

Anderson County Government

INVITATION TO BID

100 North Main Street, Suite 214
Courthouse
Clinton, Tennessee 37716
(865) 457-6218 Office
(865) 457-6252 Fax

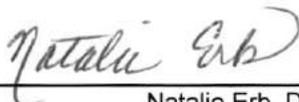
purchasing@andersontn.org
<http://andersontn.org/purchasing>

BID No.: 4777, Range Hood for Culinary Arts Classroom at Clinton High School
Date Issued: July 5, 2017

Bids will be received until
2:30 p.m. Eastern Time on July 25th, 2017

Sealed bids are subject to the General Terms and Conditions of this bid, and any other data attached or incorporated by reference. Bids will be received in the office of the Anderson County Purchasing Agent until the date and time specified above, and at that time publicly opened and read aloud.

THE ANDERSON COUNTY PURCHASING AGENT RESERVES THE RIGHT TO WAIVE ANY INFORMALITIES IN OR TO REJECT ANY OR ALL PROPOSALS AND TO ACCEPT THE PROPOSAL DEEMED FAVORABLE AND IN THE BEST INTEREST OF ANDERSON COUNTY.



Natalie Erb, Director of Finance

Scope of Work

THE SCOPE OF THE WORK INCLUDES FURNISHING ALL LABOR, MATERIAL AND EQUIPMENT, AND SERVICES NECESSARY TO INSTALL A COMPLETE RANGE HOOD SYSTEM. ALL MASONRY WORK, CEILINGS, PAINTING, SHEET METAL WORK, WIRING, TESTING, ETC. SHALL BE FURNISHED AND INSTALLED COMPLETE.

DRAWINGS AND SPECIFICATIONS MAY BE OBTAINED BY BIDDERS AT KNOXVILLE BLUE PRINT AND SUPPLY COMPANY, 622 LEROY AVE., KNOXVILLE, TN 37921. DRAWINGS AND SPECIFICATIONS MAY BE EXAMINED AT THE KNOXVILLE BUILDERS EXCHANGE AND F.W. DODGE COMPANY.

A MANDATORY PRE-BID CONFERENCE WILL BE HELD JULY 13, 2017 AT 10:00. BIDDERS ARE TO MEET IN THE CLINTON HIGH SCHOOL LOBBY.

**RANGE HOOD for
CULINARY ARTS CLASSROOM
CLINTON HIGH SCHOOL**

CLINTON, TENNESSEE

**ANDERSON COUNTY BOARD OF EDUCATION
CLINTON, TENNESSEE**

PROJECT MANUAL

**ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C.
500 Clyde Street
Knoxville, TN 37921
Phone 865-637-8339
Fax 865-523-8186**

PROJECT NO. 17022

**SET NO. _____
May 15, 2017**

PROJECT:
RANGE HOOD for CULINARY ARTS CLASSROOM
CLINTON HIGH SCHOOL
PROJECT #17022
ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C.

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INVITATION
TO BID
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ANDERSON COUNTY INVITATION TO BID NUMBER 4777

NOTICE IS HEREBY GIVEN THAT THE ANDERSON COUNTY PURCHASING AGENT WILL ACCEPT SEALED BIDS FOR

RANGE HOOD for CULINARY ARTS CLASSROOM
CLINTON HIGH SCHOOL
ANDERSON COUNTY SCHOOLS
CLINTON, TENNESSEE

SEALED BIDS WILL BE ACCEPTED UNTIL JULY 25, 2017 AT 2:30 P.M. E.S.T./LOCAL TIME, AT THE OFFICE OF THE ANDERSON COUNTY PURCHASING AGENT, 100 N. MAIN STREET, COURTHOUSE RM. 214, CLINTON, TENNESSEE, 37716-3687, AT WHICH TIME AND PLACE THEY WILL BE PUBLICLY OPENED AND READ ALOUD. BIDS MAY ONLY BE MAILED OR HAND DELIVERED. THE PURCHASING AGENT MUST RECEIVE BID IN A SEALED ENVELOPE PLAINLY MARKED IN THE UPPER LEFT CORNER WITH THE **BID NUMBER, THE OPENING DATE, CONTRACTOR'S LICENSE NUMBER, EXPIRATION DATE, CLASSIFICATION AND LIMIT ON LICENSE.** FAXED BIDS OR BIDS RECEIVED AFTER THE ABOVE SCHEDULED CLOSING TIME WILL NOT BE CONSIDERED NOR RETURNED. CONTRACTORS MUST PAY ALL APPLICABLE TAXES ON MATERIALS AND EQUIPMENT PURCHASED.

THE ANDERSON COUNTY PURCHASING AGENT RESERVES THE RIGHT TO WAIVE ANY INFORMALITIES IN OR REJECT ANY OR ALL BIDS AND TO ACCEPT THE BID DEEMED FAVORABLE TO THE BEST INTEREST OF ANDERSON COUNTY.

FURNISH ALL LABOR, MATERIAL AND EQUIPMENT, AND SERVICES NECESSARY TO INSTALL A COMPLETE RANGE HOOD SYSTEM. ALL MASONRY WORK, CEILINGS, PAINTING, SHEET METAL WORK, WIRING, TESTING, ETC. SHALL BE FURNISHED AND INSTALLED COMPLETE.

A **MANDATORY** PRE-BID MEETING WILL BE HELD ON JULY 13, 2017 AT 10:00 A.M., AT THE SCHOOL. BIDDERS SHALL MEET IN THE SCHOOL LOBBY.

DRAWINGS AND SPECIFICATIONS (FULL SETS ONLY) MAY BE OBTAINED BY BIDDERS AT KNOXVILLE BLUE PRINT AND SUPPLY COMPANY, 622 LEROY AVE., KNOXVILLE, TN 37921. DRAWINGS AND CONTRACT DOCUMENTS MAY BE EXAMINED AT THE KNOXVILLE BUILDERS EXCHANGE AND F.W. DODGE COMPANY.

EACH BID MUST BE ACCOMPANIED BY A BIDDERS BOND IN THE SUM OF NOT LESS THAN FIVE PERCENT (5%) OF THE TOTAL OF AMOUNT OF THE BID, INCLUDING ANY ADDITIVE ALTERNATIVES. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH SATISFACTORY PERFORMANCE AND PAYMENT BONDS EACH IN THE FULL AMOUNT OF THE BID. ALL BONDS SHALL BE FROM A SURETY COMPANY REGISTERED IN THE FEDERAL REGISTER, PART VIII, DEPARTMENT OF THE TREASURY, FISCAL SERVICE, COMPANIES HOLDING CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETIES ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANIES; NOTICE AND AUTHORIZED TO TRANSACT BUSINESS IN THE STATE OF TENNESSEE. ATTORNEYS-IN-FACT WHO SIGN ANY BONDS MUST FILE WITH EACH INSTRUMENT A CERTIFIED AND EFFECTIVE DATED COPY OF THEIR POWER OF ATTORNEY.

ALL BIDDERS MUST BE LICENSED IN THE CATEGORY OF "MC - MECHANICAL CONTRACTING" AS REQUIRED BY THE CONTRACTORS LICENSING ACT OF 1976, ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE ON MARCH 21, 1976, AS CURRENTLY AMENDED.

NO BIDDER WILL BE PERMITTED TO WITHDRAW HIS BID WITHIN FORTY-FIVE (45) DAYS AFTER THE DATE OF OPENING OF BIDS.

THE CONSTRUCTION CONTRACT, THE DETAILED SPECIFICATIONS, AND DRAWINGS CONTAIN THE PROVISIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT. NO INFORMATION OBTAINED FROM ANY OFFICER, AGENT, OR EMPLOYEE OF THE OWNER ON ANY MATTERS SHALL IN ANY WAY EFFECT THE RISK OR OBLIGATION ASSUMED OR RELIEVE HIM FROM FULFILLING ANY OF THE CONDITIONS OF THE CONTRACT.

BIDDER MUST AGREE TO COMMENCE WORK ON THE DATE ENTERED IN THE BID FORM AND TO FULLY COMPLETE IN THE NUMBER OF DAYS ENTERED IN THE BID FORM. BIDDER MUST AGREE ALSO TO PAY AS LIQUIDATED DAMAGES THE SUM OF FIVE HUNDRED DOLLARS (\$500.00) FOR EACH CONSECUTIVE CALENDAR DAY THAT THE CONTRACTOR IS IN DEFAULT AFTER THE STIPULATED NUMBER OF DAYS FOR COMPLETION OF THE WORK.

END OF INVITATION TO BID NUMBER 4777

PROJECT:
RANGE HOOD for CULINARY ARTS CLASSROOM
CLINTON HIGH SCHOOL
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INSTRUCTIONS
TO BIDDERS

ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C.

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INSTRUCTIONS TO BIDDERS

1. THE WORK:

RANGE HOOD
for CULINARY ARTS CLASSROOM

2. SECURING BID DOCUMENTS:

COPIES OF THE BID DOCUMENTS MAY BE OBTAINED UPON THE CONDITIONS SET FORTH IN THE INVITATION TO BID.

3. QUALIFICATIONS TO BIDDERS:

BIDDERS SHALL BE:

- A. LICENSED CONTRACTORS AND/OR SUBCONTRACTORS IN THE STATE OF TENNESSEE, WITH SPECIALITY CATEGORY OF MECHANICAL CONTRACTORS.

4. BID FORM

- A. **IN ORDER TO BE CONSIDERED ALL BIDS MUST BE SIGNED. PLEASE SIGN THE ORIGINAL IN BLUE INK.**

5. BONDS:

- A. BID SECURITY IN THE AMOUNT STATED IN THE INVITATION TO BID MUST ACCOMPANY EACH BID ISSUED BY SURETY. THE SUCCESSFUL BIDDER'S SECURITY WILL BE RETAINED UNTIL HE HAS SIGNED THE CONTRACT AND HAS FURNISHED THE REQUIRED CERTIFICATES OF INSURANCE.

- B. THE OWNER RESERVES THE RIGHT TO RETAIN THE SECURITY OF ALL BIDDERS UNTIL THE SUCCESSFUL BIDDER ENTERS INTO THE CONTRACT OR UNTIL FORTY FIVE (45) DAYS AFTER BID OPENING, WHICHEVER IS SOONER.

1. OTHER BID SECURITY WILL BE RETURNED AS SOON AS PRACTICAL. IF ANY BIDDER REFUSES TO ENTER INTO A CONTRACT, THE OWNER MAY RETAIN HIS BID SECURITY AS LIQUIDATED DAMAGES BUT NOT AS A PENALTY.

- C. PRIOR TO SIGNING THE CONTRACT, THE OWNER WILL REQUIRE THE SUCCESSFUL BIDDER TO SECURE AND POST A LABOR AND MATERIALS PAYMENT BOND AND A PERFORMANCE BOND, EACH IN THE AMOUNT OF ONE HUNDRED PERCENT (100%) OF THE CONTRACT SUM ON EACH OF THE FORMS PROVIDED HEREIN THE PROJECT MANUAL OR ITS AIA APPROVED EQUAL. SUCH BONDS SHALL BE ISSUED BY A SURETY COMPANY LICENSED TO DO BUSINESS IN THE STATE OF TENNESSEE. SUCH BONDS SHALL BE ISSUED BY SURETY ACCEPTABLE TO THE OWNER. COSTS OF SUCH BONDS WILL BE INCLUSIVE TO THE BID AMOUNT. IF THE BIDDER'S BID AMOUNT IS UNDER \$25,000.00 THEN BIDDER MAY SUBMIT A BANK IRREVOCABLE LETTER OF CREDIT (SUBJECT TO APPROVAL BY ANDERSON COUNTY) AT ONE HUNDRED PERCENT (100%) BID VALUE IN LIEU OF THE ABOVE BONDS.

- D. VENDORS ARE ADVISED THAT ALL BONDING COMPANIES MUST BE LISTED IN THE FEDERAL REGISTER, DEPARTMENT OF THE TREASURY FISCAL SERVICE, COMPANIES HOLDING CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETIES ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANIES; NOTICE.

6. NON-DISCRIMINATION:

BIDDERS MUST COMPLY WITH THE PRESIDENT'S EXECUTIVE ORDERS NO. 11246 AND 11375 WHICH PROHIBIT DISCRIMINATION IN EMPLOYMENT REGARDING RACE, COLOR, RELIGION, SEX OR NATIONAL ORIGIN. BIDDERS MUST NOT MAINTAIN OR PROVIDE FOR THEIR EMPLOYEES ANY FACILITIES THAT ARE SEGREGATED ON THE BASIS OF RACE, COLOR, RELIGION OR NATIONAL ORIGIN. BIDDERS MUST ALSO COMPLY WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, COPELAND ANTI-KICK BACK ACT, THE CONTRACT WORK HOURS AND SAFETY STANDARD ACT, SECTION 402 OF THE VIETNAM VETERAN ADJUSTMENT ACT OF 1974 AND SECTION 503 OF THE REHABILITATION ACT OF 1973, ALL OF WHICH ARE HEREIN INCORPORATED BY REFERENCE.

7. MINORITY SUB-CONTRACTORS:

BIDDERS ARE ENCOURAGED TO ACTIVELY SOLICIT MINORITY SUB-CONTRACTORS.

8. EXAMINATION OF DOCUMENTS AND SITE:

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BEFORE SUBMITTING A BID, EACH BIDDER SHALL EXAMINE THE DRAWINGS CAREFULLY, SHALL READ THE SPECIFICATIONS AND ALL OTHER PROPOSED CONTRACT DOCUMENTS, AND SHALL VISIT THE SITE OF THE WORK. EACH BIDDER SHALL FULLY INFORM HIMSELF PRIOR TO BIDDING AS TO EXISTING CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK IS TO BE PERFORMED, AND SHALL INCLUDE IN HIS BID A SUM TO COVER THE COST OF ITEMS NECESSARY TO PERFORM THE WORK AS SET FORTH IN THE PROPOSED CONTRACT DOCUMENTS. NO ALLOWANCE WILL BE MADE TO A BIDDER BECAUSE OF LACK OF SUCH EXAMINATION OR KNOWLEDGE. **THE SUBMISSION OF A BID WILL BE CONSIDERED AS CONCLUSIVE EVIDENCE THAT THE BIDDER HAS MADE SUCH EXAMINATION, AND THAT ALL QUANTITIES OF MATERIAL NECESSARY TO PERFORM THE WORK ARE INCLUDED IN THE BID AMOUNT AS DERIVED FROM BIDDER'S OWN FIELD MEASUREMENTS.**

9. INTERPRETATION OF PLANS AND SPECIFICATIONS:

- A. NO INTERPRETATION OF THE MEANING OF THE PLANS, SPECIFICATIONS OR OTHER PRE-BID DOCUMENTS WILL BE MADE TO ANY BIDDER ORALLY. EACH REQUEST FOR SUCH INTERPRETATION SHOULD BE IN WRITING ADDRESSED TO THE ENGINEER. TO BE GIVEN CONSIDERATION IT MUST BE RECEIVED AT LEAST SEVEN (7) DAYS PRIOR TO THE DATE FIXED FOR THE OPENING OF BIDS. ANY AND ALL SUCH INTERPRETATIONS AND ANY SUPPLEMENTAL INSTRUCTIONS WILL BE IN THE FORM OF WRITTEN ADDENDA TO THE SPECIFICATIONS WHICH, IF ISSUED, WILL BE FAXED TO ALL PROSPECTIVE BIDDERS, NOT LATER THAN THREE (3) DAYS PRIOR TO THE DATE FIXED FOR THE OPENING OF THE BIDS. ALL ADDENDA SO ISSUED SHALL BECOME PART OF THE CONTRACT DOCUMENTS.
- B. THE INTENT OF THESE SPECIFICATIONS IS TO SET FORTH AND CONVEY TO PROSPECTIVE BIDDERS THE GENERAL STYLE, TYPE, CHARACTER AND QUALITY OF THE ARTICLE DESIRED, AND NOT TO DESIGNATE OR IMPLY A CERTAIN BRAND OR MAKE. HOWEVER, ANY DEVIATION FROM THIS SPECIFICATION SHALL BE CLEARLY NOTED ALONG WITH SUFFICIENT INFORMATION TO ALLOW THE COUNTY AND THE ENGINEER TO EVALUATE THE EXCEPTIONS. BRAND NAMES AND/OR STOCK NUMBERS ARE USED TO DESCRIBE QUALITY STANDARD.

10. INSURANCE:

THE SUCCESSFUL BIDDER (CONTRACTOR) SHALL MAINTAIN BUILDERS RISK INSURANCE IN FORCE THROUGHOUT THE DURATION OF THE PROJECT.

11. WITHDRAWAL OF BIDS:

- A. A BIDDER MAY WITHDRAW HIS BID, EITHER PERSONALLY OR BY WRITTEN REQUEST, AT ANY TIME PRIOR TO THE SCHEDULED TIME FOR OPENING BIDS.
- B. NO BIDDER MAY WITHDRAW HIS BID FOR A PERIOD OF FORTY-FIVE (45) CALENDAR DAYS AFTER THE DATE SET FOR OPENING THEREOF, AND BIDS SHALL BE SUBJECT TO ACCEPTANCE BY THE OWNER, DURING THIS PERIOD.

12. EXECUTION OF AGREEMENT:

- A. THE FORM OF AGREEMENT WHICH THE SUCCESSFUL BIDDER WILL BE REQUIRED TO EXECUTE IS THE STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR WHERE THE BASIS FOR PAYMENTS IS STIPULATED SUM, AIA-A101, 1987 EDITION.
- B. THE BIDDER TO WHOM THE CONTRACT IS AWARDED SHALL, WITHIN SEVEN (7) CALENDAR DAYS AFTER NOTICE OF AWARD AND RECEIPT OF AGREEMENT FORMS FROM THE OWNER, SIGN AND DELIVER REQUIRED COPIES TO THE OWNER.
- C. AT OR PRIOR TO DELIVERY OF THE SIGNED AGREEMENT, THE BIDDER TO WHOM THE CONTRACT IS AWARDED SHALL DELIVER TO THE OWNER PERFORMANCE BOND AS ARE REQUIRED BY THE OWNER.
- D. BONDS SHALL BE APPROVED BY THE OWNER BEFORE THE SUCCESSFUL BIDDER MAY PROCEED WITH THE WORK. FAILURE OR REFUSAL TO PROVIDE SUCH BONDS IN A FORM SATISFACTORY TO THE OWNER SHALL SUBJECT THE SUCCESSFUL BIDDER TO LOSS OF TIME FROM THE ALLOWABLE CONSTRUCTION PERIOD EQUAL TO THE TIME OF DELAY IN FURNISHING THE REQUIRED MATERIAL.

13. NOTICE TO PROCEED:

- A. A NOTICE TO PROCEED SHALL BE ISSUED BY THE ENGINEER.

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B. CONSTRUCTION SHALL COMMENCE ON A DATE TO BE SPECIFIED IN THE "NOTICE TO PROCEED" TO THE CONTRACTOR AND SHALL BE COMPLETED ON OR BEFORE THE COMPLETION DATE SPECIFIED WITHIN THE BID PROPOSAL AND IN THE CONTRACT DOCUMENTS AS TIME IS OF THE ESSENCE IN THE PERFORMANCE OF THE CONTRACT FOR CONSTRUCTION.

C. UPON RECEIPT OF NOTICE TO PROCEED, THE CONTRACTOR WILL PROSECUTE THE WORK REGULARLY, DILIGENTLY, AND UNINTERRUPTEDLY AT SUCH RATE OF PROGRESS AS WILL INSURE FULL COMPLETION THEREOF WITHIN THE TIME SPECIFIED.

14. CONTRACT TERMINATION:

A. THE COUNTY MAY, BY WRITTEN NOTICE OF DEFAULT TO THE CONTRACTOR, TERMINATE THE WHOLE OR ANY PART OF THIS CONTRACT IF THE CONTRACTOR FAILS TO MAKE DELIVERY OF THE SUPPLIES OR TO PERFORM THE SERVICES WHEREIN THE TIME SPECIFIED HEREIN OR ANY EXTENSION THEREOF; OR IF THE CONTRACTOR FAILS TO PERFORM ANY OF THE OTHER PROVISIONS OF THE CONTRACT, OR SO FAILS TO MAKE PROGRESS AS TO ENDANGER PERFORMANCE OF THIS CONTRACT IN ACCORDANCE WITH ITS TERMS, AND EITHER OF THESE TWO CIRCUMSTANCES DOES NOT CURE SUCH FAILURE WITHIN A PERIOD OF ONE (1) DAY (OR SUCH LONGER PERIOD AS THE PURCHASING AGENT MAY AUTHORIZE IN WRITING) AFTER RECEIPT OF NOTICE FROM THE PURCHASING AGENT SPECIFYING SUCH FAILURE.

B. IF THE CONTRACT IS TERMINATED IN WHOLE OR IN PART FOR DEFAULT, THE COUNTY MAY PROCURE, UPON SUCH TERMS AND IN SUCH MANNER AS THE PURCHASING AGENT MAY DEEM APPROPRIATE, SUPPLIES OF SERVICES SIMILAR TO THOSE SO TERMINATED. THE CONTRACTOR SHALL BE LIABLE TO THE COUNTY FOR ANY EXCESS COSTS FOR SUCH SIMILAR SUPPLIES OR SERVICES, AND SHALL CONTINUE THE PERFORMANCE OF THIS CONTRACT TO THE EXTENT NOT TERMINATED UNDER THE PROVISIONS OF THIS CLAUSE.

C. EXCEPT WITH RESPECT TO DEFAULTS OF SUBCONTRACTORS, THE CONTRACTOR SHALL NOT BE LIABLE FOR ANY EXCESS COSTS IF THE FAILURE TO PERFORM THE CONTRACT ARISES OUT OF CAUSES BEYOND THE CONTROL AND WITHOUT THE FAULT OR NEGLIGENCE OF THE CONTRACTOR. IF THE FAILURE TO PERFORM IS CAUSED BY THE DEFAULT OF A SUBCONTRACTOR, AND IF SUCH DEFAULT ARISES OUT OF CAUSES BEYOND THE CONTROL OF BOTH THE CONTRACTOR AND THE SUBCONTRACTOR, AND WITHOUT THE FAULT OR NEGLIGENCE OF EITHER OF THEM, THE CONTRACTOR SHALL NOT BE LIABLE FOR ANY EXCESS COSTS FOR FAILURE TO PERFORM, UNLESS THE SUPPLIES OR SERVICES TO BE FURNISHED BY THE SUBCONTRACTOR WERE OBTAINABLE FROM OTHER SOURCES IN SUFFICIENT TIME TO PERMIT THE CONTRACTOR TO MEET THE REQUIRED DELIVERY SCHEDULE.

D. PAYMENT FOR COMPLETED SUPPLIES DELIVERED TO AND ACCEPTED BY THE COUNTY SHALL BE AT THE CONTRACT PRICE. THE COUNTY MAY WITHHOLD FROM AMOUNTS OTHERWISE DUE TO THE CONTRACTOR FOR SUCH COMPLETED SUPPLIES SUCH SUM AS THE PURCHASING AGENT DETERMINES TO BE NECESSARY TO PROTECT THE COUNTY AGAINST LOSS BECAUSE OF OUTSTANDING LIENS OR CLAIMS OF FORMER LIEN HOLDERS.

E. IF, AFTER NOTICE OF TERMINATION OF THIS CONTRACT UNDER THE PROVISIONS OF THIS CLAUSE, IT IS DETERMINED FOR ANY REASON THAT THE CONTRACTOR WAS NOT IN DEFAULT UNDER THE PROVISIONS OF THIS CLAUSE, THE RIGHTS AND OBLIGATIONS OF THE PARTIES SHALL BE THE SAME AS IF THE NOTICE OF TERMINATION HAD BEEN ISSUED PURSUANT TO TERMINATION FOR CONVENIENCE OF THE COUNTY.

F. THE RIGHTS AND REMEDIES OF THE COUNTY PROVIDED IN THIS CLAUSE SHALL NOT BE EXCLUSIVE AND ARE IN ADDITION TO ANY OTHER RIGHTS AND REMEDIES PROVIDED BY LAW OR UNDER THIS CONTRACT.

15. COMPLIANCE WITH APPLICABLE SAFETY STANDARD:

A. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS AND SAFETY STANDARDS RELATING TO CONSTRUCTION INCLUDING, BUT NOT LIMITED TO THE FEDERAL OR STATE OCCUPATIONAL SAFETY AND HEALTH ACT, AND ALL RULES AND ADMINISTRATIVE REGULATIONS PROMULGATED IN CONNECTION THEREWITH, AND SHALL MAINTAIN SUCH RECORDS AS ARE REQUIRED BY STATE AND FEDERAL LAWS RELATING TO CONSTRUCTION WORK, AND THE SAFETY AND HEALTH STANDARDS REGARDING SUCH WORK PLACES.

B. THE CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE PROCESSING OF JOB SAFETY AND WILL DESIGNATE A QUALIFIED SAFETY INSPECTOR IN HIS EMPLOY.

16. CONDITIONS OF SURFACES:

A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY INSPECT AND EXAMINE SURFACES OR AREAS PREPARED TO RECEIVE HIS WORK. SHOULD HE CONSIDER SUCH SURFACES OR AREAS NOT PROPER, OR SATISFACTORY FOR THE

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INSTALLATION OR APPLICATION OF HIS WORK, HE SHALL NOTIFY THE ENGINEER IN WRITING. SHOULD HE PROCEED BEFORE PROPER CORRECTIONS HAVE BEN MADE, IT SHALL BE AT HIS OWN RISK AND ANY SUBSEQUENT CORRECTIONS THAT MAY BE ORDERED OR REQUIRED SHALL BE AT HIS EXPENSE.

17. PROTECTION OF EXISTING STRUCTURES:

- A. THE CONTRACTOR SHALL PROTECT THE EXISTING STRUCTURES IN THE AREA FROM DAMAGE CAUSED BY HIS WORK OR WORKMEN, AND BE RESPONSIBLE FOR ANY DAMAGE THUS CAUSED.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE TO ITS ORIGINAL CONDITION ALL AREAS DISTURBED BY CONSTRUCTION.

18. BUILDING PERMITS:

A BUILDING PERMIT IS NOT REQUIRED FOR THIS PROJECT.

19. SMOKE FREE:

ANDERSON COUNTY BUILDINGS ARE DESIGNATED "SMOKE FREE" AND THERETO SMOKING ON OR IN THE BUILDINGS SHALL BE PROHIBITED.

20. PROOF OF FINANCIAL AND BUSINESS CAPABILITY:

BIDDER MUST, UPON THE REQUEST OF ANDERSON COUNTY, FURNISH SATISFACTORY EVIDENCE OF THEIR ABILITY TO FURNISH PRODUCTS OR SERVICES IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE CONTRACT DOCUMENT. ANDERSON COUNTY WILL MAKE THE FINAL DETERMINATION AS TO THE BIDDER'S ABILITY.

END SECTION

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SECTION: 00300
BID FORM

ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C.

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PART 1 - GENERAL

- 1.1 BID FORM (INCLUDING THE DRUG-FREE WORKPLACE AVIDAVIT) SHALL BE THE PREPARED BID FORM EXECUTED IN ITS ENTIRETY.
- 1.2 COPY OF THE BID FORM AND DRUG-FREE WORKPLACE AVIDAVIT IS BOUND HEREIN.
- 1.3 IN ORDER FOR THE PROPOSAL TO BE CONSIDERED, ALL BIDS MUST BE SIGNED BY AN AUTHORIZED AGENT OF THE BIDDER.

END OF SECTION

BID ENVELOPE COVER

NAME OF PROJECT: RANGE HOOD for CULINARY ARTS CLASSROOM: CLINTON HIGH SCHOOL

SEALED PROPOSALS WILL BE RECEIVED BY: ANDERSON COUNTY BOARD OF EDUCATION PURCHASING DEPARTMENT

DELIVER BIDS TO: ANDERSON COUNTY PURCHASING AGENT
100 N. MAIN STREET, COURTHOUSE RM. 214
CLINTON, TENNESSEE 37716

DATE: JULY 25, 2017

TIME: 2:30 PM

BIDDER: _____

ADDRESS: _____

TENNESSEE CONTRACTOR'S LICENSE NUMBER: _____

LICENSE CLASSIFICATION: _____

DOLLAR LIMIT: _____

LICENSE EXPIRATION DATE: _____

SUBCONTRACTOR'S TO BE USED ON THIS PROJECT

(IF NO SUBCONTRACT WORK IS REQUIRED, WRITE "NONE REQUIRED")

_____ LICENSE No. _____

Classification: _____ Expiration Date: _____

_____ LICENSE No. _____

Classification: _____ Expiration Date: _____

_____ LICENSE No. _____

Classification: _____ Expiration Date: _____

_____ LICENSE No. _____

Classification: _____ Expiration Date: _____

BIDDERS MUST COMPLETE ALL AREAS OF THIS FORM – THIS IS A SEALED BID

TO: ANDERSON COUNTY PURCHASING AGENT
100 N. MAIN STREET
COURTHOUSE RM. 214
CLINTON, TENNESSEE 37716-3687
ATTN: KATHERINE AJMERI

FROM: _____ (NAME OF BIDDER)

(ADDRESS OF BIDDER)

TENNESSEE LICENSE NO. _____
LICENSE CLASSIFICATION _____

FOR: RANGE HOOD for CULINARY ARTS PROGRAM
CLINTON HIGH SCHOOL
CLINTON, TENNESSEE

LUMP SUM BASE BID:

THE UNDERSIGNED, HAVING FAMILIARIZED HIMSELF WITH THE REQUIREMENTS OF CONTRACT DOCUMENTS INCLUDING ANY ADDENDA ACKNOWLEDGED HEREINAFTER AS PREPARED BY ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C., KNOXVILLE, TENNESSEE, AND THEIR CONSULTANTS HEREBY PROPOSE TO COMPLETE CONSTRUCTION WORK AND FURNISH ALL THINGS AS REQUIRED BY SAID DOCUMENTS AND ADDENDA FOR HVAC SYSTEM REPLACEMENT FOR TECHNOLOGY DEPARTMENT FOR THE LUMP SUM BASE BID PRICE OF:

BASE BID: _____ DOLLARS
(\$ _____)

THE BIDDER DECLARES THAT HE HAS MADE A CAREFUL EXAMINATION OF THE SITE FOR THE PROPOSED PROJECT, HAS DETERMINED THE AMOUNT AND CHARACTER OF THE WORK, THE EQUIPMENT AND MATERIAL NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS, AND HAS BECOME ACQUAINTED WITH ALL LOCAL CONDITIONS WHICH WOULD AFFECT WORK ON THE PROPOSED PROJECT. THE UNDERSIGNED HEREBY STATES THAT THIS PROPOSAL IS BASED ON THE USE OF THE MATERIALS AND PRODUCTS ACTUALLY MENTIONED BY NAME IN THE SPECIFICATIONS AND ADDENDA AND THAT HE SHALL BE RESPONSIBLE FOR FURNISHING MATERIALS WHICH FULLY CONFORM TO THESE SPECIFICATIONS.

SUBSTITUTIONS:

THE UNDERSIGNED BIDDER HAS BASED HIS BID UPON THE MATERIALS, PRODUCTS, ARTICLES, EQUIPMENT, BRANDS, MANUFACTURERS AND PROCESSES DESCRIBED IN THE BIDDING DOCUMENTS OR UPON APPROVED EQUIVALENTS. PROOF OF EQUIVALENCY OF SUBSTITUTIONS IS THE RESPONSIBILITY OF THE BIDDER, BUT THE ENGINEER AND OWNER SHALL BE THE JUDGE OF EQUIVALENCY. PROPOSED EQUIVALENT SUBSTITUTIONS SHALL BE EQUAL IN ALL RESPECTS TO THE REQUIREMENTS OF THE BIDDING DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE DESIGN, QUALITY, PHYSICAL SIZE, PERFORMANCE CHARACTERISTICS, STRENGTH, PREVIOUS HISTORY OF USE, AND TO THE METHOD OF INSTALLATION, ATTACHMENT, OR CONNECTION TO RELATED OR ADJOINING WORK.

ADDENDA:

THE UNDERSIGNED HEREBY ACKNOWLEDGES RECEIPT OF ALL CONTRACT DOCUMENTS, ALL PAGES OF SPECIFICATIONS, AND ALL SHEETS OF THE DRAWINGS, AND THE ADDENDA LISTED BELOW. ALL COSTS RESULTING FROM THESE ADDENDA HAVE BEEN INCLUDED IN THE PREPARATION OF THIS BID FORM.

ADDENDUM NO. _____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO. _____ DATED _____

COMPLETION DATE:

TIME IS OF THE ESSENCE. THIS JOB WILL BE AWARDED TO THE VENDOR THAT ANDERSON COUNTY DEEMS THE BEST VALUE OF COST AND JOB COMPLETION/SCHEDULING. PLEASE CLEARLY INDICATE THE FOLLOWING REGARDING YOUR BID.

- 1. DATE YOUR COMPANY CAN START JOB: _____
- 2. NUMBER OF CALENDAR DAYS NEEDED TO COMPLETE JOB: _____

BID ACCEPTANCE:

THE BIDDER DECLARES THAT HE HAS MADE A CAREFUL EXAMINATION OF THE SITE FOR THE PROPOSED PROJECT, HAS DETERMINED THE AMOUNT AND CHARACTER OF THE WORK, THE EQUIPMENT AND MATERIAL NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS, AND HAS BECOME ACQUAINTED WITH ALL LOCAL CONDITIONS WHICH WOULD AFFECT WORK ON THE PROPOSED PROJECT. THE BIDDER AGREES TO COORDINATE HIS WORK AND THE WORK OF ALL SUBCONTRACTORS ON THE PROJECT.

BID SECURITY:

SECURITY IN THE SUM OF _____
 _____ DOLLARS (\$ _____), IN THE FORM OF
 _____ IS SUBMITTED HERewith IN ACCORDANCE WITH THE INVITATION TO BID.

SHOULD THE BIDDER FAIL OR REFUSE TO EXECUTE THE CONTRACT OR FURNISH A BOND AS CALLED FOR IN THESE DOCUMENTS, THE BID SECURITY SHALL BE FORFEITED TO THE OWNER.

BID FORMS:

THE UNDERSIGNED ATTACHES TO THIS BID THE FOLLOWING FORMS:

- A. BID BOND (AIA-A310 OR EQUIVALENT)

BID HONOR:

THE UNDERSIGNED AGREES TO HOLD AND HONOR HIS BID FOR FORTY-FIVE (45) DAYS. THE UNDERSIGNED AGREES, IF WRITTEN NOTICE OF THE ACCEPTANCE OF THE BID IS MAILED, TELEGRAPHED OR DELIVERED TO THE UNDERSIGNED WITHIN FORTY-FIVE (45) DAYS AFTER THE OPENING THEREOF, OR AT ANY TIME THEREAFTER BEFORE THIS BID IS WITHDRAWN, THE UNDERSIGNED AGREES TO EXECUTE AND DELIVER A CONTRACT IN THE PRESCRIBED FORM AND FURNISH THE REQUIRED BOND WITH TEN (10) DAYS AFTER THE CONTRACT IS PRESENTED TO HIM, FOR SIGNATURE.

TIME SCHEDULE:

THE UNDERSIGNED AGREES TO COMMENCE WORK UNDER THIS CONTRACT ON OR BEFORE A DATE TO BE SPECIFIED IN THE "NOTICE TO PROCEED" AND TO FULLY COMPLETE THE PROJECT BY THE DATE OF COMPLETION LISTED ABOVE. BIDDER FURTHER AGREES TO PAY AS LIQUIDATED DAMAGES, THE SUM OF \$500.00 FOR EACH CONSECUTIVE CALENDAR DAY THEREAFTER AS PROVIDED IN THE GENERAL CONDITIONS.

NON-COLLUSION CERTIFICATION:

THE UNDERSIGNED CERTIFIES THAT THIS BID IS NOT THE RESULT OF, OR AFFECTED BY, ANY UNLAWFUL ACT OF COLLUSION WITH ANY OTHER PERSON OR COMPANY ENGAGED IN THE SAME LINE OF BUSINESS OR COMMERCE, OR ANY OTHER FRAUDULENT ACT PUNISHABLE UNDER TENNESSEE OR UNITED STATES LAWS.

MISCELLANEOUS CERTIFICATIONS:

THE BIDDER CERTIFIES THAT HE DOES NOT MAINTAIN OR PROVIDE FOR HIS EMPLOYEES ANY SEGREGATED FACILITIES AT ANY OF HIS ESTABLISHMENTS, AND THAT HE DOES NOT PERMIT HIS EMPLOYEES TO PERFORM THEIR SERVICES AT ANY LOCATION, UNDER HIS CONTROL, WHERE SEGREGATED FACILITIES ARE MAINTAINED. THE BIDDER CERTIFIES FURTHER THAT HE WILL NOT MAINTAIN OR PROVIDE FOR HIS EMPLOYEES ANY SEGREGATED FACILITIES AT ANY OF HIS ESTABLISHMENTS, AND THAT HE WILL NOT PERMIT HIS EMPLOYEES TO PERFORM THEIR SERVICES AT ANY LOCATION UNDER HIS CONTROL WHERE SEGREGATED FACILITIES ARE MAINTAINED. THE BIDDER AGREES THAT A BREACH OF THIS CERTIFICATION WILL BE A VIOLATION OF THE EQUAL OPPORTUNITY CLAUSE IN ANY CONTRACT RESULTING FROM ACCEPTANCE OF THIS BID. AS USED IN THIS CERTIFICATION, THE TERM "SEGREGATED FACILITIES" MEANS ANY WAITING ROOM, WORK AREAS, RESTROOMS, AND WASHROOMS, RESTAURANTS, AND OTHER EATING AREAS, TIME CLOCKS, LOCKER ROOMS, AND OTHER STORAGE OR DRESSING AREAS, PARKING LOTS, DRINKING FOUNTAINS, RECREATION OR ENTERTAINMENT AREA, TRANSPORTATION, AND HOUSING FACILITIES PROVIDED FOR EMPLOYEES WHICH ARE SEGREGATED BY EXPLICIT DIRECTIVE OR ARE IN FACT SEGREGATED ON THE BASIS OF RACE, COLOR, RELIGION, OR NATIONAL ORIGIN, BECAUSE OF HABIT, LOCAL CUSTOM, OR OTHERWISE. THE BIDDER AGREES THAT (EXCEPT WHERE HE HAS OBTAINED IDENTICAL CERTIFICATIONS FROM PROPOSED SUBCONTRACTORS FOR SPECIFIC TIME PERIODS) HE WILL OBTAIN IDENTICAL CERTIFICATIONS FROM PROPOSED SUBCONTRACTORS PRIOR TO THE AWARD OF SUBCONTRACTS EXCEEDING \$10,000 WHICH ARE NOT EXEMPT FROM THE PROVISIONS OF THE EQUAL OPPORTUNITY CLAUSE, AND THAT HE WILL RETAIN SUCH CERTIFICATIONS IN HIS FILES.

DEFAULT:

THE UNDERSIGNED, ACKNOWLEDGES THAT ANDERSON COUNTY RESERVES THE RIGHT, IN CASE OF BIDDER (CONTRACTOR) DEFAULT, TO PROCURE THE ARTICLES OR SERVICES FROM OTHER SOURCES AND HOLD THE DEFAULTING BIDDER (CONTRACTOR) RESPONSIBLE FOR ANY EXCESS COSTS OCCASIONED THEREBY.

BID REJECTION:

THE UNDERSIGNED, IN SUBMITTING THIS BID UNDERSTANDS THAT THE RIGHT IS RESERVED BY ANDERSON COUNTY TO REJECT ANY AND ALL BIDS.

THE PERSON WHO SIGNS THIS BID ON BEHALF OF THE BIDDER IS REQUIRED TO BE AND IS LEGALLY EMPOWERED TO BIND THE BIDDER TO A CONTRACT.

SIGNATURES

(NAME OF CORPORATION)

(BUSINESS ADDRESS)

DATE: _____
(TYPED)

BY: _____ BY: _____
(PRESIDENT)

ATTEST: _____
(SECRETARY)

CORPORATE SEAL

DATE: _____

NOTARIZED BY: _____

(TYPED)

COUNTY OF: _____

MY COMMISSION EXPIRES: _____

DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____

COUNTY OF _____

The undersigned, principal officer of _____, an employer of five (5) or more employees contracting with _____ County government to provide construction services, hereby states under oath as follows:

1. The undersigned is a principal officer of _____ (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.

2. The Company submits this Affidavit pursuant to T.C.A 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.

3. The Company is compliance with T.C.A 50-9-113

Further affiant saith not.

Principal Officer

STATE OF _____

COUNTY OF _____

Before me personally appeared _____, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purpose therein contained.

Witness my hand and seal office this _____ day of _____, 20_____.

Notary Public

My commission expires: _____, 20_____.

BACKGROUND CHECK COMPLIANCE FORM

ANDERSON COUNTY BOARD OF EDUCATION

101 South Main Street
Clinton, TN 37716
(865) 463-2800
(865) 457-9157 (Fax)

RANGE HOOD for CULINARY ARTS CLASSROOM: CLINTON HIGH SCHOOL

BACKGROUND CHECKS Contractors shall comply with Public Chapter 587 of 2007, as codified in Tennessee Code Annotated Section 49-5-413, which requires all contractors to facilitate a criminal history records check conducted by the Tennessee Bureau of Investigation and the Federal Bureau of Investigation for each employee prior to permitting the employee to have contact with students or enter school grounds when students are present.

Any person, corporation or other entity who enters or any employee of any person, corporation or entity who enters into or renews a contract with a local board of education or child care program on or after September 1, 2007, must:

- (1) Provide a fingerprint sample
- (2) Submit to a criminal history records check to be conducted by the Tennessee Bureau of Investigations and the Federal Bureau of Investigations.

Contact Anderson County Schools at (865-463-2800) for fingerprint instructions.

Company or Individuals (Name)

Address

City, State, Zip Code

Telephone Number

()

Contractor License Number (If Applicable)

I agree to abide by Public Chapter 587 of 2007, as codified in Tennessee Code Annotated Section 49-5-413, and certify that I am authorized to sign. The undersigned further agrees if this bid or contract is accepted, to furnish any and all of the Background Check Information on himself and all of his employees as required by law, at the request of Hamblen County Government. I hereby agree to release all criminal history and other required information to Hamblen County Government, the Tennessee Bureau of Investigation and the Federal Bureau of Investigation in accordance with Tennessee law and I further certify that all information supplied by me regarding this inquiry is true and accurate. I agree to release and hold harmless the above-mentioned governmental entities for the use of this information related to the purposes mandated under Tennessee law. I further certify that I have obtained acceptable criminal history information on all current employees and will obtain said information on future employees associated with the performance of the work defined in this bid or contract, pursuant to Tennessee Code Annotated 49-5-413 and that neither I nor any employee of mine is prohibited from direct contact with school children for the reasons enumerated in Tennessee Code annotated Section §§ 49-5-401 et seq.

Signature _____ Title _____

Printed Name: _____ Date _____

(Please Print Clearly)

(Month, Day, Year)

INTERNAL OFFICE USE ONLY

Notes _____

PROJECT:
RANGE HOOD for CULINARY ARTS CLASSROOM
CLINTON HIGH SCHOOL
PROJECT # 17022
ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C.

SECTION: 00700
GENERAL
CONDITIONS

PAGE: 1

AIA DOCUMENT A201, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, 1997, THOUGH NOT BOUND INTO THE PROJECT MANUAL IS AN INTEGRAL PART OF THE PROJECT MANUAL. THIS DOCUMENT IS AVAILABLE FOR REVIEW AT THE ENGINEER'S OFFICE.

END SECTION

PROJECT:
RANGE HOOD for CULINARY ARTS CLASSROOM
CLINTON HIGH SCHOOL
PROJECT # 17022
ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C.

SECTION: 01010
SUMMARY OF
WORK
PAGE: 1

PART 1 - GENERAL

- 1.1 LOCATION OF PROPERTY: THE PROPERTY IS LOCATED AT 425 DRAGON DRIVE, CLINTON, TN 37716.
- 1.2 PROJECT SCOPE: FURNISH ALL LABOR, MATERIAL AND EQUIPMENT, AND SERVICES NECESSARY TO INSTALL A COMPLETE RANGE HOOD SYSTEM. ALL MASONRY WORK, CEILINGS, PAINTING, SHEET METAL WORK, WIRING, TESTING, ETC. SHALL BE FURNISHED AND INSTALLED COMPLETE.
- 1.3 WORK SEQUENCE
- A. CONSTRUCTION WORK SHALL ACCOMMODATE THE OWNER'S OCCUPANCY OF THE PREMISES. THE INSTALLATION OF ALL WORK SHALL BE SUBSTANTIALLY COMPLETE AND OPERATIONAL WITHIN THE NUMBER OF DAYS ENTERED ON THE BID FORM.
- B. IT SHALL BE MANDATORY FOR THE CONTRACTOR TO KEEP CONSTRUCTION OPERATIONS PERSONNEL, MATERIALS, DEBRIS, ETC., FROM ENCRANCHING ON ACCESS WAYS OR REQUIRED EXITS FOR FIRE SAFETY AND COMPLIANCE WITH APPLICABLE ORDINANCES OR LAWS. CONTRACTOR SHALL COORDINATE THE USE OF PREMISES FOR WORK AND STORAGE OF MATERIALS FOR ALL SUBCONTRACTORS. CONTRACTOR SHALL RESTRICT ALL CONSTRUCTION TRAFFIC, DELIVERIES, ETC., TO THE AREAS DESIGNATED BY THE OWNER.
- 1.4 PROJECT MEETINGS
- A. THE OWNER, THE CONTRACTOR, SUBCONTRACTORS, MATERIAL MEN, AND VENDORS WHOSE PRESENCE IS NECESSARY, MUST ATTEND MEETINGS WHEN CALLED BY ENGINEER OR HIS REPRESENTATIVE FOR THE PURPOSE OF DISCUSSING THE EXECUTION OF THE WORK.
- B. MEETINGS WILL BE HELD AS REQUIRED, AT A TIME AND PLACE DESIGNATED BY THE OWNER AND THE ENGINEER OR HIS REPRESENTATIVES.
- 1.5 USE OF COMPLETED PORTIONS
- A. THE OWNER SHALL HAVE THE RIGHT TO TAKE POSSESSION OF AND USE ANY COMPLETED OR PARTIALLY COMPLETED PORTIONS OF THE WORK, BUT SUCH TAKING POSSESSION AND USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK NOT COMPLETED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR, OWNER AND ENGINEER SHALL MAKE AN INSPECTION OF THAT PORTION OF WORK TO DETERMINE ITS STATUS OF COMPLETION.
- B. IF SUCH PRIOR USE INCREASES THE COST OF OR DELAYS THE WORK, THE CONTRACTOR SHALL BE ENTITLED TO SUCH EXTRA COMPENSATION OR EXTENSION OF TIME, OR BOTH, AS THE ENGINEER MAY DETERMINE.
- 1.6 DISCRETIONARY FUND
- A. The General Contractor shall include in the base bid an amount equal to **five percent (5%)** of the Base Bid amount which shall constitute a discretionary fund. This fund shall be used at the discretion of the Engineer and the Owner. Upon completion of the work, the Contractor shall credit his final request for payment in the amount of all or any unused portion of this fund.
1. The discretionary fund amount shall be calculated on the entire Base Bid amount including all insurance and bonds.
- 1.7 DISCRETIONARY FUND ALLOWANCE
- A. Definition: The discretionary fund shall be calculated as a percentage of the cost of the portion of the work described to include overhead, profit, bonds and insurance.

PROJECT:
RANGE HOOD for CULINARY ARTS CLASSROOM
CLINTON HIGH SCHOOL
PROJECT # 17022
ALBERT F.G. BEDINGER CONSULTING ENGINEERS, P.C.

SECTION: 01010
SUMMARY OF
WORK

PAGE: 2

- B. Use the discretionary fund only as directed by the Engineer for the Owner's purposes and only by Field Orders which indicate amounts to be charged to the allowance.
- C. The Contractor's related costs for products and equipment ordered by the Owner under the discretionary fund are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- D. Change Orders authorizing use of funds from the discretionary fund will include Contractor's related costs and reasonable overhead and profit margins.
 - 1. At Project closeout, credit unused amounts remaining in the discretionary fund to the Owner by Change Order.

1.8 Unused Materials:

- A. Return unused materials to the manufacturer or supplier for credit to the Owner, after installation has been completed and accepted.
- B. When requested by the Engineer, prepare unused material for storage by Owner where it is not economically practical to return the material for credit. When directed by the Engineer, deliver unused material to the Owner's storage space. Otherwise, disposal of unused material is the Contractor's responsibility.

END SECTION

PART 1 - GENERAL

1.1 FINAL INSPECTION

- A. CONTRACTOR SHALL SUBMIT A WRITTEN DECLARATION TO THE OWNER AND ENGINEER THAT: ALL ASPECTS OF THE CONTRACT DOCUMENTS HAVE BEEN COMPLIED WITH, ALL TOOLS, CONSTRUCTION EQUIPMENT AND SURPLUS MATERIALS HAVE BEEN REMOVED FROM SITE.
- B. CONTRACTOR WITH OWNER AND ENGINEER WILL MAKE FINAL INSPECTION TO ENSURE COMPLETION OF ALL CONTRACT REQUIREMENTS.

1.2 DOCUMENTS REQUIRED PRIOR TO FINAL PAYMENT

PRIOR TO FINAL PAYMENT, AND BEFORE THE ISSUANCE OF A FINAL CERTIFICATE OF PAYMENT IN ACCORDANCE WITH THE PROVISIONS OF THE GENERAL CONDITIONS, FILE THE FOLLOWING PAPERS WITH THE ENGINEER:

A. GUARANTEES

TWO COPIES OF THE GUARANTEE REQUIRED BY THE GENERAL CONDITIONS AND ANY OTHER EXTENDED GUARANTEES STATED IN THE TECHNICAL SECTIONS OF THE SPECIFICATIONS.

B. RELEASE OR WAIVER OF LIENS

AS REQUIRED BY THE GENERAL AND SUPPLEMENTARY CONDITIONS.

C. OPERATION AND MAINTENANCE MANUALS

- 1. FURNISH THREE COMPLETE SETS OF MANUALS CONTAINING THE MANUFACTURER'S INSTRUCTIONS FOR MAINTENANCE AND OPERATION OF EACH ITEM OF EQUIPMENT AND APPARATUS FURNISHED UNDER THE CONTRACT AND ANY ADDITIONAL DATA SPECIFICALLY REQUIRED UNDER THE VARIOUS SECTIONS OF THE SPECIFICATIONS.
- 2. ARRANGE THE MANUALS IN PROPER ORDER, INDEXED AND SUITABLY BOUND. CERTIFY BY ENDORSEMENT THEREON THAT EACH OF THE MANUALS IS COMPLETE AND ACCURATE. ASSEMBLE THESE MANUALS FOR ALL DIVISIONS OF THE WORK, REVIEW THEM FOR COMPLETENESS, AND SUBMIT THEM TO THE ENGINEER. PROVIDE SUITABLE TRANSFER CASES AND DELIVER THE MANUALS THEREIN, INDEXED AND MARKED FOR EACH DIVISION OF THE WORK.

D. PROJECT RECORD DOCUMENTS

- 1. AS THE WORK PROGRESSES KEEP A COMPLETE AND ACCURATE RECORD OF CHANGES OR DEVIATIONS FROM THE CONTRACT DOCUMENTS AND THE SHOP DRAWINGS, INDICATING THE WORK AS ACTUALLY INSTALLED. CHANGES SHALL BE NEATLY AND CORRECTLY SHOWN ON THE RESPECTIVE PORTION OF THE AFFECTED DOCUMENT, USING BLACKLINE OR BLUELINE PRINTS OF THE DRAWINGS AFFECTED, OR THE SPECIFICATIONS, WITH APPROPRIATE SUPPLEMENTARY NOTES. GIVE PARTICULAR ATTENTION TO CONCEALED WORK WHICH WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE. THIS RECORD SET OF DRAWINGS, SHOP DRAWINGS, AND SPECIFICATIONS SHALL BE KEPT AT THE JOB SITE FOR INSPECTION BY THE ENGINEER, OWNER, OR THEIR REPRESENTATIVES.
- 2. THE RECORDS ABOVE SHALL BE ARRANGED IN ORDER, IN ACCORDANCE WITH THE VARIOUS SECTIONS OF THE SPECIFICATIONS, AND PROPERLY INDEXED. AT THE COMPLETION OF THE WORK, CERTIFY BY ENDORSEMENT THEREOF THAT EACH OF THE REVISED PRINTS OF THE DRAWINGS AND SPECIFICATIONS IS COMPLETE AND ACCURATE. PRIOR TO APPLICATION FOR FINAL PAYMENT, AND AS A CONDITION TO ITS APPROVAL BY THE ENGINEER AND OWNER, DELIVER THE RECORD DRAWINGS AND SPECIFICATIONS, ARRANGED IN PROPER ORDER, INDEXED, AND ENDORSED AS HEREIN BEFORE SPECIFIED. PROVIDE SUITABLE TRANSFER CASES AND DELIVER THE RECORDS THEREIN, INDEXED AND MARKED FOR EACH DIVISION OF THE WORK.

PROJECT:
RANGE HOOD for CULINARY ARTS CLASSROOM
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SECTION: 01700
PROJECT CLOSEOUT

PAGE: 2

3. REVIEW OR RECEIPT OF SUCH RECORDS BY THE ENGINEER OR OWNER SHALL NOT BE A WAIVER OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS OR THE SHOP DRAWINGS OR IN ANY WAY RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE SHOP DRAWINGS TO THE EXTENT THEY ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

END SECTION

SECTION 15050

BASIC MECHANICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The provisions of Division 1 apply to the work under this section.

1.02 DESCRIPTION OF WORK

Furnish all labor, material, equipment, and services necessary to furnish and install a range hood shown on the drawings and specified herein.

1.03 SPECIAL REQUIREMENTS

- A. Determine the characteristics of electric current to be provided to operate the mechanical equipment prior to ordering such equipment. All electrically operated equipment shall be designed for operation with the type of electric current available to the project.
- B. The equipment shall be properly prepared structurally and mechanically ready to receive a single connection for each of the various mechanical items. Verify all connections and rough-in locations with the Engineer and/or the equipment supplier or contractor prior to the start of their work.
- C. The provisions of Division 1, "GENERAL REQUIREMENTS" apply to the work under this section.
- D. The requirements included under this section are additional and supplementary to all of the following sections under DIVISION 15.

1.04 EQUIPMENT LISTS, SHOP DRAWINGS AND SAMPLES

- A. Submit to the Engineer for approval within 30 days after receipt of notice to proceed with the work, a complete list of materials, equipment and accessories proposed for use, including complete descriptions and specifications of any proposed substitutions, manufacturer's shop drawings, rough-in drawings, and any other information required for the proper installation of the work. Submittals shall be in .pdf format (no paper copies).
- B. A detailed list of all items that do not meet the specifications shall accompany all submittals. This list shall be the first page of all submittals. Any delays associated with investigating proposed substitutions shall be the responsibility of the Contractor.

- C. All submittals shall be submitted at one time in one file. All submittals shall include the following information.
 - 1. The project title
 - 2. The date of submission and the dates of any previous submissions
 - 3. Contractor, supplier and manufacturer identification
 - 4. Identification of revisions on re-submittals
 - 5. A 6" x 6" blank space for Engineer's stamp
- D. All re-submittals shall be submitted at one time in one file. If substitute material, equipment, etc. is rejected twice, the specified product shall then be submitted.
- E. Shop drawings shall show physical dimensions of equipment, capacity characteristics of equipment, and all other pertinent details.
- F. The right is reserved to require the submission of samples of any or all items of materials, equipment and accessories which are proposed for use as equal to those specified, and the Contractor shall, if requested by the Engineer, submit such samples without additional cost to the Owner.

1.05 OPERATING INSTRUCTIONS

- A. Furnish the services of a competent person (or persons) to instruct the Owner's personnel in the proper operation and maintenance of all equipment installed under this contract.
- B. Furnish and deliver to the Engineer three sets of bound operating instructions for all equipment installed under this contract, including shop drawings, piping diagrams, wiring diagrams, maintenance recommendations and information concerning replacement parts. Completed warranty information shall be included with the manual.

1.06 PERMITS, INSPECTIONS AND CODES

- A. Work shall comply with all applicable laws, ordinances and codes of the State of Tennessee and local authorities having jurisdiction, and with applicable rules and regulations of the local utility. Except as inconsistent with the aforementioned State and local laws, ordinances and codes, the work shall conform to the requirements of NFPA, ADA, the International Plumbing Code, the International Mechanical Code and the International Energy Conservation Code.
- B. Obtain all permits and inspections required for the completion of the work and pay all fees and costs in connection therewith.

1.07 GUARANTEE

- A. The Contractor shall guarantee all work to be in accordance with the contract requirements and free from defective materials, equipment and workmanship, and he shall guarantee that all equipment is of proper size and design and so installed as to produce the performance specified and called for on the drawings.
- B. The period of the guaranty shall be for one year after substantial completion of the project.
- C. If within the guaranty period the Owner finds that the guaranteed work needs to be repaired, changed, or replaced because of the use of materials, equipment or workmanship which are inferior, defective, or not according to the contract documents or because of equipment that will not produce the specified capacities, he shall advise the Contractor and the Contractor shall promptly and without additional expense to the Owner:
 - (1) Place in a satisfactory condition all of such guaranteed work by repairing, changing, or replacing it.
 - (2) Make good all damage to equipment, the building or contents thereof, which is the result of such unsatisfactory guaranteed work.
 - (3) Make good any work, materials, and equipment that are disturbed in fulfilling the guaranty.

PART 2 - PRODUCTS

2.01 MATERIALS

Equipment and materials used in the work shall be in accordance with the contract requirements, shall be new and unused and shall be the manufacturer's latest standard or current model for which replacement parts are readily available.

2.02 MOTORS

- A. Motors shall be in accordance with I.E.E.E. and N.E.M.A. standards, selected for quiet operation, of standard design for specific voltage available, and for continuous duty 40 degree C rise. Unless otherwise specified, they shall be open drip proof, ball bearing, squirrel cage type, equal to Reliance, or approved substitute. Provide raceway terminal box on each motor, of ample size and with removable cover to make connections.
- B. Motors up to, and including, 1/2 HP shall be designed for 120 volt, single phase current; motors 3/4 HP and larger shall be designed for 480 volt, three phase current. Verify characteristics of available current at the building before equipment is ordered. See ELECTRICAL.
- C. All motors shall meet NEMA MG-1, Section IV, Part 31.40.42 requiring motors to operate with up to 1600 peak voltage and a minimum rise time of 0.1 microseconds.

- D. Where no definite horsepower is specified, motors shall be sized so that when driven apparatus is operated at full capacity, motor shall be under not less than 3/4 load rating.

2.03 SUBSTITUTIONS

- A. Certain items of equipment have been specified by manufacturer's name and catalog number to indicate the type and quality desired and to serve as a basis for the engineering design. Similar products of other manufacturers will be approved, if deemed equal by the Engineer to those specified in type, function and quality, and if compatible with adjacent or connected work.
- B. If any substitutions are allowed, the Contractor shall furnish all additional, supplementary engineering drawings required by such substitutions, and shall make all necessary incidental omissions, additions or adjustments in other work that may be necessitated by such substitutions, without additional cost to the Owner. No substitution shall be made without the written approval of the Engineer.

PART 3 - EXECUTION

3.01 WORKMANSHIP

- A. Work shall be installed under the constant supervision of a competent superintendent and by skilled and competent mechanics.
- B. Apparatus and equipment shall be installed and connected in accordance with the best engineering practices and in accordance with the manufacturer's recommendations. All auxiliary electrical connections, etc., recommended by the manufacturer or required for proper operation shall be furnished and installed complete.
- C. Ducts shall be run concealed in walls, ceilings and chases through all finished spaces.
- D. Ducts, and equipment shall be kept as close as possible to overhead structure, walls, columns, etc., and shall be installed in such an orderly manner as to take up a minimum of space and allow a maximum of headroom, and all offsets, fittings, etc., required to accomplish this shall be furnished and installed, whether or not each offset and fitting is specifically shown or noted.

3.02 INTERFERENCES AND DEVIATIONS

- A. The work shall be so coordinated as to avoid interference between mechanical, electrical, architectural, and structural work as specified under "Coordination" herein. All necessary offsets and fittings in ducts shall be furnished and installed or minor deviations made, as required to avoid interference.

- B. Any work installed so as to prevent the proper installation of subsequent work shall be removed and properly reinstalled without additional cost to the Owner.
- C. If necessary to coordinate and expedite the work, the Contractor shall prepare "interference drawings" and submit them to the Engineer for approval. Such drawings shall show the work of the various trades involved, illustrate proposed details of construction and arrangement of equipment and apparatus, and clearly indicate deviations from contract requirements.
- D. Minor changes in arrangement may be made to suit unforeseen conditions, but no major deviation shall be made without written approval from the Engineer. If any deviations are deemed necessary, submit all details of proposed changes and all reasons therefor, in writing, to Engineer the for approval prior to making installation of such work.

3.03 COORDINATION

- A. The mechanical drawings are generally diagrammatic, and unless specifically dimensioned, the locations of equipment, and the routing of ducts are approximate only, and shall not be scaled from the mechanical drawings. See architectural drawings for dimensions.
- B. The mechanical work shall be installed as nearly as possible in the locations shown, but shall be subject to such deviations, modifications and relocations as may be necessary to conform to the requirements of the architectural drawings and as necessary to avoid interference with the structural work and the work of other trades, and interference between the various trades.

3.04 CUTTING AND REPAIRING

Structural members or finished work shall not be cut without the express permission of the Engineer. Cutting shall be done neatly and patching or repairing shall match adjacent work.

3.05 QUIETNESS OF OPERATION

Fans, motors and other apparatus shall be selected and installed for reasonably quiet operation. Any objectionable noise that develops shall be corrected before the work will be accepted. Equipment that produces objectionable noise shall be adjusted so as to eliminate the noise, or shall be removed and replaced with satisfactory equipment.

3.06 PROTECTION AND CLEANING

- A. Work shall be protected at all times. Equipment shall be covered, if necessary, to protect against dirt, water, chemical or mechanical damage or defacement.
- B. Upon completion of the work and after all tests have been made clean all equipment and leave in correct operating condition. At the time of substantial completion all air filters shall be replaced with new filters.

- C. Each subcontractor shall remove from the premises and dispose of all rubbish and debris resulting from his work.

END OF SECTION 15050

SECTION 15500

HEATING AND VENTILATING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The provisions of Division 1, and Section 15050, "BASIC MECHANICAL MATERIALS AND METHODS" apply to the work under this section.

1.02 DESCRIPTION OF WORK

Furnish all labor, material and equipment, and perform all work to install a complete range hood system as shown on the drawings and specified herein.

PART 2 - PRODUCTS

2.01 SHEET METAL WORK

- A. All ducts shall be fabricated from galvanized steel.
- B. Ducts shall be sizes shown on the drawings, cross-braced, rigidly braced, adequately supported, and securely fastened in place. Metal gauges, turning vanes, transitions, seams, joints, and reinforcing shall be in accordance with the latest SMACNA "Low Pressure Duct Construction Standards". No ducts shall be lighter than #24 gauge. Duct sizes are net inside dimension and allowance in each direction shall be made for liner.
- C. Install single thickness turning vanes at right angles and small radius turns in ducts. Make reductions in duct size with tapered transition pieces. Transitions for connections to equipment shall be designed to suit conditions and so that the airflow will not be restricted.
- D. All transverse seams and joints in ductwork shall be thoroughly sealed with Irongrip, Childers, United Duct Seal, or equal duct sealer.
- E. Ductwork for range hood exhaust system shall be constructed of not less than 16 gauge black steel. All seams and joints shall be continuously welded and be liquid-tight. The exhaust ductwork for the hood shall not be interconnected with any other ventilation system. Where ductwork passes through walls, ceilings, or partitions, adequate measures shall be taken to prevent combustion of building materials as per NFPA 96. An opening shall be provided at each change of direction and every six feet in horizontal ductwork to facilitate cleaning. The opening shall be capable of being sealed and not affect the integrity of the duct system. All sections of the ductwork shall be constructed and installed without forming dips and traps and must slope not less than one quarter inch per foot toward either the hood or approved residue trap. Ducts cannot pass through fire partitions having a fire resistance rating of two hours or more. The ductwork shall

lead, as directly as possible, to the exterior of the building.

2.02 DUCT INSULATION

- A. All insulation shall be installed by an insulation contractor that is normally engaged in this type of work.
- B. All fiberglass insulating materials shall be equal to Owens-Corning, Knauf, or equal, installed in strict accordance with the manufacturer's recommendations. Duct linings, coverings, vapor barriers, and the adhesives used for applying them shall have a flame spread classification of not more than 25 and a smoke developing rating of not more than 50 as tested in accordance with ASTM Standard E84.
- C. Insulate all supply air ductwork with 2-1/5" thick Type 75, ASW fiberglass duct wrap. Thoroughly tape all joints and seams with SMACNA tape.

2.03 DUCT HEATER

- A. Electric duct heater shall be the open coil type, U.L. listed, furnished with magnetic contactors, branch circuit fusing, control transformer, SCR controller, door interlock disconnect, thermal protection devices, air flow switch and over temperature control.
- B. The heater shall be the insert type with a hinged, solid cover control box of aluminized steel. Element support bars shall be of aluminized steel. Element wire of 80% nickel and 20% chromium shall be strung on heater with a stretch ratio of not less than 2:1.
- C. The duct heater shall be as manufactured by Redd-i Heat, Indeeco, or equal, and have the performance characteristics scheduled on the drawings and be suitable for the voltage on the job. Verify voltage.
- D. The duct heater shall be installed in a straight section of ductwork a minimum of 48" downstream of any elbow, transition, branch duct, air unit, etc.

2.04 RANGE HOOD

- A. The range hood shall be the wall canopy style, hood Model SW as manufactured by Kalthoff Fabricators, or equal. The inner and outer liner of the hood shall be constructed of 18 gauge, type 304 stainless steel finished to a number 4 polish. All joints shall be continuously welded liquid tight and ground and polished. The hood shall meet the UL 710 Standard and be U. L. listed with fire damper assembly in the supply collar only and be fabricated in compliance with the latest edition of NFPA 96 and SMC 504, and shall bear the National Sanitation Foundation Seal of Approval. The front overhang of the hood shall extend 6 inches beyond the deepest piece of cooking equipment and the hood shall extend 6 inches beyond the equipment at the ends. The bottom edge of the hood shall be a maximum of 7 ft above the finished floor. Verify hood size with kitchen equipment supplied and adjust accordingly. The hood shall include a filter

housing and UL classified, stainless steel, grease filters of such size, type and arrangement as will permit the exhaust air volume to pass through the unit at velocities conforming to those for which the units are designed. The filter housing shall terminate into a grease trough, which shall drain into a removable grease drawer.

- B. The hood shall be furnished with vapor proof, U. L. listed light fixtures installed at 3-foot centers. A control panel shall be mounted on the face of the canopy, which shall include one switch each for control of the lights and fans. Switches shall have an indicator light.
- C. The canopy shall be furnished with a UL listed, pre-engineered, liquid agent, cartridge-operated type fire suppression system with a fixed nozzle agent distribution network equal to Ansul Model R-102. The system shall be capable of automatic detection and actuation with remote manual actuation. Provide fuel supply shut off in accordance with applicable codes. Install in fire path exit area, a remote manual fire pull and integrate into system. At the time of installation, an authorized dealer of the fire suppression system shall certify in writing that the system is properly installed and in proper operating condition.

2.05 RANGE HOOD EXHAUST FAN

The exhaust fan shall have the performance characteristics as noted on the drawings and be the upblast type of spun aluminum construction with BI or airfoil blades only, containing a built-in grease trough and having a completely isolated motor compartment. The fan wheel shall be Teflon coated. The fan shroud shall be equipped with a clean out. No bird screens or back draft dampers will be permitted as per NFPA 96-1980. Furnish a minimum 18" high, 18 gauge galvanized curb, or higher, to raise fan discharge to 40" above the roof surface. The fan shall be complete with disconnect switch in motor compartment.

2.06 RANGE HOOD SUPPLY FAN

The supply fan shall be the size noted on the drawings and be a forward curved, double width, double inlet blower mounted in a downblast position. The fan shall be belt driven with adjustable sheave on the motor, complete with permanently lubricated ball bearings, drives, belt and motor with disconnect in the motor compartment. The housings shall be constructed of painted galvanized steel with 1" thick permanent cleanable filters and a one piece, weather-tight removable top for easy access. Furnish on 8" high, 18 gauge galvanized curb with duct adaptor and curb cap.

2.07 MISCELLANEOUS SPECIALTIES

- A. All specialties shall be sizes shown on the drawings with the characteristics noted.
- B. Items not specified herein shall be as called for on the drawings.

PART 3 - EXECUTION

3.01 TESTING AND APPROVAL

- A. When installation is complete, all equipment and controls shall be tested for proper operation and functioning.
- B. All equipment, fans and motors shall run at their required speeds without vibration or objectionable noise. No bearing or journal, or any part of a motor shall heat to a temperature higher than 40 degrees C above the temperature of the surrounding air. Check the rotation of all fans.
- C. After installation of all ductwork and fans, the fan speeds shall be adjusted as necessary. Adjustment shall include any required belt and drive changes.
- D. Furnish a written air testing and adjusting report to the Engineer a minimum of ten (10) working days prior to the final inspection. The report shall be performed by a contractor who is a member in good standing of AABC, NEBB or SMACNA employing a minimum of one certified testing and adjusting supervisor.

END OF SECTION 15500

SECTION 16100
GENERAL ELECTRICAL

PART 1 - GENERAL

1.01 SCOPE OF WORK

The contractor shall furnish all plant, labor, materials, equipment, and services necessary for and reasonably incidental to the complete installation of all electrical work as shown on the drawings and as specified herein.

1.02 RELATED WORK

General Provisions of the Contract, General and Supplementary Conditions, and Division 1 Specification Sections, General Requirements, apply to this section.

1.03 GENERAL

- A. The drawings indicate the extent and general arrangement of the electrical system. Details of proposed departures due to unforeseen conditions or other causes shall be submitted to the Architect for approval before proceeding.
- B. Equipment and materials to be furnished under this specification shall be the standard products of manufacturer's latest standard, shall be new and unused, and bear the Underwriter's Seal of Approval.
- C. All work of the installation to be done by skilled workmen in a workmanlike manner, following the best modern practices. The work shall present a neat and workmanlike appearance when completed.
- D. Manufacturers, catalog numbers, etc., used in these specifications or shown on the drawings are to denote design, workmanship and quality desired.

1.04 APPLICABLE STANDARDS AND CODES

Be governed by these specifications and by the current rules and regulations as listed in Division 1 General Conditions, Section 1A, Item No. 4, Applicable Codes.

1.05 PRINCIPAL FEATURES

- A. A complete system of conduit and conductors to supply electrical energy to new HVAC equipment.
- B. Panelboard.

- C. Grounding.
- D. Safety switches.
- E. Wiring in connection with mechanical equipment.
- F. Fire alarm system modifications.

1.06 ARCHITECTURAL DRAWINGS

Refer to architectural drawings for details such as finishes, dimensions, materials, etc. Refer to drawings for door locations, door swings, partitions location, cabinet and counters, making proper allowances therefore. Refer to equipment plans for exact location of electrical connections.

1.07 INITIAL OPERATION OF EQUIPMENT

Give all equipment furnished in the contract an operational test prior to final acceptance. Assist the owner in the initial operation when the owner operates the building and equipment. Instruct the owner's personnel in the proper operation and maintenance of all the equipment furnished under this section of the specifications.

1.08 GUARANTEE

Guarantee all work to be free from defects of material and workmanship for a period one year after date of final acceptance. Repair and/or replace all defective material or equipment and any work damaged thereby and make any other adjustments necessary without additional cost to the Owner.

1.09 RECORD DRAWINGS

Furnish record drawings showing the changes and modifications that occurred during the construction period. The job supervisor shall maintain a set of prints of the job office to be used to illustrate and note the job changes as they occur.

1.10 WORK IN CONNECTION WITH OTHER TRADES

Coordinate and review all ceiling systems by other sections so that lighting fixtures and other ceiling mounted equipment and their trims are compatible with the ceiling system used prior to submittal of shop drawings and brochures.

1.11 TYPICAL MOUNTING HEIGHTS

For all exposed elements of electrical work such as lighting fixtures, panelboards, wiring devices, switches, fire alarm, etc., mounted in walls and finished spaces will have the mounting heights supplied in detail by the architect. These heights are to be used in all cases except where mounting heights are noted for a specific device, fixture or panel on the

electrical drawings. Schedule will be prepared when shop drawings and brochures have been submitted so that the dimensions of particular pieces of equipment can be evaluated in relation to ceiling height and other clearances.

1.12 METHODS OF ATTACHMENT TO BUILDING

Attachment to the building structure, or walls, floors, or other elements, shall be made by suitable clamps, expansion bolts, and similar elements. The use of explosion-type devices which engage the building structure shall not be used.

1.13 WORK IN CONNECTION WITH MOTORS

Check rotation and connect for proper rotation. Check overload heater element furnished with starters against nameplate rating of motor and code, call attention to improper sizes to mechanical contractor and Architect. Connect all motors with short length of flexible conduit as manufactured by American Brass Company. Use proper type connector with this type conduit. Connect all motor and controls completely, neatly, orderly, and properly tagged for proper operation of system involved.

1.14 WORK IN CONNECTION WITH THE MECHANICAL EQUIPMENT

- A. Furnish and install all conduit and wiring necessary for the line voltage (120-volts and above) power supply for the plumbing, heating, ventilating, air conditioning facilities. All control wiring (less than 120-volts) including conduit shall be furnished and installed as part of Division 15 work.
- B. Conductors shall be installed in the conduit for line voltage wiring and connections made.
- C. Furnish and install all disconnect switches required by the National Electrical Code and/or as called for on the drawings.
- D. Stencil the name of the equipment being controlled on the cover of all starters and disconnect switches when located remotely from motors. Stencils to be 3/4" high in black letters on white background to match those set forth in mechanical specifications.

1.15 SERVICE TO EQUIPMENT

Check service required by equipment prior to making final connection. Call differences to attention of Architect. Check equipment for proper protective devices and safety devices to allow proper operation of equipment and prevent burnout. Assist Owners in initial operation of equipment and make necessary adjustment for proper operation.

1.16 CONNECTIONS TO EQUIPMENT

Wiring to and connection to all equipment (except controls) shall be included in the electrical contract work. Equipment shall be properly prepared to receive a single connection with all wiring internal to the equipment installed by the equipment supplier. Verify all connections and rough-in location with the equipment supplier prior to start of work.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION 16100

SECTION 16200

POWER SERVICE AND GROUNDING

PART 1 - GENERAL

1.01 DESCRIPTION

Power service shall be taken from existing 800-ampere panel at 277/480-volts, 3-phase, 4-wire.

PART 2 - PRODUCTS

2.01 MATERIALS

Install new circuit breaker in existing panel.

PART 3 - EXECUTION

3.01 INSTALLATION

Furnish and install a code sized grounding conductor in all conduit runs, properly connected at each end so as to ground metal parts of current-carrying equipment. Ground new HVAC equipment as required by code.

END OF SECTION 16200

SECTION 16301

CONDUCTORS

PART 1 - GENERAL

1.01 DESCRIPTION

Furnish and install copper conductors throughout the raceway system for distribution of electrical energy for the lighting and power needs.

1.02 RELATED WORK

General Provisions of the Contract, General and Supplementary Conditions, and Division 1 Specification Sections, General Requirements, apply to this section.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use stranded conductors for sizes No. 8 and larger and solid conductors for No. 10 and 12. Minimum size shall be No. 12 AWG. Insulate conductors with Type "THWN" insulation unless specifically indicated otherwise on the drawings. Rating shall be 600-volts, AC. Conductors shall be color coded as to phase.
- B. Connectors for conductors size No. 10 and 12 shall be approved type insulated twist-on wire nuts. Use hydraulic compression type connectors for conductors No. 8 and larger. All conductors are to be copper.
- C. Install separate neutral conductor for each branch circuit.

PART 3 - EXECUTION

3.01 INSTALLATION

Conform to manufacturer's recommendations and latest standard practice of industry. Color code all conductor for phase, neutral, and ground reference.

END OF SECTION 16301

SECTION 16302

CONDUIT

PART 1 - GENERAL

1.01 DESCRIPTION

Furnish and install a system of raceways and boxes for installation of conductors for distribution of power and controls throughout building. All wiring shall be in conduit. Conduit shall be concealed except where specifically called for to be exposed, such as in mechanical equipment rooms.

1.02 RELATED WORK

General Provisions of the Contract, General and Supplementary Conditions, and Division 1 Specification Sections, General Requirements, apply to this section.

PART 2 - PRODUCTS

2.01 RACEWAYS

Liquid-tight flexible metal conduit shall be used for making final connections to equipment.

2.02 BUSHING

Bushings for conduit 2" in size and smaller shall be plastic. Conduit size 2-1/2" and larger shall be OZ Company type "B" Appleton Co. Efcor Series No.55 or approved equal with metal ring and insulator as an integral part of bushing.

2.03 MANUFACTURER

Conduit shall be as manufactured by Pittsburgh, National, Republic Steel Companies, General Electric Company, or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Conduit may be run exposed in electrical/ mechanical rooms. Elsewhere, conduit shall be run concealed.
- B. Conduits shall be continuous from outlet to outlet and from outlet to panel or pull box. Connect conduit in building construction except as indicated.

Secure conduit to all boxes and bushings with double locknuts so that system will be electrically continuous.

- C. Install all conduit in a workmanlike manner with bends made using tools specifically designed for purpose to prevent kinks and flattened areas. Where electric metallic tubing is connected to an outlet box or panel, terminate tubing in an approved type connector and couple together with approved type connectors in order to insure adequate bonding.
- D. Where conduit is installed above ceilings, secure it in place by attachment to building structural framing system with appropriate clamps manufactured for purpose of making conduit attachment.
- E. The use of "explosion" type or "shot" type attachment to the building structure is prohibited. Attachment shall be by bolted connection, use of drilled and set expansion bolts, or other approved means.
- F. Coordinate the special fire stop provision for conduit penetrations through fire rated walls. Separate multiple penetrations by 24" of clearance.

END OF SECTION 16302

SECTION 16303

BOXES

PART 1 - GENERAL

1.01 DESCRIPTION

Furnish outlet boxes for wall receptacles, and other boxes as required. Also, pull boxes and junction boxes shall be furnished as required.

1.02 RELATED WORK

General Provisions of the Contract, General and Supplementary Conditions, and Division 1 Specification Sections, General Requirements, apply to this section.

PART 2 - PRODUCTS

2.01 WALL BOXES

Plug receptacle boxes and telephone boxes and intercom boxes shall be 4" square by 1-1/2" deep with a 4" square device cover, either one or two-gang as required. Covers shall be square cut, with a depth to accommodate the wall finish material with a minimum raised cut of 1/2".

2.02 MANUFACTURER

Boxes and fittings shall be Appleton, Steel City, Raco, Efcor, Crouse-Hinds, or equal.

2.03 FABRICATION

Pull and junction boxes shall be galvanized or sheradized sheet metal or code thickness with lapped and welded joints and with 3/4" flange. They shall be rigidly supported on ceiling or wall. Conduit runs entering a box shall not be considered as adequate support.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install pull and/or junction boxes in conduit lines wherever necessary to avoid excessive length of runs or number of bends in run. No run shall exceed 100 feet without a pull box.
- B. Pull and junction boxes shall be accessible and sized in accordance with provisions of Article No. 370-18 of latest edition of National Electrical Code.

- C. Pull and junction boxes shall be installed so that cover shall be accessible at all times.
- D. No pull or junction box shall be installed for joint use of line voltage and signal or low-voltage controls unless wires are all insulated for highest voltage being used in same pull box.
- E. The use of powder actuated devices for attachment to the building structure is prohibited. Attachment shall be by bolted connection, use of drilled and set expansion bolts, or other approved means.

END OF SECTION 16303

SECTION 16401

PANELBOARDS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Furnish and install panelboards with circuit breaker equipment as indicated on drawings and specified hereinafter.
- B. Related Work: General Provisions of the Contract, General and Supplementary Conditions, and Division 1 Specification Sections, General Requirements, apply to this section.

1.02 SHOP DRAWINGS:

- A. Shop drawings shall be submitted for approval. Shop drawings shall be specific indicating busing.
- B. All submittals shall conform to Section 1C - Submittals.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Branch circuit panelboards (225 amperes and less) shall be of the circuit breaker, dead-front safety type equal to Square D type "NQOD" with contents, as indicated on panel schedule, shall bear approved device label of UL, and shall meet all applicable requirements of National Electrical Manufacturers Association. Panelboards shall be the product of one of following manufacturers or equal: Square D Company, General Electric Company, or ITE Company.
- B. Number of branch circuits, their rating, number of poles arrangements, etc., are indicated on drawings.
- C. Panelboards shall have lugs (both main lugs and branch circuit lugs) suitable and UL approved for both aluminum and copper conductors. Such panelboards shall have their breakers labeled and approved by UL.
- D. Provide neutral bars for all 4-wire system feeders. Isolate such neutral bars from the panel box.
- E. Panels shall have a separate "ground bar" installed with lugs or connectors on bar. Such bar shall be grounded to panel box.

- F. Bus bars shall be of sequence-phase type arranged for 120/208-volts or 277/480-volts, 3-phase, 4-wire mains. All circuits shown as common neutral shall be installed in accordance with National Electrical Code. Bus shall be copper.
- G. Balance all circuits in a panel to achieve not more than 10 percent unbalanced neutral current in panel feeder. Panel circuit numbering shall be revised as necessary and arranged to facilitate above.
- H. Multiple breakers shall have common trip. Trip indication shall be as indicated by breaker handle moving to a position other than ON or OFF. Equip doors on panels with chrome-plated lock and a catch with two keys supplied for each lock, concealed hinges and attachment means. Panelboards shall be flush or surface mounted as required.
- I. Furnish six handle "lock-on" devices for each panel for installation on circuits as directed by Owner to prevent unauthorized personnel from turning off circuits to controls, unit heaters, clocks, night lights, etc. Any spare lock-ons remaining shall be turned over to Owner for his use.
- J. Provide typed directory cards under plastic on doors. Submit detailed drawings for approval showing size of cabinets, trim, detail for busing, locks, method of numbering, voltage, phase, etc., and obtain approval from Architect before manufacture is commenced.
- K. Distribution panels (all panels greater than 225-ampere) shall be similar and equal to Square D I-line type, or ITE type CDP circuit breaker distribution panelboard.
- L. Circuit breakers shall be fully rated and temperature rated for a 40 degrees C. ambient. All panelboards shall have lugs (both main lugs and branch circuit lugs) suitable and UL approved for aluminum and copper conductors. Such panelboards shall have their breakers labeled and approved by UL. Circuit breaker shall have HACR rating.
- M. Breakers shall be of thermal magnetic type rated for refrigeration use, sized and numbered as indicated on schedule on drawings, and shall be quick-make, with trip indication shown by a handle position other than ON or OFF with trip on all multipole breakers.
- N. Minimum short circuit interrupting capacity shall be as indicated on panel schedule.
- O. Panelboard fronts shall have concealed hinges and attachment bolts, be complete with door cylinder lock and catch, all keyed alike. Fronts shall have adjusting indicating trim clamps and Bakelite nameplates engraved to indicate device,

panel, or motor being served. Spare breakers and spaces only shall have nameplates with no engraving. Secure all nameplates to panelboard trim with two round head sheet metal screws.

- P. Panelboards shall be UL approved. Panelboard main sizes, branch circuit rating, and mounting shall be as indicated on plans. Shop drawings shall be submitted for approval. Shop drawings shall be specific showing busing, breaker dimensions, gutter dimensions, spare space dimensions, number, size, trip, and interrupting capacity on all circuits. Standard factory work sheets will not be acceptable as shop drawings.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Secure surface mounted panelboards to wall using 1/4" toggle bolts, bolted to masonry wall. Where hollow block walls do not occur, suitable expansion shields and anchor bolts shall be utilized. Unless directed otherwise, panelboards shall be mounted to have the top 6 feet clear above finished floor.
- B. The directories within each panelboard shall be properly filled out, so as to have a comprehensive understanding of the loads to which each circuit breaker is connected. They shall be filled out by use of a typewriter. Provide laminated plastic nameplate for each panelboard to indicate panel designation and voltage.

END OF SECTION 16401

SECTION 16402
SAFETY SWITCHES

PART 1 - GENERAL

1.01 DESCRIPTION

Furnish and install fused safety switches and/or disconnect switches as called for on the drawings, and as may be otherwise required by the Codes.

1.02 RELATED WORK

General Provisions of the Contract, General and Supplementary Conditions, and Division 1 Specification Sections, General Requirements, apply to this section.

PART 2 - PRODUCTS

2.01 MATERIALS

Safety switches shall be heavy-duty, horsepower rated, quick-make, quick-break with arc shields with enclosed construction.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install where called for on the drawings and/or as required by the National Electrical Code.
- B. Where disconnect or safety switches are called for away from walls, a suitable support shall be provided to allow the switch to be in a position of approximately 4-1/2 feet above floor. Where necessary, provide a steel frame attached to the floor or overhead structural system or both. Switches may be mounted on equipment where specific approval is realized from the supplier of the equipment, so as not to interfere with normal and ready maintenance of this equipment.

END OF SECTION 16402

SECTION 16500

FIRE ALARM FACILITY

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Furnish and install a new kitchen hood fire alarm relay to monitor hood extinguishing system.
- B. Existing fire alarm control panel is Notifier Model MPC 2000.
- C. Fire alarm contractor on project must be certified in accordance with Tennessee Alarm Contractors Licensing Act of 1991, TCA Title 62, Chapter 32.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. New fire alarm relay shall be addressable and shall be product of Notifier.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Extend new data circuit from relay and connect to existing addressable network at either existing smoke detector or manual station.
- B. At completion of job, test new relay and verify that fire alarm system functions properly.
- C. All new wiring to be installed in EMT raceway. Initiation circuits shall be twisted pair as recommended by manufacturer.

END OF SECTION 16500