

#### **INVITATION TO BID**

**#21369** 

For

#### A.J. Rickoff - Life Skills Academy - Range and Hood Installation

FOR THE CLEVELAND MUNICIPAL SCHOOL DISTRICT
DBA: CLEVELAND METROPOLITAN SCHOOL DISTRICT
BOARD OF EDUCATION, 1111 SUPERIOR AVENUE E, SUITE 1800
CLEVELAND, OHIO 44114

UNDER THE DIRECTION OF THE BOARD OF EDUCATION OF THE CLEVELAND METROPOLITAN SCHOOL DISTRICT - CUYAHOGA COUNTY, OHIO

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#### **Part I: ITB Submission & Process Requirements**

Part I of the ITB provides a detailed set of directions which the service provider will use to prepare their bid.

Schedule for posting and service provider selection for the <u>A.J. Rickoff – Life Skills Academy – Range and</u> Hood Installation – ITB #21369.

Step	Date*
ITB Posted	October 20, 2022
Pre-Bid Meeting(Virtual)	October 26, 2022 at 3:45 PM
All final questions from service providers to the	November 2, 2022
District	
Answers to service providers from the District and	November 4, 2022
all addenda issued (if necessary)	
ITB Responses Due	November 9, 2022
Bid Opening	November 9, 2022
Bid Award	November 18, 2022
Contract Negotiation	December 5 – December 9, 2022
Contract Start	December 16, 2022

<sup>\*</sup>Dates listed are subject to change at discretion of the District. Service Providers will be notified of changes to the schedule, as appropriate.

#### Section A: Bid Submission & Format Requirements Bid Submission Requirements

- a. In order for the District to evaluate bids fairly and completely, service providers should follow the format set forth herein and provide all of the information requested. The District discourages costly bids.
- b. All bids shall include all bid format requirements found below. All information requested in the district related forms must be filled in legibly and completely with blue ink signatures, or the bid may be considered non-responsive. ITB Name: A.J. Rickoff Life Skills Academy Range and Hood Installation and ITB #21369 must be on the outside of the envelope of submittals including shipping labels.
- c. Sealed Responses are due at the Cashier's Office of the Cleveland Metropolitan School District, 1111 Superior Ave E. Cleveland, Ohio 44114 on or before 1:00 PM current local time on November 9, 2022. Mailing of Bids are encouraged. However, hand deliveries will be accepted from 12:00 PM to 1:00 PM on November 9, 2022. The bids will be opened following the bid cut off time at 1111 Superior Ave. E. Cleveland, Ohio 44114 on the 19<sup>th</sup> Floor.
- d. There will be a Pre-Bid Meeting at **3:45 PM on October 26, 2022.** The meeting will be held at **Andrew J. Rickoff School, 3500 E. 147**<sup>th</sup> **Street, Cleveland, OH 44120.** Attendance at the pre-bid is encouraged but not mandatory. Suppliers are encouraged to submit questions prior to the Pre-Bid Meeting so they may be addressed
- e. All submissions must include one(1) original with blue signatures, one(1) copy, and one(1) electronic bid on a USB B Flash Drive. Original Copy should be easily identifiable. Electronic bid should include all documents. Service Providers not complying with this requirement shall be notified that they have twenty-four(24) hours in which to comply with this requirement or their bid may be disqualified. This applies to copies only. All materials are submitted as is.
- f. All written questions shall be directed to the Purchasing Division via email to:

Amanda.Joyce@clevelandmetroschools.org. Written questions will be accepted via email until 12:00 pm on November 2, 2022. Under no circumstances should any firm interested in providing the services identified in the ITB, their designees, or anyone affiliated with their firm, contact any other District employee or official during the ITB process, in an attempt to lobby or influence the selection of a service provider pursuant to this ITB

g. The District reserves the right to reject any and all proposals, to waive any and all informalities or irregularities, and to disregard all non-conforming responsive conditional proposals. Each Proposer is liable for all proposal errors or omissions. A proposer shall not be permitted to alter or amend any proposal documents after the Proposal deadline time and date detailed in the RFP unless such is formally requested, in writing, by the District.

#### **Bid Format Requirements**

- a. The A.J. Rickoff Life Skills Academy Range and Hood Installations specifications for ITB #21369 is described in Part II. Service Providers are required to provide the information below as well as complete the District Related Forms in Appendix A.
- b. Bid Responses are to include the documents as follows:
  - i. **Transmittal Cover Letter**: Prepare a letter transmitting the bid on business letterhead. The letter should identify the business name, phone number, and business web address along with the name, phone number, and email address of the key contact person. The letter must have the signature of a person with authority to obligate the business. The transmittal cover letter shall also contain a statement that the bid is a firm offer for a ninety (90) day period.
  - ii. Bid Cost Form, including evidence of State certification to perform the work required.
  - iii. Completed District Related Forms set forth in Appendix A of this ITB.
  - iv. **Bid Guaranty:** A Certified Check for 10% of the total amount of the bid payable to the Treasurer of the Cleveland Metropolitan School District, or satisfactory bid bond executed by the bidder or a Surety company on a form supplied by the bondsman.

#### **Section B: Bid Constraints**

- The service provider must comply with all laws, rules and regulations dictated by the Board of Education
  of the Cleveland Metropolitan School District, City of Cleveland, the State of Ohio and the United States
  Federal Government.
- ii. Purchases funded by federal grant funds must adhere to regulations found in Uniform Guidance "Super Circular", 2 CFR 200 (UGG), as a condition of receiving funds and to meet annual audit compliance. In an effort to keep policy for all grants consistent, the District implemented the new federal guidelines regarding procurement utilized with federal grants immediately.
- iii. The District will only accept proposals that cover all of the major components requested in the RFP.
- iv. Service provider shall not include Ohio Sales Tax in the price quoted. The District will provide tax exempt certificate to the successful Proposer.
- v. Service provider's personnel and subcontractors on the District site will be required to meet security requirements. Service provider agrees to successfully complete background checks on all of its employees, agents and subcontracts, if necessary, who provide services on site under this scope of work. Each person on site must wear an identification badge that clearly identifies and makes visible the person's name and company.
- vi. No response may be withdrawn for at least ninety(90) days after receipt of bids.
- vii. Bidder understands and agrees that subsequent to submission of the bid, any District resolution authorizing the award of a contract or agreement does not vest any contractual rights to the bidder.
- viii. Bidder understands and agrees that such District resolution operates only to encumber funds necessary for the project and does not create a binding contract.
- ix. Bidder further acknowledges and agrees that any such District resolution may be revoked, at any time

- prior to execution of a formal, written contract.
- x. Bidder acknowledges and agrees that it has no vested contractual right until such time as a purchase order or contract have been issued.
- xi. Bidder further acknowledges and agrees that execution of a contract and issuance of a purchase order is not a ministerial function but is a formal requirement for acceptance of a bid.
- xii. Bidder must present evidence to the District, upon request, that they are fully competent and have the necessary facilities, equipment and financial resources to perform the work required in the specifications within the time frame required.
- xiii. The District reserves the right to award the bid in whole or in parts, by item, by group of items, to a single service provider or to multiple service providers, where such action serves the best interests of the District.
- xiv. The successful Service provider and their subcontractor(s), including organizations having personnel, equipment and vehicles on District property, shall provide evidence of insurance as follows:

a.	Commercial General Liability	Including limited contractual liability \$2,000,000.00 Limit of Liability
		(Per occurrence)
b.	Automobile Liability	Including non-owned and hired
		\$2,000,000.00 Limit of Liability
		(Per occurrence)
c.	Worker's Compensation	Worker's compensation and employer's
		insurance to full extent required by applicable
		law

- xv. This requirement must be fulfilled by the successful service provider providing the District with a current Certificate of Insurance (standard ACORD form), showing the Board of Education of the Cleveland Municipal School District as an additional insured (Certificate Holder does not constitute being an additional insured), within five(5) days of Notice of Intent to Award Agreement. The certificates of insurance shall contain a provision that the policy or policies shall not be cancelled without thirty (30) days' prior written notice to the District.
- xvi. The required insurance must be provided by a company licensed by the State of Ohio, which company must be financially acceptable to the Administration of the Cleveland Municipal School District
- xvii. The District is not liable for vandalism which results in damage(s) to the property or vehicles of the Vendor. The school District will not reimburse for private insurance deductibles for such vandalism.
  - a. Vandalism damage is defined as damage resulting from criminal conduct for which an individual may (but not necessarily be processed under the Ohio Revised Code
- xviii. In submitting a bid, service providers agree, unless specifically authorized in writing by an authorized representative of the District on a case by case basis, that it shall have no right to use, and shall not use, the name of Cleveland Metropolitan School District, its officials or employees, in any advertising, publicity, promotion, nor to express or imply any endorsement of service provider's services.
- xix. The Diversity Business and Service Provider Contract Compliance Programs shall make every good faith effort to ensure that certified diversity business enterprises in the District's relevant geographic market area shall be afforded the maximum opportunity to compete for contracts, services, and purchases. The general goals for diversity business participation are: 15% for services, 20% for goods and supplies, and 30% for maintenance, construction, and repair. Non-diversity vendors will have their diversity business participation counted toward their goal attainment only with minority vendors who are certified and demonstrate previous experience in the respective business classification of the prime contractor. Only direct participation in the subcontract will be counted toward diversity business enterprise goal attainment. Service Providers shall refer to <a href="https://bit.ly/3wvVApK">https://bit.ly/3wvVApK</a> for further information and requirements on the District's diversity goals.

#### **Section C: Evaluation Process**

- i. Responsiveness: Bids will be evaluated, first, as responsive or non-responsive to the Bid specifications. A preliminary review will be conducted of all bids submitted on time to ensure the bid adheres to the material submission requirements specified in the Bid. Bids that do not meet the material submission requirements may be deemed non-responsive and rejected. In the event that all bidders do not meet one or more of the material submission requirements, the District reserves the right to continue the qualitative evaluation of the bids and select the bid(s) which most closely meets the specifications in the ITB. Bids must include, or meet, the following submission requirements:
  - a. Timely Submission
  - **b.** Transmittal Cover Letter
  - c. Bid Cost Form
  - **d.** District Related Forms
  - e. Bid Guaranty
- ii. **Qualitative Evaluation** The Bids will be evaluated to determine the lowest responsive and responsible bidder.

#### Section D: All District Related Forms

There are a number of REQUIRED forms in Appendix A of the ITB that must be completed and submitted with the bid response. These forms include

- a. Addendum Acknowledgement
- b. Certificate of Debarment
- c. Conflict of Interest
- d. Proposer Qualification Form
- e. Non-Collusion Affidavit
- f. DBE Forms A, B, C, D, E, F, G, & H
- g. EOA Contractual Declaration Forms
- h. References

#### Section E: Award of Contract

- i. The terms of this agreement will begin immediately upon selection, approval, and contract execution through completion of the lowest responsive and responsible service provider.
- ii. The contract documents consist of the following:
  - a. District Contract
  - b. Certified Purchase Order or Supplier Contract
  - c. ITB Submission Requirements
  - d. Bid Cost Form
  - e. Bid Guaranty
  - f. All Required District Related Forms
  - g. All applicable addenda
- iii. The awarded bidder shall perform all work described in the contract documents, including without limitation, all terms and conditions of the specifications contained herein or otherwise stated in the bid documents and reasonably inferable therefrom by the bidder as necessary to produce the results intended thereby for specifications requested herein by the District.
- iv. CMSD reserves the right to reject all bids and deviate from this purchasing process to utilize other purchasing mechanisms available to the district under Ohio Law. Scope review and follow-up discussions with the apparent low bidder may be requested. CMSD reserves the right to interview or to seek additional information related to criteria already specified in the Invitation to Bid after opening the bids prior to issuance a certified Purchase Order or Supplier Contract

#### **Part II: Overview and Specifications**

#### **Section A: Overview**

The Cleveland Metropolitan School District (hereafter the "District) under ITB #21369 is seeking a general contractor to install a range and hood at A.J. Rickoff School, Life Skills Academy.

Section B: Specifications – Please refer to the specifications found in Attachment B – "Construction Documents"

#### Part III: Bid Cost Form ITB #21369 A.J. Rickoff – Life Skills Academy – Range and Hood Installation

The Bidder proposes to furnish all labor, materials, and equipment necessary to complete the ITB 21369. The undersigned proposes to complete the interior alteration at A.J. Rickoff School for Cleveland Metropolitan School District in accordance with the Specifications and to the entire satisfaction of, and acceptance by, the District and for the following prices. The Agreement will begin December 16, 2022 pending authorization of funds at the discretion of the District.

The Architect's opinion of probable cost of construction, for base bid is \$250,000.

Base Bid: Unless otherwise noted, all work indicated on the drawings and/or described in this project manual

for Base Bid. The work includes, but is not limited to selective demolition, general trades, electrical, mechanical, plumbing, fire protection, and technology. Base Bid shall also include, removal and disposal of all temporary plywood covering of exterior windows and doors, and temporary security chain link fencing and posts around the building/site. Base bid shall include a 5% contingency allowance to address concealed conditions. Materials: Labor: 5% Contingency Allowance Total Sum: Alternate Base Bid - Accelerated Completion Date: Bidder shall include a detail estimate of premium charges necessary to complete this work at an accelerated completion date. Materials: Labor: Total Sum:

#### **Schedule:**

Date to Begin Construction:

Event:	Date:

<u>Substitutions:</u> Bidder is to list here any "Substitutions" for which consideration is desired, showing the addition or reduction in price to be made, for each, if the substitution is accepted, or stated "No Change in Price", if none is provided. Submission of proposed substitution for approval, whether for savings in cost or improvement in construction is encouraged.

Substitutions are for consideration of inclusion only. The District has the right to require all work to conform to the Specifications issued.

Branded or Make Specified	Proposed Substitutions	Add	Deduct

#### **Signatory:** Vendors are required to complete the signatory section below.

Company Name:	
Address:	
City, State, Zip Code:	
Telephone Number:	Fax Number:
Email Address:	
Signature:	
Printed Name:	
Date:	

#### Appendix A: District Related Forms Addendum Acknowledgement Form for ITB #21369

_	quest for Proposal Documents, including the specifications, prepared by the above-referenced Project, and the following Addenda:	: Cleveland
Addendum Number	Date of Receipt	
Bidder:	<u>.</u>	
The undersigned Vendor propodocument for the proposed sum	es to perform all work for the applicable contract, in accordance with th	e contract
Failing to ack	owledge a published Addendum may cause your bid to be rejected.	
Signature:	Date:	

#### **Certificate of Debarment**



#### Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primary Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 13 CFR Part 145. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160-19211). Copies of the regulations are available from local offices of the U.S. Small Business Administration.

#### (BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

- (1) The prospective primary participant certifies to the best of its knowledge and belief that it and its principals:
  - (a) Are not presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
  - (d) Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective primary participant shall attach an explanation to this proposal.

Business Name	
Date B	Name and Title of Authorized Representative
	Signature of Authorized Representative

SBA Form 1623 (10-88)



This form was electronically produced by Elite Federal Forms, Inc.

#### Certificate of Debarment Pg. 2

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#### INSTRUCTIONS FOR CERTIFICATION

- 1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- 2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
- 3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If is is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.
- 4. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- 5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations (13 CFR Part 145).
- 6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- 7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- 8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the ineligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- 9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- 10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

#### **Conflict of Interest Form**

#### Statement of Potential Conflicts of Interest

Vendor Name:	Primary Contact:
Address 1:	Telephone #:
Address 2:	Fax #:
City:	Email:
tate, Zip:	Website:
Ethics Commission. As such, each vendor is r	D) adheres to Ohio Ethics Law and strictly follows the opinion of the Ohio requested to submit this statement declaring any potential conflicts or . Please answer the following two questions providing all requested
members, or any of their immediate fami	in School District (CMSD) employees, Cleveland Board of Education ily members, also members of the vendor's board of directors, hold any shares of any stock issued by the vendor?
	Yes No
	rd member, or immediately family member is a member of the vendor's vendor, please state the person's name and position with the vendor.
Name:	<del></del>
Position:	
	rd member, or immediate family member owns share of any stock in the percentage of all outstanding company shares owned by the CMSE
	%
Are any current CMSD employees, CMSD the vendor?	board members, or any immediate family members also employees o
	Yes No
If <b>Yes</b> , please state the person's name and pro	ovide a description of their job duties for the provider:
Name:	
Job Duties:	
If <b>Yes</b> , please describe the contact that the ve the course of providing services to the District	endor will have with the CMSD employee or CMSD board member in t:

**CERTIFICATION** 

I do hereby certify that the foregoing statements are true and accurate, and that my signature below attests to the authenticity of my identity as the person actually signing this form. This document is not a contract. In order for a binding Agreement to exist, a signed Agreement will be required prior to any legally binding commitment by the District.

#### **NOTARIZED STATEMENT**

	bein	g duly sworn and deposes	says
That he/she is the			_of
	(title)		
	(organization)	, and answers to all the	
foregoing question	is and all statements therein contained	are true and correct.	
	(signature)		
	Subscribed and sworn before me this	day of,	20
Notary Public:			
My commission ex	pires:		

#### **Bidder Qualifications Form**

Bidder must answer all questions or attach a written explanation for each question.

PR	OPOSER	R NAME:	<del></del>	
ΑC	DRESS:_			
CIT	ΓΥ; STATE	E:	ZIP:	
CC	NTACT P	PERSON:		
TIT	ΓLE:			
TE	LEPHONE	E: ( ) TOLL FREE: ( )_		
ΤA	XPAYER	IDENTIFICATION NUMBER:		
1.	What t	type of organization? (i.e. corporation, partnership, etc.)		
2.	2. How many years has your organization been in business?			
3.	3. How many years has your organization been in business under its current name?			
4.	4. List any other aliases your organization has utilized in the last two years and the form of Business			
5.	5. If you are currently a corporation, list the following:			
	a.	State of incorporation		
	b.	Date of incorporation		
	C.	President's name		
	d.	Secretary's name		
	e.	Treasurer's name		
	f.	Statutory agent's name		
	g.	Name of shareholders, if less than 10		

h. Principal place of doing business

6.	If you are currently in a partnership, list the following:  a. Name and address of all general and limited partners.
	b. Original name and date of organization's inception
7.	If you are neither a corporation nor a partnership, please describe your organization and list principals.
8.	Are you legally qualified to do business in the State of Ohio?
9.	Are you legally qualified to do business in Cuyahoga County and licensed by the City of Cleveland?
10.	Has your organization ever been (i) declared by a customer to be in default under a contractor and/or (ii) sued by a customer for failure to completely a contract or properly perform services in a timely manner? If yes, please state where, when, and why.
11.	Has your organization ever been cited by a local, county, state, or federal authority for violation of a regulation or statute or failing to timely complete a contract in accordance with specifications? I yes, please state date, agency, and final disposition.
12.	Has your organization ever filed for bankruptcy? If yes, please state where, when and why?
13.	On a separate sheet, list the major customers for whom your organization has provided this type of equipment or service in the past five years. Include owner's name and type of work performed.
14.	Has your organization ever been sued by a supplier for failure to timely pay for materials or equipment provided? If yes, please provide details.
15.	What is the dollar limit of your firm's General (CLS) Liability Insurance?
	Name of insuring company:
	Policy number:
16.	What is the dollar limit of your firm's Automotive Liability Insurance?
	Owned vehicles
	Non-Owned vehicles

	Name of insuring company	
	Policy number	
17.	List the name and address of every person having an interest in this ITB.	
18.	Has any federal, state or local government entity ever cited or taken any action against your of its principals for failure to pay or remit any taxes including but not limited to income, franchise, or personal property taxes? If yes, please give name of agency, date and amount o resolution of the issue.	withholding, sales,
19.	Is your organization and its' principals current in payment of personal property taxes?	
20.	The prospective lower tier participant certifies, by submission of this ITB, that neither it presently debarred, suspended, proposed, for debarment or suspension, declared inelig excluded from participation in this transaction by any State and/or Federal Department or Ag	ible, or voluntarily
21.	Where the prospective lower tier participant is unable to certify to any of the statements in the prospective participants shall attach an explanation to this ITB.	is certification, such

#### **Notarized Statement**

	bei	ng duly sworn and deposes says
that he/she is the		of
	(title)	
		, and answers to all the
(organization)		
foregoing questions and all statements the	erein contained	are true and correct.
(signatu	re)	
Subscribed and sworn before me this	day of	, 20
Notary Public:		
NA		
My commission expires:		

#### **Non-Collusion Affidavit**

This Affidavit must be executed and shall accompany the proposal in order for the proposal to be considered.

#### NON-COLLUSION AFFIDAVIT State of Ohio, Cuyahoga County

	State of Ohio, Cuyahoga County	
	, being first duly sworn, deposes and says that	:
he/she is	of	_
has not colluded, conspi proposal, or that such ot by agreement or collusion other proposer, to fix and any advantage against the interested in the proposation, directly or indirectly,	foregoing proposal; that such proposal is genuine and not collusive of ired, connived, or agreed, directly or indirectly, with any proposer of their person shall refrain from proposing, and has not in any manner, on, or communication or conference, with any person, to fix the propy overhead, profit or cost element of said proposal price, or of that of he Board of Education of the Cleveland Metropolitan School District al; and that all statements contained in said proposal are true; and fur a submitted this proposal, or the contents thereof, or divulged information member or agent thereof.	or person, to put in a sham directly or indirectly sought cosal price of affiant or any fany proposer, or to secure to any person or persons ther that such proposer has
	Affiant	
Swe	orn to and subscribed before me this day of, 2	.0
	Notary Public in and for Cuyahoga County, Ohio	

My commission expires:

#### **Diversity Business Enterprise Forms**

Information about the District's Diversity Business Enterprise Program can be found at <a href="https://bit.ly/3wvVApK">https://bit.ly/3wvVApK</a>.

#### **DBE Form A**

Name of Firm:	-
Address:	
City, State, Zip Code:	
Telephone Number:	
Type of Business (Product or Service):	_
Date of Proposed Contract Award:	-
Amount of Proposed Contract Award:	
Diversity Business Enterprise Subcontractor(s):	
Dollar Amount Subcontract Award:	-
Percent of Subcontract Award:	
D.B.E. Participation: \$	
F.B.E. Participation: \$	
Name of EEO Officer:	
(Signature of owner, partner, or authorized officer)	
Name: Dated:	
Title:	
DO NOT COMPLETE BELOW THIS LINE	
CompliantCompliance PendingNon-Compliant	
Compliance Date:	
(signature, DBE Department) (date)	

#### **DBE Form B**

#### NOTICE OF REQUIREMENT TO ENSURE DIVERSITY BUSINESS ENTERPRISE (DBE) OPPORTUNITY

Note: All eligible proposers for award of the contract should comply with the Requirements, Terms, and Conditions of this Notice.

The undersigned proposer hereby agrees that the goal it has established for DBE participation in this project through either subcontracting or entering into a joint Venture with DBEs in conformity with the Requirements. Terms and Conditions of this Notice is a goal of thirty (30%) percent for a construction/repair/ maintenance contract, twenty (20%) percent for a supply contract, and fifteen (15%) for a service contract of the total contract amount of this project. In no event will the absence of goals as stated above be deemed as compliance with the requirements, terms and conditions of this notice.

In addition, the undersigned will complete and attach hereto the DBE (Form C) Schedule for DBE participation, showing all DBE/FBE that will participate as subcontractors or joint ventures in this contract and a DBE (Form D), DBE Letter of Intent form for each DBE/FBE listed on the Schedule.

roposer:	
ate:	
y:	
tle:	

#### Definition of DBE: A Diversity Business Enterprise (DBE)

"Small Diversity business concern" means a small business concern that is a least (51) percent unconditionally owned by one or more individuals who are both socially and economically diverse, or a publicly owned business that has at least (51) percent of its stock unconditionally owned by one or more socially and economically diverse individuals and that has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least (51) percent unconditionally owned by an economically diverse Indian tribe or Native Hawaiian Organization, or a publicly owned business that has least (51) percent of its stock unconditionally owned by one of these entities, that has its management and daily business controlled by members of an economically diverse Indian tribe or Native Hawaiian Organization.

#### **DBE Form C**

#### **SCHEDULE MBE/FBE PARTICIPATION**

Project Name:
Name of Non-DBE Contractor:
Identification Number:
Location:
Name of Minority Contractor:
Address:
City, State, Zip:
Type of work to be performed and work hours involved:
Projected commencement and completion dates for work:
Agreed price in dollars or percentage:
The undersigned will enter into a formal agreement with DBE for work listed in this schedule conditioned upon execution for a contract with the Cleveland Municipal School District
TO BE RETURNED WITH THE PROPOSAL
Signature of Non-DBE Prime Contractor
Date:

#### **DBE Form D**

#### **DBE LETTER OF INTENT**

To:	
Non-DBE Prime or General Proposer	<del></del>
Project:	
NON-DBE PRIME OR GENERAL PROPOSER	
The Undersigned intends to perform work in con	nection with the above-referenced project as
(check one):	
an individual a corporation	a partnership a joint venture
DBE status of the undersigned is confirmed in the with a certification date of:	e Cleveland Municipal School District's DBE file of bona fide enterprises
The Undersigned is prepared to perform the foll Specify in detail particular work items or parts the	lowing described work in connection with the above referenced project. nereof to be performed:
	nt date of such work, and the undersigned is projecting completion of
Projected Commencement Date	
Projected Completion Date	
NON-DBE contractor (s) and/or NON-FBE SUPPL	f the dollar value of the subcontract will be sublet and/or awarded to IERS. The undersigned will enter into a formal agreement for the above of a contract with the Cleveland Municipal School District.
Date	Name of DBE Firm (where applicable)
Signature of DBE (where applicable)	Signature of MBE Firm
(TO BE RETURNEDWITH ITB)	
Name of FBE Firm	Signature of FBE Firm

#### **DBE Form E**

#### **DBE Unavailability Certification**

l,	·····	
Name	Title	
Of	, certify that on	
I contacted the following DBE to obtain a Proposa	Date al for work items to be performed on:	
Board Project:		
Minority Contractor:		
Work Items Sought:		
Form of Proposal Sought:		
Female Contractor:		
Work Items Sought:		
Form of Proposal Sought:		
due to lack of agreement on price) for work on th	ority business enterprise was unavailable (exclusive of the his project or unable to prepare a proposal for the follow	ring reason (s):
Signature, Non-DBE prime Proposer	Date	
	portunity to proposal on the above-referenced work on by	
Date	Non-DBE Prime Proposer	
Signature, Non-DBE Prime Proposer		
The above statement is a true and accurate accou	unt of why I did not submit a Proposal on this project.	
Signature, Non-DBE prime Proposer		

#### **DBE Form F**

#### **Non-Minority Prime Affidavit For DBE**

STATE OF	}	
COUNTY OF	} SS.	<b>AFFIDAVIT</b>

The undersigned swear that the foregoing statements are correct and include all material information necessary to identify and explain the items and operation of our subcontract and the intended participation by each party in the undertaking. Further, the undersigned covenant and agree to provide to the Cleveland Municipal School District current, complete, and accurate information regarding actual subcontract work and the payments thereof, and any proposed changes in any of the subcontract arrangements and to permit the audit and examination of the books, records and files of the subcontract or those of each party relevant to the subcontract, by authorized representatives of the Cleveland Municipal School District. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under federal and state laws concerning false statements.

Name of Firm:				
Signature:				
Name and Title:				
Date:			_	
STATE OF COUNTY OF } SS.	}			
On this	day of		20	, before me appeared
		, to m	e personally k	nown, who being duly sworn,
did execute the fo	regoing affid	avit, and did state t	hat they were	e properly authorized by
		to execute the	affidavit and	did so as their free act and deed.
(Seal)				
Notary Public				
Commission expir	es			

#### **DBE Form G**

#### This form need not be completed if all join venture firms are diversity business enterprises

1.	Name of Joint Venture:
2.	Address of Joint Venture:
3.	Phone Number of Joint Venture:
4.	Identify the firms which comprise this joint venture. (The DBE partner must complete DBE Form A or have current DBE Certification)
	a. Describe the roll of the DBE firm in the joint venture:
	b. Describe briefly the experience and business qualifications of each non-DBE Joint Venture:
5.	Nature of Joint Venture's Business:
6.	Provide a copy of the Joint Venture Agreement.
7.	What is the percentage of DBE Ownership? DBE% FBE%
8.	Ownership of Joint Venture: (This need not be completed if described in the Joint Venture agreement provided in response to question 6).
	a. Profit and loss sharing:
	b. Capital contributions, including equipment:
	c. Other applicable ownership interest:
9.	Control of and participation in this contract. Identify by name, race, and "firm" those individuals and their title who are responsible for day-to-day management and policy decision making, including, but not limited to, those prime responsibility form:

a. Financial decisions:

b.	Manag	ement decisions, such as:
	i.	Estimating:
	ii.	Marketing and Sales:
	iii.	Hiring and firing of management personnel:
	_	
	iv.	Purchasing of major items or supplies:
	-	
c.	Superv	ision of field operations:

Note: If after complete the DBE Form B and before the completion of the joint venture's work on any contract awarded, there is any significant change in the information submitted, the joint venture must inform the Cleveland Municipal School District, either directly or through the non-DBE prime subcontractor if the joint vendor is a subcontractor.

#### **DBE Form H**

#### Non-Minority Prime Affidavit (Joint Venture)

STATE OF OHIO

**CUYAHOGA COUNTY** 

**AFFIDAVIT** 

The undersigned swear that the forgoing statements are correct and include all material information necessary to identify and explain the items and operation of our subcontract and the intended participation by each joint venture in the undertaking. Further, the undersigned covenant and agree to provide to the Cleveland Municipal School District current, complete, and accurate information regarding actual joint venture work and the payments thereof and any proposed changes in any of the subcontract arrangements and to permit the audit and examination of the books, records and files of the joint venture or those of each party relevant to the joint venture, by authorized representatives of the Cleveland Municipal School District. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under federal and state laws concerning false statements.

Name of Firm (Prime)		Name of Firm (DBE)	·	
Signature		Signature	·	
Name and Title		Name and Title		
 Date		Date		
STATE OF	] COUNTY OF	JSS.		
On this	day of			_ , before me appeared
affidavit, and did state and did so as their fre	e that they were properly au			
(Seal)				
	Notary Pub	olic		
	Commissio	n expires		

#### **EOA Contractual Declaration Forms**

Information about the District's Affirmative Action Program can be found at <a href="https://bit.ly/3wvVApK">https://bit.ly/3wvVApK</a>.

#### **Service Provider Contract Compliance Form**

Name of Firm:		_
Address:		_
City, State, Zip Code:		_
Telephone Number:		_
Standard Metropolitan Statistical A	rea:	_
Recruitment Area:		
Type of Business (product or servic	e):	_
Name of EEO Officer:		_
Signature of Owner, Partner, or Au	thorized Officer:	_
Name (type or print):		_
Date:	Title:	_
	Do not complete below this line	
Status of Vendor:		
Compliance	Conditional Compliance	
Non-Compliance	Compliance Pending	
Comments:		_
		-
Date:	Signature:	_

#### **Compliance Declaration**

#### The following must be filled out completely:

It is the policy of	that equal employment opportunity be afforded
to all qualified persons without regard to	race, religion, color, sex, national origin, age, or handicap.
	will not discriminate against any employee or
applicant for employment because of rac	ce, religion, color, sex, national origin, age, or handicap.
	will take affirmative action to insure that applicants are employed and
that employees are treated during employees Such action will include, but not be limited	oyment without regard to race, color, sex, national origin, age, or handicap. ed to:
_	n for employment, hiring, placement, upgrading, transfer or demotion, eship rates of pay or other forms of compensation, layoffs or termination.
The undersigned company states that the and Non-Discriminatory Practices of Federal	ey are of current applicable requirement pertaining to Fair Labor Standards eral, State, and Local Governments.
The undersigned further acknowledges t comply with all Fair Labor Standard Pract	hat if the contract is awarded to the undersigned, that the undersigned will tice.
(Name of Company)	
	Date:
(Signature of Company Official)	
STATE OF ( )	
COUNTY OF (	) SS.
-	r said County and State personally appeared the above-named Company
lt's	, who acknowledged that they knowingly signed the aforesaid
instrument, and that the same is their fre	ee act and deed duly authorized and the free act and deed of said company.
IN TESTIMONY WHEREOF, I have hereto	set my hand and affixed seal at
	, this
day of, 20	

#### **Employment Data Form**

Please note this data may be obtained by visual survey or post-employment record. Neither visual surveys nor post-employment records are prohibited by any federal, state or local law. All specified data is required to be filled in by District policy.

	All	EMPLPOY	EES			MALES					FEMALES		
Job Categories	TOALS MALES & FEMALES	MALES	FEMALES	WHITE (NOT OF HISPANIC ORIGIN)	BLACK (NOT OF HISPANIC ORIGIN)	ASIAN AMERICAN OR PACIFIC ISLANDER	AMERICAN INDIAN OR ALSKAN NATIVE	HISPANIC	WHITE (NOT OF HISPANIC ORIGIN)	BLACK (NOT OF HISPANIC ORIGIN)	ASIAN AMERICAN OR PACIFIC ISLANDE	AMERICAN INDIAN OR ALSKAN NATIVE	HISPANIC
OFFICIALS, MGRS & SUPERVISORS													
PROFESSIONALS													
TECHNICIANS													
SALES WORKERS													
OFFICE/CLERICAL													
CRAFTWORKERS (SKILLED)													
OPERATIONS (SEMI-SKILLED)													
LABORERS (UNSKILLED)													
SERVICE WORKERS													
APPRENTICES													
TOTAL													

#### Additional information (optional):

Describe any other actions taken which show that all employees are recruited, hired, or trained or promoted without regard to their race, religion, color, sex, handicap, age or national origin. Use second sheet if additional space is needed:

The undersigned certifies that they are legally authorized by the proposer to make the statements and representations contained in this report, and that they have red all of the foregoing statements and representations which are true and correct to the best of their knowledge and belief.

FIRM OR CORPORATE NAME:	DATE:	
SIGNATURE:	TITLE:	

#### **References**

Include below three references of equal or larger size to this current ITB project. Public sector experience is preferred, but not required. Please attach relevant supporting documentation, such as project plans, scope of work.

Reference #1:
Company/School Name:
Address:
Type of Business:
Contact Person:
Telephone and Fax#:
Dates of Service:
Description of Services Provided:
Reference #2: Company/School Name:
Address:
Type of Business:
Contact Person:
Telephone and Fax #:
Dates of Service:
Description of Services Provided:

Reference #3:
Company/School Name:
Address:
Type of Business:
Contact Person:
Tolophono and Faytt
Telephone and Fax#:
Dates of Service:
Description of Services Provided:

#### **Appendix B: Service Provider Checklist**

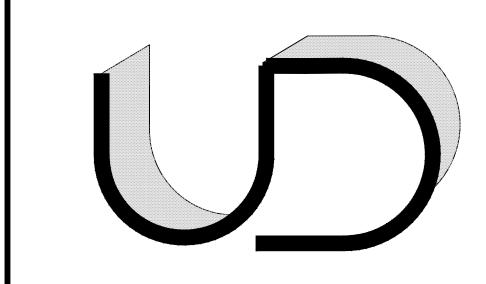
To assist service providers in the preparation of their proposals to ensure compliance with all document requirements ☐ Cover Page ☐ Transmittal Cover Letter, signed ☐ Table of Contents **Bid Cost Form** Signatory **District Related Forms** ☐ Addendum Acknowledgement, checked: https://www.clevelandmetroschools.org/purchasing for any addendums Certificate of Debarment ☐ Conflict of Interest □ Bidder Qualification Form ■ Non-Collusion Affidavit DBE Forms- A, B, C, D, E, F, G, & H, for more information: <a href="https://bit.ly/3wvVApK">https://bit.ly/3wvVApK</a> EOA Contractual Declaration Forms 1 &2, for more information: <a href="https://bit.ly/3wvVApK">https://bit.ly/3wvVApK</a> ☐ Employment Data Form References **Bid Guaranty** 

	C

Copies

Original, marked

# ANDREW J. RICKOFF School



Ms. Hollie Dellisanti

#### DRAWING INDEX

TITLE SHEET

#### **ENGINEERING**

HVAC DEMOLITION AND NEW

PLUMBING DEMOLITION AND NEW FLOOR PLANS, SCHEDULES &

FLOOR PLANS AND SCHEDULES

DEMOLITION PLAN

SYMBOL LEGEND AND LUMINAIRE SCHEDULE

**ELECTRICAL FLOOR PLANS** 

**ELECTRICAL SPECIFICATIONS** 

### LIFE SKILLS ACADEMY Range and Hood Installation

INTERIOR ALTERATION

3500 EAST 147TH STREET CLEVELAND, OH 44120

#### PREPARED FOR:



MS. HOLLIE DELLISANTI, EXEC. DIR. ARCHITECTURAL PROJECTS, CAPITAL PROGRAMS 1111 SUPERIOR AVENUE E CLEVELAND, OHIO 44114 EMAIL: Hollie.Dellisanti@clevelandmetroschools.org

#### PREPARED BY:



SHAKER HEIGHTS, OHIO 44120 P 216.752.4444 F 216.752.5011 ARCATEK@UDLTD.COM



FRONT FACADE

\_ PROJECT LOCATION

# SITE AERIAL BUILDING KEY PLAN

CHI COLIFARTS TO COMMON MEDILE SCHOOL CLASSROOM WING COMMON TO COLIFAR SHOW THE COLIFARING THE WING COMMON TH COMPREHENSIVE FIRST FLOOR PLAN

B. DESCRIPTION AND USER GROUP CLASSIFICATION

OF BLDG: C. NATURE OF PROJECT:

D. USE GROUP:

E. OCCUPANT LOAD: F. PERMANENT PARCEL NO.: G. CONSTRUCTION TYPE: H. WORK AREA LIMIT:

I. TYPE OF MECHANICAL:

1,066 SF / 20 = 53 occp.

FIRST LEVEL ROOMS 107, 108 & 109 EXISTING RTU; NEW EXHAUSE SEE

MECHANICAL PLANS

3500 EAST 147TH STREET CLEVELAND, OHIO 44120

INTERIOR ALTERATION

BUILDING: [E] EDUCATION

PROJECT AREA: [B] BUSINESS

WE ARE SEEKING TO TRANSFORM

INTO A NEW LIFE SKILLS ACADEMY SPACE FOR LIGHT FOOD PREPARATION

A FORMER LABORATORY SPACE A136

#### **CODE INFORMATION**

#### REFERENCED CODES

IN ALL CASES, IF THERE IS A DISCREPENCY BETWEEN CODE REQUIREMENTS, BETWEEN ANY REFERENCED CODES,

THE MORE STRINGENT CODE ALWAYS APPLIES. 2017 OHIO BUILDING CODE (OBC)

2017 OHIO MECHANICAL CODE (OMC)

2017 OHIO PLUMBING CODE (OPC)

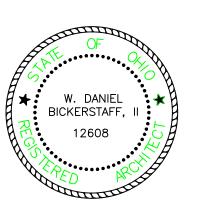
NFPA NATIONAL ELECTRICAL CODE 2017

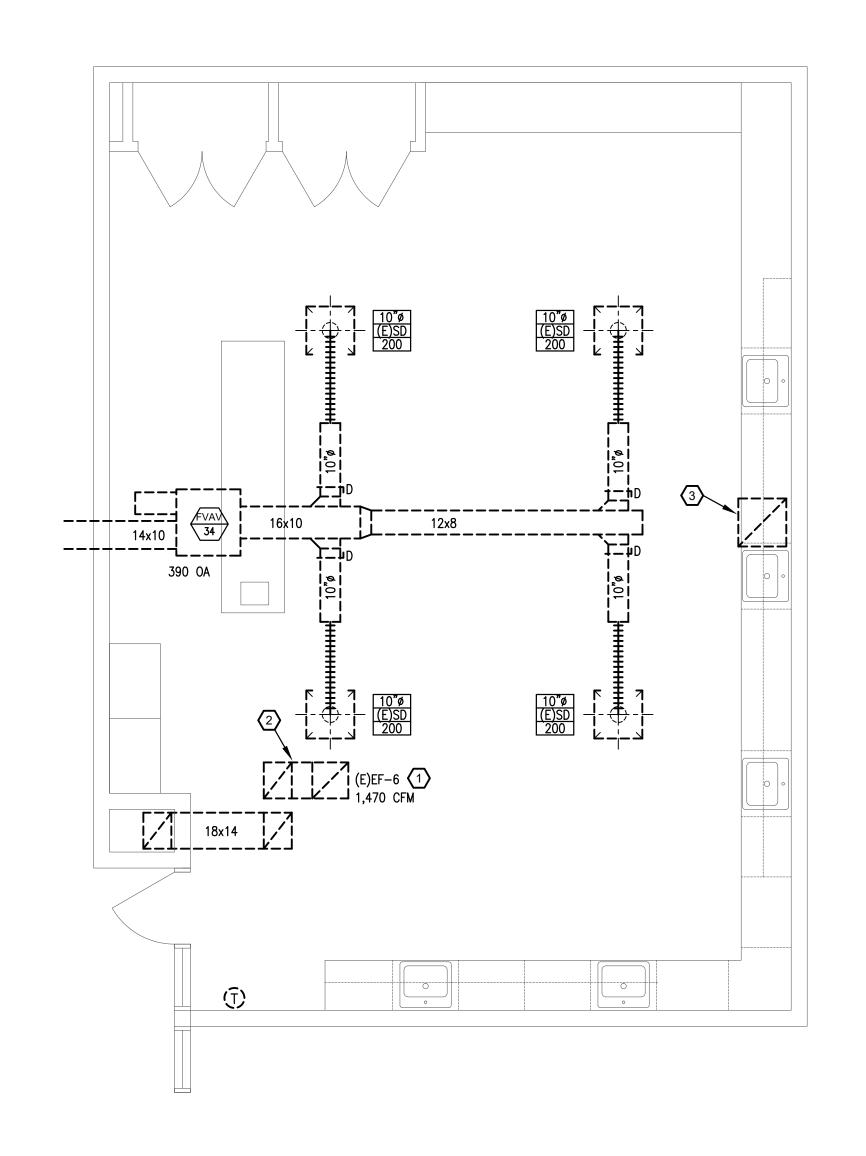
LIFE SAFETY CODE, NFPA 101- 2017

2017 NFPA 13 SPRINKLER CODE

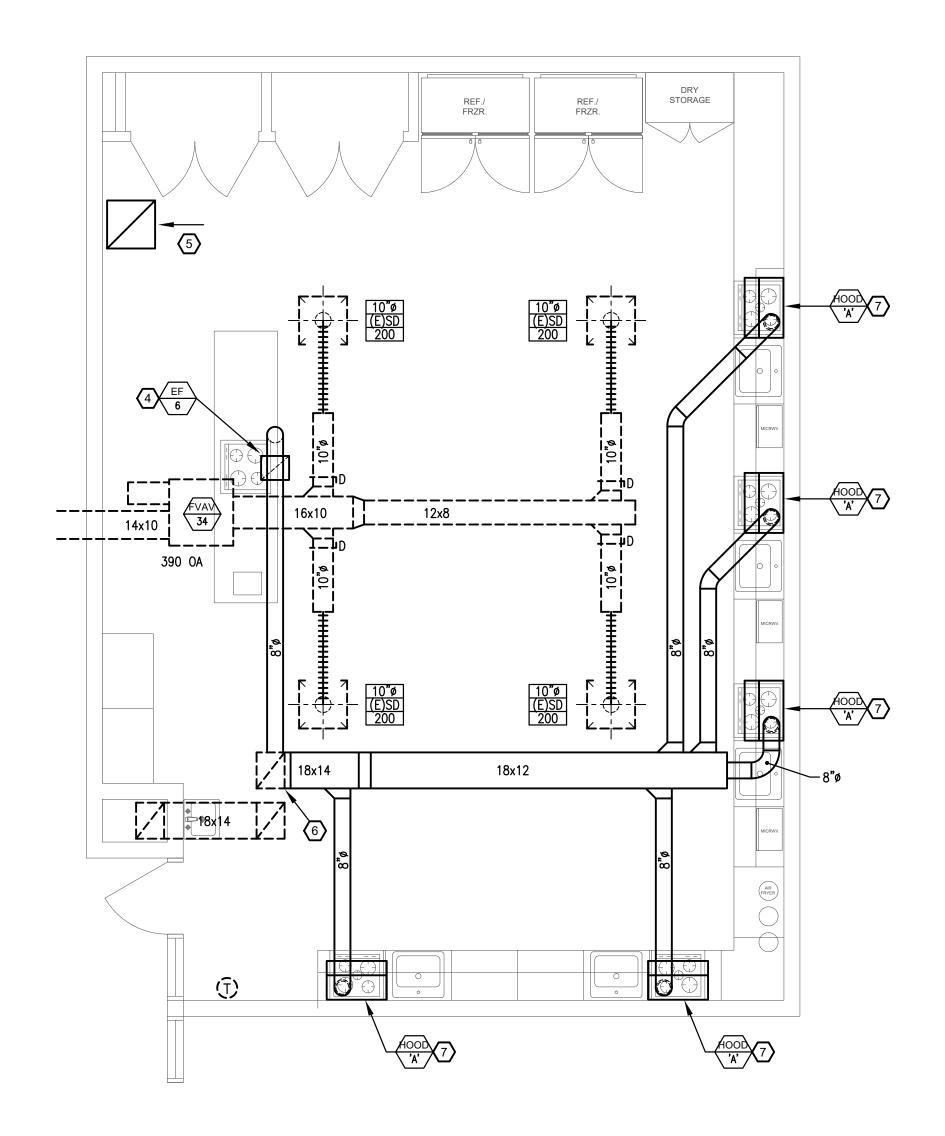
2017 DEPT. OF JUSTICE ADA STANDARDS FOR ACCESSIBLE DESIGN

2009 ICC/ANSI A117.1









# 2 FLOOR PLAN - NEW H.V.A.C. SCALE: 1/4"=1'-0" NORTH

#### GENERAL H.V.A.C. NOTES:

- 1. COORDINATE ALL H.V.A.C SCOPE OF WORK WITH EXISTING FIELD CONDITIONS & WORK OF OTHER TRADES.
- ALL HOOD EXHAUST DUCTWORK ABOVE CEILING IS TO BE SEALED & WRAPPED WITH NELSON FIRE WRAP INSULATION.
- ALL EQUIPMENT REQUIRING AN ELECTRICAL CONNECTION TO ENSURE THAT PROPER CLEARANCE IS PROVIDED FOR SERVICING IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.

#### PLAN CODED NOTES:

- EXISTING EF-6 TO BE REMOVED.
- DISCONNECT FAN DISCHARGE AT 18x14 DUCT RISING UP THRU ROOF. PREP DUCT FOR NEW DUCT CONNECTION, REFER TO NEW PLAN.
- EXISTING 24x24 RETURN GRILLE TO BE REMOVED, PREP FOR RELOCATION. REFER TO NEW PLAN FOR NEW LOCATION.
- —NEW EF-6 INSTALLED IN CEILING ABOVE INSTRUCTOR'S COOKTOP. TRANSITION FAN DISCHARGE TO 8"Ø, ROUTE & CONNECT TO EXISTING 18x14 DUCT RISING THRU ROOF TO GOOSENECK ABOVE.
- 5 RELOCATED 24x24 RETURN GRILLE.
- 6 CONNECT NEW 18x14 TO EXISTING AS REQ'D.
- 7 NEW EXHAUST HOOD MOUNTED WITH WALL BRACKETS 36"
  ABOVE COOKTOP. COORDINATE W/ OWNER PROPOSED HEIGHT
  PRIOR TO INSTALLATION. REFER TO SCHEDULE AND
  SPECIFICATIONS.

(H)	EXHAUST	HOOD SCH	HEDL	JLE				
MARK	MANUFACTURER	MODEL	HOOD WIDTH	DISCHARGE SIZE	C.F.M.	MOTOR AMPS	VOLTAGE	NOTES
'A'	DENLAR	D1030-(NFPA101)	30"	6"ø	300	5	120V-1ø	1
	O BE COMPLETE FOR N	NFPA101 COMPLIANCE.	ROLS IN-LL	NF FAN FLIFL S	HUT-OFF	F FOR FLFC	TRIC APPLIANCE	

FA FA	AN SCHEDULE	-												
MARK	AREA SERVED	MANUFACTURER	TYPE	MODEL	PURPOSE	TOTAL CFM	E.S.P. "WG	H.P./WATT	POWER V/PH	DRIVE	SONES	WEIGHT	CONTROL	NOTES
EF-6	INSTRUCTOR COOKRANGE	GREENHECK	CEILING IN-LINE	SP-A390-VG	EXHAUST	300	0.3	51 W	120V-1ø	DIRECT	3.5	24	A	1
NOTES: 1. CEILING	MOUNTED W/ GRILLE, PLUG DISCON	INECT, BACK-DRAFT DA	MPER, 8x8 DISCHA	RGE			<u>(</u>	CONTROLS: A. CONTROLI	ED BY LOC	AL ON/OFF	SWITCH,	see electi	RICAL	

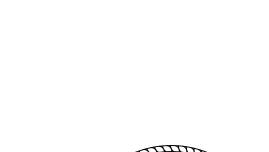


Project Team:

Architect



3443 LEE ROAD SHAKER HEIGHTS, OHIO 44120 P 216.752.4444 F 216.752.5011 ARCATEK@UDLTD.COM



W. Donal Britary T

W. DANIEL BICKERSTAFF,

W. Daniel Bickerstaff, II License No. 12608 Expiration Date: December 31, 2023

PERMIT ISSUANCE	WDB, II	09.01.2022
ISSUED	BY	DATE

ANDREW J. RICKOFF SCHOOL

Interior Alteration

LIFE SKILLS ACADEMY

3500 East 147th Street Cleveland, OH 44120

X		
Hollie Dellisanti EDU	CATOR. Exec. Dir.	
Architectural Project		Date

FLOOR PLANS H.V.A.C.

09.30.2022

#### 200100 GENERAL MECHANICAL REQUIREMENTS

#### 1.1 GENERAL NOTE:

A. THIS SPECIFICATION SECTION APPLIES TO PLUMBING WORK AND HVAC WORK. CONTRACTOR SHALL USE THESE PARAGRAPHS THAT APPLY TO HIS WORK.

#### 1.2 GENERAL CONDITIONS:

A. THE REQUIREMENTS OF THE GENERAL CONDITIONS. INSTRUCTIONS TO BIDDERS AND GENERAL REQUIREMENTS ARE A PART OF THIS CONTRACT.

#### 1.3 SEQUENCE OF CONSTRUCTION:

A. A SEQUENCE OF CONSTRUCTION INDICATING THE MANNER IN WHICH THE WORK IN VARIOUS AREAS WILL BE PERFORMED SHALL BE AS OUTLINED IN THE CONSTRUCTION SCHEDULE PREPARED BY THE ARCHITECT OR AS SHALL BE PREPARED BY THE GENERAL CONTRACTOR.

#### 1.4 VISIT THE SITE:

A. THIS WORK INVOLVES ADDITION TO EXISTING BUILDING. CONTRACTOR SHALL VISIT THE SITE DURING BIDDING PERIOD AND BECOME FAMILIAR WITH EXISTING CONDITIONS AFFECTING HIS WORK. THE SUBMISSION OF HIS PROPOSAL SHALL BE CONSTRUED AS INDICATING SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT WILL BE MADE ON CLAIMS THAT ARISE OF A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.

#### 1.5 CODES AND PERMITS:

- A. INSTALL ALL WORK IN FULL ACCORDANCE WITH CODES, RULES AND REGULATIONS OF MUNICIPAL COUNTY, STATE, PUBLIC UTILITY, AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES (I.E. OBC, OHIO PLUMBING CODE, AMERICANS WITH DISABILITIES GUIDELINES, ASHRAE, SMACNA, NFPA, NEC ETC.)
- B. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTION REQUIRED FOR HIS WORK BY THE FOREGOING AUTHORITIES. ALL SUCH CERTIFICATES SHALL BE DELIVERED TO THE ARCHITECT IN DUPLICATE BEFORE FINAL PAYMENT ON CONTRACT WILL BE ALLOWED.
- C. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS AS REQUIRED BY LOCAL CODES TO PROVIDE COMPLETE SYSTEM.

#### 1.6 WORK INCLUDED:

- A. THE WORK REQUIRED UNDER THIS SPECIFICATION SHALL CONSIST OF ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, POWER, TRANSPORTATION, HOISTING IMPLEMENTS, ETC. OF EVERY DESCRIPTION NECESSARY FOR THE ENTIRE COMPLETION OF THE MECHANICAL WORK OF THE CONTRACT, ALL AS SPECIFIED HEREIN, SHOWN ON THE DRAWINGS OR REASONABLY IMPLIED BY EITHER, COMPLETE IN EVERY RESPECT UNLESS SPECIFICALLY EXCEPTED HEREIN. THE WORK INCLUDED IN THIS CONTRACT SHALL CONSIST OF THE INSTALLATION, TEST AND GUARANTEE OF ALL WORK. AT ALL TIMES KEEP PREMISES AND BUILDING IN NEAT AND ORDERLY CONDITION; FOLLOW EXPLICITLY ANY INSTRUCTIONS OF GENERAL CONTRACTOR IN REGARD TO STORING OF MATERIALS, PROTECTIVE MEASURES AND DISPOSING OF DEBRIS.
- B. CONTRACTOR SHALL EXAMINE THE WORK OF OTHER TRADES THAT COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. CONTRACTOR SHALL IN NO CASE ATTACH TO, COVER UP, OR FINISH AGAINST ANY DEFECTIVE WORK. OR INSTALL HIS WORK IN A MANNER THAT WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES. CONTRACTOR SHALL CONSULT ALL DRAWINGS, SPECIFICATIONS AND DETAILS OF OTHER DIVISIONS OF THE WORK ON THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS OF SAME AFFECTING HIS WORK. CONTRACTOR SHALL DO ALL PLUMBING, HEATING VENTILATING AND AIR CONDITIONING WORK NECESSARY TO BE DONE IN CONNECTION WITH THE INSTALLATION OF OTHER DIVISIONS OF THE WORK UNLESS SPECIFICALLY OTHERWISE SPECIFIED UNDER THAT DIVISION. LACK OF COORDINATING WORK WILL NOT BE ACCEPTED AS CAUSE FOR ADDITIONAL COMPENSATION.

#### 1.7 WORK BY OTHERS:

A. ALL WALL AND FLOOR OPENINGS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, BUT CONTRACTOR SHALL INSTRUCT THE GENERAL CONTRACTOR AS TO THE EXACT SIZE AND LOCATION OF SUCH

#### **B.** PAINTING SHALL BE WORK OF GENERAL TRADES CONTRACTOR.

#### 1.8 LAYOUT OF WORK:

- A. CONTRACTOR SHALL BE GOVERNED BY THE GENERAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS AND EXISTING CONDITIONS, AND SHALL COORDINATE HIS WORK WITH ALL OTHER SUB-TRADES DURING CONSTRUCTION AND PRIOR TO ANY EQUIPMENT INSTALLATION. THE FINAL LOCATIONS OF ALL EQUIPMENT, DIFFUSERS, ETC., ARE SUBJECT TO REASONABLE CHANGES BY THE ARCHITECT OR OWNER BEFORE ROUGHING-IN AT NO ADDITIONAL COST TO THE OWNER.
- B. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THE BUILDING SITE BEFORE STARTING FABRICATION OR DOING ANY WORK IN THE FIELD AND SHALL BE RESPONSIBLE FOR THE CORRECT AND PROPER MEASUREMENTS OF HIS WORK ALONG WITH RESOLUTIONS FOR ANY CONFLICT OF SPACE WITH OTHER
- C. EQUIPMENT, PIPING, ETC. SHALL NOT BE SUPPORTED FROM CEILINGS, OTHER PIPING, CONDUIT OR DUCTWORK, ROOF DECK. OR JOIST BRIDGING. EQUIPMENT SHALL BE SUPPORTED FROM ACCEPTABLE BUILDING STRUCTURE COMPONENTS AS DETERMINED BY THE ARCHITECT AND STRUCTURAL ENGINEER. EQUIPMENT SHALL BE INSTALLED WITH CAREFUL ATTENTION TO FULL ACCESS FOR SERVICE AND REMOVAL OF EQUIPMENT WITHOUT ANY MAJOR INTERRUPTION TO OTHER EQUIPMENT.
- D. CONTRACTOR SHALL PROVIDE ALL PIPE AND EQUIPMENT HANGERS AND SUPPORTS, EQUIPMENT BASES AND SUPPORT, SLEEVES AND SEALS, FLASHING AND SEALING EQUIPMENT AND PIPE STACKS, FIRE STOPPING ACCORDING TO ALL INDUSTRY ACCEPTABLE STANDARDS AND TO ALL APPLICABLE UL TESTING AND RATING METHODS.

#### 1.09 RECORD DRAWINGS:

A. CONTRACTOR SHALL FURNISH TO OWNER ONE NEW AND COMPLETE SET OF "RECORD" PRINTS. PRINTS SHALL BE GENERATED FROM REVISED CAD DRAWINGS PRODUCES BY THE CONTRACTOR. THESE PRINTS SHALL INDICATE EXACT LOCATION OF ALL INSTALLED EQUIPMENT, DUCT AND PIPING AND INCORPORATE ALL CHANGES FROM ORIGINAL CONTRACT DOCUMENTS.

#### 1.10 CLEANING UP:

A. PROPERLY PROTECT THIS WORK DURING ERECTION; SECURELY CAP OR PLUG ALL PIPE OPENINGS TO PREVENT OBSTRUCTION OR DAMAGE. REMOVE ALL DEBRIS CAUSED BY THIS WORK; CLEAN ALL EXPOSED PIPING, FIXTURES AND APPARATUS AT COMPLETION.

#### 1.11 GUARANTEE:

A. MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER. DEMONSTRATE TO THE OWNER'S SATISFACTION THE PROPER OPERATION OF EACH OF THE SYSTEMS COMPRISING THIS CONTRACT BEFORE FINAL PAYMENT.

#### 1.12 TESTS:

A. ALL TESTS FOR VARIOUS SYSTEMS SHALL BE PERFORMED AS REQUIRED AS FOR GOOD GENERAL PRACTICE AND IN COMPLIANCE WITH JURISDICTIONAL CODES AND AUTHORITIES. PROVIDE PRESSURE TESTS FOR ALL PIPING. REPLACE ALL DEFECTED MATERIAL WITH NEW MATERIAL. ADJUST ALL AIR

MOVING EQUIPMENT. ADJUST ALL AUTOMATIC TEMPERATURE CONTROL AND SET TO PROPER OPERATION.

#### **220100 PLUMBING**

#### 1.1 SERVICES:

A. EACH SERVICE (WASTE, VENT, COLD WATER AND HOT WATER) SHALL BE COMPLETE AND EXTENDED AND CONNECTED UP WITH ALL USING FIXTURES AND INSTALLED UNDER ALL DIVISIONS OF WORK ON THIS

#### 1.2 INSPECTION AND TESTS

- A. ALL TESTS SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY OR SERVING UTILITY AS THE CASE MAY BE. THE OWNER'S REPRESENTATIVE AND THE PLUMBING INSPECTOR SHALL BE NOTIFIED IN ADVANCE OF ALL TESTS AND SHALL BE PRESENT AT SUCH TESTS. NO WORK SHALL BE COVERED UP UNTIL IT IS INSPECTED AND APPROVED.
- B. DRAINAGE SYSTEM THE NEW DRAINAGE AND VENTING SYSTEM SHALL BE TESTED TO CONFORM WITH OHIO BUILDING CODE OR AS DIRECTED BY THE PLUMBING INSPECTOR.
- C. WATER SYSTEMS THE NEW WATER PIPING SYSTEM SHALL BE TESTED AT A HYDROSTATIC PRESSURE OF 1-1/2 TIMES THE ACTUAL WORKING PRESSURE BUT NOT LESS THAN 100 PSI GAUGE AND PROVED TIGHT AT THIS PRESSURE FOR NOT LESS THAN 30 MINUTES IN ORDER TO PERMIT INSPECTION OF ALL JOINTS. WHERE A PORTION OF THE WATER PIPING SYSTEM IS TO BE CONCEALED BEFORE COMPLETION, THIS PORTION SHALL BE TESTED SEPARATELY IN A MANNER DESCRIBED FOR THE ENTIRE

#### 1.3 EXCAVATION AND BACKFILL:

- A. CONTRACTOR SHALL DO ALL EXCAVATING AND BACKFILLING NECESSARY FOR THE INSTALLATION OF HIS
- B. ALL TRENCHES SHALL BE DUG TO EXACT GRADE AND DEPTH WITH ONLY SUFFICIENT DIRT REMOVED TO PROVIDING WORKING SPACE. TRENCHES DUG BELOW THE REQUIRED DEPTH SHALL BE REFILLED TO PROPER DEPTH WITH AGGREGATE #57. TRENCHES SHALL BE SHORED FOR SHEET PILE, IF NECESSARY, TO PREVENT CAVING AND THE WORK OF OTHER CONTRACTORS. SHALL NOT BE ENDANGERED. THIS SUBCONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR DAMAGE CAUSED BY HIS WORK.
- C. ALL EXCAVATIONS INSIDE THE BUILDING, UNDER WALKS AND DRIVE SHALL BE BACKFILLED WITH PREMIUM BACKFILL SLAG OR LIMESTONE SCREENING THOROUGHLY TAMPED AND FLOODED.

#### 1.4 PIPE INSTALLATION:

A. ALL PIPING SHALL BE CONCEALED EXCEPT WHERE CALLED FOR OTHERWISE. PIPING SHALL BE INSTALLED WITH PROPER PROVISION FOR EXPANSION AND CONTRACTION AND SO AS NOT TO SAG IN

#### 1.5 PIPING MATERIAL:

- A. ALL MATERIALS SHALL BE NEW AND FOR INTENDED USE AND BE FREE FROM DEFECTS. PIPE AND FITTINGS SHALL BE OF DESIGN TO WITHSTAND 125 LBS. S.W.P.
- B. SANITARY AND STORM SEWERS (UNDERGROUND & INTERIOR) UNDERGROUND SANITARY AND STORM SEWERS SHALL BE CARLON OR APPROVED EQUAL SCHEDULE 40 PVC SEWER PIPE AND DRAIN FITTINGS, SOLVENT WELDED JOINTS.
- C. SOIL. WASTE AND VENT PIPING (ABOVE GROUND INTERIOR, BELOW RETURN AIR PLENUM) SCHEDULE 40 PVC DRAINAGE PIPE AND FITTINGS, JOINTS TO BE SOLVENT WELDED. INSTALL EXPANSION JOINT IN VERTICAL STACK PRIOR TO STACK PENETRATING ROOF.
- D. WATER PIPING (INSIDE BUILDING) ALL HOT AND COLD WATER PIPING SHALL BE: TYPE "L" HARD COPPER PIPE WITH WROUGHT COPPER SWEAT SOLDER TYPE FITTINGS. SOLDERED JOINTS SHALL BE MADE USING "STAY-SAFE 40" LEAD FREE SOLDER (J.W. HARRIS CO., CINCINNATI, OHIO) OR OTHER LEAD FREE SOLDER AS APPROVED BY THE STATE OF OHIO. COPPER PRESS FITTING MAY BE USED AS AN OPTION
- E. CPVC PIPE AND FITTING. JOINTS TO BE SOLVENT WELD WITH ASTM F493 SOLVENT CEMENT.
- F. POLYBUTYLENE PIPE AND FITTINGS. FITTING TO BE PLASTIC INSERT TYPE OR COPPER. JOINTS: MECHANICAL WITH COPPER COMPRESSION RINGS.
- G. WATER HAMMER ARRESTORS THIS SUBCONTRACTOR SHALL FURNISH AND INSTALL AIR CHAMBERS AT EACH HOT AND COLD WATER FIXTURE CONNECTION. CHAMBERS SHALL BE 18" HIGH AND OF THE SAME DIAMETER AS THE FIXTURE CONNECTION, BUT NOT LESS THAN 1/2".
- H. INSULATING COUPLINGS V-LINE INSULATING COUPLING AS MANUFACTURED BY VICTAULIC OR PERFECTION CORPORATION OR APPROVED EQUAL.
- I. ESCUTCHEONS ALL PIPE PASSING THROUGH WALLS, FLOORS OR CEILINGS IN FINISHED ROOMS SHALL BE FITTED WITH STEEL OR BRASS ESCUTCHEONS WITH SET SCREW.
- J. CLEANOUTS A CLEANOUT SHALL BE INSTALLED AT THE BASE OF EACH SOIL AND WASTE STACK, DOWNSPOUT AND AT NOT MORE THAN 50 FT. INTERVALS ON HORIZONTAL RUNS AND AS REQUIRED BY CODE. CLEANOUTS SHALL BE THE SAME SIZE AS THE PIPE THEY SERVE, EXCEPT THEY NEED NOT BE LARGER THAN 4".

#### 1.6 VALVES:

- A. FURNISH AND INSTALL AS SHOWN ON DRAWINGS VALVES AND AS REQUIRED FOR PROPER OPERATION OF VARIOUS PARTS OF WORK. VALVES SHALL BE AS MANUFACTURED BY POWELL, NIBCO, APOLLO, OR
- B. DRAIN VALVES WITH HOSE CONNECTING ENDS AND PROTECTIVE CAPS SHALL BE INSTALLED AT LOW POINTS ON ALL LINES CARRYING LIQUIDS.
- C. COMPRESSION TYPE VALVES SHALL NOT BE USED FOR DRAIN VALVES.
- D. PROVIDE SHUT-OFF VALVES AT ALL BRANCH CONNECTIONS TO MAIN, AT ALL FIXTURE GROUPINGS, EACH PIECE OF APPARATUS, AND IN MAINS TO SECTIONALIZE THE SYSTEM.
- **E.** SCHEDULE OF VALVES:

WATER VALVE SCHEDULE										
TYPE NIBCO NO. SIZE BODY ENDS PRESSUF										
BALL VALVE	S-580-66 T-580-66 (S.S. BALL)	2" & UNDER	BRONZE	SOLDERED THREADED	150 WSP					
CHECK	413	2" & UNDER	BRONZE	THREADED	125 WSP					
S.S. STEM,	BRONZE DISC,	EPT/CPDM SEA	AT)							

- F. WATER HAMMER ARRESTER: SIOUX CHIEF, OR APPROVED EQUAL, HYDRA-RESTER, SHALL BE PRECHARGED AND PERMANENTLY SEALED AT THE FACTORY AND SHALL HAVE A MALE THREADED NIPPLE FOR CONNECTION TO THE WATER SYSTEM. WATER HAMMER ARRESTERS ARE NOTED WAHA-X. WHERE THE 'X' DESIGNATES THE P.D.I. SYMBOL DESCRIBED IN P.D.I. STANDARD MANUAL WH-201.
- G. TEMPERING VALVES: INSTALL AT ALL PUBLIC HAND WASHING LAVS AND SINKS A TEMPERING VALVE THAT MEETS ASSE 1070 SIMILAR TO POWERS THERMOSTATIC MIXING VALVE LM495M

#### 1.7 INSULATION:

- A. FURNISH AND INSTALL THE FOLLOWING INSULATION IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL PIPING LISTED BELOW WITH REQUIRED INSULATION THICKNESS SHALL BE AS
- **B.** CLEAN AND DRY SURFACES PRIOR TO INSULATION.
- C. EXTEND INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS, HANGERS AND SIMILAR
- D. FIBERGLASS ASJ/SSL-11 PIPE INSULATION WITH FACTORY APPLIED JACKET OF A VINYL COATED AND EMBOSSED VAPOR BARRIER LAMINATE. ALL JACKET LAPS TO BE SEALED WITH FACTORY APPLIED SELF-SEALING LAP (SSL). ALL BUTT JOINTS TO BE SEALED WITH FACTORY PROVIDED ASJ BUTT STRIPS. INSULATE FITTINGS WITH MOLDED OR SEGMENTAL INSULATION, A LAYER OF MASTIC, A LAYER OF GLASS CLOTH FITTING TAPE, AND A FINISH LAYER OF MASTIC COMPLETELY COVERING THE FITTING TAPE. FITTING MASTIC ON HOT PIPE TO BE OCF TYPE "H", ON COLD TO BE OCT TYPE "C". ALL FITTINGS, VALVE BODIES, VALVE BONNETS AND UNIONS ON PLUMBING PIPING SHALL BE INSULATED. IN LIEU OF THE STANDARD METHOD DESCRIBED FOR INSULATING THE FITTINGS THE INSULATION CONTRACTOR HAS THE OPTION OF USING ZESTON'S ONE PIECE PREMOLDED INSULATED FITTINGS WHEREVER POSSIBLE, PER MANUFACTURER'S RECOMMENDATION. PIPE INSULATION SHALL NOT BE

SERVICE	INSULATION TYPE					
1. PLUMBING HOT AND COLD WATER PIPING.	1" REFER TO DESCRIPTION ABOVE.					

E. ALL INSULATION SHALL BE APPLIED IN AN APPROVED MANNER, THE WORKMANSHIP SHALL BE FIRST CLASS AND ALL JOINTS SHALL BE MADE TIGHT. INSULATION SHALL BE OWENS-CORNING, ARMSTRONG, CERTAIN-TEED/SAINT GOBAIN, KNAUF OR SCHULLER.

#### 1.8 PLUMBING FIXTURES:

- A. PLUMBING FIXTURES, TRIM AND OTHER EQUIPMENT SHALL BE PROTECTED AGAINST DAMAGE OR INJURY. ALL FIXTURES AND EQUIPMENT DAMAGED BY ANY CAUSE AND ANY TRIM WITH MARRED OR SCRATCHED FINISH SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER. THE FIXTURE PROTECTION SHALL BE REMOVED AT THE COMPLETION OF THE WORK OR FOR FINAL INSPECTION.
- B. SEE DRAWINGS FOR FIXTURE SCHEDULE

#### 230100 HVAC

#### 1.1 EXHAUSTHOOD

#### A. PROVIDE AND INSTALL KITCHEN HOOD AND EXHAUST FAN WHERE SHOWN ON PLANS. KITCHEN HOOD TO BE DENLAR MODEL D1030-D-WF-NFPA OR APPROVED EQUAL

1. UNIT SHALL BE OF STAINLESS STEEL CONSTRUCTION (#18 & #20 GA,

- POLISHED 304) W/ NO SHARP EDGES AND BRUSHED FINISH.
- **1.** 30" WIDE 175-522 CFM
- 2. ADA HEIGHT CONTROLS
- **3.** NFPA 101 COMPLIANT **4.** SELF-CONTAINED FIRE SUPPRESSION - AMEREX 660
- **5.** APPLIANCE DISCONNECT 6. DISCONNECT FOR ELECTRIC RANGE - D100-E
- . WALL-MOUNTED EXHAUST FAN D1000-WF-NFPA ASY **8.** MANUAL PULL STATION

#### C. INSTALLATION:

1. UNIT SHALL BE WALL MOUNTED SO THAT THE BOTTOM OF THE MOUNTING BRACKET SITS 36" (V.I.F) ABOVE THE COOKTOP.

D. FACTORY CERTIFIED START AND TEST. SUPPLY START-UP REPORT

#### 1.2 EXHAUST FANS:

- A. FANS SHALL BE GREENHECK, BROAN, NUTONE, OR COOK WITH ALL ACCESSORIES SHOWN ON DRAWINGS.
- B. PROVIDE BACKDRAFT DAMPER GRAVITY ACTUATED, ALUMINUM MULTIPLE BLADE CONSTRUCTION, FELT EDGED WITH NYLON BEARINGS.
- C. PROVIDE DISCONNECT SWITCH FACTORY WIRED, NON-FUSIBLE, IN HOUSING FOR THERMAL OVERLOAD PROTECTED MOTOR. PROVIDE TIMER SWITCH FOR FAN ON/OFF. FOR FAN/LIGHT COMBINATION PROVIDE SINGLE SWITCH.

#### 1.3 SHEET METAL WORK:

- A. ALL DUCTWORK AND FITTINGS SHALL BE FABRICATED. ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF SMACNA HVAC DUCT CONSTRUCTIONS STANDARDS.
- B. ALL DUCT SIZES ON DRAWINGS INDICATE FREE INTERNAL DIMENSIONS. ACTUAL SHEET METAL SIZES SHALL INCLUDE ON ALLOWANCE FOR INTERNAL DUCT LINER.
- C. DUCTWORK SHALL BE FABRICATED OF PRIME GRADE MATERIALS FREE FROM ANY IMPERFECTIONS. GALVANIZED SHEET STEEL SHALL BE G 90 ZINC COATED AND MILL PHOSPHATIZED FOR PAINTED APPLICATIONS ON EXPOSED DUCTWORK IN CONDITIONED SPACES.
- **D.** CONSTRUCTION:
- 1. GENERAL EXHAUST AIR DUCTWORK WITHIN THE BUILDING SHALL BE 2" SMACNA PRESSURE CLASSIFICATION GALVANIZED STEEL UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- INSTALL AND SEAL ALL DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION 2. STANDARDS — METAL AND FLEXIBLE. SEALANT TO BE NON—HARDENING, WATER RESISTANT, FIRE RESISTIVE, COMPATIBLE WITH MATING MATERIALS, UL LISTED DUCT SEALER. SEAL CLASS "B" FOR ALL DUCTWORK UP TO 2" PRESSURE CLASS, SEAL CLASS "A" FOR ALL DUCTWORK ABOVE 2" PRESSURE CLASS. CLOTH BASED DUCT TAPE IS NOT ACCEPTABLE.
- E. ELBOWS OR TURNS IN THE DUCTWORK SHALL BE FABRICATED WITH A CENTER LINE RADIUS OF NOT LESS THAN 1.5 TIMES THE DUCT WIDTH OR WITH ELBOWS WITH INTEGRAL TURNING VANES. TRANSITIONS AND OFFSETS SHALL BE FABRICATED WITH A MAX ANGULAR TAPER OF 30 DEGREES UNLESS SPACE CONDITIONS PROHIBIT.
- F. FLEXIBLE DUCTWORK SHALL HAVE A FLAMEPROOF VINYL SHEATH WITH SPIRAL WOUND SPRING STEEL AND 1" THICK FIBERGLASS INSULATION WITH A VINYL VAPOR BARRIER EXTERIOR JACKET. FLEXIBLE DUCTWORK INSTALLATION SHALL BE A MAXIMUM OF FIVE FEET IN LENGTH AND NO MORE THAN 1-90 DEG. ELBOW. FLEXIBLE DUCT SHALL BE CONNECTED TO METAL COLLARS WITH PLASTIC LOCKABLE STRAPS. CLOTH BASED DUCT TAPE CONNECTION IS NOT ACCEPTABLE.
- G. DUCTWORK BRANCHES OFF OF MAINS SHALL GENERALLY BE ARRANGED AS FOLLOWS:
- 1. RECTANGULAR BRANCHES OFF OF RECTANGULAR MAINS SHALL BE WITH 45 DEGREE SHOE ENTRY TYPE TOP IN FITTINGS.

2. ROUND BRANCHES OFF OF RECTANGULAR MAINS SHALL BE MADE WITH CONICAL TYPE TOP IN

- FITTINGS IF THE MAIN IS 4" OR GREATER IN DEPTH THAN THE BRANCH DIAMETER. OTHERWISE, A 45 DEGREE SHOE ENTRY TYPE TOP IN FITTING WITH RECTANGULAR DIMENSIONS OF EQUIVALENT CROSS SECTIONAL AREA TO THE ROUND BRANCH DIAMETER SHALL BE USED IMMEDIATELY FOLLOWED BY A RECTANGULAR TO ROUND TRANSITION.
- 3. ROUND BRANCHES OFF OF ROUND MAINS SHALL BE MADE WITH Y-BRANCH, CONICAL TOP, 45 DEGREE SHOE ENTRY TOP. OR TEE FITTINGS AS INDICATED ON THE DRAWINGS.
- 4. PROVIDE AT EACH BRANCH AND SPLIT A VOLUME DAMPER FOR AIR BALANCING.

#### 1.4 INSULATION:

A. FURNISH AND INSTALL THE FOLLOWING INSULATION IN FULL COMPLIANCE WITH MANUFACTURER'S

SERVICE	INSULATION TYPE
2. HOOD EXHAUST DUCTS	THE HOOD EXHAUST DUCT SHALL BE COVERED WITH 3M FIRE BARRIER DUCT WRAP 615+, WITH 1.5" INSULATION THICKNESS, USED IN COMBINATION WITH 3M FIRE BARRIER 2000+ SILICONE SEALANT. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND DETAILS.

B. ALL INSULATION SHALL BE APPLIED IN AN APPROVED MANNER, THE WORKMANSHIP SHALL BE FIRST CLASS AND ALL JOINTS SHALL BE MADE TIGHT. INSULATION SHALL BE OWENS-CORNING, ARM STRONG, CERTAIN-TEED/SAINT GOBAIN, KNAUF OR MANVILLE.

#### 1.5 TESTS AND ADJUSTMENTS:

- A. PERFORM TESTS AND ADJUSTMENTS UNDER CONTRACTOR'S SUPERVISION AND REPORT TO ARCHITECT. DURING TESTING PERIOD, MAINTAIN ON JOB A COMPETENT ENGINEER THOROUGHLY FAMILIAR WITH ALL PHASES FOR AS LONG A PERIOD AS REQUIRED TO THOROUGHLY ADJUST ALL SYSTEMS AND DEMONSTRATE TO ARCHITECT THAT THEY ARE FUNCTIONING PROPERLY.
- B. FOR AIR HANDLING AND AIR DISTRIBUTION SYSTEMS, PROCURE SERVICES OF AN INDEPENDENT AGENCY THAT SPECIALIZES IN TESTING AND BALANCING OF SUCH SYSTEMS. ALL WORK BY THIS AGENCY TO BE DONE UNDER DIRECT SUPERVISION OF A QUALIFIED HEATING AND VENTILATING ENGINEER. INDEPENDENT AGENCY SHALL BE A MEMBER OF AABC OR NEBB.
- C. TESTING ADJUSTING AND BALANCING WORK SHALL BE DONE IN ACCORDANCE WITH AABC, NEBB OR ASHRAE RECOMMENDATIONS.
- D. THE TEST AND BALANCE AGENCY SHALL PERFORM TESTS AND MAKE ALL ADJUSTMENTS AS REQUIRED TO BALANCE THE HVAC SYSTEMS TO THE FOLLOWING CRITERIA:
- 1. ALL FANS SHALL PERFORM "EQUAL TO" OR "10% IN EXCESS OF" THE DESIGN VOLUME. 2. MINIMUM OUTDOOR AIR REQUIREMENTS SHALL BE WITHIN 5% ABOVE OR BELOW THE DESIGN
- 3. SUPPLY DIFFUSERS AND REGISTERS SHALL BE WITHIN 10% ABOVE OR 5% BELOW THE DESIGN

4. RETURN AND EXHAUST GRILLES SHALL BE WITHIN 5% ABOVE OR 10% BELOW THE DESIGN VOLUME.

#### 1.6 FIRESTOPPING:

A. PROVIDE FIRESTOPPING AT PENETRATIONS REQUIRED FOR THE PASSAGE OF A DUCT, CABLE, CABLE TRAY ,CONDUIT, PIPING, ELECTRICAL BUSWAYS AND RACEWAYS THROUGH FIRE—RATED VERTICAL BARRIERS(WALLS AND PARTITIONS), HORIZONTAL BARRIERS(FLOOR/CEILING ASSEMBLIES), AND VERTICAL SERVICE SHAFT WALLS AND PARTITIONS.

#### **B.** QUALITY ASSURANCE

- 1. A MANUFACTURER'S DIRECT REPRESENTATIVE (NOT DISTRIBUTOR OR AGENT) TO BE ON—SITE DURING INITIAL INSTALLATION OF FIRESTOP SYSTEM TO TRAIN APPROPRIATE CONTRACTOR PERSONNEL IN PROPER SELECTION AND INSTALLATION PROCEDURES. THIS WILL BE DONE PER MANUFACTURERS WRITTEN RECOMMENDATIONS PUBLISHED IN THEIR LITERATURE AND DRAWING DETAILS.
- 2. FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF ASTM E-814 OR UL1479 TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF THE CONSTRUCTION BEING
- 3. PROPOSED FIRESTOP MATERIALS AND METHODS SHALL CONFORM TO APPLICABLE GOVERNING CODES HAVING LOCAL JURISDICTION.
- 4. FIRESTOP SYSTEM DOES NOT RE-ESTABLISH THE STRUCTURAL INTEGRITY OF LOAD BEARING PARTITIONS/ASSEMBLIES, OR SUPPORT LIVE LOADS AND TRAFFIC. INSTALLER SHALL CONSULT
- 5. FOR THOSE FIRESTOP APPLICATIONS THAT EXIST FOR WHICH NO UL SYSTEM IS AVAILABLE THROUGH ANY MANUFACTURER, A MANUFACTURER'S ENGINEERING JUDGMENT DERIVED FROM SIMILAR UL SYSTEM DESIGNS OR OTHER TESTS WILL BE SUBMITTED TO LOCAL AUTHORITIES HAVING JURISDICTION FOR THEIR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ENGINEER JUDGMENT DRAWINGS MUST FOLLOW REQUIREMENTS SET FORTH BY THE INTERNATIONAL FIRESTOP COUNCIL (SEPTEMBER 7, 1994).

STRUCTURAL ENGINEER PRIOR TO PENETRATING ANY LOAD BEARING ASSEMBLY.

6. FNGAGE AN EXPERIENCED INSTALLER WHO IS CERTIFIED. LICENSED, OR OTHERWISE QUALIFIED BY THE FIRESTOPPING MANUFACTURER AS HAVING THE NECESSARY EXPERIENCE, STAFF AND TRAINING TO INSTALL MANUFACTURER'S PRODUCTS PER SPECIFIED REQUIREMENTS. A MANUFACTURER'S WILLINGNESS TO SELL ITS FIRESTOPPING PRODUCTS TO THE CONTRACTOR OR TO THE INSTALLER ENGAGED BY THE CONTRACTOR DOES NOT IN ITSELF CONFER QUALIFICATIONS ON THE BUYER.

1. USE ONLY FIRESTOP PRODUCTS THAT HAVE BEEN ASTM E-814 OR UL 1479 TESTED AND APPROVED FOR SPECIFIC FIRE-RATED CONSTRUCTION ASSEMBLY TYPE, PENETRATING ITEM TYPE. ANNULAR SPACE REQUIREMENTS AND FIRE-RATING INVOLVED FOR EACH SEPARATE INSTANCE.

#### 2. ACCEPTABLE MANUFACTURERS: HILTI, 3M, METACAULK, NELSON

#### 1.7 TEMPERATURE CONTROL:

- A. CONTRACTOR SHALL PROVIDE ALL THERMOSTATS, RELAYS, CONTROL WIRING AND ALL ACCESSORIES REQUIRED TO COMPLETE ALL TEMPERATURE CONTROL WORK.
- **B.** ALL WIRING SHALL BE DONE PER NEC, STATE AND LOCAL CODE.
- C. FURNISH OWNER WITH THREE (3) SETS OF OPERATING INSTRUCTIONS.
- **D.** CONTROLS: 1. EXHAUST FAN #1
  - THE ELECTRICAL CONTRACTOR SHALL PROVIDE A WALL SWITCH FOR ON/OFF FAN CONTROL.



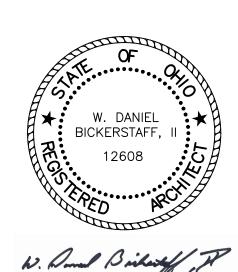
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Expiration Date: December 31, 2023

PERMIT ISSUANCE WDB, II 09.01.2022

ANDREW J. RICKOFF SCHOOL

Interior Alteration

LIFE SKILLS **ACADEMY** 

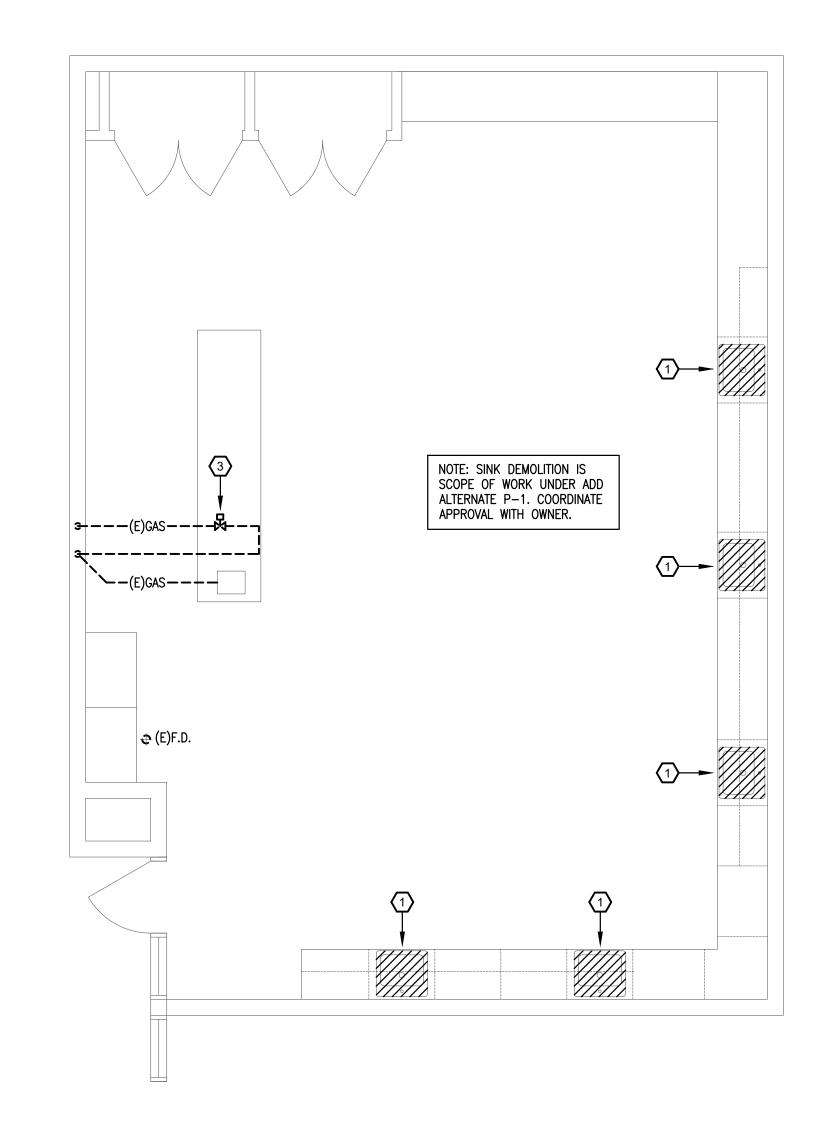
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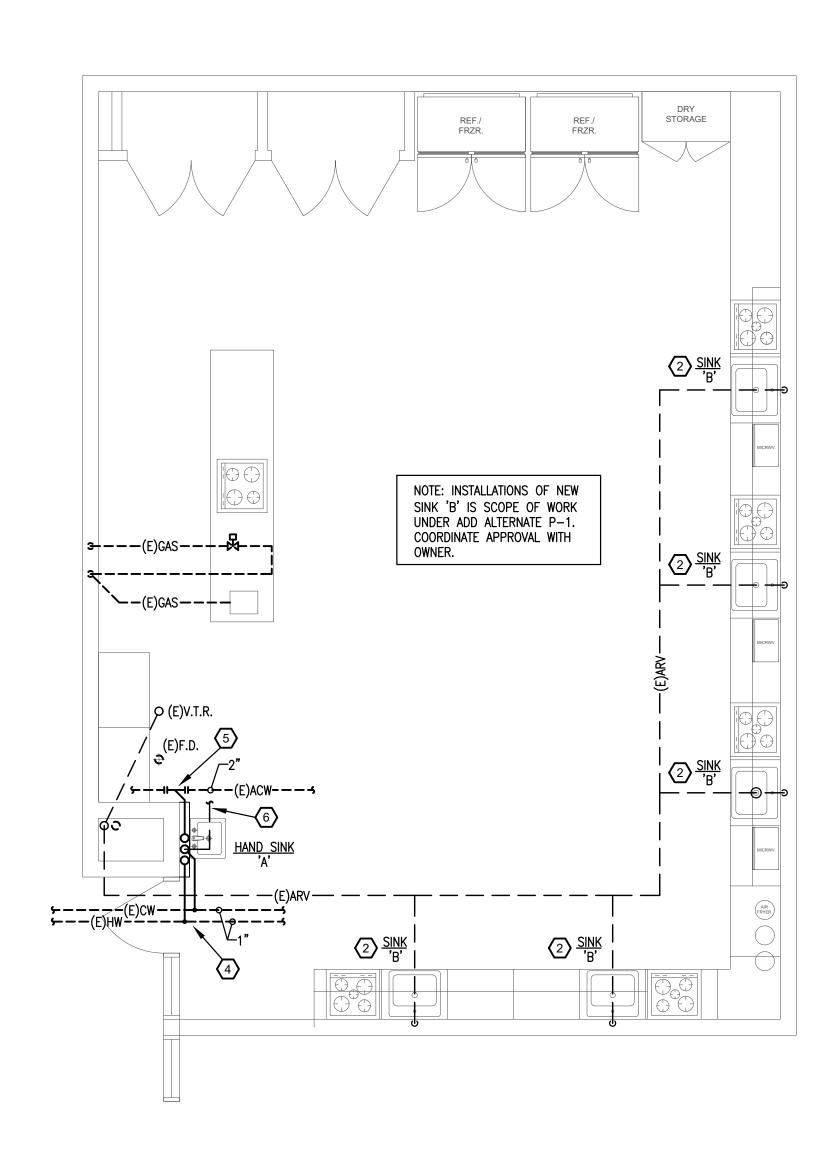
**SPECIFICATIONS** MECHANICAL

09.30.2022

MP-1









EQUIPMENT & FIXTURE CONNECTION SCHEDULE										
FIXTURE	DRAWING DESIGNATION	SAN.	VENT	C.W.	H.W.					
HAND SINK	SINK-'A'	1 1/2"	1 1/2"	1/2"	1/2"					
SINK	SINK-'B'	1 1/2"	1 1/2"	1/2"	1/2"					

#### NOTES:

- 1. "EQ" = INDICATES EQUIPMENT FURNISHED BY OWNER.

  2. WATER DISPENSER & ICE MAKER SHALL HAVE AN AIR GAP OF 2" PER CODE
- 2. WATER DISPENSER & ICE MAKER SHALL HAVE AN AIR GAP OF 2" PER CODE & LOCAL HEALTH DEPT.

3. ADA FIXTURES WITH EXPOSED TRAP AND/OR SUPPLIES ARE REQUIRED TO HAVE INSULATION KIT INCLUDED AND INSTALLED. UNLESS ARCHITECT IS PROVIDING A REMOVABLE PANEL BELOW FIXTURE.

#### **GENERAL PLUMBING NOTES:**

- 1. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO CONSTRUCTION.
- 2. CONTRACTOR SHALL VERIFY & CONFIRM SANITARY MAIN LOCATION, ROUTING & SIZE IN FIELD.
- 3. SANITARY SEWERS 2 1/2" & SMALLER SHALL BE PITCHED @
- 2% SLOPE.4. PLUMBING SYSTEM PIPING SHALL BE TESTED AND INSPECTED
- FOR COMPLIANCE WITH STATE CODE.

  5. POTABLE WATER SYSTEM SHALL BE PURGED & DISINFECTED
- PRIOR TO OWNER & OR TENANT USE. METHOD TO COMPLY W/ STATE CODE.

  6. WATER HAMMER ARRESTORS SHALL BE FURNISHED AND
- ACTUATED FIXTURE GROUPINGS AND AT ALL QUICK CLOSING FAUCETS.

  7. ANY PIPING PASSING THRU RATED WALLS OR FLOORS SHALL

INSTALLED AS DIRECTED BY STATE AT ALL FLUSH VALVE

BE FIRESTOPPED IN METHOD COMPLIANT WITH STATE CODE.

8. ALL SINKS SHALL INCLUDE COST & INSTALLATION OF A THERMOSTATIC MIXING VALVE.

#### PLAN CODED NOTES:

- ADD ALTERNATE #P-1: EXISTING INTERGRAL SINK /
  COUNTERTOP TO BE REMOVED. EXISTING SINK ROUGH-INS TO
  REMAIN FOR NEW SINK INSTALLATION. REFER TO NEW PLAN.
- 2 ADD ALTERNATE #P-1: INSTALL NEW SINK 'B' AS INDICATED. CONNECT TO EXISTING SINK ROUGH-IN AS REQ'D. REFER TO FIXTURE SPECIFICATIONS. NOTE: HOT WATER SYSTEM IS EQUIPPED WITH MAIN TEMPERING VALVE. INDIVIDUAL TEMPERING NOT REQUIRED.
- 3—EXISTING GAS SERVING PREVIOUS SCIENCE LAB TO REMAIN. SHUT-OFF GAS AT NEAREST VALVE POINT FOR IN-ACTIVE, NON-USE IN NEW LIFE SKILLS CLASSROOM.
- NEW 1/2" CW & HW TO CONNECT TO EXISTING 1" LINES ABOVE CEILING OF CLASSROOM AT 1ST FLOOR. ROUTE & RISE UP IN NEW FURRED OUT WALL AT CHASE FOR NEW HAND WASH SINK.
- 5 NEW 1-1/2" SAN FOR HAND SINK TO CONNECT TO EXISTING 2" WASTE LINE ABOVE CEILING OF CLASSROOM AT 1ST FLOOR. NOTE: EXISTING WASTE IS ACID RESISTANT PIPING. NEW SAN TO MATCH EXISTING MATERIAL FROM POINT OF CONNECTION TO NEW FIXTURE CONNECTION IN NEW FURRED OUT WALL.
- 6 NEW 1-1/2" VENT TO CONNECT TO EXISTING VENT SYSTEM ABOVE CEILING NEAR EXISTING V.T.R. MATCH EXISTING ACID RESISTANT VENT

PLUN
EXISTING PIPING

# PLUMBING FIXTURE SCHEDULE HAND SINK AMSTAN 0355.012: "LUCERNE" VITREOUS CHINA 20" X 18" LAVATORY BACK DRILLED FOR CONCEALED ARMCHAIR CARRIER. CHICAGO 1802-CP-1000: CENTERSET SUPPLY FITTING 4" SPOUT NUMBER 1000 HANDLES AND AERATOR. AMSTAN 2411.015: DRAIN FITTING WITH PERFORATED GRID STRAINER AND TAILPIECE. AMSTAN 7723.018: OFFSET TAILPIECE. CHICAGO 1005-CP: WALL SUPPLIES, FLEXIBLE TUBE RISERS, ANGLE VALVES WITH LOOSEKEY STOPS. BRASSCO 551: 1/4", 17 GAUGE CHROME "P" TRAP WITH CLEANOUT 17 GA TUBING TO WALL. NOTE: INSULATION TRAP, TAILPIECE AND SUPPLY PIPING WITH "TRUEBRO" "HANDI-LAV-GUARD" MODEL 103 INSULATION KIT. ADD ALT. P-1 JUST SL-1921-A-GR: 19" X 21" TYPE 304 (18-8) STAINLESS STEEL SINK, SINGLE COMPARTMENT, SELF-RIMMING, INSTALL IN COUNTERTOP. DRILL SINK TO RECEIVE TRIM

## SPECIFIED. CHICAGO 1100: "CLASSIC" TOP MOUNT SINK FAUCET, SWING SPOUT, AERATOR. JUST J35: STAINLESS STEEL CRUMB CUP STRAINER WITH REMOVABLE STAINLESS STEEL BASKET. BRASSCO 57: 1 1/2" 17 GALIGE CHROME "P" TRAP WITH CLEANOUT 17 GA TURING TO

BRASSCO 57: 1 1/2", 17 GAUGE CHROME "P" TRAP WITH CLEANOUT. 17 GA TUBING TO WALL. CHICAGO 1005—CP: WALL SUPPLIES, FLEXIBLE TUBE RISERS, ANGLE VALVES WITH LOOSEKEY STOPS.

#### NOTE:

REDUCERS AND ESCUTCHEONS.

- 1. EACH INDIVIDUAL PLUMBING FIXTURE SHALL BE INSTALLED WITH ITS OWN SHUT-OFF VALVE ON RESPECTIVE COLD WATER SUPPLY & / OR HOT WATER SUPPLY LINES. ALL FLUSH VALVE OPERATED FIXTURES AND SHOWER VALVES SHALL BE FURNISHED WITH SCREWDRIVER BAK-CHEK ANGLE STOPS.
- 2. INSTALL EACH FIXTURE WITH TRAP, EASILY REMOVABLE FOR SERVICING AND CLEANING.

  3. PROVIDE CHROME PLATED RIGID OR FLEXIBLE SUPPLIES TO FIXTURES W/ HANDLE OR LOOSE KEY STOPS,
- 4. INSTALL AND SECURE FIXTURES IN PLACE WITH WALL SUPPORTS, FLOOR SUPPORTS, WALL CARRIERS AND BOLTS.

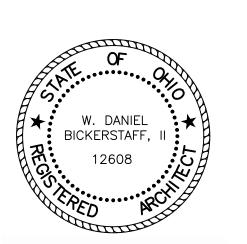


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ISSUED BY DATE

#### ANDREW J. RICKOFF SCHOOL

Interior Alteration

LIFE SKILLS ACADEMY

3500 East 147th Street Cleveland, OH 44120

CMSD Approval:

X

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

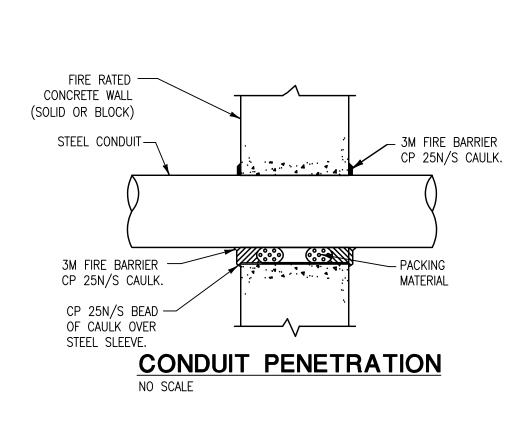
Consultant Project #

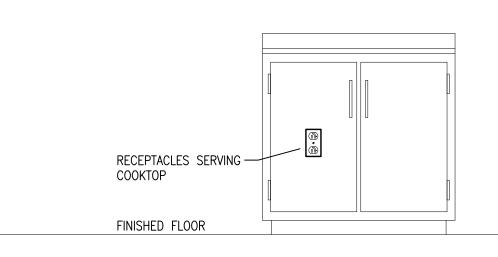
Drawn by:
DB

Checked by:
WDB, II

FLOOR PLANS PLUMBING

Date: 09.30.2022

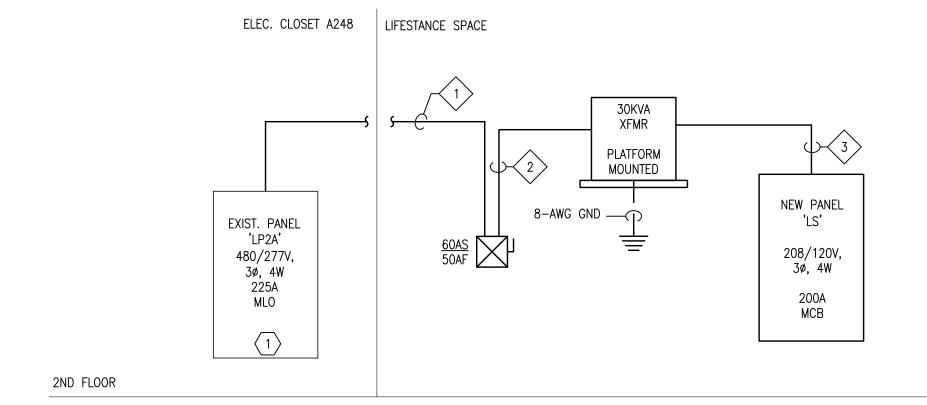




#### TYPICAL DEVICE MOUNTING DETAIL

#### IOTES:

- 1. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO THE CENTERLINE OF DEVICE.
- 2. NO WIRING DEVICES OR OUTLET BOXES SHALL BE MOUNTED BACK TO BACK.
- 3. ALL MOUNTING DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL UNLESS OTHERWISE



#### DISTRIBUTION DIAGRAM NOTES:

- PROVIDE FULL LENGTH VERTICAL BUSSING IN ALL PANELBOARDS.
- 2. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE.
- 3. ALL INTERIOR WALL-MOUNTED EQUIPMENT SHALL BE MOUNTED ON 3/4" FIRE RATED BACKBOARD.
- 4. COORDINATE SPACE W/ ALL OTHER TRADES TO MAINTAIN ALL CODE-REQUIRED CLEARANCES.
- 5. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

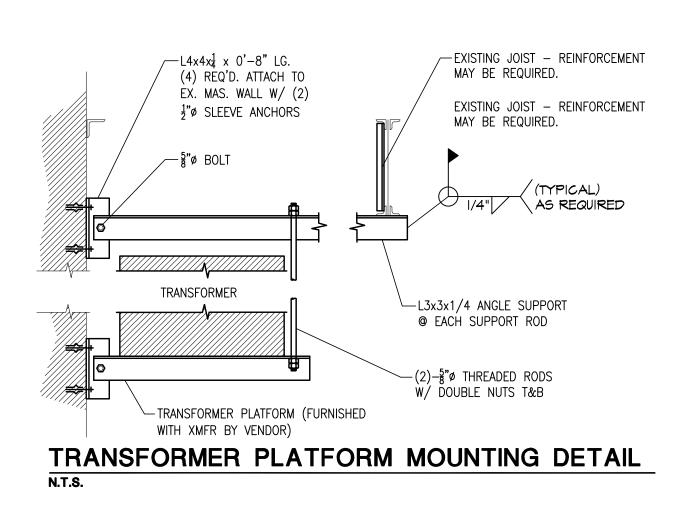
#### **XKEYED NOTE SCHEDULE**

1. PROVIDE A NEW 50 AMP 3 POLE BREAKER IN AVAILABLE SPACE FOR NEW PANEL "LS" AND PROVIDE FEEDER AS SHOWN. LABEL BREAKER AS "LIFESTANCE" PRIOR TO COMMENCEMENT OF PROJECT. TYPE AND AIC RATING TO MATCH EXISTING.

#### FEEDER SCHEDULE

- 1. 4-4 AWG, 1-8 AWG GND. IN 1-1/4"C APPROXIMATE LENGTH 65 FEET.
- 2. 3-6 AWG, 1-10 AWG GND. IN 1"C APPROXIMATE LENGTH 10 FEET
- 3. 4-3 AWG, 1-8 AWG GND. IN 1-1/2"C APPROXIMATE LENGTH 10 FEET





	ELECTRICAL SYMBOL/ABBREVIATION LEGEND									
SYMBOL	DESCRIPTION	MTG. HGT. (U.N.O.)	ABBREVIATION	DESCRIPTION						
Φ/Φ/Φε	SINGLE / DUPLEX / DOUBLE DUPLEX RECEPTACLE / G-GROUND FAULT	18"	AFF	ABOVE FINISHED FLOOR						
<b>⇔</b> <sup>AC</sup>	GROUND FAULT DUPLEX RECEPTACLE, AC-MOUNTED ABOVE COUNTER		AHJ	AUTHORITY HAVING JURISDICTION						
	SPECIAL RECEPTACLE		EX	EXISTING						
	FLOOR BOX SPECIAL RECEPTACLE		SW	SWITCH						
\$™	MANUAL MOTOR STARTER DISCONNECT									
<b>(1)</b>	PLAN CODED NOTE		TYP	TYPICAL						
	DISCONNECT SWITCH GENERAL PURPOSE, 240V, 2-P NON-FUSED, OR AS NEEDED		UC	UNDER COUNTER  UNLESS NOTED OTHERWISE						
⊠,	DISCONNECT SWITCH GENERAL PURPOSE, 240V, 2-P FUSED, OR AS NEEDED		UNO XFMR	TRANSFORMER						
	PANELBOARD									
RP2C-14	INDICATES - PANEL, CIRCUIT NUMBER AND #12AWG, #12AWG GND IN 3/4" CONDUIT	UNO								
1. COORD	NATE WITH ARCHITECT AND INDICATE MOUNTING HEIGHTS OF DEVICES.									

	CIRCUIT BREAKER PANEL:	LP2A		VOLTAGE:	27	7/480V-3Ø-	4W	MAINS:	225	MLO	TYPE: NQOD • SURF MTD	
NO.	DESCRIPTION	C/B	LOAD	KVAC	PH-A	PH-B	PH-C	KVAC	LOAD	C/B	DESCRIPTION	NO.
1	Existing Lighting	20/1	LTG	3.4	5.7	XXXXXXX	XXXXXXX	2.3	LTG	20/1	Existing Lighting	2
3	Existing Lighting	20/1	LTG	2.7	XXXXXXX	5.5	XXXXXXX	2.8	LTG	20/1	Existing Lighting	4
5	Existing Lighting	20/1	LTG	1.6	XXXXXXX	XXXXXXX	2.5	0.9	LTG	20/1	Existing Lighting	6
7	Existing Lighting	20/1	LTG	1.5	3.7	XXXXXXX	XXXXXXX	2.2	LTG	20/1	Existing Lighting	8
9	Existing Lighting	20/1	LTG	3.5	XXXXXXX	6.2	XXXXXXX	2.7	LTG	20/1	Existing Lighting	10
11	Existing Lighting	20/1	LTG	3.2	XXXXXXX	XXXXXXX	5.5	2.3	LTG	20/1	Existing Lighting	12
13	SPARE	20/1			2.3	XXXXXXX	XXXXXXX	2.3	LTG	20/1	Existing Lighting	14
15	Existing HAVC Boxes	20/1	HTG	2.9	XXXXXXX	2.9	XXXXXXX			20/1	SPARE	16
17	Existing HAVC Boxes	20/1	HTG	2.9	XXXXXXX	XXXXXXX	5.8	2.9	HTG	20/1	Existing HAVC Boxes	18
19	Existing HAVC Boxes	20/1	HTG	1.9	4.8	XXXXXXX	XXXXXXX	2.9	HTG	20/1	Existing HAVC Boxes	20
21	Existing HAVC Boxes	20/1	HTG	1.9	XXXXXXX	3.8	XXXXXXX	1.9	HTG	20/1	Existing HAVC Boxes	22
23	SPARE	20/1			XXXXXXX	XXXXXXX	1.9	1.9	HTG	20/1	Existing HAVC Boxes	24
25	SPARE	20/1			0.0	XXXXXXX	XXXXXXX				Space	26
27	SPARE	20/1			XXXXXXX	0.0	XXXXXXX				Space	28
29	SPARE				XXXXXXX	XXXXXXX	0.0				Space	30
31	Space				19.0	XXXXXXX	XXXXXXX	19.0	KITCH		Transformer	32
33	Space				XXXXXXX	20.1	XXXXXXX	20.1	KITCH	50/3	30KVA/Panel LPAC	34
35	Space				XXXXXXX	XXXXXXX	18.9	18.9	KITCH		JOHN MICHEL AG	36
					0.0	XXXXXXX	XXXXXXX					
					XXXXXXX		XXXXXXX					
					XXXXXXX	XXXXXXX	0.0					
LOAD	SUMMARY	LTG	REC	A/C	HTG	VENT	КІТСН	MISC	COMP	OTHER		BAI
	KVAC	31.4	0.0	0.0	19.2	0.0	58.0	0.0	0.0	0.0	108.6	-0.
	SF	1.25	NEC	0.00	1.00	1.25	0.43	1.00	1.00	1.00		2.3
	KVAS	39.3	0.0	0.0	19.2	0.0	24.9	0.0	0.0	0.0	83.4	-1.0
FEEDE	RCALCS	PH-A	PH-B	PH-C	TOTAL	MCA	OCP	SPARE	SCA	AIC	FEEDER SOURCE	CK
	KVAC	35.5	38.5	34.6	108.6	100	225	55%	<10K	10K	DP2	Ok

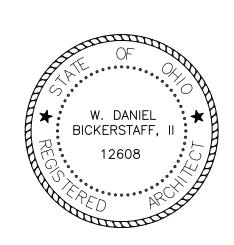
	CIRCUIT BREAKER PANEL:	RPC2	١ ١	VOLTAGE:	120	0/208V-3Ø-	4W	MAINS:	100	MCB	TYPE: NQOD • SURF M TD	
NO.	DESCRIPTION	C/B	LOAD	KVAC	PH-A	PH-B	PH-C	KVAC	LOAD	C/B	DESCRIPTION	NO.
1	Receptacle Cooktop	50/2	KITCH	4.0	8.0	XXXXXXX	XXXXXXX	4.0	KITCH	50/2	Receptacle Cooktop	2
3	Neceptacle Cooktop	30/2	KITCH	4.0	XXXXXXX	8.0	XXXXXXX	4.0	KITCH	30/2	recorpiacie occinop	4
5	Receptacle Cooktop	50/2	KITCH	4.0	XXXXXXX	XXXXXXX	8.0	4.0	KITCH	50/2	Receptacle Cooktop	6
7	Treceptacie Cooktop	30/2	KITCH	4.0	8.0	XXXXXXX	XXXXXXX	4.0	KITCH	30/2	Neceptacle Cooktop	8
9	Receptacle Cooktop	50/2	KITCH	4.0	XXXXXXX	8.0	XXXXXXX	4.0	KITCH	50/2	Receptacle Cooktop	10
11	Receptable Cooktop	30/2	KITCH	4.0	XXXXXXX	XXXXXXX	8.0	4.0	KITCH	30/2		12
13	Fridge/Freezer	20/1	KITCH	0.9	1.8	XXXXXXX	XXXXXXX	0.9	KITCH	20/1	Fridge/Freezer	14
15	Receptacle Air Fryer	20/1	KITCH	1.7	XXXXXXX	3.4	XXXXXXX	1.7	KITCH	20/1	Receptacle Air Fryer	16
17	Exhaust Hoods	20/1	KITCH	1.2	XXXXXXX	XXXXXXX	2.9	1.7	KITCH	20/1	Receptacle Air Fryer	18
19	Exhaust Hoods	20/1	KITCH	1.2	1.2	XXXXXXX	XXXXXXX				SPACE	20
21	Exhaust Hoods/EF-6	20/1	KITCH	0.7	XXXXXXX	0.7	XXXXXXX				SPACE	22
23	SPACE				XXXXXXX	XXXXXXX	0.0				SPACE	24
25	SPACE				0.0	XXXXXXX	XXXXXXX				SPACE	26
27	SPACE				XXXXXXX	0.0	XXXXXXX				SPACE	28
29	SPACE				XXXXXXX	XXXXXXX	0.0				SPACE	30
					0.0	XXXXXXX	XXXXXXX					
					XXXXXXX	0.0	XXXXXXX					
					XXXXXXX	XXXXXXX	0.0					
					0.0	XXXXXXX	XXXXXXX					
					XXXXXXX	0.0	XXXXXXX					
					XXXXXXX	XXXXXXX	0.0					
OAD	SUMMARY	LTG	REC	A/C	HTG	VENT	KITCH	MISC	COMP	OTHER		BAL
	KVAC	0.0	0.0	0.0	0.0	0.0	58.0	0.0	0.0	0.0	58.0	-0.3
	SF	1.25	NEC	1.25	1.25	1.25	0.43	1.00	1.00	1.00		0.8
	KVAS	0.0	0.0	0.0	0.0	0.0	24.9	0.0	0.0	0.0	24.9	-0.4
EEDE	RCALCS	PH-A	PH-B	PH-C	TOTAL	MCA	OCP	SPARE	SCA	AIC	FEEDER SOURCE	СК
	KVAC	19.0	20.1	18.9	58.0	69	100	31%	<10K	22K	LPA2/VIA XFMR	OK



Project Team:

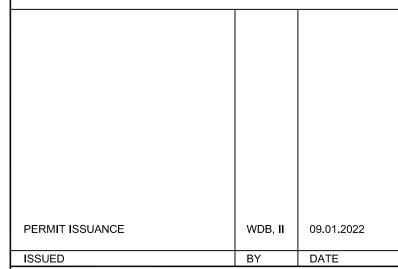
Architect





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W. Daniel Bickerstaff, II License No. 12608
Expiration Date: December 31, 2023



ANDREW J. RICKOFF SCHOOL

Interior Alteration

LIFE SKILLS ACADEMY

3500 East 147th Street Cleveland, OH 44120

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

Consultant Project #

Drawn by:
DB

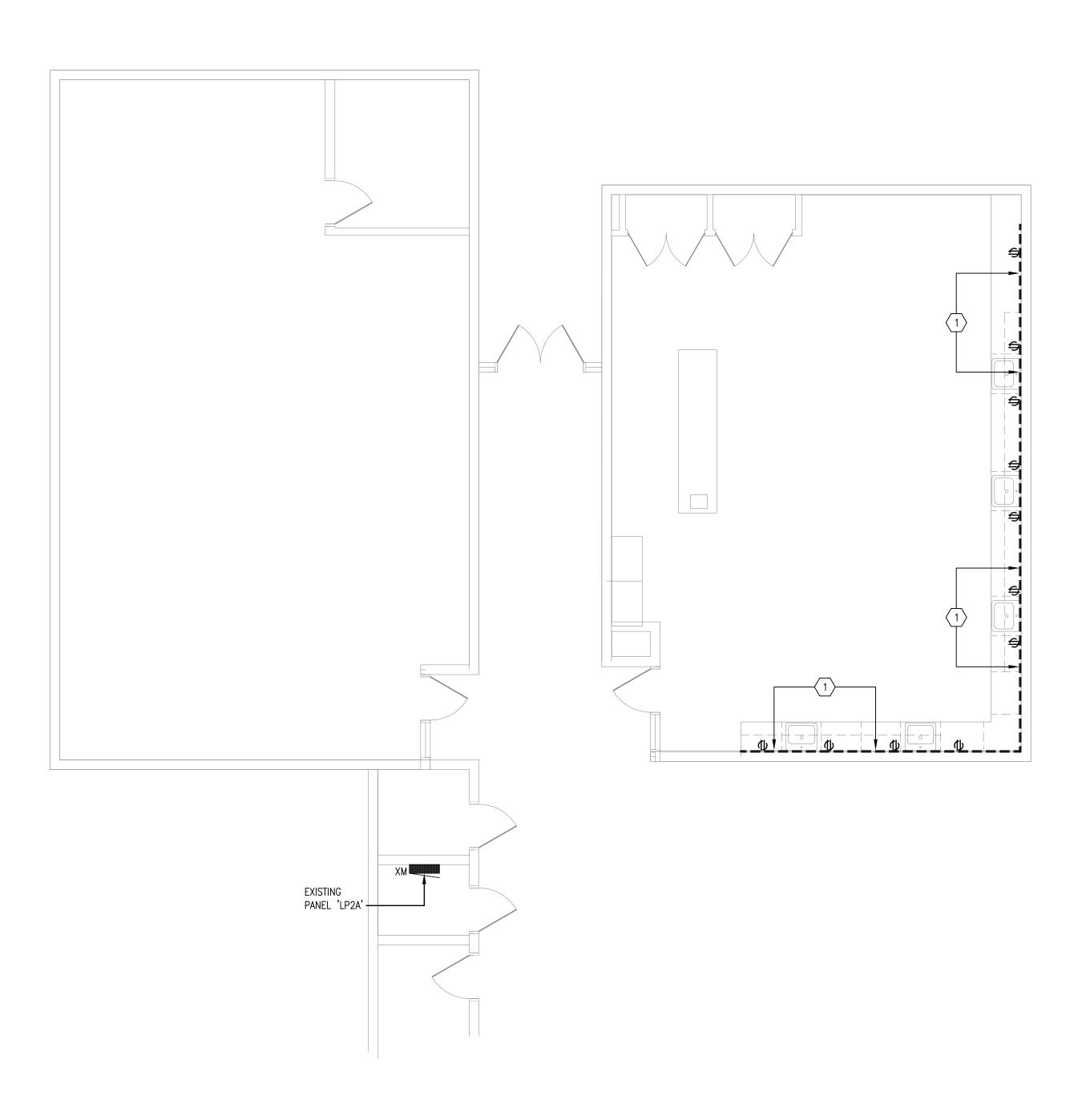
Checked by:
WDB, II

SYMBOL LEGEND

AND ELECTRICAL
DISTRIBUTION DIAGRAM

Date: 08.15.2022

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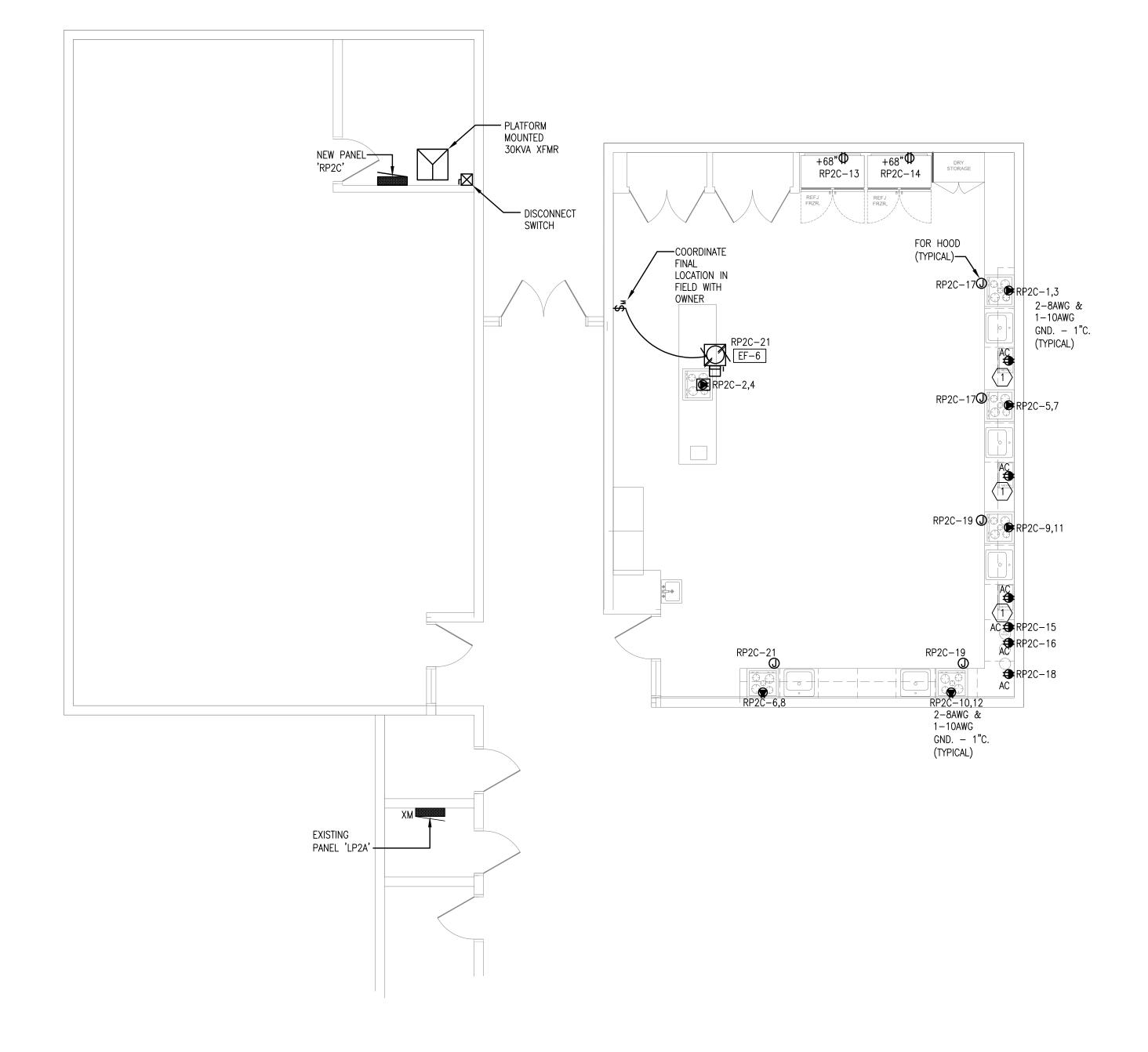


#### **DEMOLITION NOTES:**

- 1. PERFORM ALL DEMOLITION OF EXISTING ELECTRICAL SYSTEMS AS INDICATED ON ELECTRICAL AND ARCHITECTURAL PLANS OR NECESSARY FOR THE PROJECT. REMOVE FROM SITE AND PROPERLY DISPOSE OF ALL MATERIAL AND DEBRIS FROM THIS WORK.
- 2. DEMOLITION DRAWINGS ARE GENERAL IN NATURE SHOWING THE SCOPE OF DEMOLITION WORK. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE QUANTITY OF LUMINAIRES, OUTLETS, ETC. REMOVE ALL EQUIPMENT AND DEVICES NO LONGER REQUIRED FOR FINISHED CONSTRUCTION. REMOVE CONDUITS BEYOND NEW SURFACES. REMOVE ALL EXISTING WIRE FROM CONDUIT BACK TO POINT OF COMMON USE OR TO PANELS.
- 3. FOR ALL DEVICES AND BEING REMOVED, REMOVE RELATED CONDUIT AND WIRING TO SOURCE. RE-LABEL EXISTING CIRCUIT BREAKERS AS "SPARE" WHEN LOAD IS COMPLETELY REMOVED OR REVISE LABEL ON PANEL DIRECTORY APPROPRIATELY AND SET BREAKER TO THE 'OFF' POSITION.
- 4. PATCH ALL SURFACES TO MATCH SURROUNDING FOR DEVICES BEING REMOVED FROM EXISTING WALLS TO BE MAINTAINED. ALL CIRCUITS WHICH ARE REQUIRED TO REMAIN ACTIVE SHALL BE MAINTAINED OR REWORKED AS REQUIRED. ANY EXISTING CIRCUITS OR CABLING SYSTEMS SERVING AREAS NOT AFFECTED BY DEMOLITION SHALL BE MAINTAINED.
- 5. ALL CIRCUITS SHALL BE VERIFIED WITH EXISTING DRAWINGS AND ACTUAL FIELD CONDITIONS PRIOR TO BEGINNING DEMOLITION.
- 6. THE OWNER RESERVES THE RIGHT OF SALVAGE FOR ALL EXISTING ELECTRICAL EQUIPMENT PRIOR TO DEMOLITION. THE CONTRACTOR SHALL REVIEW ALL MATERIALS AND DELIVER TO THE OWNER THOSE REQUIRED IN THEIR EXISTING CONDITION. ALL OTHER MATERIAL SHALL BE REMOVED BY THIS
- 7. ALL WORK SHOWN LIGHT IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
- 8. ALL WORK SHOWN DARK OR DARK/DASHED SHALL BE DISCONNECTED AND REMOVED IN ITS ENTIRETY UNLESS NOTED OTHERWISE.

#### **EXECUTE EXECUTE EXECU**

1. DISCONNECT AND REMOVE EXISTING SURFACE MOUNTED RACEWAY ALONG WITH POWER DEVICES MAINTAIN BRANCH CIRCUIT WIRING FOR FUTURE CONNECTION OF NEW DEVICE.



SECOND FLOOR PARTIAL ELECTRICAL PLAN E1.1 SCALE: 3/16" = 1'-0"

#### **GENERAL NOTES:**

ANNOTATION LEGEND

DENOTES EXISTING TO BE MAINTAINED

- 1. ALL DEVICES, EQUIPMENT, LUMINAIRES, ETC., MUST BE GROUNDED BY USE OF A PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ELECTRICAL BONDS OF THE METALLIC RACEWAY SYSTEM SHALL ALSO
- 2. BRANCH CIRCUIT WIRE SIZES (AND CONDUITS) SHALL BE INCREASED FROM THESE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED A LIMIT OF 3%.
- 3. CIRCUITS MAY BE COMBINED IN CONDUIT PROVIDED WIRE IS PROPERLY DE-RATED AND CONDUIT SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN NINE (9) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT.
- 4. ALL CONDUITS SHALL CONTAIN A GROUND WIRE SIZED PER NEC TABLE #250-122. WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR VOLTAGE DROP, THE GROUND WIRE SIZE SHALL BE INCREASED PROPORTIONATELY (ACCORDING TO CIRCULAR MIL AREA) FROM THE SIZE REQUIRED BY NEC TABLE
- 5. EXPOSED CONDUITS, WHERE PERMITTED, SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO BUILDING STRUCTURAL MEMBERS.
- 6. ALL DEVICES SHALL BE WHITE WITH MATCHING COVERPLATES, UNLESS NOTED OTHERWISE.

#### X KEYED NOTE SCHEDULE

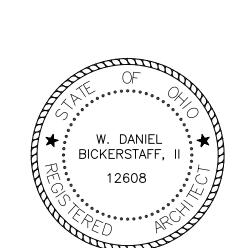
1. CONNECT TO SPARE DEDICATED CIRCUIT MADE AVAILABLE PER DEMOLITION. E.C. SHALL CONFIRM ALL CIRCUITS IN FIELD AND ADJUST AS REQUIRED.



Project Team:

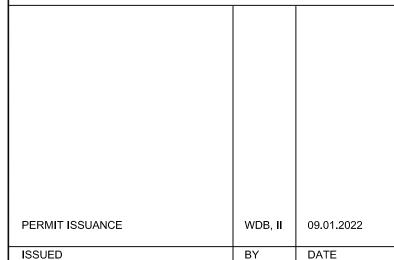
Architect





W. Daniel Bickerstaff, II License No. 12608 Expiration Date: December 31, 2023

.\0.1 Occupancy Final Plans\Signature Freehand.jpg



ANDREW J. RICKOFF SCHOOL

Interior Alteration

LIFE SKILLS ACADEMY

3500 East 147th Street Cleveland, OH 44120

Architectural Projects, Capital Projects Checked by: WDB, II **ELECTRICAL FLOOR PLANS** 

#### ELECTRICAL SPECIFICATIONS

#### SECTION 260010 - GENERAL REQUIREMENTS

- A. THE ARCHITECTURAL AND MECHANICAL EQUIPMENT AND ANY EQUIPMENT AND SPECIFICATIONS ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE ELECTRICAL CONTRACT DOCUMENTS. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME FAMILIAR WITH
- PROVISIONS CONTAINED THEREIN. B. IT IS THE PURPOSE OF THE ELECTRICAL DRAWINGS TO INDICATE THE APPROXIMATE LOCATIONS OF ALL EQUIPMENT, OUTLETS, FIXTURES, ETC. ASCERTAIN EXACT LOCATIONS AND ARRANGE WORK ACCORDINGLY. THE FINAL LOCATIONS ARE SUBJECT TO REASONABLE CHANGE BY THE ARCHITECT OR OWNER PRIOR TO ROUGH-IN AT NO ADDITIONAL COST. DIMENSIONS GIVEN ON THE PLANS SHALL BE VERIFIED IN THE FIELD. DRAWINGS SHALL NOT BE SCALED TO OBTAIN EXACT DIMENSIONS.
- THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS ELECTRICAL DEVICES, EQUIPMENT, FIXTURES, AND THE METHOD OF CONNECTING AND CONTROLLING THEM: THEY ARE NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL, NOR ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM. MATERIAL OR LABOR WHICH IS NOT SHOWN ON THE DRAWINGS OR INCLUDED IN THE SPECIFICATIONS BUT IS NECESSARY TO COMPLETE THE WORK, SHALL BE PROVIDED.
- THE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC, BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL OPERATION OF BUILDING AND WORK OF OTHER TRADES WILL PERMIT. ALL CHANGES FROM THESE DRAWINGS. NECESSARY TO MAKE THE WORK CONFORM TO THE BUILDING AS CONSTRUCTED. AND TO FIT THE WORK OF OTHER TRADES OR TO CONFORM TO THE RULES AND REGULATIONS OF THE STATE. MUNICIPAL AND LOCAL BODIES HAVING JURISDICTION, SHALL BE MADE BY THIS CONTRACTOR, AT HIS
- OWN EXPENSE. ALL BIDDERS ARE REQUIRED TO VISIT THE SITE OF WORK AND BECOME FAMILIAR WITH THE CONDITIONS AFFECTING INSTALLATION. SUBMISSION OF A PROPOSAL SHALL PRESUPPOSE KNOWLEDGE OF SUCH CONDITIONS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED WHERE EXTRA LABOR OR
- MATERIALS ARE REQUIRED BECAUSE OF IGNORANCE OF THESE CONDITIONS. F. IT IS THE INTENT OF THESE SPECIFICATIONS THAT EQUIPMENT SPECIFIED AS AN EXTENSION TO OR AN INTERFACE WITH AN EXISTING SYSTEM BE COMPLETELY COMPATIBLE WITH THE EXISTING SYSTEM. THE CONTRACTOR SHALL DETERMINE CHARACTERISTICS OF THE EXISTING SYSTEMS AND COORDINATE WITH SUPPLIERS OF NEW EQUIPMENT TO PROVIDE COMPLETE AND PROPERLY OPERATING SYSTEMS.
- 1.2 WORK INCLUDED A. ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE AND OPERATING ELECTRICAL
- INSTALLATION. ALL PERMITS AND INSPECTIONS REQUIRED FOR ELECTRICAL WORK. TEMPORARY ELECTRICAL SERVICE, GFI PROTECTED, LIGHTING AND WIRING FOR CONSTRUCTION.
- CONCRETE WHERE REQUIRED FOR ELECTRICAL WORK. CUTTING, PATCHING AND FIREPROOFING WHERE REQUIRED FOR ELECTRICAL WORK. FEEDER AND BRANCH CIRCUIT WIRING.
- GROUNDING SYSTEM H. LIGHTING FIXTURES AND LAMPS.
- ALL LIGHTING FIXTURES, HANGERS, SUPPORTS, LAMPS AND CONTROL DEVICES INSTALLED AND CONNECTED IN COMPLETE WORKING ORDER.
- EMERGENCY LIGHTING SYSTEM AND EXIT SIGNS RECEPTACLE OUTLETS, DISCONNECT SWITCHES AND EQUIPMENT CONNECTIONS. OUTLET BOXES, CABLING AND PLYWOOD BACKBOARDS IF REQUIRED FOR MOUNTING TELEPHONE AND
- M. PANELBOARDS, DISCONNECT AND TRANSFORMER PROVIDE CONSTRUCTION POWER AND LIGHTING, INCLUDING GFI PROTECTION FOR ALL TRADES. ASSIST OTHER TRADES.
- 1.3 MATERIALS NOT PROVIDED BY THIS CONTRACTOR, BUT SUBJECT TO HIS WIRING MOTORS AND MOTOR CONTROLS PROVIDED BY OTHER CONTRACTORS UNDER OTHER SECTIONS OF UNLESS OTHERWISE INDICATED ON THE DRAWING, THE MECHANICAL CONTRACTOR PROVIDES
- TEMPERATURE CONTROL COMPONENTS AND ALL RELATED CONDUIT AND WIRING. SECURITY SYSTEM AND WIRING BY OWNER. 1.4 REQUIREMENTS OF REGULATORY AGENCIES
- A. ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF ALL APPLICABLE FEDERAL, STATE, LOCAL AND REGIONAL CODES, RULES, REGULATIONS, AND STANDARDS, INCLUDING THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS INTERPRETED BY THE LOCAL
- B. SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR ELECTRICAL WORK AND GIVE THE PROPER AUTHORITIES NOTICES AS REQUIRED BY LAW. COMPLY WITH REGULATIONS REGARDING TEMPORARY ENCLOSURES, OBSTRUCTIONS, EXCAVATIONS, AND PAY FOR ALL LEGAL FEES INVOLVED. C. COPIES OF ALL INSPECTION REPORTS SHALL BE MADE AVAILABLE TO THE ARCHITECT ON REQUEST. THE ELECTRICAL CONTRACTOR SHALL FURNISH TO THE ARCHITECT THREE (3) COPIES OF THE
- APPROVED FINAL INSPECTION REPORT BEFORE REQUEST FOR FINAL PAYMENT. D. ALL CONDITIONS AND REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) SHALL BE FOLLOWED THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. THIS PROJECT, WHEN COMPLETE SHALL MEET OR EXCEED THE CONDITIONS AND REQUIREMENTS FOR SAFETY AS ESTABLISHED BY THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- 1.5 SUBMITTALS A. SUBMIT DRAWINGS, CATALOG SHEETS AND/OR WIRING DIAGRAMS FOR THE FOLLOWING EQUIPMENT AND SYSTEMS AS SPECIFIED IN DIVISION 1. WIRING DEVICES AND COVER PLATES. SUBMIT COLOR SAMPLES.
- LIGHTING FIXTURES & EMERGENCY LIGHTING. B. THE SUBMITTALS WILL BE REVIEWED BY THE ENGINEER FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS ONLY, AND NOT FOR DIMENSIONS, QUANTITIES, ETC.

PANELBOARDS, DISCONNECT SWITCHES, FUSED & NON-FUSED. STARTERS.

- THE SUBMITTALS RETURNED MARKED "REVIEWED" OR "FURNISH AS CORRECTED" SHALL BE USED FOR PROCUREMENT; HOWEVER, THE RESPONSIBILITY FOR CORRECT PROCUREMENT REMAINS SOLELY WITH THE CONTRACTOR. ANY SUBMITTALS RETURNED MARKED "REVISE AND RESUBMIT" OR "REJECTED" SHOULD BE RESUBMITTED AS NOTED. DISPOSITION OF SUBMITTALS SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY FOR
- DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS, UNLESS HE HAS SUBMITTED IN WRITING A LETTER ITEMIZING OR CALLING ATTENTION TO SUCH DEVIATIONS AT TIME OF SUBMISSION AND SECURED WRITTEN APPROVAL FROM THE ARCHITECT, NOR SHALL SUCH DISPOSITION OF SUBMITTALS RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN SUBMITTALS. 1.6 SUBSTITUTIONS
- A. THESE SPECIFICATIONS SHALL ESTABLISH THE QUALITY AND STANDARD FOR MATERIALS AND EQUIPMENT TO BE FURNISHED. ITEMS SPECIFIED BY MANUFACTURER, TRADE NAME, OR CATALOG NUMBER SHALL
- BE FURNISHED AS SPECIFIED WHERE MORE THAN ONE MANUFACTURER IS SPECIFIED FOR AN ITEM OR SYSTEM, THE CONTRACTOR MAY FURNISH ANY ITEM OR SYSTEM SPECIFIED. WHERE THE EQUIPMENT OF ONE MANUFACTURE IS SPECIFIED AND OTHER MANUFACTURERS ARE LISTED AS "ALTERNATE MANUFACTURERS", THE CONTRACTOR MAY FURNISH THE EQUIPMENT OF THE SPECIFIED MANUFACTURE OR OF ANY OF THE LISTED ALTERNATE MANUFACTURES. HOWEVER, THE DRAWINGS ARE BASED ON THE EQUIPMENT OF THE SPECIFIED MANUFACTURER ONLY. IF THE CONTRACTOR ELECTS TO FURNISH EQUIPMENT OF AN ALTERNATE MANUFACTURE. ANY CHANGES TO THE WORK SHOWN ON THE DRAWINGS REQUIRED ACCOMMODATING VARIATIONS OF THE ALTERNATE EQUIPMENT IN DIMENSIONS,

CHARACTERISTIC, ACCESS, ETC. FROM THE SPECIFIED EQUIPMENT INCLUDING WORK OF OTHER

PROVIDE AS-BUILT DRAWINGS ON MEDIA REQUIRED BY ARCHITECT. AS WORK PROGRESSES, RECORD ANY DEVIATION FROM CONTRACT DRAWINGS. NOTATIONS SHALL BE NEAT AND LEGIBLE WITH ANY ADDITIONAL EXPLANATORY DRAWINGS OR SKETCHES NECESSARY. KEEP ON SITE A CURRENT SET AND SUBMIT AT COMPLETION OF PROJECT.

CONTRACTORS SHALL BE INCLUDED IN THIS CONTRACTOR'S BID.

- 1.8 TEMPORARY LIGHTING AND WIRING A. PROVIDE TEMPORARY ELECTRICAL SERVICE, CONVENIENCE OUTLETS GFI PROTECTED, LIGHTING AND POWER AS REQUIRED FOR USE OF ALL TRADES DURING CONSTRUCTION.
- GUARANTEE ALL WORKMANSHIP AND MATERIALS FURNISHED UNDER THE CONTRACT FOR ONE YEAR AFTER ACCEPTANCE BY OWNER.REPAIR OR REPLACE ANY DEFECT DURING THE GUARANTEE PERIOD, WITHOUT COST TO OWNER.
- 1.10 MATERIALS AND EQUIPMENT A. ALL EQUIPMENT AND MATERIAL SHALL BE NEW, OF CURRENT MANUFACTURE AND MEET OR EXCEED STANDARDS SPECIFIED BY UL, NEMA, ANSI, AND IEEE WHEREVER SUCH STANDARDS HAVE BEEN ESTABLISHED AND SHALL BEAR THE UNDERWRITER'S LABORATORIES LABEL. ALL MATERIALS SUPPLIED OF ONE TYPE OR OF ONE SYSTEM SHALL BE BY THE SAME MANUFACTURER.
- B. EQUIPMENT AND MATERIAL SHALL BE PROTECTED BY AND BE THE RESPONSIBILITY OF CONTRACTOR UNTIL FORMALLY ACCEPTED BY THE OWNER.

#### 1.11 SUPPORTING DEVICES

- A. PROVIDE ALL HARDWARE, SUPPORTS, HANGERS, ANGLE IRON, CHANNELS, RODS, CLAMPS, ETC., FOR INSTALLATION OF ELECTRICAL EQUIPMENT AND LIGHT FIXTURES AS REQUIRED TO SUIT CONDITIONS AND APPLICATION. ALL SUPPORTING DEVICES SHALL BE GALVANIZED OR CADMIUM PLATED STEEL OR OTHER SUITABLY CORROSION-RESISTANT MATERIAL.
- B. SUPPORTING DEVICES SHALL INCLUDE:
- INDIVIDUAL STEEL RING OR CLEVIS TYPE HANGERS. 2. MALLEABLE IRON C-CLAMP AND RETAINING CLIPS FOR ATTACHMENT TO STEEL BEAMS. 3. RING AND TURNBUCKLE ATTACHMENT FOR STEEL PIPE.
- 4. TRAPEZE HANGERS WITH CLAMPS AND HANGER. 5. CONCRETE INSERTS RATED PER LOAD FOR ATTACHMENT TO CONCRETE.

1.12 WORKMANSHIP A. JOURNEYMAN ELECTRICIANS UNDER THE DIRECT SUPERVISION OF A COMPETENT FOREMAN SHALL INSTALL ELECTRICAL WORK. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICES OF

#### 1.13 EQUIPMENT CONNECTIONS

- A. SERVE AND CONNECT ELECTRICAL EQUIPMENT FURNISHED BY OTHERS AS SCHEDULED ON DRAWINGS. COORDINATE ALL OUTLET LOCATIONS AND CONNECTION REQUIREMENTS WITH THE CONTRACTOR FURNISHING THE EQUIPMENT. BEFORE CONNECTING ANY PIECE OF EQUIPMENT, CHECK THE NAMEPLATE RATING AGAINST THE INFORMATION SHOWN ON THE DRAWINGS AND CALL ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT. CAREFULLY STUDY ALL EQUIPMENT
- MANUFACTURER'S WIRING DIAGRAMS AND MAKE CONNECTIONS ACCORDINGLY. 1.14 CUTTING AND PATCHING
- CONTRACTOR SHALL GIVE THE GENERAL CONTRACTOR COMPLETE INFORMATION AS TO THE EXACT SIZE AND LOCATION OF SUCH OPENINGS AT THE PROPER TIME. B. PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL WORK IN EXISTING

A. AVOID CUTTING AND PATCHING OF NEW CONSTRUCTION BY USING SLEEVES. INSERTS. AND CHASES AS

CHASES, ETC., IN NEW CONSTRUCTION WILL BE PROVIDED BY THE GENERAL CONTRACTOR. THIS

REQUIRED. OPENINGS FOR THE PASSAGE OF DUCTS AND CONDUITS THROUGH WALLS AND FLOORS,

- CONSTRUCTION. STRUCTURAL MEMBERS SHALL NOT BE CUT UNLESS APPROVED BY ARCHITECT.
- A. TEST ALL CIRCUITS EQUIPMENT AND SYSTEMS SPECIFIED FOR GROUNDS, SHORTS AND PROPER PHASING BEFORE ENERGIZING. TEST ALL DEVICES, EQUIPMENT AND LIGHT FIXTURES FOR PROPER FUNCTIONING. CHECK LOAD BALANCE ON PANELS AND SERVICE. B. CONDUCT ANY TESTS REQUIRED BY CODE, LISTING AGENCY, MANUFACTURER, INSPECTOR, BUILDING
- DEPARTMENT, FIRE DEPARTMENT OR ANY OTHER AUTHORITY HAVING JURISDICTION. C. THE CONTRACTOR SHALL CONDUCT TESTS OF THE SYSTEM IN THE PRESENCE OF THE ARCHITECT/ENGINEER OR HIS AGENT. THE CONTRACTOR SHALL TURN OVER SYSTEM WIRING DIAGRAMS AND MAINTENANCE DATA TO THE ARCHITECT/ENGINEER.
- 1.16 FIELD QUALITY CONTROL AND COORDINATION A. CONSULT PLANS, FIELD LAYOUTS AND SHOP DRAWINGS COVERING WORK OF THE VARIOUS OTHER
  - TRADES AND PLAN LAYOUT OF ELECTRICAL WORK ACCORDINGLY. B. KEEP FULLY INFORMED OF THE PROGRESS OF THE GENERAL CONSTRUCTION, AND INSTALL WORK THAT IS TO BE CONCEALED WITHIN THE BUILDING CONSTRUCTION IN SUFFICIENT TIME TO SECURE PROPER LOCATION WITHOUT DELAY TO WORK OF OTHER TRADES.
  - C. ALL CONDUIT AND OUTLET BOXES CONCEALED IN MASONRY CONSTRUCTION SHALL BE INSTALLED DURING WALL CONSTRUCTION. OUTLET BOXES SHALL LINE UP WITH EITHER TOP OR BOTTOM OF MASONRY COURSES. ATTEND THE ELECTRICAL WORK DURING PROGRESS OF BUILDING-IN TO PREVENT
- D. EXAMINE WORK OF OTHER TRADES WHERE THEIR WORK COMES IN CONTACT WITH OR IS COVERED BY ELECTRICAL WORK. DO NOT ATTACH TO, COVER UP, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL ELECTRICAL WORK IN A MANNER, WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK E. TAKE ALL FIELD MEASUREMENTS NECESSARY AND ASSUME RESPONSIBILITY FOR THEIR ACCURACY.
- F. BEFORE INSTALLING ANY WORK, SEE THAT IT DOES NOT INTERFERE WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL WORK. REPORT ANY INTERFERENCE BETWEEN THIS WORK AND THAT OF ANY OTHER CONTRACTOR TO THE ARCHITECT AS SOON AS THEY ARE DISCOVERED. 1.17 EQUIPMENT INSTALLATION AND SUPPORT
- A. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S AND U.L. LABELING INSTRUCTIONS. B. ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING.
- SERVICING. MAINTAINING AND REPAIRING. C. ELECTRICAL WORK SHALL BE SUPPORTED FROM BUILDING STRUCTURAL ELEMENTS ONLY, AND NOT FROM BUILDING SUB-SYSTEMS SUCH AS MECHANICAL DUCTS OR PIPES OR ROOF DECK.

#### <u>SECTION 261000 - BASIC METHODS AND MATERIALS</u>

#### CONDUITS A. CONDUITS SHALL BE:

- RIGID OR INTERMEDIATE GRADE GALVANIZED STEEL CONDUIT IN WET LOCATIONS, CONCRETE, EXTERIOR MASONRY WALLS AND EXPOSED LOCATIONS SUBJECT TO DAMAGE. GALVANIZED STEEL ELECTRICAL METALLIC TUBING IN DRY LOCATIONS, INTERIOR PARTITIONS, AND
- 3. FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO TRANSFORMERS, MOTORS AND EQUIPMENT. LIQUIDTIGHT FLEXIBLE METAL CONDUIT IN WET AND DAMP LOCATIONS. 4. FLEXIBLE METALLIC TUBING FROM OUTLET BOX TO RECESSED LIGHT. 5. FIXTURES IN SUSPENDED CEILINGS — SIX FOOT MAXIMUM LENGTH.
- B. RACEWAYS SHALL BE SIZED IN ACCORDANCE WITH N.E.C. TABLES OR AS NOTED ON DRAWINGS, WHICHEVER IS LARGER. MINIMUM CONDUIT SIZE SHALL BE ONE HALF INCH. CONDUIT FITTINGS FOR RIGID CONDUIT SHALL BE THREADED CAST FERROUS ALLOY WITH GASKETS AND COVERS WHERE REQUIRED. CONDUIT FITTINGS FOR EMT SHALL BE SET SCREW OR COMPRESSION TYPE. LOCKNUTS SHALL BE OF THE BONDING TYPE THAT BITES INTO THE METAL OF THE BOX. BUSHINGS SHALL BE OF THE INSULATING TYPE.
- METAL CONDUITS SHALL BE COUPLED AND SECURED TO ALL BOXES IN A MANNER THAT PROVIDES AN ELECTRICALLY CONTINUOUS GROUND PATH FROM POINT OF SERVICE TO ALL OUTLETS. RIGID CONDUITS SHALL BE TERMINATED IN SHEET STEEL WITH DOUBLE LOCKNUTS AND AN INSULATING
- BUSHING. EMPTY CONDUITS STUBBED SHALL BE THREADED AND CAPPED. NYLON PULL LINE SHALL BE INSTALLED IN ALL EMPTY CONDUITS. G. CONDUIT ROUTING INDICATED ON THE DRAWINGS IS DIAGRAMMATIC ONLY AND IS NOT NECESSARILY THE
- INTENDED ACTUAL CONDUIT RUN. CONTRACTOR SHALL CHECK AND BE RESPONSIBLE FOR THE ACTUAL INSTALLATION WITH REGARD TO AVAILABLE SPACE AND SHALL COOPERATE WITH OTHER TRADES. H. ALL CONDUITS SHALL BE SIZED AND INSTALLED SO THAT THE REQUIRED NUMBER OF CONDUCTORS MAY BE PULLED IN WITHOUT INJURY OR STRAIN.
- CONDUIT RUNS SHALL BE LOCATED TO AVOID EQUIPMENT AND ACCESS TO EQUIPMENT OF OTHER CONDUITS IN FINISHED AREAS SHALL BE RUN CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS. CONDUITS MAY BE RUN EXPOSED ONLY IN MECHANICAL ROOM. K. EXPOSED CONDUITS, WHERE PERMITTED SHALL BE RUN WITH ALL RUNS PARALLEL TO OR AT RIGHT
- ANGLES TO BUILDING STRUCTURAL MEMBERS. CONDUIT SUPPORTS SHALL BE ATTACHED TO BUILDING STRUCTURAL MEMBERS ONLY, AND NOT TO ANY BUILDING SUB-SYSTEMS SUCH AS SUSPENDED CEILINGS, MECHANICAL DUCTS OR PIPES.
- M. ENDS OF EACH CONDUIT SHALL BE CAPPED WITH AN APPROVED CAP OR DISC TO PREVENT THE ENTRANCE OF FOREIGN MATERIALS DURING CONSTRUCTION. CONDUITS THAT PASS THROUGH FIRE OR SMOKE RATED WALLS, CEILINGS, OR DECKS SHALL BE INSTALLED SO AS TO MAINTAIN THE FIRE OR SMOKE RATING.
- EXPANSION FITTINGS SHALL BE INSTALLED AT ALL POINTS WHERE CONDUITS CROSS BUILDING EXPANSION JOINTS. CONDUIT ENTRIES INTO BUILDING SHALL BE MADE WATERTIGHT. ALL UNDERGROUND JOINTS SHALL BE

#### 1.2 600 VOLT FEEDER AND BRANCH CIRCUIT CONDUCTORS A. FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE U.L. LABELED, 98% CONDUCTIVITY COPPER

- STAMPED AT 2 FT. INTERVALS WITH CONDUCTOR SIZE AND INSULATION TYPE. FEEDER CIRCUIT CONDUCTORS SHALL BE TYPE 'THWN' OR 'XHHW', 600 VOLT, STRANDED COPPER. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE 'THHN/THWN', 600 VOLT, COPPER. WIRE SIZES #8 AWG AND LARGER SHALL BE STRANDED. MINIMUM WIRE SIZE SHALL BE #12 AWG OR LARGER AS REQUIRED TO LIMIT VOLTAGE DROP AT FURTHEST OUTLET TO 3%.
- COLOR CODE BRANCH CIRCUIT AND FEEDER CONDUCTORS AS FOLLOWS
- 120/208 VOLT, 3 PHASE 4 WIRE
  PHASE A BLACK
  PHASE B RED
  PHASE C BLUE
  NEUTRAL WHITE
  GROUND GREEN

- E. COLOR CODING SHALL BE CONTINUOUS ON INSULATION FOR #8 AWG OR SMALLER CONDUCTORS AND CONTINUOUS OR MARKED WITH COLORED TAPE AT ALL CONNECTIONS FOR CONDUCTORS LARGER THAN
- WIRE AND CABLE SHALL BE PULLED INTO CONDUIT USING IDEAL INDUSTRIES "YELLOW 77" OR EQUAL. MECHANICAL MEANS MAY BE USED TO PULL #4 AWG AND LARGER CONDUCTORS. SIX INCHES OF FREE WIRE SHALL BE PROVIDED AT ALL OUTLETS FOR WIRING DEVICE CONNECTION.
- G. ALL MECHANICAL WIRE AND CABLE TERMINATIONS SHALL BE TIGHTENED WITH TORQUE WRENCH OR SCREWDRIVER TO MANUFACTURER'S RECOMMENDED TORQUE VALUES.
- H. JOINTS IN #10 AWG AND SMALLER WIRE SHALL BE MADE WITH 3M "SCOTCH LOCKS OR EQUIVALENT INSULATED CONNECTORS. I. JOINTS IN #8 AWG AND LARGER WIRE SHALL BE MADE WITH PRESSURE TYPE MECHANICAL
- CONNECTORS AND INSULATED WITH ELECTRICAL TAPE OR HEAT SHRINK INSULATION TO 150% OF THE INSULATING VALUE OF THE CONDUCTOR INSULATION. J. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO CONNECT ALL SINGLE-PHASE, (120 AND 208)
- VOLT LOADS TO THE 3-PHASE BUS SYSTEM IN ORDER TO BALANCE THE LOADING ON THE PHASE K. PROVIDE DEDICATED NEUTRAL PER CODE FOR 120 CIRCUITS.
- 1.3 METAL CLAD CABLE (MC) SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH UNDERWRITERS LABORATORIES, INC. STANDARD FOR METAL CLAD CABLES. THE CABLE SHALL BEAR THE U.L. LABEL AND THE MANUFACTURER'S "E" NUMBER. IN ADDITION, METAL CLAD CABLE MUST MEET THE REQUIREMENTS OF THE LATEST NEC, NFPA 70, ARTICLE 334, METAL CLAD CABLE.
- A. DESCRIPTION: CLAD CABLE, CONTINUOUS SHEATH (INTERLOCKED STYLE IS NOT ACCEPTABLE BECAUSE THE OUTER ARMOR IS NOT AN APPROVED GROUNDING PATH).
- B. FEEDER CIRCUIT CONDUCTORS SHALL BE TYPE 'THWN' OR 'XHHW', 600 VOLT, STRANDED COPPER.
- INSULATION VOLTAGE RATING: 600 VOLTS.
- INSULATION TEMPERATURE RATING: 90 DEGREES C (DRY). INSULATION MATERIAL: THERMOPLASTIC (THHN) OR EQUIVALENT.
- ARMOR MATERIAL: GALVANIZED STEEL OR ALUMINUM OF THE CLASS A TYPE, CONTINUOUS SHEATH. GROUNDING: A FULL-SIZE INSULATED GREEN CONDUCTOR MUST BE PROVIDED. 4. USE ON U.L. "MC" CONNECTORS LISTED FOR SMOOTH OR CORRUGATED CONTINUOUS SHEATH (ROMEX AND BX CONNECTORS ARE NOT ACCEPTABLE).
- PROTECT EXPOSED CABLE FROM DAMAGE. 6. MC CABLE MAY BE USED IN LIEU OF CONDUIT AND WIRE SYSTEM FOR 20 AMP, 120 VOLT OR 277 VOLT CIRCUITING WHERE CONCEALED IN FINISHED AREAS, ABOVE CEILINGS OR UNFINISHED UTILITY
- SPACES EXCEPT FOR EXAM ROOMS & INJECTION ROOM. 1.4 CONDUIT BOXES A. OUTLET BOXES SHALL BE GALVANIZED STEEL CONSTRUCTION OF PROPER SIZE MEETING NEC
- REQUIREMENTS AND SUITABLE FOR THE LOCATION. B. PULL AND JUNCTION BOXES SHALL BE INSTALLED AT ALL POINTS REQUIRED WHETHER INDICATED ON DRAWINGS OR NOT. MINIMUM DIMENSIONS SHALL NOT BE LESS THAN NEC REQUIREMENTS. PULL AND
- JUNCTION BOXES SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL AND SHALL BE PROVIDED WITH FLAT PLAIN COVERS. C. ALL CONDUIT BOXES SHALL BE RIGIDLY MOUNTED TO THE BUILDING STRUCTURE INDEPENDENT OF
- D. DOOR SWING DIRECTIONS SHALL BE VERIFIED BEFORE INSTALLING BOXES FOR LIGHT SWITCHES. E. BOXES SHALL NOT BE INSTALLED BACK-TO-BACK IN WALLS. OPEN KNOCKOUTS OR HOLES IN BOXES SHALL BE PLUGGED WITH SUITABLE BLANKING DEVICES.

- WIRING DEVICES SHALL BE AS SPECIFIED IN THE SYMBOL LEGEND ON THE DRAWINGS. ALL WIRING DEVICES SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER EXCEPT WHERE SPECIFICALLY STATED OTHERWISE. COLORS SHALL BE AS SELECTED BY ARCHITECT.
- B. SWITCHES AND RECEPTACLES SHALL BE MANUFACTURED BY HUBBELL, PASS & SEYMOUR OR LEVITON COVER PLATES SHALL BE HIGH IMPACT SMOOTH THERMOPLASTIC. COLOR OF COVER PLATE SHALL MATCH DEVICE, AND STAINLESS OR GALVANIZED STEEL IN UNFINISHED SPACES. FINAL COLOR BY ARCHITECT.
- D. EACH RECEPTACLE SHALL BE TESTED FOR PROPER CONNECTION, POLARITY AND GROUNDING, WITH
- E. THE INSIDE COVER OF ALL RECEPTACLE AND LIGHT SWITCH PLATES SHALL BE PERMANENTLY MARKED TO INDICATE THE PANEL AND CIRCUIT NUMBER OF THE OUTLET OR LIGHT CIRCUIT.

#### SECTION 264000 - SERVICE AND DISTRIBUTION 1.1 ELECTRIC

A. THE ELECTRICAL SERVICE IS EXISTING, E.C. SHALL PROVIDE & INSTALL NEW EQUIPMENT AS NOTED. COORDINATE WITH FOR INCOMING SERVICES WITH LOCAL PROVIDER.

#### 1.2 BRANCH CIRCUIT PANELBOARDS

- A. BRANCH CIRCUIT PANELBOARDS ARE DEAD FRONT CIRCUIT BREAKER TYPE, WITH VOLTAGE, AMPERAGE, MAIN CIRCUIT BREAKER OR MAIN LUGS ONLY, AS NOTED ON DRAWINGS. ALL PANELBOARDS SHALL BE PROVIDED WITH SOLID NEUTRALS AN A GROOUNDING BUS WITH LUGS.
- B. CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC, MOLDED CASE, BOLT-ON TYPE WITH QUANTITY, AMPERAGE, AND POLES AS NOTED ON THE PANEL SCHEDULES. SHORT CIRCUIT INTERRUPTING CAPACITY SHALL BE 25,000 AMPERES SYMMETRICAL MINIMUM. TWO AND THREE POLE BREAKERS SHALL BE COMMON TRIP. AUTOMATIC TRIPPING SHALL BE INDICATED BY THE OPERATING HANDLE ASSUMING A MID-POSITION BETWEEN ON AND OFF.
- C . PANELBOARDS ENCLOSURES SHALL BE GENERAL PURPOSE, SURFACE OF FLUSH MOUNTED AS NOTED ON PLANS WITH GALVANIZED BACKBOX AND PAINTED FRONT WITH LOCKABLE DOOR. A GLAZED DIRECTORY FRAME SHALL BE PROVIDED INSIDE DOOR AND SHALL BE OF SUFFICIENT SIZE TO GIVE DESCRIPTION OF EACH CIRCUIT, ALL SECTIONS OF MILTI-SECTION PANELS SHALL BE SAME SIZE.
- D. TWO KEYS SHALL BE PROVIDED WITH EACH PANEL AND ALL PANELS SHALL SCREW FASTENED E. HANDLE LOCK-ON DEVICES SHALL BE PROVIDED ON BRANCH CIRCUIT BREAKERS FOR EMERGENCY, EXIT, SECURITY AND NIGHT LIGHTS.
- F. BRANCH CIRCUIT PANELBOARDS SHALL BE SQUARE D, SEIMENS OR CUTLER HAMMER.

#### 1.3 DISCONNECT SWITCHES

- A. ALL MOTOR DRIVEN EQUIPMENT SHALL BE PROVIDED WITH THE PROPERLY SIZED AND RATED DISCONNECT SWITCHES TO COMPLY WITH NEC REQUIREMENTS WHETHER INDICATED ON DRAWINGS OR
- B. DISCONNECT SWITCHES FOR ALL THREE PHASE MOTORS AND SINGLE PHASE MOTORS OVER 1/2 HORSEPOWER SHALL BE GENERAL DUTY, SINGLE THROW SAFETY SWITCHES. SWITCHES SHALL BE FUSIBLE OR NON-FUSIBLE, AS INDICATED ON DRAWINGS WITH AMPERAGE, POLES AND NEUTRAL, AS SHOWN ON DRAWINGS SWITCHES SHALL BE PROVIDED WITH QUICK-MAKE. QUICK-BREAK OPERATING MECHANISM, FULL COVER INTERLOCK AND INDICATOR HANDLE, PROVISIONS FOR PADLOCKING OFF, UL CLASS R REJECTION TYPE FUSE CLIPS, NEMA 1 ENCLOSURE FOR DRY LOCATIONS AND NEMA 3R
- C . DISCONNECT SWITCHES SHALL BE SQUARE D, SEIMENS OR CUTLER HAMMER.

#### 1.4 DRY TYPE TRAMSFORMER

- A. TRANSFORMERS SHALL BE GENERAL PURPOSE, VENTILATED, DRY TYPE, WITH 480 VOLT, 3 PHASE, 3 WIRE DELTA PRIMARY, 120/208 VOLT, 3 PHASE, 4 WIRE, WYE SECONDARY, AND KVA AS NOTED ON THE DRAWINGS. TRANSFORMERS SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ANSI C89.2 FOR KVA RATINGS OF 500 KVA AND BELOW.
- B. INSULATION SYSTEM SHALL BE CLASS F (115 DEGRESS C. TEMPERATURE RISE) FOR 15 KVA AND BELOW, AND CLASS H (150 DEGRESS C. TEMPERATURE RISE) FOR 30 KVA AND ABOVE. COILS SHALL BE WOUND WITH COPPER OR ALUMINUM. THE ENCLOSURE TEMPERATURE SHALL NOT EXCEED 35 DEGREES C. ABOVE AMBIENT.
- C. SOUND LEVELS SHALL NOT EXCEED NEMA STANDARDS.
- D. TWO 5% FULL CAPACITY TAPS BELOW NOMINAL VOLTAGE SHALL BE PROVIDED FOR 15 KVA AND BELOW, AND SIX 2.5% FULL CAPACITY TAPS, 2 ABOVE AND 4 BELOW NOMINAL VOLTAGE, SHALL BE PROVIDED FOR 30 KVA AND ABOVE.
- TRANFORMERS SHALL BE SQUARE D, SIEMENS OR CUTLER HAMMER.

- 1.5 EQUIPMENT IDENTIFICATION A. PROVIDE NEW NAMEPLATES WITH BLACK FACE AND WHITE LETTERS (MINIMUM HEIGHT 1/8" HIGH) ON ALL ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT. LETTERING SHALL BE AS FOLLOWS: LINE 1 - NAME OF EQUIPMENT AND IDENTIFICATION NUMBER USED ON DRAWINGS; LINE 2 - AMPERAGE AND VOLTAGE RATING; LINE 3 - IDENTIFICATION OF UPSTREAM OVERCURRENT PROTECTION DEVICE.
- 1.6 GROUNDING SYSTEM A. THIS CONTRACTOR SHALL VERIFY THAT THERE IS A COMPLETE SYSTEM OF GROUNDING FOR ALL
- GROUNDING CONNECTORS. B. ELECTRICAL SYSTEM AND EQUIPMENT GROUNDS SHALL COMPLY WITH ALL LOCAL, STATE AND N.E.C.

EQUIPMENT. A GOOD MECHANICAL AND ELECTRICAL CONNECTION SHALL BE MADE WITH APPROVED

CODES AND REGULATIONS. BONDING JUMPERS SHALL BE INSTALLED AT ALL LOCATIONS REQUIRED BY

C. PROVIDE GROUNDING AS REQUIRED FOR ALL COMMUNICATION SYSTEM EQUIPMENT.



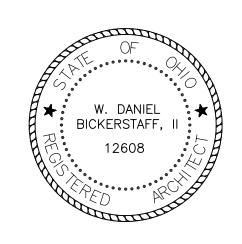
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PERMIT ISSUANCE WDB, II 09.01.2022

ANDREW J. RICKOFF SCHOOL

Interior Alteration

LIFE SKILLS **ACADEMY** 

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Checked by: WDB, II **ELECTRICAL** 

**SPECIFICATIONS** 

08.15.2022