#### ENGINEERING HALL SPRINKLER AND GAS PIPING – PHASE 2 UNIVERSITY OF WISCONSIN - MADISON MADISON, WISCONSIN

### ADDENDUM #2

UWSA Project No. A-23-003

April 16, 2024

For the Board of Regents of the University of Wisconsin On Behalf of the University of Wisconsin – Madison 1860 Van Hise Hall, 1220 Linden Drive Madison, Wisconsin 53703

> Affiliated Engineers, Inc. 5802 Research Park Blvd. Madison, WI, 53719 Phone: 608-238-2616

RE: ENGINEERING HALL SPRINKLER AND GAS PIPING – PHASE 2 UNIVERSITY OF WISCONSIN – MADISON UWSA Project No. A-23-003

- BID OPENING: For MEP BIDDERS: 2:00 PM., THURSDAY, MAY 2, 2024 For GENERAL PRIME CONTRACTORS: 2:00 PM, THURSDAY, MAY 16, 2024
- FROM: Affiliated Engineers, Inc. 5802 Research Park Blvd. Madison, WI 53719
- TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Contract Documents dated **January 30, 2024** as noted below. Acknowledge receipt of this addendum by inserting the number and issue date of this addendum in the blank space provided on the Bid Form. Failure to do so may subject the Bidder to disgualification.

This Addendum consists of one-hundred twenty-four (124) pages (including this text document of 7 pages).

#### CHANGES TO BIDDING REQUIREMENTS

- 1. Table of Contents GPC
  - a. Added new Electrical and Mechanical sheets.
- 2. Table of Contents MEP
  - a. Added new Electrical and Mechanical sheets.
- 3. Table of Contents Technical Sections
  - a. Added new Electrical and Mechanical sheets.
- 4. Instructions to Bidders GPC
  - a. Section 23. Work By The Owner
    - i. Removed Asbestos Abatement
- 5. Division 1 General Requirements GPC
  - a. Section 5. Hazardous Substances Asbestos, Lead and Polychlorinated Biphenyls (PCB's)
    - i. Updated language regarding the scope of work responsibility for Asbestos Containing Materials and Abatement.
- 6. Instructions to Bidders MEP
  - a. Section 22. Work By The Owner
    - i. Removed Asbestos Abatement
- 7. Division 1 General Requirements MEP
  - a. Section 5. Hazardous Substances Asbestos, Lead and Polychlorinated Biphenyls (PCB's)
    - i. Updated language regarding the scope of work responsibility for Asbestos Containing Materials and Abatement.

#### CHANGES TO SPECIFICATIONS (DIVISIONS 2 THRU 34):

1. None.

### CHANGES TO DRAWINGS:

- 1. Sheet AD10B.1 Basement Demolition Floor Plan East
  - a. Replace Drawing Sheet AD10B.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 2. Sheet AD10B.2 Basement Demolition Floor Plan West
  - a. Replace Drawing Sheet AD10B.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 3. Sheet AD11B.1 Basement Demolition Reflected Ceiling Plan East
  - a. Replace Drawing Sheet AD11B.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 4. Sheet AD11B.2 Basement Demolition Reflected Ceiling Plan West
  - a. Replace Drawing Sheet AD11B.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 5. Sheet AD101.1 First Floor Demolition Plan East
  - a. Replace Drawing Sheet AD101.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend

- 1. Correct misspelling.
- 6. Sheet AD101.2 First Floor Demolition Plan West
  - a. Replace Drawing Sheet AD101.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 7. Sheet AD102.1 Second Floor Demolition Plan East
  - a. Replace Drawing Sheet AD102.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 8. Sheet AD102.2 Second Floor Demolition Plan West
  - a. Replace Drawing Sheet AD102.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
      - ii. Demo Plan Symbol Legend
        - 1. Correct misspelling.
- 9. Sheet AD103.1 Third Floor Demolition Plan East
  - a. Replace Drawing Sheet AD103.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 10. Sheet AD103.2 Third Floor Demolition Plan West
  - a. Replace Drawing Sheet AD103.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend

- 1. Correct misspelling.
- 11. Sheet AD104.1 Fourth Floor Demolition Plan East
  - a. Replace Drawing Sheet AD104.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
      - ii. Demo Plan Symbol Legend
        - 1. Correct misspelling.
- 12. Sheet AD104.2 Fourth Floor Demolition Plan West
  - a. Replace Drawing Sheet AD104.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 13. Sheet AD105.1 Penthouse Demolition Floor Plan East
  - a. Replace Drawing Sheet AD105.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 14. Sheet AD105.2 Penthouse Demolition Floor Plan West
  - a. Replace Drawing Sheet AD105.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 5 and replace it with "Not Used".
      - Revise General Note 6 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
    - ii. Demo Plan Symbol Legend
      - 1. Correct misspelling.
- 15. Sheet AD111.1 First Floor Demolition Reflected Ceiling Plan East
  - a. Replace Drawing Sheet AD111.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."

- 16. Sheet AD111.2 First Floor Demolition Reflected Ceiling Plan West
  - a. Replace Drawing Sheet AD111.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 17. Sheet AD112.1 Second Floor Demolition Reflected Ceiling Plan East
  - a. Replace Drawing Sheet AD112.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 18. Sheet AD112.2 Second Floor Demolition Reflected Ceiling Plan West
  - a. Replace Drawing Sheet AD112.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 19. Sheet AD113.1 Third Floor Demolition Reflected Ceiling Plan East
  - a. Replace Drawing Sheet AD113.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 20. Sheet AD113.2 Third Floor Demolition Reflected Ceiling Plan West
  - a. Replace Drawing Sheet AD113.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 21. Sheet AD114.1 Fourth Floor Demolition Reflected Ceiling Plan East
  - a. Replace Drawing Sheet AD114.1 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."

- 22. Sheet AD114.2 Fourth Floor Demolition Reflected Ceiling Plan West
  - a. Replace Drawing Sheet AD114.2 with revised, issued with this addendum.
    - i. General Notes
      - 1. Delete General Note 4 and replace it with "Not Used".
      - Revise General Note 5 and replace it with "If Hazardous Materials are encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract. Refer also to Division 1 – General Requirements, Section 5 Hazardous Substances. Follow all applicable local, state, and federal regulations pertaining to hazardous materials."
- 23. Sheet P10B.1 PLUMBING BASEMENT PLAN EAST
  - a. Add this sheet to account for an additional gas detection sensor above existing valves in the hydrogen system.
- 24. Sheet P702 GAS DETECTION SCHEDULES
  - a. Add this sheet to account for an additional gas detection sensor above existing valves in the hydrogen system.
- 25. Sheet MD11B.2 MECHANICAL BASEMENT DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 26. Sheet MD111.1 MECHANICAL FIRST FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 27. Sheet MD111.2 MECHANICAL FIRST FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 28. Sheet MD112.1 MECHANICAL SECOND FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 29. Sheet MD112.2 MECHANICAL SECOND FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 30. Sheet MD113.1 MECHANICAL THIRD FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 31. Sheet MD113.2 MECHANICAL THIRD FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 32. Sheet MD114.1 MECHANICAL FOURTH FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 33. Sheet MD114.2 MECHANICAL FOURTH FLOOR DEMO RCP
  - a. New sheet added to account for existing mechanical diffuser quantities in existing ceilings impacted by new fire protection work.
- 34. Sheet F002 FIRE PROTECTION CEILING SCHEDULE
  - a. Fixed discrepancies in ceiling schedule.
- 35. Sheet ED11B.1 ELECTRICAL BASEMENT DEMO RCP EAST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 36. Sheet ED11B.2 ELECTRICAL BASEMENT DEMO RCP WEST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 37. Sheet ED111.1 ELECTRICAL FIRST FLOOR DEMO RCP EAST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.

- 38. Sheet ED111.2 ELECTRICAL FIRST FLOOR DEMO RCP WEST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 39. Sheet ED112.1 ELECTRICAL SECOND FLOOR DEMO RCP EAST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 40. Sheet ED112.2 ELECTRICAL SECOND FLOOR DEMO RCP WEST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 41. Sheet ED113.1 ELECTRICAL THIRD FLOOR DEMO RCP EAST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 42. Sheet ED113.2 ELECTRICAL THIRD FLOOR DEMO RCP WEST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 43. Sheet ED114.1 ELECTRICAL FOURTH FLOOR DEMO RCP EAST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 44. Sheet ED114.2 ELECTRICAL FOURTH FLOOR DEMO RCP WEST
  - a. New sheet added to account for existing lighting fixture quantities in existing ceilings impacted by new fire protection work.
- 45. Sheet E12B.2 ELECTRICAL BASEMENT FLOOR SYSTEMS PLAN
  - a. Added sheet keynote 4.
  - b. Added (4) tamper switches for existing control valves.
  - c. Revised location of fire alarm devices from B551 to B553.
- 46. Sheet E800 ELECTRICAL SCHEDULES
  - a. Revised description in motor schedule from Preaction Air Compressor to Nitrogen Generator.

END OF ADDENDUM

Affiliated Engineers, Inc. 5802 Research Park Blvd. Madison, WI, 53719

For the Board of Regents of the University of Wisconsin On Behalf of the University of Wisconsin – Madison 1860 Van Hise Hall, 1220 Linden Drive Madison, Wisconsin 53703

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#### GPC INSTRUCTIONS TO BIDDERS (Rev 11/2022) 1

2 UW-Madison Project No. 0408 2331 / UWSA Project No. A-23-003

3

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(i) "Contractor" is all contractors working on a project regardless of contractual relationship. This includes the General Prime Contractor, MEP Subcontractors, Non-MEP Subcontractors, and all Subcontractors, regardless of tier of subcontract.

# 2. GENERAL

Time for bid opening shall be the prevailing central standard or daylight saving time in force at Madison, Wisconsin, on the date set forth in the Invitation to Bid.

All potential bidders must be certified by DOA prior to submitting bids on state construction projects over \$50,000. All
 bids received from contractors who are not certified will be rejected. Contractor certification applications and instructions
 for completing the form may be obtained from the DOA Website Contractor Certification page:
 <u>https://doa.wi.gov/Pages/DoingBusiness/ContractorCertification.aspx</u>.

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The Owner will issue an addendum if a successful MEP bid is withdrawn or rejected <u>after</u> the MEP Subcontractors have been identified but <u>before</u> the General Prime Contractor bid opening, This addendum will include a revised list of successful MEP bids that must be included in General Prime Contractor bids <u>and</u> will move the General Prime Contractor bid opening five (5) days later to allow bidders sufficient time to update their bids based on the revised MEP list.

18

Before submitting a bid, the Bidder shall examine all of the Bidding and Contract Documents listed in the Table of Contents of these specifications. The successful Bidder will be required to do all work which is shown on the drawings, mentioned in the specifications or reasonably implied as necessary to complete the contract for this project.

Failure to visit the site or failure to examine any and all Bidding and Contract Documents will in no way relieve the successful Bidder from the necessity of furnishing any materials or equipment, or performing any work, that may be required to complete the work in accordance with the Bidding and Contract Documents. Neglect of above requirements will not be accepted as reason for delay in the work or additional compensation.

27

22

All bidders shall have established and diligently maintained a satisfactory safety program, and if eligible for Experience Modification Rating (EMR), must have a rating of 1.20 or less as established by the Wisconsin Compensation Rating Bureau (WCRB) or the National Council on Compensation Insurance (NCCI).

# 31

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# 32 3. DRAWINGS AND SPECIFICATIONS

The drawings and specifications that form a part of these Bidding Documents are all the documents (drawings, specifications, etc) in this invitation to bid.

Complete sets of Contract Documents for all trades will be issued to all Bidders, irrespective of the category of work to be bid on, in order that all Bidders may be familiar with the work of other trades as they affect their bid.

# 39 4. INTERPRETATION

No verbal explanation or instructions will be given in regard to the meaning of the drawings or specifications during the
 bid period. Bidders shall bring inadequacies, omissions or conflicts to the Architect/Engineer's attention at least ten (10)
 days before the date set for bid opening. Prompt clarification will be supplied to all bidders of record by addendum.

Failure to so request clarification or interpretation of the drawings and specifications will not relieve the successful Bidder of responsibility. Signing of the contract will be considered as implicitly denoting that the Contractor has thorough understanding of the scope of work and comprehension of the contract documents.

47

48 Neither the Architect/Engineer nor the Owner will be responsible for verbal instructions.
 49

# 50 5. MANDATORY PRE-BID DOA CERTIFICATION

51 All potential bidders must become certified as qualified and responsible bidders **before** they can bid on state projects

52 over \$50,000. The criteria for determining certification of qualified and responsible bidders are itemized in Wis. Stat. s.

16.855(9m). If the Owner determines that more experience is necessary for a particular project, the Owner may include
 additional requirements.

#### 1 6. BID GUARANTEE

A bid bond prepared on the Bid Bond Form bound herein, payable to the Owner in the amount not less than 10% of the maximum bid shall accompany each bid as a guarantee. A bank certified check or a cashier's check may accompany each bid as a guarantee pursuant to Wis. Stat. s. 779.14(1m)(c)2.b. and 779.14(1s). Failure to enter into the contract with the Owner (including failure to obtain certificate of insurance and separate 100% performance and 100% payment bonds) may result in forfeiture of the Bid Bond. The company issuing the Bonds must be licensed to do business in Wisconsin.

8 9

Any bid which is not accompanied by a bid guarantee will not be accepted and will not be read at the bid opening.

10

All checks tendered as bid guarantee, except those of the three lowest bidders, will be returned to their makers within three (3) days after bid opening. All such retained checks will be returned immediately upon execution of the contract between the General Prime Contractor and the Owner.

14

#### 15 7. WITHDRAWAL OF BIDS

Prior to the time fixed for bid opening, bids may be withdrawn by written request from the Bidder, without prejudice to the right of the Bidder to file a new bid. Withdrawn bids will be returned unopened.

18

After the bid has been opened, negligence on the part of the Bidder in preparing their bid confers <u>**no**</u> right for withdrawal of the bid without penalty.

21

If a bid contains an error, omission, or mistake, the bidder may limit liability to the amount of their bid guarantee by giving the Owner written Notice, within seventy-two (72) hours of the bid opening, of their intent not to execute the contract with the owner. If no such notice is given, the Owner reserves the right to obtain the amount of the difference in bid price between the low bidder and the next low bidder.

26

#### 27 8. CONTRACT FORM

These specifications include a copy of the contract the successful Bidder is required to enter into with the owner. Bidders shall read and understand the conditions contained in this contract. The successful Bidder will be offered a contract via email to the contact provided by the bidder on the Bid Form.

31

#### 32 9. CONTRACT INTERESTS BY STATE PUBLIC OFFICIALS

33 In accordance with section 19.45(6) of the Wisconsin Statutes, no state public official, member of a state public official's 34 immediate family, nor any organization with which the state public official or a member of the official's immediate family 35 owns or controls at least 10% of the outstanding equity, voting rights, or outstanding indebtedness may enter into any 36 contract or lease involving a payment or payments of more than \$3,000 within a twelve (12) month period, in whole or in 37 part derived from state funds unless the state public official has first made written disclosure of the nature and extent of 38 such relationship or interest to the board and to the department acting for the state in regard to such contract or lease. 39 Any contract or lease entered into in violation of this subsection may be voided by the owner in an action commenced 40 within three (3) years of the date on which the ethics board, or the department or officer acting for the state in regard to the allocation of state funds from which such payment is derived, knew or should have known that a violation of this 41 42 subsection had occurred. This subsection does not affect the application of s.946.13.

43

#### 44 10. DISCLOSURE OF OWNERSHIP

The Bidder shall disclose on the date of submitting a bid for this project, the name of any construction business of which the Bidder has had a 25% or greater interest as a shareholder, officer, partner, or owner at any time during the preceding three (3) years, if said construction business has been found by the Department of Workforce Development to have failed to pay the prevailing wage rate or at least 1.5 times the hourly basic rate of pay for hours worked in excess of the prevailing hours of labor to any employee at any time within the preceding three (3) years.

50

51 The "Disclosure of Ownership" form may be obtained at no charge from the Department of Workforce Development, 52 Equal Rights Division, P.O. Box 8928, Madison, Wisconsin 53708.

53

#### 54 11. MINORITY BUSINESS ENTERPRISE AND DISABLED VETERAN-OWNED BUSINESS INVOLVEMENT

"Minority Business Enterprise" (MBE) means: a business certified by the Wisconsin Supplier Diversity Program under
 Wis. Stat. s. 16.287(2).

"Disabled Veteran-Owned Business" (DVB) means: a business certified by the Wisconsin Supplier Diversity Program
 under Wis. Stat. s. 16.283(3).

In awarding construction contracts, the University of Wisconsin System Administration shall attempt to ensure that 5 percent of the total amount expended in each fiscal year is awarded to contractors which are minority businesses. The General Prime Contractor Bidder shall make every effort to award a minimum of 15% of the work to minority business enterprises (MBE) involvement for all projects within 60 mile radius of Milwaukee and 5% for projects located elsewhere.

In awarding construction contracts, the University of Wisconsin System Administration shall attempt to ensure that at
 least 1 percent of the total amount expended each fiscal year is awarded to contractors that are disabled veteran-owned
 businesses.

In order to assist the department in these endeavors we strongly encourage General Prime Contractors to use MBEs
 and DVBs.

General Prime Contractor Bidders shall submit a "Form A Affidavit of Compliance – Minority Business Enterprise and Disabled Veteran-Owned Business Provision" within seven days of the general prime contractor contract offer. This form should indicate the percentage of MBE/DVB participation commitment. All MEP Subcontractor Bidders shall also make every effort to encourage MBE and DVB involvement.

For assistance in identifying DOA certified MBE and DVB companies, please contact the Department of Administration Supplier Diversity Program at: <u>DOABDMBD@wisconsin.gov</u>, or by telephone at: (608)267-9550, or visit their website at: http://www.doa.wi.gov/Divisions/Enterprise-Operations/Supplier-Diversity-Program.

#### 25 **12. SUBSTANCE ABUSE PREVENTION**

Mission/Purpose: The University of Wisconsin System Administration recognizes and supports drug-free workplace programs as an important element in the national strategy to reduce the devastating effects of drug and alcohol abuse in our society. the Owner requires contractors, subcontractors, suppliers and vendors to establish and enforce drug-free workplace policies and programs that conform to Sec 103.503 of the Wisconsin Statutes.

- Statement: The possession, use of, distribution or purchase of illegal drugs, or use of alcohol at work by any employee on University of Wisconsin System Administration construction job sites, is strictly prohibited.
- The terms of this Substance Abuse Program Statement shall cover all construction personnel who are working on University of Wisconsin System Administration job sites. This includes employees of all Contractors, Subcontractors, contractor suppliers, and their employees working at the job site.
- General Prime Contractor's and Subcontractor's Written Program: Each General Prime Contractor and Subcontractor
   shall have in place a written Substance Abuse Program conforming to Sec 103.503(3) of the Wisconsin Statutes.
- In addition, representatives of the Owner who believe that any General Prime Contractor's or Subcontractor's employee may be under the influence of alcohol or drugs shall, where deemed appropriate, contact the General Prime Contractor's or Subcontractor's appropriate management/supervision authority and request that appropriate action be taken. The General Prime Contractor's or Subcontractor's employer shall immediately remove an employee who is suspected of being under the influence of illegal drugs or alcohol shall be immediately removed from the job site.
- 47 Procedures for testing and handling of positive drug tests shall be in compliance and consistent with State and Federal
   48 laws.
   49

Costs of Substance Abuse Programs and Testing: The cost associated with the development, implementation and enforcement of Substance Abuse Programs and any testing required shall be the responsibility of each individual General Prime Contractor and Subcontractor for their respective employees working on the job site. The Owner will not be responsible for any cost of substance abuse testing, rehabilitation or medical reviews related to substance abuse.

- 55 The General Prime Contractor and Subcontractors shall indemnify and hold the Owner harmless from any damages or 56 other costs incurred that are related to the implementation or enforcement of any substance abuse policy or program.
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1	13.	METHOD	OF	AWARD -	RESER	/ATION
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General prime contractor bids that do not include the successful MEP bids identified by the Owner will be
 rejected.
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5 The general prime contract will be awarded based on the following, as long as the cost does not exceed the amount of 6 project funds available:

7 8

The lowest dollar amount is submitted by a qualified, responsible, certified bidder on a SINGLE BASE BID for all work comprising the project.

9 10

Should a qualified, responsible, certified minority business enterprise or disabled veteran-owned business submit a bid that is no more than 5% higher than the apparent low bid, the Contract may be awarded to the minority business enterprise or disabled veteran-owned business.

14

Firms wishing to be considered for the 5% bidding preference must be certified as a minority business enterprise or disabled veteran-owned business by the Wisconsin Supplier Diversity Program should indicate in the space provided on the Bid Form that preference is requested.

18

The Owner reserves the right to reject any and all bids, or to waive any informality in any bid, or to accept any bid which will serve the best interests of the Owner.

21 22

2 Informational Bids will not be considered in establishing low bidder.

23

# 24 14. SECURITY FOR SEPARATE 100% PERFORMANCE AND SEPARATE 100% PAYMENT

Bidder is required to furnish separate 100 % performance and 100 % payment bonds to the benefit of the Board of Regents of the University of Wisconsin as the sole oblige. These bonds shall be delivered to the Owner with the signed contract. The Surety Company shall be licensed to do business in Wisconsin. The Bond must be dated the same date or subsequent to the date of the Contract.

29

A certified copy of power of attorney shall be provided by the Surety Company showing that the agent who signs the Bond has the power of attorney to sign for the Surety Company. This power of attorney must be signed by the Secretary or Assistant Secretary of the company and not by an attorney-in-fact. The power of attorney must bear the same or later date as the bond.

34

If the Bidder is a partnership or a joint venture, a certified list providing the names of individuals constituting the partnership or joint venture <u>must</u> be furnished. The Contract itself may be signed by one partner of the partnership, or one partner of each firm comprising the joint venture, but the separate Performance and Payment Bonds must be signed by <u>all</u> of the partners.

39

If the Bidder is a corporation, a <u>current</u> certified copy of the resolution or other official act of the directors of the corporation must be submitted showing that the person who signs the contract is authorized to sign contracts for the corporation. <u>The corporate seal must be affixed to the resolution, contract, and separate performance and payment bonds</u>. If the Bidder's corporation has no seal, the above documents must include a statement or notation to the effect that the

- 44 corporation has <u>no</u> seal.
- 45

# 46 **15. TAXES**

The Bidder shall include in the bid all taxes required by law.

48

49 In accordance with section 71.80(16)(a), Wis. Stats., SURETY BOND; NONRESIDENT CONTRACTOR. "All

50 nonresident persons, whether incorporated or not, engaging in construction contracting in this state as contractor or 51 subcontractor and not otherwise regularly engaged in business in this state, shall file a surety bond with the

52 department (Wisconsin Department of Revenue MS 5-77 Attn: Non-Resident Surety Bonds, 2135 Rimrock Rd.,

53 Madison, WI 53713, telephone (608)266-2776) payable to the department of revenue, to guarantee the payment of

54 income taxes, required unemployment compensation contributions, sales and use taxes and income taxes withheld

55 from wages of employees, together with any penalties and interest thereon. The amount of the bond shall be 3% of

- 56 the contract or subcontract price on all contracts of \$50,000 or more..."
- 57

As the Board of Regents is an exempt entity, building materials purchased for this project are exempt. The University

2 of Wisconsin System CES number: 040706. The Certificate of Exempt Status (CES) will be provided to the awarded

3 Contractor upon request.

# 5 16. SUBMISSION OF BIDS

All bids shall be submitted on the standard Bid Forms and only bids that are made on the Bid Forms will be considered.
 The entire Bid Form including the Addendum Receipt/Signature page, the Bid Bond Form, (if used), and other supporting
 documents (if any), shall be filled out and submitted in the manner specified hereinafter. SPECIFICATIONS SHALL NOT
 ACCOMPANY BID.

- No bids for any subdivision or any subclassification of this work, except as indicated, will be accepted. Any conditional bid, amendment to the Bid Form or appendant thereto, the inclusion of any correspondence, written or printed matter, unsolicited material or data, or details of any nature other than the information specifically called for, will disqualify the Bid. Telecommunication alterations to the bid will not be accepted.
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Space is provided on the Bid Form for General Prime Contractor's single bid. Appropriate insertions are as follows: numerals indicating the cost of the work, \$0 if there is no cost for the work, or the words 'No Bid' if the bidder is not intending to bid the work. Blank space(s) will be considered the same as 'No Bid'.

20 Bidders shall submit a Single Base Bid for all the work.

Spaces are also provided on the Bid Form for General Prime Contractor's to list the successful MEP Subcontractors bids
 included in the General Prime Contractor's single base bid.

## General prime contractor bids that do <u>not</u> include the successful MEP bids identified by the Owner will be rejected.

Any addendum issued during the time of bidding shall become a part of the Contract Documents. Bidders shall
acknowledge receipt of such addendum in the appropriate space provided on the Bid Form. Bid will be rejected if receipt
of an addendum applicable to the award of contract has not been acknowledged on the Bid Form.

The Owner is not responsible for bids not clearly labeled as required. Bids shall be signed, sealed, and delivered to the place indicated in the Invitation to Bid <u>before</u> the time designated in the Invitation to Bid. All bids shall be identified with the Project Name, Project Number, Project Location, Category of Work being bid on, Bid Date, and the Name and Address of Bidder.

- Bidder shall be responsible for the bid being delivered to the place designated for the bid opening before the time
   specified. Bids received after the time indicated in the Invitation to Bid will be rejected and returned to Bidder unopened.
- Bid will be considered invalid and will be rejected if it has not been signed by the Bidder.

Bids will be rejected if the bidder is not certified by DOA in the division(s) of work they bid on and/or if their bid amount
exceeds their certification threshold in that division of work.

# 4445 **17. BASE BID**

- 46 Base Bids shall be received as follows:
- 47 SINGLE BASE BID FOR ALL THE WORK.
- 48

39

49 Base Bid No. 1. All Work, as per specification Divisions 2 thru 33, applicable provisions of Division 1 and related drawings. 50

- 51 18. INFORMATIONAL BIDS
- 52 None.

#### 53 54 **19. UNIT PRICES**

- 55 None.
- 56

#### 1 20. STATED ALLOWANCES

2 None.

3

#### 4 21. SUBCONTRACTORS

#### 5 GENERAL PRIME CONTRACTOR SUBCONTRACT WITH MEP SUBCONTRACTORS:

The successful General Prime Contractor shall offer a subcontract to the successful MEP Subcontractors identified by the Owner and included in the General Prime Contractor's bid. This subcontract between a General Prime Contractor and a MEP Subcontractor <u>must</u> include a scope of work clause identical to the scope of work clause included in the Bid Documents and the contract between the General Prime Contractor and the owner. A General Prime Contractor and an MEP Subcontractor may not enter any agreement in connection with bids submitted that would alter or affect the scope or price of the contracts entered into. This prohibition does <u>not</u> apply to the Owner change orders that result in changes to the plans or specifications, or to back charges allowed by the contract.

13

The General Prime Contractor must base the Project Schedule on the schedule that the MEP Subcontractors and General Prime Contractors bid on (in the specifications or bid instructions), unless otherwise agreed to by the MEP Subcontractor.

17

18 As the work progresses under any MEP subcontract for construction of a project, the General Prime Contractor shall, 19 upon request of a subcontractor, pay to the subcontractor an amount equal to the proportionate value of the subcontractor's work properly completed, less retainage. The retainage shall be an amount equal to not more than 5 20 21 percent of the subcontractor's work completed until 50 percent of the subcontractor's work has been completed. At 50 22 percent completion, no additional amounts may be retained, and partial payments shall be made in full to the 23 subcontractor unless the department certifies that the subcontractor's work is not proceeding satisfactorily. At 50 percent 24 completion or any time thereafter when the progress of the subcontractor's work is not satisfactory, additional amounts 25 may be retained but the total retainage may not be more than 10 percent of the value of the work completed. Upon 26 substantial completion of the subcontractor's work, any amount retained shall be paid to the subcontractor, less the value 27 of any required corrective work or uncompleted work. All payments the General Prime Contractor makes under this 28 paragraph shall be within 7 calendar days after the date on which the General Prime Contractor receives payment from 29 the department.

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The contract entered into between the General Prime Contractor and an MEP Subcontractor <u>must</u> contain all of the following clauses:

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<u>Scope of Work</u>. The MEP Subcontractor scope of work is identical to the General Prime Contractor scope of work included in these bidding and contract documents. By submitting and signing a bid, all bidders have examined all of the Bidding Documents listed in the Table of Contents of the project specifications. The successful bidders will be required to do all work which is shown on the drawings, mentioned in the specifications, or reasonably implied as necessary to complete the division of work bid for this project.

- 40 <u>Prompt Payment</u>. (General prime contractor) shall pay (mechanical, electrical, or plumbing subcontractor) in
   41 accordance with section 16.855(19)(b), Wisconsin stats, for work that has been satisfactorily completed and
   42 properly invoiced by (mechanical, electrical, or plumbing subcontractor). A payment is timely if it is mailed,
   43 delivered, or transferred to (mechanical, electrical, or plumbing subcontractor) by the deadline under section
   44 16.855(19)(b), Wisconsin stats.
- If (mechanical, electrical, or plumbing subcontractor) is not paid by the deadline in this contract, (general prime
   contractor) shall pay interest on the balance due from the eighth day after the (general prime contractor)
   receives payment from the University of Wisconsin System Administration for the work for which payment is
   due and owing to (mechanical, electrical, or plumbing subcontractor), at the rate specified in section 71.82,
   Wisconsin stats., compounded monthly.
- 50 A (mechanical, electrical, or plumbing subcontractor) that receives payment as provided under this contract 51 and that subcontracts with another entity shall pay those subcontractors, and be liable for interest on late 52 payments to those subcontractors, in the same manner as the (general prime contractor) is required to pay the 53 (mechanical, electrical, or plumbing subcontractor) under this contract.
- 55 **Insurance and Bonds.** (Mechanical, electrical, or plumbing subcontractor) shall not commence work under 56 this contract until it has obtained all necessary insurance required of (mechanical, electrical, or plumbing 57 subcontractor) in the contract between the (general prime contractor) and the University of Wisconsin System

Administration. (mechanical, electrical, or plumbing subcontractor) shall provide a separate 100 percent performance bond and a separate 100 percent payment bond to the benefit of the (general prime contractor) as the sole named obligee. Original bonds shall be given to the (general prime contractor) and a copy shall be given to the University of Wisconsin System Administration no later than 10 days after execution of this contract.

Indemnification. To the fullest extent permitted by law, (mechanical, electrical, or plumbing subcontractor) shall defend, indemnify, and hold harmless (general prime contractor) and its officers, directors, agents, and any others whom (general prime contractor) is required to indemnify under its contract with the Owner, and the employees of any of them, from and against claims, damages, fines, penalties, losses, and expenses, including but not limited to attorney fees, arising in any way out of or resulting from the performance of the work under this contract, but only to the extent such claim, damage, fine, penalty, loss, or expense: (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of property, including but not limited to loss of use resulting therefrom and is caused by the negligence, or acts or omissions, of (mechanical, electrical, or plumbing subcontractor), its subcontractors, any of their employees, and anyone directly or indirectly employed by them or anyone for whose acts they may be liable, or (2) as related to such claims, damages, fines, penalties, losses, and expense of or against (general prime contractor), results from or arises out of the negligence of the (general prime contractor) or other fault in providing general supervision or oversight of the work of (mechanical, electrical, or plumbing subcontractor) or (3) as related to claims, damages, fines, penalties, losses, and expense against the University of Wisconsin System Administration, arises out of the department's status as owner of the project or project site.

23 In addition (mechanical, electrical, or plumbing subcontractor) shall defend, indemnify, and hold harmless 24 (general prime contractor) and its officers, directors, agents, and any others (general prime contractor) is 25 required to indemnify under its contract with the department, and the employees of any of them, from any liability, including liability resulting from a violation of any applicable safe place act, that (general prime 26 27 contractor) or the owner incurs to any employee of (mechanical, electrical, or plumbing subcontractor) or any 28 third party where the liability arises from a derivative claim from said employee, when the liability arises out of 29 the failure of the (general prime contractor) or the owner to properly supervise, inspect, or approve the work or 30 work area of (mechanical, electrical, or plumbing subcontractor), but only to the extent that the liability arises 31 out of the acts or omissions of (mechanical, electrical, or plumbing subcontractor), its employees, or anyone 32 for whom (mechanical, electrical, or plumbing subcontractor) may be liable, or from (mechanical, electrical, or 33 plumbing subcontractor's) breach of its contractual responsibilities or arises out of (general prime contractor's) 34 negligence or other fault in providing general supervision or oversight of (mechanical, electrical, or plumbing 35 subcontractor's) work or arises out of the University of Wisconsin System Administration's status as owner of 36 the project or project site. In claims against (general prime contractor) or the owner by an employee of 37 (mechanical, electrical, or plumbing subcontractor) or its subcontractors or anyone for whose acts (mechanical, 38 electrical, or plumbing subcontractor) may be liable, the indemnification obligation of this paragraph is not 39 limited by a limitation on amount or type of damage, compensation, or other benefits payable by or for the 40 (mechanical, electrical, or plumbing subcontractor) subcontractors under workers compensation act. 41

Except as identified above, the obligations of (mechanical, electrical, or plumbing subcontractor) under this indemnification do not extend to the liability of (general prime contractor) and its agents or employees arising out of (1) preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications; (2) the giving of or failure to give directions or instructions by the (general prime contractor) or the University of Wisconsin System Administration or their agents or employees provided the giving or failure to give is the cause of the injury or damage; or (3) the acts or omissions of other subcontractors.

**<u>Retainage</u>**. Retainage shall occur and be in amounts and on a schedule equal to that in the contract between (general prime contractor) and the University of Wisconsin System Administration.

#### 52 22. COMMENCEMENT AND COMPLETION

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The successful General Prime Contractor Bidder shall commence work upon an executed contract with Owner. The General Prime Contractor shall not Mobilize until the date to be specified in a written "Notice to Proceed" issued by the Owner, and to fully complete all the work for Substantial Completion no later than 05/22/2026. Completion time will be converted to a specific date at the time the "Notice to Proceed" is issued. 1 The construction duration and below milestone dates are based on the current bidding schedule, and subject to

2 modification if bidding does not proceed as planned. Refer also to General Conditions for additional information in

3 regards to time for completion.

4 5

The General Prime Contractor must base the Project Schedule on the schedule that the MEP Subcontractors

and General Prime Contractors bid on (in the specifications or bid instructions), unless otherwise agreed to by

7 **the MEP Subcontractor.** These milestones will be incorporated into the master project schedule after the Notice to

Proceed is issued. The schedule must include, but is not limited to, the following milestone categories as they apply to the project:

10

Start Date	End Date	Schedule Milestones	
(Month/Year)	(Month/Year)		
7/2024	7/2024	Contracts	
7/2024	12/2024	Field Verification / Takeoff for Fire Protection Submittal	
12/2024	12/2024	State AHJ Fire Protection Submittal	
1/2025	1/2025	State AHJ Fire Protection Approval	
2/2025	6/2025	Winter 2024 - Spring 2025 Work	
6/2025	6/2025	Winter 2024 – Spring 2025 Work: Substantial Completion	
7/2025	7/2025	Winter 2024 – Spring 2025 Work: 100% Punchlist Work Items Complete	
6/2025	1/2026	Summer 2025 – Fall 2025 Work	
1/2026	1/2026	Summer 2025 – Fall 2025 Work: Substantial Completion	
2/2026	2/2026	Summer 2025 – Fall 2025 Work: 100% Punchlist Work Items Complete	
1/2026	5/2026	Winter 2025 Work	
5/2026	5/2026	Winter 2025 Work: Substantial Completion	
6/2026	6/2026	Winter 2025 Work: 100% Punchlist Work Items Complete	
7/2026	7/2026	100% of Closeout Activities Complete	

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#### 13 23. WORK BY THE OWNER

The following work will be accomplished by the Owner or will be let under separate contracts and will not be included under the General Prime Contract:

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# 17 DOOR HARDWARE:

18 Cylinders and cores are Owner provided and installed by the UW Lock Shop. Latches, latch sets and closers will be

provided by the UW Lock Shop for installation by the contractor.

21 ASBESTOS ABATEMENT:

22 See General Requirements, HAZARDOUS SUBSTANCES for regulatory requirements, materials testing results, and

23 General Prime Contractor's responsibility regarding ACM.

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<ol> <li>Definitions</li> <li>General</li> <li>Special Site Conditions</li> <li>Inspection of Surfaces</li> <li>Hazardous Substances - Asbestos, Lead and Polychlorinated Biphenyls (PCB'S)</li> <li>Soil Test Borings</li> <li>Mutual Responsibility</li> <li>Project Meetings</li> <li>Sleeves and Openings</li> <li>Cutting and Patching</li> <li>Manufacturer's Directions</li> <li>Layout</li> <li>Supervision</li> <li>Field Offices</li> <li>Stairs and Scaffolds</li> </ol>
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14. Field Offices 15. Stairs and Scaffolds
15 Stairs and Scattolds
16. Hoists, Elevators or Cranes
17. Signs
18. Fence
19. Roadway
20. Tollets
21. Telephones
22. Water Suppry 22. Temperary Electrical Work
23. Tempolary Electrical Work
24. Cold Wediner Frolection
20. Enclosure 26. Temporary Heat
20. Tempolary heat
27. The Flotection 28. Watchnersons
20. Watchpersons 29. Storage of Materials
30 Protection of Finished Construction
31 Protection in General
32 Cleaning and Waste Disposal
33 Operating and Maintenance Manuals and Instructions
34 Tests and Adjustments
35 Loose and Detachable Parts
36 Erosion Control and Storm water Management
37. Air Quality Management
38. Construction Waste Management
39. Guarantee Documents
40. Record Documents
1. DEFINITIONS

50 mechanical (Heating, Ventilating, and Air Conditioning), electrical, plumbing, or fire protection (fire suppression) work 51 for the Project, and enters into a contract with the General Prime Contractor to perform their division of work.

- 52 53
- (b) "Qualified bidder" means a contractor that DOA certifies under Wis. Stat. s. 16.855(9m)(b)1.

(c) "Qualified responsible bidder" means a contractor who is a Qualified bidder and who is a Responsible bidder.

(d) "Responsible bidder" means a contractor that DOA certifies under Wis. Stat. s. 16.855(9m)(b)2.

(e) "Single prime contracting" means bidding and contracting through a process in which only a general prime contractor has a contractual relationship with the Owner and all mechanical, electrical, or plumbing subcontractors are identified by the Owner and are subcontractors to the General Prime Contractor.

(f) "General Prime Contractor" is a contractor that enters into a contract with the Owner to perform all work as required by the Contract Documents and enters into contracts with subcontractors including MEP Subcontractors identified by the Owner.

(g) "Non-MEP Subcontractor" is a subcontractor to a General Prime Contractor in divisions of work other than mechanical, electrical, plumbing, and fire protection. This includes suppliers and installers to the General Prime Contractor.

(h) "Subcontractor "is all subcontractors on a project. This includes MEP Subcontractors, subcontractors to the MEP Subcontractors, and Non-MEP Subcontractors.

(i) "Contractor" is all contractors working on a project regardless of contractual relationship. This includes the General Prime Contractor, MEP Subcontractors, Non-MEP Subcontractors, and all Subcontractors, regardless of tier of subcontract.

#### 2. GENERAL

All articles in these General Requirements are applicable to all Divisions and Sections of the Work included herein. The Conditions of the Contract, General and Supplementary General Conditions, and these General Requirements shall apply with equal force and effect to the General Prime Contractor and all Subcontractors engaged in this work.

Contractor or the Contractor's authorized representative must be present to accept delivery of all equipment and material
 shipments. The Owner will not knowingly accept, unload or store anything delivered to the site for the Contractor's use.
 Inadvertent acceptance of delivered items by any representative or employee of the Owner shall not constitute
 acceptance or responsibility for any of the materials or equipment. It is the Contractor's responsibility to assume liability
 for equipment or material delivered to the job site.

#### 3. SPECIAL SITE CONDITIONS

Confine all operations, equipment, apparatus and storage of materials, to the immediate area of work to the greatest possible extent. Contractor shall ascertain, observe and comply with all rules and regulations in effect on the project site, including but not limited to parking and traffic regulations, use of walks, security restrictions and hours of allowable ingress and egress. Any special traffic control during construction involving lane closures shall be in accordance with the federal standard, Manual of Uniform Traffic Control Devices.

The Contractor shall take all measures necessary to become acquainted with the location of underground service. utilities, structures, etc., which may be encountered or be affected by the Contractor's work, and shall be responsible for damage caused by neglect to provide proper precautions or protection. As a minimum to become acquainted with such underground appurtenances, the Contractor shall: 1) Observe existing conditions visible at the site immediately prior to commencement of work; 2) Review available site plans incorporated in the contract documents and/or provided by the Owner; 3) Final check with the Owner for additions to or changes from conditions indicated on site plans for the facility; and 4) Obtain input from the "one-call system", the organization composed of all suppliers of utilities/services to or from the site. 

Information pertaining to existing conditions that are described in the specifications or appear on the drawings, is based on available records. While such data has been collected with reasonable care, there is no expressed or implied guarantee that conditions so indicated are entirely representative of those actually existing. This information is provided

4	to inform the Contractor of Irrown, eviction conditions on that due diling not in taken by the Contractor to evold demons
1	to inform the Contractor of known, existing conditions so that due diligence is taken by the Contractor to avoid damage.
2	Where site observation or documents indicate existing underground utilities/services in close proximity (within four feet
3	horizontally and/or four feet vertically) to necessary new construction work, the Contractor shall be responsible to test,
4	probe or otherwise determine exact locations so as to prevent damage to such utilities/services.
5	
6	Existing pipes, electrical work, and all other utilities encountered, which may interfere with new work, shall be re-routed
7	and a state of a replaced by the contractor bound initiation in accordance with the Bidding and Contract Decimenta
1	capped, cut on, or replaced by the contractor naving junsoiction, in accordance with the Bidding and Contract Documents.
8	
9	Any noisy and disruptive activities will need to be coordinated with the Owner and occur before 9am or after
10	4pm, Monday through Friday or between 6am and 6pm on Saturday or Sunday.
11	
12	Students and staff will occupy Engineering Hall during the entire period of this renovation and will be present
12	in bisher constition during months which fall within the condemic school wars
10	in righer capacities during months which fail within the academic school year.
14	
15	Limit use of premises to work in the areas indicated. Do not disturb portions of the site beyond areas in which work is
16	indicated. General, confine construction operations to areas defined within Project Limits, unless specifically noted or
17	otherwise and/or approved by Owner. Confine storage of materials and support facilities to designated staging areas
18	
10	Desiring of an approximate site is predicated. Contracted through an unadian unbial or will be premitted to drive an
19	Parking at or near the project site is restricted. Contractor's truck or working venicles will be permitted to drive on
20	premises only for the purpose of loading and unloading materials and equipment for this project and only if keys are
21	removed and all doors locked when not in use. No Contractor's will be allowed to park inside of the construction fence.
22	Free parking passes will not be provided. Contractors may park remotely and carpool to the project site, or may purchase
23	parking permits as space is available from Transportation Services (www.fpm.wisc.edu/trans). Vehicles in violation of
24	University partice regulation and which the first
24	University parking regulations are subject to line.
25	
26	Owner will designate an area in a building which can be used by workers for eating lunch and for toilet needs. I oilets
27	used by workers shall be kept clean and sanitary at all times.
28	
29	All buildings at this site will be occupied during the construction.
30	
21	To ansure the setatu of persons at the University, the following setaty measures should be observed:
01	To ensure the safety of persons at the oniversity, the following safety measures should be observed.
32	Contractor shall instruct their workers not to leave any openings in barricades, or to leave tools, equipment, or
33	materials lying around in any area where persons may traverse. Surfaces of barricades, enclosures, etc., must
34	be smooth with no protruding nails or other sharp projections or edges on side toward existing occupied areas,
35	corridors, connecting links, etc.
36	
27	Outdoor lance for amongoing with from existing buildings which may lie within or adjacent to new construction area must
57	Subort and a sub-energency exit from existing buildings which may lie within of adjacent to new construction area must
30	be kept clear of obstructions at all times.
39	
40	The Owner reserves the right to occupy and place and install equipment in completed areas of construction. Such
41	placement of equipment and partial occupancy shall not constitute acceptance of the Work. The Owner will prepare a
42	Certificate of Substantial Completion for each specific portion of the work to be occupied before occupancy. Before
43	partial occuracy, mechanical and electrical systems shall be fully operational and required documents and inspections
11	and be suspended in the international and electrical systems in the Ourse's will appreciate our desired in the product of the suspended of the
44	shall be successfully completed. On third completion, the owner will operate, and maintain mechanical and electrical
40	systems serving occupied portions of the building. On Substantial Completion, the Owner will assume responsibility for
46	maintenance and custodial service for occupied portions of the building.
47	
48	4. INSPECTION OF SURFACES
49	Contractor shall obtain complete data at the site and inspect surfaces that are to receive the Work before proceeding
50	with fabricating, assembling, fitting or erecting any work under this contract
51	
01	

1 Contractor shall notify the Owner in writing in case of discrepancies between existing work and drawings, and of any 2 defects in such surfaces that are to receive the Contractor's work. The Owner will evaluate the notice and direct what 3 remedial action will be taken.

Starting of work implies acceptance of existing work or the work of others. Removal and replacement of work applied to defective surfaces, in order to correct defects, shall be done at the expense of the Contractor who applied work to defective surfaces.

#### 5. HAZARDOUS SUBSTANCES - ASBESTOS, LEAD AND POLYCHLORINATED BIPHENYLS (PCB'S)

Airborne asbestos fibers, lead, and PCB compounds, if encountered, have been determined to be hazardous to one's
 health. Compliance with all possible applicable regulations is the Contractor's responsibility. Contractor shall not provide
 or install any product that contains any amount of asbestos or PCB. See General Requirements, CLEANING AND
 WASTE DISPOSAL for disposal of hazardous waste, if encountered.

#### 14 ASBESTOS

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15 Contractor's attention is directed to WAC NR 447, WAC DSS 159 and the Occupational Safety and Health Act (OSHA) 16 in general, part 1926.1101--ASBESTOS in particular. Contractor is responsible for compliance with all applicable 17 regulations when the work includes fastening to or coring through Asbestos Containing Materials (ACM) and disturbance 18 of asbestos containing caulking and mastics. Contractor is responsible for removal and disposal of Category I non-19 friable ACM that will be disturbed by the work. Unless otherwise indicated, all caulking, sealants, glazing compounds, 20 gaskets, asphalt roofing materials and miscellaneous adhesives are assumed to contain asbestos and are considered 21 to be Category I non-friable ACM as defined in NR 447. Waste material containing Category I non-friable ACM, is 22 regulated as Construction and Demolition (C&D) waste and may be disposed of at a Department of Natural Resources 23 (DNR) approved C &D waste landfill. If Contractor's work methods cause non-friable ACM to become friable, the 24 Contractor is responsible for the disposal of the friable asbestos waste at a landfill specifically approved by DNR to 25 accept friable asbestos. A copy of the signed waste manifest for the disposal of all friable asbestos waste shall be 26 provided to the Owner prior to request for final payment. 27

The Owner, under a separate abatement contract, will remove hard-packed pipe fittings, pipe insulation, resilient floor tile, mastic, ceramic tile grout and mortar. Hard packed pipe fittings might be present in inaccessible spaces that will be disturbed by the GPC's work. If encountered, the GPC is to mark the extent of hard packed pipe fittings to be removed. Allow five consecutive days in the construction schedule during each phase of demolition for asbestos abatement. Coordinate work with asbestos abatement contractor (AAC) who will require sole occupancy of the workspace during asbestos abatement.

If hazardous materials are not anticipated, but encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract.

#### 39 Lead Based Paint

Paint is assumed to contain lead. Conform to OSHA and EPA recommended worker safety requirements when removing lead based paint or material bearing lead based paint or material contaminated with lead by the demolition process. Contractor's attention is directed to the Occupational Safety and Health Act (OSHA) in general and particularly to 29 CFR 1910 (LEAD STANDARD) and to CFR 1926 (LEAD EXPOSURE IN THE CONSTRUCTION INDUSTRY). Dispose of refuse containing lead based paint or contaminated with lead by the demolition process in conformance with State of Wisconsin Hazardous Waste Regulations set forth by the Department of Natural Resources and in conformance with OSHA and EPA recommended worker safety requirements.

#### 48 PCB'S

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Contractor's attention is directed to Wisconsin Administrative Code, Chapter NR 157 relative to PCB's. Refer to Division
 Electrical within these specifications for work involving PCB's.

#### 52 6. SOIL TEST BORINGS

53 Not applicable to this project.

### 2 7. MUTUAL RESPONSIBILITY

Contractor(s) shall coordinate the work with adjacent work and shall cooperate with all other contractors to facilitate the general progress of the work. Each contractors shall afford all other contractors every reasonable opportunity for the installation of their work and for the storage of their material. In no case will the Contractor(s) be permitted to exclude from the premises or work, any other Contractor or employees thereof, or interfere with any other Contractor in the executing or installation of their work.

8

9 Contractor(s) shall arrange the work and dispose of materials so as not to interfere with the work or storage of materials 10 of others and each shall join their work to that of others in accordance with the intent of the drawings and specifications. 11 All Contractors shall work in cooperation with the General Prime Contractor and with each other, and fit their work into 12 the structure as job conditions may demand. All final decisions as to the right-of-way and run of pipe, ducts, etc., shall 13 be made by the Owner at prearranged meetings with responsible representatives of the Contractors involved.

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### 15 8. PROJECT MEETINGS

Project meetings will be held at the time designated by the Owner. Contractor, when requested, shall attend these meetings. If the principal of the firm does not attend meetings, a responsible representative of the Contractor who can bind the Contractor to a decision at the meetings shall attend.

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The Architect/Engineer or a representative thereof will write a report covering all items discussed and decisions reached and copy of such report distributed to all parties involved.

#### 23 9. SLEEVES AND OPENINGS

Each Contractor requiring sleeved openings shall furnish all sleeves required for their penetrations whether or not they responsible for providing the respective openings. Contractors furnishing sleeves to others for installation shall do this in a timely manner so as not to impede the project schedule.

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Openings shown on the structural and/or architectural drawings shall be the responsibility of the General Prime Contractor. Sleeves furnished by other contractors for openings shown on the structural and/or architectural drawings shall be installed by the General Prime Contractor.

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Openings that are required and are not shown on the structural and/or architectural drawings shall be the responsibility of the contractor requiring the openings. The contractor requiring the opening shall install sleeves for these openings or cut openings as needed (including floor openings within chases).

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36 Individuals skilled in such work shall accomplish installation of sleeves and openings.

37 Each Contractor shall be responsible for coordinating locations of their sleeves with work of other contractors.

38

Each Contractor who requires sleeves and/or openings shall submit through the Contractor, to the Owner for review and approval, layout drawings of all such required sleeves and/or openings. Sleeve and opening layout drawings shall be received by the Owner a minimum of two weeks prior to installation of the sleeves and openings. Sleeve and opening sizes and locations shall be dimensioned from column lines and floor elevations or from a point of reference approved by the Owner.

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# 45 **10. CUTTING AND PATCHING**

46 Cutting and patching required to access work in existing walls, in chases, above inaccessible ceilings, below floors, etc., 47 shall be by the Contractor who requires the access, unless shown on the bid documents otherwise or noted otherwise.

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The Contractor shall do all cutting, or fitting of the work as required to make its several parts fit together, or to receive the work of others, as shown or reasonably implied by the drawings or specifications, or as may be directed by the

51 Owner. Holes cut in exterior walls and/or roofs shall be waterproofed.

The Contractor who cuts shall also be responsible for patching. Where cutting and patching is required, the Contractor shall hire individuals skilled in such work to do cutting and patching.

The Contractor who removes or relocates building components which leaves a remaining opening shall be responsible for patching the opening.

Patching includes repairing openings to match adjacent construction and painting the surface to match existing. Painting means covering the entire wall where patching is to be done to nearest break point or corner unless indicated to be done by other contractors.

11 Contractor shall not endanger any work by cutting, digging or otherwise and shall not cut or alter the work of others 12 without their consent.

Do not pierce beams or columns without permission of the Owner and then only as directed in writing. If any ductwork, piping, conduit, etc. is required through walls or floors where no sleeve has been provided, use a core drill or saw cut to prevent damage and structural weakening.

Wherever any material, finish, or equipment, is damaged, the skilled contractor shall accomplish the repair or replacement, in that particular work and the cost shall be charged to the party responsible for the damage.

### 11. MANUFACTURER'S DIRECTIONS

Contractors shall apply, install, connect, erect, use, clean and condition manufactured articles, materials, and equipment
 as recommended by the manufacturer, unless specified to the contrary. The manufacturer's latest recommendations at
 the time of bidding shall be used.

### 26 12. LAYOUT

The General Prime Contractor shall immediately upon entering the site for purpose of beginning work, locate general reference points and take such action as is necessary to prevent their destruction. Each Contractor shall lay out its work and be responsible for all lines, elevations and measurements of the building and other work executed under its Contract. Each Contractor must exercise proper precaution to verify dimensions on the drawings before laying out work and will be held responsible for any error resulting from failure to exercise such precaution.

Using datum furnished by the Owner, the lot lines and present levels have been established as shown on the drawings.
 Other grades, lines, levels and benchmarks, shall be established and maintained by each Contractor, who shall be responsible for them.

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As work progresses, the General Prime Contractor shall lay out on forms and floor, the locations of all partitions, walls and fix column centerlines as a guide to all contractors.

The General Prime Contractor shall make provision to preserve property line stakes, benchmarks, or datum point. If any are lost, displaced or disturbed through neglect of any Contractor, Contractor's agents or employees, the Contractor responsible shall pay the cost of restoration.

43

47

Each Contractor shall verify grades, lines, levels, locations and dimensions as shown on drawings and report any errors
 or inconsistencies to the Owner before commencing work. Starting of work by each Contractor shall imply acceptance
 of existing conditions.

48 13. SUPERVISION

The General Prime Contractor shall take complete charge of the work under this contract and coordinate the work of all contractors on the project.

- 51 52 **14. FIELD OFFICES**
- 53 Not required.

#### 2 15. STAIRS AND SCAFFOLDS

3 The General Prime Contractor shall:

Furnish and maintain equipment such as temporary stairs, fixed ladders, ramps, chutes, runways and the like as required
 for proper execution of work by all contractors, and shall remove them on completion of the work.

6 7

8

Erect permanent stair framing as soon as possible. Provide stairs with temporary treads, handrails, and shaft protection.

9 Contractors requiring scaffolds shall make arrangements with the General Prime Contractor, or shall provide their own and remove them on completion of the work. Each Contractor shall underlay its interior scaffolds with planking to prevent uprights from resting directly on the floor construction.

#### 13 16. HOISTS, ELEVATORS OR CRANES

Each separate contractor shall provide and pay for its own hoist/crane or other apparatus necessary for unloading/setting or moving their equipment and materials. Installation and removal of equipment for this activity must be accounted for in the Project Schedule.

17

Equipment and operations for this activity shall comply with applicable Department of Safety and Professional Services and OSHA requirements. No material hoist may be used to transport personnel unless it meets Department of Safety and Professional Services and OSHA requirements for that purpose.

21

Contractors shall provide any protection required, temporary or long term, to prevent damage to work in place or in progress. When hoisting activity results in such damage, the responsible contractor shall pay for cleaning, repair or replacement of material or equipment as determined by the Owner.

25

26 Equipment, that imposes loads of any kind on work in place, shall not be erected without agreement from the Owner.

27

At their own discretion, two or more contractors may agree to use common hoisting facilities. Under such arrangements, the allocation of costs, access and scheduling and all other details of the agreement are the responsibility of the contractors involved.

31

Existing elevators may be used on a limited basis with the Owner's permission and agreement. Costs of warranty extensions and additional service work required will be paid by the using contractor. Appropriate protection must be provided by the using contractor and that contractor shall be responsible for any structural, mechanical or finish damage to the elevator and its parts and to adjoining building finishes and components.

36 37 **17. SIGNS** 

38 No project sign required.

39

No individual advertising signs, plaques or credits, temporary or permanent, will be permitted on the building or premises,
 except the name of the Contractor on Contractor's office or material shed.

- 42
- 43 **18. FENCE**

44 Construction Staging Areas/Materials Storage Areas: the Owner will assign required Construction Site Staging Areas 45 and Material Storage Areas as required on this project. The General Prime Contractor shall provide an eight-foot (8'-0") 46 high, temporary chain-link construction fence around the site construction staging/material storage areas as required to 47 secure the staging area(s) and construction materials stored on site. Contractor shall construct of standard studded T-48 Posts of sufficient length for line posts and spaced not to exceed 8'-0" apart. Corner posts and gate posts are to be 49 galvanized steel pipe of not less than 2 1/2" o.d. and shall be properly braced. Note: Plastic fencing or wooden snow 50 fence is not acceptable. Provide gates, properly constructed and braced, complete with hinges, hasps, and padlocks in 51 number and location required for proper control, delivery and distribution of material and equipment. Gate posts shall 52 be adequately back tied and anchored to insure a rigid installation. All protective fencing shall be maintained in an 53 upright, orderly fashion throughout the construction schedule.

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## 19. ROADWAY

Not applicable to this project.

### 20. TOILETS

The General Prime Contractor shall arrange with Owner to use existing toilet facilities at building site. Toilets used by workers shall be kept clean and sanitary at all times.

#### 21. TELEPHONES

It is expected that each contractor have access to their own cell phone for their own use. No additional telephone service will be provided.

### 22. WATER SUPPLY

The General Prime Contractor shall arrange with the Owner to use nearby existing water service.

Toilets and slop sinks used by workers shall be kept clean and sanitary at all times.

The General Prime Contractor shall supply water required for construction and other purposes from the existing building plumbing system.

The General Prime Contractor shall prevent waste of water and shall maintain valves, connections, and hoses in perfect condition, at all times. Contractors shall provide their own hose or piping from hose bibs.

### 24 23. TEMPORARY ELECTRICAL WORK

Duplex receptacles (120 volts) are available in each of the existing areas where work is performed for use of small hand tools when available.

If a Contractor contemplates the use of equipment that requires a different voltage or greater capacity than that specified, then that Contractor must arrange with utility for this additional service and pay for installation of the service and the necessary additional switches and wiring required.

The Electrical Contractor shall provide, at no cost to others, all lamps, wiring, switches, sockets and similar equipment required for temporary system until substantial completion. Upon completion of the project, the Electrical Contractor shall remove the temporary system.

The temporary lighting system shall be sufficient to enable all contractors to safely complete their work and to enable the Owner to check all work as it is being done. Illumination shall be 5 foot-candles minimum in all areas and, in addition, shall meet or exceed the requirements of 29 CFR 1926.56 Illumination (OSHA regulations).

In accordance with the latest issue of the National Electrical Code, all temporary electrical circuits for construction purposes shall be equipped with combination ground fault interrupter and circuit breakers meeting the requirements of UL for Class A, Group 1 devices. The ground fault interrupter portion shall be solid state type, insulated and isolated from the breaker mechanism. A test button shall be provided for checking the device. The breaker mechanism shall provide overload and short circuit protection and shall be operated by a toggle switch with overcenter switching mechanism so that contact cannot be held closed.

46

All contractors shall furnish their extension cords and lamps other than those furnished for general lighting.

49 All contractors and other separate Contractors shall be allowed to use the service provided for general lighting and

50 fractional horsepower hand tools at no cost.

1 The General Prime Contractor shall be compensated by those requiring three phase and single-phase energy used for 2 equipment other than fractional horsepower hand tools. Arrangements shall be made with the General Prime Contractor

before construction equipment is used.

4

# 24. COLD WEATHER PROTECTION

All heating and protective covering, required to protect the work from injury due to freezing and moisture during the construction period and prior to enclosure of the building, shall be classed as COLD WEATHER PROTECTION. Such protection shall be provided and paid for by the General Prime Contractor.

Heat required to protect materials from injury due to freezing during the construction period and prior to enclosure, shall
 be provided by means of portable heating units intended for this purpose.

12

9

All heating units must be approved types. Proper ventilation must be provided. The use of temporary units whose product of combustion will damage fresh concrete, mortar or other building materials, will not be allowed. Use of coke or oil salamanders is prohibited.

16

19

If electrical power is required for oil or gas portable heating units, it may be taken from the available temporary power
 source and paid for by the General Prime Contractor.

20 Heating units and the area surrounding the units shall be kept in a clean and safe condition.

#### 21 22 **25. ENCLOSURE**

The General Prime Contractor should provide approved translucent material for temporary enclosure of exterior wall openings if they have not received final louvers. Plain or reinforced polyethylene film or other suitable translucent material will be acceptable, provided it is installed in or on a well fitting rigid wood frame and kept in good repair. This means of temporary enclosure shall be used for other minor openings in walls.

27

At the end of day's work, securely close temporary enclosures. Padlock work area doors. The General Prime Contractor shall supervise the effectiveness of enclosures.

30

# 31 26. TEMPORARY HEAT

All heating required after enclosure of the building up to substantial completion shall be classified as TEMPORARY
 HEAT. Enclosure is defined in the preceding Article.

34

It shall be the responsibility of the General Prime Contractor to see that every precaution is used to prevent unnecessary
 escape of heat.

37

For installations that are not connected to central plant steam or central plant hot water, the General Prime Contractor shall pay the fuel costs for temporary heat for both permanent heating systems used for temporary heat and/or temporary heating systems used for temporary heat.

41

42 The General Prime Contractor shall pay for all electrical energy consumed for temporary heat.

43

The Mechanical Contractor shall provide one of the following systems or a combination thereof, for furnishing temporary
 heat:

46

Permanent heating system may be used for temporary heating. If permanent system is used, the Mechanical Contractor shall install in their permanent location heating coils or connectors as approved by the Owner, with controls to maintain temperatures required. Temporary filters shall be used in the permanent system. Provide bases, shields, etc., around heating element to prove the permanent experience of elements of elements of the permanent system.

50 heating elements to prevent too rapid drying of adjacent concrete, masonry or plaster. Relocation of some of the

51 permanent heating system equipment may be required during construction to prevent interference with new construction. 52 Temporary units may be installed in such areas during the time permanent equipment is not operating due to relocation.

The distribution piping of the permanent heating system may be utilized for supply and return to unit heaters on each floor in lieu of temporary piping, provided approved connections, controls and protection of such piping is maintained.

If the permanent air system is used during temporary heating period, temporary filters shall be provided in the system and they shall have efficiency equal to the permanent filters. The return air ductwork shall be protected from construction dirt by temporary filters placed over return openings.

8 If the Mechanical Contractor does not have one of the above systems in operation by the time the building is enclosed, 9 then the Mechanical Contractor shall provide, maintain and supervise the operation of temporary portable units with 10 necessary automatic controls to provide required temperatures. Current required may be taken from the temporary 11 electrical service. See "Temporary Electrical Installation". Cost of fuel to operate portable units shall be paid by the 12 General Prime Contractor.

All electrical wiring required for temporary heating units shall be furnished and installed by Mechanical Contractor, from temporary wiring service. Electrical wiring to permanent equipment used for temporary heating that has been mounted in its permanent location shall be wired by contractors skilled in that work.

18 The use of open salamanders as portable heating units will not be approved. All portable temporary heating units shall 19 be properly ventilated to prevent combustion gases from remaining in the heating area.

The Mechanical Contractor must ascertain if heating equipment will operate on the temporary electrical service available.
 If service is insufficient to operate equipment, Mechanical Contractor shall make other arrangements.

The Mechanical Contractor shall be responsible for the proper adjustment and maintenance of the system, and shall supervise and be responsible for the operation of the system used for temporary heating until the Owner occupies the building. Supervision shall include periodic checking of operation as required.

A minimum temperature of 45 degrees and a maximum temperature of 60 degrees for the building shall be maintained by the Mechanical Contractor, except for a period of at least ten days prior to the placing of interior woodwork and throughout the placing of this and other finish, varnishing, painting, etc., and until substantial completion to provide sufficient heat to insure a temperature in the spaces involved of not less than 70 degrees nor more than 80 degrees.

The temporary heating system shall be removed by the Mechanical Contractor after the permanent heating system has been installed and operating. Surfaces and structure shall be patched as required. Temporary heating equipment shall be relocated by the Mechanical Contractor as required during construction to prevent interference with new construction.

At completion of construction work or when temporary heat is no longer required, Mechanical Contractor must repair any damage done to permanent equipment during temporary heating period and also perform the necessary cleaning of all ducts and equipment. The Mechanical Contractor shall provide permanent filters to the complete satisfaction of the Owner.

# 42 27. FIRE PROTECTION

The General Prime Contractor shall provide and maintain in working order during the entire construction period, a minimum of three (3) fire extinguishers on each floor level, including basement of the building, and one (1) in temporary office. Extinguishers shall be non-freeze type such as A-B-C rated dry chemical, of not less than 10-pound capacity each. In addition, any Subcontractor who maintains an enclosed shed on the site shall provide and maintain, in an accessible location, one or more similar nonfreezing type fire extinguisher in each enclosed shed.

# 49 28. WATCHPERSONS

50 Watchpersons will not be furnished by the Owner. The Contractor shall provide such precautionary measures, to include

the furnishing of watchpersons if deemed necessary, to protect persons and property from damage or loss where the

52 Contractor's work is involved.

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#### 29. STORAGE OF MATERIALS 1

2 Contractor shall confine equipment, apparatus, storage of materials and operations to limits indicated on the drawings 3 or by specific direction of the Owner and shall not bring material onto the site until they are needed for the progress of 4 the work.

5

6 The storage of materials on the grounds and within the building shall be in strict accordance with the instructions of the 7 Owner. Storage of materials within the building shall at no time exceed the design carrying capacity of the structural 8 system.

- 10 All materials affected by moisture shall be stored on platforms and protected from the weather.
- 11

9

12 All materials shall be stored in a manner that prevents release of hazardous material to the environment. 13

14 All hazardous materials, including motor fuels, shall be properly handled and contained to prevent spills or other releases. 15 The General Prime Contractor shall develop and maintain a contingency plan to provide emergency response, 16 containment, and cleanup of spills of hazardous materials resulting from contract activities. All spills and releases shall 17 be reported to the Owner as soon as possible.

18

19 During the construction of this building, materials, construction sheds, and earth stockpiles shall be located so as not to 20 interfere with the installation of the utilities nor cause damage to existing lines.

- 21
- 22 The Contractor shall allot space to others for storage of their materials, and erection of their sheds. 23

24 Should it be necessary at any time to move material sheds or storage platforms, the Contractor shall move same at the 25 Contractor's expense, when directed by Owner.

- 26
- 27 Repairing of areas used for placing of sheds, offices, and for storage of materials shall be done by the Contractor.
- 28

#### 29 **30. PROTECTION OF FINISHED CONSTRUCTION**

30 Contractor shall assume the responsibility for the protection of all finished construction under the Contract and shall 31 repair and restore any and all damage of finished work to its original state.

32

33 Wheeling of any loads over any type of floor, either with or without plank protection, will be permitted only in rubber tired 34 wheelbarrows, buggies, trucks or dollies.

35 36

37

Where structural concrete is also the finished surface, care must be taken to avoid marking or damaging those surfaces.

#### 38 **31. PROTECTION IN GENERAL**

39 All structures and equipment shall be constructed, installed and operated with guards, controls and other devices in 40 place.

41

42 Temporary pumps required for pumping water from building excavation or from building proper shall be provided by the 43 General Prime Contractor, including temporary connections. Plumbing Contractor shall install permanent sump basins 44 and piping where and when required. Permanent sump pumps shall not be installed until building is substantially 45 complete and when approved by Owner. The General Prime Contractor shall remove temporary pumps and connections 46 when approved by Owner.

47

48 The General Prime Contractor shall:

49 Provide, erect and maintain all required planking, barricades, guard rails, temporary walkways, etc., of sufficient size and

50 strength necessary for protection of stored material and equipment; paved surfaces, walks, curbs, gutters and drives;

51 streets adjacent to or within project area; adjoining property and all project work to prevent accidents to the public and 52

- the workmen at the job site.
- 53

Notify adjacent property owners if their property interferes with the work so that arrangements for proper protection can be made.

Provide and maintain proper shoring and bracing to prevent earth from caving or washing into the building excavation. Provide temporary protection around openings through floors and roofs, including elevator openings, stairwells, and edge of slabs.

Provide and maintain proper shoring and bracing for existing underground utilities, sewers, etc., encountered during excavation work, to protect them from collapse or other type of damage until such time as they are to be removed, incorporated into the new work, or can be properly backfilled upon completion of new work.

Provide protection against rain, snow, wind, ice, storms, or heat to maintain all work, materials, apparatus, and fixtures, incorporated in the work or stored on the site, free from injury or damage. At the end of the day's work, cover all new work likely to be damaged. Remove snow and ice as necessary for safety and proper execution of the work.

Protect the building and foundations from damage at all times from rain, ground water and back-up from drains or sewers. Provide all equipment and enclosures as necessary to provide this protection.

Damaged property shall be repaired or replaced in order to return it to its original condition. Damaged lawns shall be replaced with sod.

Protect materials, work and equipment, not normally covered by above protection, until construction proceeds to a point where the general building protection of the area where located, dispenses with the necessity therefore. Protect work outside of the building lines such as trenches and open excavations, as specified above.

Take all necessary precautions to protect the Owner's property as well as adjacent property, including trees, shrubs, buildings, sanitary and storm sewers, water piping, gas piping, electric conduit or cable, etc., from any and all damage which may result due to work on this project.

30 Repair work outside of property line in accordance with the requirements of the authority having jurisdiction. 31

Repair any work, damaged by failure to provide proper and adequate protection, to its original state to the satisfaction of the Owner or remove and replace with new work at the Contractor's expense.

Protect trees indicated on the drawings to remain and trees in locations that would not interfere with new construction, from all damage. Do not injure trunks, branches, or roots of trees that are to remain. Do cutting and trimming only as approved and as directed by Owner.

The value of trees destroyed or damaged will be charged against the account of the Contractor responsible for the damage in an amount equal to the expense of replacing the trees with those of similar kind and size.

# 42 **32. CLEANING AND WASTE DISPOSAL**

Contractor shall be responsible for all cleaning required within the technical sections of the specifications governing work under the Contractor's jurisdiction as well as for keeping all work areas, passageways, ramps, stairs and all other areas of the premises free of accumulation of surplus materials, rubbish, debris and scrap which may be caused by the Contractor's operations or that of the Subcontractors.

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Remove rubbish, debris and scrap promptly upon its accumulation and in no event later than the end of each week.

50 Combustible waste shall be removed immediately or stored in fire resistive containers until disposed of in an approved

51 manner.

1 No burning of rubbish or debris will be allowed at the site. Rubbish, debris and scrap shall not be thrown through any 2 window or other opening, or dropped from any great height; it shall be conducted to the ground, to waiting truck(s) or 3 removable container(s) by means of approved chutes or other means of controlled conveyance.

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Form and scrap lumber shall have all nails withdrawn or bent over; shall be neatly stacked, placed in trash bins, or removed from the premises.

8 Spillages of oil, grease or other liquids which could cause a slippery or otherwise hazardous situation or stain a finished 9 surface, shall be cleaned up immediately.

10

11 Dust, dirt and other foreign matter shall be removed completely from all internal surfaces of all mechanical and electrical 12 units, cabinets, ducts, pipes, etc.

13

15

14 Dirt, soil, fingerprints, stains and the like, shall be completely removed from all exposed finished surfaces.

16 General Prime Contractor shall wash all glass immediately prior to the occupancy of this project. Work shall include the 17 removal of labels, paint splattering, glazing compound and sealant. Surfaces shall include mirrors and both sides of all glass in windows, borrowed lights, partitions, doors and side lights. 18

19

20 Broken, scratched or otherwise damaged glass shall be replaced by the General Prime Contractor.

21

22 In addition to the above, the General Prime Contractor shall be responsible for the general "broom" cleaning of the 23 premises and for expediting all of the cleaning, washing, waxing and polishing required within the technical sections of 24 the specifications governing work under this Contract. The General Prime Contractor shall also perform "final" cleaning 25 of all exposed surfaces to remove all foreign matter, spots, soil, construction dust, etc., so as to put the project in a 26 complete and finished condition ready for acceptance and use intended.

27

28 If rubbish and debris is not removed, or if surfaces are not cleaned as specified above, the Owner reserves the right to 29 have said work done by others and the related cost(s) will be deducted from monies due the Contractor.

30

#### 31 33. OPERATING AND MAINTENANCE MANUALS AND INSTRUCTIONS

32 Contractor shall provide the Owner with two (2) sets of the O&M data for each device, piece of equipment and assembly 33 furnished and/or installed under this contract. Format shall be paper, indexed and labeled and bound in three-ring 34 binders. When duplicate electronic data is available, include electronic media in 3-hole vinyl holders in binders.

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36 The O&M manuals shall include the following:

- Table of Contents •
- 38 Contact information (including emergency contact number) for installing contractor, original vendor • 39 manufacturer and service provider 40
  - Copy of approved submittals •
  - As-built control drawings and sequences of operations •
  - Catalog data or literature with correct model number checked
  - Manufacturer's installation and operation instructions including start-up, break-in, shutdown, seasonal, • emergency and special operation procedures
- 45 Manufacturer's maintenance instructions including procedures and instructions for problem corrections, • 46 preventive maintenance, testing, alignment, adjustment and repair
  - Complete parts list in an exploded view diagram of the equipment •
  - **Construction Verification Checklists** •
- 49 Inspection and testing reports • 50
  - Maintenance records indicating maintenance performed by contractor prior to substantial completion •
- 51 Equipment warranties including terms and conditions and date of inception (substantial completion) and date ٠ 52 of expiration
  - List of special tools or testing equipment required for the operation, testing or maintenance of the equipment

For items assembled by the Contractor for special functions, write operating and maintenance instructions • Contractor shall submit to A/E for review, make revisions noted by A/E and provide final O&M data for A/E's review 30 business days prior to training. Any revisions or changes to the systems and/or equipment post-delivery of the final O & M data submittal must be submitted to A/E as an addendum within 30 days of the revision or change.

## 34. TESTS AND ADJUSTMENTS

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The complete installation consisting of the several parts and systems and all equipment installed according to the requirements of the Contract Documents, shall be ready in all respects for use by the Owner and shall be subjected to a test at full operating conditions and pressures for normal conditions of use.

Contractor shall make all necessary adjustments and replacements affecting the work which is necessary to fulfill Owner 11 12 requirements and to comply with the directions and recommendations of the manufacturer of the several pieces of 13 equipment, and to comply with all codes and regulations which may apply to the entire installation. Contractor shall also 14 make all required adjustments to comply with all provisions of the drawings and specifications.

#### 16 35. LOOSE AND DETACHABLE PARTS

17 Contractor shall retain all loose and small detachable parts of apparatus and equipment furnished under this Contract, 18 until completion of the work and shall turn them over to Owner designated to receive them. Contractor shall obtain from 19 the Owner an itemized receipt thereof

#### 21 36. EROSION CONTROL AND STORM WATER MANAGEMENT

22 Not applicable to this project. 23

#### 24 **37. AIR QUALITY MANAGEMENT**

25 In accordance with the Department of Administration's air guality management practice on Ozone Action Days, all 26 contractors shall reduce or limit emissions and particulate matter that adversely affect air quality.

- 28 The General Prime Contractor shall establish the action plan, in cooperation with other contractor(s), concerning 29 implementation of air quality management on Ozone Action Days. This plan shall include suspending work or modifying
- 30 operations for all activities related to ozone, volatile organic compounds (VOC) and nitrogen oxide emissions. These
- 31 work activities include but are not limited to the following:
- 32 Limit equipment and vehicle refueling to after 6 pm.
- 33 Limit use of gasoline-powered vehicle and equipment. 34
  - Limit excessive idling of diesel-powered vehicle and equipment.
- 35 Limit large scale painting with VOC. 36
  - Limit large scale asphalt roofing and paving.
    - Limit and/or control all dust creating activities.

#### 39 For information on air quality readings on Ozone Action Days refer to:

1-866-324-5924; or

http://www.dnr.state.wi.us/org/aw/air/wisards/state.htm

#### 43 **38. CONSTRUCTION WASTE MANAGEMENT**

- 44 See Section 01 74 19 - Construction Waste Management.
- 45

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#### 46 **39. GUARANTEE DOCUMENTS**

- 47 Upon Substantial Completion of project, the Contractor shall submit such written guarantees and bonds to the Owner.
- 48

#### 49 **40. RECORD DOCUMENTS**

- 50 On a suitable set of Contract Documents, the contractor is to maintain a daily record of changes and deviations from the
- 51 contract. All buried or concealed piping, conduit, or similar items shall be located by dimensions and elevations on the 52 record drawings.
- 53

The daily record of changes shall be the responsibility of Contractor's field superintendent. No arbitrary mark-ups will be 1 2 permitted.

3

4 Once during the month the Contractor shall present at the project, the job copy showing variations and changes to date 5 to the Architect/Engineer and the Owner for their review.

6 7

At substantial completion of the project, the Contractor shall transmit the marked up as-built documents to the

8 Architect/Engineer and copy the Owner on the transmittal of the documents. The A/E will incorporate the contractor 9 marked up as-built drawings into the record drawings.

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MEP INSTRUCTIONS TO BIDDERS (Rev 11/2022) UW-Madison Project No. 0408 2331 / UWSA Project No. A-23-003 2

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28		
29	1. DEFINITIO	NS
30	In this docum	ent, the following terms are defined as:
31		
32	(a) "Mech	nanical, electrical, or plumbing subcontractor" ("MEP Subcontractor") is a contractor that performs
33	mechanical (F	leating, Ventilating, and Air Conditioning, electrical, plumbing, or fire protection (fire suppression) work for
34 25	the Project, a	nd enters into a contract with the General Prime Contractor to perform their division of work.
36 20	(b) "Oua	lified hidder" means a contractor that the department certifies under Wis. Stat. s. 16.855/9m)/b)1
37	(b) Qua	
38	(c) "Oua	lified responsible bidder" means a contractor who is a qualified bidder and who is a responsible bidder
39	(0) Quu	
40	(d) "Res	nonsible bidder" means a contractor that the department certifies under Wis. Stat. s. 16.855(9m)(b)2
41	(u) 1100	
42	(e) "Sind	le prime contracting" means bidding and contracting through a process in which only a general prime
43	contractor has	s a contractual relationship with the owner and all mechanical, electrical, or audio visual subcontractors
44	are identified	by the department and are subcontractors to the General Prime Contractor.
45		
46	(f) "Gene	ral Prime Contractor" is a contractor that enters into a contract with the owner to perform all work as
47	required by th	e Contract Documents and enters into contracts with subcontractors including MEP Subcontractors
48	identified by t	he Owner.
49		
50	(g) "Non-	MEP Subcontractor" is a subcontractor to a General Prime Contractor in divisions of work other than
51	mechanical, e	electrical, plumbing, and fire protection. This includes suppliers and installers to the General Prime
52	Contractor.	
53 E4	(L) "O. I.	entropies (in all subsentropies on a project. This is all des MED Out-subsectors sub-sub-sub-sub-sub-
04 55	(n) "Subo	contractor is all subcontractors on a project. This includes MEP Subcontractors, subcontractors to the
55	IVIER SUDCON	
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(i) "Contractor" is all contractors working on a project regardless of contractual relationship. This includes the General Prime Contractor, MEP Subcontractors, Non-MEP Subcontractors, and all Subcontractors, regardless of tier of subcontract.

### 2. GENERAL

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Time for bid opening shall be the prevailing central standard or daylight saving time in force at Madison, Wisconsin, on the date set forth in the Invitation to Bid.

All potential bidders must be certified by DOA prior to submitting bids on state construction projects over \$50,000. All
 bids received from contractors who are not certified will be rejected. Contractor certification applications and instructions
 for completing the form may be obtained from the DOA Website Contractor Certification page:
 <u>https://doa.wi.gov/Pages/DoingBusiness/ContractorCertification.aspx</u>.

The Owner will issue an addendum if a successful MEP bid is withdrawn or rejected <u>after</u> the MEP Subcontractors have been identified but <u>before</u> the General Prime Contractor bid opening, This addendum will include a revised list of successful MEP bids that must be included in General Prime Contractor bids <u>and</u> will move the General Prime Contractor bid opening five days later to allow bidders sufficient time to update their bids based on the revised MEP list.

Before submitting a bid, the Bidder shall examine all of the Bidding Documents listed in the Table of Contents of these specifications. The successful Bidder will be required to do all work which is shown on the drawings, mentioned in the specifications or reasonably implied as necessary to complete the division of work being bid for this project.

Failure to visit the site or failure to examine any and all Bidding Documents will in no way relieve the successful Bidder from the necessity of furnishing any materials or equipment, or performing any work, that may be required to complete the work in accordance with the Bidding Documents. Neglect of above requirements will not be accepted as reason for delay in the work or additional compensation.

All bidders shall have established and diligently maintained a satisfactory safety program, and if eligible for Experience Modification Rating (EMR), must have a rating of 1.20 or less as established by the Wisconsin Compensation Rating Bureau (WCRB) or the National Council on Compensation Insurance (NCCI).

#### 32 3. DRAWINGS AND SPECIFICATIONS

The drawings and specifications that form a part of these Bidding Documents are all the documents (drawings, specifications, etc) in this invitation to bid.

Complete sets of Bidding Documents for all trades will be issued to all Bidders, irrespective of the category of work to be bid on, in order that all Bidders may be familiar with the work of other trades as they affect their bid.

# 39 4. INTERPRETATION

No verbal explanation or instructions will be given in regard to the meaning of the drawings or specifications during the
 bid period. Bidders shall bring inadequacies, omissions or conflicts to the Architect/Engineer's attention at least ten (10)
 days before the date set for bid opening. Prompt clarification will be supplied to all bidders of record by addendum.

Failure to so request clarification or interpretation of the drawings and specifications will not relieve the successful Bidder

45 of responsibility. Signing of the subcontract with the General Prime Contractor will be considered as implicitly denoting

- that the MEP Subcontractor has thorough understanding of the scope of work and comprehension of the Bidding
- 47 Documents.48

49 Neither the Architect/Engineer nor the Owner will be responsible for verbal instructions.

# 5. MANDATORY PRE-BID DOA CERTIFICATION

52 All potential bidders must become certified as qualified and responsible bidders **before** they can bid on state projects

53 over \$50,000. The criteria for determining certification of qualified and responsible bidders are itemized in Wis. Stat. s.

54 16.855(9m). If the Owner determines that more experience is necessary for a particular project, the Owner may include 55 additional requirements.

#### 1 6. BID GUARANTEE

A bid bond prepared on the Bid Bond Form bound herein, payable to the Owner in the amount not less than 10% of the maximum bid shall accompany each bid as a guarantee. A bank certified check or a cashier's check may accompany each bid as a guarantee pursuant to Wis. Stat. s. 779.14(1m)(c)2.b. and 779.14(1s). Failure to enter into the contract with the Owner (including failure to obtain certificate of insurance and separate 100% performance and 100% payment bonds) with the General Prime Contractor may result in forfeiture of the Bid Bond. The company issuing the Bonds must be licensed to do business in Wisconsin.

8

Any bid which is not accompanied by a bid guarantee will not be accepted and will not be read at the bid opening.

9 10

All checks tendered as bid guarantee, except those of the three lowest bidders, will be returned to their makers within three (3) days after bid opening. All such retained checks will be returned immediately upon execution of the contract between the General Prime Contractor and the MEP Subcontractor.

14

#### 15 7. WITHDRAWAL OF BIDS

Prior to the time fixed for bid opening, bids may be withdrawn by written request from the Bidder, without prejudice to the right of the Bidder to file a new bid. Withdrawn bids will be returned unopened.

18

After the bid has been opened, negligence on the part of the Bidder in preparing their bid confers <u>**no**</u> right for withdrawal of the bid without penalty.

21

If a bid contains an error, omission, or mistake, the bidder may limit liability to the amount of their bid guarantee by giving the Owner written Notice, within seventy-two (72) hours of the MEP bid opening, of their intent not to execute the contract with the General Prime Contractor. If no such notice is given, the Owner reserves the right to obtain the amount of the difference in bid price between the low bidder and the next low bidder.

#### 27 8. MEP BIDDER IDENTIFICATION

Within five (5) days of the MEP bid opening, the Owner will identify a lowest, qualified, responsible, certified MEP Subcontractor in each applicable MEP division of work (as long as the cost does not exceed the amount of project funds available).

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The lowest dollar amounts submitted by qualified, responsible, certified bidders on the SEPARATE BASE BIDS for various specified mechanical, electrical, plumbing, and fire protection divisions of the work; or

The lowest dollar amount submitted by qualified, responsible, certified bidders on the COMBINED BASE BIDS for any combination of the Separate Base Bids for various specified mechanical, electrical, plumbing, and fire protection divisions of the work.

The Owner reserves the right to reject any and all bids, or to waive any informality in any bid, or to accept any bid which will serve the best interest of the Owner.

40

#### 41 9. MEP SUBCONTRACT WITH GENERAL PRIME CONTRACTOR

The General Prime Contractor will offer the successful MEP Bidder (s) a subcontract. A contract entered into between a General Prime Contractor and a MEP Subcontractor <u>must</u> include a scope of work clause identical to the scope of work clause included in the MEP Subcontractor bid documents. A General Prime Contractor and an MEP

44 work clause included in the MEF Subcontractor bid documents. A General Finne Contractor and an MEF 45 Subcontractor may not enter any agreement in connection with bids submitted that would alter or affect the scope or

46 price of the contracts entered into. This prohibition does <u>not</u> apply to the Owner change orders that result in changes to 47 the plans or specifications, or to back charges allowed by the contract.

48

The General Prime Contractor must base the Project Schedule on the schedule that the MEP Subcontractors and General Prime Contractors bid on (in the specifications or bid instructions), unless otherwise agreed to by the MEP Subcontractor.

51 52

As the work progresses under any MEP subcontract for construction of a project, the General Prime Contractor shall, upon request of a subcontractor, pay to the subcontractor an amount equal to the proportionate value of the subcontractor's work properly completed, less retainage.

The retainage shall be an amount equal to not more than 5 percent of the subcontractor's work completed until 50 percent of the subcontractor's work has been completed. At 50 percent completion, no additional amounts may be retained, and partial payments shall be made in full to the subcontractor unless the department certifies that the subcontractor's work is not proceeding satisfactorily. At 50 percent completion or any time thereafter when the progress of the subcontractor's work is not satisfactory, additional amounts may be retained but the total retainage may not be more than 10 percent of the value of the work completed. Upon substantial completion of the subcontractor's work, any amount retained shall be paid to the subcontractor, less the value of any required corrective work or uncompleted work. All payments the General Prime Contractor makes under this paragraph shall be within 7 calendar days after the date on which the General Prime Contractor receives payment from the Owner.

11 The contract entered into between the General Prime Contractor and an MEP Subcontractor <u>must</u> contain all of the 12 following clauses:

**Scope of Work**. The MEP Subcontractor scope of work is identical to the General Prime Contractor scope of work included in these bidding and contract documents. By submitting and signing a bid, all bidders have examined all of the Bidding Documents listed in the Table of Contents of the project specifications. The successful bidders will be required to do all work which is shown on the drawings, mentioned in the specifications, or reasonably implied as necessary to complete the division of work bid for this project.

**Prompt Payment.** (General prime contractor) shall pay (mechanical, electrical, or plumbing subcontractor) in accordance with section 16.855(19)(b), Wisconsin stats, for work that has been satisfactorily completed and properly invoiced by (mechanical, electrical, or plumbing subcontractor). A payment is timely if it is mailed, delivered, or transferred to (mechanical, electrical, or plumbing subcontractor) by the deadline under section 16.855(19)(b), Wisconsin stats.

If (mechanical, electrical, or plumbing subcontractor) is not paid by the deadline in this contract, (general prime contractor) shall pay interest on the balance due from the eighth day after the (general prime contractor) receives payment from the Owner for the work for which payment is due and owing to (mechanical, electrical, or plumbing subcontractor), at the rate specified in section 71.82, Wisconsin stats., compounded monthly.

A (mechanical, electrical, or plumbing subcontractor) that receives payment as provided under this contract and that subcontracts with another entity shall pay those subcontractors, and be liable for interest on late payments to those subcontractors, in the same manner as the (general prime contractor) is required to pay the (mechanical, electrical, or plumbing subcontractor) under this contract.

Insurance and Bonds. (Mechanical, electrical, or plumbing subcontractor) shall not commence work under this contract until it has obtained all necessary insurance required of (mechanical, electrical, or plumbing subcontractor) in the contract between the (general prime contractor) and the Owner. (mechanical, electrical, or plumbing subcontractor) shall provide a separate 100 percent performance bond and a separate 100 percent payment bond to the benefit of the (general prime contractor) as the sole named obligee. Original bonds shall be given to the (general prime contractor) and a copy shall be given to the Owner no later than 10 days after execution of this contract.

Indemnification. To the fullest extent permitted by law, (mechanical, electrical, or plumbing subcontractor) shall defend, indemnify, and hold harmless (general prime contractor) and its officers, directors, agents, and any others whom (general prime contractor) is required to indemnify under its contract with the department, and the employees of any of them, from and against claims, damages, fines, penalties, losses, and expenses, including but not limited to attorney fees, arising in any way out of or resulting from the performance of the work under this contract, but only to the extent such claim, damage, fine, penalty, loss, or expense: (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of property, including but not limited to loss of use resulting therefrom and is caused by the negligence, or acts or omissions, of (mechanical, electrical, or plumbing subcontractor), its subcontractors, any of their employees, and anyone directly or indirectly employed by them or anyone for whose acts they may be liable, or (2) as related to such claims, damages, fines, penalties, losses, and expense of or against (general prime contractor), results from or arises out of the negligence of the (general prime contractor) or other fault in providing general supervision or oversight of the work of (mechanical, electrical, or plumbing, electrical, or plumbing subcontractor) or other fault in providing general supervision or oversight of the work of (mechanical, electrical, or plumbing, or plumbing subcontractor) or other fault in providing general supervision or oversight of the work of (mechanical, electrical, or plumbing, or plumbing subcontractor) or (3) as related to claims,

1 damages, fines, penalties, losses, and expense against the Owner, arises out of the department's status as 2 owner of the project or project site.

3 In addition (mechanical, electrical, or plumbing subcontractor) shall defend, indemnify, and hold harmless 4 (general prime contractor) and its officers, directors, agents, and any others (general prime contractor) is 5 required to indemnify under its contract with the department, and the employees of any of them, from any 6 liability, including liability resulting from a violation of any applicable safe place act, that (general prime 7 contractor) or the owner incurs to any employee of (mechanical, electrical, or plumbing subcontractor) or any 8 third party where the liability arises from a derivative claim from said employee, when the liability arises out of 9 the failure of the (general prime contractor) or the owner to properly supervise, inspect, or approve the work or 10 work area of (mechanical, electrical, or plumbing subcontractor), but only to the extent that the liability arises 11 out of the acts or omissions of (mechanical, electrical, or plumbing subcontractor), its employees, or anyone 12 for whom (mechanical, electrical, or plumbing subcontractor) may be liable, or from (mechanical, electrical, or 13 plumbing subcontractor's) breach of its contractual responsibilities or arises out of (general prime contractor's) 14 negligence or other fault in providing general supervision or oversight of (mechanical, electrical, or plumbing 15 subcontractor's) work or arises out of the Owner's status as owner of the project or project site. In claims 16 against (general prime contractor) or the owner by an employee of (mechanical, electrical, or plumbing 17 subcontractor) or its subcontractors or anyone for whose acts (mechanical, electrical, or plumbing 18 subcontractor) may be liable, the indemnification obligation of this paragraph is not limited by a limitation on 19 amount or type of damage, compensation, or other benefits payable by or for the (mechanical, electrical, or 20 plumbing subcontractor) subcontractors under workers compensation act.

Except as identified above, the obligations of (mechanical, electrical, or plumbing subcontractor) under this indemnification do not extend to the liability of (general prime contractor) and its agents or employees arising out of (1) preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications; (2) the giving of or failure to give directions or instructions by the (general prime contractor) or the University of Wisconsin System Administration or their agents or employees provided the giving or failure to give is the cause of the injury or damage; or (3) the acts or omissions of other subcontractors.

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**<u>Retainage</u>**. Retainage shall occur and be in amounts and on a schedule equal to that in the contract between (general prime contractor) and the Owner.

### 30

#### 31 10. CONTRACT INTERESTS BY STATE PUBLIC OFFICIALS

32 In accordance with section 19.45(6) of the Wisconsin Statutes, no state public official, member of a state public official's 33 immediate family, nor any organization with which the state public official or a member of the official's immediate family 34 owns or controls at least 10% of the outstanding equity, voting rights, or outstanding indebtedness may enter into any 35 contract or lease involving a payment or payments of more than \$3,000 within a twelve (12) month period, in whole or in 36 part derived from state funds unless the state public official has first made written disclosure of the nature and extent of 37 such relationship or interest to the board and to the department acting for the state in regard to such contract or lease. 38 Any contract or lease entered into in violation of this subsection may be voided by the owner in an action commenced 39 within three (3) years of the date on which the ethics board, or the department or officer acting for the state in regard to 40 the allocation of state funds from which such payment is derived, knew or should have known that a violation of this 41 subsection had occurred. This subsection does not affect the application of s.946.13. 42

#### 43 11. DISCLOSURE OF OWNERSHIP

The Bidder shall disclose on the date of submitting a bid for this project, the name of any construction business of which the Bidder has had a 25% or greater interest as a shareholder, officer, partner, or owner at any time during the preceding three (3) years, if said construction business has been found by the Department of Workforce Development to have failed to pay the prevailing wage rate or at least 1.5 times the hourly basic rate of pay for hours worked in excess of the prevailing hours of labor to any employee at any time within the preceding three (3) years.

49

50 The "Disclosure of Ownership" form may be obtained at no charge from the Department of Workforce Development, 51 Equal Rights Division, P.O. Box 8928, Madison, Wisconsin 53708.

52

#### 53 12. MINORITY BUSINESS ENTERPRISE AND DISABLED VETERAN-OWNED BUSINESS INVOLVEMENT

<sup>54</sup> "Minority Business Enterprise" (MBE) means: a business certified by the Wisconsin Supplier Diversity Program under

55 Wis. Stat. s. 16.287(2).

2 "Disabled Veteran-Owned Business" (DVB) means: a business certified by the Wisconsin Supplier Diversity Program
 3 under Wis. Stat. s. 16.283(3).

General Prime Contractors are strongly encouraged to use MBEs and DVBs.

General Prime Contractor Bidders shall submit a "Form A Affidavit of Compliance – Minority Business Enterprise and
 Disabled Veteran-Owned Business Provision" within seven days of the general prime contractor contract offer. This form
 should indicate the percentage of MBE/DVB participation commitment. All MEP Subcontractor Bidders shall also make
 every effort to encourage MBE and DVB involvement.

For assistance in identifying DOA certified MBE and DVB companies, please contact the Department of Administration Supplier Diversity Program at: <u>DOABDMBD@wisconsin.gov</u>, or by telephone at: (608)267-9550, or visit their website at: http://www.doa.wi.gov/Divisions/Enterprise-Operations/Supplier-Diversity-Program.

#### 16 13. SUBSTANCE ABUSE PREVENTION

Mission/Purpose: The Board of Regents of the University of Wisconsin System recognizes and supports drug-free workplace programs as an important element in the national strategy to reduce the devastating effects of drug and alcohol abuse in our society. The Owner requires contractors, subcontractors, suppliers and vendors to establish and enforce drug-free workplace policies and programs that conform to Sec 103.503 of the Wisconsin Statutes.

22 Statement: The possession, use of, distribution or purchase of illegal drugs, or use of alcohol at work by any employee 23 on the Owner's construction job sites, is strictly prohibited.

The terms of this Substance Abuse Program Statement shall cover all construction personnel who are working on the Owner's job sites. This includes employees of all Contractors, Subcontractors, contractor suppliers, and their employees working at the job site.

General Prime Contractor's and Subcontractor's Written Program: Each General Prime Contractor and Subcontractor
 shall have in place a written Substance Abuse Program conforming to Sec 103.503(3) of the Wisconsin Statutes.

In addition, representatives of the Owner who believe that any General Prime Contractor's or Subcontractor's employee may be under the influence of alcohol or drugs shall, where deemed appropriate, contact the General Prime Contractor's or Subcontractor's appropriate management/supervision authority and request that appropriate action be taken. The General Prime Contractor's or Subcontractor's employer shall immediately remove an employee who is suspected of being under the influence of illegal drugs or alcohol shall be immediately removed from the job site.

38 Procedures for testing and handling of positive drug tests shall be in compliance and consistent with State and Federal 39 laws.

Costs of Substance Abuse Programs and Testing: The cost associated with the development, implementation and enforcement of Substance Abuse Programs and any testing required shall be the responsibility of each individual General Prime Contractor and Subcontractor for their respective employees working on the job site. the Owner will not be responsible for any cost of substance abuse testing, rehabilitation or medical reviews related to substance abuse.

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46 The General Prime Contractor and Subcontractors shall indemnify and hold the Owner harmless from any damages or 47 other costs incurred that are related to the implementation or enforcement of any substance abuse policy or program. 48

#### 49 14. SECURITY FOR SEPARATE 100% PERFORMANCE AND SEPARATE 100% PAYMENT

50 MEP Subcontractors will be required to deliver to the General Prime Contractor separate 100 % performance and 100 51 % payment bonds to the benefit of the General Prime Contractor as the sole obligee. Original bonds shall be given to 52 the General Prime Contractor and a copy shall be given to the Owner no later than 10 days after the execution of the 53 subcontract. Separate 100% performance and separate 100 % payment bond forms are included in Appendix 1 of these 54 instructions.

#### 1 15. TAXES

2 The Bidder shall include in the bid, all Sales, Consumer, Use and other similar taxes required by law.

3 4

In accordance with section 71.80(16)(a), Wis. Stats., SURETY BOND; NONRESIDENT CONTRACTOR. "All

5 nonresident persons, whether incorporated or not, engaging in construction contracting in this state as contractor or 6 subcontractor and not otherwise regularly engaged in business in this state, shall file a surety bond with the

department (Wisconsin Department of Revenue MS 5-77 Attn: Non-Resident Surety Bonds, 2135 Rimrock Rd.,

8 Madison, WI 53713, telephone (608)266-2776.) payable to the department of revenue, to guarantee the payment of

9 income taxes, required unemployment compensation contributions, sales and use taxes and income taxes withheld

10 from wages of employees, together with any penalties and interest thereon. The amount of the bond shall be 3% of

11 the contract or subcontract price on all contracts of \$50,000 or more..."

12

As the Board of Regents is an exempt entity, building materials purchased for this project are exempt. The University of Wisconsin System CES number: 040706. The Certificate of Exempt Status (CES) will be provided to the awarded Contractor upon request.

16

#### 17 16. SUBMISSION OF BIDS

All bids shall be submitted on the standard Bid Forms and only bids that are made on the Bid Forms will be considered. The entire Bid Form including the Addendum Receipt/Signature page, the Bid Bond Form (if used), and other supporting documents (if any) shall be filled out and submitted in the manner specified hereinafter. SPECIFICATIONS SHALL NOT ACCOMPANY BID.

22

No bids for any subdivision or any subclassification of this work, except as indicated, will be accepted. Any conditional bid, amendment to the Bid Form or appendant thereto, the inclusion of any correspondence, written or printed matter, unsolicited material or data, or details of any nature other than the information specifically called for, will disqualify the Bid. Telecommunication alterations to the bid will not be accepted.

27

Space(s) are provided on the Bid Form for each Division of Work. Appropriate insertions are as follows: numerals indicating the cost of the work, \$0 if there is no cost for the work, or the words 'No Bid' if the bidder is not intending to bid the work. Blank space(s) will be considered the same as 'No Bid'.

31

Bidders may submit separate base bids for any divisions of work they are certified to bid on (Fire Suppression,
 Plumbing, Heating, Ventilating and Air Conditioning, and Electrical).

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Bidders may submit combined base bids for any combination of base bid categories if they are certified in each
 division of work included in their combined base bid.

37

Any addendum issued during the time of bidding shall become a part of the Bidding Documents. Bidders shall acknowledge receipt of such addendum in the appropriate space provided on the Bid Form. Bid will be rejected if receipt of an addendum applicable to the award of contract has not been acknowledged on the Bid Form.

41

The Owner is not responsible for bids not clearly labeled as required. Bids shall be signed, sealed, and delivered to the place indicated in the Invitation to Bid <u>before</u> the time designated in the Invitation to Bid. All bids shall be identified with the Project Name, Project Number, Project Location, Category of Work being bid on, Bid Date, and the Name and Address of Bidder.

46

Bidder shall be responsible for the sealed bid being delivered to the place designated for bid opening before the time
 specified. Bids received after the time indicated in the Invitation to Bid will be rejected and returned to Bidder unopened.

49

50 Bid will be considered invalid and will be rejected if it has not been signed by the Bidder.

51

52 Bids will be rejected if the bidder is not certified by DOA in the division(s) of work they bid on and/or if their bid amount 53 exceeds their certification threshold in that division of work.

B-7

# 17. BASE BIDS

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Fire Protection (Fire Suppression), Plumbing, Mechanical (Heating, Ventilating and Air Conditioning), and Electrical Base
 Bids shall be received utilizing one or all methods of bidding as follows:

#### SEPARATE BASE BIDS FOR THE VARIOUS DIVISIONS OF THE WORK.

Base Bid No. 2 Fire Suppression Work as per specification Division 21, applicable provisions of Division 1 and related drawings.

10 Base Bid No. 3 Plumbing Work as per specification Division 22, applicable provisions of Division 1 and related drawings.

Base Bid No. 4 Heating, Ventilating and Air Conditioning Work as per specification Division 23, applicable provisions of Division 1 and related drawings.

Base Bid No. 5 Electrical Work as per specification Division 26, 27, 28 applicable provisions of Division 1 and related drawings.

18 <u>COMBINED BASE BIDS FOR ANY COMBINATION OF SEPARATE BASE BIDS FOR VARIOUS DIVISIONS OF THE</u>
 19 <u>WORK.</u>

 21
 Base Bid No.\_\_\_\_for\_\_\_\_, Base Bid No.\_\_\_\_for\_\_\_\_ and Base Bid No.\_\_\_\_for\_\_\_\_as per specifications,

 22
 applicable provisions of Division 1 and related drawings.

#### 24 18. INFORMATIONAL BIDS

25 None.
 26

### 27 19. UNIT PRICES

28 None. 29

30 20. STATED ALLOWANCES

31 None.32

#### 33 21. COMMENCEMENT AND COMPLETION

The successful mechanical, electrical, plumbing, or fire protection Bidder must agree to commence the work on or before a date to be specified in a written "Notice to Proceed" issued by the General Prime Contractor and to fully complete all the work for Substantial Completion no later than 05/22//2026. Completion time will be converted to a specific date at the time the "Notice to Proceed" is issued. The construction duration and below milestone dates are based on the current bidding schedule, and subject to modification if bidding does not proceed as planned. Refer also to General Conditions for additional information in regards to time for completion.

40

The General Prime Contractor must base the Project Schedule on the schedule that the MEP Subcontractors and General Prime Contractors bid on (in the specifications or bid instructions), unless otherwise agreed to by

43 **the MEP Subcontractor.** These milestones will be incorporated into the master project schedule after the Notice to

Proceed is issued. The schedule must include, but is not limited to, the following milestone categories as they apply to

45 the project: 46

Start Date	End Date	Schedule Milestones
(Month/Year)	(Month/Year)	
7/2024	7/2024	Contracts
7/2024	12/2024	Field Verification / Takeoff for Fire Protection Submittal
12/2024	12/2024	State AHJ Fire Protection Submittal
1/2025	1/2025	State AHJ Fire Protection Approval
2/2025	6/2025	Winter 2024 - Spring 2025 Work
6/2025	6/2025	Winter 2024 – Spring 2025 Work: Substantial Completion

Start Date (Month/Year)	End Date (Month/Year)	Schedule Milestones
7/2025	7/2025	Winter 2024 – Spring 2025 Work: 100% Punchlist Work Items Complete
6/2025	1/2026	Summer 2025 – Fall 2025 Work
1/2026	1/2026	Summer 2025 – Fall 2025 Work: Substantial Completion
2/2026	2/2026	Summer 2025 – Fall 2025 Work: 100% Punchlist Work Items Complete
1/2026	5/2026	Winter 2025 Work
5/2026	5/2026	Winter 2025 Work: Substantial Completion
6/2026	6/2026	Winter 2025 Work: 100% Punchlist Work Items Complete
7/2026	7/2026	100% of Closeout Activities Complete

#### 2 22. WORK BY THE OWNER

3 The following work will be accomplished by the Owner or will be let under separate contracts and will not be included

4 under the General Prime Contract:

5

#### 6 DOOR HARDWARE:

7 Cylinders and Cores are Owner provided and installed by the UW Lock Shop. Latches, latch sets, and closers will be 8 provided by the UW Lock Shop for installation by the Contractor.

9 10 ASBESTOS ABATEMENT:

11 See General Requirements, HAZARDOUS SUBSTANCES for regulatory requirements, materials testing results, and

- 12 General Prime Contractor's responsibility regarding ACM.
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<ol> <li>Definitions</li> <li>General</li> <li>Special Site Conditions</li> <li>Inspection of Surfaces</li> <li>Hazardous Substances - Asbestos, Lead and Polychlorinated Biphenyls (PCB'S)</li> <li>Soil Test Borings</li> <li>Mutual Responsibility</li> <li>Project Meetings</li> <li>Sleeves and Openings</li> <li>Cutting and Patching</li> <li>Manufacturer's Directions</li> <li>Layout</li> <li>Supervision</li> <li>Field Offices</li> <li>Stairs and Scaffolds</li> </ol>
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14. Field Offices 15. Stairs and Scaffolds
15 Stairs and Scattolds
16. Hoists, Elevators or Cranes
17. Signs
18. Fence
19. Roadway
20. Tollets
21. Telephones
22. Water Suppry 22. Temperary Electrical Work
23. Tempolary Electrical Work
24. Cold Wediner Frolection
20. Enclosure 26. Temporary Heat
20. Tempolary heat
27. The Flotection 28. Watchnersons
20. Watchpersons 29. Storage of Materials
30 Protection of Finished Construction
31 Protection in General
32 Cleaning and Waste Disposal
33 Operating and Maintenance Manuals and Instructions
34 Tests and Adjustments
35 Loose and Detachable Parts
36 Erosion Control and Storm water Management
37. Air Quality Management
38. Construction Waste Management
39. Guarantee Documents
40. Record Documents
1. DEFINITIONS

50 mechanical (Heating, Ventilating, and Air Conditioning), electrical, plumbing, or fire protection (fire suppression) work 51 for the Project, and enters into a contract with the General Prime Contractor to perform their division of work.

- 52 53
- (b) "Qualified bidder" means a contractor that DOA certifies under Wis. Stat. s. 16.855(9m)(b)1.

(c) "Qualified responsible bidder" means a contractor who is a Qualified bidder and who is a Responsible bidder.

(d) "Responsible bidder" means a contractor that DOA certifies under Wis. Stat. s. 16.855(9m)(b)2.

(e) "Single prime contracting" means bidding and contracting through a process in which only a general prime contractor has a contractual relationship with the Owner and all mechanical, electrical, or plumbing subcontractors are identified by the Owner and are subcontractors to the General Prime Contractor.

(f) "General Prime Contractor" is a contractor that enters into a contract with the Owner to perform all work as required by the Contract Documents and enters into contracts with subcontractors including MEP Subcontractors identified by the Owner.

(g) "Non-MEP Subcontractor" is a subcontractor to a General Prime Contractor in divisions of work other than mechanical, electrical, plumbing, and fire protection. This includes suppliers and installers to the General Prime Contractor.

(h) "Subcontractor "is all subcontractors on a project. This includes MEP Subcontractors, subcontractors to the MEP Subcontractors, and Non-MEP Subcontractors.

(i) "Contractor" is all contractors working on a project regardless of contractual relationship. This includes the General Prime Contractor, MEP Subcontractors, Non-MEP Subcontractors, and all Subcontractors, regardless of tier of subcontract.

#### 2. GENERAL

All articles in these General Requirements are applicable to all Divisions and Sections of the Work included herein. The Conditions of the Contract, General and Supplementary General Conditions, and these General Requirements shall apply with equal force and effect to the General Prime Contractor and all Subcontractors engaged in this work.

Contractor or the Contractor's authorized representative must be present to accept delivery of all equipment and material
 shipments. The Owner will not knowingly accept, unload or store anything delivered to the site for the Contractor's use.
 Inadvertent acceptance of delivered items by any representative or employee of the Owner shall not constitute
 acceptance or responsibility for any of the materials or equipment. It is the Contractor's responsibility to assume liability
 for equipment or material delivered to the job site.

#### 3. SPECIAL SITE CONDITIONS

Confine all operations, equipment, apparatus and storage of materials, to the immediate area of work to the greatest possible extent. Contractor shall ascertain, observe and comply with all rules and regulations in effect on the project site, including but not limited to parking and traffic regulations, use of walks, security restrictions and hours of allowable ingress and egress. Any special traffic control during construction involving lane closures shall be in accordance with the federal standard, Manual of Uniform Traffic Control Devices.

The Contractor shall take all measures necessary to become acquainted with the location of underground service. utilities, structures, etc., which may be encountered or be affected by the Contractor's work, and shall be responsible for damage caused by neglect to provide proper precautions or protection. As a minimum to become acquainted with such underground appurtenances, the Contractor shall: 1) Observe existing conditions visible at the site immediately prior to commencement of work; 2) Review available site plans incorporated in the contract documents and/or provided by the Owner; 3) Final check with the Owner for additions to or changes from conditions indicated on site plans for the facility; and 4) Obtain input from the "one-call system", the organization composed of all suppliers of utilities/services to or from the site. 

Information pertaining to existing conditions that are described in the specifications or appear on the drawings, is based on available records. While such data has been collected with reasonable care, there is no expressed or implied guarantee that conditions so indicated are entirely representative of those actually existing. This information is provided

4	to inform the Contractor of Irrown, eviction conditions on that due diling not in taken by the Contractor to evold demons
1	to inform the Contractor of known, existing conditions so that due diligence is taken by the Contractor to avoid damage.
2	Where site observation or documents indicate existing underground utilities/services in close proximity (within four feet
3	horizontally and/or four feet vertically) to necessary new construction work, the Contractor shall be responsible to test,
4	probe or otherwise determine exact locations so as to prevent damage to such utilities/services.
5	
6	Existing pipes, electrical work, and all other utilities encountered, which may interfere with new work, shall be re-routed
7	and a state of a replaced by the contractor bound initiation in accordance with the Bidding and Contract Decimenta
1	capped, cut on, or replaced by the contractor naving junsoiction, in accordance with the Bidding and Contract Documents.
8	
9	Any noisy and disruptive activities will need to be coordinated with the Owner and occur before 9am or after
10	4pm, Monday through Friday or between 6am and 6pm on Saturday or Sunday.
11	
12	Students and staff will occupy Engineering Hall during the entire period of this renovation and will be present
12	in bisher constition during months which fall within the condemic school wars
10	in righer capacities during months which fail within the academic school year.
14	
15	Limit use of premises to work in the areas indicated. Do not disturb portions of the site beyond areas in which work is
16	indicated. General, confine construction operations to areas defined within Project Limits, unless specifically noted or
17	otherwise and/or approved by Owner. Confine storage of materials and support facilities to designated staging areas
18	
10	Desiring of an approximate site is predicated. Contracted through an unadian unbial or will be premitted to drive an
19	Parking at or near the project site is restricted. Contractor's truck or working venicles will be permitted to drive on
20	premises only for the purpose of loading and unloading materials and equipment for this project and only if keys are
21	removed and all doors locked when not in use. No Contractor's will be allowed to park inside of the construction fence.
22	Free parking passes will not be provided. Contractors may park remotely and carpool to the project site, or may purchase
23	parking permits as space is available from Transportation Services (www.fpm.wisc.edu/trans). Vehicles in violation of
24	University partice regulation and which the first
24	University parking regulations are subject to line.
25	
26	Owner will designate an area in a building which can be used by workers for eating lunch and for toilet needs. I oilets
27	used by workers shall be kept clean and sanitary at all times.
28	
29	All buildings at this site will be occupied during the construction.
30	
21	To ansure the setatu of persons at the University, the following setaty measures should be observed:
01	To ensure the safety of persons at the oniversity, the following safety measures should be observed.
32	Contractor shall instruct their workers not to leave any openings in barricades, or to leave tools, equipment, or
33	materials lying around in any area where persons may traverse. Surfaces of barricades, enclosures, etc., must
34	be smooth with no protruding nails or other sharp projections or edges on side toward existing occupied areas,
35	corridors, connecting links, etc.
36	
27	Outdoor lance for amongoing with from existing buildings which may lie within or adjacent to new construction area must
57	Subort and a sub-energency exit from existing buildings which may lie within of adjacent to new construction area must
30	be kept clear of obstructions at all times.
39	
40	The Owner reserves the right to occupy and place and install equipment in completed areas of construction. Such
41	placement of equipment and partial occupancy shall not constitute acceptance of the Work. The Owner will prepare a
42	Certificate of Substantial Completion for each specific portion of the work to be occupied before occupancy. Before
43	partial occuracy, mechanical and electrical systems shall be fully operational and required documents and inspections
11	and be suspended in the international and electrical systems in the Ourse's will appreciate our desired in the product of the suspended of the
44	shall be successfully completed. On third completion, the owner will operate, and maintain mechanical and electrical
40	systems serving occupied portions of the building. On Substantial Completion, the Owner will assume responsibility for
46	maintenance and custodial service for occupied portions of the building.
47	
48	4. INSPECTION OF SURFACES
49	Contractor shall obtain complete data at the site and inspect surfaces that are to receive the Work before proceeding
50	with fabricating, assembling, fitting or erecting any work under this contract
51	
01	

1 Contractor shall notify the Owner in writing in case of discrepancies between existing work and drawings, and of any 2 defects in such surfaces that are to receive the Contractor's work. The Owner will evaluate the notice and direct what 3 remedial action will be taken.

Starting of work implies acceptance of existing work or the work of others. Removal and replacement of work applied to defective surfaces, in order to correct defects, shall be done at the expense of the Contractor who applied work to defective surfaces.

#### 5. HAZARDOUS SUBSTANCES - ASBESTOS, LEAD AND POLYCHLORINATED BIPHENYLS (PCB'S)

Airborne asbestos fibers, lead, and PCB compounds, if encountered, have been determined to be hazardous to one's
 health. Compliance with all possible applicable regulations is the Contractor's responsibility. Contractor shall not provide
 or install any product that contains any amount of asbestos or PCB. See General Requirements, CLEANING AND
 WASTE DISPOSAL for disposal of hazardous waste, if encountered.

#### 14 ASBESTOS

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15 Contractor's attention is directed to WAC NR 447, WAC DSS 159 and the Occupational Safety and Health Act (OSHA) 16 in general, part 1926.1101--ASBESTOS in particular. Contractor is responsible for compliance with all applicable 17 regulations when the work includes fastening to or coring through Asbestos Containing Materials (ACM) and disturbance 18 of asbestos containing caulking and mastics. Contractor is responsible for removal and disposal of Category I non-19 friable ACM that will be disturbed by the work. Unless otherwise indicated, all caulking, sealants, glazing compounds, 20 gaskets, asphalt roofing materials and miscellaneous adhesives are assumed to contain asbestos and are considered 21 to be Category I non-friable ACM as defined in NR 447. Waste material containing Category I non-friable ACM, is 22 regulated as Construction and Demolition (C&D) waste and may be disposed of at a Department of Natural Resources 23 (DNR) approved C &D waste landfill. If Contractor's work methods cause non-friable ACM to become friable, the 24 Contractor is responsible for the disposal of the friable asbestos waste at a landfill specifically approved by DNR to 25 accept friable asbestos. A copy of the signed waste manifest for the disposal of all friable asbestos waste shall be 26 provided to the Owner prior to request for final payment. 27

The Owner, under a separate abatement contract, will remove hard-packed pipe fittings, pipe insulation, resilient floor tile, mastic, ceramic tile grout and mortar. Hard packed pipe fittings might be present in inaccessible spaces that will be disturbed by the GPC's work. If encountered, the GPC is to mark the extent of hard packed pipe fittings to be removed. Allow five consecutive days in the construction schedule during each phase of demolition for asbestos abatement. Coordinate work with asbestos abatement contractor (AAC) who will require sole occupancy of the workspace during asbestos abatement.

If hazardous materials are not anticipated, but encountered, follow procedures described in Section 10.3 Hazardous Materials and Substances, of AIA Document A201 General Conditions of the Contract.

#### 39 Lead Based Paint

Paint is assumed to contain lead. Conform to OSHA and EPA recommended worker safety requirements when removing lead based paint or material bearing lead based paint or material contaminated with lead by the demolition process. Contractor's attention is directed to the Occupational Safety and Health Act (OSHA) in general and particularly to 29 CFR 1910 (LEAD STANDARD) and to CFR 1926 (LEAD EXPOSURE IN THE CONSTRUCTION INDUSTRY). Dispose of refuse containing lead based paint or contaminated with lead by the demolition process in conformance with State of Wisconsin Hazardous Waste Regulations set forth by the Department of Natural Resources and in conformance with OSHA and EPA recommended worker safety requirements.

#### 48 PCB'S

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Contractor's attention is directed to Wisconsin Administrative Code, Chapter NR 157 relative to PCB's. Refer to Division
 Electrical within these specifications for work involving PCB's.

#### 52 6. SOIL TEST BORINGS

53 Not applicable to this project.

### 2 7. MUTUAL RESPONSIBILITY

Contractor(s) shall coordinate the work with adjacent work and shall cooperate with all other contractors to facilitate the general progress of the work. Each contractors shall afford all other contractors every reasonable opportunity for the installation of their work and for the storage of their material. In no case will the Contractor(s) be permitted to exclude from the premises or work, any other Contractor or employees thereof, or interfere with any other Contractor in the executing or installation of their work.

8

9 Contractor(s) shall arrange the work and dispose of materials so as not to interfere with the work or storage of materials 10 of others and each shall join their work to that of others in accordance with the intent of the drawings and specifications. 11 All Contractors shall work in cooperation with the General Prime Contractor and with each other, and fit their work into 12 the structure as job conditions may demand. All final decisions as to the right-of-way and run of pipe, ducts, etc., shall 13 be made by the Owner at prearranged meetings with responsible representatives of the Contractors involved.

14

### 15 8. PROJECT MEETINGS

Project meetings will be held at the time designated by the Owner. Contractor, when requested, shall attend these meetings. If the principal of the firm does not attend meetings, a responsible representative of the Contractor who can bind the Contractor to a decision at the meetings shall attend.

19

The Architect/Engineer or a representative thereof will write a report covering all items discussed and decisions reached and copy of such report distributed to all parties involved.

#### 23 9. SLEEVES AND OPENINGS

Each Contractor requiring sleeved openings shall furnish all sleeves required for their penetrations whether or not they responsible for providing the respective openings. Contractors furnishing sleeves to others for installation shall do this in a timely manner so as not to impede the project schedule.

27

Openings shown on the structural and/or architectural drawings shall be the responsibility of the General Prime Contractor. Sleeves furnished by other contractors for openings shown on the structural and/or architectural drawings shall be installed by the General Prime Contractor.

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Openings that are required and are not shown on the structural and/or architectural drawings shall be the responsibility of the contractor requiring the openings. The contractor requiring the opening shall install sleeves for these openings or cut openings as needed (including floor openings within chases).

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36 Individuals skilled in such work shall accomplish installation of sleeves and openings.

37 Each Contractor shall be responsible for coordinating locations of their sleeves with work of other contractors.

38

Each Contractor who requires sleeves and/or openings shall submit through the Contractor, to the Owner for review and approval, layout drawings of all such required sleeves and/or openings. Sleeve and opening layout drawings shall be received by the Owner a minimum of two weeks prior to installation of the sleeves and openings. Sleeve and opening sizes and locations shall be dimensioned from column lines and floor elevations or from a point of reference approved by the Owner.

44

# 45 **10. CUTTING AND PATCHING**

46 Cutting and patching required to access work in existing walls, in chases, above inaccessible ceilings, below floors, etc., 47 shall be by the Contractor who requires the access, unless shown on the bid documents otherwise or noted otherwise.

48

The Contractor shall do all cutting, or fitting of the work as required to make its several parts fit together, or to receive the work of others, as shown or reasonably implied by the drawings or specifications, or as may be directed by the

51 Owner. Holes cut in exterior walls and/or roofs shall be waterproofed.

The Contractor who cuts shall also be responsible for patching. Where cutting and patching is required, the Contractor shall hire individuals skilled in such work to do cutting and patching.

The Contractor who removes or relocates building components which leaves a remaining opening shall be responsible for patching the opening.

Patching includes repairing openings to match adjacent construction and painting the surface to match existing. Painting means covering the entire wall where patching is to be done to nearest break point or corner unless indicated to be done by other contractors.

11 Contractor shall not endanger any work by cutting, digging or otherwise and shall not cut or alter the work of others 12 without their consent.

Do not pierce beams or columns without permission of the Owner and then only as directed in writing. If any ductwork, piping, conduit, etc. is required through walls or floors where no sleeve has been provided, use a core drill or saw cut to prevent damage and structural weakening.

Wherever any material, finish, or equipment, is damaged, the skilled contractor shall accomplish the repair or replacement, in that particular work and the cost shall be charged to the party responsible for the damage.

### 11. MANUFACTURER'S DIRECTIONS

Contractors shall apply, install, connect, erect, use, clean and condition manufactured articles, materials, and equipment
 as recommended by the manufacturer, unless specified to the contrary. The manufacturer's latest recommendations at
 the time of bidding shall be used.

### 26 12. LAYOUT

The General Prime Contractor shall immediately upon entering the site for purpose of beginning work, locate general reference points and take such action as is necessary to prevent their destruction. Each Contractor shall lay out its work and be responsible for all lines, elevations and measurements of the building and other work executed under its Contract. Each Contractor must exercise proper precaution to verify dimensions on the drawings before laying out work and will be held responsible for any error resulting from failure to exercise such precaution.

Using datum furnished by the Owner, the lot lines and present levels have been established as shown on the drawings.
 Other grades, lines, levels and benchmarks, shall be established and maintained by each Contractor, who shall be responsible for them.

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As work progresses, the General Prime Contractor shall lay out on forms and floor, the locations of all partitions, walls and fix column centerlines as a guide to all contractors.

The General Prime Contractor shall make provision to preserve property line stakes, benchmarks, or datum point. If any are lost, displaced or disturbed through neglect of any Contractor, Contractor's agents or employees, the Contractor responsible shall pay the cost of restoration.

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47

Each Contractor shall verify grades, lines, levels, locations and dimensions as shown on drawings and report any errors
 or inconsistencies to the Owner before commencing work. Starting of work by each Contractor shall imply acceptance
 of existing conditions.

48 13. SUPERVISION

The General Prime Contractor shall take complete charge of the work under this contract and coordinate the work of all contractors on the project.

- 51 52 **14. FIELD OFFICES**
- 53 Not required.

#### 2 15. STAIRS AND SCAFFOLDS

3 The General Prime Contractor shall:

Furnish and maintain equipment such as temporary stairs, fixed ladders, ramps, chutes, runways and the like as required
 for proper execution of work by all contractors, and shall remove them on completion of the work.

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8

Erect permanent stair framing as soon as possible. Provide stairs with temporary treads, handrails, and shaft protection.

9 Contractors requiring scaffolds shall make arrangements with the General Prime Contractor, or shall provide their own and remove them on completion of the work. Each Contractor shall underlay its interior scaffolds with planking to prevent uprights from resting directly on the floor construction.

#### 13 16. HOISTS, ELEVATORS OR CRANES

Each separate contractor shall provide and pay for its own hoist/crane or other apparatus necessary for unloading/setting or moving their equipment and materials. Installation and removal of equipment for this activity must be accounted for in the Project Schedule.

17

Equipment and operations for this activity shall comply with applicable Department of Safety and Professional Services and OSHA requirements. No material hoist may be used to transport personnel unless it meets Department of Safety and Professional Services and OSHA requirements for that purpose.

21

Contractors shall provide any protection required, temporary or long term, to prevent damage to work in place or in progress. When hoisting activity results in such damage, the responsible contractor shall pay for cleaning, repair or replacement of material or equipment as determined by the Owner.

25

26 Equipment, that imposes loads of any kind on work in place, shall not be erected without agreement from the Owner.

27

At their own discretion, two or more contractors may agree to use common hoisting facilities. Under such arrangements, the allocation of costs, access and scheduling and all other details of the agreement are the responsibility of the contractors involved.

31

Existing elevators may be used on a limited basis with the Owner's permission and agreement. Costs of warranty extensions and additional service work required will be paid by the using contractor. Appropriate protection must be provided by the using contractor and that contractor shall be responsible for any structural, mechanical or finish damage to the elevator and its parts and to adjoining building finishes and components.

36 37 **17. SIGNS** 

38 No project sign required.

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No individual advertising signs, plaques or credits, temporary or permanent, will be permitted on the building or premises,
 except the name of the Contractor on Contractor's office or material shed.

- 42
- 43 **18. FENCE**

44 Construction Staging Areas/Materials Storage Areas: the Owner will assign required Construction Site Staging Areas 45 and Material Storage Areas as required on this project. The General Prime Contractor shall provide an eight-foot (8'-0") 46 high, temporary chain-link construction fence around the site construction staging/material storage areas as required to 47 secure the staging area(s) and construction materials stored on site. Contractor shall construct of standard studded T-48 Posts of sufficient length for line posts and spaced not to exceed 8'-0" apart. Corner posts and gate posts are to be 49 galvanized steel pipe of not less than 2 1/2" o.d. and shall be properly braced. Note: Plastic fencing or wooden snow 50 fence is not acceptable. Provide gates, properly constructed and braced, complete with hinges, hasps, and padlocks in 51 number and location required for proper control, delivery and distribution of material and equipment. Gate posts shall 52 be adequately back tied and anchored to insure a rigid installation. All protective fencing shall be maintained in an 53 upright, orderly fashion throughout the construction schedule.

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## 19. ROADWAY

Not applicable to this project.

### 20. TOILETS

The General Prime Contractor shall arrange with Owner to use existing toilet facilities at building site. Toilets used by workers shall be kept clean and sanitary at all times.

#### 21. TELEPHONES

It is expected that each contractor have access to their own cell phone for their own use. No additional telephone service will be provided.

### 22. WATER SUPPLY

The General Prime Contractor shall arrange with the Owner to use nearby existing water service.

Toilets and slop sinks used by workers shall be kept clean and sanitary at all times.

The General Prime Contractor shall supply water required for construction and other purposes from the existing building plumbing system.

The General Prime Contractor shall prevent waste of water and shall maintain valves, connections, and hoses in perfect condition, at all times. Contractors shall provide their own hose or piping from hose bibs.

### 24 23. TEMPORARY ELECTRICAL WORK

Duplex receptacles (120 volts) are available in each of the existing areas where work is performed for use of small hand tools when available.

If a Contractor contemplates the use of equipment that requires a different voltage or greater capacity than that specified, then that Contractor must arrange with utility for this additional service and pay for installation of the service and the necessary additional switches and wiring required.

The Electrical Contractor shall provide, at no cost to others, all lamps, wiring, switches, sockets and similar equipment required for temporary system until substantial completion. Upon completion of the project, the Electrical Contractor shall remove the temporary system.

The temporary lighting system shall be sufficient to enable all contractors to safely complete their work and to enable the Owner to check all work as it is being done. Illumination shall be 5 foot-candles minimum in all areas and, in addition, shall meet or exceed the requirements of 29 CFR 1926.56 Illumination (OSHA regulations).

In accordance with the latest issue of the National Electrical Code, all temporary electrical circuits for construction purposes shall be equipped with combination ground fault interrupter and circuit breakers meeting the requirements of UL for Class A, Group 1 devices. The ground fault interrupter portion shall be solid state type, insulated and isolated from the breaker mechanism. A test button shall be provided for checking the device. The breaker mechanism shall provide overload and short circuit protection and shall be operated by a toggle switch with overcenter switching mechanism so that contact cannot be held closed.

46

All contractors shall furnish their extension cords and lamps other than those furnished for general lighting.

49 All contractors and other separate Contractors shall be allowed to use the service provided for general lighting and

50 fractional horsepower hand tools at no cost.

1 The General Prime Contractor shall be compensated by those requiring three phase and single-phase energy used for 2 equipment other than fractional horsepower hand tools. Arrangements shall be made with the General Prime Contractor

before construction equipment is used.

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# 24. COLD WEATHER PROTECTION

6 All heating and protective covering, required to protect the work from injury due to freezing and moisture during the 7 construction period and prior to enclosure of the building, shall be classed as COLD WEATHER PROTECTION. Such 8 protection shall be provided and paid for by the General Prime Contractor.

Heat required to protect materials from injury due to freezing during the construction period and prior to enclosure, shall
 be provided by means of portable heating units intended for this purpose.

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All heating units must be approved types. Proper ventilation must be provided. The use of temporary units whose product of combustion will damage fresh concrete, mortar or other building materials, will not be allowed. Use of coke or oil salamanders is prohibited.

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If electrical power is required for oil or gas portable heating units, it may be taken from the available temporary power
 source and paid for by the General Prime Contractor.

20 Heating units and the area surrounding the units shall be kept in a clean and safe condition.

#### 21 22 **25. ENCLOSURE**

The General Prime Contractor should provide approved translucent material for temporary enclosure of exterior wall openings if they have not received final louvers. Plain or reinforced polyethylene film or other suitable translucent material will be acceptable, provided it is installed in or on a well-fitting rigid wood frame and kept in good repair. This means of temporary enclosure shall be used for other minor openings in walls.

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At the end of day's work, securely close temporary enclosures. Padlock work area doors. The General Prime Contractor shall supervise the effectiveness of enclosures.

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# 31 26. TEMPORARY HEAT

All heating required after enclosure of the building up to substantial completion shall be classified as TEMPORARY
 HEAT. Enclosure is defined in the preceding Article.

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It shall be the responsibility of the General Prime Contractor to see that every precaution is used to prevent unnecessary
 escape of heat.

37

For installations that are not connected to central plant steam or central plant hot water, the General Prime Contractor shall pay the fuel costs for temporary heat for both permanent heating systems used for temporary heat and/or temporary heating systems used for temporary heat.

41

42 The General Prime Contractor shall pay for all electrical energy consumed for temporary heat.

43

The Mechanical Contractor shall provide one of the following systems or a combination thereof, for furnishing temporary
 heat:

46

Permanent heating system may be used for temporary heating. If permanent system is used, the Mechanical Contractor shall install in their permanent location heating coils or connectors as approved by the Owner, with controls to maintain temperatures required. Temporary filters shall be used in the permanent system. Provide bases, shields, etc., around heating element to prove the permanent experience of elements of elements of the permanent system.

50 heating elements to prevent too rapid drying of adjacent concrete, masonry or plaster. Relocation of some of the

51 permanent heating system equipment may be required during construction to prevent interference with new construction. 52 Temporary units may be installed in such areas during the time permanent equipment is not operating due to relocation.

The distribution piping of the permanent heating system may be utilized for supply and return to unit heaters on each floor in lieu of temporary piping, provided approved connections, controls and protection of such piping is maintained.

If the permanent air system is used during temporary heating period, temporary filters shall be provided in the system and they shall have efficiency equal to the permanent filters. The return air ductwork shall be protected from construction dirt by temporary filters placed over return openings.

8 If the Mechanical Contractor does not have one of the above systems in operation by the time the building is enclosed, 9 then the Mechanical Contractor shall provide, maintain and supervise the operation of temporary portable units with 10 necessary automatic controls to provide required temperatures. Current required may be taken from the temporary 11 electrical service. See "Temporary Electrical Installation". Cost of fuel to operate portable units shall be paid by the 12 General Prime Contractor.

All electrical wiring required for temporary heating units shall be furnished and installed by Mechanical Contractor, from temporary wiring service. Electrical wiring to permanent equipment used for temporary heating that has been mounted in its permanent location shall be wired by contractors skilled in that work.

18 The use of open salamanders as portable heating units will not be approved. All portable temporary heating units shall 19 be properly ventilated to prevent combustion gases from remaining in the heating area.

The Mechanical Contractor must ascertain if heating equipment will operate on the temporary electrical service available.
 If service is insufficient to operate equipment, Mechanical Contractor shall make other arrangements.

The Mechanical Contractor shall be responsible for the proper adjustment and maintenance of the system, and shall supervise and be responsible for the operation of the system used for temporary heating until the Owner occupies the building. Supervision shall include periodic checking of operation as required.

A minimum temperature of 45 degrees and a maximum temperature of 60 degrees for the building shall be maintained by the Mechanical Contractor, except for a period of at least ten days prior to the placing of interior woodwork and throughout the placing of this and other finish, varnishing, painting, etc., and until substantial completion to provide sufficient heat to insure a temperature in the spaces involved of not less than 70 degrees nor more than 80 degrees.

The temporary heating system shall be removed by the Mechanical Contractor after the permanent heating system has been installed and operating. Surfaces and structure shall be patched as required. Temporary heating equipment shall be relocated by the Mechanical Contractor as required during construction to prevent interference with new construction.

At completion of construction work or when temporary heat is no longer required, Mechanical Contractor must repair any damage done to permanent equipment during temporary heating period and also perform the necessary cleaning of all ducts and equipment. The Mechanical Contractor shall provide permanent filters to the complete satisfaction of the Owner.

# 42 27. FIRE PROTECTION

The General Prime Contractor shall provide and maintain in working order during the entire construction period, a minimum of three (3) fire extinguishers on each floor level, including basement of the building, and one (1) in temporary office. Extinguishers shall be non-freeze type such as A-B-C rated dry chemical, of not less than 10-pound capacity each. In addition, any Subcontractor who maintains an enclosed shed on the site shall provide and maintain, in an accessible location, one or more similar nonfreezing type fire extinguisher in each enclosed shed.

# 49 28. WATCHPERSONS

50 Watchpersons will not be furnished by the Owner. The Contractor shall provide such precautionary measures, to include

the furnishing of watchpersons if deemed necessary, to protect persons and property from damage or loss where the

52 Contractor's work is involved.

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## 29. STORAGE OF MATERIALS 1

2 Contractor shall confine equipment, apparatus, storage of materials and operations to limits indicated on the drawings 3 or by specific direction of the Owner and shall not bring material onto the site until they are needed for the progress of 4 the work.

5

6 The storage of materials on the grounds and within the building shall be in strict accordance with the instructions of the 7 Owner. Storage of materials within the building shall at no time exceed the design carrying capacity of the structural 8 system.

- 10 All materials affected by moisture shall be stored on platforms and protected from the weather.
- 11

9

12 All materials shall be stored in a manner that prevents release of hazardous material to the environment. 13

14 All hazardous materials, including motor fuels, shall be properly handled and contained to prevent spills or other releases. 15 The General Prime Contractor shall develop and maintain a contingency plan to provide emergency response, 16 containment, and cleanup of spills of hazardous materials resulting from contract activities. All spills and releases shall 17 be reported to the Owner as soon as possible.

18

19 During the construction of this building, materials, construction sheds, and earth stockpiles shall be located so as not to 20 interfere with the installation of the utilities nor cause damage to existing lines.

- 21
- 22 The Contractor shall allot space to others for storage of their materials, and erection of their sheds. 23

24 Should it be necessary at any time to move material sheds or storage platforms, the Contractor shall move same at the 25 Contractor's expense, when directed by Owner.

- 26
- 27 Repairing of areas used for placing of sheds, offices, and for storage of materials shall be done by the Contractor.
- 28

## 29 **30. PROTECTION OF FINISHED CONSTRUCTION**

30 Contractor shall assume the responsibility for the protection of all finished construction under the Contract and shall 31 repair and restore any and all damage of finished work to its original state.

32

33 Wheeling of any loads over any type of floor, either with or without plank protection, will be permitted only in rubber tired 34 wheelbarrows, buggies, trucks or dollies.

35

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36 Where structural concrete is also the finished surface, care must be taken to avoid marking or damaging those surfaces.

## 38 **31. PROTECTION IN GENERAL**

39 All structures and equipment shall be constructed, installed and operated with guards, controls and other devices in 40 place.

41

42 Temporary pumps required for pumping water from building excavation or from building proper shall be provided by the 43 General Prime Contractor, including temporary connections. Plumbing Contractor shall install permanent sump basins 44 and piping where and when required. Permanent sump pumps shall not be installed until building is substantially 45 complete and when approved by Owner. The General Prime Contractor shall remove temporary pumps and connections 46 when approved by Owner.

47

48 The General Prime Contractor shall:

49 Provide, erect and maintain all required planking, barricades, guard rails, temporary walkways, etc., of sufficient size and

50 strength necessary for protection of stored material and equipment; paved surfaces, walks, curbs, gutters and drives;

51 streets adjacent to or within project area; adjoining property and all project work to prevent accidents to the public and 52

- the workmen at the job site.
- 53

Notify adjacent property owners if their property interferes with the work so that arrangements for proper protection can be made.

Provide and maintain proper shoring and bracing to prevent earth from caving or washing into the building excavation. Provide temporary protection around openings through floors and roofs, including elevator openings, stairwells, and edge of slabs.

Provide and maintain proper shoring and bracing for existing underground utilities, sewers, etc., encountered during excavation work, to protect them from collapse or other type of damage until such time as they are to be removed, incorporated into the new work, or can be properly backfilled upon completion of new work.

Provide protection against rain, snow, wind, ice, storms, or heat to maintain all work, materials, apparatus, and fixtures, incorporated in the work or stored on the site, free from injury or damage. At the end of the day's work, cover all new work likely to be damaged. Remove snow and ice as necessary for safety and proper execution of the work.

Protect the building and foundations from damage at all times from rain, ground water and back-up from drains or sewers. Provide all equipment and enclosures as necessary to provide this protection.

Damaged property shall be repaired or replaced in order to return it to its original condition. Damaged lawns shall be replaced with sod.

Protect materials, work and equipment, not normally covered by above protection, until construction proceeds to a point where the general building protection of the area where located, dispenses with the necessity therefore. Protect work outside of the building lines such as trenches and open excavations, as specified above.

Take all necessary precautions to protect the Owner's property as well as adjacent property, including trees, shrubs, buildings, sanitary and storm sewers, water piping, gas piping, electric conduit or cable, etc., from any and all damage which may result due to work on this project.

30 Repair work outside of property line in accordance with the requirements of the authority having jurisdiction. 31

Repair any work, damaged by failure to provide proper and adequate protection, to its original state to the satisfaction of the Owner or remove and replace with new work at the Contractor's expense.

Protect trees indicated on the drawings to remain and trees in locations that would not interfere with new construction, from all damage. Do not injure trunks, branches, or roots of trees that are to remain. Do cutting and trimming only as approved and as directed by Owner.

The value of trees destroyed or damaged will be charged against the account of the Contractor responsible for the damage in an amount equal to the expense of replacing the trees with those of similar kind and size.

## 42 **32. CLEANING AND WASTE DISPOSAL**

Contractor shall be responsible for all cleaning required within the technical sections of the specifications governing work under the Contractor's jurisdiction as well as for keeping all work areas, passageways, ramps, stairs and all other areas of the premises free of accumulation of surplus materials, rubbish, debris and scrap which may be caused by the Contractor's operations or that of the Subcontractors.

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Remove rubbish, debris and scrap promptly upon its accumulation and in no event later than the end of each week.

50 Combustible waste shall be removed immediately or stored in fire resistive containers until disposed of in an approved

51 manner.

1 No burning of rubbish or debris will be allowed at the site. Rubbish, debris and scrap shall not be thrown through any 2 window or other opening, or dropped from any great height; it shall be conducted to the ground, to waiting truck(s) or 3 removable container(s) by means of approved chutes or other means of controlled conveyance.

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Form and scrap lumber shall have all nails withdrawn or bent over; shall be neatly stacked, placed in trash bins, or removed from the premises.

Spillages of oil, grease or other liquids which could cause a slippery or otherwise hazardous situation or stain a finished
 surface, shall be cleaned up immediately.

10

11 Dust, dirt and other foreign matter shall be removed completely from all internal surfaces of all mechanical and electrical 12 units, cabinets, ducts, pipes, etc.

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14 Dirt, soil, fingerprints, stains and the like, shall be completely removed from all exposed finished surfaces.

General Prime Contractor shall wash all glass immediately prior to the occupancy of this project. Work shall include the
 removal of labels, paint splattering, glazing compound and sealant. Surfaces shall include mirrors and both sides of all
 glass in windows, borrowed lights, partitions, doors and side lights.

19

20 Broken, scratched or otherwise damaged glass shall be replaced by the General Prime Contractor.

21

In addition to the above, the General Prime Contractor shall be responsible for the general "broom" cleaning of the premises and for expediting all of the cleaning, washing, waxing and polishing required within the technical sections of the specifications governing work under this Contract. The General Prime Contractor shall also perform "final" cleaning of all exposed surfaces to remove all foreign matter, spots, soil, construction dust, etc., so as to put the project in a complete and finished condition ready for acceptance and use intended.

27

If rubbish and debris is not removed, or if surfaces are not cleaned as specified above, the Owner reserves the right to have said work done by others and the related cost(s) will be deducted from monies due the Contractor.

30

## 31 33. OPERATING AND MAINTENANCE MANUALS AND INSTRUCTIONS

Contractor shall provide the Owner with two (2) sets of the O&M data for each device, piece of equipment and assembly furnished and/or installed under this contract. Format shall be paper, indexed and labeled and bound in three-ring binders. When duplicate electronic data is available, include electronic media in 3-hole vinyl holders in binders.

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36 The O&M manuals shall include the following:

- Table of Contents
- Contact information (including emergency contact number) for installing contractor, original vendor
  manufacturer and service provider
  - Copy of approved submittals
  - As-built control drawings and sequences of operations
  - Catalog data or literature with correct model number checked
  - Manufacturer's installation and operation instructions including start-up, break-in, shutdown, seasonal, emergency and special operation procedures
- Manufacturer's maintenance instructions including procedures and instructions for problem corrections,
  preventive maintenance, testing, alignment, adjustment and repair
  - Complete parts list in an exploded view diagram of the equipment
  - Construction Verification Checklists
- Inspection and testing reports
  - Maintenance records indicating maintenance performed by contractor prior to substantial completion
- Equipment warranties including terms and conditions and date of inception (substantial completion) and date 52 of expiration
  - List of special tools or testing equipment required for the operation, testing or maintenance of the equipment

For items assembled by the Contractor for special functions, write operating and maintenance instructions • Contractor shall submit to A/E for review, make revisions noted by A/E and provide final O&M data for A/E's review 30 business days prior to training. Any revisions or changes to the systems and/or equipment post-delivery of the final O & M data submittal must be submitted to A/E as an addendum within 30 days of the revision or change.

## 34. TESTS AND ADJUSTMENTS

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The complete installation consisting of the several parts and systems and all equipment installed according to the requirements of the Contract Documents, shall be ready in all respects for use by the Owner and shall be subjected to a test at full operating conditions and pressures for normal conditions of use.

Contractor shall make all necessary adjustments and replacements affecting the work which is necessary to fulfill Owner 11 12 requirements and to comply with the directions and recommendations of the manufacturer of the several pieces of 13 equipment, and to comply with all codes and regulations which may apply to the entire installation. Contractor shall also 14 make all required adjustments to comply with all provisions of the drawings and specifications.

## 16 35. LOOSE AND DETACHABLE PARTS

17 Contractor shall retain all loose and small detachable parts of apparatus and equipment furnished under this Contract, 18 until completion of the work and shall turn them over to Owner designated to receive them. Contractor shall obtain from 19 the Owner an itemized receipt thereof

## 21 36. EROSION CONTROL AND STORM WATER MANAGEMENT

22 Not applicable to this project. 23

## 24 **37. AIR QUALITY MANAGEMENT**

25 In accordance with the Department of Administration's air guality management practice on Ozone Action Days, all 26 contractors shall reduce or limit emissions and particulate matter that adversely affect air quality.

- 28 The General Prime Contractor shall establish the action plan, in cooperation with other contractor(s), concerning 29 implementation of air quality management on Ozone Action Days. This plan shall include suspending work or modifying
- 30 operations for all activities related to ozone, volatile organic compounds (VOC) and nitrogen oxide emissions. These
- 31 work activities include but are not limited to the following:
- 32 Limit equipment and vehicle refueling to after 6 pm.
- 33 Limit use of gasoline-powered vehicle and equipment. 34
  - Limit excessive idling of diesel-powered vehicle and equipment.
- 35 Limit large scale painting with VOC. 36
  - Limit large scale asphalt roofing and paving.
    - Limit and/or control all dust creating activities.

## 39 For information on air quality readings on Ozone Action Days refer to:

1-866-324-5924; or

http://www.dnr.state.wi.us/org/aw/air/wisards/state.htm

## 43 **38. CONSTRUCTION WASTE MANAGEMENT**

- 44 See Section 01 74 19 - Construction Waste Management.
- 45

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## 46 **39. GUARANTEE DOCUMENTS**

- 47 Upon Substantial Completion of project, the Contractor shall submit such written guarantees and bonds to the Owner.
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## 49 **40. RECORD DOCUMENTS**

- 50 On a suitable set of Contract Documents, the contractor is to maintain a daily record of changes and deviations from the
- 51 contract. All buried or concealed piping, conduit, or similar items shall be located by dimensions and elevations on the 52 record drawings.
- 53

The daily record of changes shall be the responsibility of Contractor's field superintendent. No arbitrary mark-ups will be 1 2 permitted.

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4 Once during the month the Contractor shall present at the project, the job copy showing variations and changes to date 5 to the Architect/Engineer and the Owner for their review.

6 7

At substantial completion of the project, the Contractor shall transmit the marked up as-built documents to the

8 Architect/Engineer and copy the Owner on the transmittal of the documents. The A/E will incorporate the contractor 9 marked up as-built drawings into the record drawings.

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1 PLUMBING BASEMENT FLOOR PLAN - EAST SCALE: 1/8" = 1'-0"

SH	EET KEYNOTES	5802 Research Park Blvd Madison, WI 53719 AEI Project No: 21110 AEI Project No: 21110
	PROVIDE FLAMMABLE GAS DETECTION AT STRUCTURE LEVEL ABOVE HYDROGEN ISOLATION VALVES.	
2	HYDROGEN LINE FROM GAS CABINET.	
3	HYDROGEN LINES AND 2 FUTURE 1/2" GAS LINES, REFER TO 4/P800. 1-1/2" DCW AND 1" DHW TO EMERGENCY SHOWER MIXING VALVE. 1-1/2" TEMPERED WATER SUPPLY FROM MIXING VALVE TO EEWS-1. REFER TO 3/P800.	
5	PROVIDE HYDROGEN GAS DETECTION AT CEILING LEVEL IN ROOM B103J.	
	PROVIDE MANUAL EMERGENCY STOP PUSH BUTTON AND HYDROGEN ALARM LIGHT STACK INSIDE LAB ENTRANCE.	
	RENOVATION OF LAB B103. NEW WATER LINES FOR EMERGENCY SHOWER/EYEWASH TO BE RUN AT BOP=9'-2" AFF ALONG WALL. OFFSET WATER LINES SOUTH AROUND DUCT CONNECTION TO EXISTING FUME HOOD.	Keyplan:
9 (10)	GAS LINES TO PENETRATE VAULT WALL AT BOP=8'-4" AFF. DROP GAS LINES TO BOP=7'-3" AFF.	
\ \ 11\	INSTALL HDS-B103J, EAPB-B103J AND ASSOCIATED HORN/STROBE IN THIS LOCATION. PIPE SENSING TUBING INTO ROOM B103J. ROOMS B103J AND B103H ARE CLASS 1, DIVISION 2 RATED SPACES. GAS DETECTION PROVIDER SHALL NOT INSTALL CONTROL OR POWER WIRING WITHIN THESE SPACES. ROUTE GAS SENSORS EXHAUST TUBING BACK TO ROOM B103J TO KEEP EXHAUST WITHIN RATED ROOM	
12	INSTALL HDS-B103, EAPB-B103 AND ASSOCIATED HORN/STROBE IN THIS LOCATION. SENSOR REMOTE TUBING TO SENSE HYDROGEN IN HIGH BAY AREA	ehalf of Madis
13	ABOVE. INSTALL HDS-B1000T, EAPB-B1000T AND ASSOCIATED HORN/STROBE IN THIS	of the I on bé nsin -
14	LOCATION. INSTALL HDS-B1000W, EAPB-B1000W AND ASSOCIATED HORN/STROBE IN B1000W.	Jents ( consin Niscol
15	ROOM B11 IS AN EXISTING SERVER ROOM. INSTALL BASEMENT GAS DETECTION WALL MOUNTED RACK ENCLOSURE AND DESKTOP TOWER COMPUTER. GAS DETECTION CONTRACTOR SHALL COORDINATE NEW RACK LOCATION WITH OWNER TO ALIGN WITH EXISTING	ard of Reg sity of Wisc versity of V
16	INSTALL BASEMENT GAS DETECTION WALL MOUNTED CONTROL PANEL IN THIS LOCATION. COORDINATE LOCATION WITH OWNER AND EXISTING EQUIPMENT IN ROOM.	The Bo Univers the Uni Wisconsin - M
17	WALL MOUNTED DDC CABINET PROVIDE BY CONTRACTOR RESPONSIBLE FOR 23 09 23 WITHIN ROOM B11 FOR MONITORING OF GAS DETECTION ALARMS. REFER TO P701, 23 09 15 AND 23 09 93 FOR FURTHER DETAILS.	University of
		ALL SPRINKLER AND GAS PIPING PH 2
		UW ENGINEERING HA
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SENSOR TAG	
(1)	
HDS-2001	
HDS-2003	
HDS-2005	
HDS-2007	
HDS-2034	
HDS-2036	
HDS-2105	
HDS-2106	
HDS-2111	
HDS-2112A	
HDS-2112	
HDS-200L-A	20
HDS-200L-B	20
NOTES:	
(1)	SENSOR TAG NU

DR TAG NUMBER (HDS-XXX) DENOTES THE SPACE WHERE AIR IS BEING SAMPLED. UNLESS NOTED OTHERWISE, THE SENSOR SHALL BE INSTALLED IN THE ROOM WHERE THE AIR IS BEING SAMPLED. REFER TO HYDROGEN GAS DETECTION INSTALLATION DETAILS. (2) SAMPLING LOCATION DESCRIPTORS:

FOR DETAILS.

## **HYDROGEN DETECTION SENSOR SCHEDULE - LEVEL 2**

ROOM	AIR SAMPLING LOCATION	EMERGENCY SHUTOFF VALVE (ESV) ACTUATION	NOTES:
	(2)	(3)	
2001 - LAB	STRUCTURE	ESV-H2(250)-212	
2003 - LAB	STRUCTURE	ESV-H2(250)-211	
2005 - LAB	STRUCTURE	ESV-H2(250)-210	
2007 - LAB	STRUCTURE	ESV-H2(250)-209	
2034 - LAB	STRUCTURE	ESV-H2(250)-208	
2036 - LAB	STRUCTURE	ESV-H2(250)-207	
2105 - LAB	STRUCTURE	ESV-H2(250)-202	
2106 - LAB	STRUCTURE	ESV-H2(250)-203	
2111 - LAB	STRUCTURE	ESV-H2(250)-206	
		ESV-H2(1000)-203	
2112A - LAB	STRUCTURE	ESV-H2(250)-205	
2112 - LAB	STRUCTURE	ESV-H2(250)-204	
		ESV-H2(1000)-202	
200L - CORRIDOR	CEILING, (4)	ESV-H2(1000)-201	
		ESV-H2(250)-201	
200L - CORRIDOR	STRUCTURE, (5)	ESV-H2(1000)-201	
		ESV-H2(250)-201	

STRUCTURE - TUBING SHALL SAMPLE TIGHT TO STRUCTURAL SLAB. REFER TO DETAIL 3/P801 FOR DETAILS.

CEILING - TUBING SHALL SAMPLE JUST BELOW CEILING, DIRECTLY ABOVE H2 ISOLATION VALVES/FLOW METER. REFER TO DETAIL 4/P801 FOR DETAILS. (3) GAS DETECTION SYSTEM SHALL CLOSE THE NOTED SHUT-OFF VALVES UPON REACHING A LEVEL 2 ALARM. REFER TO 22 09 00 (SEQUENCE OF OPERATION)

(4) HYDROGEN DETECTOR WILL BE PROVIDED TO DETECT LEAKAGE NEAR FLOW METER ASSEMBLIES FE-H2(1000)-201 AND FE-H2(250)-201. FLOW METERS

WILL BE INSTALLED BELOW CEILING. IN CORRIDOR 2001. REFER TO PLUMBING FLOOR PLANS FOR LOCATION. INSTALL SENSING TUBING T STRUCTURE ABOVE THE FLOW METERS.

(5) HYDROGEN DETECTOR WILL BE PROVIDED TO DETECT LEAKAGE AT TOP OF H2 PIPE RSERS. INSTALL SENSING TUBING TIGHT TO STRUCTURE ABOVE H2 PIPE RISERS.

SOR TAG	ROOM	AIR SAMPLING LOCATION	EMERGENCY SHUTOFF VALVE (ESV) ACTUATION	NOTES:	5802 Research Park Blvd Madison, WI 53719
(1) S-B103J	B103J - H-2 GAS ROOM	(2) STRUCTURE	(3) ESV-H2(1000)-B1	VALVES PROVIDED INTEGRAL TO GAS CABINET FGC-H2-1A AND	AE
			ESV-H2(250)-B1	FGC-H2-2A. GAS DETECTION SYSTEM SHALL CLOSE VALVE	
				THROUGH SIGNAL TO GAS CABINET CONTROL PANEL.	
S-B103	B103 - LABORATORY	STRUCTURE (4)	ESV-H2(1000)-B2	VALVES PROVIDED INTEGRAL TO GAS CABINET EGC-H2-1A AND	
			ESV-H2(250)-B2	FGC-H2-2A, GAS DETECTION SYSTEM SHALL CLOSE VALVE	
				THROUGH SIGNAL TO GAS CABINET CONTROL PANEL.	
					Suite 400, Madison, WI 53703
DS-B103	B103 - LABORATORY	STRUCTURE, (5)	ESV-H2(1000)-B2 ESV-H2(250)-B2		
	······	h	······	Juni	
DS-B04	B04 - LAB	STRUCTURE	ESV-H2(250)-B8		
DS-B08	B08 - LAB	STRUCTURE	ESV-H2(250)-B9		
DS-B12	B12 - LAB	STRUCTURE	ESV-H2(250)-B10		
DS-B18	B18 - LAB	STRUCTURE	ESV-H2(250)-B11		
DS-B41	B41 - LAB	STRUCTURE	ESV-H2(1000)-B3		
DS-B42	B42 - LAB	STRUCTURE	ESV-H2(250)-B3		
DS-B46	B46 - LAB	STRUCTURE	ESV-H2(250)-B4		
DS-B47	B47- LAB	STRUCTURE	ESV-H2(250)-B6		
DS-B48	B48 - LAB	STRUCTURE	ESV-H2(250)-B5		
S-B1000T	B1000T - CORRIDOR	CEILING	ESV-H2(250)-B7		
-B1000W	B1000W - CORRIDOR	CEILING	ESV-H2(1000)-B2		
			ESV-H2(250)-B2		
B1000T B1000W NOTES: (1) SE IN	B1000T - CORRIDOR B1000W - CORRIDOR ENSOR TAG NUMBER (HDS-XXX) DENOTES THE ROOM WHERE THE AIR IS BEING SA	CEILING CEILING CEILING S THE SPACE WHERE AIR IS BEING SAMPLED. MPLED. REFER TO HYDROGEN GAS DETECTION	ESV-H2(250)-B7 ESV-H2(1000)-B2 ESV-H2(250)-B2 UNLESS NOTED OTHERWISE, THE SENSOR SHALL BE INSTALLED ON INSTALLATION DETAILS.		half of
(2) SA ST CE (3) GA	AMPLING LOCATION DESCRIPTORS: FRUCTURE - TUBING SHALL SAMPLE TIGH EILING - TUBING SHALL SAMPLE JUST BEL AS DETECTION SYSTEM SHALL CLOSE TH	HT TO STRUCTURAL SLAB. REFER TO DETAIL OW CEILING, DIRECTLY ABOVE H2 ISOLATION IE NOTED SHUT-OFF VALVES UPON REACHING	3/P801 FOR DETAILS. NVALVES/FLOW METER. REFER TO DETAIL 4/P801 FOR DETAILS. G A LEVEL 2 ALARM . REFER TO 22 09 00 (SEQUENCE OF OPERAT	ION) FOR	s of the sin on be consin - [
DE (4) SE	ETAILS. ENSOR IS DETECTING H2 IN A HIGH BAY A	REA THAT EXTENDS TO THE FLOOR ABOVE.	EXTEND AIR SAMPLING TUBE TO BOTTOM OF STRUCTURE ABOVE	ETHIS	gent cons Wisc
				$\overline{}$	Vise

## HYDROGEN DETECTION SENSOR SCHEDULE - LEVEL 1

SENSOR TAG	ROOM	AIR SAMPLING LOCATION	EMERGENCY SHUTOFF VALVE (ESV) ACTUATION	NOTES:
(1)		(2)	(3)	
HDS-1020-A	1020 - LAB	STRUCTURE	ESV-H2(1000)-106	
			ESV-H2(250)-106	
			ESV-H2(1000)-107	
			ESV-H2(250)-107	
HDS-1020-B	1020 - LAB	STRUCTURE	ESV-H2(1000)-106	
			ESV-H2(250)-106	
			ESV-H2(1000)-107	
			ESV-H2(250)-107	
HDS-1023	1023 - LAB	STRUCTURE	ESV-H2(1000)108	
			ESV-H2(250)108	
HDS-1032	1032 - LAB	CEILING, (5)	(4)	
HDS-1102A	1102A - LAB	STRUCTURE	ESV-H2(1000)-105	
			ESV-H2(250)-105	
HDS-1102B	1102B - LAB	STRUCTURE	ESV-H2(1000)-104	
			ESV-H2(250)-104	
	(1000 - 100			
HDS-1102C	1102C - LAB	STRUCTURE	ESV-H2(1000)-103	
			ESV-H2(250)-103	
		OTDUCTURE	F0) ( 110(4000) 400	
HDS-1102H	1102H - LAB	STRUCTURE	ESV-H2(1000)-102	
			ESV-HZ(200)-102	
HDS-1102		CEILING (6)	ESV_H2(1000)_101	
100 1102		OLIENVO, (0)	ESV/H2(1000)-101	
			L3V-H2(230)-101	

NOTES:

(1) SENSOR TAG NUMBER (HDS-XXX) DENOTES THE SPACE WHERE AIR IS BEING SAMPLED. UNLESS NOTED OTHERWISE, THE SENSOR SHALL BE INSTALLED IN THE ROOM WHERE THE AIR IS BEING SAMPLED. REFER TO HYDROGEN GAS DETECTION INSTALLATION DETAILS.

(2) SAMPLING LOCATION DESCRIPTORS: STRUCTURE - TUBING SHALL SAMPLE TIGHT TO STRUCTURAL SLAB. REFER TO DETAIL 3/P801 FOR DETAILS. CEILING - TUBING SHALL SAMPLE JUST BELOW CEILING, DIRECTLY ABOVE H2 ISOLATION VALVES/FLOW METER. REFER TO DETAIL 4/P801 FOR DETAILS.

(3) GAS DETECTION SYSTEM SHALL CLOSE THE NOTED SHUT-OFF VALVES UPON REACHING A LEVEL 2 ALARM. REFER TO 22 09 00 (SEQUENCE OF OPERATION) FOR DETAILS.

(4) GAS SHUT-OFF VALVE WILL NOT BE INSTALLED ON DAY 1. SHUT-OFF VALVES WILL BE INSTALLED IN FUTURE. UPON DETECTION OF ELEVATED LEVELS OF HYDROGEN GAS, GAS DETECTION SERVER WILL STILL ANNUNCIATE ALARM.

(5) HYDROGEN PIPING WILL NOT BE INSTALLED IN ROOM 1032 ON DAY 1. INSTALL SENSING TUBING, JUST BELOW CEILING, ABOVE THE MANUAL ISOLATION VALVES. MANUAL ISOLATION VALVES WILL BE INSTALLED, BELOW CEILING, IN CORRIDOR 100R. REFER TO PLUMBING FLOOR PLANS FOR LOCATION. (6) HYDROGEN DETECTOR WILL BE PROVIDED TO DETECT LEAKAGE NEAR FLOW METER ASSEMBLIES FE-H2(1000)-101 AND FE-H2(250)-101. FLOW METERS WILL BE INSTALLED BELOW CEILING, IN CORRIDOR 1102. REFER TO PLUMBING FLOOR PLANS FOR LOCATION. INSTALL SENSING TUBING TIGHT TO STRUCTURE ABOVE THE FLOW METERS.

Revisions of the second		The Board of Regents of the University of Wisconsin on behalf of	the University of Wisconsin - Madison	University of Wisconsin - Madison Madison, WI 53703
Image: No:    Date:    Description:      1    04/16/24    Addendum 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		JW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2		neet Title: AS DETECTION SCHEDULES
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- 1. EXISTING DIFFUSERS INSTALLED IN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED DIFFUSERS BE TEMPORARILY DISCONNECTED, STORED, AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING DIFFUSERS IN THE ROOMS AND SPACES, FOR BIDDING PURPOSES THE MECHANICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE DIFFUSERS SHOWN ON THIS PLAN WILL BE IMPACTED BY THE NEW FIRE PROTECTION SYSTEM INSTALLATION.
- ROOMS OR SPACES WHERE DIFFUSERS ARE NOT SHOWN HAVE NO CEILINGS AND ARE OPEN TO STRUCTURE.
- 3. AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.

## **SHEET KEYNOTES**

THIS ROOM DOES NOT HAVE A CEILING AND IS EXPOSED TO STRUCTURE.









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## **SHEET KEYNOTES**

1. THIS ROOM WAS NOT ACCESSIBLE DURING SITE OBSERVATION VISITS. MECHANICAL CONTRACTOR TO ASSUME A CEILING LAYOUT IN THIS SPACE WHICH IS SIMILAR TO ADJACENT SPACES OF THE SAME DIMENSION.







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) DIFFUSERS BE TEMPORARILY FED, STORED, AND RE-INSTALLED TO ATE FIRE PROTECTION WORK. WHILE IRT WILL BE MADE TO MINIMIZE IMPACTS 5 DIFFUSERS IN THE ROOMS AND R BIDDING PURPOSES THE MECHANICAL IR SHALL ASSUME THAT 15% OF THE SHOWN ON THIS PLAN WILL BE Y THE NEW FIRE PROTECTION SYSTEM IN. SPACES WHERE DIFFUSERS ARE NOT E NO CEILINGS AND ARE OPEN TO TARE HATCHED HAVE EXISTING FIRE N SYSTEM IN THIS AREA INSTALLED AS EVIOUS WORK. REFER TO SHEET G001 DNAL INFORMATION.	ASS    CONSTRUCTION      ASS    CONSTRUCTION      ASS    CONSTRUCTION      ASS    CONSTRUCTION      ASS    CONSTRUCTION
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# **GENERAL NOTES**

1. EXISTING DIFFUSERS INSTALLED IN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED DIFFUSERS BE TEMPORARILY DISCONNECTED, STORED, AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING DIFFUSERS IN THE ROOMS AND SPACES, FOR BIDDING PURPOSES THE MECHANICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE DIFFUSERS SHOWN ON THIS PLAN WILL BE IMPACTED BY THE NEW FIRE PROTECTION SYSTEM INSTALLATION.

Affiliated Engineers

ARO EBERLE ARCHITECTS

608-238-2616 aeieng.com AEI Project No: 21110-10

(608) 204-7464 AroEberle.com

5802 Research Park Blvd Madison, WI 53719

433 West Washington Avenue Suite 400, Madison, WI 53703

Keyplan:

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- ROOMS OR SPACES WHERE DIFFUSERS ARE NOT SHOWN HAVE NO CEILINGS AND ARE OPEN TO STRUCTURE.
- 3. AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.

## **SHEET KEYNOTES**

1. THIS ROOM WAS NOT ACCESSIBLE DURING SITE OBSERVATION VISITS. MECHANICAL CONTRACTOR TO ASSUME A CEILING LAYOUT IN THIS SPACE WHICH IS SIMILAR TO ADJACENT SPACES OF THE SAME DIMENSION.



					UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2	Sheet Title: MECHANICAL THIRD FLOOR DEMOLITION REFLECTED CEILING PLAN - EAST
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- 1. EXISTING DIFFUSERS INSTALLED IN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED DIFFUSERS BE TEMPORARILY DISCONNECTED, STORED, AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING DIFFUSERS IN THE ROOMS AND SPACES, FOR BIDDING PURPOSES THE MECHANICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE DIFFUSERS SHOWN ON THIS PLAN WILL BE IMPACTED BY THE NEW FIRE PROTECTION SYSTEM INSTALLATION.
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Types of Pairset Genreges         272         A(1)           fippe of         2723         A(7)           Wetal celing tiles         273         A(7)           Exposed         273         A(7)           Bopsed         273         A(7)           Metal celing tiles         273         A(7)           More dering tiles         273         A(7)           Metal celing tiles         273         A(7)           Metal celing tiles         273         A(7)           Metal celing tiles         273         A(7)           A(7)         273         A(7)           A(7)         273         A(7)           A(7)         270         A(7)           A(7)         270         A(7)           A(7)         200         A(7) <td>E</td> <td>Exposed Painted concrete</td> <td>2715</td> <td>АСТ</td> <td></td> <td></td> <td>3640 3641</td> <td>Exposed Exposed</td> <td>4645A 4662A</td> <td>Exposed ACT</td> <td>_</td> <td></td>	E	Exposed Painted concrete	2715	АСТ			3640 3641	Exposed Exposed	4645A 4662A	Exposed ACT	_	
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ACI       654       AT         Meal caling tiles       743       AT         Bipposed       743       AT         Sposed       743       AT         Sposed       753       CT         ACT       2000       Exposed         ACT       2001       Exposed         ACT       2002       Exposed         ACT       2001       Exposed         ACT       2001       Exposed         ACT       2001       Exposed         BO2A       Exposed       Exposed         BO2A       Exposed       Exposed         BO2A       Exposed       Exposed	E	Exposed	2730	ACT			3646 3650	Exposed ACT	1			
Metal trailing tiles         2/13         ACT           Exposed         2/145         ACT           ACI         2/200         Exposed           ACT         2/200         ACT           ACT         2/2001         ACT           ACT         2/2001         ACT           ACT         2/2002         ACT           ACT         2/2001         ACT           ACT         2/2002         Exposed           ACT         2/2002         Exposed           B2/2A         Exposed           3/20.1         Exposed           3/20.2         Exposed           3/20.2         Exposed           3/20.2         Exposed           3/20.2         Exposed           3/20.2         ACT           3/20.2         ACT           3/20.2         Exposed           3/20.2         Exposed           3/20.2         Exposed           3/20.2         Exposed <tr< td=""><td></td><td>ACT</td><td>2733 2740</td><td>АСТ</td><td></td><td></td><td>3654 3660</td><td>АСТ</td><td>-</td><td></td><td></td><td></td></tr<>		ACT	2733 2740	АСТ			3654 3660	АСТ	-			
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µ/L1       200UU       Exposed         ACT       2000F       Exposed         ACT       2001       ACT         ACT       2000I       Exposed         ACT       200F       Exposed         ACT       200F       Exposed         ACT       200F       Exposed         301A       ACT       2002A         ACT       200F       Exposed         302A       Exposed         302B       Exposed         302C       Exposed         302D       ACT         302D       Exposed         302D       Exposed         302D       Exposed         302D       Exposed         302D       Exposed         302D       Exposed         302D       Exposed      3	/£	ACT	2750	Exposed			3334A	Exposed	1			
ACT       20001       ACT         ACT       3020F       Exposed         3601A       Exposed         3001A       ACT         300A       ACT         300A       ACT         300A       Exposed         300A       Exposed <tr< td=""><td>   </td><td>ACT</td><td>2000D 2000F</td><td>Exposed Exposed</td><td></td><td></td><td>3335A 3335B</td><td>ACT ACT</td><td>-</td><td></td><td></td><td></td></tr<>	 	ACT	2000D 2000F	Exposed Exposed			3335A 3335B	ACT ACT	-			
ACT       3601A       Exposed         3602A       Exposed         3602A       Exposed         3601A       Exposed         3602B       Exposed         3601A       Exposed         3602B       Exposed         3601A       Exposed         3602B       Exposed         3601A       Exposed         3602B       Exposed         3001       ACT         3001       Exposed         3002       Exposed         3003       Exposed         3540A       Exposed         3540B       Exposed         3540A       Exposed         3633A       Exposed         3643A       Exposed		ACT	2000J 200F	ACT Exposed			3336A 3424A	Exposed Exposed	-			
3602A       Exposed         3607A       Exposed         3607A       Exposed         3001       ACT         300M       ACT         300P       ACT         300P       ACT         300R       Exposed         3000R       Exposed         3539A       Exposed         3540B       Exposed         3556A       Exposed         3603A       Exposed         3603A       Exposed         3641A       Exposed	, , , ,	АСТ			-		3601A	Exposed	]			
3607A       Exposed         300J       ACT         300M       ACT         300P       ACT         300R       ACT         3000R       ACT         3000R       Exposed         3000F       Exposed         3540A       Exposed         3540A       Exposed         3546A       Exposed         3645A       Exposed							3602B	Exposed	1			
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UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2       Image: Comparison of the Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison         Image: State Transment       Image: Comparison of Comparison	S802 Research Park Blvd Madison, WI 53719 AEI P	Incers 608-238-2616 aeieng.com roject No: 21110-10 ERLE (608) 204-7464 AroEberle.com
UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2	The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison	University of Wisconsin - Madison Madison, WI 53703
	UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2	Sheet Title: FIRE PROTECTION CEILING SCHEDULE

CEILING <sup>-</sup>	ΓΥΡΕ ΚΕΥ
ACT	ACOUSTIC CEILING TILE
EXPOSED	EXPOSED TO
	STRUCTURE
METAL CEILING TILE	SPLINE CEILING
GYPSUM	SUSPENDED
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B265D EXP B265E B265 EXP

B265A EXP

1 ELECTRICAL BASEMENT DEMO RCP - EAST SCALE: 1/8" = 1'-0"

![](_page_112_Figure_4.jpeg)

![](_page_112_Figure_6.jpeg)

- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
- 3. ROOMS OR SPACES WHERE LIGHTING IS NOT SHOWN HAVE NO CEILINGS AND ARE OPEN TO STRUCTURE.
- AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.
- **SHEET KEYNOTES**
- 1. THIS EXIT IS TO BE RELOCATED TO A LOCATION WHERE IT IS VISIBLE FROM THE PATH OF EGRESS. EXIT SIGN WAS BLOCKED BY FIRE PROTECTION MAIN PIPING DURING PHASE ONE OF THE PROJECT.

![](_page_112_Figure_14.jpeg)

![](_page_112_Picture_15.jpeg)

![](_page_113_Figure_0.jpeg)

![](_page_113_Figure_1.jpeg)

![](_page_113_Figure_2.jpeg)

1 ELECTRICAL BASEMENT DEMO RCP - WEST SCALE: 1/8" = 1'-0"

- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
- 3. ROOMS OR SPACES WHERE LIGHTING IS NOT SHOWN HAVE NO CEILINGS AND ARE OPEN TO STRUCTURE.
- 4. AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.
- **SHEET KEYNOTES**
- 1. THIS EXIT IS TO BE RELOCATED TO A LOCATION WHERE IT IS VISIBLE FROM THE PATH OF EGRESS. EXIT SIGN WAS BLOCKED BY FIRE PROTECTION MAIN PIPING DURING PHASE ONE OF THE PROJECT.
- 2. THIS ROOM DOES NOT HAVE A CEILING AND IS EXPOSED TO STRUCTURE.

ARCENCE ARCENCEC 433 West Washington Avenue Suite 400, Madison, WI 53703	(608) 204-7464 AroEberle.com
Keyplan:	
The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison	University of Wisconsin - Madison Madison, WI 53703
NW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2	Sheet Title: ELECTRICAL BASEMENT DEMO RCP - WEST
Revisions:       No:     Date:     Description       1     04/16/24     Addendum       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1	n: n 2
UWSA Number A-23-003 MSN Number 0408-2331 Set Type ADDENDU	M 2

![](_page_113_Picture_14.jpeg)

![](_page_114_Figure_0.jpeg)

![](_page_114_Figure_1.jpeg)

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- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
- ROOMS OR SPACES WHERE LIGHTING IS NOT SHOWN HAVE NO CEILINGS AND ARE OPEN TO STRUCTURE.
- AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.

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![](_page_114_Picture_13.jpeg)

![](_page_115_Figure_0.jpeg)

![](_page_115_Figure_1.jpeg)

![](_page_115_Figure_2.jpeg)

- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
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- (#) SHEET KEYNOTES
- 1. THIS ROOM WAS NOT ACCESSIBLE DURING SITE OBSERVATION VISITS. ELECTRICAL CONTRACTOR TO ASSUME A CEILING LAYOUT IN THIS SPACE WHICH IS SIMILAR TO ADJACENT SPACES OF THE SAME DIMENSION.

![](_page_115_Figure_11.jpeg)

![](_page_115_Picture_12.jpeg)

![](_page_116_Figure_0.jpeg)

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![](_page_116_Picture_3.jpeg)

- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
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![](_page_116_Figure_11.jpeg)

NORTH	0 4' SCALE : 1/4	8' 8" = 1'-0"

Keyplan:       The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison         University of Wisconsin - Madison       Madison         Madison, MI 53703       Madison	5802 Research Park Blvd Madison, WI 53719	608-238-2616 aeieng.com AEI Project No: 21110-10
Image: Second of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison       Image: Second of Regents of the University of Wisconsin - Madison         University of Wisconsin - Madison       University of Wisconsin - Madison         Madison, WI 53703       Madison	AROE ARCH 33 West Washington Avenu suite 400, Madison, WI 5370	BERLE TECTS (608) 204-7464 AroEberle.com
Kexhlau:       The Board of Regents of the         University of Wisconsin on behalf of       University of Wisconsin - Madison         University of Wisconsin - Madison       University of Wisconsin - Madison         Madison, W153703       Madison		
Ketal       The Board of Regents of the         University of Wisconsin on behalf of the University of Wisconsin - Madison         University of Wisconsin - Madison         Madison, WI 53703		
The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison University of Wisconsin - Madison Madison, WI 53703	Keyplan:	
The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison University of Wisconsin - Madison Madison, WI 53703		
	The Board of Regents of the University of Wisconsin on behalf of	University of Wisconsin - Madison Madison, WI 53703
UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2 Sheat The:	UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2	Sheet Title: ELECTRICAL SECOND FLOOR DEMO RCP - EAST
・ 応 団 Revisions: No: Date: Description: 1 04/16/24 Addendum 2	Revisions: No: Date: [1 1 04/16/24 /	៊ី ញ escription: ddendum 2
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![](_page_117_Figure_1.jpeg)

![](_page_117_Figure_2.jpeg)

ELECTRICAL SECOND FLOOR DEMO RCP - WEST SCALE: 1/8" = 1'-0"

- 1. REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
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ARCELECC 433 West Washington Avenue Suite 400, Madison, WI 53703	(608) 204-746 AroEberle.com
Keyplan:	
The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison	University of Wisconsin - Madison Madison, WI 53703
UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2	Sheet Title: ELECTRICAL SECOND FLOOR DEMO RCP - WEST
No:     Date:     Descript       1     04/16/24     Addendu       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1       1     1     1	ion: .m 2
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- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
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SB02 Research Park Blvd Madison, WI 53719 AEI Pro AROCEDEC ARCENTECC 433 West Washington Avenue Suite 400, Madison, WI 53703	ACCESS 608-238-2616 aeieng.com ject No: 21110-10 COMPARIENT (608) 204-7464 AroEberle.com
Keyplan:	
The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison	University of Wisconsin - Madison Madison, WI 53703
UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2	Sheet Title: ELECTRICAL THIRD FLOOR DEMO RCP - EAST
Revisions: No: Date: Description 1 04/16/24 Addendum 1 04/16/24 Adden	あ 山 n: 1 2
UWSA Number A-23-003 MSN Number 0408-2331 Set Type ADDENDU Date Issued 04/16/2024 Sheet	M 2

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3207 EXP 3207D EXP 3207C S207C		
3207D EXP 3207D EXP 3207C EXP		
EXP 3207D EXP 3207C S207C		
EXP 3207D EXP 3207C EXP		
EXP 3207D EXP 3207C EXP		
3207D EXP (3207C) EXP		
3207C		
3207D EXP [3207C] [EXP]		
3207D EXP		
3207C		
3207D EXP 3207C EXP		
3207D EXP		
3207D EXP 3207C 3207C EXP		
3207D EXP		
3207D EXP 3207C EXP		
3207D EXP 3207C EXP		
3207D EXP		
3207D EXP 3207C 3207C EXP		
3207D EXP 3207C EXP		
3207D EXP 3207C EXP		
32070 EXP		
3207D EXP 3207C EXP		
3207D EXP 3207C EXP		
3207D EXP 3207C EXP		
EXP 3207C EXP		
EXP 3207C EXP FXP	3207D	
3207C	32070	
3207C	3207D	
3207¢	3207D	
3207C	3207D EXP	
3207C	3207D EXP	
3207E EXP	3207D EXP	
3207C	3207D EXP	
3207C	3207D EXP	
3207C	3207D EXF	
3207C	3207D EXP	
3207C	3207D EXP	
3207C	3207D EX9	
XP	3207D	
	3207D EXF	
	3207C	
	3207D	
	3207D EXF	
	3207C	
	3207D EXP	
	3207D EXP 3207C ZXP	

![](_page_118_Picture_15.jpeg)

![](_page_119_Figure_0.jpeg)

![](_page_119_Figure_1.jpeg)

![](_page_119_Figure_2.jpeg)

1 ELECTRICAL THIRD FLOOR DEMO RCP - WEST SCALE: 1/8" = 1'-0"

- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
- 3. ROOMS OR SPACES WHERE LIGHTING IS NOT SHOWN HAVE NO CEILINGS AND ARE OPEN TO STRUCTURE.
- 4. AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.
- **SHEET KEYNOTES**
- 1. THIS ROOM WAS NOT ACCESSIBLE DURING SITE OBSERVATION VISITS. ELECTRICAL CONTRACTOR TO ASSUME A CEILING LAYOUT IN THIS SPACE WHICH IS SIMILAR TO ADJACENT SPACES OF THE SAME DIMENSION.

![](_page_119_Figure_12.jpeg)

![](_page_119_Picture_13.jpeg)

![](_page_120_Figure_0.jpeg)

![](_page_120_Figure_1.jpeg)

![](_page_120_Figure_3.jpeg)

![](_page_120_Figure_4.jpeg)

- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
- 3. ROOMS OR SPACES WHERE LIGHTING IS NOT SHOWN HAVE NO CEILINGS AND ARE OPEN TO STRUCTURE.
- 4. AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.
- SHEET KEYNOTES
- 1. THIS ROOM WAS NOT ACCESSIBLE DURING SITE OBSERVATION VISITS. ELECTRICAL CONTRACTOR TO ASSUME A CEILING LAYOUT IN THIS SPACE WHICH IS SIMILAR TO ADJACENT SPACES OF THE SAME DIMENSION.

![](_page_120_Figure_12.jpeg)

![](_page_120_Picture_13.jpeg)

![](_page_121_Picture_0.jpeg)

- REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. EXISTING LIGHTING FIXTURES INSTALLED WITHIN EXISTING CEILING SYSTEMS ARE INDICATED ON THIS PLAN FOR CONTRACTOR REFERENCE AND BIDDING PURPOSES. THE INSTALLATION OF NEW FIRE PROTECTION SPRINKLER SYSTEM PIPING IN ROOMS AND SPACES WHICH CURRENTLY HAVE EXISTING CEILING SYSTEMS, MAY REQUIRE THAT SOME ASSOCIATED LIGHTING FIXTURES BE TEMPORAPHING ASSOCIATED LIGHTING FIXTURES BE TEMPORARILY DISCONNECTED, STORED AND RE-INSTALLED TO ACCOMMODATE FIRE PROTECTION WORK. WHILE EVERY EFFORT WILL BE MADE TO MINIMIZE IMPACTS TO EXISTING LIGHTING FIXTURE IN THESE ROOMS AND SPACES, FOR BIDDING PURPOSES THE ELECTRICAL CONTRACTOR SHALL ASSUME THAT 15% OF THE LIGHTING FIXTURES SHOWN ON THIS PLAN WILL BE IMPACTED BY NEW FIRE PROTECTION SYSTEMS INSTALLATION.
- 3. ROOMS OR SPACES WHERE LIGHTING IS NOT SHOWN ARE OPEN TO STRUCTURE.
- AREAS THAT ARE HATCHED HAVE EXISTING FIRE PROTECTION SYSTEM IN THIS AREA INSTALLED AS PART OF PREVIOUS WORK. REFER TO SHEET G001 FOR ADDITIONAL INFORMATION.

#### **SHEET KEYNOTES**

THIS ROOM WAS NOT ACCESSIBLE DURING SITE OBSERVATION VISITS. ELECTRICAL CONTRACTOR TO ASSUME A CEILING LAYOUT IN THIS SPACE WHICH IS SIMILAR TO ADJACENT SPACES OF THE SAME DIMENSION.

AEI P AEI P ARCHITEC 433 West Washington Avenue Suite 400, Madison, WI 53703	(608) 204-7464 AroEberle.com
Keyplan:	
The Board of Regents of the University of Wisconsin on behalf of the University of Wisconsin - Madison	University of Wisconsin - Madison Madison, WI 53703
Revisions:	Sheet Title: ELECTRICAL FOURTH FLOOR DEMO RCP - WEST
UWSA Number A-23-003	

![](_page_121_Picture_10.jpeg)

![](_page_122_Figure_0.jpeg)

![](_page_122_Figure_1.jpeg)

![](_page_122_Figure_2.jpeg)

1 ELECTRICAL BASEMENT FLOOR SYSTEMS PLAN - WEST SCALE: 1/8" = 1'-0"

#### **GENERAL NOTES**

- 1. REFER TO SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
- 2. REFER TO SHEET E800 FOR FIRE ALARM MATRIX. 3. CONTACT DoIT-NETWORK SERVICES INFRASTRUCTURE TO COORDINATE TEMPORARY RELOCATION OR REMOVAL OF WIRELESS HARDWARE THAT IS IN THE PATH OF PROJECT RELATED WORK. THE WIRELESS HARDWARE IS MONITORED AND IF DAMAGED/DISCONNECTED
- 4. ELECTRICAL CONTRACTOR TO TAKE SPECIAL CARE A PRECAUTIONS AS TO NOT DAMAGE ANY EXISTING

WITHOUT NOTICE, WILL GENERATE A PROCESS IN WHICH A TECHNICIAN WILL BE DISPATCHED FOR

CAMERAS PER UW-MADISON POLICE DEPARTMENT. 5. CONTRACTOR SHALL BE FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEM, WHICH WILL BE

TROUBLESHOOTING AND REPAIR.

AFFECTED BY THE REMODELING WORK. 6. EXISTING BUILDING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTOR SHALL **OBTAIN PERMISSION FROM OWNERS** REPRESENTATIVE TO SHUT OFF SERVICE OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR THE DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.

#### SHEET KEYNOTES

- 1. NEW FIRE PROTECTION WET SYSTEM WILL BE PROVIDED IN THE BASEMENT. PROVIDE (1) TAMPER SWITCH AND (1) FLOW SWITCH AT THIS LOCATION. TAMPER AND FLOW SWITCHES SHALL BE MONITORED BY THE FIRE ALARM SYSTEM FOR THE DEVICES INDICATED. SPRINKLER ZONE NAME DESIGNATED BY FIRE PROTECTION CONTRACTOR SHALL BE SAME NAME TO IDENTIFY ZONE ON THE FIRE ALARM SYSTEM. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH THE FIRE PROTECTION CONTRACTOR PRIOR TO ROUGH-IN.
- 2. PROVIDE TAMPER SWITCHES, PRESSURE SWITCHES AND FLOW SWITCHES AS SHOWN FOR (2) PRE-ACTION VALVES. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH THE FIRE PROTECTION CONTRACTOR PRIOR TO ROUGH-IN.
- 3. PROVIDE (2) PRE-ACTION RELEASING PANELS AT THIS LOCATION. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH THE FIRE PROTECTION CONTRACTOR PRIOR TO ROUGH-IN.
- 4. PROVIDE NEW TAMPER SWITCH AND WIRE TO EXISTING CONTROL VALVE. EXISTING CONTROL VALVE WAS INSTALLED DURING PHASE. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH THE FIRE PROTECTION CONTRACTOR PRIOR TO ROUGH-IN.

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	] ]		
The Decenter of the	University of Wisconsin on behalf of	the University of Wisconsin - Madison	University of Wisconsin - Madison Madison, WI 53703
Revision	UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2		Sheet Title: ELECTRICAL BASEMENT FLOOR SYSTEMS PLAN - WEST
Revision No: Da 1 0	ate: 4/16/24	Descripti Addendu	on: im 2
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Date Issued	01/	30/202	4

![](_page_122_Picture_17.jpeg)

E12B.2

#### MOTOR SCHEDULE

MOTOR ID	EQUIPMENT			MOTOR DATA				FEEDER			STARTER		LOCAL DISC SW	REMARKS
	TAG	DESCRIPTION	LOCATION	VOLTAGE	SIZ	ZE	RATING	SOURCE	BREAKER	CONDUIT & WIRE	SIZE	TYPE	SIZE	
				(V/PH)	(HP)	(kVA)	(FLA)		(A/PH)	SIZE & QUANTITY			(SWITCH/FUSE)	
1	PAC-1		BASEMENT	208/1	1	1.8	8.8	NB/1	25/2	3/4"C - (2) #12, (1) #12 GND	NEMA 1	FVNR	30/12	
2	PAC-2		FIRST FLOOR	120/1	1/2	1.1	9.8	LP/Q	20/1	3/4"C - (2) #12, (1) #12 GND	NEMA 1	FVNR	30/15	
3	PAC-3		THIRD FLOOR	120/1	1/2	1.1	9.8	3/E	20/1	3/4"C - (2) #12, (1) #12 GND	NEMA 1	FVNR	30/15	
4	PAC-4		FIFTH FLOOR	120/1	1	1.1	9.8	4/GA	20/1	3/4"C - (2) #12, (1) #12 GND	NEMA 1	FVNR	30/15	

2 MINIMUM STARTER SIZE SHALL BE NEMA SIZE 1. COORDINATE AND FIELD VERIFY REDUCED-VOLTAGE TYPE STARTER SIZES

WITH MANUFACTURER AND MOTOR HORSEPOWER. 3 FVNR = FULL VOLTAGE, NON-REVERSING; TS1W = TWO-SPEED, ONE-WINDING;

VFD = VARIABLE FREQUENCY DRIVE; PFCC = POWER FACTOR CORRECTING CAPACITOR.

RVAT = REDUCED VOLTAGE AUTO TRANSFORMER; SSRV = SOLID STATE REDUCED VOLTAGE 4 TYPICAL: FULL LOAD CURRENTS (FLA), CONDUCTOR SIZES AND SWITCH SHALL BE BASED ON NFPA 70 (NEC).

5 TYPICAL: PROVIDE FUSIBLE TYPE DISCONNECT SWITCH IF VFD, COMBINATION STARTER OR INTEGRAL DISCONNECT SWITCH IS NOT WITHIN 25'-0" OR IS OUT OF SITE OF MOTOR.

6 TYPICAL: FUSIBLE DISCONNECT NOT REQUIRED WHERE MOTOR SERVED BY VFD WITH INTEGRAL OVERCURRENT PROTECTION. PROVIDE NO CONTACTS PER 26 2728. 7 TYPICAL: PROVIDE XHHW-2 WIRING BETWEEN VFD'S AND MOTOR TERMINALS.

		Control Unit Annunciation					Notification																				
		System Outputs	-		-	_											_				-	_	-				
System Inputs (Note 11)	Number Identifier	Actuate Common Alarm Signal Indicator	Actuate Audible Alarm Signal	Actuate Common Supervisory Signal	Actuate Audible Supervisory Signal	Actuate Common Trouble Signal Indicator	Actuate Audible Trouble Signal	Actuate Appropriate Location Indicator	Actuate All Audible Evacuation Signals	Actuate All Visible Evacuation Signals	Outdoor Audible and/or Visual Device	Display/Print Change of Status	Transmit Alarm Signal to Supervisin Station	Transmit Supervisory Signal to Supervising Station	Transmit Trouble Signal to Supervising Station	Release Magnetically Held Smoke Doors	Remove Power From Associated Power Operated Doors In Smoke Walls and Fire Rated Walls	Associated Door Holds	Unlock Security Doors In Path of Egress	Recall Elevators To Primary Recall Floor	Recall Elevators to Atternate Recall Floor	Elevator Fire Hat Flash	Associated Fan Shutdown	Damper Shutdown (Note 4)	Remotely Display Status	Initiate Stairwell Pressulzation for Associated Stairwell	Number Identifier
		А	В	С	D	E	F	G	Н	I	J	К	L	М	Ν	0	Р	Q	R	S	Т	U	v	w	X	Y	
Smoke Detector at Door Hold Opens	1	Х	х	х	Х			Х	Х	х		Х	х			Х	Х	х	Х						Х		1
Smoke Detector in Elev. Machine/Control Room	2	Х	х					Х														Х					2
	3																										3
Heat Detector in Elev. Machine/Control Room	4	Х	Х					Х	Х	Х		Х	х			Х	Х	х	Х								4
	5																										5
Fire Protection Dry Pipe System (Preaction)	6	Х	Х					Х	Х	Х		Х	Х			Х	Х	Х	Х						Х		6
	7																										7
Sprinkler Main Waterflow	8	X	Х					Х	X	Х	Х	Х	Х			Х	Х	Х	Х						Х		8
Sprinkler Tamper Switch	9			Х	Х			Х				Х		Х											Х		9
	10																										10
Elevator Shunt Trip Monitor	11			Х	Х							Х		Х											Х		11

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	UW ENGINEERING HALL SPRINKLER AND GAS PIPING PH 2		sheet Title: ELECTRICAL SCHEDULES
Revision No: Da 1 0 <sup>,</sup>	s: ate: 4/16/24	Descriptior Addendum	n: 2
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