

Maryland Stadium Authority Request for Proposals Building Commissioning Services Renovation Projects at M&T Bank Stadium

Issue Date: September 21, 2023

## **KEY INFORMATION SUMMARY SHEET**

#### MARYLAND STADIUM AUTHORITY

# Request for Proposals Building Commissioning Services Renovation Projects at M&T Bank Stadium

<b>RFP Issue Date:</b>	September 21, 2023
Procurement Officer:	Yai Waite Maryland Stadium Authority 351 West Camden Street, Suite 300 Baltimore, Maryland 21201 Phone: 443-602-0681 E-mail: <u>ywaite@mdstad.com</u>
Procurement Method:	Competitive Sealed Proposals
<b>MBE Participation Goal:</b>	12% overall; no subgoals
Pre-Proposal Conference:	September 27, 2023 at 11:00 a.m. (Local Time)
Closing Date and Time Technical Proposals:	October 13, 2023 at 1:00 p.m. (Local Time)

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#### **SECTION 1**

#### **GENERAL INFORMATION**

#### 1.1 Summary Statement

The Maryland Stadium Authority (hereinafter "MSA") is issuing this Request for Proposals (hereinafter "RFP") for Building Commissioning Services to select a qualified Offeror to implement and manage the commissioning process for the M&T Bank Stadium Renovations Project (the "Project"). The project scope will include, but is not limited to, the commissioning of newly built aluminum entrances, storefronts and windows, brick veneer, metal panels, and new MEP systems which include but are not limited to AHUs, DOAS units, energy recovery modules, make-up air units, air-cooled condensing units, VRF systems, heat pumps, ductless split AC units, terminal heaters, pumps, exhaust fans, VFDs, DDC Control Systems, lighting controls, emergency generator, automatic transfer switch, chiller plant, heating water plant, domestic hot and cold water system, storm and sanity systems, and lightning protection.

A detailed summary of the scope of the work of the project and a tentative construction schedule is included in section 3 of this RFP.

#### **1.2** Abbreviations and Definitions

For purposes of this RFP, the following abbreviations and terms have the meanings indicated below:

- a. **Architect/Engineer ("A/E")** The team responsible for providing professional engineering, architectural, and design services for the Project. The A/E is Gensler (hereinafter "A/E").
- b. **Basis of Design (BOD)** Narrative of Owner's project requirements and conceptual design developed during the programming phase.
- c. **Building Enclosure Commissioning (BECx)** The process by which the design and constructed performance of building enclosure materials, components, assemblies and systems are validated to meet defined objectives and requirements of the project, as established by the owner. (Source: NIBS 3-2012).
- d. **Building Enclosure Commissioning Authority (BECxA)** Entity that is designated to formally document the project-specific Building Enclosure Commissioning. This entity should be trained, experienced and knowledgeable in the process of building enclosure commissioning and possess basic architectural and building science knowledge of the design, performance, systems, and construction related to the building enclosure. The BECxA role

may be accomplished by the BES, CxA or an additional member to the team. (Source: NIBS 3-2012).

- e. **Building Enclosure Specialists (BES)** This person or party is deemed an "expert" in the building enclosure systems anticipated to be used on the proposed building and possesses the experience and technical qualifications to design, critique, validate and support the team in the project development and construction validation. (Source: NIBS 3-2012).
- f. **COMAR** Code of Maryland Regulations (available at http://www.dsd.state.md.us).
- g. **Contract** The written agreement entered into between MSA and the selected Offeror. The Contract will include all general terms and conditions, and will incorporate the entire RFP, including any amendments and addenda to the RFP, and all or indicated portions of the selected Offeror's proposal. A sample contract is attached hereto as **Attachment J**.
- h. **Consultant** The selected Offeror pursuant to the terms of this RFP.
- i. **Commissioning Agent (CxA)** Person responsible for ensuring the building systems are installed and operating in accordance with the project design.
- j. **Commissioning Authority** –An entity identified by the Owner who leads, plans, schedules, and coordinates the commissioning team to implement the commissioning process. (Source: ASHRA 0-2005).
- k. **Commissioning Team** The individuals responsible for implementing and executing the commissioning process.
- 1. **Construction Manager (CM)** A third party engaged by the Owner to provide pre-construction and construction management services. The CM is Gilbane Building Company (hereinafter "CM").
- m. eMMA eMaryland Marketplace Advantage (<u>https://emma.maryland.gov</u>).
- n. **LEED** A third-party certification program and the nationally accepted benchmark for the design, construction, and operation of high performance green buildings developed by the U.S. Green Building Council (USGBC).
- o. Local Time Time in the Eastern Time Zone as observed by the State.
- p. **MBE** –Minority Business Enterprise certified by the Maryland Department of Transportation (hereinafter "MDOT").
- q. **MSA** Maryland Stadium Authority (<u>www.mdstad.com</u>).

- r. **MSA Business Hours** 8:30 a.m. to 5:00 p.m., local time, Monday through Friday, excluding State holidays.
- s. **MSA Procurement Policies** MSA procurement policies and procedures (available at <u>www.mdstad.com</u>).
- t. **Notice to Proceed (NTP)** A formal notification issued by the Procurement Officer that directs the Consultant to perform work and establishes the date on which the work is to commence on a Project.
- u. **Offeror** An entity that submits a Proposal in response to this RFP.
- v. **Procurement Officer (PO)** The MSA representative responsible for this RFP. MSA may change the Procurement Officer at any time and will provide written notice to the Offerors of any such change.
- w. **Project** The M&T Bank Stadium Renovations Project includes, among other things, aluminum entrances, storefronts, and windows, brick veneer, and new MEP systems which include AHUs, DOAS units, energy recovery modules, make-up air units, air-cooled condensing units, VRF systems, heat pumps, ductless split AC units, terminal heaters, pumps, exhaust fans, VFDs, DDC Control Systems, lighting controls, emergency generator, automatic transfer switch, and lightning protection. More detail included throughout this RFP.
- x. **Project Manager (PM)** The MSA representative that is primarily responsible for monitoring the daily activities of the Contract and for providing technical assistance to the Consultant.
- y. **Project Team** The Maryland Stadium Authority; the Client; the A/E, CM and consultants, and any other consultant/entity the MSA may engage to participate in the effort.
- z. **Proposal** The submission provided by Offerors in response to this RFP.
- aa. **RFP** This Request for Proposals.
- bb. **Selection Committee-** The representatives selecting the Consultant.
- cc. **State** State of Maryland.

#### **1.3** Contract Type

The contract that results from this RFP will include a fixed fee for professional services and a contingency amount to be used by MSA in its sole discretion. After execution, the Contract amount shall not be exceeded without the necessary contract modification.

#### **1.4** Contract Duration

The term of the Contract will be for a period necessary to complete the scope of work and as agreed upon by MSA and the Consultant.

#### **1.5 Procurement Officer**

The sole point-of-contact for purposes of this RFP is the Procurement Officer listed below:

Yai Waite Maryland Stadium Authority 351 West Camden Street, Suite 300 Baltimore, Maryland 21201 Cell: 443-602-0681 Email: ywaite@mdstad.com

MSA may change the Procurement Officer at any time and will provide written notice to the Offerors if any such change occurs.

# 1.6 Pre-Proposal Conference and Site Visit

A virtual pre-proposal conference ("Conference") will be held on **September 27**, **2023 at 11:00 a.m. (Local Time)**. Please use the link below to register:

https://us02web.zoom.us/meeting/register/tZorce2prjsvE9Wdv8wgzMW\_eciQ M2R1Y4Cl#/registration

A site visit will be held on October 2, 2023 at 10:00 a.m., Local Time.

https://www.eventbrite.com/e/site-visit-rfp-commissioning-svcs-renovationprojects-mt-bank-stadium-tickets-722220108787?aff=oddtdtcreator

#### 1.7 The Project Manager

The Project Manager is:

Kelly Smulovitz Maryland Stadium Authority 333 West Camden Street, Suite 500 Baltimore, Maryland 21201

MSA may substitute the PM at any time. Prior to Contract award, written notice of any substitution will be provided to Offerors and, if post award, to the Consultant.

#### 1.8 e-Maryland Marketplace Advantage

In order to receive a Contract award, a vendor must be registered on eMMA. Registration is free. Go here to register: <u>https://procurement.maryland.gov</u>Click on "New Vendor? Register Now" to begin the process and follow the prompts.

#### 1.9 Questions

Questions regarding this RFP shall be submitted electronically in Word or PDF formats via the following link no later than **October 3**, **2023 at 1:00 p.m. (Local Time):** 

https://mdstad.sharefile.com/r-r981533f9c84747a1b5545b340d31dfbb

Please include information regarding the name of the firm, representative's name, and contact information. Based on the availability of time to research and communicate an answer, the Procurement Officer will decide whether an answer can be given before the proposal closing date. Answers to all substantive questions that have not previously been answered, and are not clearly specific to the requestor, will be responded via addendum.

## 1.10 Technical Proposals - Closing Date and Time

To be considered, Technical Proposals must be uploaded to the following link no later than **October 13, 2023 at 1:00 p.m. (Local Time):** 

https://mdstad.sharefile.com/r-r39ebc2b4ed0144c89ac429fc7174aa0f

Requests for an extension of this date and time will not be granted. Offerors shall allow sufficient electronic transmission time to ensure timely receipt. Proposals received by MSA after the deadline will not be considered. Proposals will not be reviewed publicly.

#### **1.11 Oral Presentations**

MSA reserves the right to conduct virtual or in-person oral presentations. In the event that MSA exercises its right, short-listed Offerors will be required to make virtual oral presentations to the Selection Committee. Significant representations made by an Offeror during their oral presentation must be confirmed in writing. All such representations will become part of the Offeror's Proposal and are binding if a Contract is awarded as a result of this RFP. The tentative date for Oral Presentations is October 23-25, 2023. In your Technical Proposal, please state your availability for the dates provided. Typically, oral presentations will follow a specified format and generally be limited to 45 minutes [30 minutes for the presentation and 15 minutes for questions]. The Procurement Officer will notify the short-listed Offerors with details and instructions prior to the presentation.

The presentation must consist of, but not be limited to, a discussion of the Offeror's specific approach to the project, understanding of the scope of work, and how it intends to execute the work within schedule and budget.

## 1.12 Duration of Offer

Proposals submitted in response to this RFP are irrevocable for **180 days** following the closing date for proposals, the deadline for the submission of Best and Final Offers ("BAFO"), if requested, or the date any protest concerning this RFP is finally resolved. This period may be extended at the Procurement Officer's request only with the Offeror's written agreement.

## 1.13 Offeror's Affidavit

- a. Bid/Proposal Affidavit. Each Offeror shall complete and submit the Bid/Proposal Affidavit attached hereto as **Attachment A** with the Offeror's Technical Proposal.
- b. Contract Affidavit. A successful Offeror will be required to complete a Contract Affidavit in the form attached hereto as **Attachment C** and provide to MSA within five (5) business days after notification of proposed recommendation of award of the Agreement. An executed Contract Affidavit should not be submitted with an Offeror's Proposal.
- **c.** Contract Affidavit. A successful Offeror will be required to complete a Contract Affidavit in the form attached hereto as **Attachment C** and provide to MSA within 5 business days after notification of proposed recommendation of award of the Contract. An executed Contract Affidavit should not be submitted with an Offeror's Proposal.
- d. Corporate Diversity Addendum and Affidavit. Each Offeror shall complete and submit the Corporate Diversity Addendum and Affidavit attached hereto as **Attachment L** with the Offeror's Technical Proposal.

#### **1.14** Acceptance of Terms and Conditions

By submitting a Proposal, the Offeror if selected for award, shall be deemed to have accepted all of the terms and conditions set forth in this RFP including all attachments.

#### 1.15 Procurement Method

The Contract resulting from this RFP will be awarded in accordance with the Competitive Sealed Proposals process under Section 3 (C) of MSA's Procurement Policies. MSA's Procurement Policies are available for review on MSA's website or may be obtained by contacting the Procurement Officer.

#### 1.16 Arrearages

By submitting a response to this RFP, an Offeror represents that it is not in arrears in the payment of any obligations due and owing the State of Maryland, including, by way of example only, the payment of taxes and employee benefits, and that it will not become so in arrears during the term of the Contract if selected for contract award.

## **1.17** Revisions to the RFP

- a. If the RFP is revised before the Proposal Closing Date, MSA shall post any addenda to the RFP on eMMA and MSA's website and shall endeavor to provide such addenda to all prospective Offerors that were sent this RFP or are otherwise known by the Procurement Officer to have obtained this RFP. It remains the responsibility of all prospective Offerors to check eMMA and MSA's website for any addenda issued prior to the Proposal Submission Deadline.
- b. Acknowledgment of the receipt of all addenda to this RFP issued before the Proposal Closing Date shall be included in the Transmittal Letter accompanying the Offeror's Technical Proposal.
- c. Addenda made after the Proposal Closing Date will be sent only to those Offerors that remain under award consideration as of the issuance date of the addenda.
- d. Acknowledgement of the receipt of addenda to the RFP issued after the Proposal Closing Date shall be in the manner specified in the addendum notice.
- e. Failure to acknowledge receipt of an addendum does not relieve the Offeror from complying with the terms, additions, deletions, or corrections set forth in the addendum, and may cause the Proposal to be deemed not reasonably susceptible of being selected for award.

#### **1.18** Cancellations; Discussions

MSA reserves the right to cancel this RFP, to accept or reject any and all proposals, in whole or in part, received in response to this RFP, to waive or permit cure of minor irregularities, and to conduct discussions with any or all qualified or potentially qualified Offerors in any manner necessary to serve the best interests of MSA. This may be followed by submission of Offeror-revised Proposals and best and final offers ("BAFO"). MSA also reserves the right, in its sole discretion, to award a contract based upon written proposals received, without prior discussions or negotiations.

#### **1.19** False Statements

MSA incorporates by reference the provisions of Section 11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland regarding truthfulness in the information included in the Contract documents. Offeror shall comply with the obligations set forth therein, including, without limitation, the following:

- a. In connection with a procurement Contract, a person may not willfully:
  - 1. Falsify, conceal, or suppress a material fact by any scheme or device;
  - 2. Make a false or fraudulent statement or representation of a material fact; or
  - 3. Use a false writing or document that contains a false or fraudulent statement or entry of a material fact.
- b. A person may not aid or conspire with another person to commit an act under subsection of this section.
- c. A person who violates any provision of this section is guilty of a felony and on conviction is subject to a fine not exceeding \$20,000 or imprisonment not exceeding five years or both.

## **1.20** Minority Business Enterprise

Minority Business Enterprises are encouraged to respond to this solicitation.

- a. An overall MBE subcontractor participation goal as identified in the Key Information Summary Sheet has been established for this procurement, representing a percentage of the total contract dollar value, including all renewal option terms, if any. All subcontractors named by the Offeror as part of their MBE Schedule must be certified with the Maryland Department of Transportation (MDOT).
- b. Notwithstanding any subgoals established for this RFP, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from any/all of the various MBE classifications to meet the remainder of the overall MBE participation goal.
- c. By submitting a response to this solicitation, the Offeror acknowledges the overall MBE subcontractor participation goal and subgoals and commits to achieving the overall goal and subgoals by utilizing certified minority business enterprises, or requests a full or partial waiver of the overall goal and subgoals.

An Offeror that does not commit to meeting the entire MBE participation goal must submit a request for waiver with its proposal submission that is supported by good faith efforts documentation to meet the MBE goal made prior to submission of its proposal as outlined in **Attachment D-1B**, Waiver

Guidance. Failure of an Offeror to properly complete, sign, and submit **Attachment D-1A** at the time it submits its technical Proposal will result in the rejection of the Proposal and the Offeror being deemed not reasonably susceptible of being selected for award.

- d. Attachments
  - a) D-1 to D-5 The following Minority Business Enterprise participation instructions, and forms are provided to assist Offerors:
    - Attachment D-1A MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule (must be submitted with Proposal)
    - Attachment D-1B Waiver Guidance
    - Attachment D-1C Good Faith Efforts Documentation to Support Waiver Request
    - Attachment D-2 Outreach Efforts Compliance Statement
    - Attachment D-3A MBE Subcontractor Project Participation Certification
    - Attachment D-3B MBE Prime Project Participation Certification
    - Attachment D-4A Prime Contractor Paid/Unpaid MBE Invoice Report
    - Attachment D-4B MBE Prime Contractor Report
    - Attachment D-5 Subcontractor Paid/Unpaid MBE Invoice Report
  - b) The Offeror shall include with its Proposal a completed MBE Utilization and Fair Solicitation Affidavit (**Attachment D-1A**) whereby:
    - 1. The Offeror acknowledges the certified MBE participation goal and commits to make a good faith effort to achieve the goal and any applicable subgoals, or requests a waiver, and affirms that MBE subcontractors were treated fairly in the solicitation process; and
    - 2. The Offeror responds to the expected degree of MBE participation, as stated in the solicitation, by identifying the specific commitment of certified MBEs at the time of Proposal submission. The Offeror shall specify the percentage of total contract value associated with each MBE subcontractor identified on the MBE participation schedule, including any work performed by the MBE prime (including a prime participating as a joint venture) to be counted towards meeting the MBE participation goals.
    - The Offeror requesting a waiver should review Attachment D-1B (Waiver Guidance) and D-1C (Good Faith Efforts Documentation to Support Waiver Request) prior to submitting its request.
  - c) If the Offeror fails to submit a complete Attachment D-1A with the technical proposal as required, the Procurement Officer will deem the Proposal not reasonably susceptible of being selected for award.
  - d) Offerors are responsible for verifying that each MBE (including any MBE

prime and MBE prime participating in a joint venture) selected to meet the goal and any subgoals and subsequently identified in Attachment D-1A is appropriately certified by the Maryland Department of Transportation and has the correct NAICS codes allowing it to perform the committed work.

- e) Within ten (10) Business Days from notification that it is the recommended awardee or from the date of the actual award, whichever is earlier, the Offeror must provide the following documentation to the Procurement Officer:
  - 1. Outreach Efforts Compliance Statement (Attachment D-2);
  - 2. MBE Subcontractor/Prime Project Participation Certification (Attachment D-3A/3B); and
  - 3. Any other documentation required by the Procurement Officer to ascertain Offeror responsibility in connection with the certified MBE subcontractor participation goal or any applicable subgoals.
  - 4. Further, if the recommended awardee believes a waiver (in whole or in part) of the overall MBE goal or of any applicable subgoal is necessary, the recommended awardee must submit a fully-documented waiver request that complies with COMAR 21.11.03.11. If the recommended awardee fails to return each completed document within the required time, the Procurement Officer may determine that the recommended awardee is not responsible and, therefore, not eligible for Contract award. If the Agreement has already been awarded, the award is voidable.
- f) A current directory of certified MBEs is available through the Maryland State Department of Transportation (MDOT), Office of Minority Business Enterprise, 7201 Corporate Center Drive, Hanover, Maryland 21076. The phone numbers are (410) 865-1269, 1-800-544-6056, or TTY (410) 865-1342. The directory is also available on the MDOT website at http://mbe.mdot.maryland.gov/directory/. The most current and up-todate information on MBEs is available via this website. Only MDOTcertified MBEs may be used to meet the MBE subcontracting goals.
- g) An Offeror that requests a waiver of the goal or any of the applicable subgoals will be responsible for submitting the Good Faith Efforts Documentation to Support Waiver Request (**Attachment D-1C**) and all documentation within ten (10) Business Days from notification that it is the recommended awardee or from the date of the actual award, whichever is earlier, as required in COMAR 21.11.03.11.
- h) All documents, including the MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule (**Attachment D-1A**), completed and submitted by the Offeror in connection with its certified MBE participation commitment shall be considered a part of the Agreement and are hereby expressly incorporated into the Agreement by reference thereto. All of the referenced documents will be considered a part of the Proposal for order of precedence purposes (see Sample Contract **Attachment J**).
- i) The Offeror is advised that liquidated damages will apply in the event the

Contractor fails to comply in good faith with the requirements of the MBE program and pertinent Contract.

# **1.21** Incurred Expenses; Economy of Preparation

MSA will not be responsible for any costs incurred by an Offeror in preparing and submitting a proposal, making an oral presentation, providing a demonstration or performing any other activities related to this RFP. Proposals should be prepared simply and economically, providing a straightforward, concise description of how the Offeror proposes to meet the requirements of this RFP.

# 1.22 Protests/Disputes

Any protest or dispute related to this RFP or a resulting Agreement shall be subject to Section 10 of MSA's Procurement Policies and Procedures and the relevant provisions of the Agreement.

# **1.23** Public Information Act Note

- a. The Offeror should give specific attention to the clear identification of those portions of its Proposal that it considers confidential and/or proprietary commercial information or trade secrets, and provide justification why such materials, upon request, should not be disclosed by MSA under the Public Information Act, Md. Code Ann., General Provisions Article, Title 4 Offerors are advised to read carefully the requirements set forth in Section 4.e(b) herein regarding identification of confidential or proprietary information. (See also RFP Section 1.31 "Confidentiality").
- b. This information should be identified by page and section number and placed after the Title Page and before the Table of Contents in the Technical Proposal and if applicable, separately in the Financial Proposal.
- c. Offerors are advised that, upon request for this information from a third party, the Procurement Officer is required to make an independent determination whether the information must be disclosed.

# **1.24** Offeror Responsibilities

- a. The Offerors shall be able to provide all goods and services required by this RFP and the successful Offeror shall be responsible for Agreement performance including any subcontractor participation.
- b. All subcontractors must be identified, and a complete description of their roles relative to the Proposal must be included in the Offeror's Proposal. If applicable, subcontractors utilized in meeting the established MBE participation goal(s) for this solicitation shall be identified as provided in the appropriate attachment(s) to this RFP (see Section 1.20 "Minority Participation

Enterprise").

- c. If an Offeror is the subsidiary of another entity, all information submitted by the Offeror including but not to, references and financial reports, or experience and documentation (e.g. insurance policies, bonds, letters of credit) used to meet the minimum qualifications, if any shall pertain exclusively to the Offeror, unless the parent organization will guarantee the performance of the subsidiary. If applicable, the Offeror's Proposal shall contain an explicit statement, signed by an authorized representative of the parent entity, stating that the parent entity will guarantee the performance of the subsidiary.
- d. A performance guarantee by a parent entity of the Offeror under this section will not automatically result in crediting the Offeror with the experience or qualifications of the parent under any evaluation criteria pertaining to the actual Offeror's experience and qualifications. Instead, the Offeror will be evaluated on the extent to which MSA determines that the experience and qualifications of the parent are applicable to and shared with the Offeror, any stated intent by the parent to be directly involved in the performance of the Agreement, and the value of the parent's participation as determined by MSA.

# **1.25** Patents, Copyrights, and Intellectual Property

- a. If the Consultant furnishes any design, device, material, process or other item that is covered by a patent or copyright or that is proprietary to or a trade secret of another, it shall obtain the necessary permission or license to permit MSA to use such item.
- b. The Consultant will defend or settle, at its own expense, any claim or suit against MSA alleging that any such item furnished by the Consultant infringes any patent, trademark, copyright, or trade secret. If a third party claims that a product infringes that party's patent, trademark, copyright or trade secret, the Consultant will defend MSA against that claim at the Consultant's expense and will pay all damages, costs, and attorney's fees that a court finally awards, provided MSA: (i) promptly notifies Consultant in writing of the claim; and (ii) allows the Consultant to control, and cooperates with the Consultant in, the defense and any related settlement negotiations. The obligations of this paragraph are in addition to those stated in the next paragraph.
- c. If any product(s) furnished by the Consultant become, or in the Consultant's opinion is/are likely to become, the subject of a claim of infringement, the Consultant will, at its option and expense: (i) procure for MSA the right to continue using the applicable item; (ii) replace the product with a non-infringing product substantially complying with the item's specifications; or (iii) modify the item so that it becomes non- infringing and performs in a substantially similar manner to the original item.

#### **1.26** Non-Availability of Funding

If the General Assembly fails to appropriate funds or if funds are not otherwise made available for continued performance for any fiscal period of a Contract succeeding the first fiscal period, the Contract shall be canceled automatically as of the beginning of the fiscal year for which funds were not appropriated or otherwise made available; <u>provided</u>, <u>however</u>, that this will not affect the rights of the Consultant and/or MSA under any termination clause in the Contract. The effect of termination of the Contract hereunder will be to discharge the Consultant, and MSA from future performance of the Contract, but not from their rights and obligations existing at the time of termination. The Consultant shall be reimbursed for the reasonable value of any nonrecurring costs incurred but not amortized in the price of the Contract. MSA shall notify the Consultant as soon as it has knowledge that funds may not be available for the continuation of the Contract for each succeeding fiscal period beyond the first.

#### **1.27** Financial Disclosure

The Consultant shall comply with §13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State or its agencies during a calendar year under which the business is to receive in the aggregate, \$100,000 or more, shall, within 30 days after the aggregate value of these contracts, leases or other agreements reaches \$100,000, file with the Secretary of the State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

#### **1.28** Non-Exclusive Use

Neither this RFP nor any resulting Contract shall be construed to require MSA to use any Offeror or exclusively use the Consultant for the services described in this RFP. MSA reserve the right to obtain services of any nature from other sources when it is in the best interest of MSA to do so and without notice to any party. MSA makes no guarantees that it will purchase any products or services from the Consultant resulting from this RFP.

#### **1.29** Sustainability Policies

MSA is committed to procuring all supplies, services, maintenance, construction, and architect-engineer services in a manner consistent with the promotion of sound environmental practices.

#### 1.30 Payments by Electronic Fund Transfer

By submitting a response to this RFP, the Offeror agrees to accept payments by electronic funds transfer (EFT) unless the State Comptroller's Office grants an exemption from this method of payment. The awarded CM shall register using the

COT/GAD X-10 Vendor Electronic Funds Transfer (ETF) Registration Request form. MSA will provide the required EFT forms to the awarded Offeror. Requests for exemption are strictly the responsibility of the awarded CM.

# 1.31 Confidentiality

Subject to the Maryland Public Information Act and any other applicable laws, all confidential or proprietary information and documentation relating to either party to a Contract resulting from this RFP (including without limitation any information or data stored within the Consultant's computer systems) shall be held in absolute confidence by the other party. Each party shall, however, be permitted to disclose relevant confidential information to its officers, agents, and employees to the extent that such disclosure is necessary for the performance of their duties under the Contract, provided that the data may be collected, used, disclosed, stored, and disseminated only as provided by and consistent with the law. The provisions of this section shall not apply to information that (a) is lawfully in the public domain; (b) has been independently developed by the other party; (d) was supplied to such party by a third-party lawfully in possession thereof and legally permitted to further disclose the information; or (e) such party is required to disclose by law.

#### 1.32 Loss of Data

In the event of loss of any MSA data or records where such loss is due to the intentional act or omission or negligence of the Consultant or any of its subconsultants or agents, the Consultant shall be responsible for recreating such lost data in the manner and on the schedule set by the Procurement Officer. The Consultant shall ensure that all data is backed up and recoverable by the Consultant.

# **1.33** Non-Hiring of Employees

No official or employee of the State, as defined in State Government Article §15-102, Annotated Code of Maryland, whose duties as such official or employee include matters relating to or affecting the subject matter of this procurement, shall, during the pendency and term of a resulting Contract, and while serving as an official or employee of the State, become or be an employee of the Consultant or any entity that is a subconsultant on said Contract.

#### 1.34 Nondiscrimination in Employment

The Consultant agrees: (a) not to discriminate in any manner against an employee or applicant for employment because of race, color, religion, creed, age, sex, marital status, sexual orientation, national origin, ancestry, or disability of a qualified individual with a disability; (b) to include a provision similar to that contained in subsection (a) above in any subcontract except a subcontract for standard commercial supplies or raw materials; and (c) to post, and to cause subconsultants to post, in conspicuous places available to employees and applicants for employment, notices setting forth the substance of this clause.

#### **1.35** Contingent Fee Prohibition

The Consultant warrants that it has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson or commercial selling agency working for the Consultant, to solicit or secure a Contract, and that it has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson or commercial selling agency, any fee or other consideration contingent on the making of a Contract.

## **1.36** Commercial Nondiscrimination

As a condition of entering into this Contract, Contractor represents and warrants that it will comply with the State's Commercial Nondiscrimination Policy, as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland. As part of such compliance, Contractor may not discriminate on the basis of race, color, religion, ancestry, national origin, sex, age, marital status, sexual orientation, sexual identity, genetic information or an individual's refusal to submit to a genetic test or make available the results of a genetic test or on the basis of disability, or otherwise unlawful forms of discrimination in the solicitation, selection, hiring, or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall Contractor retaliate against any person for reporting instances of such discrimination. Contractor shall provide equal opportunity for subcontractors, vendors, and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that this clause does not prohibit or limit lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in the marketplace. Contractor understands that a material violation of this clause shall be considered a material breach of this Contract and may result in termination of this Contract, disgualification of Contractor from participating in State contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party.

As a condition of entering into this Contract, upon the request of the Commission on Civil Rights, and only after the filing of a complaint against Contractor under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland, as amended from time to time, Contractor agrees to provide within 60 days after the request a complete list of the names of all subcontractors, vendors, and suppliers that Contractor has used in the past four (4) years on any of its contracts that were undertaken within the State of Maryland, including the total dollar amount paid by Contractor on each subcontract or supply contract. Contractor further agrees to cooperate in any investigation conducted by the State pursuant to the State Commercial Nondiscrimination Policy as set forth under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland, and to provide any documents relevant to any investigation that are requested by the State. Contractor understands that violation of this clause is a material breach of this Contract and may result in Contract termination, disqualification by the State from participating in State contracts, and other sanctions.

#### **1.37** Political Contribution Disclosure

The Consultant shall comply with Election Law Article, §§14-101 to 14-108, Annotated Code of Maryland, which requires that every person that enters into Contracts, leases, or other agreements with the State, a county, an incorporated municipality, or its agencies, during a calendar year in which the person receives in the aggregate \$100,000 or more, shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election. The statement shall be filed with the State Board of Elections (1) before a purchase or execution of a lease or Contract by the State, a county, an incorporated municipality, or their agencies, and shall cover the preceding two calendar years; and (2) if the contribution is made after the execution of a lease or Contract, then twice a year, throughout the Contract term, on: (a) February 5, to cover the 6month period ending January 31; and (b) August 5, to cover the 6-month period ending July 31.

#### **1.38** Verification of Registration and Tax Payment

Before a corporation can do business in the State, it must be registered with the Department of Assessments and Taxation, State Office Building, Room 803, 301 West Preston Street, Baltimore, Maryland 21201. It is strongly recommended that any potential Offeror complete registration prior to the closing date for receipt of Proposals. An Offeror's failure to complete registration with the Department of Assessments and Taxation may disqualify an otherwise successful Offeror from final consideration and recommendation for Contract award.

# **1.39 MBE and Prevailing Wage Compliance System**

As part of MSA's commitment to assist firms in complying with legal and Contractual requirements, MSA maintains a web-based MBE and prevailing wage compliance system. The system was designed to provide various work- flow automation features that improve the project reporting process. This system will monitor Contract compliance for all Program Contracts. The prime firm, its firsttier consultants, and all MBE participation subconsultants awarded Contracts will be required to use the web-based system to submit project information including, but not limited to, certification of payments made and received and certified payroll records (if the Contract includes prevailing wage and/or workforce development requirements). MSA may require additional information related to the Contract to be provided electronically through the system at any time before, during, or after Contract award.

# 1.40 Maryland Law

This RFP shall be construed, interpreted, and enforced according to the laws of the State of Maryland.

#### **SECTION 2**

## **OFFEROR'S QUALIFICATIONS**

At a minimum, Offerors shall meet the following qualifications to be considered for award:

#### 2.1 Qualifications

- a. Offeror shall be a firm specializing in providing commissioning services and experienced in establishing, overseeing, monitoring, tracking, and reporting commissioning requirements;
- b. Offeror shall have significant experience participating in all phases of construction including design review, submittal review, construction monitoring, owner training, O&M review, post acceptance, final and post occupancy commissioning;
- c. Offeror shall have significant experience in developing and implementing project specific commissioning plans for new construction projects;
- d. Offeror shall demonstrate a minimum of seven (7) years of experience providing fundamental and enhanced building enclosure commissioning services;
- e. Offeror shall demonstrate knowledge of LEED accreditation requirements and building techniques;
- f. Offeror shall have a minimum of three (3) years of experience in developing building and systems maintenance plans;
- g. Offeror shall have experience with complex integration of new systems in buildings 60,000GSF or larger;
- h. Offeror shall have experience with large public gathering venues such as athletic facilities, hotels/conference centers, convention centers, educational facilities, office buildings, etc; and,
- i. Offeror shall meet the insurance requirements stated in the Sample Contract, **Attachment J.**

#### **SECTION 3**

#### PURPOSE AND SCOPE OF WORK

#### 3.1 Purpose

The MSA is issuing this Request for Proposals to implement and manage building commissioning services for the M&T Bank Stadium Renovations project (the "Project") in Baltimore, MD. MSA is seeking a commissioning firm to implement the commissioning process in the renovated facility. The objective of commissioning is to ensure that all energy-related and other building systems installed are performing per the design intent and provide documented confirmation that the renovated facility systems fulfill the operational, functional, and performance requirements of MSA, its occupants, and the maintainability standards of the Operation and Maintenance (O&M) personnel. To reach this goal, it is necessary for the commissioning process to fully document and implement the project requirements for system function, performance, and maintenance, as well as to verify and document compliance with these criteria throughout design, construction, start-up, and the post occupancy period of operation for mechanical, electrical, plumbing, lighting, AV, and life safety systems. Commissioning services shall be performed on all mechanical, electrical, plumbing, IT/AV, and building enclosure systems. The selected Offeror will work closely with the Project Team in a cooperative and coordinated fashion.

The commissioning process will systematically document that the specified components and systems have been properly manufactured, installed, and are functioning as specified. This process shall be completed through pre-functional checkout and system functional testing to verify and document the proper operation of all equipment in various modes, critical alarms, and under anticipated performance conditions.

The Consultant will work closely with the MSA, the CM, the A/E, and other project participants in a cooperative and coordinated fashion. The MSA will deliver the project via Construction Manager at risk method. The CM on the job is Gilbane and the A/E is Gensler.

#### 3.2 Scope of Services

The Consultant will be responsible for all commissioning activities in accordance with ASHRAE and NIBS Guidelines on a single project, inclusive of design input and reviews, installation verification, equipment startup, pre-functional checkout, and full system functional testing. Commissioning services will be provided for 12 months after substantial completion of each phase. Testing, verification and reporting on the performance of all commissioned systems is to be completed in a systematic fashion based on an approved project-specific commissioning plan. Consultant will be responsible for testing, evaluating, and confirming the proper integration of new equipment installed as part of the Project.

At a minimum, the Consultant will commission the following systems:

- Mechanical & Plumbing Systems and Equipment
  - Air Handling Units
  - DOAS Units
  - Energy Recovery Modules
  - Make-Up Air Units
  - Air Cooled Condensing Units
  - Variable Refrigerant Flow Systems
  - Heat Pumps
  - Ductless Split AC Units
  - Terminal Heaters
  - o Pumps
  - Exhaust Fans
  - o VFDs
  - DDC Control Systems
  - o VAVs
  - o FCUs
  - Chiller Plant
  - Domestic Hot Water
  - Domestic Cold Water
  - Heating Water Plant
  - Stormwater Pumps
  - Sanitary Pumps
  - Stormwater Retention Facilities
- Electrical Systems & Equipment
  - Automatic Transfer Switches
  - Lighting and Daylighting Controls
  - o AV Controls
  - Lightning Protection

- Motor Controllers
- Transformers
- Panelboards
- Grounding Systems
- Emergency Generator Connections
- Building Enclosure Systems
- Special Systems
  - Kitchen equipment

After substantial completion but prior to final acceptance, the Consultant shall work with the Project Team to capture trending data on all commissioned equipment from a continuous seven (7) calendar day period, confirming satisfactory system performance.

The M&T Bank Stadium Renovation Project consists of the following four phases:

- 1. 2024 Projects
  - a. For the 2024 projects listed below, construction will take place from January 2024 – August 2024. Above ceiling mechanical work is anticipated to move quickly and will require commissioning agent to staff accordingly as to not delay the project.
  - b. Club Level Renovation Replace all existing mechanical equipment on club level, renovate restrooms, and replace all finishes / lighting throughout. No major changes to mechanical equipment, replace in kind.
  - c. Suite Level Hallways and Entrances Replace all existing mechanical equipment on suite level hallways and replace all finishes / lighting throughout. No major changes to mechanical equipment, replace in kind.
  - d. Chairman Suites Completely renovate the current press level and turn it into suites, a large kitchen, and a lounge space. All associated MEP and finishes are included with this scope. There is anticipated to be a lot of AV / IT work with this project. The new space is approximately 30,000 SF.
  - e. Press Relocation Relocate the press from the current press level to lower suite level. All associated MEP and finishes included with this scope. There is anticipated to be a lot of AV / IT work with this project. The new space is approximately 9,000 SF.
  - f. Miller Lite Building Replace the tent in the SE corner with a two story beer hall. First floor will be enclosed with glass and the second floor will be an outside rooftop bar. Building is approximately 13,000 SF.
- 2. 2025 Projects

- a. For the 2025 project listed below, construction will take place from January 2024 August 2025.
- b. Service Level Renovation Currently service level is only about half finished. The remainder of the service level will be excavated and finished with suites, clubs, locker room space, interview space, and other misc. uses. Newly finished space is about 45,000 SF.
- c. Chiller Plant A new chiller plant will be built to either serve just M&T, or to serve the Warehouse, Oriole Park, and M&T. The plant will be between 3,600 and 5,300 tons.
- 3. 2026 Projects
  - a. For the 2026 projects listed below, construction will take place from roughly January 2025– August 2026.
  - b. Plazas On the outside of the building, there will be several plazas and buildings built. It is anticipated that roughly four - three story building will be built.
  - c. Parking Garage A 350 space parking garage will be built on the south side of the stadium.
- 4. Facility Condition Assessment Projects
  - a. As part of a facility condition assessment done of M&T Bank Stadium, it was concluded that all mechanical and plumbing equipment needs to be replaced. This does not included ductwork or piping except what is needed to make the connections to the new equipment. A schedule of equipment from original construction to help determine rough quantities is included in the bid document. This is not a 100% inclusive list and items added with renovations over time are not listed. The intent is to replace the equipment as one of the renovation projects above moves through a space. If an area is not getting renovated, the equipment will be replaced at a time within the project schedule that is in the best interest of the project.

Commissioning agent will be responsible for the scope listed in tis RFP for all projects listed above. Construction scheduled are anticipated to be very tight and timing will not allow for waiting on commissioning agent. Bidders must be able to have teams available quickly to meet the demands of the schedule. Same / next day reports will be required to be able to repair issues found quickly.

The scope of work includes the following general tasks.

- a. Serve as the Commissioning Agent (CxA) and Building Enclosure Specialists (BES) (herein after *Commissioning Authority*) for the Project.
  - 1. Provide Commissioning Services and deliverables in accordance with this RFP and ASHRAE Guideline 0-2005.
  - 2. Provide Building Enclosure Commissioning services and deliverables in

accordance with this RFP and NIBS Guideline 3-2012.

- b. Conduct formal design reviews and document in a formal report. The design review report must also address completeness of design documents regarding system performance, operability, maintainability, energy efficiency and sustainability of the overall design during the pre-construction phase. At a minimum, the design reviews must confirm the design complies with the current statutes of State energy codes. Formal reviews are required, at the conclusion of each phase of A/E document submission (DD, CD 70%, and CD 95%). The timing of the award of the commissioning contract will not allow for all phases of review for the 2024 projects. Full review at each submission will be required for the 2025 and 2026 projects.
- c. Develop full commissioning specifications (requirements) for all mechanical, electrical, plumbing, special systems, and building enclosure equipment and systems tailored to scale and complexity of the project. Coordinate with and integrate into the project specifications produced by the Project Team.
- d. Coordinate a design phase controls integration meeting for the building energy management system and temperature controls integration with the Project Team to discuss EMS and equipment control integration issues, and sequences of operations between equipment, and systems, to ensure that integration issues such as point matrix delineation and operational sequences of commissioned systems are clearly described in the specifications.
- e. Coordinate commissioning activities and required meetings with the Project Team through both the design and construction phases, along with final acceptance, turnover and certification of the project.
- f. Conduct, schedule, manage the commissioning kick off meeting during the design phase with the A/E, and hold another kick off meeting for the CM & subcontractors during the construction phase of the project. Provide a detailed commissioning schedule with durations delineated to integrate with the overall project schedule. The Commissioning Authority shall work with CM's Project Scheduler to integrate commissioning activities into overall project schedule.
- g. Develop, implement and track a project-specific commissioning plan incorporating the requirements from the Project's commissioning specifications and include all project-specific equipment pre-functional checklists, startup checkout forms, detailed commissioning schedule, and issues log templates.
  - 1. Commissioning plan shall be developed in accordance with ASHRAE Guideline 0-2005 and NIBS Guideline 3-2012 to include all mechanical, electrical, plumbing, and building enclosure systems and equipment
- h. At a minimum, the Commissioning plan shall include:

- 1. Brief overview of the commissioning process.
- 2. Identification of the roles of primary commissioning participants and their responsibilities.
- 3. Define the proper communication protocols and methods for distribution of information amongst the Project Team.
- 4. Review of the Basis of Design.
- 5. List of all commissioned features and systems including a master list of all pertinent equipment and systems.
- 6. Description of the management, communication and reporting of the plan.
- 7. Outline of the commissioning scope, including submittal review, observation, start-up, testing, and mock-up inspection.
- 8. List of the expected written work products: pre-functional checklists of commissioned equipment, startup checkout forms, issues log tracking forms, functional test procedures and forms, and other reports mandated.
- 9. Detailed commissioning schedule with durations delineated for the equipment to be commissioned.
- 10. Description of the rigor and scope of testing including sampling method. All major equipment including central plant equipment, (air handling units, etc.) must be fully tested and may not be sampled.
- i. The Commissioning Authority must review the construction documents during the design phase to ensure that each commissioned feature or system meets the Basis of Design (BOD) relative to functionality, reduction in energy use & atmosphere protection, water use reduction, ease of maintenance, affordability, indoor environmental quality and local environmental impacts.
- j. Review and comment on project submittals as it pertains to: commissioning and compliance with contract documents, any deviation for energy efficiency requirements of the specified equipment, as well as warranty provisions.
  - Generate and distribute a list of submittals requiring the Commissioning Authority's review.
- k. Review and comment on project specific mock-ups as it pertains to the building enclosure system(s).
- 1. Perform site visits to observe general construction progress for preparation of commissioning activities.
- m. Witness component and equipment startup to ensure that startup efforts are performed in accordance with the commissioning plan, contract documents, and manufacturer requirements.
- n. Witness component testing to ensure that proper procedures are followed. Direct the execution of all functional performance testing with the trade contractors. All equipment must be fully tested, no sampling is allowed.
  - Included as part of the 12-month post occupancy warranty period, provide

opposite season testing of HVAC equipment and systems.

- o. Monitor and report on the training of operation and maintenance personnel. Review the draft-training plan and trainer qualification.
- p. Perform 10-month post-acceptance pre-warranty end review of outstanding commissioning issues, operational deficiencies, equipment failures, building operator and occupant complaints, and results from EMS systems monitoring and trending. Document all systems operation, maintenance, performance, systems alterations and changes, and re- testing and re-commissioning needs, as required.
- q. Conduct commissioning meetings during the construction phase, inspect, test, log and track all deficient items. Responsible for generating and managing a master issues log and ensure issues are addressed. This report is to be produced and submitted to the Owner, CM, A/E and responsible contractor on an ongoing basis. Commissioning is anticipated to be at a fast pace so reports must keep up. Additionally, a written list of all outstanding commissioning issues and any testing that is scheduled for a later date must be included. All outstanding environmentally or economically responsive feature deficiencies must be corrected or listed in the commissioning report. All completed functional tests should be listed in an appendix to the commissioning report
- r. Develop and complete the final commissioning report at the completion of all commissioning activities including seasonal start-ups. The Final Commissioning Report shall be developed in accordance with ASHRAE Guideline 0-2005 and NIBS Guideline 3-2012 and include, at a minimum:
  - 1. Final version of lessons learned and benefits resulting from commissioning. Design phase as well as construction phase considerations should both be addressed.
  - 2. Completed record of all pre-functional checklists, startup checkout forms, final results of functional tests including trending data demonstrating satisfactory system performance over seven (7) calendar days, and enclosure test records.
  - 3. Building maintenance plan as defined in Section 3.2(t) and Building Enclosure Preventative Maintenance Program as defined in Section 3.2(u).
  - 4. Signed letter confirming the commissioning plan has been successfully executed and the design intent of the Project has been achieved.
- s. Review the assembly of O&M manuals by the Contractor documenting design criteria, design assumptions and limitations, system descriptions, operating parameters, performance capabilities, and maintenance requirements as stipulated in the contract documents.
- t. Develop a specific Building Maintenance Plan ("BMP") for the entire building's critical systems in accordance with the design, manufacturer's

recommendations. This specific BMP development is to be completed prior substantial completion of the project and shall address all systems within the scope of commissioning.

- Critical systems include, but are not limited to, HVAC and associated controls, life safety, electrical, lighting, and plumbing systems.
- u. Develop a specific Building Enclosure Preventative Maintenance Plan in accordance with manufacturer recommendations, to be submitted prior to substantial completion.

## 3.3 Schedule

The schedule outlining the current project timelines are listed above in the Scope of Services section of this RFP.

#### **SECTION 4**

#### PROPOSAL SUBMISSION AND REQUIREMENTS

#### 4.1 Solicitation Process

The solicitation will follow a multi-step process to select the successful Offeror.

1. Step 1– Submission of Technical Proposal

Offerors will submit a technical Proposal in accordance with Section 4.3 to demonstrate their experience (including meeting the minimum requirements and ability to execute the Project successfully). Upon receipt of the technical Proposals, proposals will be reviewed and those deemed responsible and reasonably susceptible of being selected for award will be reviewed by the Selection Committee. Offerors must respond to all requirements of the RFP. Offerors that fail to do so shall be deemed not reasonably susceptible of being selected for award.

2. Step 2 – Review of Technical Proposals

The Selection Committee will review technical Proposals and rank the Proposals according to technical merit. Based on their achieved technical rankings, selected Offerors will be "short-listed" to participate in the oral presentation phase of the procurement.

3. Step 3 – Short-list and Oral Presentation

Short-listed Offerors will be asked to attend a virtual oral presentation. Offerors that are not short-listed will be notified that they are not reasonably susceptible of being selected for award.

4. Step 4 – Selection for the Financial Proposal Phase

After oral presentations and based on achieved rankings, the Selection Committee will select which short-listed firms will be requested to submit a financial Proposal. Offerors that are not short-listed will be notified that they are not reasonably susceptible of being selected for award.

5. Step 5 – Recommendation for Award

The Offeror deemed to provide the best value (Technical and Financial) to the Project by the Selection Committee will be recommended for award. The Offeror deemed to provide the best value (Technical and Financial) to the Project by the Selection Committee will be recommended for award.

# 4.2 Submission – General Requirements

Offerors shall submit proposals labeled "**Request for Proposals – Building Commissioning Services – M&T Bank Stadium Renovations – Request for Proposals – Volume I – Technical Proposal**". All pages of each proposal volume must be consecutively numbered from beginning (Page 1) to end (Page "x"). The final page shall state "Final Page".

Technical proposals shall be uploaded electronically to the link provided in Section 1.10 of the RFP, as revised by any addendum. The electronic submissions (formatted as .pdf file) shall include the firm's name in the file name and shall be formatted so each page can be legibly printed in 8 <sup>1</sup>/<sub>2</sub>" x 11" format.

## 4.3 Volume I – Technical Proposal

This section provides specific instructions for submission of the Offeror's Technical Proposal. The Technical Proposal shall follow the format provided below.

#### a. Transmittal Letter

A transmittal letter must be included in the Technical Proposal. The purpose of this letter is to transmit the proposal to the Procurement Officer. The transmittal letter should be brief and signed by an individual who is authorized to commit the Offeror to the services and requirements as stated in this RFP.

# b. Title and Table of Contents

The Technical Proposal shall begin with a title page bearing the name and address of the Offeror, point of contact information (including e-mail address), and the title of this RFP. A table of contents for the Proposal should follow the title page. Information claimed to be confidential shall be clearly identified. **Unless there is a compelling case, an entire proposal** should not be labeled confidential. Only those portions that can reasonably be shown to be proprietary or confidential should be so labeled.

#### c. Executive Summary

The Offeror shall condense and highlight the contents of the technical Proposal in a separate section titled "Executive Summary." The summary shall acknowledge the receipt of any amendments or addenda associated with this RFP and identify its tax identification number. The Executive Summary shall not exceed two (2) pages. The summary shall identify any exceptions the Offeror has taken to the RFP requirements and/or sample Contract – **Attachment J**. Offerors shall also identify any joint ventures at the time of submission, if any, and the roles these relationships will have in the performance of a Contract. Upon MSA's request,

Offerors shall make available within 24 hours the joint venture scope of work documents and/or agreement.

<u>Warning</u>: Exceptions to terms and conditions may result in having the proposal deemed as not reasonably susceptible of being selected for award. If an Offeror takes no exception, the Executive Summary should so state.

# d. Work Plan and Offeror's Experience

Section 3 (Scope of Work) of the RFP, provides Offerors with information on the desired outcome of this solicitation. At a minimum, Offerors shall address the following:

- 1. Demonstrate that they meet the qualifications set forth in Section 2 (Offeror's Qualifications) of the RFP.
- 2. Offeror's organization and how it intends to complete the scope of work outlined in the RFP. Please provide a general description of your company's approach to the commissioning process for the specific Project and identify some potential challenges and proposed course of action plans.
- 3. The Offeror shall convey project related experience by completing the Experience Form included as **Attachment K.**
- 4. Schedule:

Offerors shall include a detailed schedule of activities and durations.

5. Experience:

The names, titles, and resumes of key management personnel (staffing plan) directly involved with managing the work that will be required under the Contract.

- 6. Provide work samples of the following deliverables:
  - Issues Log
  - Commissioning Plan
  - Final Commissioning Report (including pre-functional checklist, start-up forms, and final results of functional testing)
  - Building Maintenance Plan
  - Building Enclosure Preventative Maintenance Plan

Note: During proposal evaluation, MSA reserves the right to require that the Offeror provide a copy of its most current Annual Report or audited Statement of Financial Condition to include a Balance Sheet, Income Statement and Cash Flow Statement or other acceptable financial information. These documents may be relied upon in any determination regarding the Offeror's financial responsibility.

# e. Other Required Submissions

In addition, Offerors must submit the following items in the Technical Proposal:

- A. Completed Bid/Proposal Affidavit (Attachment A);
- B. Completed Conflict of Interest Information/Affidavit and Disclosure **(Attachment B)**;
- C. Work Capacity Summary Form for Key Management and Personnel, including subconsultants (**Attachment G**); and,
- D. Verification from the Offeror's insurance carrier/provider identifying the Offeror's current policy limits and current deductible amounts, including coverage limits for Commercial General Liability, Excess Liability, Automobile, Worker's Comp/Employer Liability, and any additional insurance coverages held by the Offeror are to be identified and submitted.
- E. A completed Corporate Profile (Attachment E).
- F. An accurately completed and signed MBE Form D1- "MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule" (see Attachment D). Per COMAR regulation 21.11.03.09.C (5), failure to include and/or accurately complete this form shall result in a determination that the proposal is not susceptible for award **(Attachment D).**
- G. Corporate Diversity Affidavit and Addendum (Attachment L).

# 4.4 Volume II - Financial Proposal

#### a. Required Submissions

Short-listed Offerors will receive additional instructions regarding the submission of the financial proposal. Any Offeror requested to submit a financial proposal must submit the following items in the Financial Proposal:

1. The sample pricing form is included in this RFP as **Attachment H**.

#### **SECTION 5**

#### **EVALUATION CRITERIA AND SELECTION PROCEDURE**

#### 5.1 Evaluation Criteria

Evaluation of the Proposals will be performed by the Selection Committee and will be based on the criteria set forth below. Technical criteria shall be given more weight than financial criteria.

## 5.2 Technical Criteria

Criteria used to rate the Technical Proposal includes, without limitation, the following:

- a. Adequacy of the Work Plan presented to provide the proposed services; adequacy of the Offeror's proposed work approach, and sample Inspection forms.
- b. Experience and qualifications of the Offeror and its key management personnel (Staffing Plan), with specific emphasis on similar projects.
- c. Past Performance and Offeror References
- d. Work Capacity.
- e. Oral Presentation (if required)
- f. Overall Quality of Submission.

#### 5.3 Financial Criteria

All qualified short-listed Offerors will be given a score based on their evaluated financial proposal. The score for each other financial proposal will be determined on a pro-rata basis compared to the lowest evaluated financial proposal.

#### 5.4 Reciprocal Preference

Although Maryland law does not authorize procuring agencies to favor resident Offeror in awarding procurement contracts, many other states do grant their resident businesses preferences over Maryland contractors. Therefore, as described in COMAR 21.05.01.04, a resident business preference may be given if: a responsible Offeror whose headquarters, principal base of operations, or principal site that will primarily provide the services required by this RFP is in another state submits the most advantageous offer; the other state gives a preference to its residents through law, policy, or practice; and the preference does not conflict with a federal law or grant affecting the Contract. The preference given will be identical to the preference that the other state, through law, policy, or practice gives to its residents.

# 5.5 General Selection Process

- a. The Contract will be awarded in accordance with the competitive sealed proposals process under Section 3(C) of MSA's Procurement Policies.
- b. Prior to award of a Contract pursuant to this RFP, MSA may require any and all Offerors to submit such additional information bearing upon the Offeror's ability to perform the Contract as MSA may deem appropriate. MSA may also consider any information otherwise available concerning the financial, technical and other qualifications or abilities of the Offeror.
- c. MSA may hold discussions with any or all Offerors judged reasonably susceptible of being selected for award, or potentially so. MSA also reserves the right to develop a short-list of Offerors deemed most qualified based upon their Technical Proposals and conduct discussions with only the short-listed Offerors. However, MSA also reserves the right to make an award without holding discussions. Whether or not discussions are held, MSA may determine an Offeror to be not responsible or not reasonably susceptible of being selected for award, in its sole and absolute discretion, at any time after the initial closing date for receipt of proposals and the review of those proposals.

# 5.6 Award Determination

Upon completion of all evaluations, discussions and negotiations, and reference checks, the Procurement Officer will recommend award of the contract to the responsible Offeror whose proposal is determined to be the most advantageous to MSA considering technical evaluation factors and price factors as set forth in this RFP. The award is subject to approval by the MSA Board of Directors.

# **ATTACHMENTS**

All attachments can be accessed via the following Share File link: <u>https://mdstad.sharefile.com/d-s252b3f4f9f574b98adf42fa51ff863a5</u>
ABID/PROPOSAL AFFIDAVIT
BCONFLICT OF INTEREST AFFIDAVIT
C CONTRACT AFFIDAVIT
D MBE INSTRUCTIONS AND FORMS
ECORPORATE PROFILE
FDESIGN DEVELOPMENT DOCUMENTS
G CAPACITY SUMMARY SHEET
H PRICING FORM
IANTICIPATED PROJECT SCHEDULE (see individual project schedules in Section 3)
J SAMPLE CONTRACT (to be issued via addendum)
K EXPERIENCE FORM
L CORPORATE DIVERSITY AFFIDAVIT
M EXHIBIT 1: MBE RESEARCH FACTORS (to be issued via addendum)

# Attachment A

# **BID/PROPOSAL AFFIDAVIT**

# Attachment A. Bid/Proposal Affidavit

# A. AUTHORITY

I hereby affirm that I, \_\_\_\_\_\_ (name of affiant) am the \_\_\_\_\_\_ (title) and duly authorized representative of \_\_\_\_\_\_ (name of business entity) and that I possess the legal authority to make this affidavit on behalf of the business for which I am acting.

#### B. CERTIFICATION REGARDING COMMERCIAL NONDISCRIMINATION

The undersigned Bidder/Offeror hereby certifies and agrees that the following information is correct: In preparing its Bid/proposal on this project, the Bidder/Offeror has considered all Bid/proposals submitted from qualified, potential subcontractors and suppliers, and has not engaged in "discrimination" as defined in § 19-103 of the State Finance and Procurement Article of the Annotated Code of Maryland. "Discrimination" means any disadvantage, difference, distinction, or preference in the solicitation, selection, hiring, or commercial treatment of a vendor, subcontractor, or commercial customer on the basis of race, color, religion, ancestry, or national origin, sex, age, marital status, sexual orientation, sexual identity, genetic information or an individual's refusal to submit to a genetic test or make available the results of a genetic test, disability, or any otherwise unlawful use of characteristics regarding the vendor's, supplier's, or commercial customer's employees or owners. "Discrimination" also includes retaliating against any person or other entity for reporting any incident of "discrimination". Without limiting any other provision of the solicitation on this project, it is understood that, if the certification is false, such false certification constitutes grounds for the State to reject the Bid/proposal submitted by the Bidder/Offeror on this project, and terminate any contract awarded based on the Bid/proposal. As part of its Bid/proposal, the Bidder/Offeror herewith submits a list of all instances within the past four (4) years where there has been a final adjudicated determination in a legal or administrative proceeding in the State of Maryland that the Bidder/Offeror discriminated against subcontractors, vendors, suppliers, or commercial customers, and a description of the status or resolution of that determination, including any remedial action taken. Bidder/Offeror agrees to comply in all respects with the State's Commercial Nondiscrimination Policy as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland.

#### **B-1. CERTIFICATION REGARDING MINORITY BUSINESS ENTERPRISES.**

The undersigned Bidder/Offeror hereby certifies and agrees that it has fully complied with the State Minority Business Enterprise Law, State Finance and Procurement Article, § 14-308(a)(2), Annotated Code of Maryland, which provides that, except as otherwise provided by law, a contractor may not identify a certified minority business enterprise in a Bid/proposal and:

- (1) Fail to request, receive, or otherwise obtain authorization from the certified minority business enterprise to identify the certified minority bid/proposal;
- (2) Fail to notify the certified minority business enterprise before execution of the contract of its inclusion in the Bid/proposal;
- (3) Fail to use the certified minority business enterprise in the performance of the contract; or
- (4) Pay the certified minority business enterprise solely for the use of its name in the Bid/proposal.

Without limiting any other provision of the solicitation on this project, it is understood that if the certification is false, such false certification constitutes grounds for the State to reject the

Bid/proposal submitted by the Bidder/Offeror on this project, and terminate any contract awarded based on the Bid/proposal.

# **B-2. CERTIFICATION REGARDING VETERAN-OWNED SMALL BUSINESS ENTERPRISES.**

The undersigned Bidder/Offeror hereby certifies and agrees that it has fully complied with the State veteran-owned small business enterprise law, State Finance and Procurement Article, § 14-605, Annotated Code of Maryland, which provides that a person may not:

- (1) Knowingly and with intent to defraud, fraudulently obtain, attempt to obtain, or aid another person in fraudulently obtaining or attempting to obtain public money, procurement contracts, or funds expended under a procurement contract to which the person is not entitled under this title;
- (2) Knowingly and with intent to defraud, fraudulently represent participation of a veteran-owned small business enterprise in order to obtain or retain a Bid/proposal preference or a procurement contract;
- (3) Willfully and knowingly make or subscribe to any statement, declaration, or other document that is fraudulent or false as to any material matter, whether or not that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (4) Willfully and knowingly aid, assist in, procure, counsel, or advise the preparation or presentation of a declaration, statement, or other document that is fraudulent or false as to any material matter, regardless of whether that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (5) Willfully and knowingly fail to file any declaration or notice with the unit that is required by COMAR 21.11.13; or
- (6) Establish, knowingly aid in the establishment of, or exercise control over a business found to have violated a provision of § B-2(1) -(5) of this regulation.

#### C. AFFIRMATION REGARDING BRIBERY CONVICTIONS

#### I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, § 6-220, Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business):

# D. AFFIRMATION REGARDING OTHER CONVICTIONS

#### I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

- (1) Been convicted under state or federal statute of:
  - (a) A criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or
  - (b) Fraud, embezzlement, theft, forgery, falsification or destruction of records or receiving stolen property;
- (2) Been convicted of any criminal violation of a state or federal antitrust statute;
- (3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. § 1961 et seq., or the Mail Fraud Act, 18 U.S.C. § 1341 et seq., for acts in connection with the submission of Bids/Proposals for a public or private contract;
- (4) Been convicted of a violation of the State Minority Business Enterprise Law, § 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (5) Been convicted of a violation of § 11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsections (1)—(5) above;
- (7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of Bids/Proposals for a public or private contract;
- (8) Been found in a final adjudicated decision to have violated the Commercial Nondiscrimination Policy under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland with regard to a public or private contract;
- (9) Been convicted of a violation of one or more of the following provisions of the Internal Revenue Code:
  - (a) §7201, Attempt to Evade or Defeat Tax;
  - (b) §7203, Willful Failure to File Return, Supply Information, or Pay Tax,
  - (c) §7205, Fraudulent Withholding Exemption Certificate or Failure to Supply Information;
  - (d) §7206, Fraud and False Statements, or
  - (e) §7207 Fraudulent Returns, Statements, or Other Documents;
- (10) Been convicted of a violation of 18 U.S.C. §286 Conspiracy to Defraud the Government with Respect to Claims, 18 U.S.C. §287, False, Fictitious, or Fraudulent Claims, or 18 U.S.C. §371, Conspiracy to Defraud the United States;
- (11) Been convicted of a violation of the Tax-General Article, Title 13, Subtitle 7 or Subtitle 10, Annotated Code of Maryland;
- (12) Been found to have willfully or knowingly violated State Prevailing Wage Laws as provided in the State Finance and Procurement Article, Title 17, Subtitle 2, Annotated Code of Maryland, if:

- (a) A court:
  - (i) Made the finding; and
  - (ii) Decision became final; or
- (b) The finding was:
  - (i) Made in a contested case under the Maryland Administrative Procedure act; and
  - (ii) Not overturned on judicial review;
- (13) Been found to have willfully or knowingly violated State Living Wage Laws as provided in the State Finance and Procurement Article, Title 18, Annotated Code of Maryland, if:
  - (a) A court:
    - (i) Made the finding; and
    - (ii) Decision became final; or
  - (b) The finding was:
    - (i) Made in a contested case under the Maryland Administrative Procedure act; and
    - (ii) Not overturned on judicial review;
- (14) Been found to have willfully or knowingly violated the Labor and Employment Article, Title 3, Subtitles 3, 4, or 5, or Title 5, Annotated Code of Maryland, if:
  - (a) A court:
    - (i) Made the finding; and
    - (ii) Decision became final; or
  - (b) The finding was:
    - (i) Made in a contested case under the Maryland Administrative Procedure act; and
    - (ii) Not overturned on judicial review; or
- (15) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in §§ B and C and subsections D(1)—(14) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment):

#### E. AFFIRMATION REGARDING DEBARMENT

#### I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the

name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension).

#### F. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

- (1) The business was not established and does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and
- (2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (you must indicate the reasons why the affirmations cannot be given without qualification):

# G. SUBCONTRACT AFFIRMATION

#### I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

# H. AFFIRMATION REGARDING COLLUSION

#### I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business has:

- (1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying Bid/proposal that is being submitted; or
- (2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the Bid/proposal price of the Bidder/Offeror or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying Bid/proposal is submitted.

#### I. CERTIFICATION OF TAX PAYMENT

# I FURTHER AFFIRM THAT:

Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, State Department of Assessments and Taxation, and Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

#### J. CONTINGENT FEES

#### I FURTHER AFFIRM THAT:

The business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the business, to solicit or secure the Contract, and that the business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on the making of the Contract.

# K. CERTIFICATION REGARDING INVESTMENTS IN IRAN

- (1) The undersigned certifies that, in accordance with State Finance and Procurement Article, §17-705, Annotated Code of Maryland:
  - (a) It is not identified on the list created by the Board of Public Works as a person engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland; and
  - (b) It is not engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland.
- (2) The undersigned is unable to make the above certification regarding its investment activities in Iran due to the following activities:

# L. CONFLICT MINERALS ORIGINATED IN THE DEMOCRATIC REPUBLIC OF CONGO (FOR SUPPLIES AND SERVICES CONTRACTS)

#### I FURTHER AFFIRM THAT:

The business has complied with the provisions of State Finance and Procurement Article, §14-413, Annotated Code of Maryland governing proper disclosure of certain information regarding conflict minerals originating in the Democratic Republic of Congo or its neighboring countries as required by federal law.

#### M. PROHIBITING DISCRIMINATORY BOYCOTTS OF ISRAEL

# I FURTHER AFFIRM THAT:

In preparing its bid/proposal on this project, the Bidder/Offeror has considered all bid/proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor, vendor, or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity on the basis of Israeli national origin, or residence or incorporation in Israel and its territories. The Bidder/Offeror also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. Without limiting any other provision of the solicitation for bid/proposals for this project, it is understood and agreed that, if this certification is false, such false certification will constitute grounds for the State to reject the bid/proposal submitted by the Bidder/Offeror on this project, and terminate any contract awarded based on the bid/proposal.

# N. I FURTHER AFFIRM THAT:

Any claims of environmental attributes made relating to a product or service included in the bid or bid/proposal are consistent with the Federal Trade Commission's Guides for the Use of Environmental Marketing Claims as provided in 16 C.F.R. §260, that apply to claims about the environmental attributes of a product, package or service in connection with the marketing, offering for sale, or sale of such item or service.

# O. ACKNOWLEDGEMENT

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this Bid/proposal shall be construed to supersede, amend, modify or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

By:

Signature of Authorized Representative and Affiant

Printed Name:

Printed Name of Authorized Representative and Affiant

Title:

Title

Date: Date

# Attachment B

# **CONFLICT OF INTEREST AFFIDAVIT**

# Attachment B. Conflict of Interest Affidavit and Disclosure

#### Reference COMAR 21.05.08.08

A. "Conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

B. "Person" has the meaning stated in COMAR 21.01.02.01B (64) and includes a Offeror, Contractor, consultant, or subcontractor or sub-consultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a Proposal is made.

C. The Offeror warrants that, except as disclosed in §D, below, there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a conflict of interest.

D. The following facts or circumstances give rise or could in the future give rise to a conflict of interest (explain in detail — attach additional sheets if necessary):

E. The Offeror agrees that if an actual or potential conflict of interest arises after the date of this affidavit, the Offeror shall immediately make a full disclosure in writing to the procurement officer of all relevant facts and circumstances. This disclosure shall include a description of actions which the Offeror has taken and proposes to take to avoid, mitigate, or neutralize the actual or potential conflict of interest. If the contract has been awarded and performance of the contract has begun, the Contractor shall continue performance until notified by the procurement officer of any contrary action to be taken.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

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

(Authorized Representative and Affiant)

# SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL

# Attachment C

# **CONTRACT AFFIDAVIT**

# Contract Affidavit

# A. AUTHORITY

I hereby affirm that I, \_\_\_\_\_ (name of affiant) am the

(title) and duly authorized representative of

(name of business entity) and that I possess the legal

authority to make this affidavit on behalf of the business for which I am acting.

# B. CERTIFICATION OF REGISTRATION OR QUALIFICATION WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION

# I FURTHER AFFIRM THAT:

The business named above is a (check applicable box):

- (1) Corporation  $\Box$  domestic or  $\Box$  foreign;
- (2) Limited Liability Company  $\Box$  domestic or  $\Box$  foreign;
- (3) Partnership  $\Box$  domestic or  $\Box$  foreign;
- (4) Statutory Trust  $\Box$  domestic or  $\Box$  foreign;
- (5)  $\Box$  Sole Proprietorship.

and is registered or qualified as required under Maryland Law. I further affirm that the above business is in good standing both in Maryland and (IF APPLICABLE) in the jurisdiction where it is presently organized, and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation. The name and address of its resident agent (IF APPLICABLE) filed with the State Department of Assessments and Taxation is:

Name and Department ID Number:

Address:

and that if it does business under a trade name, it has filed a certificate with the State Department of Assessments and Taxation that correctly identifies that true name and address of the principal or owner as:

Name and Department ID Number:

Address:

# C. FINANCIAL DISCLOSURE AFFIRMATION

# I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of State Finance and Procurement Article, §13-221, Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate \$200,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches \$200,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

# D. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

# I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, Title 14, Annotated Code of Maryland, which requires that every person that enters into a procurement contract with the State, a county, or a municipal corporation, or other political subdivision of the State, during a calendar year in which the person receives a contract with a governmental entity in the amount of

\$200,000 or more, shall file with the State Board of Elections statements disclosing: (a) any contributions made during the reporting period to a candidate for elective office in any primary or general election; and (b) the name of each candidate to whom one or more contributions in a cumulative amount of \$500 or more were made during the reporting period. The statement shall be filed with the State Board of Elections: (a) before execution of a contract by the State, a county, a municipal corporation, or other political subdivision of the State, and shall cover the 24 months prior to when a contract was awarded; and (b) if the contribution is made after the execution of a contract, then twice a year, throughout the contract term, on or before: (i) May 31, to cover the six (6) month period ending April 30; and (ii) November 30, to cover the six (6) month period ending October 31.

# E. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)

# I CERTIFY THAT:

- (1) Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.
- (2) By submission of its Proposal, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:
  - (a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;
  - (b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;
  - (c) Prohibit its employees from working under the influence of drugs or alcohol;
  - (d) Not hire or assign to work on the contract anyone who the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;
  - (e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;
  - (f) Establish drug and alcohol abuse awareness programs to inform its employees about:
    - (i) The dangers of drug and alcohol abuse in the workplace;
    - (ii) The business's policy of maintaining a drug and alcohol free workplace;
    - (iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and
    - (iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;
  - (g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §E(2)(b), above;
  - (h) Notify its employees in the statement required by E(2)(b), above, that as a condition of continued employment on the contract, the employee shall:
    - (i) Abide by the terms of the statement; and
    - (ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;

- (i) Notify the procurement officer within 10 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;
- (j) Within 30 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:
  - (i) Take appropriate personnel action against an employee, up to and including termination; or
  - (ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and
- (k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of E(2)(a)—(j), above.
- (3) If the business is an individual, the individual shall certify and agree as set forth in §E(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.
- (4) I acknowledge and agree that:
  - (a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;
  - (b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and
  - (c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.

# F. CERTAIN AFFIRMATIONS VALID

#### I FURTHER AFFIRM THAT:

To the best of my knowledge, information, and belief, each of the affirmations, certifications, or acknowledgements contained in that certain Bid/Proposal Affidavit dated \_\_\_\_\_\_\_ and executed by me for the purpose of obtaining the contract to which this Exhibit is attached remains true and correct in all respects as if made as of the date of this Contract Affidavit and as if fully set forth herein.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date:

By:

\_\_\_\_\_ (print name of Authorized Representative and Affiant)

\_\_\_\_\_ (signature of Authorized Representative and Affiant)

# Attachment D

# MBE INSTRUCTIONS AND FORMS

# Attachment D. Minority Business Enterprise (MBE) Forms

#### D-1A

# MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT & MBE PARTICIPATION SCHEDULE

# PART 1 - INSTRUCTIONS

PLEASE READ BEFORE COMPLETING THIS DOCUMENT

This form includes Instructions and the MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule which must be submitted with the bid/proposal. <u>If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award unless the inaccuracy is determined to be the result of a minor irregularity that is waived or cured in accordance with COMAR 21.06.02.04.</u>

- 1. Contractor shall structure its procedures for the performance of the work required in this Contract to attempt to achieve the minority business enterprise (MBE) subcontractor participation goal stated in the Invitation for Bids or Request for Proposals. Contractor agrees to exercise good faith efforts to carry out the requirements set forth in these Instructions, as authorized by the Code of Maryland Regulations (COMAR) 21.11.03.
- 2. MBE Goals and Subgoals: Please review the solicitation for information regarding the Contract's MBE overall participation goals and subgoals. After satisfying the requirements for any established subgoals, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from the various MBE classifications to meet the remainder of the overall MBE participation goal.
- 3. MBE means a minority business enterprise that is certified by the Maryland Department of Transportation ("MDOT"). <u>Only MBEs certified by MDOT may be counted for purposes of</u> <u>achieving the MBE participation goals</u>. In order to be counted for purposes of achieving the MBE participation goals, the MBE firm, including a MBE prime, must be MDOT-certified for the services, materials or supplies that it is committed to perform on the MBE Participation Schedule. A firm whose MBE certification application is <u>pending may not be counted</u>.
- 4. Please refer to the MDOT MBE Directory at https://mbe.mdot.maryland.gov/directory/ to determine if a firm is certified with the appropriate North American Industry Classification System ("NAICS") Code <u>and</u> the product/services description (specific product that a firm is certified to provide or specific areas of work that a firm is certified to perform). For more general information about NAICS codes, please visit <u>https://www.census.gov/cos/www/naics/</u>. Only those specific products and/or services for which a firm is certified in the MDOT Directory can be used for purposes of achieving the MBE participation goals. CAUTION: If the firm's NAICS Code is in <u>graduated status</u>, such services/products <u>may not be counted</u> for purposes of achieving the MBE participation goals. A NAICS Code is in the graduated status if the term "Graduated" follows the Code in the MDOT MBE Directory.
- 5. <u>Guidelines Regarding MBE Prime Self-Performance</u>. Please note that when a certified MBE firm participates as a prime contractor on a Contract, a procurement agency may count the distinct, clearly defined portion of the work of the Contract that the certified MBE firm performs with its own workforce toward fulfilling up to, <u>but no more than</u>, fifty-percent (50%) of the overall

MBE participation goal, including up to one hundred percent (100%) <u>of not more than one</u> of the MBE participation subgoals, if any, established for the Contract.

- ✓ In order to receive credit for self-performance, an MBE prime must be certified in the appropriate NAICS code to do the work and must list its firm in the MBE Participation Schedule, including the certification category under which the MBE prime is self-performing and include information regarding the work it will self-perform.
- ✓ For the remaining portion of the overall goal and the remaining subgoals, the MBE prime must also identify on the MBE Participation Schedule the other certified MBE subcontractors used to meet those goals or request a waiver.
- ✓ These guidelines apply to the work performed by the MBE Prime that can be counted for purposes of meeting the MBE participation goals. These requirements do not affect the MBE Prime's ability to self-perform a greater portion of the work in excess of what is counted for purposes of meeting the MBE participation goals.
- ✓ Please note that the requirements to meet the MBE participation overall goal and subgoals are distinct and separate. If the contract has subgoals, regardless of MBE Prime's ability to self-perform up to 50% of the overall goal (including up to 100% of any subgoal), the MBE Prime must either commit to use other MBEs for each of any remaining subgoals or request a waiver. As set forth in Attachment 1-B Waiver Guidance, the MBE Prime's ability to self-perform certain portions of the work of the Contract will not be deemed a substitute for the good faith efforts to meet any remaining subgoal or the balance of the overall goal.
- ✓ In certain instances where the percentages allocated to MBE participation subgoals add up to more than 50% of the overall goal, the portion of self-performed work that an MBE Prime may count toward the overall goal may be limited to less than 50%. Please refer to the Governor's Office of Small Minority & Women Business Affairs' website for the MBE Prime Regulations Q&A for illustrative examples. <u>http://www.goMDsmallbiz.maryland.gov/Documents/MBE\_Toolkit/MBEPrimeRegulation\_QA.pdf</u>
- 6. Subject to items 1 through 5 above, when a certified MBE performs as a participant in a joint venture, a procurement agency may count a portion of the total dollar value of the Contract equal to the distinct, clearly-defined portion of the work of the Contract that the certified MBE performs with its own forces toward fulfilling the Contract goal, and not more than one of the Contract subgoals, if any.
- 7. The work performed by a certified MBE firm, including an MBE prime, can only be counted towards the MBE participation goal(s) if the MBE firm is performing a commercially useful function on the Contract. Please refer to COMAR 21.11.03.12-1 for more information regarding these requirements.

# 8. <u>Materials and Supplies: New Guidelines Regarding MBE Participation.</u>

✓ <u>Regular Dealer (generally identified as a wholesaler or supplier</u> in the MDOT Directory): Up to 60% of the costs of materials and supplies provided by a certified MBE may be counted towards the MBE participation goal(s) if such MBE is a Regular Dealer of such materials and supplies. Regular Dealer is defined as a firm that owns, operates, or maintains a store, a warehouse, or any other establishment in which the materials, supplies, articles, or equipment are of the general character described by the specifications required under the contract and are bought, kept in stock, or regularly sold or leased to the public in the usual course of business; and does not include a packager, a broker, a manufacturer's representative, or any other person that arranges or expedites transactions.

Example for illustrative purposes of applying the 60% rule:

Overall contract value: \$2,000,000 Total value of supplies: \$100,000

Calculate Percentage of Supplies to overall contract value: \$100,000 divided by \$2,000,000 = 5%

# Apply 60% Rule - Total percentage of Supplies/Products 5% x 60% = 3%

<u>3%</u> would be counted towards achieving the MBE Participation Goal and Subgoal, if any, for the MBE supplier in this example.

- ✓ <u>Manufacturer</u>: A certified MBE firm's participation may be counted in full if the MBE is certified in the appropriate NAICS code(s) to provide products and services as a manufacturer.
- ✓ <u>Broker</u>: With respect to materials or supplies purchased from a certified MBE that is neither a manufacturer nor a regular dealer, a unit may apply the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials and supplies required on a procurement toward the MBE contract goals, provided a unit determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. A unit may not apply any portion of the costs of the materials and supplies toward MBE goals.
- ✓ <u>Furnish and Install and other Services</u>: The participation of a certified MBE supplier, wholesaler, and/or regular dealer certified in the proper NAICS code(s) to furnish and install materials necessary for successful contract completion may be counted in full. Includes the participation of other MBE service providers in the proper NAICS code(s) may be counted in full.
- 9. <u>**Dually certified firms**</u>. An MBE that is certified in more than one subgroup category may only be counted toward goal fulfillment of ONE of those categories with regard to a particular contract.

*Example: A woman-owned Hispanic American (dually certified) firm may be used to fulfill the women-owned OR Hispanic American subgoal, but not both on the same contract.* 

- 10. CAUTION: The percentage of MBE participation, computed using the percentage amounts determined for all of the MBE firms listed in PART 3, MUST meet or exceed the MBE participation goal and subgoals (if applicable) as set forth in PART 2- for this solicitation. If a bidder/offeror is unable to meet the MBE participation goal or any subgoals (if applicable), then the bidder/offeror must request a waiver in PART 2 or the bid will be deemed not responsive, or the proposal not reasonably susceptible of being selected for award. You may wish to use the attached Goal/Subgoal Worksheet to assist in calculating the percentages and confirming that your commitment meets or exceeds the applicable MBE participation goal and subgoals (if any).
- 11. If you have any questions as to whether a firm is certified to perform the specific services or provide specific products, please contact MDOT's Office of Minority Business Enterprise at 1-

800-544-6056 or via email to <u>mbe@mdot.state.md.us</u> sufficiently prior to the submission due date.

# Subgoals (if applicable)

	Total African American MBE Participation:Total Asian American MBE Participation:Total Hispanic American MBE Participation:Total Women-Owned MBE Participation:	% % %
Overall Go	al	
	Total MBE Participation (include all categories):	%

# PART 2 - MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT & <u>MBE PARTICIPATION SCHEDULE</u>

This MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule must be completed in its entirety and included with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award.

In connection with the bid/proposal submitted in response to the Request for Proposals for Building Commissioning Services - Renovation Projects at M&T Bank Stadium, I affirm the following:

# 1. MBE Participation (PLEASE CHECK ONLY ONE)

I acknowledge and intend to meet IN FULL the overall certified Minority Business

Enterprise (MBE) participation goal of <u>12 percent</u>, no subgoals.

Therefore, I am not seeking a waiver pursuant to COMAR 21.11.03.11. I acknowledge that by checking the above box and agreeing to meet the stated goal and subgoal(s), if any, I **must** complete PART 3 - MBE Participation Schedule and Part 4 Signature Page in order to be considered for award.

# <u>OR</u>

After making good faith outreach efforts prior to making this submission, I conclude that I am unable to achieve the MBE participation goal and/or subgoals. I hereby request a waiver, in whole or in part, of the overall goal and/or subgoals I acknowledge that by checking this box and requesting a partial waiver of the stated goal and/or one or more of the stated subgoal(s) if any, I <u>must</u> complete Part 3, the MBE Participation Schedule and Part 4 Signature Page for the portion of the goal and/or subgoal(s) if any, for which I am not seeking a waiver, in order to be considered for award. I acknowledge that by checking this box and requesting a full waiver of the stated subgoal(s) if any, I <u>must</u> complete Part 4 Signature Page in order to be considered for award.

# **Additional MBE Documentation**

I understand that if I am notified that I am the apparent awardee or as requested by the Procurement Officer, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier:

- (a) Good Faith Efforts Documentation to Support Waiver Request (Attachment D-1C)
- (b) Outreach Efforts Compliance Statement (Attachment D-2);
- (c) MBE Subcontractor/MBE Prime Project Participation Statement (Attachments D-3A and 3B);
- (d) Any other documentation, including additional waiver documentation if applicable, required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal and subgoals, if any.

I understand that if I fail to return each completed document within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has already been awarded, the award is voidable.

# **Information Provided to MBE firms**

In the solicitation of subcontract quotations or offers, MBE firms were provided not less than the same information and amount of time to respond as were non-MBE firms.

# PART 3 - MBE PARTICIPATION SCHEDULE

SET FORTH BELOW ARE THE (I) CERTIFIED MBES I INTEND TO USE, (II) THE PERCENTAGE OF THE TOTAL CONTRACT VALUE ALLOCATED TO EACH MBE FOR THIS PROJECT AND, (III) THE ITEMS OF WORK EACH MBE WILL PROVIDE UNDER THE CONTRACT. I HAVE CONFIRMED WITH THE MDOT DATABASE THAT THE MBE FIRMS IDENTIFIED BELOW (INCLUDING ANY SELF-PERFORMING MBE PRIME FIRMS) ARE PERFORMING WORK ACTIVITIES FOR WHICH THEY ARE MDOT-CERTIFIED.

Prime Contractor	Project Description	Project/Contract Number
	CX Services- Renovation Projects at M&T Bank Stadium	

LIST INFORMATION FOR EACH CERTIFIED MBE FIRM YOU AGREE TO USE TO ACHIEVE THE MBE PARTICIPATION GOAL AND SUBGOALS, IF ANY. <u>MBE PRIMES</u>: PLEASE COMPLETE BOTH SECTIONS A AND B BELOW.

#### SECTION A: For MBE Prime Contractors ONLY (including MBE Primes in a Joint Venture)

MBE Prime Firm Name: MBE Certification Number: (If dually certified, check only one box.)	Percentage of total Contract Value to be performed with own forces and counted towards the MBE overall participation goal (up to 50% of the overall goal):% Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.
<ul> <li>African American-Owned</li> <li>Hispanic American- Owned</li> <li>Asian American-Owned</li> <li>Women-Owned</li> <li>Other MBE Classification</li> <li>NAICS code:</li></ul>	Percentage of total Contract Value to be performed with own forces and counted towards the <b>subgoal</b> , if any, for my MBE classification (up to 100% of not more than one subgoal):% Supplier, wholesaler and/or regular dealer (count 60%) Manufacturer (count 100%) Broker (count reasonable fee/commission only) Furnish and Install and other Services (count 100%) Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work your firm is self-performing to calculate amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.
	<ul> <li>A. Percentage amount of subcontract where the MBE Prime firm is being used for manufacturer, furnish and install, and/or services (excluding products / services from suppliers, wholesalers, regular dealers and brokers)%</li> <li>B. Percentage amount for items of work where the MBE Prime firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products% x 60% =%</li> <li>C. Percentage amount of fee where the MBE Prime firm is being used as broker (count reasonable fee/commission only)%</li> <li>Description of the work to be performed with MBE prime's own forces:</li></ul>

# SECTION B: For all Contractors (including MBE Primes and MBE Primes in a Joint Venture)

MBE Firm Name: MBE Certification Number: (If dually certified, check only one box.)	<ul> <li>Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</li> <li>Supplier, wholesaler and/or regular dealer (count 60%)</li> <li>Manufacturer (count 100%)</li> <li>Broker (count reasonable fee/commission only)</li> <li>Furnish and Install and other Services (count 100%)</li> <li>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</li> <li>A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers)%</li> </ul>
MBE Firm Name:	B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule)).         Total percentage of Supplies/Products% X 60% =%         C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only)%         Description of the work to be performed:
MBE Certification Number:	<ul> <li>Supplier, wholesaler and/or regular dealer (count 60%)</li> <li>Manufacturer (count 100%)</li> <li>Broker (count reasonable fee/commission only)</li> <li>Furnish and Install and other Services (count 100%)</li> <li>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE Firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</li> <li>A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers)%</li> <li>B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule)). Total percentage of Supplies/Products% X 60% =%</li> <li>C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only)%</li> </ul>

Name:       MBE participation guidelines regarding materials and supplies.         MBE Certification Number:       Supplier, wholesaler and/or regular dealer (count 60%)         MBE participation guidelines regarding materials and supplies.         MBE certification Number:       Supplier, wholesaler and/or regular dealer (count 60%)         Manufacturer (count 100%)       Broker (count reasonable fee/commission only)         African American-Owned       Furnish and Install and other Services (count 100%)         Hispanic American-Owned       Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards	MBE Certification Number:	<ul> <li>MBE participation guidelines regarding materials and supplies.</li> <li>Supplier, wholesaler and/or regular dealer (count 60%)</li> <li>Manufacturer (count 100%)</li> <li>Broker (count reasonable fee/commission only)</li> <li>Furnish and Install and other Services (count 100%)</li> <li>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that for the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</li> <li>A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers)%</li> <li>B. Percentage of the total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products% X 60% =%</li> <li>C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only)%</li> </ul>
Name:       MBE participation guidelines regarding materials and supplies.         MBE Certification Number:       Supplier, wholesaler and/or regular dealer (count 60%)         MBE participation guidelines regarding materials and supplies.         MBE certification Number:       Supplier, wholesaler and/or regular dealer (count 60%)         Manufacturer (count 100%)       Broker (count reasonable fee/commission only)         African American-Owned       Furnish and Install and other Services (count 100%)         Hispanic American-Owned       Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards		Description of the work to be performed:
	Name: MBE Certification Number: (If dually certified, check only one box.) African American-Owned Hispanic American-Owned Asian American-Owned Women-Owned Other MBE Classification	<ul> <li>Supplier, wholesaler and/or regular dealer (count 60%)</li> <li>Manufacturer (count 100%)</li> <li>Broker (count reasonable fee/commission only)</li> <li>Furnish and Install and other Services (count 100%)</li> <li>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</li> <li>A. Percentage of total contract amount where the MBE firm is being used for</li> </ul>

# CONTINUE ON SEPARATE PAGE IF NEEDED

# PART 4 – SIGNATURE PAGE

# To complete Affidavit committing to MBE(s) or requesting waiver, Bidder/Offeror must sign below:

I solemnly affirm under the penalties of perjury that: (i) I have reviewed the instructions for the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule, and (ii) the information contained in the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule is true to the best of my knowledge, information and belief.

Bidder/Offeror Name (PLEASE PRINT OR TYPE)	Signature of Authorized Representative
Address	Printed Name and Title
City, State and Zip Code	Date

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL

# **D-1B WAIVER GUIDANCE**

# GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET MBE PARTICIPATION GOALS

In order to show that it has made good faith efforts to meet the Minority Business Enterprise (MBE) participation goal (including any MBE subgoals) on a contract, the Offeror must either (1) meet the MBE Goal(s) and document its commitments for participation of MBE Firms, or (2) when it does not meet the MBE Goal(s), document its Good Faith Efforts to meet the goal(s).

# I. Definitions

MBE Goal(s) - "MBE Goal(s)" refers to the MBE participation goal and MBE participation subgoal(s).

**Good Faith Efforts** - The "Good Faith Efforts" requirement means that when requesting a waiver, the Offeror must demonstrate that it took all necessary and reasonable steps to achieve the MBE Goal(s), which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient MBE participation, even if those steps were not fully successful. Whether the Offeror that requests a waiver made adequate good faith efforts will be determined by considering the quality, quantity, and intensity of the different kinds of efforts that the Offeror has made. The efforts employed by the Offeror should be those that one could reasonably expect the Offeror to take if the Offeror were actively and aggressively trying to obtain MBE participation sufficient to meet the MBE contract goal and subgoals. Mere *pro forma* efforts are not good faith efforts to meet the MBE contract requirements. The determination concerning the sufficiency of the Offeror's good faith efforts is a judgment call; meeting quantitative formulas is not required.

**Identified Firms** – "Identified Firms" means a list of the MBEs identified by the procuring agency during the goal setting process and listed in the procurement as available to perform the Identified Items of Work. It also may include additional MBEs identified by the Offeror as available to perform the Identified Items of Work, such as MBEs certified or granted an expansion of services after the procurement was issued. If the procurement does not include a list of Identified Firms, this term refers to all of the MBE Firms (if State-funded) the Offeror identified as available to perform the Identified Items of Work and should include all appropriately certified firms that are reasonably identifiable.

**Identified Items of Work** – "Identified Items of Work" means the Proposal items identified by the procuring agency during the goal setting process and listed in the procurement as possible items of work for performance by MBE Firms. It also may include additional portions of items of work the Offeror identified for performance by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved. If the procurement does not include a list of Identified Items of Work, this term refers to all of the items of work the Offeror identified as possible items of work for performance by MBE Firms and should include all reasonably identifiable work opportunities.

**MBE Firms** – "MBE Firms" refers to firms certified by the Maryland Department of Transportation ("MDOT") under COMAR 21.11.03. Only MDOT-certified MBE Firms can participate in the State's MBE Program.

# II. Types of Actions Agency will Consider

The Offeror is responsible for making relevant portions of the work available to MBE subcontractors and suppliers and select those portions of the work or material needs consistent with the available MBE subcontractors and suppliers, so as to facilitate MBE participation. The following is a list of types of actions the procuring agency will consider as part of the Offeror's Good Faith Efforts when the Offeror fails to meet the MBE Goal(s). This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

# A. Identify Proposal Items as Work for MBE Firms

- 1. Identified Items of Work in Procurements
  - (a) Certain procurements will include a list of Proposal items identified during the goal setting process as possible work for performance by MBE Firms. If the procurement provides a list of Identified Items of Work, the Offeror shall make all reasonable efforts to solicit quotes from MBE Firms to perform that work.
  - (b) Offerors may, and are encouraged to, select additional items of work to be performed by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved.
- 2. Identified Items of Work by Offerors
  - (a) When the procurement does not include a list of Identified Items of Work or for additional Identified Items of Work, Offerors should reasonably identify sufficient items of work to be performed by MBE Firms.

(b) Where appropriate, Offerors should break out contract work items into economically feasible units to facilitate MBE participation, rather than perform these work items with their own forces. The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the Offeror of the responsibility to make Good Faith Efforts.

# B. Identify MBE Firms to Solicit

- 1. MBE Firms Identified in Procurements
  - (a) Certain procurements will include a list of the MBE Firms identified during the goal setting process as available to perform the items of work. If the procurement provides a list of Identified MBE Firms, the Offeror shall make all reasonable efforts to solicit those MBE firms.
  - (b) Offerors may, and are encouraged to, search the MBE Directory to identify additional MBEs who may be available to perform the items of work, such as MBEs certified or granted an expansion of services after the solicitation was issued.
- 2. MBE Firms Identified by Offerors
  - (a) When the procurement does not include a list of Identified MBE Firms, Offerors should reasonably identify the MBE Firms that are available to perform the Identified Items of Work.
  - (b) Any MBE Firms identified as available by the Offeror should be certified to perform the Identified Items of Work.

# C. Solicit MBEs

- 1. Solicit <u>all</u> Identified Firms for all Identified Items of Work by providing written notice. The Offeror should:
  - (a) provide the written solicitation at least 10 days prior to Proposal opening to allow sufficient time for the MBE Firms to respond;
  - (b) send the written solicitation by first-class mail, facsimile, or e-mail using contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; and
  - (c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the MBE, and other requirements of the contract to assist MBE Firms in responding. (This information may be provided by including hard copies in the written solicitation or by <u>electronic means</u> as described in C.3 below.)
- 2. "<u>All"</u> Identified Firms includes the MBEs listed in the procurement and any MBE Firms you identify as potentially available to perform the Identified Items of Work, but it does not include MBE Firms who are no longer certified to perform the work as of the date the Offeror provides written solicitations.
- 3. "<u>Electronic Means</u>" includes, for example, information provided *via* a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested MBE cannot access the information provided by electronic means, the Offeror must make the information available in a manner that is accessible to the interested MBE.
- 4. Follow up on initial written solicitations by contacting MBEs to determine if they are interested. The follow up contact may be made:
  - (a) by telephone using the contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; or
  - (b) in writing *via* a method that differs from the method used for the initial written solicitation.
- 5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, use all other reasonable and available means to solicit the interest of MBE Firms certified to perform the work of the contract. Examples of other means include:
  - (a) attending any pre-Proposal meetings at which MBE Firms could be informed of contracting and subcontracting opportunities; and
  - (b) if recommended by the procurement, advertising with or effectively using the services of at least two minority focused entities or media, including trade associations, minority/women community organizations, minority/women contractors' groups, and local, state, and federal minority/women business assistance offices listed on the MDOT Office of Minority Business Enterprise website.

# D. Negotiate with Interested MBE Firms

Offerors must negotiate in good faith with interested MBE Firms.

- 1. Evidence of negotiation includes, without limitation, the following:
  - (a) the names, addresses, and telephone numbers of MBE Firms that were considered;
  - (b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and
  - (c) evidence as to why additional agreements could not be reached for MBE Firms to perform the work.
- 2. The Offeror using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.
- 3. The fact that there may be some additional costs involved in finding and using MBE Firms is not in itself sufficient reason for the Offeror's failure to meet the contract MBE goal(s), as long as such costs are reasonable. Factors to take into consideration when determining whether an MBE Firm's quote is excessive or unreasonable include, without limitation, the following:
  - (a) dollar difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
  - (b) percentage difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
  - (c) percentage that the MBE subcontractor's quote represents of the overall contract amount;
  - (d) number of MBE firms that the Offeror solicited for that portion of the work;
  - (e) whether the work described in the MBE and Non-MBE subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and
  - (f) number of quotes received by the Offeror for that portion of the work.
- 4. The above factors are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.
- 5. The Offeror may not use its price for self-performing work as a basis for rejecting an MBE Firm's quote as excessive or unreasonable.
- 6. The "average of the other subcontractors' quotes received" by the Offeror refers to the average of the quotes received from all subcontractors. Offeror should attempt to receive quotes from at least three subcontractors, including one quote from an MBE and one quote from a Non-MBE.
- 7. The Offeror shall not reject an MBE Firm as unqualified without sound reasons based on a thorough investigation of the firm's capabilities. For each certified MBE that is rejected as unqualified or that placed a subcontract quotation or offer that the Offeror concludes is not acceptable, the Offeror must provide a written detailed statement listing the reasons for this conclusion. The Offeror also must document the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.
  - (a) The factors to take into consideration when assessing the capabilities of an MBE Firm, include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.
  - (b) The MBE Firm's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of Proposals in the efforts to meet the project goal.

# E. Assisting Interested MBE Firms

When appropriate under the circumstances, the decision-maker will consider whether the Offeror Offeror made reasonable efforts to assist interested MBR Firms in obtaining:

- 1. The bonding, lines of credit, or insurance required by the procuring agency or the Offeror; and
- 2. Necessary equipment, supplies, materials, or related assistance or services.

# III. Other Considerations

In making a determination of Good Faith Efforts the decision-maker may consider engineering estimates, catalogue prices, general market availability and availability of certified MBE Firms in the area in which the work is to be performed, other Proposals or offers and subcontract Proposals or offers substantiating significant variances between certified MBE and Non-MBE costs of participation, and their impact on the overall cost of the contract to the State and any other relevant factors.

The decision-maker may take into account whether the Offeror decided to self-perform subcontract work with its own forces, especially where the self-performed work is Identified Items of Work in the procurement. The decision-maker also may take into account the performance of other Offerors in meeting the contract. For example, when the apparent successful Offeror fails to meet the contract goal, but others meet it, this reasonably raises the question of whether, with additional reasonable efforts, the apparent successful Offeror could have met the goal. If the apparent successful Offeror fails to meet the goal, but meets or exceeds the average MBE participation obtained by other Offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful Offeror having made Good Faith Efforts.

# IV. Documenting Good Faith Efforts

At a minimum, the Offeror seeking a waiver of the MBE Goal(s) or a portion thereof must provide written documentation of its Good Faith Efforts, in accordance with COMAR 21.11.03.11, within 10 Business Days after receiving notice that it is the apparent awardee. The written documentation shall include the following:

# A. Items of Work (Complete Good Faith Efforts Documentation Attachment D-1C, Part 1)

A detailed statement of the efforts made to select portions of the work proposed to be performed by certified MBE Firms in order to increase the likelihood of achieving the stated MBE Goal(s).

# B. Outreach/Solicitation/Negotiation

- 1. The record of the Offeror's compliance with the outreach efforts prescribed by COMAR 21.11.03.09C(2)(a). (Complete Outreach Efforts Compliance Statement D-2).
- 2. A detailed statement of the efforts made to contact and negotiate with MBE Firms including:
  - (a) the names, addresses, and telephone numbers of the MBE Firms who were contacted, with the dates and manner of contacts (letter, fax, e-mail, telephone, etc.) (Complete Good Faith Efforts Attachment D-1C- Part 2, and submit letters, fax cover sheets, e-mails, etc. documenting solicitations); and
  - (b) a description of the information provided to MBE Firms regarding the plans, specifications, and anticipated time schedule for portions of the work to be performed and the means used to provide that information.

# C. Rejected MBE Firms (Complete Good Faith Efforts Attachment D-1C, Part 3)

- 1. For each MBE Firm that the Offeror concludes is not acceptable or qualified, a detailed statement of the reasons for the Offeror's conclusion, including the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.
- 2. For each certified MBE Firm that the Offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the Offeror's conclusion, including the quotes received from all MBE and Non-MBE firms proposing on the same or comparable work. (Include copies of all quotes received.)
- 3. A list of MBE Firms contacted but found to be unavailable. This list should be accompanied by an MBE Unavailability Certificate (see **D-1B Exhibit A** to this Part 1) signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the MBE Unavailability Certificate.

# **D.** Other Documentation

- 1. Submit any other documentation requested by the Procurement Officer to ascertain the Offeror's Good Faith Efforts.
- 2. Submit any other documentation the Offeror believes will help the Procurement Officer ascertain its Good Faith Efforts.

	MBE Su	D-1B - Exhibit A bcontractor Unavailability Cer	rtificate
1. It is hereby	y certified that the firm of	٠ -	
		(Name of Minority fi	rm)
located at _	(Number)	(Street)	
	(City)	(State) (Zip	)
was offered a	an opportunity to bid on Solicitat	ion No.	
in	County by		
		(Name of Prime Contractor's	
****	*****	****	****
(Signature o Representat	of Minority Firm's MBE ive)	(Title)	(Date)
(MDOT Ce	rtification #)	(Telephone #)	
	*****	******	*****
*******			and stad by the mine with firms
	pleted by the prime contractor if	Section 2 of this form is not com	apieted by the minority firm.

(Signature of Prime Contractor)

(Title)

(Date)

# D-1C GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST

PAGE OF			
Prime Contractor:	Project Description:	PROJECT/CONTRACT	
Offeror Company Name, Street Address, Phone		Solicitation #:	

Parts 1, 2, and 3 must be included with this certificate along with all documents supporting your waiver request.

I affirm that I have reviewed **Attachment D-1B**, Waiver Guidance. I further affirm under penalties of perjury that the contents of Parts 1, 2, and 3 of this **Attachment D-1C** Good Faith Efforts Documentation Form are true to the best of my knowledge, information, and belief.

Company:
Company Name (please print or type)
By:
Signature of Authorized Representative
Printed Name:
Printed Name
Title:
Title
Date:
Date
Address:

Company Address

# GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST PART 1 – IDENTIFIED ITEMS OF WORK OFFEROR MADE AVAILABLE TO MBE FIRMS

Prime Contractor:	Project Description:	PROJECT/CONTRACT
Offeror Company Name, Street Address, Phone		Solicitation #:

PAGE \_\_ OF \_\_\_\_

Identify those items of work that the Offeror made available to MBE Firms. This includes, where appropriate, those items the Offeror identified and determined to subdivide into economically feasible units to facilitate the MBE participation. For each item listed, show the anticipated percentage of the total contract amount. It is the Offeror's responsibility to demonstrate that sufficient work to meet the goal was made available to MBE Firms, and the total percentage of the items of work identified for MBE participation equals or exceeds the percentage MBE goal set for the procurement. Note: If the procurement includes a list of Proposal items identified during the goal setting process as possible items of work for performance by MBE Firms, the Offeror should make all of those items of work to make available to MBE Firms, those additional items should also be included below.

Identified Items of Work	Was this work listed in the procurement?	Does Offeror normally self- perform this work?	Was this work made available to MBE Firms? If no, explain why not.
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No

Please check if Additional Sheets are attached.

# GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST PART 2 – IDENTIFIED MBE FIRMS AND RECORD OF SOLICITATIONS

PAGE \_\_ OF \_\_\_\_

Prime Contractor:	Project Description:	PROJECT/CONTRACT
Offeror Company Name, Street Address, Phone		Solicitation #:

Identify the MBE Firms solicited to provide quotes for the Identified Items of Work made available for MBE participation. Include the name of the MBE Firm solicited, items of work for which quotes were solicited, date and manner of initial and follow-up solicitations, whether the MBE provided a quote, and whether the MBE is being used to meet the MBE participation goal. MBE Firms used to meet the participation goal must be included on the MBE Participation Schedule. Note: If the procurement includes a list of the MBE Firms identified during the goal setting process as potentially available to perform the items of work, the Offeror should solicit all of those MBE Firms or explain why a specific MBE was not solicited. If the Offeror identifies additional MBE Firms who may be available to perform Identified Items of Work, those additional MBE Firms should also be included below. Copies of all written solicitations and documentation of follow-up calls to MBE Firms must be attached to this form. This list should be accompanied by a Minority Contractor Unavailability Certificate signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the Minority Contractor Unavailability Certificate (Attachment D-1B - Exhibit A). If the Offeror used a Non-MBE or is self-performing the identified items of work, Part 4 must be completed.

Name of Identified MBE Firm & MBE Classification	Describe Item of Work Solicited	Initial Solicitation Date & Method	Follow-up Solicitation Date & Method	Details for Follow-up Calls	Quote Rec'd	Quote Used	Reason Quote Rejected
Firm Name: MBE Classification (Check only if requesting waiver of MBE subgoal.) African American-Owned Hispanic American-Owned Asian American-Owned Women-Owned Other MBE Classification		Date: □ Mail □ Facsimile □ E-mail	Date: □ Phone □ Mail □ Facsimile □ E-mail	Time of Call: Spoke with: Left Message	□ Yes □ No	□ Yes □ No	<ul> <li>□ Used Other</li> <li>MBE</li> <li>□ Used Non-</li> <li>MBE</li> <li>□ Self-</li> <li>performing</li> </ul>
Firm Name: MBE Classification (Check only if requesting waiver of MBE subgoal.) African American-Owned Hispanic American-Owned Asian American-Owned Women-Owned Other MBE Classification		Date: □ Mail □ Facsimile □ E-mail	Date: Date: Mail Facsimile E-mail	Time of Call: Spoke with: Left Message	□ Yes □ No	□ Yes □ No	□ Used Other MBE □ Used Non- MBE □ Self- performing

Please check if Additional Sheets are attached.

# GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST PART 3 – ADDITIONAL INFORMATION REGARDING REJECTED MBE QUOTES

PAGE	OF	

Prime Contractor:	Project Description:	PROJECT/CONTRACT NUMBER:
Offeror Company Name, Street Address, Phone		Solicitation #:

This form must be completed if Part 1 indicates that an MBE quote was rejected because the Offeror is using a Non-MBE or is self-performing the Identified Items of Work. Provide the Identified Items Work, indicate whether the work will be self-performed or performed by a Non-MBE, and if applicable, state the name of the Non-MBE. Also include the names of all MBE and Non-MBE Firms that provided a quote and the amount of each quote.

Describe Identified Items of Work Not Being Performed by MBE (Include spec/ section number from Proposal)	Self-performing or Using Non-MBE (Provide name)	Amount of Non-MBE Quote	Name of Other Firms who Provided Quotes & Whether MBE or Non- MBE	Amount Quoted	Indicate Reason Why MBE Quote Rejected & Briefly Explain
	□ Self-performing □ Using Non-MBE 	\$	□ MBE □ Non-MBE	\$	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE 	\$	□ MBE □ Non-MBE	\$	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE 	\$	□ MBE □ Non-MBE	\$	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE 	\$	□ MBE □ Non-MBE	\$	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE 	\$	□ MBE □ Non-MBE	\$	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE 	\$	□ MBE □ Non-MBE	\$	□ Price □ Capabilities □ Other

Please check if Additional Sheets are attached.

#### **D- 2**

#### **OUTREACH EFFORTS COMPLIANCE STATEMENT**

Complete and submit this form within 10 Business Days of notification of apparent award or actual award, whichever is earlier.

In conjunction with the Proposal submitted in response to Solicitation No. \_\_\_\_\_\_, I state the following:

1. Offeror identified subcontracting opportunities in these specific work categories:

2. Attached to this form are copies of written solicitations (with Proposal instructions) used to solicit certified MBE firms for these subcontract opportunities.

3. Offeror made the following attempts to personally contact the solicited MDOT-certified MBE firms:

# 4. Please Check One:

- □ This project does not involve bonding requirements.
- Offeror assisted MDOT-certified MBE firms to fulfill or seek waiver of bonding requirements. (DESCRIBE EFFORTS):

# 5. **Please Check One:**

Offeror did attend the pre-Proposal conference.

No pre -Proposal meeting/conference was held.

Offeror did not attend the pre-Proposal conference.

# PLEASE PRINT OR TYPE

Company: Company Name (please print or type) By: Signature of Authorized Representative Printed Name: Printed Name Title: Title Date: Date: Address:

Company Address

### D-3A

### **CERTIFED MBE SUBCONTRACTOR PARTICIPATION CERTIFICATION**

### **INSTRUCTIONS:**

**PRIME CONTRACTOR:** After completing SECTIONS A, B, and D, provide this form to *each* certified Minority Business Enterprise subcontractor (MBE) listed on the MBE Participation Schedule (Attachment D-1A) allowing sufficient time for the MBE to respond within the required timeframe.

**CERTIFIED MBE SUBCONTRACTOR:** Complete SECTION C to acknowledge and certify the information in SECTION A. Return the completed form directly to the Procurement Officer identified in SECTION D <u>within 10 days</u> after notice from the Prime Contractor of the State's intent to award the Contract. Provide a copy to the Prime Contractor.

### IF THIS FORM IS NOT RETURNED WITHIN THE REQUIRED TIME, THE PROCUREMENT OFFICER MAY DETERMINE THAT THE PRIME CONTRACTOR IS NOT RESPONSIBLE AND THEREFORE NOT ELIGIBLE FOR CONTRACT AWARD.

## SECTION A

Provided that (Prime Con-	tractor)		i	s awarded the State contract
in conjunction with Solicitation Number		, (Prime Contractor)		Prime Contractor)
		intends to enter into a sub-	contract with (Certifi	ed MBE Subcontractor)
		with MDOT Certification	n Number	committing to
participation by (Certified MBE Subcontrac		ctor)		of at least
\$	which equals	% of the Total Contra	ect Value for the follo	wing products/services:
NAICS CODE	LINE ITEMS	SPECIFICATION NUMBER, OR WORK CATEGORIES APPLICABLE)		DF SPECIFIC PRODUCTS OR SERVICES

The Contractor and certified MBE each acknowledge that, for purposes of determining the accuracy of the information provided herein, the Procurement Officer may request additional information, including, without limitation, copies of the subcontract agreements and quotes. The Contractor and certified MBE each solemnly affirms under the penalties of perjury that: (i) the information provided in this Certified MBE Subcontractor Participation Certification is true to the best of its knowledge, information and belief, and (ii) it has fully complied with the State Minority Business Enterprise law, State Finance and Procurement Article §14-308(a)(2), Annotated Code of Maryland which provides that, except as otherwise provided by law, a Contractor may not identify a certified MBE in a Bid/Proposal and:

- (1) fail to request, receive, or otherwise obtain authorization from the MBE to identify the MBE in its Bid/Proposal;
- (2) fail to notify the MBE before execution of the Contract of its inclusion of the Bid/Proposal;
- (3) fail to use the MBE in the performance of the Contract; or
- (4) pay the MBE solely for the use of its name in the Bid/Proposal.

## PAGE 2 – CERTIFIED MBE SUBCONTRACTOR PARTICIPATION CERTIFICATION

SECTION B – Prime Contractor	SECTION C – Certified MBE Subcontractor
Signature of Representative:	Signature of Representative:
Printed Name and Title:	Printed Name and Title:
Prime Firm's Name:	MBE Firm's Name:
Federal Identification Number:	Federal Identification Number:
Street Address, City, State, Zip Code:	Street Address, City, State, Zip Code:
Phone:	Phone:
Date:	Date:

SECTION D				
This completed form is due to the Procurement Officer on or before:				
Solicitation #:	Solicitation Title:			
Agency/Dept.:	Procurement Officer:			
Phone: ]	Email:			
Street Address, City, State, Zip Code:				

## D-3B MBE PRIME PROJECT PARTICIPATION CERTIFICATION

Please complete and submit this form to attest to each specific item of work that your MBE firm has listed on the MBE Participation Schedule (Attachment D-1A) for purposes of meeting the MBE participation goals. This form must be submitted within 10 Business Days of notification of apparent award. If the Offeror fails to return this affidavit within the required time, the Procurement Officer may determine that Proposal is not susceptible of being selected for Contract award.

Provided that \_\_\_\_\_\_ (Prime Contractor's Name) with Certification Number \_\_\_\_\_\_\_ is awarded the State contract in conjunction with Solicitation No.

\_, such MBE Prime Contractor intends to perform with its own forces at least

\$\_\_\_\_\_which equals to\_\_\_% of the Total Contract Amount for performing the following goods and services for the Contract:

NAICS CODE	WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE) For Construction Projects, General Conditions must be listed separately	DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES	VALUE OF THE WORK

### **MBE Prime Contractor**

Company:

Company Name (please print or type)

FEIN:

Federal Identification Number

Company Address: \_\_\_\_\_

Phone:

Printed Name:

Title:

By:

Signature of Authorized Representative

Date:

## D-4A Minority Business Enterprise Participation Prime Contractor Paid/Unpaid Invoice Report

Report #:	Contract #:
Reporting Period (Month/Year):	Contracting Unit:
Bring Contractory Demost is due to the MDF Linison by	Contract Amount:
Prime Contractor: Report is due to the MBE Liaison by the 10th of the month following the month the services were provided. Note: Please number reports in sequence	MBE Subcontract Amt:
	Project Begin Date:
	Project End Date:
	Services Provided:

Prime Contractor:			Contact Person:			
Address:						
City:				State: ZIP:		
Phone:		FAX:		E-mail:		
MBE Su	bcontractor Name:			Contact Person:		
Phone:		FAX:		E-mail:		
Subcontr	actor Services Provided	1:				
List all payments made to MBE subcontractor named above during this reporting period:		List d	ates and amounts of any out	standing invoices:		
	Invoice #	Amount		Invoice #	Amount	
1.			1.			
2.			2.			
3.			3.			
4.			4.			
Total Dollars Paid: \$		Total Dollars Unpaid: \$				

- If more than one MBE subcontractor is used for this contract, you must use separate Attachment D-4A forms. Information regarding payments that the MBE prime will use for purposes of meeting the MBE participation goals must be reported separately in Attachment D-4B.
- Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):

Contract Monitor Name

Address

Email

Signature (Required)

Contracting Unit

City, State Zip

Phone Number

Date

## D-4B Minority Business Enterprise Participation MBE Prime Contractor Report

MBE Prime Contractor:	Contract #:
Certification Number:	Contracting Unit:
Report #:	Contract Amount:
Reporting Period (Month/Year):	Total Value of the Work to the Self-Performed for purposes
MBE Prime Contractor: Report is due to the MBE	of Meeting the MBE participation goal/subgoals:
Liaison by the 10th of the month following the month the	
services were provided.	
Note: Please number reports in sequence	Project Begin Date:
· · ·	Project End Date:

Contact Person:			
Address:			
City:		State:	ZIP:
Phone:	FAX:	E-mail:	

Invoice Number	Value of the Work	NAICS Code	Description of Specific Products and/or Services

Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):

Contract Monitor Name

Contracting Unit

Address

City, State Zip

Email

Phone Number

Signature (Required)

Date

## D-5 Minority Business Enterprise Participation <u>MBE Subcontractor Paid/Unpaid Invoice Report</u>

Report #:	Contract #:
Reporting Period (Month/Year):	Contracting Unit:
Report is due by the 10th of the month following the	MBE Subcontract Amt:
month the services were performed.	Project Begin Date:
	Project End Date:
	Services Provided:

MBE Subcontractor Name:					
MDOT	MDOT Certification #:				
Contact	Person:				
Address	:				
City:				State:	ZIP:
Phone:		FAX:		E-mail:	
Subcon	tractor Services Provide	d:			
List all payments received from Prime Contractor during reporting period indicated above.		List dates and amounts of any unpaid invoices over 30 days old.			
	Invoice Amount	Date		Invoice Amount	Date
1.			1.		
2.			2.		
3.			3.		
4.	4. 4.				
Total Dollars Paid: \$   Total Dollars			l Dollars Unpaid: \$		
Prime Contractor:		Contract Person:			

Return one copy of this form to the following addresses (electronic copy with signature and date is preferred):

Contract Monitor Name	Contracting Unit
Address	City, State Zip
Email	Phone Number
Signature (Required)	Date

## Attachment E

## **CORPORATE PROFILE**

## **Construction - Corporate Profile**

Firm Contact Information	
Firm Name:	
Federal ID Number:	
Point of Contact:	Phone Number:
Regional Office Address:	
Firm Background Information	
Year Firm Founded:	
Is the firm MDOT MBE Certified?	No If certified, provide the
Primary Business/Service Provided:	
Number of Years Performing Services:	
Number Full Time Employees (Corporate/Reg Provide a brief narrative outlining the firm's h	· ·
Provide a brief narrative outlining what servic	es the firm intends to self-perform.

Provide a brief narrative outlining what services the firm intends to subcontract to others.

Provide a brief narrative outlining the firm's familiarity with standards, laws and conditions as they apply to the work to be performed under this project.

Provide a brief narrative clarifying the firm's capacity to perform services as outlined in the solicitation.

Provide sales volume and project completion data for the most recently completed three-year period. Note that information provided is to be for the regional / local office that would be responsible for completing work under this solicitation.

Volume	Annual Sales	Completed Projects	Largest Project
2019			
2020			
2021			
2022			

## **Firm References**

Provide three (3) references. Note that references are to be from different projects; that is, only one reference per project is allowed. MSA staff members cannot be considered as a firm's reference.

Project Name:	
Name: Title: Company Name: Phone Number and email: Project Relationship:	
Project Name:	
Name: Title: Company Name: Phone Number and email Project Relationship:	
Project Name:	
Name: Title: Company Name: Phone Number and email: Project Relationship:	

## **Disclosure of Contract Issues; Litigation; Criminal Investigations**

In the last five years, list and discuss any alleged prior or ongoing contract failures (potential judgment/settlement in excess of \$100,000), contract breaches (potential judgment/settlement in excess of \$100,000), other significant civil litigation, and all criminal litigation or investigations, which involved your firm.

## **Failure to Complete**

In the last five (5) years, disclose any projects that your firm was involved with that were not completed.

## Insurance

Include current certificates of insurance showing the limits of liability maintained by your firm in each of the following categories: workers' compensation, employer's liability, commercial general liability, automobile liability, umbrella or excess liability, and property insurance.

## Safety

Have you received any regulatory citations (e.g. federal or state OSHA) in the last three years? Yes/No

If yes, provide explanation:

Provide your Workers' Compensation I 4 years	Experience Modification Rates (EMR) for the last
2019	
2020	
2021	
2022	
If EMR not applicable, provide explanation	
Prepared By:	
Name:	
Title:	
Signature:	
Date:	

## Attachment F

## **DESIGN DEVELOPMENT**

## DOCUMENTS

- Mechanical and Plumbing schedules from original building construction with the intent of giving an idea for the quantity and type of equipment in the building. Equipment has been added over the years that may not show up on these schedules.
- DD level mechanical schedules for the 2024 projects. These are subject to change as design progresses.

1. 2.	BHP SHALL BE NC	L COMPLY WITH ASHRA GREATER THAN 90% C ATION OF 20 FT. STATI
I	DENTIFICATION	
	EF-03-C-01	GENE
	RF-9	AHU-9
	1. EXTERNAL STA AND DUCTWOF 2. SUPPLY FAN T	(APPLIES TO ALL): TIC PRESSURE INCLUDE RK SYSTEM (EXCLUDES F OTAL STATIC PRESSURE AIRFLOW IS WINTER DIVE SELECTION
	IDENTIFICATION	AREA SERVED

Chairman Suite Mechanical Schedules from DD Drawings -Subject to Change

## IRAE 90.1. % OF THE MOTOR H.P. TIC PRESSURE AT SEA LEVEL.

FAN TYPES: BVS - BELTED VENT SET. CEILING - CEILING MOUNTED FAN. MF - MIXED FLOW FAN.

PRS - POWER ROOF SUPPLY FAN.

PRV - POWER ROOF VENTILATOR.

SQI - SQUARE-INLINE CENTRIFUGAL.

TC - TUBULAR CENTRIFUGAL (INLINE).

UBD - UPBLAST DILUTION FAN.

PROP - PROPELLER.

TA - TUBE AXIAL.

VA - VANE AXIAL.

WHEEL TYPES: AF - AIR FOIL. BI - BACKWARD INCLINE. FC - FORWARD CURVED. PRE - POWER ROOF EXHAUSTER. ESP - EXTERNAL STATIC...

TS - MAX. TIP SPEED (RPM).

STARTER TYPES / ACCESS: A = COMBINATION MAGNETIC ACROSS THE LINE STARTER.

F = EMERGENCY POWER.

B = MANUAL MOTOR STARTER. C = HAND-OFF-AUTO SWITCH, PILOT LIGHT, AND CONTROL TRANSFORMER IN STARTER D = VARIABLE FREQUENCY DRIVE. E = LINE REACTOR, MAIN DISCONNECT, AND CONTROL RELAY

					STATIC		WHEEL	L			MOTOR			STA	F
SYSTEM	DESIGN BASIS	MODEL NUMBER	TYPE	CFM	PRESSURE (IN. WG)	LVL	SIZE	TS	BHP	MIN. HP	RPM	VOLTAGE	TYPE	LOCATION	I
NERAL EXHAUST	GREENHECK		INLINE	2400	1.5					2.00		460/3	Α	UNIT MOUNTED	Ī
J-9 RETURN FAN	GREENHECK		INLINE	6,625	1.5					5.00		460/3	Α	UNIT MOUNTED	Ī
														AIR HAI	

1. EXTERNAL STA AND DUCTWOF 2. SUPPLY FAN T	<b>C (APPLIES TO ALL):</b> ATIC PRESSURE INCLUDES LOSSES RK SYSTEM (EXCLUDES FILTER LO OTAL STATIC PRESSURE (TSP) IN AIRFLOW IS WINTER DIVERSIFIED. E SELECTION	SS) CLUDES	SCHEDULED	DIRTY FILTER LOSS.	4. PREMIUM 5. FILTERS S 6. SEE SPEC	SHALL BE	SELECT	ED AT TH			SURE	DROP					VFD - MMS	- FAC - MAI	TYPES: TORY MOU NUAL MOTO COMBINAT BY DIVISIO	OR STA ION MA	RTER PF	OVIDED								
						C	IDE AIR FM						SUPPLY F		DTOR(S)	)														
IDENTIFICATION	AREA SERVED	MFR	MODEL NUMBER	TYPE	PRESSURE	MIN MAX			MIN MAX			MIN MAX	MIN MAX		мах	CFM	ESP	TSP		BHP	P MIN. HP	VOLT	STARTER				FLUID	QTY	CFM	MAX. F
									(IN. WG)	(IN. WG)	QTY	(EA)	(EA)	/ PH	TYPE	LOCATION	QTY	SP				VEL. (F								
AHU-9	CHAIRMAN SUITE CLUB	JCI	XTI-69X99	MULTIZONE VAV	MEDIUM	5,850	16,100	16,100	3.50	6.87	2	5.80	15	460 / 3	VFD	UNIT MOUNTED	1		25% E.G.	1	16,100	500								

G	SENERAL NOTES
1	. EXTERNAL STATIC PRESSURE INCLUDES LOSSES FOR GREASE EXHAUST
	DUCTWORK, COOKING EXHAUST HOOD, DISCHARGE DUCTWORK, EXHAUS
	PLENUM, AND LOUVER
2	. PREMIUM EFFICIENCY MOTORS
3	. FILTERS SHALL BE SELECTED AT THEIR HALF LIFE PRESSURE DROP

STARTER TYPES / ACCESSORIES: MAG-X-L - COMBINATION MAGNETIC ACROSS 1 STARTER PROVIDED BY DIVISION 2 MMS - MANUAL MOTOR STARTER PROVIDED **BY DIVISION 26** VFD - VARIABLE FREQUENCY DRIVE WITH INT DISCONNECT. PCU MANUFACTURER SH PROVIDE, MOUNT, AND WIRE THE VFD

PCU-02-C-01	

		ROOM	MANUFACTURE	R MODEL	. NUMB	ER	
t		PCU PLATFORM	HALTON	POLL	USTOF	)	_
		PRESSURE INCLUDES DUCT SYSTEM TINGS, AND FIRE DAMPER ETC. CY MOTOR			1 = 1" 2 = 2" 3 = DIS UNITS 4 = SIN	MENT / THROV PLEAT SCHAR GLE P USED I USED I	
	IDENTIFICATION	AREA SERVED	MODEL NUMBER	TYPE	CFM	OA CFM	
	FCU-03-B-01	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500		ſ
	FCU-03-B-02	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500		
	FCU-03-B-03	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500		
	FCU-03-B-04	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500		
	FCU-03-B-05	COACHES BOOTH	FHP-D10	HORIZONTAL	600		Γ

FCU-03-B-05	COACHES BOOTH	FHP-D10	HORIZONTAL	600	 0.5	3	
FCU-03-C-01	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500	 0.5	7	
FCU-03-C-02	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500	 0.5	7	
FCU-03-C-03	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500	 0.5	7	
FCU-03-C-04	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500	 0.5	7	
FCU-03-C-05	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500	 0.5	7	
FCU-03-C-06	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500	 0.5	7	
FCU-03-C-07	CHAIRMAN SUITE	FNP18	HORIZONTAL	1500	 0.5	7	
FCU-03-C-08	COACHES BOOTH	FHP-D10	HORIZONTAL	600	 0.5	3	
FCU-03-C-09	BROADCAST BOOTH	FHP-D10	HORIZONTAL	600	 0.5	3	
FCU-03-C-09	COACHES BOOTH LOBBY	FHP-D10	HORIZONTAL	600	 0.5	2.8	

GENERAL NOTES:
1. SEE SPECIFICATIONS.
2. PIPE CONNECTIONS SIZES PER PLANS.
3. CONTROL SEQUENCE PER DRAWINGS.
3. TYPICAL QUANTITY 6 PER SUITE.

IDENTIFICATION TYPE

RADIANT HEATER

RH-1

F	٩N	S	CHE	DUL	E																			
			ACCESSO 1. LINED F 2. DOUBLE 3. WEATHE 4. OSHA B 5. MOTOR 6. FAN CA 7. ACCESS 8. HOUSIN 9. INLET S 10. OUTLE 11. MOTOE 12. MOTOE 13. GRAVE 14. GRAVE 15. UL 793 16. INLET 17. OUTLE 18. HIGH V	IOUSING. EWALL HC ERPROOF ELT GUAR COVER. GE WITH V S DOOR. IG DRAIN. CREEN. T SCREEN RIZED INLE RIZED OUT TY INLET I TY OUTLE BUTTERF BELL. T CONE.	HOUSING D. VALL SLEE I. ET DAMPE ILET DAM DAMPERS T DAMPEF LY DISCH	EVE. :RS. PERS. RS. ARGE DA				20. WAL 21. COF 22. INLE 23. INLE 24. FAN 25. AUT 26. SOL 27. SOL 28. DISC 29. DISC 30. FAN 31. ELE 32. 1" FI 33. 2" FI 34. HAN	L CURI PLANER ET AIRF ET AND I ROLL ( OMATIO ID STA ONNE CONNE CONNE I INLET CTRON ILTER (I ID-OFF	B (24" HIGH B. SILENCER LOW STRA OUTLET RI OUT EQUIP C BELT TEN TE SPEED ( CT SWITCH CT SWITCH PIEZOMETI IICALLY CO ESP INCLUI ESP INCLUI AUTOSWIT CIRCUIT TR	R. IGHTEN EGAIN A MENT. NSIONE CONTRO CONTRO I IN FAN I IN FAN RIC AIR MMUNIO DES DIF DES DIF CH IN N	ATTENUAT R. OLLER (PF OLLER (FI HOUSING HOUSING FLOW ME CATED MC RTY FILTE RTY FILTE MOTOR ST	RE-WIRI ELD INS G (PRE- G (FIELI ASURE DTOR (E R LOSS R LOSS TARTER	STALL WIRE DINS MENT ECM). 5).	D). TALLED). TRING.				36. EXF 37. UL DUCT / 38. UL 39. ST/ 40. ALU 41. COI 42. REV 43. TW/ 44. TE/ 45. TEF 46. EXT 47. SH/ 48. HIN	762 LI ADAPT LISTE MINUES JMINU NCRE /ERSI O SPE AO MC C MO C MO C MO	STINC TIVE F D FOF SS ST IM WH TE INI BLE M BLE M EED M OTOR. TOR. TOR. TOR.	G WITI PLATE R SMC EEL S IEEL / ERTIA MOTOI IOTOF BE LII NDING
STAR		. TYPE	ACCESS		dB 63 Hz IN / OUT	dB 125 IN / Ol		250 Hz / OUT	dB 500 Hz IN / OUT	dB 100 IN / C		dB 2000 H: IN / OUT		4000 Hz / OUT	dB 800 IN / C		dB Lw, IN / OU		MAX. DNES	ISOLATORS	R	OOF / OPEN	/ WAL NING	L
		FUSED FUSED																						
			<u> </u>	<b>T O O</b>		<u></u>	_				I			I										
	IDL	.IN(	g uni	ISC		i																		
	CY DRIV DIVISIO				1. HOR	RIZONTAL	CESSORI DRAW-TH E FAN(S)		GURATIO	N				5. F	ROVIDE		KABLE DC	OR HA	NDLER	TURN AIR DAM S FOR ALL AC GE AND RADI/	CESS DOC		OWFR	
	RTER PI		ED		3. SINC	GLE POIN	T 460/3/60		CAL CONNE D LIGHTS A			PARATE								SECTION(S)			o vi Li v	
														8. F	ROVIDE	E 3-WA	AY VALVE	AT CO	OLING (	COIL AND HOT	WATER C	OILS.		
	_			COOL							1								1 1	HEATING	COIL			
X. FACE (FPM)	<u> </u> w	DB / VB	LAT DB / WB (° F)	SENSIBL CAPACIT	Y CAP	ACITY	EWT   LW (° F)   (° F		ROWS & FPI	MAX. AIR PD	MAX. WATE PD			PE F	LUID	QTY	CFM	EAT (° F)	LAT (° F)		EWT LM (°F) (°			ROWS & FPI
	,	'F)		(MBTU / H	<u> </u>					(IN. WG)	(FT HC	D)	-		~ = 0		40.400	. ,						
500	84.1	/ 68.4	53.8 / 53.1	524		36	40 54	112	8 & 9	0.82	7.9	2-1/2	PRE	HEAT 25	% E.G.	1	16,100	45	55	587	200 17	0 4	12	8&2
				POL	_LU1	ΙΟΙ		DNT	ROL	UN	IT S	SCHE	ÐU	JLE										
on 26 Ed Integ R Shal Fd				4. UL LIS 7. BAS BA 9. SINGLI 120/1/0 10. CARB	T DRIVE F/ TED FIRE I ACNET INT E POINT 46 60 CIRCUIT 60N FILTEF NDED LIFE	DAMPER ERFACE 50/3/60 EL F FOR MIS R ODOR C	ECTRICA	L CONNEC ONENTS	CTION WITH	I SEPARAT	TE			14. PRE-I BY C 15. INTEF MAN 16. CONT MAN 17. PROV	PIPED F OOKING RFACE V UFACTU ROL PA UFACTU	OR AN G HOO VITH [ JRER NEL ( JRER S CT SU	D MANUF DCV CONT LOCATED SHALL SH	TEM. A ACTUF ROLLE REMC IP CON LET OF	RER ER PRO' DTELY FI NTROL F F PCU, A	YSTEM PROVI VIDED BY HOC ROM PCU). PC PANEL LOOSE. ND WASH DOV	D U	ROL P	ANEL	
R		BINET &	&		AN		F/	AN MOTO	R		;	STARTER		MODUL		DULE			SECTIO	NS				OPE
	MOD	DEL SIZ		E.S.P (IN)	T.S.P. (IN)	HP	BHP	FLA	ELEC.		YPE	LOCATI		TYPE 1		PE 2	MODUL TYPE			CONTROL	VELC FLAT/CA	RT. (FI	PM)	WEIG
		8	6,910	1.5	7.7	20	14.1	27	460/3/60	\	/FD	UNIT MOU	INTED	1		2			ECOLC	) SCENTRY	50	)0		5
							FA	NC	OIL	UNI	r s	CHEI	DUI	LE										
HROW/ LEATE CHARG REFER GLE PO	E AND F TO FLO INT ELE	ILTERS WAWA RETUR DOR PL ECTRIC	S NY FILTERS N AIR GRILLE( ANS FOR DUC CAL CONNECTI OR FAN MOTO	TED / NON	-DUCTED INIT MOUN	ITED		6 = PROV 7 = 120 V(	IDE ECM M	OTOR WIT	Н СОЛТ	ATE 120/1/6 IROLLER ER, FAN CO				ION			PLANS 9 = AU TURN	IIT OR WALL N S FOR THERM IXILLARY DRA OFF FCU UPO AS BACNET IN	OSTAT LO IN PAN W N DETEC	CATIO		SWITC
FAN OA	ESP (IN.	GPM	EWT / LWT	EAT DB/WB	LA <sup>.</sup> DB/V	T SE	OLING CO ENSIBLE APACITY	DIL TOTAL CAPACII		MAX WA		BRANCH	GPM	EWT / L	NT EA			IG COII SIBLE ACITY	ROW				мс тү.	
CFM	(IN. WG) 0.5	7	(° F) 40 / 54	(° F)	(° F	<sup>;</sup> ) (	BTUH) 35,833	(BTUH) 42,573		<b>PD. (F</b>	-	SIZE (IN)	2.0	(° F)	(°	F) (°	F) (B1	<b>UH)</b>	1	<b>PD. (FT)</b>	<b>SIZE (</b> 1/2	N)	1	пг  1/3
	0.5	7	40 / 54	74 / 61.8	52.0 /	51.8	35,833	42,573	6	7.02		1	2.0	200 / 17	70 70	3 8	35 25	,110	1	0.11	1/2		1	1/3
	0.5 0.5	7	40 / 54 40 / 54	74 / 61.8 74 / 61.8			35,833 35,833	42,573 42,573	6 6	7.02 7.02		1	2.0 2.0	200 / 17 200 / 17				,110 ,110	1	0.11	1/2 1/2		1	1/3 1/3
	0.5 0.5	3	45 / 57 40 / 54	74 / 61.8 74 / 61.8			14,060 35,833	16,610 42,573	5	2.04		3/4	1.3 2.0	150 / 12 200 / 17		_	,	720	1	0.11	1/2		2	1/4
	0.5	7	40 / 54	74 / 61.8			35,833	42,573	6	7.02		1	2.0	200 / 17		_		,110	1	0.11	1/2		1	1/3
	0.5	7	40 / 54	74/61.8			35,833	42,573	6	7.02		1	2.0	200 / 17		_		,110	1	0.11	1/2		1	1/3
	0.5	7	40 / 54 40 / 54	74 / 61.8 74 / 61.8			35,833 35,833	42,573 42,573	6	7.02 7.02		1	2.0	200 / 17	-	_		,110 ,110	1	0.11	1/2		1	1/3 1/3
	0.5	7	40 / 54	74 / 61.8			35,833	42,573	6	7.02		1	2.0	200 / 17	0 70	3 8	35 25	,110	1	0.11	1/2		1	1/3
	0.5	7	40 / 54	74 / 61.8			35,833	42,573	6	7.02		1	2.0	200 / 17		_		,110	1	0.11	1/2		1	1/3
	0.5 0.5	3	45 / 57 45 / 57	74 / 61.8 74 / 61.8			14,060 14,060	16,610 16,610	-	2.04 2.04		3/4 3/4	1.3 1.3	150 / 12 150 / 12	-		/	720 720	1	11.3 11.3	1/2		2	1/4 1/4
		1	1	1						1				1					+		-			

			MIN.			HO	T WATER		ELECTRI	C HEAT	MOUNT	AP
SERVICE	MANUFACTURER	MODEL NUMBER	CAPACITY (BTUH)	CFM	EWT	WPD	ROWS	GPM	CAPACITY (kW)	TYPE	HEIGHT (AFF)	SIZE
CHAIRMAN SUITES	INFRTECH	CD4024	13,648						4			39'

		19. ROOF CU 20. WALL CU 21. COPLANE	RB.										PROOF M									
		21. COPLANE 22. INLET AIR 23. INLET AN 24. FAN ROLI 25. AUTOMAT 26. SOLID ST	FLOW STRAIG D OUTLET RE - OUT EQUIPM TIC BELT TEN	GHTENER. GAIN ATTE MENT. SIONER.							DUCT A 38. UL L 39. STA 40. ALU	ADAPTIVE LISTED F INLESS S IMINUM V	NG WITH ( E PLATE AI OR SMOKI STEEL SH/ WHEEL AN INERTIA B	ND CURI E CONTF AFT AND D HOUS	B EXTENS ROL SYST HARDWA ING.	SION TO M EM.					OOF.	
		27. SOLID ST 28. DISCONN 29. DISCONN 30. FAN INLE	ATE SPEED C ECT SWITCH ECT SWITCH T PIEZOMETR	ONTROLLE IN FAN HO IN FAN HO RIC AIRFLO	ER (FIEL USING ( USING ( W MEAS	D INSTAL (PRE-WIR (FIELD IN SUREMEN	ED). STALLED). IT RING.				42. REV 43. TWO 44. TEA 45. TEF	/ERSIBLE D SPEED O MOTO C MOTO	e motor. Motor. R. R.	·	PE (C).							
		31. ELECTRC 32. 1" FILTER 33. 2" FILTER 34. HAND-OF 35. CONTROI	(ESP INCLUD (ESP INCLUD F-AUTOSWIT(	DES DIRTY I DES DIRTY I CH IN MOTO	FILTER FILTER OR STAI	LOSS). LOSS). RTER.	,				47. SHA		LUBE LINE UNDING R SE KIT									
	B 500 Hz N / OUT	dB 1000 Hz IN / OUT	dB 2000 Hz IN / OUT	dB 4000 IN / OU		IB 8000 H IN / OUT	z dB Lw IN / OL			OLATORS		OOF / W/ OPENIN			ATING IT (LBS)	AC	CESSOF	RIES		RE	MARKS	
	L CONNE	N ECTION WITH SE ND OUTLETS	EPARATE		5. PR0 6. REF 7. 2" T	OVIDE LO FER TO SI THICK PEF	CKABLE DO HEET M006 RFORATED	OOR HANDI FOR DISC	LERS FO HARGE	RN AIR DAMP OR ALL ACCE AND RADIAT CTION(S) L AND HOT W	ESS DOC TED SOU	ND POWI	ER LEVELS	;	BAG FILTI PARTICLE 1 = FLAT I 2 = FLAT I	TER: AAF A ER: VILEDO E FILTER: A	ON T60, M AAF VAR AG FILT	RICEL SH, 9 ER			7	
	ROWS & FPI		ER BRANCH SIZE (IN)		FLU	דס מונ	Y CFM	EAT LA (°F) (°		HEATING CO APACITY E BTU / HR) (1	WT LW		8 EDI	MAX. AIR PD	MAX. WATER PD	BRANC SIZE (IN	H WEIG	ERATING GHT (LBS)	ACCES	SORIES	FIL MODULE TYPE	TER VELOCIT (FPM)
112	8 & 9	(IN. WG) (FT I 0.82 7.9	HD)	PREHEAT	25%	E.G. 1	16,100	45 5			200 170		8&2	( <b>IN. WG)</b> 0.04	(FT. HD) 6.3	1-1/2		6,750	1, 2, 3, 4	4, 5, 7, 8	2	500
	OL	UNIT	SCHE												FILTER T							
ATION LE LINK CONNECT ENTS DDULE	ON WITH	SEPARATE		13. 14. 15. 16.	FILTER PRE-PIF BY COO INTERF MANUF CONTRO MANUF PROVID	INTEGRIT PED FOR A OKING HC ACE WITH FACTUREN OL PANEL FACTUREN DE DUCT S	OD MANUF I DCV CON R (LOCATEE R SHALL SH	R TEM. ANSI ACTURER IROLLER F REMOTEL IIP CONTR LET OF PC	JL SYST PROVIDI LY FROM OL PAN	TEM PROVIDI ED BY HOOD M PCU). PCU EL LOOSE. WASH DOWI	)	ROL PANE	EL		HEPA FIL 1 = EXTER 2 = HEPA 3 = ELEC 4 = PRE-F 5= BAG F	TROSTATIO FILTER: PLE ILTER: 10 F	EFF., ME FILTER C PRECIF EATED 3 POCKET,	RV 16	00, CLASS			
	LEC.	SP TYPE			ODULE YPE 1	MODUL TYPE 2	E MODU		TIONS		VELO LAT/CAF	OCITY RT. (FPM)	OPERA WEIGHT			INTE	RLOCK			AC	CESSORIES	6
	0/3/60	VFD			1	2		EC	OLO SC	ENTRY	50	0	5,68	30		Al	HU-9		1, 2, 7	7, 9, 10, 11	I, 12, 13, 14,	16, 17
= CONDEN	ISATE PU	IMP WITH SEPA	RATE 120/1/60			NECTION		PL	ANS FO	OR WALL MO OR THERMOS	STAT LO	CATION					AIRSTR	EAMS AT A			N SUPPLY A	
	T CONTR	OTOR WITH CON OL TRANSFORI . STRIP		ITACTOR, A	ND LOW	V		TU	JRN OF	LARY DRAIN F FCU UPON BACNET INTI	DETECT	TION OF C			Ö		2,000 CF 12 = PR(	∙M OVIDE 3-W	AY VALVE	E AT COIL		
<b>TOTAL</b> <b>APACITY</b> (BTUH) 42,573	ROWS	MAX WATER PD. (FT) 7.02	BRANCH SIZE (IN)	GPM	VT / LWT (° F) 00 / 170	<b>F EAT</b> <b>DB</b> (° <b>F)</b> 70	LAT SEN DB CAP (°F) (B	IG COIL SIBLE ACITY RUH)	ows I	MAX WATER PD. (FT) 0.11	BRANC SIZE (II	СН N) QTY.	MOTOR HP 1/3	<b>VOL</b> 1 460/3	гирн мси		OSP	MAXIMU (L x W x		1.3.4.0	<b>REMARK</b>	S
42,573 42,573 42,573	6 6 6	7.02 7.02 7.02	1 1 1 1	2.0     20       2.0     20       2.0     20       2.0     20	00 / 170 00 / 170 00 / 170	70 70 70	85         25           85         25           85         25           85         25	,110 ,110 ,110	1 1 1 1	0.11 0.11 0.11	1/2 1/2 1/2	1 1 1	1/3 1/3 1/3 1/3	460/3 460/3 460/3	3/60 5.85 3/60 5.85 3/60 5.85	5         15           5         15           5         15           5         15		62 x3 62 x3 62 x3	3 x 17 3 x 17 3 x 17 3 x 17	1, 3, 4, 6, 1, 3, 4, 6, 1, 3, 4, 6,	, 7, 8, 9, 10 , 7, 8, 9, 10 , 7, 8, 9, 10	
16,610 42,573 42,573 42,573	5 6 6	2.04 7.02 7.02 7.02	3/4 1 1 1	2.0 20 2.0 20	50 / 120 00 / 170 00 / 170 00 / 170		85 25 85 25	720 ,110 ,110 ,110	1 1 1 1	11.3 0.11 0.11 0.11	1/2 1/2 1/2 1/2	1	1/4 1/3 1/3 1/3	460/3 460/3 460/3 460/3	3/60 5.85 3/60 5.85	5 15 5 15		62 x3	3 x 17	1, 3, 4, 6, 1, 3, 4, 6,	, 7, 8, 9, 10 , 7, 8, 9, 10 , 7, 8, 9, 10 , 7, 8, 9, 10	
42,573 42,573 42,573 42,573	6 6 6	7.02 7.02 7.02 7.02	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2.0 20 2.0 20	00 / 170 00 / 170 00 / 170 00 / 170		85 25 85 25	,110 ,110 ,110 ,110	1 1 1 1	0.11 0.11 0.11 0.11	1/2 1/2 1/2 1/2	1	1/3 1/3 1/3 1/3	460/3 460/3 460/3 460/3	3/60 5.85 3/60 5.85	5 15 5 15		62 x3 62 x3 62 x3 62 x3 62 x3	3 x 17 3 x 17	1, 3, 4, 6, 1, 3, 4, 6,	, 7, 8, 9, 10 , 7, 8, 9, 10 , 7, 8, 9, 10 , 7, 8, 9, 10	
16,610 16,610 16610	5 5 5 5	2.04 2.04 2.04	3/4 3/4 0.75	1.3 15 1.3 15	50 / 120 50 / 120 50 / 120 50 / 120	70 70	85 9, 85 9,	720 720 720 720	1 1 1 1	11.3 11.3 11.3	1/2 1/2 1/2 0.5	2	1/3 1/4 1/4 0.25	460/3 460/3 460/3 460/3	3/60 1.8 3/60 1.8	15 15		52 x 5 52 x 5	51 x 11 51 x 11 51 x 11 51 x 11	1, 3, 4, 6, 1, 3, 4, 6,	, 7, 8, 9, 10 , 7, 8, 9, 10 , 7, 8, 9, 10 , 7, 8, 9, 10	
	JNI	THE	ATEF	r sc	HE	EDl	JLE															
RAL ELEC NG BRAC	CTRICAL KET 7 FILTER	JT AIRFLOW DISCONNECT / S WITH CONTRO					FG										MANEN	T SPLIT-C ICALLY CO			OR.	
OR THER STAT CO VAY ELEC DE SWIV T TO CEII DE PROGI	MOSTAT VER FOR TRIC CC EL MOUN LING PEF RAMMAB	LOCATION. PR ALL ADJUSTA NTROL VALVE TING BRACKE MANUFACTUI LE DIGITAL CO TED BY ARCHI	OVIDE LOCKI BLE THERMO TS RER'S INSTRL NTROLLER A	NG TAMPE STATS LOC JCTIONS	RPROO CATED I	)F IN PUBLIC																
EL NUMB	ER	MIN. CAPACITY (BTUH)	CFM	EWT					ELECI PACITY (kW)	TRIC HEAT	н	IOUNT EIGHT (AFF)	APPR SIZE (L)		МОТ НР	OR TYPE	EL	ECTRICAI	FLA		REMARKS	6
CD4024		13,648	TERM	INAL	U	 NIT (	SCH	EDU	4 LE	(HO)	ΓW	ΆΤΕ	<sup>39"×9"</sup> ER R		 EAT		480/	/3			H, I, K	
	CEM: 5"	- 16" = 0.75 IN. V								10. IF HEATI									SEDADAT			
.G.		IPERATURE	v.G., 24 x 10 -	1.75 114. 00.5	0.					DUCT MC COIL ANE	DUNTED D INSULA M WATEF	HEATING ATE DUCI R PRESSI	G COIL TO N T AND COIL URE DROP	MEET SCI COMPL AND MIN	HEDULED Y WITH TH IIMUM DEL	CAPACITY IE MAXIMU .TA-T INDIC	. INDEPE IM AIR P CATED A	ENDENTLY RESSURE BOVE IN N	INSTALL DROP, OTES 1-3.			
		IN THE SCHEDU		-							)LID LINE IRE. CHARGE	ER AND 1	" THICK INS ORK TO HA		N AT THE I	NDICATED	MAXIMU OF 1" T	JM INLET S	STATIC USTICAL L			
NAVERAG	E WATER	FWATER FLOW R DELTA-T AND O ON THE FLOW	SHOWN FOR F	RUNOUT PIF	PE SIZIN					ATTENUATO 13. UNIT SU 14. UNIT CO 15. UNIT INL	PPLY VC	)LTAGE: ^ /OLTAGE	120 / 1 V E: 24V									
												SHOWN		N ACCL	TADLE.				A. / B. I	VISION NO ADDED MODIFIED DELETED	)	
OCC HEATII MAX CFM	NG M C	CC. UNOCC IN. MIN. FM CFM	SIZE (IN.)	DUCT RUNOUT SIZE (IN.)	EAT (°F)	LAT (°F)	FLUID	MIN BTUH	EWT (°F)	GPM	PIPE RUNOUT SIZE (IN.)		ITROL TYPI	E INL (IN	MAX ET S.P. . W.G.)	MAX	RAD	REMAR	RKS	REVIS	ION NOTE-D	ELTA #
300 350	1 1 3	20         120           40         140           25         125           67         367           97         497	8 8 8 14	10 10 10 16	55 55 55 55	85 85 85 85	WATER WATER WATER	9552.92 11145.0 9950.96 29216.0	150 150 150 150	1 1 1 2	0.75 0.75 0.75 0.8		2-WAY 2-WAY 2-WAY 2-WAY		1.00 1.00 1.00 1.00	29.0 29.0 29.0 29.0	29 30 29 36					
313 918		37 437	14	16	55	85	WATER	34788.5	150	3	0.8		2-WAY		1.00	30.0	38					
	3 5 4 2	37         437           67         367           30         430           50         250           30         530	14 14 14 12 16	16 16 14 16x16	55 55 55 55 55	85 85 85 85 85	WATER WATER	29216.0 34231.3 19901.9 42192.0	150 150 150 150	2 3 2 4	0.8 0.8 0.8 0.8		2-WAY 2-WAY 2-WAY 2-WAY		1.00 1.00 1.00 1.00	29.0 30.0 25.0 29.0	36 38 29 36					

	HOUSING.		_	_		20. WALL CUI			_	_	_										
3. WEATH 4. OSHA 5. MOTO	E WALL HOUSI ERPROOF HO BELT GUARD. COVER. GE WITH WAL	USING.				23. INLET AN 24. FAN ROLL	R SILENCER. FLOW STRAIG O OUTLET RE OUT EQUIPM IC BELT TENS	GAIN ATTENU IENT.	ATORS.					DUCT ADAP 38. UL LISTE 39. STAINLE	IVE PLATE AI D FOR SMOKE	GREASE TROUGH ND CURB EXTEN E CONTROL SYS NFT AND HARDW D HOUSING	SION TO M TEM.				
7. ACCES 8. HOUSI 9. INLET	S DOOR. NG DRAIN.	L SLEEVE.				26. SOLID ST. 27. SOLID ST. 28. DISCONN	ATE SPEED C ATE SPEED C ECT SWITCH ECT SWITCH	ONTROLLER ( ONTROLLER ( IN FAN HOUSI	FIELD INST NG (PRE-W	ALLED). /IRED).	).				TE INERTIA B BLE MOTOR. ED MOTOR.	ASE (TYPE C).					
11. MOTO 12. MOTO 13. GRAV	RIZED INLET D RIZED OUTLET ITY INLET DAM	T DAMPERS IPERS.	3.			30. FAN INLE 31. ELECTRO 32. 1" FILTER	T PIEZOMETR NICALLY COM (ESP INCLUD (ESP INCLUD	IC AIRFLOW N IMUNICATED ES DIRTY FIL <sup>-</sup>	IEASUREM MOTOR (EC FER LOSS).	ENT RING. CM).	).			45. TEFC MC 46. EXTENDE	Tor. D Lube Line Rounding R						
15. UL 79 16. INLET 17. OUTL	BUTTERFLY [	DISCHARGI			:	34. HAND-OF	F-AUTOSWITC CIRCUIT TRA	H IN MOTOR	STARTER.					40. HINGED I							
ACCES	dB 6	63 Hz dB	125 Hz dE		dB 500 Hz IN / OUT	dB 1000 Hz IN / OUT	dB 2000 Hz IN / OUT	dB 4000 Hz IN / OUT	dB 8000 IN / OL				LATORS	ROOF /		OPERATING WEIGHT (LBS)	AC	CESSOR	RIES	REMA	RKS
-																					
UN	T SCH																D/DE0-				
	:	1. HORIZON 2. DIRECT D 3. SINGLE P	0RIVE FAN(S) 0INT 460/3/6	HRU CONFIC	AL CONNEC		PARATE	5 6	. PROVIDE I . REFER TO	LOCKABLE I SHEET MOO	6 FOR DISC	LERS FOR HARGE A	R ALL ACCE ND RADIAT	ERS ESS DOORS FED SOUND PO	WER LEVELS	BAG FIL	LTER: AAF TER: VILED E FILTER:	ON T60, N	I, 30% EFF., MEF ∕IERV 13 ICEL SH, 99.9% ∣		
				PREWIRED	LIGHTS AND						d liner in f 'e at coolii	NG COIL /	AND HOT W				FILTER & F				
T DB / WE (° F)	COOLING SENSIBLE CAPACITY		EWT LV	VT F) GPM	ROWS	MAX. MA AIR PD PE	ER BRANCH	ТҮРЕ	FLUID (	QTY CFM	EAT LA	T CAP	EATING CO ACITY E	WT LWT G		MAX. AIR PD PD	BRANC	H WEIG	ERATING GHT (LBS)		FILTER
8.8 / 53.1	(MBTU / HR) 524	(MBTU / HF 736	40 5		(1	IN. WG) (FT H	ID)	PREHEAT	25% E.G.	1 16,100				200 170 4		0.04 6.3			6,750 1, 2	2, 3, 4, 5, 7, 8	2 500
	POLL	UTIC		ONTF	ROL		SCHE	DULE													
	ACCESSORIE 1. HORIZONT 2. DIRECT DF 4. UL LISTED	ΓAL DRAW-Τ RIVE FAN						13. FIL	TER INTEGR	RITY MONIT	CONSTRUCT OR (STEM. ANSI		M PROVID	ED		HEPA FI	<b>TYPES:</b> TER: 90% El LTER: 95% ENDED LIFE	EFF., ME			
	7. BAS BACN 9. SINGLE PC 120/1/60 C 10. CARBON	DINT 460/3/6 DIRCUIT FOF	0 ELECTRICA R MISC COMP	PONENTS	FION WITH S	SEPARATE		15. INT MA	ERFACE WI	TH DCV CO RER	JFACTURER NTROLLER F ED REMOTEL	PROVIDE				4 = PRE-	CTROSTATI	EATED 30	PITATOR 0%, UL 900, CLA 95%, UL 900, CL		
	11. EXTENDE							MA 17. PR	NUFACTUR	RER SHALL S T SUMP AT	SHIP CONTR	OL PANEI	LOOSE.	N CONTROL P	ANEL				UL 900, CLASS		
	E.S.P						STARTER	MODU						VELOCITY	OPERA		INTE	ERLOCK		ACCE	SSORIES
<b>CFM</b> 6,910	(IN) 1.5	5. <b>P. (IN)</b> HI				SP TYPE VFD				E 2 TYP	E 3	OR CON	F	500	рм) 5,68		A	HU-9	1	, 2, 7, 9, 10, 11, 12	2, 13, 14, 16, 17
			FA		JIL U	INIT S	CHED	ULE													
	(S) FOR NON-D					IP WITH SEPA	RATE 120/1/60 ITROLLER		CONNECTIC	DN	PL 9 :	ANS FOF	THERMOS	DUNTED THER STAT LOCATION PAN WITH FL	ON OAT SWITCH	IN PAN TO			EAMS AT ALL FO	S LOCATED IN S CUS WITH AIRFLO	
CONNEC	CTED / NON-DUO ION WITH UNIT OR AND ELECTF	MOUNTED	ł		LT CONTROI TERMINAL S		IER, FAN CON	TACTOR, AND	LOW				FCU UPON ACNET INTI	DETECTION ( ERFACE	F CONDENSA	TE		12 = PR(	DVIDE 3-WAY VA	ALVE AT COIL	
WT / LWT (° F)	EAT DB/WB (° F)	LAT DB/WB (° F)	COOLING C SENSIBLE CAPACITY (BTUH)	TOTAL	r Rows	MAX WATER PD. (FT)	BRANCH SIZE (IN)	GPM EWT /		LAT SE	ING COIL INSIBLE APACITY BTUH)		AX WATER PD. (FT)	BRANCH SIZE (IN)	MOTOR TY. HP	VOLT/PH MC	CTRICAL	OSP	MAXIMUM SIZ (L x W x H) (II		REMARKS
40 / 54 40 / 54 40 / 54	74 / 61.8 74 / 61.8	52.0 / 51.8 52.0 / 51.8 52.0 / 51.8	35,833 35,833 35,833	42,573 42,573 42,573	6 6 6	7.02       7.02       7.02       7.02	1 1 1	2.0         200 /           2.0         200 /           2.0         200 /	170     70       170     70	85 2 85 2	25,110 25,110 25,110	1 1 1	0.11 0.11 0.11	1/2       1/2       1/2       1/2	1         1/3           1         1/3           1         1/3	460/3/60         5.8           460/3/60         5.8           460/3/60         5.8	35 15 35 15		62 x33 x 17 62 x33 x 17 62 x33 x 17	1, 3, 4, 6, 7,           1, 3, 4, 6, 7,           1, 3, 4, 6, 7,           1, 3, 4, 6, 7,	8, 9, 10 8, 9, 10
40 / 54 45 / 57 40 / 54 40 / 54	74 / 61.8 74 / 61.8	52.0 / 51.8 52.0 / 51.8 52.0 / 51.8 52.0 / 51.8	35,833 14,060 35,833 35,833	42,573 16,610 42,573 42,573	6 5 6	7.02       2.04       7.02       7.02	1 3/4 1	2.0         200 /           1.3         150 /           2.0         200 /           2.0         200 /	120     70       170     70	85 85	25,110 9,720 25,110	1 1 1	0.11 11.3 0.11 0.11	1/2	1 1/3 2 1/4 1 1/3	460/3/60 5.8 460/3/60 5.8 460/3/60 5.8 460/3/60 5.8	8 15 35 15		62 x33 x 17 52 x 51 x 11 62 x33 x 17	1, 3, 4, 6, 7,	8, 9, 10 8, 9, 10
40 / 54 40 / 54 40 / 54 40 / 54	74 / 61.8 74 / 61.8	52.0 / 51.8 52.0 / 51.8 52.0 / 51.8 52.0 / 51.8	35,833 35,833 35,833 35,833	42,573 42,573 42,573 42,573	6 6 6 6	7.02       7.02       7.02       7.02	1 1 1 1	2.0         200 /           2.0         200 /           2.0         200 /           2.0         200 /	170     70       170     70	85 2 85 2	25,110 25,110 25,110 25,110 25,110	1 1 1 1	0.11 0.11 0.11	1/2 1/2 1/2 1/2	1         1/3           1         1/3           1         1/3           1         1/3           1         1/3	460/3/60         5.8           460/3/60         5.8           460/3/60         5.8           460/3/60         5.8	35 15 35 15		62 x33 x 17 62 x33 x 17 62 x33 x 17 62 x33 x 17 62 x33 x 17	1, 3, 4, 6, 7, 1, 3, 4, 6, 7, 1, 3, 4, 6, 7, 1, 3, 4, 6, 7, 1, 3, 4, 6, 7,	8, 9, 10 8, 9, 10
40 / 54 40 / 54 45 / 57	74 / 61.8 74 / 61.8	52.0 / 51.8 52.0 / 51.8 52.0 / 51.8	35,833 35,833 14,060	42,573 42,573 16,610	6 6 5	7.02 7.02 2.04	1 1 3/4	2.0         200 /           2.0         200 /           1.3         150 /	170     70       170     70	85 2 85 2	25,110 25,110 9,720	1 1 1 1	0.11 0.11 11.3	1/2 1/2	1         1/3           1         1/3           2         1/4	460/3/60         5.8           460/3/60         5.8           460/3/60         1.	35 15 35 15		62 x33 x 17 62 x33 x 17 62 x33 x 17 52 x 51 x 11	1, 3, 4, 6, 7,           1, 3, 4, 6, 7,	8, 9, 10 8, 9, 10
45 / 57 45 / 57		52.0 / 51.8 52.0 / 51.8	14,060 14060	16,610 16610	5	2.04 2.04	3/4 0.75	1.3     150 /       1.3     150 /	120     70       120     70		9,720 9720	1 1	11.3 11.3		2 1/4 2 0.25	460/3/60         1.           460/3/60         1.			52 x 51 x 11 52 x 51 x 11		
					UNI	T HE	ATEF	R SCI	HED	ULE											
				TTOM IN, BC	OTTOM OUT		AND MANUAL	STARTER PRO	OVIDED BY	MFG								RMANEN	T SPLIT-CAPAC	ITOR. JTATED MOTOR.	
			D. 1" 1	NGING BRAG THROWAWA LL MOUNTE	AY FILTERS		OL TRANSFOR	MER. REFER	TO FLOOR												
			THER F. TW	MOSTAT CC O-WAY ELEC	OVER FOR A					LIC SPACES	5										
			H. MO I. PRC	UNT TO CEI VIDE PROG	ILING PER N GRAMMABLE	MANUFACTU	RER'S INSTRU NTROLLER AN		ERLOCKED	WITH BAS											
E	MANL	JFACTURE	R M		BER	MIN. CAPACITY	CFM		HOT W	ATER		ELECTR		MOUN	г   АРРК	ох.	TOR	EL	ECTRICAL	RI	EMARKS
UITES		IFRTECH		CD4024		<b>(BTUH)</b> 13,648		EWT				APACITY (kW) 4	TYPE				TYPE 	<b>VOLT</b> / 480/			Н, I, К
						AIR <sup>-</sup>	<b>FERM</b>		UNIT	SCH	IEDU	LE	(HO	r wa	ER R	EHEAT	)				
	AL NOTES: IMUM AIR PRES	SSURE DRO	P AT OCC. C	OOLING MAX	X CFM: 5" - 1	16" = 0.75 IN. V	/.G.; 24"x16" = 1	1.75" IN. W.G.				1	0. IF HEATI	ING CAPACITY	CANNOT BE N	IET, ELIMINATE C	OIL FROM	ATU AND	PROVIDE SEPA	RATE	
3. MAX 4. HEA	MUM WATER DE IMUM WATER P TING COIL SELE	PRESSURE E	DROP: 5.0 FT SIS: SCHEDU	LED LEAVIN	IG AIR TEMP	PERATURE							COIL ANE MAXIMUN	D INSULATE D M WATER PRE	JCT AND COIL SSURE DROP	IEET SCHEDULEE . COMPLY WITH T AND MINIMUM DE	HE MAXIMI	JM AIR PI CATED A	RESSURE DROF BOVE IN NOTES	2, 1-3.	
6. HEA 7. HEA	TING COIL MINII TING COIL MAXI TING COIL ROW FORMING TO N	IMUM FACE V QUANTITY	VELOCITY:	700 FPM	) TO OBTAIN	N THE SCHEDU	JLED CONDITIO	ONS, WHILE					WITH SC PRESSU	DLID LINER AN IRE.	D 1" THICK INS	ERMINED USING ULATION AT THE VE A MINIMUM LE	INDICATE	) MAXIMU	IM INLET STATIO	C	OUTLET OF UNI
	TING COILS SEL SCHEDULED L TING COIL FLOV	EAVING AIR	TEMPERAT	JRE.								A	TTENUATO	RST DIFFUSEF DR IS TO BE P IPPLY VOLTAG	ROVIDED.	ERE 4' OF ACOUS	TICAL LINII	NG CAN N	IOT BE ACCOMI	DATED, A FACTO	RY FURNISHED S
ТН	TROL VALVE AN FERMINAL UNIT			IZES SHALL	BE BASED (	ON THE FLOW	RATES LISTE	) IN THE APPR	OVED					NTROL VOLTA		1 ACCEPTABLE.					
THE 9. HEA COM	RKS: AND CONTROL	LED VENTIL	ATION																	REVISION NOTE A. ADDED B. MODIFIED	ES:
THE 9. HEA CON AIR REMA A. DEM	IT SETBACK		OCC.	000				DUCT						PIPE			MAX			C. DELETED	
THE 9. HEA CON AIR REMA A. DEM	IT SETBACK		COOLIN MAX		ING MIN X CFN	N. MIN. M CFM	INLET SIZE (IN.) 8	RUNOUT E SIZE ( (IN.)	AT LAT (°F) (°F)	FLUID	MIN BTUH 9552.92	<b>EWT</b> (°F) 150	<b>GPM F</b>		ONTROL TYPI	E MAX INLET S.P. (IN. W.G.) 1.00	<b>DISCH</b> 29.0	<b>RAD</b> 29	REMARKS	REVISION	NOTE-DELTA #
THE 9. HEA CON AIR REMA A. DEM B. NIG	IT SETBACK	AHU AHU-9	<b>CFM</b> 600.00	300	0   120	1 120		-	55 85 55 85	WATER	11145.0	150	1	0.75	2-WAY 2-WAY	1.00 1.00 1.00	29.0	30		1	
THE 9. HEA CON AIR REMA A. DEM B. NIG	<b>SIGNATION</b> U-03-B-01 U-03-B-02 U-03-B-03 U-03-B-04	AHU-9 AHU-9 AHU-9 AHU-9	600.00 700.00 625.00 1835.00	350 313 918	0 140 3 125 8 367	5 125 7 367	8 8 14	10 5 16 5	55 85 55 85	WATER WATER	9950.96 29216.0	150 150	1 2	0.75	2-WAY 2-WAY	1.00	29.0 29.0	29 36			
THE 9. HEA CON AIR REMA A. DEN B. NIG DE DE	U-03-B-01 U-03-B-02 U-03-B-02	AHU-9 AHU-9 AHU-9	600.00 700.00 625.00	350 313 918 1,09 918 1,07	0 140 3 125 8 367 93 437 8 367 75 430	5         125           7         367           7         437           7         367           0         430	8	10         9           16         9           16         9           16         9           16         9           16         9           16         9           16         9           16         9           16         9					1 2 3 2 3 2 2								

## **M&T BANK** STADIUM 1101 Russell St, Baltimore, MD 21230 Gensler Tel 202.721.5200 2020 K Street NW Suite 200 Fax 202.872.8587 Washington, DC 20006 United States STADIUA A AN IN Maryland Stadium Authority A & F ENGINEERS INC. 333 West Camden St. Ste. 500 1112 16th St NW UNIT 920, &, 351 W Camden St Ste. 300, Washington, DC 20036 Baltimore, MD 21201 United States United States Tel 202. 628.1600 Tel 410.333.1560 Fax xxx.xxx.xxxx Fax xxx.xxx.xxxx Culinary Advisors Cerami & Associates 1155 15th St NW #606, 2004 Stockton Rd Washington, DC 20005 Phoenix, MD 21042 United States United States Tel 202.448.9975 Tel 443.243.4814 Fax xxx.xxx.xxxx SSR Elevate Environments 160 West 900 South 2995 Sidco Dr Salt Lake City, UT 84101 Nashville, TN 37204 United States United States Tel 615.383.1113 Tel 801.363.1881 Fax 615.386.8469 Fax xxx.xxx.xxxx RK&K Setty 1415 Eliot Place NW 700 East Pratt St Suite 500 Suite 100 Baltimore, MD 21202 Washington, DC 20007 United States United States Tel 801.363.1881 Tel 202.393.1523 Fax 202.315.3059 $\triangle$ Date Description Seal / Signature **NOT FOR** CONSTRUCTION Project Name M&T BANK STADIUM Project Number 09.0186.000 Description MECHANICAL SCHEDULES Scale NOT TO SCALE M0.02.PS

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	1. EXTERNAL STA AND DUCTWOF 2. SUPPLY FAN TO	(APPLIES TO ALL): TIC PRESSURE INCLUDES LOSSES &K SYSTEM (EXCLUDES FILTER LOS DTAL STATIC PRESSURE (TSP) INC AIRFLOW IS WINTER DIVERSIFIED. SELECTION	SS) LUDES SO		RTY FILTER
	IDENTIFICATION	AREA SERVED	MFR	MODEL NUMBER	TYF
	AHU-1	CLUB/SUITES - A	TRANE		MULTIZC
	AHU-3	CLUB/SUITES - C	TRANE		MULTIZC
	AHU-4	CLUB/SUITES - D	TRANE		MULTIZC
1. 2.	BHP SHALL BE NC	L COMPLY WITH ASHRAE 90.1. GREATER THAN 90% OF THE M /ATION OF 20 FT. STATIC PRESS			
I	DENTIFICATION	SYSTEM			DESIGN
	RF-1	AHU-1 RETURN			GREEN
	RF-3	AHU-3 RETURN AHU-4 RETURN			GREEN
	RF-4				GREEN

Α		INAL UN	ITS SCHI	EDULE - CLU	JB - A	
EXISTING TAG	AHU	QTY.	FAN CFM	OCC. MAX (CFM)	OCC. MIN. (CFM)	BTUH
1	AHU-1	1	160	110	80	4320
2	AHU-1	1	1670	1110	555	50447
3	AHU-1	1	2020	1350	675	43686
4	AHU-1	1	1670	1110	555	50447
5	AHU-1	1	1570	1050	525	33966
6	AHU-1	2	280	190	95	6102
7	AHU-1	1	1260	840	420	27216
8	AHU-1	1	1940	1290	645	41850
9	AHU-1	1	1930	1290	645	41742
10	AHU-1	2	1500	1000	500	32400
11	AHU-1	2	1110	740	370	23976
12	AHU-1	1	945	630	315	20412
13	AHU-1	3	1480	990	495	32033
14	AHU-1	3	740	490	245	15930
15	AHU-1	3	320	210	105	6858
16	AHU-1	1	1800	1200	600	97200
17	AHU-1	1	1785	1190	595	96390
18	AHU-1	1	2040	1360	680	44064
19	AHU-1	1	1000	670	335	21654

### **AIR TERMINAL UNITS SC** EXISTING TAG AHU QTY. FAN CFI AHU-2 AHU-2 AHU-2 4 AHU-2 19 AHU-2 AHU-2 48 AHU-2 1870 1 AHU-2 1

## **AIR TERMINAL UNITS SCH**

QTY.

1

1

1

1

AHU

AHU-2

AHU-2 AHU-2 AHU-2

AHU-2 AHU-2 AHU-2

AHU-2

AHU-2

AHU-2

AHU-2

AHU-2

STARTER TYPES:

EXISTING TAG	AHU	QTY.	FAN CFM	OCC. MAX (CFM)	OCC. MIN. (CFM)	BTUH	EXISTING TAC
65	AHU-1	1	1115	740	370	24030	73
66	AHU-1	1	1650	1100	550	35640	74
67	AHU-1	1	400	270	135	8694	75
68	AHU-1	1	1675	920	460	29754	76
69	AHU-1	1	1800	1200	600	62208	77
70	AHU-1	1	540	360	180	18662	78
71	AHU-1	2	1120	750	375	38761	79
72	AHU-1	1	960	640	320	33178	100
95	AHU-1	1	1780	1190	595	96174	101
96	AHU-1	2	465	310	155	17075	102
97	AHU-1	1	930	620	310	34150	103
98	AHU-1	1	1800	1200	600	97200	104
99	AHU-1	1	390	260	130	14321	-
100	AHU-1	1	2080	1390	695	56214	

**AIR TERMINAL UNITS SCHEDULE - SUITES - A** 

690

390

136

LOSSES FOR INTAKE LOUVER, DAMPER, TER LOSS) TSP) INCLUDES SCHEDULED DIRTY FILTER LOSS.

## 4. PREMIUM EFFICIENCY MOTOR 5. FILTERS SHALL BE SELECTED AT THEIR HALF LIFE PRESSURE DROP 6. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

VFD - FACTORY MOUNTED VARIABLE FREQUENCY DRIVE MMS - MANUAL MOTOR STARTER PROVIDED BY DIVISION 26 MAG-X-L - COMBINATION MAGNETIC X-LINE STARTER PROVIDED **BY DIVISION 26** 

OUTSIDE AIR SUPPLY FAN CFM MOTOR(S) MODEL NUMBER PRESSURE CLASS TYPE MFR STARTER MIN MAX CFM ESP ISP (IN. WG) (IN. WG) QTY BHP MIN. HP VOLT (EA) (EA) / PH ESP TSP FLUID QTY CFM MAX. FA TYPE LOCATION QTY TRANE MULTIZONE VAV MEDIUM 23,300 36,400 36,400 25% E.G. 1 36,400 500 460 / 3 VFD UNIT MOUNTED 2 TRANE MULTIZONE VAV MEDIUM 34,100 55,000 55,000 25% E.G. 1 460/3 VFD UNIT MOUNTED 55,000 500 TRANE -- 25% E.G. 1 36,400 500 MULTIZONE VAV MEDIUM 24,020 36,400 36,400 460/3 VFD UNIT MOUNTED 1 2 

- FAN TYPES: BVS - BELTED VENT SET. CEILING - CEILING MOUNTED FAN. MF - MIXED FLOW FAN.
- PRE POWER ROOF EXHAUSTER. ESP EXTERNAL STATIC... PROP - PROPELLER. PRS - POWER ROOF SUPPLY FAN.
- PRV POWER ROOF VENTILATOR. SQI - SQUARE-INLINE CENTRIFUGAL. TA - TUBE AXIAL.
- TC TUBULAR CENTRIFUGAL (INLINE). UBD - UPBLAST DILUTION FAN. VA - VANE AXIAL.
- WHEEL TYPES: AF - AIR FOIL. BI - BACKWARD INCLINE. FC - FORWARD CURVED. TS - MAX. TIP SPEED (RPM).

STARTER TYPES / ACCESS: A = COMBINATION MAGNETIC ACROSS THE LINE STARTER. B = MANUAL MOTOR STARTER. C = HAND-OFF-AUTO SWITCH, PILOT LIGHT, AND CONTROL TRANSFORMER IN STARTER D = VARIABLE FREQUENCY DRIVE. E = LINE REACTOR, MAIN DISCONNECT, AND CONTROL RELAY

F = EMERGENCY POWER.

											18. HIGH VELOCITY DISCHAI	RGE CONE.								
SYSTEM		TYPE	OEM.	STATIC WHEI	EL	N	MOTOR		S	TARTER	dB 62 H-		dB 250 Hz dB 500 Hz dB 1000 Hz	dB 2000 Hz			ROOF / WALL			REMARKS
SYSTEM	DESIGN BASIS MODEL NUMBER	TYPE		STATIC LVL SIZE	E TS BHI	P MIN. HP	RPM VOLTAGE	TYPE	LOCATION	DISC. TYPE	ACCESSORIES	UD 125 HZ	dB 250 Hz dB 500 Hz dB 1000 Hz.	ав 2000 нг	dB 4000 Hz dB 8000 Hz dB LwA	ISULATORS	ROOF / WALL	OPERATING	ACCESSORIES	REWARKS
J-1 RETURN FAN	GREENHECK	INLINE	20,600	2.25		15	460/3	A	UNIT MOUNTED	NON-FUSED						2" SPRING		1500	1, 12, 29, 46, 47	
J-3 RETURN FAN	GREENHECK	INLINE	44,000	2.25		25	460/3	A	UNIT MOUNTED	NON-FUSED						2" SPRING		1500	1, 12, 29, 46, 47	
J-4 RETURN FAN	GREENHECK	INLINE	27,400	2.25		15	460/3	A	UNIT MOUNTED	NON-FUSED						2" SPRING		1500	1, 12, 29, 46, 47	

NITS SCH	EDULE - CL	UB B			AIR TERN	INAL UI	NITS SCH	EDULE - CL	UB C		l l	AIR TERN	/INAL UN	NITS SCH	EDULE - CL	UB D	
FAN CFM	OCC. MAX (CFM)	OCC. MIN. (CFM)	втин	EXISTING TAG	AHU	QTY.	FAN CFM	OCC. MAX (CFM)	OCC. MIN. (CFM)	втин	EXISTING TAG	AHU	QTY.	FAN CFM	OCC. MAX (CFM)	OCC. MIN.	BTUH
160	110	80	4320	1	AHU-3	1	160	110	80	4320						(CFM)	1
280	190	95	6102	6	AHU-3	2	280	190	95	6102		A1111 4	1	100	140	00	4000
1110	740	370	23976	11	AHU-3	4	1110	740	370	23976	1	AHU-4	1	160	110	80	4320
320	210	105	6858	15	AHU-3	4	320	210	105	6858	6	AHU-4	3	280	190	95	6102
1000	670	335	21654	32	AHU-3	1	1550	1030	515	33426	11	AHU-4	1	1110	740	370	23976
1030	690	345	22302	33	AHU-3	1	1080	720	360	40824	15	AHU-4	3	320	210	105	6858
2075	1380	690	44766	34	AHU-3	2	1330	890	445	28782	16	AHU-4	1	1800	1200	600	97200
1040	690	345	39258	35	AHU-3	1	1090	730	365	41256	17	AHU-4	1	1785	1190	595	96390
2080	1390	695	78678	36	AHU-3	1	1540	1030	515	33318	19	AHU-4	1	1000	670	335	21654
1880	1250	625	50706	37	AHU-3	1	1710	1140	570	36936	20	AHU-4	1	1780	1190	595	96174
1700	1130	565	36666	38	AHU-3	1	1180	790	395	25542	21	AHU-4	1	2270	1510	755	48978
1185	1260	630	50949	39	AHU-3	4	2300	1530	765	62046	22	AHU-4	3	760	510	255	16470
1890	1260	630	51030	40	AHU-3	1	1090	730	365	23598	25	AHU-4	3	1520	1010	505	32778
1720	1150	575	37206	41	AHU-3	2	1600	1070	535	34614	24	AHU-4	1	615	410	205	13284
1490	990	495	32130	42	AHU-3	2	2265	1510	755	61155	25	AHU-4	2	1290	860	430	27864
960	640	320	25920	43	AHU-3	3	2240	1490	745	84618	26	AHU-4	1	1470	980	490	31752
1650	1100	550	35640	44	AHU-3	3	1115	740	370	42093	27	AHU-4	1	1630	1090	545	35262
1870	1250	625	50544	45	AHU-3	1	780	520	260	21060	28	AHU-4	1	940	630	315	20358
1380	920	460	29808	46	AHU-3	1	1120	750	375	54486	29	AHU-4	2	1880	1250	625	40554
1375	920	460	29754								30	AHU-4	1	1705	1140	570	36882
1870	1250	625	50544								31	AHU-4	1	1700	1130	565	36666
1640	1090	545	35370														
	1																
TS SCHE	CHEDULE - SUITES - B AIR TERMINAL UNITS SCHEDULE - SUITES - C										AI	R TERMI	NAL UNI	TS SCHE	DULE - SUIT	ES - D	
FAN CFM	OCC. MAX (CFM)	OCC. MIN. (CFM)	втин	EXISTING TAG	AHU	QTY.	FAN CFM	OCC. MAX (CFM)	OCC. MIN. (CFM)	втин	EXISTING TAG	AHU	QTY.	FAN CFM	OCC. MAX (CFM)	OCC. MIN.	BTUH

24	AHU-4
25	AHU-4
26	AHU-4
27	AHU-4
28	AHU-4
29	AHU-4
30	AHU-4
31	AHU-4
A	R TER
EXISTING TAG	AHU
88	AHU-4
90	

И	OCC. MAX (CFM)	(CFM)	BTUH
	1050	525	72965
	1200	600	83592
	570	285	39884
	1280	640	89165
	1470	735	47574
	570	285	18522
	340	170	11016
	1390	695	56214
	1380	690	55890
	460	230	14904
	390	195	12690
	910	455	29430

EXISTING TAG	AHU	QTY.	FAN CFM	OCC. MAX (CFM)	(CFM)	втин	EXISTING T
80	AHU-3	1	840	560	280	18144	88
81	AHU-3	1	510	340	170	11016	89
82	AHU-3	1	1310	870	435	28242	90
83	AHU-3	1	2300	1530	765	49626	91
84	AHU-3	2	1500	1000	500	40500	92
85	AHU-3	3	1820	1210	605	49140	93
86	AHU-3	4	1585	1060	530	73661	94
87	AHU-3	1	590	390	195	27346	110
105	AHU-3	1	1660	1110	555	44874	111
106	AHU-3	1	400	270	135	8694	112
107	AHU-3	2	1225	820	410	26514	113
108	AHU-3	3	1500	1000	500	40500	114
109	AHU-3	1	500	330	165	13500	115
131	AHU-3	1	540	360	180	11664	132
133	AHU-3	1	1700	1130	565	45900	L
134	AHU-3	1	2300	1530	765	62046	

## AIR HANDLING UNIT SCHEDULE

EQUIPMENT ACCESSORIES: 1. HORIZONTAL DRAW-THRU CONFIGURATION 2. DIRECT DRIVE FAN(S) 3. SINGLE POINT 460/3/60 ELECTRICAL CONNECTION WITH SEPARATE

120/1/60 CIRCUIT FOR PREWIRED LIGHTS AND OUTLETS

4. UNIT MOUNTED OUTSIDE AIR AND RETURN AIR DAMPERS 5. PROVIDE LOCKABLE DOOR HANDLERS FOR ALL ACCESS DOORS 6. REFER TO SHEET M006 FOR DISCHARGE AND RADIATED SOUND POWER LEVEL

7. 2" THICK PERFORATED LINER IN FAN SECTION(S) 8. PROVIDE 3-WAY VALVE AT COOLING COIL AND HOT WATER COILS.

		COOLING COIL HEATING COIL																					
FACE (FPM)	EAT DB / WB (° F)	LAT DB / WB (° F)	SENSIBLE CAPACITY (MBTU / HR)	TOTAL CAPACITY (MBTU / HR)	EWT (°F)		GPM	ROWS & FPI	MAX. AIR PD (IN. WG)	חם	BRANCH SIZE (IN)	TYPE	FLUID	QTY	CFM	EAT (° F)	LAT (° F)	CAPACITY (MBTU / HR)	EWT (° F)		GPM	ROWS & FPI	(
00	86.4 / 70.3	46 / 45.8			40	54						PREHEAT	WATER	1	36,400	45	60		200	170			
00	86.4 / 70.3	46 / 45.8			40	54						PREHEAT	WATER	1	55,000	45	60		200	170			
00	86.4 / 70.3	46 / 45.8			40	54						PREHEAT	WATER	1	36,400	45	60		200	170			

19. ROOF CURB (24" HIGH).

21. COPLANER SILENCER.

22. INLET AIRFLOW STRAIGHTENER.

24. FAN ROLL OUT EQUIPMENT.

25. AUTOMATIC BELT TENSIONER.

23. INLET AND OUTLET REGAIN ATTENUATORS.

26. SOLID STATE SPEED CONTROLLER (PRE-WIRED).

27. SOLID STATE SPEED CONTROLLER (FIELD INSTALLED).

28. DISCONNECT SWITCH IN FAN HOUSING (PRE-WIRED).

31. ELECTRONICALLY COMMUNICATED MOTOR (ECM).

32. 1" FILTER (ESP INCLUDES DIRTY FILTER LOSS).

33. 2" FILTER (ESP INCLUDES DIRTY FILTER LOSS).

34. HAND-OFF-AUTOSWITCH IN MOTOR STARTER.

29. DISCONNECT SWITCH IN FAN HOUSING (FIELD INSTALLED).

30. FAN INLET PIEZOMETRIC AIRFLOW MEASUREMENT RING.

35. CONTROL CIRCUIT TRANSFORMER IN MOTOR STARTER.

20. WALL CURB.

## FAN SCHEDULE ACCESSORIES

AUGESSORIES:
1. LINED HOUSING.
2. DOUBLE WALL HOUSING.
3. WEATHERPROOF HOUSING.
4. OSHA BELT GUARD.

5. MOTOR COVER.
6. FAN CAGE WITH WALL SLEEV
7. ACCESS DOOR.

- 8. HOUSING DRAIN. 9. INLET SCREEN. 10. OUTLET SCREEN.
- 11. MOTORIZED INLET DAMPERS. 12. MOTORIZED OUTLET DAMPERS.
- 13. GRAVITY INLET DAMPERS. 14. GRAVITY OUTLET DAMPERS.
- 15. UL 793 BUTTERFLY DISCHARGE DAMPER. 16. INLET BELL.
- 17. OUTLET CONE. 18. HIGH VELOCITY DISCHARGE CONE.

QTY.	FAN CFM	OCC. MAX (CFM)	OCC. MIN. (CFM)	втин
3	1120	750	375	38761
1	540	360	180	18662
1	1230	820	410	42509
1	1375	920	460	47574
1	400	270	135	8694
1	1650	1100	550	35640
1	1115	740	370	24030
1	465	310	155	17075
1	410	270	135	15001
1	1800	1200	600	97200
1	930	620	310	34150
1	465	310	155	17075
1	1780	1190	595	96174
1	440	290	145	15206
	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3         1120           1         540           1         1230           1         1375           1         400           1         1650           1         1115           1         465           1         410           1         1800           1         930           1         465           1         1780	3         1120         750           1         540         360           1         1230         82O           1         1375         920           1         1375         920           1         400         270           1         1650         1100           1         1115         740           1         465         310           1         410         270           1         1800         1200           1         930         620           1         465         310           1         1780         1190	QTY.FAN CFMOCC. MAX (CFM)(CFM)3112075037515403601801123082O41011375920460140027013511650110055011115740370146531015511800120060019306203101465310155117801190595

ΞL	FILTER TYPES: FLAT FIILTER: AAF AMAIR301, 30% EFF., MERV 8 S BAG FILTER: VILEDON T60, MERV 13 PARTICLE FILTER: AAF VARICEL SH, 99.9% EFF., MERV 17 1 = FLAT FILTER 2 = FLAT FILTER & BAG FILTER 3 = FLAT FILTER & PARTICLE FILTER													
						FIL	FILTER							
;	MAX. AIR PD (IN. WG)	MAX. WATER PD (FT. HD)	BRANCH SIZE (IN)	OPERATING WEIGHT (LBS)	ACCESSORIES	MODULE TYPE	VELOCITY (FPM)							
					1, 2, 3, 4, 5, 7, 8	2	500							
					1, 2, 3, 4, 5, 7, 8	2	500							
					1, 2, 3, 4, 5, 7, 8	2	500							

36. EXPLOSION PROOF MOTOR WITH NON-SPARKING WHEEL AND DRIVE ASSEMBLY. 37. UL 762 LISTING WITH GREASE TROUGH, STEEL DRAIN, HINGED FAN ACCESS, DUCT ADAPTIVE PLATE AND CURB EXTENSION TO MAINTAIN 40" INCHES ABOVE THE ROOF. 38. UL LISTED FOR SMOKE CONTROL SYSTEM. 39. STAINLESS STEEL SHAFT AND HARDWARE. 40. ALUMINUM WHEEL AND HOUSING. 41. CONCRETE INERTIA BASE (TYPE C).

46. EXTENDED LUBE LINES 47. SHAFT GROUNDING RING

42. REVERSIBLE MOTOR.

43. TWO SPEED MOTOR.

48. HINGED BASE KIT

44. TEAO MOTOR.

45. TEFC MOTOR.

# **M&T BANK STADIUM**

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△ Date Description

Seal / Signature

## **NOT FOR** CONSTRUCTION

Project Name M&T BANK STADIUM

Project Number 09.0186.000 Description MECHANICAL SCHEDULES

Scale NOT TO SCALE

# M0.02.CS

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2. PROVIDE UN 3. PROVIDE UN 4. PROVIDE MA 5. FOR AHU UN 6. PROVIDE AI 7. PROVIDE UN 8. ALL DDC CC 9. CHILLED WA	NIT WITH SINGLE POI NIT WITH UNIT-MOUN ANUFACTURER RECO NIT SHALL BE PROVID R FLOW MONITORING NIT WITH APPROVED NTROLS AND SENSO ATER COIL SHALL BE	ROWN OUT PROTECTION INT POWER CONNECT ITED, NEMA RATED DIS OMMENDED SPACE CL DED WITH 2" PLEATED G STATION (AFMS) FOR DUCT SMOKE DETECTOR SIZED AND SELECTED N 4" CONCRETE PAD W	ION. SCONNECT SWITC LEARANCES AROU MERV 8 PRE FILT R OUTSIDE & SUP TORS AND INTERF UNIT OPERATION O FOR 25% ETHYL	CH. IND UNIT. ER AND 4" PLEATED M PLY AIR INTAKE. CACE WITH BUILDING SHALL BE INTEGRAL ENE GLYCOL SOLUTIO	IERV 13 FINAL FILTEI FIRE ALARM SYSTEM TO THE UNIT WITH B	RS. I.		AS.
			DESIGN A	IRFLOW (CFM)			SU	PPLY FAN
UNIT MARK SERVICE		LOCATION	SUPPLY AIR	MIN. OUTDOOR AII	AIR FLOW	QTY.	ESP (IN WC)	TSP (IN WC)
		410 - MECH.ROOM	19000	5000	9500	2	1.5	4.23
AHU 1-4								
AHU 1-4						YDRC	NIC UN	
NOTES: 1. PROVIDE UN 2. PROVIDE WI 3. PROVIDE BL 4. UNIT SHALL 5. UNIT SHALL 6. PROVIDE TH - TI 7. FAN MOTOR 8. THE CEILING	IIT WITH INTEGRAL T TH INTEGRATED THE JILT-IN CIRCUIT BREA BE INSTALLED AS PE BE KEPT AT A MINIM IE FOLLOWING: (FAC HERMAL CUT OFF. SHALL BE COMPLET	THERMOSTAT & NEMA ERMOSTAT SET AT 70 AKER TO ALLOW FOR I ER MANUFACTURER'S UM DISTANCE FROM A TORY INSTALLED/SUP FELY ENCLOSED. TURE AND THE ANCHO	°F AND UNIT SHAL DIRECT CONNECT RECOMMENDATIO ADJACENT SURFA PLIED IF NOT COM	L HAVE SEASONAL C ION FROM ELECTRIC ON. CE PER MANUFACTU ITRACTOR SHALL PR	N/OFF SWITCH. AL FEEDER TAPS. RER RECOMMENDAT DVIDE).	ION.	DNIC UN	IT HEA
NOTES: 1. PROVIDE UN 2. PROVIDE WI 3. PROVIDE BL 4. UNIT SHALL 5. UNIT SHALL 6. PROVIDE TH - TI 7. FAN MOTOR 8. THE CEILING	IIT WITH INTEGRAL T TH INTEGRATED THE JILT-IN CIRCUIT BREA BE INSTALLED AS PE BE KEPT AT A MINIM IE FOLLOWING: (FAC HERMAL CUT OFF. SHALL BE COMPLET MOUNTING STRUCT	THERMOSTAT & NEMA ERMOSTAT SET AT 70 AKER TO ALLOW FOR I ER MANUFACTURER'S UM DISTANCE FROM A TORY INSTALLED/SUP FELY ENCLOSED. TURE AND THE ANCHO	°F AND UNIT SHAL DIRECT CONNECT RECOMMENDATIO ADJACENT SURFA PLIED IF NOT COM	L HAVE SEASONAL O ION FROM ELECTRIC DN. CE PER MANUFACTU ITRACTOR SHALL PR S MUST BE OF SUFFI MOTOR	N/OFF SWITCH. AL FEEDER TAPS. RER RECOMMENDAT DVIDE).	ION.	DNIC UN	ED WEIGHT OF

9. CHILLED WATER COIL SHALL BE SIZED AND SELECTED FOR 25% ETHYLENE GLYCOL SOLUTION. 10. INSTALL AIR HANDLING UNIT ON 4" CONCRETE PAD WITH VIBRATION ISOLATION. UNIT MARK SERVICE LOCATION INCLUDING AIR FLOW (CFM) COLL DATA AIR FLOW (CFM) COLL DAT	RE-HEATING COIL DATA           ELECTRICAL           SPM)         MATER PD (FT. OF WATER)         FLUID TYPE         CFM         TOTAL MBH         EAT DB (°F)         LAT DB (°F)         LWT (°F)         FLOW (GPM)         WATER PD (FT. OF WATER)         FLUID TYPE         MCA         MOCP         FLA         VOLTS/PH/H
AHU 1-4         200 - BEER HALL         410 - MECH.ROOM         19000         5000         9500         2         1.5         4.23         1927         1800         10 HP         831         580         80.26/66.65         52.54/52.12         40         54         132	
HYDRONIC UNIT HEATER SCHEDULE	FAN SCHEDULE
NOTES: 1. PROVIDE UNIT WITH INTEGRALT HERMOSTAT & NEMA RATED DISCONNECT SWITCH. 2. PROVIDE UNIT WITH INTEGRATED THERMOSTAT SET AT 70 °F AND UNIT SHALL HAVE SEASONAL ON/OFF SWITCH. 3. PROVIDE BUILT-IN CIRCUIT BREAKER TO ALLOW FOR DIRECT CONNECTION RROM ELECT RICAL FEEDER TAPS. 4. UNIT SHALL BE INSTALLED AS PER MANUPACTURER'S RECOMMENDATION. 5. UNIT SHALL BE INSTALLED AS PER MANUPACTURES'S INTEGRATING TO CONTRACTOR SHALL PROVIDE). - THERMAL CUT OFF. 7. FAN MOTOR'S SHALL BE COMPLETELY ENCLOSED. 8. THE CELLING MOUNTING STRUCTURE AND THE ANCHORING PROVISIONS MUST BE OF SUFFICIENT STRENGTH TO SUPPORT THE COMBINED WEIGHT OF THE HEATER AND MOUNTING BRACKET. 9. PROVIDE CELLING HUNG MOUNTING BRACKETS. <u>UNIT MARK TYPE LOCATION AIRFLOW (CFM) HP HEATING CAPACITY EVT (°F) LWT (°F) FLOW (GPM) (FT. OF WATER) AMPS VOLTS/PH/HZ MANUFACTURER MODEL</u> <u>UH-1 CEILING HUNG 410 - MECH ROOM 580 25 WATT 24.8 200 170 1.7 2.2 1.2 115/1/80 STERLING HS-125A SEE NOTES</u>	NOTES:       1. UNIT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.         2. FAN LOCATED OUTDOOR SHALL BE PROVIDED WITH WEATHER HOOD AND OUTLET GUARD.         3. UNIT CLEARANCE SHALL BE PROVIDED AS PER MANUFACTURER'S RECOMMENDATION.         4. PROVIDE THE FOLLOWING: (FACTORY INSTALLED/SUPPLIED IF NOT CONTRACTOR SHALL PROVIDE).         - NEMA RATED DISCONNECT SWITCH.         - SOUPORT PER MANUFACTURER'S RECOMMENDATION FOR ALL ROOF MOUNTED FANS.         5. PROVIDE FANS WITH NEMA RATED DISCONNECT SWITCH.         6. ROOF MOUNTED EXHAULS FANS SHALL BE PROVIDED WITH FACTORY PRE-FABRICATED 18" HIGH SOUND ABSORBING ROOF CURB AND ADAPTER.         7. PROVIDE THERMAL OVERHEAT PROTECTION.         9. PROVIDE THERMAL OVERHEAT PROTECTION.         9. PROVIDE THERMAL OVERHEAT PROTECTION.         10. PROVIDE INSULATED CABINET.         11. REFER TO ELECTRICAL DWGS FOR WIRING, CIRCUIT BREAKER AND DISCONNECT SWITCH.         11. REFER TO ELECTRICAL DWGS FOR WIRING, CIRCUIT BREAKER AND DISCONNECT SWITCH.         11. REFER TO ELECTRICAL DWGS FOR WIRING, CIRCUIT BREAKER AND DISCONNECT SWITCH.         11. INT MARK       SERVICE
	EF-1         MEN, WOMENS, RESTROOMS & BOH         CLUB LEVEL ROOF         DOWNBLAST         1000         0.75         1621         DIRECT         0.24         1725         115/60/1         8.9         41           KEF-1         KITCHEN         CLUB LEVEL ROOF         UPBLAST         500         0.75         1712         DIRECT         0.14         1725         115/60/1         9.2         36
VENTILATION COMPLIANCE SCHEDULE - AHU 1-4         M&T Bank Stadium Miller Lite Tent Enhancement         SYSTEM TYPE: SINGLE ZONE CONSTANT VOLUME	ELECTRIC UNIT HEATER SCHEDULE
SIPX231011.04 SYSTEM TAG: - AHU - 1 IMC 2018	<ol> <li>PROVIDE UNIT WITH INTEGRAL THERMOSTAT &amp; NEMA RATED DISCONNECT SWITCH.</li> <li>PROVIDE WITH INTEGRATED THERMOSTAT SET AT 70 °F AND UNIT SHALL HAVE SEASONAL ON/OFF SWITCH.</li> <li>PROVIDE BUILT-IN CIRCUIT BREAKER TO ALLOW FOR DIRECT CONNECTION FROM ELECTRICAL FEEDER TAPS.</li> <li>UNIT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.</li> <li>UNIT SHALL BE KEPT AT A MINIMUM DISTANCE FROM ADJACENT SURFACE PER MANUFACTURER RECOMMENDATION.</li> <li>PROVIDE THE FOLLOWING: (FACTORY INSTALLED/SUPPLIED IF NOT CONTRACTOR SHALL PROVIDE).</li> </ol>
ROOM #     ZONE NAME     CCUPANCY CATEGORY     AREA OA RATE (CFM/P)     AREA OA RATE (CFM/P)     AREA OA RATE (CFM/SF)     OCCUPANCY DENSITY     BREATHING ZONE (SF)     ZONE AIR (SF)     ZONE OUTDOOR DISTRIBUTION AIRFLOW (CFM)     ZONE OUTDOOR AIRFLOW (CFM)     ZONE PRIMARY AIRFLOW (CFM)     PRIMARY OUTDOO AIRFLOW (CFM)	
Image: Normal systemNormal systemNormal systemNormal systemNormal systemNormal systemNormal systemNormal systemNormal systemNormal system200BEER HALLBAR7.50.18100400.03,73036710.8458916,6500.28001ABEER SERVEBAR7.50.1810020.08002940.836813001.3000.28221KITCHEN PREPDINING7.50.18706.0300990.81244200.293CORRIDORCORRIDORS00.0600.0430260.8324300.082HOST/RECEPTIONRECEPTION7.50.12202.070230.829200.15 $t = t = t = t = t = t = t = t = t = t =$	EUH-1         WALL MOUNTED         402 - RESTROOM         1.5         12.5         120/1/60         THERMOSTAT           EUH-2         WALL MOUNTED         403 - RESTROOM         1.5         12.5         120/1/60         THERMOSTAT           EUH-3         WALL MOUNTED         404 - RESTROOM         1.5         12.5         120/1/60         THERMOSTAT           EUH-3         WALL MOUNTED         404 - RESTROOM         1.5         12.5         120/1/60         THERMOSTAT           EUH-4         WALL MOUNTED         410 - RESTROOM         1.5         12.5         120/1/60         THERMOSTAT           EUH-5         WALL MOUNTED         410 - RESTROOM         1.5         12.5         120/1/60         THERMOSTAT
SYSTEM DESIGN OPERATING CONDITION       HEATING MODE         APPLICABLE CODE       IMC 2018         IMC 2018       IMC 2018         OCCUPANCY DIVERSITY (D) (%)       100	NOTES:         1. BTU/FT CALCULATED CONSIDERING ALL CORRECTION FACTORS.
OCCUPANCY DIVERSITY (D) (%)100SYSTEM POPULATION (Ps)428UNCORRECTED OUTDOOR AIR INTAKE (Vou) (CFM)4,114SYSTEM HEATING VENTILATION EFFICIENCY (EV)92%SYSTEM PRIMARY AIRFLOW (Vps) (CFM)19,000OUTDOOR AIR INTAKE FLOW (Vot) (CFM)4,462DESIGN OUTDOOR AIRFLOW (CFM)5,000	<ul> <li>PTR'S SHALL BE PROVIDED WITH MINIMUM 14 GAUGE ENCLOSURES.</li> <li>PROVIDE FIN-TUBE ELEMENT SUPPORT BRACKETS, SADDLE, HANGERS, CONTINUOUS BAFFLE AS REQUIRED TO INSTALL UNITS.</li> <li>PROVIDE FIN-TUBE ADDIATION NELCOSURE. CONTRACTOR SHALL COORDINATE IN THE FIELD.</li> <li>PROVIDE SHUT-OFF AND ISOLATION VALVES.</li> <li>REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT AND TYPE OF FIN-TUBE RADIATION ENCLOSURE ACCHITECT TO SELECT ENCLOSURE COLOR.</li> <li>ALL FTR SHALL BE INSTALLED WITH CLEAR AIR SPACE FOR THE AIR INLET AS RECOMMENDED BY MANUFACTURER.</li> <li>REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.</li> <li>FIELD MEASURE ALL SECTIONS LEGGTH PRIOR TO FABRICATION.</li> <li>FIELD MEASURE ALL SECTIONS LENGTH PRIOR TO BE SUPPLIED BY RADIATOR MANUFACTURERS ENCLOSURE.</li> <li>PIPE ENCLOSURE AS NECESSARY. PIPE ENCLOSURES TO BE SUPPLIED BY RADIATOR MANUFACTURERS IN ORDER TO MATCH RADIATOR COVER.</li> <li>INIT MARK ENCLOSURE TYPE ROWS HIGH FIN SIZE (IN X IN) FINS/FT TUBE SIZE IN ENCLOSURE SIZE WATTER AWATTER AWATTER</li></ul>
	AIR DEVICE SCHEDULE
	NOTES: 1. INSTALL OPPOSED BLADE DAMPERS ON ALL DIFFUSERS LOCATED IN DRY WALL CEILING. 2. DIFFUSER/GRILLES SHALL BE CONSTRUCTED OF 24 GAUGE STEEL. 3. GRILLE SHALL BE PROVIDED WITH BORDER FRAME. 4. DIFFUSER/GRILLES SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-2006. 5. PROVIDE FRAME/BORDER TYPE AS REQUIRED FOR INSTALLATION AND COORDINATE WITH ARCHITECT FOR CEILING TYPE. 6. ALL ML TYPE LINEAR SUPPLY/RETURN DIFFUSERS SHALL BE PROVIDED WITH MP TYPE PLENUM BOX. 7. GRILLES SHALL BE TESTED IN ACCORDANCE WITH UL 263 AND MUST MEET NFPA 90A REQUIREMENTS. 8. PROVIDE PLASTER FRAME FOR ALL AIR DEVICES LOCATED IN GYP BOARD CEILINGS. 9. PROVIDE REGISTERS WITH INTEGRAL GANG OPERATED OPPOSED BLADE DAMPERS WITH REMOVABLE KEY OPERATOR OPERABLE FROM FACE. 10. COORDINATE MOUNTING TYPE WITH CEILING PLANS. REFER TO ARCHITECTURAL DRAWINGS. 11. SIDE GRILLE THROW SHALL BE SET AT 45° THROW ANGLE.
	NIT MARKCFM R>VEBASIS /> ESIGNTYPELOCATIONICCATIONSIZEMIN.MAX.MANUFACTURERMODELIII LINEAR DIFFUSERCEILING102 SLOT x 1" SLOT SPACING, 4" LONGLD-10300TITUSFL-10-HTLINEAR DIFFUSERCEILING102 SLOT x 1" SLOT SPACING, 4" LONGSD-10300TITUSOMNIDIFFUSERCEILING102 SLOT x 1" SLOT SPACING, 4" LONGSG-10100TITUS300RLGRILLECEILING10x1024x24SG-2100250TITUS300RLGRILLECEILING18x1220x14RG-103400TITUS350 RLGRILLECEILING48x1850x20EG-2100200TITUS355 RLGRILLECEILING10x812x10EG-3200250TITUS355 RLGRILLECEILING10x814x12TG-10200TITUS350 RLGRILLECEILING10x812x10TG-10200TITUS350 RLGRILLECEILING10x812x10
	SPLIT SYSTEM INDOOR UNIT SCHEDULE
	NOTES: 1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB) 2. REFRIGERANT SHALL BE NON-CFC BASED. BASIS OF DESIGN USES REFRIGERANT R-410A. 3. INSULATE & SIZE REFRIGERANT LINES AS PER MANUFACTURER'S RECOMMENDATIONS.
	4. PROVIDE UNIT WITH CONDENSATE PUMP @20FT OF DISCHARGE HEAD, UL LISTED, 115V/1/60. PROVIDE SAFETY SWITCH AND CHECK VALVE. GOBI-II MODEL & OVERFLOW SWITCH.           UNIT MARK         NOMINAL TONS         SUPPLY AIR CFM (HIGH)         TOTAL COOLING CAPACITY (MBH)         SENSIBLE HEAT FACTOR         WEIGHT (LBS)         UNIT DIMENSIONS (HxWxD)         V/PH/HZ         MCA
	AC-1         220 - ELEC         1.5         450         18.2         0.73         45         24-13/16 x 32-4/16 x 11-3/16         208/1/60         11           AC-2         208 - AV / IT         2.0         775         24.3         0.76         -         24-13/16 x 32-4/16 x 11-3/16         208/1/60         -
	SPLIT SYSTEM OUTDOOR UNIT SCHEDULE NOTES:
Miller Lite Mechanical Schedules from DD Drawings -	1. BASIS OF DESIGN IS BASED ON 95"F DB AMBIENT AND 78"F WB.         2. PROVIDE UNIT WITH THE FOLLOWING         A. NEMA RATED INTEGRAL DISCONNECT SWITCH.         B. LOW AMBIENT CONTROLS AND CRANKCASE HEATER TO PERMIT UNIT OPERATION AT 0 "F AMBIENT OUTDOOR.         3. REFRIGERANT SHALL BE NON-CPC BASED. BASIS OF DESIGN USES REFRIGERANT R-410A.         4. CONDENSING UNIT MUST HAVE FULLY MODULATING INVERTER COMPRESSORS.         5. CONDENSING UNIT MUST HAVE FULLY MODULATING INVERTER COMPRESSORS.         6. CONTRACTOR'S INSTALLATION PERSONNEL MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CASS WITHIN PAST 24 MONTHS.         7. CONTRACTOR'S INSTALL INSULATION ON REFRIGERANT PIPING.         8. MANUFACTURER'S REPRESENTATIVE MUST HAVE LOCAL SERVICE, STOCK PARTS, AND PROOF OF CONTINUOUS SALES SUPPORT FOR TO FURNISH AND INSTALL INSULATION ON REFRIGERANT PIPING.         9. UNIT SHALL BE SET FOR COOLING ONLY OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING ONLY OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING TO 0"F OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING TO 0"F OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING TO 0"F OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING TO 0"F OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING TO 0"F OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING TO 0"F OPERATION.         10. PROVIDE WIND BAFFLE KIT FOR COOLING TO 0"F OPERATION.                  ACCU-1
Subject to Change	ROOF TOP HEAT PUMP UNIT SCHEDULE
	NOTES: 1. BASIS OF DESIGN IS BASED ON 95°F DB AMBIENT AND 78°F WB. 2. PROVIDE UNIT WITH THE FOLLOWING A. NEMA RATED INTEGRAL DISCONNECT SWITCH. B. LOW AMBIENT CONTROLS AND CRANKCASE HEATER TO PERMIT UNIT OPERATION AT 0 °F AMBIENT OUTDOOR. 3. REFRIGERANT SHALL BE NON-CFC BASED. BASIS OF DESIGN USES REFRIGERANT R-410A. 4. UNIT MUST HAVE FULLY MODULATING INVERTER COMPRESSORS. 5. UNIT MUST HAVE WINIMUM SI MINS. OF NON-VOLATILE OPERATION MEMORY FOR USE IN DIAGNOSTICS. 6. CONTRACTOR'S INSTALLATION PERSONNEL MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CLASS WITHIN PAST 24 MONTHS. 7. CONTRACTOR TO FURNISH AND INSTALL INSULATION ON REFRIGERANT PIPING. 8. MANUFACTURER'S REPRESENTATIVE MUST HAVE LOCAL SERVICE, STOCK PARTS, AND PROOF OF CONTINUOUS SALES SUPPORT FOR AT LEAST 10 YEARS. 9. PROVIDE UNIT WITH VIBRATION ISOLATORS.
	$\mu_{\text{NNT}}$ $\mu_{\text{NCATION}}$ $\mu_{\text{NOMINAL}}$ $\mu_{\text{RFLOW CFM}}$ $\mu_{RFLOW CF$

## AIR HANDLING UNIT SCHEDULE

						M&T BA Stadiu	
/PH/HZ		(LBS)	BASIS OF DESIGN		REMARKS	1101 Russell St, Balti	imore, MD 21230
3/60	5618				SEE NOTES	2020 K Street NW Suite 200 Washington, DC 20006 United States	Tel 202.721.5200 Fax 202.872.8587
						Maryland Stadium Authority 333 West Camden St. Ste. 500 &, 351 W Camden St Ste. 300, Baltimore, MD 21201 United States Tel 410.333.1560 Fax xxx.xxx.xxxx	,
GHT	MANUFACT GREENHE GREENHE GREENHE	ECK	SIGN MODEL VAD-36H14-23-B50 G-100-VG CUE-095-VG	1,3,4,5	<b>MARKS</b> ,7,8,9,10,11 5,6,7,8,10,11 5,6,7,8,10,11	Cerami & Associates 1155 15th St NW #606, Washington, DC 20005 United States Tel 202.448.9975 Fax xxx.xxx.xxx	Culinary Advisors 2004 Stockton Rd Phoenix, MD 21042 United States Tel 443.243.4814
						Elevate Environments 160 West 900 South Salt Lake City, UT 84101 United States Tel 801.363.1881 Fax xxx.xxx.xxx	SSR 2995 Sidco Dr Nashville, TN 37204 United States Tel 615.383.1113 Fax 615.386.8469
	MANUFAC MARL MARL MARL MARL MARL	EY EY EY EY	ESIGN MODEL WH3150FC WH3150FC WH3150FC WH3150FC WH3150FC	SE SE SE SE	EMARKS E NOTES E NOTES E NOTES E NOTES E NOTES	RK&K 700 East Pratt St Suite 500 Baltimore, MD 21202 United States Tel 801.363.1881	Setty 1415 Eliot Place NW Suite 100 Washington, DC 20007 United States Tel 202.393.1523 Fax 202.315.3059
						$\triangle$ Date Description	
TION DR 4	BTUH/FT @ 185 °F AWT 1280	LENGTH (FT) I 90	BASIS OF DES MANUFACTURER RUNTAL	SIGN MODEL RF-5	REMARKS SEE NOTES		
NG	MAX. SP (II 0.08 0.06 0.01 0.01 0.07 0.08 0.04 0.03 0.04		MAX. NC  17	REMAR	TES TES TES TES TES TES TES TES		
NCA 11 -	ATA MOCP 28 -	MANUFACTU MITSUBIS MITSUBIS	HI TPKA0A018 <sup>-</sup>	L 1LA10A	ALL ALL		
Ν	BAS IUFACTURER IITSUBISHI IITSUBISHI	TRUYA	<b>10DEL</b> 0181KA70NA 0241HA70NA	REMA AL AL	L		FOR RUCTION
						Project Number Project Number 09.0186.000 Description MECHANICAL SCH	
DNS I)	UNIT WEIGHT (LBS)	EMERGENCY POWER (Y/N)	BASIS OF D	ESIGN MODEL	REMARKS	Scale	
x 39	400	Y	AC PRO	Q6SE-X24K	SEE NOTES	NOT TO SCALE	
						© 2023 Gensler	D1ML

2. BHP SHALL BE NO	LL COMPLY WITH ASHF O GREATER THAN 90% VATION OF 20 FT. STA
IDENTIFICATION	
EF-04-B-01	GEN
RF-2	AHU
1. EXTERNAL STA AND DUCTWO 2. SUPPLY FAN 1	S (APPLIES TO ALL): ATIC PRESSURE INCLUD RK SYSTEM (EXCLUDES TOTAL STATIC PRESSUR AIRFLOW IS WINTER DI E SELECTION
IDENTIFICATION	AREA SERVE
AHU-2	CLUB/SUITES

Press Relocation Mechanical Schedules from DD Drawings - Subject to Change

							FAN S	CHI	EDULE	Ξ															
T. STATIC PRESSURE AT SEA LEVEL. MF - M PRE - F PROP PRS - F PRV - F SQI - S TA - TU TC - TU				SET. IOUNTED FAN. AN. EXHAUSTER.	WHEEL TYPES AF - AIR FOIL. BI - BACKWARE FC - FORWARD ESP - EXTERNA TS - MAX. TIP S	D INCLINE. ) CURVED. AL STATIC	A = COMBINA ACROSS THE B = MANUAL C = HAND-OF AND CONTRO D = VARIABLE		PILOT LIGHT, R IN STARTER RIVE.		1. LIN 2. DO 3. WE 4. OS 5. MO 6. FAI 7. ACI 8. HO 9. INL 10. OI 11. MI 12. MI 13. GI 14. GI 15. UI 16. IN 17. OI	ILET BELL. UTLET CONE.	OUSING. ALL SLEEVE. T DAMPERS. ET DAMPERS. MPERS.	ΛPER.	20. y 21. c 22. 1 23. 1 24. 1 25. 2 26. 5 27. 5 28. 1 29. 1 30. 1 31. 1 32. 1 33. 2 33. 2	DISCONNECT S DISCONNECT S AN INLET PIEZ ELECTRONICAL "FILTER (ESP HAND-OFF-AUT	ENCER. / STRAIGHT ELT REGAII EQUIPMEN ELT TENSION PEED CONT PEED CONT WITCH IN F. WITCH IN F. COMETRIC A LLY COMMU INCLUDES I INCLUDES I	IN ATTENUA IT. NER. TROLLER (P TROLLER (F FAN HOUSIN FAN HOUSIN AIRFLOW ME JNICATED M DIRTY FILTE DIRTY FILTE N MOTOR S	RE-WIRED). IELD INSTALLEI IG (PRE-WIRED) IG (FIELD INSTA EASUREMENT R IOTOR (ECM). ER LOSS). ER LOSS).	LLED). ING.		3 D 3i 3i 4i 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	6. EXPLOSION 7. UL 762 LIST JCT ADAPTIV 8. UL LISTED F 9. STAINLESS 9. ALUMINUM 1. CONCRETE 9. REVERSIBL 8. TWO SPEEL 9. TEAO MOTO 6. TEFC MOTO 6. EXTENDED 7. SHAFT GRO 8. HINGED BAS	ING WITH ( TE PLATE A FOR SMOK STEEL SH, WHEEL AN INERTIA B E MOTOR. D MOTOR. DR. DR. LUBE LINE DUNDING R	GREASE AND CUR (E CONTH IAFT AND IAFT AND BASE (TY ES
SYSTEM	DESIGN BASIS	MODEL NUMBER	ТҮРЕ С	FM STATIC PRESSURE (IN. WG)	WHEEL	TS BHP MIN	MOTOR . RPM	VOLTAGE TYPE		DISC. TYP	E ACC		3 63 Hz dB 125 H I / OUT IN / OU				2000 Hz d / OUT	dB 4000 Hz IN / OUT	dB 8000 Hz IN / OUT		MAX. SONES	OLATORS	ROOF / W OPENIN		OPEF WEIGI
GENERAL EXHAUST AHU-2 RETURN FAN	GREENHECK GREENHECK		INLINE 8 INLINE 44,	00 1.5 ,000 2.25		1.00		460/3 A 460/3 A	UNIT MOUNTED	NON-FUSE															
_): ICLUDES LOSSES FOR INTAKE LOUVEI LUDES FILTER LOSS) ESSURE (TSP) INCLUDES SCHEDULED ER DIVERSIFIED. USE FOR COIL LOAD	DIRTY FILTER LOSS.		NCY MOTOR SELECTED AT THEIR H NNS FOR ADDITIONAL IN		E DROP			MMS - MANUAL MAG-X-L - COM		QUENCY DRIVE ED BY DIVISION 26		NIT SCI		ESSORIES: DRAW-THRU COM FAN(S) 460/3/60 ELECTF	IFIGURATION RICAL CONNECTION ED LIGHTS AND OU		TE	5. F 6. F 7. 2	UNIT MOUNTED ( PROVIDE LOCKA REFER TO SHEE 2" THICK PERFOI PROVIDE 3-WAY	BLE DOOR I T M006 FOR RATED LINE	HANDLERS F DISCHARGE R IN FAN SE(	OR ALL ACCES AND RADIATE	S DOORS ) SOUND POW	/ER LEVELS	3
			IDE AIR FM		SUPPL	Y FAN						COOLIN	G COIL									HEATING COI			
SERVED MFR MODEL NUMBER	ТҮРЕ	PRESSURE CLASS MIN	MAX CFM (IN.	SP TSP WG) (IN. WG) QT	Y BHP MIN. H (EA) (EA)		STARTER	SP FL		FACE EAT DB / (FPM) (° F)	LAT DB / (° F)	WB SENSIBLE CAPACITY (MBTU / HR)		WT LWT F) (°F) GPM	ROWS MAX & FPI (IN. W			ТҮРЕ І	FLUID QTY	CFM (° F	T LAT C, ) (°F) (M	APACITY EW BTU / HR) (° F	T LWT ) (°F) GPM	ROWS & FPI	MAX. AIR PD (IN. WG)
SUITES B YORK	MULTIZONE VAV	MEDIUM 30,800	55,000 55,000	2		460 / 3 VFD	UNIT MOUNTED	D 1 25%	E.G. 1 55,000 5	00 86.4 / 70.3	46.0 / 4	5.8 2430		40 54 601				REHEAT	1 5	55,000 45	60	1,118 200	170 75		
				(2) PREMIUI IDENTIFI FCU-04 FCU-04 FCU-04 FCU-04 FCU-04	ICATION 15-B-01 15-B-02 15-B-03 15-B-04	S, AND FIRE DAMPE DTOR AREA SERV PRESS DINING / PRESS DINING / PRESS DINING / PRESS DINING / PRESS DINING /	<b>/ED</b> LOUNGE LOUNGE LOUNGE LOUNGE LOUNGE	MODEL NUMBER FNP12 FNP12 FNP12 FNP12 FNP12 FNP12 FNP12	3 = DISC UNITS. F 4 = SING NON-FU	EFER TO FLOOR F LE POINT ELECTR	RN AIR GR LANS FOR CAL CONN FOR FAN N EWT / L (° F) 45 / 5 45 / 5 45 / 5 45 / 5	Example         Example           ILLE(S)         FOR NON-D           IDUCTED / NON-D         IECTION WITH UNITY           IDOTOR AND ELEC         IECTION WITH UNITY           IDUTED / NON-D         IECTION WITH UNITY           IDUED / NON-D         IECTION WITH UNITY	LAT         SEN           DB/WB         CAP           (° F)         (B           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°           52.0 / 51.8         2°	T = 120 VOLTAG           VOLTAG           ISIBLE         TOTA           PACITY         CAPAC           TUH)         (BTUH)           1,375         25,52           1,375         25,52           1,375         25,52           1,375         25,52           1,375         25,52           1,375         25,52           1,375         25,52           1,375         25,52           1,375         25,52	ITY         ROWS         MAX PL           5         6         8           5         6         8           5         6         8           5         6         8           5         6         8           5         6         8           5         6         8           5         6         8           5         6         8	ANSFORMER, F           WATER         BRAI           .(FT)         SIZE           .45         1           .45         1           .45         1           .45         1           .45         1           .45         1           .45         1           .45         1	AN CONTAC	EWT / L (° F)           6         150 / 1           6         150 / 1           6         150 / 1           6         150 / 1           6         150 / 1           6         150 / 1           6         150 / 1           6         150 / 1           6         150 / 1	EAT DB (°F)         LAT DB (°F)           20         70         85           20         70         85           20         70         85           20         70         85           20         70         85           20         70         85           20         70         85           20         70         85           20         70         85           20         70         85           20         70         85	CAPACIT (BTUH)           14,580           14,580           14,580           14,580           14,580           14,580           14,580	9 = AUXII TURN OF 10 - BAS DIL E	OR THERMOST LARY DRAIN P F FCU UPON D BACNET INTER PD. (FT) 2.07 2.07 2.07 2.07 2.07 2.07 2.07	AN WITH FLOA ETECTION OF FACE	AT SWITCH CONDENSA MOTOR	ATE VOL1 460/3 460/3 460/3 460/3
					EVIATIONS: OPTIONAL STANI	D-BY POWER	1. 40°F EWT CH RETURN WA 2. COOLING CA TEMPERATU INDOOR TEM	ATER TEMP APACITY BASED ON JRE, 600 FT ELEVA MPERATURE STATIC PRESSURE	LL): T SIZED TO MAXIMIZE N 94.6°F DB OUTDOOR AIR FION, AND 75 °F / 50% RH DOES NOT INCLUDE		<ol> <li>MICRO MONIT</li> <li>COMM AUTO</li> <li>INTEG</li> <li>AIR FI</li> <li>INTEG</li> </ol>	TORING AND HUM MON ALARM, REMO RESTART, AND R GRAL DISCONNEC ILTER BOX WITH 3	ONTROL WITH UNIT IIDITY CONTROL OTE ON/OFF, SETB EMOTE MONITORII T SWITCH AND SIN 0% EFFICIENT MEE O RETURN GRILLES	ACK CONTROL, NG CAPABILITY I GLE POINT POW DIA AND FILTER	TEMPERATURE CA 3Y BAS ER KIT	IBRATION SYS	TEM	REHEAT			7 8 9	. UPFLOW UNIT . INTEGRAL SM . LOW AMBIENT . CONDENSATE 0. BACNET INTI	OKE DETECTO CONTROL TO PUMP WITH S	DRS AND DU ) 0 °F SAME ELEC NETWORK	UAL FLOA
				IDE	INTIFICATION	DESIGN BASIS		AREA SERVED	MODEL NO	INDOOR	GPM		OTAL CAP. SEN	SIBLE CAP. (BTUH)	TY CFM	ESP (IN) HP	ТҮР	CA	NPACITY T (KW)			WAT. SUPPLY SI SIZE (IN)			FLA
				CF	RAC-03-B-01	STULZ		NFL RACK ROOM	CRS-090	75.0 / 62.4	12	1 1/4	71,838	60,367	3 2,900	0.00 0.25	j						0.5 2	30	
											1.   2.   3.   4.   5.   6.   7.   8.   9.   9.   9.   9.   9.   9.   1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MINIMUM WATER I MAXIMUM WATER HEATING COIL SEI HEATING COIL MIN HEATING COIL MA HEATING COIL RO CONFORMING TO HEATING COILS SI THE SCHEDULED HEATING COIL FLO CONTROL VALVE A AIR TERMINAL UN	PRESSURE DROP LECTION BASIS: S NIMUM FLOW RATE XIMUM FACE VELC W QUANTITY SHAL NOTES 1-5. ELECTED WITH 1 F LEAVING AIR TEM OW RATES ARE BA AND BALANCING V IT SUBMITTAL.	SOUTINESSES SHARESSES SHAR	IAX CFM: 5" - 16" = /ING AIR TEMPERA RED TO OBTAIN TH MINIUM HOT WAT RAGE WATER DEL	0.75 IN. W.G.; 2 TURE E SCHEDULED ( ER FLOW RATE A-T AND SHOW HE FLOW RATE UNOCC. I	4"x16" = 1.75 CONDITIONS OF 0.5 GPM /N FOR RUNG S LISTED IN NLET SIZE (IN.) 12	5" IN. W.G. 5, WHILE I CAN EXCEE IOUT PIPE SIZ I THE APPRO I THE APPRO 14 55 14 55 8 55 8 55 8 55 8 55	ZING. VED T LAT (°F) FL 5 90 WA 5 90 WA 5 90 WA 5 90 WA 5 90 WA 5 90 WA 5 90 WA	UID M TER 22,3 TER 22,3 TER 22,3 TER 4,2 TER 4,2 TER 4,2	INJH         EWT (°F)           290         150.0           72         150.0           72         150.0           72         150.0           72         150.0           72         150.0           72         150.0           72         150.0           72         150.0           72         150.0	10. IF HEATING         DUCT MOU         COIL AND I         MAXIMUM V         11. NOISE CRI         WITH SOLI         PRESSURI         12. ATU DISCH         BEFORE FIRS         ATTENUATOR         13. UNIT SUPF         14. UNIT CONT         15. UNIT INLET         GPM         2         2         1         1         0         1         1         0         1         0         1         0         1         1	CAPACITY CANTED HEATING NSULATE DUC VATER PRESS TERIA (NC) SH D LINER AND 1 IS TO BE PRO LY VOLTAGE: ROL VOLTAGE: ROL VOLTAGE SIZE SHOWN	ANNOT BE I G COIL TO N T AND COIL URE DROP IALL BE DET I" THICK INS /ORK TO HA BANCH. WH VIDED. 120 / 1 V E: 24V	MET, ELIN MEET SCI 2 AND MIN TERMINE ISULATION AVE A MIN HERE 4' O

G-X-L - COMBINATION MAGNET	IC X-
BY DIVISION 26	

							FAN SCHEDULE																					
ASHRAE 90.1. I 90% OF THE MOTOR H.P. STATIC PRESSURE AT SEA LEVEL	FAN TYPES: BVS - BELTED VENT SET CEILING - CEILING MOU MF - MIXED FLOW FAN. PRE - POWER ROOF EX PROP - PROPELLER. PRS - POWER ROOF SU PRV - POWER ROOF VE SQI - SQUARE-INLINE CI TA - TUBE AXIAL. TC - TUBULAR CENTRIFI UBD - UPBLAST DILUTIC VA - VANE AXIAL.					HEEL TYPES - AIR FOIL. - BACKWAR C - FORWARI SP - EXTERN S - MAX. TIP S	D INCLINE. D CURVED.	A = COMBIN ACROSS TH B = MANUA C = HAND-C AND CONTH D = VARIAB E = LINE RE AND CONTH	TYPES / ACCE NATION MAGN HE LINE STAF JL MOTOR ST/ OFF-AUTO SW ROL TRANSF BLE FREQUEN EACTOR, MAIL ROL RELAY SENCY POWE	NETIC RTER. ARTER. VITCH, PILOT ORMER IN ST NCY DRIVE. N DISCONNE	TARTER			13. GRAVIT 14. GRAVIT 15. UL 793 B 16. INLET BE 17. OUTLET	DUSING. WALL HOU RPROOF H LT GUARE OVER. E WITH W DOOR. DRAIN. REEN. SCREEN. ZED INLET ZED OUTL Y INLET D Y OUTLET BUTTERFL ELL.	HOUSING. ). ALL SLEEVE. T DAMPERS. LET DAMPERS. AMPERS.	DAMPER.		20. WALL 21. COPL 22. INLET 23. INLET 24. FAN R 25. AUTO 26. SOLID 27. SOLID 28. DISCO 30. FAN IN 31. ELEC 32. 1" FIL 33. 2" FIL 34. HAND	ANER SILE AIRFLOW AND OUTI ROLL OUT E MATIC BEL STATE SF STATE SF ONNECT SV ONNECT SV NLET PIEZO TRONICALI TER (ESP I D-OFF-AUTO	NCER. STRAIGHTEN ET REGAIN / EQUIPMENT. T TENSIONE EED CONTR VITCH IN FAN VITCH IN FAN OMETRIC AIR LY COMMUNI NCLUDES DII NCLUDES DII DSWITCH IN N	ATTENUATORS	/IRED). INSTALLE RE-WIRED ELD INSTA REMENT F R (ECM). ISS). ISS). ER.	). ALLED). RING.		37. DL 38. 39. 40. 41. 42. 43. 44. 45. 46. 47.	<ol> <li>EXPLOSION</li> <li>UL 762 LIST</li> <li>UCT ADAPTIV</li> <li>UL LISTED 1</li> <li>STAINLESS</li> <li>ALUMINUM</li> <li>CONCRETE</li> <li>REVERSIBL</li> <li>TWO SPEEI</li> <li>TEAO MOTO</li> <li>EXTENDED</li> <li>EXTENDED</li> <li>SHAFT GRO</li> <li>HINGED BA</li> </ol>	TING WITH VE PLATE A FOR SMOI S STEEL SH WHEEL A E INERTIA LE MOTOR D MOTOR OR. OR. OLUBE LIN OUNDING
SYSTEM	DESIGN BASIS	MODEL NUMBER	ТҮРЕ	CFM	STATIC PRESSURE (IN. WG) LV	WHEEL	TS BHP HI	MOTOR N. RPM	VOLTAGE	ТҮРЕ	LOCAT		RTER	E ACCESSO			125 Hz dB 250 / OUT IN / OU		iz dB 1000 F IN / OU					dB LwA M/ IN / OUT SO		LATORS	ROOF / W OPENIN	
GENERAL EXHAUST AHU-2 RETURN FAN	GREENHECK GREENHECK		INLINE		1.5 2.25		1.0		460/3 460/3	A A	UNIT MOL		NON-FUSE															
											AIF	R HA	NDLIN		Г SC	HEDU	LE											
.): CLUDES LOSSES FOR INTAKE LOUVE UDES FILTER LOSS) SSURE (TSP) INCLUDES SCHEDULED ER DIVERSIFIED. USE FOR COIL LOAE	DIRTY FILTER LOSS.	4. PREMIUM EFFICIE 5. FILTERS SHALL B 6. SEE SPECIFICATI	E SELECTED A			ROP			MMS - MA	R TYPES: CTORY MOUN ANUAL MOTOF - COMBINATIC BY DIVISIO	R STARTER I ON MAGNET	PROVIDED E	Y DIVISION 26			1. HORIZON 2. DIRECT D 3. SINGLE P	ACCESSORIES: FAL DRAW-THRU RIVE FAN(S) DINT 460/3/60 ELE IRCUIT FOR PREN	CTRICAL CON	NECTION WITI		E	5. PROVI 6. REFEF 7. 2" THI	IDE LOCKA R TO SHEE CK PERFO	OUTSIDE AIR AI ABLE DOOR HAN ET M006 FOR DIS ORATED LINER IN Y VALVE AT COO	NDLERS FOR SCHARGE AN	R ALL ACCESS ND RADIATED ION(S)	S DOORS D SOUND POW	VER LEVEL
			SIDE AIR CFM			SUPPI	Y FAN								COOLIN										HE	EATING COIL		
SERVED MFR MODEL NUMBER	ТҮРЕ	PRESSURE CLASS MIN	MAX CI	FM ESP (IN. WG)	TSP (IN. WG)	BHP MIN. (EA) (EA	MOTOR(S HP VOLT ) / PH TYPE	STARTER	QTY SP	FLUID	QTY CFM	MAX. FA VEL. (FP			SENSIBLE CAPACITY MBTU / HR	E TOTAL ( CAPACITY R) (MBTU / HR	) (° F) (° F) G	PM ROWS & FPI		MAX. WATER BF PD SI (FT HD)	RANCH TY ZE (IN)	PE FLUID	QTY	CFM (° F)	LAT CAP/ (°F) (MBTI	ACITY EWT U / HR) (° F)	T LWT ) (°F) GPN	M ROWS & FPI
UITES B YORK	MULTIZONE VAV	MEDIUM 30,800	0 55,000 55,	,000	2		460 / 3 VFD	UNIT MOUNTE	ED 1	25% E.G.	1 55,000	0 500	86.4 / 70.3	46.0 / 45.8	2430	4000	40 54 6	COIL		SCH			1	55,000 45	60 1,1	118 200	) 170 75	
					(2) PREMIUM E IDENTIFICA FCU-05-B- FCU-05-B- FCU-05-B- FCU-05-B- FCU-05-B- FCU-05-B-	ATION 01 02 03 04 05	OTOR AREA SER PRESS DINING / PRESS DINING / PRESS DINING / PRESS DINING / PRESS DINING /	/ LOUNGE / LOUNGE / LOUNGE / LOUNGE / LOUNGE	MODEL NU FNP1 FNP1 FNP1 FNP1 FNP1 FNP1 FNP1	2 HOF 2 HOF 2 HOF 2 HOF 2 HOF 2 HOF	TYPE	UNITS. REFE 4 = SINGLE F NON-FUSED FAN CFM OA CFM OA	R TO FLOOR I	(° F)           45 / 57           45 / 57           45 / 57           45 / 57           45 / 57           45 / 57	ÉD / NON-E N WITH UN	LAT DB/WB (° F) 52.0 / 51.8 52.0 / 51.8 52.0 / 51.8 52.0 / 51.8 52.0 / 51.8	SENSIBLE CAPACITY (BTUH)         TC CAP CAPACITY (B 21,375           21,375         24 21,375           21,375         24 24 21,375           21,375         24 24 24 25	PROVIDE ECM           20 VOLT CONTAGE TERMIN/           7AGE TERMIN/           PACITY TUH)           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6           5,525           6	ROL TRANSF	FORMER, FA		<b>EWT / LWT</b> (° F) 150 / 120 150 / 120 150 / 120 150 / 120 150 / 120	EAT DB (°F)         LA` DB (°F           70         85           70         85           70         85           70         85           70         85           70         85           70         85           70         85           70         85           70         85           70         85	HEATING COIL           T         SENSIBLE           CAPACITY           (BTUH)           14,580           14,580           14,580           14,580           14,580           14,580           14,580           14,580	TURN OFF F           10 - BAS BAG           ROWS         MA:           1         P           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1	ARY DRAIN PA           FCU UPON DE           ACNET INTERF           AX WATER           PD. (FT)           2.07           2.07           2.07           2.07           2.07           2.07           2.07           2.07           2.07           2.07           2.07	ETECTION OF	CONDENS
					ABBREVIA			GENERAL NO						EQUIPMENT A	CCESSORI		MPUTE	R RO		/C UI		CHEDI	JLE					
							D-BY POWER	1. 40°F EWT ( RETURN W 2. COOLING ( TEMPERAT INDOOR TE	CHILLED WAT VATER TEMP CAPACITY BAS TURE, 600 FT I EMPERATURE _ STATIC PRES	ER, LWT SIZEI SED ON 94.6°F ELEVATION, A E	F DB OUTDO ND 75 °F / 50	OOR AIR 0% RH		1. MICROPROC MONITORING 2. COMMON AL AUTO RESTA 3. INTEGRAL D	CESSOR CO G AND HUN LARM, REM ART, AND F DISCONNEC BOX WITH 3	ONTROL WITH MIDITY CONTRO 10TE ON/OFF, S REMOTE MONI CT SWITCH ANI 30% EFFICIENT	SETBACK CONTRO ORING CAPABILI SINGLE POINT F MEDIA AND FILT	DL, TEMPERAT TY BY BAS OWER KIT	URE CALIBRA		EM				7. IN 8. LC 9. CC	IPFLOW UNIT NTEGRAL SMC OW AMBIENT CONDENSATE BACNET INTE	OKE DETECTO CONTROL TO PUMP WITH S	ORS AND E O 0 °F SAME ELE(
					IDENTI	IFICATION	DESIGN BASIS		AREA SER	2VED	мс	DDEL NO.	INDOOR DB / WB (°F)			OR TOTAL CAP. (BTUH)	SENSIBLE CAP. (BTUH)	QTY CF	FAN M ESP (IN)	НР	ТҮРЕ	CAPACIT (KW)	TY 1			WAT. UPPLY SIZ ZE (IN)	FILTER	
					CRAC	C-03-B-01	STULZ		NFL RACK F	ROOM	C	CRS-090	75.0 / 62.4	12 1	1/4	71,838	60,367	3 2,9									0.5 2	30
														2. MINIMU 3. MAXIM 4. HEATIN 5. HEATIN 6. HEATIN 7. HEATIN CONFC 8. HEATIN CONFC 8. HEATIN CONTR AIR TEI REMARKS A. DEMAN B. NIGHT IDENTII ATU-I ATU-I	IUM AIR PR JM WATER IUM WATEF NG COIL SE NG COIL MI NG COIL MI NG COIL RC DRMING TO NG COIL SE CHEDULEE NG COIL FL ROL VALVE RMINAL UN	R DELTA-T: 20 F R PRESSURE D ELECTION BAS INIMUM FLOW AXIMUM FACE OW QUANTITY D NOTES 1-5. SELECTED WIT D LEAVING AIR OW RATES AR AND BALANCI NIT SUBMITTAL	ROP: 5.0 FT. W.G S: SCHEDULED L RATE: 0.5 GPM VELOCITY: 700 FI SHALL BE AS REC H 1 ROW AND AT TEMPERATURE. E BASED ON AN A NG VALVE SIZES : ATION	EAVING AIR TI M QUIRED TO OB THE MINIUM H AVERAGE WAT SHALL BE BAS	5" - 16" = 0.75 I EMPERATURE TAIN THE SCH OT WATER FL ER DELTA-T A ED ON THE FL ON THE FL OCC. UNC MIN. M CFM CI 240 24	IN. W.G.; 24 E HEDULED C LOW RATE C AND SHOWN LOW RATES OCC. IN IIN. S FM (	'x16" = 1.75"    ONDITIONS, V DF 0.5 GPM C/	A. W.G. /HILE AN EXCEED T PIPE SIZING. IE APPROVED T T T T T T T T T T T T T	-AT FI 90 W/ 90 W/ 90 W/ 90 W/	ATER         22,290           ATER         22,290           ATER         22,290           ATER         4,272           ATER         4,272	10 11 12 BE AT 13 14 15 14 15	0. IF HEATING DUCT MOUN COIL AND IN MAXIMUM W 1. NOISE CRIT WITH SOLIC PRESSURE 2. ATU DISCH/ EFORE FIRST TTENUATOR I 3. UNIT SUPPL 4. UNIT CONTI 5. UNIT INLET 5. UNIT INLET <b>GPM</b> <b>RUN</b> <b>SI</b> (II 2 0. 2 0. 1 0.	G CAPACITY C NTED HEATIN NSULATE DUC WATER PRESS TERIA (NC) SH D LINER AND E. HARGE DUCTW T DIFFUSER R IS TO BE PRC PLY VOLTAGE: TROL VOLTAGE: TROL VOLTAGE: TSIZE SHOWN SIZE SHOWN 0.75 0.75 0.75	CANNOT BE NG COIL TO CT AND COI SURE DROF HALL BE DE 1" THICK IN WORK TO H RBANCH. W OVIDED. :: 120 / 1 V GE: 24V
														ATU-	·05-B-05 ·05-B-06 ·05-B-07	AHU-2	230	115	46 4	46 46 46	6         8           6         8           6         8	55	85 W/	ATER         4,272           ATER         3,662           ATER         3,662	150.0	1 0.	).75	2-\

											AN	SC	HEI	JUL	.E															
N. EXHA SUPF (ENT CEN	TED FAN.	WHEEL TYP AF - AIR FO BI - BACKW FC - FORW ESP - EXTE TS - MAX. T	L. ARD INCLI ARD CURV RNAL STA	ED. TIC	STARTER T A = COMBIN ACROSS TH B = MANUAI C = HAND-C AND CONTF D = VARIAB E = LINE RE AND CONTF F = EMERGI	ATION MAG IE LINE STAL MOTOR ST IFF-AUTO SV ROL TRANSF LE FREQUE ACTOR, MA ROL RELAY	INETIC RTER. FARTER. WITCH, PI FORMER I NCY DRIV IN DISCOM	N STARTEF E.	-				3. WEATH 4. OSHA B 5. MOTOR 6. FAN CA 7. ACCESS 8. HOUSIN 9. INLET S 10. OUTLE 11. MOTO 12. MOTO 13. GRAVI 14. GRAVI 15. UL 793 16. INLET 17. OUTLE	HOUSING. E WALL HO ERPROOF ELT GUAR COVER. GE WITH V S DOOR. IG DRAIN. CREEN. TSCREEN. TSCREEN RIZED INLE RIZED OUT TY INLET E TY OUTLE BUTTERF BELL. ET CONE.	HOUSING. RD. WALL SLEEVE N. ET DAMPERS TLET DAMPEF	RS. GE DAMPE	R.		2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3	9. ROOF CUF 0. WALL CUF 1. COPLANE 2. INLET AIR 3. INLET ANE 4. FAN ROLL 5. AUTOMAT 6. SOLID STA 7. SOLID STA 8. DISCONNE 9. DISCONNE 9. DISCONNE 1. ELECTROI 2. 1" FILTER 3. 2" FILTER 4. HAND-OFF 5. CONTROL	B. R SILENCER LOW STRA OUTLET RE OUT EQUIP C BELT TEN TE SPEED ( TE SPEED ( CT SWITCH PIEZOMETE NICALLY CO (ESP INCLUI (ESP INCLUI CAUTOSWIT	GHTENER EGAIN ATT MENT. ISIONER. CONTROLI IN FAN HO IN FAN HO RIC AIRFLO MMUNICA DES DIRTY DES DIRTY CH IN MO	ENUATO	-WIRED). D INSTAI PRE-WIR FIELD IN SUREMEN OR (ECM LOSS). LOSS). RTER.	ED). STALLED). IT RING. ).				<ol> <li>37. UL 76</li> <li>DUCT AE</li> <li>38. UL LE</li> <li>39. STAIN</li> <li>40. ALUM</li> <li>41. CONO</li> <li>42. REVE</li> <li>43. TWO</li> <li>44. TEAC</li> <li>45. TEFC</li> <li>46. EXTE</li> <li>47. SHAF</li> </ol>	LOSION PROOF 62 LISTING WITH DAPTIVE PLATE ISTED FOR SMO NLESS STEEL S MINUM WHEEL A CRETE INERTIA ERSIBLE MOTOR D MOTOR. C MOTOR. C MOTOR. ENDED LUBE LIN FT GROUNDING GED BASE KIT
n	STATIC PRESSURE (IN. WG)	WHE		BHP MIN HP		VOLTAGE	ТҮРЕ	LO	OCATION	STA	RTER	ГҮРЕ	ACCESS			B 125 Hz N / OUT	dB 250 Hz IN / OUT	z dB 50 IN / 0		dB 1000 Hz IN / OUT	dB 2000 Hz IN / OUT	dB 400		B 8000 H IN / OUT	dB Lw. IN / OU			SOLATORS		DOF / WALL DPENING
00	1.5 2.25			1.00 30.0		460/3 460/3	A		MOUNTEI		NON-FU																			
								A	AIR H		NDL	NG	UNI	T SC		ULE														
ORM	IFE PRESSUR IATION. TSP (IN. WG) QT	SUI	PPLY FAN	MOTOR(S)	STARTER	VFD - FA MMS - M MAG-X-L	FLUIC	DUNTED VA DTOR STAR ATION MAG ISION 26		IDED B		DB / LAT	T DB / WB (° F)	SENSIBL	2. DIRECT 3. SINGLE 120/1/60 ING COIL	POINT 460 POINT 460 CIRCUIT F	W-THRU CO N(S)		ONNECT ITS AND	MAX. MA) IR PD PD	C. ER BRANCH SIZE (IN)		5. PR 6. RE 7. 2" <sup>-1</sup> 8. PR	OVIDE LO FER TO SI THICK PEF OVIDE 3-V	CKABLE DC IEET M006	OOR HAN FOR DIS LINER IN AT COO	NDLERS F SCHARGE		CESS DOOF ATED SOUN WATER CO	ND POWER LEVE
	2		EA) /	ТҮРЕ	LOCATION	<b>QTY</b>	P - 25% E.	G. 1 5	55,000	500	86.4 / <sup>°</sup>		6.0 / 45.8	(MBTU / H 2430	4000	40	54 60'			. WG) (FT H		PREHEA	AT .	1	55,000				200 170	
																F	AN (	COI	LU	NIT S	CHEI	DULI	E							
	LÓSSES, G (2) PREMIU IDENTIF FCU-0 FCU-0 FCU-0 FCU-0	IAL STATIC P         RILLES, FITTI         IM EFFICENCY         ISSUE         ICATION         ISS-B-01         ISS-B-02         ISS-B-03         ISS-B-04         ISS-B-05         ISS-B-06	NGS, AND MOTOR PRE PRE PRE PRE		ED LOUNGE LOUNGE LOUNGE LOUNGE LOUNGE	MODEL N FNP FNP FNP FNP FNP	12 12 12 12 12 12 12	TYPE HORIZONT, HORIZONT, HORIZONT, HORIZONT, HORIZONT,	2 = 2" 3 = DI3 UNITS 4 = SII NON-F CFM AL 900 AL 900 AL 900 AL 900 AL 900	PLEAT SCHAR B. REFE	R TO FLOC POINT ELEC DISCONNE	VAWAY FI ETURN AI OR PLANS CTRICAL C CT FOR F GPM E' 5 5 5 5 5 5	IR GRILLE( 5 FOR DUC CONNECT	TED / NON	(° F)           3         52.0 / 51.8           3         52.0 / 51.8           3         52.0 / 51.8           3         52.0 / 51.8           3         52.0 / 51.8           3         52.0 / 51.8           3         52.0 / 51.8           3         52.0 / 51.8	ER COOLIN SENSIE CAPAC (BTUH 3 21,37 3 21,37 3 21,37 3 21,37 3 21,37	6 = PR 7 = 120 VOLTA G COIL G COIL G COIL G COIL CAPA (BTU 5 25,5 5 25,5 5 25,5 5 25,5 5 25,5 5 25,5	AL CITY 225 225 225 225		AX WATER	TROLLER	NTACTOR,         GPM       E         1.6       1.6         1.6       1.6         1.6       1.6         1.6       1.6         1.6       1.6		<ul> <li>EAT DB (° F)</li> <li>70</li> <li>70</li> <li>70</li> <li>70</li> <li>70</li> <li>70</li> <li>70</li> </ul>	DB         CAP (B)           85         14           85         14           85         14           85         14           85         14           85         14           85         14           85         14		PLANS F 9 = AUXII TURN OF 10 - BAS	OR THERMO LLARY DRA F FCU UPO BACNET IN	OSTAT LOC IN PAN WIT N DETECTIO	TH FLOAT SWITC ON OF CONDEN MOTOR
	ABBRI	EVIATIONS:			GENERAL NO		ES TO ALL	):				EQ		ACCESSOF		MPU	JTEF	RRC	DO	/I A/C	UNIT	SC	HEC	DUL						
		OPTIONAL ST	AND-BY PO	DWER	1. 40°F EWT C RETURN W 2. COOLING C TEMPERAT	CHILLED WAT ATER TEMP CAPACITY BA URE, 600 FT CMPERATURE STATIC PRE	TER, LWT S ASED ON 9 ELEVATIC E	SIZED TO M 4.6°F DB OL N, AND 75 °	JTDOOR AI °F / 50% RH			1. I 2. ( 3. I 4. / 5. I	MICROPRO MONITORI COMMON AUTO RES INTEGRAL AIR FILTEF	DCESSOR C NG AND HU ALARM, RE TART, AND DISCONNE R BOX WITH SUPPLY AN	CONTROL WIT JMIDITY CONT MOTE ON/OFF REMOTE MOI ECT SWITCH A H 30% EFFICIE ND RETURN G	ROL 5, SETBACH NITORING ND SINGLE NT MEDIA	CONTROL CAPABILITY POINT PO	, TEMPER BY BAS WER KIT	RATURE	CALIBRATION							7 8 9 1	7. INTEGRAL 3. LOW AMB 9. CONDENS	- SMOKE DE IENT CONTE GATE PUMP INTERFACE	12" HIGH FLOOR ETECTORS AND ROL TO 0 °F WITH SAME ELE E WITH NETWOR
				BIGN BASIS		AREA SEF			MODEL		INDOO DB / WB	R (°F) (	GPM B	RANCH	TOTAL CAP. (BTUH)		UH)		CFM	AN ESP (IN)	НР	ТҮРЕ	IEAT CAPA (K		TYPE			WAT. SUPPLY SIZE (IN)	SIZE (IN)	
		RAC-03-B-01		STULZ		NFL RACK	ROOM		CRS-09	90	75.0 / 62	2.4	12	1 1/4	71,838	60,	367	3	2,900	0.00	0.25	ΙΝΔ			SCH				0.5 TW	2 30 ATER I
													1. MAXI 2. MININ 3. MAXI 4. HEAT 5. HEAT 6. HEAT 7. HEAT CON 8. HEAT 9. HEAT CON AIR T REMAR A. DEM B. NIGH	MUM WATE MUM WATE FING COIL S FING COIL N FING COIL F FORMING T FING COILS SCHEDULE FING COIL F TROL VALV ERMINAL L	PRESSURE DR RESSURE DR R DELTA-T: 20 ER PRESSURE SELECTION BA MINIMUM FLOV MAXIMUM FAC ROW QUANTIT TO NOTES 1-5. SELECTED W ED LEAVING A FLOW RATES A /E AND BALAN JNIT SUBMITT.	0 F E DROP: 5.0 ASIS: SCHE W RATE: 0. E VELOCIT Y SHALL B VITH 1 ROW IR TEMPEF ARE BASEI CING VALV AL.	C. LING M 00 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AVING AIF 1 IRED TO 1 IE MINIUN ERAGE W	R TEMPE OBTAIN M HOT W VATER D	RATURE THE SCHEDU ATER FLOW I ELTA-T AND S N THE FLOW	LED CONDIT RATE OF 0.5 SHOWN FOR RATES LISTE	IONS, WHII GPM CAN I RUNOUT P	LE EXCEED PIPE SIZIN APPROVE		<b>FLUID</b> WATER WATER	MIN BTUH 22,290 22,290		DUCT N COIL AN MAXIMU 11. NOISE WITH S PRESS 12. ATU DI BEFORE F ATTENUAT 13. UNIT S 14. UNIT C 15. UNIT IN	MOUNTED H ND INSULAT UM WATER CRITERIA ( SOLID LINEF SURE. ISCHARGE I FIRST DIFFU TOR IS TO E SUPPLY VOL CONTROL VO	CITY CANNOT BI HEATING COIL TO TE DUCT AND CO PRESSURE DRO (NC) SHALL BE D R AND 1" THICK I DUCTWORK TO I JSER RBANCH. V BE PROVIDED. LTAGE: 120 / 1 V OLTAGE: 24V SHOWN IS MINIM CONTROL TY 2-WAY
													ATU ATU ATU	U-05-B-03 U-05-B-04 U-05-B-05 U-05-B-06	AHU-2 AHU-2 AHU-2 AHU-2 AHU-2	23 23 23 23 23	0 0 0	115 115 115 115 115	46 46 46 46	46 46 46 46 46	6 6 6 6	8 8 8 8 8	55 55 55 55 55	90 90 90 85	WATER WATER WATER WATER	4,272 4,272 4,272 4,272 3,662	150.0 150.0 150.0	1 1 1 1 1	0.75 0.75 0.75 0.75 0.75	2-WAY 2-WAY 2-WAY 2-WAY
														U-05-B-06 U-05-B-07	AHU-2 AHU-2		-	115 115	46	46	6	8	55		WATER			1	0.75	2-WAY 2-WAY

									F	AN S	SCHE																			
	D FAN. STER. Y FAN. ATOR. RIFUGAL. L (INLINE).	AF - AIR FOIL. BI - BACKWAR FC - FORWAR ESP - EXTERN	RD INCLINE. D CURVED. IAL STATIC		A = COMBI ACROSS T B = MANU/ C = HAND- AND CONT D = VARIA E = LINE R AND CONT	NATION MAG HE LINE STAF AL MOTOR ST OFF-AUTO SV ROL TRANSF BLE FREQUEN EACTOR, MAI ROL RELAY	NETIC RTER. ARTER. WITCH, PI ORMER I NCY DRIV IN DISCOI	N STARTER /E.			1. LINE 2. DOU 3. WEA 4. OSH 5. MOT 6. FAN 7. ACC 8. HOU 9. INLE 10. OU 11. MC 12. MC 13. GR 14. GR 15. UL 16. INL 17. OU	ED HOUSING JBLE WALL F ATHERPROO IA BELT GUA FOR COVER. I CAGE WITH CESS DOOR. JSING DRAIN ET SCREEN. JTLET SCREED TORIZED OU CORIZED OU CAVITY INLET AVITY OUTL 793 BUTTER LET BELL.	HOUSING. DF HOUSING ARD. I WALL SLEI N. EN. ILET DAMPE UTLET DAM T DAMPERS LET DAMPER RFLY DISCH	EVE. ERS. IPERS. RS. ARGE [				20. WA 21. CO 22. INL 23. INL 24. FAI 25. AU 26. SO 27. SO 28. DIS 30. FAI 31. ELE 32. 1" F 33. 2" F 34. HAI	LL CURB. PLANER SII ET AIRFLOV ET AND OU N ROLL OU TOMATIC B LID STATE CONNECT CONNECT N INLET PIE ECTRONICA FILTER (ESF FILTER (ESF	LENCER. W STRAIG TLET RE TEQUIPM ELT TENS SPEED C SPEED C SWITCH SWITCH SWITCH ZOMETR LLY COM P INCLUD TOSWITC	GHTENER GAIN ATT IENT. SIONER. ONTROLL ONTROLL IN FAN HO IN TO TO TO TO TO IN TO TO TO IN TO IN TO IN TO INTO IN TO IN TO IN TO IN TO IN TO IN TO IN TO IN TO	ENUATC ER (PRE ER (FIEL DUSING DUSING DUSING DUSING TED MOT FILTER FILTER	E-WIRED LD INSTA (PRE-WI (FIELD IN SUREME FOR (ECI LOSS). LOSS). RTER.	ÁLLED). RED). NSTALLE ENT RING M).	G.			37. U DUC 38. U 39. S 40. A 41. C 42. F 43. T 44. T 45. T 46. E 47. S	EXPLOSION I JL 762 LISTIN T ADAPTIVE JL LISTED FO STAINLESS S ALUMINUM W CONCRETE I REVERSIBLE TWO SPEED TEAO MOTOR TEFC MOTOR EXTENDED L SHAFT GROU	NG WITI E PLATE FOR SMC STEEL S WHEEL / INERTIA E MOTOF MOTOF PR. R. LUBE LII UNDING
<form>      No.     No.     No.     No.     No.     No.     No.     No.       State     No.     No.     No.     No.     No.     No.     No.     No.       State     No.     No.     No.     No.     No.     No.     No.     No.       No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.       No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.     No.</form>	RESSURE					VOLTAGE	ТҮРЕ	LOC			PE ACCI	ESSORIES															ISOLATOR	s	ROOF / WA OPENING	
<text></text>				1.00																										
<text></text>								Α	IR HA		IG UI		CHEI	DUI	LE															
						VFD - FA MMS - M	CTORY M ANUAL MO COMBIN	OTOR STARTE	R PROVIDED	BY DIVISION 26			1. HOF 2. DIRE 3. SINC	RIZONTA ECT DRI GLE POI	AL DRAW IVE FAN(\$ INT 460/3,	-THRU CONF 3) '60 ELECTRI	CAL CONNI	IECTION W		ATE		5. PR 6. RE 7. 2" 1	ovide Lo Fer to s Thick Pe	OCKABLI SHEET M ERFORAT	E DOOR HA 1006 FOR D TED LINER	NDLERS	FOR ALL A SE AND RAE ECTION(S)	CCESS D NATED S	OUND POWE	ER LEVE
		SUPP		DTOR(S)								coo															HEATING			
	TSP N. WG) QT	Y BHP MIN. (EA) (EA	A) / PH	ТҮРЕ				D QTY C				VVB CAPAC	CAP	ACITY				AIR PD	WATER PD		TYPE	FLI	UID Q.	TY CF	FM EAT (°F)	LAT (°F) (	CAPACITY MBTU / HR)	EWT (° F)	LWT (°F) GPM	ROWS & FPI
	2		460 / 3	VFD	UNIT MOUNT	ED 1	25% E.	G. 1 55,	000 500	86.4 / 70.	3 46.0 / 45	.8 2430	) 40	000	40	54 601					PREHEA	λ <b>Τ</b>		1 55,0	000 45	60	1,118	200	170 75	
															F	AN C	OIL	UNI	T SC	HEC	OULE	3								
	LÓSSES, GI (2) PREMIU	RILLES, FITTING	<b>3S, AND FIRE</b> IOTOR	DAMPER	ETC.	MODEL N	UMBER	TYPE	2 = 2" PLEA 3 = DISCHA UNITS. REF 4 = SINGLE NON-FUSEI	ATED THROWAN RGE AND RETU ER TO FLOOR POINT ELECTF D DISCONNECT	WAY FILTERS JRN AIR GRII PLANS FOR I RICAL CONNE FOR FAN MO	LLE(S) FOR N DUCTED / NO ECTION WITH OTOR AND EI	DN-DUCTED I UNIT MOUN LECTRIC HE	 NTED ATER C	SENSIBLI	6 = PROV 7 = 120 V( VOLTAGE COIL	IDE ECM M DLT CONTR TERMINAL	IOTOR WI ROL TRAN L STRIP	TH CONTRO ISFORMER,		TACTOR,	AND LOV		HE.	SENSIBLE	PLANS 9 = AU) TURN ( 10 - BA	FOR THERI (ILLARY DR OFF FCU UP S BACNET	IOSTAT AIN PAN ON DETE NTERFA	LOCATION I WITH FLOAT ECTION OF C CE	AT SWITC CONDEN MOTOR
									. 900	0.5 5	(° F) 5 45 / 57	(° F) 7 74 / 61	) (° F 1.8 52.0 /	<b>-)</b> 51.8	<b>(BTUH)</b> 21,375	(BTUH) 25,525	6	2 PD. (F	<b>•T) SIZI</b>		1.6	<b>(° F)</b> 150 / 120	(° F) 70	(° F) 85	<b>(BTUH)</b> 14,580	<b>ROWS</b>	<b>PD. (FT</b> 2.07	) SIZI	ANCH         QTY.           1/2         1           1/2         1	HP
PLANDAG         PRESERVANCE-URINE         PRES         PRESERVANCE-URINE         PRES         PRESERVANCE         PRESERVANCE <th< td=""><td>FCU-09</td><td>5-B-03 5-B-04</td><td>PRESS D</td><td>DINING / L</td><td>OUNGE</td><td>FNP1</td><td>12</td><td>HORIZONTAL HORIZONTAL</td><td>. 900 . 900</td><td>0.5 5</td><td>5 45 / 57</td><td>7 74 / 61 7 74 / 61</td><td>1.8 52.0 / 1.8 52.0 /</td><td>51.8 51.8</td><td>21,375 21,375</td><td>25,525 25,525</td><td>6</td><td>8.45</td><td>5</td><td>1</td><td>1.6 1.6</td><td>150 / 120 150 / 120</td><td>70 70</td><td>85 85</td><td>14,580 14,580</td><td>1 1 1</td><td>2.07 2.07</td><td></td><td>1/2 1 1/2 1 1/2 1</td><td>1/2 1/2 1/2</td></th<>	FCU-09	5-B-03 5-B-04	PRESS D	DINING / L	OUNGE	FNP1	12	HORIZONTAL HORIZONTAL	. 900 . 900	0.5 5	5 45 / 57	7 74 / 61 7 74 / 61	1.8 52.0 / 1.8 52.0 /	51.8 51.8	21,375 21,375	25,525 25,525	6	8.45	5	1	1.6 1.6	150 / 120 150 / 120	70 70	85 85	14,580 14,580	1 1 1	2.07 2.07		1/2 1 1/2 1 1/2 1	1/2 1/2 1/2
																,	-	-		1						1			1/2 1	1/2
Immunitie         Immunitie <t< td=""><td></td><td></td><td>ND-BY POWEF</td><td>R</td><td><ol> <li>40°F EWT RETURN N</li> <li>COOLING TEMPERA INDOOR 1</li> <li>EXTERNA</li> </ol></td><td>CHILLED WAT WATER TEMP CAPACITY BA TURE, 600 FT EMPERATURE L STATIC PRE</td><td>ER, LWT S SED ON 9 ELEVATIO</td><td>SIZED TO MAX 14.6°F DB OUT DN, AND 75 °F</td><td>DOOR AIR / 50% RH</td><td></td><td><ol> <li>MICRO MONITO</li> <li>COMMO AUTO F</li> <li>INTEGF</li> <li>AIR FIL</li> <li>INTEGF</li> </ol></td><td>PROCESSOR ORING AND H ON ALARM, R RESTART, AN RAL DISCONN .TER BOX WIT RAL SUPPLY ,</td><td>ORIES: R CONTROL ' HUMIDITY CO REMOTE ON/ ND REMOTE NECT SWITC TH 30% EFFI AND RETUR</td><td>WITH UI ONTROL OFF, SE MONITC CH AND S</td><td>NIT MOUI L ETBACK C DRING CA SINGLE F MEDIA AN</td><td>NTED LARGE CONTROL, TI PABILITY BY POINT POWE</td><td>E GRAPHIC EMPERATU 7 BAS R KIT</td><td>: LCD DISF JRE CALIB CH</td><td>PLAY FOR</td><td></td><td></td><td></td><td>DUL</td><td>.E</td><td>HUMI</td><td>DIFIER</td><td>7. INTEGRA 8. LOW AM 9. CONDEM</td><td>AL SMOK BIENT CO ISATE PU</td><td>E DETECTOR ONTROL TO ( UMP WITH SA</td><td>RS AND 0 °F AME ELE NETWOR</td></t<>			ND-BY POWEF	R	<ol> <li>40°F EWT RETURN N</li> <li>COOLING TEMPERA INDOOR 1</li> <li>EXTERNA</li> </ol>	CHILLED WAT WATER TEMP CAPACITY BA TURE, 600 FT EMPERATURE L STATIC PRE	ER, LWT S SED ON 9 ELEVATIO	SIZED TO MAX 14.6°F DB OUT DN, AND 75 °F	DOOR AIR / 50% RH		<ol> <li>MICRO MONITO</li> <li>COMMO AUTO F</li> <li>INTEGF</li> <li>AIR FIL</li> <li>INTEGF</li> </ol>	PROCESSOR ORING AND H ON ALARM, R RESTART, AN RAL DISCONN .TER BOX WIT RAL SUPPLY ,	ORIES: R CONTROL ' HUMIDITY CO REMOTE ON/ ND REMOTE NECT SWITC TH 30% EFFI AND RETUR	WITH UI ONTROL OFF, SE MONITC CH AND S	NIT MOUI L ETBACK C DRING CA SINGLE F MEDIA AN	NTED LARGE CONTROL, TI PABILITY BY POINT POWE	E GRAPHIC EMPERATU 7 BAS R KIT	: LCD DISF JRE CALIB CH	PLAY FOR				DUL	.E	HUMI	DIFIER	7. INTEGRA 8. LOW AM 9. CONDEM	AL SMOK BIENT CO ISATE PU	E DETECTOR ONTROL TO ( UMP WITH SA	RS AND 0 °F AME ELE NETWOR
AIR TERMINAL UNIT SCHEDULE (HOT 1           CENERAL NOTES         1.000000000000000000000000000000000000	IDE	NTIFICATION	DESIGN	BASIS		AREA SER	RVED		MODEL NO.		) GPM						Y CFM				TYPE			TYP			SUPPLY	SIZE	(IN) NO.	% EFF.
GENERAL NOTES:       1. MAXAMUM ARE PRESSURE DROP AT OCC. COOLING MAX CPM. 5" - 15" = 0.75 IN. W.G. 24"x16" = 1.75 IN. W.G.       10. IF HEATING         1. MAXAMUM WATER DELTAT: 22 F       DUCTMOUN         3. MAXAMUM WATER DELTAT: 22 F       DUCTMOUN         4. HEATING COLL MANUMAR FLOW RESSURE DROP. 6.0 FT W.G.       COLL MOUN         4. HEATING COLL MANUMAR FLOW RESSURE DROP. 6.0 FT W.G.       MAXAMUM WATER PRESSURE DROP. 6.0 FT W.G.       MAXAMUM WATER PRESSURE DROP. 6.0 FT W.G.         6. HEATING COLL MANUMAR FLOW RATE: 0.5 GPM       MAXAMUM AVERTICE MARKING PRESSURE DROP 6.0 FT W.G.       MAXAMUM AVERTICE MARKING PRESSURE DROP 6.0 FT W.G.         7. HEATING COLL MAXIMUM FLOW WATE: 0.5 GPM       MAXAMUM AVERTICE MARKING PRESSURE DROP TO DETAIN THE SCHEDULED CONDITIONS, WHILE       PRESSURE CONTROLLED CONTROL AND AND AT THE MINUM HOT WATER FLOW RATE OR 0.5 GPM CAN EXCEED       10. JUNE CONTROL AND AND THE MARKING PRESSURE DROP TO BETAIN THE SCHEDULED CONDITIONS, WHILE       12. SUIT DROP WATER ARE BASED ON AN AVERAGE WATER FLOW RATE OR 0.5 GPM CAN EXCEED       13. UNIT CONTROL AND AND AT THE MARKING PRESSURE P	CF	RAC-03-B-01	STUI	ILZ		NFL RACK F	ROOM		CRS-090	75.0 / 62.4	12	1 1/4	71,838	3	60,36	7 3	2,900											0.5		30
											1. M 2. M 3. M 4. H 5. H 6. H 7. H 0. H 0. H 0. H 0. H 0. H 0. H 0. H 0	MAXIMUM AIR MINIMUM WAT MAXIMUM WAT MAXIMUM WAT MAXIMUM WAT MAXIMUM WAT MAXIMUM WAT MEATING COIL MEATING COIL CONFORMING MARKS: DEMAND CON MARKS: DEMAND CON	R PRESSURE TER DELTA-T ITER PRESSI L SELECTION L MINIMUM F L MAXIMUM F L MAXIMUM F L MAXIMUM F L MAXIMUM F L MAXIMUM F L ROW QUAN G TO NOTES LS SELECTE FILED LEAVIN L FLOW RAT LVE AND BAI L UNIT SUBW NTROLLED V ACK	F: 20 F URE DR N BASIS FLOW RA FACE VE NTITY SH 1-5. D WITH G AIR TH ES ARE LANCING IITTAL.	CP: 5.0 F S: SCHED ATE: 0.5 ELOCITY: HALL BE 1 ROW A EMPERA BASED C G VALVE TION CCC COOLI MAX CFM 1,200 1,200 230 230 230	T. W.G. ULED LEAVI GPM 700 FPM AS REQUIRE ND AT THE I TURE. DN AN AVER SIZES SHAL SIZES SHAL G NG HEA M CI G G G G G G G G G G G G G G G G G G	NG AIR TEM ED TO OBTA MINIUM HO AGE WATE L BE BASE L BE BASE C TING AX FM 200 22 15 2 15 2 15 2 15 2 15 2	" - 16" = 0.1 MPERATU AIN THE S DT WATER ER DELTA- ED ON THE DON THE 240 240 240 240 240 240 240 240	75 IN. W.G.; : IRE ICHEDULED FLOW RATE T AND SHOW E FLOW RATE FLOW RATE 240 240 240 240 240 240 240 240 240 240	24"x16" = CONDITIO E OF 0.5 G WN FOR F ES LISTED INLET SIZE (IN.) 12	1.75" IN. W DNS, WHIL PM CAN E UNOUT P D IN THE A D IN THE A D IN THE A SIZE (IN.) 14	C.G. E EXCEED IPE SIZIN PPROVE	IG. ED 90 90 90 90 90	FLUIC WATE WATE WATE WATE WATE	D MIN BTUH R 22,29 R 22,29 R 22,29 R 4,272 R 4,272 R 4,272 R 4,272	H (°F) 0 150. 0 150. 2 150. 2 150. 2 150.	10. IF HE DUCT COIL MAXII 11. NOIS WITH PRES 12. ATU BEFORE ATTENU 13. UNIT 14. UNIT 15. UNIT 15. UNIT	ATING C MOUNTI AND INSI JUM WA E CRITEF SOLID L SURE. DISCHAR FIRST D ATOR IS SUPPLY CONTRO	APACITY CA ED HEATING ULATE DUCT TER PRESSL RIA (NC) SHA INER AND 1" AGE DUCTWO DIFFUSER RB TO BE PROV VOLTAGE: 1 DL VOLTAGE: 1	ANNOT B G COIL TO T AND CO URE DRO ALL BE D " THICK I ORK TO BANCH. V VIDED. 120 / 1 V E: 24V

ATE AN MOKE EL SHA EL ANE TIA BA	REASE D CUR CONTI	TROUGH B EXTENS ROL SYST HARDW/ ING.	, STEEL D SION TO M 'EM.	DRAIN, HI	NGED F	RIVE ASSEI AN ACCESS HES ABOVI	S,	OF.	M&T STAD 1101 Russell S	
TOR. "OR. "LINES NG RII									Cens 2020 K Street NW Suite 200 Washington, DC 2000	
									United States	
		RATING HT (LBS)	AC	CESSOF	RIES		RE	MARKS	Maryland Stadium Au 333 West Camden St	S
									&, 351 W Camden St Baltimore, MD 21201 United States Tel 410.333.1560 Fax xxx.xxx.xxxx	St
VELS		BAG FILT PARTICLE 1 = FLAT 2 = FLAT	TER: AAF ER: VILED E FILTER:	ON T60, N AAF VAR BAG FILTI	IERV 13 ICEL SH	FF., MERV 8 , 99.9% EFF.	, MERV 17	,	Cerami & Associates 1155 15th St NW #606 Washington, DC 20009 United States Tel 202.448.9975 Fax xxx.xxx	
					ERATING			FIL	TER Elevate Environments 160 West 900 South Solt Lake City, UT 841	0 <i>'</i>
	MAX. AR PD N. WG)	MAX. WATER PD (FT. HD)	BRANC SIZE (II	WEIC	ERATING		SORIES	MODULE TYPE	VELOCITY (FPM) Salt Lake City, UT 841 United States Tel 801.363.1881 Fax xxx.xxx.xxxx	U
ITCH II ENSAT	R TO FI N PAN 1 E	Ō		AIRSTRI 2,000 CF	EAMS AT M	TECTORS LO TALL FCUS WAY VALVE	WITH AIR	FLOW GRE	Tel 801.363.1881	
DR HP	VOL	Г/РН МС			(L x V	MUM SIZE V x H) (IN)		REMARK	S Date De	;C
1/2 1/2 1/2	460/3 460/3 460/3	3/60 4.88 3/60 4.88	8 15 8 15		47 x 47 x	33 x 17 33 x 17 33 x 17	1, 3, 4, 6, 1, 3, 4, 6,	7, 8, 9, 10 7, 8, 9, 10 7, 8, 9, 10		
1/2 1/2 1/2	460/3 460/3 460/3	3/60 4.8	8 15		47 x	33 x 17 33 x 17 33 x 17	1, 3, 4, 6,	7, 8, 9, 10 7, 8, 9, 10 7, 8, 9, 10		
ND DU	AL FLOA	AT CONDE	EAK DETE NSATE PU ON AS EV ECTRICA			UNIT WEIGHT		ACCESSOR	NES	
0		7.0	15.0	460/3/60	Y	380	1,	2, 3, 4, 6, 7,	3, 9, 10	
T BE M T TO MI COIL. DROP A E DETE CK INSI TO HAV H. WHE D. 1 V	et, elii Eet SC Compl ND Min Ermine Jlatioi /e a mii :re 4' o	HEDULED Y WITH TH IIMUM DEI D USING A N AT THE I	DIL FROM CAPACITY HE MAXIMI TA-T INDI AHRI STAN INDICATEI	Y. INDEPE UM AIR PI CATED A IDARD 88 D MAXIMU 4' OF 1" TI	ENDENTL RESSUR BOVE IN 5-2008 A JM INLET HICK AC	NOTES 1-3. PPENDIX E STATIC OUSTICAL L	INING FRI		OF UNIT IISHED SOUND	
	INL	MAX .ET S.P.			REM	ARKS	REVISI	ON NOTE-D	ELTA #	
_ TYPE	(IN	I. W.G.) 1 1 1	25 25	RAD           29           29           29						
.Y .Y		1 1 1	34 34 34	26 26 26						
Y Y Y Y Y			. 94	26						
- TYPE - Y - Y - Y - Y - Y - Y - Y - Y		1 1 1 1 1 1	34 34 34 34 29	26 26 26 29						

# **M&T BANK** STADIUM

1101 Russell St, Baltimore, MD 21230

## Gensler

Tel 202.721.5200 Fax 202.872.8587

Maryland Stadium AuthorityA & F ENGINEERS INC.333 West Camden St. Ste. 5001112 16th St NW UNIT 920,&, 351 W Camden St Ste. 300,Washington, DC 20036Baltimore, MD 21201United States United States Tel 202. 628.1600 Fax xxx.xxx.xxxx

> Culinary Advisors 2004 Stockton Rd Phoenix, MD 21042 United States Tel 443.243.4814

Elevate Environments 160 West 900 South Salt Lake City, UT 84101 United States Tel 801.363.1881 Fax xxx.xxx.xxxx

United States Tel 615.383.1113 Fax 615.386.8469

2995 Sidco Dr

Nashville, TN 37204

SSR

Setty 1415 Eliot Place NW Suite 100 Washington, DC 20007 United States Tel 202.393.1523 Fax 202.315.3059

 $\triangle$  Date Description

## **NOT FOR** CONSTRUCTION

Project Name M&T BANK STADIUM

Project Number 09.0186.000

Description MECHANICAL SCHEDULES

Scale NOT TO SCALE

M0.02.PR

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# AHU 1 and 2, 3 and 4, 5 and 6, and 7 and 8 were combined during original construction. Only 4 AHUs exist, not 8. AIR HANDLING UNIT SCHEDULE

				FAN S	ECTION	ł										COOLIN	G SECTION											HEATING SI	ECTION						
DESIG	DUTY	CFM	MIN. OA CFM	TSP INCH H₂O	MOTO BHP I	OR HP	PM V	WHEEL DIA INCH	E DB	AT <sup>•</sup> F WB		LAT 'F	VB I	OTAL SENS	GPM @ 36°F EWT 54°F LWT	MAX H₂O PD FT H₂O	MIN TOTAL FACE AREA	FACE VEI	OF	MAX FIN SPACING FIN/IN	MAXIMUM AIR PD IN H₂ O	MIN ROWS	EAT •F			930°F	MAXIMUM H <sub>2</sub> O PD FT H <sub>2</sub> O	AIR PD	MIN TOTAL FACE AREA	FACE VEL	OF	MAX FII SPACIN FIN/IN	G   MIN	ELECTRICAL	REMARKS
U-1	CLUB/SUITES - A	18200	11650	6.39	24.3	30 14	+71	AF30	87.6	5 71.	8 42.	5 4	2.5   1	565 898	197	40	40.0	455	2	14	1.80	12	33.8	53.8	393	28.0	27	0.09	40.0	495	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-2	CLUB/SUITES - A	18200	11650	6.39	24.3	30 14	+71/2	AF30	87.6	5 71.	8 42.	5 4	2.5   1	565 898	197	40	40.0	455	2	14	1.80	12	33.8	53.8	393	28.0	27	0.09	40.0	495	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-3	CLUB/SUITES - B	27500	15400	(7.0	37.6	50 14	4Š1)	AF33	86.	1 70.	5 42.	5 4	2.5 2	222 1311	280	40	58.8	468	2	14	1.87	12	39.0	59.0	594	42.4	22	0.09	58.8	468	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-4	CLUB/SUITES – B	27500	15400	7.0	37.6	50 14	451)	AF33	86.	1 70.	5 42.	5 4	2.5 2	222 1311	280	40	58.8	468	2	14	1.87	12	39.0	59.0	594	42.4	22	0.09	58.8	468	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-5	CLUB/SUITES - C	27500	17050	7.0	37.6	50 14	451)	AF33	87.2	2 71.	6 42.	6 4	2.6 2	336 1341	295	40	58.8	468	2	14	1.87	12	35.1	55.1	594	42.4	22	0.09	58.8	468	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-6	CLUB/SUITES - C	27500			<u></u>	ىدىسىمەت ھەت ھە	an and the second s	AF33						336 1341	295	40	58.8	468	2	14	1.87	12				42.4	22	0.09	58.8	468	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-7	CLUB/SUITES - D	18200	12010	6.30	24.3	30 14	+71	AF30	87.9	9 72.	2 42.	6 4	2.6   1	590 902	201	39	40.0	455	2	14	1.80	12	32.4	52.4	393	28.0	26	0.09	40.0	455	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-8	CLUB/SUITES - D	18200						AF30					2.6 1			39	40.0	455	2	14	1.80					28.0	26	0.09	40.0	455	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-9	PRESS LEVEL						and the second se						2.5	806 560	102	29	30.2	441	1	14	1.68	12	57.5	77.5		20.5	22	0.08	30.2	441	2	8	1	480V/3ø/60HZ	LOW TEMP/FP VAV
U-10	GAME DAY SERVICES - A		1800											162 82.1		28	5.5	327	1	10	0.45	6	10		146	10.7	21	0.05	5.5	325	1	8	2	480V/3¢/60HZ	CV/SZ
J-11	STADIUM OPERATIONS - B	2900	1420	2.5	2.2	3 15	562 FC	C10X10	0 84.8	3 69.	0 52	1 5	1.7	155 104	18.9	24	7.6	383	1	14	0.57	5	44	85	128	9.4	13	0.07	7.6	383	1	8	1	480V/3ø/60HZ	CV/SZ
	BROADCAST MEDIA – B	3000	1350	2.0	2.0	3 14	193 FC	C10X10	0 84.	1 68.	2 52	7 5	1.9	150 103	18.5	27	7.6	396	1	8	0.52	6	46	85	126	9.3	12	0.07	7.6	396	1	8	1	480V/3ø/60Hz	CV/SZ
<u>U-13</u>	SECURITY – B													52.2 46.1	7.9	36	3.4	471	1	10	0.63	5	63	85	38.0	2.8	5	0.10	3.4	471	1	8	1	480V/3ø/60HZ	CV/SZ
<u>U-14</u>	OFFICIALS - B		2500													25	5.5	455	1	10	0.98	8	10	85	203	14.9	25	0.08	5.5	451	1	10	2	480V/3ø/60HZ	CV/SZ
	VISITING LOCKER NO.1 - B	9300	9300	3.5			and the second se							843 429		19	21.3	437	1	10	0.92	8	10	85	753	55.2	21	0.09	20.4	457	1	8	2	480V/3ø/60HZ	CV/RH
U-16	VISITING LOCKER NO.2 - B		8100					and the second se		CONTRACTOR OF THE OWNER				736 374		21	21.3	380	1	8	0.66	8	10			48.1	21	0.07	20.4	398	1	8	2	480V/3ø/60HZ	CV/RH
	HOME TEAM AREA - B	12900	12900	3.5										177 598	144	19	30.2	427	1	10	0.89	8	10	85 1		76.6	22	0.08	29.7	434	1	8	2	480V/3ø/60HZ	
U-18	HOME TEAM STORAGE - B	2600	260	2.5		2 15							2.0 9			34	5.5	473	1	10	0.64	5	69		56.2	4.0	14	0.10	5.5	473	1	8	1	480V/3ø/60HZ	
U-19	MEDIA LOUNGE – A		640											6.0 27.5		9	3.2	200	1	16	-	4	10		51.8	3.8	13	-	3.2	200	1	16	4	120V/1ø/60HZ	
	ELEVATOR CORE – A		970										1.8			22.0	21.3	460	1	12	0.70	5	69		210	15.0	20	0.10	21.3	460	1	8	1		BYPASS VAV
IU-21	ELEVATOR CORE – B														51.0	22.0	21.3	460	1	12	0.70	5		89		17.5	30	0.10	21.3	460	1	8	1	480V/3ø/60HZ	
	ELEVATOR CORE – C	Contraction of the second s		and the second se										416 313		22.0	21.3	460	1	12	0.70	5		89		17.5	30	0.10	21.3	460	1	8	1		BYPASS VAV
	ELEVATOR CORE – D													358 270		22.0	21.3	460	1	12	0.70	5		89		15.0	20	0.10	21.3	460	1	8	1		BYPASS VAV
	TICKET OFFICE - C													4.8 32.4		22.0	3.4	400	1	8	0.31	4		118.5	the second se	4.5	13	0.10	3.2	400	1	8	2	480V/3ø/60HZ	
	TICKET OFFICE - D													2.7 30.9		22.0	3.4	380	1	8	0.31	4		121.0		4.5	13	0.10	3.2	380	1	8	2	480V/3ø/60HZ	
U-26	TICKET OFFICE - B	1200	120	2.0	0.95	1.5 16	680 1	FC9x4	77.8	3   64.	4 54	0 5	2.5	2.7 30.9	5.0	22.0	3.4	380	1	8	0.31	4	69	121.0	72.4	4.5	13	0.10	3.2	380	1	8	2	480V/3ø/60HZ	CV/SZ

				FAN	SECTION								HEATING S	SECTION				······		
DESIG	DUTY	CFM	MIN. OA CFM	TSP INCH H₂O	Motor Bhp hf		WHEEL DIA INCH	EAT •F	LAT F	MBH @200°F EWT	GPM @30°F △ T	MAXIMUM H₂O PD FT H₂O	MAXIMUM AIR PD IN H₂ O	MIN TOTAL FACE AREA	MAXIMUM FACE VEL FPM	No OF COILS	MAX FIN SPACING FIN/IN	MIN ROWS	ELECTRICAL	REMARKS
HVU-1	CONCESSION STO/COMMISSARY	30,000	3000	2.0	16.0 20	947	AF36	50.5	85.0	1118	59.8	24	0.09	66.1	454	1	8	1	480V/30/60HZ	
HVU-2	CONC. LOCKERS	13000	3900	2.0	6.8 10	1327	AF24	32.5	85.0	737	39.4	27	0.09	30.2	431	1	12	1	480V/3ø/60HZ	
HVU-3	GAME DAY LOCKERS	6,000	3000	2.0	4.6 7.5	5 2703	AF15	32.5	85.0	340	18.2	19	0.14	12.0	500	1	14	1	480V/3ø/60HZ	
HVU-4	RECYCLE	2000	2000	1.75	0.9 1.5	5 1289	FC10X10	10.0	85.0	162	8.7	15	0.08	5.5	364	1	14	1	480V/3ø/60HZ	
HVU-5	FIELD MAINTENANCE	6600	1320	2.0	4.2 7.5	5 1047	FC15X15	47.4	85.0	268	14.3	22	0.09	14.7	448	1	8	1	480V/3ø/60HZ	
HVU-6	SHOP-EAST	2300	1150	2.0	1.3 2	1393	FC10X10	32.5	85.0	130	7.0	39	0.10	5.5	419	1	12	1	480V/3ø/60HZ	
HVU-7	SHOP-WEST	5700	2850	2.0	4.1 7.5	5 2613	AF15	32.5	85.0	323	17.3	13	0.12	12.0	476	1	12	1	480V/3ø/60HZ	
HVU-8	FREIGHT ELEVATOR LOBBY	2700	2700	2.0	1.7 2	1440	FC10X10	10	85.0	219	11.7	28	0.19	5.5	491	1	8	2	480V/3ø/60HZ	
HVU-9	SERVICE TUNNEL	3200	3200	2.0	2.3 3	1534	FC10X10	10	85.0	259	13.9	46	0.15	7.6	422	1	8	2	480V/3ø/60HZ	
HVU-10	SERVICE TUNNEL	8800	8800	2.0	5.6 7.5	5 1749	AF20	10	85.0	713	38.1	20	0.14	21.3	413	1	8	2	480V/3ø/60HZ	
HVU-11	SERVICE TUNNEL	5800	5800	2.0	4.3 7.5	5 2643	AF15	10	85.0	470	25.1	28	0.19	12.0	484	· 1	8	2	480V/3ø/60HZ	
HVU-12	SERVICE TUNNEL	5800	5800	2.0	4.3 7.5	5 2643	AF15	10	85.0	470	25.1	28	0.19	12.0	484	1	8	2	480V/3ø/60HZ	
HVU-13	FREIGHT ELEVATOR LOBBY	5800	2700	2.0	1.7 2	1440	FC10X10	10	85.0	219	11.7	28	0.19	5.5	491	1	8	2	480V/3ø/60HZ	

NOTE: 40% ETHYLENE GLYCOL HEATING WATER SOLUTION

									-01	$\mathbf{N}$	PIPt	<u>-</u> FA	N C	OIL U	NII	SCH	DUL	Ł								
		SU		AN SECT						G SEC		· · · ·				G SECTIC		APPROXIMATE								
DESIG	MAX CFM	RPM	ESP INCH H₂O	Motor Size HP	WHEEL DIA INCH	EAT •	(F) S WB L M	SENS   OAD   MBH	total Load MBH	MIN ROWS	GPM @18"F _∆T	MAXIMUI H2O PI FT H2C	EAT F	MBH @ 200°F EWT	GPM @30°F △ T	MAXIMUN H₂O PE FT H₂C	MIN ROWS	OPERATING WEIGHT (LBS)	ELECTRICAL (V/PH/HZ)	REMARKS			E	XPAN	SION -	TANK SCHEDULE
FC-1	900	1080	0.35	1/3	9"	76 6	2.5 1	16.0	24.0	3	3.5	1.0	65	32	2.5	2.0	2	130	120/1/60	HORIZONTAL CONCEALED - CEILING		0.5010		TANK		DIMENSIONS
FC-2	1200	1000	0.35	(2)1/4	(2)9"	76 6	2.5 2	22.0	32.0	3	4.0	1.0	65	37	3.0	2.0	2	180	120/1/60	HORIZONTAL CONCEALED – CEILING		DESIG	DUTY	TANK VOLUME	TYPE	DIA HEIGHT WEIGHT REMARKS
FC-3	1500	1100	0.35	(2)1/3	(2)9"	76 6	2.5 2	28.0	40.0	3	5.0	1.0	65	41	3.8	2.0	2	200	120/1/60	HORIZONTAL CONCEALED - CEILING						
FC-4	1300	1000	.25	(2)1/3	(2)9"	95 7	′5.0 <u>3</u>	36.3	36.3	4	5.5	12	55	13.9	1.0	2.0	1	200	120/1/60	VERTICAL CABINET - WALL		ET-1	HEATING WATER	528	DIAPHRAGM	48" 85" 1810 LBS AMTROL 2000-L
																			· ·			ET-2	HEATING WATER	528	DIAPHRAGM	
																						ET-S	HEATING WATER	528	DIAPHRAGM	48" 85" 1810 LBS AMTROL 2000-L
																			· · · · · · · · · · · · · · · · · · ·		1 (	ET-4	DOMESTIC HOT WATER	422	DIAPHRAGM	48" 71" 1580 LBS AMTROL 1600-L
NOTES																										

NOTES: 1. UNITS SHALL BE PROVIDED WITH 2-WAY MODULATING VALVE, PIPING PACKAGE, REMOTE THERMOSTATS, REAR RETURN AND UNIT MOUNTED DISCONNECT SWITCH. 2. CHILLED AND HEATED WATER ARE 40% ETYHLENE GLYCOL SOLUTION.

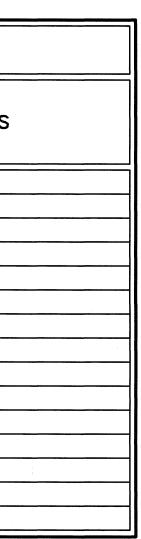
				RET	URN	FA	N S	CHEC	OULE	•			
DESIG	SERVICE	TYPE	CFM	SP INCH H₂O	APPROX RPM	BHP	HP (MOTOR SIZE)	WHEEL DIA. (IN)	DRIVE	AMCA CONSTRUCTION CLASS	ELECTRICAL (V/PH/HZ)	APPROX WEIGHT (LBS)	REMARKS
RF-1	AHU-1,2-CLUB/SUITE LEVEL-QUAD A	В	20,600	2.25	1170	11.0	15.0	42	BELT	I	480/3/60	1,240	INLINE-VANEAXIAL
RF-3	AHU-3,4-CLUB/SUITE LEVEL-QUAD B	В	44,000	2.25	1170	25.0	30.0	54	BELT	I	480/3/60	1,340	INLINE-VANEAXIAL
RF-5	AHU-5,6-CLUB/SUITE LEVEL-QUAD C	В	44,000	2.25	1170	25.0	30.0	54	BELT	I	480/3/60	1,340	INLINE-VANEAXIAL
RF-7	AHU-7,8-CLUB/SUITE LEVEL-QUAD D	В	27,400	2.25	1170	15.0	20.0	42	BELT	I	480/3/60	1,240	INLINE-VANEAXIAL
RF-9	AHU-9-PRESS LEVEL	С	11,200	1.5	950	4.2	5.0	30	BELT	I	480/3/60	490	INLINE-CENTRIFUGA
RF-20	AHU-20-ELEVATOR LOBBIES-QUAD A	C	8,700	1.5	850	3.2	5.0	30	BELT	I	480/3/60	490	INLINE-CENTRIFUGA
RF-21	AHU-21-ELEVATOR LOBBIES-QUAD B	C	10,200	1.5	950	4.2	5.0	30	BELT	I	480/3/60	490	INLINE-CENTRIFUGA
RF-22	AHU-22-ELEVATOR LOBBIES-QUAD C	C	10,200	1.5	950	4.2	5.0	30	BELT	I	480/3/60	490	INLINE-CENTRIFUGA
RF-23	AHU-23-ELEVATOR LOBBIES-QUAD D	C	8,700	1.5	850	3.2	5.0	30	BELT	I	480/3/60	490	INLINE-CENTRIFUGA
· · · · · · · · · · · · · · · · · · ·													

# Original Construction Mechanical Schedules for Reference Only.

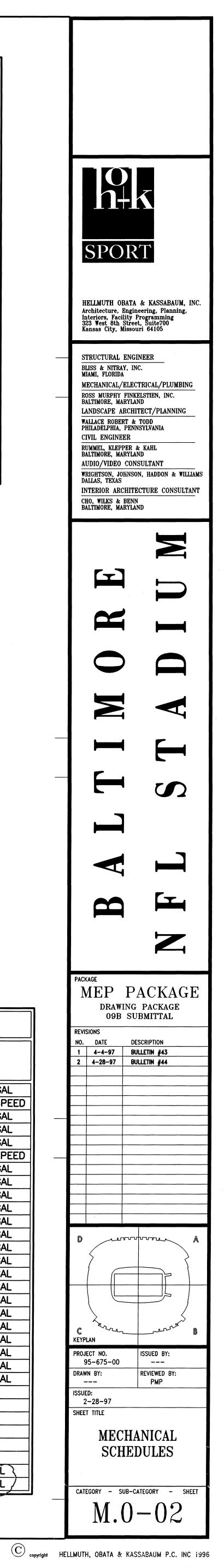
## HEATING AND VENTILATING UNIT SCHEDULE

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					N	/ENT	TLATI	ON	FAN	SCI	HEDI	JLE			
	DESIG	SERVICE	LEVEL	TYPE	CFM	SP INCH H₂O	APPROX RPM	BHP	HP (MOTOR SIZE)	WHEEL DIA	DRIVE	AMCA CONSTRUCTION CLASS	ELECTRICAL (V/PH/HZ)	APPROX WEIGHT (LBS)	REMARKS
	/F-1	HVU-1	SERVICE – A	С	26,000	1.0	600	11.0	15.0	45	BELT	I	480/3/60	720	INLINE-CENTRIFUGAL
V	/F-2	HVU-2	SERVICE – A	С	11,000/5500	1.0	900	4.8	5.0	33	BELT	I	480/3/60	480	INLINE-CENT-2 SPEED
V	/F-3	HVU-3	SERVICE – A	С	2800	1.0	1100	1.13	2.0	18	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
	/F-4	HVU-4	SERVICE – A	С	2,000	1.0	1600	1.3	2.0	15	BELT	I	480/3/60	100	INLINE-CENTRIFUGAL
V	/F-5	HVU-5	SERVICE – A	С	6,300	1.0	1100	2.3	3.0	24	BELT	I	480/3/60	240	INLINE-CENTRIFUGAL
V	/F-6	HVU-6	SERVICE – B	С	2200/1100	1.0	1600	1.3	2.0	15	BELT	I	480/3/60	100	INLINE-CENT-2 SPEED
V	/F-7	HVU-7	SERVICE – B	С	5500	1.0	1100	2.3	3.0	24	BELT	I	480/3/60	240	INLINE-CENTRIFUGAL
V	/F-8	NORTH MECH RM A	SERVICE – A	С	10,000	1.25	800	3.9	5.0	33	BELT	I	480/3/60	480	INLINE-CENTRIFUGAL
V	/F-9	NORTH MECH RM A	SERVICE – A	С	30,000	1.25	600 /2	12.0	15.0	40	BELT	I	480/3/60	600	INLINE-CENTRIFUGAL
V	/F-10	SOUTH MECH RM B	SERVICE – B	F	12,000	0.50	915	2.0	2.0	36	BELT	I	480/3/60	260	INLINE-CENTRIFUGAL
V	/F-11	SOUTH MECH RM B	SERVICE – B	С	24,000	1.25	800	11.0	15.0	40	BELT	Ι	480/3/60	600	INLINE-CENTRIFUGAL
V	/F-12	SOUTH ELEC RM B	SERVICE – B	С	25,000	1.25	800	11.0	15.0	40	BELT	I	480/3/60	600	INLINE-CENTRIFUGAL
V	/F-13	SOUTH ELEC RM B	SERVICE – B	C	25,000	1.25	800	11.0	15.0	40	BELT	I	480/3/60	600	INLINE-CENTRIFUGAL
V	/F-14	LOADING DOCK	SERVICE - A	С	4,300	1.0	1100	1.9	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-15	LOADING DOCK	SERVICE – A	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-16	LOADING DOCK	SERVICE – A	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-17	LOADING DOCK	SERVICE - A	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-18	LOADING DOCK	SERVICE – A	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
	/F-19	LOADING DOCK	SERVICE – A	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-20	LOADING DOCK	SERVICE – A	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-21	LOADING DOCK	SERVICE – B	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
	/F-22	LOADING DOCK	SERVICE – B	С	5,300	1.0	1300	2.4	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-23	LOADING DOCK	SERVICE – B	С	4,300	1.0	1100	1.9	3.0	20	BELT	I	480/3/60	120	INLINE-CENTRIFUGAL
V	/F-24	FIRE PUMP ROOM	SERVICE – B	F	4,500	0.25	1200		3/4	20	BELT	I	480/3/60	65	PROPELLER
	/F25	AHU-1 THRU 8 MECH RMS	PRESS LEVEL	F	2 3,600	0.25	1200		1/2	20	BELT	I	480/3/60	65	PROPELLER
V	/F-26	ELECTRIC ROOM	PRESS – A	(H)	32,000	0.75	640	12.0	15.0	44.5	BELT	I	480/3/60	840	PLENUM FAN
V	/F-27	ELECTRIC ROOM	PRESS – B	γн	32,000	0.75	640	12.0	15.0	44.5	BELT	I	480/3/60	840	PLENUM FAN
V	/F-28	ELECTRIC ROOM	PRESS – C	γнζ	32,000	0.75	640	12.0	15.0	44.5	BELT	I	480/3/60	840	PLENUM FAN
$\sqrt{2}$	(F-29	ELECTRIC ROOM	PRESS - D	ΥΗ		0.75	640	12.0	15.0	44.5	BELT	I	480/3/60	840	PLENUM FAN
	/F-30	ELEV MACH ROOMS- A,B,C,D	LEVEL 8	D	3,700	0.25	100Ŏ	0.58	3/4		BELT	I	480/3/60	130	ROOF CENTRIFUGAL
<u>ک</u> ک	/F-31	SERVICE ELEV MACH RM-A,B	LEVEL 7,8	D	1,200	0.25	1135	0.13	1/4	-	BELT	I	120/1/60	100	ROOF CENTRIFUGAL



AIR SEPARA	TOR DUTY	-
DESIGNATION :	<u>AS-1</u>	
PIPE SIZE :	10"ø	
WATER FLOW :	3,000 GPM	
STRAINER FREE AREA :	409 SQ. INCHES	
PRESSURE DROP :	10.0 FT H <sub>2</sub> 0	
CV FACTOR W/STRAINER :		
APPROX SHIPPING WEIGHT :	1,000 LBS	
SIZE :	30"ø×60"H	
REMARKS :	AMTROL 10-AS	



	FAN POWERE	) TERMINAL REHE								FANP	OWERED							
NOFANPRIMARYINLETCFMCFMAIRCFMSIZEMAXMINMINMINMIN	OUTLET PRIMARY SIZE AIR SP LOSS INCHES H20	FAN DATA 5 HP FLA DISCH 5 SP ELECTR	FAT LAT BTUH	PERFORMANCE MAX. H2O PD ROW FT H2O	FILTER GPM SOF SIZE EFFICIENCY AT		NO FAN CFM	PRIMARY AIR CFM MAX MIN	INLET SIZE	OUTLET SIZE	PRIMARY AIR SP LOSS INCHES H <sub>2</sub> 0		DATA DISCH SP ELECTF	FAT		PERFORMANCE MAX. H2O PD ROW FT H2O	GPM S @30°F ∆ T	SIZE EFF
21670111055512"\$\nterv<32020135067512"\$\nterv<	13       1/4x11       1/2       0.18         13       1/4x11       1/2       0.22         13       1/4x11       1/2       0.18	1/10       0.8       0.40       277V/1ø         1/2       4.6       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         1/2       4.6       0.40       277V/1ø         1/10       0.8       0.40       277V/1ø	60HZ         60         85         4320           60HZ         65         93         50447           60HZ         65         85         43686           60HZ         65         93         50447           60HZ         65         85         43686           60HZ         65         93         50447           60HZ         65         85         33966	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		}	101         2070           102         690           103         590           104         1360           105         1660           106         400	1380         690           460         230           390         195           910         455           1110         555           270         135	8"ø 8"ø 10"ø 12"ø	13       1/4x11       1/2         9       1/4x10       3/8         9       1/4x10       3/8         10       1/2x10       3/8         13       1/4x11       1/2         6       7/8x10       3/8	0.09 0.06 0.19 0.19	/4 2.1 (	0.40277V/1ø0.40277V/1ø0.40277V/1ø0.40277V/1ø	60HZ 65	8514904851269085294309044874	1.011.011.011.02	1.0 0.8 2.0 3.0	22"×19"       \$         16"×14"       \$         16"×14"       \$         17"×17"       \$         17"×17"       \$         16"×14"       \$
7126084042010"\$\nterm\$81940129064512"\$\nterm\$91930129064512"\$\nterm\$11500100050012"\$\nterm\$11111074037010"\$\nterm\$	10       1/2x10       3/8       0.19         13       1/4x11       1/2       0.19         13       1/4x11       1/2       0.19         13       1/4x11       1/2       0.19         13       1/4x11       1/2       0.17         10       1/2x10       3/8       0.11	1/3         3.1         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø	60HZ         65         85         27216           60HZ         65         85         41850           60HZ         65         85         41742           60HZ         65         85         32400           60HZ         65         85         23976	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		10712251081500109500110465111410	820         410           1000         500           330         165           310         155           270         135	10"ø 12"ø 8"• 6"ø 6"ø	10 1/2x10 3/8 13 1/4x11 1/2 9 1/4x 10 3/8 6 7/8x10 3/8 6 7/8x10 3/8	0.15 0.18 0.03 0.18 1 0.18 1 0.14 1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.40277V/1ø0.40277V/1ø0.40277V/1ø0.40277V/1ø0.40277V/1ø0.40277V/1ø	\$/60HZ     65       \$/60HZ     65       \$/60HZ     65       \$/60HZ     65       \$/60HZ     65       \$/60HZ     65	85265149040500901350099170759915001	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.8 2.7 0.9 1.1 1.0	17"x17"       17"x17"       16"x14"       16"x14"       16"x14"
13 1480 990 495 12 <b>"ø</b>	91/4x103/80.1067/8x103/80.07131/4x111/20.20131/4x111/20.19	1/3       3.1       0.40       277V/1ø         1/2       4.6       0.40       277V/1ø         1/4       2.1       0.40       277V/1ø         1/10       0.8       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø	60HZ         65         85         32022           60HZ         65         85         15930           60HZ         65         85         6858           60HZ         65         115         97200           60HZ         65         115         96390	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			1040 520 800 400	10"ø 6"ø 12"ø 12"ø 10"ø	13       1/4x11       1/2         10       1/2x10       3/8         6       7/8x10       3/8         13       1/4x11       1/2         13       1/4x11       1/2         13       1/4x11       1/2         13       1/4x11       3/8         9       1/4x10       3/8	0.08         1           0.18         1           0.19         1           0.18         1           0.15         1	$   \begin{array}{c cccccccccccccccccccccccccccccccccc$	D.40277V/10D.40277V/10D.40277V/10D.40277V/10D.40277V/10D.40277V/10	\$/60HZ       65         \$/60HZ       65         \$/60HZ       65         \$/60HZ       65         \$/60HZ       65         \$/60HZ       65	99341509917075159617496523429640176	1.0     2       1.0     1       1.0     2       1.0     2       1.0     2       1.0     2	2.3 1.1 6.4 3.5 2.7 1.1	22"x19"         17"x17"         16"x14"         22"x19"         17"x17"         17"x17"         17"x17"         16"x14"
19100067033510"ø201780119059512"ø212270151075514"ø227605102558"ø231520101050512"ø246154102058"ø	101/2x103/80.09131/4x111/20.19135/8x117/80.2091/4x103/80.11131/4x111/20.1891/4x103/80.06	1/3         3.1         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           3/4         5.7         0.40         277V/1ø           1/4         2.1         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/4         2.1         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/4         2.1         0.40         277V/1ø	60HZ         65         85         21654           60HZ         65         115         96174           60HZ         65         85         48978           60HZ         65         85         16470           60HZ         65         85         32778           60HZ         65         85         13284	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		119510120360121220122430123535124390	34017024012015080290145360180260130	8"ø 6"ø 6"ø 8"ø 8"ø 6"ø	9       1/4x10       3/8         6       7/8x10       3/8         6       7/8x10       3/8         9       1/4x10       3/8         9       1/4x10       3/8         6       7/8x10       3/8	0.06         1           0.07         1           0.03         1           0.03         1           0.04         1           0.03         1	/4     2.1     0       /10     0.8     0       /10     0.8     0       /10     0.8     0       /10     0.8     0       /4     2.1     0       /10     0.8     0	0.40277V/1ø0.40277V/1ø0.40277V/1ø0.40277V/1ø0.40277V/1ø0.40277V/1ø	\$/60HZ       65         \$/60HZ       65         \$/60HZ       65         \$/60HZ       65         \$/60HZ       65         \$/60HZ       65	857776854968051863005231669010530	1.011.011.021.021.01	0.5 0.5 1.2 1.5 0.7	16"×14"         16"×14"         16"×14"         16"×14"         16"×14"         16"×14"         16"×14"         16"×14"         16"×14"         16"×14"
25       1290       860       430       10"ø         26       1470       980       490       12"ø         27       1630       1090       545       12"ø         28       940       630       315       10"ø         29       1880       1250       625       12"ø         30       1705       1140       570       12"ø         31       1700       1130       565       12"ø	131/4x111/20.15131/4x111/20.20101/2x103/80.06131/4x111/20.25131/4x111/20.20	1/3       3.1       0.40       277V/1ø         1/2       4.6       0.40       277V/1ø         1/2       4.6       0.40       277V/1ø         1/2       4.6       0.40       277V/1ø         1/3       3.1       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø	60HZ         65         85         31752           60HZ         65         85         35262           60HZ         65         85         20358           60HZ         65         85         20358           60HZ         65         85         40554           60HZ         65         85         36882	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		12616001273701285301292751301595	10705352501253501751809051060530	12"ø 6"ø 8"ø 6"ø 12"ø	9 1/4x10 3/8 13 1/4x11 1/2 6 7/8x10 3/8 9 1/4x10 3/8 6 7/8x10 3/8 13 1/4x11 1/2 9 1/4X 10 3/8	0.20 0.08 1 0.05 0.06 1 0.18	$\begin{array}{c cccc} /10 & 0.8 & 0 \\ \hline /2 & 4.6 & 0 \\ \hline /10 & 0.8 & 0 \\ \hline /4 & 2.1 & 0 \\ \hline /10 & 0.8 & 0 \\ \hline /2 & 4.6 & 0 \\ \hline /4 & 2.1 & 0 \\ \hline \end{array}$	0.40 277V/1ø 0.40 277V/1ø 0.40 277V/1ø 0.40 277V/1ø 0.40 277V/1ø	0/60HZ       65         0/60HZ       65       1         0/60HZ       65       1	85346140516038851139405118268534398	1.0     1       1.0     1       1.0     1       1.0     1       1.0     1       1.0     1	2.3 1.1 0.8 0.8 2.3	16"x14"       17"x17"       16"x14"       16"x14"       16"x14"       16"x14"       16"x14"       16"x14"       16"x14"       16"x14"
32         1550         1030         515         12"ø           33         1080         720         360         10"ø           34         1330         890         445         10"ø           35         1090         730         365         10"ø           36         1540         1030         515         12"ø           37         1710         1140         570         12"ø	131/4x111/20.17101/2x103/80.10101/2x103/80.18101/2x103/80.10131/4x111/20.18	1/2         4.6         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø	60HZ         65         85         33426           60HZ         65         100         40824           60HZ         65         85         28782           60HZ         65         100         41256           60HZ         65         85         33318	1.0     1       1.0     2       1.0     2       1.0     1       1.0     2       1.0     2       1.0     1       1.0     1	2.2       17"×17"       20%         2.7       17"×17"       20%         1.9       17"×17"       20%         2.8       17"×17"       20%         2.2       17"×17"       20%         2.5       22"×19"       20%		13244013317001342300	29014511305651530765	6"ø 12"ø 14"ø	6 7/8X10 3/8 13 1/4x11 1/2 13 5/8X11 7/8 9 1/4X 10 3/8	0.14 1 0.19 3 0.20 3	$\begin{array}{c cccc} /10 & 0.8 & 0 \\ 5/4 & 5.4 & 0 \\ 5/4 & 5.7 & 0 \\ \end{array}$	0.40 277V/1ø 0.40 277V/1ø 0.40 277V/1ø	\$/60HZ     65       \$/60HZ     65       \$/60HZ     65	971520690459009062046	1.0     1       1.0     1       1.0     2	1.0 3.1 4.1	16" x14" 22" x19" 24" x20"
38         1180         790         395         10"ø           39         2300         1530         765         14"ø           40         1090         730         365         10"ø           41         1600         1070         535         12"ø           42         2265         1510         755         14"ø           43         2240         1490         745         14"ø	135/8x117/80.20101/2x103/80.10131/4x111/20.20135/8x117/80.20131/4x111/20.20		60HZ         65         90         62046           60HZ         65         85         23598           60HZ         65         85         34614           60HZ         65         90         61155           60HZ         65         100         84618	1.0     2       1.0     1       1.0     1       1.0     1       1.0     2       1.0     2       1.0     2       1.0     2	5.6 24"×20" 20%													
482075138069012'ø497805202608"ø	91/4x103/80.11101/2x103/80.12101/2x103/80.09131/4x111/20.2591/4x103/80.11	1/4         2.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           1/4         2.1         0.40         277V/1ø	60HZ         65         100         42093           60HZ         65         90         21060           60HZ         65         110         54486           60HZ         65         85         22302           60HZ         65         85         44766           60HZ         65         85         16848	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2.8         17" ×17"         20%           1.4         16" ×14"         20%           3.6         17" ×17"         20%           1.5         17" ×17"         20%           3.0         22" ×19"         20%           1.1         16" ×14"         20%							•						
50       1040       690       345       10"\$\nu\$         51       2080       1390       695       12"\$\nu\$         52       1880       1250       625       12"\$\nu\$         53       1700       1130       565       12"\$\nu\$         54       1185       1260       630       12"\$\nu\$         55       1890       1260       630       12"\$\nu\$	131/4x111/20.22131/4x111/20.21131/4x111/20.20131/4x111/20.21131/4x111/20.21	3/4         5.4         0.40         277V/1ø	60HZ         65         100         39258           60HZ         65         100         78678           60HZ         65         90         50706           60HZ         65         85         36666           60HZ         65         90         50949           60HZ         65         90         50949           60HZ         65         90         51030           60HZ         65         90         51030	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$2.6$ $17" \times 17"$ $20\%$ $5.2$ $22" \times 19"$ $20\%$ $3.4$ $22" \times 19"$ $20\%$ $2.4$ $22" \times 19"$ $20\%$ $3.4$ $22" \times 19"$ $20\%$												• • •	
56       1720       1150       575       12"ø         57       1490       990       495       12"ø         58       960       640       320       10"ø         59       1650       1100       550       12"ø         60       1870       1250       625       12"ø         61       1380       920       460       10"ø         62       1375       920       460       10"ø	131/4x111/20.15101/2x103/80.06131/4x111/20.19131/4x111/20.21101/2x103/80.18	1/2         4.6         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø	60HZ         65         85         37206           60HZ         65         85         32130           60HZ         65         90         25920           60HZ         65         90         25920           60HZ         65         85         35640           60HZ         65         90         50544           60HZ         65         85         29808           60HZ         65         85         29808           60HZ         65         85         29754	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $													
631870125062512"ø641640109054512"ø65111574037010"ø661650110055012"ø674002701356"ø	131/4x111/20.21131/4x111/20.20101/2x103/80.12131/4x111/20.18	3/4         5.4         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/10         0.8         0.40         277V/1ø	/60HZ 65 90 50544 /60HZ 65 85 35370 /60HZ 65 85 24030 /60HZ 65 85 35640	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
691800120060012"\$705403601808"\$71112075037510"\$7296064032010"\$	131/4x111/20.1991/4x103/80.04101/2x103/80.12101/2x103/80.07131/4x111/20.18	3/4         5.4         0.40         277V/1ø           1/4         2.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø	60HZ         65         97         62208           60HZ         65         97         18662           60HZ         65         97         3876           60HZ         65         97         3876           60HZ         65         97         33178           60HZ         65         108         72965	3       1.0       2         2       1.0       2         1       1.0       2         3       1.0       2         5       1.0       2	$\begin{array}{c c c c c c c c c c c c c c c c c c c $				·					•	. to e	· ·		
7586057028510"\$761920128064012"\$772200147073514"\$7886057028510"\$	101/2x103/80.05131/4x111/20.22135/8x117/80.15101/2x103/80.0591/4x103/80.04	1/3         3.1         0.40         277V/1ø           3/4         5.4         0.40         277V/1ø           3/4         5.7         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/4         2.1         0.40         277V/1ø	/60HZ 65 108 39884	1.0     2       1.0     2       1.0     1       1.0     1       1.0     1       1.0     1       1.0     1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									• •				
81       510       340       170       8"ø         82       1310       870       435       10"ø         83       2300       1530       765       14"ø         84       1500       1000       500       12"ø         85       1820       1210       605       12"ø	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1/4         2.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           3/4         5.7         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           3/4         5.7         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø           1/2         4.6         0.40         277V/1ø	60HZ         65         85         11016           60HZ         65         85         28242           60HZ         65         85         49626           60HZ         65         90         40506           60HZ         65         90         40506           60HZ         65         90         49146           60HZ         65         108         7366	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $													
88         1120         750         375         10"ø           89         540         360         180         8"ø           90         1230         820         410         10"ø           91         1375         920         460         10"ø           92         400         270         135         6"ø		1/3         3.1         0.40         277V/1ø           1/4         2.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/3         3.1         0.40         277V/1ø           1/10         0.8         0.40         277V/1ø	60HZ         65         97         18662           60HZ         65         97         42509           60HZ         65         97         42509           60HZ         65         97         47574           60HZ         65         85         8694	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $													
931650110055012"\$94111574037010"\$951780119059512"\$964653101556"\$9793062031010"\$981800120060012"\$	101/2x103/80.12131/4x111/20.2067/8x103/80.18101/2x103/80.08131/4x111/20.19	1/3       3.1       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         1/10       0.8       0.40       277V/1ø         1/3       3.1       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø         1/3       3.1       0.40       277V/1ø         3/4       5.4       0.40       277V/1ø	/60HZ         65         85         24030           /60HZ         65         115         96174           /60HZ         65         99         17075           /60HZ         65         99         34150           /60HZ         65         115         97200	1.0     1       1.0     2       1.0     2       1.0     1       1.0     2       1.0     2       1.0     2       1.0     2       1.0     2       1.0     2	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	R .												
99       390       260       130       6"ø         100       2080       1390       695       12"ø		1/10 0.8 0.40 277V/1¢ 3/4 5.4 0.40 277V/1ø			1.0         16" x14"         20%           3.7         22" x19"         20%	Y												

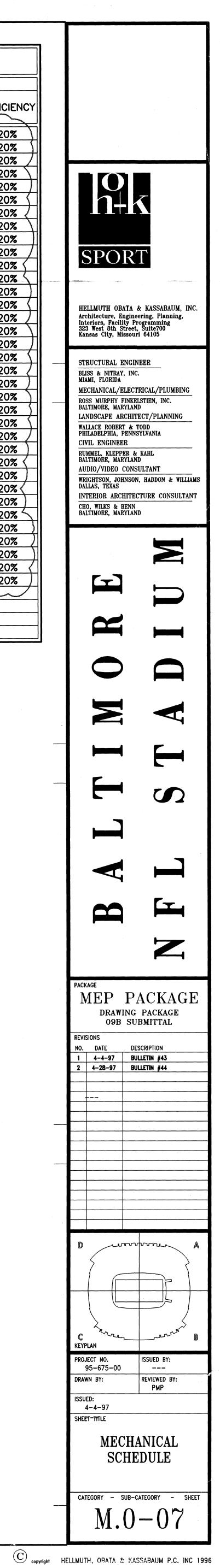
9-5110M06 - RMF #95

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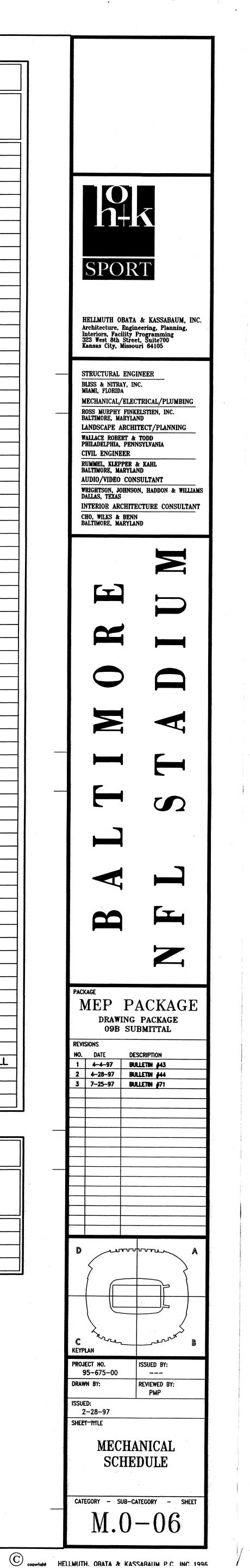
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2.97-18:09-511

# Original Construction Mechanical Schedules for Reference Only.



				MAK	KE UP				DULE										AIR D	EVICE SC	HEDULE	•	
DESIG	SERVICE ROOM No	LEVEL	TYPE (SEE SPEC)	CFM H <sub>2</sub>		X	HP MOTOR		DRIVE	T	G SECTION OUTPUT MBH	ELECTRICAL V/PH/HZ	R	EMARKS	<	TYPE	DUTY	CFM	SIZE	BLOW		NC	RE
MAU-1A		MAIN CONCOURSE	A	5500 1.2 8600 1.2	25 895 25 950		5.0	15 15	BELT	0 100		480V/3ø/60H 480V/3ø/60H				Α	CEILING SUPPLY CEILING SUPPLY	0-150	6" X6" 9" X9"	4-WAY 4-WAY	0.17	23	
MAU-2A MAU-3A MAU-4A	6.13.01	CLUB LEVEL UPPER SUITE UPPER CONCOURSE	B	2750 1.2 5500 21.2	25 1205	1.45		10	BELT	0 100	) 297.0	480V/3¢/60H 480V/3¢/60H	IZ ROOF MO	DUNTED UNIT		A A	CEILING SUPPLY CEILING SUPPLY	281-500 501-625	12"X12" 15"X15"	4-WAY 4-WAY	0.12	23	
	7.02.01					2.40	5.0									A	CEILING SUPPLY CEILING SUPPLY	626-900 901-1225	18"X18" 21"X21"	4-WAY 4-WAY	0.08	20	
																A	CEILING SUPPLY	1226-1600		4-WAY	0.08	22	
						4										B	LINEAR BAR SUPPLY		<u> </u>	O DEFL O DEFL	0.07	21 22	
			· · · · · · · · · · · · · · · · · · ·													B	LINEAR BAR SUPPLY	160/FT	5 <b>"</b> 6"	0° DEFL 0° DEFL	0.07	22 24	
MAU-1B	2.19.01	MAIN CONCOURSE	A	8250 1.2	25 785	4.21	5.0	18	BELT	0 100	) 891.0	480V/3ø/60H		a de la companya de l		C	SUPPLY REGISTER	0-130	6"X6"	22.5° DEFL	0.10	20	
MAU-2B MAU-3B		CLUB LEVEL UPPER SUITE	C B		25118025780		2.0 3.0	10 15			) 594.0	480V/3¢/60H 480V/3¢/60H	Z ROOF MO	UNTED UNIT		C C	SUPPLY REGISTER SUPPLY REGISTER		10"X6" 14"X6"	22.5° DEFL 22.5° DEFL	0.10	23 24	
MAU-4B	7.23.01	UPPER CONCOURSE	В	5500 1.2	25 780	2.46	3.0	15	BELT	0 100	) 594.0	480V/3¢/60H	IZ ROOF MO	OUNTED UNIT		C C	SUPPLY REGISTER SUPPLY REGISTER	331-430 431-530	20"X6" * 18"X8" *	22.5° DEFL 22.5° DEFL	0.08	21 22	* OR EQU * OR EQU
														· · · · · · · · · · · · · · · · · · ·			SUPPLY REGISTER SUPPLY REGISTER	531-670 671-820	18"X10" * 22"X10" *	22.5° DEFL 22.5° DEFL	0.08	23 23	* OR EQU
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	·											C	SUPPLY REGISTER SUPPLY REGISTER	821-1000	24"X12" * 30"X12" *		0.08	21 22	* OR EQU * OR EQU
													· · · · · · · · · · · · · · · · · · ·			D	LINEAR SLOT SUPPLY		3@1"SLOT 4@1"SLOT	1-WAY	0.05	22	
MAU-1C MAU-2C		MAIN CONCOURSE CLUB LEVEL	A		25 700 25 1180			20	BELT BELT	0 100	and a second descent of the second	480V/3ø/60H 480V/3ø/60H	in the second				LINEAR SLOT SUPPLY	Y 110/FT	5@1"SLOT 6@1"SLOT	1-WAY 1-WAY 1-WAY	0.05 0.05 0.05	24 23 21	
MAU-2C MAU-3C MAU-4C	6.40.01	UPPER SUITE UPPER CONCOURSE	B	2750 1.2	25         1205           25         1205	1.45	2.0	10	BELT	0 100	) 297.0	480V/30/60H 480V/30/60H	Z ROOF MC	UNTED UNIT		E	RETURN REGISTER	0-170	6"X6"	O" DEFL	0.05	21	
	/.J2.UI								<sup>1</sup>							E E	RETURN REGISTER	171–230 231–310	8" X6" 10" X6"	O DEFL O DEFL	0.11	22 22 23	
		······														E E	RETURN REGISTER RETURN REGISTER	311-370 371-460	12"X6" 12"X8" *	O DEFL O DEFL	0.11	24 22	* OR EQ
											· · · · · · · · · · · · · · · · · · ·					E E	RETURN REGISTER RETURN REGISTER	461-580 581-700	12"X10" * 24"X6" *	0° DEFL 0° DEFL	0.11 0.11	23 24	* OR EQ
																E	RETURN REGISTER RETURN REGISTER	701-800 801-950	18"X10" + 18"X12" +	O DEFL	0.11 0.11	21 22	* OR EQ
MAU-1D	2.46.01	MAIN CONCOURSE	A		25 785	4.21	5.0	18	BELT	0 100	and the second	480V/3ø/60H				<u>Е</u> Е	RETURN REGISTER RETURN REGISTER	951-1100 1101-1500		0° DEFL 0° DEFL	0.11	22 23	* OR EQ
MAU-2D MAU-3D			C B	2575         1.2           5500         1.2		2.46	3.0				) 594.0	480V/3ø/60H 480V/3ø/60H	IZ ROOF MC	UNTED UNIT		E E	RETURN REGISTER RETURN REGISTER	1501-1600 1601-2100		0° DEFL 0° DEFL	0.11	24 21	* OR EQU
MAU-4D	7.52.01	UPPER CONCOURSE	<u> </u>	2750 1.2	25 1205	1.45	2.0	10	BELT	0 100	) 297.0	480V/3ø/60H	IZ ROOF MC	DUNTED UNIT		F	EXHAUST GRILLE	0-170	6"X6"	O DEFL	0.11	22	
· · · · · · · · · · · · · · · · · · ·																F F	EXHAUST GRILLE EXHAUST GRILLE	171-230 231-310 311 370	8"X6" 10"X6" 12"X6"	0° DEFL 0° DEFL	0.11	22 23	9 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1
																F F	EXHAUST GRILLE EXHAUST GRILLE EXHAUST GRILLE	311-370 371-460 461-580	12"X8" * 12"X10" *	0° DEFL 0° DEFL 0° DEFL	0.11 0.11 0.11	24 22 23	+ OR EQU
															K	F F	EXHAUST GRILLE EXHAUST GRILLE	581-700 701-800	24"X6" * 18"X10" *	0 DEFL 0 DEFL 0 DEFL	0.11	23 24 21	+ OR EQU + OR EQU + OR EQU
																F	EXHAUST GRILLE EXHAUST GRILLE	801-950 951-1100	18"X12" + 18"X14" +	0° DEFL 0° DEFL	0.11	21 22 22	* OR EQU
		TS TYPE C REFER TO			<u>M.U-U6</u>			~ ^								F F	EXHAUST GRILLE EXHAUST GRILLE	1101-1500 1501-1600		0° DEFL 0° DEFL	0.11 0.11	23 24	+ OR EQU
		ABLE AIR V								•						<b>F</b>	EXHAUST GRILLE	1601-2100			0.11	21	* OR EQU
			C M	AX				JUILL								G	TRANSFER GRILLE	0-170	6" X6" 8" X6"	0° DEFL 0° DEFL	0.11	22 22	
	X MIN SIZ	T OUTLET PRESS E SIZE DROP IN WO	URE NC V CHES ©1.0 IN INLET	/ALUE CH H₂O EAT SP ⁺F	LAT MAX F P.D.	AIR N . IN. <b>@</b> 1	/BH MA) 190°F H₂O WT FT H	PD ROWS	GPM @30°F ^T	REMAR	RKS					G	TRANSFER GRILLE	231-310 311-370	10" X6" 12" X6"	0° DEFL 0° DEFL	0.11	23 24	
	30 600 14		9 -	- 55	89 0.	.41 7	78.3 3.9	9 2	5.5	· · · · · · · · · · · · · · · · · · ·						G	TRANSFER GRILLE TRANSFER GRILLE TRANSFER GRILLE	371-460 461-580 581-700	12"X8" * 12"X10" * 24"X6" *	0° DEFL 0° DEFL	0.11	22 23	* OR EQU
3 45	0 120 7	12"x8"         0.2           12"x10"         0.2           16"x15"         0.5	9 2	21 55° 20 55°	97         0.           137         0.           103         0.	.20 3	3.5     0.       9.8     2.       78.3     5.	3 2	1.0 3.0 5.5							G	TRANSFER GRILLE	701-800 801-950	18"X10" * 18"X12" *	Of   DEFL     Of   DEFL     Of   DEFL	0.11 0.11 0.11	24 21 22	* OR EQU * OR EQU * OR EQU
4         151           5         48           6         120	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12"x10" 0.3	3 2	- 55° 0 55° 2 55°	103         0.           81         0.           111         0.											G	TRANSFER GRILLE		18"X14" +		0.11		+ OR EQU + OR EQU
7 82	0 0 8" 0 600 10	12"x10" 0.6	9 2	5         55*           2         55*	80 0. 111 0.	.46 2	2.2 1.0 78.3 4.	0 2	1.5 5.5							G	TRANSFER GRILLE	1501–1600 1601–2100	30"X12" +	0° DEFL 0° DEFL	0.11	24 21	* OR EQU * OR EQU
9 82	0 0 8	12"x10" 0.6 12"x8" 0.2	9 2	25 55° 21 55°		.46 2	22.2 1.0 5.0 0.	0 2	1.5							J	SPOT DIFFUSER	320-500	12 <b>"</b> ø	40° ROTATION	0.24	25	O ROTATIO
11 273		# 20"x17" 0.8	4 ·	- 55° 21 55°	82 0. 97 0.		78.3     3.5       3.5     0.3		5.5 1.0							J	SPOT DIFFUSER	501-950	16"ø	40° ROTATION	0.21	26	
	0 120 6* 90 600 14	ø 20°×17° 0.4	9.	0 55° - 55°	1670.920.	.65 7	59.8     1.       78.3     5.	7 2 6 2	3.0 5.5	·					$\sum_{i=1}^{n}$								
16 155	50 600 12	12"x10"         0.3           16"x15"         0.6	1 .	20 55° - 55°		.41 7	3.5         2.0           78.3         5.0		1.0 5.5	······								00115011					
18 155	50 600 12	#         12"x10"         0.6           #         16"x15"         0.6	1 .	25 55° - 55°	102 0.	.41 7	22.2     1.0       78.3     5.0		1.5								DLING COIL		LE LING SECTION				T
	0 240 5"	b         12"x10"         0.6           b         12"x8"         0.2           c         20"x17"         0.7	5 2	25 55° 21 55°	103 0.	.13 1	22.2     1.0       5.0     0.0       78.3     3	3 2	1.5 1.0 5.5				DESIG	DUTY	c	FM EAT 'F	LAT *F TOTAL SENS		AX MIN TOTAL PD FACE H <sub>2</sub> O AREA	MAXIMUM No FACE VEL OF FPM COILS	MAX FIN MA SPACING AI	XIMUM R PD MIN	R
22 30	0 0 5	9         20"x17"         0.7           12"x8"         0.2           12"x8"         0.3	5 2	- 55° 21 55° 20 55°	84         0.           97         0.           167         0.	.13 1	78.3 3.9 3.5 0. 39.8 1.		5.5 1.0 3.0					RM 4.19.03		575 94 78	58 57.8 187 100	23 20	·····	FPM         COILS           500         1		H <sub>2</sub> 0 ROWS	40% GLY
	10 600 14	12 x8         0.3           Ø         20"x17"         0.4           Ø         12"x10"         0.3	9 .	- 55° 20 55°	91 0. 81 0.	.35 7	19.8     1.       78.3     5.       3.5     2.		5.5 1.0					RM 4.35.05 RM 4.46.03			5857.81871005857.8187100	23 20 23 20		500         1           500         1		).39 4 ).39 4	40% GLY 40% GLY
25         48           26         155           27         82	50 600 12	12 x10         0.3           16"x15"         0.6           12"x10"         0.6	1 .	- 55° 25 55°	102 0.	.41 7	3.5         2.0           78.3         5.0           22.2         1.0	7 2	5.5 1.5		······································												
28 155 29 82	50 600 12 0 0 8	Ø 16"x15" 0.6	1 .	- 55° 25 55°	102 0. 80 0.	.41 7 .46 2	78.3 5. 22.2 1.0	7 2	5.5 1.5								•						ú.,
23         32           30         28           31         217	0 240 5" 70 600 14	12"x8"         0.2           12"x8"         0.2           12"x17"         0.4	5 2	21 55 <sup>°</sup> - 55 <sup>°</sup>	103 0.	.13 1	5.0         0.           78.3         3.		1.0 5.5														
32         30           33         47	0 0 5" 0 120 7"	12"x8"         0.2           12"x10"         0.3	5 2	21 55° 20 55°	97 0. 133 0.	.13 1	3.5 0.	3 2	1.0 3.0						in an an an an air an						• •		
34         151           35         48	10 600 12 0 0 7	Ø         16"x15"         0.5           Ø         12"x10"         0.3	6 .	- 55° 20 55°	103         0.           81         0.	.20 1	78.3         5.0           3.5         2.0	6 2 3 2	5.5 1.0														
	90 600 10	Ø 14"x12" 0.8	4 2	2 55	111 0.	.45 7	8.3 4.	52	5.5 1.5								•						
37 82	0 0 8 <sup>°</sup> 90 600 10'	ø 12"x10" 0.6	<u> </u>	55     55*       2     55*       25     55*	and the second secon		22.2 1.0 78.3 4.5		5.5														



		DESIG
		KEF-1A
		KEF-2A
		KEF-JA
		KEF-4A
		KEF-5A
		KEF-6A
		KEF-1B
		KEF-3B
		KEF-4B
	<u>/2</u> \	KEF-2B
		KEF-2C
		KEF-3C
		KEF-1D
		KEF-2D KEF-3D
		KEF-8A
		KEF-9A
		KEF-10/
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		KEF-5B
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		KEF-7B
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<u> </u>		KEF-11
		KEF-12
		KEF-4C
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X		KEF-110
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		KEF-130
		KEF-140 KEF-4D
		KEF-40 KEF-5D
X		KEF-50 KEF-6D
		KEF-7D
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<b></b>		KEF-10
1		KFF-11

		[		<b>K</b>	SP	IEN I							
DESIG	SERVICE ROOM No	LEVEL	TYPE	CFM	INCH H₂O	APPROX RPM	BHP		WHEEL DIA	DRIVE	ELECTRICAL		REMARKS
EF-1A	6.13.01	UPPER SUITE	G	2,500	1.75	2,830	1.60		12	BELT	480V/30/60HZ		
EF-2A	7.02.01	UPPER CONCOURSE	G	5,000	1.75	2,150	3.33		16	BELT	480V/3¢/60HZ	NOTE	(1)
(EF-3A (EF-4A	1.08.01 & 4.08.05 4.08.01 & 4.08.05	CLUB LEVEL	G	2,875	2.25	2,510	2.05	-	13	BELT	480V/30/60HZ		
KEF-5A	4.08.01 & 4.08.05	CLUB LEVEL	G	5,400 3,600	3.00 2.75	1,960 2,350	4.40		18 15	BELT	480V/3ø/60HZ 480V/3ø/60HZ	NOTE NOTE	$\bigcirc$
KEF-6A	4.08.01 & 4.08.07	CLUB LEVEL	G	1,600	2.75	2,780	1.25		10	BELT	480V/3¢/60HZ		$\mathbf{H}$
KEF-1B	2.19.01	MAIN CONCOURSE	G	7,500	3.5	1,665	6.36		22	BELT	480V/30/60HZ		$\tilde{1}$
KEF-3B	6.15.01	UPPER SUITE	G	5,000	1.75	2,150	3.33	5.0	16	BELT	480V/30/60HZ		$\overline{0}$
KEF-4B	7.23.01	UPPER CONCOURSE	G	5,000	1.75	2,150	3.33		16	BELT	480V/30/60HZ		<u>()</u>
KEF-2B		CLUB LEVEL	G	2,875	2.25	2,510	2.05		13	BELT	480V/3¢/60HZ		()
KEF-2C	6.40.01	UPPER SUITE	G	2,500	1.75	2,830	1.60		12	BELT	480V/30/60HZ		(1)
KEF-3C KEF-1D	7.32.01 2.46.01	UPPER CONCOURSE	G	2,500	1.75	2,830 2,830	1.60	2.0 3.0	12 16	BELT	480V/3ø/60HZ 480V/3ø/60HZ		
KEF-2D	6.42.01	UPPER SUITE	G	2,500	1.75	2,050	3.33	5.0	16	BELT	480V/3¢/60HZ		$\mathbf{H}$
KEF-2D KEF-3D	7.52.01	UPPER CONCOURSE	G	2,500	1.75	2,830	1.60	2.0	12	BELT	480V/3¢/60HZ		(1)
KEF-8A	COMMISSARY	SERVICE LEVEL	С	1,400	2.75	2,780	1.25	2.0	10	BELT	480V/30/60HZ		
KEF-9A	2.01.02	MAIN CONCOURSE	A	650	1.25	the second s	0.23		9 3/16		120V/1ø/60HZ		
KEF-10A		MAIN CONCOURSE	A	1,480	2.50	2,340	1.00		12 1/4		480V/30/60HZ		<u>A</u>
	2.10.02	MAIN CONCOURSE	G	5,000	3.50	1,490	4.29		22	BELT	480V/3¢/60HZ	NOTE	N N N N N N N N N N N N N N N N N N N
	2.12.01	MAIN CONCOURSE	G	650	1.25		0.23		9 3/16 9 3/16		120V/1¢/60HZ	NOTE	0
	6.08.01 6.09.01	UPPER SUITE	<u>A</u> A	650 650	1.25		0.23		9 3/16		120V/1ø/60HZ 120V/1ø/60HZ		
	6.10.01	UPPER SUITE	A	650	1.25		0.23		9 3/16		120V/1¢/60HZ		
	7.05.01	UPPER CONCOURSE	A	650	1.25		0.23		9 3/16		120V/1¢/60HZ		
	7.05.02	UPPER CONCOURSE	Α	650	1.25	1,470	0.23	+	9 3/16		120V/1ø/60HZ		**************************************
KEF-18A	7.06.02	UPPER CONCOURSE	A	650	1.25	1,470	0.23	1/3	9 3/16	BELT	120V/1ø/60HZ		
KEF-5B	2.16.01	MAIN CONCOURSE	A	650	1.25		0.23		9 3/16		120V/1ø/60HZ		
KEF-6B		MAIN CONCOURSE	<b>A</b>	650	1.25	1,470	0.23		9 3/16		120V/1ø/60HZ		
KEF-7B	2.25.01	MAIN CONCOURSE	<u>A</u>	650	1.25	1,470	0.23		9 3/16		120V/1ø/60HZ		
KEF-8B KEF-9B	6.18.01 6.19.01	UPPER SUITE	A	650 650	1.25	1,470 1,470	0.23		9 3/16 9 3/16		120V/1ø/60HZ 120V/1ø/60HZ		
	7.21.01	UPPER CONCOURSE	<u> </u>	650	1.25	1,470	0.23		9 3/16	and the second se	120V/1¢/60HZ		
KEF-11B		UPPER CONCOURSE	A	650	1.25	1,470	0.23		9 3/16		120V/1ø/60HZ		
	7.25.02	UPPER CONCOURSE	A	650	1.25	1,470	0.23		9 3/16		120V/1ø/60HZ		
KEF-4C		MAIN CONCOURSE	Α	650	1.25	1,470	0.23		9 3/16		120V/1ø/60HZ		
KEF-5C		MAIN CONCOURSE	A	650	1.25	1,470	0.23		9 3/16		120V/1ø/60HZ		<b>A</b>
KEF-6C		MAIN CONCOURSE	G	10,000	3.50	1,280	7.50		27	BELT	480V/3¢/60HZ	NOTE	
KEF-7C	and a single second	MAIN CONCOURSE	A G	650	1.25	1,470	0.23		9 3/16 15	BELT	120V/1ø/60HZ	NOTE	
KEF-8C KEF-9C	4.35.05 6.35.01	UPPER SUITE	A	2,875 650	<u>3.50</u> 1.25	2,250 1,470	2.40 0.23		9 3/16	BELT	480V/3ø/60HZ 120V/1ø/60HZ	NUIE	
	6.36.01	UPPER SUITE	A	650	1.25	the second s	0.23		9 3/16		120V/1¢/60HZ		· · · · · · · · · · · · · · · · · · ·
	6.37.01	UPPER SUITE	A	650	1.25	and the second	0.23		9 3/16	and the standard sector of the	120V/1¢/60HZ		
	7.28.01	UPPER CONCOURSE	A	650	1.25		0.23		9 3/16		120V/1ø/60HZ		
KEF-13C	7.32.01	UPPER CONCOURSE	A	650	1.25	Contraction of the second s	0.23		9 3/16		120V/1ø/60HZ		
	7.33.02	UPPER CONCOURSE	Α	650	1.25	and the second se	0.23	and the second se	9 3/16	and the second	120V/1ø/60HZ		
and the second	2.43.01	MAIN CONCOURSE	<b>A</b>	650	1.25	Contraction of the local distance of the loc	0.23		9 3/16		120V/1ø/60HZ		
KEF-5D		MAIN CONCOURSE	A	650	1.25	in the second	0.23		9 3/16	and the second	120V/1ø/60HZ		
KEF-6D KEF-7D		CLUB LEVEL PANTRY	G	650 2,875	1.25 3.50	1,470 2,250	0.23		9 3/16 15	BELT	120V/1ø/60HZ 480V/3ø/60HZ	NOTE	0
KEF-8D		UPPER SUITE	A	650	1.25	1,470	0.23		9 3/16		120V/1¢/60HZ		$\mathbf{\nabla}$
KEF-9D	ter in the second se	UPPER SUITE	<u> </u>	650	1.25	1,470	0.23		9 3/16	the second s	120V/1¢/60HZ	····	
	7.48.01	UPPER CONCOURSE	A	650	1.25	1,470	0.23		9 3/16		120V/1ø/60HZ		· · · · · · · · · · · · · · · · · · ·
	7.48.04	UPPER CONCOURSE	Α	650	1.25	1,470	0.23	1/3	9 3/16	BELT	120V/1ø/60HZ		
	7.49.01	UPPER CONCOURSE	A	650	1.25	1,470	0.23		9 3/16		480V/30/60HZ		0
(EF-13D)	2.46.01	MAIN CONCOURSE	G	5,000	3.50	1,685	4.29	5	20	BELT	480V/3ø/60HZ	NOTE	(1)
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<u>NOTE</u> :		ROVED FOR MAXIMUM 3											

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		COIL	PIPE SCHE	DULE	
DESIG	No COILS IN BANK	RUNOUT PIPE SIZE	BANK HEADER PIPE SIZE B	MAIN PIPE SIZE B	
CC-1	2	3	4	4	AHU-
HC-1	2	1.5	2	2	AHU-
CC-2	2	3	4	4	AHU-
HC-2	2	1.5	2	2	AHU-
CC-3	2	3	4	4	AHU-
HC-3	2	1.5	2	2	AHU-
CC-4	2	3	4	4	AHU-
HC-4	2	1.5	2	2	AHU-
CC-5	2	3	4	4	AHU-
HC-5	2	1.5	2	2	AHU-
CC-6	2	3	4	4	AHU-
HC-6	2	1.5	2	2	AHU-
CC-7	2	3	4	4	AHU-
HC-7	2	1.5	2	2	AHU-
CC-8	2	3	4	4	AHU-
HC-6	2	1.5	2	2	AHU-

Original Construction Mechanical Schedules for Reference Only.

-1-1 -1-1A		TYPE	NOM CFM	APPROX BANK DIMENSION LxHxD	No CARTRIDGES	CARTRIDGE SIZE LxHxD	FACE VEL FPM	MEDIA AREA PER CARTRIDGE	MAXIMUM INITIAL PD IN WG	EFFICIENCY	REMARKS
-1-1A	AHU-1	В	18200	100"x60"x12"	15	20"x20"x12"	436	39.0 SQ FT	0.29	60%	
	AHU-1	A	18200	100"x60"x2"	15	20" ×20" ×2"	436	4.6 SQ FT	0.28	30%	
-2-1	AHU-2	B	18200	100"x60"x12"	15	20"x20"x12"	436	39.0 SQ FT	0.29	60%	
-2-1A	AHU-2	Α	18200	100"x60"x2"	15	20"x20"x2"	436	4.6 SQ FT	0.28	30%	
-3-1	AHU-3	B	27500	100"x80"x12"	20	20"x20"x12"	494	39.0 SQ FT	0.29	60%	<u>.</u>
<u>-3–1A</u> -4–1	AHU-3 AHU-4	A B	27500 27500	<u>100"x80"x2"</u> 100"x80"x12"	20 20	20"x20"x2" 20"x20"x12"	494 494	4.6 SQ FT 39.0 SQ FT	0.28	<u> </u>	
-4-1A	AHU-4	A	27500	100"x80"x2"	20	20" x20" x2"	494	4.6 SQ FT	0.23	30%	
-5-1	AHU-5	B	27500	100"x80"x12"	20	20" x20" x12"	494	39.0 SQ FT	0.29	60%	
-5–1A	AHU-5	A	27500	100" x80" x2"	20	20" x20" x2"	494	4.6 SQ FT	0.28	30%	
-6-1	AHU-6	B	27500	100"x80"x12"	20	20"x20"x12"	494	39.0 SQ FT	0.29	60%	
-6-1A	AHU-6	A	27500	100"x80"x2"	20	20" x20" x2"	494	4.6 SQ FT	0.28	30%	
-7-1	AHU-7	B	18200	100"x60"x12"	15	20"x20"x12"	436	39.0 SQ FT	0.29	60%	· · · · · · · · · · · · · · · · · · ·
-7-1A	AHU-7	A	18200	100" x60" x2"	15	20" x20" x2"	436	4.6 SQ FT	0.28	30%	
-8-1 -8-1A	AHU-8 AHU-8	B	18200	<u>100"x60"x12"</u> 100"x60"x2"	<u> </u>	20"x20"x12" 20"x20"x2"	436 436	39.0 SQ FT 4.6 SQ FT	0.29	60% 30%	
- <u>0-1A</u> -9-1	AHU-0 AHU-9	A B	18200 13300	96"x48"x12"	8	24" x24" x12"	416	39.0 SQ FT	0.30	60%	NOTE 1
9-1A	AHU-9	A	13300	96" x48" x2"	8	24" x24" x2"	416	4.6 SQ FT	0.20	30%	NOTE 1
-10-1	AHU-10	A	1800	32" x40" x2"	4	20"x16"x2"	202	4.6 SQ FT	0.20	30%	NOTE 1,2
-11-1	AHU-11	Α	2900	40" x40" x2	4	20"x20"x2"	261	4.6 SQ FT	0.20	30%	NOTE 1,2
12-1	AHU-12	A	3000	40"x40"x2"	4	20"x20"x2"	270	4.6 SQ FT	0.20	30%	NOTE 1,2
13-1	AHU-13	Α	1600	20"x32"x2"	2	20"x16"X2"	364	4.6 SQ FT	0.20	30%	NOTE 1,2
14-1	AHU-14	A	2500	32" x40" x2"	4	20"x16"x2"	280	4.6 SQ FT	0.20	30%	NOTE 1,2
15-1	AHU-15	B	9300	80"x40"x12"	8	<u>20"x20"x12"</u>	419	39.0 SQ FT	0.30	60% 30%	NOTE 1 NOTE 1
- <u>15–1A</u> -16–1	AHU-15 AHU-16	B	9300 8100	80"x40"x2" 80"x40"x12"	8	20" x20" x2" 20" x20" x12"	419 365	4.6 SQ FT 39.0 SQ FT	0.30	60%	NOTE 1
-16–1A			8100	80" x40" x2"	8	20" x20" x2"	365	4.6 SQ FT	0.20	30%	NOTE 1
17-1	AHU-17	B	12900	96" x48" x12"	8	20" x20" x12"	403	39.0 SQ FT	0.30	60%	NOTE 1
-17–1A		A	12900	96" ×48" ×2"	8	20" x20" x2"	403	4.6 SQ FT	0.20	30%	NOTE 1,2
18-1	AHU-18	A	2600	32"x40"x2"	4	20"x16"x2"	292	4.6 SQ FT	0.20	30%	NOTE 1,2
-20-1	AHU-20	A	9700	80"x40"x2"	8	20"x20"x2"	437	4.6 SQ FT	0.20	30%	NOTE 1,2
-21-1	AHU-21	A	11300	72" x48" x2"	6	24" x24" x2"	471	4.6 SQ FT	0.20	30%	NOTE 1,2
-22-1	AHU-22	A	11300	72" x48" x2"	6	24" x24" x2"	471	4.6 SQ FT	0.20	30%	NOTE 1,2 NOTE 1,2
-23-1 -V-1		A	9700	80"x40"x2" 96"x60"x2"	8	20" x20" x2" 24" x20" x2"	437	4.6 SQ FT 4.6 SQ FT	0.20	30%	NOTE 1,2
V-2	HVU-1 HVU-2	A	16300		12	16" x25" x2"	- 308	4.6 SQ FT	0.20	30%	NOTE 1,2
			13000		4	<u>16"x20"x2"</u>					
V-3 V-4	HVU-3 HVU-4	A	6000 2000	60" x40" x2" 32" x40" x2"	6 4	20"x20"x2" 16"x20"x2"	360 225	4.6 SQ FT 4.6 SQ FT	0.20	30%	NOTE 1,2 NOTE 1,2
·V-5	AHU-23	A	6600	76"x40"x2"	6	20" x20" x2"	313	4.6 SQ FT	0.20	30%	NOTE 1,2
					2	16" x20" x2"	250	A 6 SO FT	0.20	30%	NOTE 1,2
V-6 V-7	HVU-6 HVU-7	A A	3300 5700	32"x40"x2" 60"x40"x2"	4	16" x20" x2" 20" x20" x2"	259 342	4.6 SQ FT 4.6 SQ FT	0.20	30%	NOTE 1,2
V-8	HVU-8	A	2700	32" x40" x2"	4	16" x20" x2"	304	4.6 SQ FT	0.20	30%	NOTE 1,2
V-9	HVU-9	A	3200	40" x40" x2	4	20" x20" x2"	288	4.6 SQ FT	0.20	30%	NOTE 1,2
V-10	HVU-10	A	8800	84" x50" x2"	8	16" x25" x2" 20" x25" x2"	302	4.6 SQ FT	0.20	30%	NOTE 1,2
V-11	HVU-11	Δ	5800	60" x40" x2"	6	20" x20" x2"	348	4.6 SQ FT	0.20	30%	NOTE 1,2
V-12	HVU-12	A	5800	60" x40" x2"	6	20" x20" x2"	348	4.6 SQ FT	0.20	30%	NOTE 1,2
V-13	HVU-13	A	2700	32" x40" x2"	4	16" x20" x2"	520	4.6 SQ FT	0.20	30%	NOTE 1,2
-A-1	ELEC RM	A	32,000		18	24" x24" x2"	444	4.6 SQ FT	0.20	30%	PRESS QUAD
·B-1	ELEC RM	Α	32,000		18	24" x24" x2"	444	4.6 SQ FT	0.20	30%	PRESS QUAD
-C-1	ELEC RM	A	32,000		18	24" x24" x2"	444	4.6 SQ FT	0.20	30%	PRESS QUAD
-D-1	ELEC RM	A	32,000		18	24" x24" x2"	444	4.6 SQ FT	0.20	30%	PRESS QUAD
B-2	ELEC RM	A	50000	192"x72"x2"	24	24" x24" x2"	520	4.6 SQ FT	0.20	30%	MAIN CONCO
-	<u>.</u>										<u> </u>

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NOTES: (1) provided by anu manufacturer. 2) FILTER/MIXING BOX.

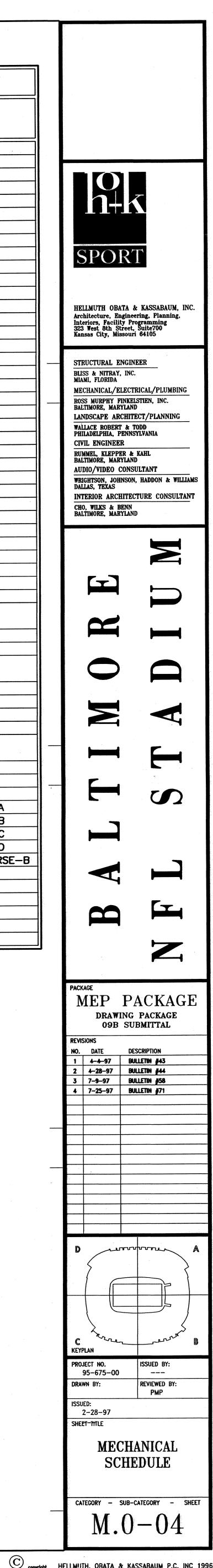
			DUCT	HE	EATI	NG C	OIL S	CHE	DULE	
	CFM	APPROX SIZE LxH	MAX AIR PD (IN H₂O)	EAT ⁺F	LAT F	BTUH @200°F EWT	MAX H20 PD (FT H20)	ROWS	GPM * @30°F ДТ	REMARKS
RH-1	670	18"x9"	.20	55	90	25300	1.0	1	1.9	
RH-2	800	34" x8"	.10	55	90	30200	1.0	1	2.2	
RH-3	1825	38"x12"	.20	55	90	69000	1.0	1	5.0	
RH-4	525	14" x9"	.20	55	90	19800	1.0	1	1.4	
RH-5	495	14"×9"	.20	55	90	18700	1.0	1	1.3	
RH-6	500	14"×9"	.20	55	90	18900	1.0	1	1.4	
RH-7	260	12"x6"	.20	55	90	9800	1.0	1	0.8	
RH-8	315	14" x6"	.20	55	90	11900	1.0	1	0.9	
RH-9	180	6"x10"	.20	55	90	6800	1.0	1	0.6	
RH-10	160	6"x10"	.10	55	90	6000	1.0	1	0.5	
RH-11	160	6"x10"	.10	55	90	6000	1.0	1	0.5	
RH-12	935	26"x12"	.10	55	90	35300	2.0	1	2.6	
RH-13	110	8"x6"	.10	55	90	4200	1.0	1	0.5	
RH-14	760	24" x9"	.20	55	90	28700	1.0	1	2.1	
RH-15	1120	30" x9"	.20	55	90	42300	2.0	1	3.1	
RH-16	970	20"x12"	.20	55	90	36700	2.0	1	2.6	
RH-17	545	16" x9"	.20	55	90	20600	1.0	1	1.5	
RH-18	85	6"×6"	.10	55	90	3200	1.0	1	0.5	
RH-19	1310	30"x12"	.20	55	90	49500	4.0	1	3.6	
RH-20	1310	30"x12"	.20	55	90	49500	4.0	1	3.6	
RH-21	370	16" x6"	.20	55	90	14000	1.0	1	1.0	
RH-22	1000	28"×9"	.20	55	90	37800	2.0	1	2.7	
RH-23	560	24"×6"	.20	55	90	21200	1.0	1	1.5	
RH-24	1120	24"x12"	.20	55	90	42300	2.0	1	3.1	
RH-25	680	20"×9"	.20	55	90	25700	1.0	1	1.9	
RH-26	765	22"×9"	.20	55	90	28900	1.0	1	2.1	
RH-27	880	20"x12"	.20	55	90	33300	1.0	1	2.5	
RH-28	720	18"x12"	.20	55	90	27300	1.0	1	2.0	

+ 40% EG SOLUTION

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REMARKS

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						GEN	ERAL	_ FAI	NS	SCHED	ULE				
DE	ESIG		LEVEL	TYPE	CFM	SP INCH H₂O	APPROX RPM	ן סחר ועי	HP MOTOR SIZE)	WHEEL DIA	DRIVE	AMCA CONSTRUCTION CLASS	ELECTRICAL	APPROX WEIGHT (LBS)	REMARKS
GEF-	1	ELEVATOR LOBBY	UPPER CONC	A	1650	0.50	1075	0.26	1/3	_	DIRECT	1	115V/1ø/60HZ	90	
GEF-	-A2	TRASH ROOM	MAIN CONC	$\langle J \rangle$	970	0.50	1140	0.248	1/4	18 1/4"	DIRECT		115V/1ø/60HZ	100	
	-A3	ELECTRIC ROOM	MAIN CONC	E 2	1420	0.375	1075		1/2	-	DIRECT	1	115V/1ø/60HZ	130	
	-A4	SUMP PIT	SERVICE	A	900	3.0	2600	0.70	1.0	10 1/2"	DIRECT		480V/30/60HZ	150	
	-A5	ELECTRICAL ROOM	UPPER SUITE	E	480	0.375			1/6	12 15/16"			115V/1ø/60HZ	70	
		ELECTRICAL ROOM	UPPER CONC	D	480	0.375	1550		1/8	_	DIRECT		115V/1ø/60HZ	30	
1	-A7	EVECTRICAL ROOM	SERVICE LEVEL	E	240	0.375			1/6	12 15/16"		l	115V/1ø/60HZ	30	
1	-B1	ELEVATOR LOBBY	UPPER CONC		4620	0.50	1370	1.33 1	1/2	-	BELT		480V/1ø/60HZ	130	
	-B2	TRASH ROOM	MAIN CONC		970	0.50		+	1/4	18 1/4"	DIRECT		115V/1ø/60HZ	100	
	-B3	ELECTRIC ROOM	MAIN CONC	E 2	1420	0.375	1075		1/2	-	DIRECT		115V/1ø/60HZ	130	
	<u>-B4</u>	SUMP PIT	SERVICE	A	900	3.0	2600	0.70	1.0	10 1/2"	DIRECT		480V/3ø/60HZ	150	
[	-B5	VENDING	MAIN CONC	$\left( \mathbf{J}\right)$	940	0.375			1/4	18 1/4"	DIRECT		115V/3ø/60HZ	100	
		ELECTRICAL ROOM	UPPER CONC	Þ/	480	0.375	1550	+	1/8	-	DIRECT		115V/1ø/60HZ	30	
	<u>-B7</u>	MECHANICAL ROOM	PRESS LEVEL	E	710	0.375	1075		1/3		DIRECT		115V/1ø/60HZ	70	
		ELEV. LOBBY	UPPER CONC		1660	0.50	1075		1/3		DIRECT		115V/1ø/60HZ	90	
GEF-		TRASH ROOM	MAIN CONC	U)	880	0.50		<u> </u>	1/4	18 1/4"	DIRECT		115V/1ø/60HZ	100	· · · · · · · · · · · · · · · · · · ·
		ÉLECTRIC ROOM	MAIN CONC	E	1420	0.375	1075		1/2		DIRECT		115V/1ø/60HZ	130	
		ELECTRIC ROOM	UPPER CONC	D/2	480	0.375	1550	+	1/8		DIRECT		115V/1ø/60HZ	30	
		ELECTRIC ROOM	UPPER SUITE	-5-	480	0.375				12 15/16"			115V/1ø/60HZ	70	
			MAIN CONC	<u> </u>	970	0.50			1/4	18 1/4"	DIRECT		115V/1ø/60HZ	100	·····
	Į¢	FLECTRIC ROOM	MAIN CONC	Ĕ	1420	0.375	1075		1/2		DIRECT		115V/1ø/60HZ	130	
GEF-	-03/	ELECTRIC ROOM	UPPER CONC	D	480	0.375	1550	-	1/8	-	DIRECT		115V/1ø/60HZ	30	

Construction continues

			SMO	KE	EXHA	AUS	T FA	N S	CHE	DULE			
DESIG	SERVICE	TYPE	CFM	SP INCH H₂O	APPROX RPM	BHP	HP (MOTOR SIZE)	WHEEL DIA	DRIVE	AMCA CONSTRUCTION CLASS	ELECTRICAL	APPROX WEIGHT (LBS)	REMARKS
SEF-1	SERVICE LEVEL-QUAD A	С	12,500	1.5	800	5.2	7.5	33	BELT		480/3/60	480	INLINE-CENTRIFUGAL
SEF-2	SERVICE LEVEL-QUAD A	C	12,500	1.5	800	5.2	7.5	33	BELT	1	480/3/60	480	INLINE-CENTRIFUGAL
SEF-3	SERVICE LEVEL-QUAD B	C	12,500	1.5	800	5.2	7.5	33	BELT	l	480/3/60	480	INLINE-CENTRIFUGAL
SEF-4	SERVICE LEVEL-QUAD B	С	12,500	1.5	800	5.2	7.5	33	BELT	1	480/3/60	480	INLINE-CENTRIFUGAL
SEF-5	ATRIUM-QUAD A	В	26,000	1.5	1170	13.5	15.0	40	DIRECT	l	480/3/60	930	INLINE-VANEAXIAL
SEF-6	ATRIUM-QUAD A	A	24,000	1.5	800	12.5	15.0	40	BELT	1	480/3/60	1,230	VENT SET
SEF—7a	ATRIUM-QUAD B	В	32,000	1.5	1170	15.0	20.0	48	DIRECT	1	480/3/60	1,490	INLINE-VANEAXIAL
SEF-7b	ATRIUM-QUAD B	B	32,000	1.5	1170	15.0	20.0	48	DIRECT	1	480/3/60	1,490	INLINE-VANEAXIAL
SEF-8	ATRIUM-QUAD B	A	12,000	1.5	800	5.3	7.5	33	BELT	1	480/3/60	930	VENT SET
SEF-9	ATRIUM-QUAD B	A	24,000	1.5	800	12.5	15.0	40	BELT	1	480/3/60	1,230	VENT SET
SEF-10a	CLUB LEVEL-QUAD C	В	37,500	2.0	1170	17.0	20.0	48	DIRECT	l	480/3/60	1,490	INLINE-VANEAXIAL
SEF-10b	CLUB LEVEL-QUAD C	В	37,500	2.0	1170	17.0	20.0	48	DIRECT	I	480/3/60	1,490	INLINE-VANEAXIAL
SEF-11	ATRIUM-QUAD D	В	26,000	1.5	1170	13.5	15.0	40	DIRECT	l	480/3/60	930	INLINE-VANEAXIAL
SEF-12	ATRIUM-QUAD D	A	24,000	1.5	800	12.5	15.0	40	BELT	·	480/3/60	1,230	VENT SET

					HE	EAT	EXCH	IANGER	SC	HED	ULE				
					TUBE SIDE						SH	ELL SIDE		100001	
DESIG	GPM	EWT •F	LWT •F	TUBE VELOCITY	MAXIMUM PRESS DROP	No PASS	HEATING SURFACE	FOULING FACTOR	GPM	EWT •F	LWT •F	SHELL VELOCITY	MAXIMUM PRESS DROP	APPROX SIZE	CAPACITY
HX-1	200	40	130	1.6 FPS	1.1 FT	4	761 SQ FT	0.001	300	200	140	2.1 FPS	4.8 FT	24"øx96"L	9000 MBH
												· · ·			
							L	L							

				HEAT	ING WATER SID	E				STEAM SIDE		100001	
DESIG	GPM	EWT •F	LWT *F	TUBE VELOCITY	MAXIMUM PRESS DROP	No PASS	HEATING SURFACE	FOULING FACTOR	STEAM PRESSURE	SAT STEAM TEMP	COND LOAD	APPROX SIZE	CAPACITY
C-1	1500	176	200	7.3 FPS	5.8 FT	2	337 SQ FT	0.001	60 PSIG	307 <b>'</b> F	49,200 MBH	22"øx60"L	16,400 MBH
C-2	1500	176	200	7.3 FPS	5.8 FT	2	337 SQ FT	0.001	60 PSIG	307 <b>°</b> F	49,200 MBH	22"øx60"L	16,400 MBH
C-3	1500	176	200	7.3 FPS	5.8 FT	2	337 SQ FT	0.001	60 PSIG	307 °F	49,200 MBH	22"øx60"L	16,400 MBH

<b>(</b>	DESIG	LOCATION	CAPACITY SQ FT EDR	GPM	DISCHARGE HEAD PSIG	RECEIVER SIZE	PUMP DISCHARGE SIZE	MOTOR HP	RPM	ELECTRICAL V/PH/HZ	REMARKS
	CRU-1	MECH 1.26.03	100,000	150	20	120 GAL	2"	2.0	1750	480/3/60	
	CRU-2	MECH 1.26.03	100,000	150	20	120 GAL	2"	2.0	1750	480/3/60	
				L	<u></u>						

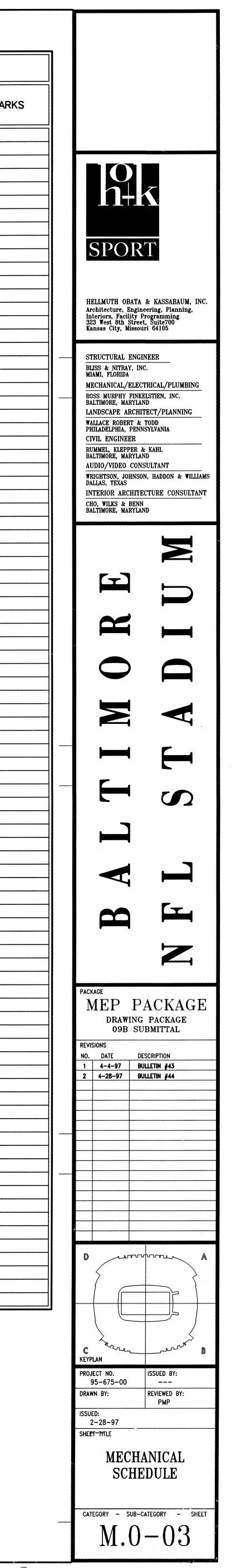
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Palateria aggioria protestati.

HEDULE	-
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DESIG	SERVICE	LEVEL	TYPE	CFM	SP INCH H₂O	APPROX RPM		HP (MOTOR SIZE)	WHEEL DIA	DRIVE	AMCA CONSTRUCTION CLASS	ELECTRICAL	APPROX WEIGHT (LBS)	REMARI
TEF-A1 TEF-A2	TOILET/LOCKER TOILET/LOCKER	SERVICE SERVICE 2	$\left( \begin{array}{c} J \\ J \end{array} \right)$	2400 1500	0.50		0.859		18 1/4" 20 15/16"	DIRECT		480V/3ø/60HZ 115V/1ø/60HZ		
TEF-A3	TOILET/LOCKER	SERVICE	~ J \	3720	0.50	1725	1.729	2	20 15/16"			480V/3ø/60HZ		n ay shifte
TEF-A4	TOILET	MAIN CONC	<pre>&gt; J </pre>	1460	0.50		0.498		20 15/16"			115V/1ø/60HZ	f	
TEF-A5 TEF-A6	TOILET	MAIN CONC MAIN CONC		1900 2480	0.50	1140 1725	0.498		20 15/16" 20 15/16"			115V/1ø/60HZ 480V/3ø/60HZ		
TEF-A7	TOILET	MAIN CONC	Ĕ	200	0.375	1550	-	155 WATTS		DIRECT		115V/1ø/60HZ		
TEF-A8	NOT USED			P	0.50	1110	0.400	1/0		DIDEOT		4451/44/00117	100	
<u>TEF-A9</u> TEF-A10	TOILET	MAIN CONC	J	1460 1740	0.50	1140 1075	0.498	1/2 1/3	20 15/16"	DIRECT	 	115V/1ø/60HZ 115V/1ø/60HZ		
TEF-A11		UPPER CONC	D	1740	0.50	1075	0.26	1/3	_	DIRECT	 I	115V/1ø/60HZ		
TEF-A12		UPPER CONC	D	1800	0.50	1075	0.42	1/3	-	DIRECT		115V/1ø/60HZ	90	
<u>TEF-A13</u> TEF-A14		UPPER CONC	D	960	0.50	1075	0.16	1/6"	_	DIRECT		115V/1ø/60HZ	80	
TEF-A15		UPPER CONC	DA	1740	0.50	1075	0.26	1/3	-	DIRECT	I	115V/1ø/60HZ		
TEF-A16		UPPER CONC	$D^{2}$	3760	0.75	1020	0.90	1	-	BELT		480V/30/60HZ		
<u>TEF-A17</u> TEF-A18	1	UPPER SUITE	$\left\{ J \right\}$	<u>800</u> 1040	0.50 0.50		0.248		18 1/4" 15 9/16"	DIRECT		115V/1ø/60HZ 115V/1ø/60HZ		
TEF-A10		UPPER SUITE		450	0.375	+	0.149		12 15/16"			115V/10/60HZ		
EF-A20		UPPER CONC	ø	1360	0.50	1725	0.34	1/3	-	DIRECT		115V/1ø/60HZ		·
EF-A21 EF-A22		UPPER CONC	D	1100	0.50 0.50	1725 1725	0.34 0.34	1/3 1/3	-	DIRECT		115V/1ø/60HZ 115V/1ø/60HZ		
EF - A22 EF - A23	A	CLUB 2		<u>1180</u> 1410	0.50		0.34		 20 15/16"	DIRECT		115V/10/60HZ		
EF-B1	TOILET/LOCKER	SERVICE	\J \	810	0.50	1140	0.248	1/4	18 1/4"	DIRECT	l	115V/1ø/60HZ	100	
EF-82	TOILET	SERVICE	<u> </u>	1395	0.50		0.498		20 15/16"	DIRECT	1	115V/10/60HZ		
EF-B3 EF-B4	TOILET TOILET/LOCKER	SERVICE SERVICE		1980 225	0.75 0.375		0.859	1 1/8	18 1/4" 15 9/16"	DIRECT	1	480V/3Ø/60HZ 115V/1Ø/60HZ		
EF-B5	TOILET	SERVICE	\ J \	2675	0.50	1725	0.859	1	18 1/4"	DIRECT		480V/3ø/60HZ	100	
EF-B6	TOILET/LOCKER	SERVICE	> J )	13270	0.75	780	4.91	7 1/2	42 3/16"	BELT		480V/30/60HZ		
EF-B7 EF-B8	TOILET/LOCKER TOILET/LOCKER	SERVICE SERVICE		7920 8770	0.50	1075 1190	3.02	5	31 9/16" 31 9/16"	BELT		480V/3Ø/60HZ 480V/3Ø/60HZ		
EF-B9	TOILET	MAIN CONC	<b>J</b>	1460	0.50		0.498		20 15/16"			115V/1ø/60HZ		
EF-B10	+	MAIN CONC	\ J \	2060	0.50		0.498	1/2	20 15/16"			115V/1ø/60HZ		
EF-B11 EF-B12		UPPER SUITE MAIN CONC		300 2140	0.375	1140 1140	0.101	1/8 1/2	15 9/16" 20 15/16"	DIRECT		115V/1ø/60HZ 115V/1ø/60HZ	t	
EF-B13		MAIN CONC		1700	0.50		0.498		20 15/16"			115V/10/60HZ		
EF-B14		UPPER CONC	P/	3580	0.75	1020	0.90	1	-	BELT	<b>I</b>	480V/3ø/60HZ	140	
EF-B15		UPPER CONC CLUB/SUITE	D D	1740	0.50	1075 1075	0.26	1/3		DIRECT	1	115V/10/60HZ		
<u>EF-B16</u> EF-B17		UPPER CONC	D	<u>1740</u> 2620	0.50	1140	0.26	1/3 3/4		DIRECT		115V/1ø/60HZ 480V/3ø/60HZ		
EF-B18		UPPER CONC	D	960	0.50	1075	0.16	1/6	-	DIRECT		115V/1ø/60HZ	80	
EF-B19			$\frac{D^{2}}{2}$		0.50	1075	0.16	1/6	-	DIRECT	1	115V/1ø/60HZ		
EF-B20 EF-B21		UPPER SUITE		940 880	0.50		0.248		18 1/4" 18 1/4"	DIRECT	I	115V/1ø/60HZ 115V/1ø/60HZ		
EF-B22		UPPER CONC	- Co-	1540	0.50	1725	0.34	1/3	-	DIRECT	I	115V/1ø/60HZ		
EF-B23		UPPER CONC	D	1180	0.50	1725	0.34	1/3	_	DIRECT	<u> </u>	115V/1ø/60HZ		
<u>F-B24</u> F-B25		UPPER CONC CLUB		<u>1180</u> 570	0.50	1725 1140	0.34	1/3 1/8		DIRECT	<b>I</b>	115V/1ø/60HZ 115V/1ø/60HZ		
EF-B26	T	UPPER SUITE	L.	100	0.375	1170	-	115 WATTS		DIRECT		115V/10/60HZ		
EF-B27	TOILET	MAIN CONC	(1)	750	0.375		0.248		18 1/4"	DIRECT		115V/1ø/60HZ	100	
EF-C1	TOILET	MAIN CONC MAIN CONC		1460	0.50		0.498	<u> </u>	20 15/16"			115V/10/60HZ		
<u>EF-C2</u> EF-C3	TOILET TOILET	MAIN CONC /		<u>2220</u> 3240	0.50		0.498	+	20 15/16" 23 9/16"	DIRECT		115V/1ø/60HZ 480V/3ø/60HZ		
EF-C4	TOILET	MAIN CONC	Ĕ	200	0.375	1550	_	155 WATTS	-	DIRECT	1	115V/1ø/60HZ	40	
EF-C5 EF-C6	TOILET TOILET	PRESS UPPER CONC		940	0.50		0.248		18 1/4"	DIRECT	I	115V/10/60HZ		
EF - CO	TOILET	UPPER CONC	 D	<u>2620</u> 1740	0.50	1140 1075	0.82	3/4	-	DIRECT	I	480V/3Ø/60HZ 115V/1Ø/60HZ		
EF-C8	TOILET	UPPER CONC	D	1740	0.50	1075	0.26	1/3	-	DIRECT	I	115V/1ø/60HZ	90	
EF-C9	TOILET		D	5060	0.50	1010	1.17	1 1/2	-	BELT		480V/30/60HZ		
EF-C10 EF-C11		UPPER CONC UPPER CONC	D D/2	1360 960	0.50	1725 1075	0.34	1/3 1/6	_	DIRECT	 	115V/1ø/60HZ 115V/1ø/60HZ		
EF-C12		UPPER SUITE		800	0.50		0.248		18 1/4"	DIRECT		115V/1ø/60HZ		
EF-C13	TOILET	UPPER SUITE	\J}	1020	0.50	1725	0.357	1/3	15 9/16"	DIRECT	l	115V/1ø/60HZ	90	
EF-C14 EF-C15		CLUB MAIN CONC		1 <u>230</u> 200	0.50	1725 1550	0.357	1/3 155 WATTS	15 9/16"	DIRECT		115V/1ø/60HZ 115V/1ø/60HZ		
TEF-C16		UPPER CONC	 D	1200	0.50	1725	0.34	1/3	_	DIRECT		115V/10/60HZ		
EF-C17	TOILET	UPPER CONC	D	1180	0.50	1725	0.34	1/3	-	DIRECT		115V/1ø/60HZ	70	
		UPPER CONC	D	1540	0.50	1725	0.34	1/3	-	DIRECT	<b>I</b>	115V/1ø/60HZ	70	
EF = CT9 EF = C20	(NUT USED)	UPPER SUITE	(J)	400	0.375	 1140	0.101	1/8	15 9/16"	– DIRECT	-		90	
EF-C21		UPPER CONC	<u> </u>	480	0.50	1550	_	1/8	_	DIRECT		115V/1ø/60HZ		
EF-D1	TOILET	MAIN CONC		3440	0.75		0.923		23 9/16"	DIRECT		480V/30/60HZ	<u> </u>	
EF-D2 EF-D3	TOILET	UPPER CONC UPPER CONC		1180 1540	0.50	1725 1725	0.34	1/3 1/3	-	DIRECT		115V/1ø/60HZ 115V/1ø/60HZ		
EF-D4	TOILET	MAIN CONC	$\overline{\langle 1 \rangle}$	2140	0.50		0.498		20 15/16"		 I	115V/1ø/60HZ		
F-D5	TOILET	MAIN CONC	(1)	1700	0.50	1140	0.498	1/2	20 15/16"	DIRECT		115V/1ø/60HZ	120	
EF-D6 EF-D7	TOILET	UPPER CONC UPPER CONC		3720	0.75	870 1075	0.81 0.42	3/4 1/3	-	BELT	1	480V/3Ø/60HZ 115V/1Ø/60HZ		
<u>F-D7</u> EF-D8	TOILET	UPPER CONC	D	<u>1900</u> 1740	0.50	1075	0.42	1/3	_	DIRECT	1	115V/10/60HZ		
EF-D9	TOILET	UPPER CONC	D	1740	0.50	1075	0.26	1/3	_	DIRECT		115V/1ø/60HZ	90	
EF-D10			D	960	0.50	1075	0.16	1/6	-	DIRECT		115V/10/60HZ		
EF-D11 EF-D12		UPPER CONC UPPER SUITE	- J.	<u>1740</u> 450	0.50 0.375	1075 1140	0.26	1/3 1/8	-	DIRECT		115V/1ø/60HZ 115V/1ø/60HZ		
EF-D12		UPPER SUITE	< J/A	940	0.575	f	0.101		18 1/4"	DIRECT	I	115V/10/60HZ		
EF-D14	TOILET	UPPER SUITE		800	0.50	1140	0.248	1/4	18 1/4"	DIRECT		115V/1ø/60HZ	100	
EF-D15	·····	CLUB	5	1440	0.50		0.498		20 15/16"	DIRECT	1	115V/10/60HZ		
<u>EF-D16</u> FF-D17	TOILET	UPPER CONC UPPER SUITE	E	1560 100	0.50 0.375	1725 1170	0.34	1/3 115 WATTS	-	DIRECT		115V/1ø/60HZ 115V/1ø/60HZ		
			<u> </u>					1.10 11/113		UNLUI	I		20	

# Original Construction Mechanical Schedules for Reference Only.



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		L	JNIT H	EATE	ER S	CHEC	DULE	E (ELECT	RIC)											Н	EAT	PUN	MP (	JNIT	SCHED	ULE									
	DESIG	NOMINAL CFM	REQUIRED MBH		TEMP RISE °F			ELECTRICAL	REMARKS	DESIG		DUTY	CFM	MIN. OA CFM	FAN SEC TSP INCH H2O	CTION MOTOR HP	RPM	WHEEL DIA INCH	EAT *F DB \		_AT 'F	SECTIO	SENS	MAXIMUM AIR PD IN H₂ O	HEAT PUMP MBH △ T 17°F		NG SECTIO RESISTAN KW	ON NCE HEAT EAT F DB	LAT 'F DB	CONDI No OF COMP	ENSER S COND FAN HP		ELECTRIC	AL	REMARKS
5	UH-1 UH-2	715 540	34.1 25.6	10.0 7.5	44	1/15		480V/3Ø/60HZ 480V/3Ø/60HZ		HPU-1		C – MAIN CONC. D A – MAIN CONC.	4030		2.20	5 1/3	980 960	15x15	77.8 5 77.8 5					- 0.4	- 18.0	<sup>*</sup> 184.3 52.5	54 15	69.0 70.0	111.3 121.5	2	1	65 62.4	480V/3Ø/60 480V/3Ø/60		
(	UH-3 UH-4	) 1250	51.3	15.0 5.0		1/4		480V/3ø/60HZ 480V/3ø/60HZ		- HPU-3 (	FIRST AI	D C - MAIN CONC.	920	90	1.50	1/3	960	10x8	77.8 5	2.2 54.	0 53.0	0 26.9	21.9		18.0	52.5	15	70.0	121.5	1	1	62.4	480V/3ø/60	DHZ	
		/	<u></u>			1	1		4	HPU-4 HPU-5		B – MAIN CONC. B – MAIN CONC.	1140		1.50 1.50	1/3	960		77.8 5 77.8 5					-	18.0 18.0	52.5 52.5	15 15	70.0 70.0	111.6 111.6	1	1	-	480V/3Ø/60 480V/3Ø/60	DHZ	
					TOR	SCH	IFDI			HPU-6 HPU-7		D – MAIN CONC. D – MAIN CONC.	/ 1140		1.50				77.8 5 77.8 5						18.0 18.0	52.5 52.5	15 15	70.0	111.6	1	1		480V/30/60	DHZ	an a
										HPU-8 HPU-9	TV/AV-A TV/AV-B		<sup>7</sup> 1070 1070	0	1.00	1/2	980	9X4	76.0 5 76.0 5	3.0 54.	0 53.0	31.8	25.4		22.6 22.6	-	-	74.0 74.0		REFER T				DHZ S	SPLIT SYSTEM
	DESIG	REQUIREI MBH	р кw	ELE	CTRICAL		REMA	ARKS		HPU-10	TV/AV-C		1070	0	1.00	1/2	960 960	9X4	76.0 5	3.0 54.	0 53.	31.8	25.4	-	22.6	_	_	74.0	93.6	REFER T	O ACCU-	-10 SCH.	115V/1ø/60	DHZ S	PLIT SYSTEM
	1	6.8	2	277V/	/1ø/60H	Z				HPU-12	TV/AV-D FIRST AI	DB	430	0	- (	0.5 AMP	· _		76.0 5 76.0 5	3.0 –	-	14.3	-		22.6 8.7	5.1	1.5	74.0	103.7	REFER TO	O ACCU-	-12 SCH,	115V/1ø/60	DHZ S	PLIT SYSTEM
$\sum_{2}$	2	10.2	3		/1ø/60H /1ø/60H						) FIRST AI	D D BOARD CONTROL A	430 7300	0 750	2.25	0.5 AMP 7.5		and the second se	76.0 5 77.8 5					_	8.7	5.1 126.2	1.5 38.0	74.0 69.0	85.0	(REFER TO	O ACCU-	-14 SCH.	115V/1ø/60		SPLIT SYSTEM
	4	3.4	1		/1ø/60H																									$ \longrightarrow $	~~~	$\sim$		2	١

UNIT HEATER SCHEDULE (ELECTRIC			HEAT PUMP UNIT	SCHEDULE	
	ARKS DESIG 2 DUTY	FAN SECTION       MIN.     TSP     MOTOR     WHEEL       CFM     OA     INCH     HP     DIA       CFM     H2O     HP     INCH	COOLING SECTION         EAT 'F       LAT 'F       TOTAL       SENS       MAXIMUM         DB       WB       DB       WB       MBH       MBH       AIR       PD         IN       H2 O       O       H2 O       H2 O       H2 O       H2 O       H2 O	HEATING SECTION       I HEAT PUMP     RESISTANCE HEAT       MBH △ T     MBH       MBH △ T     MBH       KW     DB	CONDENSER SECTIONLAT *FNo OFCONDTOTALLAT *FCOMPFANUNITDBHPAMP
UH-1         715         34.1         10.0         44         1/15         1550         480V/3ø/60HZ           UH-2         540         25.6         7.5         44         1/25         1550         480V/3ø/60HZ           UH-2         540         25.6         7.5         44         1/25         1550         480V/3ø/60HZ	HPU-1 TICKETS C - MAIN CONC. HPU-2 FIRST AID A - MAIN CONC.		77.8       52.2       54.0       52.2       143.3       103.6       -         77.8       52.2       54.0       53.0       26.9       21.9       0.4		111.3     2     1     65     480V/3¢/60HZ       121.5     1     1     62.4     480V/3¢/60HZ
UH-3         1250         51.3         15.0         38         1/4         1550         480V/3¢/60HZ           UH-4         315         17.1         5.0         50         1/50         1550         480V/3¢/60HZ	HPU-3 ( FIRST AID C - MAIN CONC HPU-4 / NOVELTY B - MAIN CONC.	\[         \left( 1140 \]     110 1.50 1/3 960 10x8     \]	77.852.254.053.026.921.90.477.852.254.052.236.427.1-	18.0 52.5 15 70.0 1	121.5     1     1     62.4     480V/3ø/60HZ       111.6     1     1     -     480V/3ø/60HZ
	HPU-5 NOVELTY B - MAIN CONC. HPU-6 NOVELTY D - MAIN CONC.	/1140 110 1.50 1/3 960 10x8	77.8       52.2       54.0       53.0       36.4       27.1       -         77.8       52.2       54.0       53.0       36.4       27.1       -	18.0 52.5 15 70.0 1	111.6     1     -     480V/3¢/60HZ       111.6     1     1     -     480V/3¢/60HZ
CONVECTOR SCHEDULE	HPU-7 ( NOVELTY D - MAIN CONC. HPU-8 TV/AV-A	1070 0 1.00 1/2 980 9X4	77.8       52.2       54.0       53.0       36.4       27.1       -         76.0       53.0       54.0       53.0       31.8       25.4       -	22.6 74.0	111.6 1 1 - 480V/30/60HZ 93.6 REFER TO ACCU-8 SCH. 115V/10/60HZ SPLIT SYSTEM
DESIG REQUIRED KW ELECTRICAL REMARKS	HPU-9 TV/AV-B HPU-10 TV/AV-C HPU-11 TV/AV-D	1070         0         1.00         1/2         980         9X4           1070         0         1.00         1/2         960         9X4           1070         0         1.00         1/2         960         9X4           1070         0         1.00         1/2         960         9X4	76.0       53.0       54.0       52.2       31.8       25.4       -         76.0       53.0       54.0       53.0       31.8       25.4       -         76.0       53.0       54.0       53.0       31.8       25.4       -         76.0       53.0       54.0       53.0       31.8       25.4       -	22.6 – – 74.0	93.6REFER TO ACCU-9 SCH.115V/10/60HZSPLIT SYSTEM93.6REFER TO ACCU-10 SCH.115V/10/60HZSPLIT SYSTEM93.6REFER TO ACCU-11 SCH.115V/10/60HZSPLIT SYSTEM
1     6.8     2     277V/1ø/60HZ       2     10.2     3     277V/1ø/60HZ	HPU-12 FIRST AID B HPU-13 FIRST AID D	430         0         -         0.5         AMP         -         -           430         0         -         0.5         AMP         -         -	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8.7 5.1 1.5 74.0 1	103.7 REFER TO ACCU-12 SCH. 115V/10/60HZ SPLIT SYSTEM
2 3 4 3.4 277V/10/60HZ 4 3.4 1 277V/10/60HZ 4 3.4 1 277V/10/60HZ	HPU-14 SCORE BOARD CONTROL A	7300 750 2.25 7.5 1000 15x15	77.8 52.2 54.0 53.0 249.7 187.6 -		85.0 REFER TO ACCU-14 SCH. 115V/10/60HZ SPLIT SYSTEM
Undandan /					

	PUMP SCHEDULE														
DESIG	DUTY	TYPE	GPM	HEAD FEET H₂O	SUCTION X DISCHARGE	MOT BHP	OR HP	RPM	% EFFICIENCY	ELECTRICAL	REMARKS				
P-1	SECONDARY CHW	B	1650	160	8"×8"	81	100	1780	81%	460V/3ø/60HZ	VSD				
P-2	SECONDARY CHW	В	1650	160	8"×8"	81	100	1780	81%	460V/3ø/60HZ	VSD				
P-3	SECONDARY CHW	В	1650	160	8"×8"	81	100	1780	81%	460V/3ø/60HZ	VSD				
P-4	PRIMARY HTG WATER	В	1500	50	10"x8"	22.7	25	1175	83%	460V/3ø/60HZ	VSD				
P-5	PRIMARY HTG WATER	В	1500	50	10"x8"	22.7	25	1175	83%	460V/3ø/60HZ	VSD				
P-6	PRIMARY HTG WATER	В	1500	50	10"x8"	22.7	25	1175	83%	460V/3ø/60HZ	VSD				
P-7	SECONDARY HTG WATER	В	1300	130	8"×6"	53.3	75	1780	79%	460V/3ø/60HZ	VSD				
P-8	SECONDARY HTG WATER	В	1300	130	8"×6"	53.3	75	1780	79%	460V/3ø/60HZ	VSD				
UDP-1	PRIMARY CHW	-	3300	-	_	-	-	_	-	-	BY OTHERS				
UDP-2	PRIMARY CHW	-	3300	_	-	-	-	-		-	BY OTHERS				

			S	SOUND	ATTENUA	TOR SCI	HED	UL	E					
DESIG	DUTY	No ATTEN	SIZE LxWxH	CAPACITY CFM	MAXIMUM PD	FACE VELOCITY		MINIM		B RED AVE B		N BY		REMARKS
			IN. (EACH)	TOTAL	INCH H₂O	FPM	2	3	4	5	6	7	8	
SA-1-1	AHU-1 SUPPLY	1	36" x36" x36"	18200	0.20	2022	5	9	14	23	24	14	10	IAC 3L
SA-2-1	AHU-2 SUPPLY	1	36" ×36" ×36"	18200	0.20	2022	5	9	14	23	24	14	10	IAC 3L
SA-3-1	AHU-3.4 SUPPLY	4	36" ×24" ×36"	55000	0.30	2290	7	12	15	15	10	9	8	IAC 3LFL
SA-5-1	AHU-5.6 SUPPLY	4	36" ×24" ×36"	55000	0.30	2290	7	12	15	15	10	9	8	IAC 3LFL
SA-7-1	AHU-7.8 SUPPLY	3	36" ×24" ×30"	36400	0.30	2000	7	12	15	15	10	9	8	IAC 3LFL
SA-1-2	RF-1 DUCT	2	36"×24" X30"	20600	0.20	1650	7	13	17	16	11	11	10	IAC 3LFL
		1	36"×12"×30"											
SA-3-2	RF-3 DUCT	3	36"×24"×42"	44000	0.30	2095	7	13	17	16	11	11	10	IAC 3LFL
SA-5-2	RF-5 DUCT	3	36"×24"×42"	44000	0.30	2095	7	13	17	16	11	11	10	IAC 3LFL
SA-7-2	RF-7 DUCT	3	36"×24"×30"	27400	0.20	1570	7	13	17	16	11	11	10	IAC 3LFL
		1	36"×12"×30"											
SA-1-3	RF-1 DISCHARGE	1	32"×48"×48"	20600	-	_	9	16	18	19	14	10	10	IAC D-DUCT
SA-3-3	RF-3 DISCHARGE	1	48" ×72" ×72"	44000	-	_	9	17	19	17	12	12	10	IAC D-DUCT
SA-5-3	RF-5 DISCHARGE	1	48"×72"×72"	44000	-	_	9	17	19	17	12	12	10	IAC D-DUCT
SA-7-3	RF-7 DISCHARGE	1	38" ×58" ×58"	27400		-	10	16	20	17	14	12	10	IAC D-DUCT

			UN	IT HEA	TER SO	CHED	ULE	(HYDRO	NIC)
	DESIG	NOMINAL CFM	CAP BTUH @ 200°F EWT	CAP BTUH @ 30°F △T H₂O	MAXIMUM H <sub>2</sub> O PD FT H <sub>2</sub> O	MOTOR HP	RPM	ELECTRICAL	REMARKS
4	UH-10	2220	83.2	5.5	2.0	1/6	1070	120V/1ø/60HZ	DOWN-BLAST DISCHARGE
$\wedge$	UH-11	<ul><li>√ 1540</li></ul>	50.0	3.5	1.0	1/8	1550	120V/1ø/60HZ	HORIZONTAL DISCHARGE
	UH-12	1100	31.7	2.5	1.0	1/8	1550	120V/1ø/60HZ	HORIZONTAL DISCHARGE
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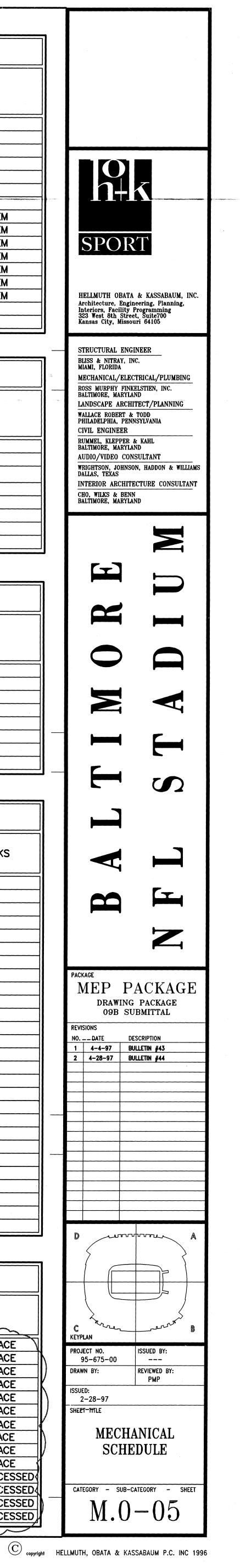
	REMARKS
ACCU-9 2700 1 1/4 850 1.6 3.5 480V/3ø/60HZ 1 20.5 107.0 95 14.6 2 13	
ACCU-10 2700 1 1/4 850 1.6 3.5 480V/3ø/60HZ 1 20.5 107.0 95 14.6 2 13	
ACCU-11 2700 1 1/4 850 1.6 3.5 480V/3ø/60HZ 1 20.5 107.0 95 14.6 2 13	
ACCU-12 - 1 0.5 - 115V/10/60HZ 1 10.0 35.0 95	
ACCU-{13} - 1 - 0.5 - 115V/1ø/60HZ 1 10.0 35.0 95	
ACCU-14 17100 3 3/4 1075 3.5 - 480V/3ø/60HZ 1 10.0 214.0 95 38.8 3 12	

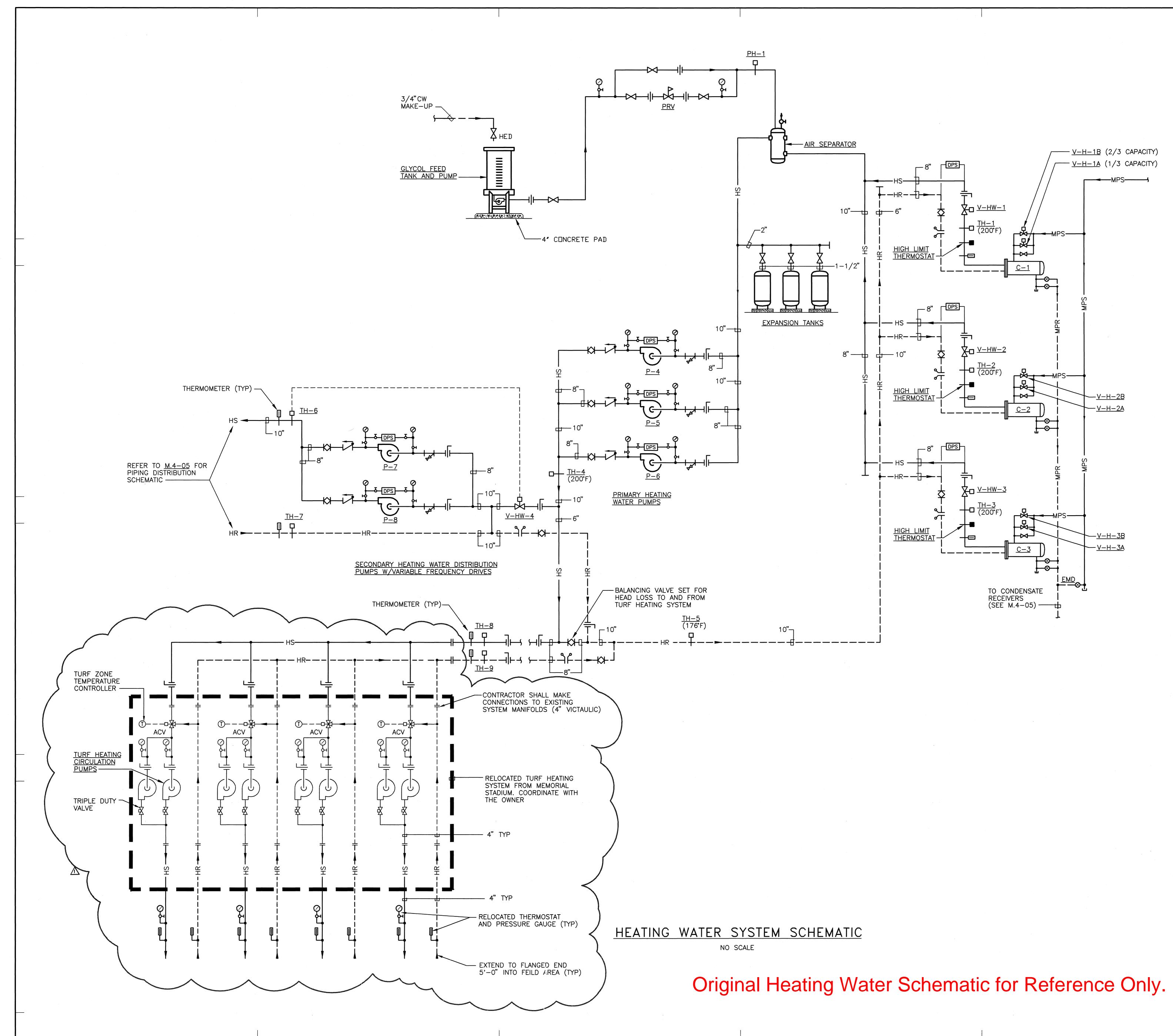
		KIT	CHE	N E>	(HA)	UST I	JNIT	SCH	HEDL	JLE		
DESIG	SERVICE ROOM No	LEVEL	TYPE	CFM	SP INCH H₂O		ВНР	HP MOTOR SIZE	DRIVE	ELECTRICAL V/PH/HZ	APPROX WEIGHT	REMARKS
KEU-1A	2.10.02	MAIN CONCOURSE	A	5000	2	1840	5.20	7.5	BELT	480V/30/60HZ	3360	
KEU-1B	2.19.01	MAIN CONCOURSE	A	5000	2	1840	5.20	7.5	BELT	480V/30/60HZ	3360	
KEU-1C	2.34.01	MAIN CONCOURSE	A	5000	2 (	1840	5.20	7.5	BELT	480V/30/60HZ	3360	
KEU-2C	22.34.01	MAIN CONCOURSE	A	5000	2	1840	5.20	7.5	BELT	480V/30/60HZ	3360	
KEU-3C	4.35.03	CLUB	A	2875	2	2960	3.10	5.0	BELT	480V/30/60HZ	2700	
KEU-1D	2.46.01	MAIN CONCOURSE	A	5000	2	1840	5.20	7.5/2	BELL	480V/30/60HZ	3360	
KEU-2D	4.46.03	CLUB	A	2875	2 (	2960	3.10	) 5.0	BELT	480V/30/60HZ)	2700	
						$\searrow$		1	$\sim$			

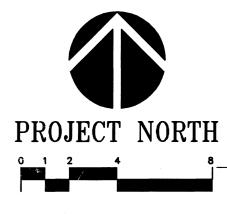
				CC	DIL PU	MP	SCH	IEDU	LE		
DESIG	DUTY	TYPE	GPM	HEAD FEET H₂O	SUCTION X DISCHARGE	Mot Bhp	OR HP	RPM	% EFFICIENCY	ELECTRICAL	REMARKS
CCP-1	AHU-1 COOLING OIL	C	197	51	2.5" x2.5"	4.2	5.0	1760	60%	460V/3ø/HZ	
CCP-2	AHU-2 COOLING COIL	С	197	51	2.5" x2.5"	4.2	5.0	1760	60%	460V/3ø/HZ	
CCP-3	AHU-3 COOLING COIL	С	280	51	3" x 3"	5.0	7.5	1760	73%	460V/3ø/HZ	
CCP-4	AHU-4 COOLING COIL	С	280	51	3" x 3"	5.0	7.5	1760	73%	460V/3ø/HZ	· · · · · · · · · · · · · · · · · · ·
CCP-5	AHU-5 COOLING COIL	С	295	51	3"×3"	5.3	7.5	1760	72%	460V/3ø/HZ	
CCP-6	AHU-6 COOLING COIL	C	295	51	3" x 3"	5.3	7.5	1760	72%	460V/3ø/HZ	
CCP-7	AHU-7 COOLING COIL	С	201	50	2.5"×2.5	4.3	5.0	1760	60%	460V/3ø/HZ	
CCP-8	AHU-8 COOLING COIL	C	201	50	2.5" x2.5"	4.3	5.0	1760	60%	460V/3ø/HZ	
CCP-9	AHU-9 COOLING COIL	С	102	40	2"×2"	1.6	3.0	1750	63%	460V/3ø/HZ	
CCP-10	AHU-10 COOLING COIL	C	21	38	1.5"x1.5"	0.5	1.0	1750	43%	460V/3ø/HZ	
CCP-11	AHU-11 COOLING COIL	C	19	34	1.5" x1.5"	0.4	1.0	1760	41%	460V/3ø/HZ	
CCP-12	AHU-12 COOLING COIL	C	19	37	1.5" x2.5"	0.4	1.0	1760	40%	460V/3ø/HZ	
CCP-13	AHU-13 COOLING COIL	C	8	46	1.5"x1.5"	0.7	1.5	1760	17%	460V/3ø/HZ	
CCP-14	AHU-14 COOLING COIL	C	28	35	1.5"x1.5"	0.5	1.0	1760	49%	460V/3ø/HZ	
CCP-15	AHU-15 COOLING COIL	C	104	30	2" x2"	1.3	2.0	1750	62%	460V/3ø/HZ	· · · · · · · · · · · · · · · · · · ·
CCP-16	AHU-16 COOLING COIL	C	91	31	2"×2"	1.0	1.5	1750	71%	460V/3ø/HZ	
CCP-17	AHU-17 COOLING COIL	С	144	30	2"×2"	1.7	3.0	1750	63%	460V/3ø/HZ	
CCP-18	AHU-18 COOLING COIL	С	12	44	1.5"x1.5"	0.7	1.5	1760	20%	460V/3ø/HZ	
CCP-19	AHU-19 COOLING COIL	C	8	40	1.5"x1.5"	0.4	1.5	1750	25%	460V/3ø/HZ	
CCP-20	AHU-20 COOLING COIL	С	44	31	1.5" x1.5"	0.6	1.5	1750	<b>55%</b>	460V/3ø/HZ	
CCP-21	AHU-21 COOLING COIL	C	51	31	2"×2"	0.7	1.5	1750	59%	460V/3ø/HZ	
CCP-22	AHU-22 COOLING COIL	C	51	31	2"×2"	0.7	1.5	1750	59%	460V/3ø/HZ	
CCP-23	AHU-23 COOLING COIL	С	44	31	1.5" x1.5"	0.6	1.5	1750	55%	460V/3ø/HZ	
	AHU-24 COOLING COIL	С	7	32	2"×2"	0.4	1.0	1160	16%	460V/3ø/HZ	
CCP-25	AHU-25 COOLING COIL	C	7	32	2"×2"	0.4	1.0	1160	16%	460V/3ø/HZ	
CCP-26	AHU-26 COOLING COIL	C	7	32	2"×2"	0.4	1.0	1160	16%	460V/3ø/HZ	

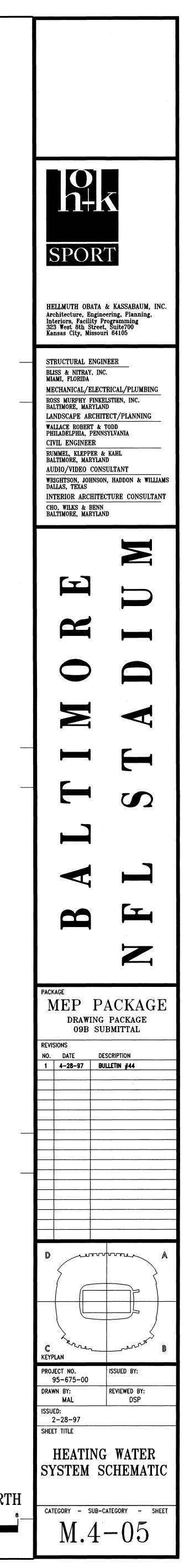
		C	ABIN	ET H	EATE	R S	CHEDULE	
DESIG	NOMINAL CFM	REQUIRED MBH	ĸw	TEMP RISE <b>°</b> F	MOTOR	RPM		REMARKS
CUH-1	1000	81.9	24.0	75.8	1/20	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
CUH-2	1000	95.6	28.0	88.5	1/20	1550	480V/3ø/60HZ	WALL MOUNTED - SURFACE
CUH-3	1000	68.3	20.0	63.2	1/20	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
CUH-4	1000	54.6	16.0	50.6	1/20	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
CUH-5	1000	109.2	32.0	101.1	1/20	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
CUH-6	750	40.9	12.0	50.5	1/20	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
CUH-7	320	17.1	5.0	50.0	1/50	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
CUH-8	400	20.5	6.0	47.4	1/20-	1550	480V/3ø/60HZ (	WALL MOUNTED - SURFACE
CUH-9	600	27.3	8.0	42.1	1/20	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
CUH-10	310	~10.2~~	-3.0~	311	1/20	1550	480V/30/60HZ	WALL MOUNTED - SURFACE
~CUH-11	750	34.1	10.0	42.1	1/20	1550	480V/3ø/60HZ	CEILING MOUNTED - RECESSE
CUH-12	600	27.3	8.0	42.1	1/20	1550	480V/30/60HZ	CEILING MOUNTED - RECESSE
CUH-13	1000	54.6	16.0	50.6	1/20	1550	480V/ <i>3</i> ø/60HZ	CEILING MOUNTED - RECESSE
CUH-14	320	17.1	5.0	50.0	1/50	1550	480V/30/60HZ	CEILING MOUNTED - RECESSE

2

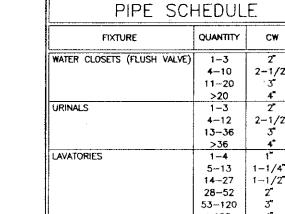








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SCALE: 1

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EDULE							PLU	ABING	; FIX	TURE	SCHE	DULE				]		
QUANTITY CW	н₩	No	FI	XTURE	C		NUGH-IN CO	SAN	VENT	F CW	IXTURE UN	ITS SAN		REMA	RKS			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		P-1 P-1A		SET (VALVE)	1	*		4" 4"	2	10 10	-	6 6	HANDICA	PPED				
11-20 '3" >20 4" 1-3 2"		P-18 P-10 P-2			1/	2		4" 4" 2"	2 2 1 1/2	5 5 5		6 6 6	HANDICAL	PPED				
4-12 2-1/2" 13-36 3"		P-2A P-3		· …	1		- 1/2	2 1 1/2	1 1/2 1 1/4	5 1,5		6 1	HANDICAL WALL MC			-	$\mathbf{Q}$	<del>ر</del>
>36 4" 1-4 1"	1	P-3A P-38	LAVATORY		1/	Z	1/2	1 1/2 1 1/2	1 1/4" 1 1/4"	1.5 1.5	1.5 1.5	1	UNDER (	OUNTER	NDICAPPED			
5-13 1-1/4" 14-27 1-1/2" 28-52 2"	1-1/4 1-1/2 2	P3C P3D P4		·	1/ 1/	2	1	<u>1 1/2"</u> 1 1/2" 2"	$\frac{1}{1}\frac{1/4}{1/4}$ $\frac{1}{1}\frac{1}{2}$	1.5 1.5 1.5	1.5 1.5 1.5	1 1 2	UNDER C				SPOR'	R
53-120 3 >120 4	3 4	P-4A	· · · · · · · · · · · · · · · · · ·		1/	2	1/2 1/2	<u>z</u> 3	$\frac{1}{1}\frac{1/2}{1}$	1.5	1.5	2 3	HANDICA	PED			·····	
		P-6 P-7	DARKROOM HAND SINK		1/	2		2 1-1/2	1 1/2 1 1/4	1.5 1.5	1.5 1.5	2	STAINLES	s steel		-	HELLBUTH OBATA A Architecture. Engine- Interiors, Facility Pr 323 West 6th Street, Kansas City, Hissour	k KASSABAUN, INC. rting, Planning, ogramming
REFER TO PLUMBING FIXT	UNE SCHEDULE.	P-8 P-8A P-9	DRINKING FO DRINKING FO BAR SINK		1/	2	-	1 1/2 1 1/2 1 1/2	1 1/4 1 1/4 1 1/4	0.5 0.5 1.5	- - 1.5	0.5 0.5	BARRIER				323 Teal 8th Street, Kansas City, Rissoar	Swite700 1 54105
		P-10	SINGLE COM	PARTMENT SIN	ιK 1/	2	1/2"	$\frac{2^{"}}{1-1/2"}$	1 1/2	1.5 3	1.5	2	STAINLES	S STEEL	CTION ONLY		STRUCTURAL ENGIN BUSS & NITRAY, INC. MIAMI, PLOISIDA	
		P-12 P-13	ELECTRIC W	ATER SOOLER		8		2	1 1/2	3	3	3	ROUGH-		CTION ONLY		WECHANICAL/ELECT ROSS MURPHY FINKET BALTINORE, MARYLAN LANDSCAPE ARCHIT	STIEN, INC.
	♪ (	P-14 P-15		NECTION	1/		1/2 <sup>*</sup> 1/2 <sup>*</sup>	Z" 1-1/2"	<u>1 1/2</u> <u>1 1/4</u>	1.5 1.5	1.5 1.5	2	STAINLES	S STEEL			VALLACE ROHERT & T PHILADELPHIA, PENNS CIVIL ENGINEER	ODD Ylyania
1			$\sim$			$\sim$						$\leq$		$\sim$		ח	RUMWEL, KLEPPER & BALTINGRE, MARYLANI AUDIO/VIDEO CONS- VIEGETSON, JOHNSON	) JLTANT
	SERVICE		,	SEWAGE			FUMP			.C.	BASIN		]	REMARK			VEIGETSON, JOHNSON DALLAS, TEXAS INTERIOR ARCHITEC CHO, WILKS & RENN DALITINORE, MARYLAND	TURE CONSULTANT
SP-1 S	EWAGE EJECT	OR	No HP 2 20	SIZE 4x15	GPM 525	HEAL			/PH/HZ /3/60	SIZE		TYPE	<u> </u>		····			human
SE 2 SEWA	QUAD B GE EJECTOR JIP. RM. QUA		2 3	4x6.25	50	40'			/3/60	48'øx5'-		AST-IRON			<u></u>			
	P-BOWL DRA QUAD A		3 20	5x11.5	800	45'	1155		/3/60	10'₩x90'L		RUCTURAL						
SP-4 SUM	PBOWL DRA QUAD B		3 20	5x12	800	50'	1155	460V	/3/60	10' <b>W</b> x90'L		RUCTURAL						and water
SP-5	SUMP-LOADIN DOCK		2 15	4x15	478	50'	865		/3/60	10'øx11'		PRECAST						
SP-6	P-FIELD DRA EAST P-FIELD DRA		2 15	4x15	600	50'				12'-6'Lx10		RUCTURAL ONCRETE RUCTURAL				-		(viewen)
SP-7	WEST ELECTRIC		2 15 1 1/2	4x15	600 10	50' 25'	·		/3/60 1	12'6"Lx1(								Y
5-0 F	ROOM MANHO		1 172	- 172					/ 1/ 50					· · · · · · · · · · · · · · · · · · ·		-		<b>Fame</b>
		<u>.</u> I	l											$\overline{}$	$\sim$		<b>F</b>	
OOR DRAI	N SCH	IEDUL	Ē			] / [	 	PRES	SURE	RED	UCING	VAL	VE SC	CHED	ULE	])	• •	
ACTURER			REMARKS				No.	SER	VICE ·		GPM	SIZE S	ESSURE ETTING	CV RATING	REMARKS	1 <	joonned	
30000 ROU	ND TYPE ME	DIUM DUTY	WITH SEDIMENT WITH FUNNEL			1/ IF		ERVICE LE				2-1/2	(PSI) 80 80				R	inserved.
36210 ROU	ND TYPE HEA	AVY DUTY I	WITH SEDIMENT WITH SEDIMENT WITH SEDIMENT	BUCKET		$ \rangle $	PRV-2 S	ERVICE LE	VEL SLT-	-7	150 2	2-1/2	80 80				$\sim$	Time
ROU	GH-IN CONN	ECTION ON	LY			$\left \right\rangle$	PRV-3 S PRV-3A S	ERVICE LE	VEL SLT- VEL SLT-	-13	360 210	4" 2-1/2"	80 80					
49360 SQU	ARE FLOOR S	SINK WITH	GRATE			1\ [[	PRV-4A S	ERVICE LE ERVICE LE	vel slt-	-1	110 40 75	1*	80 80 80					<b> </b> <sup>2</sup> −−−−↓
	ARE FLOOR S		GRATE			1/ 10	PRV5A S	ERMCE LE	VEL SLT- VEL SLT-	-4	20 75	1*	80 80 80			1 <	FOUNDAT	
34720 ROU		AVY WEIGHT	WITH SEDIMEN	IT BUCKET		17 12	PRV-7 S		VEL SLT-	-2	20 140	3	80 80				DRAWING F 05 SUBM	
24720 SCU	ND TYPE HEA PPER DRAIN	VY WEIGHT				17 12	PRV-8 S	ERVICE LE		гн	40 125 50 1	2	80 80 80				1 11-7-96 904	CRIPTION LETIN #2 LETIN #12
	MCE LEVEL T	RENCH					PRV-9 M	AIN CONC	OURSE NO	RTH WEST	400 250	5	80 80					PACKAGE LETIN 143 LETIN 144
	D TRENCH					10	PRV-10A N	AN CONC	DURSE SOU	JTH WEST	400 250	3	80 80					
1 2100 ROUI	ND WITH LAR	GE SUMP				と臣	PRV-11A N	AN CONC	DURSE M DURSE M DURSE M	CC6	30 20 100 2	1"	80 80 80		2.24.01 2.24.01			
			·····				PRV-12A M		DURSE M		20	1	80 80 80		2.19.01			
R SHALL BE PROD		$\sim$					PRV13A M PRV14 M	AIN CONC AIN CONC	ourse m ourse m	СТ6	30 125 2	1* -1/2*	80 80		2.19.01			
BOOSTER	HEATI	ER SC				ΧĿ	PRV-15 M	AN CONC	DURSE M DURSE M DURSE M	CC-4	20 30 20	1"	80 80 80		2.16.01		D word	A
E KW GF	M EWT	LWT F	MBH CAPAC (GA		trical H/HZ)	1/12	PRV-16 ₩	AIN CONC AIN CONC AIN CONC	DURSE M	CT-1 CT-1	90 20 20	Z .	80 80 80					
SINK 15 3 SINK 9 1.	5 110 5 110	140 <sup>°</sup> 140 <sup>°</sup>	52.5 20 22.5 5		3/60 3/60	//	2RV-17 M 2RV-17A M	AIN CONC AIN CONC	DURSE M	CT-7 CT-7	20	1/2°	80 80		10.011-2		TH	<u> </u>
		~		$\sim$		X		AIN CONC AIN CONC FLD IRRIG	OURSE M	CC-3 CC-3	30 20 500	1 1	80 80 95	·	.10.01&2.12.01 .10.01&2.12.01	-11 / 18	C Revolution	- ward
					1	1		AIN CONC	DURSE MC	CT-2		-1/2	80 80				PROJECT NO. 95-675-00	SSUED BY:
					. (		PRV-21 P PRV-21A P	ress levi Ress levi	1.		100 35	2 ( 1 1	80 80				DRAWN 87: NWS 155UED: 9-13-96	REVIEWED BY:
· · .					▲ (	۲ II		ITCHEN C			45 1 30		50 50				SHCET TITLE	
		•			_ \	Ľ	<del>سانہ سمبر ہے</del> ^		~~~			L	<u>_</u>	<u>_</u>	~	<u>ار ب</u>	PLUM	
edu	les	s t(	or F	≺ei	<b>Ie</b>	rè		Ce		m	$\mathbf{V}^{\mathbf{Y}}$			<u> </u>	$\sim$		CATEGORY ~ SUB-CA	iegory - sheet
			- • •				•				J -						P.0-	
		1. 1. s	·-															

															. <u></u>		]			
PIPE SCHE	DULE								UMBIN		TURE	SCHE	EDULE	-						
FIXTURE	IANTITY	cw	н₩	No	FIXT	URE	CW	ROUGH-IN HW	CONNECTIO SAN	N VENT	F CW	IXTURE UN	ITS SAN	_	REMA	RKS				
, j		2 <sup>7</sup> 2-1/2 <sup>7</sup>		P-1A WA	TER CLOSE	T (VALVE)	1"	-	4" 4"	2 2	10 10	-	<u>6</u> 6	HANDICAP	PED					
	1-20 >20	3 4		P-1C WA	TER CLOSE		1/2		4" 4" 7"	2	5		6	HANDICAP	PED					D
	1-3 4-12 2 3-36	2 2-1/2 3		P-2A UR	NAL NAL ATORY	·	1" 1/2"		2 2 1 1/2	1 1/2 1 1/2 1 1/4	5 5 1,5		6 6 1	HANDICAP					2k	
	336 ≥36 1-4	4	1	P-3A LAV	ATORY		1/2	1/2 1/2	$1 \frac{1}{1/2}$ 1 1/2	1 1/4"	1.5	1.5 1.5	1	WALL MOU	JNTED HA	NDICAPP	ED		ΗK	
	5-13 1	-1/4 -1/2	1-1/4 1-1/2	P-3C LAV	ATORY		1/2"	1/2	$\frac{1}{1}\frac{1/2}{1}$	1 1/4"	1.5	1.5	1 1		OUNTER					
2	8-52 5-120	2 3	2 3	P-4 SH	DWER		1/2	1/2	<u>1</u> <u>2</u>	$\frac{1}{1}\frac{1/2}{1}$	1.5	1.5	2	HANDICAP					ORT	
	>120	4"	4	P-5 MO	p sink Rkroom sit	NK	1/2" 1/2"	1/2° 1/2°	<u> </u>	$\frac{1}{1}\frac{1/2}{1}$	1.5 1.5	1.5 1.5	3	STAINLESS	S STEEL				6 691797 6 VIDO	CODIDI DIC
NERAL NOTES; For pipe size to individual fixtures r	FER TO PLUM	BING FOTU	RE SCHEDULE.		1D SINK NKING FOU	NTAIN	1/2 1/2	1/2"	$\frac{1-1/2}{1-1/2}$	1 1/4 1 1/4	1.5 0.5	1.5	2 0.5					Architectu Interiors, 323 Test	i OBATA & XASSJ re. Engineering. Pl facility Programm Mh Street, Suite70 y. Nissonri 54105	SABAGN, 190. Planning, uning 1700
`				}	NKING FOU ₹SINK	NTAIN	1/2 1/2	- 1/2	1 1/2" 1 1/2"	1 1/4 1 1/4	0.5	- 1.5	0.5	BARRIER STAINLESS						
				P-11 THF	REE COMPA	ARTMENT SINK RTMENT SINK	1/2 3/4	1/2" 3/4"	2" (3) 1-1/2		1.5 3	1.5 3	2 5	STAINLESS ROUGH-IN	CONNE			BLISS & N Riami, Plo	IAL ENGINEER ITRAY, INC. INDA AL/ELECTRICAL/F	
				P-13 ELE		ER SOOLER	3/4	3/4"	2 1/2	1 1/2	0.5	3	3	BARRIER		CTION ON		ROSS MURI BALTIMORE	NJ/ BLECTRICAL/ F PHY PINKELSTIEN, 1 , MARYLAND B. ARCHITECT/PLA	I, INC.
				+ · · · · · · · · · · · · · · · · · · ·	SHER CONN R SINK	IECTION	1/2 1/2	1/2" 1/2"	Z" 1-1/2"	<u>1 1/2</u> <u>1 1/4</u>	1.5 1.5	1.5 1.5	2	STAINLESS	STEEL			VALLACE R	OHERT & TOND IIA, PENNSYLVANIA	
				$\sim$			$\frown$								$\sim$	/		RUMMEL, K BALTINGRE	LEPPER & KAHL NARYLAND DEO CONSULTANT	
					S	EWAGE/	/SUMF	PUM	IP SCH	HEDUL	.E							WHEGHTSON DALLAS, TE	ARCHITECTURE C	DON & WILLIAM
	No		SERVICE	No	HP	SIZE	PUMP GPM H	HEAD F		S/PH/HZ	SIZE	BASIN	TYPE		REMAR	<s< td=""><td></td><td>CHO, VELCS</td><td></td><td></td></s<>		CHO, VELCS		
	SP-1	SE	VAGE EJECTOR	2	20	4x15				v/3/60	10'#x11'-		PRECAST						he he	
	SP-2	SEWAG	E EJECTOR FIEL P. RM. QUAD E	LD 2	3	4x6.25	50	40' 1	700 460	V/3/60	48'øx5'	-8"D C	AST-IRON					-	¶ ->	
	SP-3	SUMP	-BOWL DRAINAG	æ 3	20	5x11.5	800	45' 1	155 460	V/3/60	10'₩x90'L		RUCTURAL							
	SP-4	SUMP	-BOWL DRAINAG	ЭE 3	20	5×12	800	50' 1	155 460	v/3/60	10'₩x90'L		RUCTURAL CONCRETE						aad aad ba	STATISTICS.
	SP-5	SL	MP-LOADING DOCK	2	15	4x15	478	50' 8	365 460	V/3/60	10'øx11'-	-6 D	PRECAST							
	SP-6	SUMP	-FIELD DRAINAG EAST	SE 2	15	4x15	600	50' 8	365 460	V/3/60	12'- <b>5"L</b> x10		RUCTURAL							
	SP-7	SUMP	-FIELD DRAINAG WEST	ЭE 2	15	4x15	600	50' i	365 460	V/3/60	12'6"Lx10		RUCTURAL						<b>10</b>	
	SP-8	RC	ELECTRIC	1	1/2	1 1/2	10	25' 1	750 120	V/1/60									<b>-</b> 1	-4
																	]	janeze		
							(				$\overline{}$	$\sim$	$\sim$		$\searrow$			-E	ищі — С	$\mathcal{O}$
FL(	) OR [		SCHE	DULE					PRES	SURE	RED	UCINO	VAL	VE SC	HED	ULE	]		- -	
DESIG CONN MANUFA	CTURER			REMA	NRKS			No.	SE	RVICE		GPM		RESSURE		REM	iarks		<b>1</b>	
D-1 <u>5</u> JOSAM D-2 <u>5</u> JOSAM			D TYPE HEAVY D TYPE MEDIUM			UCKET		PRV-1		EVEL SLT-			2-1/2	80				< <	ť •	-
D-3 4" JOSAM D-4 3" JOSAM			D TYPE HEAVY D TYPE HEAVY					PRV-1A PRV-2	SERVICE L	EVEL SLT- EVEL SLT-	-7	150	1-1/2 2-1/2	80 80					~ [	
D4a 6" JOSAM D-5 3"	36210	ROUG	D TYPE HEAVY H-IN CONNECTI	ON ONLY		UCKET	(	PRV-2A PRV-3	SERVICE L	EVEL SLT- EVEL SLT-	-13	360	1-1/Z"	80					ad "	
D-6 4" JOSAM			D TYPE WITH S		NER			PRV-3A PRV-4 PRV-4A	SERVICE L	EVEL SLT- EVEL SLT- EVEL SLT-	-1	210 110 40	<u>2-1/2"</u>	80 80 80					r	
TS-1 4" JOSAM TS-2 3" JOSAM			re floor sink Re floor sink				$\equiv \rangle$	PRV-5A	SERVICE L	EVEL SLT- EVEL SLT-	-4	75 20	2"	80 80 80				PACKAGE		
D-1 4" JOSAM			TYPE HEAVY		· · · · · · · · · · · · · · · · · · ·	PUCKET		PRV-6 PRV-6A	SERVICE L	EVEL SLT-	-12	75 20	<u>2</u> "	80 80				DRAV	IDATION FING_PACKA	AGE
D-2 6" JOSAM D-3 4" JOSAM D-30 3" JOSAM	36210	ROUN	D TYPE HEAVY D TYPE HEAVY	WEIGHT	SEDIMENT	BUCKEI		PRV-7 PRV-7A	SERVICE L	EVEL SLT-	-2	140	3"	80 80				ND, DATE	DESCRIPTION	
D-3a 3" JOSAM D-4 4" JOSAM D-4o 3" JOSAM	24720	SCUPF	D TYPE HEAVY PER DRAIN PER DRAIN	WEIGHS			=	PRV-8 PRV-8A	SERVICE L	EVEL NOR	тн	125	Z  -1/Z	80 80				1 11-7-1	16 BUALLETIN /2 17 BULLETIN /1	12 112
D-1 - JOSAN N			E LEVEL TREN	СН			$ \rightarrow $	PRV-9 PRV-9A		COURSE NO		400 250	5 3	80 80				3 2-28-1 4 4-4-9 5 4-28-5	7 BALLETIN J4	<del>14</del> 3
D-2 - JOSAM N			TRENCH				(	PRV-10 PRV-10		COURSE SO		400 250	5" 3"	80 80				$\left< \pm \right>$		
D-1 3 JOSAM	2100	ROUN	WITH LARGE	SUMP				PRV-11 PRV-11/	MAIN CON	COURSE M	CC6	30 20	1"	80 80		2.24		)		
NERAL NOTES					<u></u>			PRV-12	MAIN CON	COURSE M	CT-7	20	2-1/2	80 80						
ALL SANTARY FLOOR DRAINS AND FLOOR	SINKS SHALL	BE PROMO	ED WITH DEEP SEAL	TRAPS	$\sim$	~~~	$\sim$	PRV-13		COURSE M		30	1"	80 80		2.19				
	BOOS	TER	HEATER	SCHE	DULE			PRV-14 PRV-14/ PRV-15	MAIN CON	COURSE M	CT6 CT6 CC4	20	2-1/2"	80 80 80		2.16	<u> </u>			
	KW	·	EWT		STORAG				MAIN CON	COURSE M		30 20 90	1 1 2	80 80 80		2.16				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	INPO		F	'F MON	(GAL)	(V/PH/	(\)	h	MAIN CON		CT-1	20	1 1/2	80 80 80	,			$\langle   -  $		<u>}</u>
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ATORIES 1-4	1 <sup>#</sup>	1	P-38 LA	VATORY		1/2	1/2	$\frac{1}{1}\frac{1/2}{1}$	1 1/4	1.5	1.5	1	UNDER C	OUNTER					
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ERAL NOTES:	<u> </u>		P-6 DA	RKROOM SIN	IK	1/2	1/2 1/2	<u>2"</u> 1-1/2"	1 1/2	1.5	1.5	2	STAINLES	S STEEL				HELLBUTH OBATA	i & KASSABAUN,
R PIPE SIZE TO INDIVIDUAL FIXTURES REFER	to plumbing fixt	URE SCHEDULE,	P-8 DR	INKING FOU		1/2		$1 \frac{1}{1/2}$	1 1/4	0.5		0.5	BARRIER	FREE				Architecture, Engie Interiors, Facility 323 Test 5th Stree Kansas City, Misso	eering, Findinag Programming et, Suite700 ari 84105
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ſ											$\leq$			$\sim$				RUMMEL, KLEPPYRR BALTINGRE, NAEYLA AUDIO/VIDEO CON VEIGETSON, JOHNSO	IND (SULTANT)
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-	No	SERVICE	No	HP	SIZE	GPM			TS/PH/HZ	SIZE		TYPE	1	REMAR				DALLINGTRE, MARYLA	
	SP-1	QUAD B	2	20	4x15	525			0V/3/60	10'#x11'		PRECAST							
	SP-Z EQU	IP. RM. QUAD B P-BOWL DRAINAG		3	4x6.25	50			0V/3/60	48'øx5'-		CAST-IRON						G	<b>}</b>
	SP-3	P-BOWL DRAINAG QUAD A P-BOWL DRAINAG		20	5x11.5	800			0V/3/60	10'₩x90'L	X 10 U	STRUCTURAL						السي سر	þessar
	SP-4	QUAD B SUMP-LOADING	- 3	20	5x12	800			0V/3/60	10'₩x90'L		CONCRETE			· · · · · · · · · · · · · · · · · · ·			μ μ	COLUMN PART
	5P-5	DOCK P-FIELD DRAINAG	2 F	15	4x15	478			0V/3/60	10'øx11'		PRECAST							
	SP-6	EAST P-FIELD DRAINAG	<b>F</b>	15	4x15	600			OV/3/60	12'-6"Lx10		CONCRETE STRUCTURAL							<u> </u>
		WEST ELECTRIC	2	15	4x15	600			OV/3/60	12'6"Lx10	3.M×8.0	CONCRETE					2407. V 100		
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ISIG CONN MANUFACTU -1 <u>3</u> JOSAM 362 -2 <u>3</u> JOSAM 300	RER 210 ROU 000 ROU	ND TYPE HEAVY ND TYPE MEDIUM	REM DUTY WITH DUTY WITH	SEDIMENT BI			PRV-1	SERVICE	ERVICE · LEVEL SLT		GPM 150	SIZE PRI SIZE S 2-1/2"	essure Etting (PSI) 80	cv		ENARKS		AL	Juenna
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<td>RER         ROU           210         ROU           20         SCUF           20         ROU           20         ROU           20         ROU           20         ROU           20         ROU           20         ROU           20         ROU</td> <td>ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE H</td> <td>REM DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUARE STRA WITH GRATE WITH GRATE WIT</td> <td>SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER ME GRATE I SEDIMENT</td> <td></td> <td></td> <td>PRV-1           PRV-1A           PRV-2A           PRV-3A           PRV-3A           PRV-4A           PRV-4A           PRV-5A           PRV-5A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-7           PRV-6A           PRV-7A           PRV-7B           PRV-7A           PRV-7A           PRV-7B           PRV-11           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15</td> <td>SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN COI MAIN</td> <td>ERVICE</td> <td></td> <td>GPM</td> <td>SIZE <math>\begin{array}{c} PR \\ SIZE \\ S \\ 2-1/2' \\ 1-1/2' \\ 2-1/2' \\ 1-1/2' \\ 2-1/2' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 1'' \\ 2-1/2' \\ 1'' \\ 1'' \\ 2-1/2' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 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SECRETION ULET 12 PACKAGE ULET 12 PACKAGE ULET 143</td>	RER         ROU           210         ROU           20         SCUF           20         ROU	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE H	REM DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUARE STRA WITH GRATE WITH GRATE WIT	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER ME GRATE I SEDIMENT			PRV-1           PRV-1A           PRV-2A           PRV-3A           PRV-3A           PRV-4A           PRV-4A           PRV-5A           PRV-5A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-7           PRV-6A           PRV-7A           PRV-7B           PRV-7A           PRV-7A           PRV-7B           PRV-11           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE 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SIG         CONN         MANUFACTUL           -1         3"         JOSAM 362           -2         3"         JOSAM 300           -3         4"         JOSAM 301           -4         3"         JOSAM 362           -40         6"         JOSAM 362           -5         3"         -           -6         4"         JOSAM 493           -1         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 493           -1         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 362           -1         4"         JOSAM 362           -3         4"         JOSAM 362           -30         3"         JOSAM 362           -40         3"         JOSAM 247           -1         -         JOSAM MEAD           -1         -         JOSAM MEAD           -1         -         JOSAM MEAD           -1         -         JOSAM 210           -1         3"         JOSAM 210           -1         3"         JOSAM 2	RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUTY WITH DUARE STRA WITH GRATE WITH GRATE WIT	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT		/HZ)	PRV-1           PRV-1           PRV-1           PRV-1           PRV-1           PRV-2           PRV-2           PRV-3A           PRV-3A           PRV-3A           PRV-4           PRV-5           PRV-6           PRV-7A           PRV-10           PRV-11           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-16           PRV-17           PRV-16           PRV-17	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN COI M	ERVICE		GPM	SIZE $\begin{array}{c} PR \\ SIZE \\ S \\ 2 \\ -1/2' \\ 1 \\ -1/2' \\ 2 \\ -1/2' \\ 1 \\ -1/2' \\ 2 \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2'' \\ 1'' \\ 2 \\ -1/2' \\ 1'' \\ 2 \\ -1/2' \\ 1'' \\ 2 \\ -1/2' \\ 1'' \\ 1'' \\ 2 \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1''' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\ 1'' \\$	ESSURE ESSURE ESTING (PSI) 80 80 80 80 80 80 80 80 80 80		RE	24.01 24.01 24.01 19.01 19.01 16.01	$\leq E$	ACKAGE FOUNDA! DRAWING 05 SUB 111-7-96 B 2 1-15-97 B 4 4-4-97 B 5 4-28-87 B 4 4-4-97 B 5 4-28-87 B	FION PI PACKAGE MITTAL SECRETION ULET 72 ULET 72 DIACKAGE ULET 72
SIG         CONN         MANUFACTUL           -1         3"         JOSAM 362           -2         3"         JOSAM 300           -3         4"         JOSAM 301           -4         3"         JOSAM 362           -40         6"         JOSAM 362           -5         3"         -           -6         4"         JOSAM 493           -1         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 493           -1         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 362           -1         4"         JOSAM 362           -3a         3"         JOSAM 362           -3a         3"         JOSAM 247           -4a         JOSAM 247         -           -1         -         JOSAM MEAD           -2         -         JOSAM MEAD           -1         -         JOSAM MEAD           -1         -         JOSAM 210           -1         3"         JOSAM 210           -1         3"         JOSAM 2	RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE W	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT	JCKET JCKET JCKET BUCKET BUCKET BUCKET E E Y E E E E E E LEECTI (V/PH	/HZ)	PRV-1           PRV-1A           PRV-2           PRV-3A           PRV-3A           PRV-4A           PRV-4A           PRV-5A           PRV-5A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-6A           PRV-7           PRV-6A           PRV-7A           PRV-7B           PRV-7A           PRV-7B           PRV-7A           PRV-7B           PRV-7A           PRV-7B           PRV-10           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-15           PRV-16           PRV-17           PRV-18           PRV-18	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN COI	ERVICE		GPM	SIZE PR SIZE S $2-1/2^{2}$ $1-1/2^{2}$ $2-1/2^{2}$ $1-1/2^{2}$ $2-1/2^{2}$ $1^{2}$ $1^{2}$ $2^{2}$ $1^{3}$ $2^{2}$ $1^{3}$ $1^{3}$ $2^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $2^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$ $1^{3}$	ESSURE ESTING (PSI) 80 80 80 80 80 80 80 80 80 80		RE	24.01 24.01 24.01 19.01 19.01 16.01 16.01 16.01 2.12.01		ACKAGE FOUNDA' DRAWING 05 SUB HYNSONS 42. DATE 1 11-7-46 P 3 2-28-97 M 4 4-4-97 P 5 4-28-97 M 4 4-497 P 5 4-28-97 P 7 4-497 P	FION PI PACKAGE MITTAL SECRETION ULET 72 ULET 72 DIACKAGE ULET 72
SIG         CONN         MANUFACTUL           -1         3"         JOSAM 362           -2         3"         JOSAM 300           -3         4"         JOSAM 301           -4         3"         JOSAM 362           -40         6"         JOSAM 362           -5         3"         -           -6         4"         JOSAM 493           -1         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 493           -1         4"         JOSAM 493           -2         6"         JOSAM 362           -3         4"         JOSAM 362           -3a         3"         JOSAM 362           -4a         JOSAM 362         -3a           -4a         JOSAM 247           -4a         JOSAM 247           -1         -         JOSAM MEAD           -2         -         JOSAM MEAD           -1         -         JOSAM 210           -1         -         JOSAM 210           -1         3"         JOSAM 210           -1         3"         JOSAM 210 <td< td=""><td>RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2</td><td>ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY</td><td>REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE W</td><td>SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT</td><td>JCKET JCKET JCKET BUCKET BUCKET BUCKET E E Y E E E E E E LEECTI (V/PH</td><td>/HZ)</td><td>PRV-1           PRV-1           PRV-1A           PRV-2           PRV-2A           PRV-3A           PRV-3A           PRV-4A           PRV-4A           PRV-5A           PRV-5A           PRV-6A           PRV-6A           PRV-7A           PRV-6A           PRV-7B           PRV-7A           PRV-7B           PRV-7B           PRV-7A           PRV-7B           PRV-7A           PRV-7B           PRV-7A           PRV-7B           PRV-711           PRV-11           PRV-12           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-15           PRV-16           PRV-17           PRV-18           PRV-19           PRV-19           PRV-19           PRV-19           PRV-19           PRV-19           PRV-20</td><td>SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN COI</td><td>ERVICE LEVEL SLT LEVEL SLT SLT SLT SLT SLT SLT SLT SLT</td><td></td><td>GPM</td><td>SIZE <math>\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} </math></td><td>ESSURE ESSURE ESTING (PSI) 80 80 80 80 80 80 80 80 80 80</td><td></td><td>RE</td><td>24.01 24.01 24.01 19.01 19.01 16.01 16.01 16.01 2.12.01</td><td></td><td>АСКАСС FOUNDA DRAWING 05 SUB 1 11-7-96 В 2 1-15-97 В 2 4-29-77 В 4 4-4-97 В 4 4-4-97 В 4 4-4-97 В 4 4-4-97 В 5 4-29-97 В 1 11-7-96 В 1 2-29-97 В 1</td><td>FION PI PACKAGE MITTAL SECRETION ULET 72 ULET 72 DIACKAGE ULET 72</td></td<>	RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE W	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT	JCKET JCKET JCKET BUCKET BUCKET BUCKET E E Y E E E E E E LEECTI (V/PH	/HZ)	PRV-1           PRV-1           PRV-1A           PRV-2           PRV-2A           PRV-3A           PRV-3A           PRV-4A           PRV-4A           PRV-5A           PRV-5A           PRV-6A           PRV-6A           PRV-7A           PRV-6A           PRV-7B           PRV-7A           PRV-7B           PRV-7B           PRV-7A           PRV-7B           PRV-7A           PRV-7B           PRV-7A           PRV-7B           PRV-711           PRV-11           PRV-12           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-15           PRV-16           PRV-17           PRV-18           PRV-19           PRV-19           PRV-19           PRV-19           PRV-19           PRV-19           PRV-20	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE 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ESIG CONN MANUFACTUL -1 3" JOSAM 362 -2 3" JOSAM 307 -3 4" JOSAM 307 -4 3" JOSAM 307 -4 3" JOSAM 362 -5 3" -6 4" JOSAM 362 -1 4" JOSAM 493 -1 4" JOSAM 493 -1 4" JOSAM 493 -1 4" JOSAM 493 -1 4" JOSAM 362 -3 4" JOSAM 362 -3 4" JOSAM 362 -3 4" JOSAM 362 -4 4" JOSAM 362 -4 4" JOSAM 362 -4 4" JOSAM 247 -1 - JOSAM MEAD -2 - JOSAM MEAD -1 3" JOSAM MEAD -1 3" JOSAM 210 -1 3" JOSAM 210	RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE W	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT	JCKET JCKET JCKET BUCKET BUCKET BUCKET E E Y E E E E E E LEECTI (V/PH	/HZ)	PRV-1           PRV-1           PRV-1           PRV-1           PRV-2           PRV-3A           PRV-3           PRV-3A           PRV-3A           PRV-4           PRV-5           PRV-6           PRV-6           PRV-7A           PRV-7A           PRV-6           PRV-7A           PRV-7A           PRV-7A           PRV-7A           PRV-7A           PRV-7A           PRV-7A           PRV-7A           PRV-71           PRV-71           PRV-10           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-16           PRV-17           PRV-18           PRV-18           PRV-10           PRV-18           PRV-18           PRV-20           PRV-20	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN COI	ERVICE LEVEL SLT LEVEL NOF VCOURSE NO VCOURSE NO V		GPM	SIZE         PR $2-1/2'$ $1-1/2'$ $2-1/2'$ $1-1/2'$ $2-1/2'$ $1''$ $2-1/2'$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $1''$ $2''$ $1''$ $2''$ $1''$ $1''$ $1''$ $1'''$ $1'''$ $1''''$ $1'''$ $1''''$ $1''''$ $1'''''$ $1''''$ $1''''''''''''''''''''''''''''''''''''$	ESSURE ESSURE (PSI) 80 80 80 80 80 80 80 80 80 80		RE	24.01 24.01 24.01 19.01 19.01 16.01 16.01 16.01 2.12.01		ACKAGE FOUNDA' DRAWING 05 SUB HYNSONS 42. DATE 1 11-7-46 P 3 2-28-97 M 4 4-97 P 5 4-28-97 M 4 4-97 P 5 4-28-97 M	FION PI PACKAGE MITTAL SECRETION WILTIM #12 SP PACKAGE WILTIM #44
ESIG CONN MANUFACTU D-1 3" JOSAM 362 D-2 3" JOSAM 307 D-3 4" JOSAM 307 D-4 3" JOSAM 362 D-4 5" JOSAM 362 D-4 6" JOSAM 362 D-6 4" JOSAM 362 D-6 4" JOSAM 493 D-1 4" JOSAM 493 D-1 4" JOSAM 493 D-1 4" JOSAM 362 D-2 6" JOSAM 362 D-3 3" JOSAM 362 D-3 3" JOSAM 362 D-3 3" JOSAM 362 D-4 4" JOSAM 362 D-4 3" JOSAM 247 D-1 - JOSAM MEAD D-1 3" JOSAM MEAD D-1 3" JOSAM MEAD D-1 3" JOSAM 210 MERAL NOTES U SANTARY FLOOR DRAINS AND FLOOR SMM EBH-1 POT UTILITY SINK	RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE W	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT	JCKET JCKET JCKET BUCKET BUCKET BUCKET E E Y E E E E E E LEECTI (V/PH	/HZ)	PRV-1           PRV-1           PRV-1A           PRV-2           PRV-3A           PRV-3A           PRV-3A           PRV-3A           PRV-3A           PRV-4           PRV-5           PRV-6           PRV-7A           PRV-710           PRV-10           PRV-11           PRV-11           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-15           PRV-16           PRV-17           PRV-18           PRV-20           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN COI	ERVICE LEVEL SLT LEVEL NOF NCOURSE NO NCOURSE NO NCO		GPM	SIZE         PR $2-1/2'$ $1-1/2'$ $2-1/2'$ $1-1/2'$ $2-1/2'$ $1-1/2'$ $2-1/2'$ $1''$ $2''$ $1''$ $2''$ $1'''$ $1'''$ $2'''$ $1'''$ $2''''$ $1''''''''''''''''''''''''''''''''''''$	ESSURE ESSURE ESSURE ESTING (PSI) 80 80 80 80 80 80 80 80 80 80		RE	24.01 24.01 24.01 19.01 19.01 16.01 16.01 16.01 2.12.01		АСКАСЕ FOUNDA' DRAWING 0.5 SUB WINSONS 40. DATE 1 11-7-46 P 3 2-28-97 M 4 4-4-97 P 5 4-28-97 M 4 4-4-97 P 5 4-28-97 M 4 4-97 P 5 4-28-97 M 4 4-97 P 5 4-28-97 M 6 4-97 P 5 4-28-97 M 6 4-97 P 7 40 0 7 5 5 5 5 0 6 5 5 5 7 5 - 00 6 4 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
SIG         CONN         MANUFACTUL           -1         3"         JOSAM 362           -2         3"         JOSAM 300           -3         4"         JOSAM 301           -4         3"         JOSAM 362           -40         6"         JOSAM 362           -5         3"         -           -6         4"         JOSAM 493           -1         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 493           -1         4"         JOSAM 493           -2         6"         JOSAM 362           -3         4"         JOSAM 362           -3a         3"         JOSAM 362           -4a         JOSAM 362         -3a           -4a         JOSAM 247           -4a         JOSAM 247           -1         -         JOSAM MEAD           -2         -         JOSAM MEAD           -1         -         JOSAM 210           -1         -         JOSAM 210           -1         3"         JOSAM 210           -1         3"         JOSAM 210 <td< td=""><td>RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2</td><td>ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY</td><td>REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE W</td><td>SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT</td><td>JCKET JCKET JCKET BUCKET BUCKET BUCKET E E Y E E E E E E LEECTI (V/PH</td><td>/HZ)</td><td>PRV-1           PRV-1           PRV-1A           PRV-2           PRV-3A           PRV-3A           PRV-3A           PRV-3A           PRV-3A           PRV-4           PRV-5           PRV-6           PRV-7A           PRV-710           PRV-10           PRV-11           PRV-11           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-15           PRV-16           PRV-17           PRV-18           PRV-20           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21</td><td>SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN COI M</td><td>ERVICE LEVEL SLT LEVEL NOF NCOURSE NO NCOURSE NO NCO</td><td></td><td>GPM</td><td>SIZE         PR           <math>2-1/2'</math> <math>1-1/2'</math> <math>2-1/2'</math> <math>1-1/2'</math> <math>2-1/2'</math> <math>1-1/2'</math> <math>2-1/2'</math> <math>1''</math> <math>2''</math> <math>1''</math> <math>1''</math> <math>2-1/2''</math> <math>1''</math> <math>1'''</math> <math>1'''</math> <math>1'''''</math> <math>1''''''''''''''''''''''''''''''''''''</math></td><td>ESSURE ESSURE ESSURE ESTING (PSI) 80 80 80 80 80 80 80 80 80 80</td><td></td><td>RE</td><td>24.01 24.01 24.01 19.01 19.01 16.01 16.01 16.01 2.12.01</td><td></td><td>ACKAGE FOUNDA' DRAWING 05 SUB HYSIONS 42 1-15-07 B 3 2-28-97 M 4 4-4-97 B 5 4-28-97 S 5 4-28-97 S C C C NOL 55-672-00 RAMING SNUCC 9-13-95 MEEL THLE</td><td>FION PI PACKAGE MITTAL SECRETION ULLETM #2 ULLETM #44 ULLETM #44 ULLETM #44 SSUED BT: REVIEWED BT:</td></td<>	RER         ROU           210         ROU           200         ROU           20         ROU           20         SCUF           RAIN         SERV           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           200         ROU           20         SCUF           RAIN         FIELD           200         ROU           2	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE W	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT	JCKET JCKET JCKET BUCKET BUCKET BUCKET E E Y E E E E E E LEECTI (V/PH	/HZ)	PRV-1           PRV-1           PRV-1A           PRV-2           PRV-3A           PRV-3A           PRV-3A           PRV-3A           PRV-3A           PRV-4           PRV-5           PRV-6           PRV-7A           PRV-710           PRV-10           PRV-11           PRV-11           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-15           PRV-16           PRV-17           PRV-18           PRV-20           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21           PRV-21	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE 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SIG CONN MANUFACTUL -1 3" JOSAM 362 -2 3" JOSAM 307 -4 3" JOSAM 307 -4 3" JOSAM 307 -6 4" JOSAM 362 -5 3" -6 -6 4" JOSAM 493 -1 4" JOSAM 321 -2 6" JOSAM 362 -3 4" JOSAM 362 -3 4" JOSAM 362 -4 4" JOSAM 362 -4 4" JOSAM 247 -40 3" JOSAM MEAD -1 - JOSAM MEAD -1 3" JOSAM MEAD -1 3" JOSAM MEAD -1 3" JOSAM 210 ERAL NOTES (SANTART) FLOOR DRANS AND FLOOR SAN BH-1 POT UTILITY SINK BH-2 BAR UTILITY SINK	RER         ROU           210         ROU           20         SCUF           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           20         SOSTER           NPUT         GP           15         3.           9         1	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE WITH GRATE DUTY UTH GRATE WITH GRATE DUTY UTH GRATE WITH GRATE DUTY UTH GRATE WITH GRATE DUTY UTH GRATE DUTY UTH GRATE DUTY UTH GRATE WITH GRATE DUTY UTH GRATE DUTY UTH GRATE WITH GRATE DUTY UTH GRATE	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT	JCKET JCKET JCKET BUCKET BUCKET E E E E E E E E E LECTI (V/PH 480/3 480/3	/HZ) /60 /60	PRV-1           PRV-1           PRV-1A           PRV-2           PRV-3A           PRV-3A           PRV-4           PRV-4           PRV-5           PRV-6           PRV-6           PRV-7           PRV-6           PRV-7           PRV-7           PRV-8           PRV-9           PRV-10           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-14           PRV-15           PRV-14           PRV-15           PRV-15           PRV-16           PRV-17           PRV-18           PRV-19           PRV-19           PRV-19           PRV-19           PRV-19           PRV-18           PRV-19           PRV-20           PRV-21           PRV-22           PRV-22           PRV-22	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN C	ERVICE LEVEL SLT LEVEL SLT LEV		GPM  150  70  150  80  360  210  110  10  75  20  75  20  75  20  140  40  125  50  400  250  400  250  400  250  400  250  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  35  45  30  125  30  20  100  35  45  30  125  30  20  100  35  45  30  125  30  20  100  35  45  30  125  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  100  100  100  100  100  100	SIZE         PR $2-1/2'$ $1-1/2'$ $2-1/2'$ $1-1/2'$ $2-1/2'$ $1-1/2'$ $2-1/2'$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $1''$ $2-1/2''$ $1''$ $1'''$ $1'''$ $1'''''$ $1''''''''''''''''''''''''''''''''''''$	ESSURE ESSURE ESSURE ESTING (PSI) 80 80 80 80 80 80 80 80 80 80		RE	24.01 24.01 24.01 19.01 19.01 16.01 16.01 16.01 2.12.01		PACKAGE FOUNDA' DRAWING 05 SUB UNSONS est DATE 1 11-2-46 B 3 2-28-97 M 4 4-4-97 B 5 4-28-97 S 5 4-28-9	
SIG         CONN         MANUFACTUL           -1         3"         JOSAM 362           -2         3"         JOSAM 300           -3         4"         JOSAM 301           -4         3"         JOSAM 302           -4         3"         JOSAM 362           -5         3"         -           -6         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 493           -2         3"         JOSAM 493           -1         4"         JOSAM 493           -1         4"         JOSAM 362           -2         3"         JOSAM 362           -3         4"         JOSAM 362           -30         3"         JOSAM 362           -4         JOSAM 362         -4           -1         -1         JOSAM 247           -40         3"         JOSAM MEAD           -1         -         JOSAM MEAD           -1         -         JOSAM MEAD           -1         -         JOSAM 210           -1         -         JOSAM 210           -1         -         JOSAM 210	RER         ROU           210         ROU           20         SCUF           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           20         ROU           20         SCUF           RAIN         FIELD           20         SOSTER           NPUT         GP           15         3.           9         1	ND TYPE HEAVY ND TYPE MEDIUM ND TYPE HEAVY ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY GH-IN CONNECTION ND TYPE HEAVY ND TYPE HEAVY	REM DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE DUTY WITH DUTY WITH GRATE WITH GRATE WITH GRATE WITH GRATE DUTY UTH GRATE WITH GRATE DUTY UTH GRATE WITH GRATE WITH GRATE DUTY UTH GRATE WITH GRATE DUTY UTH GR	SEDIMENT BU FUNNEL SEDIMENT BU SEDIMENT BU SEDIMENT BU INER AE GRATE I SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT SEDIMENT	JCKET JCKET JCKET BUCKET BUCKET E E E E E E E E E LECTI (V/PH 480/3 480/3	/HZ) /60 /60	PRV-1           PRV-1           PRV-1A           PRV-2           PRV-3A           PRV-3A           PRV-4           PRV-4           PRV-5           PRV-6           PRV-6           PRV-7           PRV-6           PRV-7           PRV-7           PRV-8           PRV-9           PRV-10           PRV-11           PRV-12           PRV-13           PRV-14           PRV-15           PRV-14           PRV-15           PRV-14           PRV-15           PRV-14           PRV-15           PRV-16           PRV-17           PRV-18           PRV-19           PRV-19           PRV-19           PRV-11           PRV-15           PRV-16           PRV-17           PRV-18           PRV-20           PRV-21           PRV-22           PRV-22           PRV-22	SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE MAIN COI MAIN C	ERVICE LEVEL SLT LEVEL SLT LEV		GPM  150  70  150  80  360  210  110  10  75  20  75  20  75  20  140  40  125  50  400  250  400  250  400  250  400  250  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  20  100  35  45  30  125  30  20  100  35  45  30  125  30  20  100  35  45  30  125  30  20  100  35  45  30  125  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  35  45  30  100  100  100  100  100  100  100	SIZE         PR $2-1/2'$ $1-1/2'$ $2-1/2'$ $1-1/2'$ $2-1/2'$ $1-1/2'$ $2-1/2'$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $2''$ $1''$ $1''$ $2-1/2''$ $1''$ $1'''$ $1'''$ $1'''''$ $1''''''''''''''''''''''''''''''''''''$	ESSURE ESSURE ESSURE ESTING (PSI) 80 80 80 80 80 80 80 80 80 80		RE	24.01 24.01 24.01 19.01 19.01 16.01 16.01 16.01 2.12.01		PACKAGE FOUNDA' DRAWING 05 SUB UNSONS est DATE 1 11-2-46 B 3 2-28-97 M 4 4-4-97 B 5 4-28-97 S 5 4-28-9	FION P PACKAGE MITTAL SECRETION ULLETIN 412 SP PACKAGE MILETIN 412 SP PACKAGE MILETIN 414 SSECO ST: REVENTO BT: REVENTO BT: REVENTO BT:

20' MAX -DRAINAGE PANEL (NOTE 4) POLYETHYLENE LINER TO PROTECT AGAINST CONCRETE INTRUSION GEOTEXTILE FABRIC GEOTEXTILE FABRIC WRAP -CONCRETE SLAB -NOTE 2 THEFT **AQ** 6<sup>™</sup>MIN (TYP ) ALL SIDES)→→→ 44 -FILTER MATERIAL, MIN 4" 4 -FILTER MATERIAL AROUND PIPE (NOTE 1) (NOTE 1) ─ 6" SLOTTED CORRUGATED POLYETHYLENE TUBING (NOTE 2) NOTES: - 1. FILTER MATERIAL: AASHTO M-43 SIZE No.7 (MDSHA COARSE AGG-PCC-SIZE 7). SUBDRAINAGE PIPING SHOULD BE 6"INCHES DIA. SLOTTED CORRUGATED POLYETHYLENE (PE) TUBING PER ASTM D-405 WITH MAXIMUM 1/8" INCH SLOT WIDTH. 3. WASHED GRAVEL OR CRUSHED STONE DRAINAGE BLANKET SHOULD SATISFY GRADATION REQUIREMENTS FOR AASHTO SIZE No.57. 4. DRAINAGE PANELS SHOULD HAVE A MINIMUM FLOW RATE OF 10-GALLONS PER MINUTE PER FOOT AT A HYDRAULIC GRADIENT OF 1.0 PER ASTM D-4716. 5. GEOTEXTILE FABRIC: CLASS C PER MDSHA SPECIFICATION SECTION 921.09.

		DOME	ESTIC WA	TER	BOC	STER	PUM	P SCHE	DULE	
DESIG	SERVICE	HEAD FT H₂0	PERCENTAGE SPLITS	GPM EACH PUMP	НР	PUMP SIZE	RPM	ELECTRICAL	EFFICIENCY	REMARKS
BP-1a	DOMESTIC WATER	140	25%	675	40	<b>4</b> " x5"	1750	460V/3ø	75%	
BP-1b	DOMESTIC WATER	140	25%	675	40	4"x5"	1750	460V/3ø	75%	
BP-1c	DOMESTIC WATER	140	25%	675	40	4" x5"	1750	460V/3ø	75%	
BP-1d	DOMESTIC WATER	140	25%	675	40	4"x5"	1750	460V/3¢	75%	
BP-2a	DOMESTIC WATER	140	25%	675	40	4" x5"	1750	460V/3ø	75%	
BP-2b	DOMESTIC WATER	140	25%	675	40	4" x5"	1750	460V/3ø	75%	
BP-2c	DOMESTIC WATER	140	25%	675	40	4" x5"	1750	460V/3#	75%	
BP-2d	DOMESTIC WATER	140	25%	675	40	4" x5"	1750	460V/3ø	75%	

GENERAL NOTES:

-

(1) MAXIMUM RELIEF VALVE SETTING 140PSI.

2) PROVIDE PACKAGED SYSTEMS WITH A 170 GALLON PRESSURE TANK.

	EWT	LWT	TANK	TANK	HEAT	HE	HEATING ELEMENT			STEAM		
DESIG	F	F	GALLONS (MIN)	SIZE	CAPACITY MEH	SIZE	LENGTH	TUBES	lbs/hr	PSI	RATING (PSI G)	REMARKS
DWH-1	40	140	6,000	8'≉ x 18'	5,000	ຮ	113	3/4"	5,482	50	140	CEMENT LINED
DWH-2	_40	140	6,000	8'≇ x 18'	5,000	8	115	3/4"	5,482	50	140	CEMENT LINED
DWH-3	40	140	6,000	8≢ x 18'	5,000	8	115	3/4"	5,482	50	140	CEMENT LINED
DWH-4	40	140	6.000	8'≠ × 18'	5,000	8	113"	3/4"	5,482	50	140	CEMENT LINED

DETAIL - FOUNDATION DRAIN

GENERAL NOTES: (1) STEAN SYSTEM PRESSURE IS 60 PSIG, COIL SELECTED AT 50 PSI ALLOWING MAX 10 PSI ACY LOSS.

				SCHEDU	<u>مــــــــــــــــــــــــــــــــــــ</u>					
	(TYPE		HEAD	SUCTION	MOTO	JR	1			
DUTY	SEE GPI SPEC)	GPM	FEET H <sub>1</sub> 0	X DISCHARGE	BHP	HP	RPM	X EFRCIENCY	ELECTRICAL	
HOT WATER RECIRC	A	150	115	3"x3"	8.3	10.0	1750	55	460v/	30
HOT WATER RECIRC	A	150	115	3"x3"	8.3	10.0	1750	55	460v/	30
	IOT WATER RECIRC	DUTY SEE SPEC) HOT WATER RECIRC A	DUTY SEE GPM SPEC) GPM IOT WATER RECIRC A 150	DUTY SEE GPM FEET SPEC) CPM H.O NOT WATER RECIRC A 150 115	DUTY         SEE SPEC         GPM         FEET H <sub>1</sub> O         X           IOT WATER RECIRC         A         150         115         3" x3"	DUTY         SEE SPEC)         GPM         FEET H = 0         X           NOT WATER RECIRC         A         150         115         3" x 3"         8.3	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	DUTY         SEE SPEC)         GPM         FEET H <sub>1</sub> 0         X         BHP         HP         RPM           IOT WATER RECIRC         A         150         115         3"x3"         8.3         10.0         1750	DUTY         SEE SPEC)         GPM         FEET H <sub>1</sub> O         X         AU         ROM         X         EFRCIENCY           NOT WATER RECIRC         A         150         115         3"x3"         8.3         10.0         1750         55	DUTY         SEE SPEC         GPM         FEET H = 0         X         Monormal         RPM         X EFRCIENCY         ELECTR           NOT WATER RECIRC         A         150         115         3" × 3"         8.3         10.0         1750         55         460v/

	-		GREASE IN	TERCEPTOR	R DUTY
DESIG	PIPE SIZE	FLOW (GPM)	GREASE CAPACITY (LBS)	SIZE Lx₩xH	REMARKS
GI-1	4"	100	200	54" x36" x32"	
G1-2	4	150	300	60"x40"x38"	
GI-3	3"	35	70	48"x42"x12"	NOTE 1
GI4	3	35	70	30° ×20° ×22°	NOTE 1

GENERAL NOTES:

(1) FOR GREASE INTERCEPTORS LOCATED BELOW DOUBLE TEE CONSTRUCTION PROVIDE AN EXTENSION COLLAR

**Original Construction Plumbir** 

## Attachment G

## CAPACITY SUMMARY SHEET

### CAPACITY SUMMARY SHEET FOR KEY MANAGEMENT AND PERSONNEL

### Name of Firm:

### Project(s): Building Commissioning Services for Renovation Projects at M&T Bank Stadium

## In this table, your firm must include information for all key management and other personnel (including subconsultants) who were listed as part of the project team in the Work Plan. Please add rows as necessary.

Name/Position Description (must be consistent with Financial Proposal)	Current and Projected Assignments	Value of Contract	Role on Current and Projected Assignments	NTP Date		Project on Schedule (Y/N)	hours for the	Identify issues which may affect individual's ability to perform the services described in this RFP. Indicate if a current project is high-priority/rush. If project is behind schedule, provide brief explanation.
					Tota		0	
					1018		U	
					Tota	al	0	

## Attachment H

## **PRICING FORM**

## **Attachment H** Pricing Form- Building Commissioning Services Renovation Projects at M&T Bank Stadium

	Design Review / Pre-Construction Activities	Construction Phase Activities	Post Construction Phase Activities
2024 Projects		\$-	\$ -
2025 Projects	\$-	\$-	\$ -
2026 Projects	\$-	\$-	\$ -
Facility Condition Assessment Projects	\$ -	\$-	\$ -
Sub-Total	\$-	\$ -	\$ -
Total			\$ -

## Attachment I

## ANTICIPATED PROJECT SCHEDULE

## (See individual project schedules in Section 3)

## Attachment J

## SAMPLE CONTRACT

(to be issued via addendum)

## Attachment K

## **EXPERIENCE FORM**

## Request for Proposals - Building Commissioning Services Renovation Projects at M&T Bank Stadium

### Attachment K - Experience Form

Offering Firm:

Project Name	Project Description (including square footage, venue, etc.	Services Provided	Project Value	Contract Value	Project Location (City/County, State)	Year Complete

## Attachment L

## CORPORATE DIVERSITY AFFIDAVIT

## CORPORATE DIVERSITY ADDENDUM

Effective August 18, 2022

**Instructions:** Pursuant to § 11-101 of the Tax-Property Article, certain entities must provide a Corporate Diversity Addendum, which contains certain diversity data specified by Code of Maryland Regulation ("COMAR") 24.01.07. To determine whether you must provide the Corporate Diversity Addendum, please complete Worksheet A.

Failure to complete the Addendum or failure to meet the criteria therein, may prohibit you from receiving certain State benefits. For more information, refer to COMAR 24.01.07.

Please be aware, the information you include in the Corporate Diversity Addendum may be shared with other Maryland State agencies.

## Worksheet A

1. Are you an entity that is required to be in good standing with the State Department of Assessments and Taxation ("SDAT"), and meets the following definition:

(1) A commercial enterprise or business that is formed in the State or registered with SDAT to do business in the State; or (2) a corporation, foundation, school, hospital, or other legal entity for which none of the net earnings inure to the benefit of any private shareholder or individual holding an interest in the entity?

 $\Box$  Yes – Proceed to Question 2

 $\Box$  No – STOP. You are not required to complete the Corporate Diversity Addendum. Complete Affidavit (I) on Page 2 and submit with the application for a State benefit.

2. Check the appropriate box if you are any of the following types of entities:

□ Sole Proprietor

 $\Box$  Limited liability company (LLC) owned by a single member

□ Privately held company if at least 75% of the company's shareholders are family members

 $\Box$  Entity that (1) has an annual operating budget or annual sales less than \$5,000,000; and (2) has not qualified for or applied for, and does not intend to apply for, a State benefit, as defined below

Did you check at least one box?

Yes – STOP. You are not required to complete the Corporate Diversity Addendum. Complete Affidavit (I) on Page 2 and submit with the application for a State benefit.
 No – Proceed to the Corporate Diversity Addendum on Page 3.

"State benefit" means (1) a State capital grant funding totaling 1.0 million or more in a single fiscal year (July 1 – June 30); (2) State tax credits totaling 1.0 million or more in a single fiscal year (July 1 – June 30); or (3) the receipt of a State contract with a total value of 1.0 million or more. "State contract" means a contract that (a) resulted from a competitive procurement process and (b) is not federally funded in any way.

## AFFIDAVIT (I)

<b>UNDER PENALTIES O</b>	F PERJURY, I hereby	v swear that the	entity submit	ting this report is not
required to submit the Cor	porate Diversity Adder	ndum.		

Entity/Business Name:					
Federal Employer Identification Number (FEIN):					
SDAT Identification Number:					
Name of Entity's representative completing this Affidavit (print clearly):					
Title:					
Signature:	Date:				

## CORPORATE DIVERSITY ADDENDUM

**Instructions:** If you are required to provide the Corporate Diversity Addendum, completing Affidavit (II) on Page 4 is mandatory. A response to both items is required. Failure to provide a complete response to either of the two items may render the entity ineligible for certain state benefits. For more information, refer to COMAR 24.01.07.

I. A response to Item I is required. However, the content of your response has no bearing on eligibility for State benefits. Select below the underrepresented communities which are represented on this entity's board or in executive leadership. Select all that apply.

- 🗆 Alaska Native
- □ Asian-Pacific Islander
- $\Box$  Black or African-American
- □ Hispanic or Latino
- □ Native American
- □ Native Hawaiian
- $\Box$  One or more of the racial or ethnic groups listed above
- $\Box$  None of the above

II. Check the box next to the following Corporate Diversity indicators that pertain to this entity. <u>Note that</u> <u>references to underrepresented communities refers to communities listed in Item I above. The examples</u> <u>provided are intended to be representative, not exclusive</u>. Select all that apply.

- 2.  $\Box$  Entity offers DEI training to its workforce.

3.  $\Box$  Entity assigns a senior-level employee as responsible for oversight and direction of the entity's DEI efforts.

- 4. 
  □ Entity reports performance of its workforce DEI programs on its website.

9. D Entity has a supplier diversity policy that provides business opportunities to diverse suppliers, including businesses owned by members of underrepresented communities, such as State-certified Minority Business Enterprises ("MBEs").

10.  $\Box$  Entity publicizes its procurement opportunities to encourage participation from businesses owned by members of underrepresented communities.

11. □ Entity measures percentage of contract dollars awarded to businesses owned by members of underrepresented communities, including MBEs.

12. 
□ Entity provides support and outreach to underrepresented communities and/or organizations that represent underrepresented communities.

Only entities that meet at least 33% (4) of the Corporate Diversity Indicators above, by checking all the applicable boxes, qualify to receive a State benefit.

## AFFIDAVIT (II)

UNDER PENALTIES OF PERJURY, I declare that I have examined this Corporate Diversity
Addendum, and to the best of my knowledge and belief, it is true, correct, and complete.

Entity/Business Name:	
Federal Employer Identification Number (FEIN):	
SDAT Identification Number:	
Name of Entity's representative completing this Affidavit (print clear	ly):
Title:	
Signature Da	ate

**Penalties for Submitting False Information**. If information provided by the entity in this form or by other means is materially false, the entity and the individual providing the false information may be subject to criminal prosecution for perjury, procurement fraud, and other crimes and may be subject to debarment, and all State benefits or contracts to the entity made in reliance upon the inaccurate form or other information may be void or subject to termination for default. See COMAR 24.01.07.

## Attachment M

## **EXHIBIT 1: MBE RESEARCH FACTORS**

## (to be issued via addendum)