



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia Purchase Order

Order Date: 04-29-2022

CORRECT ORDER NUMBER MUST APPEAR
ON ALL PACKAGES, INVOICES, AND
SHIPPING PAPERS. QUESTIONS
CONCERNING THIS ORDER SHOULD BE
DIRECTED TO THE DEPARTMENT
CONTACT.

Order Number:	CPO 0211 4001 GSD2200000021 1	Procurement Folder:	1011090
Document Name:	Building 1, West Wing Fan Coil Replacement Project - Phase 2	Reason for Modification:	Award of CRFQ GSD22000000036
Document Description:	Bldg 1 West Wing Fan Coil Replacement Project		
Procurement Type:	Central Purchase Order		
Buyer Name:	Melissa Pettrey		
Telephone:	(304) 558-0094		
Email:	melissa.k.pettrey@wv.gov		
Shipping Method:	Best Way		
Free on Board:	FOB Dest, Freight Prepaid	Effective Start Date:	
		Effective End Date:	

VENDOR

Vendor Customer Code: 000000174873
DOUGHERTY CO INC
PO BOX 1828
CHARLESTON WV 25327-1828
US
Vendor Contact Phone: 304-925-6664 Extension:
Discount Details:

	Discount Allowed	Discount Percentage	Discount Days
#1	No	0.0000	0
#2	Not Entered		
#3	Not Entered		
#4	Not Entered		

DEPARTMENT CONTACT

Requestor Name: David K Parsons
Requestor Phone: 304-352-5486
Requestor Email: david.k.parsons@wv.gov

22

FILE LOCATION _____

INVOICE TO

DEPARTMENT OF ADMINISTRATION
GENERAL SERVICES DIVISION
103 MICHIGAN AVENUE
CHARLESTON WV 25305
US

SHIP TO

DEPARTMENT OF ADMINISTRATION
GENERAL SERVICES DIVISION BLDG 1
1900 KANAWHA BLVD E
CHARLESTON WV 25305
US

Purchasing Division's File Copy

Total Order Amount: \$896,000.00

ENTERED

PURCHASING DIVISION AUTHORIZATION DATE: <u>4/29/2022</u> ELECTRONIC SIGNATURE ON FILE: <u>Tanya S. Gray</u>	ATTORNEY GENERAL APPROVAL AS TO FORM DATE: <u>5/4/2022</u> ELECTRONIC SIGNATURE ON FILE: <u>Beverly Toler</u>	ENCUMBRANCE CERTIFICATION DATE: <u>5-5-22</u> ELECTRONIC SIGNATURE ON FILE: <u>Beverly Toler</u>
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Extended Description:

Central Purchase Order
One -Time Purchase
Construction

The Vendor, Dougherty Company, Inc., of Charleston, WV, agrees to this One-Time Purchase with the WV Department of Administration, General Services Division to establish a contract to provide electrical power upgrade and install, the owner provided Liebert units for the Auditors office in the west wing of the Capitol Complex Building 1, per the bid requirements, specifications, Project plans, Terms and Conditions, Addendum no. 1 dated 03/15/2022, Addendum no. 2 dated 03/17/2022, Addendum no. 3 dated 03/25/2022 and the Vendors submitted bid dated 04/07/2022 incorporated herein by reference and made a part hereof.

Line	Commodity Code	Quantity	Unit	Unit Price	Total Price
1	72151206	0.00000			
Service From		Service To	Manufacturer	0.000000	896000.00
				Model No	
Commodity Line Description: Building 1, West Wing Fan Coil Replacement Project					

Extended Description:

Per attached Project Plans

GENERAL TERMS AND CONDITIONS:

- 1. CONTRACTUAL AGREEMENT:** Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
- 2. DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
- 2.1. "Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
- 2.2. "Bid" or "Proposal"** means the vendors submitted response to this solicitation.
- 2.3. "Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.
- 2.4. "Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.
- 2.5. "Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.
- 2.6. "Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.
- 2.7. "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
- 2.8. "State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
- 2.9. "Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☐ **Term Contract**

Initial Contract Term: The Initial Contract Term will be for a period of _____. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to _____ successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

☐ **Alternate Renewal Term** – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☒ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within Three hundred (300) days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for _____ year(s) thereafter.

☐ **One-Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** Contract Term specified in _____
Revised 02/08/2022

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☐ **Open End Contract:** Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☒ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked in this section must be provided to the Purchasing Division by the Vendor as specified:

☒ **BID BOND (Construction Only):** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☒ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

☒ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

☐☐☐☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

☒ **Commercial General Liability Insurance** in at least an amount of: \$1,000,000.00 per occurrence.

☒ **Automobile Liability Insurance** in at least an amount of: \$1,000,000.00 per occurrence.

☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: _____ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.

☒ **Commercial Crime and Third Party Fidelity Insurance** in an amount of: \$100,000.00 per occurrence.

☐ **Cyber Liability Insurance** in an amount of: _____ per occurrence.

☐ **Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.

☐ **Pollution Insurance** in an amount of: _____ per occurrence.

☐ **Aircraft Liability** in an amount of: _____ per occurrence.

☐☐☐☐

Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

9. WORKERS' COMPENSATION INSURANCE: Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. [Reserved]

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

☐ _____ for _____.

☒ Liquidated Damages Contained in the Specifications.

☐ Liquidated Damages Are Not Included in this Contract.

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence regarding all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. PURCHASING AFFIDAVIT: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

38. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

39. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☐ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a “substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

44. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES – This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

ADDITIONAL TERMS AND CONDITIONS (Construction Contracts Only)

1. CONTRACTOR'S LICENSE: Until June 15, 2021, West Virginia Code § 21-11-2, and after that date, § 30-42-2, requires that all persons desiring to perform contracting work in this state be licensed. The West Virginia Contractors Licensing Board is empowered to issue the contractor's license. Applications for a contractor's license may be made by contacting the West Virginia Contractor Licensing Board.

The apparent successful Vendor must furnish a copy of its contractor's license prior to the issuance of a contract award document.

2. DRUG-FREE WORKPLACE AFFIDAVIT: W. Va. Code § 21-1D-5 provides that any solicitation for a public improvement contract requires each Vendor that submits a bid for the work to submit an affidavit that the Vendor has a written plan for a drug-free workplace policy. If the affidavit is not submitted with the bid submission, the Purchasing Division shall promptly request by telephone and electronic mail that the low bidder and second low bidder provide the affidavit within one business day of the request. Failure to submit the affidavit within one business day of receiving the request shall result in disqualification of the bid. To comply with this law, Vendor should complete the enclosed drug-free workplace affidavit and submit the same with its bid. Failure to submit the signed and notarized drugfree workplace affidavit or a similar affidavit that fully complies with the requirements of the applicable code, within one business day of being requested to do so shall result in disqualification of Vendor's bid. Pursuant to W. Va. Code 21-1D-2(b) and (k), this provision does not apply to public improvement contracts the value of which is \$100,000 or less or temporary or emergency repairs.

2.1. DRUG-FREE WORKPLACE POLICY: Pursuant to W. Va. Code § 21-1D-4, Vendor and its subcontractors must implement and maintain a written drug-free workplace policy that complies with said article. The awarding public authority shall cancel this contract if: (1) Vendor fails to implement and maintain a written drug-free workplace policy described in the preceding paragraph, (2) Vendor fails to provide information regarding implementation of its drug-free workplace policy at the request of the public authority; or (3) Vendor provides to the public authority false information regarding the contractor's drug-free workplace policy.

Pursuant to W. Va. Code 21-1D-2(b) and (k), this provision does not apply to public improvement contracts the value of which is \$100,000 or less or temporary or emergency repairs.

3. DRUG FREE WORKPLACE REPORT: Pursuant to W. Va. Code § 21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. For contracts over \$25,000, the public authority shall be the West Virginia Purchasing Division. For contracts of \$25,000 or less, the public authority shall be the agency issuing the contract. The report shall include:

- (1) Information to show that the education and training service to the requirements of West Virginia Code § 21-1D-5 was provided;
- (2) The name of the laboratory certified by the United States Department of Health and Human Services or its successor that performs the drug tests;

(3) The average number of employees in connection with the construction on the public improvement;

(4) Drug test results for the following categories including the number of positive tests and the number of negative tests: (A) Pre-employment and new hires; (B) Reasonable suspicion; (C) Post-accident; and (D) Random.

Vendor should utilize the attached Certified Drug Free Workplace Report Coversheet when submitting the report required hereunder. Pursuant to W. Va. Code 21-1D-2(b) and (k), this provision does not apply to public improvement contracts the value of which is \$100,000 or less or temporary or emergency repairs.

4. AIA DOCUMENTS: All construction contracts that will be completed in conjunction with architectural services procured under Chapter 5G of the West Virginia Code will be governed by the attached AIA documents, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein.

4A. PROHIBITION AGAINST GENERAL CONDITIONS: Notwithstanding anything contained in the AIA Documents or the Supplementary Conditions, the State of West Virginia will not pay for general conditions, or winter conditions, or any other condition representing a delay in the contracts. The Vendor is expected to mitigate delay costs to the greatest extent possible and any costs associated with Delays must be specifically and concretely identified. The state will not consider an average daily rate multiplied by the number of days extended to be an acceptable charge.

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July 1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: Provided, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

6. LOCAL LABOR MARKET HIRING REQUIREMENT: Pursuant to West Virginia Code §21-1C-1 et seq., Employers shall hire at least seventy-five percent of employees for public improvement construction projects from the local labor market, to be rounded off, with at least two employees from outside the local labor market permissible for each employer per project.

Any employer unable to employ the minimum number of employees from the local labor market shall inform the nearest office of Workforce West Virginia of the number of qualified employees needed and provide a job description of the positions to be filled.

If, within three business days following the placing of a job order, Workforce West Virginia is unable to refer any qualified job applicants to the employer or refers less qualified job applicants than the number requested, then Workforce West Virginia shall issue a waiver to the employer stating the unavailability of applicant and shall permit the employer to fill any positions covered by

the waiver from outside the local labor market. The waiver shall be in writing and shall be issued within the prescribed three days. A waiver certificate shall be sent to both the employer for its permanent project records and to the public authority.

Any employer who violates this requirement is subject to a civil penalty of \$250 per each employee less than the required threshold of seventy-five percent per day of violation after receipt of a notice of violation.

Any employer that continues to violate any provision of this article more than fourteen calendar days after receipt of a notice of violation is subject to a civil penalty of \$500 per each employee less than the required threshold of seventy-five percent per day of violation.

The following terms used in this section have the meaning shown below.

(1) The term “construction project” means any construction, reconstruction, improvement, enlargement, painting, decorating or repair of any public improvement let to contract in an amount equal to or greater than \$500,000. The term “construction project” does not include temporary or emergency repairs;

(2) The term “employee” means any person hired or permitted to perform hourly work for wages by a person, firm or corporation in the construction industry; The term “employee” does not include:(i) Bona fide employees of a public authority or individuals engaged in making temporary or emergency repairs;(ii) Bona fide independent contractors; or(iii) Salaried supervisory personnel necessary to assure efficient execution of the employee's work;

(3) The term “employer” means any person, firm or corporation employing one or more employees on any public improvement and includes all contractors and subcontractors;

(4) The term “local labor market” means every county in West Virginia and any county outside of West Virginia if any portion of that county is within fifty miles of the border of West Virginia;

(5) The term “public improvement” includes the construction of all buildings, roads, highways, bridges, streets, alleys, sewers, ditches, sewage disposal plants, waterworks, airports and all other structures that may be let to contract by a public authority, excluding improvements funded, in whole or in part, by federal funds.

7. DAVIS-BACON AND RELATED ACT WAGE RATES:

- ☐ The work performed under this contract is federally funded in whole, or in part. Pursuant to _____, Vendors are required to pay applicable Davis-Bacon wage rates.
- ☒ The work performed under this contract is not subject to Davis-Bacon wage rates.

8. SUBCONTRACTOR LIST SUBMISSION: In accordance with W. Va. Code § 5-22-1, the apparent low bidder on a contract valued at more than \$250,000.00 for the construction, alteration, decoration, painting or improvement of a new or existing building or structure shall submit a list of all subcontractors who will perform more than \$25,000.00 of work on the project including labor and materials. (This section does not apply to any other construction projects, such as highway, mine reclamation, water or sewer projects.) The subcontractor list shall be provided to the Purchasing Division within one business day of the opening of bids for review. If the apparent low bidder fails to submit the subcontractor list, the Purchasing Division shall promptly request by telephone and electronic mail that the low bidder and second low bidder provide the subcontractor list within one business day of the request. Failure to submit the subcontractor list within one business day of receiving the request shall result in disqualification of the bid.

If no subcontractors who will perform more than \$25,000.00 of work are to be used to complete the project, the apparent low bidder must make this clear on the subcontractor list, in the bid itself, or in response to the Purchasing Division's request for the subcontractor list.

a. Required Information. The subcontractor list must contain the following information:

- i. Bidder's name
- ii. Name of each subcontractor performing more than \$25,000 of work on the project.
- iii. The license number of each subcontractor, as required by W. Va. Code § 21-11-1 et. seq.
- iv. If applicable, a notation that no subcontractor will be used to perform more than \$25,000.00 of work. (This item iv. is not required if the vendor makes this clear in the bid itself or in documentation following the request for the subcontractor list.)

b. Subcontractor List Submission Form: The subcontractor list may be submitted in any form, including the attached form, as long as the required information noted above is included. If any information is missing from the bidder's subcontractor list submission, it may be obtained from other documents such as bids, emails, letters, etc. that accompany the subcontractor list submission.

c. Substitution of Subcontractor. Written approval must be obtained from the State Spending Unit before any subcontractor substitution is permitted. Substitutions are not permitted unless:

- i. The subcontractor listed in the original bid has filed for bankruptcy;
- ii. The subcontractor in the original bid has been debarred or suspended; or
- iii. The contractor certifies in writing that the subcontractor listed in the original bid fails, is unable, or refuses to perform his subcontract.

Subcontractor List Submission (Construction Contracts Only)Bidder's Name: Dougherty Company, Inc.

CRFQ 0211 GSD 2200000036

☐ Check this box if no subcontractors will perform more than \$25,000.00 of work to complete the project.

Subcontractor Name	License Number if Required by W. Va. Code § 21-11-1 et. seq.
Cornerstone Electric LLC	WV040693
Agsten Construction Company, Inc.	WV031022
Prime Insulation	WV023110
TRANE	WV026978

Attach additional pages if necessary

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.



(Name, Title)

Brian W. Smith, President

(Printed Name and Title)

P.O. Box 1828, Charleston, WV 25327

(Address)

(304)925-6664 / (304)925-4280

(Phone Number) / (Fax Number)

briansmith@doughertyco.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

Dougherty Company, Inc.

(Company)



(Authorized Signature) (Representative Name, Title)

Brian W. Smith, President

(Printed Name and Title of Authorized Representative)

4/07/2022

(Date)

(304)925-6664 / (304)925-4280

(Phone Number) (Fax Number)

REQUEST FOR QUOTATION
Building 1, West Wing Fan Coil Replacement Project – Phase 2

GENERAL CONSTRUCTION SPECIFICATIONS (No AIA Documents)

1. **Purpose and Scope:** The West Virginia Purchasing Division is soliciting bids on behalf of the WV Department of Administration, General Services Division, to establish a contract for the following:

To provide electrical power upgrade and install, the owner provided Liebert units for the Auditors office in the west wing of the Capitol Complex, Building 1, as shown on the attached Exhibits.

The Vendor shall furnish all materials, labor, and equipment necessary to complete all Construction Services. The Vendor shall furnish any incidental work, materials, labor, and equipment that are necessary to complete the Construction Services, even if such incidental work is not explicitly included in the Project Plans.

2. **Definitions:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions and in the Specification's Manual as defined below.

- 2.1. **"Construction Services"** means demolition and installation services as more fully described in the Project Plans.

- 2.2. **"Pricing Page"** means the pages contained in wvOASIS, attached hereto, or included in the Specifications/Project Manual upon which Vendor should list its proposed price for the Construction Services.

- 2.3. **"Solicitation"** means the official notice of an opportunity to supply the State with Construction Services that is published by the Purchasing Division.

- 2.4. **"Project Plans"** means documents developed by an architect, an engineer, the Agency, or another design professional, which are attached hereto as Exhibits B-J, that provide detailed instructions on how the Construction Services are to be performed. In the event that Project Plans contain drawings or other documents too large to attach in Exhibits B-J, Vendors can obtain copies in accordance with Section 9 of these Specifications.

3. **ORDER OF PRECEDENCE:** This General Construction Specifications document will have priority over, and supersede, anything contained in the Specifications/Project Manual.

4. **Qualifications:** Vendor, or Vendor's staff if requirements are inherently limited to individuals rather than corporate entities, shall have the following minimum qualifications:

REQUEST FOR QUOTATION
Building 1, West Wing Fan Coil Replacement Project – Phase 2

- 4.1. Experience:** Vendor, or Vendor's supervisory staff assigned to this project, must have successfully completed at least three (3) projects that involved work similar to that described in these specifications or the Project Plans. Compliance with this experience requirement will be determined prior to contract award by the State through references provided by the Vendor upon request, through knowledge or documentation of the Vendor's past projects, through confirmation of experience requirements from the architect assisting the State in this project, or some other method that the State determines to be acceptable. Vendor must provide any documentation requested by the State to assist in confirmation of compliance with this provision. References, documentation, or other information to confirm compliance with this experience requirement may be requested after bid opening and prior to contract award.
- 5. CONTRACT AWARD:** The Contract is intended to provide Agency with a purchase price for the Construction Services. The Contract will be awarded to the lowest qualified responsible bidder meeting the required specifications. If the Pricing Pages contain alternates/add-ons, the Contract will be awarded based on the grand total of the base bid and any alternates/add-ons selected.
- 6. SELECTION OF ALTERNATES:** Pursuant to W. Va. Code § 5-22-1(f), any solicitation of bids shall include no more than five alternates. Alternates, if accepted, shall be accepted in the order in which they are listed on the bid form. Any unaccepted alternate contained within a bid shall expire 90 days after the date of the opening of bids for review. Determination of the lowest qualified responsible bidder shall be based on the sum of the base bid and any alternates accepted. Alternate selection will be identified in the Purchase Order.
- 7. PERFORMANCE:** Vendor shall perform the Construction Services in accordance with this document and the Project Plans.
- 8. SUBSTITUTIONS:** Any substitution requests must be submitted in accordance with the official question and answer period described in the INSTRUCTIONS TO VENDORS SUBMITTING BIDS, Paragraph 4. Vendor Question Deadline. Vendors submitting substitution requests should submit product brochures and product specifications during the official question and answer period.
- 9. PROJECT PLANS:** The checked box will apply to Project Plans for this solicitation.
- ☒ **No Additional Project Plan Documents:** There are no additional Project Plans other than those attached hereto as Exhibits B-J or any subsequent addenda modifying Exhibits B-J.
- ☐ **Additional Project Plan Documents:** There are additional Project Plan documents other than those attached as Exhibit B. Copies of the additional Project Plan documents not attached as Exhibit B can be obtained by contacting the entity identified

REQUEST FOR QUOTATION
Building 1, West Wing Fan Coil Replacement Project – Phase 2

below.

10. CONDITIONS of the WORK

10.1. Permits: The Vendor shall procure all necessary permits and licenses to comply with all applicable Federal, State, or Local laws, regulations and ordinances of any regulating body.

10.2. Existing Conditions: If discrepancies are discovered between the existing conditions and those noted in the specifications, Vendor must immediately notify the Agency's representative. Vendor must also immediately notify the Agency if suspected hazardous materials are encountered.

10.3. Standard Work Hours: The standard hours of work for this Contract will be 7:00 am to 5:00 pm, Monday through Friday, excluding holidays recognized by the State of West Virginia. Any work outside of the standard hours of work must be approved in advance at the Agency's sole discretion. Authorization of work outside of the standard hours of work will not entitle Vendor to additional compensation.

10.4. Project Closeout: Project Closeout shall include the following:

10.4.1. Final Cleanup: Vendor shall perform the final cleanup activities listed below, along with any other final cleanup activities normally associated with the work performed under this Contract, prior to final inspection:

10.4.2. Final Inspection: Vendor shall participate in a final inspection with the Agency's project manager. The purpose of the final inspection will be to identify deficiencies that need to be remedied prior to Agency's final acceptance of the work. Vendor shall at all times be obligated to perform in accordance with the Contract and must take all actions necessary to ensure that work complies with requirements of Contract prior to final acceptance. Final acceptance does not waive or release Vendor from its obligation to ensure that work complies with the Contract requirements. Vendor shall submit any warranty documents to the Agency project manager at final inspection.

10.5. Payment

10.5.1. Agency shall pay flat fee as shown on the Pricing Page, for all Contract Services performed and accepted under this Contract. Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

10.5.1.1. Progress Billing: The Vendor will be paid in the form of periodic progress payments for work completed. Payment

REQUEST FOR QUOTATION
Building 1, West Wing Fan Coil Replacement Project – Phase 2

requests along with documentation supporting the request will be submitted to and reviewed by the Owner. If approved, the Owner will process payment. The Owner reserves the right to withhold liquidated damages from progress payments. Progress payments will be made no more than monthly.

Approval and payment of progress payments will be based on Vendor's submission of a payment allocation schedule which allocates the entire contract sum to payment milestones. Engineer and Owner will review the payment allocation and may mandate changes that they believe are necessary.

10.5.1.2. Liquidated Damages: Vendor shall pay liquidated damages in the amount of \$500.00 per calendar day for every calendar day beyond the completion date established by the Notice to Proceed in which they fail to achieve Final Completion of the Construction Services.

10.5.2. Invoices shall be submitted for payment (in arrears) and must include the following information:

10.5.2.1. Invoice must include, at a minimum, invoice date, FEIN number and complete address of vendor and Contract number.

10.5.2.2. Invoices shall be mailed to the following address:

General Services Division
112 California Avenue
Charleston, WV 25305

10.5.2.3. Or, emailed to GSDInvoices@wv.gov.

11. FACILITIES ACCESS: Performance of Contract Services may require access cards and/or keys to gain entrance to Agency's facilities. In the event that access cards and/or keys are required:

11.1. Vendor must identify principal service personnel which will be issued access cards and/or keys to perform service.

11.2. Vendor will be responsible for controlling cards and keys and will pay replacement fee, if the cards or keys become lost or stolen.

11.3. Vendor shall notify Agency immediately of any lost, stolen, or missing card or key.

11.4. Anyone performing under this Contract will be subject to Agency's security

REQUEST FOR QUOTATION
Building 1, West Wing Fan Coil Replacement Project – Phase 2

protocol and procedures.

11.5. Vendor shall inform all staff of Agency's security protocol and procedures.

- 12. Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: _____

Telephone Number: _____

Fax Number: _____

Email Address: _____

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Building 1, West Wing Fan Coil Replacement Project – Phase 2
CRFQ GSD2200000036

EXHIBIT A - Pricing Page

Base Bid (Commodity Line 1 in wvOasis): All inclusive, lump-sum bid to provide electrical power upgrade and install, the owner provided Liebert units for the Auditors office in the west wing of the Capitol Complex, Building 1, including all associated work as specified herein:

Lump Sum = \$ 896,000.00 (A)

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EXHIBIT B - PROJECT PLANS

1. GENERAL REQUIREMENTS:

1.1. Mandatory Construction Services Requirements: Construction Services must meet or exceed the mandatory requirements listed below. All work to be performed per the specifications included in the attached Exhibits.

1.1.1. Vendor shall:

- 1.1.1.1.** Remove existing walls in WB 6,7,8 including finishes on the existing exterior masonry walls. Remove ceiling and lighting. Remove the wall between WB 5 and WB 6. Protect existing corridor walls and doors on the room side and the corridor side. Provide two new single panel doors and one new double door.
- 1.1.1.2.** Provide and Install new 12.47kv unit substation (see attached cut sheet).
- 1.1.1.3.** Provide and install three new 480/277V panel boards as scheduled and indicated.
- 1.1.1.4.** Provide and install one new 112.5 copper wound K3 transformer and one 208/120 panelboard as scheduled. Transfer approximately five existing 120v circuits from existing MCC #1 to the new 208/120v panelboard WB 6.
- 1.1.1.5.** Provide new conduit and wiring from three existing pumps and one air compressor to the new 480/277V panel in West Basement 15.
- 1.1.1.6.** Demo power to three existing Liebert units in the Auditors computer room. (one ten ton from the existing UPS and two twenty ton units from MCC #1) See riser diagram.
- 1.1.1.7.** Receive, protect and install three new owner provided Liebert computer room a/c units. Provide hot tap on mechanical room chilled water piping as indicated and floor penetrations. Provide piping for chilled water supply and return to the three computer room units. Provide wiring and conduits to connect the three new units to the existing UPS. Remove existing UPS feeder and buck and boost transformer (that is routed through the top hat of MCC #1). Provide new feed from unit substation.
- 1.1.1.8.** Remove feeders (three) and conduits feeding MCC#1 and remove MCC #1. Remove feeders and conduits feeding 3 existing Liebert a/c condensers on the west wing roof. Maintain an existing roof warranty when patching the roof.

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Building 1, West Wing Fan Coil Replacement Project – Phase 2

- 1.1.1.9. Transfer 5 existing fan coil circuits and two existing pump circuits from MCC#1, to the new power panel WB 6 in room WB 15.
- 1.1.1.10. Provide new lighting circuit for substation space with new light fixture in accordance with the cut sheets attached.
- 1.1.1.11. See drawing for details subject to Vendor field verification.

1.2. BUILDING AUTOMATION SYSTEM – GENERAL DESCRIPTION

1.2.1. Provide an extension of the existing Building Automation System (BAS) to control all mechanical equipment associated with this project. All new building controllers, and equipment/plant controllers, shall be tied into the existing Trane Tracer Ensemble.

1.2.1.1. New controls shall be tied into owners existing Trane Ensemble System for a seamless user interface. Hotlinks/targets to other applications and/or separate web pages will be NOT accepted as a “seamless” interface to the Ensemble System.

1.2.1.2. Provide long term data logging and archiving of data for a minimum of 3 years.

1.2.1.3. All data, alarms, and graphics shall be available for user interface from both local workstation(s) as well as mobile devices through either a mobile browser and/or mobile app.

1.2.1.4. ATC shall provide any necessary controls hardware and/or software upgrades to the existing Ensemble System to meet the spec requirements of this project.

1.2.1.4.1. The Building Automation System shall be as indicated on the drawings and described in these specifications. System must be fully integrated and coordinated with mechanical equipment DDC controllers furnished and installed in the equipment manufacturer’s factory as specified in those sections. The intent of the BAS is to tie all mechanical equipment into one system for global monitoring, control, and alarming associated with the building. It is the BAS manufacturer’s responsibility to provide all the design, engineering, and field coordination required to ensure all equipment sequence of operations are met as specified and the designated BAS operators have the capability of managing the building mechanical system to ensure occupant comfort while maintaining energy efficiency.

1.2.1.4.2. The BAS shall meet open standard protocol communication standards (As defined in System Communications and Field Bus Communications of COMMUNICATIONS) to ensure the system maintains “interoperability” to avoid proprietary arrangements that

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will make it difficult for the Owner to consider other BAS manufacturers in future projects.

1.2.1.4.3. Direct Digital Control (DDC) technology shall be used to provide the functions necessary for control of mechanical systems and terminal devices on this project.

1.2.1.4.4. The BAS shall accommodate simultaneous multiple user operation. Access to the control system data should be limited only by the security permissions of the operator role. Multiple users shall have access to all valid system data. An operator shall be able to log onto any workstation on the control system and have access to all appropriate data.

1.3. BAS - APPROVED CONTROL SYSTEM MANUFACTURERS

1.3.1. Trane Tracer® – Basis of Design

1.4. BAS - SYSTEM COMMUNICATION

1.4.1. System Communications

1.4.1.1. Each workstation, building controller, and equipment controller communication interface shall utilize the BACnet protocol with an Ethernet (IEEE 802.3, 802.11), RS485 (EIA-485), or Zigbee (802.15.4) physical interface and an appropriate data link technology as defined in ANSI®/ASHRAE® Standard 135-2012. (e.g. BACnet over IP, BACnet over IPv6, BACnet over MS/TP, BACnet Zigbee).

1.4.1.2. All system controllers shall be BTL listed as a BACnet Building Controller (B-BC) as defined in ANSI®/ASHRAE® Standard 135-2012. All documented status and control points, schedule, alarm, and data-log services or objects shall be available as standard object types as defined in ANSI®/ASHRAE® Standard 135-2012.

1.4.1.3. Each System Controller shall communicate with a network of Custom Application and Application Specific Controllers utilizing one or more of the interfaces documented within Field Bus Communications below.

1.4.2. Field Bus Communications

1.4.2.1. BACnet

1.4.2.1.1. All equipment and plant controllers shall be BTL listed as a BACnet Application Specific Controller (B-ASC) or a BACnet Advanced Application Controller (B-AAC) as defined in ANSI®/ASHRAE® Standard 135-2012.

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1.4.2.1.2. All communication shall conform to ANSI®/ASHRAE® Standard 135-2012.

1.4.2.1.3. System Controller shall function as a BACnet router to each unit controller providing a globally unique BACnet Device ID for all BACnet controllers within the system.

1.4.2.1.4. BACnet over Zigbee

1.4.2.1.4.1. Communication between System Controller and equipment/plant controllers shall utilize BACnet over Zigbee as defined in ANSI®/ASHRAE® Standard 1352012.

1.4.2.1.4.2. Each equipment controller wireless communication interface shall self-heal to maintain operation in the event of network communication failure.

1.4.2.1.4.3. Each zone sensor wireless communication interface shall be capable of many-to-one sensors per controller to support averaging, monitoring, and multiple zone applications. Sensing options shall include temperature, relative humidity, CO2, and occupancy.

1.4.2.1.5. BACnet over MS/TP

1.4.2.1.5.1. Communication between System Controller and equipment/plant controllers shall utilize BACnet over MS/TP as defined in ANSI®/ASHRAE® Standard 1352012.

1.4.3. Vendor must provide Agency with training on use of equipment prior to Final Acceptance.

1.5. Painting: Vendor will perform painting in accordance with Exhibit H.

2. SCHEDULE: Vendor and Agency shall agree upon a schedule for performance of Contract Services and Contract Services Deliverables, unless such a schedule is already included herein by Agency. In the event that this Contract is designated as an open-end contract, Vendor shall perform in accordance with the release orders that may be issued against this Contract.

2.1. Vendor and Agency shall agree upon a schedule for performance of Contract Services and Contract Services Deliverables, unless such a schedule is already included herein by Agency.

2.2. The Vendor shall provide the Agency Project Manager with an overall project schedule

REQUEST FOR QUOTATION
Building 1, West Wing Fan Coil Replacement Project – Phase 2

within **seventy-two (72) hours** of Award of the Contract. The proposed project schedule shall indicate areas to be worked. Where coordination or disruption of adjacent workspaces or occupants may be required, provide at least one week's advance notice prior to conducting work in those areas. Vendor shall adhere to schedule provided and coordinate through the Agency Project Manager.

2.3. Work shall be conducted as a single project. The work schedule shall be reviewed and approved by the Agency Project Manager prior to commencement of the work. The Vendor shall coordinate the schedule around the Agency's work requirements.

3. TRAVEL: Vendor shall be responsible for all mileage and travel costs, including travel time, associated with performance of this Contract. Any anticipated mileage or travel costs may be included in the Vendor's bid, but such costs will not be paid by the Agency separately.

4. PROJECT SPECIFIC CONDITIONS OF THE WORK

4.1. Limits of Work

Work areas will be limited to those spaces required for access to the jobsite. The Vendor shall be required to leave the work area clean upon completion of work daily. Vendor shall make arrangements for the collection and disposal of Vendors waste and construction related debris. Debris shall be removed on a daily basis.

4.2. Work Restrictions

Access to the building shall be coordinated with the Owner. Vendor shall not leave open doors unattended and shall close doors when not in use. This is a non-smoking building. Smoking is not permitted within the building or near entrances, operable windows or outdoor air intakes.

4.3. Parking

Some parking is available on the project site. Parking in non-designated areas is not permitted. Parking is the responsibility of the Vendor. With prior approval, Vendor's vehicles may be brought on-site for loading & unloading or to provide equipment necessary for conducting the work. Use of loading dock areas or sidewalk areas for parking is strictly prohibited. Vendor must coordinate with the Agency on how best to minimize disruption of employee parking during the execution of the work.

4.4. Codes

All work is to be performed in compliance with applicable Federal and State codes including but not limited to the International Building Code, International Mechanical Code, Life Safety Code, NEC, OSHA, UL, ANSI, ASME and related standards.

REQUEST FOR QUOTATION
Building 1, West Wing Fan Coil Replacement Project – Phase 2

4.5. Safety

All applicable local safety and OSHA rules and guidelines shall be met by the Vendor. Work shall be subject to verification and inspection by GSD Safety representatives. Such verification shall not relieve the Vendor from meeting all applicable safety regulations and inspection by other agencies.

Notify Owner if suspected hazardous materials are encountered. Any areas requiring abatement will be provided by the GSD under separate contract.

Vendor to provide barricades around open excavations to protect the general public.

4.6. Workmanship

Vendor shall complete all work in a neat and workmanlike manner. All work shall be done using new materials in a manner that meets commercial quality standards. Work shall be neat, true, plumb and square, as applicable. Vendor shall verify all dimensions.

4.7. General Services Division Jobsite Safety Handbook

Prior to beginning any work covered by the Contract, Vendor shall have read, reviewed and acknowledged in writing the attached Jobsite Safety Handbook (Exhibit J).

4.8. Warranty

A minimum one (1) year warranty on labor is required, and Vendor must provide one (1) year or manufacturer's warranty on materials, whichever is longer. Vendor will be required to provide Agency with all warranty documentation prior to Final Acceptance.

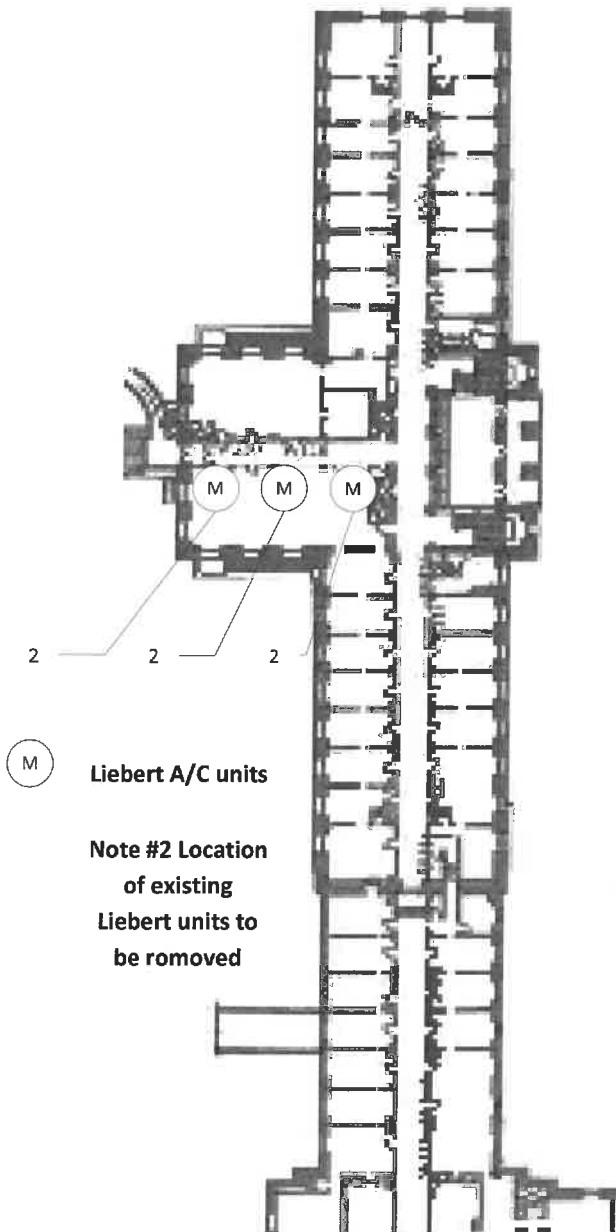
Exhibit C - Page 1

General Notes Mechanical:

1. Contractor will receive and install three new chilled water Liebert A/C units provided by the owner. Remove three existing Liebert units.
2. Recover refrigerant and remove refrigerant piping to the roof.
3. Remove existing condensers from the building roof and patch roofing maintaining factory warranty.
4. core drill existing floor and connect units to the existing west wing chilled water system.
5. Hot tap existing west wing 8" chilled water supply and return in room WB 15.
6. Provide a 4" header and full port ball valves at the hot tap of the supply and return. Provide separate 2" takeoff from the headers to each unit.
7. Provide full throat ball valves at each header take off and at each unit.
8. Connect each unit to the existing condensate drain system.
9. Provide 2 inch fiberglass insulation with a PVC jacket on supply return and condensate piping.

General Notes Electrical:

1. Remove feeders to existing units to include cables and conduits.
2. Remove existing buck and boost transformer, disconnects and feeders to MCC#1 and PNL PB-2
3. Provide new breakers cables and conduit to connect three new Liebert A/C units to existing PNL PB-2

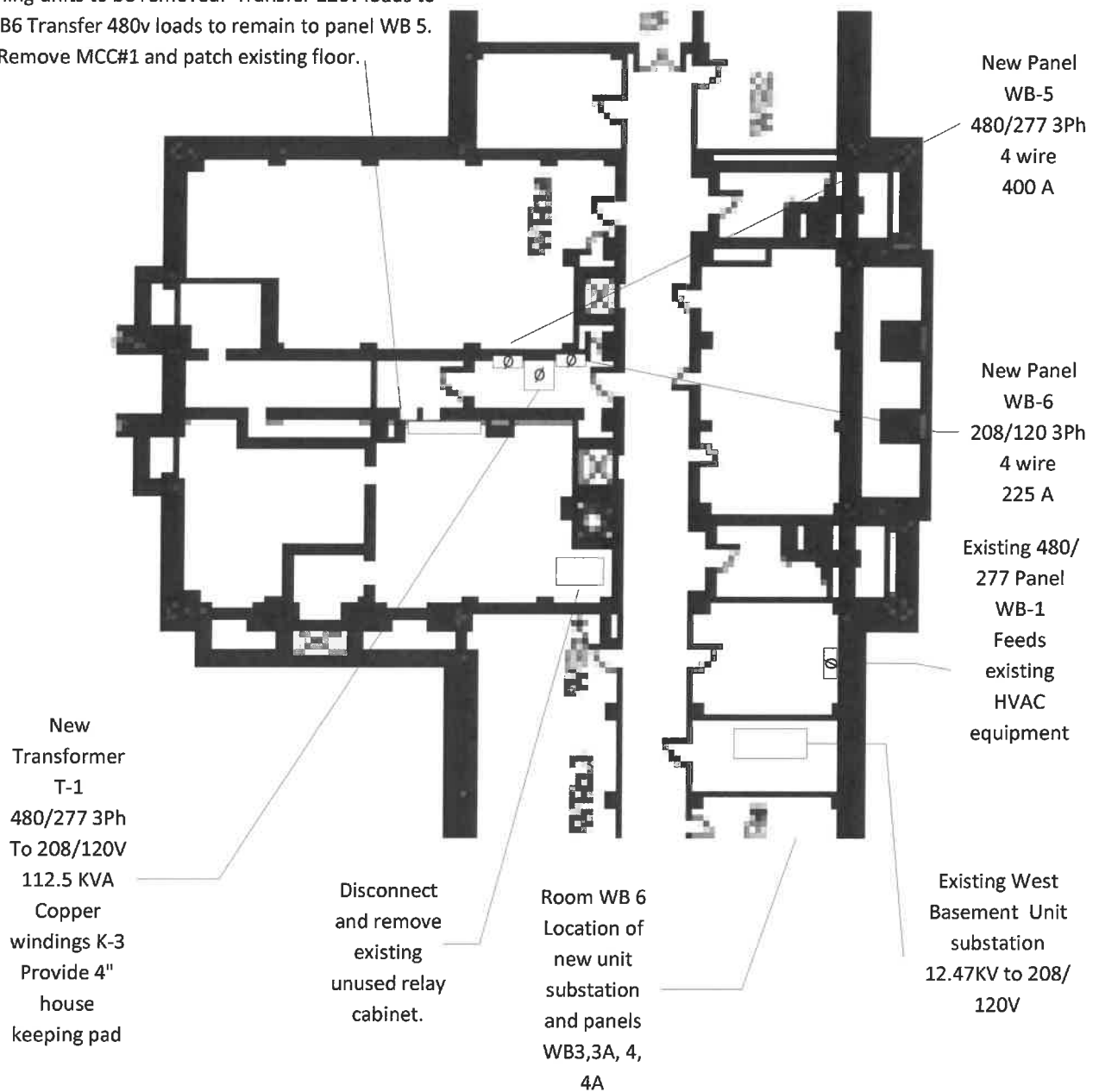


GSD Energy Department	West Wing Ground Floor			
	Ground Floor FC Replacement Phase 2			
	SIZE	FSCM NO	DWG NO	REV
	SCALE	1 : 1	20	SHEET 1 OF 7

Exhibit C - Page 2

Existing West Basement MCC#1 208/120V sections
Feeds existing Fan Coil units. 480/277 feeds existing air conditioning units to be removed. Transfer 120v loads to panel WB6 Transfer 480v loads to remain to panel WB 5.

Remove MCC#1 and patch existing floor.



GSD Energy Department	Building 1 West Basement Partial Plan			
	West Basement Electrical Plan Phase 2			
	SIZE	FSCM NO FSM	DWG NO	REV 0
	SCALE	NTS	24	SHEET 2 OF 7

Panel		WB-3		Location		West Basement 6		Feeder Size		4-250MCM with a #4 GND in a 3 inch conduit	
Amps		480/277 3Ph 4 Wire		Main Circuit Breaker		250A		Feed Through Lugs		40,000 RMS bracing	
Breaker	Amps	Poles	Description	Circuit		Phase Load		C	Circuit		Breaker
				Watts	Number	A	B		Watts	Number	
20	1	1	Spare		1					2	Spare
20	1	1	Spare		3					4	Spare
20	1	1	Spare		5					6	Spare
20	1	1	Spare		7					8	Spare
15	1	1	Spare		9					10	Spare
15	1	1	Spare		11					12	Spare
15	1	1	Spare		13					14	Spare
15	1	1	Spare		15					16	Spare
15	1	1	Spare		17					18	Spare
15	1	1	Spare		19					20	Spare
15	1	1	Spare		21					22	Spare
15	1	1	Spare		23					24	Spare
15	1	1	Spare		25					26	Spare
15	1	1	Spare		27					28	Spare
			Space		29					30	Spare
			Space		31					32	Spare
			Space		33					34	Spare
			Space		35					36	Spare
			Space		37					38	Spare
			Space		39					40	Spare
			Space		41					42	Spare
			Space		43					44	Spare
			Space		45					46	Spare
			Space		47					48	Spare
Notes:				Totals							
				Copper Buss Only!				Total Loads			
								Watts			
								Amps			

Panel			WB-3A			Location			West Basement			
						Feeder Size			4-250 MCM with a #4 GND in a 3 inch conduit			
Amps			480/277 3Ph 4 Wire			Main Circuit Breaker			250A			
Breaker		Description	Circuit		Phase Load			Circuit	Description	Breaker		
Amps	Poles		Watts	Number	A	B	C	Watts	Number	Amps	Poles	
20	1	Spare		1					2	Spare	20	1
20	1	Spare		3					4	Spare	15	1
20	1	Spare		5					6	Spare	15	1
20	1	Spare		7					8	Spare	15	1
15	1	Spare		9					10	Spare	15	1
15	1	Spare		11					12	Spare	15	1
15	1	Spare		13					14	Spare	15	1
15	1	Spare		15					16	Spare	20	1
15	1	Spare		17					18	Spare	15	1
15	1	Spare		19					20	Spare	20	1
15	1	Spare		21					22	Spare	15	1
15	1	Spare		23					24	Spare	15	1
15	1	Spare		25					26	Spare	15	1
15	1	Spare		27					28	Spare	15	1
15	1	Spare		29					30	Spare	15	1
15	1	Spare		31					32	Spare	15	1
15	1	Spare		33					34	Spare	15	1
15	1	Spare		35					36	Spare	20	1
15	1	Spare		37					38	Spare	20	1
15	1	Spare		39					40	Spare	20	1
15	1	Spare		41					42	Spare	20	1
15	1	Spare		43					44	Spare	20	1
15	1	Spare		45					46	Spare	20	1
15	1	Spare		47					48	Spare	20	1
Notes:			Totals								Total Loads	
											Watts Amps	

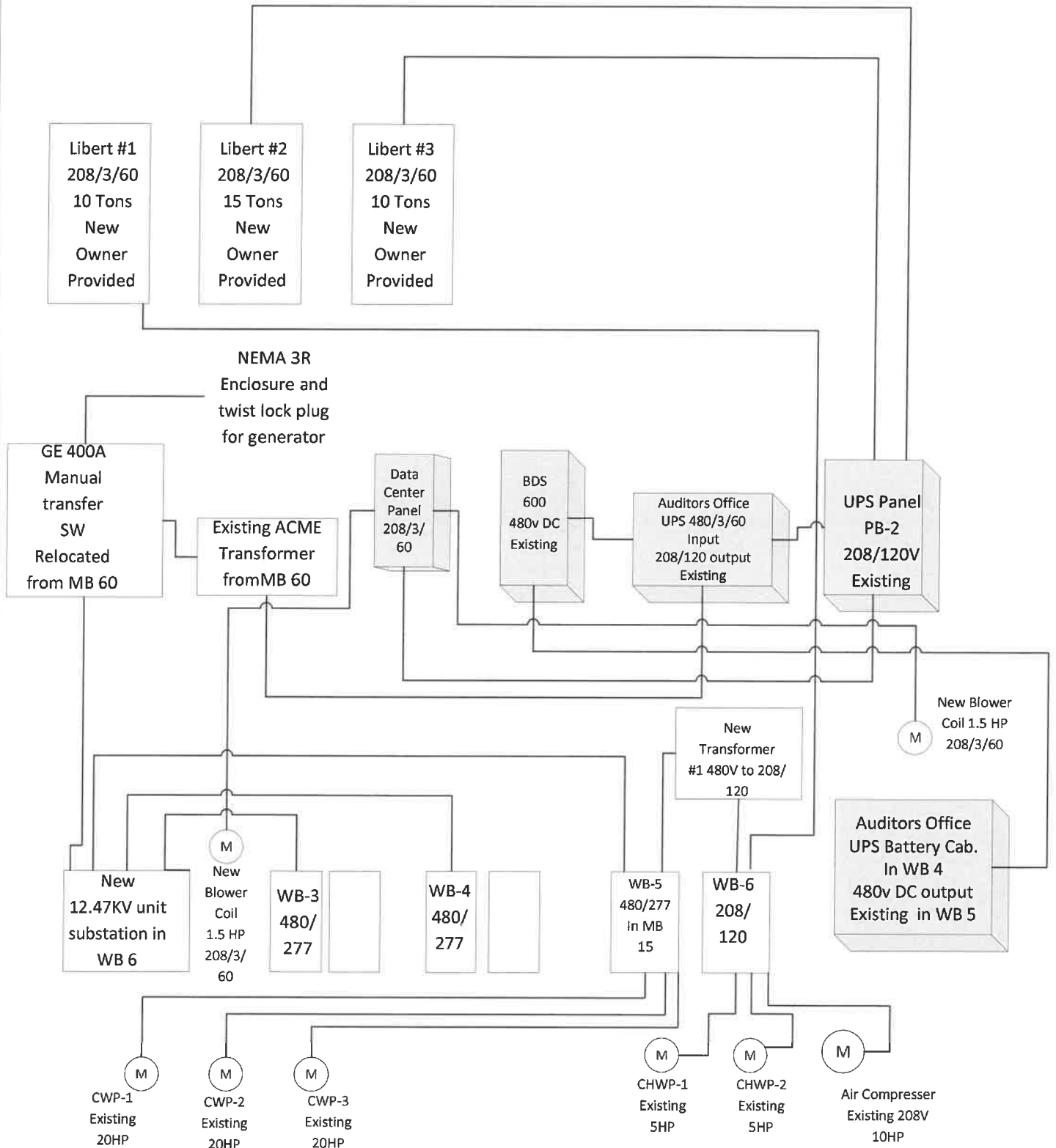
Panel		WB-4		Location		West Basement 6									
Amps		480/277 3Ph 4 Wire		Main Circuit Breaker		250A		Feeder Size		4-250 MCM with a #4 GND in a 3 inch conduit					
Breaker		Description		Circuit		Phase Load		Circuit		Description		Breaker			
Amps	Poles			Watts	Number	A	B	C	Watts	Number			Amps	Poles	
20	1	Spare			1					2	Spare		20	1	
20	1	Spare			3					4	Spare		15	1	
20	1	Spare			5					6	Spare		15	1	
20	1	Spare			7					8	Spare		15	1	
15	1	Spare			9					10	Spare		15	1	
15	1	Spare			11					12	Spare		15	1	
15	1	Spare			13					14	Spare		15	1	
15	1	Spare			15					16	Spare		20	1	
15	1	Spare			17					18	Spare		15	1	
15	1	Spare			19					20	Spare		20	1	
15	1	Spare			21					22	Spare		15	1	
15	1	Spare			23					24	Spare		15	1	
15	1	Spare			25					26	Spare		15	1	
15	1	Spare			27					28	Spare		15	1	
		Space			29					30	Spare		15	1	
		Space			31					32	Spare		15	1	
		Space			33					34	Spare		15	1	
		Space			35					36	Space		15	1	
		Space			37					38	Space				
		Space			39					40	Space				
		Space			41					42	Space				
		Space			43					44	Space				
		Space			45					46	Space				
		Space			47					48	Space				
Notes:				Totals									Total Loads		Watts Amps
						</									

Panel		WB-4A		Location		West Basement 6		Feeder Size		4-250 MCM with #4 GND in a 3 inch conduit			
Amps		480/277 3ph 4 Wire		Main Circuit Breaker		250A		40,000 RMS bracing					
Breaker		Description		Circuit		Phase Load		Circuit		Breaker			
Amps	Poles			Watts	Number	A	B	C	Watts	Number	Amps	Poles	
20	1	Spare			1					2	20	1	
20	1	Spare			3					4	15	1	
20	1	Spare			5					6	15	1	
20	1	Spare			7					8	15	1	
15	1	Spare			9					10	15	1	
15	1	Spare			11					12	15	1	
15	1	Spare			13					14	15	1	
15	1	Spare			15					16	20	1	
15	1	Spare			17					18	15	1	
15	1	Spare			19					20	20	1	
15	1	Spare			21					22	15	1	
15	1	Spare			23					24	15	1	
15	1	Spare			25					26	15	1	
15	1	Spare			27					28	15	1	
		Space			29					30	15	1	
		Space			31					32	15	1	
		Space			33					34	15	1	
		Space			35					36			
		Space			37					38			
		Space			39					40			
		Space			41					42			
		Space			43					44			
		Space			45					46			
		Space			47					48			
Notes:				Totals								Total Loads	
												Watts	
												Amps	
												Totals	
												Copper Buss only!	
												Watts	
												Amps	

Panel: WB-6														Location: West Basement 15													
Feeder Size														4-4/0 with a #4 GND in a 2 1/2 inch conduit													
Amps		120/208 3Ph 4 wire				Circuit Breaker				225A				22,000 RMS bracing													
Breaker		Description		Circuit		Phase Load		Circuit		Description		Breaker															
Amps	Poles			Watts	Number	A	B	C	Watts	Number		Amps	Poles														
20	1			1920	1	1920				2	Spare	20	1														
20	1		Existing Fan Coil Units	1920	3		1920			4	Spare	20	1														
20	1		Existing Fan Coil Units	1920	5			1920		6	Spare	20	1														
20	1		Existing Fan Coil Units	1920	7	1920				8	Spare	20	1														
20	1		Existing Fan Coil Units	1920	9		1920			10	Spare	20	1														
				2004	11			2004		12	Spare	20	1														
25	3		CHWP-1 5HP	2004	13	2004				14	Spare	20	1														
				2004	15		2004			16	Spare	20	1														
				2004	17			2004		18	Spare	20	1														
25	3		CHWP-2 5HP	2004	19	2004				20	Spare	20	1														
				2004	21		2004			22	Spare	20	1														
				3696	23			2004		24	Spare																
40	3		Air Compressor 10 HP	3696	25	2004				26	Spare																
				3696	27		2004			28	Spare																
				7692	29	7652				30	Spare																
90	3		Auditor's Office A/C #1	7692	31		7652			32	Spare																
				7692	33			7652		34	Spare																
			Space		35					36	Spare																
			Space		37					38	Spare																
			Space		39					40	Spare																
			Space		41					42	Spare																
			Space		43					44	Spare																
			Space		45					46	Spare																
			Space		47					48	Spare																
Notes:						Totals								Total Loads		Watts 50,712 Amps 140											
						Copper Buss Only!																					

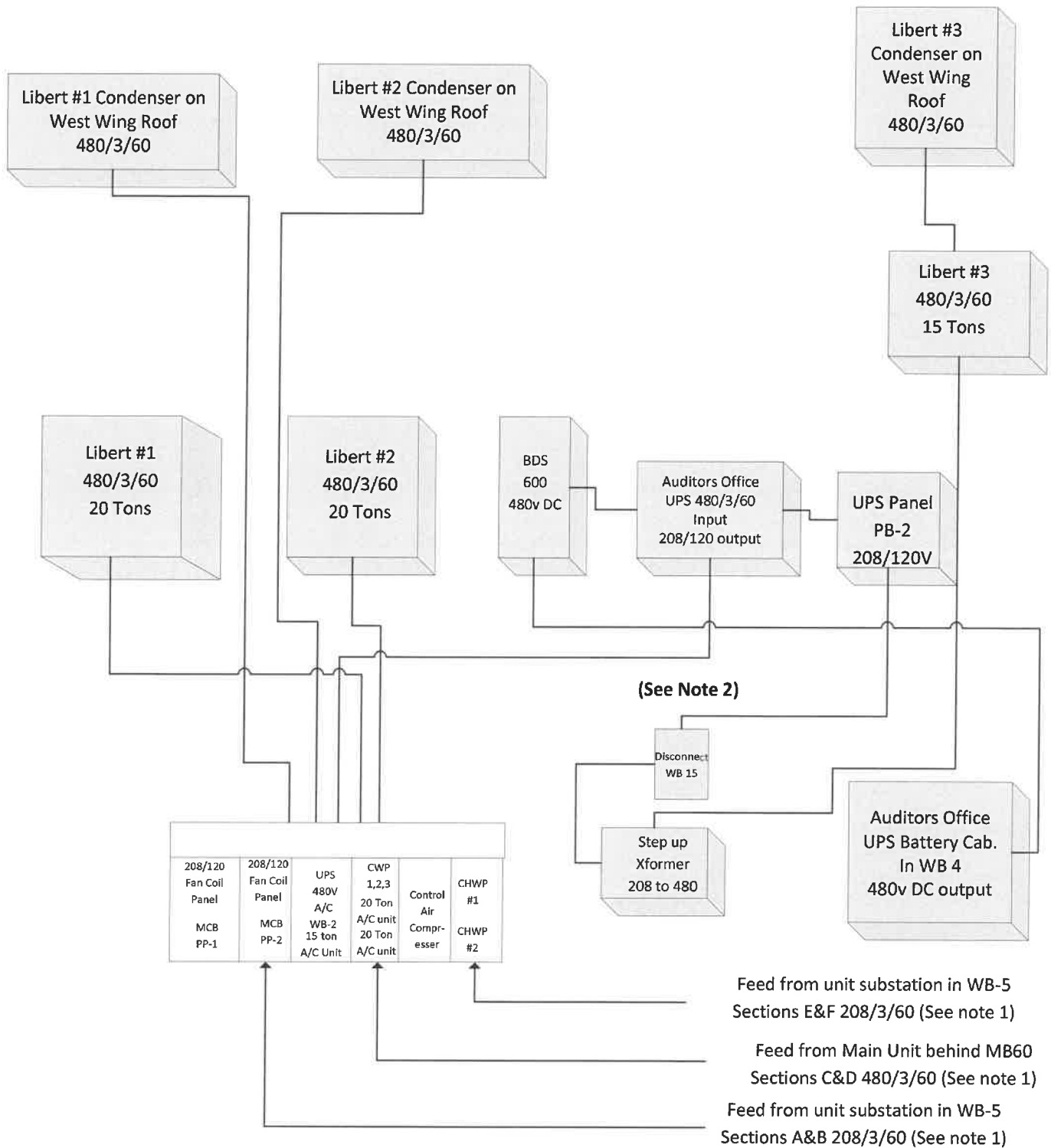
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Exhibit C - Page 9



GSD Energy Department	Building 1 West Basement Partial Plan			
	West Basement Electrical Plan Phase 2(New)			
	SIZE	FSCM NO FSM	DWG NO	REV 0
	SCALE	NTS	24	SHEET 3 OF 7

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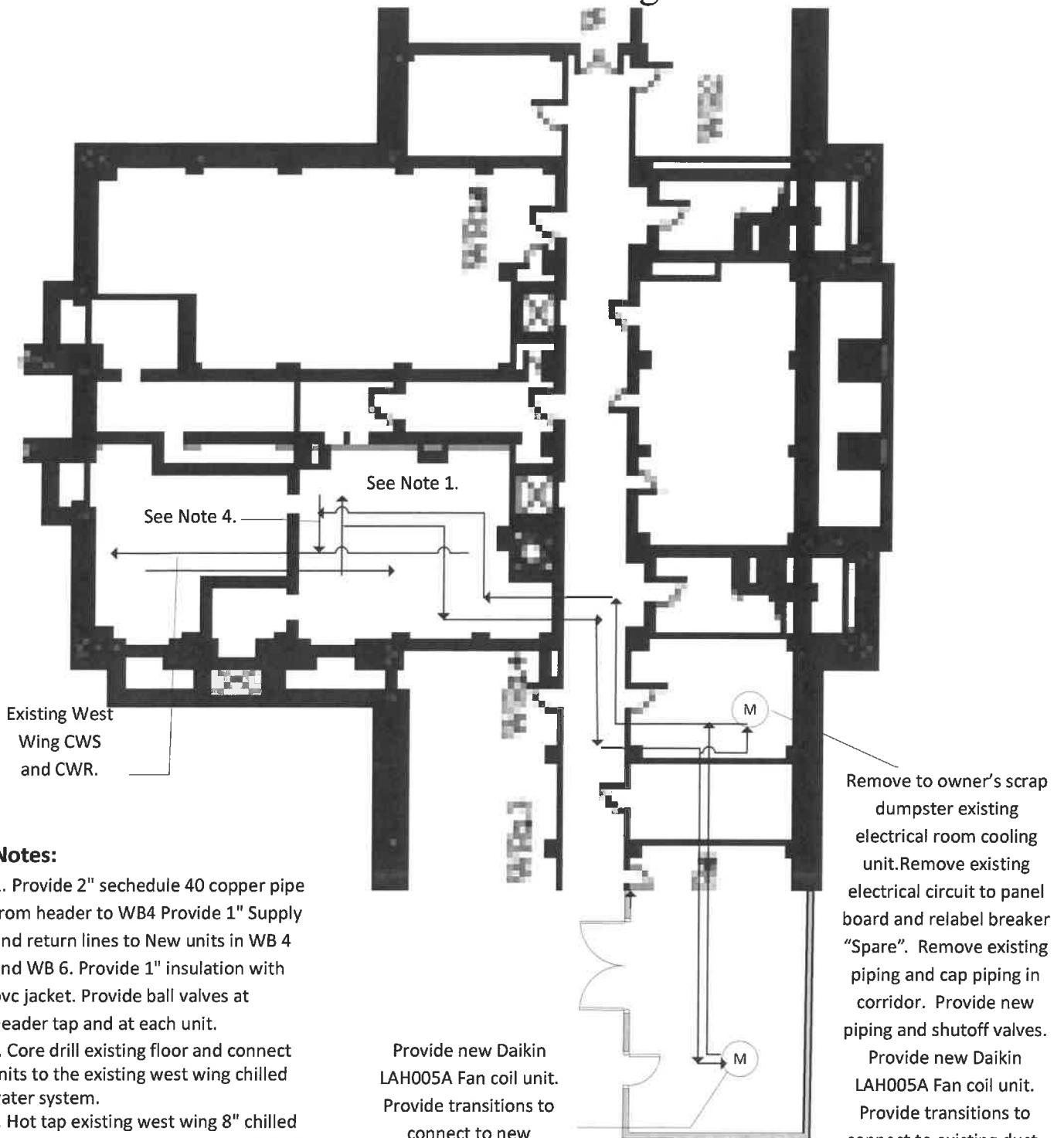


Notes:

1. All three MCC feeders are overhead.
2. Feeders run through top hat Of MCC.

GSD Energy Department	Building 1 West Basement Partial Plan			
	West Basement Electrical Plan Phase 2(Existing)			
	SIZE	FSCM NO FSM	DWG NO	REV 0
	SCALE	NTS	24	SHEET 4 OF 7

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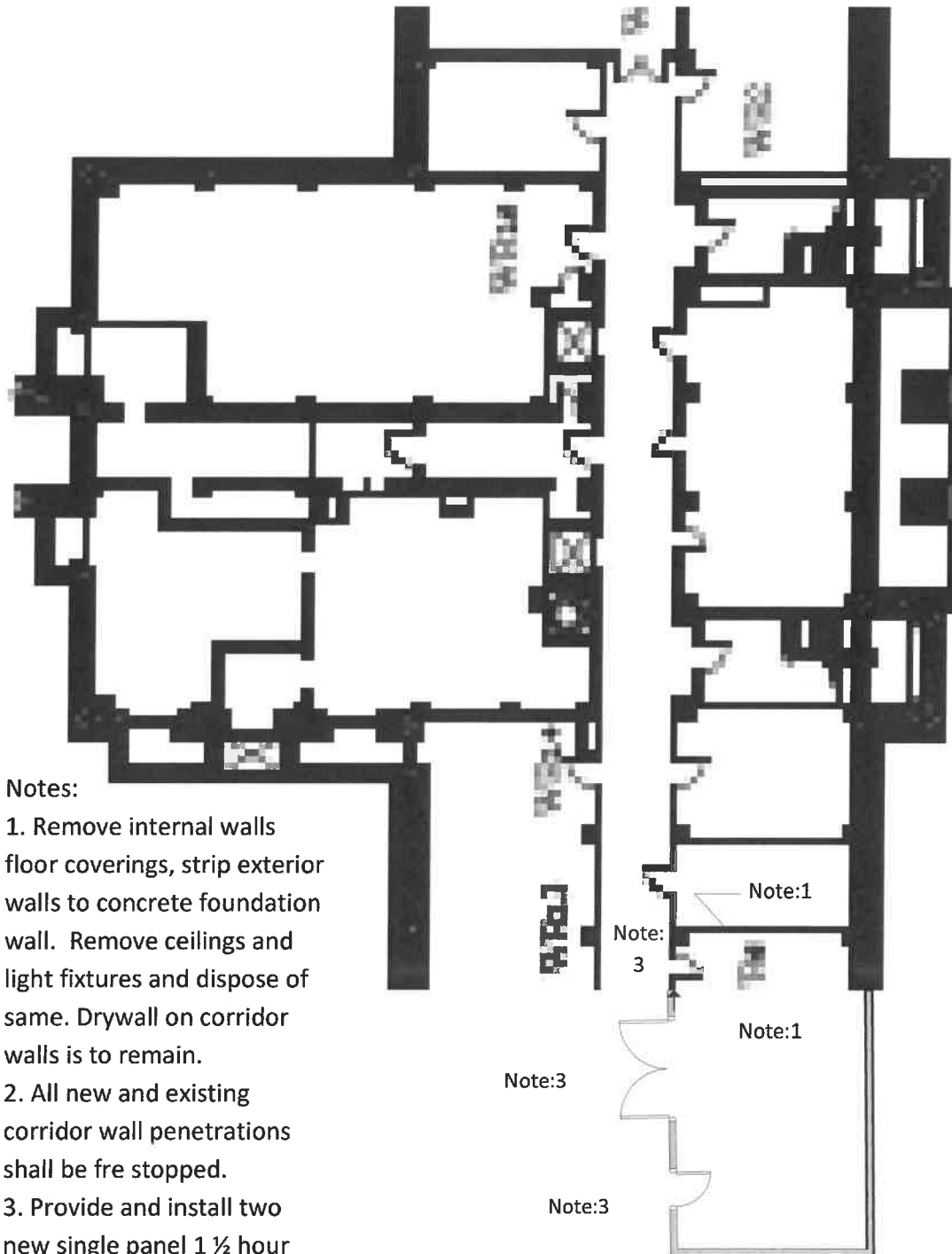


Notes:

1. Provide 2" sechedule 40 copper pipe from header to WB4 Provide 1" Supply and return lines to New units in WB 4 and WB 6. Provide 1" insulation with pvc jacket. Provide ball valves at header tap and at each unit.
2. Core drill existing floor and connect units to the existing west wing chilled water system.
3. Hot tap existing west wing 8" chilled water supply and return in room WB 15.
4. Provide a 4" header and full port ball valves at the hot tap of the supply and return. Provide separate 2" takeoff from the headers to each unit.
5. Provide full throat ball valves at each header take off and at each unit.
6. Connect each unit to the existing condensate drain system.
7. Provide 2 inch fiberglass insulation with a PVC jacket on supply return and condensate piping.

GSD Energy Department	Building 1 West Basement Partial Plan			
	West Basement Mechanical Plan Phase 2(New)			
	SIZE	FSCM NO FSM	DWG NO	REV 0
	SCALE	NTS	24	SHEET 5 OF 7

Exhibit C - Page 12



Notes:

1. Remove internal walls floor coverings, strip exterior walls to concrete foundation wall. Remove ceilings and light fixtures and dispose of same. Drywall on corridor walls is to remain.
2. All new and existing corridor wall penetrations shall be fire stopped.
3. Provide and install two new single panel 1 ½ hour doors and one 1 1/2 hour double door to match existing. New hardware to match existing.
4. See sheet 7 of 7 for door requirements.

GSD Energy Department	Building 1 West Basement Partial Plan			
	West Basement A/E Plan Phase 2(New)			
	SIZE	FSCM NO FSM	DWG NO	REV 0
	SCALE	NTS	24	SHEET 6 OF 7

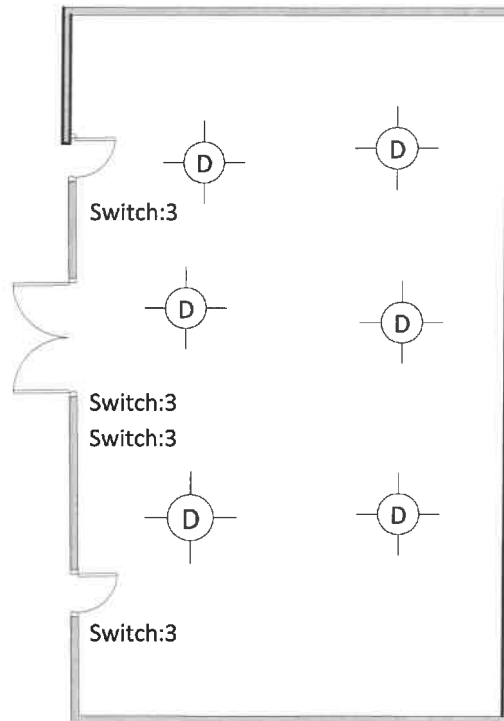
Exhibit C - Page 13

Lighting Notes:

1. Suspended lights are Barron model BAR RCL40-4K-WH-SC. Input voltage 120-277v.
2. Wire 3 lights to each of two sets of three way switches at doors as indicated.
3. Demolish existing lighting circuits and lighting switches etc. in project area.
Provide new single pole breaker and power circuit to Panel WB 5.
4. Coordinate light positions with installed equipment.

New door notes:

1. Provide and install two new single panel 1 ½ hour doors and one 1 1/2 hour double door to match existing. New hardware to match existing.
2. Hollow metal frames shall be 16gage welded assemblies w/Curries "275" ogee profile or equivalent 1 1/2hour rated fire doors.
3. Hollow metal doors shall be Curries High Definition 2-panel embossed or equivalent. Overlapping Astragal provided by mfg. for door pairs.
4. All hardware shall be US3 Bright Brass to match existing.
5. Hinges shall be Hager BB1279 5"X 5" US3 ball tip.
6. Exit devices shall be Corbin Russwin "5200A X L955 US3"
7. Locks shall be Corbin Russwin "ML2055 LWA 605" Keying as required.
8. Closers shall be Norton 8501 w/696 gold sprayed finish. Closers shall be "8501 696" Where "stop arm" parallel arm closers are required. Closers shall be "CLP8501 696".
9. Flush bolts for pairs shall be Hager 282D US3.
10. Wall stops shall be 236W US3.



GSD Energy Department	Building 1 West Basement Partial Plan			
	West Basement Lighting Plan Phase 2(New)			
	SIZE	FSCM NO FSM	DWG NO	REV 0
	SCALE	NTS	24	SHEET 7 OF 7



Liebert Products & Service

World Headquarters

United States

1050 Dearborn Drive, P.O. Box 29186

Columbus, Ohio 43229

Telephone: 614-888-0246

Liebert CW

Job Name	State Of Wv Auditors Office
Model	CW051DC1CT09B9 (15 TON)
Quantity	1
Date	12/17/2021
Invoice #	
Purchaser	
P.O. #	
Tag #	
Submitted By	Greg Bridgewater

2. Liebert CW

Liebert CW ENGINEERING SPECIFICATION SHEET FLOORMOUNT CHILLED WATER SYSTEMS

Project Name:

Date: 12/17/2021

Reference No.: CPQ-202832-1

Submitted By: Greg Bridgewater

Model Number: CW051DC1CT09B9

Quantity: 1

45 Deg Entering Water

UNIT PERFORMANCE DATA

- 75 °F (23.9 °C) DB 61 °F (16.1 °C) WB 44 % RH
- Total: 174,000 BTU/hr (51.0 kW), net capacity
- Sensible: 174,000 BTU/hr (51.0 kW), net capacity
- Flow Rate: 37.6 GPM (2.4 l/hr)
- Pressure Drop: 9.2 ft H₂O (27.5 kPa)

ELECTRICAL INFORMATION AND PERFORMANCE DATA

- 208/3/60 Voltage with 65,000 amps rms Short Circuit Current Rating
- 98.7 Full Load Amps *with Condensate Pump 101 FLA*
- 123.4 WSA *126.3 WSA*
- 150.0 OPD *(Note: Take out Reheat + Humidifier)* OPD ~~150.0~~ 43.2
FLA 54.3

CABINET SECTION

- Downflow Orientation
- Standard Color
- Colors: Main: Black Gray Matte (ZP-7021)
- Locking Disconnect Included and Dual Float Condensate Pump Included
- Domestic Packaging Option Included

CHILLED WATER COIL SECTION

- 4 Row Aluminum Coil with Copper Tubes
- Face Area or Coil: 18.5 ft² / (1.7 m²)

- Qty of (1) per Unit - 3-Way Valve High Pressure (400 psig / 2,758 kPa) with insulated chilled water piping
- 400 psig / 2,758 kPa Flow Switch, ships loose

Control, Sensors and Monitoring

- Liebert iCOM Control with High Definition Display
 - Integrated Controls and High Definition Color User Interface
 - Display Language is English
 - Audible and Visual Alarms
- iCOM based communication
 - BACnet IP (Ethernet Port)
 - BACnet MSTP (RS-485 Port)
 - IP Protocols over one network
- Reheat/Humidity Lockout
- Remote Humidifier Contact
- Low Voltage Terminal Package
 - (2) Two Extra Terminals for Remote Shutdown
 - (2) Two Extra Common Alarm Contacts
 - Main Fan Auxiliary Switch
 - Liqui-tect Shutdown
- Qty of (1) per Unit 4 Side Zone Leak Detection Sensor Included
- Smoke or High Temperature Sensor Not Included

FAN AND MOTOR SECTION

- Operating at 9200 CFM and 0.2 inches ESP at 0 - 1000 feet
- 2 Motors, 3.6 Hp each motor

FILTER SECTION

- Efficiency based on ASHRAE Standard 52.2
- 4" MERV 8 Filters

HUMIDIFIER SECTION

- Infrared with Auto-Flush Humidification
- Capacity: 17.4 lbs/hr (7.9 kg/hr) 6.4 kW

REHEAT SECTION

- • Electric Reheat —
 - Capacity: 68,240 BTU/hr (20 kW)
 - Steam Supplied: 219 °F (103.3 °C)

FLOORSTANDS AND PLENUM SECTION

- 24 (610mm)" Standard Floorstand

- No Plenum

WARRANTY INSPECTION, WARRANTY, AND SERVICE SECTION

ELECTRICAL INFORMATION AND PERFORMANCE DATA

SHORT CIRCUIT CAPACITY RATING

All 60 Hz Liebert CW Units with voltages of 460, 208, 230, 380 are manufactured with components necessary to provide a 65,000 Amp RMS Short Circuit Current Rating for the entire unit. Liebert CW Units using 575/3/60 volt power have a 25,000 Amp RMS Short Circuit Current Rating for the entire unit. All 50 Hz Liebert CW Units are manufactured with components necessary to provide a 5,000 Amp RMS Short Circuit Current Rating for the entire unit.

UNIT FACTORY INSTALLED LOCKING DISCONNECT SWITCH

The Locking Disconnect consists of a non-automatic molded case switch operational from the outside of the unit. Access to the high voltage electric panel compartment can be obtained only with the switch in the "off" position. The molded case switch disconnect models contain separate main fuses. Units with fused disconnect have main fuses within the disconnect.

DUAL FLOAT CONDENSATE PUMP - The pump has capacity of 6 GPM (23 l/m) at 20 ft. head (58 kPa).

(Consult factory for 200V or 230V, 50Hz applications). The pump is complete with integral dual float switch, pump, motor assembly, and reservoir. The secondary float shall send a signal to the local alarm and shut down the unit upon high water condition. The unit is shipped loose for field installation on Chilled Water units that are Upflow with bottom return. They are also shipped loose for under floor field installation on CW038-CW060 units with EC fans.

CABINET SECTION

CABINET AND FRAME

Custom powder painted steel panels with 1" (25mm), 1 1/2 lbs. (.68 kg) insulation. A hinged control access panel opens to a second front panel, which is a protection enclosure for all high voltage components. Frame is constructed of 14 gauge heliarc welded steel and painted using an autodeposition coating system.

DOMESTIC PACKAGING

Liebert CW units are secured to a shipping skid with protective plastic covering and corner buffers.

CHILLED WATER COIL SECTION

COOLING COIL

A-Frame design with full face circuiting constructed of copper tubes and aluminum fins manufactured by Liebert. A stainless steel condensate drain pan is provided. All chilled water piping is insulated from the factory.

3-WAY CHILLED WATER CONTROL VALVE

The water circuit includes a 3-way modulating valve. The valve is designed for up to 400 PSI (2758 kPa) water pressure. The Liebert iCOM control positions the valve in response to room conditions.

HIGH PRESSURE CIRCUIT

The circuit consists of the chilled water coil, modulating valve, and piping. It is designed for a

maximum system water pressure of 400 PSIG (2758 kPa).

FLOW SWITCH

The 400 psig (2758kPa) flow switch can be field installed in the chilled water piping and wired to an alarm light to indicate a 'loss of flow' condition.

Control, Sensors and Monitoring

Liebert iCOM

The Liebert iCOM unit control is factory-set for Intelligent Control which uses 'fuzzy logic' and 'expert systems' methods. Proportional and Tunable PID are user selectable options. Internal unit component control includes the following: System Auto Restart, Sequential Load Activation, Hot Water Flush Cycles (if hot water coil is present), and Predictive Humidity Control. The control system and electronic circuitry is provided with self-diagnostics to aid in troubleshooting. The microcontroller board is diagnosed and reported as pass/not pass. Control inputs are indicated as on or off at the front monitor panel. Control outputs are able to be turned On or Off from the front monitor panel without using jumpers or a service terminal.

The display and housing are viewable while the unit panels are open or closed. The display is organized into three main sections: User Menus, Service Menus and Advanced Menus. The system displays user menus for: active alarms, event log, graphic data, unit view/status overview (including the monitoring of room conditions, operational status in % of each function, date and time), total run hours, various sensors, display setup, and service contacts. A password is required to make system changes within the service or advanced menus.

The Liebert iCOM control can activate an audible and visual alarm in event of any of the following conditions: High/Low Temperature, High/Low Humidity, Change Filters, Loss of Air Flow or Power, and four separate Custom Alarms.

Unit-to-Unit communication with another Liebert CW unit included as standard using a private ethernet network between iCOM controllers. Optional network switch required for unit-to-unit communication between three or more Liebert CW.

iCOM – High Definition Color Display

The standard user interface is the 7" High Definition Color Display which presents system information and allows all parameters to be viewed and adjusted. It features a capacitive touchscreen for navigation ease and LED color indicating operational status.

Supply Air Sensor

A factory installed and commissioned supply air sensor ships with the unit for sensor location in the field by others. The sensor is terminated on the Liebert iCOM unit controller terminal strip and the associated cable wiring is coiled within the unit for shipment. It is the responsibility of others to uncoil and locate the sensor in accordance with acceptable best practices and any local codes.

Common Alarm Contact

The common alarm contacts provide the customer with a set of normally open contacts for remote indication of unit alarms.

* Fan Power Control with Unit and UPS.

LOW VOLTAGE TERMINAL PACKAGE

The low voltage terminal package includes: two (2) additional remote shutdown terminals with a total of three locations to remotely shut down the unit; two (2) extra common alarm contacts with 3 sets of n/o contacts for remote indication of unit alarms.; main fan auxiliary switch, with one (1) set of normally open contacts to indicate that the motor/unit is running; and Liqui-tect Shutdown provides one (1) N/O contact. (Liqui-tect sensor not included.)

REHEAT/ HUMIDIFIER LOCKOUT

The option includes the relays necessary to disable the reheat and humidifier from an external customer supplied 24 Volt AC signal.

REMOTE HUMIDITY LOCKOUT

The option includes a dry contact closure to disable a remote humidifier.

Base-Comms for BMS Connectivity

The Liebert iCOM controller provides one Ethernet Port and one RS-485 Port dedicated for BMS Connectivity. Provides ground fault isolated RS-485 Modbus, BACnet IP & Modbus IP network connectivity to Building Management Systems for unit monitoring and management. Also, provides ground fault isolated 10/100 baseT Ethernet connectivity for unit monitoring and management. The supported management interfaces include: SNMP for Network Management Systems, HTTP for web page viewing, SMTP for email, and SMS for mobile messaging. The iCOM controller can support dual IP on one network and one 485 protocol simultaneously.

LEAK DETECTION - ZONE

The water sensor is a hermetically sealed solid state device with no moving parts. When the sensor detects the presence of moisture at any point along its length, the alarm system is activated. Ships loose for field installation.

FAN, FILTER, HUMIDIFIER AND REHEAT SECTION

ELECTRONICALLY COMMUTATED (EC) FANS

The Liebert CW unit is supplied with plug/plenum type, single inlet fans that are dynamically balanced at the factory. The drive package consists of a direct drive, electronically commutated and variable speed motor. The fans are located to draw air through the A-frame coil to ensure even air distribution and maximum coil performance. The fans shall be located below the A-frame coil in the casing of the unit or be lowered into the raised floor environment when installed on a floor stand of at least 24" high in Down flow applications. The fans shall be located above the A-frame coil in a separate, field installed fan plenum in Upflow applications.

4" MERV 8 FILTERS

Deep pleated 4" thick filters with a minimum efficiency MERV8 (based on ASHRAE 52.2) located within the cabinet and serviceable from either end of the unit (or top on downflow models). CW089, CW106, CW114, CW146, CW181, CW300 and CW400 downflow filters are removable from the front only.

INFRARED WITH AUTO-FLUSH HUMIDIFICATION

High intensity infrared quartz lamps over a stainless steel humidifier pan. An automatic water supply system continuously maintains water level and an automated flush system greatly reduces mineral

precipitation. A flow control valve permits operation at water pressure between 15 and 150 PSIG (103 and 1034 kPa).

ELECTRIC REHEAT

Electric low watt density reheat elements of rugged stainless steel finned tubular construction provides three stages of nonionizing reheat with maximum sheath temperatures below 420°F (215.5°C).

FLOOR STAND

The Floor stand is constructed of heliarc welded tubular steel and available in heights from 24" to 48" (610mm to 1067mm) for downflow models. Vibration isolation pads are provided on the adjustable legs.

Need 21" Floor Stand

Services

Warranties:

- Warranty Inspection Only Included



VERTIV

LIEBERT CW

STANDARD FEATURES

UPFLOW & DOWNFLOW MODELS CW038 - CW181

iCOM UNIT-LEVEL CONTROLLER Liebert CW is controlled by the iCOM Control System. A 7-inch, high definition, capacitive, color touchscreen presents system information and allows parameters to be viewed and adjusted. The controls shall be menu driven and shall display user menus for active alarms, event log, graphic data, unit view/status overview (including the monitoring of room conditions, operational status in percentage of each function, date and time), total run hours, various sensors, display setup and service contacts. It features a 3-level password protection system. Unit-to-Unit communication capability with other Liebert CW units is included as standard.

BASE-COMMS FOR BMS CONNECTIVITY The Liebert iCOM controller provides one Ethernet Port and one RS-485 Port dedicated for BMS connectivity. Provides ground fault isolated RS-485 Modbus, BACnet IP & Modbus IP network connectivity to Building Management Systems for unit monitoring and management. Also, provides ground fault isolated 10/100 baseT Ethernet connectivity for unit monitoring and management. The supported management interfaces include: SNMP v1/v2c/v3 for Network Management Systems, HTTP for web page viewing, SMTP for e-mail, and SMS for mobile messaging. The iCOM controller can support dual IP on one network and one 485 protocol simultaneously.

COOLING COIL A-Frame design with full face circuiting constructed of copper tubes and aluminum fins manufactured by Liebert. A stainless steel condensate drain pan is provided.

CHILLED WATER CONTROL VALVE is a 2-way or 3-way modulating type that provides proportional control in response to room temperature and humidity as sensed by the microprocessor control. The unit uses a motorized ball valve as standard. It is an equal percentage characteristic control valve with no sudden change in inlet flow and excellent stability.

FORWARD CURVED BLOWERS Centrifugal type, double width, double inlet dynamically balanced with lifetime lubricated self aligning ball bearings rated at a minimum life of 100,000 hours. The fan motor operates at 1750 RPM for 60Hz and 1450 RPM for 50Hz. The drive package is two belt, variable speed, sized for 200% of the fan motor horsepower. Not available on the down-flow units [CW038- CW181]

ELECTRONICALLY COMMUTATED (EC) FAN is plug type, integral direct driven fan with backward curved blades and Electronically Commutated DC motors; commonly referred to as an EC fan. The fan speed shall be variable and automatically regulated by the Liebert iCOM® control through all modes of operation. The impeller shall be made of aluminum and dynamically balanced. The fan shall be located to draw air through the coil to ensure even air distribution and maximum coil performance. In Downflow applications the fans shall be located below the A-frame coil in the casing of the unit, or be lowered into the raised floor environment when installed on a floorstand of at least 24" high. In Upflow applications the fans shall be located above the A-frame coil in a separate field installed fan plenum (not available on the CW146 or CW181).

UNIT FACTORY INSTALLED DISCONNECT SWITCH, Fuse Block and Main Fuses - Type of disconnect switch available – "Locking". The "Locking Type" consists of a non-automatic molded case switch operational from the outside of the unit. Access to the high voltage electric panel compartment can be obtained only with the switch in the "off" position. The molded case switch disconnect models contain separate main fuses. Units with fused disconnect have main fuses within the disconnect.

MAIN FAN OVERLOAD ALARM - The overload alarm activates an alarm or digital readout on the monitor to indicate a main fan overload condition.

FILTERS Deep pleated with a minimum efficiency MERV8 (based on ASHRAE 52.2) located within the cabinet and serviceable from either end of the unit (or top on downflow models). The CW106, and CW114 downflow filters are removable from the front only. CW146 and CW181 filters are contained within a plenum mounted on top of the base unit and are removable from the front.

CABINET AND FRAME Custom powder painted steel panels with 1" (25mm), 1-1/2 lbs. (.68kg) insulation. A hinged control access panel opens to a second front panel which is a protection enclosure for all high voltage components. Frame is constructed of 14 gauge heliarc welded steel and painted using and auto deposition coating system.

✓ **HUMIDIFIER** High intensity infrared quartz lamps over a stainless steel humidifier pan. An automatic water supply system continuously maintains water level and an automated flush system greatly reduces mineral precipitation. A flow control valve permits operation at water pressure between 15 and 150 PSIG (103 and 104 kPa).



VERTIV

LIEBERT CW

STANDARD FEATURES

UPFLOW & DOWNFLOW MODELS CW038 - CW181

✓ **REHEAT** Electric low watt density reheat elements of rugged stainless steel finned tubular construction provides three stages of nonionizing reheat with maximum sheath temperatures below 420°F (215.5°C).

UNIT WATER CIRCUITS (COIL PIPING AND VALVES) are designed for a maximum system water pressure of 400 PSIG (2758 kPa).



LIEBERT CW

OPTIONAL FEATURES CW038 - CW181 MODELS

REVERSING STARTER (models CW146 and CW181 only) - The Reversing Starter allows the customer to use a primary and secondary power supply to maintain primary functions during power interruption. If the primary power supply is interrupted, the reversing starter contactors switch the Main Fan, Controls and Condensate Pump to the secondary power supply (after a customer defined delay period of up to 30 seconds). The Humidifier and Reheats will remain off during operation from the secondary power supply. Once the primary power supply is reengaged, the reversing starter contactors switch the Main Fan, Control and Condensate Pump back to the primary power supply (after a customer defined delay period of up to 30 seconds). The Humidifier and Reheats will revert to normal operation. Indicator lights on the front accent panel alert the customer as to which power supply is supplying the Main Fan, Controls and Condensate Pump.

EC THD TRANSFORMER (CW106, CW114, CW146 and CW181) - The requirement for the internally mounted THD (total harmonic distortion) mitigation transformer is application dependant. It is highly recommended that start up measurements be taken to determine if the current flow THD levels are acceptable. This option may be required if the Computer Room Air Conditioner units are on a back-up generator and the blower current is greater than 33% of the generator load current. The option may also be required if the EC blower load becomes a high percentage of the UPS rating (if units are on a UPS) or if the EC blower load becomes a large percentage of the utility service supply power in installations with a weak supply.

HIGH TEMP STAT - The High Temperature Stat is mounted in the electric panel compartment with the sensing element in the return air flow. Upon activation, the High Temp Stat will immediately shut down the entire unit.

SMOKE SENSOR - The Smoke Sensor samples the return air and shuts down the unit if smoke is detected. It also provides a visual and audible alarm. Dry contacts are available for a remote customer alarm. This smoke detector is not intended to function as or replace any room smoke detection system that may be required by local or national codes.

✓ **FILTERS** - Either 4" MERV8 or 4" MERV11 filters (efficiency based on ASHRAE 52.2) may be specified.

LIQUI-TECT SENSOR - The water sensor is a hermetically sealed solid state device with no moving parts. When the sensor detects the presence of moisture, the alarm system is activated.

REMOTE TEMPERATURE AND HUMIDITY SENSORS - These devices are provided in a vented case for mounting in the room to be conditioned. They include 30 ft. (9m) cables for connecting the sensors to the unit.

✓ **FLOORSTAND** - The Floorstand is constructed of heliarc welded tubular steel and available in heights from 24" to 48" (610mm to 1067mm) for models with EC blowers. Vibration isolation pads are provided on the adjustable legs.

PLENUM - Plenums are constructed of steel panels with 1" (25mm), 1 1/2 lb. (.68kg) insulation and are custom painted in unit matching colors. They are available in several standard configurations with nominal heights of 20" (508mm), 24" (610mm) and 36" (914mm). Models CW146 and CW181 requires a special 18" (457mm) plenum to house the filters. Additional plenums with nominal heights of 12" (309mm), 18" (457mm), and 24" (610mm) can be stacked onto the filter plenum to add additional height. Models CW026 to CW114 with EC fans in upflow orientations require special, field installed plenums that house the fans.

✓ **INTELLISLOT WITH UNITY CARD (IS-UNITY-DP)** - The Liebert IntelliSlot with Unity Card (IS-UNITY-DP) shall provide ground fault isolated RS-485 BACnet & Modbus, BACnet IP and Modbus TCP/IP network connectivity to Building management Systems for unit monitoring and management. Also is shall provide ground fault isolated 10/100 base T Ethernet connectivity for unit monitoring and management. The supported management interfaces include: SNMP for Network Management Systems, HTTP for Web page viewing, SMTP for e-mail and SMS for mobile messaging. The card shall support IP and 485 protocols simultaneously.

RS-485 EXPANSION CARD - Provides ground fault isolated connection to a Liebert SiteLink-E for monitoring and management. Compatible with Liebert SiteScan Web 4.0 or newer version.

✓ **FLOW SWITCH** - The flow switch is shipped loose for field mounting in the chilled water piping and must be field wired to the control board to indicate a "loss of flow" condition.


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LIEBERT CW

OPTIONAL FEATURES CW038 - CW181 MODELS

INFRARED HUMIDIFIER – OPTIONAL – The humidifier shall be of the infrared type consisting of high intensity quartz lamps mounted above and out of the water supply. The evaporator pan shall be stainless steel and arranged to be serviceable without disconnecting water supply lines, drain lines or electrical connections. The complete humidifier section shall be pre-piped ready for final connection. The infrared humidification system shall use bypass air to prevent over-humidification of the controlled space. The auto flush system shall automatically flush deposits from the humidifier pan. System shall automatically fill and drain as well as maintain the required water level based on conductivity. A 1" (25mm) air-gap within the humidifier assembly shall prevent back flow of the humidifier supply water.

STEAM REHEAT - The Steam Reheat System is factory piped with a two-way modulating control valve and cleanable Y-strainer. A float and thermostatic (F&T) steam trap is factory supplied for field installation. The reheat coil is of copper tube and aluminum fin construction. This option is available only on units with Forward Curved Blowers.

HOT WATER REHEAT - The Hot Water Reheat system is factory piped with a two-way modulating control valve and cleanable Y-strainer. The reheat coil is of copper tube and aluminum fin construction. This option is available only on units with Forward Curved Blowers.

✓ **DUAL FLOAT CONDENSATE PUMP** - The pump has capacity of 6 GPM (23 l/m) at 20 ft. head (58 kPa). (Consult factory for 200V or 230V, 50Hz applications). The pump is complete with integral dual float switch, pump, motor assembly, and reservoir. The secondary float shall send a signal to the local alarm and shut down the unit upon high water condition. The unit is shipped loose for field installation on Chilled Water units that are upflow with bottom return. They are also shipped loose for under floor field installation on CW026-CW060 units with EC fans.

VARIABLE SPEED DRIVE (VSD) - The VSD option is available on upflow CW106 and CW114 with Forward Curved Blowers. The drive is controlled by the iCOM control to match the speed of the blower with the chilled water valve position and consequently the load in the room. This option eliminates excessive energy use to oversized equipment.

HIGH VOLTAGE CIRCUIT BREAKERS - These are available on 50Hz downflow models and CW106, CW114, CW146 and CW181 models. The breakers and IEC contactors provide another option for high voltage circuit protection.

HIGH STATIC PRESSURE BLOWER/MOTOR PACKAGES - High static pressure packages deliver selected airflow at static pressures above the standard 0.5 inches wg. (125 Pa). This option is available only on upflow units with Forward Curved Blowers.

✓ **REHEAT/ HUMIDIFIER LOCKOUT** – The option includes the relays necessary to disable the reheat and humidifier from an external customer supplied 24 Volt AC signal.

✓ **LOW VOLTAGE TERMINAL PACKAGE -**

TWO (2) ADDITIONAL REMOTE SHUTDOWN TERMINALS provide the customer with a total of three locations to remotely shut down the unit.

TWO (2) EXTRA COMMON ALARM CONTACTS provide the customer with a total of three sets of normally open contacts for remote indication of unit alarms.

MAIN FAN AUXILIARY SWITCH – The main fan auxiliary switch provides the unit with one normally open set of contacts to indicate that the main fan motor is on.

LIQUI-TECT SHUTDOWN – One pair of dry contacts for the Liqui-TECT sensor signal will provide unit shutdown. (Liqui-Tect sensor is not included. Only available on models 146 & 181).

✓ **REMOTE HUMIDIFIER CONTACTS** allow the unit's humidity controller to control a humidifier outside the unit. Power to operate the remote humidifier does not come from the Liebert CW unit.

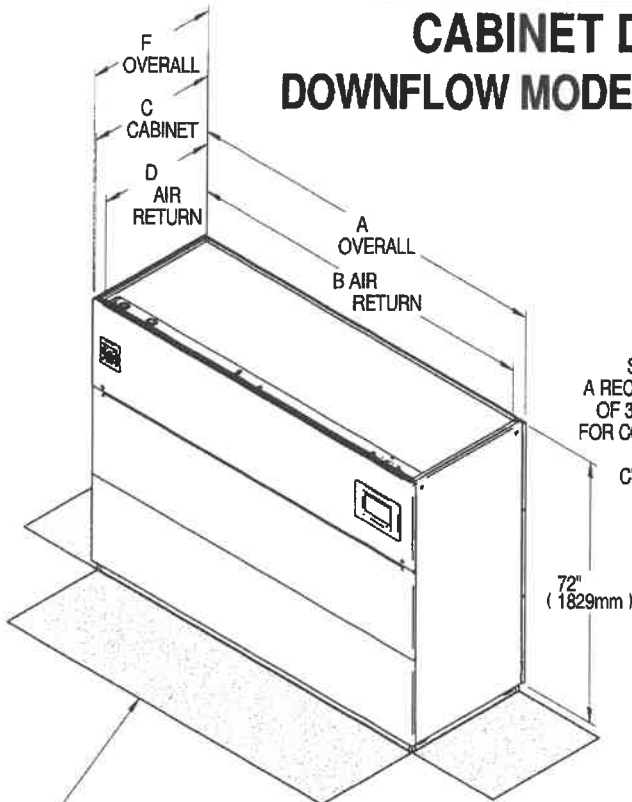


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LIEBERT CW

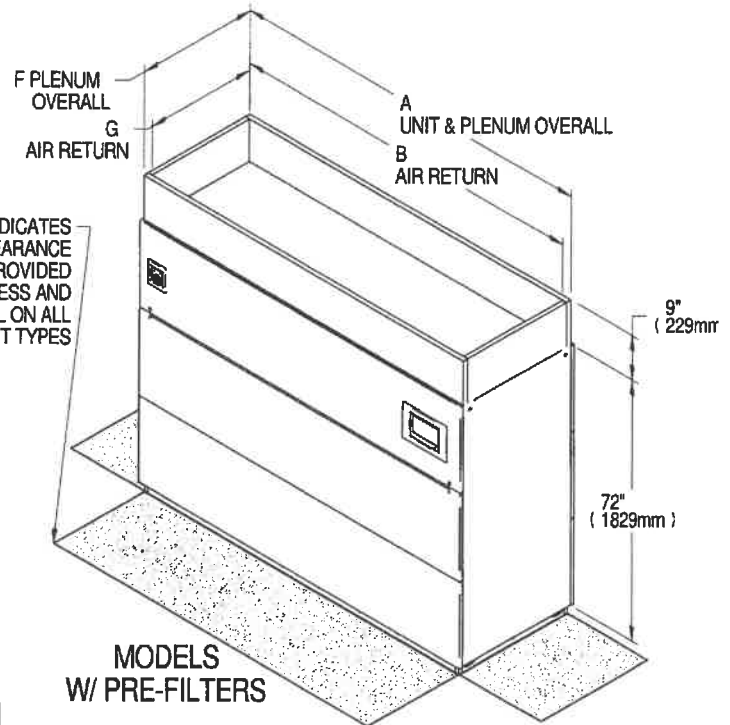
CABINET DIMENSIONAL DATA

DOWNFLOW MODELS CW038 - CW084 W/ EC FANS



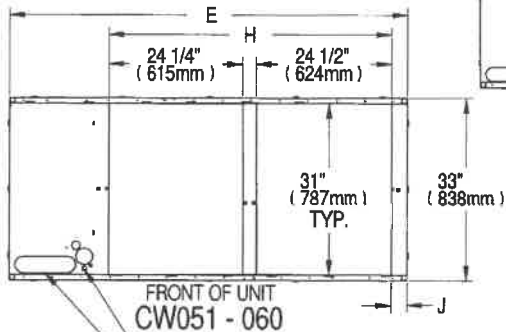
UNIT DIMENSIONAL DATA

SHADED AREA INDICATES A RECOMMENDED CLEARANCE OF 36" (914mm) BE PROVIDED FOR COMPONENT ACCESS AND FILTER REMOVAL ON ALL CW026-CW084 UNIT TYPES

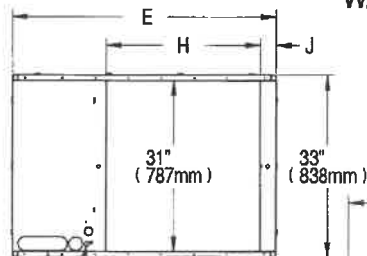
MODELS
W/ PRE-FILTERS

NOTES:

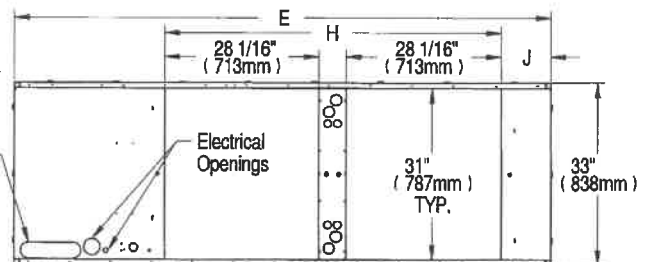
1. MINIMUM CLEARANCE OF 24" (610mm) REQUIRED BELOW THE UNIT TO LOWER THE FANS. FANS MAY ALSO REMAIN IN UNIT IF DESIRED.
2. VIEWS OF ELECTRICAL & AIR DISCHARGE OPENINGS ARE FROM INSTALLER'S POINT OF VIEW.

FRONT OF UNIT
CW051 - 060

Standard Piping Opening
Electrical Openings

FRONT OF UNIT
CW038 - 041

Electrical Openings
Standard Piping Opening

FRONT OF UNIT
CW076 - 084

Electrical Openings
Standard Piping Opening

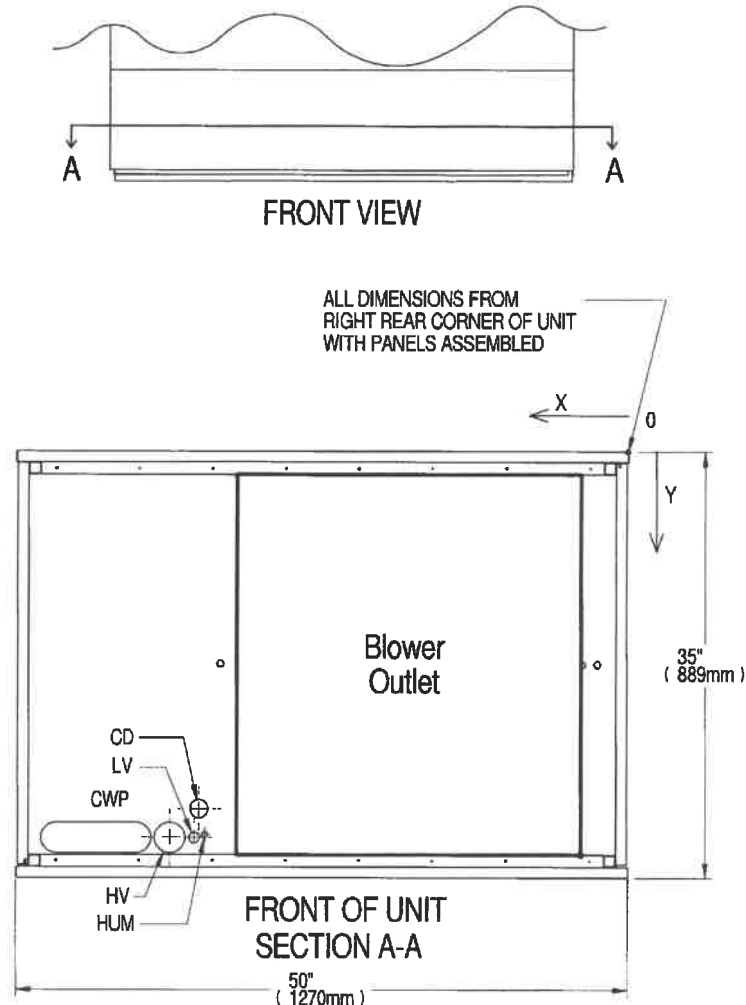
STANDARD PIPING, ELECTRICAL & AIR DISCHARGE OPENINGS

CHILLED WATER MODEL	DIMENSIONAL DATA inches (mm)									NET WT. lb. (kg)		
	A	B	C	D	E	F	G	H	J			
CW038	50 (1270)	46 (1168)	35 (889)	32 (813)	48 (1219)	35 5/8 (905)	31 (787)	28 (711)	2 7/8 (73)	840 (381)		
CW041												900 (408)
CW051	74 (1880)	70 (1778)						72 (1829)			51 1/4 (1302)	1220 (553)
CW060												1250 (567)
CW076	99 (2515)	95 (2413)						97 (2464)			60 3/4 (1543)	8 7/8 (225)
CW084										1540 (690)		



LIEBERT CW

PRIMARY CONNECTION LOCATIONS DOWNFLOW MODELS CW038 & CW041 W/ EC FANS



POINT	DESCRIPTION	X	Y	CONNECTION SIZE / OPENING
CD	CONDENSATE DRAIN	35 1/16" (891mm)	29 5/16" (745mm)	3/4" (19mm) NPT Female
	W/ OPTIONAL CONDENSATE PUMP			1/2" (13mm) O.D. Cu
HUM	HUMIDIFIER SUPPLY LINE	34 9/16" (878mm)	31 3/8" (797mm)	1/4" (6mm) O.D. Cu
CWP	CHILLED WATER PIPING SLOT (CENTER)	43 7/16" (1104mm)	31 5/8" (803mm)	9" (229mm) X 2 1/2" (64mm)
	SUPPLY & RETURN PIPING DIAMETER	N/A		CW038: 1 3/8" (32mm)
				CW041: 1 5/8" (41mm)
HV	HIGH VOLT ELECTRICAL CONNECTION	37 7/16" (951mm)	31 5/8" (803mm)	2 1/2" (64mm)
LV	LOW VOLT ELECTRICAL CONNECTION	35 7/16" (900mm)		7/8" (22mm)

Notes:

1. Drawing not to scale. Tolerance on all piping dimensions is $\pm (13\text{mm}) 1/2"$.

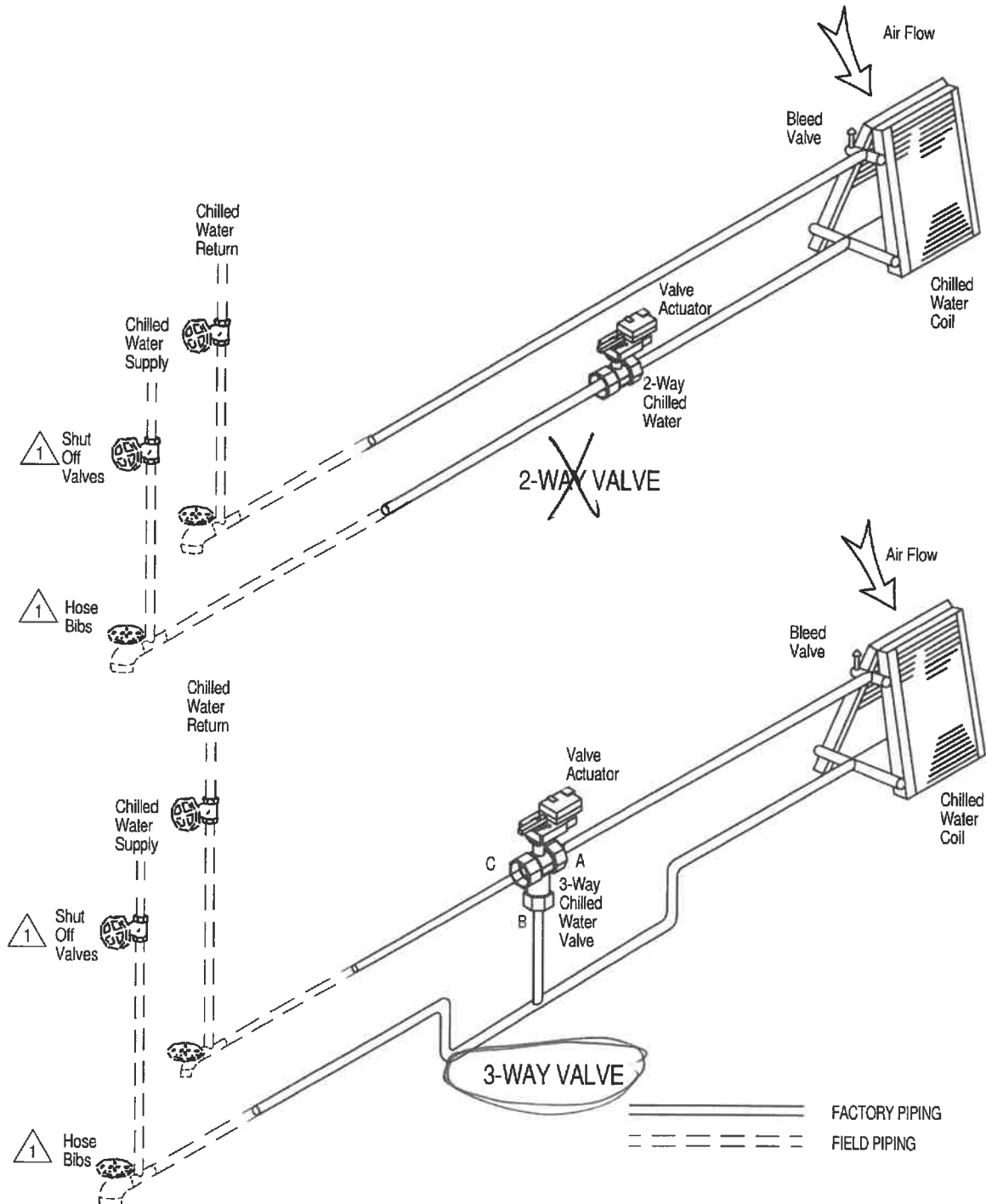
2. Field pitch Condensate Drain line a minimum of 1/8" (3.2 mm) per foot (305 mm). All units contain a factory installed condensate trap. Do not trap external to the unit. Select appropriate drain system materials. The drain line must comply with all local codes.

3. Optional Condensate Pump to be installed under unit.



LIEBERT CW

GENERAL ARRANGEMENT DIAGRAM DOWNFLOW CW038 - CW114 MODELS



Notes:

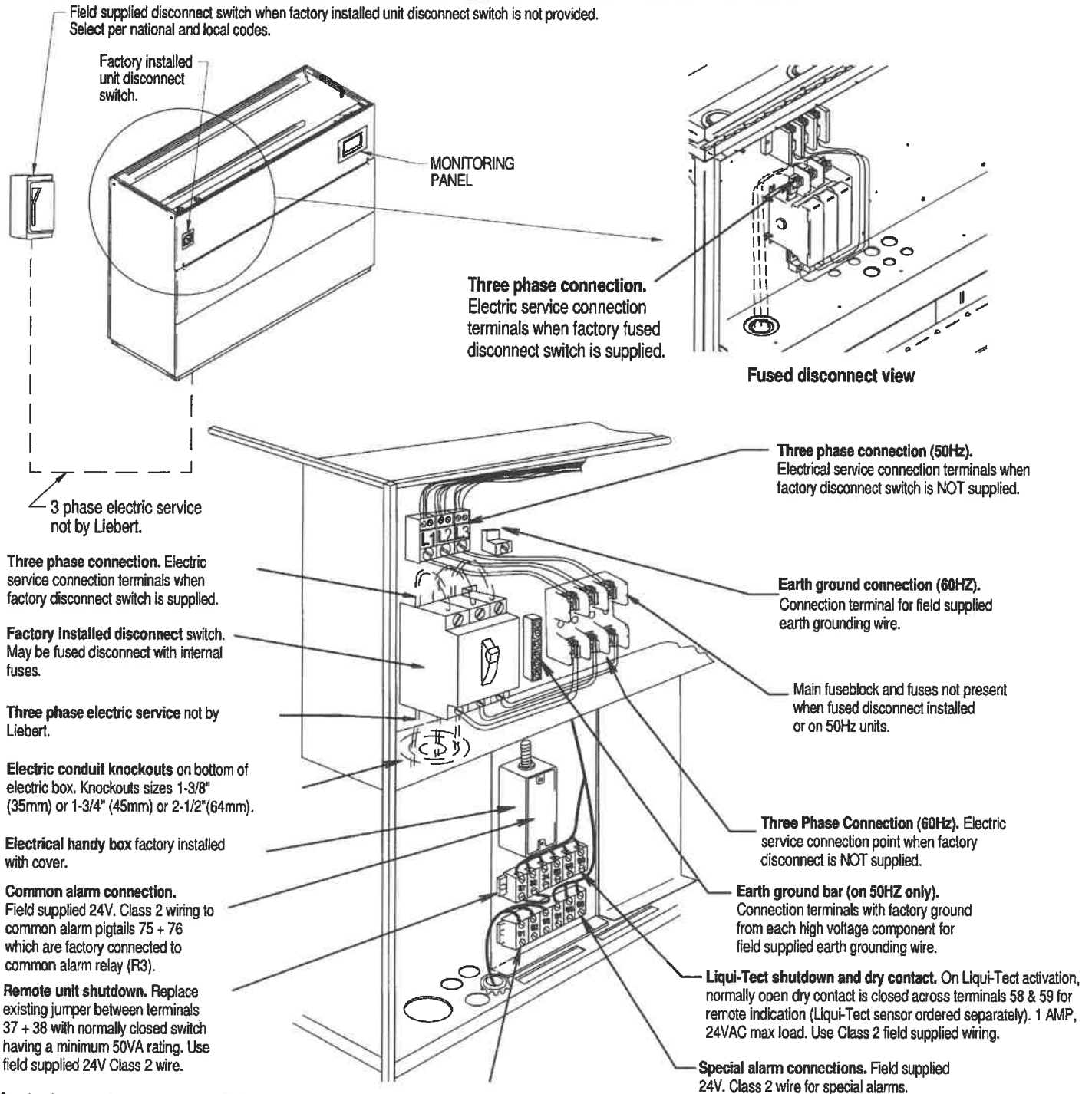
1. Components are not supplied by Liebert, but are required for proper circuit operation and maintenance.



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LIEBERT CW

ELECTRICAL FIELD CONNECTIONS DOWNFLOW MODELS CW038 - CW084

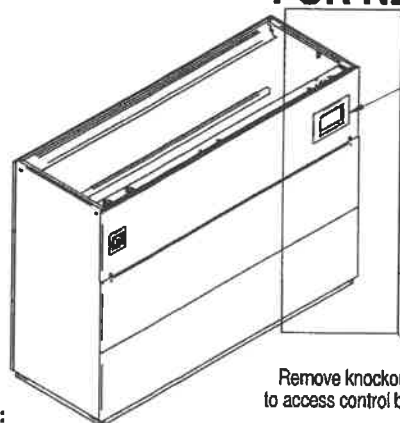


NOTE: Refer to specification sheet for full load amp and wire size amp ratings.



LIEBERT CW

ELECTRICAL FIELD CONNECTIONS DOWNFLOW MODELS CW038 - CW084 FOR NETWORK ETHERNET CONNECTIONS



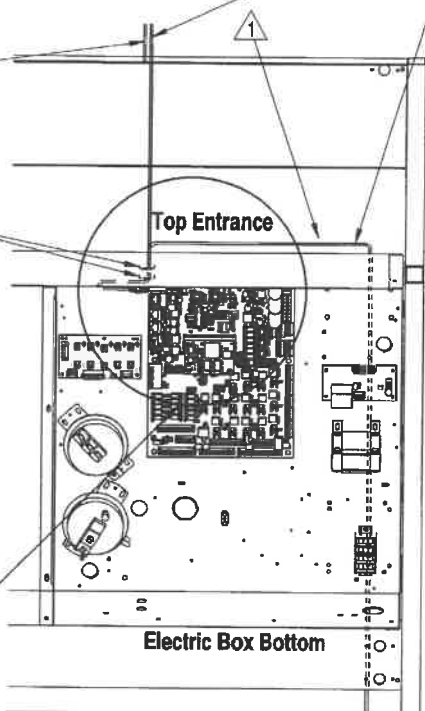
MONITORING
PANEL

Remove knockouts
to access control board.

Notes:

1. To provide unit to unit (U2U) networking, the customer must first connect an Ethernet cable from P64 on the iCOM control board, to a network switch.

Low Voltage Communication Wiring
CAT5E Ethernet connections – field installed
Avoid routing near high voltage wiring.
Secure wiring to prevent damage and
use bushing or edge guard to avoid sharp edges.



Top Entrance

Electric Box Bottom

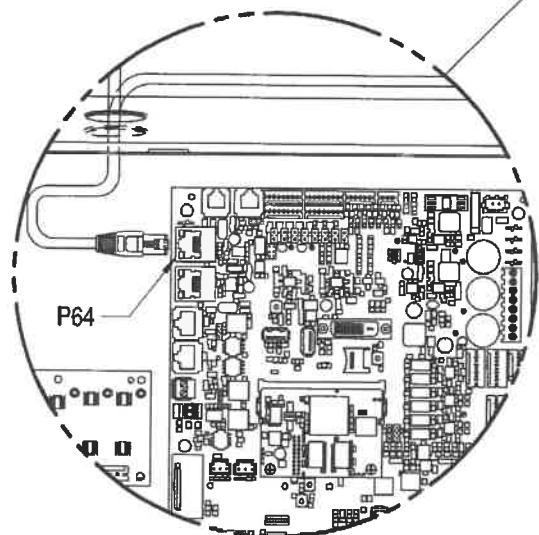
Coil Support Frame

Remove knockouts.

Unit Bottom
Front of Unit

Bottom Entrance

Right side of Unit



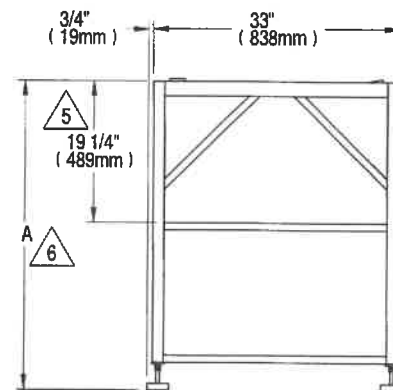
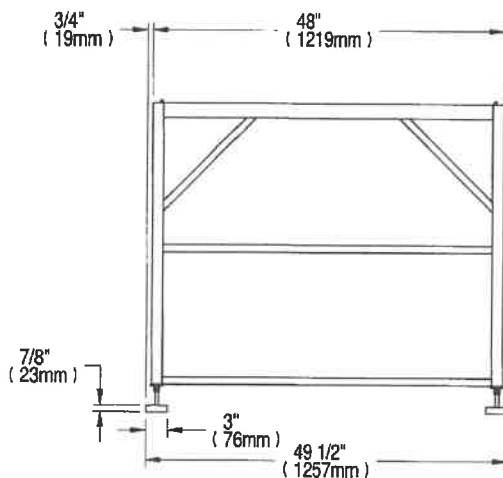
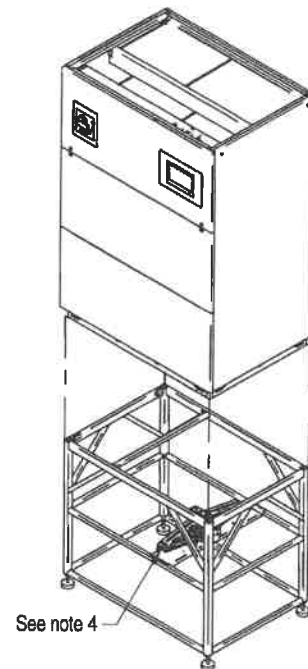
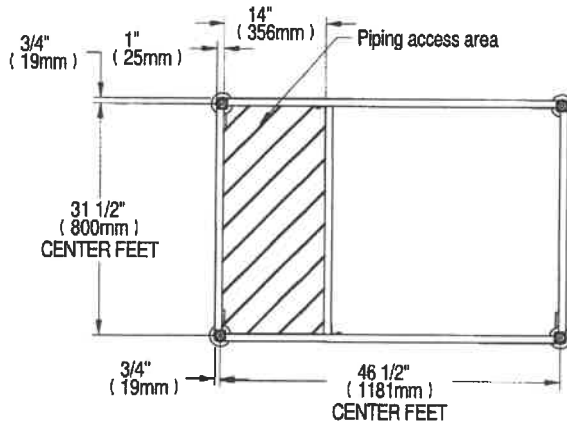
P64

NOTE: Refer to specification sheet for full load amp and wire size amp ratings.


VERTIV

LIEBERT CW

FLOORSTAND & FLOOR PLANNING DIMENSIONAL DATA DOWNFLOW MODELS CW038 & CW041 W/ EC FANS


NOTE:

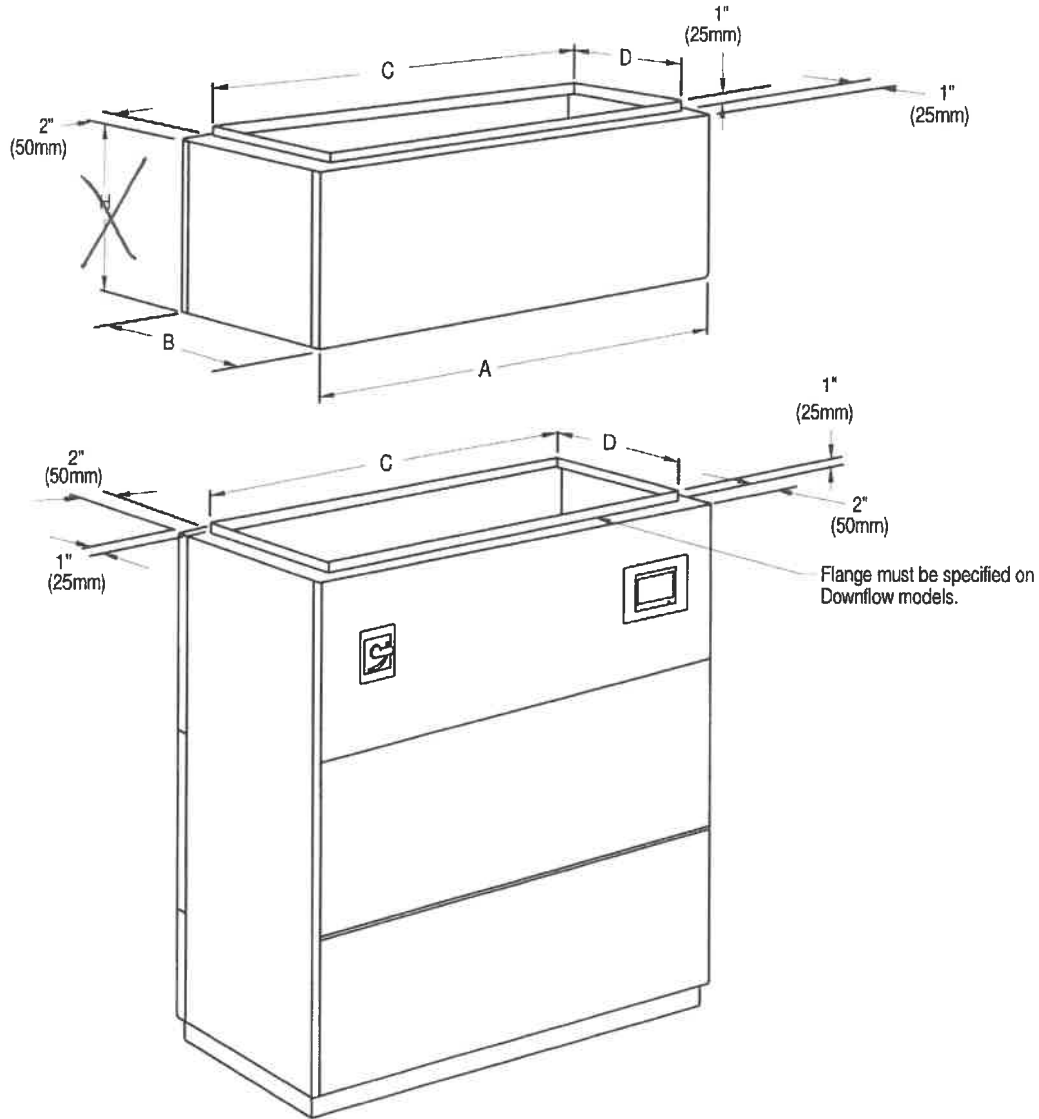
1. This floor stand should be used when EC fans are intended to be lowered under a raised floor. The standard Liebert CW floor stand can be used "if" the fans are to remain in their original raised position.
2. All paneled sides of unit overhang floorstand 1" (25mm).
3. The floor stand used with EC units is not symmetrical and its orientation to the Liebert CW is critical for lowering the EC fans. Unless the floor stand is installed in the correct position, the blowers will not lower into the floor stand.
4. Jack and jack support are shipped loose and are intended to be placed into position under each fan and utilized to lower or raise that fan as needed.
5. Not applicable to 24" high floorstand.
6. Leveling feet are provided with $\pm 1\text{-}1/2"$ (38mm) adjustment from nominal height "A".

Height in (mm)
A Δ
24 (610)
30 (762)
36 (914)
42 (1067)
48 (1219)



LIEBERT CW

PLENUM DIMENSIONAL DATA DOWNFLOW MODELS CW038 - CW084 W/ EC FANS



Plenum Dimensional Data in. (mm)				
Model	A	B	C	D
CW038, CW041	50 (1270)	34 (864)	46 (1168)	32 (813)
CW051, CW060	74 (1880)		70 (1778)	
CW076, CW084	99 (2515)		95 (2413)	

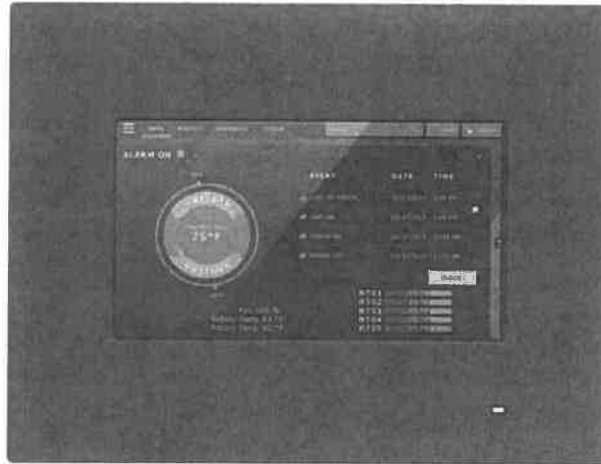
No

Plenum Height in. (mm)
H
20 (508)
22-3/4 (578)
34-3/4 (883)



LIEBERT® iCOM™

PRODUCT INFORMATION UNIT MOUNTED DISPLAY



The Liebert® iCOM™ display is a 7-inch capacitive, color-touchscreen display in an ergonomic, aesthetically pleasing housing. The display and housing will be viewable while the unit accent panels are open or closed. The display can be easily detached to view while the panel is open.

Menu Layout- The menus will be broken out into two main menu screens: User screen and Service screen. The User screen contains the menus to access parameters required for basic unit control and setup. The Service screen is designed for service personal and provides access to advanced control setup features and diagnostic information.

Password Protection- The display will contain two unique passwords to protect against unauthorized changes. An auto hide/show feature allows the user to see applicable information based on the login used. These four-digit passwords may be customized according to User preference.

Unit Backup and Restore- The user shall have the ability to create safety copies of important control parameters. The display has the ability for the user to automatically backup unit configuration settings to internal memory or USB storage drive. Configuration settings may be transferred to another unit for a more streamlined unit startup.

Parameter Search- The display has search fields for efficient navigation and parameter lookup.

Parameter Download- The Liebert iCOM shall enable the user to download a report that lists parameter names, factory default settings, and the user programmed settings in .csv format for remote reference.

Parameter Directory- The Liebert iCOM shall provide a directory that lists all parameters in the control. The list shall provide Line ID numbers, parameter labels, and current parameter values.



LIEBERT® iCOM™

PRODUCT INFORMATION UNIT MOUNTED DISPLAY

Context Sensitive Help- The display will have an onboard help database. The database will provide context sensitive help to assist with setup and navigation of the menus.

Display Setup- The user has the ability to configure the display information based on the specific user's preference. Language, units of measure, screen contrast, home screen layout, back light timer and the hide/show of certain readouts will be configurable through the display.

Additional Readouts- The display has the ability for the user to configure custom widgets on the main screen. Widget options will include items such as fan speed, call for cooling, call for free cooling, maintenance status, call for hot water reheat, call for electric reheat, call for dehumidification, call for humidification, airflow, static pressure, fluid flow rate and cooling capacity.

Status LEDs- The display will provide the user with the unit's operating status using an integrated LED. The LED will indicate if the unit has an active alarm; if the unit has an active alarm that has been acknowledged; or if the unit is on, off, or in a standby status.

Unit Alarms – All unit alarms are annunciated through both audio and visual cues, clearly displayed on the screen, automatically recorded in the event log, and communicated to monitoring plug connections.

Event Log – The display will automatically store the last 400 unit-only events (messages, warnings, and alarms).

Service Contact Information – The display has the ability to store the local service or sales contact information.

Upgradeable – Display and Control Board software upgrades are performed through a USB connection.

Unit-to-Unit (U2U) Communication – Communication via private Ethernet network allows for advanced control functionality (Teamwork modes, sharing sensor data, Standby Rotation, Lead-Lag, and Cascade operation).

Temperature Control- Precision temperature control is maintained while maximizing efficiency based on a user entered setpoint and tolerance.

Various Control Types- Proportional, PI (proportional-integral), or Intelligent control types can be selected for supply or return temperature. These control types have been developed to maximize component life and maintain precise environmental control.

Timers/Sleep Mode- The menus shall allow various customer settings for turning the unit On or Off.

Sensor Calibration- The menus shall allow unit sensors to be calibrated with external sensors.

Maintenance/Wellness Settings- The menus shall allow reporting of potential component problems before they occur.



LIEBERT® iCOM™

PRODUCT INFORMATION UNIT MOUNTED DISPLAY

Options Setup- The menus shall provide operation settings for the installed components.

Auto Restart- The unit will return to its previous operating status after loss of power. Units can be stagger started to minimize system current draw.

Auxiliary Boards- The menus shall allow setup of optional expansion boards.

Various Sensors: The menus shall allow setup and display of optional custom sensors. The control shall include four customer accessible analog inputs for field-supplied sensors. The analog inputs shall accept a 4 to 20mA signal. The user shall be able to change the input to 0 to 5VDC or 0 to 10VDC. The gains for each analog input shall be programmable from the front display. The analog inputs shall be able to be monitored from the front display.

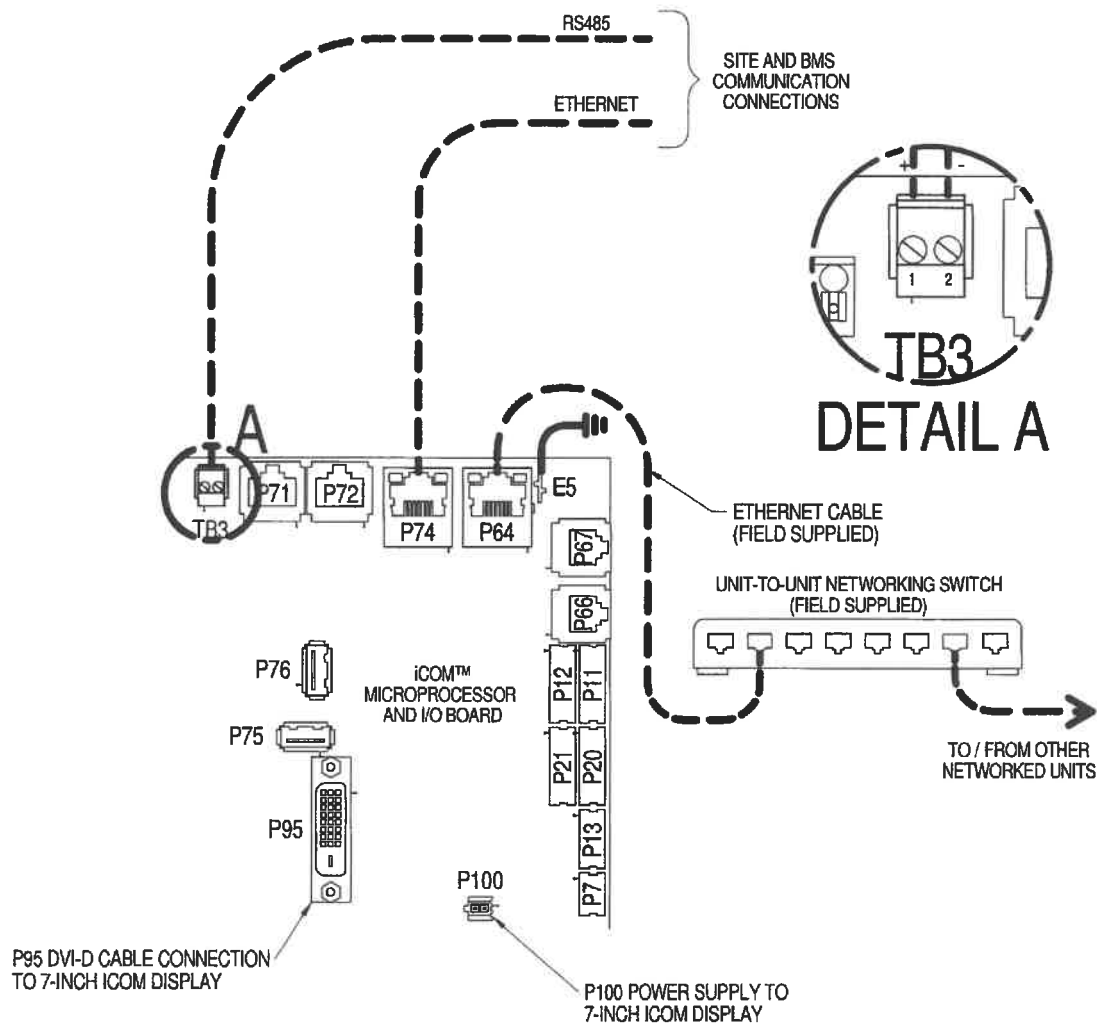
Diagnostics/Service Mode- The Liebert® iCOM™ control shall be provided with self-diagnostics to aid in troubleshooting. The microcontroller board shall be diagnosed and reported as pass/not pass. Control inputs shall be indicated as On or Off at the front display. Control outputs shall be able to be turned On or Off from the front display without using jumpers or a service terminal. Each control output shall be indicated by an LED on a circuit board.



LIEBERT® iCOM™

UNIT TO UNIT NETWORK CONNECTIONS

LIEBERT® CW, LIEBERT® CWA, LIEBERT® DS, LIEBERT® DSE,
LIEBERT® PDX, LIEBERT® PCW



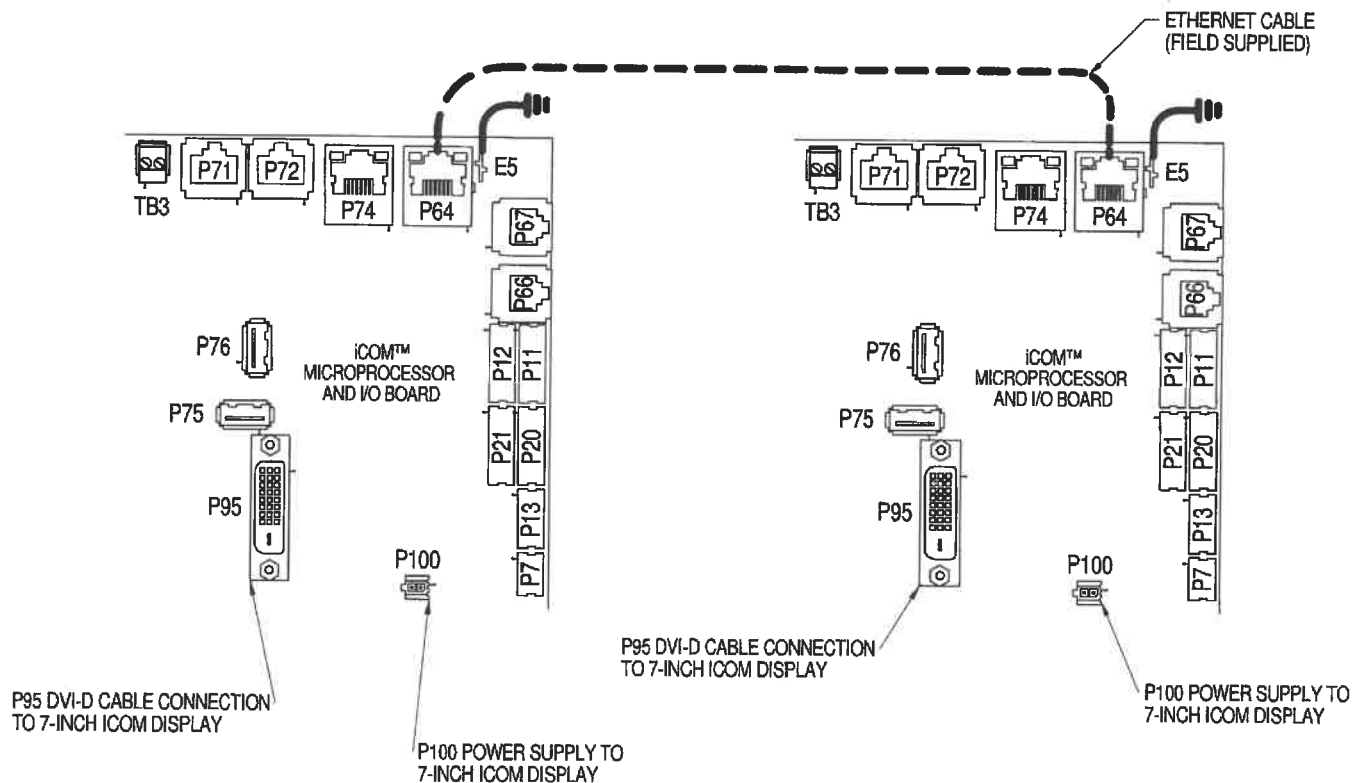


VERTIV

LIEBERT® iCOM™

UNIT TO UNIT NETWORK CONNECTIONS

**LIEBERT® CW, LIEBERT® CWA, LIEBERT® DS, LIEBERT® DSE,
LIEBERT® PDX, LIEBERT® PCW**



NOTE* For dual-unit network configurations only



LIEBERT® LIQUI-TECT™ 460 KIT ZONE LEAK DETECTION SENSOR WITH CABLE

Product Specification/Installation Guide



The Liebert® Liqui-Tect™ 460 (LT460) provides zone detection of leaks, protecting equipment by constantly monitoring the area for leaking liquids. The LT460 is the ideal solution for perimeter sensing or serpentine coverage of areas requiring up to 100 feet of cable.

Selectable modes of operation provide flexible alarming options and protection for the cable. The LT460 constantly monitors a zone for leaks, internal faults, and power failures and warns of any abnormal conditions. Top cover LEDs provide status indication and also ensure that the cable is properly installed and operational under raised floors.

Two independent outputs provide a signal to a local alarm panel, Liebert cooling unit, and a remote building management system, or external equipment, such as motorized water shutoff valves.

LT460 APPLICATIONS

The LT460 is ideally suited for:

- Glycol and chilled water cooling,
- Humidification supply water piping,
- Condensate pumps and drains,
- Unit and ceiling auxiliary drip pans,
- Overhead piping troughs.

LOCATIONS/PLACEMENT

The LT460 is an excellent choice for:

- Large scale network control centers,
- Data centers,
- MRI and CAT scan rooms
- Server rooms and closets,
- Unattended, remote shelters,
- Mechanical equipment rooms,
- Sensitive areas with overhead piping,
- Industrial process control rooms.

COMPONENTS

Liqui-Tect™ 460 Module

The LT460 consists of a metal enclosure with a hinged top door providing access to the internal circuit board for wiring termination and configuration of DIP switches. The LT460 will monitor up to 100 feet of connected LT500Y leak detection cable.

LT500Y Leak Detection Cable

The cable material and construction allow the cable to lie flat when used with hold down clips. The LT500Y is plenum-rated and UL listed for safe operation.

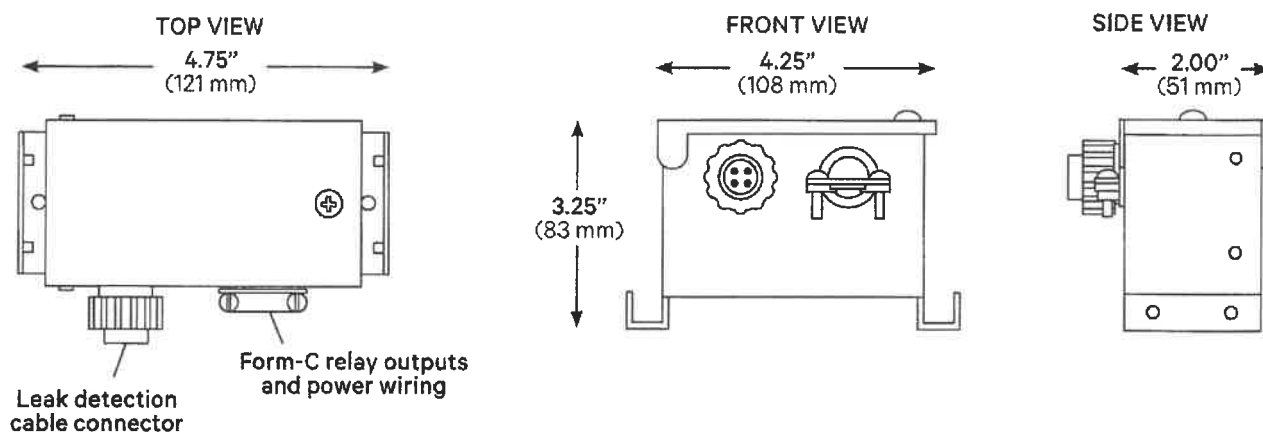
- If purchased separately, cables are available in lengths of 15, 35 and 50 feet. These cables can be connected incrementally to monitor from 15 feet up to 100 feet. An end terminator and hold-down clips (two clips required for each 6-8 feet of cable) must be ordered separately.
- If included in a kit, cables are available in lengths of 20, 25, 30, 35 and 45 feet. Cables in kits cannot be lengthened. Hold down clips are provided.

LIEBERT® LIQUI-TECT™ 460 ZONE LEAK DETECTION SENSOR

Product Specification/Installation Guide



DIMENSIONS - TOP, FRONT AND SIDE



SPECIFICATIONS

Power Requirements	24 VAC 120 mA, 50/60 Hz, 3 VA (max.)
Dimensions, W x D x H	5.35 in. x 3.23 in. x 3.5 in. (135.9 mm x 82 mm x 88.9 mm) Mounting-holes require #8 screws.
Weight (assembled)	2.0 lb. (0.9 kg)
Leak-detection Cable Compatibility	All Liebert LT500 sensing cables
Maximum Leak-detection Cable Length	100 ft. (30.5 m)
Metal Enclosure	NEMA 1, IP 30

ENVIRONMENTAL CONDITIONS

Operating Temperature	50°F to 104°F (10°C to 40°C)
Operating Humidity	10% to 95% relative humidity (non-condensing)
Operating Altitude	0 to 10,000 ft. (0 to 3,048 m)
Output Relay Contact Rating	2 Form-C; 3 A rating at 24 VAC

AGENCY LISTINGS

UL	UL916
C-UL	C22.2, No. 205-M1983
CE	Yes
FCC Compliance	47 CFR, Part 15

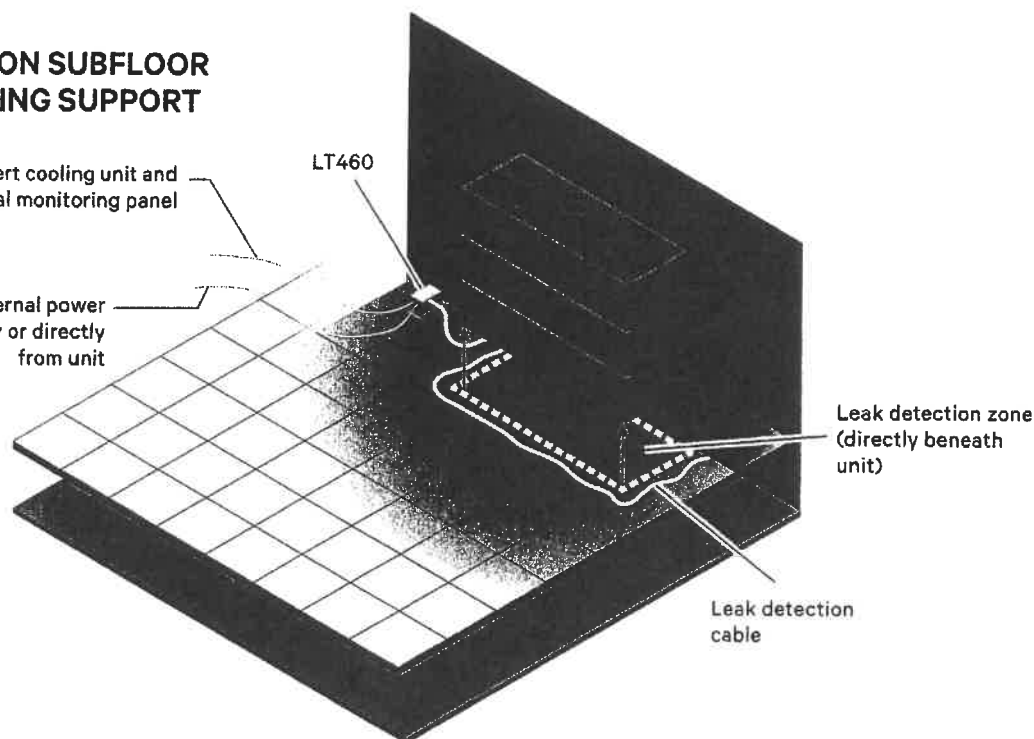
LIEBERT® LIQUI-TECT™ 460 ZONE LEAK DETECTION SENSOR Product Specification/Installation Guide



PLACEMENT ON SUBFLOOR UNDER COOLING SUPPORT EQUIPMENT

To a Liebert cooling unit and an optional monitoring panel

To external power supply or directly from unit



CONFIGURATION-SWITCH SETTINGS

A four position DIP switch selects two alarm (filter) delays and three mutually exclusive alarm modes. The switches are located next to the wiring termination blocks.

SWITCH SETTINGS

	OFF	ON
1. Leak Detect Filter	10 sec	2 min
2. Alarm Latch	No	Yes
3. Alarm Retest Delay	No	1 hr
4. Not Used	-	-

ALL CIRCUITS: CLASS 2

Contacts shown in POWERED, NON-ALARM state



CONNECT ENCLOSURE TO EARTH GROUND

LIEBERT® LIQUI-TECT™ 460 ZONE LEAK DETECTION SENSOR

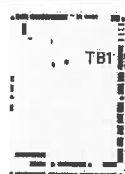
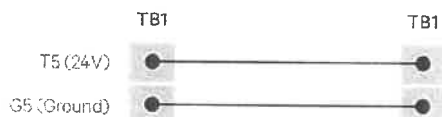
Product Specification/Installation Guide

**POWER WIRING**

The LT460 is rated for 24 VAC, 50/60 Hz, and 0.12 A.

✓ Liebert® DS, DSE, CW, PDX, PCW,
Mini-Mate with iCOM
or Mini-Mate2 (8 ton)

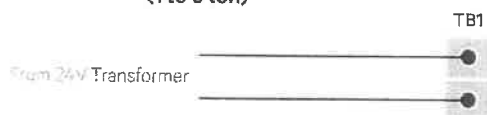
LT460



Location of T5 (24V)
connection on main
controller board of
Liebert unit.

Liebert® Mini-Mate2
(1 to 5 ton)

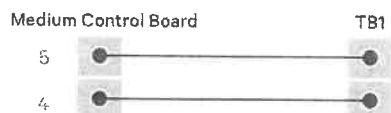
LT460



* Requires external transformer (there are no designated terminal
connections on the unit)

Liebert® CRV

LT460



Transformer

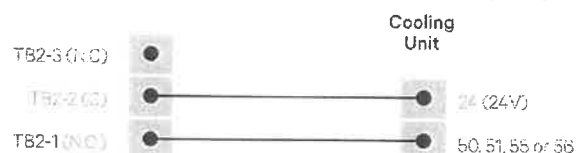
LT460

**WIRING TO COOLING UNIT**

The LT460 has two Form-C dry-contact alarm-output
contacts (TB2 and TB3). Each contact is rated for 24 VAC
at 3 amp.

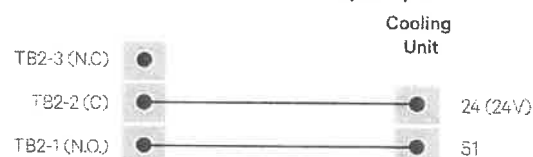
NOTE: In Liebert® iCOM™ use the Service Options menu to verify that the
Liqui-Tect™ is installed

LT460 Liebert® DS, DSE, CW, PDX,
PCW or Mini-Mate2 (8 ton)



Note: Terminal 50 not available on Mini-Mate2 (8 ton)

LT460 Liebert® Mini-Mate Variable
Capacity with iCOM



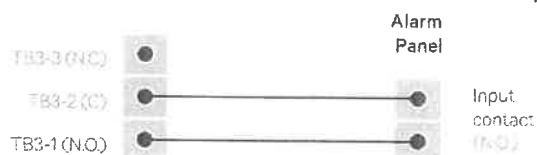
LT460 Liebert® Mini-Mate2,
(1 to 5 ton)



LT460 Liebert® CRV

**WIRING TO AUXILIARY ALARM PANELS**

LT460 Liebert® contact monitor panel



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S... 1023, Rev. 06-20



Destiny™ Air Handler



Job Information

Job Name E2186-21 State Of Wv Auditors office
Date 12/16/2021
Submitted By Greg Bridgewater
Software Version 08.40
Unit Tag Battery room CW Unit

Technical Data Sheet



Unit Overview

Model Number	Voltage V/Hz/Phase	Airflow CFM	Static Pressure		Unit Configuration
			External inH ₂ O	Total inH ₂ O	
LAH005A	208/60/3	2000	1.00	1.44	Vertical

Unit

Model Number: LAH005A
Type: Indoor Air Handler
Altitude: 780 ft
Configuration: Vertical
Construction: Double-wall construction with foam injected insulation
Approval: AHRI, ETL, CETL & MEA

Physical

Unit				
Length 36.4 in	Height 54.4 in	Width 42.5 in	Weight 453.3 lb	
Unit Construction				
Outer Panel Galvanized Steel	Inner Liner Galvanized steel	Insulation 1 inch Expanded Foam	Frame 1 inch Aluminum	Access Hinged access; Drive side filter and fan

Filter

Type	Face Area	Filter Face Velocity	Air Pressure Drop	Air Pressure Drop Type	(Quantity) Height x Width x Depth
Pleated (MERV 8)	6.3 ft ²	318.0 ft/min	0.19 inH ₂ O	Clean Pressure Drop	(2) 20 in x 24 in x 2 in

Chilled Water Cooling Coil

Physical		Material		Header		Casing	
Face Velocity	385.4 ft/min	Face Area	5.2 ft²	Fin Height	22.0 in	Fin Length	34.0 in
Face Velocity	385.4 ft/min	Face Area	5.2 ft²	Fin Height	22.0 in	Fin Length	34.0 in
Material		Material		Header	Copper	Casing	Galvanized steel casing
Connection Type	Copper Sweat	Connection Type	Copper Sweat	Header	Copper	Casing	Galvanized steel casing
Drain Pan Connection	1 in ID MPT	Drain Pan Connection	1 in ID MPT	Header	Copper	Casing	Galvanized steel casing
Performance		Performance		Header	Copper	Casing	Galvanized steel casing
Capacity		Capacity		Header	Copper	Casing	Galvanized steel casing
Total Btu/hr	75557	Sensible Btu/hr	51734	Header	Copper	Casing	Galvanized steel casing
Entering	80.0	Leaving	54.5	Header	Copper	Casing	Galvanized steel casing
Wet Bulb °F	67.0	Wet Bulb °F	55.6	Header	Copper	Casing	Galvanized steel casing
Fluid		Fluid		Header	Copper	Casing	Galvanized steel casing
Flow Rate gpm	15.9	Pressure Drop ft H ₂ O	13.4	Header	Copper	Casing	Galvanized steel casing
Velocity ft/min	4.4	Velocity ft/min	4.4	Header	Copper	Casing	Galvanized steel casing

Supply Fan

Fan		Orientation		Vibration Isolation	
Type	Forward Curved	Class	Class 1	Orientation	Upblast - CW Rotation
Wheel Diameter	10 in x 10 in	Orientation	Upblast - CW Rotation	Vibration Isolation	Rubber in Shear
Motor		Motor		Motor	
Voltage	208/60/3 V/Hz/Phase	Full Load Current	4.4 A	Drive Side	Left Hand
Efficiency	86.5 %	Drive Side	Left Hand	VFD	60 Hz
Drive Package Data		Drive Package Data		Drive Package Data	
Sheaves		Sheaves		Sheaves	
Fan	AK39	Motor	1VP34	Quantity	1
Part Number	A36	Part Number	A36	Part Number	A36

Note: Daikin Applied reserves the right to provide a different but equivalent drive package

Performance		Performance		Performance		Performance	
Air Flow CFM	2000	Total Static Pressure inH ₂ O	1.44	Fan Speed RPM	1337	Brake Horsepower HP	1.14
Total Static Pressure inH ₂ O	1.44	Fan Speed RPM	1337	Brake Horsepower HP	1.14	Total Input Power HP	1.46
Fan Speed RPM	1337	Brake Horsepower HP	1.14	Total Input Power HP	1.46	Fan Energy Index (FEI)	0.97
Brake Horsepower HP	1.14	Total Input Power HP	1.46	Fan Energy Index (FEI)	0.97	Outlet Velocity ft/min	1942
Total Input Power HP	1.46	Fan Energy Index (FEI)	0.97	Outlet Velocity ft/min	1942	Altitude ft	780

Sound

Sound Power (db)		Sound Power (db)		Sound Power (db)		Sound Power (db)	
Frequency	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	78	74	72	76	74	71	66
Discharge	80	79	79	81	79	75	70
Radiated	75	67	64	65	63	56	48

Internal Pressure Drop Calculation

Cooling Coil: 0.25 inH₂O
Filter: 0.19 inH₂O
Total Internal Pressure Drop: 0.44 inH₂O

Options

Unit

AHRI Certification

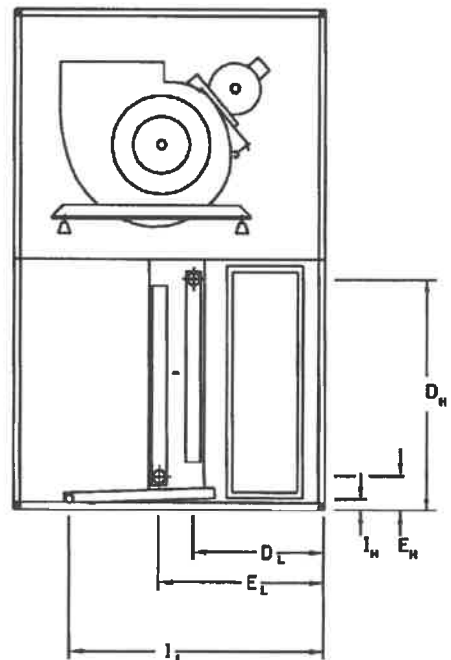
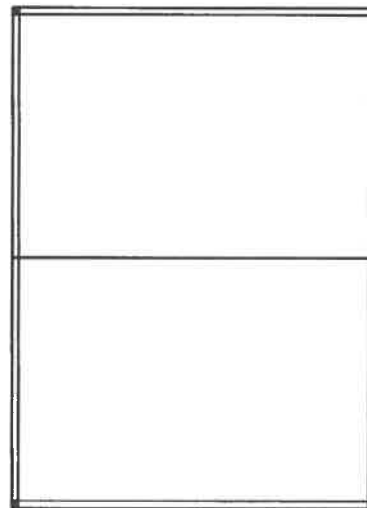
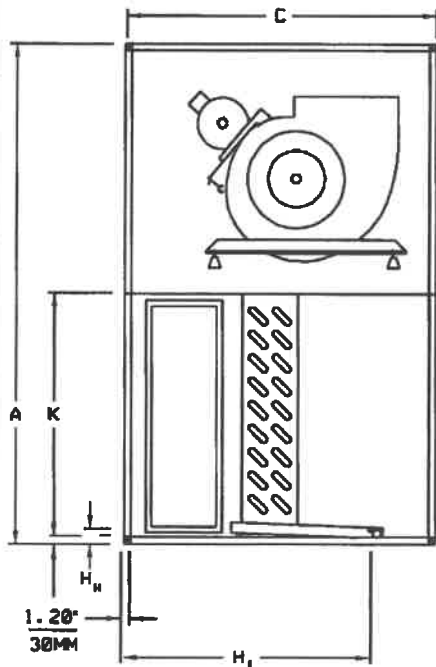
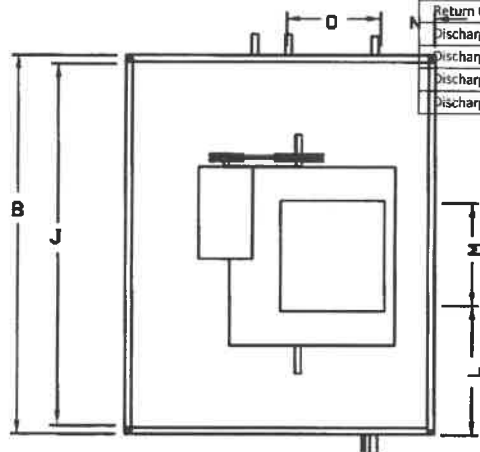


All equipment is rated and certified in accordance with AHRI 430.

Notes

Accessories

Part Number	Mandatory	Description
TempRowAccessorie		
S		



Dimensions		
Description	Letter	Dimension (in)
Unit Height (Includes Base Channel If selected)	A	54.39
Unit Width	B	42.52
Unit Length	C	36.42
Coil 1 (Water/Steam Return) (DX Suction) Connection	D _L	11.4
Coil 1 (Water/Steam Return) (DX Suction) Connection	D _H	25.66
Coil 1 (Water/Steam Supply) (DX Liquid) Connection	E _L	14
Coil 1 (Water/Steam Supply) (DX Liquid) Connection	E _H	10.2
Drain Connection - Secondary	H _L	21.63
	H _H	6.48
Drain Connection - Primary	I _L	24.38
	I _H	5.72
Return Opening Width	J	40.16
Return Opening Height	K	25.99
Discharge Opening Location - Width	L	14.72
Discharge Opening Width	M	13.07
Discharge Opening Location - Height	N	9.49
Discharge Opening Height	O	11.34

Product Drawing

Product:

Model: LAH005A

Sales Engineer:

Unit Tag: Battery room CW Unit

Project Name: E2186-21 State Of Wv

Sales Office: Mason & Barry, Inc.

Dec. 16, 2021

Ver/Rev:

Sheet 1 of 1



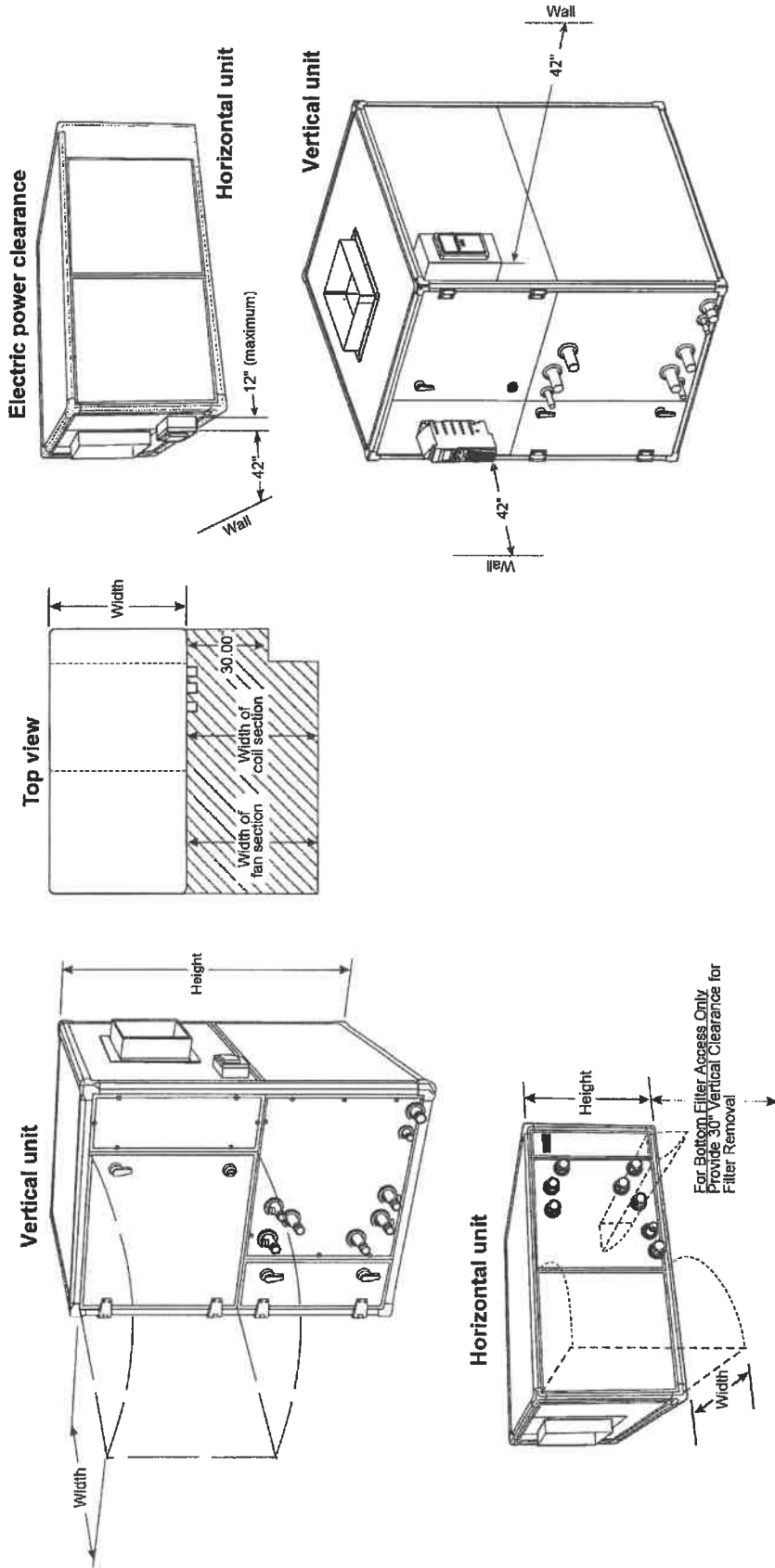
13600 Industrial Park Blvd. Minneapolis, MN 55441
www.DaikinApplied.com Software Version: 08.40

Scale: NTS

Tolerance: +/-0.25"

Dwg Units: (in)

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.



Product Drawing

Product:

Model: LAH005A

Unit Tag: Battery room CW Unit

Project Name: E2186-21 State Of Wv

Dec. 16, 2021 Ver/Rev:

Sheet: 1 of 1

Sales Office: Mason & Barry, Inc.

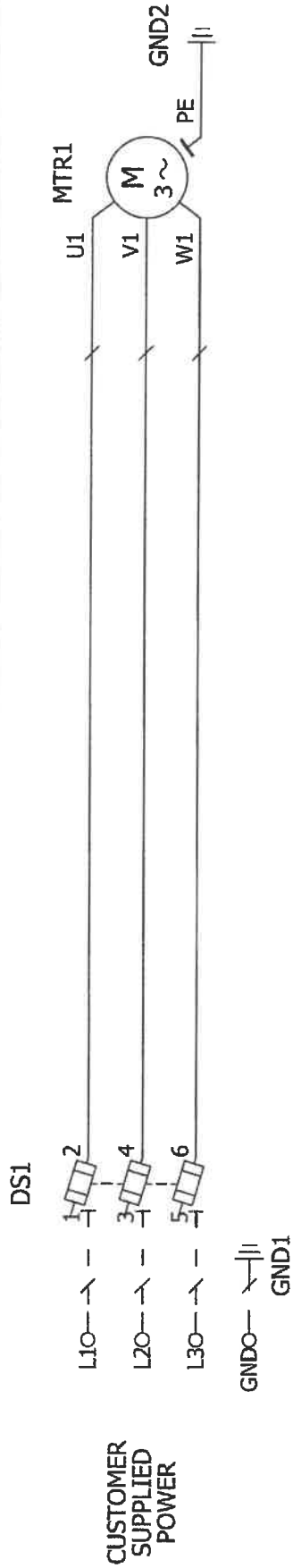
Sales Engineer:

Scale: NTS Tolerance: +/- 0.25" Dwg Units: in [mm]



13600 Industrial Park Blvd. Minneapolis, MN 55441
www.DaikinApplied.com Software Version: 08.40

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.



Product Drawing		Unit Tag: Battery room CW Unit		Sales Office: Mason & Barry, Inc.	
Product:		Project Name: E2186-21 State Of Wv		Sales Engineer:	
Model: LAH005A		Dec. 16, 2021	Ver/Rev:	Sheet: 1 of 1	Dwg Units: in [mm]
No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.					
				13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 08.40	

ACCESS TO: Front/Rear	PHASE: 3P4W
CLASS: 2	AMPERE: 800A
LABEL: U/L SE	BUS MTL: Cu 1000A/in ²
VOLTAGE: 480/277V	PLATE: Silver Plate
STYLE: Bolt-On	RATING: Fully Rated
BUS BRACING (RMS SYM):	65000A
DEV MIN INT RATING (RMS SYM):	65000A

Switchboard / Device Information

Circuit No.	Device	Amps	Poles	Nameplates	Lugs/Cable Size	Notes
Main	SS	600	3			7,8,9
1	SELA	100	3		(1) - #12 - 3/0 AWG CU - Mech. AL	
2	SELA	100	3		(1) - #12 - 3/0 AWG CU - Mech. AL	
3	SFLA	200	3		(1) - #8 - 350 MCM CU - Mech. AL	
4	SFLA	200	3		(1) - #8 - 350 MCM CU - Mech. AL	
5	SFLA	200	3	(SPACE AND BUS)	(1) - #8 - 350 MCM CU - Mech. AL	10
6	SFLA	200	3	(SPACE AND BUS)	(1) - #8 - 350 MCM CU - Mech. AL	10
7	SELA	100	3		(1) - #12 - 3/0 AWG CU - Mech. AL	
8	SELA	100	3		(1) - #12 - 3/0 AWG CU - Mech. AL	

NOTES:

1. Equipment ground bus furnished with lugs.
2. Copper ground bus furnished.
3. Switchboard furnished with Nameplates.
4. All Nameplates to be fastened with screws.
5. Switchboard furnished with fully rated panel.
6. All group mounted devices in section 1 must load exit out the Bottom.
7. Device is 100 percent rated.
8. Device furnished with ETU (LSI) programmer.
9. Device furnished with padlocking provisions.
10. Lugs not furnished with SPACE AND BUS.
11. Estimated total factory connected wiring points for the lineup 15.
12. Estimated shipping weight for the lineup is 1027 lbs.

PROJECT NAME :
Capital West Wing WB5

CUSTOMER:
GEXPRO, POCA



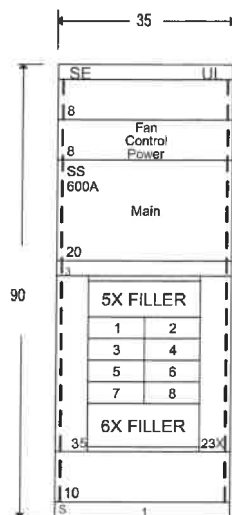
Industrial
Solutions **by ABB**

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REVISION NO.: 1

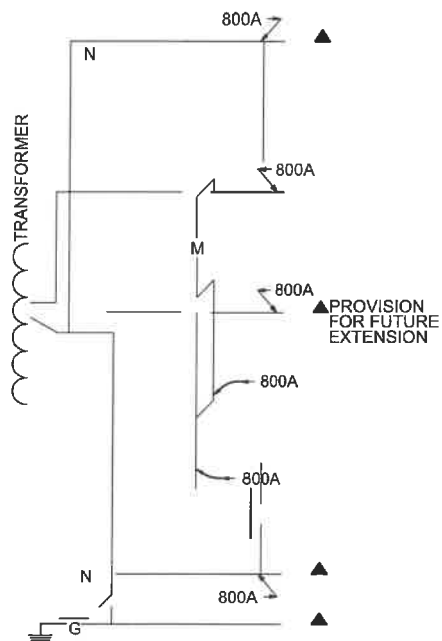
PRODUCT NAME:
Spectra Series
Switchboard

DRAWING NO:
ITEM NO: 3
MARKS:
QUOTE NO: U73-00004039
SHEET: 1 of 3

ACCESS TO: Front/Rear	PHASE: 3P4W
CLASS: 2	AMPERE: 800A
LABEL: U/L SE	BUS MTL: Cu 1000A/in ²
VOLTAGE: 480/277V	PLATE: Silver Plate
STYLE: Bolt-On	RATING: Fully Rated
BUS BRACING (RMS SYM):	65000A
DEV MIN INT RATING (RMS SYM):	65000A



1027 lbs
(Est.)
FRONT VIEW



BUSSING DIAGRAM

PROJECT NAME :
Capital West Wing WB5

CUSTOMER:
GEXPRO, POCA



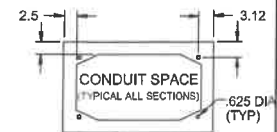
Industrial
Solutions by ABB

DWG TITLE: Front View/ Bussing
CREATED BY: B, Oshel, John
DATE: 01/14/2021 16:00:49
REVISION NO.: 1

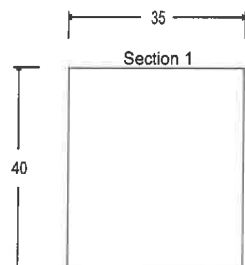
PRODUCT NAME:
Spectra Series™
Switchboard

DRAWING NO:
ITEM NO: 3
MARKS:
QUOTE NO: U73-00004039
SHEET: 2 of 3

ACCESS TO: Front/Rear	PHASE: 3P4W
CLASS: 2'	AMPERE: 800A
LABEL: U/L SE	BUS MTL: Cu 1000A/in ²
VOLTAGE: 480/277V	PLATE: Silver Plate
STYLE: Bolt-On	RATING: Fully Rated
BUS BRACING (RMS SYM):	65000A
DEV MIN INT RATING (RMS SYM):	65000A

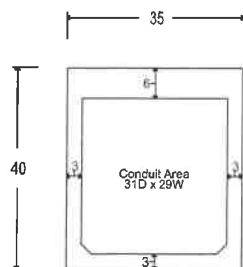


Top Conduit Area



Front Plan View

Bottom Conduit Area



Front Plan View

PROJECT NAME :
Capital West Wing WB5

CUSTOMER:
GEXPRO, POCA



Industrial
Solutions **by ABB**

DWG TITLE: Conduit View

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DATE: 01/14/2021 16:00:49

REVISION NO.: 1

PRODUCT NAME:

Spectra Series™
Switchboard

DRAWING NO:

ITEM NO: 3

MARKS:

QUOTE NO: U73-00004039

SHEET: 3 of 3

DESCRIPTION

The low-profile RCL round LED canopy/garage luminaire features a domed lens allowing uplight and improved light distribution. Its high-performance light engine is designed for maximum efficacy and heat dissipation. The RCL is offered with an optional integral 1-10V dimming occupancy sensor to maximize energy savings. This product is ideal for applications including, but not limited to, parking garages, schools, office complexes, light commercial developments, apartments, walkways, entryways and stairwells.

CONSTRUCTION

- Die-cast aluminum housing with stainless steel hardware
- Hinged mounting plate for easy surface mount installation
- White powder coat finish
- Unit includes a 3' whip for ease of wiring in pendant mount applications
- Hex head fasteners in a white finish optimize aesthetics and deter vandalism

OPTICS/LEDS

- High transmittance UV-stabilized dome Fresnel lens provides uplight
- 160° Distribution for optimal spacing
- 40W and 60W models with up to 7818 lumens for maximum project flexibility
- Efficacies up to 133 LPW maximize energy savings and utility rebates
- 4000K and 5000K CCT
- L90 of 54,000 hours at 40°C (104°F)
- CRI ≥ 80

ELECTRICAL

- Class 1, 120 - 277VAC driver, 50/60Hz
- 1-10V Dimming driver
- Power factor > 0.90
- Total harmonic distortion < 20%

INSTALLATION

- Easy surface mount installation with the hinged mounting plate. Can be surface mounted to standard 3-1/2" or 4" recessed square electrical J-box
- Three removable threaded plugs allow surface mounted 1/2" conduit feed
- Pendant mounted using a standard 3/4" downrod and hardware (supplied by others)

OPTIONS

- Integral 1-10V dimming occupancy sensor with built-in daylight control (SC)

TESTING & COMPLIANCE

- cULus Listed for Wet Locations
- DesignLights Consortium® (DLC) PREMIUM Qualified
- Meets state of California Title 24 requirements for dimming and control of light fixtures
- Operating temperatures: -20°C to 40°C (-4°F to 104°F)

WARRANTY

- Five year warranty (terms and conditions apply)

Note: Environment and application will affect actual performance. Typical values and 25°C used for testing. Specifications subject to change without notice.

ORDERING INFORMATION

Example: RCL40-4K-WH-SC

Series/Wattage	CCT	Finish	Options
RCL40 = 40W	4K = 4000K	WH = White	SC = Integral sensor
RCL60 = 60W	5K = 5000K		

Model: _____ Date: _____
Accessories: _____
Job Name: _____ Type: _____

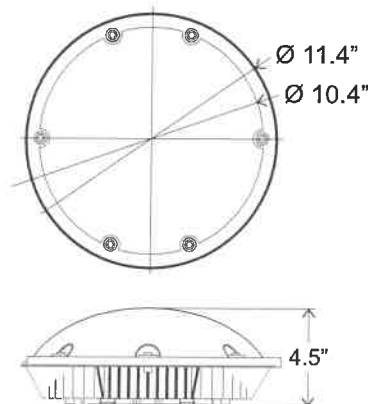


Specs At A Glance*

Wattage (W)	40		60	
CCT	4000K	5000K	4000K	5000K
Lumens (lm)	5244	5569	7432	7818
Efficacy (LPW)	127	132	127	133
Equivalency (HID)	150W		250W	
Distribution	Type V, 160°			
CRI	≥80			
Input Voltage	120-277VAC, 50/60Hz			
Operating Temp	-20°C to 40°C (-4°F to 104°F)			
Certifications	UL Listed for Wet Locations, IP65, DLC PREMIUM			
Warranty	5 Years			
Weight	6.0 lbs			

*Nominal Wattage

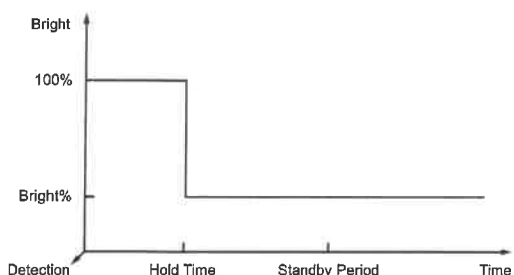
DIMENSIONS



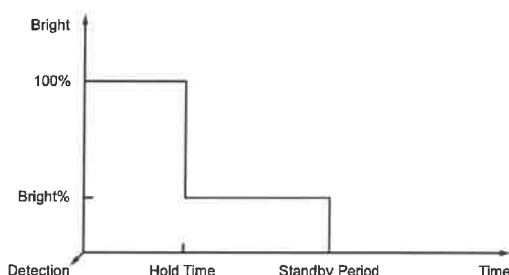
SENSOR SETTING

(Can be modified in the field) Sensor can be set up to turn off after a certain period of inactivity or remain in low mode until motion is detected.




2 Steps



3 Steps



Dip Switch Sensor Settings:

ON		1	2	
	I	ON	ON	100%
	II	ON	OFF	75%
	III	OFF	ON	50%
OFF	IV	OFF	OFF	10%

Default setting with gray background

Detection area

Detection area can be reduced by selecting the combination on the DIP switches to fit precisely each application

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Hold time

Refers to the time period the lamp remains at 100% illumination after no motion is detected.

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	I	ON	ON	ON	0S
	II	OFF	ON	ON	5S
	III	ON	OFF	ON	5min
	IV	OFF	OFF	ON	10min
	V	ON	ON	OFF	30min
	VI	OFF	ON	OFF	1h
	VII	OFF	OFF	OFF	+∞

Stand-by period

Refers to the time period the lamp remains at a low light level before it completely switches off in the long absence of people.
When set to +∞ mode, the low light maintained until motion is detected.

<div>ON</div> 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Daylight sensor

The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold.

When set to Disable mode, the daylight sensor will switch on the lamp when motion is detected regardless of ambient light level.

50lux, 30lux: twilight operation, 10lux, 5lux: darkness operations only.

Note that daylight sensor is active only when lamp totally switches off.

ON		5	6	
↑	I	ON	ON	50%
■	II	OFF	ON	30%
□	III	ON	OFF	20%
OFF	IV	OFF	OFF	10%

Stand-by dimming level

The low light level you would like to have after the hold time in the long absence of people.

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1 Painting:

- A** Manufacturers: Subject to compliance with requirements available, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- 1 Benjamin Moore & Co.
- 2 PPG Architectural Finishes, Inc.
- 3 Sherwin-Williams Company (The)

2 Paint, General:

- A** Material Compatibility:

- 1 Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
- 2 For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

3 Field Conditions:

- A** Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B** Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

4 Preparation:

- A** Comply with manufacturer's written instructions and recommendations in "MPI Manual" (Manufacturers' Product Information) applicable to substrates indicated.
- B** Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
- 1 After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection, in any.

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- C** Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1** Remove incompatible primers and re-prime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D** Remove existing caulks and fillers. Repair cracked or damaged substrate wood. Sand all exposed surfaces for uniform appearance. Repair exposed joints and cracked panels.
- E** Steel Substrates: remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer, but not less than the following:
 - 1** SSPC-SP3, “Power Tool Cleaning.”

5 Application:

- A** Apply paints according to manufacturer’s written instructions and to recommendations in “MPI Manual.”
 - 1** Use applicators and techniques suited for paint and substrate indicated.
 - 2** Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 - 3** Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 4** Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B** Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C** If undercoats, or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D** Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp

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Exhibit H

lines and color breaks.

E Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1 Paint the following work where exposed in occupied spaces:

a Doors, jams, and door closers.

2 Paint portions of internal surfaces of metal ducts, grilles, behind air inlets and outlets that are visible from occupied spaces.

6 Hollow Metal Doors and Frames:

A Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- 1** Amweld Building Products, LLC
- 2** Curries Company; an Assa Abloy Group Company
- 3** Deansteel Manufacturing Company, Inc.
- 4** Firedoor Corporation
- 5** Security Metal Products Corp.
- 6** Steelcraft; and Ingersoll-Rand Company.

7 Materials:

A Cold-rolled Steel Sheet: ASTM A 1008/A 1008M Commercial Steel (CS), Type B; suitable for exposed applications.

B Metallic-coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum A40 (ZF120) metallic coating.

C Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z (12G) coating designation; mill phosphatized.

- 1** For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M, or ASTM A 1011/A 1011M, hot dip galvanized to ASTM A153/A 153M, Class B.

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D Inserts, Bolts, and Fasteners: Hot dip galvanized according to ASTM A 153/A 153M.

E Grout: ASTM C 76, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

8 Standard Hollow Metal Frames:

A General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

B Exterior Frames: Fabricated from metallic-coated steel sheet.

- 1** Fabricate frames as full profile welded unless otherwise indicated.
- 2** Frames for Level 3 Steel Doors: 0.053 inch (1.3 mm) thick steel sheet.

C Interior Frames: Fabricated from metallic-coated steel sheet/

- 1** Fabricate frames with mitered or coped corners.
- 2** Fabricate frames as knocked down for door in Gypsum Board Partitions and full profile welded doors in CMU Partitions.
- 3** Frames for Level 2 Steel Doors: 0.053 inch (1.3 mm) thick steel sheet.

D Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

9 Frame Anchors:

A Jamb Anchors

- 1** Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch (1.0 mm) thick, with corrugated or perforated straps not less than 2 inches (50 mm) wide by 10 inches (250 mm) long; or wire anchors not less than 0.177 inch (4.5 mm) thick.
- 2** Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch (1.0 mm) thick.
- 3** Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.

B Floor Anchors: Formed for same material as frames, not less than 0.042 inch (1.0 mm) thick, and as follows:

- 1** Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

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- 2** Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch (50 mm) height adjustment. Terminate bottom of frames at finish floor surface.

10 Quality Assurance:

- A** Source Limitations: Obtain hollow metal work from single source from single manufacturer.
- B** Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252.
 - 1** Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.
 - 2** Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to the authorities having jurisdiction for use on types and sizes of doors indicated based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
 - 3** New double doors and frames are 3-hour rated assemblies.

11 Door Hardware Schedule:

- A** Submit schedule with hardware sets in vertical format as illustrated by the Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening. Include the following information:
 - 1** Door Index; include door number, heading number, and Architects hardware set number.
 - 2** Opening Lock Function Spreadsheet; list locking device and function for each opening.
 - 3** Type, style, function, size, and finish of each hardware item.
 - 4** Name and manufacturer of each item.

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- 5** Fastenings and other pertinent information.
- 6** Location of each hardware set cross-referenced to indications on Drawings.
- 7** Explanation of all abbreviations, symbols, and codes contained in schedule.
- 8** Mounting locations for hardware.
- 9** Door and frame sizes and materials.
- 10** Name and phone number for the local manufacturer's representative for each product.

- a** Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.

12 Reinforced Unit Masonry:

- A** Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- B** Lay hollow masonry units with face shell bedding on head and bed joints.
- C** Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- D** Remove excess mortar as work progresses.
- E** Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar, and replace.
- F** Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

13 Reinforcement and Anchorage:

- A** Reinforcement Bars: Secure at locations indicated and to avoid displacement during grouting. Minimum spacing between bars or to masonry surfaces shall be one bar diameter.
- B** Joint Reinforcement: Install horizontal joint reinforcement 8 inches on center.
- C** Anchors: Reinforce joint corners and intersections with strap anchors 16 inches on center.
- D** Anchors: Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Unless otherwise indicated on drawings or closer spacing is indicated under specific wall type, space anchors at maximum of 36 inches horizontally and 24 inches vertically.

Building 1, West Wing Fan Coil Replacement Project – Phase 2

Exhibit H

E Wall Ties: Install wall ties at locations indicated, spaced at not more than 24 inches on center horizontally and 16 inches on center vertically, unless otherwise indicated on drawings.

F Install rebar positioners in walls over 8 ft high.

1. Hohmann & Barnard Single and Twin Rebar Positioners www.h-b.com

G Reinforced Hollow Unit Masonry: Keep vertical cores to be grouted clear of mortar, including bed area of first course.

1 Bond Beams: At bond beams or other locations for horizontally reinforced masonry, provide special masonry units or saw to accommodate reinforcement.

2 Provide steel angle lintels above the new openings to support masonry independent of the door frame.

14 Quality Control:

A As work progresses, install built-in metal door frames and other items to be built into the work and furnished under other sections.

B Install built-in items plumb, level, and true to line.

C Bed anchors of metal door and glazed frames in adjacent mortar joints. Fill frame voids solid with grout.

1. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.

D Do not build into masonry construction organic materials that are subject to deterioration.

15 Tolerances:

A Maximum Variation from Alignment of Columns: 1/4 inch.

B Maximum Variation from Unit to Adjacent Unit: 1/16 inch.

C Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.

D Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.

E Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.

F Maximum Variation of Joint Thickness: 1/8 inch in 3 ft.

Building 1, West Wing Fan Coil Replacement Project – Phase 2

Exhibit H

G Maximum Variation from Cross Sectional Thickness of Walls: ¼ inch.

16 Brick:

- A** Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B** Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.
- C** Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.
- D** Ensure that all work performed under this contract only be performed by mechanics who have first provided documentation to the Owner of certification and licensure, as follows:
 - 1** Any reference to brand/make/model in the attached Exhibits is not intended to limit competition and should be followed by the words “or equal.” All provided and installed materials must meet the minimum specifications as described in the Exhibits.
 - 2** Vendor must test all installed equipment/systems for proper operation prior to Final Acceptance of the Work.
 - 3** Vendor must provide Agency with training on use of equipment prior to Final Acceptance.

Building 1, West Wing Fan Coil Replacement Project – Phase 2

Exhibit I – Points List

TYPICAL VERTICAL FAN COIL UNIT		POINT TYPE							
SYSTEM POINT DESCRIPTION		GRAPHIC	HARDWARE INPUT	HARDWARE OUTPUT	SOFTWARE POINT	HARDWARE INTERLOCK	WIRELESS	NETWORK	DEFAULT VALUE
VERTICAL FAN COIL UNIT - SYSTEM POINTS LIST									
DISCHARGE AIR TEMPERATURE LOCAL		X	AI						
SPACE HUMIDITY		X	AI				X		
SPACE TEMPERATURE LOCAL TEMPERATURE		X	AI				X		
CONDENSATE OVERFLOW DETECTION LOCAL		X	BI						
REHEAT OUTPUT 1		X		BO					
SUPPLY FAN OUTPUT 1		X		BO					
SUPPLY FAN OUTPUT 2		X		BO					
SUPPLY FAN OUTPUT 3		X		BO					
COOLING VALVE		X		FLTG					
GENERAL NOTES									

ADDENDUM ACKNOWLEDGEMENT FORM

SOLICITATION NO.: CRFQ GSD2200000036

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification. Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- ☒ Addendum No. 1
- ☒ Addendum No. 2
- ☒ Addendum No. 3
- ☐ Addendum No. 4
- ☐ Addendum No. 5

- ☐ Addendum No. 6
- ☐ Addendum No. 7
- ☐ Addendum No. 8
- ☐ Addendum No. 9
- ☐ Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Dougherty Company, Inc.

Company

Authorized Signature

April 7, 2022

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Request for Quote
Construction

Proc Folder: 1011090

Doc Description: Add. No. 3 Bldg 1 West Wing Fan Coil Replacement Project

Reason for Modification:

Addendum No. 3

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2022-03-25	2022-04-07 13:30	CRFQ 0211 GSD2200000036	4

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name :

Address :

Street :

City :

State :

Country :

Zip :

Principal Contact :

Vendor Contact Phone:

Extension:

FOR INFORMATION CONTACT THE BUYER

Melissa Pettrey
(304) 558-0094
melissa.k.pettrey@wv.gov

Vendor
Signature X

FEIN#

DATE

All offers subject to all terms and conditions contained in this solicitation

SOLICITATION NUMBER: CRFQ GSD2200000036
Addendum Number: 3

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- ☒ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☒ Attachment of vendor questions and responses
- ☐ Attachment of pre-bid sign-in sheet
- ☐ Correction of error
- ☐ Other

Description of Modification to Solicitation:

Addendum is issued to publish the following information to the Vendor community.

1. To publish responses to Vendor technical questions, per Attachment A.
2. To extend the bid opening date to April 7, 2022 @ 1:30PM.
3. To provide clarification to the following:
 - A. Exhibit C - Page 1, General Notes Electrical 1.
 - B. Exhibit C - Page 11, "Remove to owner's scrap..."
 - C. Exhibit C - Page 12, Notes: 3.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ATTACHMENT A

Building 1, West Wing Fan Coil Replacement Project – Phase 2
CRFQ GSD2200000036 Technical Questions & Responses

Q 1. What requires painting besides the new fire doors and frames, and interior finishes of the corridor area?

A 1. Mechanical items that are exposed but unfinished such as equipment stands, supports etc.

Q 2. Are any new housekeeping pads required for new equipment?

A 2. No.

Q 3. What type of keying is required for the new door locks?

A 3. Key doors to match the existing West Wing electrical rooms.

Q 4. Exhibit C, page 12, note 1 says “corridor drywall is to remain.” Does that mean leave any drywall on the inside of the electrical room; or on the corridor side only, which is understood?

A 4. Please leave drywall on the corridor side only.

Q 5. There is a unit masonry spec, does that apply only to the masonry work at the new door frames, or are there other new masonry installations?

A 5. New unit masonry should only be found around new doors.

Q 6. Concerning the 4” piping header that comes off the hot taps in the mechanical room, can this piping be schedule 40 grooved pipe with grooved fittings? If not please specify what piping to use.

A 6. Schedule 40 grooved piping is permitted.

Q 7. Can we use pro-press fittings on the 2” copper branch lines feeding the 3 Liebert units and the 2 Daikin units?

A 7. Pro-press fittings are permitted.

Q 8. Is there a detail or piping schematic to show what is required in the piping at each unit? Will they need strainers, balance valves, control valves, etc.?

A 8. Control valves are provided by the factory. Provide other specialty valves including shut off valves for each unit. See Exhibit C page 1 General Notes mechanical

Q 9. Do all 5 units have existing condensates to use? Will there be any need for condensate pumps?

A 9. The computer room units condensate will tie into existing. The two units in the mechanical rooms will require condensate pumps and pvc piping to tie into the existing header in the corridor.

Building 1, West Wing Fan Coil Replacement Project – Phase 2
CRFQ GSD2200000036 Technical Questions & Responses

Q 10. Will the two Daiken units need stands made or equipment pads poured to set them on?

A 10. Provide equipment stands for the new vertical units.

Q 11. One of the Daiken units calls for new duct and the other ties into existing, what is the layout of the new duct and what areas will it feed?

A 11. Provide a 12 X 12 vertical section with an elbow to a 10"-0 horizontal run of the same size with 4 drum louvers sized for 500 cfm each and control dampers for each. Wrap with 1" fiberglass insulation with foil backing. Provide an elbow for the unit return with egg crate grill. Revise as necessary to accommodate the room's final arrangement. The units feed the electrical room indicated.

Q 12. What requires painting other than the new fire doors, frames, and interior finishes of the corridor area?

A 12. See answer to question 1.

Q 13. What type of keying is required for the new door locks?

A 13. See answer to question 3.

Q 14. Exhibit C, page 12, note 1 says "corridor drywall is to remain." Does that mean leave any drywall on the inside of the electrical room; or on the corridor side only, which is understood?

A 14. See answer to question 4.

Q 15. There is a unit masonry spec, does that apply only to the masonry work at the new door frames, or are there other masonry installations?

A 15. See answer to question 5.

Q 16. Is it possible to have another site visit to look at the electrical portion of the project?

A 16. A secondary site visit was permitted on 3/23, with Addendum # 2. No additional visits

Q 17. The scope of work doc "Exhibit B - Project Plans 1.1.1.2 mention an attachment for the 12.47 unit substation lineup. Please provide this.

A 17. Please see Exhibit F - Dry Type Station Transformer & Low Voltage Switchboard.

Q 18. Will there be additional drawings issued? Would like to see actual electrical one lines or scalable drawings of the electrical layout in all rooms where new panels are going in or feeders are running to.

A 18. No additional drawing will be issued.

Building 1, West Wing Fan Coil Replacement Project – Phase 2
CRFQ GSD2200000036 Technical Questions & Responses

Q 19. Can we be provided with scalable floor plans for the first-floor area along with the basement?

A 19. No scalable backgrounds are available.

Q 20. Is there more information on the new substation feeders as far as conduit & wire sizing along with any specifications on special needs for the medium voltage raceway or cable? Also is there a one-line drawing for this?

A 20. For all substation requirements please comply with the manufacturer's recommendations.

Q 21. Is the control work for the fan coils and Liebert or any other phase of work associate with this project to be done by the electrical contractor? If so are we to receive drawings associated with the control side wiring of how the system needs to be completed.

A 21. Refer to section 1.4.1 BAS-system communication and 1.2 BuildingAutomation system for guidance. The existing TRANE Ensemble program is to be utilized for new equipment integration either by wired link or Air system wireless to the nearest TRANE SC controle module. New equipment display points will feature standard monitoring points available and graphics display integration. Includes alarm link to existing GSD notification email system + 1 (auditor office) for continuous monitoring/ alarm conditions

Q 22. Would like to request a one week bid extension due to amount of questions being answered and new information being provided to provide the best possible bid for the project.

A 22. Bid opening will be moved to Thursday, April 7, 2022 at 1:30PM.

Clarifications:

1. Include the removal of equipment pads under the buck and boost transformer to be removed and MCC #1.
2. Remove and cap piping existing fan coil units in the contract area.
3. Remove room WB 8 from the contract limits. Remove one replacement single door from the project.



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Request for Quote
Construction

Proc Folder: 1011090

Doc Description: Add. No. 2 Bldg 1 West Wing Fan Coil Replacement Project

Reason for Modification:

Addendum No. 2

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2022-03-17	2022-03-31 13:30	CRFQ 0211 GSD2200000036	3

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name :

Address :

Street :

City :

State :

Country :

Zip :

Principal Contact :

Vendor Contact Phone:

Extension:

FOR INFORMATION CONTACT THE BUYER

James R Jones
304-352-5517
james.r.jones@wv.gov

Vendor
Signature X

FEIN#

DATE

All offers subject to all terms and conditions contained in this solicitation

SOLICITATION NUMBER: CRFQ GSD2200000036
Addendum Number: 2

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- ☐ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☐ Attachment of vendor questions and responses
- ☐ Attachment of pre-bid sign-in sheet
- ☐ Correction of error
- ☒ Other

Description of Modification to Solicitation:

Addendum is issued to publish the following to the vendor community.

1. Vendor, and their potential sub-contractors, will be permitted to perform an additional site visit. Site visit will be held on Wednesday, March 23, 2022 at 10:00am. Vendors will meet at the West Wing Entrance as the visit will proceed precisely at that time.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Request for Quote
Construction

Proc Folder: 1011090			Reason for Modification: Addendum No. 1
Doc Description: Add. No. 1 Bldg 1 West Wing Fan Coil Replacement Project			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2022-03-15	2022-03-31 13:30	CRFQ 0211 GSD2200000036	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name :

Address :

Street :

City :

State :

Country :

Zip :

Principal Contact :

Vendor Contact Phone:

Extension:

FOR INFORMATION CONTACT THE BUYER

James R Jones
304-352-5517
james.r.jones@wv.gov

**Vendor
Signature X**

FEIN#

DATE

All offers subject to all terms and conditions contained in this solicitation

SOLICITATION NUMBER: GSD2200000036

Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- ☐ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☐ Attachment of vendor questions and responses
- ☒ Attachment of pre-bid sign-in sheet
- ☐ Correction of error
- ☒ Other

Description of Modification to Solicitation:

Addendum No. 1 is issued to publish the following to the vendor community:

1. To attach a copy of the pre-bid sign-in sheet, per Attachment A.
2. To extend Technical Question deadline to Thursday March 24, 2022 @ 3:00PM.
3. To extend Bid Opening date to Thursday March 31, 2022 @ 1:30PM.
4. To attach the signature page from the specification section that did not print properly. Please complete and add to your bid submission.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.