

CONSTRUCTION - Addendum 01		BID DUE DATE AND TIME
BOARD OF SUPERVISORS OF LOUISIANA STATE UNIVERSITY AND AGRICULTURAL & MECHANICAL COLLEGE		06/02/2026 11:00 AM CT

SOLICITATION RFQ-0000002785 SUPPLIER # SUPPLIER NAME AND ADDRESS <div data-bbox="180 394 789 604" style="border: 1px solid black; height: 100px; width: 100%;"></div>	RETURN BID TO <div data-bbox="873 363 1344 426" style="font-size: 24px; text-align: center;">lsubids@lsu.edu</div> Buyer Amy Hill Bourgeois Buyer Phone Buyer Email ahill5@lsu.edu Issue Date 04/21/2026
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TITLE: Furnish Labor and Materials for Campus Wide Direct Digital HVAC Control System (see below for full title)

Addendum 01: Notice is given to all parties that this solicitation is amended by the University as stated herein. This Addendum is hereby made an official part of this solicitation. See attached addendum.

Full Project Title: Furnish Labor and Materials for Campus Wide Direct Digital HVAC Control System, Item 54
Louisiana State University Alexandria, Louisiana Project No. 01-107-24-05, F.01004604

BID SUBMISSION INFORMATION: All bids must be submitted electronically to LSU Procurement Services. Bids must be received at the "Return Bid To" email address no later than the due date and time specified herein. Bids must be emailed to lsubids@lsu.edu (This email address should be used for bid submissions only). Any bids sent directly to the Buyer of record will not be forwarded to the "Return Bid To" email.

When submitting electronically, the RFQ number, solicitation title, and Louisiana contractor's license number should be listed in the subject line of the email. An original and redacted copy (if applicable) must be submitted electronically. Hard copies of bids will not be accepted; therefore, they will not be evaluated.

It is the responsibility of the Supplier to ensure the bid is received by LSU Procurement by the indicated due date and time. Any delays that may occur in transmission of the bid is the responsibility of the supplier. A bid will be considered late if it is not received at the "Return Bid To" email address by the indicated due date and time.

The maximum email attachment size accepted is 125 MB. It is the supplier's responsibility to ensure bid submission is sized such that it is successfully transmitted and received by LSU. If the bid response is too large to be emailed as one document, the bid must be sent as separate documents. Each submittal should be labeled. (Example – Bid Submittal 1 out of 3 for RFQ-000000XXXX - Title; Bid Submittal 2 out of 3 for RFQ-000000XXXX - Title, etc.). If any submittal is received late, LSU will not consider the late submittal(s). Only the submittal(s) received by the due date and time will be considered. Late bids will not be accepted per LAC 34:XIII.515.B.

BID OPENING INFORMATION: Bid openings are held electronically. There are no in-person bid openings. To electronically attend the bid opening, use the below link to register in advance:

<https://lsu.zoom.us/meeting/register/QLfFfBZmRqio9DF9ESf0QA>

After registering, a confirmation email will be provided containing information about joining the bid opening. No information or opinions concerning the ultimate contract award will be given at bid opening or during the evaluation process. If an unforeseen circumstance beyond LSU's control prevents bid opening, the Bid will open at the next scheduled bid opening date.

ADDENDUM NUMBER ONE (1):

DATE: 5/27/2026

PROJECT: Campus Wide Direct Digital HVAC Control System, Item 54, Louisiana State University Alexandria, Louisiana

OWNER: Louisiana State University Alexandria

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-STATE PROJECT NO.: 01-107-24-05; F.01004604

STATE I.D. NO.: RFQ-0000002785

ENGINEER: M&E CONSULTING, LLC
1304 BERTRAND DR., SUITE F-7
LAFAYETTE, LOUISIANA 70506

This addendum forms a part of the contract documents and modifies the original specifications and drawings issued for bidding to the extent noted herein after.

Careful note of this addendum shall be taken by all parties of interest so that proper allowances are made in all computations, estimates, and contracts and so that all trades affected are fully advised in the performance of the work that will be required of them.

This addendum supersedes all previous drawings, specifications and instructions pertaining to these items.

GENERAL:

1. Sign-In sheet and Pre-Bid Minutes to Meeting are attached.
2. Construction time has been changed from 210 calendar days to 305 calendar days.

SPECIFICATIONS:

1. Revised Bid Form is attached. This revised form, with Alternates added, shall replace the Bid Form in the original issue set.
2. Add Unit Prices Form.
3. Revised Instructions to Bidders is attached. This revised shall replace the Instructions to Bidders section in the original issue set. The contract time is the only revision made to this section.
4. Revised Section 01 10 00 Summary of Work Specification is attached. This revised section shall replace the 01 10 00 Summary of Work in the original issue set. The contract time is the only revision made to this section.
5. Revised Section 01 23 00 Alternates Specification is attached. This revised section shall replace the 01 23 00 Alternates section in the original issue set. Two Alternates were added to this section.
6. Add Section 01 22 00 Unit Prices specification to the original issued set.
7. Add Section 23 05 23.13 – Butterfly Valve for HVAC Piping specification to the original issued set.

DRAWINGS:

1. ME8.1 – Coughlin Hall
 - a. All references to Alternate #1 – Indicate and refer to replacing all existing VAV boxes within the first floor of Coughlin Hall
2. ME8.2 – Coughlin Hall
 - a. Indication to Alternate #1 should be now referenced to Alternate #2 on this sheet. Alternate #2 is to remove and replace all VAV boxes within second floor of Coughlin Hall.
3. ME8.3 – Coughlin Hall
 - a. Title of VAV cost schedule although listed as Alternate #1 should include the changes also associated with Alternate #2.

PRIOR APPROVALS:

1. Controllers / JACE Siemens

ENCLOSURES:

1. Pre-Bid Sign-In Sheet
2. Pre-Bid Meeting Minutes
3. Louisiana Uniform Public Work Bid Form
4. Louisiana Uniform Public Work Unit Price Form
5. Instruction to Bidders
6. 01 10 00 – Summary of Work
7. 01 22 00 – Unit Prices
8. 01 23 00 – Alternates
9. 23 05 23.13 – Butterfly Valves for HVAC Piping

-END OF ADDENDUM-



1304 BERTRAND DR. STE. F7
LAFAYETTE, LA 70506
337 234 7474
meconsulting.com

MINUTES TO PRE-BID MEETING

Date: May 14, 2026
Time: 10:30am
Project: Campus Wide Direct Digital HVAC Control System, Item 54, Louisiana State University at Alexandria.
City: Alexandria, LA
State Project No.: 01-107-24-05: F.01004604
Site I.D. No.: NA
State I.D. No.: NA
Engineer: M & E Consulting, LLC
Engr. Project No.: 25050.00

Persons Present:

<u>Name</u>	<u>Representing</u>	<u>Phone</u>	<u>E-Mail Address</u>
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See attached sign-in sheet.

The following was discussed:

1. The purpose of the meeting is to have a Pre-bid Meeting to discuss the project.
2. M & E Consulting, Inc. will be the Designer representing the Owner.
3. Discussed the project construction time limit. Various contractor expressed concern and design is evaluating a time extension.
4. Reviewed the front end specification with all bid related items.
5. Discuss working hours. Contractors are to plan late afternoon and evening working hours.
6. Discussed the usage of site and staging. Contractors should have areas in most if not all buildings to allow storage. A central storage area will also be provided.
7. Discussed alternates for the project. Alternate will be adjusted via addendum.
8. Reviewed the drawings to discuss project scope.

-End of Items-

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: LSU Procurement Services

Via email: lsubids@lsu.edu

BID FOR: Furnish Labor and Materials for

Campus Wide Direct Digital HVAC Control

System, Item 54, Louisiana State University

Alexandria, Louisiana, Project No. 01-107-24-05,

F.01004604

RFQ- 0000002785

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: **M & E Consulting, LLC**, and dated: **April 6, 2026**

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging)_____.

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____ Dollars (\$ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 *Remove and replace all existing VAV boxes within the first floor of Coughlin Hall.* for the lump sum of:

_____ Dollars (\$ _____)

Alternate No. 2 *Remove and replace all existing VAV boxes within the Second floor of Coughlin Hall* for the lump sum of:

_____ Dollars (\$ _____)

Alternate No. 3 (*Owner to provide description of alternate and state whether add or deduct*) for the lump sum of:

Not Applicable _____ Dollars (\$ _____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

A **CORPORATE RESOLUTION OR WRITTEN EVIDENCE of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA RS 38:2218 (A) is attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Office of Procurement
213 Thomas Boyd Hall
Louisiana State University
Baton Rouge, LA 70803

BID FOR: Furnish Labor and Materials for
Enter Project Name Here
RFQ-0000002785
DELETE THIS FORM IF NOT USING UNIT PRICE

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# 1" and below butterfly valve – Material and labor to remove and install new valve			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# 1 1/4" and 2" butterfly valve – Material and labor to remove and install new valve			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# 2 1/2 " to 3" butterfly valve – Material and labor to remove and install new valve			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# 4" and below butterfly valve – Material and labor to remove and install new valve			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# 6" and below butterfly valve – Material and labor to remove and install new valve			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# 8" and below butterfly valve – Material and labor to remove and install new valve			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

Wording for "DESCRIPTION" is to be provided by the Owner.
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

INSTRUCTIONS TO BIDDERS

COMPLETION TIME:

The Bidder shall agree to fully complete the contract within _____ (____) consecutive calendar days, subject to such extension as may be granted under Paragraph 8.3, in the General Conditions and the Supplementary Conditions, and acknowledges that this Construction work may start on or after the date specified in the "Notice to Proceed." Contractor may mobilize to the site before the date set forth on the notice to proceed only with the prior written consent of Owner.

LIQUIDATED DAMAGES:

The Bidder shall agree to pay as Liquidated Damages the amount of:
_____ Dollars _____ for each consecutive calendar day for which the work is not complete, beginning with the first day beyond the completion date or days stated on the "Notice to Proceed" or as amended by change order.

ARTICLE 1

DEFINITIONS

1.1 The Contract Documents include the following:

- Advertisement for Bids
- Instructions to Bidders
- Bid Form
- Bid Bond
- General Conditions of the Contract for Construction
- AIA Document A201, 2007 Edition
- Supplementary Conditions
- Contract Between Owner and Contractor and Performance and Payment Bond
- Contractor's Affidavit
- Owner Documents (if applicable)
- Change Order Form
- Partial Occupancy Form
- Recommendation of Acceptance
- Asbestos Abatement (if applicable)
- Other Documents (if applicable)
- Specifications & Drawings
- Addenda issued during the bid period and acknowledged in the Bid Form
- Affidavit regarding Verification of Employees
- Attestation Clause (Past Criminal Convictions of Bidders and Verification of Employees)

1.2 All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, and the Supplementary Conditions are applicable to the Bid Documents.

- 1.3 Addenda are written and/or graphic instruments issued by the Prime Designer prior to the opening of bids, which modify or interpret the Bid Documents by addition, deletions, clarifications, corrections and prior approvals. A bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein supported by data called for by the Bid Documents.
- 1.4 The base bid is the sum stated in the bid for which the Bidder offers to perform the Work described as the base bid, to which work may be added, or deleted for sums stated in alternate bids.
- 1.5 An alternate bid (or alternate) is an amount stated in the bid to be added to or subtracted from the amount of the base bid if the corresponding change in project scope or materials or methods of construction described in the Bid Documents, is accepted.
- 1.6 A Bidder is one who submits a bid for a prime Contract with the Owner for the work described in the proposed Bid Documents.
- 1.7 A Sub-bidder is one who submits a bid to a Bidder for materials, equipment and/or labor for a portion of the Work.
- 1.8 Where the word "Architect" is used in any of the documents, it shall refer to the Prime Designer of the project, regardless of discipline.
- 1.9 The Owner is defined as Board of Supervisors of Louisiana State University and Agricultural and Mechanical College and hereinafter referred to as Owner (University.)

ARTICLE 2

PRE-BID CONFERENCE

- 2.1 A Pre-Bid Conference may be held at the project site at least ten (10) days before the date for receipt of bids. The Prime Designer shall coordinate the setting of the date, time and place for the Pre-Bid Conference with the Owner and shall invite in writing the Owner, and all who have received sets of the Bid Documents to attend. The purpose of the Pre-Bid Conference is to familiarize Bidders with the requirements of the Project and the intent of the Bid Documents, and to receive comments and information from interested Bidders. If the Pre-Bid Conference is stated in the Advertisement for Bids to be a Mandatory Pre-Bid Conference, bids shall be accepted only from those bidders who attend the Pre-Bid Conference. Contractors who are not in attendance for the **entire** Pre-Bid Conference will be considered to have not attended.
 - 2.1.1 For projects located on the LSU Campus, a parking fee will be assessed for any parking spaces provided, in the sole discretion of Owner, outside of the Work Area, as defined in the contract documents, if spaces are available. Contact the LSU Office of Parking and Transportation (Phone 225-578-5000).
- 2.2 Any revision of the Bid Documents made as a result of the Pre-Bid Conference shall not be valid unless included in an addendum.

ARTICLE 3

BIDDER'S REPRESENTATION

- 3.1** Each Bidder by making a bid represents that:
- 3.1.1** The Bidder has read and understands the Bid Documents and the bid is made in accordance therewith.
 - 3.1.2** The Bidder has visited the site and is familiar with the local conditions under which the work is to be performed.
 - 3.1.3** The Bidder's bid is based solely upon the materials, systems, equipment and labor described in the Bid Documents as advertised and as modified by addenda.
 - 3.1.4** The Bidder's bid is not based on any verbal instructions contrary to the Bid Documents and Addenda.
 - 3.1.5** The Bidder is familiar with Code of Governmental Ethics requirement that prohibits public servants and/or their immediate family members from bidding on or entering into contracts; he is aware that the Prime Designer and its principal owners are considered Public Servants under the Code of Governmental Ethics for the limited purposes and scope of the Design Contract with the Owner on this Project (see Ethics Board Advisory Opinion, No. 2009-378 and 2010-128); and neither he nor any principal of the Bidder with a controlling interest therein has an immediate family relationship with the Prime Designer or any principal within the Prime Designer's firm. (see La. R.S. 42:1113). Any Bidder submitting a bid in violation of this clause shall be disqualified and any contract entered into in violation of this clause shall be null and void.
- 3.2** The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting a bid. In the State of Louisiana, Revised Statutes 37:2150; et seq. will be considered, if applicable.

The Contractor shall be responsible for determining that all of the Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

ARTICLE 4

BIDDING DOCUMENTS

4.1 COPIES

- 4.1.1** Bid Documents may be obtained from the Prime Designer for a deposit as stated in the Advertisement for Bids. The deposit will be refunded as stated in the Advertisement for Bids. No deposits will be refunded on Bid Documents returned later than ten (10) days after receipt of bids.
- 4.1.2** As an alternative method of distribution, the Prime Designer may provide the Bidding Documents in electronic format. They may be obtained without charge and without deposit as stated in the Advertisement for Bids.

4.1.2.1. If electronic distribution is available, printed copies will not be available from the Prime Designer, but arrangements can be made to obtain them through most reprographic firms and/or plan rooms.

4.1.3 Complete sets of Bid Documents shall be used in preparing bids; neither the Owner nor the Prime Designer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.

4.1.4 The Owner or Prime Designer in making copies of the Bid Documents available on the above terms, do so only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

4.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

4.2.1 Bidders shall promptly notify the Prime Designer in writing of any ambiguity, inconsistency or error which they may discover upon examination of the Bid Documents or of the site or local conditions.

4.2.2 Bidders requiring clarification or interpretation of the Bid Documents shall make a written request to the Prime Designer, to reach him at least seven (7) calendar days prior to the date for receipt of the bids.

4.2.3 Any interpretation, correction, or change of the Bid Documents will be made by addendum. Interpretations, corrections or changes of the Bid Documents made in any other manner will not be binding and Bidders shall not rely upon such interpretations, corrections, and changes.

4.3 SUBSTITUTIONS

4.3.1 The materials, products and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitutions shall be allowed after bidding.

4.3.2 No substitution will be considered unless written request for approval has been submitted by the Proposer and has been received by the Prime Designer at least seven (7) working days prior to the opening of Bids. (R.S. 38:2295C) Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including model numbers, drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall be included. It shall be the responsibility of the proposer to include in his proposal all changes required of the Bid Documents if the proposed product is used. Prior approval is given contingent upon supplier being responsible for any costs which may be necessary to modify the space or facilities needed to accommodate the materials and equipment approved. The burden of proof of the merit of the proposed substitution is upon the Proposer.

4.3.3 If the Prime Designer approves any proposed substitution, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

4.4 ADDENDA

- 4.4.1** Addenda will be mailed or delivered to all who are known by the Prime Designer to have received a complete set of Bid Documents.
- 4.4.2** Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose.
- 4.4.3** Except as described herein, addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any other legal holidays. If the necessity arises of issuing an addendum modifying plans and specifications within the seventy-two (72) hour period prior to the advertised time for the opening of bids, then the opening of bids shall be extended at least seven (7) but no more than twenty-one (21) working days, without the requirement of re-advertising. The Owner shall be consulted prior to issuance of such an addendum and shall approve such issuance. The revised time and date for the opening of bids shall be stated in the addendum.
- 4.4.4** Each Bidder shall ascertain from the Prime Designer prior to submitting his bid that he has received all addenda issued, and he shall acknowledge their receipt on the Bid Form.
- 4.4.5** The Owner shall have the right to extend the bid date by up to thirty (30) days without the requirement of re-advertising. Any such extension shall be made by addendum issued by the Prime Designer.

4.5 MANUFACTURERS OR BRAND NAMES

- 4.5.1** Whenever manufacturers' brand names appear in these specifications, they are used only to denote the quality standard of product desired and they do not restrict bidders to the specific brand, make, manufacturer, or specification named; they are used only to set forth and convey to prospective bidders the general style, type, character and quality of product desired, and equivalent products will be acceptable, provided prior approval is obtained as provided herein.

ARTICLE 5

BIDDING PROCEDURE

5.1 FORM AND STYLE OF BIDS

- 5.1.1** Bids shall be submitted on the Louisiana Uniform Public Work Bid Form provided by the Prime Designer.
- 5.1.2** All blanks on the Bid Form shall be filled in by typewriter or manually in ink.
- 5.1.3** Bid sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written words shall govern.
- 5.1.4** Any interlineations, alteration or erasure must be initialed by the signer of the bid or his authorized representative.

- 5.1.5** Bidders are cautioned to complete all alternates should such be required in the Bid Form. Failure to submit alternate prices will render the bid non-responsive and shall cause its rejection.
- 5.1.6** Bidders are cautioned to complete all unit prices should such be required in the Bid Form. Unit prices represent a price proposal to do a specified quantity and quality of work. Unit prices are incorporated into the base bid but are not the sole components thereof.
- 5.1.7** Bidders are strongly cautioned to ensure that all blanks on the bid form are completely and accurately filled in.
- 5.1.8** Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.
- 5.1.9** The bid shall include the legal name of Bidder and shall be signed by the person or persons legally authorized to bind the Bidder to a Contract. The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable under any of the following conditions:
- (a)** Signature on bid is that of any corporate officer or member of a partnership or partnership in commendam listed on most current annual report on file with Secretary of State.
 - (b)** Signature on bid is that of authorized representative of corporation, partnership, or other legal entity and bid is accompanied by corporate resolution, certification as to the corporate principal, or other documents indicating authority.
 - (c)** Corporation, partnership, or other legal entity has filed in the records of the Secretary of State, an affidavit, resolution or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. A bid submitted by an agency shall have a current Power of Attorney attached certifying agent's authority to bind Bidder. The name and license number on the bid shall be the same as the entity identified on the Bid Form.
- 5.1.10** On any bid in excess of fifty thousand dollars (\$50,000.00), the Contractor shall certify that he is licensed under R.S. 37:2150-2173 and show his license number on the bid above his signature or his duly authorized representative.

5.2 BID SECURITY

- 5.2.1** No bid shall be considered or accepted unless the bid is accompanied by bid security in an amount of not less than five percent (5%) of the base bid and all alternates.

The bid security shall be in the form of a certified check or cashier's check drawn on the bank insured by the Federal Deposit Insurance Corporation, or a Bid Bond written by a surety company licensed to do business in Louisiana and signed by the surety's agent or attorney-in-fact. The Bid Bond and the surety for the bond must meet the qualifications stated thereon. The Bid Bond shall include the legal name of the Bidder be in favor of the Louisiana State University and Agricultural and Mechanical College and shall be accompanied by appropriate power of attorney. The Bid Bond must be signed by both the bidder/principal and the surety in the space provided on the Bid Bond Form. Failure by the bidder/principal or the surety to sign the bid bond shall result in the rejection of the bid.

Bid security furnished by the Contractor shall guarantee that the Contractor will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Bid Documents, within ten (10) days after written notice that the instrument is ready for his signature. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as penalty.

- 5.2.2** The Owner will have the right to retain the bid security of Bidders until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

5.3 SUBMISSION OF BIDS

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5.4 MODIFICATION OR WITHDRAWAL OF BID

- 5.4.1** A bid may not be modified, withdrawn or canceled by the Bidder during the time stipulated in the Advertisement for Bids, for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with R.S. 38:2214, which states, in part:

Bids containing patently obvious, unintentional, and substantial mechanical, clerical, or mathematical errors, or errors of unintentional omission of a substantial quantity of work, labor, material, or services made directly in the compilation of the bid, may be withdrawn by the contractor if clear and convincing sworn, written evidence of such errors is furnished to the public entity within forty-eight hours of the bid opening excluding Saturdays, Sundays, and legal holidays. Such errors must be clearly shown by objective evidence drawn from inspection of the original work papers, documents, or materials used in the preparation of the bid sought to be withdrawn. If the public entity determines that the error is a patently obvious mechanical, clerical, or mathematical error, or unintentional omission of a substantial quantity of work, labor, material, or services, as opposed to a judgment error, and that the bid was submitted in good faith it shall accept the withdrawal and return the bid security to the contractor.

- 5.4.2** Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.
- 5.4.3** Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.
- 5.4.4** Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

ARTICLE 6

CONSIDERATION OF BIDS

6.1 OPENING OF BIDS

- 6.1.1** The properly identified Bids received on time will be opened publicly and will be read aloud, and a tabulation abstract of the amounts of the base bids and alternates, if any, will be made available to Bidders.

6.2 REJECTION OF BIDS

- 6.2.1** The Owner shall have the right to reject any or all bids as allowed by La. R.S. 38:2214 and in particular to reject a bid not accompanied by the required bid security or data required by the Bidding Documents or a bid in any way incomplete or irregular.

6.3 ACCEPTANCE OF BID

- 6.3.1** It is the intent of the Owner, if he accepts any alternates, to accept them in order in which they are listed in the Bid Form. Determination of the Low Bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Owner shall reserve the right to accept alternates in any order which does not affect determination of the Low Bidder.

ARTICLE 7

POST-BID INFORMATION

7.1 SUBMISSIONS

- 7.1.1** At the Pre-Construction Conference, the Contractor shall submit the following information to the Prime Designer.

7.1.1.1 A designation of the work to be performed by the Contractor with his own forces.

7.1.1.2 A breakdown of the Contract cost attributable to each item listed in the Schedule of Values. No payments will be made to the Contractor until this is received.

7.1.1.3 The proprietary names and the suppliers of principal items or systems of material and equipment proposed for the work.

7.1.1.4 A list of names and business domiciles of all Subcontractors, manufacturers, suppliers or other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the work. It is the preference of the Owner that, to the greatest extent possible or practical, the Contractor utilize Louisiana Subcontractors, manufacturers, suppliers and labor.

- 7.1.2** The Contractor will be required to establish to the satisfaction of the Prime Designer the reliability and responsibility of the proposed Subcontractors to furnish and perform the work described in the sections of the Specifications pertaining to such proposed Subcontractor's respective trades. The General Contractor shall be responsible for actions or inactions of Subcontractors and/or material suppliers.

The General Contractor is totally responsible for any lost time or extra expense incurred due to a Subcontractor's/or Material Supplier's failure to perform. Failure to perform includes, but is not limited to, a Subcontractor's financial failure, abandonment of the project, failure to make prompt delivery, or failure to do work up to standard. Under no circumstances shall the Owner mitigate the General Contractor's losses or reimburse the General Contractor for losses caused by these events.

- 7.1.3** Subcontractors and other persons and organizations selected by the Bidder must be used on the work for which they were proposed and shall not be changed except with the written approval of the Owner and the Prime Designer.

- 7.1.4** The lowest responsive and responsible bidder shall submit to the Prime Designer and the Owner within ten days after the bid opening a letter/letters from the manufacturer stating

that the manufacturer will issue the roof system guarantee complying with the requirements of Owner based on the specified roof system and include the name of the applicator acceptable to the manufacturer at the highest level of certification for installing the specified roof system. This manufacture shall be one that has received prior approval or is named in the specifications.

In accordance with La. R.S. 23:1726(B), LA. R.S. 38:2227 and LA. R.S. 38:2212.10, each bidder on this project must submit the completed Affidavit regarding Verification of Employees and Attestation Form (Past Criminal Convictions of Bidders, Verification of Employees, and Certification Regarding Unpaid Worker's Comp.), found within this bid package. The completed Affidavit and Attestation forms shall be submitted to the Office of Procurement, Room 213 Thomas Boyd Hall, Louisiana State University and Agricultural and Mechanical College within ten (10) days after the opening of bids.

ARTICLE 8

PERFORMANCE AND PAYMENT BOND

8.1 BOND REQUIRED.

- 8.1.1** The Contractor shall furnish and pay for a Performance and Payment Bond written by a company licensed to do business in Louisiana, which shall be signed by the surety's agent or attorney-in-fact, in an amount equal to 100% of the Contract amount. Surety must be listed currently on the U.S. Department of the Treasury Financial Management Service List (Treasury List) as approved for an amount equal to or greater than the contract amount, or must be an insurance company domiciled in Louisiana or owned by Louisiana residents. If surety is qualified other than by listing on the Treasury list, the contract amount may not exceed fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance and may not exceed the amount of \$500,000. However, a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide shall not be subject to the \$500,000 limitation, provided that the contract amount does not exceed ten percent of policyholders' surplus as shown in the latest A.M. Best's Key Rating Guide nor fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance. The Bond shall be signed by the surety's agent or attorney-in-fact. The bond shall be in favor of the Louisiana State University and Agricultural and Mechanical College.

8.2 TIME OF DELIVERY AND FORM OF BOND.

- 8.2.1** The Bidder shall deliver the required bond to the Owner simultaneous with the execution of the Contract.
- 8.2.2** Performance Bond and Labor and Materials Payment Bond shall be executed on the AIA Standard Form; Document A311 or A312-2010 forms.

- 8.2.3** The Bidder shall require the Attorney-In-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the Power of Attorney.

ARTICLE 9

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

9.1 FORM TO BE USED

- 9.1.1** Form of the Contract to be used shall be furnished by the Owner.

9.2 AWARD

- 9.2.1** Before award of the Contract, the successful Bidder shall furnish to the Owner a copy of a Disclosure of Ownership Affidavit stamped by the Secretary of State, a certified copy of the minutes of the corporation or partnership meeting which authorized the party executing the bid to sign on behalf of the Contractor.
- 9.2.2** In accordance with Louisiana Law, when the Contract is awarded, the successful Bidder shall, at the time of the signing of the Contract, execute the Non-Collusion Affidavit included in the Contract Documents.
- 9.2.3** When this project is financed either partially or entirely with State Bonds the award of this Contract is contingent upon the sale of bonds by the State Bond Commission. The Owner shall incur no obligation to the Contractor until the Contract Between Owner and Contractor is duly executed.

ARTICLE 10

MATERIAL SALVAGE AND DISPOSAL

- 10.1** The University shall have priority for the selection of salvaged materials and equipment. Any excess dirt, equipment and material selected to remain the property of the University, shall be removed and delivered to a location on the campus as designated by the University. Material and equipment not retained by the University shall become the property of the Contractor and shall be removed from the campus by the Contractor.

ARTICLE 11

OCCUPATIONAL AND ENVIRONMENTAL SAFETY

- 11.1** The Contractor shall keep the construction site free from hazards and shall conduct his work with the least effect on the environment and faculty, staff and students of the University. The Contractor shall maintain the project and the various sites in compliance with the applicable OSHA Standards.
- 11.2** The Contractor shall initiate and forward a copy of the site safety plan (written documentation of a working and active employee safety program as defined by the OSHA Construction Standard),

along with the site safety supervisor's name and a 24-hour phone number, to the LSU Office of Occupational and Environmental Safety (OES).

- 11.3** The construction site shall be restricted to unauthorized personnel. High hazard areas involving machinery, hot work, electrical hazards, overhead work, excavations, etc., shall be barricaded and the barricade must be enforced at all times.
- 11.4** LSU students, faculty and staff shall not be exposed to any harmful construction debris or hazardous materials (i.e., lead-based paint, asbestos, dust, noise, vapors, etc.). Where contaminants generated by construction may enter adjacent occupied building spaces, the Contractor shall erect a containment system sufficient to protect LSU faculty, staff and students from exposure. The containment system shall also be subject to approval by LSU Facility and Safety Personnel.
- 11.5** Any injury requiring medical attention which occurs on site must be reported to OES, and the Contractor shall conduct an investigation and develop action plan for prevention. This action plan may be reviewed by OES upon request and/or OES may be an observer in this investigation.

End of Instructions to Bidders.

SECTION 01 10 00 – SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Contract documents

1. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to the following:
 - a. Applicable codes and regulations.
 - b. Notices and permits.
 - c. Existing site conditions and restrictions on use of the site.
 - d. Requirements for Owner and occupancy during the Contractor Work.
 - e. LSU PDC Contract Documents.

1.2 PROJECT IDENTIFICATION

- A. The name of the Project is: **Campus Wide Direct Digital HVAC Control System, Item 54, Louisiana State University, Alexandria, LA.**
- B. The project is located at: Louisiana State University, Alexandria, Louisiana.

1.3 SUMMARY BY REFERENCE

- A. The work documents can be summarized by reference to the requirements of the various contract documents, which in turn make reference to the requirement of other applicable provisions which control or influence the work, and these references can be summarized but are not necessarily limited to the following:
 1. The Executed Owner-Contractor Agreement
 2. The General and Supplementary Conditions and Miscellaneous Documents
 3. The Drawings
 4. This Project Manual
 5. The addenda and modifications to the contract documents which have been either bound herewith or distributed by transmittal subsequent to the binding hereof
 6. Submittals, copies of which are retained by the Contractor at the site.

1.4 SUMMARY OF SITE CONDITIONS

- A. The contractor shall verify site conditions, scope of work, and requirements of the Project. The work is located throughout the campus at 8100 US-71, Alexandria, LA on LSU Campus in Alexandria, Louisiana. Power and water are available at the Site however the Contractor is responsible for supplying the necessary electrical power and water to the Work Areas to complete the Work.

1.5 SCOPE OF WORK

- A. The work under this Contract shall consist of furnishing and installing all materials and labor required to complete **Campus Wide Direct Digital HVAC Control System, Item 54, Louisiana State University, Alexandria, LA.**

B. Base Bid:

- 1. This work is a campus wide upgrade of the DDC control system with new front-end graphics for the HVAC systems.

C. Alternates:

- 1. See Section 01 23 00 for description of Alternates.

- D. Work shall be in accordance with LSU Design Standards and all Contract Documents Referenced.

- E. Unless otherwise specified, the Contractor shall supply all labor, transportation, materials, apparatus, fuel, energy, light, and tools necessary for the entire, proper and substantial completion of the Work shown on the drawings and described this Project Manual. The Contractor shall install, maintain, and remove all construction equipment and auxiliary devices and shall be responsible for the safe, proper and lawful maintenance and use of sums; and shall construct in the best and most workmanlike manner a complete job and everything properly incidental thereto, as shown on the plans, stated in the Project Manual or reasonably implied therefrom, all in accordance with the Contract Documents.

- F. The Owner will furnish water and electricity which may be required by the Contractor during construction operations. The Contractor shall provide any necessary connections and extensions from existing utility lines or outlets at the site. Temporary discontinuance of any utility services shall be coordinated with LSU.

1.6 COMPLETION TIME

- A. Substantial Completion will be **305 days** from the date of the written "Notice to Proceed."
- B. There will be no restrictions on working times. Contractor can work days, nights, and weekends. The space will be unoccupied.
- C. Contractor shall coordinate the construction schedule with LSU at the preconstruction conference. RE: Section 01 33 23 Submittals.

1.7 LIQUIDATED DAMAGES

A. Liquidated damages are set at **\$1,000.00 for each consecutive calendar day** for which work is not complete, beginning with the first day beyond the completion date stated on the written "Notice to Proceed."

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Section 012100 "Allowances" for procedures for using unit prices to adjust quantity allowances.

1.2 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price No. 1: - 1" and below butterfly valve:

1. Description: Material and labor to remove and install new valve according to Section 230523.13 Butterfly Valves for HVAC Piping."
2. Unit of Measurement: Lump Sum
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

B. Unit Price No. 2: - 1 1/4" to 2" butterfly valve:

1. Description: Material and labor to remove and install new valve according to Section 230523.13 Butterfly Valves for HVAC Piping."
2. Unit of Measurement: Lump Sum
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

C. Unit Price No. 3: - 2 1/2" to 3" butterfly valve:

1. Description: Material and labor to remove and install new valve according to Section 230523.13 Butterfly Valves for HVAC Piping."
2. Unit of Measurement: Lump Sum
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

D. Unit Price No. 4: - 4" and below butterfly valve:

1. Description: Material and labor to remove and install new valve according to Section 230523.13 Butterfly Valves for HVAC Piping."
2. Unit of Measurement: Lump Sum
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

E. Unit Price No. 5: - 6" and below butterfly valve:

1. Description: Material and labor to remove and install new valve according to Section 230523.13 Butterfly Valves for HVAC Piping."
2. Unit of Measurement: Lump Sum
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

F. Unit Price No. 6 - 8" and below butterfly valve:

1. Description: Material and labor to remove and install new valve according to Section 230523.13 Butterfly Valves for HVAC Piping."
2. Unit of Measurement: Lump Sum
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

END OF SECTION 012200

SECTION 01 23 00 – ALTERNATES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Requirements and descriptions for products and scope of Work identified as Alternate in the Drawings and Specifications and listed as “Alternate” on the Project Bid Form.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept the alternate(s).
 1. Bidding documents shall include no more than three alternates.
 2. Determination of the low bidder shall be on the basis of the sum of the base bid and any alternates accepted.
 3. Alternates, if accepted, shall be accepted in the order in which they are listed on the bid form. However, the Owner shall have the right to accept alternates in any order which does not affect determination of the low bidder.

1.4 DESCRIPTION OF ALTERNATES

- A. **Alternate No. 1: Provide Alternate #1 Remove and replace all existing VAV boxes within the first floor of Coughlin Hall.** followed by a full description of the alternate.
- B. **Alternate No. 2: Provide Alternate #2 Remove and replace all existing VAV boxes within the Second floor of Coughlin Hall.** followed by a full description of the alternate.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

Section 23 05 23.13 – Butterfly Valves for HVAC Piping

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Iron, single-flange butterfly valves.
 - 2. Iron, grooved-end butterfly valves.
 - 3. High-performance butterfly valves.
 - 4. Chainwheels.

1.3 DEFINITIONS

- A. CWP: Cold working pressure.
- B. EPDM: Ethylene propylene copolymer rubber.
- C. NBR: Acrylonitrile-butadiene, Buna-N, or nitrile rubber.
- D. SWP: Steam working pressure.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of valve.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Prepare valves for shipping as follows:
 - 1. Protect internal parts against rust and corrosion.
 - 2. Protect threads, flange faces, grooves, and weld ends.
 - 3. Set butterfly valves closed or slightly open.
- B. Use the following precautions during storage:
 - 1. Maintain valve end protection.
 - 2. Store valves indoors and maintain at higher-than-ambient-dew-point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures.
- C. Use sling to handle large valves; rig sling to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR VALVES

- A. Source Limitations for Valves: Obtain each type of valve from single source from single manufacturer.
- B. ASME Compliance:
 - 1. ASME B16.1 for flanges on iron valves.
 - 2. ASME B16.5 for pipe flanges and flanged fittings, NPS 1/2 through NPS 24.
 - 3. ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
 - 4. ASME B31.1 for power piping valves.
 - 5. ASME B31.9 for building services piping valves.
- C. AWWA Compliance: Comply with AWWA C606 for grooved-end connections.
- D. Valve Pressure-Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.
- E. Valve Sizes: Same as upstream piping unless otherwise indicated.
- F. Valve Actuator Types:
 - 1. Gear Actuator: For valves **NPS 8 (DN 200)** and larger.
 - 2. Handlever: For valves **NPS 6 (DN 150)** and smaller.
 - 3. Chainwheel: Device for attachment to gear, stem, or other actuator of size and with chain for mounting height, according to "Valve Installation" Article.
- G. Valves in Insulated Piping: With **2-inch (50-mm)** stem extensions with extended necks.

2.2 IRON, SINGLE-FLANGE BUTTERFLY VALVES

- A. Iron, Single-Flange Butterfly Valves with Aluminum-Bronze Disc:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. [Apollo Flow Controls; Conbraco Industries, Inc.](#)
 - b. [KITZ Corporation.](#)
 - c. [Milwaukee Valve Company.](#)
 - d. [NIBCO INC.](#)
 - e. [WATTS.](#)
 - 2. Description:
 - a. Standard: MSS SP-67, Type I.
 - b. CWP Rating: [**150 psig (1035 kPa)**] [**200 psig (1380 kPa)**].
 - c. Body Design: Lug type; suitable for bidirectional dead-end service at rated pressure without use of downstream flange.
 - d. Body Material: ASTM A 126, cast iron or ASTM A 536, ductile iron.
 - e. Seat: EPDM.
 - f. Stem: One- or two-piece stainless steel.
 - g. Disc: Aluminum bronze.

B. Iron, Single-Flange Butterfly Valves with Ductile-Iron Disc:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Hammond Valve.
 - b. KITZ Corporation.
 - c. Milwaukee Valve Company.
 - d. Mueller Steam Specialty; A WATTS Brand.
 - e. NIBCO INC.
 - f. WATTS.
2. Description:
 - a. Standard: MSS SP-67, Type I.
 - b. CWP Rating: [**150 psig (1035 kPa)**] [**200 psig (1380 kPa)**].
 - c. Body Design: Lug type; suitable for bidirectional dead-end service at rated pressure without use of downstream flange.
 - d. Body Material: ASTM A 126, cast iron or ASTM A 536, ductile iron.
 - e. Seat: EPDM.
 - f. Stem: One- or two-piece stainless steel.
 - g. Disc: Nickel-plated or -coated ductile iron.

C. Iron, Single-Flange Butterfly Valves with Stainless-Steel Disc:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. KITZ Corporation.
 - b. Milwaukee Valve Company.
 - c. Mueller Steam Specialty; A WATTS Brand.
 - d. NIBCO INC.
 - e. WATTS.
2. Description:
 - a. Standard: MSS SP-67, Type I.
 - b. CWP Rating: [**150 psig (1035 kPa)**] [**200 psig (1380 kPa)**].
 - c. Body Design: Lug type; suitable for bidirectional dead-end service at rated pressure without use of downstream flange.
 - d. Body Material: ASTM A 126, cast iron or ASTM A 536, ductile iron.
 - e. Seat: EPDM.
 - f. Stem: One- or two-piece stainless steel.
 - g. Disc: Stainless steel.

2.3 DUCTILE-IRON, GROOVED-END BUTTERFLY VALVES

A. 175 CWP, Iron, Grooved-End Butterfly Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Grinnell G-Fire by Johnson Controls Company.
 - b. Victaulic Company.

2. Description:
 - a. Standard: MSS SP-67, Type I.
 - b. CWP Rating: 175 psig (1200 kPa).
 - c. Body Material: Coated, ductile iron.
 - d. Stem: Two-piece stainless steel.
 - e. Disc: Coated, ductile iron.
 - f. Seal: EPDM.

B. 300 CWP, Iron, Grooved-End Butterfly Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Anvil International.
 - b. Grinnell G-Fire by Johnson Controls Company.
 - c. NIBCO INC.
 - d. Victaulic Company.
2. Description:
 - a. Standard: MSS SP-67, Type I.
 - b. NPS 8 (DN 50) and Smaller CWP Rating: 300 psig (2070 kPa).
 - c. NPS 10 (DN 250) and Larger CWP Rating: 200 psig (1380 kPa).
 - d. Body Material: Coated, ductile iron.
 - e. Stem: Two-piece stainless steel.
 - f. Disc: Coated, ductile iron.
 - g. Seal: EPDM.

2.4 HIGH-PERFORMANCE BUTTERFLY VALVES

A. Class 150, Single-Flange, High-Performance Butterfly Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Apollo Flow Controls; Conbraco Industries, Inc.
 - b. Milwaukee Valve Company.
 - c. NIBCO INC.
2. Description:
 - a. Standard: MSS SP-68.
 - b. CWP Rating: 285 psig (1965 kPa) at 100 deg F (38 deg C).
 - c. Body Design: Lug type; suitable for bidirectional dead-end service at rated pressure without use of downstream flange.
 - d. Body Material: Carbon steel, cast iron, ductile iron, or stainless steel.
 - e. Seat: Reinforced PTFE or metal.
 - f. Stem: Stainless steel; offset from seat plane.
 - g. Disc: Carbon steel.
 - h. Service: Bidirectional.

B. Class 300, Single-Flange, High-Performance Butterfly Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Apollo Flow Controls; Conbraco Industries, Inc.
 - b. Milwaukee Valve Company.
 - c. NIBCO INC.

2. Description:
 - a. Standard: MSS SP-68.
 - b. CWP Rating: 720 psig (4965 kPa) at 100 deg F (38 deg C).
 - c. Body Design: Lug type; suitable for bidirectional dead-end service at rated pressure without use of downstream flange.
 - d. Body Material: Carbon steel, cast iron, or ductile iron.
 - e. Seat: Reinforced PTFE or metal.
 - f. Stem: Stainless steel; offset from seat plane.
 - g. Disc: Carbon steel.
 - h. Service: Bidirectional.

2.5 CHAINWHEELS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Babbitt Steam Specialty Co.
 2. Roto Hammer Industries.
 3. Trumbull Industries.

- B. Description: Valve actuation assembly with sprocket rim, chain guides, chain, and attachment brackets for mounting chainwheels directly to hand wheels.
 1. Sprocket Rim with Chain Guides: Ductile or cast iron, of type and size required for valve. Include zinc or epoxy coating.
 2. Chain: Hot-dip, galvanized steel, of size required to fit sprocket rim.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.

- B. Operate valves in positions from fully open to fully closed. Examine guides and seats made accessible by such operations.

- C. Examine mating flange faces for damage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.

- D. Do not attempt to repair defective valves; replace with new valves.

3.2 VALVE INSTALLATION

- A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
- B. Locate valves for easy access and provide separate support where necessary.
- C. Install valves in horizontal piping with stem at or above center of pipe.
- D. Install valves in position to allow full stem movement.
- E. Install chainwheels on operators for butterfly valves **NPS 4 (DN 100)** and larger and more than **96 inches (2400 mm)** above floor. Extend chains to **60 inches (1520 mm)** above finished floor.
- F. Install valve tags. Comply with requirements in Section 230553 "Identification for HVAC Piping and Equipment" for valve tags and schedules.

3.3 ADJUSTING

- A. Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

3.4 CHILLED-WATER VALVE SCHEDULE

- A. Pipe **NPS 2-1/2 (DN 65)** and Larger:
 - 1. Iron, Single-Flange Butterfly Valves, **NPS 2-1/2 to NPS 12 (DN 65 to DN 300)**: 200 CWP, EPDM seat, aluminum-bronze disc.
 - 2. Iron, Single-Flange Butterfly Valves, **NPS 14 to NPS 24 (DN 350 to DN 600)**: 150 CWP, EPDM seat, ductile-iron disc.
 - 3. Iron, Grooved-End Butterfly Valves, **NPS 2-1/2 to NPS 12 (DN 65 to DN 300)**: 300 CWP.
 - 4. High-Performance Butterfly Valves: Class 300, single flange.

3.5 CONDENSER-WATER VALVE SCHEDULE

- A. Pipe **NPS 2-1/2 (DN 65)** and Larger:
 - 1. Iron, Single-Flange Butterfly Valves, **NPS 2-1/2 to NPS 12 (DN 65 to DN 300)**: 200 CWP, EPDM seat, ductile-iron disc.
 - 2. Iron, Single-Flange Butterfly Valves, **NPS 14 to NPS 24 (DN 350 to DN 600)**: 150 CWP, EPDM seat, ductile-iron disc.
 - 3. Iron, Grooved-End Butterfly Valves, **NPS 2-1/2 to NPS 12 (DN 65 to DN 300)**: 300 CWP.
 - 4. High-Performance Butterfly Valves: Class 300, single flange.

3.6 HEATING-WATER VALVE SCHEDULE

- A. Pipe **NPS 2-1/2 (DN 65)** and Larger:
 - 1. Iron, Single-Flange Butterfly Valves, **NPS 2-1/2 to NPS 12 (DN 65 to DN 300)**: 200 CWP, EPDM seat, ductile-iron disc.

2. Iron, Single-Flange Butterfly Valves, NPS 14 to NPS 24 (DN 350 to DN 600): 150 CWP, EPDM seat, ductile-iron disc.
3. Iron, Grooved-End Butterfly Valves, NPS 2-1/2 to NPS 12 (DN 65 to DN 300): 300 CWP.
4. High-Performance Butterfly Valves: Class 300, single flange.

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