for the variable air volume boxes is not included in this Contract, the inspections are included.

7. OEM Parts

For buildings covered under the maintenance service as described in Section 2, the Contractor shall provide parts for repair and replacement at no additional cost to the County. Unless the part has exceeded its life cycle as defined in this agreement.

For all other buildings, the contractor shall provide parts, on an as needed basis, at the discounted rates specified in Appendix D.

The Contractors shall stock parts and deliver them within 24 hours of the request from the County. All parts shall carry warranty for replacement due to premature failure. List of most common parts:

- a. Micro logic Boards including SCU's, BLM's, MBU's
- b. Digital input / output boards
- c. Analog input / output boards
- d. Circuit modules
- e. Control relays
- f. Air / Water Temperature Sensors
- g. Controller Units, TEM's
- h. Computer software (for system backups)
- i. Air / Water flow meters
- j. Thermostats

8. Services for Port Miami Department

The Building Management Systems at the Port Miami are maintained by the County staff.

8.1 Locations

Locations of the Building Management Systems (Siemens Apogee – Insight at all locations) at the Port Miami are as follows:

- a. 1050 - RCCL Building
- b. 1080 - RCCL Building
- c. 1015 - Port Administration Building
- d. Passenger Terminal B/C
- e. Passenger Terminal J

8.2 List of Equipment at Port Miami

- a. **1050 RCCL, 6 story corporate office building:**
The air conditioning to this building is controlled by Siemens Controls, including two chillers, 12 air handlers units, the controls of the condenser pumps to RCCL's computer room, (the loose of these pumps could cause millions of dollars in damages to RCCL's computer system), the Smoke Evacuation (life safety system) which controls all of the smoke evacuation and pressurization fans.
- b. **1080 RCCL, 6 story corporate office building:**

The air conditioning to this building is controlled by Siemens Controls, including three chillers, 14 air handler units with variable frequency drives, the controls of the condenser pumps to RCCL's computer room, (the loose of these pumps could cause millions of dollars in damages to RCCL's computer system), the Smoke Evacuation (life safety system) which controls all of the smoke evacuation and pressurization fans.

c. **1001-1015, Port Administration Building:**

The air conditioning to this building is controlled by Siemens Controls, including two chillers, four air handler units, over 30 fan coil units with individual room control. The air condition control to the Port's Main Computer Server Room.

d. **Passenger Terminal B/C:**

The air conditioning to this building is controlled by Siemens Controls, including two chillers, eight air handler units, five fan coil units with individual room control.

e. **Passenger Terminal J:**

The air conditioning to this building is controlled by Siemens Controls, including two chillers, four air handler units, Co2 sensors that control the exhaust fans in the customs area based on carbon monoxide levels, return air sensors throughout the terminal.

8.3 Technical Support - The Contractor shall provide following services on as-needed basis to the County:

- a. **Consultation** – The Contractor shall have technicians available for consultation and troubleshooting for the hardware and software components of the building management system. The Contractor shall be available for telephone consultation and for on-site consultation 24 hours a day and seven days per week. The Contractor shall be on the County site within 4 hours of notification by the County.
- b. **Technical Support (Parts and Labor)** – The Contractor shall provide technical support in the form of qualified personnel 24 hours per day, 7 days per week and provide all parts, equipment and materials necessary to make emergency or scheduled repairs as needed. The Contractor shall maintain an up to date copy of the program for each location in which Siemens has an active service agreement for preventive maintenance of the control system, in case is needed to reload the program via on-line or on-site. The Contractor shall be on the County site within 4 hours of notification by the County.

8.4 Smoke Evacuation Services For Port of Miami

- a. The Contractor shall provide technical support and services for the Apogee Smoke Control Testing at the 1080 and 1050 Building at Port Miami.
- b. The Contractor will test and inspect all of the Apogee Smoke Control Life Safety System Building technologies per the inspection frequencies requested by staff. The work is to be performed in the following three stages at each facility.
 1. A preliminary visual/functional inspection during normal business hours. The Contractor will visit the mechanical rooms to identify exposed mechanical deficiencies, leaking Eps, equipment on hand, VFDs failures, dampers frozen, check the system to confirm the programming is in place and functional and that all of the control panels

are working correctly. A report shall be generated and submitted with the findings.

2. The Contractor shall perform a preliminary smoke control system test, afterhours; all the zones are tested on normal power and one zone on emergency power. The County will provide a ten (10) hour window to complete the work starting no later than 6:00PM local time. A report shall be generated and submitted with the findings.
3. The Contractor will perform a final smoke control system test, afterhours; random zones will be tested on normal and emergency power as dictated. The County will provide an eight (8) hour window to complete the work starting no later than 6:00PM local time. A report shall be generated and submitted with the results of the testing. If all zones are functional, Contractor shall issue a signed and sealed report that the smoke control system is operating properly. However, if problems are found, repairs will need to be initiated by the County and defective areas will need to be tested again.

- c. The County will not allow smoke bombs to be set off in the buildings.

9. **Smoke Evacuation Services for Courthouse Center, Stephen P. Clark Center, Cultural Center and Central Support Facility.**

- a. Siemens will test and inspect the Apogee Smoke Control Life Safety System Building Technologies annually. The inspections will be broken into quarterly portions for the **SPCC and the Family Courthouse**. During each visit one floor/zone will be tested for Smoke Control functionality. Miami-Dade will choose the floor/zone to perform the smoke test on each quarter. The inspections for the **Cultural Center and Central Support** will be completed all at once unless mutually determined otherwise.
- b. The maintenance fee includes the necessary overtime labor to perform the work. The visits will be scheduled in advance.
- c. Miami-Dade shall provide one person to assist with the testing and to provide access to equipment.
- d. A report shall be generated after each inspection with the results of the testing. The first part of the test consists on simulating the purge/pressurization actions from the Fire Fighters Smoke Control System (FSCS) and verifies that the mechanical equipment is responding according to the sequence of operation and override commands from the FSCS. Siemens will simulate a fire alarm in one floor/zone each inspection (to be decided by the customer). Per Miami-Dade's request, there will be no smoke bombs set off in the building.
- e. The Mechanic's will be checking smoke control dampers, and the mechanical fan equipment for proper operations, on the floor/zone in question, above and below as dictated by the sequence of operations.
- f. Stairwell pressurization & door force opening will be tested and documented on the same set of floors that we are performing the testing. All results whether

satisfactory or not will be recorded. Miami Dade County personnel will be present to assist with the testing and inspections.

10. Training and Educational Material

The Contractor shall provide training and educational material to the County staff on as needed basis. Upon receiving the request from the County's Project manager or designee, the Contractor shall provide a proposal to the County. The County reserves the right to negotiate the scope of work and prices to be paid by the County. The negotiated statement of work and prices will be incorporated into the contract via issuance of work orders or supplemental agreements by the County as specified in Article 7 of the Contract.

11. Monitoring Services

11.1 The contractor shall provide the following general services:

- a. Manage and operate the County Building Management Systems Control Center ("BMS Control Center") during regular business hours. The regular business hours are Monday – Friday 7:00a.m. to 4:00p.m. Contractor shall provide two part-time on-site fully qualified personnel with a minimum certification/training levels in the following areas:
 1. 5-615 APOGEE Field Panel and FLN Operations.
 2. 5-620 APOGEE Workstation Operations.
 3. 5-625 APOGEE Advanced Operations.
 4. 5-630 APOGEE PPCL Programming.
 5. 5-720 APOGEE Workstations with BACnet.
 6. 5-725 APOGEE with BACnet Advanced Operations.
 7. FIS2124 XLS Voice Installation, Operation and Maintenance.
- b. Both personnel shall have 65% of their time allocated to the control center. The BMS Control Center is presently located on the second floor of the County's Central Support Facility located at 200 NW 1st Street, Miami, FL. The location of the County's BMS control center may change as determined by the County. The County will provide the new location to the contractor. **Note:** The planning and moving of the Control Center is not part of this agreement. The BMS Control Center provides services to the following facilities managed by the Facilities Utilities Managed Division (FUMD) of the Internal Services Department (ISD):

No.	Building	Address	Square Footage
1.	Caleb Center	5400 NW 22 nd Avenue	117,437
2.	Carol Day Care Center	112 NW 3 rd Street	15,478
3.	Central Support Facility	200 NW 1 st Street	350,000
4.	Civic Park Plaza	1469 NW 13 th Terrace	24,437
5.	Coral Gables Courthouse	3100 Ponce de Leon	25,000
6.	Courthouse	73 W Flagler Street	273,884
7.	Courthouse Center	175 NW 1 st Avenue	469,242
8.	Cultural Center/Plaza	101 W Flagler Street	321,493
9.	Data Center	5680 SW 87 th Avenue	111,548
10.	Emergency Ops Center	5600 SW 87 th Avenue	8,000
11.	Gerstein Justice Bldg.	1351 NW 12 th Street	417,504
12.	Graham Building	1350 NW 12 th Avenue	113,000
13.	Hialeah Branch Court	11 E 6 th Street	38,000

14.	Hickman Building	275 NW 2 nd Street	75,000
15.	Juvenile Justice Center	3302 NW 27 th Avenue	18,664
16.	Medical Examiner Bldg.	No. 1 Bob Hope Road	88,000
17.	Metro Annex	864 NW 23 rd Street	30,180
18.	Metro Flagler Bldg.	140 W. Flagler Street	256,082
19.	N. Dade Justice center	15555 Biscayne Blvd.	44,000
20.	Overtown Transit Village North	701 NW 1 st Court.	317,662
21.	Public Defender Bldg.	1320 NW 14 th Street	84,408
22.	Elections/311	2700 NW 87 th Avenue	120,000
23.	S. Dade Govt. Center	10710 SW 211 th Street	109,272
24.	S. Dade Govt. Center	10890 SW 211 th Street	3,225
25.	Stephen P. Clark Center	111 NW 1 st Street	760,000
26.	West Dade Permitting Center	11805 Coral Way	106,960

- c. Provide a remote BMS Control Center at Contractor's facility for after hours monitoring. The remote BMS control Center shall be operational 24 hours/7 days a week to provide for redundant operations if needed and be "Underwriters Laboratory (UL) Rated". This base service includes roll over of the phones during normal working hours as needed to support the local operations staff.
- d. Supervise all activities within both BMS Control Centers, including the utilization of the various systems.
- e. Receive messages and disseminate information to County departments, staff, and personnel; other government agencies; County contractors and their subcontractors, as needed, via various communication mediums provided by the County such as two-way radios, telephones, e-mails, and pagers. Contractor shall provide a satellite telephone for use during emergencies.
- f. Contractor shall work closely with the County's Project Manager to create a Continuity of Operation Plan (COOP) in the event of a communication, equipment, and/or systems failure or during scheduled maintenance that affects the BMS Control Center operations. The COOP shall address the following:
 - 1. Ensuring uninterrupted monitoring services are provided, including the process for provisions of an action plan to the County's Project Manager within 4 hours of such failures. The action plans will describe the steps to be taken by the Contractor to resolve the failures and are subject to approval by the County's Project Manager.
 - 2. Plan for provision of services during scheduled maintenance at either BMS Control Center. The contractor shall work closely with the County's Project Manager to submit and finalize the COOP, incorporating the County's recommendations therein. The final COOP shall be submitted to the County's Project Manager within sixty days of contract award.
- g. Attend project status meeting with the FUMD staff regularly to provide updates on the operations. Such meetings may be held on-site at the County's BMS Control Center or via teleconference, at the discretion of the County's Project Manager.

- h. Meet monthly with FUMD personnel to discuss pending issues and address any concerns by the County regarding the services being provided. The Contractor shall produce and maintain records and meeting minutes of the monthly meetings. Such records and minutes shall be provided to the County's Project Manager at the next monthly meeting or upon request.
- i. Notify FUMD staff within 30 minutes (via communication medium identified in item d above) of any issues that may affect system performance or the performance of the services provided to the County, and the Contractor's efforts to resolve the issues.
- j. Obtain contractor Identification Badges for employees prior to commencement of work by any of Contractor's employees. To obtain a badge, the employee must pass security clearance. The security clearance is subject to, among other things, passing personal and/or corporate criminal background checks. The cost for the background checks will be paid by the Contractor.

11.2 The contractor shall meet and provide the following operational requirements:

- a. Ensure appropriate staffing at both BMS Control Centers, including during and throughout an emergency or crisis situation including, but not limited to hurricanes.
- b. Ensure that the remote BMS Control Center remotely monitors the County systems in real-time.
- c. Ensure that calls to the BMS Control Center never go to voice mail. The Center should be able to handle multiple phone calls simultaneously and shall rollover the phones to the remote BMS Control Center during normal working hours as needed to support the local operations staff.
- d. Create and run various system reports on the BMS including the Fire Alarm System and County's work order system as may be needed. The reports may be required on a daily basis or as requested by FUMD personnel. The following list is an example of the reports provided on the BMS:
 - 1. Panel Point Log
 - 2. Failed Point Log
 - 3. Alarm Point Log
 - 4. Operator Point Log
 - 5. Disabled Point Log
 - 6. Panel Display Report
 - 7. Motor Status Report
- e. Issue point commands to the BMS as requested by building management staff. This includes, but is not limited to the following tasks which shall be performed within 10 minutes of request:
 - 1. Commanding points on/off (turning equipment on or off)
 - 2. Changing set points (setting to a value)
 - 3. Commanding valves (setting to a value)
 - 4. Commanding dampers (setting to a value)
 - 5. Commanding pump/pumps to run at a certain speed (setting a value)
 - 6. Initiating resets (may be a command of on/off or a setting of a value)

7. Command/set the point priority as needed. An example of this would be to change the priority at which a point is at from one value (None, PDL, Emergency, Smoke, and Operator, etc.) to another.
 8. Commanding the various point options (Disabled alarm printing, alarm by command, out of service/disabled and reset Totalization).
- f. Create and update databases for the BMS as needed. Unless otherwise specified or agreed, the following tasks shall be performed within 8 hours of request. This includes, but is not limited to the following:
1. Equipment scheduling database (Scheduler & Time of Day).
 2. Point database modification (point configurations and setup).
 3. Creating graphics and editing (graphics used for the graphical user interface).
 4. Creating and modifying trend definitions. (Database used for the configuration of the trending function).
 5. Creating and modifying PPCL program as requested by the county. In the event any modifications are deemed extensive (more than 8 hours), the County will request a quote or proceed as T&M as specified in Appendix D – Section B. All PPCL modifications shall be reviewed and approved by the County's BMS Superintendent.
 6. Creating and modifying plotter graphs utilizing the Dynamic Plotter software or Excel using data exported from the system.
 7. Monitor, respond, and escalate BMS alarms and events as instructed in Point Informational Text, Point Memo and the Procedures Manual. These tasks shall be performed within 10 minutes of system triggering alarm. Escalation process shall be completed within 40 minutes of system triggering alarm.
 8. Monitor and operate chiller plant equipment based on procedures and sequences provided by Chiller Plant Superintendent. This information may be found on graphics created to outline chiller plant operation. Supplemental information may also be found in Point Informational Text, Point memo and the Procedures Manual.
 9. Monitor and respond to fire alarms connected to the BMS control room as instructed in Point Informational Text, Point Memo and the Procedures Manual.
 10. Log all events, requests and service calls. Create work orders based on these calls and requests from building management staff.
 11. Create edit and update the Procedures/SOP and contact manuals as needed. This will be done at the request of and subset to the approval of FUMD personnel.
 12. Create, enter and close work orders on the County's work order system (Infor/Eams). This includes demand and maintenance work orders for the utilities generator crew and chiller plants managed by FUMD. Emergency work orders shall be created within 30 minutes of receiving call, non-emergency work orders shall be created within 2 hours of receiving call. All work orders shall be closed within 2 days of receiving the information needed to close the work order.

Note: the "work order system" is a software application used to create work orders and track assets. It can track several aspects of tasks/projects

including: time, labor, progress, materials, warranties, repair history, maintenance history & costs.

- g. Ensure Contractor's staff is trained on new advances and technologies related to provision of the Services.

11.3 The contractor shall meet and provide the following security requirements for remote BMS Control Center:

- a. General Security
 - 1. Have in place a security policy that manages and maintains the internal security of its infrastructure.
 - 2. Have the capability to immediately disable all or part of the functionality of the application should a security issue be identified.
- b. Physical Security
 - 1. Maintain equipment hosting the application located in a physically secure facility, which requires identification badge access at a minimum.
 - 2. Maintain infrastructure (hosts, network equipment, etc.) hosting the County's application located in a locked cage-type environment.
 - 3. Keep accurate internal records identifying the personnel with access to the environment hosting the application.
- c. Network Security for Internal Access
 - 1. Deploy appropriate firewalling technology and authentication using cryptographic technology.
 - 2. Deploy one of the following cryptographic technologies: IPSEC, SSL, SSH/SCP, PGP.
 - 3. Deploy one of the following remote access technologies offered by the County: Point-to-point IPSEC VPN, SSL-VPN, Citrix, SSH/SCP, PGP.
- d. Host Security
 - 1. Provide remote BMS Control Center that has been hardened against network attacks.
- e. Authentication and Authorization
 - 1. Provide all users accessing the BMS a unique username and password (unless a secure implementation of digital certificates is used in place of username and password).
 - 2. Ensure all authorized users accessing the BMS utilize a strong password incorporating both letters and numbers, at least six characters in length.
Note: Intruder lockout detection shall occur according to the County's security measures in place. Users denied access will require to be authenticated by the County System administrator, prior to regaining access to the system.

11.4 Remote Call Center Services

- a. The Contractor shall provide a remote Call Center with redundant operations in the event of a failure in the remote Call Center. Such services will be provided under the same terms and conditions and at no additional cost to the County. The Contractor shall provide a remote Call Center that shall:

1. Serve and function as a 24 hour/7 day a week call center for various GSA/FUMD provided services. Receive messages and disseminate information to County departments, staff, and personnel; other government agencies; County contractors and their subcontractors, as needed, via various communication mediums such as two-way radios, telephones, e-mails and pagers.
2. Ensure that calls to the BMS Control Center never go to voice mail. The Center should be able to handle a multiple phone calls simultaneously and shall rollover the phones to the remote BMS Control Center during normal working hours as needed to support the local operations staff.
3. Continue operation in the event of a communication failure. Details regarding this plan shall be made available to and approved by the County.
4. Ensure appropriate staffing at the Call Center, including during and throughout an emergency or crisis situation including, but not limited to hurricanes.

11.5 Performance Guarantees

- a. Listed below are the performance guarantees. Failure to respond to the alarms or perform the required tasks listed below, in accordance with the Scope of Services, Section 11 "Monitoring Services" and to the satisfaction of the County, shall cause the Contractor to accrue points for each documented incident. Repeated failures to comply with the Contract requirements may result in a non-performance report being generated. The County reserves the right to find the Contractor in default of the contract for failure to perform.

Incident Type	Points
a) Failing to report alarm within 10 minutes as required in Paragraph 8.2(f)(7).	1,000
b) Failing to escalate BMS alarms and events as instructed within a total time of 40 minutes as required in Paragraph 8.2(f)(7).	1,500
c) Failing to log an event as required in Paragraph 8.2(f)(10).	1,000
d) Failing to issue point commands as requested by building management staff within 10 minutes of notification (Paragraph 8.2 - e).	1,000
e) Failing to create emergency Work Orders within 30 minutes of receiving call [Paragraph 8.2(f)(12)].	1,000
f) Failing to create a non-emergency Work Order within 2 hours of receiving call [Paragraph 8.2(f)(12)].	500
g) Failing to close a Work Order within 2 days of receiving the information needed to close the Work Order [Paragraph 8.2(f)(12)].	500
h) Failing to create an update a database at the County's request within 8 hours [Paragraph 8.2(f)]. Excluding incidents in e, f, and g mentioned above.	1,000
i) Failing to provide an action plan to the County within 4 hours in the event of a systems failure [Paragraph 8.1(e)(1)].	5,000

Below is the point schedule and escalation associated with the incidents listed in the table above. There are three Levels of Escalation to be triggered when the accumulated value reaches the thresholds set below. Points will be tallied using a 182 day rolling window.

Levels of Escalation	Points
Accruing these points will initiate a meeting between Contractor's Account Project Manager and the County's Project Manager. The contractor shall provide the	4,000

county's Project Manager with an action plan to prevent incidents from occurring again which provides a resolution that satisfies the County.	
Accruing these points will initiate a meeting between contractor's Upper Management (Area Manager or higher and county's GSA/FUMD division director. The Contractor shall provide the County's Project Manager with an action plan to prevent incidents from occurring again which provides a resolution that satisfies the County.	6,000
Accruing these points will initiate a replacement of the Contractor's BMS Control Center personnel and may also result in a non-performance report of the Contractor being generated by the County.	8,000

12. Services for North District Chiller Plant

- 12.1 The Contractor shall provide the technical support and services throughout all periods listed to the Siemens Building Management System at the Miami-Dade North District Chiller Plant per the terms and conditions of the Contract. The County will provide a lift for the contractor to service the Siemens sensors located in high and difficult to reach locations. In addition, the County will provide access for the Contractor to service the Apogee controls equipment installed at the American Airlines Arena and Terremark Building which are part of the Apogee system control at the North District Chiller Plant. The Contractor shall provide the preventative maintenance to test the open/close contacts. Excluded from coverage are Non Siemens Sensors and Non Siemens Valves. Additional, coverage for each service period will be provided as follows:
- a. In addition, the Contractor shall provide the following equipment, keeping them in stock on site as spares.
 1. 1 ice controller
 2. 2 spare 50% sensors
 3. 2 spare 100% sensors for emergency stock
 - b. In addition, the Contractor shall provide one visit by the factory authorized service company to spend no more than 2 days on-site inspecting the sensors, controllers and utilize the spare stock as needed for replacement. The County will provide a scheduled shutdown/meltdown of one tank for this service visit. Should additional time be needed, the County will pay based on the rates specified in Appendix D – Price Schedule.
 - c. In addition, the Contractor shall provide the replacement coverage on the valve actuators only. The valves bodies and packing's are excluded as they may not be serviced without a plant shutdown. The labor for the replacement of the new valve actuators shall be billed separately as specified in Appendix D – Price Schedule.
 - d. Excluded from coverage are 10 Yaskawa VFD's (Variable Frequency Drive). The Contractor shall provide preventative maintenance and emergency services for the remaining 12 VSDs (Variable Speed Drive); one 350/250 HP replacement VFD or two 200/100 HP replacements per year for the remaining 12 VSD's. If more than one fails the County may be charged per the rates specified in Appendix D – Price Schedule.
 - e. In addition, the Contractor shall provide on-site training: one (1) day per quarter by a system specialist, and two (2) days per quarter for a Siemens Energy Engineer to review the operations of the plant to make written recommendations for energy savings improvements.

APPENDIX B - BUILDINGS AND EQUIPMENT**1. Medical Examiners Building - List of Maintained Equipment**

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
System 600 BLN -> MBC 40		1	5
System 600 BLN -> AEM		1	1
System 600 BLN -> PXCC36		1	1
System 600 BLN -> PXCC16		1	1
System Level -> Chiller Control Check		1	2
System Level -> Typical AHU Control Check		1	18
System Level -> Point Count		1	300
Software Update -> Apogee BASE Client		1	1
Control Systems -> Reset Water Control		1	1
Control Systems -> HVAC Supply Fan		1	18
System Level Qu -> Valves		1	29
System Level Qu -> Damper Actuators		1	42
System Level Qu -> Secondary Controls (in the Space)		1	20
System Level Qu -> Primary Controls (in Mech Room)		1	40
Valves & Actuat -> Flowrite VP593/594 ST 2 1/2" to 6"		1	15
Valves & Actuat -> Flowrite VF 591 WM 5" to 6"		1	36
Valves & Actuat -> Flowrite Doubleseat 5" to 8"		1	1
Valves & Actuat -> Damper Actuator, 6"		1	30
Accessories -> Air Flow Switch		1	54
Accessories -> Liquid Differential Pressure Switch		1	8
Controllers -> T-stat, Room, Single Pressure		1	69
Controllers -> Regulator, Differential Pressure		1	4
Controllers -> T-stat, Electric, Freeze/Fire		1	33
Electric Device -> Valve , E. P.		1	18
Software Control Loops	Tune	1	44

2. Courthouse Center BMS - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Insight Worksta -> Modem (General)		1	1
AEM		1	1
System 600 FLN -> TEC - Electronic Outputs		1	434
Field Hardware -> Temp, Room Thermistor		1	434
Field Hardware -> Damper Actuator (Belimo)		1	434

System 600 FLN -> DPU	1	4
System 600 FLN -> DEM	1	5
System 600 BLN -> MBC	1	9
System 600 BLN -> FSCS-MBC	1	1
Field Hardware -> Temp, Duct RTD, Single Pt, Platinum	1	41
Software Update -> Apogee Adv client	1	1
Field Hardware -> Transducer, AO-P	1	46
Field Hardware -> Temp, Immersed Thermistor	1	6
Field Hardware -> Transducer, 0-300 PSI, 4-20 MA	1	2
Field Hardware -> Electric Relay/Switch/Transformer	1	516
Valves & Actuat -> Flowrite VF 591 WM 1/2" to 2"	1	21
Valves & Actuat -> Damper Actuator, 4"	1	60
Valves & Actuat -> BF Valve, 2" - 6", (1) 6" motor	1	4
Electric Device -> Valve , E. P.	1	67
UPS's	1	12
Variable Frequency Drive	1	21

2. A. Courthouse Center Smoke Test - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
BMS/Fire Alarm FSCS Test	Smoke Test	1	1
One Floor/Zone Functionality Test	Smoke Test	4	1
Quarterly Test Report Results	Smoke Test	4	1

3. Stephen P. Clark Center BMS - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Field Hardware -> Temp, Duct RTD, Single Pt, Platinum		1	58
Software Update -> Apogee Adv client		1	1
Software Update -> Apogee Base client		1	1
Field Hardware -> Temp, Room RTD, Platinum		1	50
Field Hardware -> Temp, Immersed RTD, Platinum		1	2
Field Hardware -> Transducer, 0-300 PSI, 4-20 MA		1	5
Field Hardware -> RH, Room, 4-20 MA		1	3
Field Hardware -> Electric Relay/Switch/Transformer		1	313

Field Hardware -> Transducer, AO-P	1	21
PXC Modular	1	21
PXC-C 24	1	16
PXC-C 16	1	2
TEC controller, damper and room sensor	1	825
Pressure Sensors	1	25
Flow Sensors	1	5
Temp Sensors	1	124
Photocell	1	1
Periodic Loop Tuning	1	17
DP LDI	1	61
DP L2SL	1	53
CO2 sensor	1	17
Carbon Monoxide Sensor	1	1
AOP Transducers for control valves	1	17
Relays, transformers, switches	1	800

3.A Stephen P. Clark Center Smoke Test - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
BMS/Fire Alarm FSCS Test	Smoke Test	1	1
One Floor/Zone Functionality Test	Smoke Test	4	1
Quarterly Test Report Results	Smoke Test	4	1

4. South Dade Courthouse Annex - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Software Update -> Apogee Adv client		1	1
Valves & Actuat -> Flowrite VF 591 WM 2.5" to 4"		1	4
Valves & Actuat -> Pressure Reducing Valve		1	1
Valves & Actuat -> Damper Actuator, 6"		1	4
Accessories -> Air Flow Switch		1	14
Electric Device -> Valve , E. P.		1	4
Electric Device -> PE Switch, SW 251		1	4
Business Protec -> Panel B/U on-site		1	2
System 600 BLN -> PXC-M		1	2
System 600 BLN -> MEC (Lonworks gateway)		1	1
System 600 FLN -> DEM		1	1
System 600 FLN -> TEC - Electronic Outputs, dampers and room sensor		1	39
Field Hardware -> Temp, Duct Thermistor, Single Point		1	8

Photocell		1	1
CO2 sensor		1	2
Field Hardware -> Electric Relay/Switch/Transformer		1	35

5. South Dade Government Center - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Controllors -> T-stat, Room, Single Pressure		1	30
Business Protec -> Panel B/U on-site		1	1
Insight Worksta -> Modem (General)		1	1
Insight Worksta -> AEM		1	1
Insight Worksta -> Surge Transient Protector		1	1
System 600 BLN -> MBC 40		1	1
Field Hardware -> Transducer, AO-P		1	2
Valves & Actuat -> Damper Actuator, 6"		1	1
Accessories -> Air Flow Switch		1	2
Valves & Actuat -> Valve, 6"		1	1
Valves & Actuat -> BF Valve ISO	-	1	4
Accessories -> Liquid Differential Pressure Switch		1	2
Accessories -> Flow Meters		1	4
Field Hardware -> Temp, Duct Thermistor, Single Point		1	3
Field Hardware -> Temp, Outside Air Thermistor		1	1
Field Hardware -> Temp, Immersed Thermistor		1	6
Field Hardware -> Electric Relay/Switch/Transformer		1	16

6. Data Processing Center - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Software Update -> Apogee Base client		1	1
Electric Device -> Valve , E. P.		1	15
Electric Device -> PE Switch, SW 251		1	32
Valves & Actuat -> BF Valve, 2" - 6", (1) 6" motor		1	2
Valves & Actuat ->		1	8
Accessories -> Selector Switch, Pneumatic		1	2
Accessories -> Relays, RL243		1	3
Accessories -> Liquid Paddle Switch, Pneumatic		1	4
Valves & Actuat -> Damper Actuator, 4"		1	16

Accessories -> Air Flow Switch		1	8
Business Protec -> Panel B/U on-site		1	3
Network Analyisi -> NPDT - P2 - BLN	Semiannually	2	1
Insight Worksta -> Modem (General)		1	1
System 600 BLN -> MBC 40		1	3
System 600 BLN -> PXC-M		1	1
System 600 BLN -> PXC-C 16		1	1
System 600 BLN -> PXC-C 24		1	1
System 600 FLN -> TEC - Electronic Outputs, dampers and room sensor		1	14
System 600 FLN -> DPU	Until parts are no longer available	1	1
Field Hardware -> CO2 sensor		1	4
Field Hardware -> Room Temp sensor		1	4
Field Hardware -> Room humidity sensor		1	9
Field Hardware -> duct humidity sensor		1	4
System 600 FLN -> Digital Energy Monitor PA 419		1	1
Field Hardware -> Temp, Duct Thermistor, Single Point		1	16
Field Hardware -> Temp, Outside Air Thermistor		1	1
Field Hardware -> Transducer, AO-P		1	8
Field Hardware -> Electric Relay/Switch/Tranformer		1	31
Field Hardware -> Temp, Immersed Thermistor		1	7

7. Gerstein Justice Building - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Software Update -> Apogee Adv client		1	1
Valves & Actuat -> Flowrite VF 591 WM 1/2" to 2"		1	10
Valves & Actuat -> Powertop VP 658 1/2" to 1.25"		1	10
Valves & Actuat -> Pressure Reducing Valve		1	2
Accessories -> Liquid Differential Pressure Switch		1	8
Accessories -> Air Flow Switch		1	10
Electric Device -> Valve , E. P.		1	27
Business Protec -> Insight 2.X B/U on-site		1	1
Insight Worksta -> Modem (General)		1	1
Insight Worksta -> Trunk Interface/IPMDA		1	1
System 600 BLN -> MBC 40		1	4
System 600 BLN -> MBC 24		1	1

System 600 BLN -> SCU	Until parts are no longer available	1	3
System 600 FLN -> DPU	Until parts are no longer available	1	2
System 600 FLN -> TEC - Electronic Outputs		1	266
System 600 FLN -> Unit Vent Control System (TEC)		1	23
System 600 FLN -> Digital Energy Monitor PA 419		1	3
Field Hardware -> Temp, Outside Air Thermistor		1	1
Field Hardware -> Temp, Duct Thermistor, Single Point		1	20
Field Hardware -> RH, Duct, 4-20 MA		1	10
Field Hardware -> Temp, Immersed Thermistor		1	8
Field Hardware -> Electric Relay/Switch/Transformer		1	65

8. Hickman Building/Garage - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Valves & Actuat -> Flowrite VF 591 WM 2.5" to 4"		1	5
Electric Device -> Electric Relay/Switch/Transformer		1	34
Electric Device -> Valve , E. P.		1	4
Accessories -> Liquid Differential Pressure Switch		1	3
Accessories -> Air Flow Switch		1	11
System 600 FLN -> TEC - Electronic Outputs		1	10
Field Hardware -> Flow Meter		1	1
Field Hardware -> Damper Actuator (Electronic)		1	10
System 600 BLN -> PXC-C 36		1	2
System 600 BLN -> PXC-C 24		1	1
System 600 BLN -> PXC-C 16		1	1
System 600 BLN -> PXC-M		1	1
Field Hardware -> RH, Duct, 4-20 MA		1	1
Field Hardware -> Temp, Outside Air Thermistor		1	1
Field Hardware -> Temp, Room Thermistor		1	11
Field Hardware -> Temp, Room RTD, Platinum		1	12
Field Hardware -> Transducer, 0-300 PSI, 4-20 MA		1	2
Field Hardware -> Temp, Immersed RTD, Platinum		1	4
System 600 FLN -> Unit Vent Control System (TEC)		1	1
Field Hardware -> Electric Relay/Switch/Transformer		1	38
Field Hardware -> Transducer, AO-P		1	7
Field Hardware -> Transducer, E-P, 1-12 VDC		1	4

9. Graham Building - List of Maintained Equipment

EQUIPMENT TYPE	Additional Information	Yearly Frequency of service	Quantity (Number of Equipment)
Valves & Actuat -> Flowrite VF 591 WM 1/2" to 2"		1	11
Valves & Actuat -> Damper Actuator, 4"		1	11
Electric Device -> Valve , E. P.		1	11
Electric Device -> PE Switch, SW 251		1	11
Accessories -> Air Flow Switch		1	11
Accessories -> Liquid Differential Pressure Switch		1	3
Accessories -> Static Pressure Switch		1	22
Insight Worksta -> Modem (General)		1	1
System 600 BLN -> PXC-M	Until parts are no longer available	1	4
System 600 MLN -> Apogee Base client		1	1
System 600 FLN -> TEC - Electronic Outputs, room sensors and actuators		1	124
System 600 FLN -> Unit Vent Control System (TEC)		1	11
System 600 FLN -> TEC - Pneumatic Outputs		1	4
Field Hardware -> Temp, Outside Air Thermistor		1	1
Field Hardware -> RH, Duct, 4-20 MA		1	1
Field Hardware -> Temp, Duct Thermistor, Single Point		1	22
Field Hardware -> Transducer, Air Static Pressure		1	11
Field Hardware -> Temp, Room Thermistor		1	3
Field Hardware -> Electric Relay/Switch/Transformer		1	110

10. Cultural Center BMS – List of Maintained Equipment

EQUIPMENT TYPE	Additional Information	Yearly Frequency of service	Quantity (Number of Equipment)
System 600 ALN -> MBC 40		1	1
Valves & Actuat -> Damper Actuator, 4"		1	32
Valves & Actuat -> Control Valves		1	53
Field Hardware -> CO2 Sensor, Duct		1	6
Accessories -> Damper position switches		1	189
Field Hardware -> ½ inch damper control valves		1	189
Field Hardware -> Electric Relay/Switch/Transformer		1	124
Field Hardware -> Flow Meter		1	9

System 600 ALN -> PXC Modular	1	8
System 600 ALN Gateway Service Fire Alarm	1	1
System 600 ALN Gateway point End to End Check	1	654
Field Hardware -> RH, Sensor, 4-20 MA	1	40
Software Support Insight 3.X Adv User License Update	1	1
Electric Devices -> Valve, E.P.	1	189
Field Hardware -> Transducer/Sensor, 0-300 PSI	1	46
Valves & Actuat -> 2 position damper actuators	1	189
System 600 FLN TEC – Electronic Outputs	1	80
Field Hardware -> Temp, Duct RTD, Single Point	1	162
Field Hardware -> Transducer, AO-P	1	85
Data Protection & Data Recovery Insight 3.X B/U on-site	1	1
Control Loop Tuning Periodic Loop Tuning	1	85
FSCS	1	1

10.A Cultural Center - Smoke Test – List of Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
BMS/Fire Alarm FSCS Test	Smoke Test	1	1
One Floor/Zone Functionality Test	Smoke Test	4	1
Quarterly Test Report Results	Smoke Test	4	1

11. Miami-Dade Courthouse – List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Software Update -> Apogee Adv client		1	1
Valves & Actuat -> Flowrite VF 591 WM 1/2" to 2"		1	5
Valves & Actuat -> Flowrite VF 591 WM 2.5" to 4"		1	1
Valves & Actuat -> Powertop VP 658 1/2" to 1.25"		1	49
Valves & Actuat -> Relief Valve		1	1
Valves & Actuat -> Damper Actuator, 4"		1	11
Accessories -> Liquid Differential Pressure Switch		1	4
Accessories -> Selector Switch, Pneumatic		1	2
Accessories -> Air Flow Switch		1	158
Accessories -> Tank Level Switch		1	1
Accessories -> Room T/RH/CO2 sensors		1	5
Electric Device -> Valve , E. P.		1	10
Electric Device -> PE Switch, SW 251		1	2
Business Protec -> Panel B/U on-site		1	12
Insight Worksta -> Modem (General)		1	1

Insight Worksta -> Surge Transient Protector		1	1
System 600 BLN PXC-M		1	10
System 600 BLN -> PXC-C 24		1	1
System 600 BLN -> MBC 40		1	1
System 600 BLN -> AEM		1	1
System 600 FLN -> BIM		1	1
System 600 FLN -> PXM		1	1
System 600 FLN -> MPU	Until parts are no longer available	1	20
System 600 FLN -> DPU	Until parts are no longer available	1	1
System 600 FLN -> TEC - Electronic Outputs		1	52
System 600 FLN -> Unit Vent Control System (TEC)		1	8

12. Caleb Center - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
System 600 ALN -> PXC Modular		1	3
Software Support Insight 3.X Base License Update		1	1
Valves & Actuat -> Powertop VP 658 1/2" to 1.25"		1	20
Field Hardware -> Temp, Outside Air Thermistor		1	1
Field Hardware -> Temp, Duct Thermistor, Single Point		1	20
Field Hardware -> Transducer, Potential (Volts)		1	20
Field Hardware -> Electric Relay/Switch/Transformer		1	30

13. Miami-Dade 140 West Flagler Building - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Software Update -> Apogee Adv client		1	1
Valves & Actuat -> Flowrite Doubleseat 2.5" to 4"		1	2
Valves & Actuat -> Flowrite Doubleseat 5" to 8"		1	1
Valves & Actuat -> Pressure Reducing Valve		1	1
Controllers -> Regulator, Differential Pressure		1	2
Controllers -> T-stat, Room, Single Pressure		1	40
Electric Device -> Valve , E. P.		1	41
Accessories -> Air Flow Switch		1	60
Business Protec -> Panel B/U on-site		1	5
Insight Worksta -> Modem (General)		1	1
Insight Worksta -> Surge Transient Protector		1	1
System 600 BLN PXC-M		1	2
System 600 BLN -> PXC-C		1	1
System 600 BLN -> MBC 40		1	4

	Until parts are no longer available	1	
System 600 FLN -> MPU			5
System 600 BLN -> AEM		1	2
System 600 BLN -> MBC Gateway		1	1
Field Hardware -> Temp, Duct Thermistor, Single Point		1	60
Field Hardware -> Transducer, AO-P		1	30
Electric Device -> PE Switch, SW 251		1	40
Field Hardware -> Temp, Immersed Thermistor		1	4
Accessories -> Liquid Differential Pressure Switch		1	3
Field Hardware -> Electric Relay/Switch/Transformer		1	103
Indust.grade valves w/act.		1	3

14. North Dade Justice Building - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Air Flow Switch		1	14
Relays, RL243		1	11
Insight 3.S B/U on-site		2	1
Panel B/U on-site		4	4
Apogee Network Maint (MLN)		1	1
Valve, E.P.		1	9
Air Flow Switch		1	14
Liquid Differential Pressure Switch		1	2
Temp, Duct RTD, Single Pt		1	6
Temp, Room		1	4
Transducer, Air Static Pressure		1	2
Transducer, AO-P		1	2
AEM		1	1
MBC 24/32		1	2
MBC 40		1	1
RBC		1	1
PXC-C		1	1
Apg WS-Crp Netwk, Client NT		1	1
Chiller Control Check		1	2
Point Count		1	60
Typical AHU Control Check		1	7
Insight 3.X Adv User License Update		1	1
Damper Actuator, 4"		1	15
Flowrite VF 591 WM ½" to 2"		1	6
Flowrite VF 591 WM 2.5" to 4"		1	1

15. Public Defender Building - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Panel Backup on-site		2	3
Periodic Loop Tuning		1	10
PXC-M FSCS		1	1
SCU		1	2
DPU		1	4
Exhaust Fan Control Check		1	3
TEC – VAV Box Control Check		1	70
Typical AHU Control Check		1	5
Insight 3.X Adv User License Update		1	1

16. Miami-Dade Permit Building - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Insight 3.X B/U on-site		2	1
Apogee Network maint (MLN) NPDT		1	1
Apg WS-Crp Netwk, Client NT		1	1
AEM		1	1
FLN Controller		1	1
PXM		1	2
TEC – Electronic Outputs		1	20
Electric Relay/Switch/Transformer		1	100
Temp, Duct Thermistor, Single Point		1	20
Thermostat, Control, Rm/Hi-Lo Limit		1	20
Transducer, Current (AMPS)		1	20
Firmware Flashes		1	1
Insight 3.X Adv User License Update		1	1

17. Miami-Dade Elections Building - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Insight 3.X B/U on-site		2	1
Apogee Network maint (MLN)		1	1
Apg WS-Crp Netwk, Client NT		1	1
AEM		1	1
FLN Controller		1	1
TEC – Electronic Outputs		1	25
Electric Relay/Switch/Transformer		1	125
Temp, Duct Thermistor, Single Point		1	25
Thermostat, Control, Rm/Hi-Lo Limit		1	25
Transducer, Current (AMPS)		1	25

Firmware Flashes		1	1
Insight 3.X Adv User License Update		1	1

18. Miami-Dade Fire Rescue - List of Maintained Equipment

EQUIPMENT TYPE	Additional Information	Yearly Frequency of service	Quantity (Number of Equipment)
Insight Workstation -> PC Hardware		1	
Insight Workstation -> CRT, Keyboard		1	
Insight Workstation -> Printer (General)		1	
Insight Workstation -> Modem (General)		1	
Insight Workstation -> Trunk Interface/IPMDA		1	
System 600 BLN -> MBC 40 Control Panel with points		1	1
System 600 BLN -> Gateway for York chillers		1	1
System 600 BLN -> Gateways for JCI VAV TEC's		1	2
System 600 BLN -> MEC Series 100/200/300 Controller		1	6
System 600 BLN -> AEM		1	1
System 600 BLN -> RBC Control panels		1	2
Field Hardware -> Temp, 12 Immersed RTD, Platinum		1	
Field Hardware -> Temp, 16 Duct RTD, Single Pt, Platinum		1	
Field Hardware -> Transducer, Air Static Pressure		1	5
Business Protection -> Panel B/U on-site		1	
Business Protection -> Insight 3.X B/U on-site		1	
System 600 MLN -> RENO - Data Verification		1	
System 600 MLN -> Apogee Workstation S-Crp Network, Client NT		1	
Software Updates -> Apogee Advanced single server		1	
System Level -> Chiller Control Check		1	3
System Level -> Typical AHU Control Check		1	10
System Level -> Exhaust Fan Control Check		1	8
12" automatic butterfly valves at cooling towers		1	4
8" automatic butterfly valve for changeover		1	1
8" automatic butterfly valves for chillers		1	3
6" automatic butterfly valves for CW at chillers		1	2
5" automatic butterfly valve for CW at chiller		1	1
Chilled water control valves for air handling units Note: valve will be provided if one fails- installation of valve to be at discounted T&M rates.		1	10
York Chiller R-134A 240 ton		1	2
York Chiller R-22 140 ton		1	1
Marley Cooling Towers 400 ton - 1&2 common sump Note: Coverage is for the motors and gearboxes only.		1	3

Secondary chilled water pumps 9 & 10 - 1050GPM: AO Smith Motor and AP Aurora pump		1	2
Yaskawa Variable speed drives for P9 & P10		1	2
Condenser water pumps # 5, 6 & 7 - 900GPM: AO Smith Motor and AP Aurora pump		1	3
Chilled water pumps # 1 & 2 : AO Smith Motor & AP Aurora pump		1	2
Chilled water pump #3: AO Smith Motor and AP Aurora pump		1	1
Reliance Variable speed drives for cooling towers Note: if the drive fails we will replace with a Yaskawa		1	3
Danfoss Graham Variable speed drives Shared drives serve ahu 7 & 8 and 5 & 6. Note: if the drive fails it will be replaced with a Yaskawa		1	2

19. WASD Douglas – List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Control Loops		1	20
Insight 3.S B/U on-site		2	1
Panel Backup (via POST)		2	5
MBC 40		1	3
MEC W/POP, E-Net, FLN, LON FLN, BAC		1	2
TEC – Electronic Outputs using CAP		1	160
Software App Svr-Crp Netwk, MLN, NT/DB		1	1
RENO – Data Verification		1	1
Chiller Plant Controls		1	2
TEC – VAV Box Controls		1	160
Typical AHU Controls		1	10
Insight 3.X Adv first/single server update		1	1

20. WASD Hialeah Preston = List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
MEC V2.60		1	1
PXMP V2.82		1	1
AEM		1	1
D/PT Temp Sensor, RTD		1	2
Pipe Surf Temp RTD		1	1
Air Static DP Trans		1	1
Air Flow Switch		1	1
Room Temp Sensor		1	4
TEC/ACT Pkg W AZM		1	4
Currnt SW Split Core		1	1

21. Port of Miami 1080/1050 Buildings

Note: Siemens only provides inspection to the Smoke Evacuation System. No equipment is covered under maintenance. Therefore, no list of equipment is being provided.

22. Miami-Dade Police HQ - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Valves & Actuat -> BF Valve, 3W, 8"-12", (2) 6" motors		1	5
Valves & Actuat -> Flowrite VF 591 ST 1/2" to 2"		1	15
Valves & Actuat -> Flowrite VF 591 WM 1/2" to 2"		1	4
Valves & Actuat -> Powertop VP 658 1/2" to 1.25"		1	3
Valves & Actuat -> Damper Actuator, 6"		1	2
Valves & Actuat -> Damper Actuator, 4"		1	25
Controllers -> T-stat, Electric, Room, Line Voltage		1	1
Controllers -> T-stat, Room, Single Pressure		1	126
Controllers -> T-stat, Room, Dual Pressure		1	101
Controllers -> T-stat, Electric, Room, Low Voltage		1	1
Controllers -> Regualtor, Static Pressure		1	2
Valves & Actuat -> Damper Actuator, 3"		1	10
Accessories -> Liquid Differential Pressure Switch		1	7
Accessories -> Tank Level Switch		1	1
Controllers -> T-stat, Electric, Freeze/Fire		1	75
Business Protec -> Insight 2.X B/U on-site		1	1
Business Protec -> Panel B/U on-site		1	8
System 600 MLN -> Adv client		1	1
Insight Worksta -> Modem (General)		1	1
Insight Worksta -> Surge Transient Protector		1	5
Insight Worksta -> Trunk Interface/IPMDA		1	1
Insight Worksta -> Trunk Isolater/Extender		1	1
System 600 BLN -> SCU	Until parts are no longer available	1	8
System 600 FLN -> DPU	Until parts are no longer available	1	3
System 600 FLN -> MPU	Until parts are no longer available	1	1
System 600 BLN -> MBC		1	1
System 600 BLN -> MBC Liebert Gateway		1	1
System 600 FLN -> PXM (MEC)		1	3
Field Hardware -> Temp, Immersed Thermistor		1	8

Field Hardware -> RH, Duct, 4-20 MA		1	2
Field Hardware -> Transducer, Current (AMPS)		1	4
Field Hardware -> Transducer, Potential (Volts)		1	4
Field Hardware -> Transducer, Watts		1	2
Field Hardware -> Transducer, Air Static Pressure		1	2
Field Hardware -> Transducer, 0-300 PSI, 4-20 MA		1	1

** Please refer to special service for Police – Appendix A – Scope of Services. Paragraph 6.

23. Central Support BMS – List of Maintained Equipment

Central Support BMS - List of Maintained Equipment			
<u>EQUIPMENT TYPE</u>	Additional Information	Yearly Frequency of service	Quantity (Number of Equipment)
System 600 ALN -> PXC Modular		1	5
System 600 FLN BIM		1	2
Field Hardware -> Flow Meter		1	13
Control Loop Tuning Periodic Loop Tuning		1	10
Software Support Insight 3.X Adv License Update		1	14
Software Support Insight 3.X Base License Update		1	10
Data Protection & Data Recovery Insight 3.X B/U on-site		1	1
Field Hardware -> Differential Pressure Sensor		1	11
Field Hardware -> Transducer/Sensor, 0-300 PSI		1	9
Field Hardware -> Temp Sensor, Immersed		1	32
System 600 ALN -> PXC Modular Trane		1	1
System 600 ALN -> PXC Modular BACnet		1	1
System 600 ALN -> PXC Modular Fire		1	1
System 600 ALN -> PXC Compact Program		1	1
BTU Meters		1	2

23.A Central Support Facility Smoke Test - List of Maintained Equipment

<u>EQUIPMENT TYPE</u>	Additional Information	Yearly Frequency of service	Quantity (Number of Equipment)
BMS/Fire Alarm FSCS Test	Smoke Test	1	1
One Floor/Zone Functionality Test	Smoke Test	4	1
Quarterly Test Report Results	Smoke Test	4	1

24. North District Chiller Plant - List of Maintained Equipment

EQUIPMENT TYPE	Additional information	Yearly Frequency of service	Quantity (Number of Equipment)
Field Hardware / Differential Press Sensor – .4% - .25% Accuracy		1	6
Field Hardware / Transducer, Current (AMPS)		1	49
Field Hardware / Transducer/ Sensor, 0-300 PSI		1	21
Field Hardware / Flow Meter		1	1
Field Hardware / Temp, Immersed/Strap-on Pipe Thermistor		1	39
Field Hardware / Transducer, Liquid Level Transmitter		1	3
Field Hardware / Temp, Outside Air RTD, Platinum		1	1
Field Hardware / Dew Point Temp, Outside Air		1	1
Field Hardware / Transducer, AO-P		1	3
System 600 ALN / PXC Modular		1	6
System 600 ALN / AEM		1	1
System 600 FLN / Variable Frequency Drive & Soft Starters (non Yaskawa)		1	12
System Level / Chiller Control Check		1	9
System 600 FLN / BIM		1	9
System Level / Point Count		1	443
Control Systems – Summary Level - Data Protection and Recovery / Insight 3.X B/U on-site		2	2
System 600 MLN / RENO – Data Verification		1	1
System Performance Updates / Insight 3.X Adv User License Update (each)		1	2

Additional Material List at the North District Chiller Plant

Equipment	Serial Number	Model	No. of Devices
BTU meters			6
Pump differential pressure sensors			30
PM automatic butterfly valves			54
CT3 VFD Siemens (labor only)	T-wd0362000016	sed2-90/32x 6se6436-2ud38- 8fao	1
CT4 VFD Siemens (labor only)	T-wd0362000018	sed2-90/32x 6se6436-2ud38-8fao	1
CWP5 VFD Siemens (labor only)	gp440-09-250-002	gp4401425000nb30a0	1
CWP6 VFD Siemens (labor only)	gp440-09-250-001	gp4401425000nb30a0	1
DCHP-1 VFD Safronics (labor only)	1664960	3006861	1
DCHP-2 VFD Safronics (labor only)	1664959	3006861	1
GLYCOL P1 soft start (labor only)	CR472LN1435D2KX	GE-ASTAT-XT	1

GLYCOL P2 soft start (labor only)	co6d07a10b10f10j10 m10y10t100	SQD-ATS48C32Y	1
GLYCOL P3 soft start (labor only)	co6d07a10b10f10j10 m10y10t100	SQD-ATS48C32Y	1
ICE P1 VFD Safronics (labor only)	164948 100HP 480V	fp5-4055	1
ICE P2 VFD Safronics (labor only)	164949 100HP 480V	fp5-4055	1
ICE P3 VFD Siemens (labor only)	sed2-75/32x 6se6436- 2ud37-5fa0	T- a91462000020	1

APPENDIX C - TASK LIST

Below is a list of tasks that will be performed to maintain the equipment at its peak performance, on its appropriately defined basis.

TASK	DESCRIPTION
APOGEE INSIGHT PC CLIENT NT WORKSTATION	<p>SOFTWARE A&O, PC NAME/LOCATION, DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEETER SOFTWARE, RUN DEFRAG UTILITIES AND OPTIMIZE HARD DRIVE AS REQUIRED, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED BY VIEWING THE PC DURING THE BOOTUP PROCESS, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND PERATING (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER, WORKSTATION – NOTE: IF OTHER SERVICES ARE FOUND, VERIFY THEY ARE NOT NEEDED BEFORE DELETING), VERIFY THE FOLLOWING SERVICES ARE PROPERLY INSTALLED ON EACH CLIENT PC, DISPLAY THE SERVICES ON EACH PC FROM THE WINDOWS TASKBAR BY CLICKING ON START/SETTINGS/CONTROL/ PANEL/SERVICES, VERIFY INSIGHT ASYNCSVC SERVICE: MUST BE "STARTED AUTOMATIC" FOR ALL PC'S USING A BLN OR DIGI BOARD (ONLY ON PRE 3.2REVS). MUST BE DISABLED FOR ALL OTHERS, VERIFY INSIGHT CROSS TRUNK SERVICE: (ONLY IF MORE THAN 1 BLN), VERIFY INSIGHT EVENTLOGSVC SERVICE IS DISABLED FOR EACH CLIENT, VERIFY INSIGHT EVENTPRTSVC SERVICE IS DISABLED ON EVERY APOGEE PC THAT DOES NOT HAVE AN INSIGHT PRINTER, VERIFY INSIGHT GLOBAL TABLE SERVICE IS DISABLED FOR ALL CLIENTS, VERIFY INSIGHT LOADERSVC SERVICE IS DISABLED FOR ALL CLIENTS, VERIFY INSIGHT SCHEDULERSVC SERVICE IS DISABLED FOR ALL CLIENTS, VERIFY OBJECTIVITY AMS SERVICE IS STARTED AUTOMATICALLY, VERIFY OBJECTIVITY LOCK SERVER IS NOT PRESENT - IF IT IS , REMOVE IT, VERIFY NETSENTINEL SEVICE IS ENABLED FOR ANY PC THAT HAS A SOFTWARE SENTINEL, CHECK IF THERE ARE MULTIPLE SENTINALS AT THE SITE AND IF THEY ARE BEING USED ACROSS THE NETWORK, ENSURE THAT THE PC HAS THE RECOMMENDED RAM, DETERMINE IF GRAPHICS ARE SLOW TO COME UP BECAUSE OF ISSUES WITH THE BACKGROUND GRAPHIC - CHANGE AS NECESSARY, RUN THE EVENT VIEWER UTILITY TO VIEW ANY ERRORS THAT MAY BE LOGGED WITH WINDOWS NT, CORRECT APPLICATIONS OR SERVICES THAT MAY BE CAUSING THE LOG ENTRIES, RUN WINDOWS NT TASK MANAGER TO TRACK SYSTEM PREFORMANCE</p>

	ISSUES, ELIMINATE ANY 3-D SCREEN SAVERS SINCE THEY USE MOST OF THE PROCESSOR TIME, REBOOT THE PC.
APOGEE INSGT PC STNDALN, NT WRKSTA DB SVR	<p>NETWORK A&O, PERFORM AN ATOMBACK, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED, BY VIEWING THE PC DURING THE BOOTUP PROCESS, REVIEW DATABASE EDITING LOG FOR ANY RECENT CHANGES AND REVIEW WITH CUSTOMER, VERIFY THAT PC IS ENABLED AS A MASS STORAGE DEVICE,</p> <p>REVIEW WITH CUSTOMER ANY PENDING DATABASE CHANGES AND DOWNLINE LOAD AS APPROPRIATE, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND OPERATING. (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER, WORKSTATION.) NOTE: IF OTHER SERVICES ARE FOUND, VERIFY THEY ARE NOT NEEDED BEFORE DELETING, VERIFY THE FOLLOWING SERVICES ARE PROPERLY INSTALLED ON EACH CLIENT PC, DISPLAY THE SERVICES ON EACH PC FROM THE</p> <p>PANEL/SERVICES, VERIFY INSIGHT ASYNCSVC SERVICE: MUST BE "STARTED AUTOMATIC" FOR ALL PC'S USING A BLN OR A DIGI BOARD (ONLY ON PRE 3.2 REVS). MUST BE DISABLED FOR ALL OTHERS, VERIFY INSIGHT CROSS TRUNK SERVICE: (ONLY IF MORE THAN 1 BLN), VERIFY INSIGHT EVENTLOGSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT EVENTLOGSVC SERVICE IS DISABLED ON EVERY</p> <p>APOGEE PC THAT DOES NOT HAVE AN INSIGHT PRINTER, VERIFY INSIGHT GLOBAL TABLE SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT LOADERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT SCHEDULERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY AMS SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY LOCK SERVER IS INSTALLED AND OPERATING,</p> <p>VERIFY NETSENTINEL SERVICE IS ENABLED FOR ANY PC THAT HAS A SOFTWARE SENTINEL, CHECK IF THERE ARE MULTIPLE SENTINALS AT THE SITE, AND IF THEY ARE BEING USED ACROSS THE NETWORK, RUN WINDOWS NT TASK MANAGER TO TRACK SYSTEM PREFORMANCE</p> <p>ISSUES, ELIMINATE ANY 3-D SCREEN SAVERS SINCE THEY USE MOST OF THE PROCESSOR TIME, REBOOT THE PC, PERFORM AN ATOMBACK, TRANSFER DATABASE TO EXTERNAL MEDIA.</p>

**APOGEE INSGT PC STNDALN,
NT WRKSTA DB SVR**

SOFTWARE A&O, PC NAME/LOCATION PERFORM AN ATOMBACK, DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEPPER SOFTWARE, RUN DEFRAG UTILITIES AND OPTIMIZE HARD DRIVE AS REQUIRED, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED BY VIEWING THE PC DURING THE BOOTUP PROCESS, REVIEW WITH CUSTOMER A LIST OF USER ACCOUNTS AND ACCESS LEVELS AND UPDATE AS REQUIRED, REVIEW DATABASE EDITING LOG FOR ANY RECENT CHANGES AND REVIEW WITH CUSTOMER VERIFY THAT PC IS ENABLED AS A MASS STORAGE DEVICE, REVIEW WITH CUSTOMER ANY PENDING DATABASE CHANGES AND DOWNLINE LOAD AS APPROPRIATE, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND OPERATING (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER, WORKSTATION.) NOTE: IF OTHER SERVICES ARE FOUND, VERIFY THEY ARE NOT NEEDED BEFORE DELETING, VERIFY THE FOLLOWING SERVICES ARE PROPERLY INSTALLED ON EACH CLIENT PC, DISPLAY THE SERVICES ON EACH PC FROM THE WINDOWS TASKBAR BY CLICKING ON START/SETTINGS/CONTROL PANEL/SERVICES, VERIFY INSIGHT ASYNCSVC SERVICE: MUST BE "STARTED AUTOMATIC" FOR ALL PC'S USING A BLN OR A DIGI BOARD (ONLY ON PRE 3.2 REVS). MUST BE DISABLED FOR ALL OTHERS, VERIFY INSIGHT CROSS TRUNK SERVICE: (ONLY IF MORE THAN 1 BLN), VERIFY INSIGHT EVENTLOGSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT EVENTLOGSVC SERVICE IS DISABLED ON EVERY APOGEE PC THAT DOES NOT HAVE AN INSIGHT PRINTER, VERIFY INSIGHT GLOBAL TABLE SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT LOADERSVC SERVICE IS INSTALLED AND OPERATING VERIFY INSIGHT SCHEDULERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY AMS SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY LOCK SERVER IS INSTALLED AND OPERATING, VERIFY NETSENTINEL SERVICE IS ENABLED FOR ANY PC THAT HAS A SOFTWARE SENTINEL. CHECK IF THERE ARE MULTIPLE SENTINALS AT THE SITE, AND IF THEY ARE BEING USED ACROSS THE NETWORK, ENSURE THAT THE PC HAS THE RECOMMENDED RAM, DETERMINE IF GRAPHICS ARE SLOW TO COME UP BECAUSE OF ISSUES WITH THE BACKGROUND GRAPHIC - CHANGE AS NECESSARY, RUN THE EVENT VIEWER UTILITY TO VIEW ANY ERRORS THAT MAY BE LOGGED WITH WINDOWS NT, CORRECT APPLICATIONS OR SERVICES THAT MAY BE CAUSING THE LOG ENTRIES, RUN WINDOWS NT TASK MANAGER TO

	TRACK SYSTEM PERFORMANCE ISSUES, ELIMINATE ANY 3-D SCREEN SAVERS SINCE THEY USE MOST OF THE PROCESSOR TIME, REBOOT THE PC, PERFORM AN ATOMBACK, PERFORM AN ATOMREST, TRANSFER DATABASE TO EXTERNAL MEDIA.
APOGEE INSGT PC OUR MLN, NT SVR / DB SVR	<p>SOFTWARE A&O, PC NAME/LOCATION, PERFORM AN ATOMBACK, DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEPPER SOFTWARE, RUN DEFRAG UTILITIES AND OPTIMIZE HARD DRIVE AS REQUIRED, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED BY VIEWING THE PC DURING THE BOOTUP PROCESS, REVIEW WITH CUSTOMER A LIST OF USER ACCOUNTS AND ACCESS LEVELS AND UPDATE AS REQUIRED, REVIEW DATABASE EDITING LOG FOR ANY RECENT CHANGES AND REVIEW WITH CUSTOMER</p> <p>VERIFY THAT PC IS ENABLED AS A MASS STORAGE DEVICE, REVIEW WITH CUSTOMER ANY PENDING DATABASE CHANGES AND DOWNLINE LOAD AS APPROPRIATE, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND OPERATING. (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER, WORKSTATION) NOTE: IF OTHER SERVICES ARE FOUND, VERIFY THEY ARE NOT NEEDED BEFORE DELETING, VERIFY THE FOLLOWING SERVICES ARE PROPERLY INSTALLED ON EACH CLIENT PC, DISPLAY THE SERVICES ON EACH PC FROM THE</p> <p>WINDOWS TASKBAR BY CLICKING ON START/SETTINGS/CONTROL PANEL/SERVICES, VERIFY INSIGHT ASYNCSVC SERVICE: MUST BE "STARTED AUTOMATIC" FOR ALL PC'S USING A BLN OR A DIGI BOARD (ONLY ON PRE 3.2 REVS). MUST BE DISABLED FOR ALL OTHERS, VERIFY INSIGHT CROSS TRUNK SERVICE: (ONLY IF MORE THAN 1 BLN), VERIFY INSIGHT EVENTLOGSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT EVENTLOGSVC SERVICE IS DISABLED ON EVERY APOGEE PC THAT DOES NOT HAVE AN INSIGHT PRINTER, VERIFY INSIGHT GLOBAL TABLE SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT LOADERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT SCHEDULERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY AMS SERVICE IS INSTALLED AND OPERATING.</p> <p>VERIFY OBJECTIVITY LOCK SERVER IS INSTALLED AND OPERATING, VERIFY NETSENTINEL SERVICE IS ENABLED FOR ANY PC THAT HAS A SOFTWARE SENTINEL. CHECK IF THERE ARE MULTIPLE SENTINALS AT THE SITE, AND IF THEY ARE BEING USED ACROSS THE NETWORK, ENSURE THAT THE PC HAS THE RECOMMENDED RAM, DETERMINE</p>

	<p>IF GRAPHICS ARE SLOW TO COME UP BECAUSE OF ISSUES WITH THE BACKGROUND GRAPHIC. CHANGE AS NECESSARY, RUN THE EVENT VIEWER UTILITY TO VIEW ANY ERRORS THAT MAY BE LOGGED WITH WINDOWS NT, CORRECT APPLICATIONS OR SERVICES THAT MAY BE CAUSING THE LOG ENTRIES, RUN WINDOWS NT TASK MANAGER TO TRACK SYSTEM PERFORMANCE ISSUES, ELIMINATE ANY 3-D SCREEN SAVERS SINCE THEY USE MOST OF THE PROCESSOR TIME, REBOOT THE PC, PERFORM AN ATOMBACK, PERFORM AN ATOMREST, TRANSFER DATABASE TO EXTERNAL MEDIA.</p>
APOGEE INSIGHT CORP NT PC CLIENT NT WRKSTA	<p>SOFTWARE A&O, PC NAME/LOCATION DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEPPER SOFTWARE, RUN DEFRAG UTILITIES AND OPTIMIZE HARD DRIVE AS REQUIRED, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED BY VIEWING THE PC DURING THE BOOTUP PROCESS, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND OPERATING. (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER, WORKSTATION.) NOTE: IF OTHER SERVICES ARE FOUND, VERIFY THEY ARE NOT NEEDED BEFOR DELETING, VERIFY THE FOLLOWING SERVICES ARE PROPERLY INSTALLED ON EACH CLIENT PC, DISPLAY THE SERVICES ON EACH PC FROM THE WINDOWS TASKBAR BY CLICKING ON START/SETTINGS/CONTROL PANEL/SERVICES, VERIFY INSIGHT ASYNCSVC SERVICE: MUST BE "STARTED AUTOMATIC" FOR ALL PC'S USING A BLN OR DIGI BOARD (ONLY ON PRE 3.2REVS). MUST BE DISABLED FOR ALL OTHERS, VERIFY INSIGHT CROSS TRUNK SERVICE: (ONLY IF MORE THAN 1 BLN), VERIFY INSIGHT EVENTLOGSVC SERVICE IS DISABLED FOR EACH CLIENT, VERIFY INSIGHT EVENTPRTSVC SERVICE IS DISABLED ON EVERY APOGEE PC THAT DOES NOT HAVE AN INSIGHT PRINTER, VERIFY INSIGHT GLOBAL TABLE SERVICE IS DISABLED FOR ALL CLIENTS, VERIFY INSIGHT LOADERSVC SERVICE IS DISABLED FOR ALL CLIENTS, VERIFY INSIGHT SCHEDULERSVC SERVICE IS DISABLED FOR ALL CLIENTS, VERIFY OBJECTIVITY AMS SERVICE IS STARTED AUTOMATICALLY, VERIFY OBJECTIVITY LOCK SERVER IS NOT PRESENT. IF IT IS , REMOVE IT, VERIFY NETSENTINEL SEVICE IS ENABLED FOR ANY PC THAT HAS A SOFTWARE SENTINEL. CHECK IF THERE ARE MULTIPLE SENTINALS AT THE SITE, AND IF THEY ARE BEING USED ACROSS THE NETWORK, ENSURE THAT THE PC HAS THE RECOMMENDED RAM, DETERMINE IF GRAPHICS ARE SLOW TO COME UP BECAUSE OF ISSUES WITH THE</p>

	<p>BACKGROUND GRAPHIC. CHANGE AS NECESSARY, RUN THE EVENT VIEWER UTILITY TO VIEW ANY ERRORS THAT MAY BE LOGGED WITH WINDOWS NT, CORRECT APPLICATIONS OR SERVICES THAT MAY BE CAUSING THE LOG ENTRIES, RUN WINDOWS NT TASK MANAGER TO TRACK SYSTEM PERFORMANCE ISSUES, ELIMINATE ANY 3-D SCREEN SAVERS SINCE THEY USE MOST OF THE PROCESSOR TIME, REBOOT THE PC.</p>
<p>APGE CORP NT PC STNDALN, NT WRKSTA DB SVR</p>	<p>SOFTWARE A&O, PC NAME/LOCATION PERFORM AN ATOMBACK, DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEPPER SOFTWARE, RUN DEFRAG UTILITIES AND OPTIMIZE HARD DRIVE AS REQUIRED, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED, BY VIEWING THE PC DURING THE BOOTUP PROCESS, REVIEW WITH CUSTOMER A LIST OF USER ACCOUNTS AND ACCESS LEVELS AND UPDATE AS REQUIRED, REVIEW DATABASE EDITING LOG FOR ANY RECENT CHANGES AND REVIEW WITH CUSTOMER, VERIFY THAT PC IS ENABLED AS A MASS STORAGE DEVICE, REVIEW WITH CUSTOMER ANY PENDING DATABASE CHANGES AND DOWNLINE LOAD AS APPROPRIATE, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND OPERATING. (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER, WORKSTATION.) NOTE: IF OTHER SERVICES ARE FOUND, VERIFY THEY ARE NOT NEEDED BEFORE DELETING, VERIFY THE FOLLOWING SERVICES ARE PROPERLY INSTALLED ON EACH CLIENT PC, DISPLAY THE SERVICES ON EACH PC FROM THE WINDOWS TASKBAR BY CLICKING ON START/SETTINGS/CONTROL/PANEL/SERVICES, VERIFY INSIGHT ASYNCSVC SERVICE: MUST BE "STARTED AUTOMATIC" FOR ALL PC'S USING A BLN OR A DIGI BOARD (ONLY ON PRE 3.2 REVS). MUST BE DISABLED FOR ALL OTHERS, VERIFY INSIGHT CROSS TRUNK SERVICE: (ONLY IF MORE THAN 1 BLN), VERIFY INSIGHT EVENTLOGSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT EVENTLOGSVC SERVICE IS DISABLED ON EVERY APOGEE PC THAT DOES NOT HAVE AN INSIGHT PRINTER, VERIFY INSIGHT GLOBAL TABLE SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT LOADERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT SCHEDULERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY AMS SERVICE IS INSTALLED AND</p>

	<p>OPERATING, VERIFY OBJECTIVITY LOCK SERVER IS INSTALLED AND OPERATING, VERIFY NETSENTINEL SERVICE IS ENABLED FOR ANY PC THAT HAS A SOFTWARE SENTINEL. CHECK IF THERE ARE MULTIPLE SENTINALS AT THE SITE, AND IF THEY ARE BEING USED ACROSS THE NETWORK, ENSURE THAT THE PC HAS THE RECOMMENDED RAM, DETERMINE IF GRAPHICS ARE SLOW TO COME UP BECAUSE OF ISSUES WITH THE BACKGROUND GRAPHIC. CHANGE AS NECESSARY, RUN THE EVENT VIEWER UTILITY TO VIEW ANY ERRORS THAT MAY BE LOGGED WITH WINDOWS NT, CORRECT APPLICATIONS OR SERVICES THAT MAY BE CAUSING THE LOG ENTRIES, RUN WINDOWS NT TASK MANAGER TO TRACK SYSTEM PREFORMANCE ISSUES, ELIMINATE ANY 3-D SCREEN SAVERS SINCE THEY USE MOST OF THE PROCESSOR TIME, REBOOT THE PC, PERFORM AN ATOMBACK, PERFORM AN ATOMREST, TRANSFER DATABASE TO EXTERNAL MEDIA.</p>
APOGEE CORP NT PC OUR MLN, NT SVR / DB SVR	<p>SOFTWARE A&O, PC NAME/LOCATION PERFORM AN ATOMBACK, DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEPPER SOFTWARE, RUN DEFRAG UTILITIES AND OPTIMIZE HARD DRIVE AS REQUIRED, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED</p> <p>BY VIEWING THE PC DURING THE BOOTUP PROCESS, REVIEW WITH CUSTOMER A LIST OF USER ACCOUNTS AND ACCESS LEVELS AND UPDATE AS REQUIRED, REVIEW DATABASE EDITING LOG FOR ANY RECENT CHANGES AND REVIEW WITH CUSTOMER, VERIFY THAT PC IS ENABLED AS A MASS STORAGE DEVICE, REVIEW WITH CUSTOMER ANY PENDING DATABASE CHANGES AND DOWNLINE LOAD AS APPROPRIATE, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND OPERATING. (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER, WORKSTATION.) NOTE: IF OTHER SERVICES ARE FOUND, VERIFY THEY ARE NOT NEEDED BEFOR DELETING, VERIFY THE FOLLOWING SERVICES ARE PROPERLY INSTALLED ON EACH CLIENT PC, DISPLAY THE SERVICES ON EACH PC FROM THE WINDOWS TASKBAR BY CLICKING ON START/SETTINGS/CONTROL/PANEL/SERVICES, VERIFY INSIGHT ASYNCSVC SERVICE: MUST BE "STARTED AUTOMATIC" FOR ALL PC'S USING A BLN OR A DIGI BOARD (ONLY ON PRE 3.2 REVS). MUST BE DISABLED FOR ALL OTHERS, VERIFY INSIGHT CROSS TRUNK SERVICE: (ONLY IF MORE THAN 1 BLN), VERIFY INSIGHT EVENTLOGSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT EVENTLOGSVC SERVICE IS DISABLED ON EVERY APOGEE PC THAT DOES NOT HAVE AN INSIGHT PRINTER, VERIFY</p>

	<p>INSIGHT GLOBAL TABLE SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT LOADERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT SCHEDULERSVC SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY AMS SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY LOCK SERVER IS INSTALLED AND OPERATING, VERIFY NETSENTINEL SERVICE IS ENABLED FOR ANY PC THAT HAS A SOFTWARE SENTINEL. CHECK IF THERE ARE MULTIPLE SENTINALS AT THE SITE, AND IF THEY ARE BEING USED ACROSS THE NETWORK, ENSURE THAT THE PC HAS THE RECOMMENDED RAM, DETERMINE IF GRAPHICS ARE SLOW TO COME UP BECAUSE OF ISSUES WITH THE BACKGROUND GRAPHIC. CHANGE AS NECESSARY, RUN THE EVENT VIEWER UTILITY TO VIEW ANY ERRORS THAT MAY THAT MAY BE CAUSING THE LOG ENTRIES, RUN WINDOWS NT TASK MANAGER TO TRACK SYSTEM PREFORMANCE ISSUES, ELIMINATE ANY 3-D SCREEN SAVERS SINCE THEY USE MOST OF THE PROCESSOR TIME, REBOOT THE PC, PERFORM AN ATOMBACK, PERFORM AN ATOMREST, TRANSFER DATABASE TO EXTERNAL MEDIA.</p>
<p>APOGE CORP NT PC/IS SRV OUR MLN, NT/DB SVR</p>	<p>SOFTWARE A&O, NOTE: THIS SERVICE IS PERFORMED ON SYSTEMS DESIGNED WITH A SEPARATE CORPORATE IS SERVER FOR USER ACCOUNTS, PRIOR TO PERFORMING ANY WORK ON THE PC, VERIFY ACCESS TO ALL NECESSARY PASSWORDS AND OTHER REVELANT INFORMATION HAS BEEN PROVIDED, INSURE ANY INDIVIDUALS REQUIRING ADVANCED KNOWLEDGE OF WORK BEING PERFORMED ON THE PC HAVE BEEN NOTIFIED, VERIFY THERE ARE NO EXISTING ISSUES WITH ANY APPLICATIONS, OTHER THAN INSIGHT THAT MIGHT BE ASSOCIATED WITH WORK BEING PERFORMED ON THE PC, PERFORM AN ATOMBACK, DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEPPER SOFTWARE, RUN DEFRAG UTILITIES AND OPTIMIZE HARD DRIVE AS REQUIRED, ENSURE THAT THE LATEST APOGEE REVISION ALONG WITH ALL THE HOT FIXES ARE INSTALLED, VERIFY THE LATEST WINDOWS NT SERVICE PACK IS INSTALLED BY VIEWING THE PC DURING THE BOOTUP PROCESS, REVIEW WITH CUSTOMER A LIST OF USER ACCOUNTS AND ACCESS LEVELS AND UPDATE AS REQUIRED, REVIEW DATABASE EDITING LOG FOR ANY RECENT CHANGES AND REVIEW WITH CUSTOMER VERIFY THAT PC IS ENABLED AS A MASS STORAGE DEVICE, REVIEW WITH CUSTOMER ANY PENDING DATABASE CHANGES AND DOWNLINE LOAD AS APPROPRIATE, VERIFY ONLY NECESSARY NT NETWORK SERVICES ARE INSTALLED AND OPERATING. (COMPUTER BROWSER, NETBOIS INTERFACE, RPC CONFIGURATION, SERVER,</p>

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SCU	<p>AUTOMATION A&O, VISUALLY INSPECT SCU CABINET AND OBSERVE OPERATING ENVIRONMENT, CHECK DIAGNOSTIC LED'S, FUSES, AND SURGE TRANSIENT PROTECTION DEVICES, CHECK BOARD SEATING AND CHECK CABLING FOR PINCHING, TEARS AND BREAKS, CHECK CONNECTIONS ON OPTION BOARDS FOR CORROSION. CLEAN AND LUBRICATE USING ANTI-CORROSION KIT #538-775 IF NEEDED, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, RE-TERMINATE IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED. VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP. RE-TERMINATE OR</p>

	<p>DISCONNECT IF REQUIRED, LOG SCU INFORMATION BELOW:</p> <p>CONTROLLER BOARD VERSION, FIRMWARE REVISION:</p> <p>CONTROLLER BOARD PART/S</p> <p>POWER SUPPLY PART/SERIAL #: AO-P OPTION BOARD</p> <p>PART/SERIAL #: I-P OPTION BOARD PART/SERIAL #: AO-___</p> <p>OPTION BOARD PART/SERIAL #: AO-___ OPTION BOARD</p> <p>PART/SERIAL #: ___ CHECK INCOMING A/C VOLTAGE AND</p> <p>RECORD BELOW: VOLTAGE READING: ___ CHECK POWER</p> <p>SUPPLY VOLTAGES (125-1855, FP-006), RECORD BELOW.</p> <table> <thead> <tr> <th>PINS</th><th>TOLERANCES</th></tr> </thead> <tbody> <tr> <td>3-14</td><td>V1.0-3.0 CNTRL BD - REV 6 & < +5.20/+5.25 VDC</td></tr> <tr> <td>3-14</td><td>V3.0 CNTRL BD - REV 7 & > +5.05/+5.10 VDC</td></tr> <tr> <td>3-14</td><td>V4.0 CNTRL BD +5.00/+5.05 VDC</td></tr> <tr> <td>15-16</td><td>+4.75/+5.25 VDC</td></tr> <tr> <td>7-10</td><td>+14.25/+15.75 VDC</td></tr> <tr> <td>2-10</td><td>+14.25/+15.75 VDC</td></tr> <tr> <td>5-10</td><td>+24.7/33.0 VDC</td></tr> <tr> <td>13-10</td><td>-21.0/-29.0 VDC</td></tr> <tr> <td>1-9</td><td>+5.0/+6.0 VDC</td></tr> <tr> <td>4-6</td><td>20.0/25.0 VAC</td></tr> </tbody> </table> <p>CHECK BATTERY CHARGING CIRCUIT AND BATTERY (PRE VERSION 4 CONTROLLER BOARDS ONLY), CHECK BATTERY EXPIRATION DATE ON PRE-VERSION 4 CONTROLLER</p> <p>RECORD EXPIRATION DATE, REPLACE BATTERY (P/N 533-725) AND RELOAD ATABASE,</p> <p>(EVERY 4 YEARS ON PRE VERSION 4 CONTROLLER BOARDS ONLY), CHECK THE TIME, RESET IF NECESSARY, VERIFY THAT DIGITAL OUTPUT SWITCHES ARE NOT OVERRIDDEN AT THE TERMINATION BOARD, VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION. NOTE REVISION DATE, CONNECT TO MMI PORT, DELETE POINTS IN MONITOR IF THEY ARE NOT BEING USED, ENSURE THAT THE HARDWARE LOG IS IN THE CABINET AND CURRENT, CHECK FOR AIR LEAKS, CLEAN AND VACUUM CABINET, INSPECT AREA AROUND TERMINATION POINTS AND CABLE CONNECT CONNECTORS, CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS.</p>	PINS	TOLERANCES	3-14	V1.0-3.0 CNTRL BD - REV 6 & < +5.20/+5.25 VDC	3-14	V3.0 CNTRL BD - REV 7 & > +5.05/+5.10 VDC	3-14	V4.0 CNTRL BD +5.00/+5.05 VDC	15-16	+4.75/+5.25 VDC	7-10	+14.25/+15.75 VDC	2-10	+14.25/+15.75 VDC	5-10	+24.7/33.0 VDC	13-10	-21.0/-29.0 VDC	1-9	+5.0/+6.0 VDC	4-6	20.0/25.0 VAC
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4-6	20.0/25.0 VAC																						

SCU SOFTWARE A&O	SOFTWARE A&O, CHECK TIME AND DATE - RESET AS REQUIRED, CHECK OPERATION OF INTERFACE MODULES, NOTE UNRESOLVED POINTS, PRINT A REPORT OF FAILED POINTS - CORRECT AS REQUIRED, PRINT A REPORT OF DISABLED POINTS - CORRECT AS REQUIRED, PRINT A REPORT OF POINTS IN ALARM, PRINT A REPORT OF POINTS IN OPERATOR PRIORITY, RUN POINT LOG AND PPCL REPORT. VERIFY PPCL OPERATION, CORRECT ANY UNRESOLVED POINTS AND PPCL LINES AND ANY ALARM REPORTING PROBLEMS FOUND, RUN NODE TABLE REPORT TO VERIFY PROPER TRUNK COMMUNICATIONS, MODIFY SOFTWARE AND POINT DATABASE AS REQUIRED, INCLUDING ELIMINATING DUPLICATE POINTS, REDUNDANT LOOPS AND CAUSES OF UNNECESSARY TRUNK TRAFFIC, BACK UP ANY CHANGES MADE, DOCUMENT AND REVIEW ALL CHANGES AND REPORTS WITH THE CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW SOFTWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.												
DPU	AUTOMATION A&O, VISUALLY INSPECT DPU AND CHECK ALL DIAGNOSTIC LED'S AND FUSES, CHECK BOARD SEATING. CHECK CABLING FOR PINCHING, TEARS OR BREAKAGE, CHECK CONNECTIONS ON OPTION BOARDS FOR CORROSION. CLEAN AND LUBRICATE USING ANTI-CORROSION KIT #538-775 IF NEEDED, INSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED. RE-TERMINATE IF REQUIRED. ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED. VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP, RETERMINATE OR DISCONNECT IF REQUIRED, CHECK POWER SUPPLY VOLTAGES (125-1855 EC-002), RECORD <table><tr><td>TEST POINTS</td><td>VOLTAGE TOLERANCE</td><td>ACTUAL</td></tr><tr><td>+5VC TO C GND</td><td>+4.7/+5.3 VDC</td><td>()</td></tr><tr><td>+5VL TO L GND</td><td>+4.8/+5.2VDC</td><td>()</td></tr><tr><td>+26VR TO R GND</td><td>+24.3/+29.7VDC</td><td>()</td></tr></table> VERIFY THAT DIGITAL OUTPUT SWITCHES ARE NOT OVERRIDDEN AT THE TERMINATION BOARD, VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION, NOTE REVISION DATE, ENSURE THAT THE HARDWARE LOG IS IN THE CABINET AND IS CURRENT, CLEAN AND VACUUM CABINET, INSPECT AREA AROUND TERMINATION POINTS AND CABLE CONECTORS AND CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS.	TEST POINTS	VOLTAGE TOLERANCE	ACTUAL	+5VC TO C GND	+4.7/+5.3 VDC	()	+5VL TO L GND	+4.8/+5.2VDC	()	+26VR TO R GND	+24.3/+29.7VDC	()
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MPU	<p>AUTOMATION A&O, VISUALLY INSPECT MPU AND CHECK ALL DIAGNOSTIC LED'S AND FUSES, CHECK BOARD SEATING. CHECK CABLING FOR PINCHING, TEARS OR BREAKAGE, CHECK CONNECTIONS ON OPTION BOARDS FOR CORROSION, CLEAN AND LUBRICATE USING ANTI-CORROSION KIT #538-775 IF NEEDED, INSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, RE-TERMINATE IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED, VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP, RE-TERMINATE OR DISCONNECT IF REQUIRED, CHECK INCOMING A/C VOLTAGE AND RECORD BELOW: VOLTAGE READING: _____ CHECK SECONDARY (24VAC) VOLTAGE AND RECORD BELOW: VOLTAGE READING: _____ VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION. NOTE REVISION DATE BELOW: REVISION DATE: ____/____/____ ENSURE THAT THE HARDWARE LOG IS IN THE CABINET AND IS CURRENT, CLEAN AND VACUUM CABINET, INSPECT AREA AROUND TERMINATION POINTS AND CABLE CONNECTORS AND CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS.</p>
TEMP, ROOM THERMISTOR	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, CLEAN AND CALIBRATE AS REQUIRED
TEMP, ROOM RTD, PLATINUM	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS. OFFSET SYSTEM READING AS NECESSARY, CLEAN AS REQUIRED
TEMP, DUCT THERMISTOR, SINGLE POINT	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, CLEAN AND CALIBRATE AS REQUIRED
TEMP, DUCT RTD, SINGLE POINT, PLATINUM	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, OFFSET SYSTEM READING AS NECESSARY.
TEMP, DUCT RTD, AVERAGING, PLATINUM	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS. OFFSET SYSTEM READING AS NECESSARY, CLEAN AS REQUIRED
TEMP, IMMERSED THERMISTOR	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, CLEAN AND CALIBRATE AS REQUIRED
TEMP, IMMERSED RTD, PLATINUM	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS.

	OFFSET SYSTEM READING AS NECESSARY, CLEAN AS REQUIRED
TEMP, OUTSIDE AIR THERMISTOR	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, CLEAN AND CALIBRATE AS REQUIRED
TEMP, OUTSIDE AIR RTD, PLATINUM	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, OFFSET SYSTEM READING AS NECESSARY, CLEAN AS REQUIRED
RH, ROOM	AUTOMATION A&O, INSPECT DEVICE AND CLEAN AS REQUIRED, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, OFFSET SYSTEM READING AS NECESSARY.
DEW POINT TEMP, ROOM/DUCT	AUTOMATION A&O, CLEAN PROBE AND RECOAT WITH LITHIUM CHLORIDE, BLOW DRY WITH HAIR DRYER. REASSEMBLE AND CHECK, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS.
RH, DUCT	AUTOMATION A&O, INSPECT DEVICE AND CLEAN AS REQUIRED, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, OFFSET SYSTEM READING AS NECESSARY.
DEW POINT TEMP, OUTSIDE AIR	AUTOMATION A&O, CLEAN PROBE AND RECOAT WITH LITHIUM CHLORIDE, BLOW DRY WITH HAIR DRYER, REASSEMBLE AND CHECK, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS.
TRANSDUCER, AOP MODULE	AUTOMATION A&O, VISUALLY INSPECT AND CLEAN AS REQUIRED, CHECK FOR AIR LEAKS AND OIL OR WATER CONTAMINATION, CHECK CALIBRATION AND ADJUST AS NECESSARY
TRANSDUCER, 0-300 PSI, 4-20 MA	AUTOMATION A&O, VISUALLY INSPECT AND CLEAN AS REQUIRED, CHECK FOR AIR LEAKS AND OIL OR WATER CONTAMINATION, CHECK CALIBRATION AND ADJUST AS NECESSARY
TRANSDUCER, AIR STATIC PRESSURE	AUTOMATION A&O, VISUALLY INSPECT AND CLEAN AS REQUIRED, CHECK FOR AIR LEAKS AND OIL OR WATER CONTAMINATION, CHECK CALIBRATION AND ADJUST AS NECESSARY
TRANSDUCER, AIR VELOCITY PRESSURE	AUTOMATION A&O, VISUALLY INSPECT AND CLEAN AS REQUIRED, CHECK FOR AIR LEAKS AND OIL OR WATER CONTAMINATION, CHECK CALIBRATION AND ADJUST AS NECESSARY
TRANSDUCER, POTENTIAL (VOLTS)	AUTOMATION A&O, VERIFY ACCURACY OF READING ON S600 AND ADJUST AS NEEDED
TRANSDUCER, CURRENT (AMPS)	AUTOMATION A&O, VERIFY ACCURACY OF READING ON S600 AND ADJUST AS NEEDED
TRANSDUCER, WATTS	AUTOMATION A&O, VERIFY ACCURACY OF READING ON S600 SYSTEM AND ADJUST AS NEEDED

TRANSDUCER, LIQUID LEVEL TRANSMITTER	AUTOMATION A&O, VERIFY ACCURACY OF READING ON S600 SYSTEM AND ADJUST AS NEEDED
DIGITAL ENERGY MONITOR (DEM) (PA-419)	AUTOMATION A&O, VERIFY READINGS PROVIDED BY DEM
FLOW METER	AUTOMATION A&O, INSPECT DEVICE AND CLEAN AS REQUIRED, VISUALLY INSPECT FOR LEAKAGE OR DAMAGE, VERIFY READING AT SENSOR AND COMPARE TO POINT READOUT FROM S600 SYSTEM.
PRINTER - GENERAL	AUTOMATION A&O, CHECK FOR PROPER OPERATION AND ADJUST AS REQUIRED, CHECK FOR EXCESSIVE DUST AND CLEAN AS REQUIRED, REPLACE PRINTING CARTRIDGE OR RIBBON AS REQUIRED.
FIELD ANNUNCIATOR PANEL	AUTOMATION A&O, PERFORM LAMP TEST AND CHECK RANDOM LED'S FOR STATUS, CLEAN PANEL.
OPEN PROCESSOR TRUNK INTERFACE/IPMDA	AUTOMATION A&O, CHECK DIAGNOSTIC LED'S, CHECK FOR PHYSICALLY DAMAGED COMPONENTS, CHECK AND RECORD 5V SUPPLY (VDC), CHECK FOR TIGHT TERMINATIONS AND CHECK TRUNK BIAS VOLTAGE, CLEAN ENCLOSURE.
SURGE TRANSIENT PROTECTOR	AUTOMATION A&O, CHECK EACH WIRE FOR TIGHTNESS AND ENSURE THAT GROUNDING, TERMINATION IS SECURE, CHECK GAS DISCHARGE TUBE FOR DISCOLORATION (IF APPLICABLE), CHECK TRANSZORBS
MODEM, (DIAL UP, AUTO DIAL, LEASED LINE)	AUTOMATION A&O, CHECK MODEM OPERATION BY DIALING MODEM NUMBER, CHECK PHONE LINE CONNECTION AND CONDITION, CHECK MODEM TO WORKSTATION/PANEL CONNECTION AND CONDITION.
APOGEE ETHERNET MICROSERVER / AEM100	AUTOMATION A&O, VISUALLY INSPECT AEM AND OBSERVE OPERATING ENVIRONMENT
DAMPER ACTUATOR (BELIMO)	AUTOMATION A&O, VISUALLY INSPECT ELECTRICAL CONNECTIONS AND OPERATING ENVIRONMENT, CHECK SHAFT AND LINKAGE FOR BENDING, BINDING OR SLIPPING
SOLENOID VALVE	AUTOMATION A&O, OBSERVE OPERATING ENVIRONMENT AND ELECTRICAL CONNECTIONS, CLEAN AS NECESSARY, OBSERVE OPERATION AND CHECK FOR LEAKING AIR/WATER
TCU	AUTOMATION A&O, OBSERVE OPERATING ENVIRONMENT AND VERIFY PROPER OPERATION OF DIAGNOSTIC LED'S, VERIFY CONTROL UNIT OPERATION THROUGH SYSTEM WIDE DIAGNOSTICS AT OPERATOR'S CONSOLE, ENSURE THAT POWER TERMINATIONS ARE SECURE AND NOT FRAYED, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED, VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP. RE-TERMINATE OR DISCONNECT IF REQUIRED.

CRT - GENERAL	AUTOMATION A&O, CLEAN SCREEN AND KEYBOARD IF NECESSARY, INSPECT WORK AREA AND CHECK CABLES AND POWER CONNECTIONS, ADJUST CONTROLS FOR PROPER SCREEN APPEARANCE
TEMP, SURFACE MOUNTED (LIQUID)	AUTOMATION A&O, CONFIRM SENSOR OPERATION AND RELATIVE ACCURACY THROUGH SYSTEM REPORTS, CLEAN AND CALIBRATE AS REQUIRED
LOOP TUNE (UC/TEC/SCU/RCU/MBC/MEC)	CONTROL LOOP A&O, RUN PRE-LOOP TUNING REPORTS AS APPROPRIATE TO IDENTIFY LOOPS THAT ARE EXPERIENCING HUNTING, EXCESSIVE COV'S AND CONTROL POINT VARIANCES, REVIEW CLENT SITE LOG BOOK AND CHECK WITH CUSTOMER FOR HISTORY OF CONTROL PROBLEMS AND COMPLAINTS, OBTAIN PERMISSION FROM THE CUSTOMER TO PERFORM A BUMP TEST OF THE CONTROL LOOP, RUN THE LOOP TUNING APPLICATION AS DESCRIBED IN THE APOGEE FIELD PANEL USERS MANUAL, REVIEW REPORTS AND LOOP TUNING RESULTS WITH THE CUSTOMER, DOCUMENT AND COMMUNICATE EXPECTED VALUE TO THE CUSTOMER THROUGH OPTIMIZATION OF THE CONTROLS; SUCH AS, LOWER ENERGY COSTS, IMPROVED COMFORT, FEWER DISRUPTIVE AND COSTLY BREAKDOWNS, A REDUCTION IN HOT AND COLD CALLS, AND / OR EXTENDED LIFE CYCLE OF THE EQUIPMENT.
HIGH SPEED TRUNK ISOLATOR / EXTENDER	AUTOMATION A&O, OBSERVE OPERATING ENVIRONMENT AND CLEAN AS REQUIRED CHECK TRUNK AND POWER PACK CONNECTIONS
THERMOSTAT, CONTROLLER, RM/HI-LOW LIMIT	AUTOMATION A&O, VISUALLY INSPECT. CHECK FOR DIRT, LINT AND PHYSICAL DAMAGE, CHECK SET POINT AND ADJUST IF NECESSARY.
LIQUID PADDLE SWITCH, ELECTRIC	AUTOMATION A&O, VISUALLY INSPECT, CHECK FOR DIRT, LINT AND PHYSICAL DAMAGE, CHECK FOR LEAKS AND ENSURE THAT UNIT IS FUNCTIONING PROPERLY.
AIR FLOW SWITCH	AUTOMATION A&O, VISUALLY INSPECT, CHECK FOR DIRT, LINT AND PHYSICAL DAMAGE, CHECK INPUT SIGNAL AND PROPER OPERATION
VALVE, ELECTRIC FLOWRITE, 2 IN. & LESS	AUTOMATION A&O, VISUALLY INSPECT. CHECK FOR LEAKAGE AROUND STEM, CHECK LINKAGE & STROKE BY OPERATING VALVE THROUGH ENTIRE RANGE, LUBRICATE STEM AND LINKAGE.
VALVE ELECTRONIC FLOWRITE, 2.5 TO 3 IN.	AUTOMATION A&O, VISUALLY INSPECT. CHECK FOR LEAKAGE AROUND STEM, CHECK LINKAGE & STROKE BY OPERATING VALVE THROUGH ENTIRE RANGE. LUBRICATE STEM AND LINKAGE.
VALVE, ELECTRONIC FLOWRITE, 4 INCH	AUTOMATION A&O, VISUALLY INSPECT. CHECK FOR LEAKAGE AROUND STEM, CHECK LINKAGE & STROKE BY OPERATING VALVE THROUGH ENTIRE RANGE.

	LUBRICATE STEM AND LINKAGE.
VALVE, ELECTRONIC FLOWRITE, 5 TO 6 IN.	AUTOMATION A&O, VISUALLY INSPECT. CHECK FOR LEAKAGE AROUND STEM. CHECK LINKAGE & STROKE BY OPERATING VALVE THROUGH ENTIRE RANGE, LUBRICATE STEM AND LINKAGE.
VALVE, ELECTRIC FLOWRITE, 8 INCH	AUTOMATION A&O, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM, CHECK LINKAGE & STROKE BY OPERATING VALVE THROUGH ENTIRE RANGE, LUBRICATE STEM AND LINKAGE.
WEATHERSHIELD FOR FLOWRITE 599 VALVE	AUTOMATION A&O, REMOVE/RE-INSTALL WEATHERSHIELD FOR MAINTENANCE ACCESS, CHECK WEATHERSHIELD FOR DAMAGE, CRACKS, OR LEAKING.
LIQUID DIFFERENTIAL PRESSURE SWITCH	AUTOMATION A&O, VISUALLY INSPECT FOR PHYSICAL DAMAGE OR LEAKS VERIFY PROPER SETTING
ELECTRIC RELAY/SWITCH/XFORMER (PA-420)	AUTOMATION A&O, VISUALLY INSPECT FOR PHYSICAL DAMAGE AND DUST, CLEAN AS REQUIRED.
DAMPER ACTUATOR (OPEN AIR - ELECTRONIC)	AUTOMATION A&O, VISUALLY INSPECT AND OBSERVE OPERATING ENVIRONMENT, ENSURE PROPER OPERATION THROUGH ENTIRE RANGE, CHECK SHAFT AND LINKAGE FOR SIGNS OF BENDING OR BINDING.
LAN CONTROLLER	AUTOMATION A&O, OBSERVE GENERAL CONDITIONS AND OPERATING ENVIRONMENT, CHECK DIAGNOSTIC LED AND COMMUNICATION CONNECTIONS, CHECK INCOMING POWER AND TRANSFORMER VOLTAGE TO CONTROLLER BOARD, PERFORM INTEGRITY TEST AND SYSTEM WIDE FUNCTION TEST THRU RANDOM CHECKING, STANDARD REPORTS AND DIAGNOSTICS.
LAN CONTROLLER W/ T.I.U.	AUTOMATION A&O, OBSERVE GENERAL CONDITIONS AND OPERATING ENVIRONMENT, CHECK DIAGNOSTIC LED AND COMMUNICATION CONNECTIONS, CHECK INCOMING POWER AND TRANSFORMER VOLTAGE TO CONTROLLER BOARD, PERFORM INTEGRITY TEST AND SYSTEM WIDE FUNCTION TEST THRU RANDOM CHECKING, STANDARD REPORTS AND DIAGNOSTICS, CHECK OPERATION OF TIU AND MODEM.
POWERMITE VALVE WITH ELECTRONIC OPERATOR	AUTOMATION A&O, CHECK FOR LEAKAGE AROUND THE STEM, CHECK LINKAGE & STROKE BY OPERATING VALVE THROUGH ENTIRE RANGE, LUBE OPERATOR AS REQUIRED
UNIT VENT CONTROL SYSTEM (TEC)	AUTOMATION A&O, VISUALLY INSPECT UNIT VENT CONTROLLER AND OBSERVE OPERATING ENVIRONMENT, VERIFY TEMPERATURE READINGS OF ROOM SENSOR AND UNIT VENT AIR SENSOR, CHECK INCOMING POWER SUPPLY VOLTAGES FOR PROPER RANGES, CHECK TERMINATIONS AND WIRING CONDITION, PERFORM INTEGRITY TEST AND NOTE ROOM CONTROL CONDITIONS, CHECK PNEUMATIC OUTPUT MODULE FOR LEAKS, VISUALLY INSPECT

	CONTROL DEVICES (VALVE, DAMPER ACTUATORS AND EP VALVES) FOR SIGNS OF LEAKAGE, EXCESSIVE DIRT OR OIL, CLEAN AS REQUIRED.
TEC W/ELECTRNC OUTPUTS USING CAP	AUTOMATION A&O, GATHER DATA FROM SELECT TEC APPLICATIONS AND ANALYZE USING THE CONTROLLER ANALYSIS PROGRAM (CAP). RECOMMEND GATHERING DATA DURING THREE DIFFERENT TIMES OF DAY, REVIEW DATA WITH CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW TEC HARDWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.
TEC W/PNEUMATIC OUTPUTS USING CAP	AUTOMATION A&O, GATHER DATA FROM SELECT TEC APPLICATIONS AND ANALYZE USING THE CONTROLLER ANALYSIS PROGRAM (CAP). RECOMMEND GATHERING DATA DURING THREE DIFFERENT TIMES OF DAY, REVIEW DATA WITH CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW TEC HARDWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.
UNITARY CONTROLLER, 12 POINTS	AUTOMATION A&O, VISUALLY INSPECT UNITARY CONTROLLER. OBSERVE OPERATING ENVIRONMENT AND CHECK DIAGNOSTIC LED'S, FUSES AND KEYPAD DISPLAY, VERIFY THAT HAND-OFF-AUTO SWITCHES ARE NOT OVERRIDDEN AT POINT TERMINATION BOARD, VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION, NOTE REVISION DATE BELOW: REVISION DATE: ____/____/____, CHECK INCOMING A/C VOLTAGE ON UNIVERSAL INPUT TERMINAL BLOCK (125-1855, EC-018). MAKE SURE VOLTAGE IS WITHIN SPECIFICATIONS, RECORD VOLTAGE BELOW: VOLTAGE TEST 24 VDC, ACTUAL READING: __, CHECK BATTERY AND RECORD LAST REPLACEMENT DATE BELOW: BATTERY REPLACEMENT DATE: ____/____/____ INSPECT AREA AROUND TERMINATION POINTS AND CABLE CONNECTORS. CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, CHECK TERMINATION POINTS AND VERIFY THEY ARE SECURE AND SCREW TERMINALS ARE NOT STRIPPED, RETERMINATE ANY POINTS IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED. VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP, RE-TERMINATE OR DISCONNECT IF REQUIRED, NOTE FIRMWARE REVISION, ENSURE THAT THE HARDWARE LOG IS IN THE CABINET AND CURRENT.

UNITARY CONTROLLER, 24 POINTS	AUTOMATION A&O, VISUALLY INSPECT UNITARY CONTROLLER. OBSERVE OPERATING ENVIRONMENT AND CHECK DIAGNOSTIC LED'S, FUSES AND KEYPAD DISPLAY, VERIFY THAT HAND-OFF-AUTO SWITCHES ARE NOT OVERRIDDEN AT POINT TERMINATION BOARD, VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION, NOTE REVISION DATE BELOW: REVISION DATE: ____/____/____, CHECK INCOMING A/C VOLTAGE ON UNIVERSAL INPUT TERMINAL, BLOCK (125-1855, EC-018). MAKE SURE VOLTAGE IS WITHIN SPECIFIED TOLERANCE, RECORD VOLTAGE BELOW: VOLTAGE TEST 24 VDC, ACTUAL READING: __, CHECK BATTERY AND RECORD LAST REPLACEMENT DATE BELOW: BATTERY REPLACEMENT DATE: ____/____/____, INSPECT AREA AROUND TERMINATION POINTS AND CABLE, CONNECTORS, CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, CHECK TERMINATION POINTS AND VERIFY THEY ARE SECURE AND SCREW TERMINALS ARE NOT STRIPPED, RE-TERMINATE ANY POINTS IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED, VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP. RE-TERMINATE OR DISCONNECT IF REQUIRED, NOTE FIRMWARE REVISION, ENSURE THAT THE HARDWARE LOG IS IN THE CABINET AND CURRENT.
TRANSDUCER, E-P	AUTOMATION A&O, CHECK FOR AIR LEAKS OR CONTAMINATION FROM OIL OR WATER, CHECK FOR PROPER OPERATION.
ROOM SENSOR - WIRELESS W/TRANSCIVER	AUTOMATION A&O, CHECK FOR FAILED POINTS INDICATING A SENSOR OR TRANCEIVER MALFUNCTION, CONFIRM SENSOR OPERATION, ACCURACY AND BATTERY CONDITION BY PLUGGING LAPTOP INTO SENSOR AND READING STATUS, CHECK REPLACEMENT DATE ON BATTERY AND REPLACE IF BETWEEN 4 AND FIVE YEARS OLD, DATE NEW BATTERY, CLEAN DUST AND DIRT FROM SENSOR AS REQUIRED
REMOTE NOTIFICATION SOFTWARE	SOFTWARE A&O, VERIFY WITH CUSTOMER THE CONTACT DEFINITION REPORT, UPDATE AS REQUIRED, VERIFY ACCURACY OF SETUP BY REVIEWING THE ESCALATION, GROUP LISTING AND POINT REPORTS, VERIFY TRANSMISSION OF "HEART BEAT" TRANSMISSIONS, INITIATE AS NECESSARY A MANUAL MESSAGE TO VERIFY THAT THE SYSTEM AND DEVICES ARE OPERATING PROPERLY.
CO2 SENSOR	AUTOMATION A&O, INSPECT SENSOR AND CLEAN AS REQUIRED, VERIFY OUTPUT READING AT SENSOR AND COMPARE WITH READING AT SYSTEM.

POWERMITE ELECTRONIC VALVE OPERATOR	AUTOMATION A&O, OBSERVE OPERATION OF ACTUATOR THROUGH ENTIRE RANGE. CHECK FOR LOOSE OR BROKEN COMPONENTS, LUBRICATE AS REQUIRED
POWERMITE VALVE 1/2" - 2"	AUTOMATION A&O, CHECK FOR LEAKAGE AROUND THE STEM, OPERATE VALVE THROUGH ENTIRE RANGE TO ENSURE COMPLETE CLOSE OFF AND FULL OPENING.
MBC 24	AUTOMATION A&O, VISUALLY INSPECT MBC CABINET AND OBSERVE OPERATING ENVIRONMENT, INSPECT FAULT DIAGNOSTIC LED'S. NOTE ANY AC OR DC FAULTS, RESET CIRCUIT BREAKERS IF NEEDED, INSPECT CONTROLLER MODULE AND POWER MODULE FOR PROPER SEATING, INSPECT POINT TERMINATION BLOCKS ARE SECURE AND NOT PHYSICALLY DAMAGED, INSPECT AREA AROUND POWER RAILS, CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS, VERIFY THAT HAND-AUTO SWITCHES ARE NOT OVERRIDDEN AT POINT TERMINATION MODULES, REVIEW WITH CUSTOMER BEFORE CHANGING, VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION, NOTE REVISION DATE, VERIFY THAT POINT MODULE LABELS MATCH ACTUAL POINT CONFIGURATION, CHECK DATE OF LAST BATTERY REPLACEMENT AND RECORD, REPLACE IF DUE (EVERY 4 YEARS) OR IF LOW BATTERY LED IS ON, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, CHECK TERMINATION POINTS, VERIFY TERMINATION BLOCKS ARE SECURE AND SCREW TERMINALS ARE NOT STRIPPED, RE-TERMINATE ANY POINTS IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED, VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP, RE-TERMINATE OR DISCONNECT IF REQUIRED, CONNECT TO MMI PORT. DELETE POINTS IN MONITOR IF THEY ARE NOT BEING USED, NOTE FIRMWARE REVISION AND RECORD, ENSURE THAT THE HARDWARE LOG IS IN CABINET AND CURRENT, CHECK AO-P MODULES FOR AIR LEAKS, INSPECT AND RE-SEAT "O" RING IF NECESSARY, CHECK FOR OIL AND WATER BETWEEN MODULE AND TERMINATION BLOCK, CLEAN AND VACUUM CABINET.
MBC 24	SOFTWARE A&O, CHECK TIME AND DATE - RESET AS REQUIRED, CHECK OPERATION OF INTERFACE MODULES, NOTE UNRESOLVED POINTS, PRINT A REPORT OF FAILED POINTS - REPAIR AS REQUIRED, PRINT A REPORT OF DISABLED POINTS - REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN ALARM, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN OPERATOR PRIORITY. REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, RUN POINT LOG AND PPCL REPORT. VERIFY PPCL OPERATION, CORRECT ANY UNRESOLVED POINTS AND PPCL LINES AND ANY ALARM REPORTING PROBLEMS

	<p>FOUND, RUN NODE TABLE REPORT TO VERIFY PROPER TRUNK COMMUNICATIONS, MODIFY SOFTWARE AND POINT DATABASE AS REQUIRED, INCLUDING ELIMINATING DUPLICATE POINTS, REDUNDANT LOOPS AND ANY CAUSES OF UNNECESSARY TRUNK TRAFFIC, BACK UP ANY CHANGES MADE, DOCUMENT AND REVIEW ALL CHANGES AND REPORTS WITH CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW SOFTWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.</p>
MBC 40	<p>AUTOMATION A&O, VISUALLY INSPECT MBC CABINET AND OBSERVE OPERATING ENVIRONMENT, INSPECT FAULT DIAGNOSTIC LED'S, NOTE ANY AC OR DC FAULTS RESET CIRCUIT BREAKERS IF NEEDED, INSPECT CONTROLLER MODULE AND POWER MODULE FOR PROPER SEATING, INSPECT POINT TERMINATION BLOCKS ARE SECURE AND NOT PHYSICALLY DAMAGED, INSPECT AREA AROUND POWER RAILS, CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS, VERIFY THAT HAND-AUTO SWITCHES ARE NOT OVERRIDDEN AT POINT TERMINATION MODULES, REVIEW WITH CUSTOMER BEFORE CHANGING, VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION, NOTE REVISION DATE, VERIFY THAT POINT MODULE LABELS MATCH ACTUAL POINT CONFIGURATION, CHECK DATE OF LAST BATTERY REPLACEMENT AND RECORD, REPLACE IF DUE (EVERY 4 YEARS) OR IF LOW BATTERY LED IS ON, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, CHECK TERMINATION POINTS, VERIFY TERMINATION BLOCKS ARE SECURE AND SCREW TERMINALS ARE NOT STRIPPED, RETERMINATE ANY POINTS IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED, VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP, RETERMINATE OR DISCONNECT IF REQUIRED, CONNECT TO MMI PORT, DELETE POINTS IN MONITOR IF THEY ARE NOT BEING USED, NOTE FIRMWARE REVISION AND RECORD, ENSURE THAT THE HARDWARE LOG IS IN CABINET AND CURRENT, CHECK AO-P MODULES FOR AIR LEAKS, INSPECT AND RE-SEAT "O" RING IF NECESSARY. CHECK FOR OIL AND WATER BETWEEN MODULE AND TERMINATION BLOCK, CLEAN AND VACUUM CABINET.</p>

MBC 40	SOFTWARE A&O, CHECK TIME AND DATE - RESET AS REQUIRED, CHECK OPERATION OF INTERFACE MODULES, NOTE UNRESOLVED POINTS, PRINT A REPORT OF FAILED POINTS - REPAIR AS REQUIRED, PRINT A REPORT OF DISABLED POINTS - REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN ALARM, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN OPERATOR PRIORITY, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, RUN POINT LOG AND PPCL REPORT. VERIFY PPCL OPERATION, CORRECT ANY UNRESOLVED POINTS AND PPCL LINES AND ANY ALARM REPORTING PROBLEMS FOUND, RUN NODE TABLE REPORT TO VERIFY PROPER TRUNK COMMUNICATIONS, MODIFY SOFTWARE AND POINT DATABASE AS REQUIRED, INCLUDING ELIMINATING DUPLICATE POINTS, REDUNDANT LOOPS AND CAUSES OF UNNECESSARY TRUNK TRAFFIC, BACK UP ANY CHANGES MADE, DOCUMENT AND REVIEW ALL CHANGES AND REPORTS WITH CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW SOFTWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.
PC HARDWARE	AUTOMATION A&O, CHECK OVERALL SYSTEM AND HARDWARE OPERATION, INSPECT WORK AREA, CHECK CABLES AND POWER CONNECTIONS, CLEAN AS REQUIRED.
RBC	AUTOMATION A&O, VISUALLY INSPECT RBC CABINET AND OBSERVE OPERATING ENVIRONMENT, INSPECT FAULT DIAGNOSTIC LED'S. NOTE ANY AC OR DC FAULTS RESET CIRCUIT BREAKERS IF NEEDED, INSPECT CONTROLLER MODULE AND POWER MODULE FOR PROPER SEATING, INSPECT POINT TERMINATION B.OCKS ARE SECURE AND NOT PHYSICALLY DAMAGED, INSPECT AREA AROUND POWER RAILS, CLEAN AREA OF ANY WIRE CLIPPINGS AND DEBRIS, VERIFY THAT HAND-AUTO SWITCHES ARE NOT OVERRIDDEN AT POINT TERMINATION MODULES, REVIEW WITH CUSTOMER BEFORE CHANGING, VERIFY THAT LAYOUT SHEET MATCHES ACTUAL CABINET CONFIGURATION, NOTE REVISION DATE, VERIFY THAT POINT MODULE LABELS MATCH ACTUAL POINT CONFIGURATION, CHECK DATE OF LAST BATTERY REPLACEMENT AND RECORD, REPLACE IF DUE (EVERY 4 YEARS) OR IF LOW BATTERY LED IS ON, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, CHECK TERMINATION POINTS, VERIFY TERMINATION BLOCKS ARE SECURE AND SCREW TERMINALS ARE NOT STRIPPED, RETERMINATE ANY POINTS IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED, VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP, RE-

	<p>TERMINATE OR DISCONNECT IF REQUIRED, CONNECT TO MMI PORT, DELETE POINTS IN MONITOR IF THEY ARE NOT BEING USED, NOTE FIRMWARE REVISION AND RECORD, ENSURE THAT THE HARDWARE LOG IS IN CABINET AND CURRENT, CHECK AO-P MODULES FOR AIR LEAKS, INSPECT AND RE-SEAT "O" RING IF NECESSARY, CHECK FOR OIL AND WATER BETWEEN MODULE AND TERMINATION BLOCK, CLEAN AND VACUUM CABINET.</p>
RBC	<p>SOFTWARE A&O, CHECK TIME AND DATE - RESET AS REQUIRED, CHECK OPERATION OF INTERFACE MODULES, NOTE UNRESOLVED POINTS, PRINT A REPORT OF FAILED POINTS - REPAIR AS REQUIRED, PRINT A REPORT OF DISABLED POINTS - REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN ALARM. REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN OPERATOR PRIORITY. REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, RUN POINT LOG AND PPCL REPORT. VERIFY PPCL OPERATION, CORRECT ANY UNRESOLVED POINTS AND PPCL LINES AND ANY ALARM REPORTING PROBLEMS FOUND, RUN NODE TABLE REPORT TO VERIFY PROPER TRUNK COMMUNICATIONS, MODIFY SOFTWARE AND POINT DATABASE AS REQUIRED, INCLUDING ELIMINATING DUPLICATE POINTS, REDUNDANT LOOPS AND ANY CAUSES OF UNNECESSARY TRUNK TRAFFIC, BACK UP ANY CHANGES MADE, DOCUMENT AND REVIEW ALL CHANGES AND REPORTS WITH CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW SOFTWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.</p>
F/W UPD FIELD PANEL FLASH (EACH)	<p>FIRMWARE UPDATE, REVIEW EQUIPMENT OPERATION AND PLACE IN HAND PERATION WHEN REQUIRED, BACK UP CABINET DATA BASE. (MAY PERFORM ON-LINE BEFORE COMING TO SITE), FLASH IN FIRMWARE TO MEMORY, VERIFY PROPER OPERATION, RETURN EQUIPMENT TO AUTO OPERATION AFTER FW FLASH HAS BEEN COMPLETED, REVIEW WITH CUSTOMER ANY NEW ENHANCEMENTS, FEATURES OR FIXES.</p>
MBC EXPANSION MODULE	<p>AUTOMATION A&O, CHECK TERMINATION WIRING ON PRIMARY MODULE AND EXPANSION MODULE, VERIFY PROPER OPERATION OF COMMUNICATION STATUS LED'S, OBSERVE PERIODIC BLINKING IF PTM'S ARE INSTALLED, VERIFY ACCURACY OF LOCATION LABEL FOR THE PM AND EM.</p>

SW PERIODIC PANEL BACKUP - REMOTELY	BUSINESS PROTECTION & RECOVERY, PERFORM REGULARLY SCHEDULED PANEL DATA BASE BACK UPS REMOTELY. (VIA POST OR THROUGH OTHER REMOTE ACCESS SOFTWARE, ARRANGE TO HAVE BACK UP MEDIA STORED IN A DESIGNATED AND SECURED LOCATION ON SITE, STORE ADDITIONAL COPY OF BACKUP MEDIA IN A DESIGNATED AND SECURED LOCATION AT THE LANDIS LOCAL OFFICE, DATE ALL MEDIA, DOCUMENT AND REVIEW WITH CUSTOMER ALL BACKUPS PERFORMED, USE POST SERVICE REPORT PROVIDED WITH ID N3114B, DOCUMENT ALL OCCASIONS WHERE THE BACKUPS WERE USED TO RESTORE SOFTWARE TO THE SYSTEM.
SW PERIODIC BACKUP INSIGHT 3.X ON-SITE	BUSINESS PROTECTION & RECOVERY, CONFIRM NO OTHER ACTIVITY ON OTHER PC'S IF ON A MLN, PERFORM AN ATOMBACK TO ACCOMPLISH REGULARLY SCHEDULED SYSTEM DATABASE AND GRAPHIC FILE BACKUPS ON SITE, PERFORM AND ATOMREST TO BENEFIT FROM THE COMPRESSED DATA BASE, STORE SYSTEM BACK UP MEDIA IN A DESIGNATED AND SECURED LOCATION ON SITE, DATE ALL MEDIA STORE ADDITIONAL COPY OF BACKUP MEDIA IN A DESIGNATED AND SECURED LOCATION AT THE LANDIS LOCAL OFFICE, DATE ALL MEDIA, CONFIRM PROPER SYSTEM OPERATION REMOTELY AFTER BACK UP, DOCUMENT AND REVIEW WITH CUSTOMER ALL BACKUPS PERFORMED, DOCUMENT ALL OCCASIONS WHERE THE BACKUPS WERE USED TO RESTORE SOFTWARE TO THE SYSTEM, REVIEW OF CUSTOMER EMERGENCY & DISASTER RESPONSE PLAN AND CONFIRM LANDIS'S ROLE THROUGH BUSINESS PROTECTION & RECOVERY SERVICES.
SW PERIODIC PANEL BACKUP ON-SITE	BUSINESS PROTECTION & RECOVERY, PERFORM REGULARLY SCHEDULED PANEL DATA BASE BACK UPS ON-SITE, STORE SYSTEM BACKUP MEDIA IN A DESIGNATED AND SECURED LOCATION ON SITE, STORE ADDITIONAL COPY OF BACKUP MEDIA IN A DESIGNATED AND SECURED LOCATION AT THE LANDIS LOCAL OFFICE, DATE ALL MEDIA, CONFIRM PROPER SYSTEM OPERATION ON-SITE AFTER BACKUP, DOCUMENT AND REVIEW WITH CUSTOMER ALL BACKUPS PERFORMED, DOCUMENT ALL OCCASIONS WHERE THE BACKUPS WERE USED TO RESTORE SOFTWARE TO THE SYSTEM AND REVIEW THE CUSTOMER'S EMERGENCY & DISASTER RESPONSE PLAN AND CONFIRM LANDIS'S ROLE THROUGH BUSINESS PROTECTION & RECOVERY SERVICES.

INSIGHT 3.X S/W UPDATE BASE SERVER - EACH	<p>SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE UP TO 8 HOURS FOR CUSTOMER TRAINING PER SITE/LOCATION, SCHEDULE INSTALLATION OF SOFTWARE UPDATE IN ADVANCE WITH THE CUSTOMER, ENSURE PC HAS ADEQUATE MEMORY TO ACCEPT UPDATE, RECOMMEND MINIMUM PC REQUIREMENTS IF CUSTOMER IS SUPPLYING PC, BACK UP SYSTEM SOFTWARE, BACK UP GRAPHICS DATABASE, INSTALL SOFTWARE UPDATE, VERIFY AND DOCUMENT PROPER SOFTWARE OPERATION (INSIGHT AND 3RD PARTY SOFTWARE), TROUBLESHOOT AS REQUIRED, SCHEDULE TRAINING WITH CUSTOMER'S STAFF TO REVIEW THE NEW FUNCTIONS AND FEATURES, TRAIN CUSTOMER STAFF ON NEW FEATURES AND VALUE OF UPDATES, DOCUMENT AND REVIEW WITH CUSTOMER THE VALUE OF THIS SOFTWARE UPDATE, REVIEW SOFTWARE RELEASE NOTES WITH CUSTOMER AND LEAVE ON SITE, REVIEW SELF STUDY MODULE WITH CUSTOMER, PROVIDE AND/OR UPDATE CUSTOMER'S USER MANUALS AND DOCUMENTATION.</p>
INSIGHT 3.X UPDATE ADV. SINGLE SERVER	<p>SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE UP TO 8 HOURS FOR CUSTOMER TRAINING PER SITE/LOCATION, SCHEDULE INSTALLATION OF SOFTWARE UPDATE IN ADVANCE WITH THE CUSTOMER, ENSURE PC HAS ADEQUATE MEMORY TO ACCEPT UPDATE, RECOMMEND MINIMUM PC REQUIREMENTS IF CUSTOMER IS SUPPLYING PC, BACK UP SYSTEM SOFTWARE, BACK UP GRAPHICS DATABASE, INSTALL SOFTWARE UPDATE, VERIFY AND DOCUMENT PROPER SOFTWARE OPERATION (INSIGHT AND 3RD PARTY SOFTWARE), TROUBLESHOOT AS REQUIRED, SCHEDULE TRAINING WITH CUSTOMER'S STAFF TO REVIEW THE NEW FUNCTIONS AND FEATURES, TRAIN CUSTOMER STAFF ON NEW FEATURES AND VALUE OF UPDATES, DOCUMENT AND REVIEW WITH CUSTOMER THE VALUE OF THIS SOFTWARE UPDATE, REVIEW SOFTWARE RELEASE NOTES WITH CUSTOMER AND LEAVE ON SITE, REVIEW SELF STUDY MODULE WITH CUSTOMER, PROVIDE AND/OR UPDATE CUSTOMER'S USER MANUALS AND DOCUMENTATION.</p>
INSIGHT 3.X UPDTE EA ADDL SGLE SERVER	<p>SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE UP TO 8 HOURS FOR CUSTOMER TRAINING PER SITE/LOCATION, SCHEDULE INSTALLATION OF SOFTWARE UPDATE IN ADVANCE WITH THE CUSTOMER, ENSURE PC HAS ADEQUATE MEMORY TO ACCEPT UPDATE, RECOMMEND MINIMUM PC REQUIREMENTS IF CUSTOMER IS SUPPLYING PC, BACK UP SYSTEM SOFTWARE, BACK UP GRAPHICS DATABASE, INSTALL SOFTWARE UPDATE, VERIFY AND DOCUMENT PROPER SOFTWARE OPERATION (INSIGHT AND 3RD PARTY SOFTWARE), TROUBLESHOOT AS REQUIRED,</p>

	<p>SCHEDULE TRAINING WITH CUSTOMER'S STAFF TO REVIEW THE NEW FUNCTIONS AND FEATURES, TRAIN CUSTOMER STAFF ON NEW FEATURES AND VALUE OF UPDATES, DOCUMENT AND REVIEW WITH CUSTOMER THE VALUE OF THIS SOFTWARE UPDATE, REVIEW SOFTWARE RELEASE NOTES WITH CUSTOMER AND LEAVE ON SITE, REVIEW SELF STUDY MODULE WITH CUSTOMER.</p> <p>PROVIDE AND/OR UPDATE CUSTOMER'S USER MANUALS AND DOCUMENTATION.</p>
INSIGHT 3.X ADV 2 SERVER PKG (LABOR EA SVR)	<p>SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE UP TO 8 HOURS FOR CUSTOMER TRAINING PER SITE/LOCATION, SCHEDULE INSTALLATION OF SOFTWARE UPDATE IN ADVANCE WITH THE CUSTOMER, ENSURE PC HAS ADEQUATE MEMORY TO ACCEPT UPDATE, RECOMMEND MINIMUM PC REQUIREMENTS IF CUSTOMER IS SUPPLYING PC, BACK UP SYSTEM SOFTWARE, BACK UP GRAPHICS DATABASE, INSTALL SOFTWARE UPDATE, VERIFY AND DOCUMENT PROPER SOFTWARE OPERATION (INSIGHT AND 3RD PARTY SOFTWARE), TROUBLESHOOT AS REQUIRED, SCHEDULE TRAINING WITH CUSTOMER'S STAFF TO REVIEW THE NEW FUNCTIONS AND FEATURES, TRAIN CUSTOMER STAFF ON NEW FEATURES AND VALUE OF UPDATES, DOCUMENT AND REVIEW WITH CUSTOMER THE VALUE OF THIS SOFTWARE UPDATE, REVIEW SOFTWARE RELEASE NOTES WITH CUSTOMER AND LEAVE ON SITE, REVIEW SELF STUDY MODULE WITH CUSTOMER, PROVIDE AND/OR UPDATE CUSTOMER'S USER MANUALS AND DOCUMENTATION.</p>
INSIGHT 3.X ADV 5 SERVER PKG (LABOR EA SVR)	<p>SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE UP TO 8 HOURS FOR CUSTOMER TRAINING PER SITE/LOCATION, SCHEDULE INSTALLATION OF SOFTWARE UPDATE IN ADVANCE WITH THE CUSTOMER, ENSURE PC HAS ADEQUATE MEMORY TO ACCEPT UPDATE, RECOMMEND MINIMUM PC REQUIREMENTS IF CUSTOMER IS SUPPLYING PC, BACK UP SYSTEM SOFTWARE, BACK UP GRAPHICS DATABASE, INSTALL SOFTWARE UPDATE, VERIFY AND DOCUMENT PROPER SOFTWARE OPERATION (INSIGHT AND 3RD PARTY SOFTWARE), TROUBLESHOOT AS REQUIRED, SCHEDULE TRAINING WITH CUSTOMER'S STAFF TO REVIEW THE NEW FUNCTIONS AND FEATURES, TRAIN CUSTOMER STAFF ON NEW FEATURES AND VALUE OF UPDATES, DOCUMENT AND REVIEW WITH CUSTOMER THE VALUE OF THIS SOFTWARE UPDATE, REVIEW SOFTWARE RELEASE NOTES WITH CUSTOMER AND LEAVE ON SITE, REVIEW SELF STUDY MODULE WITH CUSTOMER, PROVIDE AND/OR UPDATE CUSTOMER'S USER MANUALS AND DOCUMENTATION.</p>

INSIGHT 3.X ADV 25 SERVER PKG (LBR EA SVR)	SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE UP TO 8 HOURS FOR CUSTOMER TRAINING PER SITE/LOCATION, SCHEDULE INSTALLATION OF SOFTWARE UPDATE IN ADVANCE WITH THE CUSTOMER, ENSURE PC HAS ADEQUATE MEMORY TO ACCEPT UPDATE, RECOMMEND MINIMUM PC REQUIREMENTS IF CUSTOMER IS SUPPLYING PC, BACK UP SYSTEM SOFTWARE, BACK UP GRAPHICS DATABASE, INSTALL SOFTWARE UPDATE, VERIFY AND DOCUMENT PROPER SOFTWARE OPERATION (INSIGHT AND 3RD PARTY SOFTWARE), TROUBLESHOOT AS REQUIRED, SCHEDULE TRAINING WITH CUSTOMER'S STAFF TO REVIEW THE NEW FUNCTIONS AND FEATURES, TRAIN CUSTOMER STAFF ON NEW FEATURES AND VALUE OF UPDATES, DOCUMENT AND REVIEW WITH CUSTOMER THE VALUE OF THIS SOFTWARE UPDATE, REVIEW SOFTWARE RELEASE NOTES WITH CUSTOMER AND LEAVE ON SITE, REVIEW SELF STUDY MODULE WITH CUSTOMER, PROVIDE AND/OR UPDATE CUSTOMER'S USER MANUALS AND DOCUMENTATION.
INSIGHT 3.X TSP LBR TO UPDTE EA ADDL CLIENT	SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE CLIENT SOFTWARE UPDATE, TROUBLESHOOT AS REQUIRED.
INSIGHT 3.X TSP LBR FOR POINT REV PER PC	SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, PROVIDE AND INSTALL INSIGHT POINT REVISION, REVIEW ADDED FEATURES/FIXES FOR PROPER OPERATION
INSIGHT 3.X TSP UPDATE - ADDL SW COPY	SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, ORDER AND PROVIDE INSIGHT SW COPY
INSIGHT 3.X TSP UPDATE - ADDL DOCUMENT	SOFTWARE UPDATE NOTE: REFERENCE PA-508 FOR ADDITIONAL INFORMATION, ORDER AND PROVIDE EXTRA DOCUMENT SET
INSIGHT 3.X ADV. FIRST ADDL USER LICENSE	SOFTWARE UPDATE, ORDER FIRST ADDITIONAL USER LICENSE
INSIGHT 3.X ADV SECOND ADDL USER LICENSE	SOFTWARE UPDATE, ORDER SECOND ADDITIONAL USER LICENSE
INSIGHT 3.X ADV THIRD + ADDL USER LICENSE	SOFTWARE UPDATE, ORDER THIRD PLUS ADDITIONAL USER LICENSE
INSIGHT 3.X BASE UPDATE USER LICENSE - EACH	SOFTWARE UPDATE, ORDER ADDITIONAL BASE USER LICENSE
GATEWAY SERVICE - MBC OPEN PROCESSOR	AUTOMATION A&O, VISUALLY INSPECT GATEWAY CABINET AND OBSERVE OPERATING ENVIRONMENT, INSPECT FAULT DIAGNOSTIC LED'S. NOTE ANY AC OR DC FAULTS, RESET CIRCUIT BREAKERS IF NEEDED, INSPECT CONTROLLER MODULE AND POWER MODULE FOR PROPER SEATING, CHECK DATE OF LAST BATTERY REPLACEMENT AND RECORD, REPLACE IF DUE (EVERY 4 YEARS) OR IF LOW BATTERY LED IS ON, ENSURE THAT ALL

	COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED, VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP. RE-TERMINATE OR DISCONNECT IF REQUIRED, CLEAN AND VACUUM CABINET, NOTE FIRMWARE REVISION AND RECORD, DISCUSS WITH CUSTOMER AND VENDOR OF 3RD PARTY SYSTEM AND PLANS FOR HARDWARE / POINT CHANGES OR FIRMWARE UPDATES.
GATEWAY SERVICE - MBC OPEN PROCESSOR	SOFTWARE A&O, CHECK TIME AND DATE - RESET AS REQUIRED, PRINT A REPORT OF FAILED POINTS - REPAIR AS REQUIRED, PRINT A REPORT OF DISABLED POINTS - REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN ALARM, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN OPERATOR PRIORITY, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, RUN POINT LOG AND PPCL REPORT, VERIFY PPCL OPERATION, CORRECT ANY UNRESOLVED POINTS AND PPCL LINES AND ANY ALARM REPORTING PROBLEMS FOUND, BACK UP ANY CHANGES MADE, DOCUMENT AND REVIEW ALL CHANGES AND REPORTS WITH CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW SOFTWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.
FIBER OPTIC RS485/RS232 INTERFACE	AUTOMATION A&O, CHECK DIAGNOSTIC LED'S, CHECK FOR PHYSICALLY DAMAGED COMPONENTS, CHECK FOR SECURE TERMINATIONS, CLEAN ENCLOSURE.
DUAL FIBER OPTIC TI	AUTOMATION A&O, CHECK DIAGNOSTIC LED'S, CHECK FOR PHYSICALLY DAMAGED COMPONENTS, CHECK FOR TIGHT TERMINATIONS, CLEAN ENCLOSURE.
FIBER OPTIC HUB	AUTOMATION A&O, CHECK DIAGNOSTIC LED'S, CHECK FOR PHYSICALLY DAMAGED COMPONENTS, CHECK FOR TIGHT TERMINATIONS, CLEAN ENCLOSURE.

<p>NETWORK PERFORMANCE DIAGNOSTIC TOOL</p>	<p>AUTOMATION A&O, SET UP AND USE NETWORK PERFORMANCE DIAGNOSTIC TOOL PER TOOL INSTRUCTIONS, INITIAL NETWORK REVIEW, 1) RUN THE NETWORK CABINET DISPLAY REPORT, ALL NODES ON NETWORK CAN RECOGNIZE EACH OTHER ? YES / NO, 2) RUN THE PPCL REPOR, PROBLEMS ? YES / NO, 3) RUN THE POINT REPORT, PROBLEMS ? YES / NO, 4) RUN THE TREND REPORT, PROBLEMS ? YES / NO, HARDWARE AND SOFTWARE NETWORK DIAGNOSTICS CHECKOUT: ALL HARDWARE CHECKS ARE TO BE DONE WITH THE NETWORK RUNNING, BE SURE WHEN USING A GROUND THAT IT IS A GROUND ASSOCIATED WITH THE BUILDING ELECTRICAL SYSTEM, A) RESISTANCE CHECKS, 1) CHECK GROUND TO SHIELD ON PMD, OHM READING, 2) CHECK SHIELD TO NEGATIVE (BLACK) ON PMD, OHM READING, 3) CHECK SHIELD TO POSITIVE (RED) ON PMD, OHM READING, B) AC VOLTMETER CHECKS, 1) CHECK AC VOLTAGE BETWEEN GROUND AND SHIELD, VOLTAGE READING, 2) CHECK AC VOLTAGE BETWEEN SHIELD AND NEGATIVE (BLACK), VOLTAGE READING, 3) CHECK AC VOLTAGE BETWEEN SHIELD AND POSITIVE (RED), VOLTAGE READING, C) OSCILLOSCOPE CHECK, 1) CHECK SIGNAL BETWEEN GROUND AND SHIELD, VOLTAGE READING, 2) CHECK SIGNAL BETWEEN SHIELD AND NEGATIVE (BLACK), VOLTAGE READING, (INSURE A SIGNAL EXISTS, IF NOT, THE NEGATIVE CONDUCTOR IS GROUNDED. FIND PROBLEM AND REPAIR.), 3) CHECK SIGNAL BETWEEN SHIELD AND POSITIVE (RED), VOLTAGE READING, (INSURE A SIGNAL EXISTS, IF NOT, THE NEGATIVE CONDUCTOR IS GROUNDED. FIND PROBLEM AND REPAIR.), 4) CHECK SIGNAL BETWEEN POSITIVE AND NEGATIVE (BLACK), INSURE WAVE FORM SHAPE IS SQUARE AND THAT THE TOP OF THE WAVE IS FLAT, D) CHECK THE FOLLOWING, 1) CHECK MINIMUM BIT WIDTH (FLAT AREA OF WAVE), UNITS READING, 2) CHECK IDLE VOLTAGE, VOLTAGE READING, 3) CHECK PEAK TO PEAK VOLTAGE, VOLTAGE READING, E) CHECK NETWORK CAPACITANCE, 1) NETWORK COMMUNICATION LIGHTS BLINKING IN A NICE EVEN RYTHMIC SEQUENCE. YES / NO, 2) LIGHTS ON MORE THAN THEY ARE OFF. YES / NO 3) LIGHTS OFF MORE THAN THEY ARE ON. YES / NO, 4) TRUNK TERMINATORS INSTALLED PROPERLY. YES / NO, CHECK RESULTS OF YOUR HARDWARE DIAGNOSTICS AGAINST THE NETWORK SPECIFICATION. VERIFY YOUR FINDINGS ARE WITHIN NETWORK SPECIFICATIONS, IF SO PROCEED WITH YOUR SOFTWARE CHECKOUT, IF NOT, RECORD DATA THAT DOES NOT MEET SPECIFICATIONS AND REVIEW NETWORK FOR POTENTIAL PROBLEMS, F) NETWORK PERFORMANCE AND DIAGNOSTICS, 1) STARTUP SOFTWARE, TURN ALL FILTERS ON AND UNRESOLVED POINT DIAGNOSTICS OFF, 2) BEGIN THE MONITORING</p>
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	<p>PROCESS AND INITIATE THE LOGGING FEATURE, 3) ALLOW THE SOFTWARE TO RUN LONG ENOUGH TO GATHER RELIABLE INFORMATION, 4) TURN THE MONITORING OFF AND SAVE THE LOG FILE, 5) RESTART THE MONITORING AND INITIATE THE LOGGING FEATURE, 6) ALLOW SOFTWARE TO RUN LONG ENOUGH TO GATHER RELIABLE INFORMATION, 7) TURN THE MONITOR OFF AND SAVE THE REPORT FILE. PRINT THE REPORT AND USED IN CHECKING DATA AGAINST COV REPORT, 8) VERIFY POINTS NEED TO BE COMMANDED OR ENABLED FOR COVS, DETERMINE IF THERE ARE BETTER WAYS TO ACHIEVE SAME RESULTS, UNRESOLVED POINT CHECK, SELECT FILTER AND TURN UNRESOLVED POINTS ON, TURN MONITOR ON, MONITORING ON AND INITIATE ONE OF THE FOLLOWING TASKS TO DETECT UNRESOLVED POINTS, 1) ADD A POINT TO A PANEL – RECOMMENDED, 2) WARM START A PANEL - NOT RECOMMENDED, 3) MAKE A PANEL READY – RECOMMENDED, 4) RUN TWO PASSES, AFTER SECOND COMMAND IS COMPLETE, UNRESOLVED POINTS WILL BE DISPLAYED, 5) MAKE NECESSARY MODIFICATIONS TO CLEAN UP DATABASE</p>
FLN CONTROLLER	<p>AUTOMATION A&O, CHECK DIAGNOSTIC LED AND COMMUNICATION CONNECTIONS, OBSERVE GENERAL CONDITIONS AND OPERATING ENVIRONMENT, CHECK INCOMING POWER AND TRANSFORMER VOLTAGE TO CONTROLLER BOARD, PERFORM INTEGRITY TEST AND SYSTEM WIDE FUNCTION TEST THRU RANDOM CHECKING, STANDARD REPORTS AND DIAGNOSTICS, CHECK DATE OF LAST BATTERY REPLACEMENT AND RECORD, REPLACE IF DUE (EVERY 4 YEARS) OR IF LOW BATTERY LED IS ON.</p>
GATEWAY POINT - END TO END CHECK	<p>AUTOMATION A&O, VERIFY POINT OPERATION OR ACCURACY FROM 3RD PARTY CONTROL THROUGH GATEWAY.</p>
MEC-SERIES 100/200/300 CONTROLLER	<p>AUTOMATION A&O, VISUALLY INSPECT MEC CABINET AND OBSERVE OPERATING ENVIRONMENT, INSPECT DIAGNOSTIC LEDS, VERIFY THAT HAND-AUTO SWITCHES ARE NOT OVERRIDDEN AT POINT TERMINATION MODULES. REVIEW WITH CUSTOMER BEFORE CHANGING, CHECK DATE OF LAST BATTERY REPLACEMENT AND RECORD, REPLACE IF DUE (EVERY 4 YEARS) OR IF LOW BATTERY LED IS ON, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED. CHECK TERMINATION POINTS, VERIFY TERMINATION BLOCKS ARE SECURE AND SCREW TERMINALS ARE NOT STRIPPED, RETERMIATE ANY POINTS IF REQUIRED, ENSURE THAT ALL COMMUNICATION TERMINATIONS ARE SECURE AND NOT FRAYED. VERIFY THAT THE SHIELD TERMINATION IS NOT CREATING A GROUND LOOP. RE-TERMINATE OR DISCONNECT IF REQUIRED, NOTE FIRMWARE REVISION AND RECORD, INSPECT MEC LAYOUT</p>

	SHEET AND LABELS FOR ACCURACY, CHECK FOR AIR LEAKS IF APPLICABLE CLEAN CABINET ENCLOSURE. (INTERIOR AND EXTERIOR)
MEC-SERIES 100/200/300 CONTROLLER	SOFTWARE A&O, CHECK TIME AND DATE-RESET AS REQUIRED, CHECK OPERATION OF INTERFACE MODULES, NOTE UNRESOLVED POINTS, PRINT A REPORT OF FAILED POINTS, REPAIR AS REQUIRED, PRINT A REPORT OF POINTS IN ALARM, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF POINTS IN OPERATOR PRIORITY, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, PRINT A REPORT OF DISABLED POINTS. REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CORRECT, RUN POINT LOG AND PPCL REPORT, VERIFY PPCL OPERATION, CORRECT ANY UNRESOLVED POINTS AND PPCL LINES AND ANY ALARM REPORTING PROBLEMS FOUND, RUN NODE TABLE REPORT TO VERIFY PROPER TRUNK COMMUNICATIONS, MODIFY SOFTWARE AND POINT DATABASE AS REQUIRED, INCLUDING ELIMINATING DUPLICATE POINTS, REDUNDANT LOOPS AND ANY CAUSES OF UNNECESSARY TRUNK TRAFFIC, BACK UP ANY CHANGES MADE, DOCUMENT AND REVIEW ALL CHANGES AND REPORTS WITH CUSTOMER SO THEY UNDERSTAND HOW SYSTEM OPERATIONS ARE IMPACTED AND THE VALUE OF HOW SOFTWARE ANALYSIS AND OPTIMIZATION HAS BENEFITED THEM.
MEC ANALOG/DIGITAL POINT BLOCK	AUTOMATION A&O, VISUALLY INSPECT POINT BLOCK AND NOTE OPERATING ENVIRONMENT, ENSURE THAT ALL POINT TERMINATIONS ARE SECURE AND NOT FRAYED, CHECK TERMINATION POINTS, VERIFY TERMINATION BLOCKS ARE SECURE.
THERMOSTAT, ROOM, DUAL PRESSURE	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM THERMOSTAT.
THERMOSTAT, ROOM, DUAL PRESSURE	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST, LINT, OIL, AND AIR LEAKS
THERMOSTAT, ROOM, SINGLE PRESSURE	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM THERMOSTAT.
THERMOSTAT, ROOM, SINGLE PRESSURE	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST, LINT, OIL AND AIR LEAKS.
THERMOSTAT, TH 188 UNIT MOUNTED	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM THERMOSTAT.
THERMOSTAT, TH 188 UNIT MOUNTED	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST, LINT, OIL AND AIR LEAKS.

TRANSMITTER, TEMPERATURE	PM (A&O), CHECK THAT SENSING ELEMENT AGREES WITH TEMPERATURE AT GAGE AND CALIBRATE AS NECESSARY, CLEAN DUST AND LINT FROM TRANSMITTER.
TRANSMITTER, TEMPERATURE	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST, LINT, OIL AND AIR LEAKS.
THERMOSTAT, TH 188 UNIT MOUNTED, H/C	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM TRANSMITTER.
THERMOSTAT, TH 188 UNIT MOUNTED, H/C	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST, LINT, OIL AND AIR LEAKS.
TRANSMITTER, DIFFERENTIAL PRESSURE	PM (A&O), CHECK AND ADJUST RECEIVER GAGE.
TRANSMITTER, DIFFERENTIAL PRESSURE	INSPECTION, VISUALLY INSPECT TRANSMITTER AND CHECK FOR PROPER OPERATION, CHECK FOR DUST, LINT, OIL, AND AIR LEAKS.
LIMITEM, NON-RIGID	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM LIMITEM, ENSURE THAT SENSING ELEMENT IS PROPERLY LOCATED,
LIMITEM, NON-RIGID	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST, LINT, OIL AND AIR LEAKS.
THERMOSTAT, FREEZE/FIRE (PNEUMATIC)	PM (A&O), CHECK SET POINT, ADJUST AS REQUIRED,
THERMOSTAT, FREEZE/FIRE (PNEUMATIC)	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, AND AIR LEAKS.
ENTHALPY COMPARATOR	PM (A&O), CHECK ACCURACY OF GAGE; ADJUST IF REQUIRED, CHECK CHANGE OVER.
ENTHALPY COMPARATOR	INSPECTION, VISUALLY INSPECT, CHECK FOR DUST, LINT, OIL, AND AIR LEAKS.
TRANSMITTER, ENTHALPY	PM (A&O), CHECK UNIT FOR PROPER OPERATION AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM TRANSMITTER.
TRANSMITTER, ENTHALPY	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKS, DUST, LINT, AND OIL.
TRANSMITTER, RH	PM (A&O), ENSURE THAT THE SENSING ELEMENT AGREES WITH THE HUMIDITY AND CALIBRATE IF REQUIRED, CLEAN DUST AND LINT FROM TRANSMITTER.
TRANSMITTER, RH	INSPECTION, VISUALLY INSPECT, CHECK FOR DUST, LINT, OIL, AND AIR LEAKS.
SERIES 200	PM (A&O), CLEAN DUST AND LINT FROM FLAPPER AND NOZZLE, DEPRESS CLEANING PLUNGER IN PILOT VALVE, CHECK UNIT FOR PROPER OPERATION, CHECK SET POINT AND CALIBRATE AS NEEDED.
SERIES 200	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKS, DUST, LINT, AND OIL.
THERMOSTAT, SURFACE MOUNTED	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM THERMOSTAT.
THERMOSTAT, SURFACE MOUNTED	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, AND AIR LEAKS.
LIMITEM, RIGID	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM LIMITEM.

LIMITEM, RIGID	INSPECTION, VISUALLY INSPECT, CHECK FOR DUST, LINT, OIL, AND AIR LEAKS.
REGULATOR, DIFFERENTIAL PRESSURE	PM (A&O), CHECK AND CALIBRATE IF NECESSARY.
REGULATOR, DIFFERENTIAL PRESSURE	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, WATER, AND AIR LEAKS, INSPECT FILTER SCREEN.
REGULATOR, STATIC PRESSURE	PM (A&O), CHECK RESTRICTORS FOR CLOGGING, REPLACE AS NECESSARY.
REGULATOR, STATIC PRESSURE	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, AND AIR LEAKS.
HYGROSTAT, DUCT/ROOM	PM (A&O), ENSURE RESTRICTION HOLE, NOZZLE, AND BALL VALVES ARE FREE FROM DIRT AND LINT, CLEAN OR REPLACE IF NECESSARY.
HYGROSTAT, DUCT/ROOM	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, AND OIL.
RECEIVER CONTROLLER	PM (A&O), CHECK THAT SUPPLY PRESSURE IS 22 PSI/152 KPA, CHECK TRANSMITTER INPUTS FOR CORRECT INLET PRESSURES OF 3-15 PSI/21-103 KPA, CHECK UNIT FOR PROPER OPERATION AND CALIBRATE IF NECESSARY.
RECEIVER CONTROLLER	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, AND AIR LEAKS.
TRANSMITTER, AIR VELOCITY PRESSURE	INSPECTION, VISUALLY INSPECT, CHECK FOR DUST, LINT, OIL, AND AIR LEAKS.
FLOWRITE DOUBLESEAT 1 TO 2 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, CHECK DIAPHRAGM.
FLOWRITE DOUBLESEAT 1 TO 2 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM.
FLOWRITE VF 591 WM 1/2 TO 2 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE VF 591 WM 1/2 TO 2 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE VF 591 SD 3/4 TO 2 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE VF 591 SD 3/4 TO 2 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE VF 591 ST 1/2 TO 2 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE VF 591 ST 1/2 TO 2 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE VF 591 CD 2.5 TO 4 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE VF 591 CD 2.5 TO 4 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE VF 591 WM 2.5 TO 4 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE VF 591 WM 2.5 TO 4 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE DOUBLESEAT 2.5 TO 4 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED

FLOWRITE DOUBLESEAT 2.5 TO 4 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE DOUBLESEAT 5 TO 8 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE DOUBLESEAT 5 TO 8 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE VF 591 CD 5 TO 6 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE VF 591 CD 5 TO 6 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
FLOWRITE VF 591 WM 5 TO 6 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
FLOWRITE VF 591 WM 5 TO 6 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
POWERTOP VP 658 1/2 TO 1.25 INCH	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
POWERTOP VP 658 1/2 TO 1.25 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
POWERMITE VF599 PNEU, 1/2" TO 1"	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
POWERMITE VF599 PNEU, 1/2" TO 1"	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
PILOT VALVE, VP656	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED
PILOT VALVE, VP656	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM
DAMPER ACTUATOR, 4 INCH	PM (A&O), INSPECT AND TIGHTEN ALL LINKAGES AND MOUNTS, LUBRICATE PIVOT POINTS AND BUSHINGS AS REQUIRED.
DAMPER ACTUATOR, 4 INCH	INSPECTION, VISUALLY INSPECT LINKAGE AND CHECK FOR SHAFT BENDING OR BINDING, CHECK FOR EVIDENCE OF LEAKING DIAPHRAGM.
PRESSURE REDUCING VALVE	PM (A&O), ADJUST SET POINT(S) AS REQUIRED
PRESSURE REDUCING VALVE	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKS.
RELIEF VALVE	PM (A&O), CYCLE THE VALVE TO ENSURE PROPER RESEATING.
RELIEF VALVE	INSPECTION, VISUALLY INSPECT, CHECK FOR SIGNS OF MALFUNCTION.
BF VALVE, 2-6 INCH, (1) 6 INCH MOTOR	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE LINKAGE AND REPACK STEM AS REQUIRED.
BF VALVE, 2-6 INCH, (1) 6 INCH MOTOR	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 2-6 INCH, (2) 6 INCH MOTORS	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE LINKAGE AND REPACK STEM AS REQUIRED.
BF VALVE, 2-6 INCH, (2) 6 INCH MOTORS	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 2-6 INCH, CYLINDER MOTOR	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 8-12 INCH, (2) 6 INCH MOTORS	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE LINKAGE AND REPACK STEM AS REQUIRED.

BF VALVE, 8-12 INCH, (2) 6 INCH MOTORS	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 8-12 INCH, CYLINDER MOTOR	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 3W, 2-6 INCH, (1) 6 INCH MOTOR	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE LINKAGE AND REPACK STEM AS REQUIRED.
BF VALVE, 3W, 2-6 INCH, (1) 6 INCH MOTOR	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 3W, 2-6 INCH, (2) 6 INCH MOTOR	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE LINKAGE AND REPACK STEM AS REQUIRED.
BF VALVE, 3W, 2-6 INCH, (2) 6 INCH MOTOR	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 3W, 2-6 INCH, CYLINDER MOTOR	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 3W, 8-12 INCH, (2) 6 INCH MTRS	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE LINKAGE AND REPACK STEM AS REQUIRED.
BF VALVE, 3W, 8-12 INCH, (2) 6 INCH MTRS	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
BF VALVE, 3W, 8-12 INCH, CYLINDER MOTOR	INSPECTION, VISUALLY INSPECT CHECKING FOR LEAKS OR SHAFT BENDING OR BINDING.
AIR COMP., LUBED, SINGLE, 1/4 - 2 HP	PM (A&O), REPLACE BELT, ADJUST TENSION AND CHECK SHEAVE ALINGMENT, DRAIN AND REFILL CRANKCASE OIL, CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., LUBED, SINGLE, 1/4 - 2 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS, OIL LEAKS, AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING AND CONTACTS, MEASURE COMPRESOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., LUBED, DUPLEX, 1/3 - 2 HP	PM (A&O), REPLACE BELTS, ADJUST TENSION AND CHECK SHEAVE ALIGHMENT, DRAIN AND REFILL CRANKCASE OIL, CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., LUBED, DUPLEX, 1/3 - 2 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS, OIL LEAKS, AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING AND CONTACTS, MEASURE COMPRESOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., LUBED, SINGLE, 3 AND 5 HP	PM (A&O), REPLACE BELT, ADJUST TENSION AND CHECK SHEAVE ALIGNMENT, DRAIN AND REFILL CRANKCASE OIL, CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., LUBED, SINGLE, 3 AND 5 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS, OIL LEAKS, AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION ON UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING AND CONTACTS, MEASURE COMPRESOR MOTOR CURRENT AND VOLTAGE.

AIR COMP., LUBED, DUPLEX, 3 & 5 HP	PM (A&O), REPLACE BELTS, ADJUST TENSION AND CHECK SHEAVE ALIGNMENT, DRAIN AND REFILL CRANKCASE OIL, CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., LUBED, DUPLEX, 3 & 5 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS, OIL LEAKS, AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING AND CONTACTS, MEASURE COMPRESOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., LUBED, SINGLE, 7-1/2 - 20 HP	PM (A&O), REPLACE BELTS, ADJUST TENSION AND CHECK SHEAVE ALIGNMENT, DRAIN AND REFILL CRANKCASE OIL, CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., LUBED, SINGLE, 7-1/2 - 20 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS, OIL LEAKS, AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING AND CONTACTS, MEASURE COMPRESOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., LUBED, DUPLEX, 7.5-15 HP	PM (A&O), REPLACE BELTS, ADJUST TENSION AND CHECK SHEAVE ALIGNMENT, DRAIN AND REFILL CRANKCASE OIL, CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., LUBED, DUPLEX, 7.5-15 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS, OIL LEAKS, AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING AND CONTACTS, MEASURE COMPRESOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., OILESS, SINGLE, 1/2 - 2 HP	PM (A&O), MEASURE COMPRESSOR MOTOR CURRENT AND VOLTAGE, REPLACE NYLON OR TEFLON RINGS (ANNUAL), CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., OILESS, SINGLE, 1/2 - 2 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING AND CONTACTS, MEASURE COMPRESOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., OILESS, DUPLEX, 1/2 - 2 HP	PM (A&O), REPLACE NYLON OR TEFLON RINGS (ANNUAL), CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., OILESS, DUPLEX, 1/2 - 2 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING CONTRACTS AND OPERATION, CHECK ALTERNATOR WIRING CONTACTS AND OPERATION,

	MEASURE COMPRESSOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., OILESS, SINGLE, 3 HP	PM (A&O), REPLACE NYLON OR TEFLON RINGS (ANNUAL), CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., OILESS, SINGLE, 3 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING CONTRACTS AND OPERATION, MEASURE COMPRESSOR MOTOR CURRENT AND VOLTAGE.
AIR COMP., OILESS, DUPLEX, 3 HP	PM (A&O), REPLACE NYLON OR TEFLON RINGS (ANNUAL), CHECK INTAKE FILTER, REPLACE AS REQUIRED.
AIR COMP., OILESS, DUPLEX, 3 HP	INSPECTION, VISUALLY INSPECT, CHECK FOR RUST SPOTS AND GENERAL CONDITION OF UNIT, CHECK AND RECORD COMPRESSOR RUN TIME, DRAIN THE TANK, CHECK AUTO DRAIN IF APPLICABLE, CHECK OPERATION OF UNLOADER, MEGOHM AND RECORD (ANNUAL), CHECK STARTER WIRING CONTRACTS AND OPERATION, CHECK ALTERNATOR WIRING CONTACTS AND OPERATION, MEASURE COMPRESSOR MOTOR CURRENT AND VOLTAGE.
AIR FILTER	PM (A&O), CHECK PRESSURE DROP ACROSS FILTER, REPLACE CARTRIDGE AS NECESSARY.
AIR FILTER	INSPECTION, VISUALLY INSPECT FOR WATER OR OIL, DRAIN AS REQUIRED, CHECK FILTER ASSEMBLY FOR CRACKS OR LEAKS.
AIR DRYER, 5-25 SCFM	PM (A&O), CLEAN CONDENSOR COIL OF DEBRIS AND DIRT, CHECK DRYER REFRIGERANT TEMPERATURE IN AND OUT OF THE EVAPORATOR, CHECK FOR PROPER OPERATION OF THE AUTOMATIC DRAIN.
AIR DRYER, 5-25 SCFM	INSPECTION, VISUALLY INSPECT FOR LINT AND DUST ON EVAPORATOR COIL, CHECK GENERAL CONDITION AND RECORD FINDINGS, VISUALLY INSPECT FOR OIL LEAKS ON AIR AND REFRIGERANT SIDE.
THERMOSTAT, ELECTRIC, ROOM, LOW VOLTAGE	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM THERMOSTAT.
THERMOSTAT, ELECTRIC, ROOM, LOW VOLTAGE	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST AND LINT
THERMOSTAT, ELECTRIC, ROOM, LINE VOLTAGE	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM THERMOSTAT.
THERMOSTAT, ELECTRIC, ROOM, LINE VOLTAGE	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST AND LINT.
THERMOSTAT, ELECTRIC, REMOTE BULB	PM (A&O), CHECK SET POINT AND CALIBRATE IF NECESSARY, CLEAN DUST AND LINT FROM THERMOSTAT.
THERMOSTAT, ELECTRIC, REMOTE BULB	INSPECTION, VISUALLY INSPECT UNIT, CHECK FOR DUST, LINT, AND OIL.
THERMOSTAT, ELECTRIC, FREEZE/FIRE	PM (A&O), CHECK SET POINT AND ADJUST IF NECESSARY.

THERMOSTAT, ELECTRIC, FREEZE/FIRE	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT AND LINT.
LIQUID PADDLE SWITCH, ELECTRIC	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT AND LINT, ENSURE WIRING IS INTACT.
PE SWITCH, SW 134	PM (A&O), ENSURE AIR CONNECTION IS TIGHT AND THERE ARE NO LEAKS, CHECK SET POINTS AND CALIBRATE, CLEAN DEVICE OF DUST AND LINT.
PE SWITCH, SW 134	INSPECTION, VISUALLY INSPECT FOR DUST, OIL, AND LINT.
PE SWITCH, SW 251	PM (A&O), CHECK SET POINTS AND CALIBRATE, CLEAN DEVICE OF DUST AND LINT, ENSURE AIR CONNECTION IS TIGHT AND THERE ARE NO LEAKS.
PE SWITCH, SW 251	INSPECTION, VISUALLY INSPECT FOR DUST, OIL, AND LINT.
PE SWITCH, MERCROID	PM (A&O), ENSURE AIR CONNECTION IS TIGHT AND THERE ARE NO LEAKS, CHECK SET POINTS AND CALIBRATE, CLEAN DEVICE OF DUST AND LINT.
PE SWITCH, MERCROID	INSPECTION, VISUALLY INSPECT FOR DUST, OIL, AND LINT.
VALVE, E.P.	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, AND OIL, ENSURE ALL WIRING CONTACTS ARE SECURE.
TIME CLOCK	PM (A&O), CHECK AND ADJUST FOR CORRECT TIME, CHECK TRIPPERS FOR CORRECT SETTING, ENSURE ALL WIRING CONNECTIONS ARE SECURE.
TIME CLOCK	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT AND LINT.
ENTHALPY SWITCH	PM (A&O), ENSURE WIRING IS SECURE, ENSURE SELECTOR SWITCH IS SET FOR DESIRED CONTROL RANGE.
ENTHALPY SWITCH	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, DUST, AND OIL.
STEP SWITCH	PM (A&O), CHECK SET POINTS OF STEP SWITCHES AND CALIBRATE IF NECESSARY.
STEP SWITCH	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, AND AIR LEAKS.
RELAY, POSITIONING	PM (A&O), ENSURE FEEDBACK SPRING IS IN PLACE, CHECK SETPOINT, ENSURE RELAY AND SPRING ARM ARE SECURE.
RELAY, POSITIONING	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, AND OIL, CHECK FOR LEAKS.
RELAY, POSITIONING	R/R LABOR AND MATERIAL, REPAIR OR REPLACE AS REQUIRED – LABOR AND MATERIAL COVERED UNDER TSP.
AIR FLOW SWITCH	PM (A&O), CHECK AND ADJUST SET POINT IF REQUIRED.
AIR FLOW SWITCH	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, DUST, AND AIR LEAKS.
STATIC PRESSURE SWITCH	PM (A&O), CHECK RESTRICTORS FOR CLOGGING, REPLACE IF REQUIRED.
STATIC PRESSURE SWITCH	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, DUST, OIL, AND AIR LEAKS.
SELECTOR SWITCH, PNEUMATIC	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, AND AIR LEAKS.
POSITIONING SWITCH, PNEUMATIC	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, AND AIR LEAKS.

RELAYS, RL243	PM (A&O), CHECK SET POINTS, ADJUST IF NECESSARY.
RELAYS, RL243	INSPECTION, VISUALLY INSPECT, CHECK FOR DIRT, LINT, OIL, AND AIR LEAKS.
LIQUID LEVEL SWITCH	PM (A&O), ENSURE UNIT IS OPERATING PROPERLY, ADJUST/REPLACE AS REQUIRED.
LIQUID LEVEL SWITCH	INSPECTION, VISUALLY INSPECT, CHECK FOR PROPER OPERATION.
LIQUID DIFFERENTIAL PRESSURE SWITCH	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKS AND CHECK FOR PROPER SETTING.
TANK LEVEL SWITCH	PM (A&O), CHECK AND ADJUST SETPOINT AS REQUIRED, ENSURE PROPER OPERATION OF FLOAT.
TANK LEVEL SWITCH	INSPECTION, VISUALLY INSPECT UNIT.
LIQUID PADDLE SWITCH, PNEUMATIC	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKS AND ENSURE THAT UNIT IS FUNCTIONING PROPERLY.
DAMPER ACTUATOR, 6 INCH	PM (A&O), INSPECT AND TIGHTEN ALL LINKAGES AND MOUNTS, LUBRICATE PIVOT POINTS AND BUSHINGS AS REQUIRED.
DAMPER ACTUATOR, 6 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR SHAFT BENDING/BINDING, CHECK LINKAGE.
AIR DRYER, 30-55 SCFM	PM (A&O), CLEAN CONDENSER COIL OF DEBRIS AND DIRT, CHECK DRYER REFRIGERANT TEMPERATURE IN AND OUT OF THE EVAPORATOR, CHECK FOR PROPER OPERATION OF THE AUTOMATIC DRAIN.
AIR DRYER, 30-55 SCFM	INSPECTION, VISUALLY INSPECT FOR LINT AND DUST ON EVAPORATOR COIL, CHECK GENERAL CONDITION AND RECORD FINDINGS, VISUALLY INSPECT FOR OIL LEAKS ON AIR AND REFRIGERANT SIDE.
ELECTRIC RELAY/SWITCH/TRANSFORMER	INSPECTION, VISUALLY INSPECT FOR LOOSE CONNECTIONS AND DAMAGE.
DAMPER ACTUATOR, 3 INCH	PM (A&O), INSPECT AND TIGHTEN ALL LINKAGES AND MOUNTS, LUBRICATE PIVOT POINTS AND BUSHINGS AS REQUIRED.
DAMPER ACTUATOR, 3 INCH	INSPECTION, VISUALLY INSPECT, CHECK FOR SHAFT BENDING/BINDING.
UNIT VENTILATOR CONTROLS - SINGLE SET PT	PM (A&O), CHECK ROOM THERMOSTAT CALIBRATION, SET POINT, AND SENSITIVITY, ADJUST AND CALIBRATE AS REQUIRED, CHECK UNIT MOUNTED DISCHARGE THERMOSTAT CALIBRATION, SET POINT AND SENSITIVITY, ADJUST AND CALIBRATE AS REQUIRED.
UNIT VENTILATOR CONTROLS - SINGLE SET PT	INSPECTION, VISUALLY INSPECT ALL CONTROLS, CHECKING FOR LEAKS (AIR OR WATER) AND SECURE ELECTRICAL CONNECTIONS.
UNIT VENTILATOR CONTROLS - DAY/NITE	PM (A&O), CHECK ROOM THERMOSTAT CALIBRATION, SET POINT, AND SENSITIVITY, ADJUST AND CALIBRATE AS REQUIRED, CHECK UNIT MOUNTED DISCHARGE THERMOSTAT CALIBRATION, SET POINT AND SENSITIVITY, ADJUST AND CALIBRATE AS REQUIRED, CHECK PRESSURE ELECTRIC SWITCH AT UNIT FOR PROPER SWITCH POINT, ADJUST AS NECESSARY.

UNIT VENTILATOR CONTROLS - DAY/NITE	INSPECTION, VISUALLY INSPECT ALL CONTROLS, CHECKING FOR LEAKS (AIR OR WATER) AND SECURE ELECTRICAL CONNECTIONS.
FLOWRITE VP593/594 ST 2 1/2-6"	PM (A&O), STROKE VALVE THROUGH ENTIRE RANGE, LUBE AND REPACK STEM AS REQUIRED.
FLOWRITE VP593/594 ST 2 1/2-6"	INSPECTION, VISUALLY INSPECT, CHECK FOR LEAKAGE AROUND STEM AND DIAPHRAGM.
RESET WATER CONTROL	PM (A&O), CHECK OPERATION OF PRESSURE GUAGE, CHECK AND CALIBRATE SERIES 200 CONTROLLER, CHECK OPERATION OF SWITCHING RELAY, CHECK OPERATION OF PRESSURE SWITCH, CHECK AND CALIBRATE LIMITEM THERMOSTAT.
VAV BOX CONTROL	PM (A&O), INSPECT, CLEAN, AND CALIBRATE PNEUMATIC THERMOSTATS TO OWNERS SPECIFIED SET POINTS, PROVIDE REQUIRED DEADBAND BETWEEN HEATING AND COOLING SET, TEST AND ADJUST DAMPER MOTOR AND VOLUME REGULATOR FOR ACCURATE MODULATING RESPONSE.
UNIT VENTILATOR CONTROLS	PM (A&O), CHECK ROOM THERMOSTAT CALIBRATION, SET POINT, AND SENSITIVITY, ADJUST AND CALIBRATE AS REQUIRED, CHECK UNIT MOUNTED DISCHARGE THERMOSTAT CALIBRATION, SET POINT AND SENSITIVITY, ADJUST AND CALIBRATE AS REQUIRED, CHECK (IF DAY/NIGHT) PRESSURE ELECTRIC SWITHC AT UNIT FOR PROPRER SWITHC POINT, ADJUST AS NECESSARY.
UNIT VENTILATOR CONTROLS	INSPECTION, VISUALLY INSPECT ALL CONTROLS, CHECKING FOR LEAKS (AIR OR WATER) AND SECURE ELECTRICAL CONNECTIONS.
CONTROL LOOPS	RUN PRE-LOOP TUNING REPORTS AS APPROPRIATE, IDENTIFY LOOPS EXPERIENCING HUNTING OR EXCESSIVE COV'S, IDENTIFY CONTROL POINT VARIANCES, REVIEW CLIENT SITE LOG BOOK WITH CUSTOMER, REVIEW HSITORY REPORTS FOR IMPROPER SYSTEM OPERATION, OBTAIN PERMISSION TO PERFORM AND BUMP TEST OF CONTROL LOOP, RUN LOOP TUNING APPLICATION PER FIELD PANEL USERS MANUAL, REVIEW REPORTS AND LOOP TUNING RESULTS WITH THE CUSTOMER, ENSURE UNDERSTANDING OF VALUE/BENFITS OF CONTROL LOOP A&O
INSIGHT 3.X B/U ON-SITE	CONFIRM NO OTHER ACTIVITY ON OTHER PC'S IF ON A MIN, PERFORM AN ATOMBACK FOR SYS DATA BASE BACKUPS ON SITE, PERFORM AN ATOM BACK FOR GRAPHIC FILE BACKUPS ON SITE, PERFORM AN ATOMREST (COMPRESS THE DATA BASE), STORE SYSTEM BACKUP IN A SECURED ON SITE LOCATION, STORE ADDITIONAL COPY OF BACUP IN SECURED SIEMENS OFFICE, DATE ALL MEDIA, CONFIRM PROPER SYSTEM OPERATION AFTER BACKUP, DOCUMENT AND REVIEW WITH CUSTOMER ALL BACKUPS PERFORMED, DOCUMENT ALL OCCASIONS OF BACKUPS USED FOR RESTORATION;

	REVIEW CUSTOMER EMERGENCY AND DISASTER RESPONSE PLAN, CONFIRM SIEMENS ROLE IN BUSINESS PROTECTION AND RECOVERY SERVICES
PANEL BACKUP (VIA POST)	PERFORM SCHEDULED PANEL DATA BASE BACKUPS REMOTELY, PERFORM VIA POST OR OTHER REMOTE ACCESS SOFTWARE, ARRANGE FOR SECURED STORAGE OF BACK UP MEDIA ON SITE, STORE ADDITIONAL COPY OF BACKUP IN SECURED SIEMENS OFFICE, DATE ALL MEDIA, DOCUMENT AND REVIEW WITH CUSTOEMR ALL BACKUPS PERFORMED, USE POST SERVICE REPORT PROVIDED WITH ID N3114B, DOCUMENT ALL OCCASIONS OF BACKUPS USED FOR RESTORATION.
MBC 40	VISUALLY INSPECT CABINET AND OBSERVE OPERATION, CHECK DIAGNOSITIC LED'S, NOTE ANY AC OR DC FAULTS, RESET CIRCUIT BREAKERS IF NEEDED, INSPECT AND RESEAT BOARDS, MODULES, AND TERMINATION BLOCKS, VERIFY HOA SW(S) NOT OVERRIDDEN AT POINT TERM MODULES, REVIEW WITH CUSTOMER BEFORE ATTEMPTIN TO CHANGE/CORRECT, VERIFY LAYOUT SHEET MATCHES ACTUAL CABINET CONFIG, NOTE REVISION DATE, VERIFY THAT POINT MODULE LABELS MATCH ACTUAL POINT CONFIG, CHECK IF LOW BATTERY LED IS ON, CHECK DATE OF LAST BATTERY REPLACEMENT, REPLACE BATTERY IF EXPIRATION DATE HAS BEEN MET OR EXCEEDED, RECORD REPLACEMENT DATE, CHECK ALL ELECTRICAL WIRING AND TIGHTEN LOOSE CONNECTIONS, CHECK FOTR FRAYING AND RETERMINATE IF REQUIRED, ENSURE COMMUNICATION SHIELD IS NOT CREATING A GROUND LOOP, CONNECT TO MMI PORT, DELETE POINTS IN MONITOR THAT ARE NOT BEING USED, NOTE FIRMWARE REVISION, ENSURE THE HARDWARE LOG IS IN THE CABINET AND CURRENT, CHECK FOR AIR LEAKS OR CONTAIMINATION FROM OIL OR WATER, CLEAN AND VACUUM CABINET
MEC W/POP, E-NET, FLN, LON FLN	VISUALLY INSPECT CABINET AND OBSERVE OPERATION, CHECK DIAGNOSTIC LED'S VERIFY HOA SW(S) NOT OVERRIDDEN AT POINT TERM MODULES, REVIEW WITH CUSTOMER BEFORE ATTEMPTING TO CHANGE/CORRECT, CHECK DATE OF LAST BATTERY REPLACEMENT, REPLACE BATTERY IF EXPIRATION DATE HAS BEEN MET OR EXCEEDED RECORD REPLACEMENT DATE, CHECK ALL ELECTRICAL WIRING AND TIGHTEN LOOSE CONNECTION,S CHECK FOR FRAYING AND RETERMINATE IF REQUIRED, ENSURE COMMUNICATION SHIELD IS NOT CREATING A GROUND LOOP, NOTE FIRMWARE REVISION, INSPECT MEC LAYOUT SHEET AND LABELS FOR ACCURACY, CHECK FOR AIR LEAKS OR CONTAIMINATION FROM OIL OR WATER, CLEAN AND VACUUM CABINET.
TEC – ELECTRONIC OUTPUTS USING CAP	GATHER DATA FROM SELECT TEC APPLICATIONS, GATHER DATA DURING DIFFERENT TIMES OF DAY, ANALYZE

	USING THE CONTROLLER ANALYSIS PROGRAM (CAP), REVIEW DATA WITH CUSTOMER, ENSURE UNDERSTANDING OF VALUE/BENEFITS OF TEC HARDWARE A&O
SOFTWARE APG SVR-CRP NETWK, MLN, NT/DB	RECORD PC NAME/LOCATION, PERFORM AN ATOMBACK, DEFRAG PAGE FILE TO CONSOLIDATE VIRTUAL MEMORY, VERIFY INSTALLATION OF DISCKEEPER SOFTWARE, RUN DEFRAG UTILITY AND OPTIMIZE HARD DRIVE, ENSURE LATEST APOGEE REVISION IS INSTALLED, VERIFY ALL NECESSARY HOT FIXES ARE INSTALLED, VERIFY THE LATESTWINDOWS SERVICE PACK IS INSTALLED, REVIEW WITH CUSTOMER USER ACCOUNTS AND ACCESS LEVELS, UPDATE AS REQUIRED, REVIEW RECENT CHANGES IN DATABASE EDITING LOG WITH CUSTOMER, VERIFY THAT PC IS ENABLED AS A MASS STORAGE DEVICE, REVIEW WITH CUSTOEMR ANY PENDING DATABASE CHANGES, DOWNLINE LOAD AS APPROPRIATE, VERIFY ONLY NECESSARY NETWORK SERVICES ARE INSTALLED, VERIFY AND DELETE SERVICES NOT NEEDED, VERIFY PROPER INSIGHT ASYNCSVC SERVICE PER APPLICATION, VERIFY INSIGHT CROSS TRUNK SERVICE: ONLY IF >1 BIN, VERIFY INSIGHT EVENLOGSVC SERVICE IS INSTALLED AND OPERATING, DISABLE INSIGHT EVENTPRTSVC SERVICE IF NO PRINTER ON PC, VERIFY INSIGHT GLOBAL TABLE SERVICE IS INSTALLED AND OPERATING, VERIFY INSIGHT LOADERSVC SERV IS INSTALLED AND OPERATING, VERIFY INSIGHT SCHEDULERSVC SERV IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY AMS SERVICE IS INSTALLED AND OPERATING, VERIFY OBJECTIVITY LOCK SERVER IS INSTALLED AND OPERATING, VERIFY NETSENTINEL SERVICE IS ENABLED FOR ANY SERVER PC, ENSURE THAT THE PC HAS THE RECOMMENDED MINIMUM RAM, CORRECT SLOW GRAPHICS DUE TO BACKGROUNDS, RUN THE EVENT VIEWER UTILITY, VIEW ERRORS LOGGED WITH WINDOWS OPER SYS, CORRECT APPS OR SERVICE CAUSING THE LOG ENTRIES, RUN WINDOWS TASK MANAGER TO TRACK SYS PERF ISSUES, ELIMINATE 3D SCREEN SAVERS TO OPTIMIZE PROCESSOR TIME, REBOOT THE PC, BACK UP ANY CHANGES MADE, PERFORM AN ATOMREST (COMPRESS THE DATA BASE), TRANSFER DATABASE TO EXTERNAL MEDIA
RENO – DATA VERIFICATION	VERIFY WITH CUSTOMER THE CONTACT DEFINITION REPORT, UPDATE AS REQUIRED, VERIFY ACCURACY OF SETUP, REVIEW THE ESCALATION, GROUP LISITNG, AND POINT REPORTS, VERIFY TRANSMISSION OF “HEART BEAT” TRANSMISSIONS, INITIATE A MANUAL MESSAGE, VERIFY THE SYSTEM AND DECIVCES ARE OPERATING PROPERLY.
CHILLER PLANT CONTROLS	VERIFY SEQUENCE OF OPERATION AS SYSTEM DESIGN INTENDED, REVIEW HISTORY REPORTS FOR IMPROPER SYSTEM OPERATION, REVIEW SITE LOGS (WITH OPERATING ENGINEER IF PRESENT), VISUALLY INSPECT,

	NOTE GENERAL CONDITON AND OPERATION, LOG AND EVALUATE ALL UNIT OPERATING CONDITIONS, CHECK ENTERING AND LEAVING CONDSERSEN WATER TERMPERARE, VERIFY CORRECT CHILLED AND CONDENSER WATER FLOWS, VERIFY OPERATION OF ALL FLOW OR DP SWITCHES, VERIFY OPERATION OF ALL CHILLER SAFETY CONTROLS, CHECK LEAVING CHILLED WATER TEMPERATURE VERSUS SET POINT, CHECK AND RECORD SUPPLY TEMPERATURE, CHECK AND RECORD RETURN TEMPERATURE, CONTROL DEVICES (VALVE, DAMPER ACTUATORS, AND EP VALVES), VERIFY PROPER OPERATION, VERIFY THRU RANDOM CHECKS, STANDARD REPORTS AND DIAGNOSTICS, DOCUMENT ALL RESULTS AND READS, DISCUSS RECOMMENDATIONS IDENTIFIED FOR CUSTOMER, INFORMTCUSTOMER OF NEEDED REPAIRS OR OPERATIONAL ADJUSTMENTS.
TEC – VAV BOX CONTROLS	VERIFY SEQUENCE OF OPERATION AS SYSTEM DESIGN INTENDED, TEST OPERATION OF AS FOR IT'S INTENDED CONTROL, REVIEW CLIENT SITE LOG BOOK WITH CUSTOMER, VISUALLY INSPECT, NOTE GENERAL CONDITON AND OPERATION, CHECK PRESSURE DROP ACROSS FILTER, REPLACE AS NEEDED, CONTROL DEVICES (VALVE, DAMPER ACTUATORS, AND EP VALVES), VERIFY COVERED EQUIPMENT IS CLEAN AND FUNCTIONING PROPERLY, VERIFY THRU RANDOM CHECKS, STANDARD REPORTS, AND DIAGNOSTICS
SOFTWARE APG SVR-CRP NETWK, MLN, NT/DB	VERIFY SPACE TEMP IS WITHIN CONTROL RANGE, VERIFY THAT AIR VOLUME IS WITHIN CONTROL RANGE, PERFORM INTEGRITY TEST AND NOTE ROOM CONTROL CONDITIONS, DOCUMENT ALL RESULTS AND READS, INFORM CUSTOMER OF NEEDED REPAIRS OR OPERATIONAL ADJUSTMENTS.
TYPICAL AHU CONTROLS	VERIFY SEQUENCE OF OPERATION AS SYSTEM DESIGN INTENDED, REVIEW HISTORY REPORTS FOR IMPROPER SYSTEM OPERATION, REVIEW CLIENT SITE LOG BOOK WITH CUSTOMER, REVIEW SITE LOGS (WITH OEPRATING ENGINEER IF PRESENT), VISUALLY INSPECT, NOTE GENERAL CONDITON AND OPERATION, LOG AND EVALUATE ALL UNIT OPERATING CONDITONS,CONTROL DEVICES (VALVE, DAMPER ACTUATORS, AND EP VALVES), VERIFY PROPER OPERATION, CHECK AND CALIBRATE SAFETY AND/OR OPERATING CONTROLS, PERFORM INTEGRITY TEST AND SYSTEM WIDE FUNCTION TEST,VERIFY SET POINT(S) IS IN CONTROL RANGE OF CONTROLLED MEDIUM, CHECK AND RECORD RETURN TEMPERATURE, CHECK AND RECORD SUPPLY TEMPERATURE, CONFIRM RELATIVE ACCURACY THROUGH SYSTEM REPORTS, COMPARE WITH PREVIOUS TEST RESULTS AND VALUES FROM SYSTEM, DOCUMENT ALL RESULTS AND READS, INFORM CUSTOMER OF NEEDED REPAIRS OR OPERATIONAL ADJUSTMENTS, DISCUSS

	POTENTIAL EQUIPMENT OR SERVICE DELIVERY PROBLEMS.
INSIGHT 3.X ADC FIRST/SINGLE SERVER UPDATE	REFERENCE CURRENT INSIGHT PA FOR ADDITIONAL INFORMATION, PROVIDE UP TO 8 HOURS FOR CUSTOMER TRAINING PER SITE/LOCATION, SCHEDULE INSTALL OF SW UPDATE IN ADVANCE WITH CUSTOMER, ENSURE PC HAS ADEQUATE MEMORY TO ACCEPT UPDATE, RECOMMEND MIN PC REQUIREMENTS IF CUSTOMER SUPPLIED PC, BACK UP SYSTEM SOFTWARE, BACK UP GRAPHICS DATABASE, PROVIDE SOFTWARE UPDATE BY FOLLOWING OUTLINED PROCEDURES, VERIFY AND DOC PROPER SW OPERATION INCLUDING 3 RD PARTY SW, TROUBLESHOOT AS REQUIRED, SCHEDULE TRAINING WITH CUSTOMER'S STAFF, REVIEW NEW FEATURES, FUNCTIONS AND DOCUMENTATION WITH CLIENT, TRAIN CUSTOMER ON NEW FEATURES AND VALUE OF UPDATES, REVIEW SW RELEASE NOTES WITH CUSTOMER AND LEAVE ON SITE, REVIEW SELF STUDY MODULE WITH CUSTOMER, PROVIDE UPDATED CUSTOMER DOCUMENTATION.
QA W/CRC PREP	REVIEW PM SCHEDULE, REVIEW SERVICE WORK ORDERS AND COMPLETED TASK SHEETS, REVIEW ALL CORRESPONDANCE SINCE LAST GA VISIT, DEVELOP INITIAL REPORT CARD METRICS IF THIS IS FIRST CRC, REVIEW PREVIOUS REPORT CARD AND ACTION ITEMS IF APPLICABLE, REVIEW PREVIOUS GA AND TQL SURVEY RESULTS, ADDRESS AND ACKNOWLEDGE CONCERNS RELATED TO SURVEY, REVIEW CONTRACT FOR CURRENT T&CS, REVIEW CURRENT TSP SCOPE AND EQUIPMENT LIST, REVIEW CUSTOMER TRAINING SINCE LAST GA VISIT, REVIEW TSP FINANCIAL PERFORMANCE, DISCUSS WITH TEAM MEMBERS, VERIFY SIGNIFICANT TASKS PERFORMED SINCE LAST VISIT, SUMMARIZE BENEFITS/ACTION ITEMS REGARDING WORK PERFORMED, REVIEW CAPABILITIES, PRODUCT OFFERINGS THAT MAY BENEFIT CUSTOMER, DISCUSS POTENTIAL OR STATED CUSTOMER AND OPERATOR ISSUES, DISCUSS POTENTIAL EQUIPMENT OR SERVICE DELIVERY PROBLEMS, PERFORM AN INTERNAL ASSESSMENT SURVEY OF JOB SITE, VERIFY COVERED EQUIPMENT IS CLEAN AND FUNCTIONING PROPERLY, VERIFY CLIENT SITE, CDC AND CHILLER LOG BOOK IS UP TO DATE, REVIEW POST FINGERPRINT REPORT IF APPLICABLE, NOTE OPERATOR'S CONCERNS OR QUESTIONS, VERIFY EXCESS REPAIR MATERIALS HAVE BEEN REMOVED FROM AREA, NOTE CUSTOMER CONTACT AND TITLE, NOTE FREQUENCY OF UNSCHEDULED CALLS, IDENTIFY CAUSES, ANTICIPATE POSSIBLE CONCERNS OR OBJECTIONS THAT MAY SURFACE, NOTE POSSIBLE RESOLUTIONS FOR THESE CONCERNS.

APPENDIX D – PRICE SCHEDULE

1. Contractor's fee rate for maintenance per building:

The following maintenance fees to be paid annually in advance.

Note: The prices provided below reflect a 3% discount for payments in advance.

Bldg. No.	Building Name	Six Month Payment Period Covered: 6/1/16 – 11/30/16
1	Medical Examiners Building	\$21,313
2	Courthouse Center BMS	\$46,495
2.A	Courthouse Center Smoke Test	\$21,991
3.	Stephen P. Clark Center BMS	\$77,754
3.A	Stephen P. Clark Center Smoke Test	\$43,212
4	South Dade Courthouse Annex	\$6,657
5	South Dade Government Center	\$7,772
6	Data Processing Center	\$13,075
7	Gerstein Justice Building	\$22,244
8	Hickman Building	\$12,514
9	Graham Building	\$13,755
10.	Cultural Center BMS	\$40,677
10.A	Cultural Center Smoke Test	\$15,576
11	Miami-Dade Courthouse	\$21,054
12	Caleb Center	\$4,975
13	Miami-Dade 140 West Flagler Building	\$11,321
14	North Dade Justice	\$11,049
15	Miami Dade Public Defender	\$11,369
16	Miami-Dade Permit Building	\$6,270
17	Miami-Dade Elections	\$6,961
18	Miami-Dade Fire Rescue	\$55,012
19	WASD Douglas	\$28,716
20	WASD Hialeah Preston	\$1,211
21	Port of Miami 1080 1050 Smoke Test	\$23,844
22	Miami-Dade Police HQ	\$43,265
23	Central Support Facility	\$84,519
23.A	Central Support Facility Smoke test	\$7,755
23.B	Central Support Facility Monitoring.(Appendix A-Section 10)	\$279,972
24	Miami-Dade North District Chiller Plant	\$0
	Six Month Payment Total	\$940,328

Bldg. No.	Building Name	YEAR 1 Period Covered: 12/1/16 – 11/30/17
1	Medical Examiners Building	\$41,977
2	Courthouse Center BMS	\$91,575
2.A	Courthouse Center Smoke Test	\$43,312
3.	Stephen P. Clark Center BMS	\$153,140
3.A	Stephen P. Clark Center Smoke Test	\$85,108
4	South Dade Courthouse Annex	\$13,111
5	South Dade Government Center	\$15,307
6	Data Processing Center	\$25,752
7	Gerstein Justice Building	\$43,810
8	Hickman Building	\$24,647
9	Graham Building	\$27,090
10.	Cultural Center BMS	\$80,115
10.A	Cultural Center Smoke Test	\$30,678
11	Miami-Dade Courthouse	\$41,467
12	Caleb Center	\$9,799
13	Miami-Dade 140 West Flagler Building	\$22,297
14	North Dade Justice	\$21,762
15	Miami Dade Public Defender	\$22,391
16	Miami-Dade Permit Building	\$12,348
17	Miami-Dade Elections	\$13,710
18	Miami-Dade Fire Rescue	\$108,348
19	WASD Douglas	\$56,558
20	WASD Hialeah Preston	\$2,385
21	Port of Miami 1080 1050 Smoke Test	\$49,492
22	Miami-Dade Police HQ	\$85,213
23	Central Support Facility	\$166,464
23.A	Central Support Facility Smoke test	\$15,281
23.B	Central Support Facility Monitoring.(Appendix A-Section 10)	\$551,418
24	Miami-Dade North District Chiller Plant	\$210,012
Annual Payment Total		\$2,064,565

Bldg. No.	Building Name	YEAR 2 Period Covered: 12/1/17 – 11/30/18
1	Medical Examiners Building	\$41,977
2	Courthouse Center BMS	\$91,575
2.A	Courthouse Center Smoke Test	\$43,312
3.	Stephen P. Clark Center BMS	\$153,140
3.A	Stephen P. Clark Center Smoke Test	\$85,108
4	South Dade Courthouse Annex	\$13,111
5	South Dade Government Center	\$15,307
6	Data Processing Center	\$25,752

7	Gerstein Justice Building	\$43,810
8	Hickman Building	\$24,647
9	Graham Building	\$27,090
10.	Cultural Center BMS	\$80,115
10.A	Cultural Center Smoke Test	\$30,678
11	Miami-Dade Courthouse	\$41,467
12	Caleb Center	\$9,799
13	Miami-Dade 140 West Flagler Building	\$22,297
14	North Dade Justice	\$21,762
15	Miami Dade Public Defender	\$22,391
16	Miami-Dade Permit Building	\$12,348
17	Miami-Dade Elections	\$13,710
18	Miami-Dade Fire Rescue	\$108,348
19	WASD Douglas	\$56,558
20	WASD Hialeah Preston	\$2,385
21	Port of Miami 1080 1050 Smoke Test	\$49,492
22	Miami-Dade Police HQ	\$85,213
23	Central Support Facility	\$166,464
23.A	Central Support Facility Smoke test	\$15,281
23.B	Central Support Facility Monitoring.(Appendix A- Section 10)	\$551,418
24	Miami-Dade North District Chiller Plant	\$210,012
Annual Payment Total		\$2,064,565

Notes:

- i. Control valves can be replaced under this contract. Labor costs for removal of the old valve and installation of the replacement valve will be done at the discounted rates specified in Sections 2 and 3 below.
 - ii. This Contract does not include coverage of the Air Compressors with the exception of the Miami-Dade Police HQ.
 - iii. Under the terms of this contract/agreement the County is entitled to purchase the following Siemens Industry offered services with preferred discounts; Building Automation, Electrical, Fire Safety, Security, Mechanical, and Energy Services.
2. Hourly Rates for additional services that may be required to add devices or outside the service maintenance agreement.

Position	Normal Rate*	Overtime Rate (1.5 x Normal Rate)	Premium Rate
BMS Specialist / Technician	\$120	\$180	\$60
Application Engineering	\$146.25	\$219.38	\$73.13
HVAC Mechanic-Pipefitter	\$108	\$162	\$54
Project Manager	\$146.25	\$219.38	\$73.13

Notes:

- a. *Normal Rate is for Business Hours from 8:00 AM - 5:00 PM, Monday through Friday.

- b. Overtime Rate is for applies to the work done outside of normal business hours, including Saturdays.
- c. Double Rate (2 x Normal Rate) will apply to the work done on Sunday's and other holidays.
- d. The normal rate is based on the 25% discount form current Siemens published pricing documents.
- e. The County will be charged for minimum of 2 hours of services as per the hourly rates of the personnel dispatched to provide the service. For Siemens On-line Service, the County will be charged for a minimum of 2 hours of service.

3. Parts

- a. The County will received a **55%** discount off on the current list price on Building Automation Components as published in the Powers Controls Pneumatic/Electronic and Apogee Automation Pricing Guide.
- b. The County will pay according to the schedule below for all outside material including material from other divisions (Includes one-year warranty).

SIEMENS COST	County's Cost (Siemens Cost x Multiplier below)
\$0.01 thru \$150.00	2.00
\$151.00 thru \$500.00	1.75
\$501.00 thru \$5,000.00	1.65
\$5,001.00 and up	1.55