



RFB NO. 320032

# CONSTRUCTION DOCUMENTS PROJECT MANUAL

DANE COUNTY DEPARTMENT OF PUBLIC WORKS,  
HIGHWAY AND TRANSPORTATION

**PUBLIC WORKS ENGINEERING DIVISION**  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN 53713

**REQUEST FOR BIDS NO. 320032**  
**UW-EXTENSION LOBBY REMODEL**  
**LYMAN F. ANDERSON AGRICULTURE & CONSERVATION CENTER**  
**5201 FEN OAK DRIVE**  
**MADISON, WISCONSIN**

Due Date / Time: **TUESDAY, APRIL 6, 2021 / 2:00 P.M.**

Location: **PUBLIC WORKS OFFICE**

Performance / Payment Bond: **100% OF CONTRACT AMOUNT**

Bid Deposit: **5% OF BID AMOUNT**

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FOR INFORMATION ON THIS REQUEST FOR BIDS, PLEASE CONTACT:

RYAN SHORE, PROJECT MANAGER  
TELEPHONE NO.: 608/445-0109  
FAX NO.: 608/267-1533  
E-MAIL: [shore@countyofdane.com](mailto:shore@countyofdane.com)

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Plot drawings on 22" x 34" (ANSI D) paper for correct scale or size.

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A1.0 – Overall First Floor Plan

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INVITATION TO BID

**LEGAL NOTICE**

Dane County Dept. of Public Works, Hwy & Transp., 1919 Alliant Energy Center Way, Madison, WI 53713, will receive sealed Bids until:

**2:00 P.M., TUESDAY, APRIL 6, 2021**

**RFB NO. 320032**

**UW-EXTENSION LOBBY REMODEL**

**LYMAN F. ANDERSON AGRICULTURE & CONSERVATION CENTER**

**5201 FEN OAK DRIVE, MADISON, WI**

Dane County is inviting Bids for construction services to remodel the UW-Extension lobby and front office area. Only firms with capabilities, experience & expertise with similar projects should obtain this Request for Bids (RFB) document & submit Bids.

RFB document may be obtained after **2:00 p.m. on Tuesday, March 2, 2021** by downloading it from [bids-pwht.countyofdane.com](http://bids-pwht.countyofdane.com). Please call Ryan Shore, Project Mgr., at 608/445-0109, or our office at 608/266-4018, for any questions or additional information.

All Bidders must be qualified as a Best Value Contractor before Bid Due Date / Time. Complete Pre-qualification Application for Contractors at [publicworks.countyofdane.com/bvc](http://publicworks.countyofdane.com/bvc) or obtain one by calling 608/267-0119.

A pre-bid facility tour will be held March 23, 2021 at 2:00 p.m. at the Lyman F. Anderson Agriculture & Conservation Center. Bidders are strongly encouraged to attend this tour. See RFB for mandatory disease transmission prevention practices.

**PUBLISH:    MARCH 2 & MARCH 9, 2021 - WISCONSIN STATE JOURNAL**  
**MARCH 3 & MARCH 10 - THE DAILY REPORTER**

END OF SECTION

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INSTRUCTIONS TO BIDDERS

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**1. GENERAL**

- A. Before submitting Bid, bidder shall thoroughly examine all Construction Documents. Successful Bidder shall be required to provide all the Work that is shown on Drawings, set forth in Specifications, or reasonably implied as necessary to complete Contract for this project.
- B. Bidder shall visit site to become acquainted with adjacent areas, means of approach to site, conditions of actual site and facilities for delivering, storing, placing, and handling of materials and equipment.
- C. Pre-bid meeting is scheduled on Tuesday, March 23, 2021 at 2:00 p.m. at the Lyman F. Anderson Agriculture & Conservation Center, 5201 Fen Oak Drive, Madison, WI. Attendance by all bidders is optional, however bidders and subcontractors are strongly encouraged to attend.
- D. Safe distancing & face masks are required for all tour attendees. Tours will be limited to 10 people; please limit number of attending staff & subcontractors. If there are more than 10 people, group will be split & there will be two or more tours. Allow sufficient time if you do not make it in to first tour group. Do not visit the site if you are or have recently been ill.
- E. Failure to visit site or failure to examine any and all Construction Documents will in no way relieve successful Bidder from necessity of furnishing any necessary materials or equipment, or performing any work, that may be required to complete the Work in accordance with

Drawings and Specifications. Neglect of above requirements will not be accepted as reason for delay in the Work or additional compensation.

## **2. DRAWINGS AND SPECIFICATIONS**

- F. Drawings and Specifications that form part of this Contract, as stated in Article 1 of General Conditions of Contract, are enumerated in Document Index of these Construction Documents.
- G. Complete sets of Drawings and Specifications for all trades will be available to all Bidders, irrespective of category of work to be bid on, in order that all Bidders may be familiar with work of other trades as they affect their bid.

## **3. INTERPRETATION**

- A. No verbal explanation or instructions will be given in regard to meaning of Drawings or Specifications before Bid Due Date. Bidders shall bring inadequacies, omissions or conflicts to Owner or Architect / Engineer's attention at least ten (10) calendar days before Bid Due Date. Prompt clarification will be available to all bidders by Addendum.
- B. Failure to so request clarification or interpretation of Drawings and Specifications will not relieve successful Bidder of responsibility. Signing of Contract will be considered as implicitly denoting that Contractor has thorough understanding of scope of the Work and comprehension of Construction Documents.
- C. Owner or Architect / Engineer will not be responsible for verbal instructions.

## **4. QUALIFICATIONS OF BIDDER (CONTRACTOR AND SUBCONTRACTOR)**

- A. Before award of Contract can be approved, Owner shall be satisfied that Bidder involved meets following requirements:
  - 1. Has completed at least one (1) project of at least fifty percent (50%) of size or value of Division of work being bid and type of work completed is similar to that being bid. If greater magnitude of experience is deemed necessary, other than size or value of work, such requirements will be described in appropriate section of Specifications.
  - 2. Maintains permanent place of business.
  - 3. Can be bonded for terms of proposed Contract.
  - 4. Meets all applicable Best Value Contractor requirements.
  - 5. Has record of satisfactorily completing past projects. Criteria which will be considered in determining satisfactory completion of projects by bidder will include:
    - a. Completed contracts in accordance with drawings and specifications.
    - b. Diligently pursued execution of work and completed contracts according to established time schedule unless Owner grants extensions.
    - c. Fulfilled guarantee requirements of construction documents.
    - d. Is not presently on ineligible list maintained by County's Department of Administration for noncompliance with equal employment opportunities and affirmative action requirements.
    - e. Authorized to conduct business in Wisconsin. By submitting Bid, bidder warrants that it has: complied with all necessary requirements to do business in State of

Wisconsin; that persons executing contract on its behalf are authorized to do so; and, if corporation, that name and address of bidder's registered agent are as set forth in Contract. Bidder shall notify Owner immediately, in writing, of any change in its registered agent, their address, and bidder's legal status. For partnership, term "registered agent" shall mean general partner.

- B. County's Public Works Project Manager will make such investigations as are deemed necessary to determine ability of bidder to perform the Work, and bidder shall furnish to County's Public Works Project Manager or designee all such information and data for this purpose as County's Public Works Project Manager may request. Owner reserves right to reject Bid if evidence submitted by, or investigation of, bidder fails to satisfy Owner that bidder is responsible and qualified to carry out obligations of Contract and to complete the Work contemplated therein.

## **5. BID GUARANTEE**

- A. Bank certified check, cashier's check or Bid Bond, payable to County in amount not less than five percent (5%) of maximum bid, shall accompany each Bid as guarantee that if Bid is accepted, Bidder will execute and return proposed Contract and Performance and Payment Bonds within ten (10) business days after being notified of acceptance of Bid. Company issuing bonds must be licensed to do business in Wisconsin.
- B. Any bid, which is not accompanied by bid guarantee, will be considered "No Bid" and will not be read at Bid Due Date.
- C. If successful Bidder so delivers Contract, Certificate of Insurance, and Performance and Payment Bonds, check will be returned to Bidder. In case Bidder fails to deliver such Contract, insurance, and bond, amount of bid guarantee will be forfeited to County as liquidated damages.
- D. All checks tendered as bid guarantee, except those of three (3) lowest qualified, responsible bidders, will be returned to their makers within three (3) business days after Bid Due Date. All such retained checks will be returned immediately upon signing of Contract and Performance and Payment Bonds by successful Bidder.

## **6. WITHDRAWAL OF BIDS**

- A. Bids may be withdrawn by written request received from bidder or authorized representative thereof prior to time fixed for Bid Due Date, without prejudice to right of bidder to file new Bid. Withdrawn Bids will be returned unopened. Negligence on part of bidder in preparing their Bid confers no right for withdrawal of Bid after it has been opened.
- B. No Bid may be withdrawn for period of sixty (60) calendar days after Bid Due Date.
- C. If Bid contains error, omission or mistake, bidder may limit liability to amount of bidder's guarantee by giving written Notice of Intent not to execute Contract to Owner within seventy-two (72) hours of Bid Due Date.

## **7. CONTRACT FORM**

- A. Sample copy of contract that successful Bidder will be required to enter into is included in these Construction Documents and bidders are required to familiarize themselves with all conditions contained therein.

## 8. CONTRACT INTERESTS BY COUNTY PUBLIC OFFICIALS

- A. In accordance with Wisconsin Statute 946.13, county official may not bid for or enter into any contract involving receipts or disbursements of more than \$15,000.00 in a year, in which they have private pecuniary interest, direct or indirect if at same time they are authorized to take official action with respect to making of this Contract. Any contract entered into in violation of this Statute is void and County incurs no liability thereon. This subsection does not affect application and enforcement of Wisconsin Statute 946.13 by state prosecutors in criminal courts of this state.

## 9. EMERGING SMALL BUSINESS PROVISIONS

- A. **Emerging Small Business Definition.** For purposes of this section, ESB is defined as:
1. Independent business concern that has been in business minimum of one year;
  2. Business located in State of Wisconsin;
  3. Business comprised of less than twenty-five (25) employees;
  4. Business must not have gross sales in excess of three million dollars (\$3,000,000.00) over past three years; and
  5. Business does not have history of failing to complete projects.
- B. **Emerging Small Business (ESB) Involvement.** Bidder shall make good faith effort to award minimum of ten percent (10%) of the Work to ESBs. Bidder shall submit report to Dane County Contract Compliance Specialist within ten (10) business days of Bid Due Date demonstrating such efforts. Good faith efforts means significant contact with ESBs for purposes of soliciting bids from them. Failure to make or demonstrate good faith efforts will be grounds for disqualification.
- C. **Emerging Small Business Report.** Emerging Small Business Enterprise Report is to be submitted by Bidder in separate envelope marked "Emerging Small Business Report". This report is due by 2:00 p.m. following specified ten (10) business days after Bid Due Date. Bidder who fails to submit Emerging Small Business Report shall be deemed not responsive.
- D. **ESB Goal.** Goal of this project is ten percent (10%) ESB participation. ESB utilizations are shown as percentage of total Bid. If Bidder meets or exceeds specified goal, Bidder is only required to submit Form A - Certification, and Form B - Involvement. Goal shall be met if Bidder qualifies as ESB.
- E. **Report Contents.** Following award of Contract, Bidder shall submit copies of executed contracts for all Emerging Small Businesses. Emerging Small Business Report shall consist of these:
1. Form A - Certification;
  2. Form B - Involvement;
  3. Form C - Contacts;
  4. Form D - Certification Statement (if appropriate); and



5. Supportive documentation (i.e., copies of correspondence, telephone logs, copies of advertisements).
- F. **ESB Listing.** Bidders may solicit bids from *Dane County Targeted Business Directory* by going to this website. Do not click as a link; copy & paste address into a web browser.  
<https://equity.countyofdane.com/documents/PDFs/Targeted-Business-Directory.xlsx>
- G. **DBE Listing.** Bidders may also solicit bids from *State of Wisconsin DOT Disadvantaged Business Enterprise Unified Certification Program (DBE / UCP) Directory* by going to this website. These are not only transportation-related designers & contractors. Do not click as a link; copy & paste address into a web browser.  
<https://wisconsin.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx>
- H. **ESB Certification.** All contractors, subcontractors and suppliers seeking ESB certification must complete and submit Emerging Small Business Report to Dane County Contract Compliance Program.
- I. **Certification Statement.** If ESB firm has not been certified by County as ESB prior to submittal of this Bid, ESB Report cannot be used to fulfill ESB goal for this project unless firm provides “Form D - Certification Statement”. Certification statement must be completed and signed by ESB firm.
- J. **Questions.** Questions concerning Emerging Small Business provisions shall be directed to:  
  
[OEI@countyofdane.com](mailto:OEI@countyofdane.com)  
or  
Dane County Contract Compliance Specialist  
City-County Building, Room 356  
210 Martin Luther King, Jr. Blvd.  
Madison, WI 53703  
608/266-4192
- K. **Substituting ESBs.** In event of any significant changes in subcontract arrangements or if need arises to substitute ESBs, Bidder shall report such proposed changes to Contract Compliance Specialist to making any official changes and request authorization to substitute ESB firm. Bidder further agrees to make every possible effort to replace ESB firm with another qualified ESB firm.
- L. **Good Faith Efforts.** Good faith efforts can be demonstrated by meeting all of these obligations:
1. Selecting portions of the Work to be performed by ESBs in order to increase likelihood of meeting ESB goal including, where appropriate, breaking down Contract into smaller units to facilitate ESB participation.
  2. Advertising in general circulation, trade associations and women / minority focus media concerning subcontracting opportunities.
  3. Providing written notices to reasonable number of specific ESBs that their interest in Contract was being solicited in sufficient time to allow ESBs to participate effectively.
  4. Following up on initial solicitations of interest by contacting ESBs within five (5) business days prior to Bid Due Date to determine with certainty whether ESB were interested, to allow ESBs to prepare bids.

5. Providing interested ESB with adequate information about Drawings, Specifications and requirements of Contract.
6. Using services of available minority, women and small business organizations and other organizations that provide assistance in recruitment of MBEs / WBEs / ESBs.
7. Negotiating in good faith with interested ESBs, not rejecting ESBs as unqualified without sound reason based on thorough investigation of their capabilities.
8. Submitting required project reports and accompanying documents to County's Contract Compliance Specialist within twenty-four (24) hours after Bid Due Date.

M. **Appeals Disqualification of Bid.** Bidder who is disqualified may appeal to Public Works & Transportation Committee and Equal Opportunity Commission.

## 10. METHOD OF AWARD - RESERVATIONS

- A. Following will be basis of award of Contract, providing cost does not exceed amount of funds then estimated by County as available to finance Contract(s):
  1. Lowest dollar amount submitted by qualified responsible bidder on Base Bid for all work comprising project, combined with such additive Owner accepted alternates.
  2. Owner reserves right to reject all bids or any bid, to waive any informality in any bid, and to accept any bid that will best serve interests of County.
  3. Unit Prices and Informational Bids will not be considered in establishing low bidder.

## 11. SECURITY FOR PERFORMANCE AND PAYMENTS

- A. Simultaneous with delivery of signed Contract, Bidder shall be required to furnish Performance and Payment Bonds as specified in Article 29 of General Conditions of Contract, "Contract Security". Surety Company shall be licensed to do business in Wisconsin. Performance and Payment Bonds must be dated same date or subsequent to date of Contract. Performance and Payment Bonds must emulate information in Sample Performance and Payment Bonds in Construction Documents.
- B. Provide certified copy of power of attorney from Surety Company showing that agent who signs Bond has power of attorney to sign for Surety Company. Secretary or Assistant Secretary of company must sign this certification, not attorney-in-fact. Certification must bear same or later date as Bond. Power of Attorney must emulate model power of attorney information detailed in Sample Performance and Payment Bonds.
- C. If Bidder is partnership or joint venture, State certified list, providing names of individuals constituting partnership or joint venture must be furnished. Contract itself may be signed by one partner of partnership, or one partner of each firm comprising joint venture, but Performance and Payment Bonds must be signed by all partners.
- D. If Bidder is corporation, it is necessary that current certified copy of resolution or other official act of directors of corporation be submitted showing that person who signs Contract is authorized to sign contracts for corporation. It is also necessary that corporate seal be affixed to resolution, contract, and performance and payment bonds. If your corporation has no seal, it is required that above documents include statement or notation to effect that corporation has no seal.

## **12. TAXES**

- A. Wisconsin Statute 77.54 (9m) allows building materials that become part of local unit government facilities to be exempt from sales & use tax. Vendors & materials suppliers may not charge Bidders sales & use tax on these purchases. This does not include highways, streets or roads. Any other Sales, Consumer, Use & other similar taxes or fees required by law shall be included in Bid.
- B. In accordance with Wisconsin Statute 71.80(16)(a), successful nonresident bidder, whether incorporated or not, and not otherwise regularly engaged in business in this state, shall file surety bond with State of Wisconsin Department of Revenue payable to Department of Revenue, to guarantee payment of income taxes, required unemployment compensation contributions, sales and use taxes and income taxes withheld from wages of employees, together with any penalties and interest thereon. Amount of bond shall be three percent (3%) of Contract or subcontract price on all contracts of \$50,000 or more.

## **13. SUBMISSION OF BIDS**

- A. All Bids shall be submitted on standard Bid Form bound herein and only Bids that are made on this Bid Form will be considered. Entire Bid Form and other supporting documents, if any, shall be removed or copied from Construction Documents, filled out, and submitted in manner specified hereinafter. Submit completed Bid Bond with Bid as well.
- B. No bids for any subdivision or any sub-classification of the Work, except as indicated, will be accepted. Any conditional Bid, amendment to Bid Form or appended item thereto, or inclusion of any correspondence, written or printed matter, or details of any nature other than that specifically called for, which would alter any essential provision of Construction Documents, or require consideration of unsolicited material or data in determining award of Contract, will disqualify Bid. Telecommunication alterations to Bid will not be accepted.
- C. Bidders must submit single Bid for all the Work.
- D. Bid amounts shall be inserted in words and in figures in spaces provided on Bid Form; in case of conflict, written word amounts will govern.
- E. Addenda issued after Bid Letting shall become part of Construction Documents. Bidders shall acknowledge receipt of such addenda in appropriate space provided on Bid Form. Bid may be rejected if receipt of any particular addendum applicable to award of Contract has not been acknowledged on Bid Form.
- F. Bids shall be signed, placed in envelope, sealed and delivered before due time to place designated in Invitation to Bid, and identified with project name, bid number, location, category of work being bid upon, Bid Due Date, name and address of bidder.
- G. Bidder shall be responsible for sealed Bid being delivered to place designated for Bid Due Date on or before date and time specified. Bids received after time of closing will be rejected and returned to bidder unopened.
- H. Bid will be considered invalid and will be rejected if bidder has not signed it.
- I. Faxed or emailed Bids will not be accepted.
- J. Bidder's organization shall submit completed with Bid, Fair Labor Practices Certification form, included in these Construction Documents.

#### **14. SUBCONTRACTOR LISTING**

- A. Bidders are required to submit Section 00 43 36, Proposed Subcontractors Form listing all subcontractors for this project including committed prices for each subcontractor. Project Manager must receive Form no later than when successful Bidder submits their signed Contract. Failure to submit may delay progress payments.

#### **15. ALTERNATE BIDS**

- A. Not Applicable

#### **16. INFORMATIONAL BIDS**

- A. Not Applicable.

#### **17. UNIT PRICES**

- A. Not Applicable. Provide unit prices where requested on Bid Form. Unit prices will include all costs for materials, labor, insurance, taxes, overhead and profit necessary to perform specified work. Estimated quantities are approximate only. Payment will be based upon actual quantities placed, provided or installed. Failure to provide requested unit prices may result in rejection of entire Bid.

#### **18. COMMENCEMENT AND COMPLETION**

- A. Successful Bidder shall commence work when schedule and weather permit, but no later than stated in Bid Form. Contractor shall pursue the Work regularly and continuously at reasonable rate to insure completion of the Work within time stated in Bid.
- B. Should it be found impossible to complete the Work on or before time specified for completion, written request may be submitted for extension of time setting forth reasons believed to justify granting of such request. Refer to Article 20 of General Conditions of Contract, titled "Time for Completion".

#### **19. WORK BY OWNER**

- A. This work will be accomplished by Owner or will be let under separate contracts and will not be included under this Contract:
  - 1. Furnish & install furniture, fixtures & equipment (FF&E).

#### **20. SPECIAL HAZARDS COVERAGE**

- A. Not Applicable.

**FORM A**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CERTIFICATION**

In accordance with General Conditions of Contract, submit this Emerging Small Business Report within ten (10) days after Bid Due Date.

PROJECT NAME: \_\_\_\_\_

\_\_\_\_\_

BID NO.: \_\_\_\_\_ BID DUE DATE: \_\_\_\_\_

**BIDDER INFORMATION**

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

**FORM B**

Page \_\_\_ of \_\_\_

**DANE COUNTY** (Copy this Form as necessary to provide complete information)  
**EMERGING SMALL BUSINESS REPORT - INVOLVEMENT**

COMPANY NAME: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

BID NO.: \_\_\_\_\_ BID DUE DATE: \_\_\_\_\_

ESB NAME: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE NO & EMAIL.: \_\_\_\_\_

Indicate percentage of financial commitment to this ESB: \_\_\_\_\_ % Amount: \$ \_\_\_\_\_

ESB NAME: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE NO & EMAIL.: \_\_\_\_\_

Indicate percentage of financial commitment to this ESB: \_\_\_\_\_ % Amount: \$ \_\_\_\_\_

**FORM C**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CONTACTS**

(Copy this Form as necessary to provide complete information)

COMPANY NAME: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

BID NO.: \_\_\_\_\_ BID DUE DATE: \_\_\_\_\_

	<u>ESB FIRM NAME CONTACTED</u>	<u>DATE</u>	<u>PERSON CONTACTED</u>	<u>DID ESB BID?</u>	<u>ACC- EPT BID?</u>	<u>REASON FOR REJECTION</u>
1)	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____
3)	_____	_____	_____	_____	_____	_____
4)	_____	_____	_____	_____	_____	_____
5)	_____	_____	_____	_____	_____	_____
6)	_____	_____	_____	_____	_____	_____
7)	_____	_____	_____	_____	_____	_____
8)	_____	_____	_____	_____	_____	_____

**FORM D**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CERTIFICATION STATEMENT**

I, \_\_\_\_\_, \_\_\_\_\_ of  
Name Title

\_\_\_\_\_ certify to best of my knowledge and  
Company

belief that this business meets Emerging Small Business definition as indicated in Article 9 and  
that information contained in this Emerging Small Business Report is true and correct.

\_\_\_\_\_  
Bidder's Signature

\_\_\_\_\_  
Date



Name of Bidding Firm: \_\_\_\_\_

SECTION 00 41 13

BID FORM

**BID NO. 320032**

**PROJECT: UW-EXTENSION LOBBY RENOVATION  
LYMAN F. ANDERSON AGRICULTURE & CONSERVATION CENTER**

**TO: DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY &  
TRANSPORTATION PROJECT MANAGER  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN 53713**

**NOTE: WISCONSIN STATUTE 77.54 (9M) ALLOWS FOR NO SALES & USE TAX ON  
THE PURCHASE OF MATERIALS FOR COUNTY PUBLIC WORKS PROJECTS.**

**BASE BID - LUMP SUM:**

Dane County is inviting Bids for construction services for renovations to secure the UW-Extension lobby. The undersigned, having examined the site where the Work is to be executed and having become familiar with local conditions affecting the cost of the Work and having carefully examined the Drawings and Specifications, all other Construction Documents and Addenda thereto prepared by Dane County Department of Public Works, Highway & Transportation hereby agrees to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the entire Work, as specified in the Construction Documents, for the Base Bid stipulated sum of:

\_\_\_\_\_ and \_\_/100 Dollars  
Written Price

\$ \_\_\_\_\_  
Numeric Price

Receipt of the following addenda and inclusion of their provisions in this Bid is hereby acknowledged:

Addendum No(s). \_\_\_\_\_ through \_\_\_\_\_

Dated \_\_\_\_\_

UW-Extension must have this project completed by September 3, 2021. Assuming this Work can be started by May 24, 2021 what dates can you commence and complete this job?

Commencement Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_  
(final, not substantial)

I hereby certify that all statements herein are made on behalf of:

\_\_\_\_\_  
(Name of Corporation, Partnership or Person submitting Bid)

Select one of the following:

1. A corporation organized and existing under the laws of the State of \_\_\_\_\_, or
2. A partnership consisting of \_\_\_\_\_, or
3. A person conducting business as \_\_\_\_\_;

Of the City, Village, or Town of \_\_\_\_\_ of the State of \_\_\_\_\_.

I have examined and carefully prepared this Bid from the associated Construction Documents and have checked the same in detail before submitting this Bid; that I have full authority to make such statements and submit this Bid in (its) (their) (my) behalf; and that the said statements are true and correct. In signing this Bid, we also certify that we have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a Bid; that this Bid has been independently arrived at without collusion with any other bidder, competitor, or potential competitor; that this Bid has not been knowingly disclosed prior to the Bids Due Date to another bidder or competitor; that the above statement is accurate under penalty of perjury.

The undersigned is qualified as a Best Value Contractor or has proven their exemption. Qualification or exemption shall be complete before Bid Due Date / Time.

The undersigned further agrees to honor the Base Bid and the Alternate Bid(s) for sixty (60) calendar days from date of Award of Contract.

**SIGNATURE:** \_\_\_\_\_  
(Bid is invalid without signature)

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

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

Telephone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_

END OF SECTION

**THIS PAGE IS FOR BIDDERS' REFERENCE**  
**DO NOT SUBMIT WITH BID FORM.**

**BID CHECK LIST:**

These items **must** be included with Bid:

Bid Form

Bid Bond

Fair Labor Practices Certification

**DANE COUNTY BEST VALUE CONTRACTING QUALIFICATION**

General Contractors & all Subcontractors must be qualified as a Best Value Contractor with the Dane County Public Works Engineering Division. Qualification & listing is not permanent & must be renewed every 24 months. Complete a *Best Value Contracting Application* online at:

[pwht.countyofdane.com/bvc\\_application.aspx](http://pwht.countyofdane.com/bvc_application.aspx)

**DANE COUNTY VENDOR REGISTRATION PROGRAM**

All bidders are strongly encouraged to be a registered vendor with Dane County. Registering allows vendors an opportunity to receive notifications for RFBs & RFPs issued by the County and provides the County with up-to-date company contact information. Complete a new form or renewal online at:

[danepurchasing.com/Account/Login?](http://danepurchasing.com/Account/Login?)

SECTION 00 43 36

PROPOSED SUBCONTRACTORS FORM

General Contractor Name: \_\_\_\_\_ Bid No: \_\_\_\_\_

Instructions:

1. Complete all information in table below.
2. Include this Form with signed Construction Contract (Section 00 52 96).
3. General contractors & subcontractors must be qualified & registered as Best Value Contractor (Dane County Ordinances, Chapter 40.07). General contractors must be qualified & registered before bids are due. Subcontractors must be qualified & registered before returning signed Construction Contract to Dane County Public Works. No contractor can perform work without being qualified & registered.
4. Sample Best Value Contracting Application is included in this RFB package for informational purposes; fill out form online ([publicworks.countyofdane.com/bvc](http://publicworks.countyofdane.com/bvc)).

SUBCONTRACTOR NAME	ADDRESS & PHONE NO.	DIVISION OF WORK	\$\$ AMOUNT OF CONTRACT

Check box if there is another form page attached to include additional subcontractors.

The undersigned, for and on behalf of the General Contractor named herein, certifies the information on this Form is accurate.

\_\_\_\_\_  
Officer or Authorized Agent Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed or Typed Name and Title



**COUNTY OF DANE**

**PUBLIC WORKS CONSTRUCTION CONTRACT**

Contract No. \_\_\_\_\_ Bid No. 320032

Authority: 2021 RES - \_\_\_\_\_

**THIS CONTRACT**, made and entered into as of the date by which authorized representatives of both parties have affixed their signatures, by and between the County of Dane (hereafter referred to as "COUNTY") and \_\_\_\_\_ (hereafter, "CONTRACTOR"), and

**WITNESSETH:**

**WHEREAS**, COUNTY, whose address is c/o Deputy Public Works Director, 1919 Alliant Energy Center Way, Madison, WI 53713, desires to have CONTRACTOR provide UW-Extension Lobby Remodel ("the Project"); and

**WHEREAS**, CONTRACTOR, whose address is \_\_\_\_\_

\_\_\_\_\_ is able and willing to construct the Project, in accordance with the Construction Documents;

**NOW, THEREFORE**, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which is acknowledged by each party for itself, COUNTY and CONTRACTOR do agree as follows:

1. CONTRACTOR agrees to construct, for the price of \$\_\_\_\_\_ the Project and at the CONTRACTOR'S own proper cost and expense to furnish all materials, supplies, machinery, equipment, tools, superintendence labor, insurance, and other accessories and services necessary to complete the Project in accordance with the conditions and prices stated in the Bid Form, General Conditions of Contract, the drawings which include all maps, plats, plans, and other drawings and printed or written explanatory matter thereof, and the specifications therefore as prepared by Dimension IV (hereinafter referred to as "the Architect / Engineer"), and as enumerated in the Project Manual Table of Contents, all of which are made a part hereof and collectively evidence and constitute the Contract.
2. COUNTY agrees to pay the CONTRACTOR in current funds for the performance of the Contract subject to additions and deductions, as provided in the General Conditions of Contract, and to make payments on account thereof as provided in Article entitled, "Payments to Contractor" of the General Conditions of Contract.
3. During the term of this Contract, CONTRACTOR agrees to take affirmative action to ensure equal employment opportunities. The CONTRACTOR agrees in accordance with Wisconsin Statute 111.321 and Chapter 19 of the Dane County Code of Ordinances not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs. Such equal opportunity shall include, but not be limited to, the following: employment,

upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation. CONTRACTOR agrees to post in conspicuous places, available to all employees and applicants for employment, notices setting forth the provisions of this paragraph.

4. CONTRACTOR shall file an Affirmative Action Plan with the Dane County Contract Compliance Specialist in accord with Chapter 19 of the Dane County Code of Ordinances. CONTRACTOR must file such plan within fifteen (15) business days of the effective date of this Contract. During the term of this Contract CONTRACTOR shall also provide copies of all announcements of employment opportunities to COUNTY'S Office of Equity & Inclusion, and shall report annually the number of persons, by race, ethnicity, gender, and disability status, which apply for employment and, similarly classified, the number hired and number rejected.

5. During the term of this Contract, all solicitations for employment placed on CONTRACTOR'S behalf shall include a statement to the effect that CONTRACTOR is an "Equal Opportunity Employer".

6. CONTRACTOR agrees to furnish all information and reports required by COUNTY'S Contract Compliance Specialist as the same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and the provisions of this Contract.

7. This Contract is intended to be a Contract solely between the parties hereto and for their benefit only. No part of this Contract shall be construed to add to, supplement, amend, abridge or repeal existing rights, benefits or privileges of any third party or parties including, but not limited to, employees of either of the parties.

8. The entire agreement of the parties is contained herein and this Contract supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that the express terms of this Contract shall not be amended in any fashion except in writing, executed by both parties.

9. CONTRACTOR must be qualified as a Best Value Contractor or have proven their exemption with Dane County Public Works Engineering Division before Bid Due Date / Time. All contractors and subcontractors must be qualified as a Best Value Contractor or have proven their exemption to perform any work under this Contract.

**IN WITNESS WHEREOF**, COUNTY and CONTRACTOR, by their respective authorized agents, have caused this Contract and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

\* \* \* \* \*

**FOR CONTRACTOR:**

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed or Typed Name and Title

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed or Typed Name and Title

**SAMPLE**  
NOTE: If CONTRACTOR is a corporation, Secretary should attest. In accordance with IRS Regulations, unincorporated entities are required to provide either their Social Security or Employer Number in order to receive payment for services rendered.

\* \* \* \* \*

This Contract is not valid or effectual for any purpose until approved by the appropriate authority designated below, and no work is authorized until the CONTRACTOR has been given notice to proceed by COUNTY'S Deputy Public Works Director.

**FOR COUNTY:**

\_\_\_\_\_  
Joseph T. Parisi, County Executive Date

\_\_\_\_\_  
Scott McDonell, County Clerk Date



# AIA<sup>®</sup> Document A310<sup>™</sup> – 2010

## Bid Bond

**CONTRACTOR:**

(Name, legal status and address)

**SURETY:**

(Name, legal status and principal place of business)

**OWNER:**

(Name, legal status and address)

**BOND AMOUNT:****PROJECT:**

(Name, location or address, and Project number, if any)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_

_____	(Contractor as Principal)	(Seal)
(Witness)	_____	(Title)
_____	(Surety)	(Seal)
(Witness)	_____	(Title)

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

# AIA<sup>®</sup> Document A312<sup>™</sup> – 2010

## Performance Bond

**CONTRACTOR:**

*(Name, legal status and address)*

**SURETY:**

*(Name, legal status and principal place of business)*

**OWNER:**

*(Name, legal status and address)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

**CONSTRUCTION CONTRACT**

Date:

Amount:

Description:

*(Name and location)*

**BOND**

Date:

*(Not earlier than Construction Contract Date)*

Amount:

Modifications to this Bond:  None  See Section 16

**CONTRACTOR AS PRINCIPAL**

Company: *(Corporate Seal)*

**SURETY**

Company: *(Corporate Seal)*

Signature: \_\_\_\_\_

Name \_\_\_\_\_  
and Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Name \_\_\_\_\_  
and Title: \_\_\_\_\_

*(Any additional signatures appear on the last page of this Performance Bond.)*

*(FOR INFORMATION ONLY — Name, address and telephone)*

**AGENT or BROKER:**

**OWNER'S REPRESENTATIVE:**

*(Architect, Engineer or other party:)*

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

#### § 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

Sample

*(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)*

**CONTRACTOR AS PRINCIPAL**

**SURETY**

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

*(Corporate Seal)*

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

*(Corporate Seal)*

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

**CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.**



# AIA® Document A312™ – 2010

## Payment Bond

**CONTRACTOR:**

*(Name, legal status and address)*

**SURETY:**

*(Name, legal status and principal place of business)*

**OWNER:**

*(Name, legal status and address)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312-2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

**CONSTRUCTION CONTRACT**

Date:

Amount:

Description:

*(Name and location)*

**BOND**

Date:

*(Not earlier than Construction Contract Date)*

Amount:

Modifications to this Bond:  None  See Section 18

**CONTRACTOR AS PRINCIPAL**

Company: *(Corporate Seal)*

**SURETY**

Company: *(Corporate Seal)*

Signature: \_\_\_\_\_

Name \_\_\_\_\_  
and Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Name \_\_\_\_\_  
and Title: \_\_\_\_\_

*(Any additional signatures appear on the last page of this Payment Bond.)*

*(FOR INFORMATION ONLY — Name, address and telephone)*

**AGENT or BROKER:****OWNER'S REPRESENTATIVE:**

*(Architect, Engineer or other party:)*

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

#### § 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.



§ 16.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

*(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)*

**CONTRACTOR AS PRINCIPAL**

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

(Corporate Seal)

**SURETY**

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

(Corporate Seal)

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

**CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.**

SECTION 00 72 12

GENERAL CONDITIONS OF CONTRACT

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## **1. CONSTRUCTION DOCUMENTS**

- A. Construction Documents, listed in Table of Contents of this Specification volume shall form part of this Contract and provisions of Construction Documents shall be as binding upon parties as if they were fully set forth in Contract itself.
- B. These shall also be considered as part of Construction Documents: Addenda, including additions and modifications incorporated in such addenda before execution of Contract; requests for information; construction bulletins; change orders; and written interpretations by Architect / Engineer or Public Works Project Manager that are made after execution of Contract.
- C. Construction Documents are complementary, and what is required by one shall be as binding as if required by all. Intent of Construction Documents is to include all labor, materials and equipment necessary for proper execution of the Work.

## **2. DEFINITIONS**

- A. These terms as used in this Contract are respectively defined as follows:
  - 1. All uses of term “County” in Construction Documents shall mean Dane County.
  - 2. All uses of term “Department” in Construction Documents shall mean Department of Public Works, Highway & Transportation, which is a unit of Dane County government. Department is County agency overseeing Contract with Contractor.
  - 3. Public Works Project Manager is appointed by and responsible to Department. Public Works Project Manager has authority to act on behalf of Department and will sign change orders, payment requests and other administrative matters related to projects.
  - 4. Public Works Project Manager is responsible for supervision, administration and management of field operations involved in construction phase of this Work.
  - 5. Term “Work” includes all labor, equipment and materials necessary to produce project required by Construction Documents.
  - 6. Term “Substantial Completion” is date when project or specified area of project is certified by Architect / Engineer that construction is sufficiently completed, in accordance with Construction Documents, and as modified by any subsequent changes agreed to by parties, so that County may occupy project or specified area of project for use for which it was intended subject to permit approval for occupancy.
  - 7. Contractor is person, firm, or corporation with whom County makes Contract. Though multiple contracts may be involved, Construction Documents treat them throughout as if each were of singular number.

## **3. ADDITIONAL INSTRUCTIONS AND DRAWINGS**

- A. Contractor may be furnished additional instructions and detail drawings as necessary to carry out the Work included in Contract. Additional drawings and instructions thus supplied to Contractor will coordinate with Construction Documents and will be so prepared that they can be reasonably interpreted as part thereof. Contractor shall carry out the Work in accordance with additional detail drawings and instructions.

#### **4. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

- A. Unless otherwise specified, Contractor shall submit three (3) copies of all Shop Drawings for each submission, until receiving final approval. After final approval, provide five (5) additional copies for distribution and such other copies as may be required.
- B. Contractor shall submit, on an on-going basis and as directed, Product Data such as brochures that shall contain catalog cuts and specifications of all furnished mechanical and electrical equipment. After Architect / Engineer's approval, one (1) copy shall remain in Architect / Engineer's file, one (1) kept at Department's office and one (1) kept at job site by Contractor for reference purposes.
- C. Samples shall consist of physical examples furnished by Contractor in sufficient size and quantity to illustrate materials, equipment or workmanship, and to establish standards to compare the Work.
  - 1. Submit Samples in sufficient quantity (minimum of two (2)) to permit Architect / Engineer to make all necessary tests and of adequate size showing quality, type, color range, finish, and texture. Label each Sample stating material, type, color, thickness, size, project name, and Contractor's name.
  - 2. Submit transmittal letter requesting approval, and prepay transportation charges to Architect / Engineer's office on samples forwarded.
  - 3. Materials installed shall match approved Samples.
- D. Contractor shall review Shop Drawings and place their dated stamp thereon to evidence their review and approval and shall submit with reasonable promptness and in orderly sequence to cause no delay in the Work or in work of any other contractor. At time of submission, Contractor shall inform Architect / Engineer in writing of any deviation in Shop Drawings or Samples from requirements of Construction Documents. Architect / Engineer will not consider partial lists.
- E. Architect / Engineer will review and approve or reject Shop Drawings with reasonable promptness to cause no delay. Architect / Engineer's approval shall not relieve Contractor from responsibility for errors or omissions in Shop Drawings.
- F. Contractor shall not commence any work requiring Shop Drawing, Product Data or Sample submission until Architect / Engineer has approved submission. All such work shall be in accordance with approved Shop Drawings, Product Data and Samples.
- G. Contractor shall keep on site of the Work, approved or conformed copy of Shop Drawings and shall at all times give Department access thereto.
- H. By stamping and submitting Shop Drawings, Product Data and Samples, Contractor thereby represents that he or she has or will determine and verify all field measurements, field construction criteria, materials, catalog numbers, and similar data and that he or she has checked and coordinated each Shop Drawing, Product Data and Sample with requirements of the Work and of Construction Documents. Architect / Engineer shall return without examination, Shop Drawings, Product Data and Samples not so noted.
- I. All Shop Drawings from any one Contractor should be numbered consecutively and on cover sheet shall bear name and location of project, name of Contractor, date of submittal and date of each correction or revision and associated Specification section and page number.

## **5. CUTTING AND PATCHING**

- A. Contractor shall be responsible for all cutting, fitting or patching required to complete the Work or to make its parts fit together properly.
- B. Contractor shall not damage or endanger portion of the Work or fully or partially completed construction of County or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. Contractor shall not cut or otherwise alter such construction by County or separate contractor except with written consent of County and of such separate contractor; such consent shall not be unreasonably withheld. Contractor shall not withhold unreasonably from County or separate contractor, Contractor's consent to cutting or otherwise altering the Work.

## **6. CLEANING UP**

- A. Contractor shall keep premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under Contract. Contractor shall remove from and about the Work waste materials, rubbish, Contractor's tools, construction equipment, machinery, and surplus materials at completion of the Work. Contractor shall maintain streets and sidewalks around the Work site in clean condition. Contractor shall remove all spillage and prevent tracking of spillage arising from performance of the Work, into, out of, and within the Work site. Contractor shall establish regular maintenance program of sweeping, vacuuming and / or hosing to minimize accumulation of dirt and dust upon such areas.
- B. If Contractor fails to clean up as directed in Construction Documents, County may do so and shall charge Contractor cost thereof.
- C. Contractor shall be responsible for broken windows and glass, and at completion of the Work shall replace such damaged or broken windows and glass. After replacing damaged or broken windows and glass, Contractor shall remove all labels, wash and polish both sides of all windows and glass.
- D. In addition to general cleaning (sweeping, vacuuming and / or hosing, as is appropriate to work surface), Contractor shall perform following final cleaning for all trades at completion of the Work:
  - 1. Remove temporary protections;
  - 2. Remove marks, stains, fingerprints and other soil or dirt from painted, decorated and finished woodwork and wall surfaces;
  - 3. Remove spots, plaster, soil and paint from ceramic tile, marble and other finished materials, and wash or wipe clean;
  - 4. Clean fixtures, cabinet work and equipment, removing stains, paint, dirt and dust, and leave same in undamaged, new condition;
  - 5. Clean aluminum in accordance with recommendations of manufacturer; and
  - 6. Clean resilient floors thoroughly with well-rinsed mop containing only enough moisture to clean off any surface dirt or dust and buff dry by machine to bring surfaces to sheen.

## **7. USE OF SITE**

- A. Contractor shall provide County and Architect / Engineer access to the Work under all circumstances.

- B. Contractor shall confine operations at site to areas permitted by County, law, ordinance, permits and Construction Documents and shall not unreasonably encumber site with materials or equipment. Contractor shall assure free, convenient, unencumbered, direct and safe access to all properties adjacent to the Work for County, its employees, invitees and guests.

## **8. MATERIALS AND WORKMANSHIP**

- A. Contractor shall perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, necessary to complete the Work required by this Contract, within time specified, in accordance with provisions of Construction Documents.
- B. All equipment and materials incorporated in the Work covered by this Contract are to be new; use recycled and / or recovered materials to extent that such use is technically and economically feasible. Recovered materials are products recovered from solid waste in form identical to original form for use that is same as, or similar to original use. Recycled materials are products manufactured from solid waste.
- C. If requested, Contractor shall furnish satisfactory evidence as to kind and quality of construction materials proposed or used. Contractor shall furnish to Architect / Engineer, for approval, manufacturer name and model, performance capacities and other pertinent information of machinery, mechanical, electrical or other types of equipment, which Contractor plans to install.
- D. If not otherwise provided, materials and labor called for in this Contract shall be provided and performed in accordance with established practice and standards recognized by Architects, Engineers, Department, and construction industry.
- E. Reference to “Standard” specifications of any association or manufacturer, or codes of County authorities, intends most recent printed edition or catalog in effect on date that corresponds with date of Construction Documents.
- F. Whenever reference is made in Specifications that work shall be “performed”, “applied”, in accordance with “manufacturer’s directions or instructions”, Contractor to whom those instructions are directed shall furnish three (3) printed copies of such instructions to Architect / Engineer before execution of the Work.

## **9. CONTRACTOR’S TITLE TO MATERIALS**

- A. Contractor or any subcontractor shall not purchase materials or supplies for the Work subject to any chattel mortgage or under conditional sale contract or other agreement by which seller retains interest. Contractor warrants that all materials and supplies used in the Work are free from all liens, claims or encumbrances and Contractor has good title to them.

## **10. “OR EQUAL” CLAUSE**

- A. Whenever equipment or materials are identified on Drawings or in Specifications by reference to manufacturer’s or vendor’s name, trade name, catalog number, and other identifying information, it is intended to establish standards; and any equipment or material of other manufacturers and vendors which will perform adequately duties imposed by general design will be considered equally accepted provided equipment or material so proposed is, in opinion of Architect / Engineer, of equal substance and function. Architect / Engineer and Department shall provide written approval before Contractor may purchase or install it.

- B. Equipment or materials of manufacturers, other than those named, may be used only upon following conditions:
1. That, in opinion of Architect / Engineer and Department, proposed material or equipment item is fully equal or superior (in design, materials, construction, workmanship, performance, finish, etc.) to named item. No compromise in quality level, however small, is acceptable.
  2. That, in substituting materials or equipment, Contractor assumes responsibility for any changes in system or for modifications required in adjacent or related work to accommodate such substitution despite Architect / Engineer's and Department's approval, and all costs growing out of approval of "or equal" items shall be responsibility of Contractor. No extra costs resulting from such approval shall become responsibility of Department, Architect / Engineer or any other separate Contractor.
  3. It shall be understood that use of materials or equipment other than those specified, or approved equal by Architect / Engineer and Department, shall constitute violation of Contract, and that Architect / Engineer and Department shall have right to require removal of such materials or equipment and their replacement with specified materials or equipment at Contractor's expense.
  4. Product and manufacturer named first in Specifications or on information shown on Drawings is basis of selection of manufactured items and equipment, particularly mechanical equipment. In using other than first named products or manufacturers, including those specified as additionally approved or acceptable, Contractor assumes responsibility for any changes in system and for modifications in any work required to accommodate them. Architect / Engineer's approval of such additionally acceptable products or manufacturers, either in Specifications or in Addendum, does not relieve Contractor from obligation to coordinate such optional products with other Contractors, whose work may be affected by them, and to pay all additional costs resulting from their inclusion into the Work. Contractor's liability shall include payment of Architect / Engineer's fees for any additional services made necessary by or directly connected to such product changes. No extra costs resulting from such changes shall become responsibility of Department, Architect / Engineer or any other separate Contractor.
- C. No request for approval of "or equal" materials will be entertained except from Contractor. Identify any request for substitution as substitution on Contractor's letter of transmittal and give reasons for substitution. Department may in its sole discretion allow substitutions of materials.

## **11. PATENTS AND ROYALTIES**

- A. If Contractor uses any design, device or material covered by letters, patent or copyright, it is mutually agreed and understood, that, without exception, contract prices shall include all royalties or costs arising from use of such design, device or materials, in any way involved in the Work.
- B. Contractor shall indemnify and save harmless County from any and all claims for infringement by reason of use of such patent or copyright in connection with the Work agreed to be performed under this Contract, and shall indemnify County for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during prosecution of the Work or after completion of the Work.

## **12. SURVEYS, PERMITS, REGULATIONS AND TAXES**

- A. Department will furnish to Contractor all site, topography and property surveys necessary for execution of the Work.
- B. Contractor shall procure all permits, licenses and approvals necessary for execution of this Contract.
- C. Contractor shall give all notices and comply with all State of Wisconsin, Federal and local laws, codes, rules and regulations relating to performance of the Work, protection of adjacent property, and maintenance of passageways, guard fences or other protective facilities.
- D. Contractor does not need to pay State and local sales & use taxes. See Wisconsin Statute 77.54 (9m).
- E. Contractor shall promptly notify Architect / Engineer of any variances of Drawings or Specifications with that of any State of Wisconsin, federal or local law, code, rule or regulation. Upon such notification, Architect / Engineer will require correction of variance to comply with applicable law, code, rule or regulation at no additional cost to Contractor.
- F. Work under this Contract shall comply with all applicable State of Wisconsin, Federal and local laws, codes and regulations.
- G. Contractor shall pay charges for water, sewer and other utility connections made by municipalities where required by Specifications.

## **13. CONTRACTOR'S OBLIGATIONS AND SUPERINTENDENCE**

- A. Contractor shall provide and pay for all materials, labor, tools, equipment, transportation and superintendence necessary to execute, complete and deliver the Work within specified time. Contractor agrees to secure at their own expense all personnel necessary to carry out the Work. Such personnel shall not be deemed County employees nor shall they have or be deemed to have any direct contractual relationship with County.
- B. Performance of any work necessary after regular working hours, on Sundays or Legal Holidays shall be without additional expense to County. Performance of any work at site at other than normal working hours must be coordinated with Public Works Project Manager.
- C. Contractor shall furnish, erect, maintain and remove such temporary works as may be required.
- D. Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of Construction Documents.
- E. At the Work site, Contractor shall give personal superintendence to the Work or shall employ construction superintendent or foreman, experienced in character of work covered by Contract, who shall have full authority to act for Contractor. Understand that such superintendent or foreman shall be acceptable to Architect / Engineer and Department.
- F. Remove from project or take other corrective action upon notice from Architect / Engineer or Department for Contractor's employees whose work is considered by Architect / Engineer or Department to be unsatisfactory, careless, incompetent, unskilled or otherwise objectionable.



- G. Contractor and subcontractors shall be required to conform to Labor Laws of State of Wisconsin and various acts amendatory and supplementary thereto and to other laws, ordinances and legal requirements applicable to the Work.
- H. Presence and observation of the Work by Architect / Engineer or Public Works Project Manager shall not relieve Contractor of any obligations.

#### **14. WEATHER CONDITIONS**

- A. In event of temporary suspension of work, or during inclement weather, or whenever Architect / Engineer shall direct, Contractor shall, and shall cause subcontractors to protect carefully all work and materials against damage or injury from weather. If, in opinion of Architect / Engineer or Department, any work or materials that have been damaged or injured due to failure on part of Contractor or any subcontractors so to protect the Work, such materials shall be removed and replaced at expense of Contractor.

#### **15. PROTECTION OF WORK AND PROPERTY**

- A. Contractor shall at all times safely guard County's property from injury or loss in connection with this Contract. Contractor shall at all times safely guard and protect the Work, and adjacent property, from damage. Contractor shall replace or make good any such damage, loss or injury unless such is caused directly by errors contained in Contract, or by County, or County's duly authorized representative.
- B. Contractor may act diligently, without previous instructions from Architect / Engineer and / or Department, in emergency that threatens loss or injury of property, or safety of life. Contractor shall notify Architect / Engineer and / or Department immediately thereafter. Promptly submit any claim for compensation by Contractor due to such extra work to Architect / Engineer and / or Department for approval as provided for in Article 18 herein.

#### **16. INSPECTION AND TESTING OF MATERIALS**

- A. Authorized representatives and agents of County government shall have access at all times to the Work wherever it is in preparation or progress and Contractor shall provide facilities for such access and for inspection.
- B. Should it be considered necessary or advisable at any time before final acceptance of the Work to make examination of work already completed, by removing or tearing out same, Contractor shall upon request, promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any aspect, due to fault of Contractor or subcontractors thereof, Contractor shall assume all expenses of such examination and of satisfactory reconstruction. Contractor will be reimbursed for such examination and replacement in accordance with Article 18 - A.3., of these General Conditions of Contract if such work is found to meet requirements of Contract.
- C. If Specifications, Architect / Engineer's, or Public Works Project Manager's instructions require any work to be specially tested or approved, Contractor shall give Architect / Engineer and Public Works Project Manager timely notice of its readiness for testing or inspection. Test all materials and equipment requiring testing in accordance with accepted or specified standards, as applicable. Architect / Engineer shall recommend laboratory or inspection agency and Department will select and pay for all initial laboratory inspection

services. Should retesting be required, due to failure of initial testing, cost of such retesting shall be borne by Contractor.

- D. Cost of any testing performed by manufacturers or Contractor for substantiating acceptability of proposed substitution of materials and equipment, or necessary conformance testing in conjunction with manufacturing processes or factory assemblage, shall be borne by Contractor or manufacturer responsible.

## **17. REPORTS, RECORDS AND DATA**

- A. Contractor shall submit to Architect / Engineer and Public Works Project Manager such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, invoices, records and other data as either may request concerning work performed or to be performed under this Contract.

## **18. CHANGES IN THE WORK**

- A. Make no changes, except in cases of emergency, in the Work covered by approved Construction Documents without having prior written approval of Department. Charges or credits for the Work covered by approved change shall be determined by one of these methods:
1. Unit bid prices previously approved.
  2. Agreed lump sum based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.
    - c) Ownership or rental cost of construction tools and equipment during time of use on extra work.
    - d) Power and consumable supplies for operation of power equipment.
    - e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.
    - f) Social Security and old age and unemployment contributions.
    - g) Add to cost under (2), fixed fee to be agreed upon, but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force. Fee shall be compensation to cover cost of supervision, overhead, bond, profit and any other general expense.
    - h) On that portion of the Work under (2) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit and any other general expense.
    - i) Department may require correct amount of costs with supporting vouchers; Contractor shall keep and present in such form as directed.
  3. Cost-plus work, with not-to-exceed dollar limit, based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.
    - c) Ownership or rental cost of construction tools and equipment during time of use on extra work. Rental cost cannot exceed fifty percent (50%) replacement value of rented equipment.
    - d) Power and consumable supplies for operation of power equipment.
    - e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.
    - f) Social Security and old age and unemployment contributions.
    - g) To cost under (3), there shall be added fixed fee to be agreed upon but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force.

Fee shall be compensation to cover cost of supervision, overhead, bond, profit, and any other general expense.

- h) On that portion of the Work under (3) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit, and any other general expense.
  - i) Contractor shall keep and present, in such form as directed, correct amount of cost together with such supporting vouchers as may be required by Department.
- B. If Contractor claims that by any instructions given by Architect / Engineer, Department, by drawings or otherwise, regarding performance of the Work or furnishing of material under Contract, involves extra cost, Contractor shall give Department written notice of cost thereof within two (2) weeks after receipt of such instructions and in any event before proceeding to execute work, unless delay in executing work would endanger life or property.
- C. No claim for extra work or cost shall be allowed unless it was done in pursuance of written Change Order from Architect / Engineer and approved by Department, as previously mentioned, and claim presented with payment request submitted after changed or extra work is completed.
- D. Negotiation of cost for change in the Work shall not be cause for Contractor to delay prosecution of the Work if Contractor has been authorized in writing by Public Works Project Manager to proceed.

## **19. EXTRAS**

- A. Without invalidating Contract, Department may order extra work or make changes by altering, adding to or deducting from the Work, contract sum being adjusted in accordance with Article 18 herein.

## **20. TIME FOR COMPLETION**

- A. Contractor agrees that the Work shall be prosecuted regularly and diligently and complete the Work as stated in Construction Documents.

## **21. CORRECTION OF WORK**

- A. All work, all materials whether incorporated in the Work or not, and all processes of manufacture shall at all times and places be subject to inspection of Architect / Engineer and Public Works Project Manager who shall be judge of quality and suitability of the Work, materials, and processes of manufacture for purposes for which they are used. Should they fail to meet Architect / Engineer's and Public Works Project Manager's approval they shall be reconstructed, made good, replaced or corrected, by Contractor at Contractor's expense. Immediately remove all rejected material from site.
- B. If Contractor defaults or neglects to carry out the Work in accordance with Construction Documents or fails to perform any provision of Contract, Department may, after ten (10) business days' written notice to Contractor and without prejudice to any other remedy County may have, make good such deficiencies. In such case, appropriate Change Order shall be issued deducting from Contractor's payments then or thereafter, cost of correcting such deficiencies, including cost of Architect / Engineer's additional services made necessary by such default, neglect or failure.

## **22. SUBSURFACE CONDITIONS FOUND DIFFERENT**

- A. If Contractor encounters subsurface or latent conditions at site materially differing from those shown on Drawings or indicated in Specifications, Contractor shall immediately give notice to Architect / Engineer and Public Works Project Manager of such conditions before they are disturbed. Architect / Engineer will thereupon promptly investigate conditions, and if Architect / Engineer finds that they materially differ from those shown on Drawings or indicated in Specifications, Architect / Engineer will at once make such changes as necessary, any increase or decrease of cost resulting from such changes to be adjusted in manner provided in above Article 18 entitled "Changes in the Work".

## **23. RIGHT OF DEPARTMENT TO TERMINATE CONTRACT**

- A. In event that any provisions of this Contract are violated by Contractor or by any subcontractors, County may serve written notice upon Contractor and Surety of its intention to terminate Contract, such notice to contain reasons for such intention to terminate Contract, and unless within ten (10) business days after serving of such notice upon Contractor, such violation or delay shall cease and satisfactory arrangement or correction be made, Contract shall, upon expiration of said ten (10) business days, cease and terminate.
- B. In event of any such termination, County shall immediately serve notice thereof upon Surety and Contractor, and Surety shall have right to take over and perform Contract subject to County's approval; provided, however, that if Surety does not commence performance thereof within ten (10) business days from date of mailing to such Surety of notice of termination, County may take over the Work and prosecute same to completion by contract, or by force account, at expense of Contractor; Contractor and Surety shall be liable to County for any excess cost occasioned County thereby, and in such event County may take possession of and utilize in completing the Work, such materials and equipment as may be on the Work site and therefore necessary.

## **24. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES**

- A. Contractor shall be responsible for Construction Schedule and coordination. Immediately after execution and delivery of Contract and before making first payment, Contractor shall notify all subcontractors to furnish all required information to develop Construction Schedule. Contractor and all subcontractors associated with the Work shall furnish following information from each Division of Specifications:
1. List of construction activities;
  2. Start, finish and time required for completion of each activity;
  3. Sequential relationships between activities;
  4. Identify all long lead-time items, key events, meetings or activities such as required submittals, fabrication and delivery, procurement of materials, installation and testing;
  5. Weekly definition of extent of work and areas of activity for each trade or Subcontract; and
  6. Other information as determined by Public Works Project Manager.
- B. In addition to above requested items, Contractor shall request delivery dates for all County-furnished equipment, materials or labor. This shall include any work handled by Department under separate contracts such as asbestos abatement, air and water balancing, etc. Indicate on Construction Schedule these associated delivery and installation dates.
- C. Progress Reporting:

1. Contractor shall update and publish Construction Schedule on monthly basis. Revisions to Schedule shall be by Contractor and made in same detail as original Schedule and accompanied by explanation of reasons for revision; and shall be subject to approval by Department.
  2. Failure of Contractor to keep Schedule in updated format shall result in County hiring firm specializing in construction schedule development and deducting those costs associated with updating process from payments due Contractor.
  3. Contractor shall submit show actual percentage of each activity completed, estimated future progress, and anticipated completion time.
- D. Responsibility for timely completion requires:
1. Contractor and subcontractors understand that performance of each is interdependent upon performance of others.
  2. Whenever it becomes apparent from current schedule, that phasing or progress completion dates will not be met, Contractor must take some or all following actions at no additional cost to County:
    - a) Increase construction labor in such quantities and crafts as will eliminate backlog of work.
    - b) Increase number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination of foregoing to eliminate backlog of work.
    - c) Reschedule work (yet remain in conformance with Drawings and Specifications).
  3. Prior to proceeding with any of above actions, Contractor shall notify Public Works Project Manager.
- E. Maintain current Construction Schedule at all times. Revise Construction Schedule in same detail as original and accompany with explanation of reasons for revision. Schedule shall be subject to approval by Architect / Engineer and Public Works Project Manager.

## **25. PAYMENTS TO CONTRACTOR**

- A. Contractor shall provide:
1. Detailed estimate giving complete breakdown of contract price by Specification Division; and
  2. Periodic itemized estimates of work done for purpose of making partial payments thereon.
- B. Submit these estimates for approval first to Architect / Engineer, then to Public Works Project Manager. Costs employed in making up any of these schedules are for determining basis of partial payments and not considered as fixing basis for additions to or deductions from Contract price.
- C. County will make partial payments to Contractor for value, proportionate to amount of Contract, of all labor and material incorporated in the Work during preceding calendar month upon receipt of Application and Certificate for Payment form from Architect / Engineer and approval of Department.
- D. Contractor shall submit for approval first to Architect / Engineer, and then to Public Works Project Manager all Application and Certificate for Payment forms. If requested, Application and Certificate for Payment shall be supported by such additional evidence as may be required, showing Contractor's right to payment claimed.

- E. Application and Certificate for Payment for preparatory work and materials delivered and suitably stored at site to be incorporated into the Work at some future period, will be given due consideration. Requesting payment for materials stored off site, may be rejected, however, if deemed essential for reasons of job progress, protection, or other sufficient cause, requests will be considered, conditional upon submission by Contractor of bills of sale, photographs and such other procedures as will adequately protect County's interest such as storage in bonded warehouse with adequate coverage. If there is any error in payment, Contractor is obligated to notify Department immediately, but no longer than ten (10) business days from receipt of payment.
- F. Payments by County will be due within forty-five (45) business days after receipt by Department of Application and Certificate for Payment.
- G. County will retain five percent (5%) of each Application and Certificate for Payment until final completion and acceptance of all the Work covered by Contract. However, anytime after fifty percent (50%) of the Work has been furnished and installed at site, County will make remaining payments in full if Architect / Engineer and Public Works Project Manager find that progress of the Work corresponds with Construction Schedule. If Architect / Engineer and Public Works Project Manager find that progress of the Work does not correspond with Construction Schedule, County may retain up to ten percent (10%) of each Application and Certificate for Payment for the Work completed.
- H. All material and work covered by partial payments made shall become sole property of County, but this provision shall not be construed as relieving Contractor from sole responsibility for care and protection of materials and work upon which payments have been made, or restoration of any damaged work, or as waiver of right of County to require fulfillment of all of terms of Contract.
- I. County will make final payment within sixty (60) calendar days after final completion of the Work, and will constitute acceptance thereof.
- J. County may make payment in full, including retained percentages and less authorized deductions, upon completion and acceptance of each Division where price is stated separately in Contract.
- K. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit to this Department, as requested and with final application for payment for work under said contract, affidavit(s) as required to prove that all debts and claims against this Work are paid in full or otherwise satisfied, and give final evidence of release of all liens against the Work and County.

## **26. WITHHOLDING OF PAYMENTS**

- A. County, after having served written notice on said Contractor, may either pay directly any unpaid bills of which Department has written notice, or withhold from Contractor's unpaid compensation sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged; whereupon, payment to Contractor shall be resumed in accordance with terms of this Contract, but in no event shall these provisions be construed to impose any obligations upon County to either Contractor or Contractor's Surety.
- B. In paying any unpaid bills of Contractor, County shall be deemed agent of Contractor, and any payment so made by County, shall be considered as payment made under Contract by

County to Contractor and County shall not be liable to Contractor for any such payment made in good faith.

- C. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from all claims growing out of lawful demands of subcontractors, laborers, workers, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in performance of this Contract.
- D. At Department's request, Contractor shall furnish satisfactory evidence that all obligations of nature designated above have been paid, discharged or waived.

## **27. ACCEPTANCE OF FINAL PAYMENT AS RELEASE**

- A. Making of final payment shall constitute waiver of all claims by County except those arising from:
  - 1. Unsettled lien;
  - 2. Faulty or defective work appearing after substantial completion;
  - 3. Failure of the Work to comply with requirements of Construction Documents; or
  - 4. Terms of any special guarantees required by Construction Documents.
- B. Acceptance of final payment shall constitute waiver of all claims by Contractor.

## **28. PAYMENTS BY CONTRACTOR**

- A. Contractor shall pay following not later than fifth (5<sup>th</sup>) business day following each payment received from County:
  - 1. All transportation and utility services rendered;
  - 2. All materials, tools, and other expendable equipment that have been delivered at site of the Work to extent of ninety percent (90%) of cost thereof, and balance of cost thereof when said balance is paid to Contractor; and
  - 3. Each subcontractor, respective amount allowed Contractor because of work performed by subcontractor to extent of subcontractor's interest therein.

## **29. CONTRACT SECURITY**

- A. Contractor shall furnish Performance and Payment Bonds in amount at least equal to one hundred percent (100%) of Contract price as security for faithful performance of this Contract and payment of all persons performing labor on project under this Contract and furnishing materials in connection with this Contract.
- B. Sample Performance and Payment Bonds that Contractor will be required to execute is bound into these Construction Documents. Before construction Contract is consummated, completed Performance and Payment Bonds must be approved by Department.

## **30. ASSIGNMENTS**

- A. Contractor shall not assign whole or any part of this Contract or any moneys due or to become due hereunder without written consent of Department. In case Contractor assigns all or any part of any moneys due or to become due under this Contract, instrument of assignment shall contain clause substantially to effect that it is agreed that right of assignee in and to any moneys due or to become due to Contractor shall be subject to prior claims of all

persons, firms and corporations for services rendered or materials supplied for performance of the Work called for in this Contract.

### **31. MUTUAL RESPONSIBILITY OF CONTRACTORS**

- A. If, through acts of neglect on part of Contractor or any subcontractor shall suffer loss or damage on the Work, Contractor agrees to settle with such subcontractor by agreement or arbitration if such other subcontractor will so settle. If such subcontractor shall assert any claim against County on account of any damage alleged to have been sustained, Department shall notify Contractor, who shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives against any such claim.

### **32. SEPARATE CONTRACTS**

- A. Department may award other contracts for the Work and all Contractors shall fully cooperate with each other and carefully adjust their work to that provided under other contracts as may be directed by Department. No Contractor shall commit or permit any act that will interfere with performance of the Work by any other Contractor.
- B. Contractor shall coordinate the Work with those of other Contractors. Cooperation will be required in arrangement for storage of materials and in detailed execution of the Work. Contractor, including subcontractors, shall keep informed of progress and detail work of others and shall notify Architect / Engineer or Department immediately of lack of progress or defective workmanship on part of others. Failure of Contractor to keep informed of the Work progressing on site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by Contractor of status of the Work as being satisfactory for proper coordination with Contractor's own work.

### **33. SUBCONTRACTS**

- A. Contractor may use services of specialty subcontractors on those parts of the Work that, under normal contracting practices, are performed by specialty subcontractors.
- B. Contractor shall not award any work to any subcontractor without prior approval of Department. Qualifications of subcontractors shall be same as qualifications of Contractor. Request for subcontractor approval shall be submitted to Department fifteen (15) business days before start of subcontractor's work. If subcontractors are changed or added, Contractor shall notify Department in writing.
- C. Contractor shall be as fully responsible to County for acts and omissions of subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for acts and omissions of persons directly employed by Contractor.
- D. Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to Contractor by terms of General Conditions of Contract and other Construction Documents insofar as applicable to work of subcontractors and to give Contractor same power as regards terminating any subcontract that Department may exercise over Contractor under any provision of Construction Documents.
- E. Nothing contained in this Contract shall create any contractual relation between any subcontractor and County.



- F. Contractor shall insert in all subcontracts, Articles 26, 33, 43 and 45, respectively entitled: “Withholding of Payments”, “Subcontracts”, “Affirmative Action Provision and Minority / Women / Disadvantaged Business Enterprises”, and “Minimum Wages”, and shall further require all subcontractors to incorporate physically these same Articles in all subcontracts.

#### **34. PROJECT MANAGER’S AUTHORITY**

- A. Public Works Project Manager shall:
1. Administer and ensure compliance with Construction Documents;
  2. Provide responsible on-site observations of construction and have authority to request work and to stop work whenever necessary to insure proper enforcement of Construction Documents;
  3. Convene and chair project meetings and foreman’s coordination meetings when necessary to coordinate resolution of conflicts between Contractors, Architects, Engineers, Consultants, and Department; and
  4. Check and inspect material, equipment and installation procedures of all trades for proper workmanship and for compliance with Drawings, Specifications and Shop Drawings, permit no material on project site that is not satisfactory and reject work not in compliance with Construction Documents.

#### **35. CONSULTANT’S AUTHORITY**

- A. Architect / Engineer is retained by, and is responsible to Department acting for County.
- B. Architect / Engineer shall determine amount, quality, acceptability, and fitness of several kinds of work and materials that are provided under this Contract and shall decide all questions that may arise in relation to said work and construction thereof.
- C. Architect / Engineer shall decide meaning and intent of any portion of Specifications and of any Drawings where they may be found obscure or be in dispute.
- D. Architect / Engineer shall provide responsible observation of construction. Architect / Engineer has authority to stop the Work whenever such stoppage may be necessary to insure proper execution of Construction Documents.
- E. Architect / Engineer shall be interpreter of conditions of Construction Documents and judge of its performance.
- F. Within reasonable time, Architect / Engineer shall make decisions on all matters relating to progress of the Work or interpretation of Construction Documents.
- G. Architect / Engineer’s decisions are subject to review by Public Works Project Manager.

#### **36. STATED ALLOWANCES**

- A. Stated allowances enumerated in Instructions to Bidders shall cover net cost of materials or equipment, and all applicable taxes. Contractor’s cost of delivery and unloading at site, handling costs on site, labor, installation costs, overhead, profit and any other incidental costs shall be included in Contractor’s bid, but not as part of cash allowance.

- B. Department will solicit at least two (2) bids on materials or equipment for which allowance is stated and select on basis of lowest qualified responsible bid. Contractor will then be instructed to purchase “Allowed Materials”. If actual price for purchasing “Allowed Materials”, including taxes, is more or less than “Cash Allowance”, Contract price shall be adjusted accordingly. Adjustment in Contract price shall not contain any cost items excluded from cash allowance.

### **37. ESTIMATES OF QUANTITIES**

- A. Whenever estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of Construction Documents, they are given for use in comparing bids and right is especially reserved to increase or diminish them as they may be deemed reasonably necessary or desirable by Department to complete the Work included in this Contract, and cost for such increase or diminution shall be adjusted in manner provided for in General Conditions of Contract Article 18 entitled “Changes in the Work”.

### **38. LANDS AND RIGHTS-OF-WAY**

- A. Prior to start of construction, County shall furnish all land and rights-of-way necessary for carrying out and completion of the Work to be performed under this Contract.

### **39. GENERAL GUARANTEE**

- A. Neither final certificate of payment nor any provision in Construction Documents nor partial or entire occupancy of premises by County shall constitute acceptance of work not done in accordance with Construction Documents or relieve Contractor of liability in respect to any expressed warranties or responsibility for faulty materials or workmanship.
  - 1. In no event shall making of any payment required by Contract constitute or be construed as waiver by County of any breach of covenants of Contract or waiver of any default of Contractor and making of any such payment by County while any such default or breach shall exist shall in no way impair or prejudice right of County with respect to recovery of damages or other remedy as result of such breach or default.
- B. Contractor shall remedy and make good all defective workmanship and materials and pay for any damage to other work resulting there from, which appear within period of one (1) year from date of substantial completion, providing such defects are not clearly due to abuse or misuse by County. Department will give notice of observed defects with reasonable promptness.
- C. Guarantee on work executed after certified date of substantial completion will begin on date when such work is inspected and approved by Architect / Engineer’s and Public Works Project Manager.
- D. Where guarantees or warranties are required in sections of Specifications for periods in excess of one (1) year, such longer terms shall apply; however, Contractor’s Performance and Payment Bonds shall not apply to any guarantee or warranty period in excess of one (1) year.

### **40. CONFLICTING CONDITIONS**

- A. Any provision in any of Construction Documents which may be in conflict or inconsistent with any Articles in these General Conditions of Contract or Supplementary Conditions shall be void to extent of such conflict or inconsistency.

- B. In case of ambiguity or conflict between Drawings and Specifications, Specifications shall govern.
- C. Printed dimensions shall be followed in preference to measurements by scale. Large-scale drawings take precedence over small-scale drawings. Dimensions on Drawings and details are subject to field measurements of adjacent work.

#### **41. NOTICE AND SERVICE THEREOF**

- A. Any notice to Contractor from Department relative to any part of this Contract shall be in writing and considered delivered and service thereof completed, when said notice is posted, by certified or registered mail, to Contractor at Contractor's last given address, or delivered in person to said Contractor, or Contractor's authorized representative on the Work.

#### **42. PROTECTION OF LIVES AND HEALTH**

- A. In order to protect lives and health of Contractor's employees under Contract, Contractor shall comply with all pertinent provisions of Wisconsin Administrative Code, Rules of Department of Commerce, relating to Safety and Health.
- B. Contractor alone shall be responsible for safety, efficiency and adequacy of Contractor's tools, equipment and methods, and for any damage that may result from their failure or their improper construction, maintenance or operation.

#### **43. AFFIRMATIVE ACTION PROVISION AND MINORITY / WOMEN / DISADVANTAGED BUSINESS ENTERPRISES**

- A. Affirmative Action Provisions.
  - 1. During term of their Contract, Contractor agrees not to discriminate on basis of race, religion, color, sex, handicap, age, sexual preference, marital status, physical appearance, or national origin against any person, whether recipient of services (actual or potential), employee, or applicant for employment. Such equal opportunity shall include but not be limited to following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). Contractor agrees to post in conspicuous places, these affirmative action standards so as to be visible to all employees, service recipients and applicants for this paragraph. Listing of prohibited bases for discrimination shall not be construed to amend in any fashion state or federal law setting forth additional bases and exceptions shall be permitted only to extent allowable in state or federal law.
  - 2. Contractor is subject to this Article only if Contractor has twenty (20) or more employees and receives \$20,000.00 or more in annual aggregate contracts with County. Contractor shall file and Affirmative Action Plan with Dane County Contract Compliance Specialist in accord with Chapter 19 of Dane County Code of Ordinances. Such plan must be filed within fifteen (15) business days of effective date of this Contract and failure to do so by said date shall constitute ground for immediate termination of Contract by County. Contractor shall also, during term of this Contract, provide copies of all announcements of employment opportunities to County's Office of Equity & Inclusion, and shall report annually number of persons, by race, sex and handicap status, who apply for employment, and, similarly classified, number hired and number rejected.

3. Contact Dane County Contract Compliance Specialist at Dane County Office of Equity & Inclusion, 210 Martin Luther King, Jr. Blvd., Room 356, Madison, WI 53703, 608/266-4192.
  4. In all solicitations for employment placed on Contractor's behalf during term of this Contract, Contractor shall include statement to affect Contractor is "Equal Opportunity Employer". Contractor agrees to furnish all information and reports required by County's Contract Compliance Specialist as same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and provision of this Contract.
- B. Minority / Women / Disadvantaged / Emerging Small Business Enterprises.
1. Chapter 19.508 of Dane County Code of Ordinances is official policy of Dane County regarding utilization of, to fullest extent of, Minority Business Enterprises (MBEs), Women Business Enterprises (WBEs) Disadvantage Business Enterprises (DBEs) and Emerging Small Business Enterprises (ESBEs).
  2. Contractor may utilize MBEs / WBEs / DBEs / ESBEs as subcontractors or suppliers. List of subcontractors will be required of low bidder as stated in this Contract. List shall indicate which are MBEs / WBEs / DBEs / ESBEs and percentage of subcontract awarded, shown as percentage of total dollar amount of bid.

#### **44. COMPLIANCE WITH FAIR LABOR STANDARDS**

- A. During term of this Contract, Contractor shall report to County Contract Compliance Specialist, within ten (10) business days, any allegations to, or findings by National Labor Relations Board (NLRB) or Wisconsin Employment Relations Commission (WERC) that Contractor has violated statute or regulation regarding labor standards or relations. If investigation by Contract Compliance Specialist results in final determination that matter adversely affects Contractor's responsibilities under this Contract, and which recommends termination, suspension or cancellation of this Contract, County may take such action.
- B. Contractor may appeal any adverse finding by Contract Compliance Specialist as set forth in Dane County Ordinance 25.015(11)(c) through (e).
- C. Contractor shall post this statement in prominent place visible to employees: "As condition of receiving and maintaining contract with Dane County, this employer shall comply with federal, state and all other applicable laws prohibiting retaliation or union organizing."

#### **45. DOMESTIC PARTNERSHIP BENEFITS**

- A. Not Used.

#### **46. USE AND OCCUPANCY PRIOR TO ACCEPTANCE**

- A. Contractor agrees to use and occupancy of portion or unit of the Work before formal acceptance by Department, provided Department:
1. Secures written consent of Contractor; except when in opinion of Public Works Project Manager, Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other Contract requirements.
  2. Secures endorsement from insurance carrier and consent of Surety permitting occupancy of building or use of the Work during remaining period of construction, or, secures consent of Surety.

3. Assumes all costs and maintenance of heat, electricity and water.
4. Accepts all work completed within that portion or unit of the Work to be occupied, at time of occupancy.

#### **47. MINIMUM WAGES**

- A. Contractor shall post, at appropriate conspicuous point on site of project, schedule showing all determined minimum wage rates for various classes of laborers and mechanics to be engaged in the Work under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by laborers and mechanics so engaged.
- B. Supplementary Conditions section in Construction Documents lists wage determinations required by State Law.
- C. If, after award of Contract, it becomes necessary to employ any person in trade or occupation not classified in wage determinations, such person shall be paid at not less than such rate as shall be determined by Wisconsin Department of Workforce Development. Such approved minimum rate shall be retroactive to time of initial employment of such person in such trade or occupation. Contractor shall notify Department of Contractor's intention to employ persons in trades or occupations not so classified in sufficient time for Department to obtain approved rates for such trades or occupations.
- D. Specified wage rates are minimum rates only, and Department will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage rate in excess of applicable rate contained in this Contract. Contractor shall adjust any disputes in regard to payment of wages in excess of those specified in this Contract.

#### **48. CLAIMS**

- A. No claim may be made until Department's Deputy Public Works Director has reviewed Architect / Engineer's decision as provided for in Article 35 of General Conditions of Contract. If any claim remains unresolved after such review by Department's Deputy Public Works Director, the claim may be filed under Wisconsin Statute 893.80. Work shall progress during period of any dispute or claim. Unless specifically agreed between parties, venue will be in Dane County, Wisconsin.

#### **49. ANTITRUST AGREEMENT**

- A. Contractor and County recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by County. Therefore, Contractor hereby assigns to County any and all claims for such overcharges as to goods and materials purchased in connection with this Contract, except as to overcharges which result from antitrust violations commencing after price is established under this Contract and any change order thereto.

#### **50. INSURANCE**

- A. Contractor Carried Insurance:
  1. Contractor shall not commence work under this Contract until Contractor has obtained all insurance required under this Article and has provided evidence of such insurance to Risk Manager, 425 City-County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53703. Contractor shall not allow any subcontractor to commence work until insurance

- required of subcontractor has been so obtained and approved. Company providing insurance must be licensed to do business in Wisconsin.
2. Worker's Compensation Insurance:
    - a) Contractor shall procure and shall maintain during life of this Contract, Worker's Compensation Insurance as required by statute for all of Contractor's employees engaged in work at site of project under this Contract and, in case of any such work sublet, Contractor shall require subcontractor similarly to provide Worker's Compensation Insurance for all of latter's employees to be engaged in such work unless such employees are covered by protection afforded by Contractor's Worker's Compensation Insurance.
    - b) If any claim of employees engaged in hazardous work on project under this Contract is not protected under Worker's Compensation Statute, Contractor shall provide and shall cause each subcontractor to provide adequate Employer's Liability Insurance for protection of such of Contractor's employees as are not otherwise protected.
  3. Contractor's Public Liability and Property Damage Insurance:
    - a) Contractor shall procure and maintain during life of this Contract, Contractor's Public Liability Insurance and Contractor's Property Damage Insurance in amount not less than \$1,000,000 bodily injury, including accidental death, to any one person, and subject to same limit for each person, in amount not less than \$1,000,000 on account of one accident, and Contractor's Property Damage Insurance in amount not less than \$1,000,000 or combined single limit of at least \$1,000,000 with excess coverage over and above general liability in amount not less than \$5,000,000. Contractor shall add "Dane County" as additional insured for each project.
    - b) Contractor's Public Liability and Property Damage Insurance shall include Products, Completed Operation, and Contractual Liability under Insurance Contract. "Contractor shall in all instances save, defend, indemnify and hold harmless County and Architect / Engineer against all claims, demands, liabilities, damages or any other costs which may accrue in prosecution of the Work and that Contractor will save, defend, indemnify and hold harmless County and Architect / Engineer from all damages caused by or as result of Contractor's operations" and each shall be listed as additional insured on Contractor's and subcontractors' insurance policies.
    - c) Obligations of Contractor under Article 50.A.2.b) shall not extend to liability of Architect / Engineer, agents or employees thereof, arising out of:
      - 1) Preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or
      - 2) Giving of or failure to give directions or instructions by Architect / Engineer, agents or employees thereof provided such giving or failure to give is primary cause of injury or damage.
    - d) Contractor shall procure and shall maintain during life of this Contract, Comprehensive Automobile Liability Insurance covering owned, non-owned and hired automobiles for limits of not less than \$1,000,000 each accident single limit, bodily injury and property damage combined with excess coverage over and above general liability in amount not less than \$5,000,000.
    - e) Contractor shall either:
      - 1) Require each subcontractor to procure and to maintain during life of subcontract, subcontractor's Public Liability Property Damage Insurance, and Comprehensive Automobile Liability Insurance of type and in same amount specified in preceding paragraphs; or
      - 2) Insure activities of subcontractors in Contractor's own policy.
  4. Scope of Insurance and Special Hazards: Insurance required under Article 50.A.2 & 50.A.3. hereof shall provide adequate protection for Contractor and subcontractors, respectively, against damage claims which may arise from operations under this Contract, whether such operation be by insured or by anyone directly or indirectly employed by

insured and also against any of special hazards which may be encountered in performance of this Contract as enumerated in Supplementary Conditions.

5. Proof of Carriage of Insurance: Contractor shall furnish Risk Manager with certificates showing type, amount, class of operations covered, effective dates, dates of expiration of policies and "Dane County" listed as additional insured. Such certificates shall also contain (substantially) following statement: "Insurance covered by this certificate will not be canceled or materially altered, except after ten (10) business days written notice has been received by Risk Manager."

**B. Builder's Risk:**

1. County shall provide Builder's Risk insurance coverage for its insurable interests in construction or renovation projects with completed value of \$1,000,000 or less. Therefore, if project completed value is more than \$1,000,000, Contractor shall obtain and maintain in force, at its own expense, Builder's Risk Insurance on all risks for amount equal to full completed value of covered structure or replacement value of alterations or additions. Any deductible shall not exceed \$25,000 for each loss. Policy shall include occupancy clause and list Dane County as loss payee.

**C. Indemnification / Hold Harmless:**

1. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from performance of the Work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, and is caused in whole or in part by any act or omission of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by part indemnified hereunder.
2. In any and all claims against Dane County, its boards, commissions, agencies, officers, employees and representatives or by any employee of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, indemnification obligation under this Contract shall not be limited in any way by any limitation on amount or type of damages, compensation or benefits payable by or for Contractor or any subcontractor under worker's compensation acts, disability benefits or other employee benefit acts.
3. Obligations of Contractor under this Contract shall not extend to liability of Architect / Engineer, its agents or employees arising out of:
  - a) Preparation or approval of maps, drawings, opinion, reports, surveys, change orders, designs or specifications; or
  - b) Giving of or failure to give directions or instruction by Architect / Engineer, its agents or employees provided such giving or failure to give is primary cause of injury or damage.
4. Dane County shall not be liable to Contractor for damages or delays resulting from work by third parties or by injunctions or other restraining orders obtained by third parties.

**51. WISCONSIN LAW CONTROLLING**

- A. It is expressly understood and agreed to by parties hereto that in event of any disagreement or controversy between parties, Wisconsin law shall be controlling.


END OF SECTION

SECTION 00 73 00

SUPPLEMENTARY CONDITIONS

1. APPLICATION & CERTIFICATE FOR PAYMENT

- A. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit partial and final Application & Certificate for Payment for work under said contract. Form shall provide similar information as shown on AIA G702™ and G703™ forms (samples shown below). Forms shall be submitted to Public Works Project Manager for approval.



## AIA Document G702™ – 1992

**Application and Certificate for Payment**

TO OWNER:	PROJECT:	APPLICATION NO:	<b>Distribution to:</b>
		PERIOD TO:	OWNER <input type="checkbox"/>
FROM CONTRACTOR:	VIA ARCHITECT:	CONTRACT FOR:	ARCHITECT <input type="checkbox"/>
		CONTRACT DATE:	CONTRACTOR <input type="checkbox"/>
		PROJECT NOS:	FIELD <input type="checkbox"/>
			OTHER <input type="checkbox"/>

---

**CONTRACTOR'S APPLICATION FOR PAYMENT**  
Application is made for payment, as shown below, in connection with the Contract. AIA Document G703™, Continuation Sheet, is attached.

1. ORIGINAL CONTRACT SUM .....	\$ _____
2. NET CHANGE BY CHANGE ORDERS .....	\$ _____
3. CONTRACT SUM TO DATE (Line 1 + 2) .....	\$ _____
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) .....	\$ _____
<b>5. RETAINAGE:</b>	
a. _____ % of Completed Work (Columns D + E on G703)	\$ _____
b. _____ % of Stored Material (Column F on G703)	\$ _____
Total Retainage (Lines 5a + 5b, or Total in Column I of G703) .....	
6. TOTAL EARNED LESS RETAINAGE .....	\$ _____
<i>(Line 4 minus Line 5 Total)</i>	
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT .....	\$ _____
<i>(Line 6 from prior Certificate)</i>	
8. CURRENT PAYMENT DUE .....	\$ _____
9. BALANCE TO FINISH, INCLUDING RETAINAGE .....	\$ _____
<i>(Line 3 minus Line 6)</i>	

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this month	\$	\$
<b>TOTAL</b>	<b>\$</b>	<b>\$</b>
<b>NET CHANGES by Change Order</b>	<b>\$</b>	<b>\$</b>

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

**CONTRACTOR:**  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
State of: \_\_\_\_\_  
County of: \_\_\_\_\_  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_

Notary Public:  
My commission expires: \_\_\_\_\_

---

**ARCHITECT'S CERTIFICATE FOR PAYMENT**  
In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED .....

*(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)*

**ARCHITECT:**  
By: \_\_\_\_\_ Date: \_\_\_\_\_

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

**CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.**

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 **AIA** Document G703™ – 1992

**Continuation Sheet**

AIA Document G702™-1992, Application and Certificate for Payment, or G732™-2009, Application and Certificate for Payment, Construction Manager as Adviser Edition, containing Contractor's signed certification is attached. In tabulations below, amounts are in US dollars. Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:  
APPLICATION DATE:  
PERIOD TO:  
ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED <i>(Not in D or E)</i>	G TOTAL COMPLETED AND STORED TO DATE <i>(D+E-F)</i>	H BALANCE TO FINISH <i>(C-G)</i>	I RETAINAGE <i>(if variable rate)</i>
			FROM PREVIOUS APPLICATION <i>(D-E)</i>	THIS PERIOD				
GRAND TOTAL								

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

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SUBMITTAL

END OF SECTION



Department of Public Works, Highway & Transportation  
**Public Works Engineering Division**

608/266-4018

Gerald J. Mandli, P.E.  
**Commissioner / Director**

Joseph T. Parisi  
**County Executive**

**Deputy Director**  
Todd Draper

1919 Alliant Energy Center Way  
Madison, Wisconsin 53713  
Fax: 608/267-1533  
[www.countyofdane.com/pwht/public\\_works.aspx](http://www.countyofdane.com/pwht/public_works.aspx)

## **BEST VALUE CONTRACTING APPLICATION**

### **CONTRACTORS / LICENSURE APPLICANTS**

The Dane County Department of Public Works requires contractors & subcontractors to be a Best Value Contractor before being hired. Contractor & subcontractor application documents should be turned in immediately. Contractor approval or exemption must be complete prior to Bid Due Date / Time. All subcontractors must also be approved or prove their exemption before performing any work under a County contract. This document shall be completed, properly executed, along with the necessary attachments and additional information that the County requires for the protection and welfare of the public in the performance of a County contract.

Contractors or subcontractors of any tier who attain qualification status will retain that status for a period of two (2) years from the date of qualification. Contractors shall notify the Dane County Department of Public Works, Highway & Transportation within fifteen (15) days of any changes to its business or operations that are relevant to the application. Failure to do so could result in suspension, revocation of the contractor's qualification, debarment from County contracts for up to three (3) years and / or other sanctions available under the law.

No contracts will be awarded for construction work performed on Dane County projects unless the contractor is currently approved as a Wisconsin Trade Trainer or has applied for approval as an Apprenticeship Trade Trainer to the Wisconsin Department of Workforce Development and agrees to an acceptable apprenticeship program. If you are not currently approved as a Wisconsin Trade Trainer, or have not applied for approval as an Apprenticeship Trade Trainer, please contact the Department of Workforce Development - Bureau of Apprenticeship Standards at 608/266-3133 or visit their web site at: <https://dwd.wisconsin.gov/apprenticeship/>.

### **EXEMPTIONS**

- Contractors who employ less than five (5) apprenticeable trade workers are not required to qualify.
- Contractors performing work that does not apply to an apprenticeable trade, as outlined in Appendix A.
- The contractor / subcontractor provides sufficient documentation to demonstrate one or more of the following:
  - apprentices are not available in a specific geographic area;
  - the applicable apprenticeship program is unsuitable or unavailable; or
  - there is a documented depression of the local construction market which prevents compliance.

SEC.	PROOF OF RESPONSIBILITY	CHECK IF APPLICABLE
1	Does your firm possess all technical qualifications and resources, including equipment, personnel and financial resources, necessary to perform the work required for any project or obtain the same through the use of responsible, qualified subcontractors?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
2	Will your firm possess all valid, effective licenses, registrations or certificates required by federal, state, county, or local law, which are necessary for the type of work to be performed including, but not limited to, those for any type of trade work or specialty work?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
3	Will your firm meet all bonding requirements as required by applicable law or contract specifications?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
4	Will your firm meet all insurance requirements as required by applicable law or specifications, including general liability insurance, workers compensation insurance and unemployment insurance requirements?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
5	Will your firm maintain a substance abuse policy for employees hired for public works contracts that comply with Wis. Stats. Sec. 103.503?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
6	Will your firm fully abide by the equal opportunity and affirmative action requirements of all applicable laws, including County ordinances?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
7	In the past three (3) years, has your firm had control or has another corporation, partnership or other business entity operating in the construction industry controlled it? If so, please attach a statement explaining the nature of the firm relationship?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
8	In the past three (3) years, has your firm had any type of business, contracting or trade license, certification or registration revoked or suspended?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
9	In the past three (3) years, has your firm been debarred by any federal, state or local government agency?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
10	In the past three (3) years, has your firm defaulted or failed to complete any contract?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
11	In the past three (3) years, has your firm committed a willful violation of federal, state or local government safety laws as determined by a final decision of a court or government agency authority.	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
12	In the past three (3) years, has your firm been in violation of any law relating to your contracting business where the penalty for such violation resulted in the imposition of a penalty greater than \$10,000?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
13	Is your firm an active Wisconsin Trade Trainer as determined by the Wisconsin Bureau of Apprenticeship Standards?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
14	Is your firm exempt from being qualified with Dane County?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach reason for exemption.
15	Does your firm acknowledge that in doing work under any County Public Works Contract, it will be required to use as subcontractors only those contractors that are also qualified with the County or become so within five (5) days after the Bid Due Date?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
16	Contractor has been in business less than one year?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
17	Is your firm a first time Contractor requesting a one time exemption, but, intend to comply on all future contracts and are taking steps typical of a "good faith" effort?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>

## SIGNATURE SECTION

Your firm's Officer, or the individual who would sign a bid and / or contract documents must sign this document.

I do hereby certify that all statements herein contained are true and correct to the best of my knowledge:

Signature: \_\_\_\_\_

(Application is invalid without signature)

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

NAME AND ADDRESS OF CONTRACTOR	
Name of Firm:	
Address:	
City, State, Zip:	
Phone Number:	
Fax Number:	
E-mail Address:	

## REMEMBER!

**RETURN ALL TO FORMS AND ATTACHMENTS, OR QUESTIONS TO:**

**TODD DRAPER  
EMAIL: DRAPER@COUNTYOFDANE.COM  
OFFICE: (608) 267-0119, FAX: (608) 267-1533**

**DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY & TRANSPORTATION  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WI 53713**

## APPENDIX A

### APPRENTICEABLE TRADES:

- Bricklayer
- Carpenter
- Cement Mason (Concrete Finisher)
- Cement Mason (Heavy Highway)
- Construction Craft Laborer
- Data Communications Installer
- Electrician
- Elevator Mechanic / Technician
- Environmental Systems Technician / HVAC Service Technician / HVAC Install & Service
- Glazier
- Heavy Equipment Operator / Operating Engineer
- Insulation Worker (Heat & Frost)
- Iron Worker (Assembler, Metal Buildings)
- Painter / Decorator
- Plasterer
- Plumber
- Roofer / Waterproofer
- Sheet Metal Worker
- Sprinkler Fitter
- Steamfitter (Service & Refrigeration)
- Taper & Finisher
- Telecommunications (Voice, Data & Video) Installer / Technician
- Tile Setter

END OF SECTION

SECTION 00 73 11

FAIR LABOR PRACTICES CERTIFICATION

The undersigned, for and on behalf of the BIDDER, APPLICANT or PROPOSER named herein, certifies as follows:

A. That he or she is an officer or duly authorized agent of the above-referenced BIDDER, APPLICANT or PROPOSER, which has a submitted a bid, application or proposal for a contract or agreement with the county of Dane.

B. That BIDDER, APPLICANT or PROPOSER has (check one):

\_\_\_\_\_ not been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

\_\_\_\_\_ been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

\_\_\_\_\_  
Officer or Authorized Agent Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed or Typed Name and Title

\_\_\_\_\_  
Printed or Typed Business Name

**NOTE:** You can find information regarding the violations described above at: [www.nlr.gov](http://www.nlr.gov) and [werc.wi.gov](http://werc.wi.gov).

For reference, Dane County Ordinance 25.09 is as follows:

(1) BIDDER RESPONSIBILITY. (a) Any bid, application or proposal for any contract with the county, including public works contracts regulated under chapter 40, shall include a certification indicating whether the bidder has been found by the National Labor Relations Board (NLRB) or the Wisconsin Employment Relations Committee (WERC) to have violated any statute or regulation regarding labor standards or relations within the last seven years. The Controller shall investigate any such finding and make a recommendation to the committee, which shall determine whether the conduct resulting in the finding affects the bidder’s responsibility to perform the contract.

**If you indicated that the NLRB or WERC have found you to have such a violation, you must include copies of any relevant information regarding such violation with your proposal, bid or application.**

Include this completed Certification with your bid, application or proposal.

END OF SECTION

SECTION 01 00 00  
GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Summary
  2. Summary of the Work
  3. Contractor Use of Premises
  4. Applications for Payment
  5. Change Procedures
  6. Alternates
  7. Lump Sum Allowances for Work
  8. Coordination
  9. Cutting and Patching
  10. Conferences
  11. Progress Meetings
  12. Job Site Administration
  13. Submittal Procedures
  14. Proposed Products List
  15. Shop Drawings
  16. Product Data
  17. Samples
  18. Manufacturers' Instructions
  19. Manufacturers' Certificates
  20. Quality Assurance / Quality Control of Installation
  21. References
  22. Interior Enclosures
  23. Protection of Installed Work
  24. Parking
  25. Staging Areas
  26. Occupancy During Construction and Conduct of Work
  27. Protection
  28. Progress Cleaning
  29. Products
  30. Transportation, Handling, Storage and Protection
  31. Product Options
  32. Substitutions
  33. Starting Systems
  34. Demonstration and Instructions
  35. Contract Closeout Procedures
  36. Final Cleaning
  37. Adjusting
  38. Operation and Maintenance Data
  39. Spare Parts and Maintenance Materials

#### 40. As-Built and Record Drawings and Specifications

##### 1.2 SUMMARY OF THE WORK

- A. Project Description: Perform the Work as specified and detailed in Construction Documents package. Contractor to provide construction services for renovations to secure the UW-Extension lobby.
- B. Work by Owner: Furnish & install furniture, fixtures & equipment (FF&E).
- C. Permits: Prior to commencement of the Work, Contractor to secure any and all necessary permits for completion of the Work and facility occupancy. Provide Public Works Project Manager with copies of all permits.
- D. Diggers Hotline:
  - 1. It is General Contractor's responsibility to contact Diggers Hotline to have all utility locations marked prior to excavation and planning excavation so as not to delay the Work.
  - 2. Diggers Hotline shall also be used to obtain information on safe working clearances from overhead lines.
  - 3. Completely comply with all requirements of each affected utility company.
  - 4. It is General Contractor's responsibility to contact & hire private utility locating services if necessary.

##### 1.3 CONTRACTOR USE OF PREMISES

- A. Limit use of premises to allow work by others and work by Owner.
- B. Coordinate utility outages and shutdowns with Owner.
- C. Contractors or Subcontractors shall not visit the site if they are or have recently been ill.

##### 1.4 APPLICATIONS FOR PAYMENT

- A. Submit each Application for Payment on AIA G702™ and G703™ forms or approved contractors invoice form. Contractor shall have these forms notarized and signed.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: Monthly.
- D. Submit Applications for Payment to Public Works Project Manager for approval & processing for payment.



## 1.5 CHANGE PROCEDURES

- A. Contractor's costs for Products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from contingency allowance.

## 1.6 ALTERNATES

- A. Alternates quoted on Bid Form shall be reviewed and accepted or rejected at Owner's option.
- B. Coordinate related work and modify surrounding work as required.
- C. Schedule of Alternates: there are no alternates proposed for this project.

## 1.7 LUMP SUM ALLOWANCES FOR WORK

- A. Not Applicable.

## 1.8 COORDINATION

- A. Coordinate scheduling, submittals, and work of various sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirement characteristics of operating equipment are compatible with building utilities.
- C. Coordinate space requirements and installation of mechanical and electrical work that are indicated diagrammatically on Drawings.
- D. Refer to Drawings for recommended work sequence and duration.
- E. Contractor shall provide Public Works Project Manager with work plan that ensures the Work will be completed within required time of completion.

Public Works Project Manager may choose to photograph or videotape site or workers as the Work progresses.

## 1.9 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching new work; restore work with new Products.
- B. Submit written request in advance of cutting or altering structural or building enclosure elements.
- C. Fit work tight to adjacent elements. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.

- D. Refinish surfaces to match adjacent finishes.

#### 1.10 CONFERENCES

- A. Project shall have pre-bid conference; see Instructions to Bidders.
- B. Owner will schedule preconstruction conference after Award of Contract for all affected parties.
- C. Contractor shall submit Construction Schedule at pre-construction meeting.
- D. When required in individual Specification section, convene pre-installation conference at project site prior to commencing work of Section.
- E. Safe distancing & face masks are required for all conference attendees. Conferences will be limited to 10 people; please limit number of attending staff & subcontractors. If there are more than 10 people, group will be split & there will be two or more conferences. Allow sufficient time if you do not make it in to first group.

#### 1.11 PROGRESS MEETINGS

- A. Day & time of progress meetings to be determined at pre-construction meeting.
- B. Schedule and administer meetings throughout progress of the Work at minimum of one (1) per week, at time TBD with Public Works Project Manager, involved Dane County staff & other individuals as required.
- C. Preside at meetings, record minutes, and distribute copies within two (2) business days to those affected by decisions made.
- D. Attendance at progress meetings by General Contractor, subcontractors, or their authorized representative, is mandatory.
- E. Contractors shall give verbal reports of progress on the Work, discuss schedule for upcoming period and present all conflicts, discrepancies or other difficulties for resolution.
- F. In-person meetings shall be limited & shall follow current *Public Health - Madison & Dane County* procedures & recommendations (see [publichealthmdc.com/documents/office\\_space\\_checklist.pdf](https://publichealthmdc.com/documents/office_space_checklist.pdf) and [publichealthmdc.com/coronavirus/forward-dane/current-order](https://publichealthmdc.com/coronavirus/forward-dane/current-order)). Whenever possible, meetings shall be held via teleconference or videoconference, to be hosted by contractor or consultant. Dane County reserves right to mandate safe physical distancing & use of face masks by all personnel while inside any County facility or on any County grounds.

#### 1.12 JOB SITE ADMINISTRATION

- A. Contractor shall have project superintendent on site minimum of four (4) hours per day during progress of the Work.

- B. Contractor shall not change their project superintendent or project manager for duration of the Work without written permission of Public Works Project Manager.
- C. Architect / Engineer shall have representative on site regularly during progress of the Work.

#### 1.13 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, Subcontractor or supplier; and pertinent Construction Documents references.
- B. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with requirements of the Work and Construction Documents.
- C. Identify variations from Construction Documents and Product or system limitations that may be detrimental to successful performance of completing the Work.
- D. Revise and resubmit submittals as required; identify all changes made since previous submittal.

#### 1.14 PROPOSED PRODUCTS LIST

- A. Within fifteen (15) business days after date of Award of Contract, submit complete list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.

#### 1.15 SHOP DRAWINGS

- A. Submit number of copies that Contractor requires, plus three (3) copies that shall be retained by Public Works Project Manager.

#### 1.16 PRODUCT DATA

- A. Submit number of copies that Contractor requires, plus two (2) copies that shall be retained by Public Works Project Manager.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.

#### 1.17 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of Product.
- B. Submit samples of finishes from full range of manufacturers' standard colors, textures, and patterns for Public Works Project Manager's selection.

#### 1.18 MANUFACTURERS' INSTRUCTIONS

- A. When specified in individual Specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.

#### 1.19 MANUFACTURERS' CERTIFICATES

- A. When specified in individual Specification sections, submit manufacturers' certificate to Public Works Project Manager for review, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

#### 1.20 QUALITY ASSURANCE / QUALITY CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply fully with manufacturers' instructions.
- C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

#### 1.21 REFERENCES

- A. Conform to reference standard by date of issue current as of date for receiving bids.
- B. Should specified reference standard conflict with Construction Documents, request clarification from Public Works Project Manager before proceeding.

#### 1.22 INTERIOR ENCLOSURES

- A. Provide temporary partitions as required to separate work areas from Owner occupied areas, to prevent distribution of dust and moisture into Owner occupied areas, and to prevent damage to existing materials and equipment.

#### 1.23 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual Specification sections.

#### 1.24 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel. Parking shall be available at the Work site.

- B. All contractors and their employees shall cooperate with General Contractor and others in parking of vehicles to avoid interference with normal operations and construction activities.
- C. Do not obstruct existing service drives and parking lots with equipment, materials and / or vehicles. Keep accessible for Owner's use at all times.

#### 1.25 STAGING AREAS

- A. Coordinate staging areas with Public Works Project Manager prior to starting the Work.
- B. On-site space for use as staging areas and storage of materials is limited and will be apportioned among various Contractors as their needs dictate with due regard for storage requirements of each Contractor. Each Contractor shall be responsible for safety of equipment and materials that are stored on site.

#### 1.26 OCCUPANCY DURING CONSTRUCTION AND CONDUCT OF WORK

- A. All construction material and salvage material shall be removed from facility or secured at day's end.
- B. Contractors are asked to not work at facility if they are ill with something contagious.
- C. Owner reserves right at any time to dismiss from premises any Contractor or construction personnel that do not uphold requirements of this Section.
- D. Owner shall not be held liable for any lost time, wages, or impacts to construction schedule by any Contractor or construction personnel dismissed for failure to uphold requirements of this Section.
- E. Areas of existing facility will be occupied during period when the Work is in progress. Work may be done during normal business hours (8:00 am to 4:30 pm), but confer with Owner, schedule work and store materials so as to interfere as little as possible with normal use of premises. Work performed on Saturday shall be by permission of Owner. Notify Owner when coring or similar noise making work is to be done and obtain Owner's written approval of schedule. If schedule is not convenient for Owner, reschedule and resubmit new times for Owner approval. Coring of floor along with other noisy work may have to be done on second and third shifts.
- F. Work shall be done and temporary facilities furnished so as not to interfere with access to any occupied area and so as to cause least possible interference with normal operation of facility or any essential service thereof.
- G. Contractor shall, at all times, provide approved, safe walkways and facility entrances for use by Owner, employees and public.
- H. Contractor shall provide adequate protection for all parts of facility, its contents and occupants wherever the Work under this Contract is to be performed.

- I. Each Contractor shall arrange with Owner to make necessary alterations, do new work, make connections to all utilities, etc., and at such times as will not cause interruption of utility services to facility. Contractor doing this work shall protect, cap, cut off and / or replace and relocate existing pipes, electrical work and other active utilities encountered which may interfere with new construction work.
- J. New work in extension of existing work shall correspond in all respects with that to which it connects or similar existing work unless otherwise indicated or specified.
  - 1. Existing work shall be cut, altered, removed or replaced as necessary for performance of Contract obligations.
  - 2. Work remaining in place, damaged or defaced by reason of work done under this Contract shall be restored equal to its condition at time of Award of Contract.
  - 3. If removal of work exposes discolored or unfinished surfaces or work out of alignment, such surfaces shall be refinished or materials replaced as necessary to make continuous work uniform and harmonious.
- K. Contractor is not responsible for providing & maintaining temporary toilet facilities.
- L. Contractor & subcontractors shall follow all current *Public Health - Madison & Dane County* procedures & recommendations (see [publichealthmdc.com/documents/office\\_space\\_checklist.pdf](http://publichealthmdc.com/documents/office_space_checklist.pdf) and [publichealthmdc.com/coronavirus/forward-dane/current-order](http://publichealthmdc.com/coronavirus/forward-dane/current-order)). Dane County reserves right to mandate safe physical distancing & use of face masks by all personnel while inside any County facility or on any County grounds.

1.27 PROTECTION

- A. Contractor shall provide and maintain barricades & signage to prohibit public access to construction site.

1.28 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.

1.29 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components specifically identified for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically identified or allowed by Construction Documents.

1.30 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.

### 1.31 PRODUCT OPTIONS

- A. Where definite material is specified, it is not intentional to discriminate against "equal" product made by another manufacturer. Intention is to set definite standard of material quality. Should bidder choose to bid materials other than those specified, bidder shall submit said materials specifications to Public Works Project Manager for approval at least seven (7) business days prior to Bid Due Date.
- B. Products and materials that are not specified, but have been approved for use by Public Works Project Manager shall be identified in addenda to all bidding contractors.
- C. Requests for material or product substitutions submitted after Bid Due Date may be considered. Owner reserves right to approve or reject substitutions based on Specification requirements and intended use.

### 1.32 SUBSTITUTIONS

- A. Public Works Project Manager shall consider requests for Substitutions only within fifteen (15) calendar days after date of Public Works Construction Contract.
- B. Document each request with complete data substantiating compliance of proposed Substitution with Construction Documents.
- C. Submit three (3) copies of requests for Substitution for consideration. Limit each request to one (1) proposed Substitution.
- D. Substitutions shall not change contract price established at Bid Due Date.

### 1.33 STARTING SYSTEMS

- A. Provide written notification prior to start-up of each equipment item or system.
- B. Ensure that each piece of equipment or system is ready for operation.
- C. Execute start-up under supervision of responsible persons in accordance with manufacturers' instructions.
- D. Submit written report that equipment or system has been properly installed and is functioning correctly.

### 1.34 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of final inspection.
- B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times, at designated location.

- C. Owner may choose to photograph or videotape demonstration session; demonstration and demonstrator shall be to level of satisfaction of Owner.

#### 1.35 CONTRACT CLOSEOUT PROCEDURES

- A. Submit written certification that Construction Documents have been reviewed, the Work has been inspected, and the Work is complete in accordance with Construction Documents and ready for Public Works Project Manager's inspection.
- B. Submit final Application for Payment identifying total adjusted Contract Sum / Price, previous payments, and amount remaining due.

#### 1.36 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean interior and exterior surfaces exposed to view.
- C. Remove waste and surplus materials, rubbish, and construction facilities from site.

#### 1.37 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

#### 1.38 OPERATION AND MAINTENANCE MANUAL

- A. Provide two (2) bound, hard-copy operation and maintenance manuals that include all systems, materials, products, equipment, mechanical and electrical equipment and systems supplied and installed in the Work. Provide electronic version of operation and maintenance manual also.

#### 1.39 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide Products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to the Work site and place in location as directed.

#### 1.40 AS-BUILT AND RECORD DRAWINGS AND SPECIFICATIONS

- A. Contractor-produced Drawings and Specifications shall remain property of Contractor whether Project for which they are made is executed or not. Contractor shall furnish Architect / Engineer, Public Works Project Manager with original marked up redlines of Construction Documents' drawings and specifications that shall include all Addendums, Change Orders, Construction Bulletins, on-site changes, field corrections, etc. These are project As-Built Drawings & Specifications.
- B. Architect / Engineer shall update original Construction Documents to include all Addendums & any other changes including those provided by Contractor in As-Built



Drawings & Specifications. These updates are project Record Drawings & Specifications.

- C. Architect / Engineer shall furnish Public Works Project Manager with Record Drawings as detailed in Professional Services Agreement.

## PART 2 PRODUCTS

Not Used.

## PART 3 EXECUTION

Not Used.

END OF SECTION

## SECTION 01 74 19

### CONSTRUCTION WASTE MANAGEMENT, DISPOSAL & RECYCLING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Summary
  - 2. Waste Management Goals
  - 3. Construction and / or Demolition Waste Management
  - 4. Waste Management Plan
  - 5. Reuse
  - 6. Recycling
  - 7. Materials Sorting and Storage On Site
  - 8. Lists of Recycling Facilities Processors and Haulers
  - 9. Waste Management Plan Form
- B. Related Sections:
  - 1. Section 01 00 00 - General Requirements

##### 1.2 WASTE MANAGEMENT GOALS

- A. Dane County requires that as many waste materials as possible produced as result of this project be salvaged, reused or recycled in order to minimize impact of construction waste on landfills and to minimize expenditure of energy and cost in fabricating new materials. Additional information may be found in Dane County Green Building Policy, Resolution 299, 1999-2000.

##### 1.3 CONSTRUCTION AND / OR DEMOLITION WASTE MANAGEMENT

- A. All construction and demolition waste suitable for recycling may go to Dane County Construction & Demolition Recycling Facility located at 7102 US Hwy 12, Madison, located across from Yahara Hills Golf Course. This facility can receive mixed loads of construction and demolition waste. For complete list of acceptable materials see [www.countyofdane.com/pwht/recycle/CD\\_Recycle.aspx](http://www.countyofdane.com/pwht/recycle/CD_Recycle.aspx).
- B. Dane County Landfill, also at 7102 US Hwy 12, Madison, must receive all other waste from this project. [www.countyofdane.com/pwht/recycle/landfill.aspx](http://www.countyofdane.com/pwht/recycle/landfill.aspx).

##### 1.4 WASTE MANAGEMENT PLAN

- A. Contractor shall develop Waste Management Plan (WMP) for this project. Dane County's Special Projects & Materials Manager may be contacted with questions. Outlined in RECYCLING section of this specification are examples of materials that can be recycled or reused as well as recommendations for waste sorting methods.
- B. Contractor shall complete WMP and include cost of recycling / reuse in Bid. WMP will be submitted to Public Works Project Manager within fifteen (15)

business days of Bid Due date. Copy of blank WMP form is in this Section. Submittal shall include cover letter and WMP form with:

1. Information on:
  - a. Types of waste materials produced as result of work performed on site;
  - b. Estimated quantities of waste produced;
  - c. Identification of materials with potential to be recycled or reused;
  - d. How materials will be recycled or reused;
  - e. On-site storage and separation requirements (on site containers);
  - f. Transportation methods; and
  - g. Destinations.

#### 1.5 REUSE

- A. Contractors and subcontractors are encouraged to reuse as many waste materials as possible. Salvage should be investigated for materials not reusable on site.

#### 1.6 RECYCLING

- A. These materials may be recycled at Dane County Construction & Demolition Recycling Facility:
  1. Wood.
  2. Wood Pallets.
  3. PVC Plastic (pipe, siding, etc.).
  4. Asphalt & Concrete.
  5. Bricks & Masonry.
  6. Vinyl Siding.
  7. Cardboard.
  8. Metal.
  9. Unpainted Gypsum Drywall.
  10. Shingles.
- B. These materials can be recycled elsewhere in Dane County area:
  1. Fluorescent Lamps.
  2. Foam Insulation & Packaging (extruded and expanded).
  3. Carpet Padding.
  4. Barrels & Drums.
- C. All materials must be recycled at WDNR permitted waste processing facilities that adhere to all State Statutes.

#### 1.7 MATERIALS SORTING AND STORAGE ON SITE

- A. Contractor shall provide separate containers for recyclable materials. Number of containers will be dependent upon project and site conditions.
- B. Contractor shall provide on-site locations for subcontractors supplied recycling containers to help facilitate recycling.
- C. Mixed loads of recycled materials are allowed only per instructions at [www.countyofdane.com/pwht/recycle/CD\\_Recycle.aspx](http://www.countyofdane.com/pwht/recycle/CD_Recycle.aspx).

1.8 LISTS OF RECYCLING FACILITIES PROCESSORS AND HAULERS

- A. Refer to [www.countyofdane.com/pwht/recycle/CD\\_Recycle.aspx](http://www.countyofdane.com/pwht/recycle/CD_Recycle.aspx) for information on Dane County Construction & Demolition Recycling Facility.
- B. Web site [www.countyofdane.com/pwht/recycle/categories.aspx](http://www.countyofdane.com/pwht/recycle/categories.aspx) lists current information for Dane County Recycling Markets. Contractors can also contact Allison Rathsack at 608/266-4990, or local city, village, town recycling staff listed at site [www.countyofdane.com/pwht/recycle/contacts.aspx](http://www.countyofdane.com/pwht/recycle/contacts.aspx). Statewide listings of recycling / reuse markets are available from UW Extension at <https://www.uwgb.edu/shwec/>.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

## WASTE MANAGEMENT PLAN FORM



Contractor Name: \_\_\_\_\_

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

Phone No.: \_\_\_\_\_ Recycling Coordinator: \_\_\_\_\_

MATERIAL	ESTIMATED QUANTITY	DISPOSAL METHOD (CHECK ONE)	RECYCLING / REUSE COMPANY OR DISPOSAL SITE
Salvaged & reused building materials	_____ cu. yds. _____ tons	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Wood	_____ cu. yds. _____ tons	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Wood Pallets	_____ units	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
PVC Plastic	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Asphalt & Concrete	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Bricks & Masonry	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Vinyl Siding	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Cardboard	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Metals	_____ cu. yds. _____ tons	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Unpainted Gypsum / Drywall	_____ cu. yds. _____ tons	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Shingles	_____ cu. yds. _____ tons	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Fluorescent Lamps	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Foam Insulation	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Carpet Padding	_____ cu. ft. _____ lbs.	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Barrels & Drums	_____ units	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____
Glass	_____ cu. yds. _____ tons	_____ Recycled    _____ Reused _____ Landfilled    _____ Other	Name: _____

## WASTE MANAGEMENT PLAN FORM

Other	_____	<input type="checkbox"/> Recycled <input type="checkbox"/> Reused <input type="checkbox"/> Landfilled <input type="checkbox"/> Other	Name: _____
Other	_____	<input type="checkbox"/> Recycled <input type="checkbox"/> Reused <input type="checkbox"/> Landfilled <input type="checkbox"/> Other	Name: _____
Other	_____	<input type="checkbox"/> Recycled <input type="checkbox"/> Reused <input type="checkbox"/> Landfilled <input type="checkbox"/> Other	Name: _____
Other	_____	<input type="checkbox"/> Recycled <input type="checkbox"/> Reused <input type="checkbox"/> Landfilled <input type="checkbox"/> Other	Name: _____
Other	_____	<input type="checkbox"/> Recycled <input type="checkbox"/> Reused <input type="checkbox"/> Landfilled <input type="checkbox"/> Other	Name: _____

## SECTION 02 41 19

### SELECTIVE DEMOLITION

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Demolition and removal of selected portions of building or structure.
  - 2. Salvage of existing items to be reused or recycled.
- B. See Section 01 74 19 – Recycling regarding construction waste management.

##### 1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed.

##### 1.3 SUBMITTALS

- A. Schedule of Selective Demolition Activities: Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, interruption of utility services, use of elevator and stairs, and locations of temporary partitions and means of egress.
- B. Predemolition Photographs or Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations.
- C. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

##### 1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI A10.6 and NFPA 241.

- C. Predemolition Conference: Conduct conference at Project site.

## 1.5 PROJECT CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner. Owner will remove hazardous materials under a separate contract.
- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

## 1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Survey of Existing Conditions: Record existing conditions by use of measured drawings, preconstruction photographs, preconstruction videotapes and templates.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- G. Openings in floors must be patched. Surface anchors that constitute tripping hazards must be removed or ground smooth even to the floor level.



- H. Any gaps found around ducts, pipes, conduits, etc. in fire-rated walls, smoke partitions, or any other partitions, must be patched and/or fire caulked.

### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Arrange to shut off indicated utilities with utility companies.
  - 2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

### 3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- D. Protect all surfaces including, but not limited to, windows, countertops, flooring, etc. during demotion and construction.

### 3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
  - 4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

5. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- C. Removed and Salvaged Carpet:
1. Score corner joints, cutting the adhesive tactile.
  2. Stack removed carpet in manner where remainder of the tactile does not stick to the face of the carpet.
  3. Store items in a secure area until delivery to Owner.
  4. Transport salvaged carpet to Owner's storage area designated by Owner.
  5. Completely remove remaining carpet from floors.
- D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

### 3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

SECTION 06 10 00  
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Wood furring.
  2. Blocking.

1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
  3. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1. Blocking.
  2. Nailers.
  3. Cants.
  4. Furring.
  5. Grounds.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 19 percent maximum moisture content of any species.
- C. For concealed boards, provide lumber with 15 percent maximum moisture content and any of the following species and grades:

1. Mixed southern pine, No. 2 grade; SPIB.
2. Eastern softwoods, No. 2 Common grade; NeLMA.
3. Northern species, No. 2 Common grade; NLGA.
4. Western woods, Construction or No. 2 Common grade; WCLIB or WWPA.

## 2.3 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified.
  1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Power-Driven Fasteners: NES NER-272.
- C. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

## 2.4 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch nominal thickness, compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of sill members indicated.

# PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  1. NES NER-272 for power-driven fasteners.
  2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

END OF SECTION 06 10 00

## SECTION 06 40 23

### INTERIOR ARCHITECTURAL WOODWORK

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Wood baseboards and trim.
- B. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips unless concealed within other construction before woodwork installation.

##### 1.2 SUBMITTALS

- A. Samples:
  - 1. Wood base and wood trim with shop-applied finish.

##### 1.3 QUALITY ASSURANCE

- A. Quality Standard: Unless otherwise indicated, comply with AWT's "Architectural Woodwork Quality Standards."
  - 1. Custom grade, unless indicated otherwise.

##### 1.4 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed.

##### 1.5 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Provide wood materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Species and Cut for Transparent Finish: Match existing.
- C. Wood Products to Comply with the Following:
  - 1. Hardboard: AHA A135.4.
  - 2. Softwood Plywood: DOC PS 1, Medium Density Overlay.
- D. Wood Materials:
  - 1. Provide materials that comply with requirements of referenced quality standard for each type of wood and quality grade specified, unless otherwise indicated.
    - a. Wood moisture Content for Interior Materials: 5 to 10 percent.
- E. Wood Trim: Hardwood lumber; FS MM-L-36; premium grade in accordance with AWI; maximum moisture content of 6 percent, of quality capable of transparent finish.

### 2.2 ACCESSORIES

- A. Wood Filler: Oil base, tinted to match surface color.

### 2.3 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln-dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage.
- C. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Wood Glues: 30 g/L.
  - 2. Contact Adhesive: 250 g/L.
- D. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

### 2.4 FABRICATION

- A. General: Complete fabrication to maximum extent possible before shipment to Project site. Where necessary for fitting at site, provide allowance for scribing, trimming, and fitting.
- B. Wood Trim and Baseboards: Match existing.

1. For transparent-finished trim items wider than available lumber, use veneered construction. Do not glue for width.
2. Back out or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
3. Assemble casings in plant except where limitations of access to place of installation require field assembly.

## 2.5 SHOP FINISHING

- A. Finish architectural woodwork at fabrication shop. Defer only final touchup, cleaning, and polishing until after installation.
- B. Back-priming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork.
- C. Transparent Finish:
  1. Grade: Premium.
  2. AWI Finish System: Acrylic lacquer.
  3. WI Finish System: Two (2), water-reducible acrylic lacquer.
  4. Wash Coat for Stained Finish: Apply a wash-coat sealer to woodwork made from closed-grain wood before staining and finishing.
  5. Open-Grain Woods: After staining (if any), apply paste wood filler to open-grain woods and wipe off excess. Tint filler to match stained wood.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify adequacy of backing and support framing.

### 3.2 PREPARATION

- A. Provide anchoring devices for installation and embedding.
- B. Provide templates and rough-in measurements.

### 3.3 INSTALLATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas. Examine shop-fabricated work for completion and complete work as required, including removal of packing and back-priming.
- B. Install woodwork level, plumb, true, and straight to a tolerance of 1/8 inch in 96 inches. Shim as required with concealed shims.
- C. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

- D. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- E. Wood Baseboards and Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base.
- F. All finishes must be smooth, uniform in color and match approved samples.
- G. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.
- H. Prior to final inspection, examine installation of the Work of this Section. Repair or replace all defects found. Leave installation clean, undamaged, and ready for use.

#### 3.4 REPAIRING, ADJUSTING, AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.
- C. Clean according to manufacturer's directions. Use no acids or harsh abrasives.
- D. Leave surfaces clean and without defects.

END OF SECTION



## SECTION 07 92 00

### JOINT SEALANTS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
  - 1. Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  - 2. Acoustical joint sealants.
  - 3. Refer to Drawings and Joint Sealant Schedule at the end of this Section for specific joint locations and sealant types.

##### 1.2 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

##### 1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for initial selection: For each type of sealant provide samples of full range of manufacturers available colors.
- C. Samples: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Compatibility and Adhesion Test Reports: From sealant manufacturer indicating the following:
  - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
- E. Product Test Reports: From a qualified testing agency indicating sealants comply with requirements, based on comprehensive testing of current product formulations.
- F. Warranties: Special warranties listed in this Section.

##### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced Installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.

- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- C. Preinstallation Conference: Conduct conference at Project site.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project site in original, unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multicomponent materials.
- B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

#### 1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with installation or joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 40 deg F (4.4. deg C).
  - 2. When joint substrates are wet.
- B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

#### 1.7 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance or other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint sealer manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance or other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

## 2.2 MATERIALS, GENERAL

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

## 2.3 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. VOC Content of Interior Sealants: Provide interior sealants and sealant primers that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.
- C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
  - 1. Suitability for Immersion in Liquids: Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.
- D. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- E. Suitability for Contact with Food: Where sealants are indicated for joints that will come in repeated contact with food, provides products that comply with 21 CFR 177.2600.
- F. Color of Exposed Joint Sealants: Sealant, generally, shall be the color of the adjacent material which lies in the same plane as the sealant. Verify all colors with Architect prior to installation.

## 2.4 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- C. Suitability for Immersion in Liquids. Where elastomeric sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247 and qualify for the length of exposure indicated by reference to ASTM C 920 for Class 1 or 2. Liquid used for testing sealants is deionized water, unless otherwise indicated.

- D. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food; provide products that comply with 21 CFR 177.2600.
- E. One part polyurethane, two parts polymer, or one part low-modulus silicone sealants at all interior joints, except horizontal surfaces, in which case acceptable products are as follows:
  - 1. Products:
    - a. Sika "Sikaflex-1a".
    - b. Sonneborn "Sololastic NP I or NP II".
    - c. Tremco Manufacturing Company "Dymeric" or "Dymonic".
    - d. Pecora "Dynatrol II".
    - e. G.E. "Silpruf".
    - f. Dow Corning "790".

## 2.5 SILICONE JOINT SEALANTS

- A. Mildew-Resistant Silicone Joint Sealant: ASTM C 920.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Building Systems.
    - b. Dow Corning Corporation.
    - c. GE Advanced Materials - Silicones.
    - d. May National Associates, Inc.
    - e. Pecora Corporation.
    - f. Polymeric Systems, Inc.
    - g. Schnee-Morehead, Inc.
    - h. Sika Corporation; Construction Products Division.
    - i. Tremco Incorporated.
  - 2. Type: Single component.
  - 3. Grade: Nonsag.
  - 4. Class: 100/50.

## 2.6 URETHANE JOINT SEALANTS

- A. Urethane Joint Sealant: ASTM C 920.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Building Systems.
    - b. Bostik, Inc.
    - c. Lyntal, International, Inc.
    - d. May National Associates, Inc.
    - e. Pacific Polymers International, Inc.
    - f. Pecora Corporation.
    - g. Polymeric Systems, Inc.
    - h. Schnee-Morehead, Inc.

- i. Sika Corporation; Construction Products Division.
- j. Tremco Incorporated.
2. Grade: Pourable.
3. Class: 50.
4. Uses Related to Exposure: Traffic.

## 2.7 LATEX JOINT SEALANTS

- A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
  1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Building Systems.
    - b. Bostik, Inc.
    - c. May National Associates, Inc.
    - d. Pecora Corporation.
    - e. Schnee-Morehead, Inc.
    - f. Tremco Incorporated.

## 2.8 ACOUSTICAL JOINT SEALANTS

- A. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834; application per ASTM C 919. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
- B. Manufacturers: Subject to compliance with requirements, provide products manufactured by one of the following:
  1. Accumetric LLC; BOXX 824 Acoustical Sound Sealant.
  2. BOSS 824 Acoustical Sound Sealant.
  3. Grabber Acoustical Sealant GSCS
  4. Pecora Corporation.
  5. Specified Technologies, Inc.; Smoke N Sound Acoustical Sealant.
  6. USG Corporation.
- C. Acoustical joint sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

## 2.9 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

- C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

## 2.10 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation, tolerances, and other conditions affecting joint sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants.
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant.
    - a. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
  - 2. Remove laitance and form-release agents from concrete.
  - 3. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION

- A. General: Apply sealant in a neat, weather tight manner. Three (3) sided joints shall be backed with backer rod to provide bond only to two (2) opposite sides.
  - 1. Backer Rod: Polyethylene foam.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.
- D. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- E. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- F. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- G. Tooling of Non-Sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
- H. Installation of Preformed Silicone-Sealant System: Comply with manufacturer's written instructions.
- I. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, producing seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in compliance with sealant manufacturer's written instructions.
- J. Acoustical Sealant Installation: Comply with ASTM C 919 and with manufacturer's written instructions.
- K. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
  1. Extent of Testing: Test completed and cured sealant joints as follows:
    - a. Perform 10 tests for the first 1000 feet of joint length for each kind of sealant and joint substrate.
    - b. Perform 1 test for each 1000 feet of joint length thereafter or 1 test per each floor per elevation.
  2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix XI in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
- B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

### 3.5 JOINT SEALANT SCHEDULE

- A. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  1. Joint Locations:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Perimeter joints between interior wall surfaces and frames of interior doors, windows and elevator entrances.
    - c. Other joints as indicated.
  2. Joint Sealant: Latex.
  3. Joint-Sealant Color: As selected by Owner from manufacturer's full range of colors.



- B. Joint-Sealant Application: Interior acoustical joints in vertical surfaces and horizontal nontraffic surfaces.
  - 1. Joint Sealant Location:
    - a. Acoustical joints where indicated.
    - b. Other joints as indicated.
  - 2. Joint Sealant: Acoustical.
  - 3. Joint-Sealant Color: As selected by Owner from manufacturer's full range of colors.

### 3.6 CLEANING

- A. Remove masking tape.
- B. Clean adjacent surfaces soiled by sealant installation.

### 3.7 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired joint sealants are indistinguishable from the original work.

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## SECTION 08 33 13

### COILING COUNTER DOORS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

A. This Section includes the following:

1. Coiling counter doors.

##### 1.2 SUBMITTALS

A. Product Data: For each type and size of coiling counter door and accessory provide manufacturer's descriptive literature for counter door units, hardware, and operators and the following:

1. Construction details, material descriptions, dimensions of individual components, profiles for slats, and finishes.
2. Rated capacities, operating characteristics, electrical characteristics, and furnished accessories.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Show locations of replaceable fusible links.
3. Wiring Diagrams: For power, signal, and control wiring.

C. Samples: For each exposed product and for each color and texture indicated.

D. Quality Assurance Submittals: Printed installation instructions for specified counter door assembly.

E. Maintenance Data.

##### 1.3 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

## 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Protection:
  - 1. Store components in manufacturer's unopened packing until installation.
  - 2. Maintain dry, heated storage area for component installation.

## PART 2 - PRODUCTS

### 2.1 METAL DOOR CURTAIN MATERIALS AND CONSTRUCTION

- A. Door Curtains: Fabricate coiling counter door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:
  - 1. Steel Door Curtain Slats: Zinc-coated, galvanized, cold-rolled steel, structural steel sheet; complying with ASTM A 653/A 653 M, with G90 zinc coating; nominal sheet thickness (coated) of 0.028 inch and as required to meet requirements.
- B. Bottom Bar for Service Doors: Consisting of two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch thick; fabricated from manufacturer's standard hot-dipped galvanized steel to match curtain slats and finish.
- C. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain.
  - 1. Removable Posts and Jamb Guides for Counter Doors: Manufacturer's standard.

### 2.2 HOOD

- A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.
  - 1. Galvanized Steel: Nominal 0.028-inch-thick, hot-dip galvanized steel sheet with G90 zinc coating, complying with ASTM A 653/A 653 M.

### 2.3 LOCKING DEVICES

- A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on both left and right jamb sides, operable from coil side.
- B. Chain Lock Keeper: Suitable for padlock.

- C. Safety Interlocking Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

## 2.4 CURTAIN ACCESSORIES

- A. Push/Pull Handles: Equip each push-up-operated or emergency-operated door with lifting handles on each side of door, finished to match door. Provide pull-down straps or pole hooks for doors more than 84 inches high.

## 2.5 COUNTERBALANCING MECHANISM

- A. General: Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.
- B. Brackets: Manufacturer's standard mounting brackets of either cast iron or cold-rolled steel plate.

## 2.6 ELECTRIC DOOR OPERATORS

- A. General: Electric door operator assembly of size and capacity recommended and provided by door manufacturer for door specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, control devices, integral gearing for locking door, and accessories required for proper operation.
  - 1. Comply with NFPA 70.
  - 2. Provide control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6, with NFPA 70 Class 2 control circuit, maximum 24 V, ac or dc.
- B. Usage Classification: Electric operator and components capable of operating for not less than number of cycles indicated for each door.
- C. Electric Motors: Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements specified in Section 26 00 00 "Electrical" unless otherwise indicated.
  - 1. Electrical Characteristics:
    - a. Phase: Single phase.
    - b. Volts: 115.
    - c. Hertz: 60.
  - 2. Motor Type and Controller: Reversible motor and controller (disconnect switch) for motor exposure indicated.
  - 3. Motor Size: Minimum size as indicated. If not indicated, large enough to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. and not more than 23 in./sec., without exceeding nameplate ratings or service factor.

4. Operating Controls, Controllers (Disconnect Switches), Wiring Devices, and Wiring: Manufacturer's standard unless otherwise indicated.
- D. Obstruction Detection Device: Equip motorized door with indicated external automatic safety sensor capable of protecting full width of door opening.
    1. Photoelectric Sensor: Manufacturer's standard system designed to detect an obstruction in door opening without contact between door and obstruction. Provide self-monitoring capability designed to interface with door operator control circuit to detect damage to or disconnection of sensing device.
  - E. Remote-Control Station: Momentary-contact, three-button control station with push-button controls labeled "Open," "Close," and "Stop."
    1. Interior units, full-guarded, surface-mounted, heavy-duty type, with general-purpose NEMA ICS 6, Type 1 enclosure.
  - F. Emergency Manual Operation: Equip each electrically powered door with capability for emergency manual operation. Design manual mechanism so required force for door operation does not exceed 25 lbf.
  - G. Emergency Operation Disconnect Device: Equip operator with hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engage.
  - H. Motor Removal: Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.

## 2.7 METAL DOOR ASSEMBLY

- A. Counter Door: Coiling counter door formed with curtain of interlocking metal slats.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Overhead Door Company.
    - b. Wayne Dalton Commercial.
    - c. Cornell Iron Works, Inc.
    - d. Approved Equal.
- B. Door Curtain Material: Galvanized steel.
- C. Door Curtain Slats: Flat profile slats of 1-1/2-inch center-to-center height.
- D. Curtain Jamb Guides: Galvanized steel with exposed finish matching curtain slats. Provide continuous integral wear strips to prevent metal-to-metal contact and to minimize operational noise.
- E. Hood: Match curtain material and finish.

1. Shape: Square.
  2. Mounting: As shown on Drawings.
- F. Integral Frame, Hood, and Fascia for Counter Door: Galvanized steel.
- G. Door Galvanized Steel Finish: Manufacturer's factory-applied finish.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verification of Conditions: Verify openings are in accordance with approved Shop Drawings.
- B. Installer's Examination:
1. Examine conditions under which construction activities of this Section are to be performed, then submit written notification if such conditions are unacceptable.
  2. Transmit two copies of report to Architect within 24 hours of receipt.
  3. Beginning construction activities of this Section before unacceptable conditions have been corrected is prohibited.
  4. Beginning construction activities of this Section indicates installer's acceptance of conditions.

#### 3.2 INSTALLATION

- A. Install counter doors plumb and level in accordance with approved Shop Drawings and manufacturer's printed installation instructions.
- B. Install coiling counter doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.
- C. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. Lubricate bearings and sliding parts as recommended by manufacturer. Adjust seals to provide weathertight fit around entire perimeter.

#### 3.3 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain coiling counter doors.

END OF SECTION 08 33 13

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## SECTION 09 29 00

### GYPSUM BOARD

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Interior gypsum board.
  - 2. Repairs as required, and as indicated on Drawings.
  - 3. Acoustical sealant.
- B. Related Sections include the following:
  - 1. Section 09 91 23 "Interior Painting."

##### 1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For the following products:
  - 1. Trim Accessories: Full-size Sample in 12-inch long length for each trim accessory indicated.
  - 2. Textured Finishes: Manufacturer's standard size for each textured finish indicated and on the same backing indicated for Work.

##### 1.3 QUALITY ASSURANCE

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- C. Single-Source Responsibility for Panel Products: Obtain each type of gypsum board and other panel products from a single manufacturer.
- D. Single-Source Responsibility for Finishing Materials: Obtain finishing materials from either the same manufacturer that supplies gypsum board and other panel products or from a manufacturer acceptable to gypsum board manufacturer.
- E. Any piping with insulation shall be boxed out (furred out) even if not shown to be concealed on the Drawings.

## PART 2 - PRODUCTS

### 2.1 INTERIOR GYPSUM BOARD

- A. General: Complying with ASTM C 36/C 36M or ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Temple-Inland.
    - b. American Gypsum Co.
    - c. G-P Gypsum.
    - d. Lafarge North America Inc.
    - e. National Gypsum Company.
    - f. USG Corporation.
- B. Type X:
1. Thickness: 5/8 inch.
  2. Long Edges: Tapered.
- C. Type C (as required by specific UL assemblies):
1. Thickness: 5/8 inch.
  2. Long Edges: Tapered.
- D. Ceiling Type: Manufactured to have more sag resistance than regular-type gypsum board.
1. Thickness: 1/2 inch.
  2. Long Edges: Tapered.
- E. Resilient Furring Channels: 1/2-inch deep, steel sheet members designed to reduce sound transmission.
1. Configuration: Asymmetrical or hat shaped.

### 2.2 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
1. Interior Gypsum Wallboard: Paper.
  2. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.

2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
  - a. Use setting-type compound for installing paper-faced metal trim accessories.
3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.
5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.

## 2.3 TRIM ACCESSORIES

### A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet, or rolled zinc.
2. Shapes:
  - a. Cornerbead.
  - b. Bullnose bead.
  - c. LC-Bead: J-shaped; exposed long flange receives joint compound.
  - d. U-Bead: J-shaped; exposed short flange does not receive joints compound.
  - e. Expansion (control) joint.

### B. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Fry Reglet Corp.
  - b. Gordon, Inc.
  - c. Pittcon Industries.
2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B221, Alloy 6063-T5.
3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials.

## 2.4 AUXILIARY MATERIALS

### A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

### B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

1. Use adhesives that have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

### C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.

2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- D. Acoustical Sealant: ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings as demonstrated by testing according to ASTM E 90.
1. Products: Subject to compliance with requirements, provide acoustical joint sealant by one of the following manufacturers:
    - a. Accumetric LLC; BOSS 824 Acoustical Sound Sealant.
    - b. Grabber Construction Products; Acoustical Sealant GSC.
    - c. Pecora Corporation; AC-20 FTR.
    - d. Specified Technologies Inc.; Smke N Sound Acoustical Sealant.
    - e. USG Corporation; SHEETROCK Acoustical Sealant.
    - f. Approved Equal.
  2. Acoustical joint sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

## 2.5 TEXTURED FINISHES

- A. Primer: As recommended by textured finish manufacturer.
- B. Aggregate Finish: Water-based, job-mixed, aggregated, drying –type texture finish for spray application.
1. Products: Subject to compliance with requirements, provide products by one of the following manufacturers:
    - a. G-P Gypsum: Georgia-Pacific Ceiling Textures/Vermiculite.
    - b. USG Corporation; SHEETROCK Wall and Ceiling Spray Texture (Aggregated).
    - c. Approved equal.
  2. Texture: Match existing.

## PART 3 - EXECUTION

### 3.1 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- D. All partitions are to run tight to structure; there may be exceptions noted in the Drawings.

- E. If pipes and ducts above ceiling preclude walls or partitions from going full to structure, Contractor shall provide an alternative measure acceptable to Architect at not additional cost. Examples include lath and plaster or other means of preventing the passage of smoke and/or fire.
- F. Bulkheads required for piping, etc. will require framing and sheet rock on one or both sides where piping is below typical ceiling heights.

### 3.2 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
  - 1. Type X: As indicated on Drawings and where required for fire-resistance-rated assembly.
  - 2. Type C: As required by specific UL assemblies.
  - 3. Ceiling Type: As indicated on Drawings.

### 3.3 APPLYING ACOUSTICAL SEALANT

- A. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

### 3.4 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.
- C. Interior Trim: Install in the following locations:
  - 1. Cornerbead: Use at outside corners.
  - 2. Bullnose Bead: Use at outside corners.
  - 3. LC-Bead: Use where indicated.
  - 4. U-Bead: Use where indicated.

### 3.5 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 4: At panel surfaces that will be exposed to view and under wall coverings, unless otherwise indicated.
  - a. Primer and its application to surfaces are specified in other Division 9 sections.

### 3.6 APPLYING TEXTURE FINISHES

- A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.
- B. Texture Finish Application: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Mix and apply finish using powered spray equipment, to produce a uniform texture matching approved mockup and free of starved spots or other evidence of thin application or of application patterns.
- C. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written recommendations.

### 3.7 PROTECTION

- A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- B. Remove and replace panels that are wet, moisture damaged, or mold damaged.
  1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION

## SECTION 09 51 23

### ACOUSTICAL TILE CEILINGS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes
  - 1. Reinstallation of acoustical tiles and concealed suspension systems for ceilings removed and salvaged under Section " Selective Demolition."
  - 2. New acoustical tiles and concealed suspension systems for ceilings.

##### 1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Coordination Drawings: Drawn to scale and coordinating acoustical tile ceiling installation with hanger attachment to building structure and ceiling mounted items. Show size and location of initial access modules.
- C. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.
  - 1. Acoustical Tile: Set of 12 x 12 inch square Samples of each type, color, pattern, and texture.
  - 2. Submit two samples each, 6 inches long, of suspension system main runner.
- D. Product Test Reports.
- E. Maintenance Data.

##### 1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of acoustical ceiling tile and supporting suspension system through one source from a single manufacturer.
- B. Fire-Test-Response Characteristics:
  - 1. Fire-Resistance Characteristics: Where indicated, provide acoustical tile ceilings identical to those of assemblies tested for fire resistance per ASTM E 119 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
    - a. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency.

- b. Identify materials with appropriate markings of applicable testing and inspecting agency.
  - 2. Surface-Burning Characteristics: Provide acoustical tiles with the following surface-burning characteristics complying with ASTM E 1264 for Class A materials as determined by testing identical products per ASTM E 84:
    - a. Smoke-Developed Index: 450 or less.
- C. Certificates: Submit manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry the Underwriters Laboratories (UL) classification for NRC, CAC, and AC.

#### 1.4 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Acoustical Ceiling Units: Full-size tiles equal to 3.0 percent of quantity installed.
  - 2. Suspension System Components: Quantity of each concealed grid and exposed component equal to 3.0 percent of quantity installed.
  - 3. Hold-Down Clips: Equal to 3.0 percent of amount installed.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical tiles, suspension system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical tiles, permit them to reach room temperature and have a stabilized moisture content within the acoustical tile unit manufacturer's recommended limitations.
- C. Handle acoustical tiles carefully to avoid chipping edges or damaging units in any way.

#### 1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install acoustical tile ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete and nominally dry, work above ceilings is complete and ambient conditions of temperature and humidity will be continuously maintained at values near those indicated for final occupancy.
- B. Whether shown on Drawings or not, bulkheads will be required where piping, etc. exists below typical ceiling height.



## 1.7 COORDINATION

- A. Coordinate layout and installation of acoustical tiles, and suspension system components with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, sprinkler heads and other fire-suppression system components, and partition assemblies.

## 1.8 WARRANTY

- A. Written warranty executed by the manufacturer, agreeing to repair or replacement of acoustical ceilings that fail within the warranty period. Failures include:
  - 1. Acoustical Tiles: Sagging and warping.
  - 2. Grid Systems: Rusting and manufacturer's defects.
- B. Warranty Period for Acoustical Tiles: Minimum one year from date of Substantial Completion.
- C. Warranty Period for Grid System: Minimum 10 years from date of Substantial Completion.
- D. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

## PART 2 - PRODUCTS

### 2.1 PRODUCTS

- A. Acoustical Ceiling Tile: Match existing.
- B. Locations: See Drawings.

### 2.2 ACOUSTICAL TILE CEILINGS, GENERAL

- A. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances, unless otherwise indicated.
- B. Tile-Based Antimicrobial Treatment: Provide acoustical tiles treated with manufacturer's standard antimicrobial solution that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria.
- C. Low-Emitting Materials: Acoustical tile ceilings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

- D. Metal Suspension System Standard: Provide manufacturer's standard direct-hung metal suspension system of types, structural classifications, and finishes indicated that comply with application requirements in ASTM C 635.

### 2.3 METAL SUSPENSION SYSTEM FOR ACOUSTICAL TILE CEILING

- A. Metal Suspension System: Match existing.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Armstrong World Industries, Inc.
  - 2. CertainTeed.
  - 3. USG Interiors, Inc.
  - 4. Chicago Metallic Corporation.
  - 5. National Rolling Mills.
  - 6. Approved Equal.
- C. Standard for Metal Suspension Systems: Provide metal suspension systems of type, structural, classification and finish indicated which comply with applicable ASTM C 635 requirements. Provide fire resistance rated suspension systems where fire-rated ceilings are required.
- D. Access: upward, with each access unit identified by manufacturer's standard unobtrusive markers.
- E. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.
- F. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated.
- G. Concrete Inserts: Inserts formed from hot-dipped galvanized sheet steel and designed for attachment to concrete forms and for embedment in concrete, with holes or loops for attachment at hanger wires.
- H. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:
  - 1. Zinc-Coated Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
  - 2. Nickel-Copper-Alloy Wire: ASTM B 164, nickel-copper-alloy UNS No. N04400.
  - 3. Size: Select wire diameter so its stress at three times hanger design load (ASTM C 635, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.106-inch diameter wire.
- I. Hanger Rods: Mild steel, zinc coated or protected with rust-inhibitive paint.
- J. Angle Hangers: Angles with legs not less than 7/8 inch wide; formed with 0.04-inch-thick, galvanized steel sheet complying with ASTM A 653/A 653M, G90 coating designation; with bolted connections and 5/16-inch-diameter bolts.

- K. Hold-Down Clips: Manufacturer's standard hold-down clips for grid and edge trim.
- L. Impact Clips: Where indicated, provide manufacturer's standard impact-clip system designed to absorb impact forces against acoustical tiles.
- M. Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet, pre-painted, electrolytically zinc coated, or hot-dip galvanized according to ASTM A 653/A 653M, not less than G3 coating designation, with pre-finished metal caps on flanges; size to match existing.
  - 1. Structural Classification: Intermediate-duty system.
  - 2. Face Design: Match existing.
  - 3. Cap Material: Steel or aluminum cold-rolled sheet.
  - 4. Cap Finish: Match existing.
- N. Edge Moldings and Trim: Metal or extruded aluminum of types and profiles indicated, or if not indicated, provide manufacturer's standard molding for corners, edges and penetrations of ceiling that fit type of edge detail and suspension system indicated.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, partitions, walls, and structural framing to which acoustical tile ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage of ceiling system, and with requirements for installation tolerances and other conditions affecting performance of acoustical tile ceilings.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders, and comply with layout shown on reflected ceiling plans.

### 3.3 INSTALLATION, GENERAL

- A. General: Install acoustical tile ceilings to comply with ASTM C 636 UBC Standard 25-2, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
- B. Suspend ceiling hangers from building's structural members and as follows:
  - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
  - 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, counter-splaying, or other equally effective means.

3. Splay hangers only where required and, if permitted with fire-resistance-rated ceilings, to miss obstructions; offset resulting horizontal forces by bracing, counter-splaying, or other equally effective means.
  4. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.
  5. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
  6. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both structure to which hangers are attached and type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
  7. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, post-installed mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
  8. Do not attach hangers to steel deck tabs.
  9. Do not attach hangers to steel roof deck. Attach hangers to structural members.
  10. Space hangers not more than 48 inches o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches from ends of each member.
- C. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or post-installed anchors.
- D. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles.
1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
  2. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely.
  3. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- E. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
- F. Install acoustical tiles in coordination with suspension system and exposed moldings and trim. Place splines or suspension system flanges into kerfed edges so tile-to-tile joints are closed by double lap of material.
- G. Install acoustical tiles with undamaged edges and fit accurately into suspension system runners and edge moldings. Scribe and cut tiles at borders and penetrations to provide a neat, precise fit.

1. For square-edged tiles, install tiles with edges fully hidden from view by flanges of suspension system runners and moldings.
2. For reveal-edged tiles on suspension system runners, install tiles with bottom of reveal in firm contact with top surface of runner flanges.
3. For reveal-edged tiles on suspension system members with box-shaped flanges, install tiles with reveal surfaces in firm contact with suspension system surfaces and tile faces flush with bottom face of runners.
4. Paint cut edges of tile remaining exposed after installation; match color of exposed tile surfaces using coating recommended in writing for this purpose by acoustical tile manufacturer.
5. Install hold-down clips in areas indicated, in areas required by authorities having jurisdiction, and for fire-resistance ratings; space as recommended by tile manufacturer's written instructions, unless otherwise indicated.
6. Install clean-room gasket system in areas indicated, sealing each tile and fixture as recommended by tile manufacturer's written instructions.
7. Protect lighting fixtures and air ducts to comply with requirements indicated for fire-resistance-rated assembly.

#### 3.4 CLEANING

- A. Replace damaged and broken tiles.
- B. Clean exposed surfaces of acoustical tile ceilings, including trim, edge moldings, and suspension system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

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## SECTION 09 65 13

### RESILIENT BASE AND ACCESSORIES

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Wall base.
  - 2. Molding accessories.
- B. Related Sections include the following:
  - 1. Division 09 Section "Tile Carpeting."

##### 1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Samples: For each type of product indicated, in manufacturer's standard-size Samples but not less than 12 inches long, of each resilient product color, texture, and pattern required.

##### 1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

##### 1.4 PROJECT CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer in spaces to receive resilient products.
- B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer.
- C. Install resilient products after other finishing operations, including painting, have been completed.

#### PART 2 - PRODUCTS

##### 2.1 MANUFACTURERS

- A. Manufacturers:
  - 1. Johnsonite.
  - 2. Flexco.
  - 3. Armstrong.
  - 4. Approved Equal.

## 2.2 RESILIENT WALL BASE

- A. Resilient Base Standards: ASTM F 1861.
  - 1. Material Requirement: Type TV (vinyl, thermoplastic).
  - 2. Manufacturing Method: Group I (solid, homogeneous).
  - 3. Flexibility: Will not crack, break, or show any signs of fatigue when bent around a 1/4 inch diameter cylinder.
  - 4. Style: Cove (base with toe).
  - 5. Meets or exceeds the performance requirements for resistance to heat/light aging, chemicals, and dimensional stability when tested to the methods as described in ASTM F 1861.
- B. Thickness: 0.080 inch.
- C. Height: Match existing.
- D. Lengths: Coils in manufacturer's standard lengths.
- E. Outside Corners: Job formed.
- F. Inside Corners: Job formed.
- G. Locations: See Drawings.
- H. Finish: Match existing.
- I. Colors and Patterns: Match existing.

## 2.3 RESILIENT ACCESSORIES

- A. Transition Strips:
  - 1. At dissimilar flooring materials.
  - 2. At direct glue carpet.
  - 3. At other locations as indicated.
  - 4. Color: Match the wall base.

## 2.3 RESILIENT MOLDING ACCESSORIES

- A. Description: Carpet edge for glue-down applications, reducer strip for resilient floor covering, joiner for tile and carpet, transition strips.
- B. Material: Vinyl.
- C. Profile and Dimensions: As indicated.
- D. Colors and Patterns: Match existing.



## 2.5 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.
  - 1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Supart D (EPA Method 24).
- C. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of tiles, and in maximum available lengths to minimize running joints.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Prepare substrates according to manufacturer's written recommendations to ensure adhesion of resilient products.
- B. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
- D. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
  - 1. Do not install resilient products until they are the same temperature as the space where they are to be installed.
- E. Areas to receive resilient products shall be clean, fully enclosed, weather tight, and maintained at a uniform temperature of at least 65°F for 24 hours immediately before installation.
- F. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, and dust. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 RESILIENT WALL BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.
- B. Installation work should not begin until the work of all other trades, especially overhead trades, has been completed.
- C. Areas to receive wall base shall be maintained at a uniform temperature of at least 65°F for 24 hours during and for 24 hours after the installation is completed.
- D. The wall base and adhesives shall be conditioned in the same manner.

- E. Floors and walls shall be clean, dry, free of dust, all paints, wallpaper, and all other foreign materials which may affect proper adhesive bonding.
- F. Wall bases shall not be installed on surfaces that will be exposed to drastic temperature changes or moisture.
- G. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- H. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.
- I. Tightly adhere wall base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- J. Do not stretch wall base during installation.
- K. Vinyl Wall Base: Coiled wall base shall be uncoiled and lay flat for at least 24 hours at 65°F prior to installation.
- L. Job-Formed Corners:
  - 1. Outside Corners: Use straight pieces of maximum lengths possible. Form without producing discoloration (whitening) at bends. Shave back of base at points where bends occur and remove strips perpendicular to length of base that are only deep enough to produce a snug fit without removing more than half the wall base thickness.
  - 2. Inside Corners: Use straight pieces of maximum lengths possible. Form by cutting an inverted V-shaped notch in toe of wall base at the point where corner is formed. Shave back of base where necessary to produce a snug fit to substrate.

### 3.3 RESILIENT ACCESSORY INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient accessories.
- B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor coverings that would otherwise be exposed.

### 3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.
- B. Perform the following operations immediately after completing resilient product installation:
  - 1. Remove adhesive and other blemishes from exposed surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
    - a. Do not wash surfaces until after time period recommended by manufacturer.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods recommended in writing by manufacturer. Cover resilient products until Substantial Completion.

END OF SECTION

## SECTION 09 68 13

### TILE CARPETING

#### PART 1 - GENERAL

##### 1.1 SUMMARY

A. This Section includes the following:

1. Modular Carpet Tile.

B. Related Sections include the following:

1. Division 09 Section "Resilient Base and Accessories" for resilient wall base and accessories installed with carpet tile.

##### 1.2 SUBMITTALS

A. Product Data: For the following, including installation recommendations for each type of substrate:

1. Carpet: For each type indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance.

B. Samples: For each exposed product and for each color and texture specified.

C. Shop Drawings: Show the following:

1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
2. Carpet type, color, and dye lot.
3. Type of subfloor.
4. Type of installation.
5. Pattern of installation.
6. Pattern type, location, and direction.
7. Pile direction.

D. Maintenance Data: For carpet to include in maintenance manuals. Include the following:

1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
2. Precautions for cleaning materials and methods that could be detrimental to carpet tile and carpet cushion.

E. Warranties: Special warranties specified in this Section.

### 1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer, certified by the International Certified Floorcovering Installers Association at the Commercial II certification level.
- B. Fire-Test-Response Ratings: Where indicated, provide carpet tile identical to those of assemblies tested for fire response according to NFPA 253 by a qualified testing agency.
- C. General Terminology and Information Standard: "Carpet Specifier's Handbook" by The Carpet and Rug Institute (CRI).

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with CRI 104.

### 1.5 PROJECT CONDITIONS

- A. Comply with CRI 104 for temperature, humidity, and ventilation limitations.
- B. Environmental Limitations: Do not install carpet tile until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- C. Do not install carpet tile over concrete slabs until slabs have cured, are sufficiently dry to bond with adhesive, and have pH range recommended by carpet manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet tile, install carpet tile before installing these items.

### 1.6 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: Review methods and procedures related to carpet installation, including:
  - 1. Delivery, storage, and handling procedures.
  - 2. Ambient conditions and ventilation procedures.
  - 3. Subfloor preparation procedures, including relative humidity, moisture and alkalinity tests.

### 1.7 WARRANTY

- A. Special Warranty for Carpet Tile: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet tile installation that fails in materials or workmanship within specified warranty period.
  - 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.

2. Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs, loss of tuft bind strength, excess static discharge, and delamination.
  3. Warranty Period: 10 years from date of Substantial Completion.
- B. Special Installation Warranty: Installer's written warranty, co-signed by Contractor, agreeing to provide labor and materials to replace carpet tile and accessories that fail due to installation defects, including inadequate subflooring preparation and adhesion failures.
1. Warranty does not include failure due to vandalism or abuse.
  2. Warranty Period: Lifetime. Five (5) years from date of Substantial Completion.

## 1.8 EXTRA MATERIALS

- A. Furnish extra materials, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Carpet: Fill-sized tiles equal to five (5) percent of amount installed for each type indicated, but not less than 10 square yards.
- B. All usable pieces of carpet tile remaining after completion of the work shall be left with the Owner at the Project Site.

## PART 2 - PRODUCTS

### 2.1 CARPET TILE

- A. Manufacturers/Products: See Drawings.
- B. Antimicrobial Treatment: Manufacturer's standard.

### 2.2 ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet cushion manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, non-staining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and is recommended or provided by carpet manufacturer.
1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. Vinyl Transition Strips: Vinyl transition strip of width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
  - 1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet and cushion manufacturer.
  - 2. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. General: Comply with CRI 104, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tiles.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch, unless more stringent requirements are required by manufacturer's written instructions.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet tile and cushion manufacturer.
- D. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

### 3.3 INSTALLATION

- A. Comply with CRI 104, Section 104 and with carpet tile manufacturers' written installation instructions for the following:
  - 1. Direct-Glue-Down Installation: Comply with CRI 104, Section 9, "Direct Glue-Down Installation."
- B. Comply with carpet tile manufacturer's written recommendations for seam locations and direction of carpet tile; maintain uniformity of carpet tile direction and lay of pile. At doorways, center seams under the door in closed position.

- C. Do not bridge building expansion joints with carpet tile.
- D. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.
- E. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, non-staining marking device.
- G. Install pattern parallel to walls and borders.
- H. All selvages shall be trimmed to ensure good side seams. All seams shall receive an 1/8" continuous bead of seam adhesive at the point the face yarn enters the back. Fit edges together with an invisible seam and bond with appropriate adhesive.

#### 3.4 CLEANING AND PROTECTING

- A. Perform the following operations immediately after installing carpet:
  - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet tile manufacturer.
  - 2. Remove yarns that protrude from carpet tile surface.
  - 3. Vacuum carpet tile using commercial machine with face-beater element.
- B. Protect installed carpet tile to comply with CRI 104, "Protecting Indoor Installations."
- C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer and carpet tile adhesive manufacturer.

END OF SECTION

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SECTION 09 91 23  
INTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:
  - 1. Gypsum Board.
  - 2. And as indicated on Drawings.
- B. "Paint" as used herein means all coating systems materials including primers, emulsions, enamels, stains, sealers and fillers and other applied material whether used as prime, intermediate or finish coats.
- C. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- D. The following categories are not included as part of field-applied finish work:
  - 1. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer-finishing is specified.
  - 2. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces in concealed areas and generally inaccessible areas.
  - 3. Finished metal surfaces.
  - 4. Operating parts.

1.2 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
  - 1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
  - 2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
  - 3. Semi-gloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
  - 4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

1.3 SUBMITTALS

- A. Paint: Submit a list of specified products with corresponding name of manufacturer, identifying name and number of proposed products along with manufacturer's written instructions for use of each product.
- B. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
- C. Prepare and repaint an area of each designated interior surface to requirements specified herein, with specified paint or coating showing selected color, gloss/sheen, texture and workmanship to MPI Repainting Manual standards for review and approval by Owner and Architect. When approved, interior surface shall become acceptable standard of finish quality and workmanship for similar on-site repainting of work.
- D. VOC Content Submittal: For all interior paints, product data including printed statement of VOC content.

#### 1.4 QUALITY ASSURANCE

- A. Master Painters Institute (MPI) Standards:
  - 1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
  - 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
    - a. For areas to be renovated, comply with requirements in "MPI Maintenance Repainting Manual."
- B. Source Limitations:
  - 1. Obtain primers for each coating system from the same manufacturer as the finish coats.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver materials to site until having received all written approvals of submitted information and samples.
- B. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
  - 1. Product name or title of material.
  - 2. Product description (generic classification or binder type).
  - 3. Manufacturer's stock number and date of manufacture.
  - 4. Contents by volume, for pigment and vehicle constituents.
  - 5. Thinning instructions.
  - 6. Application instructions.
  - 7. Color name and number.
  - 8. VOC content.

- C. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
  - 1. Keep storage area neat and orderly. Remove oily rags and waste daily.
- D. Take all precautions to insure that workers and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and applications of paint.

#### 1.6 PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.
- B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.
- C. Do not apply paint when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

#### 1.7 SEQUENCING AND SCHEDULING

- A. Schedule cleaning and painting so that contaminants from cleaning process will not fall onto newly-painted surfaces.

#### 1.8 EXTRA MATERIALS

- A. Furnish extra materials described below that are from the same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
  - 1. Quantity: Furnish an additional 5 percent, but not less than one (1) gallon of each material and color applied.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide products by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. PPG Architectural Finishes, Inc.
  - 3. Sherwin-Williams Company.
  - 4. Diamond Vogel.
  - 5. Approved Equal.

#### 2.2 MATERIALS

- A. Use the materials of the same manufacturer for each system.

- B. Sherwin Williams systems are called out in the system schedules to establish quality and dry mil thickness of finished installation for all systems. A different manufacturer may be used for color selection. Any manufacturer noted above may be used as long as quality and color requirements are met.
1. Proprietary names used to designate colors or materials are not intended to imply that products of named manufacturers are required to exclusion of equivalent products of other manufacturers.
- C. Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers.
- D. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer based on testing and field experience.
  2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- E. Chemical Components of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24); these requirements do not apply to paints and coatings that are applied in a fabrication or finishing shop:
1. Flat Paints, Coatings, and Primers: VOC content of not more than 50 g/L.
  2. Nonflat Paints, Coatings and Primers: VOC content of not more than 150 g/L.
  3. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
  4. Restricted Components:
    - a. Acrolein.
    - b. Acrylonitrile.
    - c. Antimony.
    - d. Benzene.
    - e. Butyl benzyl phthalate.
    - f. Cadmium.
    - g. Di (2-ethylhexyl) phthalate.
    - h. Di-n-butyl phthalate.
    - i. Di-n-octyl phthalate.
    - j. 1,2-dichlorobenzene.
    - k. Diethyl phthalate.
    - l. Dimethyl phthalate.
    - m. Ethylbenzene.
    - n. Formaldehyde.
    - o. Hexavalent chromium.
    - p. Isophorone.
    - q. Lead.
    - r. Mercury.
    - s. Methyl ethyl ketone.
    - t. Methyl isobutyl ketone.
    - u. Methylene chloride.

- v. Naphthalene.
- w. Toluene (methylbenzene).
- x. 1,1,1-trichloroethane.
- y. Vinyl chloride.

F. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated.

## 2.3 PRIMERS/SEALERS

A. Interior Latex Primer/Sealer: MPI #50.

## 2.4 LATEX PAINTS

- A. Institutional Low-Odor/VOC Latex (Flat): MPI #143 (Gloss Level 1).
- B. Institutional Low-Odor/VOC Latex (Low Sheen): MPI #144 (Gloss Level 2).
- C. Institutional Low-Odor/VOC Latex (Eggshell): MPI #145 (Gloss Level 3).
- D. Institutional Low-Odor/VOC Latex (Semigloss): MPI #147 (Gloss Level 5).

## 2.5 EQUIPMENT

A. Provide all brushes, rollers, ladders, scaffolding and other equipment of any kind to properly execute each type of work.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the work.
- B. Maximum Moisture Content of Substrates:
  - 1. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

- E. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  - 1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

### 3.2 PREPARATION

- A. Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as specified for each particular substrate condition.
  - 1. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted, or provide surface-applied protection prior to surface preparation and painting operations.
    - a. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved. Remove surface-applied protection, if any.
    - b. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning.

  - 2. Remove dirt, rust, scale, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable paint film.
- B. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
- C. Gypsum Board: Fill minor irregularities with patching material and sand to smooth level surfaces taking care not to raise nap of paper.

### 3.3 APPLICATION

- A. Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases.
- B. Do work under adequate illumination and dust-free conditions.
- C. Apply paint according to manufacturer's written instructions.
  - 1. Use applicators and techniques best suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- D. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

- E. Materials.
  - 1. Do not open containers until required for use.
  - 2. Stir materials thoroughly and keep at uniform consistency during application.
- F. Coats
  - 1. Number specified is minimum.
  - 2. Touchup suction spots between coats.
  - 3. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
  - 4. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
  - 5. Refinish surfaces affected by refitting work.

### 3.4 COLOR SEPARATION

- A. An average of one or two wall colors will be used per room. Ceilings generally will be a different color than walls. Finished closets will usually be the same as adjoining rooms.
- B. Job painted metal items such as diffusers, grilles, and registers will generally be the same color as the adjacent surface.

### 3.5 CLEANING

- A. During the progress of this work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each workday.
- B. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

### 3.6 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
- C. At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

### 3.7 INTERIOR PAINT SCHEDULE

- A. In addition to obvious surfaces, the following do not require painting or finishing:
  - 1. Do not include painting when factory-finishing or installer-finishing is specified for such items (but not limited to) acoustic materials, finished mechanical and electrical equipment, including light fixtures and distribution cabinets.

2. Painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, furred areas, utility tunnels, pipe spaces, and duct shafts.
  3. Do not paint over any code-required labels, such as Underwriter's Laboratories and Factory Mutual, or any equipment identification, performance rating, name or nomenclature plate.
- B. Gypsum Board: Provide the following finish systems over interior gypsum board surfaces:
1. Latex-Eggshell; Zero VOC.
    - a. One coat Interior Latex Primer.
    - b. Two coats Interior Latex Eggshell.
    - c. Colors: Match existing.

END OF SECTION



## SECTION 12 35 30

### CASEWORK AND COUNTERTOPS

#### PART 1 – GENERAL

##### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Plastic-laminate cabinets and countertops and backsplashes.

##### 1.2 SUBMITTALS

- A. Product Data: For cabinets, countertop materials, cabinet hardware and accessories, adhesives, and finishing materials and processes.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components. Include countertop layout for each location, details of countertop construction, including backsplash and edge details, and type of core substrate materials. Show materials, finishes, filler panels, hardware, edge and backsplash profiles, methods of joining countertops, and cutouts for plumbing fixtures. Field measure.
- C. Samples:
  - 1. Plastic laminates, 8 by 10 inches, for each type, color, pattern, and surface finish, with one (1) sample applied to core material and specified edge material applied to one (1) edge.

##### 1.3 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who specialize in fabricating products similar to those required for this Project and whose products have a record of successful in-service performance with a minimum of three (3) years documented experience. Accepted by the manufacturer as an acceptable installer.
- B. Field Measurements: Verify dimensions of construction to receive countertops by field measurements before fabrication and indicate measurements on Shop Drawings.
- C. Quality Standard: Unless otherwise indicated, comply with AWI's "Manual of Millwork."

##### 1.4 COORDINATION

- A. Coordinate work with plumbing rough-in, electrical rough-in, and installation of associated and adjacent components.

##### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver casework items only when proper storage conditions will be available. Store casework in protected area until ready for installation.

- B. Maintain optimum humidity and temperature conditions after receipt of materials.
- C. Store in manner to allow free circulation of air around all items.
- D. Maintain temperature of casework storage areas between 50 to 75 degrees Fahrenheit.

## PART 2 – PRODUCTS

### 2.1 PLASTIC-LAMINATE CABINETS AND COUNTERTOPS

- A. Plastic Laminate: Particleboard faced with high-pressure decorative laminate complying with NEMA LD3, grades as indicated, or if not indicated, as required by woodwork quality standard.
  - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers:
    - a. Wilsonart International.
    - b. Formica Corp.
    - c. Pionite.
    - d. Nevamar Company.
    - e. Approved Equal.
  - 3. Colors, Patterns and Finishes: See Room Finish List.
- B. Cabinet Hardware and Accessories:
  - 1. General: Provide manufacturer's standard units complying with BHMA A156.9, of type, size, style, material, and finish as selected by Architect from manufacturer's full range.
  - 2. Pulls: Surface mounted decorative pulls.
  - 3. Hinges: Concealed butt hinges.
  - 4. Drawer Guides: Epoxy-coated metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05011 or B05091.

### 2.2 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln-dried to less than 15 percent moisture content.
- C. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

### 2.3 FABRICATION

- A. General: Complete fabrication to maximum extent possible before shipment to Project site. Where necessary for fitting at site, provide allowance for scribing, trimming, and fitting.
  - 1. Shop cut openings to maximum extent possible. Sand edges of cutouts to remove splinters and burrs. Seal edges of openings in countertops with a coat of varnish.

## B. Plastic-Laminate Cabinets

1. AWI Type of Cabinet Construction: Flush overlay.
2. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate as follows:
  - a. Horizontal Surfaces Other Than Tops: Grade HGS.
  - b. Post Formed Surfaces: Grade HGP.
  - c. Vertical Surfaces: Grade HGS.
  - d. Edges: Grade HGS.
3. Materials for Semi-Exposed Surfaces Other Than Drawer Bodies: Thermoset decorative panels.
4. Drawer Slides and Backs: Thermoset decorative panels.
5. Drawer Bottoms: Thermoset decorative panels.
6. Colors, Patterns, and Finishes: As selected by Architect from manufacturer's standard range.
7. Provide dust panels of 1/4-inch plywood or tempered hardboard above compartments and drawers, unless located directly under tops.

## C. Plastic-Laminate Supports/Aprons:

1. AWI Type of Cabinet Construction: Flush overlay.
  - a. Horizontal Surfaces Other Than Tops: Grade HGS.
  - b. Post formed Surfaces: Grade HGP.
  - c. Vertical Surfaces: Grade HGS.
  - d. Edges: Grade HGS.
2. Materials for Semi-exposed Surfaces Other Than Drawer Bodies: Thermoset decorative panels.
3. Colors, Patterns, and Finishes: As selected by Architect from manufacturer's standard range.

## D. Plastic-Laminate Countertops:

1. High-Pressure Decorative Laminate Grade: HGS.
2. Colors, Patterns, and Finishes: As selected by Architect from manufacturer's full range.
3. Edge Treatment: Same as laminate cladding on horizontal surfaces.
4. Provide backer sheets on underside of all countertops, regardless of core thickness or unsupported area.
5. Core Material at Sinks: Particleboard made with exterior glue or exterior-grade plywood.
6. Post-rolled leading edge and integral 4-inch backsplash.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. Verify adequacy of backing and support framing.
- A. Verify location and sizes of utility rough-ins associated with work in this Section.

### 3.2 PREPARATION

- A. Provide anchoring devices for installation and embedding.
- B. Provide templates and rough-in measurements.

### 3.3 INSTALLATION

- A. Assemble countertops and complete fabrication at Project site to the extent that it was not completed in the shop.
  - 1. Provide cutouts for appliances, plumbing fixtures, electrical work, and similar items.
- B. Field Jointing: Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required.
  - 1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
- C. Install components plumb, level, true and straight according to approved Shop Drawings and manufacturer's published installation instructions. Shim as required with concealed shims.
- D. Install cabinets with no variations in flushness of adjoining surfaces; use concealed shims. Where cabinets abut other finished work, scribe and cut for accurate fit. Provide filler strip, scribe strips, and molding in finish to match cabinet face.
- E. Install casework and countertops level and plumb to a tolerance of 1/8 inch in 8 feet.
- F. Scribe and cut countertops to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- G. Fasten cabinets to adjacent units and to backing.
  - 1. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches o.c. with No. 10 wafer-head screws sized for 1-inch penetration into wood framing, blocking, or hanging strips.
  - 2. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches o.c. with toggle bolts through metal backing behind gypsum board.
- H. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Align adjacent surfaces and form seams to comply with manufacturer's written instructions using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
- I. Install backsplashes where indicated on Drawings. Adhere to countertops with construction adhesive approved by manufacturer. Caulk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants."
- J. Provide all necessary fillers, panels, end panels, scribes required to make complete installation as detailed.
- K. Prior to final inspection, examine installation of the work of this section. Repair or replace all defects found. Leave installation clean, undamaged, and ready for use.

### 3.4 ADJUSTING AND CLEANING

- A. In-Progress Cleaning: Clean countertops and backsplashes as work progresses. Remove adhesive, grout, mortar, and sealant smears immediately.
- B. Repair damages and defective work.
- C. Use no acids or harsh abrasives.
- D. Leave surfaces clean and without defects.

END OF SECTION

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## SECTION 22 00 00

### PLUMBING

#### PART 1 - GENERAL

##### 1.01 DESCRIPTION

- A. Work Included: Provide plumbing where shown on the Drawings, as specified herein, and as needed for a complete and proper installation including, but not necessarily limited to:
1. Domestic Cold Water Piping;
  2. Drain, Waste, and Vent Systems;
  3. Plumbing Demolition.
- B. Related Work:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  2. Cutting and patching existing floor by the General Contractor; cut out locations to be provided by the Plumbing Contractor.
- C. Work of Other Sections:
1. Openings for new Plumbing work in new construction walls, floors, roof, ceiling, etc. shall be provided by the General Contractor. Location and size of these openings shall be the responsibility of the Plumbing Contractor.

##### 1.02 GENERAL PROVISIONS

- A. This specification Section is a general description of the work requirements. The particular descriptions are not intended to be all inclusive. Bidders shall also refer to the Drawings.
- B. Everything essential for the completion of the work implied to be covered by these Specifications to make the system ready for normal and proper operation must be furnished and installed by this Contractor. Accordingly, any omission from either the plans or the Specifications, or both of details necessary for the proper installation and operation of the system shall not relieve this Contractor from furnishing such detail in full and proper manner.
- C. The Drawings show various details indicating the general arrangement of the plumbing work, sizes and locations of piping, equipment, etc. The said Drawings with figures, lettering, etc., shall be considered a part of these Specifications and no charge or alternation shall be made in any case unless ordered by the Engineer.
- D. In addition to the Plumbing work, refer to the Plumbing work shown on the general Construction Drawings of the building as being part of this Contract, unless specified to be completed by other contractors.

##### 1.03 QUALITY ASSURANCE

- A. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Without additional cost to the Owner, provide such other labor and materials as required to complete the work of the Section in accordance, with the requirements of governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in the Contract Documents.
- C. In acceptance or rejection of installed work, the Architect or Engineer shall make no allowance for lack of skill on the part of the Workmen.
- D. For the actual field fabrication, installation and testing of the Plumbing work, use only thoroughly trained and experienced workmen complete familiar with the items required and manufacturer's current recommended methods of installation.

E. Reference Standards:

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society of Testing and Material
AWWA	American Waterworks Association
CISPI	Cast Iron Soil Pipe Institute
FM	Factory Mutual
MCA	Mechanical Contractors Association
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
WQA	Water Quality Association

**1.04 CODES AND PERMITS**

- A. This contractor must comply with building codes and other ordinances in force where the building is located as far as it apply to his work.
- B. Plumbing work shall meet all Federal, State, Local Codes, ordinances and utility regulations.
  - 1. In the event of conflict between or among specified requirements and pertinent regulations, the more stringent requirement will govern when so directed by the Engineer.
- C. Plumbing Contractor must secure permits from proper offices and pay all legal fees as may be necessary for fulfilling the requirements of these specifications.
- D. Submit one (1) copy of all permits to the Owner.

**1.05 COORDINATION**

- A. Cooperate and coordinate with other trades to assure that all systems pertaining to the Plumbing work shall be installed in the best feasible arrangement. Coordinate as required with all other trades to share space in common areas and to provide the maximum of access to each system.



- B. Arrange plumbing work in neat, well organized manner with piping and similar services running with primary lines of building construction, and with minimum of 8 foot overhead clearance, where possible.
- C. Locate equipment properly to provide easy access, and arrange entire Plumbing Work with adequate access for operation and maintenance.
- D. Give right-of-way to piping which must slope for drainage.
- E. Where Plumbing work is to connect to existing, the Contractor must field verify all connection points before beginning any rough-in work. Verify gravity flow lines and proper invert elevations required prior to starting piping installation.
- F. Coordinate site utility requirements with Site Contractor, along with inverts required to building.

#### **1.06 PLUMBING SYSTEM IDENTIFICATION**

- A. General: Provide adequate marking of plumbing system and control equipment to allow identification and coordination of maintenance activities and maintenance manuals.
  - 1. Furnish and install adequate marking, tagging and labeling of all *accessible and exposed* Plumbing equipment, piping and control devices, per ANSI A13.1-1981. Accessible locations shall include all ceiling spaces above accessible ceilings.
- B. Piping: Identify piping once every 30 feet at each branch, at termination of lines, and near valve or equipment connections. Place flow directional arrows at each piping identification. Provide lettering of the appropriate size to convey information on wrap-around signage, adhesive-backed or paint stenciled labels.

#### **1.07 FLOOR, WALL, ROOF AND CEILING OPENINGS**

- A. The General Contractor will be required to leave openings in ceiling, floors, walls, roof, partitions, etc., as required to install the Plumbing work specified or shown on the Drawings. The Plumbing Contractor is responsible for correct size and location of his openings. Where penetrations through existing construction are required, they shall be the responsibility of the Plumbing Contractor.
  - 1. Pipe Sleeves: Schedule 40 black steel pipe, 1" larger than carrier pipe.
- B. The Plumbing Contractor shall set sleeves and anchors for all equipment, etc., and shall provide watertight seals on pipes through exterior walls, floors and roof and where noted on the Drawings.
  - 1. Interior Sound Wall Penetrations: All duct and piping penetrating sound walls shall be sleeved and sealed with fiberglass insulation and caulked for sound and odor control. Verify all required sound wall locations with Architect/General Contractor prior to bidding.
- C. Pack annular space between sleeves and pipe with fiberglass insulation and seal with approved caulking materials. Where penetrations occur through fire-rated walls or floors, fill space with fire-resistive insulation similar to high-temperature mineral wool, US Gypsum Thermafiber batts or Cera-blanket FS insulation by Tremco. Seal openings with fire-resistive fire stop caulk/sealant.
  - 1. Fire-proof plastic piping through fire-rated construction per approved UL listed assembly.

- D. Provisions for openings, holes and clearances through walls, floors, ceilings and partitions to be made in advance of construction of such parts of the building.
- E. If the Plumbing Contractor should neglect to inform the General Contractor of his opening requirements and that portion of the Building construction has been completed, the Plumbing Contractor shall pay the General Contractor for providing such openings.

#### **1.08 CUTTING AND PATCHING**

- A. General: Refer to Division 1 General Requirements.
- B. Perform all cutting and patching required for complete installation of the HVAC systems, unless specifically noted otherwise. Provide all materials required for patching unless otherwise noted.
  - 1. All cutting and patching necessary of structural members to install any plumbing work shall not be done without permission, and then only carefully done under the direction of the Architect and General Contractor.
- C. The Contractor shall not endanger any work of other trades by a demolition, cutting, digging or otherwise. Any cost caused by defective or ill-timed cutting and patching work shall be borne by the contractor responsible. Each contractor requiring cutting and patching shall hire men skilled in such cutting and patching to do the work.
  - 1. All patching work in existing areas shall match existing work and restore the finish to its original condition in material, quality, texture, finish and color unless specifically noted or scheduled otherwise.

#### **1.09 TESTS AND INSPECTIONS:**

- A. All plumbing tests shall be conducted in the presence of and to the satisfaction of the Governing Authorities, Architect/ Engineer, and Owner or his authorized representative.
- B. The Plumbing Contractor shall be responsible for applying tests and ordering inspections as required by Federal, State and local Code and Inspection authorities.
  - 1. All work shall remain exposed until it has been tested, inspected and approved.

#### **1.10 TEMPORARY SERVICES**

- A. Provide temporary services for all plumbing services to the existing facility to maintain function of sanitary, storm, natural gas and water services during the construction period.

#### **1.11 TRENCHING AND BACKFILLING**

- A. Trench, excavate and tunnel to place all piping and other related work necessary at the elevations indicated or required, as shown on the Drawings.
  - 1. Cut bottom of trench to grade, make trench 12” wider than the widest dimension of the pipe.
  - 2. All pipes shall be laid on a compacted bed of sand 6” deep. Do not lay piping on large stones, rocks or bricks.

- B. Backfill in layers and compact sufficiently to prevent settlement. Backfill with damp sand and fine gravel mixture.
  - 1. Exterior locations shall be backfilled to 12" of grade with sand and fine gravel mixture and the remainder with native compacted topsoil.
  - 2. Do not start backfill operations until plumbing work has been properly inspected and approved.

#### **1.12 CONCRETE FOR PLUMBING WORK**

- A. General: Comply with pertinent provisions of Division 1 and Division 3.
- B. No concrete work anticipated for this project.

#### **1.13 SUBMITTALS**

- A. Refer to Division 1 for additional submittal requirements.
- B. The Plumbing Contractor will be held responsible for correction of work deemed necessary by the Engineer due to proceeding with the work without shop drawings that have the Architect/Engineers final approval.
- C. Shop drawings shall include data on physical dimensions, gauges, materials of construction and capacities.
  - 1. Incomplete drawings will be disapproved.
- D. This Contractor will be responsible for all figures and dimensions shown on the shop drawings. Approval of shop drawings describing equipment that cannot fit in the space allotted does not relieve this Contractor from providing equipment that will meet the space requirements.
- E. Submit electronic PDF copies of shop drawings with file names associated with equipment submitted along with proper markup of electronic submittals to the Architect/Engineer for approval, with complete detail for all equipment, materials, etc., to be furnished and installed for this project as follows:
  - 1. Pipe and piping specialties;
  - 2. As-built Drawings(1 copy).
- F. Submit to the local building authority for approval: equipment cuts, O&M manuals, Installation manuals, and any UL listed assemblies employed to penetrate fire-rated assemblies.

#### **1.14 HOUSEKEEPING AND CLEANUP**

- A. Periodically as work progress and/or as directed by the Architect/Engineer, the Contractor shall remove waste materials from the building and leave the area of the workroom clean. Upon completion of work remove all tools, scaffolding, broken and waste materials, etc., from the site.

#### **1.15 AS-BUILT DRAWINGS**

- A. During construction maintain a set of prints showing installed as-built work for the project.

- B. Upon completion of construction before final acceptance, provide a set of as-built drawings to the Architect/Engineer.

## **PART 2 - PRODUCTS**

### **2.01 DOMESTIC WATER PIPE SCHEDULE**

A. Above Ground Piping:

1. Type 'L' copper water tube, H(hard drawn) temper, ASTM B88; with cast copper fittings, ANSI B16.18; wrought copper fittings, ANSI B16.22; lead-free(less than 0.2%) solder, ASTM B32; flux ASTM B813.
2. PEXa tubing approved for potable water piping: Crosslinked Polyethylene, ASTM F876 & ASTM F877. Fittings: Insert type fittings with cold flaring memory type fittings equal to Uponor. Crimp or compression ring fittings will not be allowed.
3. Copper mechanical grooved fittings and couplings on roll grooved pipe(propress) may be used in lieu of soldered fittings.

### **2.02 DRAIN, WASTE AND VENT PIPE SCHEDULE**

A. Interior Above Ground:

1. Hubless cast iron soil pipe and fittings, CISPI 301; with no-hub couplings, CISPI 310.
2. PVC plastic pipe, Schedule 40, Class 12454-B(PVC 112), ASTM D1785; PVC plastic drain, waste and vent pipe and fittings, ASTM D2665; socket fitting patterns, ASTM D3311; primer, ASTM F656; solvent cement, ASTM D2564.

B. Interior Below Ground:

1. Cast iron soil pipe and fittings, hub and spigot, service weight, ASTM A74; with gasketed neoprene joints.
2. PVC plastic pipe, Schedule 40, Class 12454-B(PVC 112), ASTM D1785; PVC plastic drain, waste and vent pipe and fittings, ASTM D2665; socket fitting patterns, ASTM D3311; primer, ASTM F656; solvent cement, ASTM D2564.

### **2.03 PIPE HANGERS**

A. Piping:

1. Split ring hangers with supporting rods.
2. Adjustable clevis.

B. Multiple or Trapeze Hangers:

1. Steel channels with welded spacers and hanger rods.

C. Copper Pipe Supports:

1. All supports, fasteners, clamps, etc. directly connected to copper piping shall be copper-plated or polyvinylchloride(PVC)-coated.

2. Where steel strut supports are used, provide isolation collar between supports/clamp and copper piping.

E. *Approved Manufacturers:* Fee and Mason, B-line, Grinnell or approved equal.

## **2.04 CLEANOUTS**

A. *Exterior:* Smith #4253 with XH cast iron top in concrete areas.

B. *Interior Floors:* Smith 4930-PB square nickel-bronze top.

C. *Finished walls:* Smith #4532 stainless steel with access plate and screw.

D. Provide cleanout plugs of extra heavy bronze

E. *Approved Manufacturers:* Josam, Smith, Wade, Zurn or approved equal.

## **2.05 ACCESS**

A. *General:* All piping, conduit and accessories shall be installed to permit access to equipment for maintenance. Any relocation of piping, equipment or accessories required to provide maintenance access shall be accomplished by the Contractor at no additional cost.

A. *Removable Access Plates:* Where only hand access is sufficient for valve access, provide removable plate-type access unit of minimum size which will facilitate required access.

1. Provide units of type, style, design, material and finish appropriate for location and exposure in each instance.
2. In exposed surfaces of occupied spaces provide round plate units, flush floor units and frameless low-profile wall units, primed-for-paint in painted surfaces and polished chrome or stainless steel finish in other surfaces.

C. *Walls:*

1. Smith #4767 flush wall stainless steel cover plate with screw latch lock in finished tile walls at wet locations.
2. Smith #4760 or #4765 with bonderized prime-coated steel face and screw latch lock in walls of other finished rooms.

D. *Ceilings:*

1. Provide Smith #4765 flush ceiling bonderized prime-coated steel face with screw latch lock.

E. *Floors:*

1. Smith #4910 with aluminum or nickel-bronze non-skid top.

## **2.06 OTHER MATERIALS**

A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

## **PART 3 - EXECUTION**

### **3.01 SURFACE CONDITIONS**

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### **3.02 PLUMBING SYSTEM LAYOUT**

- A. Lay out the plumbing system in careful coordination with the Drawings, determining proper elevations for all components of the system and using only the minimum number of bends to produce a satisfactorily functioning system.
- B. Follow the general layout shown on the Drawings in all cases except where other work may interfere.
- C. Lay out pipes to fall within partition, wall, or roof cavities, and to not require furring other than as shown on the Drawings.
- D. Where work is to connect to existing, Plumbing contractor must field verify all connection points before beginning any rough-in work. Verify all connecting invert elevations and flow lines of new work connected to existing gravity drainage.

### **3.03 TRENCHING AND BACKFILLING**

- A. Perform trenching and backfilling associated with the work of this Section in strict accordance with the provisions of Division 2 of these Specifications.
- B. Cut bottom of trenches to grade. Make trenches 12" wider than the greatest dimension of the pipe.
- C. Bedding and backfilling:
  - 1. Install piping promptly after trenching. Keep trenches open as short a time as practicable.
  - 2. Under the building, install pipes on a 6" bed of damp sand. Backfill to bottom of slab with damp sand.
  - 3. Outside the building, install underground piping on a 6" bed of damp sand. Backfill to within 12" of finish grade with damp sand. Backfill remainder with native topsoil.
  - 4. Do not backfill until installation has been approved and until Project Record Documents have been properly annotated.

### **3.04 INSTALLATION OF PIPING AND EQUIPMENT, GENERAL**

- A. General:
  - 1. Proceed as rapidly as the building construction will permit.

2. Thoroughly clean items before installation. Cap pipe openings to exclude dirt until fixtures are installed and final connections have been made.
3. Cut pipe accurately, and work into place without springing or forcing properly clearing window, doors, and other openings. Excessive cutting or other weakening of the building will not be permitted.
4. Show no tool marks or threads on exposed plated, polished, or enameled connections from fixtures. Tape all finished surfaces to prevent damage during construction.
5. Make changes in directions with fittings; make changes in main sizes with eccentric reducing fittings. Unless otherwise noted, install water supply and return piping with straight side of eccentric fittings at top of the pipe.
6. Run horizontal sanitary piping at a uniform grade of 1/4" per ft., unless otherwise noted. Run horizontal water piping with an adequate pitch upwards in direction of flow to allow complete drainage.

### **3.05 PIPE JOINTS**

#### **A. Copper tubing:**

1. Cut square, remove burrs, and clean inside of female fitting to a bright finish.
  - a. Apply solder flux with brush to tubing.
  - b. Remove internal parts of solder-end valves prior to soldering.
2. Provide dielectric unions at points of connection of copper tubing to ferrous piping and equipment.
3. For joining copper tubing, use the following:
  - a. Water piping 3" and smaller: 95-5 solder;
  - b. Water piping larger than 3": "Sil-fos" brazing;
  - c. Underground: "Sil-fos" brazing.

#### **B. Screwed piping:**

1. Deburr cuts.
  - a. Do not ream exceeding internal diameter of the pipe.
  - b. Thread to requirements of ANSI B2.1.
2. Use Teflon tape on male thread prior to joining other services.
3. Use litharge and glycerin on joint prior to cleaning for air and oil piping.

#### **C. Leaky joints:**

1. Remake with new material.
2. Remove leaking section and/or fitting as directed.
3. Do not use thread cement or sealant to tighten joint.

### **3.06 PIPE SUPPORTS**

- A. Support suspended piping with clevis or trapeze hangers and rods.
- B. Space hangers and support for horizontal pipes according to SPS 82 and piping manufacturer's recommendations.
- C. Provide sway bracing on hangers longer than 18".

- D. Support vertical piping with riser clamps secured to the piping and resting on the building structure. Provide at each floor unless otherwise noted.
- E. Provide insulation continuous through hangers and rollers. Protect insulation by galvanized steel shields.
- F. Arrange pipe supports to prevent excessive deflection, and to avoid excessive bending stress.
- G. Hubless piping:
  - 1. Provide hangers on the piping at each side of, and within 6" of, hubless pipe coupling so the coupling will bear no weight.
  - 2. Do not provide hangers on couplings.
  - 3. Provide hangers adequate to maintain alignment and to prevent sagging of the pipe.
  - 4. Make adequate provision to prevent shearing and twisting of the pipe and the joint.

### **3.07 SLEEVES AND OPENINGS**

- A. Provide sleeves for each pipe passing through walls, partitions, floors, roofs, and ceilings.
  - 1. Set pipe sleeves in place before concrete is placed.
  - 2. For uninsulated pipe, provide sleeves two pipe sizes larger than the pipe passing through, or provide a minimum of 1/2" clearance between inside and outside of the pipe.
  - 3. For insulated pipe, provide sleeves of adequate size to accommodate the full thickness of pipe covering, with clearance for packing and caulking.
- B. Caulk the space between sleeve and pipe or pipe covering, using a noncombustible, permanently plastic, waterproof, non-staining compound which leaves a smooth finished appearance, or pack with noncombustible asbestos cotton, or fiberglass to within 1/2" of both wall faces, and provide the waterproof compound described above.
- C. Finish and escutcheons:
  - 1. Smooth up rough edges around sleeves with plaster or spackling compound.
  - 2. Provide 1" wide chrome or nickel plated escutcheons on all pipes exposed to view where passing through walls, floors, partitions, ceilings, and similar locations.
    - a. Size the escutcheons to fit pipe and covering.
    - b. Hold escutcheons in place with set screw.

### **3.08 CLEANOUTS**

- A. Secure the Architect's approval of locations for cleanouts in finished areas prior to installation.
- B. Provide cleanouts of same nominal size as the pipes they serve; except where cleanouts are required in pipes 4" and larger provide 4" cleanouts.
- C. Make cleanouts accessible. After pressure tests are made and approved, thoroughly graphite the cleanout threads.

**END OF SECTION**



## SECTION 23 00 00

### HEATING, VENTILATING AND AIR CONDITIONING

#### **PART 1 - GENERAL**

##### **1.01 DESCRIPTION**

- A. Work Included: Provide heating, ventilating, and air conditioning systems where shown on the Drawings, as specified herein, and as needed for a complete and proper installation including, but not necessarily limited to:
1. Supply, return and fresh air ductwork system with grilles, diffusers, registers, and ductwork accessories;
  2. Exhaust systems including dampers, grilles, registers, and ductwork accessories;
  3. Demolition of HVAC systems.
- B. Related Work:
1. Cutting and patching openings for HVAC work in existing walls, floors, roof, ceiling, etc., will be provided by the HVAC Contractor.
- C. Work of Other Sections:
1. Openings for ventilating work in new walls, floors, roof, ceiling, etc., will be provided by General Contractor. Location and size of these openings will be the responsibility of the HVAC Contractor.

##### **1.02 GENERAL PROVISIONS**

- A. Everything essential for the completion of the work implied to be covered by these Specifications to make the system ready for normal and proper operation must be furnished and installed by this Contractor. Accordingly, any omission from either the plans or the Specifications, or both, of details necessary for the proper installation and operation of the system shall not relieve this Contractor from furnishing such detail in full and proper manner.
- B. The plans show various details indicating the general arrangement of the heating and ventilating work, sizes and locations of pipe work, ducts, units, etc., the said plans with figures, lettering, etc., shall be considered a part of these Specifications and no change or alternation shall be made in either case unless ordered by the Engineer.
- C. In addition to the heating and ventilating plans, see General Plans of the building, as all heating and ventilating work appearing on the latter plans will be part of this Contract unless especially specified to be done by other contractors, as well as, the said work detailed on the heating and ventilating plans.

##### **1.03 QUALITY ASSURANCE**

- A. Qualifications of Installers:

1. For the actual fabrication, installation and testing of heating and ventilating work, use only thoroughly trained and experienced workmen completely familiar with the items required and manufacturer's current recommended methods of installation.
2. In acceptance or rejection of installed work, the Architect or Engineer shall make no allowance for lack of skill on the part of the Workmen.

B. Reference Standards: The following standards are imposed, as applicable to work in each instances:

AABC	Associated Air Balance Council
ARI	Air Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
MCA	Mechanical Contractors Association
MSS	Manufacturers Standardized Society
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association

C. Environmental design conditions for all occupied areas are as follows:

Inside:	70 deg. F	74 deg. F/64 deg. wbF
Outside:	-15 deg. F	91 deg. dbF/74 deg. wbF

#### 1.04 CODES AND PERMITS

A. This Contractor must comply with building laws and other ordinances in force where the building is located as far as same apply to his work.

1. IBC 2015.
2. IMC 2015; SPS 64.

B. He must secure permits from proper offices and pay legal fees as may be necessary for fulfilling the requirements of these Specifications.

C. One (1) copy of all permits must be furnished to the Owner.

#### 1.05 COORDINATION

A. Cooperate and coordinate with other trades to assure that all systems in the heating and ventilating work may be installed in the best arrangement. Coordinate as required with all other trades to share space in common areas and to provide the maximum of access to each system.

B. Arrange heating and ventilating work in neat, well organized manner with piping and similar services running parallel with primary lines of building construction, and with minimum of 8 foot overhead clearance where possible.

C. Give right-of-way to piping which must slope for drainage.

#### 1.06 CUTTING AND PATCHING

- A. General: Refer to Division 1 General Requirements.
- B. Perform all cutting and patching required for complete installation of the HVAC systems, unless specifically noted otherwise. Provide all materials required for patching unless otherwise noted.
  - 1. All cutting and patching necessary of structural members to install any HVAC work shall not be done without permission, and then only carefully done under the direction of the Architect and General Contractor.
- C. The Contractor shall not endanger any work of other trades by any demolition, cutting, digging or otherwise. Any cost caused by defective or ill-timed cutting and patching work shall be borne by the contractor responsible. Each contractor requiring cutting and patching shall hire men skilled in such cutting and patching to do the work.
  - 1. All patching work in existing areas shall match existing work and restore the finish to its original condition in material, quality, texture, finish and color unless specifically noted or scheduled otherwise.

#### **1.07 SUBMITTALS**

- A. Refer to Division 1 for additional submittal requirements.
- B. The HVAC Contractor will be held responsible for correction of work deemed necessary by the Engineer due to proceeding with the work without shop drawings that have the Engineer's final approval.
- C. Shop drawings shall include data on physical dimensions, gauges, materials of construction and capacities.
  - 1. Incomplete drawings will be disapproved.
- D. This Contractor will be responsible for all figures and dimensions shown on the shop drawings. Approval of shop drawings describing equipment that cannot fit in the space allotted does not relieve this Contractor from providing equipment that will meet the space requirements.
- E. Submit electronic PDF copies of shop drawings with file names associated with equipment submitted along with proper markup of electronic submittals to the Architect/Engineer for approval, with complete detail for all equipment, materials, etc., to be furnished and installed for this project as follows:
  - 1. Ductwork systems;
  - 2. As-built drawings.
- F. Marked-up drawings indicated record installation as-built HVAC work.

#### **1.08 HOUSEKEEPING AND CLEANUP**

- A. Periodically as work progress and/or as directed by the Architect, the Contractor shall remove waste materials from the building and leave the area of the workroom clean. Upon completion of work remove all tools, scaffolding, broken and waste materials, etc., from the site.

#### **1.09 AS-BUILT DRAWINGS**

- A. During construction maintain a set of prints showing installed as-built work for the project.
- B. Upon completion of construction before final acceptance, provide a set of as-built drawings to the Architect/Engineer.

## **PART 2 - PRODUCTS**

### **2.01 DUCTWORK**

- A. Sheet Metal: Furnish, install, fit and secure in place all supply, return, exhaust and vent air ducts, risers, branches, etc., as shown and detailed on plans, built of galvanized iron as hereinafter specified.
  - 1. Sheet metal work shall be G90 galvanized and constructed according to practices recommended in the HVAC Duct Construction Standards - Metal and Flexible 1st ED. 1985, as published by SMACNA, and hereinafter specified. All duct dimensions noted on the drawings are finished inside dimensions.
  - 2. Ductwork Pressure-Velocity Classification: + 2" static pressure class 2,500 FPM velocity level.
  - 3. Duct Sealing Requirements: Seal Class B. Transverse and longitudinal joints.
  - 4. Install ducts, risers, etc., as indicated on plans, making necessary changes in cross section, offsets, etc., whether or not same is specifically indicated. If ducts cannot be run as shown on drawings, install ducts between required points, subject to the approval of Engineer without additional cost to the Owner.
  - 5. At all outlets and inlets in rooms, flange ducts for attachment of grilles. Install grilles according to manufacturer's recommendations.
  - 6. Sheet metal work throughout shall be assembled and erected in such a manner that no vibration will occur and no noise be transmitted by the moving air due to inappropriate fitting or offsets. *All corrective measures will be determined by the Engineer at the HVAC Contractor's expense.*
  - 7. All duct turns shall have either an inside radius equal to the duct width or be a miter turn with turning vanes. Turning vanes shall be double wall air-foil type.
  - 8. Branch Take-Off Fittings: Round branch take-off fittings shall be low-loss type fittings such as bellmouth or conical type; *no scoops or 90-degree tee fittings allowed.* Square/rectangular branch take-off fittings shall have 45-degree leading edge with 4-inch minimum depth; *no air turns or scoops allowed.*
- B. Ductwork Accessories:
  - 1. Volume Dampers: Furnish and install in branches of supply air and exhaust ducts. Substantial volume dampers to be fitted with locking devices for adjusting the air delivery. Damper blades shall not exceed 6" width.
  - 2. Openings around Ducts: Through walls must be filled with fiberglass, caulked and sealed with 14 gauge galvanized sheet metal angle around duct on each side of wall.

### **2.03 FLEXIBLE DUCT**

- A. Provide factory fabricated insulated low-pressure flexible duct with the following construction:
  - 1. Zinc-coated spring steel helix with 1" thick fiberglass insulation sheathed in a seamless vapor barrier (RFK) jacket.

- B. Composite assembly, including insulation and vapor barrier, meeting Class 1 requirements of flame spread rating of 25 or less and smoke developed rating of 50 or less as set forth in NFPA Bulletin 90-A, and bearing the UL label as an air duct.

**2.04 INSULATION**

A. General:

- 1. Provide materials complying with NFPA Bulletin 90-A, as determined by UL method NFPA 225-ASTM E84, and complying with the governing code, with flame spread rating under 25 and smoke developed rating under 50.
- 2. Where vapor barriers are used, provide intact and continuous throughout.
- 3. Acceptable Manufacturers:
  - a. Owens/Corning Fiberglass
  - b. Manville
  - c. Certainteed

B. External Ductwork Insulation:

- 1. Insulate ductwork on exterior with fiberglass insulation and foil-reinforced kraft jacket.
- 2. Concealed Ductwork: Wrap ductwork with flexible type fiberglass insulation, operating temperature range 40 to 250 degrees F, Kv = 0.25, 3/4 PCF density, FSK aluminum foil reinforced with fiberglass scrim laminated to UL rated draft, vapor permeability less than 0.02 perms. Equal to Shuller Manville Microlite faced duct wrap insulation.

3. Application Schedule:

<u>Air System</u>	<u>Thickness</u>
Supply Ducts	2"

**PART 3 - EXECUTION**

**3.01 JOB CONDITIONS**

- A. Examine and check conditions at the actual job site and determine facilities for delivery, storing and handling of materials and equipment.
- B. Drawings show approximate locations of equipment, verify exact locations.
- C. Cooperate as necessary with other trades in order that all systems in the work may be installed in the best arrangement. Coordinate as required with all other trades to share space in common areas and to provide the maximum of access to each system.

**3.02 DUCTWORK INSTALLATION**

- A. Ducts shall be constructed, supported and installed in accordance with the latest low-pressure duct standards of SMACNA. Install all turning vanes, access doors, extractors, and accessories as indicated or specified herein.
- B. Fabricate and install all ductwork to be air tight in accordance with SMACNA Class B, seal. Evident air leaks in the ductwork shall be sealed.
- C. Seal exposed outside ductwork joints water tight with mastic sealant.

- D. Flexible Duct: Provide flexible duct in fully extended condition, free from sags and kinks.
1. Use only the minimum length required to make the connection.
  2. Do not exceed 6' - 0" in length.
  3. Where horizontal support is required, provide at least 1" wide banding material hangers at not more than 36" centers.
  4. Make joints and connections with 1/2" wide positive locking straps or draw band.

### **3.03 CLEANING**

- A. Ductwork: After the ductwork has been tested and proved tight, thoroughly vacuum and clean all components of the ductwork. Remove all dirt, scale, oil and other foreign substances, which may have accumulated during the installation process.
- B. Equipment: After the equipment has been started and proved operational, carefully clean all accessible parts of each piece of equipment, thoroughly removing all traces of dirt, oil, grease and other foreign substances.

**END OF SECTION**

## SECTION 26 00 00

### ELECTRICAL

#### **PART 1 - GENERAL**

##### **1.01 DESCRIPTION**

A. Work Included: Provide complete electrical service and distribution system with equipment and materials where shown on the Drawings, as specified herein, and as needed for a complete and proper installation including, but not necessarily limited to:

1. Branch circuit wiring, for lighting, receptacles, motors and equipment;
2. Lighting fixtures;
3. Wiring system for equipment and controls provided under other Sections of these Specifications including General Construction, Plumbing and HVAC trades;
4. Lighting Control System;
5. Power to motorized coiled door operator by General Contractor;
6. Hangers, anchor sleeves, chase supports for fixtures, and other electrical materials and equipment;
7. Demolition of electrical systems in the existing facilities as noted on the Drawings.
8. Other items and services required to complete the electrical systems.

B. Related Work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications;
2. All line voltage control wiring and starter interlocks, where specified;
3. Final equipment electrical connections.

C. Work of Other Sections:

1. Communication Cabling.

##### **1.02 GENERAL PROVISIONS**

A. Everything essential for the completion of the work implied to be covered by these Specifications to make the system ready for normal and proper operation must be furnished and installed by this Contractor. Accordingly, any omission from either the plans or the Specifications, or both, of details necessary for the proper installation and operation of the system shall not relieve this Contractor from furnishing such detail in full and proper manner.

B. In addition to the electrical plans, see General Plans of the building, as all electrical work appearing on the latter plans will be part of this contract unless especially specified to be done by other contractors, as well as, the said work detailed on the electrical plans.

##### **1.03 QUALITY ASSURANCE**

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

B. Without additional cost to the Owner, provide such other labor and materials as required to complete the work of this Section in accordance with the requirements of governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in these Contract Documents.

C. Reference Standard: The following standards are imposed, as applicable to the work:

ASTM	American Society of Testing and Materials
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
UL	Underwriters Laboratories

#### **1.04 CODES AND PERMITS**

A. The Contractor must comply with national, state of Wisconsin and city of Kenosha building and electrical codes and other ordinances in force where the building is located as far as same apply to his work.

1. IBC 2015;
2. IEEC 2015;
3. NEC 2014;
4. Wisconsin Electrical Code SPS sections.

B. He must secure permits from proper offices and pay fees as may be necessary for fulfilling the requirements of these Specifications.

C. One (1) copy of all permits must be furnished to the Owner.

D. Electric Service Fee: Electrical Contractor shall secure and pay all fees for new electrical service from electric utility, including temporary power services.

#### **1.05 COORDINATION**

A. Cooperate and coordinate with other trades to assure that all systems in the electrical work may be installed in the best arrangement. Coordinate as required with all other trades to share space in common areas and to provide the maximum of access to each system.

B. Arrange electrical work in neat, well-organized manner with piping and similar running parallel with primary lines of building construction.

C. Locate operating and control equipment properly to provide easy access, and install entire electrical systems with adequate access for operation and maintenance.

D. Give right-of-way to piping which must slope for drainage.

#### **1.06 ELECTRICAL PROVISIONS OF THE MECHANICAL WORK**

A. Line Voltage Wiring: The Electrical Contractor shall make all line voltage (100 volts and greater) electrical wiring, final connections and motor wiring for Mechanical equipment.

B. Control Wiring: Low-voltage (less than 100 volts) control wiring in conjunction with Mechanical work shall be by the Mechanical Contractor in strict accordance with the applicable sections of the Electrical Specifications.



- C. Motors, Starters, and Disconnects: All motors starter and disconnects shall be provided by the Electrical Contractor, unless provided with the equipment or indicated otherwise.
  - 1. Mechanical Contractors shall furnish list of and location of all Mechanical equipment and requirements for electrical connections, along with wiring diagrams.

#### **1.07 FLOOR, WALL, ROOF AND CEILING OPENINGS**

- A. The General Contractor will be required to leave openings in new construction ceiling, floors, walls, roof, partitions, etc., as required to install the Electrical work specified or shown on the Drawings. The Electrical Contractor is responsible for correct size and location of openings.
- B. Provisions for openings, holes and clearances through new construction walls, floors, ceilings and partitions are to be made in advance of construction of such parts of the building.
- C. The Electrical Contractor shall set sleeves and anchors for all equipment, etc., and shall provide watertight seals on pipes through exterior walls, floors and roof locations, and where noted on the Drawings.

#### **1.08 CUTTING AND PATCHING**

- A. General: Refer to Division 1 General Requirements.
- B. Perform all cutting and patching required for complete installation of the Electrical systems, unless specifically noted otherwise. Provide all materials required for patching unless otherwise noted.
  - 1. All cutting and patching necessary of structural members to install any Electrical work shall not be done without permission, and then only carefully done under the direction of the Architect and General Contractor.

#### **1.09 TRENCHING AND BACKFILLING**

- A. Comply with pertinent provisions of Division 1.
- B. Perform trenching and backfilling associated with the work of this Section in strict accordance with the provisions of Division 2 of the Specifications.

#### **1.10 SUBMITTALS**

- A. Comply with pertinent provisions of Division 1.
- B. Shop Drawing Submittals: Submit electronic PDF copies of shop drawings to the Architect for approval, with complete detail for all equipment, materials, etc., to be furnished and installed for this project as follows:
  - 1. Light Fixtures;
  - 2. Electrical Devices.
  - 3. Lighting Controls;

C. Shop Drawings:

1. The Electrical Contractor will be held responsible for correction of work deemed necessary by the Engineer due to proceeding with the electrical work without approved shop drawings that have the Architect/Engineers final approval.
2. Shop drawings shall include data on physical dimensions, gauges, materials of construction and capacities. Incomplete drawings will be disapproved.
3. This Contractor will be responsible for all figures, quantities and dimensions shown on the shop drawings.
4. Approval of shop drawings describing equipment that cannot fit in the space allotted does not relieve this Contractor from responsibility of resubmitting equipment that will meet the space requirements.

D. O & M Manual: Upon completion of this portion of the Work, and as a condition of its acceptance, deliver to the Architect two (2) copies of an operation and maintenance manual compiled in accordance with the provisions of Division 1 of these Specifications. Include the following within the bound O&M manual:

1. Copy of the approved Record Documents for this portion of the Work;
2. Copies of all warranties and guaranties.
3. As-built drawings.

E. As-built Drawings: Record installation as-built on a set of blue-line prints during construction. Plan shall represent actual locations, materials and circuiting of equipment installed.

**1.11 PRODUCT HANDLING**

- A. Comply with pertinent provisions of Division 1.

**1.12 WARRANTY**

- A. In addition to standard one year warranty on all labor and materials, provide an additional warranty on ballasts for all new fluorescent and HID lighting fixtures as specified.

**1.13 HOUSEKEEPING AND CLEAN-UP**

- A. Periodically as work progresses and/or as directed by the Architect, the Contractor shall remove waste materials from the building and leave the area of the workroom clean. Upon completion of work remove all tools, scaffolding, broken and waste materials, etc., from the site.

**1.14 TEMPORARY SERVICES**

- A. This Contractor shall provide temporary lighting and power as required throughout the construction period.
- B. Arrange for temporary electrical utility with local electrical utility. Electrical Contractor shall pay all temporary electrical service and usage fees.

**PART 2 - PRODUCTS**

**2.01 GENERAL**

- A. Provide only materials that are new, of the type and quality specified. Where Underwriters' Laboratories, Inc. has established standards for such materials, provide only materials bearing the UL label.

## **2.02 GROUNDING SYSTEM**

- A. Provide grounding jumper from electrical devices to the metallic device boxes.
- B. GFI receptacles shall be provided with separate insulated ground wire conductor to the main service ground bar.
- C. Ground all motor and equipment connections with dedicated ground conductor.

## **2.05 IDENTIFICATION**

- A. Junction and pull boxes shall be stenciled utilizing a coded identification system. The following junction and pull boxes shall be identified using a coded system. Coding shall be submitted to Engineer for approval.

- 1. Light - 277/480 volt;
- 2. Power - 120/208 volt;

- B. Label circuit numbers for all accessible line voltage power distribution raceways and junction boxes.
- C. Typewritten Directory: Each panelboard shall be provided with a typewritten directory in a steel frame with plastic cover contained on the inside of panel door. These directories shall indicate load served and rooms served by each protective device in the respective panel.
- E. Identify all conductors per NEC:

- 120/208V
  - Phase A - Black
  - Phase B - Red
  - Phase C - Blue
  - Neutral - White
  - Ground - Green
  - Isolated Ground - Green with one yellow stripe

- 277/480V
  - Phase A - Yellow
  - Phase B - Brown
  - Phase C - Orange
  - Neutral - Gray
  - Ground - Green with two yellow stripes

## **2.07 WIRING DEVICES**

- A. General:
  - 1. Devices shall be provided at each location shown on the plans or called for in the Specifications.
  - 2. All devices shall be of one manufacturer. Acceptable manufacturers: Leviton, Pass and Seymour, Hubbell or General Electric.

3. Device catalog references herein and on the plans are to be considered as standards of comparison. Comparable devices manufactured by the other manufacturer will be considered as an optional choice.
4. Device finish color to be selected by Architect.
5. Provide tamper resistant devices in all public locations.

B. Receptacles:

1. Duplex Receptacles: Industrial-specification grade, nylon face and base, NEMA 5-15R, 15A, tamperproof, side-wired only, 3-wire grounding type with the third terminal U-shaped and grounded to the conduit system or green wire ground. Use of self-grounding option not permitted.
  - a. 15-amp: Leviton 5262;
  - b. 20-amp: Leviton 5362;
  - c. Provide tamperproof receptacles in all public areas.
2. GFCI Receptacle: Industrial-specification grade, NEMA 5-15R or 20R with indicator light and feed through. Provide tamper resistant devices in public areas.
  - a. 15-amp: Leviton 7599; tamper resistant: Leviton T7599
  - b. 20-amp: Leviton 7899; tamper resistant: Leviton T7899

C. Switches:

1. All toggle switches used to control lighting shall be 20 amp rated for 120/277 volts, A.C., industrial-specification grade.
2. 15 amp switches shall not to be used unless specifically shown otherwise for special control.
3. Switches to be back and side wired, silent or quiet type.
4. The following catalog numbers refer to Leviton, Inc.:
  - a. single pole – 1221-2;
  - b. three way – 1223-2;
  - c. four way – 1224-2;
  - d. Single pole with pilot light – 1221-PLR;

D. Plates:

1. Provide as required for each outlet, single or multiple gang.
2. Provide blank covers on all empty boxes or outlets.
3. Plates shall be nylon construction in all finished areas.
4. Galvanized steel box covers shall be used in unfinished areas. Cover shall be 1/2" raised with no sharp edges.

## 2.08 RACEWAY SYSTEM

A. Steel Conduit: Galvanized or sheradized steel intermediate or rigid metal conduit, or electrical metallic tubing (EMT) with steel set screw or compression ring type fittings.

1. Provide steel conduits as all exposed in the work areas.
2. Where conduit is installed underground or in the floor slab, provide rigid galvanized steel conduit, or PVC coated steel conduit is acceptable.

B. Rigid Non-Metallic Conduit: Schedule 40 PVC with solvent welded fittings.

1. Below grade installation only.
2. Encase in concrete below drives and roadways.

C. Electrical Non-Metallic Tubing(ENT):

1. Above grade indoor concealed installation only, for branch circuit wiring after the first metallic junction box from the panelboard.
2. Not allowed for service conduit and panelboard feeders.
3. Provide and install per NEC Article 331 with grounding conductor.

D. Outlets, Junction Boxes and Switch Boxes:

1. Provide standard one-piece units, galvanized or sheradized, of shape and size best suited to that particular location, of sufficient size to contain enclosed wires without crowding.
2. Provide deep boxes (2-1/8") with 1" and larger conduit.
3. For lighting outlets, provide standard 4" octagon or square units, with 3/8" malleable iron fixture studs and box hangers where required.
4. For switches and receptacles, provide boxes 4" square by 1-1/2" deep minimum with rings and covers as required.

E. Low Voltage Cabling Raceways:

1. Provide 4" square boxes with single device ring and 3/4" raceway stubbed to accessible area at ceiling with insulating bushing.
2. In areas with no ceiling, extend raceway to adjacent accessible ceiling space or to telephone backboard or as directed by Owner.
3. Provide pull string for all low-voltage raceways.

F. Pull Boxes:

1. Provide galvanized code-gauge sheet units with screw-on covers, of size and shape required to accommodate wires per NEC wire bending requirements, without crowding access and to suit the location.

G. Provide sleeves and chases where conduits pass through floors and walls.

## 2.09 CONDUCTORS

A. Wire and Cable (600 Volt): Provide 600 V insulated copper wire and cable, NEC standard, of types specified below for different applications, with UL label, and color coded as required by governmental agencies having jurisdiction. Use only copper wires and cables.

1. With conductors No. 4 and larger, provide insulating bushings.
2. Wire and cable shall be THHN or THWN.
3. Branch circuit wiring installed in wiring channels of continuous row-mounted fixtures shall be provided. UL listed type RHH or other approved 90 degree C wires, rated at 600 V.
4. Wire No. 10 and smaller shall be solid or stranded wire; wire larger than No. 10 shall be stranded wire.
5. Wire in conduits subjected to direct sunlight shall be THWN or RHWN.
6. Provide XHHW/CU wiring in underground exterior conduit.
7. Identify feeder neutrals with white tape or white paint.
8. All low-voltage wiring located in accessible areas shall be installed in metallic conduit.
9. Provide separate identified neutral conductor for emergency and exit lighting circuits.
10. All branch circuit conductors shall be connected by means of a screw terminal.

B. Armored Cable (AC) or Metal-Clad Cable (MC):

1. Limit AC and MC usage to concealed only locations, branch-circuit wiring after the first junction box from the panelboards; where approved by NEC, state and local electrical inspecting authorities.
2. Not allowed for Panelboard feeders or service conduit.
3. Provide and install per NEC Articles 333 and 334 with grounding conductor.

## **2.10 MOTOR WIRING**

- A. See plans for approximate location and sizes of all motors. Verify exact locations at job site with the contractor that is furnishing the motor driven equipment.
- B. The Drawing motor schedules indicate that the anticipated horsepower loads and circuit sizes. Verify all these requirements with contractor concerned and install accordingly under this contract.
- C. Install disconnect means where required by code for motors out of sight of controller. These shall be fusible safety switches, fusetron box cover unit, or non-fused switch as indicated on plans. All switches shall be horsepower rated.
- D. All motors will be furnished and installed by others, unless noted otherwise.
- E. Motor starters to be provided and installed by the Electrical Contractor unless indicated otherwise herein or on the plans. See Motor Schedule.
- F. All final connections to motors to be made by this Contractor.
- G. All motors to be connected using flexible metallic conduits extending from motor box to outlet box. Use liquid tight flexible metallic conduit with PVC covering in wet or oily locations and for all motors within 12" of floor. See paragraph on GROUNDING. All wires in flexible metallic conduit shall be stranded. Grounding wires shall be in all cases installed in flexible conduit and not wrapped around the outside of the conduit.

## **2.11 SAFETY SWITCHES**

- A. Provide safety switches of general duty type, horsepower rated, quick-make and quick-break design, externally operated with provision for padlocking, fusible or non-fusible as shown on the Drawings.
- B. Provide enclosures clearly marked for maximum voltage, current, and horsepower rating, and:
  1. Indoor: NEMA type 1.
  2. Outdoor: NEMA type 3R, raintight.
- C. Approved Manufacturers: Square D, Cutler Hammer or Siemens.

## **2.12 LIGHTING FIXTURES**

- A. Provide fixtures of the types shown on the Drawings, and with the following accessories as applicable.
- B. Light Fixtures:

1. Provide units having a UL label.
2. Provide local label in addition if so required by governmental agencies having jurisdiction.
3. Verify all ceiling types as shown on final architectural plans and be responsible for ordering proper fixtures and accessories for the proper ceiling.

C. LED Lighting:

1. The manufacturer of the LED lighting fixture shall utilize high-brightness LEDs and high-efficiency electronic LED drivers, dimmed or no dimmed as required.
2. The LED fixture shall be thermally designed as to not exceed the maximum junction temperature of the LED for the ambient temperature of the location the fixture is to be installed
3. Light output of the LED system shall be the absolute photometry following IESNA LM-79 and IESNA LM-80 requirements and guidelines.
4. Minimum power factor of 0.90.
5. LED lighting fixture shall be mercury-free, lead-free and RoHS compliant.
6. The LED lighting fixture shall maintain 70% lumen output for a minimum of 50,000 hours.
7. All components of the LED lighting fixture shall be replaceable.
8. The LED lighting fixture shall carry a limited 3-year warranty minimum.

D. Acceptable Lighting Fixture Manufacturers:

1. Refer to **Fixture Schedule**. Engineer will evaluate and make final decision on whether submitted fixture is equal to specified light fixture.
2. Other fixture manufacturers who consider their products equal to those specified are required to request pre-approval for bidding as base bid in accord with Instructions to Bidders section.

## 2.13 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

## PART 3 - EXECUTION

### 3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 PREPARATION

A. Coordination:

1. Coordinate as necessary with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.
2. Coordinate the installation of electrical items with the schedule for work of other trades to prevent unnecessary delays in the work schedule.

3. Where lighting fixtures and other electrical items are shown in conflict with locations of structural members and mechanical or other equipment, provide required supports and wiring to clear the encroachment.
- B. Data indicated on the Drawings and in these Specifications are as exact as could be secured, but their absolute accuracy is not warranted. The exact locations, distances, levels, and other conditions will be governed by actual construction and the Drawings and Specifications should be used only for guidance in such regard.
- C. Where outlets are not specifically located on the Drawings, locate as determined in the field by the Architect. Where outlets are installed without such specific direction, relocate as directed by the Architect and at no additional cost to the Owner.
- D. Verify all measurements at the building. No extra compensation will be allowed because of differences between work shown on the drawings and actual measurements at the site of construction.
- E. The Electrical Drawings are diagrammatic, but are required to be followed closely as actual construction and work of other trades will permit. Where deviations are required to conform with actual construction and the work of other trades, make such deviations without additional cost to the Owner.

### **3.03 INSTALLATION OF RACEWAYS AND FITTINGS**

- A. Where conduit is installed concealed in walls or above ceiling, or exposed in work areas, provide rigid galvanized conduit or electrical metallic tubing with compression type fittings.
  1. Seal joints to prevent entrance of water.
  2. Provide ground wire of proper size per NEC 250.
  3. Use nylon (rather than steel) fish tape.
- B. Use flexible conduit only for short motor connections, or where subject to vibration.
- C. Provide necessary sleeves and chases where conduits pass through floors and walls and provide other necessary openings and spaces, arranging for proper time to prevent unnecessary cutting in connection with the Work.
- D. Where conduit is exposed, run parallel to or at right angle with lines of the building.
- E. Securely and rigidly support conduits throughout the work.

### **3.04 INSTALLATION OF LIGHTING FIXTURES**

- A. Install lighting fixtures complete and ready for service in accordance with the Lighting Fixture Schedule shown on the Drawings.
- B. Wire fixtures with fixture wiring of at least 90 degrees C rating. Where fixtures are mounted in continuous rows, provide conductors in wiring channels of the same size as the circuit wires supplying the row of fixtures.
- C. Use only bonderized, galvanized, or sheradized steel for fixture installation for protection against rust and corrosion, and install fluorescent fixtures straight and true with reference to walls.



D. Install all lighting fixtures, including those mounted in continuous rows, so that the weight of the fixture is supported, either directly or indirectly, by a safe and sound structural member of the building, using adequate number and type of fastenings to assure safe installation.

1. Screwed fastenings, and toggle bolts through ceiling material or wall paneling, are not acceptable.

### **3.05 INSTALLATION OF POWER EQUIPMENT**

A. Provide power and control wiring for motor starters and safety switches as shown on the Drawings.

### **3.06 INSTALLATION OF CONDUCTORS**

A. Unless otherwise shown on the Drawings or noted in these Specifications, use No. 12 AWG conductors for all branch circuits, protected by 20 amp circuit breakers. For runs exceeding 100 feet, use larger wires to limit voltage drops.

B. Use identified (white) neutrals and color-coded phase wires for all branch circuit wiring.

1. Make splices electrically and mechanically secure with pressure-type connectors.
2. Provide "Scotchlok", Buchanon "B-cap", or Ideal "Wing-nut" connectors for wires sizes 6 AWG and smaller.
3. Provide Burndy compression-type connectors, "Hydent" or equal applied with a mechanical tool and die equipment for wire sizes 4 AWG and larger.
4. Insulate splices with a minimum of two half-lapped layers of Scotch Branch No. 33 vinyl-plastic electrical tape where insulation is required.

### **3.07 TESTING AND INSPECTION**

A. Provide personnel and equipment, make required tests, and secure required approvals from the Architect and governmental agencies having jurisdiction.

B. Make written notice to the Architect adequately in advance of each of the following stages of construction:

1. Test all parts of the electrical system and prove that all such items provided under this Section function electrically in the required manner.
2. Immediately submit to the Architect a report of maximum and minimum voltages and a copy of the recording volt-meter chart.
3. Also measure voltages between phases and between phase wires and neutrals and report these voltages to the Architect.

### **3.08 PROJECT COMPLETION**

A. Upon completion of the work of this Section, thoroughly clean all exposed portions of the electrical installation, removing all traces of soil, labels, grease, oil, and other foreign material, and using only the type cleaner recommended by the manufacturer of the item being cleaned.

B. Thoroughly indoctrinate the Owner's operation and maintenance personnel in the contents of the operations and maintenance manual required to be submitted under Article 1.3 of this Section of these Specifications.

**END OF SECTION**

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## SECTION 27 10 00

### COMMUNICATIONS CABLING

#### 2.1 DATA CABLES

- A. The voice and data cabling system is based on the installation of Un-shielded Twisted Pair (UTP) DATA (Category 5e Enhanced). All cables shall be constructed of four (4) individually twisted pairs with 24 AWG insulated copper conductors. Pairs of all cables will be unshielded and will be identified by a banded color code in which conductors are marked with a dominant color and banded with a contrasting color, which will be the dominant color of its mate. By pair number, the pair colors (Dominant / Band) are:
- Pair 1: Tip - White/Blue; Ring - Blue (or Blue/White)
  - Pair 2: Tip - White/Orange; Ring - Orange (or Orange/White)
  - Pair 3: Tip - White/Green; Ring - Green (or Green/White)
  - Pair 4: Tip - White/Brown; Ring - Brown (or Brown/White)
- B. All Cable shall meet the physical requirements of ANSI/EIA/TIA-568-1991 Standard for Commercial Building Wiring, be Underwriters Laboratory (UL) listed and comply with Article 800 (Communications Circuits) of the National Electrical Code.
- C. All Cables and Termination hardware shall be technically compliant with and installed in accordance with EIA/TIA 568, 589, TSB 36 and TSB 40-A.
- D. Voice Cables and associated Termination Components at the faceplate shall be compliant with EIA/TIA "Category 5e" performance parameters.
- E. Data Cables and ALL associated Termination Components shall be compliant with EIA/TIA "Category 5e" performance parameters.
- F. All Cables shall meet a CMR (Riser) rating and shall be suitable for installation "free-air" in building risers, above non-plenum drop ceilings, in cable tray or in duct.
- G. Voice and Data Cables shall be of a consistent color throughout the project.
1. Gray – Voice.
  2. Blue – Data.

#### 2.2 TELECOMMUNICATIONS OUTLET

- A. The Telecommunications Outlet (Voice and Data) shall consist of a mounting frame designed for use with a minimum of four (4) modular jacks mounted on an insert with ivory decora plate.
1. Voice and Data jack assemblies shall snap in to the mounting frame.
  2. Any unused jack positions will be fitted with a removable blank cover.
  3. Color of the frame and snap-in assemblies or covers shall be Ivory.
- B. Voice and Data Cables shall each be terminated at the outlet in an eight-pin modular (e.g. RJ-45) Jack. The interface between the jack and the station cable shall be a 110-Style block.

- C. All Jacks are to be pinned per EIA 568A (NOT AT&T 258A) with the pairing as follows:
- Pair 1 - Pins 5&4
  - Pair 2 - Pins 3&6
  - Pair 3 - Pins 1&2
  - Pair 4 - Pins 7&8
- E. All connecting hardware at the Telecommunications outlet for "Voice" and "Data" cables shall meet Category 5e performance criteria as defined by TIA/EIA TSB 40-A.
- F. Data Jack positions shall be distinguished by color and symbol. Voice and Data jacks are to be identified using a color-coded insert which also incorporates an icon indicating the application. Jack positions are to be identified as follows:
2. Data - Blue "DATA" Icon
- G. Wall-mounted phones "voice only" outlets shall be installed where identified on the Project Drawing(s) to accommodate wall-mounted telephone sets. The Wall Plate shall be of Stainless Steel construction, accommodate one (1) voice jack as previously defined, mounted on a standard single gang outlet box or bracket and include mating lugs for wall phone mounting.

### **2.3 DATA TERMINATION AT DATA PATCH PANELS**

- A. At the Wiring Closet, each 4-pair Data Cable shall be terminated on patch panels which incorporate modular jacks meeting the same technical specifications as those used at the faceplate locations (RJ-45).
1. Jacks shall be positioned in sequence of the faceplate I.D. to match existing sequences and numbering protocol.
- B. The panels must provide strain relief for the incoming station cables.
- C. Category 5e performance must be maintained by the panel as a system and include this interface.
1. All pair combinations must be considered, with the worst-case measurement being the basis for compliance.
- D. Panels shall be designed and installed in a fashion as to allow future station cabling to be terminated on the panel without disruption to existing connections.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION - GENERAL**

- A. The contractor will be responsible for identifying and reporting to the General Contractor any existing damage to walls, tiles and furnishings in the work area prior to start of work. All damage to interior spaces caused by the installation of cable, raceway or other hardware must be repaired. Repairs must match preexisting color and finish of walls, floors and ceilings. Any contractor damaged ceiling tiles are to be replaced to match color, size, style and texture.

### **3.2 CABLE INSTALLATION - GENERAL**

- A. Cables shall be routed "free-air" from the Tele/Comm room equipment racks to the location of the Telecommunications Outlet. Cables shall be installed as to not rest on the ceiling grid.
  - 1. Cable shall be supported via "J Hooks" anchored to the bottom cord of support trusses. Cables shall not be attached to existing cabling, plumbing or steam piping, ductwork, or electrical or communications conduit.
  - 2. Supports should be at 6-foot intervals on vapor barrier furring strips to minimize penetrations of the vapor barrier.
- B. Cable sheaths shall be protected from damage from sharp edges. Where a cable passes over a sharp edge, a bushing or grommet shall be used to protect the cable.
- C. The maximum station cable drop length shall not exceed 295 feet (90 meters) in order to meet data communications performance specifications. This length is measured from the termination block in the equipment rack to the station faceplate and must include any slack required for the installation and termination.
  - 1. The Contractor is responsible for installing station cabling in a fashion as to avoid unnecessarily long runs.
  - 2. Any area that cannot be reached within the above constraints should be identified and reported to the Engineer prior to installation.
- D. Where multiple cables join on a common route, they shall be combined into a single bundle, secured with cable ties and labeled:
  - 1. At the point at which they enter a vertical riser conduit.
  - 2. The point at which the bundle(s) enter Tele/Comm room.

### **3.3 OUTLETS AND TERMINATION HARDWARE - GENERAL**

- A. Termination blocks at the Tele/Comm room equipment racks shall be provided with hardware designed to maintain the cable's pair twists as closely as possible to the point of mechanical termination. The installer shall insure that the twists are preserved to within 1/2" of the termination for all Cables at the Telecommunications Outlet.
- B. At the Tele/Comm room equipment racks, twists in all cables designated, as "Data" must be maintained within 1/2" of the termination.
- C. Termination Hardware (Blocks and Patch Panels) Positioning and Layout must be reviewed and approved by the Engineer or Owner prior to construction.
- D. All Cables, Telecommunications Outlets, Voice Blocks and Data Patch Panels shall be clearly labeled using a Code identifying the location as unique throughout the project.
  - 1. All labeling shall be by mechanical means in black ink on non-removable tags. Hand lettered designations are not acceptable.
  - 2. Where labeling of cables is required, self-laminating labels are to be wrapped around the cable (e.g. not a "flag").
  - 3. Telecommunications Outlets are to be labeled (1) on the base of the faceplate (2) and (2) on each cable terminated at that location.

4. At the Tele/Comm Room equipment racks, all data termination hardware and cables shall be labeled with the ID corresponding to the faceplate number to which the component relates. Cables shall be positioned in sequence of the faceplate I.D. starting with the lowest number.

### 3.4 TESTING

- A. Testing shall include both the jack at the outlet and all termination components at the equipment racks.
- B. All horizontal cables must be 100% fault free. If any cable is found to be outside the specification defined herein, that cable and the associated terminations shall be replaced at the expense of the contractor.
  1. Upon completion, the applicable tests shall be repeated.
- C. Data Cable testing:
  1. All cable pairs shall be verified for paired validity, continuity, and polarity.
  2. Contractor shall perform performance measurements, which document (1) Cable Length (2) Attenuation and (3) Near End Cross Talk (NEXT). Measurements shall be to 100-MHz and include cabling, RJ-45 Patch Panel and Outlet Jack. All pair combinations shall be tested with compliance being based upon the worst-case pair combination.
  3. In order to establish testing baselines, cable samples of known length and of the cable type and lot installed shall be tested. The cable may be terminated with an 8-position Category 5e plug (RJ-45) to facilitate testing. Net Propagation Velocity (NPV) and nominal attenuation values shall be calculated based on this test and be utilized during the testing of the installed cable plant. This requirement can be waived if NPV data is available from the cable manufacturer for the exact cable type under test.
  4. Testing shall be performed using a Microtest "PentaScanner" or equivalent.
- D. Cabling Performance Testing:
  1. Performance testing shall be performed on all cables. Testing of the Transmission Performance of cables (Category 5e and above) shall include the following:
    - ❖ Length
    - ❖ Attenuation
    - ❖ Pair to Pair NEXT Loss (new limits)
    - ❖ PSNEXT Loss
    - ❖ Return Loss
    - ❖ Pair to Pair ELFEXT Loss (Equal Level Far End Cross-talk)
    - ❖ PSEFEXT Loss
    - ❖ Propagation Delay
    - ❖ Delay Skew
    - ❖ Return Loss
  2. Cables shall be tested to the maximum frequency defined by the standards covering that performance category. Transmission Performance Testing shall be performed using a test instrument designed for testing to the specified frequencies. Test records shall verify "PASS" on each cable and display the specified parameters - comparing test values with standards based "templates" integral to the unit.

3. Testing shall be per ANSI/TIA/EIA TSB67 Basic Link test configurations and ANSI/TIA/EIA 568-A-5 (SP 4195-A): Category 5e.
4. The maximum length of station cable shall not exceed 90 meters which allows 10 meters for equipment and patch cables. Worst case performance at 20°C, based on a Horizontal Cable length of 90 meters and Equipment Cord length of 4 meters, shall be as follows:

CATEGORY 5e (BASIC LINK)					
Frequency (MHz)	Attenuation (maximum dB)	NEXT Loss pair to pair (dB)	PS-NEXT Loss (dB)	ELFLEXT loss pair to pair (dB)	PSEFLEX T loss (dB)
1.0	2.1	64.2	60.0	60.0	57.0
4.0	4.0	54.8	52.0	48.0	45.0
8.0	5.7	50.0	47.1	41.9	38.9
10.0	6.3	48.5	45.6	40.0	37.0
16.0	8.2	45.2	42.2	35.9	32.9
20.0	9.2	43.7	40.7	34.0	31.0
25.0	10.3	42.1	39.1	32.0	29.0
31.25	11.5	40.6	37.5	30.1	27.1
62.5	16.7	35.7	32.6	24.1	21.1
100.0	21.6	32.3	29.3	20.0	17.0

5. Propagation Delay: the maximum propagation delay determined in accordance with the TIA/EIA -568-A-1 for a Basic Link configuration shall be less than 518-ns measured at 10MHz. (Note: In determining the channel and basic link propagation delay, the propagation delay contribution of connecting hardware is assumed to not exceed 2.5 ns from 1 MHz to 100MHz.
6. Delay Skew: The difference in propagation delay between the fastest and slowest pair in a cable shall not exceed the parameters below and the skew between all pair combinations shall not vary more than 610 ns when measured in accordance with TIA/EIA-568-A-1 and ASTM D 4566.

❖ Category 5e                      45ns between 1 MHz and 100MHz

7. Return Loss (Basic Link) Worst Pair:
 

Frequency	dB
1-20 MHz	17
20-100MHz	17 - 7Log(f/20)

- E. Contractor shall provide written reports of all test data. Test results shall include a record of test frequencies, cable type, conductor pair and cable ID (e.g. Station I.D.), measurement direction, test equipment type, model and serial number, date, reference setup, and crew member name(s).
- F. At minimum, the Engineer may request that a 5% random field re-test be conducted on the cable system - at no additional cost - to verify documented findings.

- G. In the event results of the tests are not satisfactory, the Contractor shall make adjustments, replacement and changes as are necessary and shall then repeat the test or tests which disclosed faulty or defective material, equipment or installation method, and shall make additional tests as the Engineer deems necessary.

### **3.5 DOCUMENTATION**

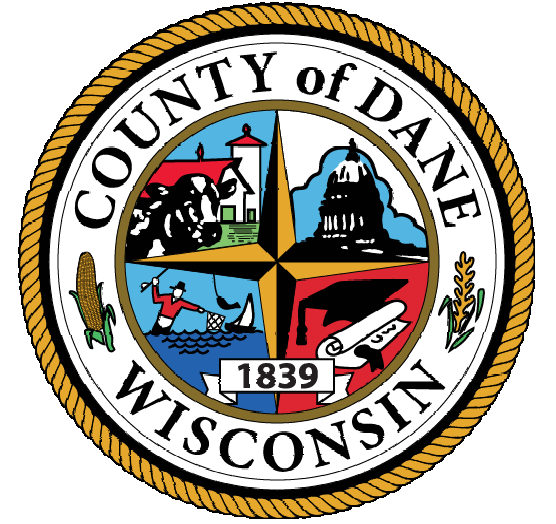
- A. Contractor is responsible for supplying all equipment and personnel necessary to conduct the acceptance tests. Contractor shall conduct acceptance testing according to a schedule coordinated with the General Contractor and Owner. Representatives of the Owner or Engineer may be in attendance to witness the test procedures. The contractor shall offer adequate advance notice to the Owner or General Contractor as to allow for such participation.
- B. The contractor shall visually inspect all cabling and terminations to insure that they are complete and conform to the wiring pattern defined herein. The contractor shall provide to the Engineer a written certification that this inspection has been made.
- C. In system documentation, contractor shall provide test results and describe the conduct of the tests including the date of the tests, the equipment used and the procedures followed. At the request of the Owner or Engineer, the Contractor shall provide copies of original test results.
- D. Upon completion of cabling installation and testing, the contractor shall provide a complete set of cable records documentation including:
  - 1. Annotated floor plans showing the location of all Telecommunications Outlets as installed. Telecommunications Outlets shall be identified by the Outlet I.D. and a unique symbol.
  - 2. Termination field and equipment rack layouts.
  - 3. Certified test and inspection results.

### **3.6 WARRANTY**

- A. The Contractor shall warranty the cable system for a period of one (1) year on materials, workmanship and installation, including all parts, components and subsystems proposed. The warranty shall commence upon satisfactory completion of all work, including test and documentation, relating to major system components.
- B. Any cable or hardware that proves defective, inoperable or incorrectly installed that must be replaced, modified or repaired to meet test criteria shall be performed by the Contractor at no additional costs to the Owner. The Contractor shall provide all labor, equipment and materials necessary to effect warranty repairs or to the proposed system.
- C. All changes and/or repairs made by the Contractor under warranty shall be labeled and documented to the Engineer as described by this document.
- D. In the event that the Contractor fails to respond to warranty repair requests in a timely manner, the Owner may secure repair services from others and charge the Contractor for the costs incurred. This action will not void any provisions of the ongoing warranty.



**END OF SECTION**



# DCPW - UW EXTENSION LOBBY REMODEL

5201 FEN OAK DRIVE  
MADISON, WI



RENDERING IS REPRESENTATIVE ONLY - SEE DOCUMENTS FOR ALL BUILDING INFORMATION

## PROJECT RENDERING/PERSPECTIVE/ELEVATION

PROJECT/BUILDING DATA
EXISTING 2 STORY BUILDING ALTERATION - LEVEL 2
<b>BUILDING AREAS</b> TOTAL BUILDING AREA = 32,342 SQFT WORK AREA = 5,091 SQFT

CODE INFORMATION SUMMARY
<b>APPLICABLE CODE</b> 2015 WISCONSIN COMMERCIAL BUILDING CODE
<b>CONSTRUCTION TYPE</b> EXISTING TYPE IIB = 2 STORY BUILDING
<b>OCCUPANCY</b> B - BUSINESS
<b>FIRE SPRINKLER</b> BUILDING IS FULLY SPRINKLERED NFPA 13 = ENTIRE BUILDING
NO CHANGES TO EXISTING OCCUPANCY, EGRESS, OR FIRE RATED WALLS.

Architecture :

**Dimension IV - Madison Design Group**  
6515 Grand Teton Plaza, Suite 120, Madison, WI 53719  
p: 608.829.4444 www.dimensionivmadison.com

MEP  
Engineering:

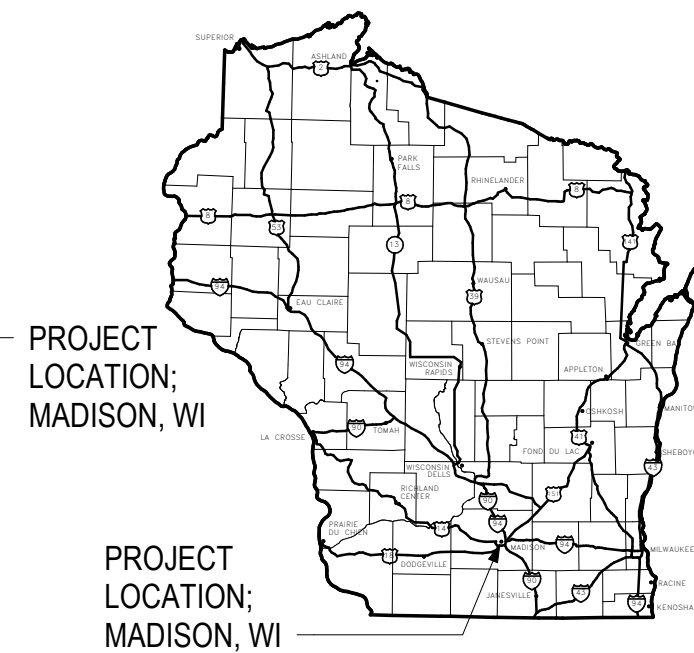
**Hein Engineering Group**  
17 Applegate Court, Suite 200, Madison, WI 53713  
p: 608.288.9260 www.heinengrp.com

## ARCHITECTURAL ABBREVIATIONS LEGEND

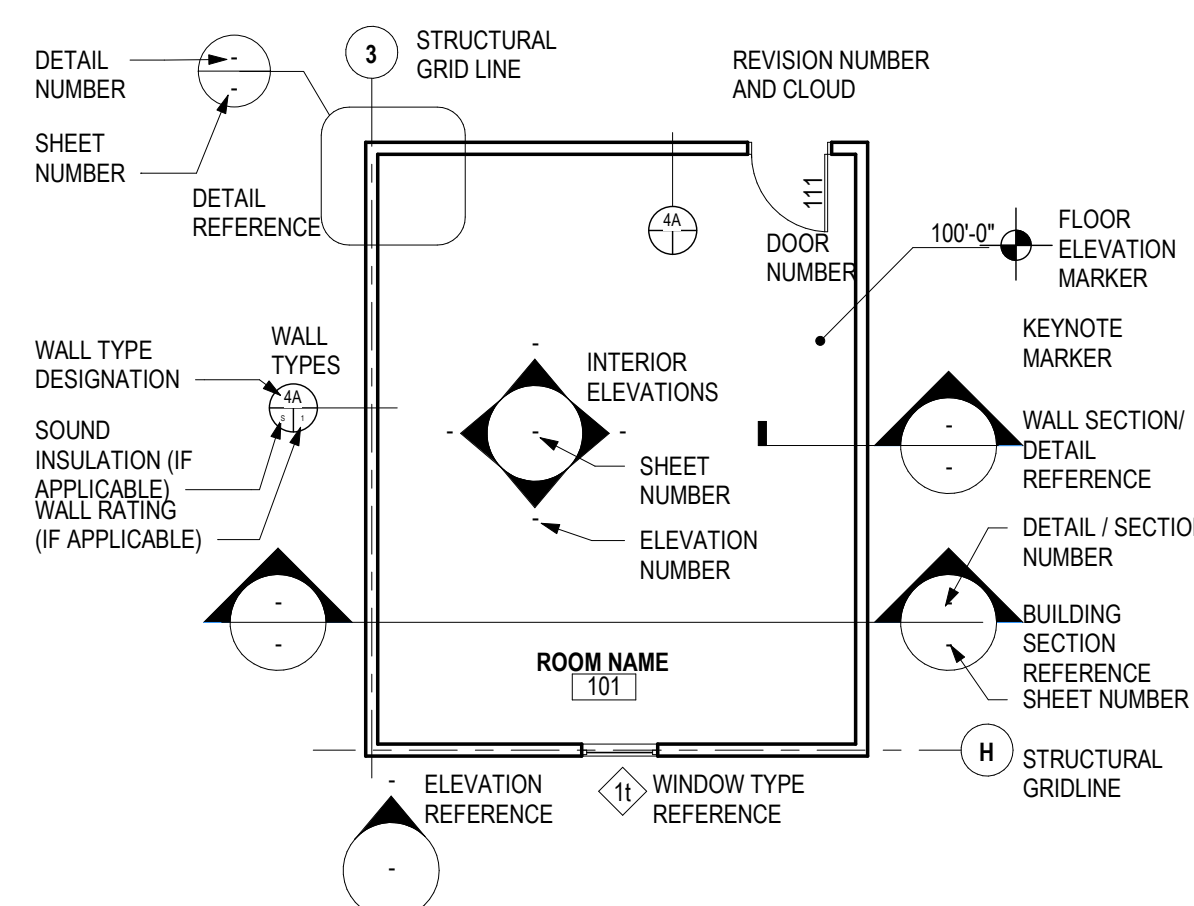
+	- AND	FND	- FOUNDATION	PREFAB	- PREFABRICATED
@	- AT	FOM	- FACE OF MASONRY	PERM	- PERIMETER
AB	- ANCHOR BOLT	FOS	- FACE OF STUD	PC	- PLUMBING CONTRACTOR
AFF	- ABOVE FINISH FLOOR	FTG	- FOOTING	PIC	- PRECAST / PRESTRESSED
ALT	- ALTERNATE	FUT	- FUTURE	P/T	- POST TENSIONED
ALUM	- ALUMINUM	FV	- FIELD VERIFY	PT	- PRESSURE TREATED
ARCH	- ARCHITECT / ARCHITECTURAL	GA	- GAUGE	R	- RADIUS
BRD	- BOARD	GALV	- GALVANIZED	RD	- ROOF DRAIN
BLK	- BLOCK (CMU)	GB	- GRAB BAR	REINF	- REINFORCING
BOT	- BOTTOM	GC	- GENERAL CONTRACTOR	RECD	- REQUIRED
		GYP	- GYPSUM	RM	- ROOM
CB	- CATCH BASIN	HC	- HVAC CONTRACTOR	SCHED	- SCHEDULE
CIP	- CAST-IN-PLACE	HM	- HOLLOW METAL	SHT	- SHEET
CJ	- CONSTRUCTION JOINT	HORIZ	- HORIZONTAL	SIM	- SIMILAR
CL	- CENTERLINE	HT	- HEIGHT	SOG	- SLAB ON GRADE
CLG	- CEILING	HVAC	- HEATING, VENTILATION & AIR CONDITIONING	SPEC	- SPECIFICATION
CLJ	- CONTROL JOINT	HR	- HOUR	SQ	- SQUARE
CLR	- CLEAR DISTANCE	ID	- INSIDE DIAMETER	SS	- STAINLESS STEEL
CMU	- CONCRETE MASONRY UNIT	I.F.	- INSIDE FACE	STL	- STEEL
CO	- CASSED OPENING	INSUL	- INSULATION	STR	- STRUCTURAL
COL	- COLUMN	INT	- INTERIOR	THK	- THICKNESS
CONC	- CONCRETE	JBE	- JOIST BEARING ELEVATION	TOL	- TOP OF LEDGE ELEVATION
CONT	- CONTINUOUS	JT	- JOINT	TOP	- TOP OF PIER ELEVATION
CU	- CUBIC	L	- STEEL ANGLE DESIGNATION	TP	- TOILET PAPER DISPENSER
		LAM	- LAMINATE	TS	- (SEE HIGH STRENGTH STEEL DESIGNATION)
DBL	- DOUBLE	LVL	- LAMINATED VENEER LUMBER	TYP	- TYPICAL
DF	- DRINKING FOUNTAIN	MAX	- MAXIMUM	TOW	- TOP OF WALL ELEVATION
DIM	- DIAMETER	MBW	- MASONRY BEARING WALL	UL	- UNDERWRITERS LAB
DN	- DOWN	MFG	- MANUFACTURER	UNO	- UNLESS NOTED OTHERWISE
DS	- DOWN SPOUT	MIN	- MINIMUM	VB	- VAPOR BARRIER
DTL	- DETAIL	MO	- MASONRY OPENING	VERT	- VERTICAL
DWG	- DRAWING	MTL	- METAL	VIF	- VERIFY IN FIELD
		NIC	- NOT IN CONTRACT	W	- WIDTH
EA	- EACH	NOM	- NOMINAL	W/	- WITH
EC	- ELECTRICAL CONTRACTOR	NTS	- NOT TO SCALE	W/O	- WITHOUT
EIFS	- EXTERIOR INSULATION FINISH SYSTEM	NO	- NUMBER	WC	- WATER CLOSET
EL	- ELEVATION	OC	- ON CENTER	WD	- WOOD
ELEV	- ELEVATOR	OD	- OUTSIDE DIAMETER	WRB	- WEATHER RESISTANT BARRIER
ENG	- ENGINEER	O.F.	- OUTSIDE FACE	WWF	- WELDED WIRE FABRIC
EQ	- EQUAL	OH	- OVERHEAD		
EXIST	- EXISTING	OPCI	- OWNER PROVIDED, CONTRACTOR INSTALLED		
EXP	- EXPANSION	OPOI	- OWNER PROVIDED, OWNER INSTALLED		
EXT	- EXTERIOR	OPNG	- OPENING		
FD	- FLOOR DRAIN	OPP	- OPPOSITE		
FND	- FOUNDATION				
FE	- FIRE EXTINGUISHER				
FEC	- FIRE EXTINGUISHER CABINET				
FF	- FINISH FLOOR				
FIN	- FINISH				
FLR	- FLOOR				



VICINITY MAP



STATE MAP



BID SET

## LIST OF DRAWINGS

SHEET NO.	SHEET NAME
GENERAL	
G0.1	COVER SHEET
ARCHITECTURAL	
D1.0	FIRST FLOOR DEMOLITION PLAN
A1.0	OVERALL FIRST FLOOR PLAN
A1.1	ENLARGED FIRST FLOOR PLAN
A4.1	REFLECTED CEILING PLAN
PLUMBING	
P1.0	PLUMBING PLANS
MECHANICAL / FP	
H-FP1.0	HVAC & FIRE PROTECTION PLANS
ELECTRICAL	
DE1.0	DEMOLITION ELECTRICAL PLANS
E1.0	ELECTRICAL PLANS

DANE COUNTY RFB # 320032  
PROJECT # 20097  
02/19/2021

**G0.1**

**DCPW - UW  
 EXTENSION LOBBY  
 REMODEL**  
 5201 FEN OAK DRIVE  
 MADISON, WI

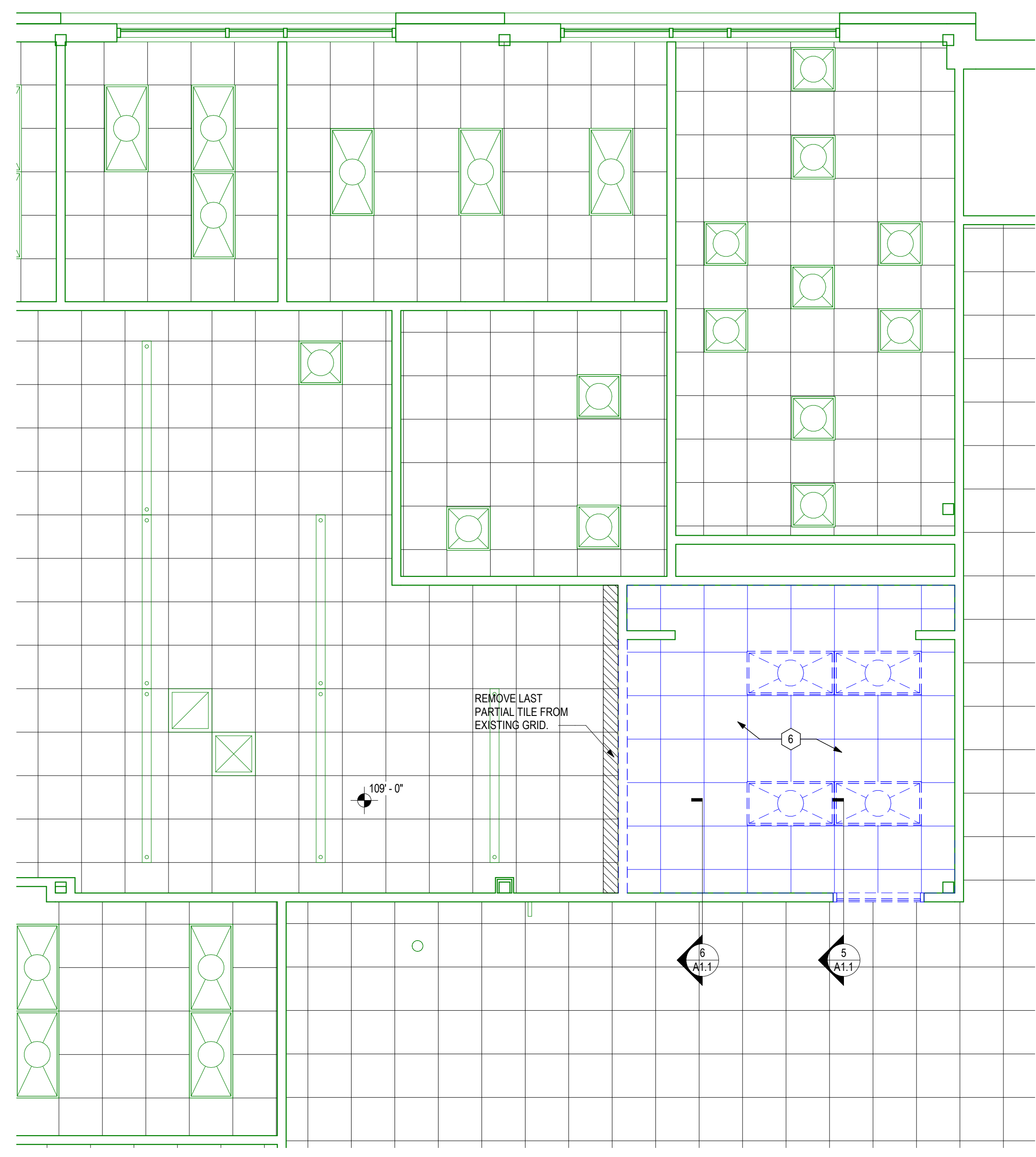
DATE OF ISSUE: 2/19/2021

REVISIONS:

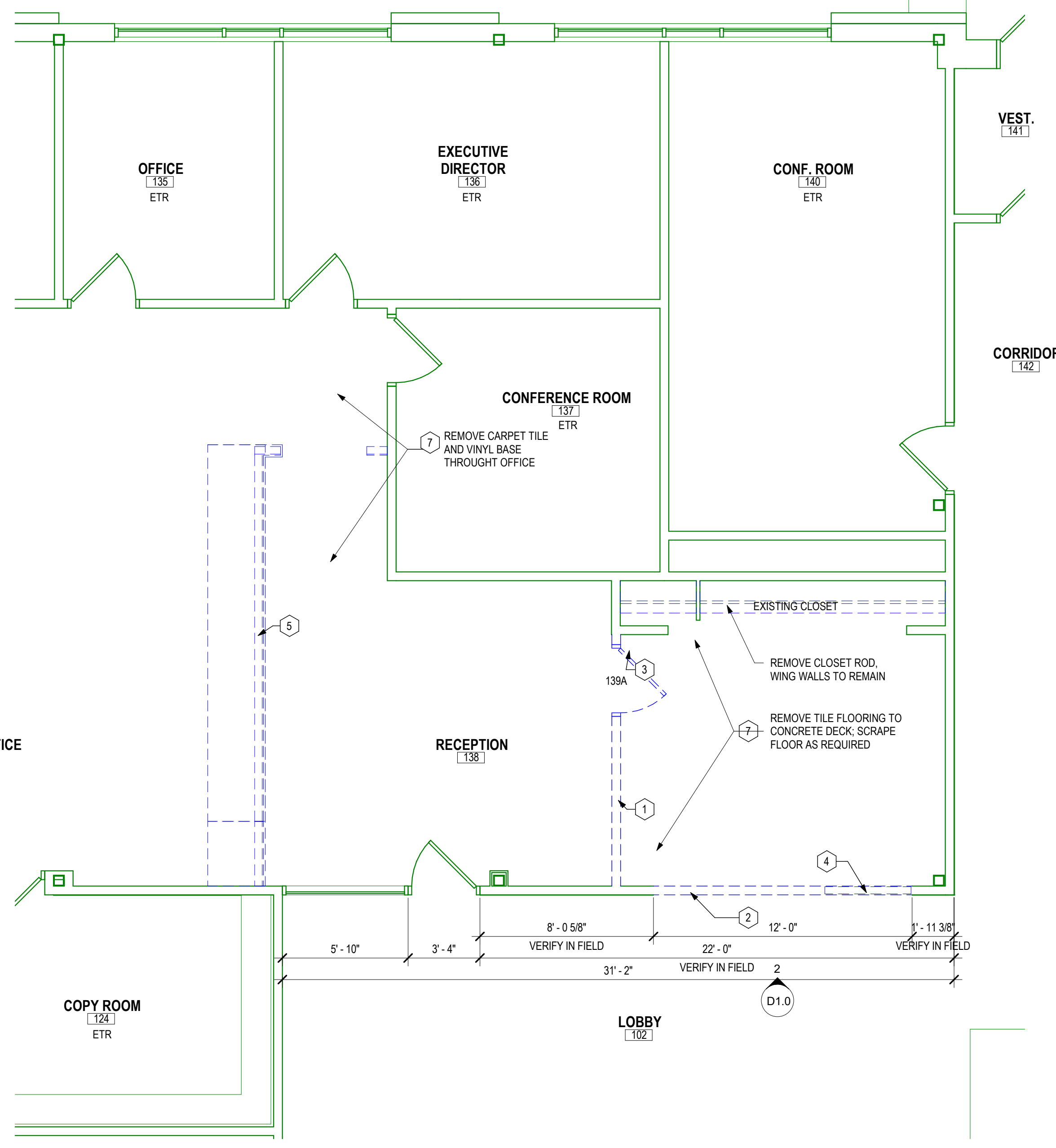

PROJECT # 20097

**FIRST FLOOR  
 DEMOLITION PLAN**

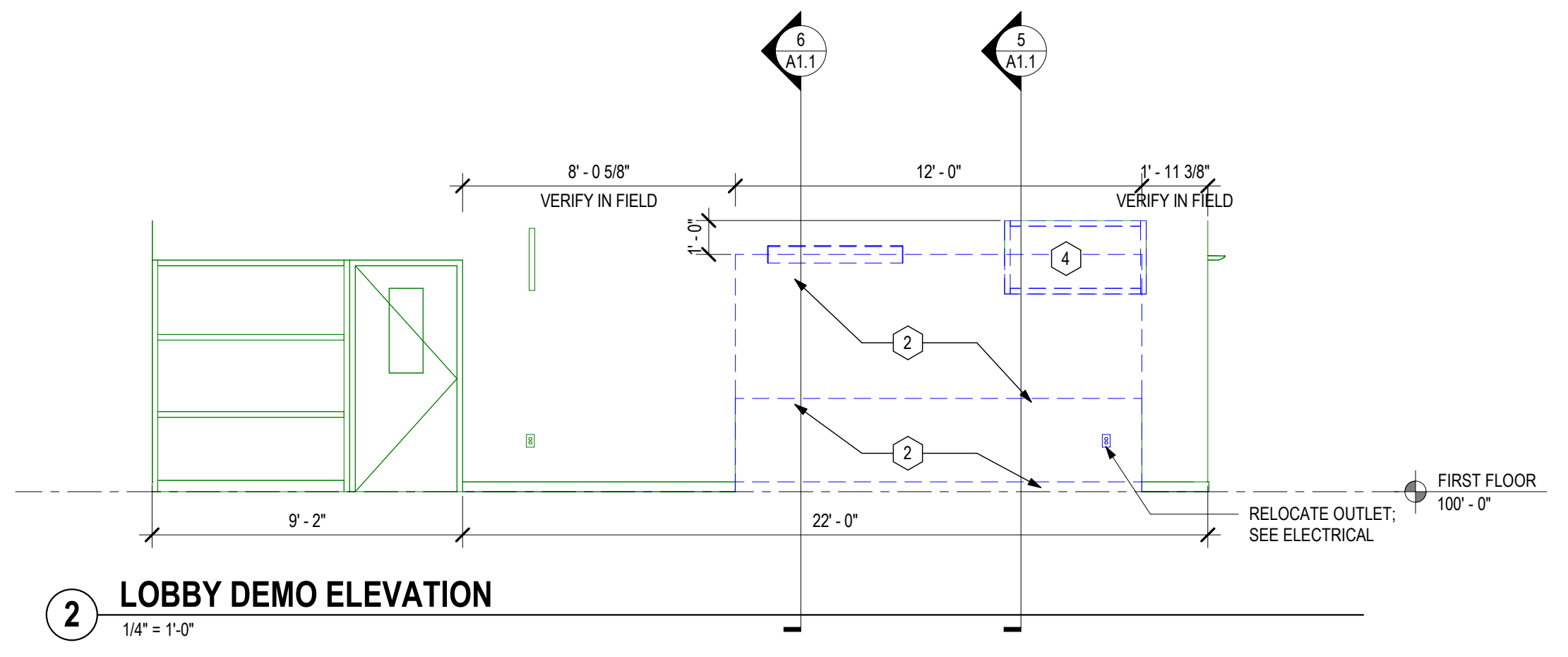
**D1.0**



**3 FIRST FLOOR REFLECTED CEILING DEMO PLAN**  
 1/4" = 1'-0"



**1 FIRST FLOOR DEMOLITION PLAN**  
 1/4" = 1'-0"





**2 LOBBY DEMO ELEVATION**  
 1/4" = 1'-0"

**DEMOLITION GENERAL NOTES**

A. MAINTAIN ALL EXIT DOORS IN UNOBSTRUCTED OPERABLE CONDITION WITH SAFE PASSAGE WAY FROM THE BUILDING. COORDINATE WITH THE LOCAL FIRE MARSHAL.	F. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING, BRACING, ETC. REQUIRED FOR REMOVAL WORK. WORK TO BE CERTIFIED BY STRUCTURAL ENGINEER IF REQUIRED.
B. PROVIDE AND MAINTAIN BARRICADES, GATES, OR OTHER MEANS OF MAINTAINING PUBLIC SAFETY AT ALL AREAS OF CONSTRUCTION OR DEMOLITION.	G. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DEMOLITION SHEETS TO COORDINATE REMOVAL WORK.
C. COORDINATE STORAGE LOCATIONS FOR SALVAGED EQUIPMENT WITH OWNER.	H. ALL EXISTING ROOM NUMBERS AND NAMES SHOWN ON THIS PLAN ARE FOR INFORMATIONAL AND COORDINATION PURPOSES.
D. ALL STRUCTURES SHOWN DASHED ON THIS PLAN SHALL BE COMPLETELY REMOVED FROM THE SITE AND DISPOSED OF BY THIS CONTRACT UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL ELECTRICAL, MECHANICAL, OR PLUMBING WITHIN THE REMOVED STRUCTURE. TERMINATE MEP AS REQUIRED. VERIFY GENERAL CONDITIONS IN FIELD PRIOR TO BIDDING.	I. COORDINATE REMOVAL AND PATCHING SHOWN WITH MECHANICAL, PLUMBING AND ELECTRICAL REMOVAL AND PATCHING DRAWINGS.
E. PREPARATION FOR NEW FINISHES SHALL INCLUDE REMOVAL OF FINISHES, REMOVAL OF TAPES, GLUES (MASTIC), NAILS, ETC. PATCHING OF HOLES AND CRACKS, AND UP TO 1" OF LEVELER COMPOUND IF REQUIRED TO PROVIDE AN ACCEPTABLE SURFACE FOR NEW FINISH INSTALLATION.	J. OWNER WILL REMOVE LOOSE FURNISHINGS FROM THE SITE PRIOR TO START OF CONSTRUCTION.
	K. CONTRACTOR SHALL SALVAGE FIXED EQUIPMENT ITEMS AND SET THEM IN A DESIGNATED LOCATION FOR THE OWNER TO REMOVE TO STORAGE. ITEMS TO BE REINSTALLED WILL BE DELIVERED TO THE JOB SITE BY THE OWNER. SALVAGE ITEMS INCLUDE DOORS, WINDOWS, FRAMES, WALL MOUNTED PROJECTION SCREENS, COAT RACKS AND OTHER MISCELLANEOUS ITEMS AS DIRECTED BY THE OWNER. ALSO SEE REMOVAL AND REMODELING NOTES.
	L. CONTRACTOR SHALL INSTALL TEMPORARY FRAME SPREADERS ON DOOR FRAMES TO BE SALVAGED, STORED AND REINSTALLED.

**DEMOLITION PLAN KEYNOTES**

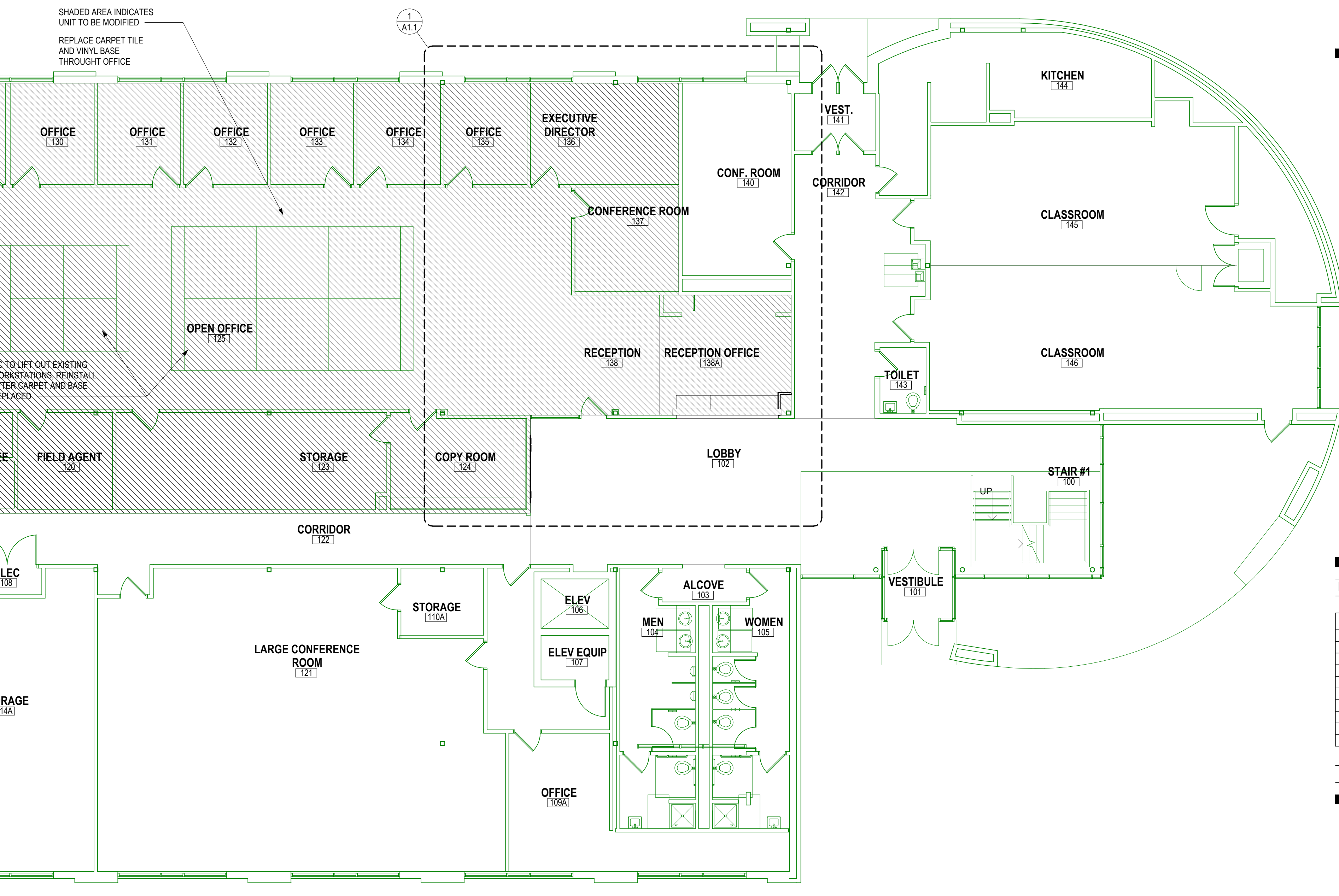
	INDICATES EXISTING WALL, DOOR, FIXTURE, ETC.
	INDICATES ITEM TO BE REMOVED
<b>DEMOLITION</b>	
1	REMOVE WALL
2	REMOVE PORTION OF WALL AS INDICATED ON PLAN AT HEIGHT REQUIRED FOR NEW HEADER WHERE APPLICABLE
3	REMOVE ENTIRE DOOR AND FRAME, COORDINATE SALVAGE WITH OWNER
4	REMOVE EXISTING WINDOW, COORDINATE SALVAGE WITH OWNER
5	REMOVE EXISTING CASEWORK AND COUNTERTOP, COORDINATE SALVAGE WITH OWNER
6	REMOVE EXISTING CEILING TILE AND GRID, COORDINATE SALVAGE WITH OWNER
7	REMOVE FLOORING AS INDICATED



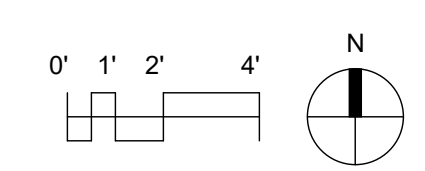
3 3D VIEW FROM LOBBY\_CURTAIN OPEN



2 3D VIEW FROM LOBBY\_CURTAIN CLOSED



1 OVERALL FIRST FLOOR PLAN  
1/8" = 1'-0"



**DCPW - UW  
EXTENSION LOBBY  
REMODEL**

5201 FEN OAK DRIVE  
MADISON, WI

DATE OF ISSUE: 2/19/2021

REVISIONS:


PROJECT # 20097

**OVERALL FIRST  
FLOOR PLAN**

**A1.0**

**DCPW - UW  
EXTENSION LOBBY  
REMODEL**

5201 FEN OAK DRIVE  
MADISON, WI

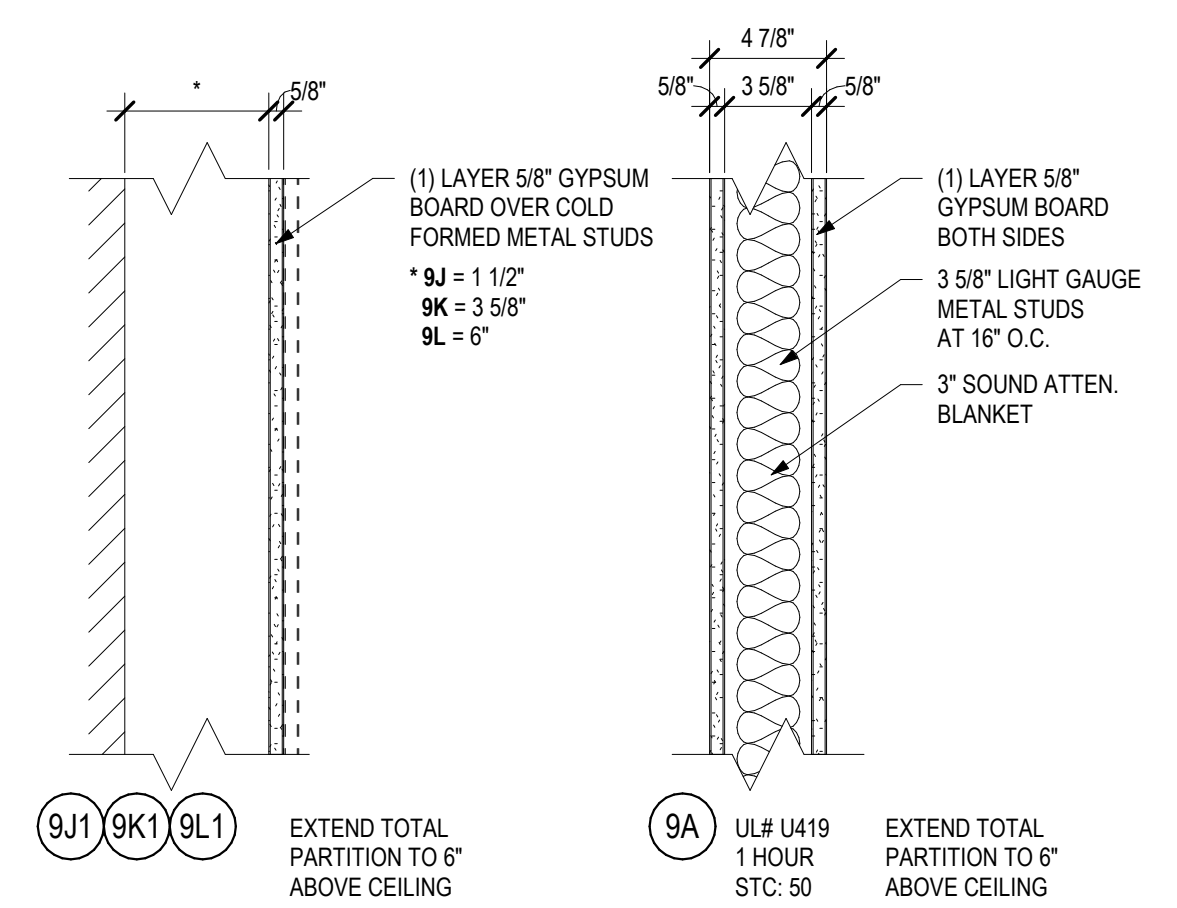
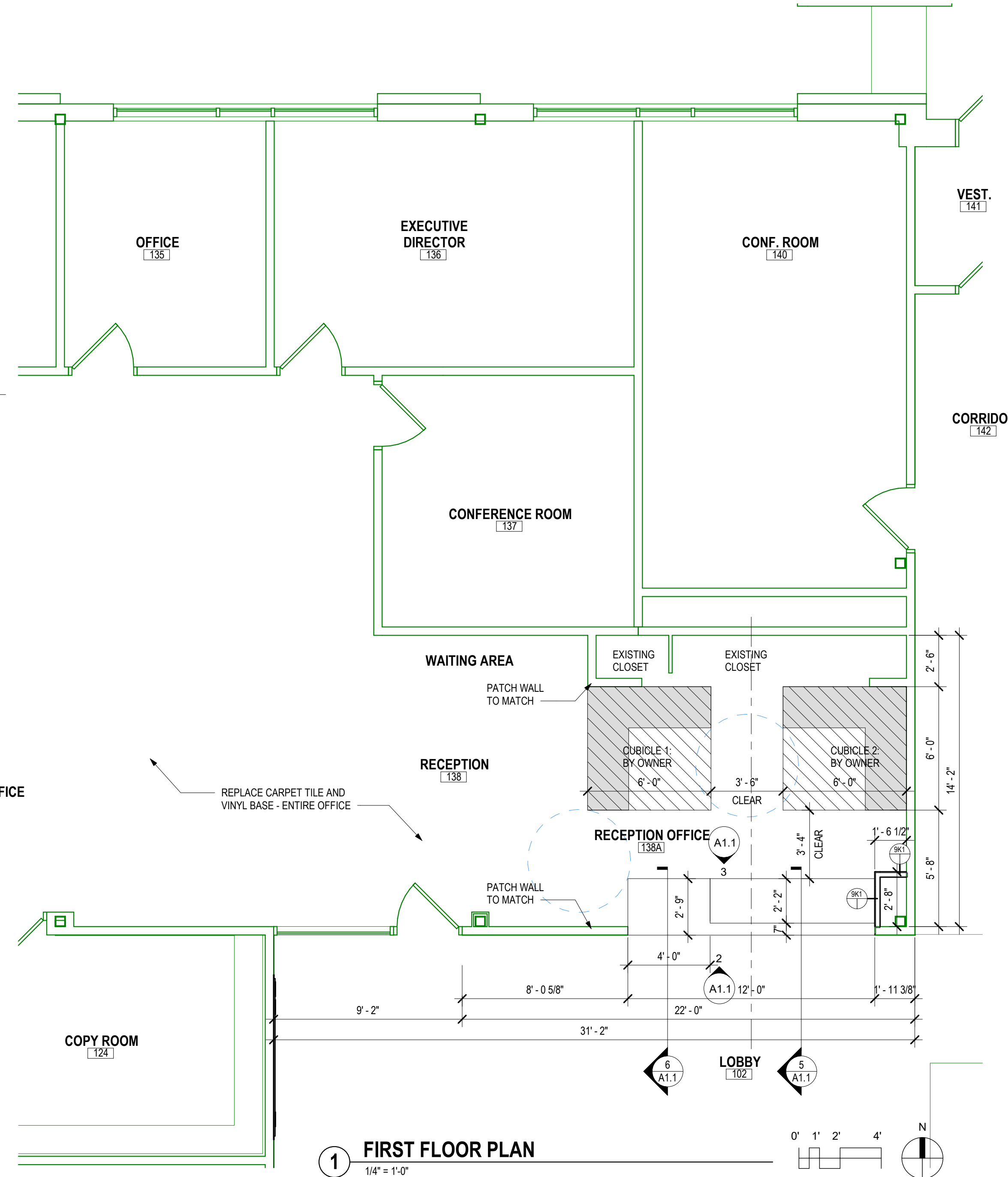
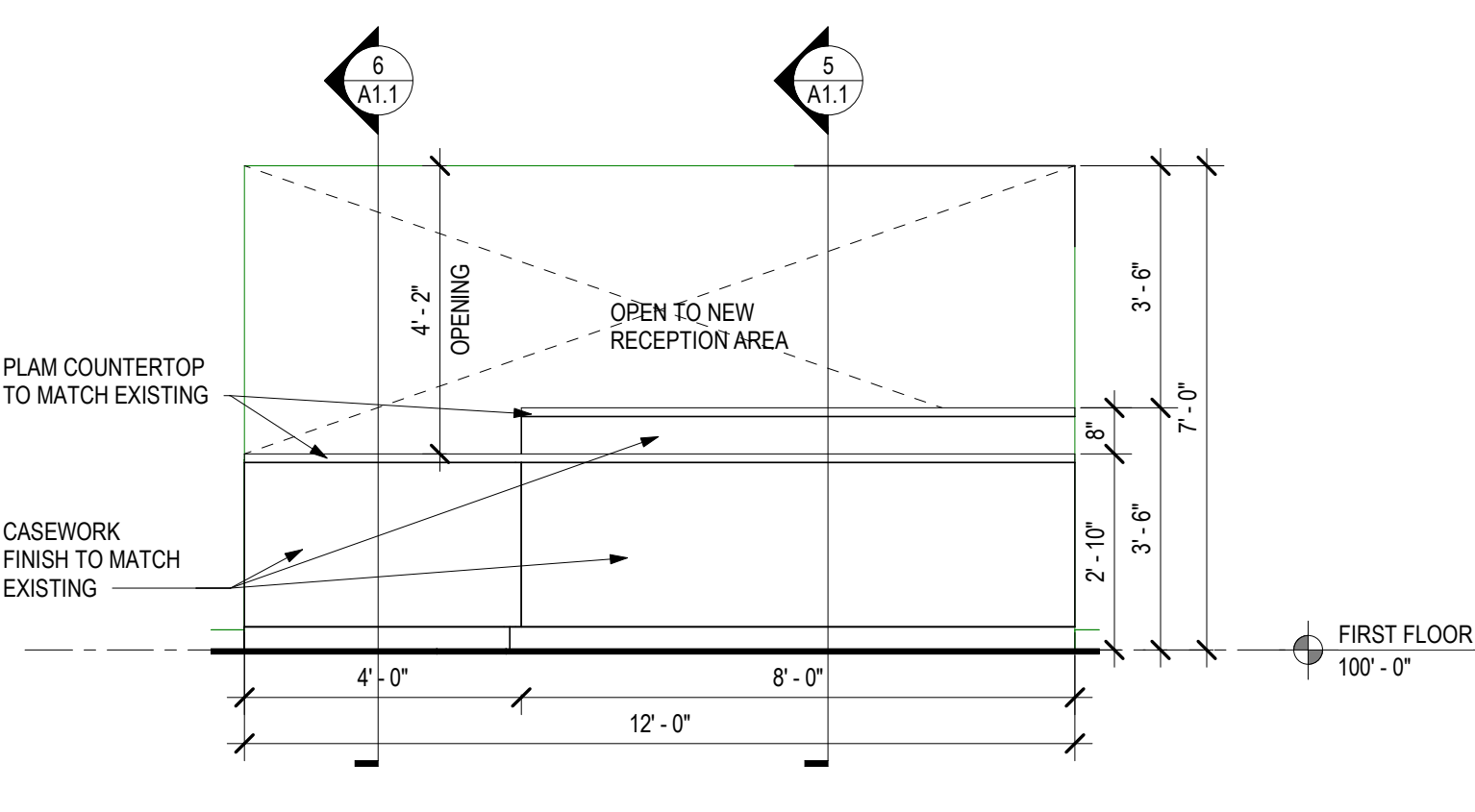
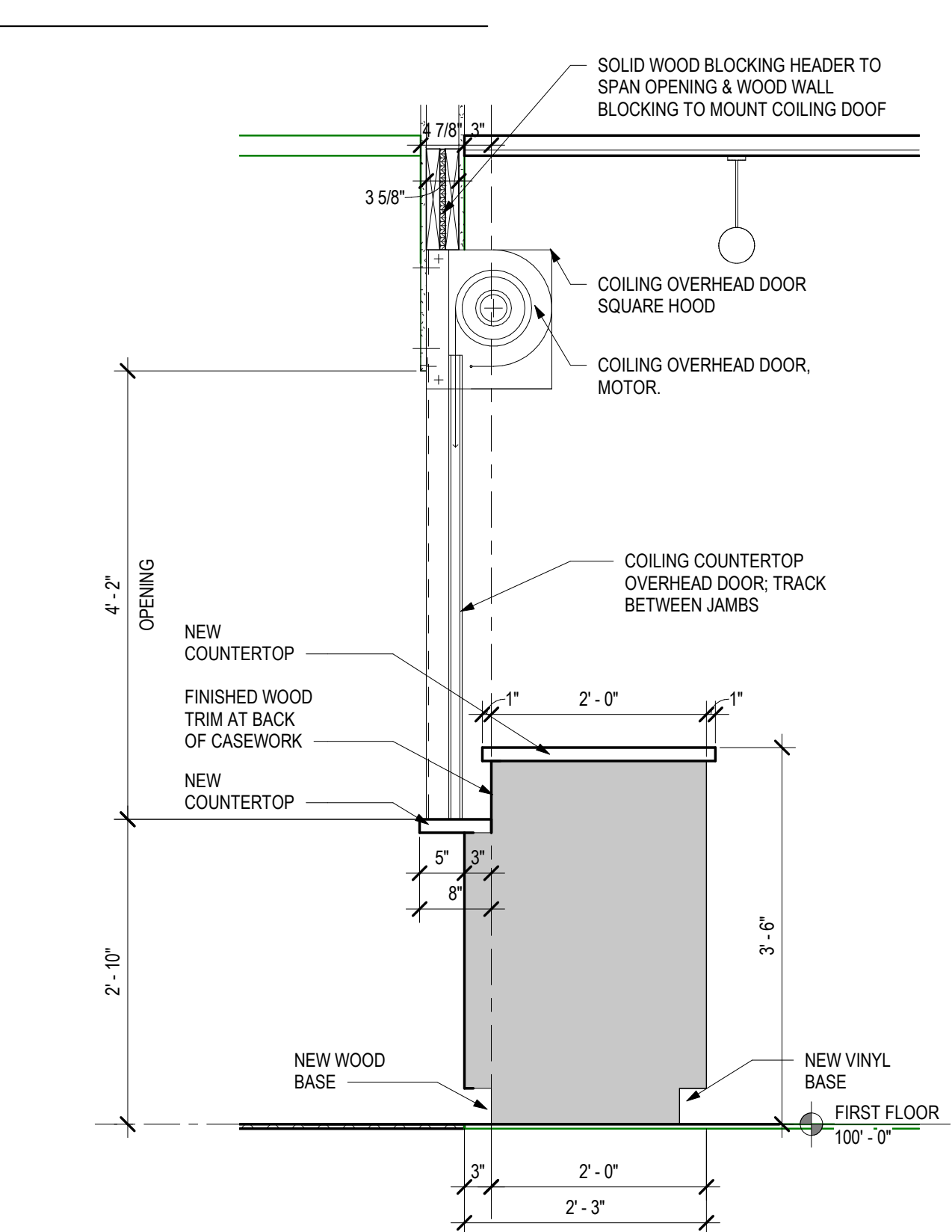
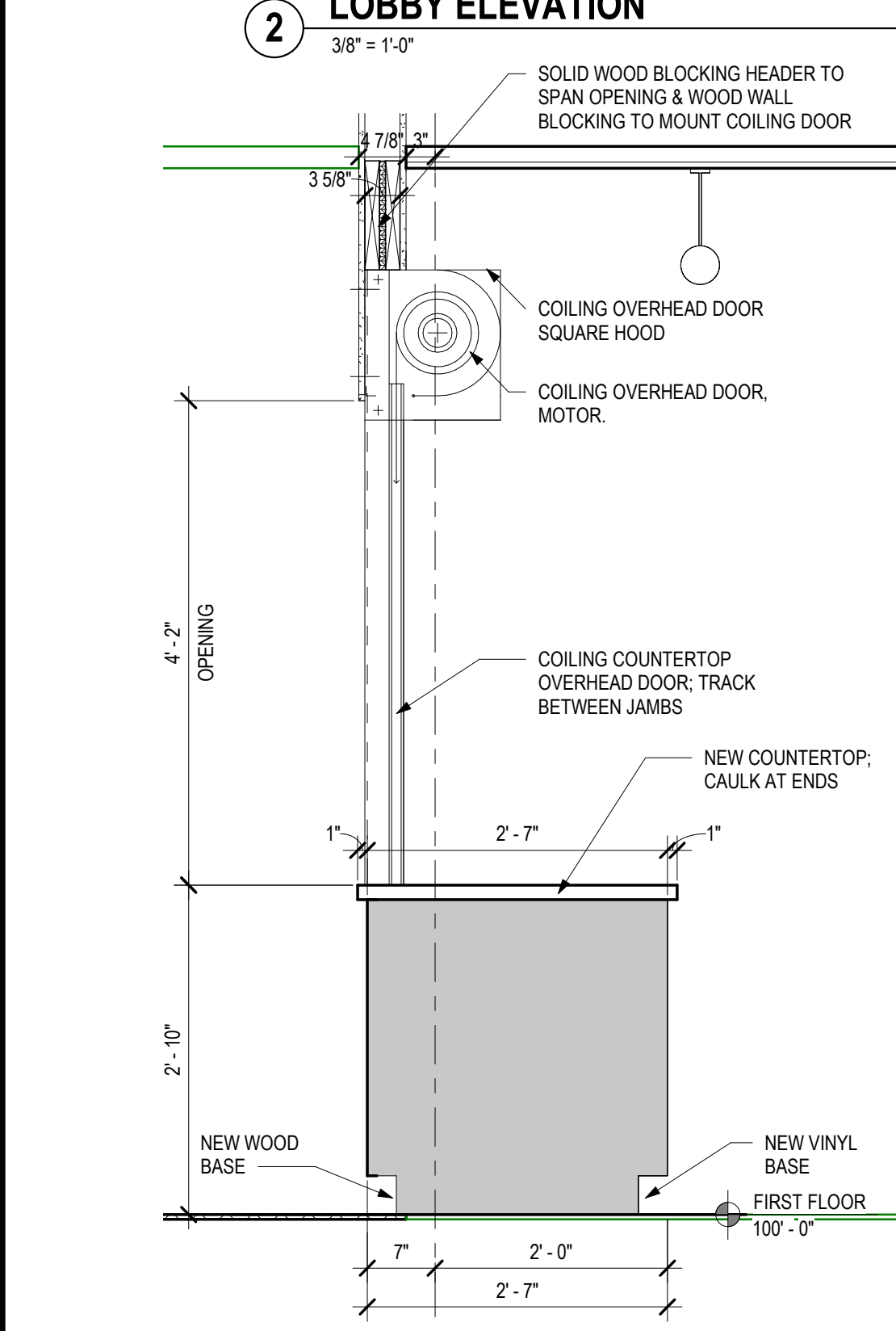
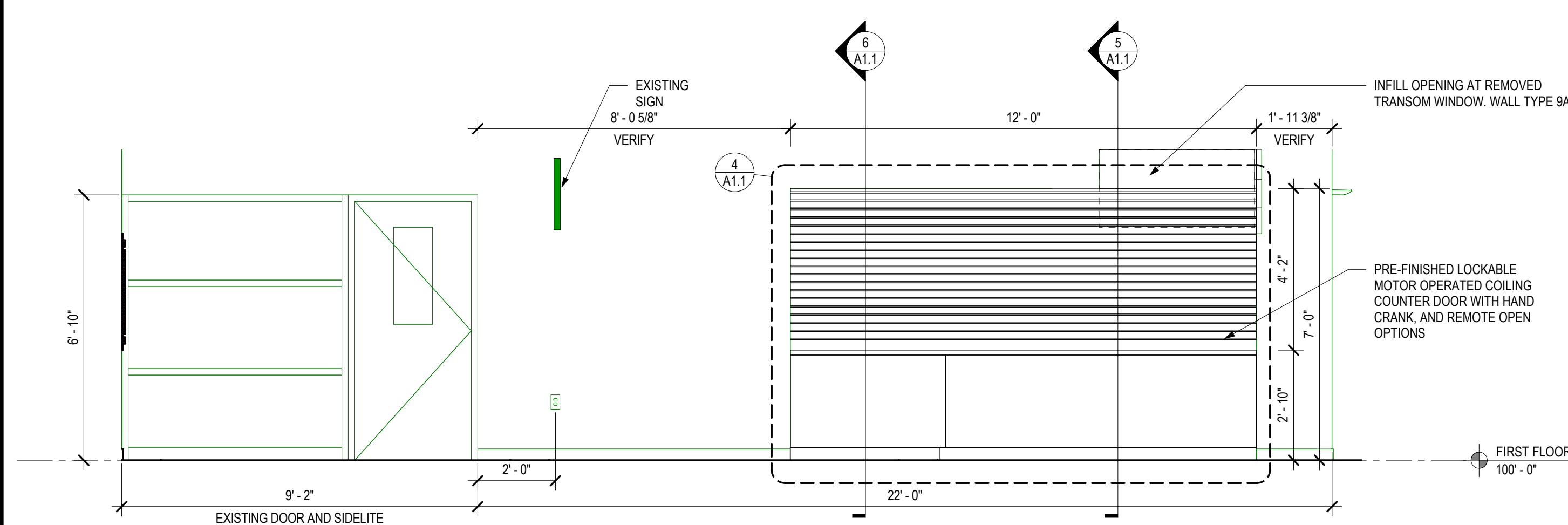
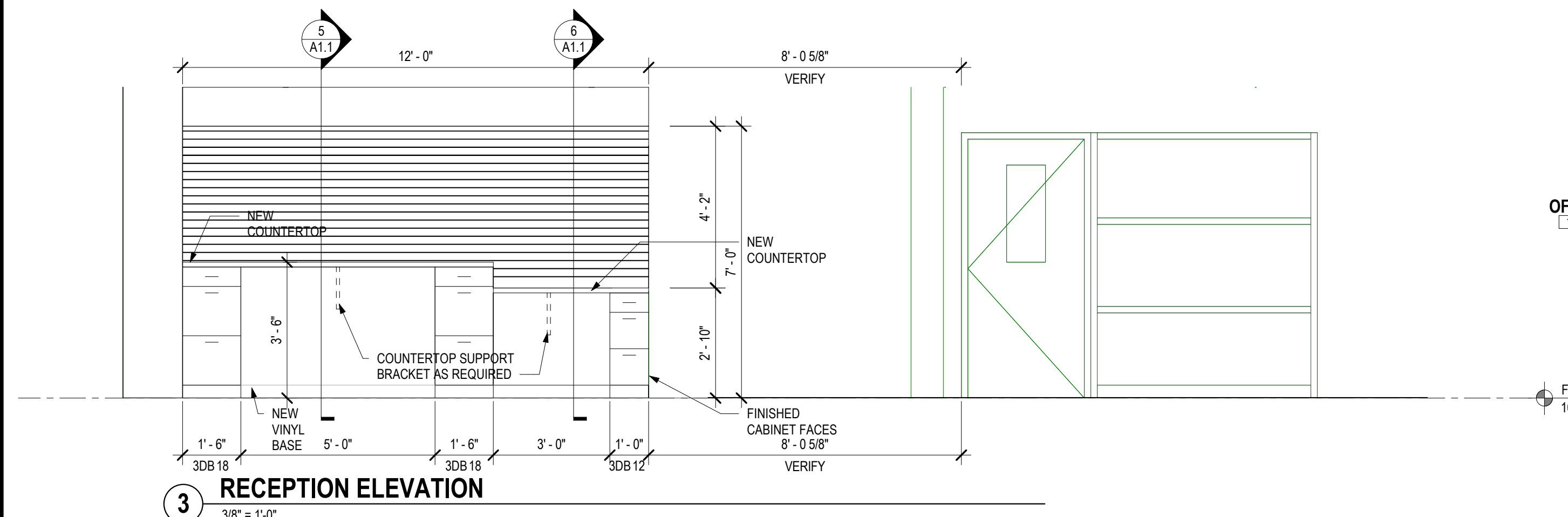
DATE OF ISSUE: 2/19/2021

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PROJECT # 20097

**ENLARGED FIRST  
FLOOR PLAN**

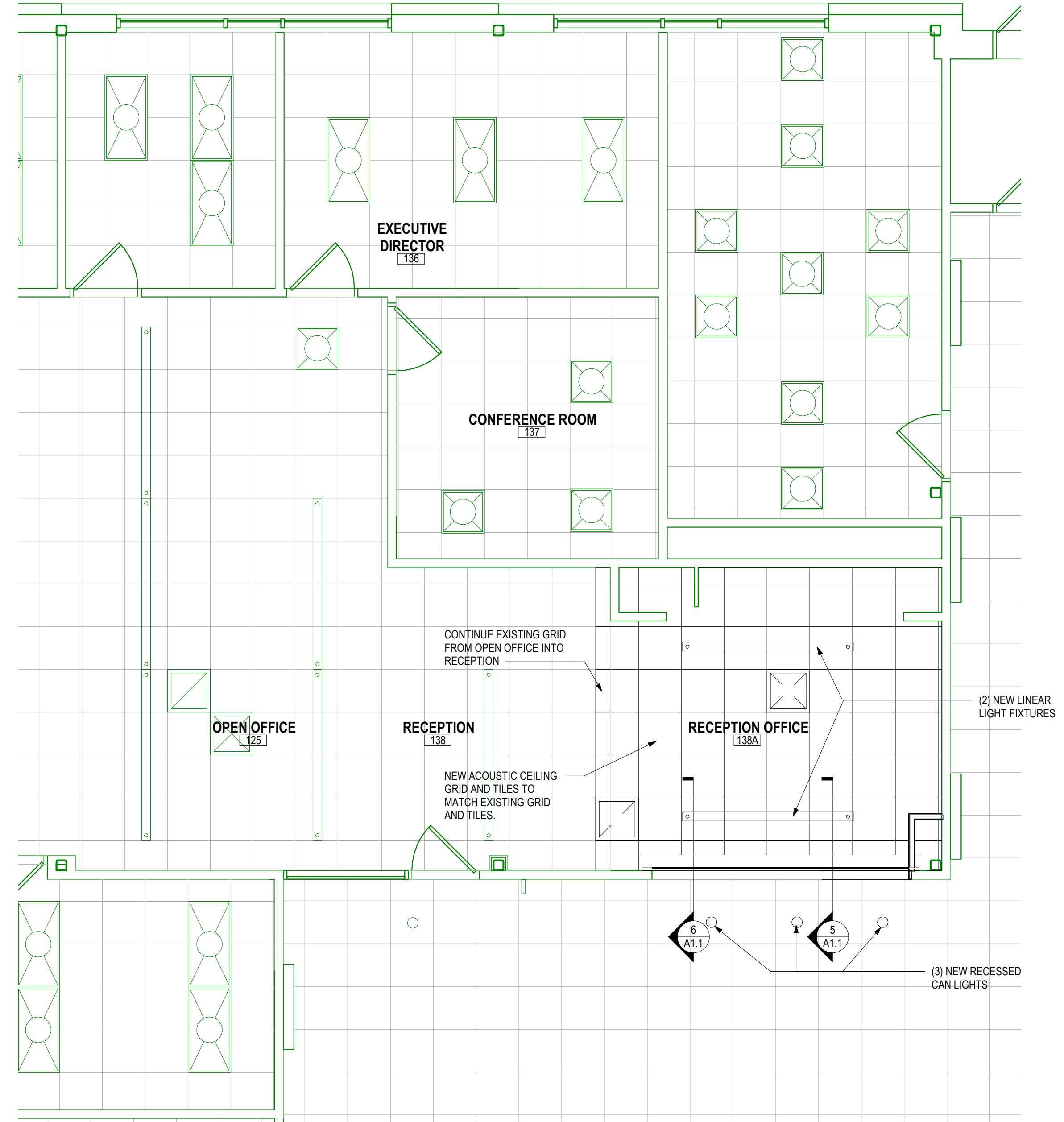
**A1.1**



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**DCPW - UW  
EXTENSION LOBBY  
REMODEL**

5201 FEN OAK DRIVE  
MADISON, WI



**1 FIRST FLOOR REFLECTED CEILING PLAN**  
1/4" = 1'-0"

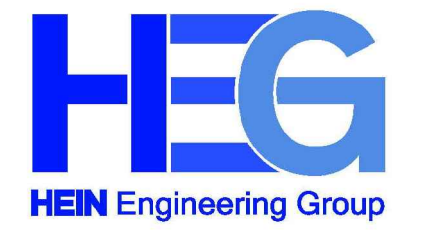
DATE OF ISSUE: 2/19/2021

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PROJECT # 20097

**REFLECTED  
CEILING PLAN**

**A4.1**



17 Applegate Court, Suite 200  
Madison, WI 53713  
Phone: (608) 288-9260  
email: hein@heinengrp.com  
Project No. H2026

**DCPW - UW EXT  
SECURE ENTRANCE**

5201 FEN OAK DRIVE  
MADISON, WI

**PLUMBING SYMBOL SCHEDULE**

SYMBOL	DESCRIPTION
---	EXISTING WASTE BELOW GROUND
---	EXISTING COLD WATER
---	EXISTING HOT WATER
---	EXISTING VENT
---	WASTE BELOW GROUND
--- ST ---	STORM BELOW GROUND
--- CWW ---	CLEAR WATER WASTE
---	WASTE ABOVE GROUND
--- ST ---	STORM ABOVE GROUND
--- CWW ---	CLEAR WATER WASTE ABOVE GROUND
---	COLD WATER
---	HOT WATER
---	HOT WATER RECIRCULATION LINE
---	VENT
---	UNDERGROUND VENT
○	PIPE UP
⊖	PIPE DOWN
┆  CO	CLEAN OUT
⊕	CONNECT TO EXISTING
CV	CIRCUIT VENT
CWV	CLEAR WATER WASTE VENT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
OSD	OPEN SITE DRAIN
RV	RELIEF VENT
V	VENT
VTR	VENT THROUGH ROOF
WCO	WALL CLEAN OUT
WHA	WATER HAMMER ARRESTOR
WV	WET VENT

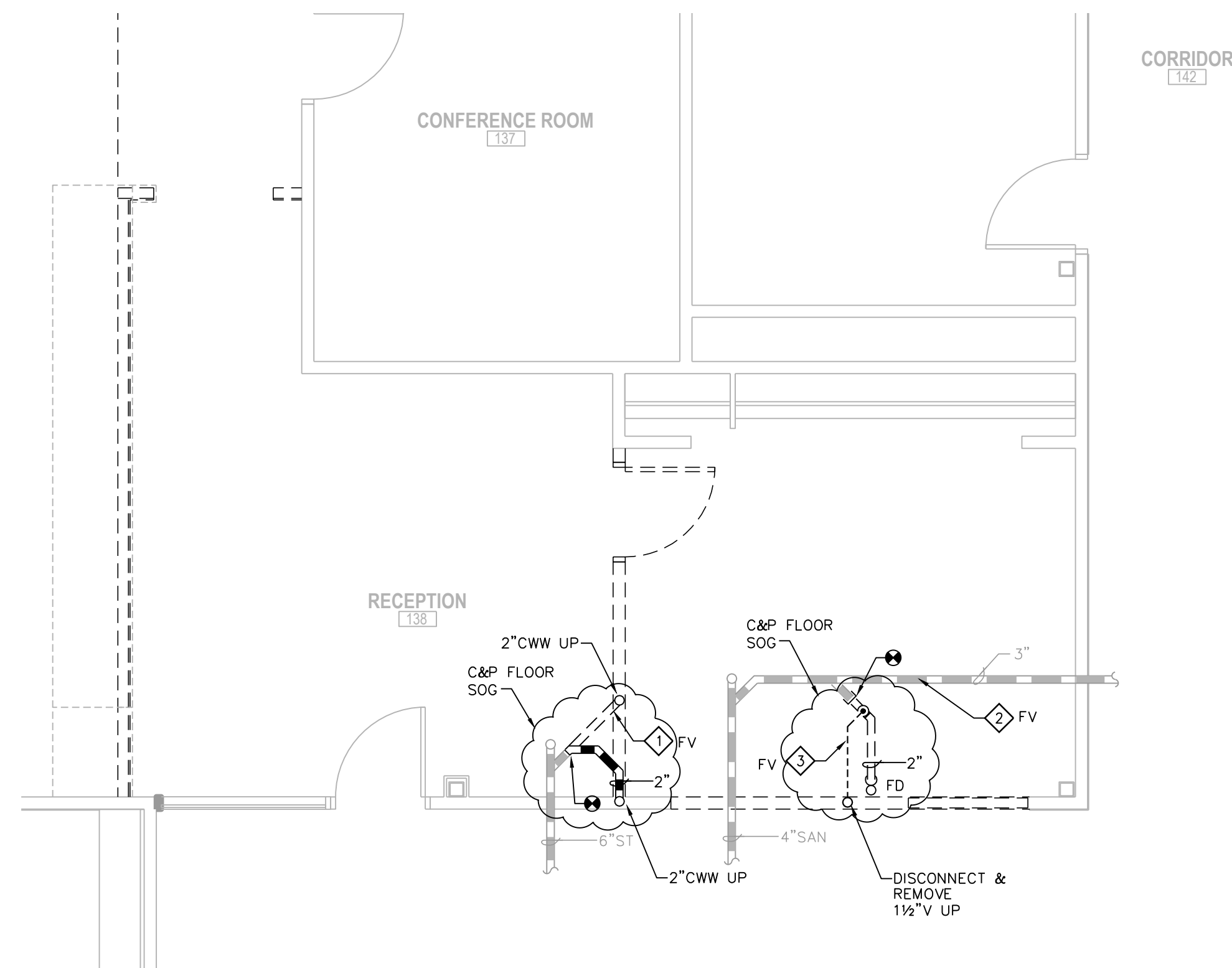
**PLUMBING GENERAL NOTES**

1. PLUMBING CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF PLUMBING WORK REQUIRED. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2. COORDINATE AND SCHEDULE ALL PLUMBING WORK WITH THE OWNER'S GENERAL CONTRACTOR AND OWNER PRIOR TO STARTING WORK.
3. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PATCHING ALL PLUMBING WORK TO MATCH EXISTING.
4. COORDINATE ALL PLUMBING WORK WITH OTHER TRADES.
5. COORDINATE FLOOR CUTTING WITH GENERAL CONTRACTOR.
6. REFER TO PLUMBING SPECIFICATIONS FOR FURTHER DETAILS & REQUIREMENTS.

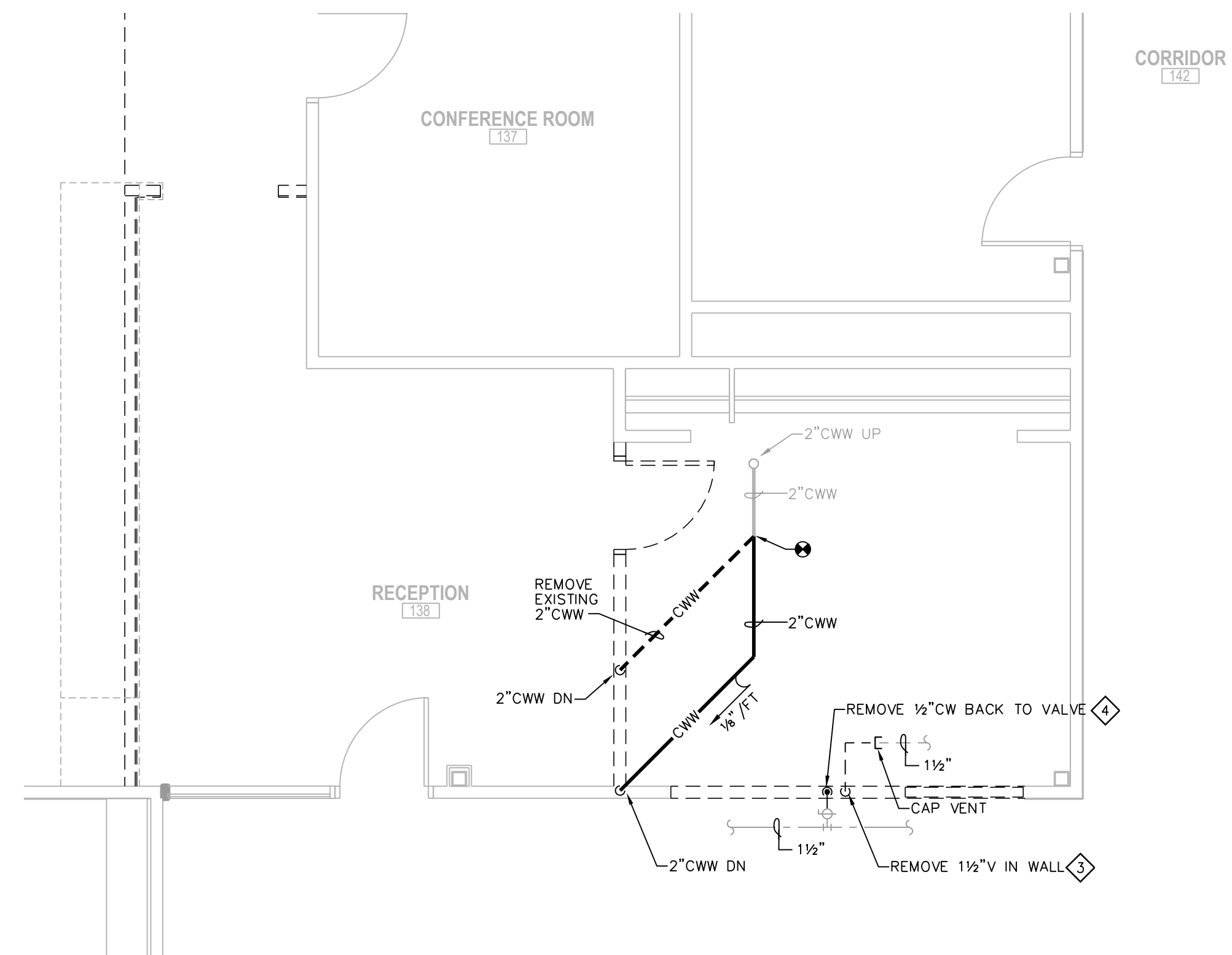
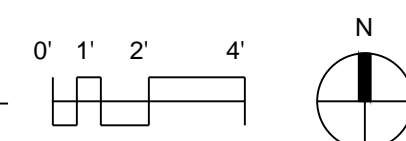
FV = FIELD VERIFY  
SOG = SLAB ON GRADE

**PLUMBING PLAN NOTES:**

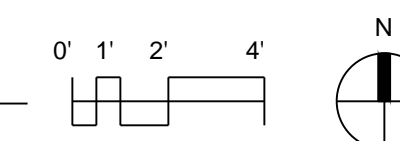
1. DISCONNECT AND REMOVE UNDERGROUND 2" CWW. EXTEND EXISTING 2" CWW TO NEW RISER LOCATION AS SHOWN. COORDINATE FLOOR CUTTING WITH GENERAL CONTRACTOR.
2. DISCONNECT AND REMOVE UNDERGROUND 2" FLOOR DRAIN TRAP AND BRANCH PIPING BACK TO MAIN AND CAP.
3. DISCONNECT AND REMOVE 1-1/2" V PIPING.
4. REMOVE 1/2" CW LINE BACK TO VALVE AND CAP.



**1 UNDERGROUND PLUMBING PLAN**  
1/4" = 1'-0"



**2 PLUMBING PLAN**  
1/4" = 1'-0"



DATE OF ISSUE: 2/19/2021

PROJECT # 20097

**PLUMBING PLANS**



17 Applegate Court, Suite 200  
 Madison, WI 53713  
 Phone: (608) 288-9260  
 email: hein@heinengrp.com  
 Project No. H2026

**DCPW - UW EXT  
 SECURE ENTRANCE**

5201 FEN OAK DRIVE  
 MADISON, WI

**FP GENERAL NOTES:**

1. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE FIRE PROTECTION DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF FP WORK REQUIRED.
2. COORDINATE AND SCHEDULE ALL FP WORK WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.
3. COORDINATE CEILING LAYOUT WITH GENERAL TRADES AND LIGHTING PLANS.
4. ALL REMODEL FP WORK SHALL MEET NFPA 13 STANDARDS.
5. CENTER ALL HEADS IN 2x2 CEILING TILES.

**FP PLAN NOTES:**

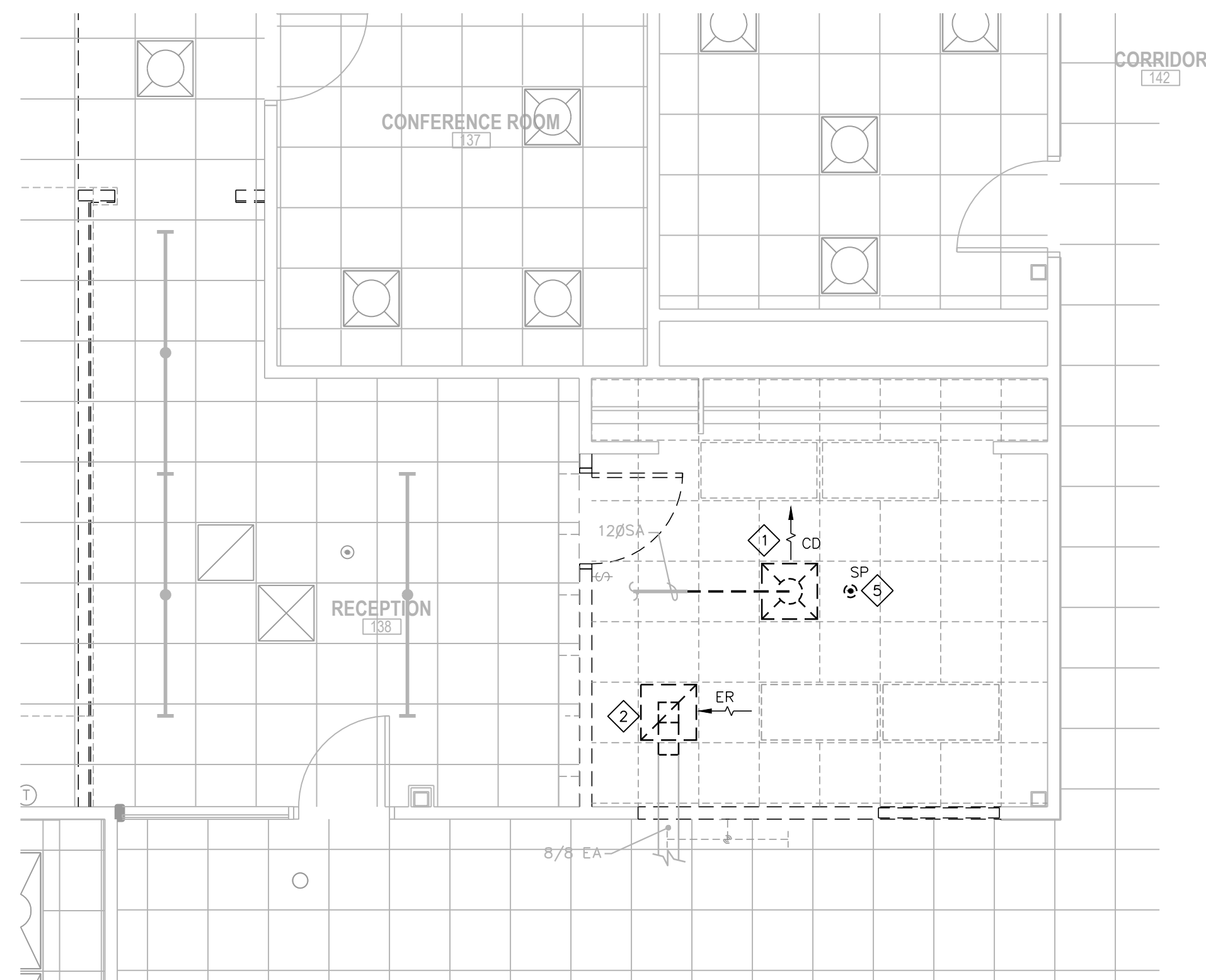
- 5 REMOVE AND PROTECT EXISTING SPRINKLER HEAD FOR REUSE.
- 6 RELOCATE SPRINKLER HEAD AS INDICATED IN NEW CEILING.

**HVAC GENERAL NOTES:**

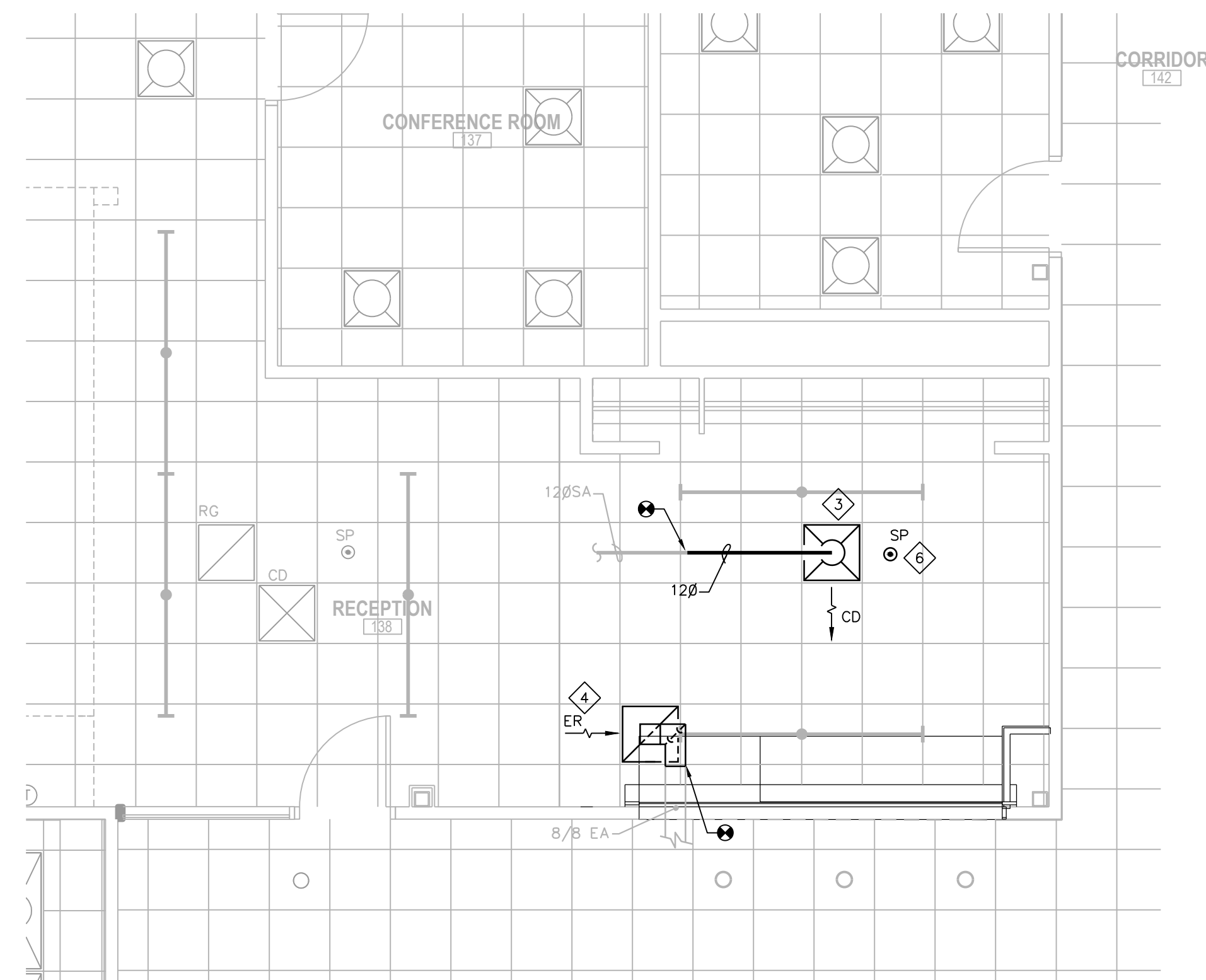
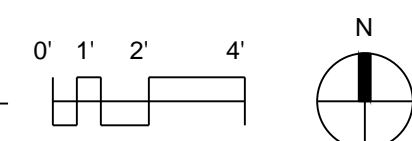
1. HVAC CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE HVAC DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF HVAC WORK REQUIRED.
2. COORDINATE AND SCHEDULE ALL HVAC WORK WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.
3. COORDINATE CEILING LAYOUT WITH GENERAL TRADES AND LIGHTING PLANS.

**HVAC PLAN NOTES:**

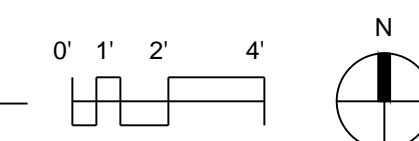
- 1 REMOVE EXISTING CEILING DIFFUSER AND PROTECT FOR REINSTALLATION WITH NEW PLAN.
- 2 REMOVE EXISTING EXHAUST REGISTER AND PROTECT FOR REINSTALLATION WITH NEW PLAN.
- 3 RELOCATE EXISTING CD AND EXTEND 12" SUPPLY DUCT AS INDICATED.
- 4 RELOCATE EXISTING ER AND EXTEND 8"x8" EXHAUST DUCT AS INDICATED.



**1 HVAC/FIRE PROTECTION PLAN - DEMOLITION**  
 1/4" = 1'-0"



**2 HVAC/FIRE PROTECTION PLAN**  
 1/4" = 1'-0"



DATE OF ISSUE: 2/19/2021

PROJECT # 20097

**HVAC/FIRE  
 PROTECTION  
 PLANS**

**H/FP1.0**



**DCPW - UW EXT  
SECURE ENTRANCE**

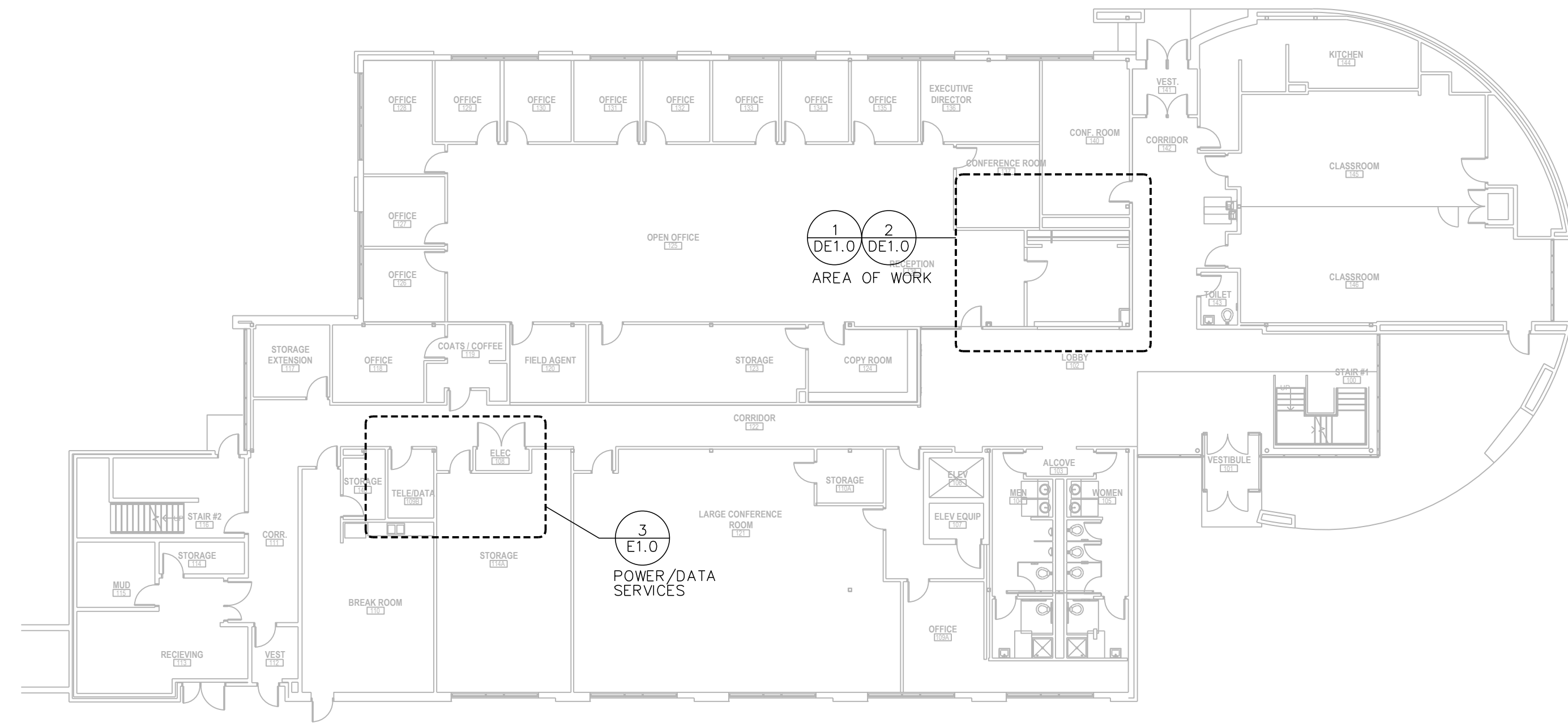
5201 FEN OAK DRIVE  
MADISON, WI

DATE OF ISSUE: 2/19/2021

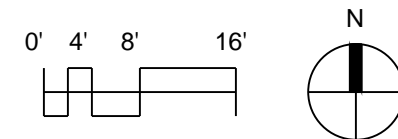
PROJECT # 20097

**ELECTRICAL  
DEMOLITION PLANS**

**DE1.0**



**3 FIRST FLOOR PLAN**  
1/16" = 1'-0"

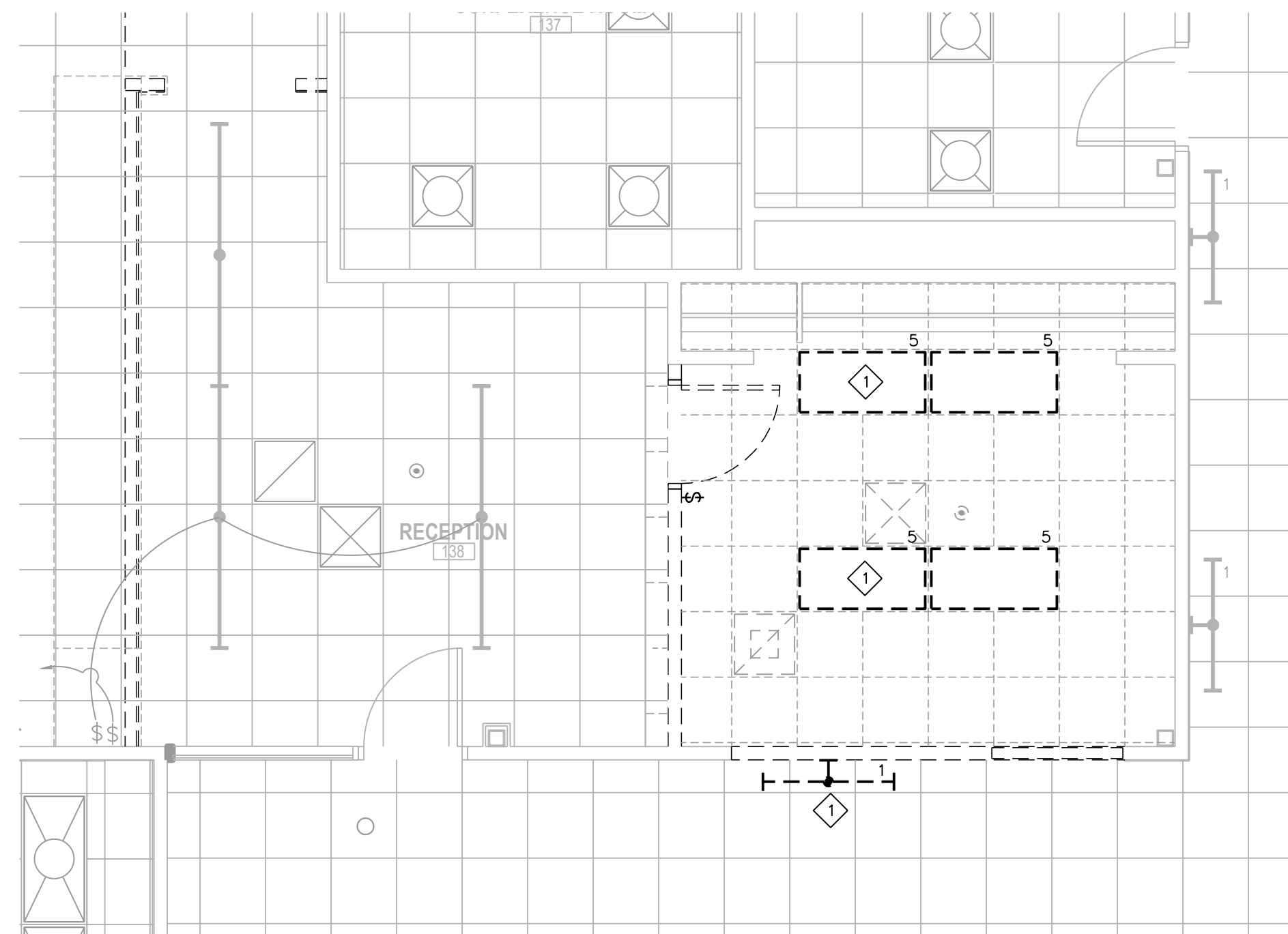


**ELECTRICAL GENERAL NOTES:**

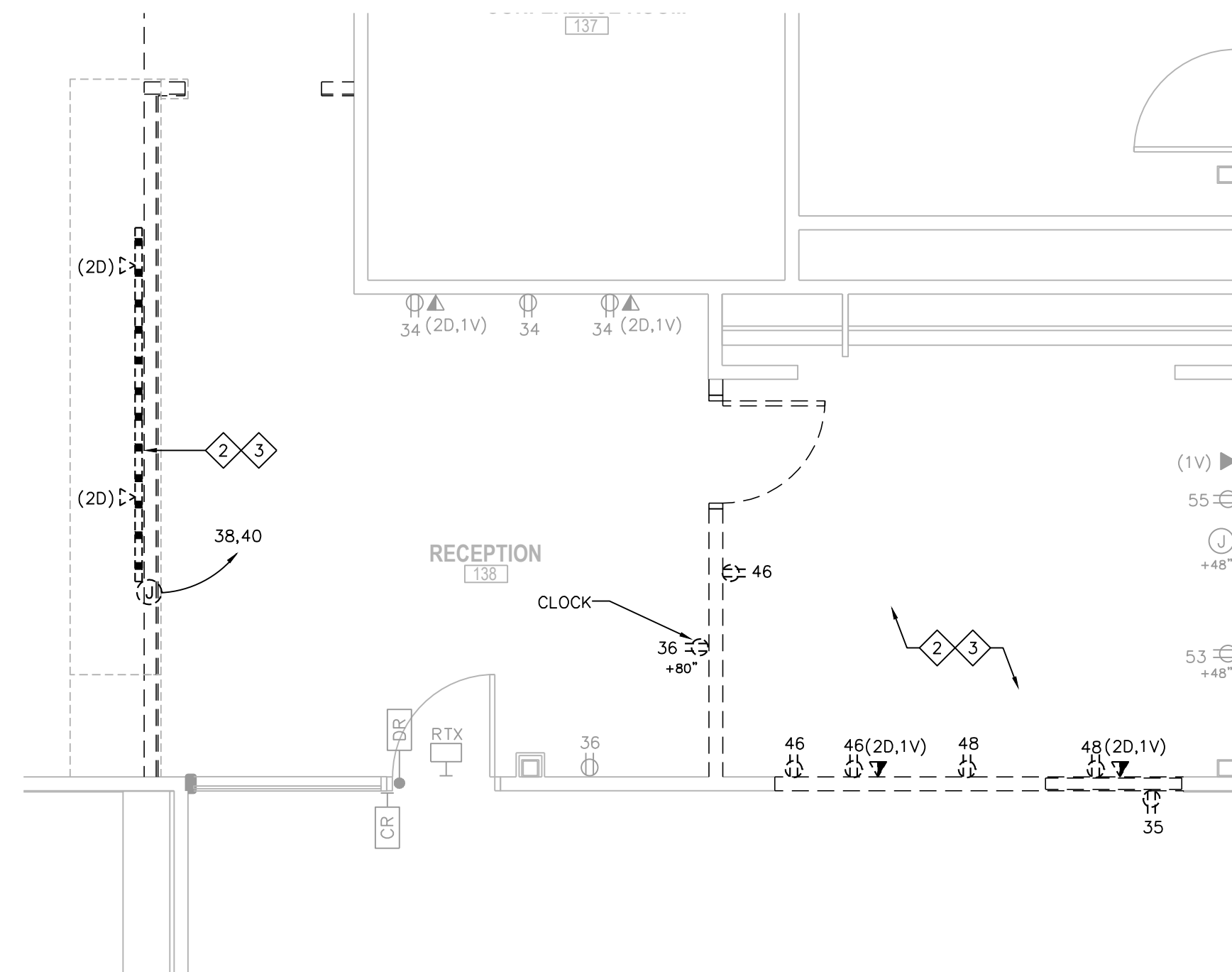
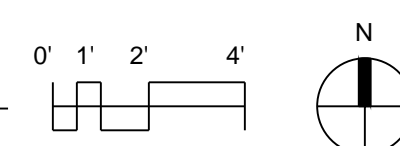
1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE ELECTRICAL DEMOLITION DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF ELECTRICAL WORK REQUIRED.
2. COORDINATE AND SCHEDULE ALL ELECTRICAL WORK WITH GENERAL TRADES AND THE OWNER PRIOR TO STARTING WORK.
3. ALL LIGHTING CIRCUITED TO PANEL 'A' (277/480V).
4. ALL RECEPTACLES CIRCUITED TO PANEL 'B' (120/208V).

**ELECTRICAL DEMOLITION PLAN NOTES:**

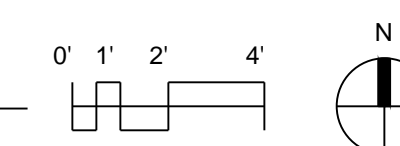
- 1 DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES AND SWITCHING. REMOVE CONDUCTORS AND RACEWAY BACK TO NEAREST JCT. BOX AND CAP.
- 2 DISCONNECT AND REMOVE RECEPTACLES. REMOVE CONDUCTORS AND RACEWAYS BACK TO NEAREST JCT BOX AND CAP.
- 3 REMOVE EXISTING VOICE AND DATA RACEWAYS. PULL CABLES BACK TO PATCH PANEL IN TELE/DATA 109B AND REMOVE.



**1 PARTIAL PLAN - ELECTRICAL LIGHTING DEMOLITION**  
1/4" = 1'-0"



**2 PARTIAL PLAN - ELECTRICAL POWER/LV DEMOLITION**  
1/4" = 1'-0"



LIGHTING FIXTURE SCHEDULE							
TAG	NO.	TYPE	LAMPS WATTS	DESCRIPTION	MOUNTING	MFGR. & MODEL	REMARKS
A	-	LED	102	W/FIXTURE	SUSP/CABLE (18")	PEERLESS - 7CRM3L-LSL-8FT-MSL8-80CRI-40K-1300LMF-DARK Z1-277-SCT-F1/18F-C210	(1)(2) 8FT DIRECT/INDIRECT LED PENDANT 10,100L; 40K
B	-	LED	11	W/FIXTURE	RECESSED/ GLC	LITHONIA - LDN4-40/10-LO4AR-LD-MVOLT-G210	(1) 4" DIA RECESSED CAN 1000L; 40K

LAMP ABBREVIATIONS:  
LED=LIGHT EMITTING DIODE  
REMARKS:  
(1) DIMMING LED DRIVER (0-10 VDC)  
(2) AIRCRAFT CABLE SUSPENSION  
ALL FIXTURE VOLTAGES ARE 120 VOLT UNLESS INDICATED OTHERWISE.

**ELECTRICAL GENERAL NOTES:**

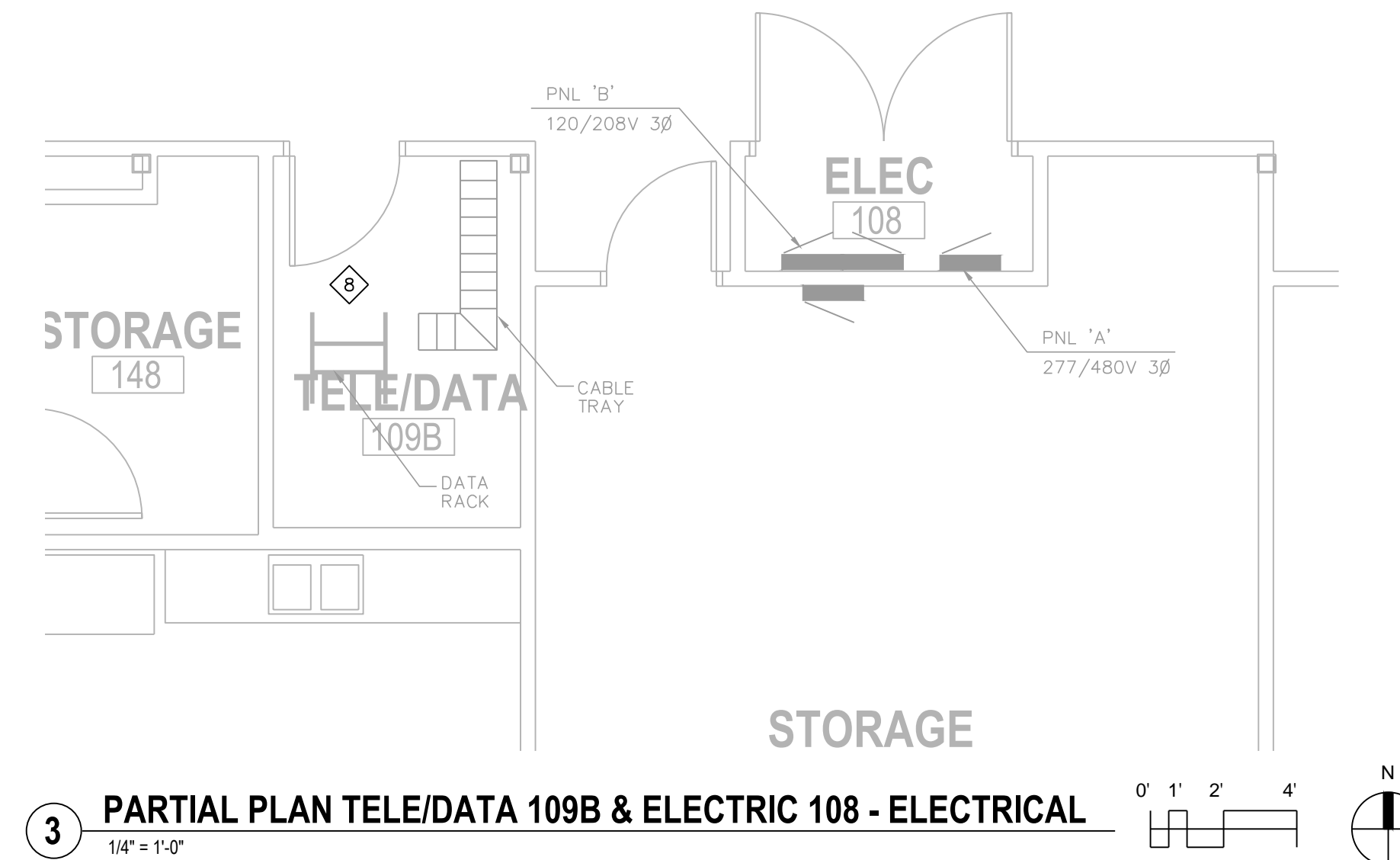
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF HVAC WORK REQUIRED.
- COORDINATE LIGHTING AND DEVICE LAYOUT WITH GENERAL TRADES.
- ALL RACEWAYS ARE TO BE CONCEALED IN FINISHED AREAS. MECHANICAL & UTILITY AREAS MAY USE SURFACE CONDUIT SYSTEMS.
- ALL LIGHTS CIRCUITED TO PANEL 'A' (277/480V).
- PROVIDE 0-10 VDC CONTROL WIRING TO ALL DIMMING FIXTURES.
- ALL RECEPTACLE CIRCUITED TO PANEL 'B' (120/208V).

**ELECTRICAL PLAN NOTES:**

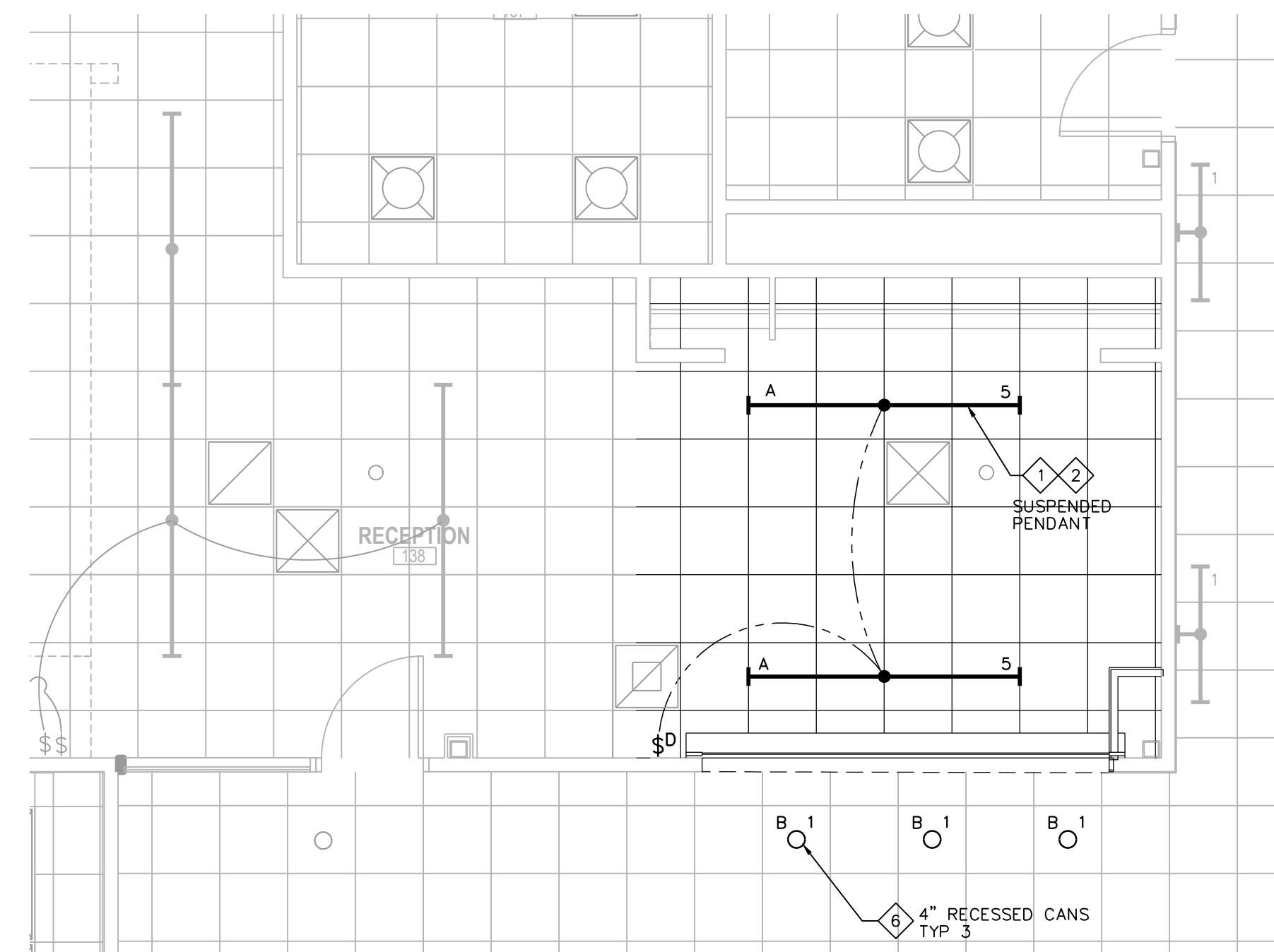
- SUSPEND PENDANTS 'A' 18" BELOW CEILING.
- PROVIDE 0-10 VDC CONTROL WIRING FROM DIMMER SWITCH TO EACH TYPE 'A' FIXTURE LED DRIVERS.
- PROVIDE POWER AND LOW-VOLTAGE JCT. BOXES IN WALL FOR POWER & DATA CABLING TO ELECTRIFIED PARTITIONS BY OWNER. PROVIDE 3/4" LIQ. TIGHT WHIP FOR DATA CABLING.
- COORDINATE INSTALLATION OF POWER WHIP WITH OWNER'S PARTITION SUPPLIER.
- COORDINATE OHD COILING DOOR POWER & CONTROL WIRING REQUIREMENTS WITH GENERAL CONTRACTOR.
- CUT-IN NEW RECESSED CANS IN EXISTING SUSP. CEILING TILES AND CONNECT TO EXISTING CORRIDOR LIGHTING CIRCUIT.
- EXTEND EXISTING POWER CIRCUITS TO NEW ELECTRICAL DEVICES. FIELD VERIFY CIRCUIT NUMBERS.
- EXTEND NEW DATA CABLES TO DATA RAK PATCH PANEL IN ROOM 109B. LABEL STATION OUTLET & PATCH PANEL.

**DIMMER TYPES:**

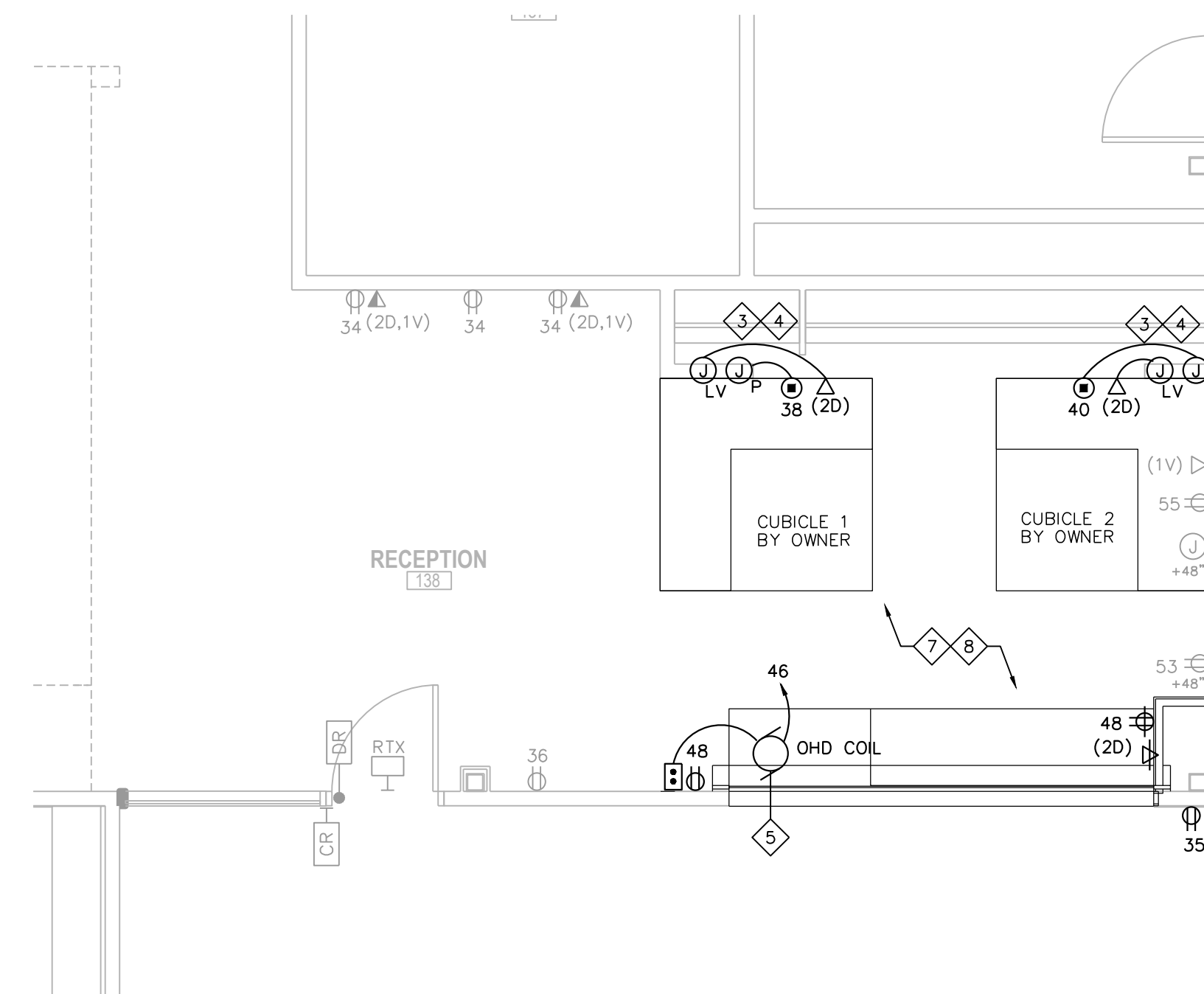
- A 0-10 VDC LED DRIVERS: SYNERGY ISD-BC-120/277-WH OR APPROVED EQUAL (TYPE 'B' FIXTURES).



**3 PARTIAL PLAN TELE/DATA 109B & ELECTRIC 108 - ELECTRICAL**  
1/4" = 1'-0"



**1 PARTIAL PLAN - ELECTRICAL LIGHTING**  
1/4" = 1'-0"



**2 PARTIAL PLAN - ELECTRICAL POWER/LV**  
1/4" = 1'-0"

**DCPW - UW EXT  
SECURE ENTRANCE**

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MADISON, WI

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**ELECTRICAL PLANS**