INVITATION TO BID

NKU-51-19

Fine Arts Passenger Elevator Mod

July 19, 2019

FINE ARTS PASSENGER ELEVATOR MOD

NKU-51-19

ATTENTION: This is not an order. Read all instructions, terms and conditions carefully.

Bid NO: NKU-51-19
Issue Date: July 19, 2019
Purchasing Officer: Blaine Gilmore
Phone: 859.572.6449

RETURN ORIGINAL COPY OF BID TO:

Northern Kentucky University
Procurement Services
1 Nunn Drive
617 Lucas Administrative Center
Highland Heights, KY 41099

IMPORTANT: BIDS MUST BE RECEIVED BY: 8/20/2019 BEFORE 2:00 P.M. HIGHLAND HEIGHTS, KY time.

NOTICE OF REQUIREMENTS

1. The University's General Terms and Conditions and Instructions to Bidders, viewable at the NKU Procurement Website, apply to this Request for Bid.
2. Contracts resulting from this ITB must be governed by and in accordance with the laws of the Commonwealth of Kentucky.
3. Any agreement or collusion among Offerors or prospective Offerors, which restrains, tends to restrain, or is reasonably calculated to restrain competition by agreement to bid at a fixed price or to refrain from offering, or otherwise, is prohibited.
4. Any person who violates any provisions of KRS 45A.325 shall be guilty of a felony and shall be punished by a fine of not less than five thousand dollars nor more than ten thousand dollars, or be imprisoned not less than one year nor more than five years, or both such fine and imprisonment. Any firm, corporation, or association who violates any of the provisions of KRS 45A.325 shall, upon conviction, may be fined not less than ten thousand dollars or more than twenty thousand dollars.

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing as provided by KRS 523.040:

1. That I am the offeror (if the offeror is an individual), a partner, (if the offeror is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the offeror is a corporation);
2. That the attached Bid has been arrived at by the offeror independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other Contractor of materials, supplies, equipment or services described in the Request for Bid, designed to limit independent bidding or competition;
3. That the contents of the Bid have not been communicated by the offeror or its employees or agents to any person not an employee or agent of the offeror or its surety on any bond furnished with the Bid and will not be communicated to any such person prior to the official closing of the ITB:
4. That the offeror is legally entitled to enter into contracts with the Northern Kentucky University and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 45A.330 to .340, 164.390, and
5. That the Offeror, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sale and use tax imposed by Chapter 139 to the extent required by Kentucky law and will remain registered for the duration of any contract award
6. That I have fully informed myself regarding the accuracy of the statement made above.

SWORN STATEMENT OF COMPLIANCE WITH FINANACE LAWS

In accordance with KRS45A.110 (2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to a bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

CONTRACTOR REPORT OF PRIOR VIOLATIONS OF KRS CHAPTERS 136, 139, 141, 337, 338, 341 & 342

The Contractor by signing and submitting a Bid agrees as required by 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 that have occurred in the previous five (5) years prior to the award of a contract and agrees to remain in continuous compliance with the provisions of the statutes during the duration of any contract that may be established. Final determinations of violations of these statutes must be provided to the University by the successful Contractor prior to the award of a contract.

CERTIFICATION OF NON-SEGREGATED FACILITIES

The Contractor, by submitting a Bid, certifies that he/she is in compliance with the Code of Federal Regulations, No. 41 CFR 60-1.8(b) that prohibits the maintaining of segregated facilities.

RECIPROCAL PREFERENCE

(1) Prior to a contract being awarded to the lowest responsible and responsive bidder on a contract by a public agency, a resident bidder of the Commonwealth shall be given a preference against a nonresident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the nonresident bidder.
(2) A resident bidder is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:
(a) Is authorized to transact business in the Commonwealth; and
(b) Has for one (1) year prior to and through the date of the advertisement, filed Kentucky corporate income taxes, made payments to the Kentucky unemployment insurance fund established in KRS 341.490, and maintained a Kentucky workers' compensation policy in effect.
(3) A nonresident bidder is an individual, partnership, association, corporation, or other business entity that does not meet the requirements of subsection (2) of this section.
(4) If a procurement determination results in a tie between a resident bidder and a nonresident bidder, preference shall be given to the resident bidder.
(5) This section shall apply to all contracts funded or controlled in whole or in part by a public agency.
(6) The Finance and Administration Cabinet shall maintain a list of states that give to or require a preference for their own resident bidders, including details of the preference given to such bidders, to be used by public agencies in determining resident bidder preferences. The cabinet shall also promulgate administrative regulations in accordance with KRS Chapter 13A establishing the procedure by which the preferences required by this section shall be given.
(7) The preference for resident bidders shall not be given if the preference conflicts with federal law.
(8) Any public agency soliciting or advertising for bids for contracts shall make KRS 45A.490 to 45A.494 part of the solicitation or advertisement for bids

DEFINITIONS

As used in KRS 45A.490 to 45A.494: (1) "Contract" means any agreement of a public agency, including grants and orders, for the purchase or disposal of supplies, services, construction, or any other item; and

(2) "Public agency" has the same meaning as in KRS 61.805.

SIGNATURE REQUIRED: This Bid cannot be considered valid unless signed and dated by an authorized agent of the offeror. Type or print the signatory's name, title, address, phone number and fax number in the spaces provided. Offers signed by an agent are to be accompanied by evidence of his/her authority unless such evidence has been previously furnished to the issuing office. Your signature is acceptance to the Terms and conditions above.

DELIVERY TIME:	**NAME OF COMPANY:**	**DUNS #**
BID FIRM THROUGH:	**ADDRESS:**	**Phone/Fax:**
PAYMENT TERMS:	**CITY, STATE & ZIP CODE:**	**E-MAIL:**
SHIPPING TERMS: F.O.B. DESTINATION - PREPAID AND ALLOWED	**FEDERAL EMPLOYER ID NO.:**	**WEB ADDRESS:**

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID or OFFER

AUTHORIZED SIGNATURE: _____

NAME (Please Print Legibly): _____

TITLE: _____ DATE: _____

****

State of _____)

County of _____)

The foregoing statement was sworn to me this _____ day of_____, 20 _____, by _____.

_____

(Notary Public)
My Commission expires: _____

THIS DOCUMENT MUST BE NOTORIZED

Table of Contents

1.0 DEFINITIONS

The term “ITB” means Invitation to Bid or this document

The term "addenda" means written or graphic instructions issued by the Northern Kentucky University prior to the receipt of Bids that modify or interpret the ITB documents by additions, deletions, clarifications and/or corrections.

The terms "offer" or “bid” mean the offeror’s/offerors’ response to this ITB.

The term "offeror" means the entity or contractor group submitting the Bid.

The term "contractor" means the entity receiving a contract award.

The term "purchasing agent" means Northern Kentucky University appointed contracting representative.

The term "responsible offeror" means a person, company or corporation that has the capability in all respects to perform fully the contract requirements and the integrity and reliability that will assure good faith performance. In determining whether an offeror is responsible, the University may evaluate various factors including (but not limited to): financial resources; experience; organization; technical qualifications; available resources; record of performance; integrity; judgment; ability to perform successfully under the terms and conditions of the contract; adversarial relationship between the offeror and the University that is so serious and compelling that it may negatively impact the work performed under this ITB; or any other cause determined to be so serious and compelling as to affect the responsibility of the offeror.

The term "solicitation" means ITB.

The term "University" means Northern Kentucky University.

General Terms & Conditions Available to view / download at:

https://inside.nku.edu/content/dam/Procurement/docs/forms/General%20Terms%20%20Conditions_RS_jg11-1-18.pdf

An electronic version of the ITB, in .PDF format only, is available through Northern Kentucky University’s Plan Room at https://www.nkuplanroom.com/purchasing/View/Login.

2.0 GENERAL OVERVIEW

2.1 Intent and Scope

Furnish all design and engineering, materials, labor, tools and equipment, transportation, supervision, testing and inspections to modernize one (1) passenger elevator per the General Requirements and Exhibit A. The adjacent freight elevator is not included in the work of this contract. In addition, perform full coverage preventive maintenance as specified within at the commencement of this Contract and continuing for 12 months after the last elevator is accepted. Furnish a pre-modernization traffic analysis and a post-modernization traffic analysis on the one (1) elevator. The traffic analysis shall be for a two-week period before and after modernization.

2.2 University Information

Information regarding Northern Kentucky University can be found at https://inside.nku.edu/

3.0 SPECIAL CONDITIONS TO BIDDER

3.1 Key Event Dates

Release of ITB	7/19/2019
Pre-Bid Conference (Optional)	7/31/2019 @ 11:00 AM
Deadline for Written Questions	Noon Eastern Time on 8/12/2019
BIDS DUE	2 p.m. Eastern Time on 8/20/2019

*projected dates

3.2 Offeror Communication

Information relative to this project obtained from other sources, including other university administration, faculty or staff may not be accurate, will not be considered binding and could adversely affect the potential for selection of your bid. All requests for information, questions or comments relative to this project should be directed, in writing to:

Ryan Straus
Coordinator, Contracts & Bidding
Procurement Services
Lucas Administrative Center, Suite 617
Northern Kentucky University
Highland Heights, KY 41099
Strausr2@nku.edu

3.3 Pre-Bid Conference

There will be **a** pre-bid meeting held on July 31, 2019 at 11:00 am ET. We will be meeting in Lucas Administrative Center, Room 615. Please email Ryan Straus, Coordinator, Procurement Services strausr2@nku.edu with any questions.

3.4 Preparation of Offers

The offeror is expected to follow all specifications, terms, conditions and instructions in this ITB.

The offeror will furnish all information required by this solicitation.

Bids should be prepared simply and economically, providing a description of the offeror's capabilities to satisfy the requirements of the solicitation. Emphasis should be on completeness and clarity of content. All documentation submitted with the Bid should be bound in the single volume except as otherwise specified.

3.5 Bid Submission and Deadline

The bidder shall submit, by the time and date specified via US Postal Service, courier or other delivery service, its bid response in a **sealed package** addressed to:

Blaine Gilmore
Director, Procurement Services
Lucas Administrative Center, Suite 617
1 Nunn Drive
Northern Kentucky University
Highland Heights, KY 41099

Both inner and outer envelopes/packages should bear respondent's name and address, and clearly marked on package(s) as follows:

ITB NKU-51-19
Fine Arts Passenger Elevator Mod

Note: Bids received after the closing date and time will not be considered. In addition, Bids received via fax or e-mail are not acceptable.

3.6 Modification or Withdrawal of Offer

An offer and/or modification of offer received at the office designated in the solicitation after the exact hour and date specified for receipt will not be considered.

An offer may be modified or withdrawn by written notice before the exact hour and date specified for receipt of offers. An offer also may be withdrawn in person by an offeror or an authorized representative, provided the identity of the person is made known and the person signs a receipt for the offer, but only if the withdrawal is made prior to the exact hour and date set for receipt of offers.

3.7 Acceptance or Rejection and Award of Bid

The University reserves the right to accept or reject any or all bids, to waive any informalities or technicalities, to clarify any ambiguities in bids. in the Bid. In case of error in extension or prices or other errors in calculation, the unit price shall govern. Further, the University reserves the right to make a single award, split awards, multiple awards or no award, whichever is in the best interest of the University.

3.8 Rejection

Grounds for the rejection of bids include (but shall not be limited to):

a) Failure of a bid to conform to the essential requirements of the ITB.

b) Imposition of conditions that would significantly modify the terms and conditions of the solicitation or limit the offeror's liability to the University on the contract awarded on the basis of such solicitation.

c) Failure of the offeror to sign the University ITB. This includes the Authentication of Bid

d) and Statement of Non-Collusion and Non-Conflict of Interest statements. (pages 1 & 2)

e) Failure to sign the Bid Form / Form of Proposal

f) Receipt of bid after the closing date and time specified in the ITB.

3.19 Addenda

Any addenda or instructions issued by the purchasing agent prior to the time for receiving Bids shall become a part of this ITB. Such addenda shall be acknowledged on the bid form or form of Bid. No instructions or changes shall be binding unless documented by a proper and duly issued addendum.

3.10 Disclosure of Offeror's Response

The ITB specifies the format, required information and general content of Bids submitted in response to this ITB. The purchasing agent will not disclose any portions of the Bids prior to contract award to anyone outside the Office of Procurement Services, the University's administrative staff, representatives of the state or federal government (if required) and the members of the committee evaluating the Bids. After a contract is awarded in whole or in part, the University shall have the right to duplicate, use or disclose all Bid data submitted by offerors in response to this ITB as a matter of public record.

Any submitted Bid shall remain valid for 90 days after the Bid due date.

3.11 Restrictions on Communications with University Staff

From the issue date of this ITB until a contractor is selected and a contract award is made, offerors are not allowed to communicate about the subject of the ITB with any University administrator, faculty, staff or

members of the board of regents except: the purchasing agent representative, any University purchasing official representing the University administration, others authorized in writing by the Office of Procurement Services and University representatives during offeror presentations. If violation of this provision occurs, the University reserves the right to reject the offeror's Bid.

3.12 Cost of Preparing Bid or Proposal

Costs for developing the bids or Bids and any subsequent activities prior to contract award are solely the responsibility of the offerors. The University will provide no reimbursement for such costs.

3.13 Questions

All questions should be submitted by either fax or e-mail to the purchasing agent listed in Section 3.2 no later than the date listed in Section 3.1.

3.14 No Contingent Fees

No person or selling agency shall be employed or retained or given anything of monetary value to solicit or secure this contract, except bona fide employees of the offeror or bona fide established commercial or selling agencies maintained by the offeror for the purpose of securing business. For breach or violation of this provision, the University shall have the right to reject the Bid, annul the contract without liability, or, at its discretion, deduct from the contract price or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee or other benefit.

3.15 Bid Addenda and Rules for Withdrawal

Prior to the date specified for receipt of offers, a submitted Bid may be withdrawn by submitting a written request for its withdrawal to the University purchasing office, signed by the offeror. Unless requested by the University, the University will not accept revisions or alterations to Bids after the Bid due date.

3.16 Effective Date

The effective date of the contract shall be the date upon which the parties execute it and all appropriate approvals, including that of the (if applicable) Commonwealth of Kentucky Legislative Contracts Review Committee, have been received.

3.17 Contractor Cooperation in Related Efforts

The University reserves the right to undertake or award other contracts for additional or related work to other entities. The contractor shall fully cooperate with such other contractors and University employees and carefully fit its work to such additional work. The contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by University employees. This clause shall be included in the contracts of all contractors with whom this contractor will be required to cooperate.

The University shall equitably enforce this clause to all contractors to prevent the imposition of unreasonable burdens on any contractor.

3.18 Governing Law

The contractor shall conform to and observe all laws, ordinances, rules and regulations of the United States of America, Commonwealth of Kentucky and all other local governments, public authorities, boards or offices relating to the property or the improvements upon same (or the use thereof) and will not permit the same to be used for any illegal or immoral purposes, business or occupation. The resulting contract shall be governed by Kentucky law and any claim relating to this contract shall only be brought in the Franklin Circuit Court in accordance with KRS 45A.245.

3.19 Kentucky's Personal Information Security and Breach Investigation Procedures and Practices Act

To the extent Company receives Personal Information as defined by and in accordance with Kentucky's Personal Information Security and Breach Investigation Procedures and Practices Act, KRS 61.931, 61.932 and 61.933 (the "Act"), Company shall secure and protect the Personal Information by, without limitation: (i) complying with all requirements applicable to non-affiliated third parties set forth in the Act; (ii) utilizing security and breach investigation procedures that are appropriate to the nature of the Personal Information disclosed, at least as stringent as University's and reasonably designed to protect the Personal Information from unauthorized access, use, modification, disclosure, manipulation, or destruction; (iii) notifying University of a security breach relating to Personal Information in the possession of Company or its agents or subcontractors within seventy-two (72) hours of discovery of an actual or suspected breach unless the exception set forth in KRS 61.932(2)(b)2 applies and Company abides by the requirements set forth in that exception; (iv) cooperating with University in complying with the response, mitigation, correction, investigation, and notification requirements of the Act , (v) paying all costs of notification, investigation and mitigation in the event of a security breach of Personal Information suffered by Company; and (vi) at University's discretion and direction, handling all administrative functions associated with notification, investigation and mitigation.

3.20 Termination for Convenience

Northern Kentucky University, Office of Procurement Services, reserves the right to terminate the resulting contract without cause with a thirty (30) day written notice. Upon receipt by the contractor of a "notice of termination," the contractor shall discontinue all services with respect to the applicable contract. The cost of any agreed upon services provided by the contractor will be calculated at the agreed upon rate prior to a "notice of termination" and a fixed fee contract will be pro-rated (as appropriate).

3.21 Termination for Non-Performance

a) Default

The University may terminate the resulting contract for non-performance, as determined by the University, for such causes as:

- Failing to provide satisfactory quality of service, including, failure to maintain adequate personnel, whether arising from labor disputes, or otherwise any substantial change in ownership or proprietorship of the Contractor, which in the opinion of the University is not in its best interest, or failure to comply with the terms of this contract;

- Failing to keep or perform, within the time period set forth herein, or violation of, any of the covenants, conditions, provisions or agreements herein contained;

- Adjudicating as a voluntarily bankrupt, making a transfer in fraud of its creditors, filing a petition under any section from time to time, or under any similar law or statute of the United States or any state thereof, or if an order for relief shall be entered against the Contractor in any proceeding filed by or against contractor thereunder. In the event of any such involuntary bankruptcy proceeding being instituted against the Contractor, the fact of such an involuntary petition being filed shall not be considered an event of default until sixty (60) days after filing of said petition in order that Contractor might during that sixty (60) day period have the opportunity to seek dismissal of the involuntary petition or otherwise cure said potential default; or

- Making a general assignment for the benefit of its creditors, or taking the benefit of any insolvency act, or if a permanent receiver or trustee in bankruptcy shall be appointed for the Contractor.

b) Demand for Assurances

In the event the University has reason to believe Contractor will be unable to perform under the Contract, it may make a demand for reasonable assurances that Contractor will be able to timely perform all obligations under the Contract. If Contractor is unable to provide such adequate assurances, then such failure shall be an event of default and grounds for termination of the Contract.

c) Notification

The University will provide ten (10) calendar days written notice of default. Unless arrangements are made to correct the non-performance issues to the University's satisfaction within ten (10) calendar days, the University may terminate the contract by giving forty-five (45) days notice, by registered or certified mail, of its intent to cancel this contract.

3.22 Funding Out

The University may terminate this contract if funds are not appropriated or are not otherwise available for the purpose of making payments without incurring any obligation for payment after the date of termination, regardless of the terms of the contract. The University shall provide the contractor thirty (30) calendar days' written notice of termination under this provision.

3.23 Assignment and Subcontracting

The Contractor(s) may not assign or delegate its rights and obligations under any contract in whole or in part without the prior written consent of the University. Any attempted assignment or subcontracting shall be void.

3.24 Permits, Licenses, Taxes

The contractor shall procure all necessary permits and licenses and abide by all applicable laws, regulations and ordinances of all federal, state and local governments in which work under this contract is performed.

The contractor must furnish certification of authority to conduct business in the Commonwealth of Kentucky as a condition of contract award. Such registration is obtained from the Secretary of State, who will also provide the certification thereof. However, the contractor need not be registered as a prerequisite for responding to the ITB.

The contractor shall pay any sales, use, personal property and other tax arising out of this contract and the transaction contemplated hereby. Any other taxes levied upon this contract, the transaction or the equipment or services delivered pursuant hereto shall be the responsibility of the contractor.

The contractor will be required to accept liability for payment of all payroll taxes or deductions required by local and federal law including (but not limited to) old age pension, social security or annuities.

3.25 Attorneys' Fees

In the event that either party deems it necessary to take legal action to enforce any provision of the contract and in the event that the University prevails, the contractor agrees to pay all expenses of such action including attorneys' fees and costs at all stages of litigation.

3.26 Royalties, Patents, Copyrights and Trademarks

The Contractor shall pay all applicable royalties and license fees. If a particular process, products or device is specified in the contract documents and it is known to be subject to patent rights or copyrights, the existence of such rights shall be disclosed in the contract documents and the Contractor is responsible for payment of all associated royalties. To the fullest extent permitted by law the Contractor shall indemnify, hold the University harmless, and defend all suits, claims, losses, damages or liability resulting from any infringement of patent, copyright, and trademark rights resulting from the incorporation in the Work or device specified in the Contract Documents.

Unless provided otherwise in the contract, the Contractor shall not use the University's name nor any of its trademarks or copyrights, although it may state that it has a Contract with the University.

3.27 Indemnification

The contractor shall indemnify, hold and save harmless the University, its affiliates and subsidiaries and their officers, agents and employees from losses, claims, suits, actions, expenses, damages, costs (including court costs and attorneys' fees of the University's attorneys), all liability of any nature or kind arising out of or relating to the Contractor's response to this ITB or its performance or failure to perform under the contract awarded from this ITB. This clause shall survive termination for as long as necessary to protect the University.

3.28 Insurance

If awarded, bidder / proposer must provide NKU with an insurance certificate listing NKU as a certificate holder and additionally insured.

Northern Kentucky University
617 Lucas Administrative Center
1 Nunn Drive
Highland Heights, KY 41099

The Contractor shall furnish the University the Certificates of Insurance and guarantee the maintenance of such coverage during the term of the contract. The Contractor shall provide an original policy endorsement of its CGL insurance naming Northern Kentucky University and the directors, officers, trustees, and employees of the University as additional insured on a primary and non-contributory basis as their interest appears. Additionally, the Contractor shall provide an original policy endorsement for Waiver of subrogation in favor of the Northern Kentucky University its directors, officers, trustees, and employees as additional insured.

Our basic insurance requirements are:

Workers' Compensation insurance with Kentucky's statutory limits and Employers' Liability insurance with at least $100,000 limits of liability.

Comprehensive General Liability (CGL) Insurance the limits of liability shall not be less than $500,000 each occurrence for bodily injury and $250,000 property damage.

Comprehensive Automobile Liability Insurance: To cover all owned, hired, leased or non-owned vehicles used on the Project. Coverage shall be for all vehicles including off the road tractors, cranes and rigging equipment and include pollution liability from vehicle upset or overturn. Policy limits shall not be less than $500,000 for bodily injury and $100,000 for property damage.

Excess liability insurance in an umbrella form for excess coverages shall have a minimum of $1,000,000 combined single limits for bodily injury and property damage for each.

If accessing NKU Student, Employee, or other personal records, vendor needs Security and Privacy Liability Insurance with limits no less than $1,000,000.

If accessing NKU Student, Employee, or other personal records, vendor needs Evidence Breach Response Services coverage with limits no less than $5,000,000.

3.29 Method of Award

It is the intent of the University to award a contract to the qualified offeror whose bid, conforming to the conditions and requirements of the ITB, is determined to be the lowest.

Notwithstanding the above, this ITB does not commit the University to award a contract from this solicitation. The University reserves the right to reject any or all offers and to waive formalities and minor irregularities in the bid received.

3.30 Reciprocal Preference

In accordance with KRS 45A.494, a resident offeror of the Commonwealth of Kentucky shall be given a preference against a nonresident offeror. In evaluating Bids, the University will apply a reciprocal preference against an offeror submitting a Bid from a state that grants residency preference equal to the preference given by the state of the nonresident offeror. Residency and non-residency shall be defined in accordance with KRS 45A.494(2) and 45A.494(3), respectively. Any offeror claiming Kentucky residency status shall submit with its Bid a notarized affidavit affirming that it meets the criteria as set forth in the above reference statute.

An affidavit is provided and attached, for your convenience to this ITB.

3.31 Reports and Auditing

The University, or its duly authorized representatives, shall have access to any books, documents, papers, records or other evidence which are directly pertinent to this contract for the purpose of financial audit or program review.

3.32 Confidentiality

The University recognizes an offeror's possible interest in preserving selected information and data included in the Bid; however, the University must treat such information and data as required by the Kentucky Open Records Act, KRS 61.870, et seq.

If the offeror declares information provided in their response to be proprietary in nature and not available for public disclosure, the offeror shall declare in their response the inclusion of proprietary information and shall noticeably label as confidential or proprietary each sheet containing such information. Bids containing information declared by the offeror to be proprietary or confidential, either wholly or in part, not excluded by the Kentucky Open Records Act, KRS 61.870 may be deemed non-responsive and may be rejected.

The University's General Counsel shall review each offeror's information claimed to be confidential and, in consultation with the offeror (if needed), make a final determination as to whether or not the confidential or proprietary nature of the information or data complies with the Kentucky Open Records Act.

3.33 Conflict of Interest

When submitting and signing a Bid, an offeror is certifying that no actual, apparent or potential conflict of interest exists between the interests of the University and the interests of the offeror. A conflict of interest (whether contractual, financial, organizational or otherwise) exists when any individual, contractor or subcontractor has a direct or indirect interest because of a financial or pecuniary interest, gift or other activities or relationships with other persons (including business, familial or household relationships) and is thus unable to render or is impeded from rendering impartial assistance or advice, has impaired objectivity in performing the proposed work or has an unfair competitive advantage.

Questions concerning this section or interpretation of this section should be directed to the University purchasing agent identified in this ITB.

3.35 Parking Permits

Contractor must obtain parking permits for all vehicles that will be parked on campus. Permits can be obtained at the Welcome Center for $80/month per vehicle.

http://parking.nku.edu/rules/guidelines.html

3.36 Tobacco Free Campus

Effective January 1st, 2014, NKU will be a tobacco free campus. The use of all tobacco products shall be prohibited in all campus buildings and outside areas on campus.

3.37 Statutory Authority

Selection of firms to provide professional services to Northern Kentucky University are governed by the provisions of the Kentucky Revised Statutes, KRS 45A.085, http://www.lrc.ky.gov/KRS/045A00/085.PDF

3.38 Foreign Corporations

Foreign corporations are defined as corporations that are organized under laws other than the laws of the commonwealth of Kentucky. Foreign corporations doing business within the commonwealth of Kentucky are required to be registered with the Secretary of State, New Capitol Building, Frankfort, Kentucky and must be in good standing.

The Foreign Corporate Proposer, if not registered with the Secretary of State at the time of the bid submittal, shall be required to become registered and be declared in good standing prior to the issuance or receipt of a contract.

3.39 Domestic Corporations

Domestic corporations are required to be in good standing

3.40 EEO

Kentucky' s EEO Act, KRS 45.560A5.640 requires non-exempt parties to submit information about employment and hiring practices for any contract award which exceeds $500,000. Bidders are required to submit reports to the Contracting Agency in accordance with the requirements of the solicitation. The

Contracting Agency will send copies of the reports to the Finance and Administration Cabinet, Office of EEO and Contract Compliance (EEO/CC) for review and approval. A list of REQUIRED EEO reports follows.

EE0 I. Employer Information
EEO II. Report Affidavit of Intent to Comply
EEO III. Subcontractor Report Form

The employment provisions of the EEO Act may also be met, in part, by subcontracting to a minority-owned and/ or a female-owned company (as appropriate).

EEO/CC will review and evaluate your employment data and, if applicable, the minority-owned and/ or female-owned company documentation. Thereafter, EEO/CC will determine whether your workforce reflects the percentage of available minorities and females in the area from which your employees are drawn. No award will become effective until all forms are satisfactorily submitted and EEO/CC has certified compliance. Thereafter, EEO/ CC will recertify your company at one (1) year intervals. All required forms are available at
http://finance.ky.gov/services/eprocurement/Pages/vendorservices.aspx

Contracts between the **Successful Bidder** and Subcontractors that exceed $500,000 shall include a provision which requires the Subcontractor(s) to comply with the EEO Act and its reporting requirements. The Successful Bidder is responsible for submitting the subcontractor's forms to EEO/CC. (Note: contracts below the second tier are exempt from EEO reporting.)

3.41 Bid Bonds:

A 5% bid bond is required with submission of this ITB.

3.42 Payment and Performance Bonds

100% Payment and Performance Bonds will be required for work arising from this ITB.

3.43 Completion Dates or Liquidated Damages if applicable

It is understood and agreed that time is of the essence. The Contractor will efficiently, diligently, and expeditiously conduct the work in a manner that will satisfy compliance with approved project schedules and completion by the completion date appearing in the body of this bid.

3.44 Coordination of Work

The Vendor shall be responsible for coordinating all work with the **NKU Project Manager**. The Contractor shall cooperate completely with the Owner's security forces and measures.

3.45 Damage and Repairs

The Contractor shall exercise particular care to avoid damage to his own work, the Owner's property, and adjacent property of every description. He shall make good any damage resulting from or caused by the work under this contract at his sole expense in a manner satisfactory and without extra cost to the Owner including, but not limited to, finishes, furnishings, and landscaping.

3.46 Hazardous Materials

No asbestos containing materials, lead based paints, or other hazardous materials shall be furnished or installed in this work.

3.47 Examination of Site

Each vendor shall fully acquaint and familiarize themselves with the conditions as they exist and the character of the operation to be carried on under the proposed contract and has made such investigation as may be reasonably necessary so that the vendor shall fully understand the facilities, physical conditions and restrictions attending to the work under the contract. The specifications furnished represent a fair approximation of the material needed but all quotations submitted should take into account knowledge gained as a result of the above referenced visual inspection.

3.48 Examination of Contract

Each vendor shall also thoroughly examine and become familiar with the specifications and associated contract documents. By submitting a bid, the vendor agrees that they have carefully examined the specifications and have thereupon decided that from their own investigation Contractor has satisfied themselves as to the nature and location of work, the general and local conditions and all matters which may in any way affect the work or its performance and that as a result of such examination and investigation, vendor fully understands the intent and purpose of the documents and conditions of the bidding. Claims for additional compensation and/or extension of time because of the vendor's failure to follow the foregoing procedure and to familiarize themselves with the Contract Documents and all conditions which might affect work will not be allowed.

3.49 Field Verification

It is the Vendor's responsibility to verify all measurements.

3.50 Hours of Work

Working days at Northern Kentucky University are Monday through Friday, 8:00am to 4:30pm, however; the scope of this may require additional work hours that can be discussed at the pre-bid meeting / pre-construction meetings.

3.51 Warranty

See Appendices for warranty information.

4.0 BID DOCUMENTS (Attached)

a) References Form
b) Subcontractors Form
c) Materials Form
d) Bid Bond Form
e) Bid Form
f) Appendix – General Requirements, Exhibit A – Mod Spec, Exhibit B – Elevator Maintenance Contract, Exhibit C – Existing Drawings

4.1 REFERENCES

Bidder Qualifications: The bidder is required to submit a list of completed projects where he has performed **similar work** to that specified herein.

Organization:_____

Contact Name:_____

Phone Number:_____

Date Work Completed:_____ **Value of Contract:**_____

Project Manager assigned to this project: _____

Brief Project Description: _____

_____

_____

Organization:_____

Contact Name:_____

Phone Number:_____

Date Work Completed:_____ **Value of Contract:**_____

Project Manager assigned to this project: _____

Brief Project Description: _____

_____

_____

Organization:_____

Contact Name:_____

Phone Number:_____

Date Work Completed:_____ **Value of Contract:**_____

Project Manager assigned to this project: _____

Brief Project Description: _____

_____

_____

4.2 SUBCONTRACTORS (IF APPLICABLE)

SUBCONTRACTORS: The following is a list of subcontractors proposed by the bidder to be used to complete the project. All subcontractors are subject to approval by Northern Kentucky University. Failure to submit this list completely filled out may invalidate bid**. SUBCONTRACTORS MAY NOT BE CHANGED AFTER CONTRACT AWARD WITHOUT APPROVAL BY NKU.**

BRANCH OF WORK	NAME, ADDRESS AND TELEPHONE OF SUBCONTRACTORS

4.3 List of Materials and Equipment
(Must be submitted within 24 hours after bid opening)

Every item listed under the different phases of this project must be clearly identified so that Northern Kentucky University will definitely know what the bidder proposes to furnish. Bidders be hereby advised that this list shall be required to be filled out completely by the apparent low bidder within twenty-four (24) hours from the close of the official reading of the bids.

The above requirement does not preclude any bidder from submitting this list, fully executed, at the time the bids are submitted.
The use of the manufacturers' dealer's name only, or stating "as per plans and specifications", will not be considered as sufficient identification. Where more than one "Make or Brand" is listed for any one item, the Owner has the right to select the one to be used.
Failure to submit a proper list may result in rejection of the Bidder's Bid.

4.4

Bid Bond

5% of Contract Price

KNOW ALL MEN BY THESE PRESENTS, that we (here insert full name and address or legal title of Contractor)

as Principal, hereinafter called the Principal, and (here insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of Kentucky as Surety, hereinafter called Surety, are held and firmly bound unto **Northern Kentucky University** as Obligee, hereinafter called Obligee, in the sum of :

_____ Dollars ($_____),

representing 5% of the Principal's total bid price and for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for (Here insert full name, address and description of project)

NOW THEREFORE, if the Obligee shall accept the bid of the Principal within the period specified, or if no period is specified, within 45 days after its opening, and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bid or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bonds or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this day of 2019

(Principal) (Seal) _____ (Witness)

(Title)

(Surety) (Seal) _____ (Witness)

(Title)

THIS DOCUMENT MUST BE NOTORIZED

This is only an example. Other forms may be used.

4.5 BID FORM

LUMP SUM BASE BID

The Bidder agrees to furnish all labor, materials, supplies, supervision and services required to perform this contract in a workmanlike manner. These services to be provided in accordance with Specifications and Contract Documents, and any duly issued Addenda for the **LUMP SUM BASE BID** set forth below:

_____Dollar_____Cents
(USE WORDS) (USE WORDS)

$ _____
(USE NUMBERS)

This offer is for, at minimum, _____ calendar days from the date this offer is opened. In submitting the above it is expressly agreed that upon proper acceptance by Northern Kentucky University of any or all items offered, a contract shall thereby be created with respect to the items accepted.

THIS BID SUBMITTED BY:

_____
(Name and Address of Bidder)

DATE: _____ AUTHORIZED SIGNATURE:_____

NOTE*: The Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest must be properly executed for this Bid to be valid.*

This Bidder, in compliance with this Request for Bid, and having carefully examined the complete contract documents, as well as the specifications for the work as prepared by Northern Kentucky University, hereby proposes to furnish all labor, supervision, materials, supplies and services required to perform the specifics of the Contract Documents, within the time set forth herein and for the final negotiated price.

The Bidder, hereby acknowledges receipt of the following Addenda:

ADDENDUM NO. _____ DATED _____ ADDENDUM NO. _____ DATE _____

SECTION 010000

GENERAL REQUIREMENTS

1.01 SCOPE OF WORK

A. Furnish all design and engineering, materials, labor, tools and equipment, transportation, supervision, testing and inspections to modernize one (1) passenger elevator per the General Requirements and Exhibit A. The adjacent freight elevator is not included in the work of this contract. In addition, perform full coverage preventive maintenance as specified within at the commencement of this Contract and continuing for 12 months after the last elevator is accepted. Furnish a pre-modernization traffic analysis and a post-modernization traffic analysis on the one (1) elevator. The traffic analysis shall be for a two-week period before and after modernization.

B. Refer to Exhibit A: Section 1.02: Related Work Included as Part of the Elevator Contract for electrical, fire alarm, sprinkler, general construction work, etc. to be performed by trades working as subcontractor to the Elevator Contractor. In addition, refer to Exhibit D for the installation of a safety guardrail located adjacent to the roof access stairway.

The Elevator Contractor agrees to provide the manpower so that this work can be completed. The Elevator Contractor shall provide data in a prompt manner and facilitate access to the hoistway and other areas in the machine room, etc.so that related work can be performed. The Elevator Contractor is responsible to help other trades gain safe legal access so they can do their tasks. This includes but is not limited to running the cars, access to the pits, disconnecting power to cars, etc.

C. Work to be performed by Owner:

1. Machine Room mechanical unit including electrical work associated with the mechanical unit.

D. In all cases where a device or part of the equipment is herein referred to in singular number, it is intended that such reference shall apply to as many such devices as are required to complete the installation.

E. Any items not specified in detail by the Specification, but which are incidental to or necessary for the complete installation and proper operation of the work described herein or reasonably implied, shall be furnished as if called for in detail by the Specification.

F. Bidders must report any discrepancies or ambiguities occurring in the Specification prior to the submission of the bid proposal. Submission of the bid without clarification will reflect acceptance of the Specification as written.

1.02 CONSULTANTS RESPONSIBILITIES

A. The consultant shall act as the representative of the Owner in matters pertaining to the work of the contract, including interpretation of the Specifications and contract documents, review of shop drawing submissions, approval of payment applications, review of project progress, and final review of the completed work prior to acceptance by the Owner.

1.03 APPLICABLE CODES

A. Refer to Exhibit A: Section 1.05 Applicable Codes.

B. Nothing contained in this Specification shall conflict with any codes or federal, state or local laws, ordinances, rules or regulations governing the work.

1.04 PERMITS AND INSPECTIONS

A. The Elevator Contractor shall give all requisite notices, obtain and pay for all permits, and pay all deposits and fees necessary for the installation of all work provided under this Specification. Permits for other trades shall also be the responsibility of the Elevator Contractor. In addition, the Elevator Contractor shall obtain and pay for all necessary state and local inspections and conduct such tests as may be required by the regulations of such authorities. These tests shall be made in the presence of the authorized representative of such authorities and in the presence of the Owner. An elevator installation permit shall be displayed on the job site and visible to interested parties.

B. The installation, when complete, shall receive final approval of all constituted authorities and the Elevator Contractor shall submit evidence of the inspection results and Certificate of Operation from the constituted authority.

1.05 ELEVATOR CONTRACTOR QUALIFICATION

A. The Elevator Contractor shall be one regularly engaged in the business of design, engineering, manufacture, installation, modernization, and/or servicing of elevators of the type and character required by this Specification, shall be or represent an approved manufacturer, and shall assume full responsibility for the products used in assembling the elevator equipment. Certified engineering drawings and descriptive technical data on the proposed equipment shall be provided by the Elevator Contractor as furnished by the component manufacturer.

B. The Elevator Contractor shall show a successful experience in the completion, installation, modernization, and maintenance of elevators and that it employs competent personnel trained in the installation, modernization and maintenance of equipment required in this Specification, that it maintains locally an adequate stock of parts for replacement or emergency, and that it has qualified employees locally available to ensure fulfillment of the service without unreasonable delay. This maintenance service shall be performed by the Elevator Contractor and shall not be assigned or transferred to any agent or subcontractor.

C. The Elevator Contractor including all subcontractors shall be licensed in the state of Kentucky

1.06 MISCELLANEOUS WORK AND PROJECT SCHEDULE

A. This Specification covers all work as specifically set forth to bring the elevator system up to acceptable standards. Any additional work deemed necessary shall be brought to the Owner's attention in writing ten (10) days prior to bid date.

B. All work shall be performed during regular working hours of regular working days as is customary in the elevator industry, unless noisy work.

C. Only one elevator shall be out of service at any one time in the performance of the work. Any work that requires two elevators to be out of service at the same time shall be scheduled two weeks in advance with the University. All overtime work associated with this work shall be included in the cost of the contract.

D. Prior to commencing work, a work schedule shall be submitted to the Owner for his approval.

E. Elevator Contractor shall confirm power, floor designation, emergency recall floors and dispatch floor locations, etc., prior to fabricating equipment.

F. All material for all elevators must be onsite or stored in a local warehouse. Owner or Owners Representative will inventory material prior to start of job. No exceptions to this item will be granted.

G. The Elevator Contractor shall provide all information, including necessary architectural and engineering information, required by the Owner to coordinate the design and inter-face work of other trades impacting the elevator work.

H. The following schedule shall be followed:

RFP Bidding Process	4 weeks
Contract Review and Award	6 weeks
Notice to Proceed to Contractor	
Field Survey/Engineering	4 weeks
Shop Drawing Approval	6 weeks
Equipment Fabrication	14 weeks
Equipment Delivery	2 weeks
Installation (Total for Both Cars)	12 weeks
Final Adjusting and Testing	2 weeks
Total Project Time	50 weeks

I. Payment Plan: All bids shall be based on the following payment plan:

Payment Schedule	
Award of Contract	10% due within 30 days of fully executed contract and approved shop drawings.
Delivery of Material	35% of the value for each bank of elevators, as stated in the bid form pricing, is due when the equipment for each bank of elevators is delivered. Contractor will not be allowed to start any work until the Owner or Owner's Representative verifies that all material is on site, or stored locally, for each bank of elevators that is scheduled. Material for the service car, mid rise and high rise elevators shall be shipped 30 to 60 days prior to those banks starting. No exceptions to this rule.
Progress Payments	At the beginning of each month the contractor may submit an invoice for the percentage of work completed the following month. This invoice will be due within 30 days
Final Payment	The final 10% will be held as a form of retention until all punch list items have been completed. This invoice will be due within 30 days of all punch list items being complete

1.08 DEMOLITION, CUTTING, ALTERATIONS AND REMOVALS

A. All demolition, cutting, alterations and removal required to prepare the building to receive the new work, and any such demolition, cutting, alterations and removal which may be necessary to complete the work in a first class workmanlike manner, shall be performed by the Elevator Contractor.

B. All surfaces, such as roofs, walls, windows, floorings, ceilings, etc., which are damaged or disturbed due to the performance of the work of this contract, shall be repaired by the Elevator Contractor in a first class, workmanlike manner to match existing surrounding areas.

C. All permanent and temporary bracing and anchoring required for the support or transfer of any load while demolition or installation work is in progress shall be provided by the Elevator Contractor. All work to be made absolutely stable and secure and Elevator Contractor shall be held strictly responsible for any damage resulting from failure to properly furnish such support.

D. The Elevator Contractor shall protect Owner's property, equipment and stored materials against damage, dust and dirt at all times and shall confine all methods of construction to promote safety and reduce noise and dust, due to occupancy of the property and provide necessary protective guards, barricade, tarpaulins and drop cloths.

E. The Elevator Contractor shall remove all unused and demolished equipment and rubbish on a continuous basis and shall keep the premises clean at all times during the term of the project. At the completion of the work, the Elevator Contractor shall leave the premises clean and in such a condition satisfactory to the Owner.

F. The Elevator Contractor understands that asbestos may exist in the hoistways and machine rooms and that the Elevator Contractor is to diligently work around the asbestos and take precautions not to disturb the asbestos. If the Elevator Contractor does disturb the asbestos the Owner shall be notified immediately. If the Elevator Contractor, its employees and its subcontractors shall be required to go to special training on asbestos and be certified to work around the asbestos and use proper protective gear at all times. The Elevator Contractor shall prepare and submit an emergency asbestos plan with the initial submittal

1.09 MATERIAL AND EQUIPMENT DELIVERY AND STORAGE

A. All materials and equipment furnished under this Specification shall be new, of the best grade and quality used for the purpose of commercial practice and shall be the latest standard product as advertised in printed catalogs by reputable manufacturers. All equipment or apparatus of any one system must be the product of one manufacturer or equivalent products of a number of manufacturers which are suitable for use in a unified or assembled system. Parts of the elevator shall be built to standard dimensions, tolerances and clearances in order to ensure complete interchangeability of similar parts of similar machines and devices.

B. The Elevator Contractor shall provide for all cartage, handling and receiving, hoisting and lowering and removal of equipment related to the work, from the property. The Elevator Contractor shall be responsible for all permits, fees and coordination with local authorities, including local fire and police departments for the use of crane service on and around the property.

C. The equipment shall be installed in accordance with the equipment manufacturer's direction, referenced codes and Specifications.

D. Machine Room equipment shall be installed with clearances complying with referenced codes and Specifications.

E. All items shall be installed so that they are safely accessible for maintenance and so that they may be removable via portable hoist or other means for maintenance and repair.

F. All materials shall be delivered in the original unopened protective packaging and shall be stored in protective packaging to prevent soiling, physical damage and wetting.

G. Equipment and exposed finishes shall be protected during transportation, erection and construction against damage and stains.

H. Elevator Contractor shall confine his apparatus and the storage of material to limits established by law, ordinances, permits or directions of the Owner and shall not unreasonably encumber the premises with his materials. All flammable or combustible materials shall be properly stored to eliminate potential fire hazards.

1.10 PROJECT MANAGEMENT AND SUPERVISION

A. Elevator Contractor shall designate an experienced Project Manager to perform the administrative management of the project and place a competent Superintendent in charge of the project throughout the course of the work. The Elevator Contractor's onsite job foreman shall be responsible for day-to-day operations and scheduling with the Owner. The Project Manager and Superintendent shall be available to the owner to assist in the progress and coordination of the work of the project and shall represent the Elevator Contractor in all matters relating to the project.

1.11 SAFETY PLAN

A. The Elevator Contractor shall submit a detailed safety plan for this project at time of shop drawing submittal. Safety plan shall detail the type and construction of the barricades to be used at open hoistways, rigging to be worn by elevator contractors, and first aid kit. Full height barricades are required that are lockable from the outside and inside. The barricades shall be designed to be no more than2' from the finished wall and if plywood shall be painted in color chosen by the Owner. Signs shall be posted on each side of the barricades. The Elevator Contractor shall be fined $1,000 for any time a hoistway door or barricade is left open or unlocked without a mechanic standing at the opening. The superintendent shall hold a safety meeting on site weekly.

1.12 LIFE SAFETY SYTEMS

A. Elevator Contractor shall maintain all operating life safety systems in operation at all times, including elevator Fire/Emergency recall and operation and Emergency Power operation. Elevators operating for the Workman's or Public's use are to be Code compliant at all times throughout the work of the Contract.

1.13 SPECIAL CONDITIONS

A. The Elevator Contractor shall perform the following as part of the execution of the work:

1. Comply with all requirements of the local Fire Codes that are applicable to this work.

2. Be sensitive to the needs and entitlements of the occupants of the building while performing the work.

3. Confirm that the Specification and Contract Documents are complete with regard to the work required to provide for a complete, legal and Code compliant installation.

4. Confirm that the elevator equipment to be provided will fit within the space available. Survey the job site and verify by measurement all dimensions affecting the work to be performed as part of the Contract. Advise the Owner of any deficiencies which may be in conflict with design tolerances of the equipment to be installed, prior to fabrication of the equipment affected.

5. Provide information as required for coordination of the work to be performed by other trades, which will affect scheduling of the elevator work, and information required for coordination in scheduling the elevator work., which will affect the scheduling of other trade contractor work.

6. Permit only skilled workmen to perform the work of the Elevator Contract.

7. Install all equipment in accordance with Elevator Contract, the Specification and the final approved shop drawings.

8. Comply with all applicable Codes, manufacturer's instructions and installation procedures.

9. Keep all means of access and egress to and from the building, stairwells and lobbies free and clear of materials, tools and equipment at all times.

10. Broom sweep the work areas, remove all hazardous materials from the site on a daily basis and keep clean of all dirt and grease resulting from the work.

11. Protect all finished surfaces during installation through to final acceptance of the elevators. Upon acceptance of the elevators, remove all protective coverings and thoroughly clean finished surfaces of paint, wrappings, mastic, etc. Repair any damage including scratches, dents, discoloration, etc, that may have occurred to the finished surfaces, with the exception of any obvious vandalism, misuse or abuse of the equipment by others. After each elevator in a group is turned on line, all the fire recall systems shall be tested to ensure proper operation. Both old and new elevators are to recall.

12. Provide a temporary protective barrier between cars in normal operation and adjacent to cars that are being modernized.

13. All Hands on Deck: During the time period when one of the elevators has been removed from service to perform modernization, all other elevators shall remain fully operational. If the operational elevator shuts down, for any reason, the Elevator Contractor shall have "all hands on deck" to immediately restore the shutdown elevator to service. The on-site modernization crews shall cease work on the modernization and immediately begin to correct work on the down elevator until the regular service crew arrives to complete the work. In the event a repair is needed on the down car, the

modernization crews shall commence work on the down car until operational. Work shall continue around the clock at no additional cost to the Owner until the car is operational.

14. Cars in Operation: During the entire modernization project and at all other times at least one car shall remain operational.

15. Existing drawings of the machine room and elevator shaft are included in Exhibit C.

END OF SECTION

Exhibit “A“ - ELECTRIC TRACTION ELEVATOR MODERNIZATION SPEC

SECTION 142200

ELECTRIC TRACTION ELEVATOR MODERNIZATION

PART 1 GENERAL

1.01 WORK INCLUDED

A. Passenger elevators as follows:
   1. Fine Arts Building, one (1) Geared Traction Passenger Elevator.

B. All engineering, equipment, labor, and permits required to satisfactorily complete elevator modernization required by Contract Documents.

C. Comply with all conditions set forth in the General Terms and Conditions, Instructions to Bidders, Special Conditions, General Requirements and all contract documents.

D. Preventive maintenance as described in NKU's maintenance agreement.

E. Cartage and Hoisting: All required staging, hoisting, and movement to, on, and from the site including new equipment, reused equipment, or dismantling and removal of existing equipment.

F. Contractor shall remove and properly dispose of all rubbish as fast as it accumulates including all existing parts and components not retained. Keep building and premises clean during progress of work and leave premises at completion in a condition acceptable to the University.
   1. Contractor shall properly remove salvaged equipment, as indicated by the University, and move to NKU storage facility for reuse. Contact to be made 48 hours in advance of delivery.

G. Contractor shall confine storage of materials on job site to limits approved by the University and shall not unnecessarily encumber premises or overload any portion of building with materials to a greater extent than structure design load.

H. At time of substantial completion of elevator work (or portion thereof), provide suitable protective coverings, barriers, devices signs or such other methods or procedures to protect elevator work from damage or deterioration. Maintain protective measures throughout remainder of modernization period until instructed to remove them by Northern Kentucky University.

I. Hoistway, pit, and machine room barricades as required.

J. All operational keys are only to be provided to the elevator office personnel, and NOT given to any of the building staff.

1.02 RELATED WORK INCLUDED AS PART OF THE ELEVATOR CONTRACT

A. Hoistway and Pit:
   1. Wall blockouts and fire rated closure for control and signal fixture boxes which penetrate walls. All cutting and patching of existing construction as required for the complete installation of the elevators is the responsibility of the Elevator Contractor.

2. Cutting and patching walls and floors. All cutting and patching of existing construction as required for the complete installation of the elevators is the responsibility of the Elevator Contractor.
3. Paint pit floor.
4. Pit lighting adequate to meet code required 10fc throughout pit area.
5. One GFCI receptacle per elevator in pit.
6. One Non-GFCI receptacle for pit each sump pump.
7. Waterproof pit.
   a. Indirect waste drain or sump with flush grate and pump.
   b. Replace existing sump pump. Sump pump/drain capacity minimum 3000 gallons per hour, per elevator.
8. Protect open hoistways and entrances during construction per OSHA Regulations.
9. Protect car enclosure, hoistway entrance assemblies, and special metal finishes from damage.
10. Hoistway venting modification:
    a. If currently vented through machine room vent and not required, the vent will need covered or vented to outside air in rated assembly.
       1. When required, install new hoistway venting power louvered vent to outside.
       2. Power vent to be normally closed and powered open. Default open with fire recall, smoke detector activation or loss of power.
11. Patching in the hall for existing hall lanterns. Materials to match existing materials and finish.
12. Pit water sensing device to be installed in the elevator pit to activate alternate floor recall.
13. Elevator smoke detectors are not to be installed in the hoistway.

B. Machine Room and Machinery Spaces:
   1. Thoroughly clean all surfaces (floors, walls, ceilings, etc.). Paint machine room floor with epoxy based high gloss finish.

C. Electrical Service, Conductors, and Devices (Electrical Contractor to Perform):
   1. For the Elevator circuits, Design Engineer shall specify that Contractor shall install, and the PM/CM should enforce and make certain that Main Feeder, Sub-feeder and Branch circuit Protective Devices are selectively coordinated for all possible values of overloads and short circuits for the system. This requirement in compliance with section 620.62 of NEC. All circuits and panels are to be properly labeled with the appropriate information, and “Fed from” information on the panel.
   2. Machine room lighting per code requirements for 19 fc throughout machine room.
      a. Provide machine room light switch adjacent to machine room door.
      b. One light at machine room access stairs to remain on at all times.
      c. Confirm building code requirements for machine room lighting.
      d. GFCI convenience outlets in machine room, minimum four outlets provided one on each of the four walls.

      Three-phase mainline copper power feeder to terminals of each elevator controller in the machine room with protected lockable “open” disconnecting means.
   3. Single-phase copper power feeder to each elevator controller for car lighting and exhaust blower with individual protected lockable “open” disconnecting means located in machine room.
   4. Emergency telephone line to each dual phone jack demarcation location in the elevator equipment room.
      a. Box with dual phone jack phone line cover mounted adjacent to each controller. Box to be mounted on equipment room wall, or ceiling. Boxes are not permitted to be attached to the elevator controller.

5. Fire alarm initiating devices in each elevator lobby, for each group of elevators or single elevator and each machine room to initiate firefighters' return feature.
   a. Provide alarm initiating signal devices in the elevator equipment room, mounted on ceiling, or wall, near controllers, as indicated on the architectural drawings and confirmed in job coordination meetings. No devices shall be mounted on the elevator controllers. Final connection to devices by alarm contractor. Fire alarm initiating devices in elevator equipment rooms: layout of devices required to meet NFPA 72 - 2010.
   b. Device in machine room to provide signal for general alarm and discrete signal for Phase II firefighters' operation.
6. Main power, emergency power and illumination to install, test and adjust elevator equipment.
7. Electrical contractor shall provide a quantity of four dedicated CAT 6 wire and conduit from each group controller to the nearest phone/data IDF or MDF
8. Fire Alarm speakers with connections to individual control panel in each elevator car and machine room. Fire Alarm speaker for elevator cab to be provided by the Electrical Contractor and installed by the Elevator Contractor
9. Means to automatically disconnect power to affected elevator drive unit and controller prior to activation of machine room fire sprinkler system. The disconnect shall be located on the line side in order to prevent alarms when the elevator mainline is powered "off" for routine elevator maintenance. Contractor to review and comply with 2013 NFPA 13 – 8.15.5.3.
   a. Manual shut-off means shall be located outside bounds of machine room for the fire sprinkler system.
10. Single-phase power feeders to machine room elevator monitoring panel/display unit with single-phase, protected lockable "open" disconnecting means.

    NOTE: Electrical contractor to provide means for absorbing power regenerated from the elevator drive during an overhauling load condition per NEC 620.91.

D. Elevator Emergency Power Provisions if installed.
   1. Emergency power of normal voltage characteristics via normal electrical feeders to run one elevator at a time in the elevator group, at full-rated car speed and capacity
   2. Emergency power of normal voltage characteristics via normal electrical feeders to run the elevator at full- rated car speed and capacity.
   3. Conductor from auxiliary form "C" dry contacts, located in the emergency power transfer switch to a designated elevator control panel in elevator group 1 and 2. Provide a time delay of 30 - 45 seconds for pre-transfer signal in either direction.
   4. Emergency single-phase power to each group controller, and each elevator controller for car lighting, exhaust blower, emergency signaling device, fire announcement speaker.
   5. Emergency power shall be supplied to all other code mandated items.

E. Elevator Emergency Battery Lowering, if installed:
   1. Battery Standby Power Transfer:
      a. Electrical contractor to install the required relay on the elevator disconnect for battery rescue operation.

1.03 DEFINITIONS

A. Specification design is based on the Safety Code for Elevators and Escalators, ASME A17.1 – 2010, the latest code adopted by Commonwealth of Kentucky Division of Building Codes Enforcement. The contractor shall install equipment based on the code being enforced by the Commonwealth of Kentucky, Division of Building Codes Enforcement at the time of a permit application.

B. Reference to a device or a part of the equipment applies to the number of devices or parts required to complete the installation.

C. Provisions of this specification are applicable to all elevators unless identified otherwise.

1.04 QUALITY ASSURANCE

A. Installer Qualifications:
   1. Acceptable Installers shall be regularly engaged in installing, and servicing elevators of the type and character herein specified, and with a history of successful production acceptable to the University.
   2. As part of the bid evaluation process, whether bidder is an elevator contractor or some other prime contractor, bidder must submit the name of the elevator company they elect to use to actually perform the elevator work specified with the bid. Acceptable Installer may be required to submit the following.
      a. Acceptable Installers shall have a staffed service office located in the Greater Cincinnati/Northern Kentucky area.
      b. Evidence the selected acceptable installers can respond to service calls within (30) minutes or less when the call covers passenger entrapment or other emergency as deemed by the University on a 7 day per week 24-hour per day basis.
      c. The service call respondents will be a competent elevator "Journeyman", skilled on the existing and upgraded equipment and a field employee of the selected acceptable installer. Installation and service employee qualifications shall be submitted to The University upon contract award and updated if and when any personnel changes are made.
      d. Evidence that Installer will utilize an adequate number of work persons ("Journeymen") thoroughly trained, experienced and skilled in the necessary crafts and that all work shall be performed in a skillful and professional manner. All work/services shall be performed by first class Elevator Constructor Journeymen with at least five (5) years' experience with similar vertical transportation equipment. All journeymen shall have a minimum of 5 years' experience, and shall have, either a current "IUEC journeyman's card" after successfully passing the journeyman's test of the International Union of Elevator Constructors (IUEC) or shall have a current Certified Elevator Technician (CET) license, after completing the National Association of Elevator Contractors (NAEC) Certified Elevator Technician Education Program. If during the course of this work, the Commonwealth of Kentucky requires elevator Journeymen to be licensed, Journeymen assigned to this project shall abide by the State licensing requirement. An apprentice worker of fewer qualifications may be utilized, only for assisting an elevator contractor Journeymen.
      e. The following installation contractors have project history with Northern Kentucky University:
         1. American Elevator
         2. Fujitec Elevator
         3. KONE Elevator
         4. Otis Elevator
         5. Schindler Elevator
         6. thyssenkrupp Elevator

1.05 APPLICABLE CODES

A. Compliance with Regulatory Agencies: Comply with most stringent applicable provisions of following Codes, laws, and/or Authorities, including revisions and changes in effect:

1. Safety Code for Elevators and Escalators, ASME A17.1
2. Guide for Inspection of Elevators, Escalators, and Moving Walks, ASME A17.2
3. Elevator and Escalator Electrical Equipment, ASME A17.5
4. National Electrical Code, NFPA 70
5. Americans with Disabilities Act, ADA
6. Local Fire Authority
7. Requirements of most stringent provision of local applicable building code.
8. Life Safety Code, NFPA 101
9. Uniform Federal Accessibility Standard, UFAS
10. Commonwealth of Kentucky code

B. In addition to complying with all applicable and pertinent regulations of National, State, City and University codes and requirements, comply with current adopted code by the Authority Having Jurisdiction (AHJ) Latest adopted version of ASME A17.1 and addenda's, 2010 ADA Standards for Accessible Design, NFPA 13 - 2010 / NFPA 70 - 2014/NFPA 72 - 2010, OBC - 2011 Edition, including updates through July 2017

1.06 OCCUPANCY AND WORK BY OTHERS

A. Contractor expressly affirms the University's rights to let other contracts and employ other Contractors in connection with required work. Contractor will afford other Contractors and their workmen reasonable opportunity for introduction and storage of materials and equipment, for execution of their work, and will properly connect and coordinate its work with theirs. Contractor will also incorporate comparable provisions in all its subcontracts.

B. Contractor declares that other Contractors employed by the University on basis of separate contracts may proceed at such times as necessary to install items of work required by the University.

C. Contractor declares that it will cooperate with other Contractors employed by the University and, in addition to other coordination and expediting efforts, will coordinate their work by written notices regarding necessity of such work to be done on or before certain dates, including all job coordination meeting minutes.

D. Contractor declares that it is responsible for review, stamped, and signed approval of all shop drawings for required work.

E. Contractor hereby declares that content of foregoing paragraphs and influence they may have on project:
1. Shall not cause a change in stipulated Contract Sum
2. Shall not cause a change in Construction Time Schedule

1.07 DOCUMENT AND SITE VERIFICATION

A. In order to discover and resolve conflicts or lack of definition which might create problems, Contractor must review Contract Documents and site conditions for compatibility with its product prior to submittal of quotation. Review existing structural, electrical, and mechanical provisions for compatibility with Contractor's products. The University will not pay for change to structural, mechanical, electrical, or other systems required to accommodate Contractor's equipment.

B. Prior to commencing elevator modernization, Installer shall inspect hoistways, Hoistway entrances, pits, and machine room, as they exist and are modified, and shall verify all critical dimensions, and examine supporting structure and all other conditions under which elevator work is to be installed. Notify the University project CM/AE in writing of any

dimensional discrepancies or other conditions detrimental to the proper modernization and performance of the work. Do not proceed with elevator installation until unsatisfactory conditions have been corrected.

1.08 SUBMITTALS

A. Elevator contractor to submit copies of all data sheets prior to ordering equipment. Contractor shall obtain NKU approval of all fixture drawings with manufacturers “FINAL” stamp, prior to releasing equipment for manufacturing.

B. Within thirty (30) calendar days after award of contract and before beginning equipment fabrication submit shop drawings, and required material samples for review. Allow fourteen (14) days for response to initial submittal.
   1. Scaled or Fully Dimensioned Layout: Plan of pit, hoistway, and machine room indicating equipment arrangement, elevation section of hoistway, details of car enclosures, and car/hall signal fixtures.
   2. Design Information: Indicate equipment lists, reactions, and design information on layouts.
   3. Power Confirmation Information: Design for existing conditions.
   4. Fixtures: Cuts, samples, or shop drawings.
      a. Including all engraved, CHEMICALLY ETCHED, signage and graphics.
   5. Finish Material: If Requested: Submit 3" x 12" samples of actual finished material for review of color, pattern, and texture. Compliance with other requirements is the exclusive responsibility of the Contractor. Include, if requested, signal fixtures, lights, graphics, Braille plates, and detail of mounting provisions. All interior finishes shall be reviewed and approved by NKU Interior Design staff.
   6. Design Information: Provide calculations verifying the following:
      a. Adequacy of existing electrical provisions.
      b. Adequacy of retained equipment relative to code requirements if car weight increased by more than 5%.
      c. Machine room heat emissions in B.T.U.
      d. Adequacy of existing retained elevator machine beams.
      e. Adequacy of existing car platform structure for intended loading.
   7. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment.
   8. Location of circuit breaker, switchboard panel and or disconnect switches, light switch, car light disconnect, and feeder termination on all controllers.
   9. Electrical power requirements of all components, new and existing.

C. Submittal review shall not be construed as an indication that submittal is correct or suitable or that the work represented by submittal complies with the Contract Documents. Compliance with Contract Documents, Code requirements, dimensions, fit, and interface with other work is Contractor’s responsibility.

D. Acknowledge and/or respond to review comments within fourteen (14) calendar days of return. Promptly incorporate required changes due to inaccurate data or incomplete definition so that delivery and installation schedules are not affected. Identify and cloud drawing revisions including Contractor elective revisions on each re-submittal. Contractor’s revision response time is not justification for equipment delivery or installation delay.

1.09 PERMIT, TEST AND INSPECTION

A. The Contractor shall be responsible for all costs and provide Northern Kentucky University with copies of all inspections, acceptances, temporary and permanent certificates of

operation, within 48 hours of said inspection/acceptance. Copies of the elevator alteration permit shall be posted on the jobsite.

B. Contractor shall complete and sign the Commonwealth of Kentucky pre-inspection document from the Division of Building Codes enforcement website. This document applies to new installation projects, as well as, modernizations. Prior to the elevator contractor requesting an acceptance inspection for the elevator, the elevator contractor is to review the job site with the pre-inspection document and note any potential violations, with a reason the violation exists and forward the document Commonwealth of Kentucky Elevator Division. The unit should not be scheduled unless all violations are able to be completed prior to the scheduled inspection.

C. Perform test required by Governing Authority in accordance with procedure described in ASME A17.2 Guide for Inspection of Elevators, Escalators, and Moving Walks in the presence of Authorized Representative.

D. Supply personnel and equipment for test and final review by CM/AE and Northern Kentucky University personnel, and / or Consultant as required.

1.10 MAINTENANCE

A. Warranties and Maintenance pertain to all elevators in 1.01, A. Regardless of the amount of upgrades and modernizations being performed to the elevators systems. Contractor to reference the scope of work in the owner's maintenance agreement in Exhibit B.

1. Warranty: Provide special project warranty, signed by Contractor, Installer, and Manufacturer, agreeing to replace/repair/restore defective materials and workmanship of elevator work during warranty period. "Defective" is hereby defined to include, but not by way of limitation, operation or control system failures, performances below required minimums, excessive wear, unusual deterioration or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise or vibration, and similar unusual, unexpected and unsatisfactory conditions.
    a. The warranty period shall be for 12 months from the date of substantial completion as dated on the substantial completion document received by the University from the primary contractor. Each elevator shall receive a final inspection by the Commonwealth of Kentucky, and punch list by the consultant, and the University. The full maintenance elevator service on all elevators will extend for a period of 12 months following substantial completion acceptance of the last elevator completed in the building.
    b. Provide after hours on site coverage to troubleshoot and repair equipment showing continued failures, ongoing passenger entrapment, or other conditions which Owner determines to be unsatisfactory modernization results, until said circumstances are remedied to the owner's satisfaction. The after hour's coverage for troubleshooting and repair is to be provided to the University at no additional cost.

2. Maintenance: Provide full maintenance service by elevator "Journeymen" and aides in the regular employment of the elevator installer, beginning at 08:00 on the date of the modernization mobilization for the first elevator in the building. The full maintenance elevator service on all elevators will then extend for a period of one-year following the University's acceptance of the last elevator completed in the building.
    a. Maintenance service shall be in accordance with NKU's current PM specification.

b. Include repair/replacement of worn or defective parts or components and lubrication, cleaning and adjusting as required for proper elevator operation in conformance with specified requirements including manufacturer recommendations.
c. The installer shall respond within 60 minutes for emergencies or entrapments and within 60 minutes for all other service requests, 24/7. For warranty maintenance and all callbacks, keys shall be picked up and returned at Lincoln Tower. Keys must be returned following completion of the day's service. Time card for maintenance and service requests shall be submitted with key return. Monthly Firefighter's service testing is included within the PM requirement.
d. Maintenance provided under this contract shall include replacement of failed lighting and signal indications and shall not be limited to the scheduled maintenance exam schedule nor to the newly installed equipment.

3. Failure to comply with the terms of the maintenance covered in this specification shall be a penalty of $300 for each failure to respond within the above limits, and for elevators not restored to service within 48 hours of notification of the reported failure.
   a. The monthly maintenance price per elevator as stated in the bid documents and included in this bid shall be used as the basis for the credit.

PART 2 PRODUCTS

2.01 SUMMARY

A. Unless specifically identified as "retain existing," provide new equipment. The base bid will include one (1) elevator at Fine Arts Building. Alternates reference the one (1) elevator.

	Existing Equipment	Disposition
Number:	Car 1	Retain Existing Car Numbers
Capacity:	4,000 lbs.	Retain Existing Capacities
Class Loading:	Passenger Class A	Retain Existing Class Loading
Contract Speed:	200 F.P.M.	Retain Existing Contract Speed
Machine:	Geared	New Hollister Whitney Geared. Alternate for Gearless Traction Machine or Imperial Gearless
Machine Location:	Overhead	Retain Existing Machinery Space
Supervisory Control:	Relay Logic	NEW – GALaxy Duplex Selective/Collective Automatic Microprocessor Based
Motor Control:	DC Motor Generator	NEW - AC Variable Voltage Variable Frequency Microprocessor Based with Digital Closed-Loop Feedback
Power Characteristics:	Field Verify	Retain Existing Power

	Existing Equipment	Disposition
Stops:	4 Front	Retain Existing Stops
Openings:	4 Front	Retain Existing Openings
Floors Served:	Floors 1-4	Retain Existing Floors Served
Travel:	Field Verify	Retain Existing Travel
Minimum Clear Inside Car:	6'-8¾" W x 5'-10" D Field Verify	Retain Existing Cab Interior Size
Entrance Size:	42" W x 84" H Field Verify	Retain Existing Entrance Sizes
Entrance Type:	All Cars: SSC/O	Retain Existing Entrance Type
Door Operation:	High Speed, Open Loop, Door Operator	NEW - GAL MOVFR High Speed, Closed Loop, Heavy-Duty, Door Operator, Minimum Opening Speed 2-1/2 F.P.S. Front and Rear.
Door Protection:	Infrared, Full Screen Device	NEW – Janus PanaChrome 3D (3D function to be turned off), Infrared, Full Screen Device with Differential Timing, Nudging and Interrupted Beam Time
Alternates:		New – Hoistway Door Panels AC Gearless Machine In lieu of Geared

2.02 MATERIALS

A. Provide manufacturers materials and components, which comply with, or fulfill the requirements of elevator schedule sheets. Where components are not otherwise indicated, provide standard components, published by manufacturer as required for a complete system
   1. At a minimum, comply with the instructions for reuse, repair, and replacement in this specification.

B. Site condition inspection
   1. Prior to beginning installation of equipment, examine hoistway and machine room areas. Verify no irregularities exist which affect execution of work specified.
   2. Do not proceed with installation until work in place conforms to project requirements.
   3. Where the specification advises that reuse or repair is appropriate and the installer determines that not to be possible, the Installer is to provide the improvement at no additional cost to the University.

C. Product delivery, storage, and handling
   1. Deliver material in Contractor's original unopened protective packaging.

2. Store material in original protective packaging. Prevent soiling, physical damage, or moisture damage.
3. Protect equipment and exposed finishes from damage and stains during transportation, erection, and construction.
4. Allocate available site storage areas and coordinate their use with the University and other Contractors.
5. Provide suitable temporary weather-tight storage facilities as may be required for materials that will be stored in the open.

D. Installation Requirements
1. Install all equipment in accordance with Contractor's instructions, referenced codes, specification, and approved submittals.
2. Install machine room equipment with clearances in accordance with referenced codes and specification.
3. Install all equipment so it may be easily removed for maintenance and repair.
4. Install all equipment for ease of maintenance.
5. Install all equipment to afford maximum accessibility, safety, and continuity of operation.
6. Remove oil, grease, scale, and other foreign matter from the following equipment and apply one coat of field-applied machinery enamel.
   a. All exposed equipment and metal work installed as part of this work which does not have architectural finish.
   b. Machine room equipment, and pit equipment.
   c. Neatly touch up damaged factory-painted surfaces with original paint color. Protect machine-finish surfaces against corrosion.

E. Manufacturer's Nameplates
1. Manufacturer's name plates and other identifying markings shall not be affixed on surfaces exposed to public view. This requirement does not apply to Underwriter's Laboratories and code required labels.
2. Each major component of mechanical and electrical equipment shall have identification plate with the Manufacturer's name, address, model number rating, and any other information required by governing codes.

F. Colors of Factory-Finished Equipment
1. All colors will be selected from the Manufacturer's standard range unless custom colors are specified herein. Contractor to provide a Clear Gloss finish on Hoist Machine, Machine Beams, Deflector Sheaves, Secondary Sheaves, and Buffers, from the manufacturer.
2. Submit samples of all standard colors available and/or specified custom colors for review and approval.
3. Submit samples of all specified architectural metals specified for review and approval.

G. Materials and Finishes
1. Steel:
   a. Sheet Steel (Furniture Steel for Exposed Work): Stretcher-leveled, cold-rolled, commercial quality carbon steel, complying with ASTM A366, matte finish.
   b. Sheet Steel (for Unexposed Work): Hot-rolled, commercial quality carbon steel, pickled and oiled, complying with ASTM A568/A568M-03.
   c. Structural Steel Shapes and Plates: ASTM A36.
2. Stainless Steel: Type 302 or 304 complying with ASTM A240, with standard tempers and hardness required for fabrication, strength and durability. Apply mechanical finish on fabricated work in the locations shown or specified, Federal

Standard and NAAMM nomenclature, with texture and reflectivity required to match Architect's sample. Protect with adhesive paper covering.
   a. No. 4 Satin: Directional polish finish. Graining directions as shown or, if not shown, in longest dimension.
3. Aluminum: Extrusions per ASTM B221; sheet and plate per ASTM B209.
4. Plastic Laminate: ASTM E84 Class A and NEMA LD3.1, Fire-Rated Grade (GP-50), Type 7, 0.050" ±.005" thick, color and texture as follows:
   a. Exposed Surfaces: Color and texture selected by Architect.
   b. Concealed Surfaces: Contractor's standard color and finish.
5. Paint: Clean exposed metal parts and assemblies of oil, grease, scale, and other foreign matter and factory paint one shop coat of standard rust-resistant primer. After erection, provide one finish coat of industrial gloss enamel paint for surfaces without manufacturers gloss finish. Galvanized metal need not be painted.
6. Baked Enamel Finish: Prime finish per above. Unless specified "prime finish" only, apply and bake three (3) additional coats of enamel in the selected solid color.

2.03 CAR PERFORMANCE

A. Car Speed: ± 3% of contract speed under any loading condition.

B. Car Capacity: Safely lower, stop and hold 125% of rated load.

C. Car Stopping Zone: ±1/4" under any loading condition.

D. Door Opening Time: Seconds from start of opening to fully open:
   1. 1.4 – 1.8 seconds.

E. Door Closing Time: Seconds from start of closing to fully closed:
   1. 2.2 – 2.6 seconds.

F. Car Floor-to-Floor Performance Time: Seconds from start of doors closing until doors are 3/4 open (1/2 open for side opening doors) and car level and stopped at next successive floor under any loading condition or travel direction (12' typical floor height).
   1. 10.5 – 11.0 seconds

G. Car Ride Quality:
   1. Horizontal and vertical acceleration within car during all riding and door operating conditions. Not more than 15 mg peak to peak (adjacent peaks) in the 1 - 10 Hz range.
   2. Acceleration and Deceleration: Smooth constant and not less than 2 feet/second^2 with an initial ramp between 0.5 and 0.75 second.
   3. Sustained Jerk: Not more than 6 feet/second^3.
   4. Measurement Standards: Measure and evaluate ride quality consistent with ISO 18738, using low pass cutoff frequency of 10 Hz and A95 peak-to-peak average calculations.

H. Noise and Vibration Control
   1. Airborne Noise: Measured noise level of elevator equipment and its operation shall not exceed 60 dBA inside car under any condition including door operation and car ventilation exhaust blower on its highest speed. Limit noise level in the machine room relating to elevator equipment and its operation to no more than 80 dBA. All dBA readings to be taken 3'-0" off the floor and 3'-0" from the equipment using the "A" weighted scale.
   2. Vibration Control: All elevator equipment provided under this contract, including power unit, controller, oil supply lines, and their support shall be mechanically

isolated from the building structure and electrically isolated from the building power supply and to each other to minimize the possibility of objectionable noise and vibrations being transmitted to occupied areas of the building.

2.04 OPERATION

A. New - Duplex Selective Collective Microprocessor-Based:
   1. Operate cars without attendants from pushbuttons in cars and located at each floor. When cars are available, park one car at main floor (“home” car). Park other car where last used (“free” car).
   2. Respond to car calls and hall calls above main floor using the free car. Once a car has started, respond to registered calls in the direction of travel and in the order the floors are reached.
   3. Do not reverse car direction until all car calls have been answered, or until all hall calls ahead of the car and corresponding to the direction of car travel have been answered.
   4. Slow cars and stop automatically at floors corresponding to registered calls in the order in which they are approached in either direction of travel. As slowdown is initiated for a hall call, automatically cancel hall call. Cancel car calls in the same manner. Hold car at arrival floor an adjustable time interval to allow passenger transfer.
   5. Answer calls corresponding to direction in which car is traveling unless call in the opposite direction is the highest (or lowest) call registered.
   6. When the free car is clearing calls, start home car to respond to:
      a. A call registered on home car pushbuttons.
      b. An up hall call registered below free car.
      c. An up or a down call registered above free car while free car is traveling down.
      d. A hall call when free car is delayed in its normal operation for a predetermined period.
   7. When both cars are clearing calls, stop only one car in response to any registered hall call. Return the first car to clear its calls to main floor. Should last service required bring both cars to main floor, the first arriving car becomes the free car.
   8. Illuminate appropriate pushbutton to indicate call registration. Extinguish light when call is answered.
   9. Approved Controller Manufacturers:
      a. GAL Manufacturing (GAL)

B. Other Items:
   1. Rope Mounted Load Weighing System: Provide means for weighing car passenger load of capacity after final acceptance.
      a. Control system to provide dispatching at main floor in advance of normal intervals when car fills to capacity.
      b. Provide hall call by-pass when the car is filled to preset percentage of rated capacity and traveling in down direction.
      c. Field adjustment range: 10% to 100%
      d. If the car is determined to be overloaded, the system shall provide visual and audible notification and hold the car at the floor with the doors open.
   2. Anti-Nuisance Feature: If car loading relative to weight in car is not commensurate with number of registered car calls, cancel car calls. Load Weighing to activate this feature.
   3. Independent Service: Provide controls for operation of each car from its pushbuttons only. Close doors by constant pressure on desired destination floor button or door close button. Open doors automatically upon arrival at selected floor.

4. The elevator control system shall be designed to interface with a card reader system, if added by owner in the future.

C. Firefighters' Service: Provide equipment and operation in accordance with Code requirements.

D. Automatic Car Stopping Zone: Stop car within 1/4" above or below the landing sill. Maintain stopping zone regardless of load in car, direction of travel, distance between landings, hoist rope slippage, or stretch.

E. Remote Monitoring and Diagnostics: Equip each controller with standard ports, interface boards, and drivers to accept maintenance, data logging, fault finding diagnostic and monitoring computers, keyboards, modems, and programming tools. The system shall be capable of driving remote color LCD monitors that continually scan and display the status of each car and call. Each elevator equipment room shall contain a machine room monitoring, complete with monitor and keyboard.

F. New - Motion Control: Microprocessor based AC variable-voltage, variable frequency with digitally encoded closed-loop velocity feedback suitable for operation specified and capable of providing smooth, comfortable car acceleration, retardation, and dynamic braking. Limit the difference in car speed between full load and no load to not more than ±3% of the contract speed.

G. New - Door Operation: Automatically open doors when car arrives at the intended floor. Door operation should not include any type of pre-opening. At expiration of normal dwell time, close doors. Reopen doors when car is designated for loading with a hall call.

H. New - Standby Lighting and Alarm: Car mounted battery unit with solid-state charger to operate alarm bell and car emergency lighting. Battery to be rechargeable with minimum 5-year life expectancy. Include required transformer. Provide test key switch on car operating panel faceplate of car operating panel. A portion of the car lighting to be integral with the emergency lighting system with Man-D-Tec power supply.

I. Standby Power Operation, where provided: Upon loss of normal power, adequate standby power will be supplied via building electrical feeders to simultaneously start and run one car in each group and single cars at contract car speed and capacity.
   1. Automatically return one car at a time in each group and single car(s) nonstop to designated floor, open doors for approximately 3.0 seconds, close doors, and park car. During return operation, car and hall call pushbuttons shall be rendered inoperative. As each car parks, system shall immediately select the next car until all cars in a group have returned to the designated floor. If a car fails to start or return within 30 seconds, system shall automatically select the next car in the group to automatically return.
   2. When all cars in a group have returned to the designated floor, one car in each group shall be designated for automatic operation. When a service demand exists for 30 seconds and designated car fails to start, next available car in the group shall be automatically selected for operation.
   3. Provide selection switches in main floor hall station.
      a. Switches shall be labeled "ELEVATOR EMERGENCY POWER" with positions marked "AUTO" and appropriate car numbers controlled by each respective switch. Key shall be keyed same as from key utilized for firefighters' Phase I and II key switch. Key shall be removable in "AUTO" position only.
      b. Switch shall override automatic return and automatic selection functions, and cause the manually selected car to operate. Manual selection shall cause car

to start and proceed to designated floor and open and close its doors before standby power is manually transferred to next selected car.

4. Provide “ELEVATOR EMERGENCY POWER” indicator lights, two per car, one indicator for door position and one indicator light illuminates when corresponding car is selected, automatically or manually, to operate on standby power.
5. Successive Starting: When normal power is restored or there has been a power interruption, individual cars in each bank shall restart at five second intervals.

J. New – Traction Elevators without Emergency Power provide Battery Standby Power Transfer:
1. Upon loss of normal power, provide controls to automatically lower or raise the cars to the nearest landing.
2. Upon arrival at the nearest landing, the elevator doors shall open automatically and remain open. The elevator shall then become deactivated.
3. The standby power source shall be provided via battery units installed in machine room or controller, including solid-state charger and testing means.
4. Battery to be rechargeable with a 10-year life expectancy.
5. Upon restoration of normal power, the elevator shall automatically resume normal operation.

K. New - Card/Proximity Reader Security System: Provide provisions, wiring only, from each individual machine room controller to main car operating panel, and to the lowest landing in the hoistway duct riser.

L. New - Pit Water feature. The elevator shall recall to the highest landing when provided upon notification of high water in pit. Pit water sensing device is to be supplied by other trades. The elevator controller shall contain a third alternate floor to add this feature. Car to be removed from service and remain with the doors open.

2.05 MACHINE ROOM EQUIPMENT

A. Arrange equipment in existing machine room spaces and/or as shown on drawings.

B. New – Hoist Machine
1. Base Bid: Geared Hollister Whitney Traction Hoist Machine:
   a. Single worm geared traction type with AC induction or P.M.S.M. ACV3F motor, brake, gear, drive shaft, deflector sheave, and gear case mounted in proper alignment on an isolated bedplate. Provide bedplate blocking to elevate new deflector sheave above machine room floor.
   b. Provide hoist machine mounted direct drive, digital, closed-loop velocity encoder.
   c. Provide hoist machine drip pans integral to machine to collect lubricant seepage.
   d. Provide manual brake release tool for machine room.
   e. Provide new rope gripper with integral machine mounted installation with new machine.
   f. Machine paint finish to be high gloss clear coated by Hollister Whitney, or Imperial.
   g. Neatly touch up damaged factory-painted surfaces with original paint color. Protect machine-finish surfaces against corrosion.

C. New - Solid State Power Conversion and Regulation Unit:
1. Provide solid state, alternating current, variable voltage, variable frequency (ACV^{3}F), I.G.B.T. converter/inverter drives.

2. Design unit to limit current, suppress noise, and prevent transient voltage feedback into building power supply. Provide internal heat sink cooling fans for the power drive portion of the converter panels. Conform to IEEE standards 519-1992 for line harmonics and switching noise.
3. Provide separate isolation transformers, filter networks, and choke inductors. Isolate unit to minimize noise and vibration transmission.
4. Suppress solid-state converter noises, radio frequency interference, and eliminate regenerative transients induced into the mainline feeders or the building standby power generator.
5. Supplemental direct-current power for the operation of hoist machine brake, door operator, dispatch processor, signal fixtures, etc., from separate static power supply.
6. ACV3F Drives for gearless elevators shall be regenerative and utilize IGBT converter/inverter and dynamic braking during overhauling condition.

D. New - Encoder: Direct drive, solid-state, digital type. Update car position at each floor and automatically restore after power loss.

E. New - Controller: UL/CSA labeled.
1. Compartment: Securely mount all assemblies, power supplies, chassis switches, relays, etc., on a substantial, self-supporting steel frame. Completely enclose equipment with covers. Provide means to prevent overheating. Monitor/keyboard and power to same whether elevator car is powered or not. Include controller intercom to cab communications regardless of building height.
2. Relay Design: Magnet operated with contacts of design and material to insure maximum conductivity, long life, and reliable operation without overheating or excessive wear. Provide wiping action and means to prevent sticking due to fusion. Contacts carrying high inductive currents shall be provided with arc deflectors or suppressors.
3. Microprocessor-Related Hardware:
   a. Provide built-in noise suppression devices which provide a high level of noise immunity on all solid-state hardware and devices.
   b. Provide power supplies with noise suppression devices.
   c. Isolate inputs from external devices (such as pushbuttons) with opto-isolation modules.
   d. Design control circuits with one leg of power supply grounded.
   e. Safety circuits shall not be affected by accidental grounding of any part of the system.
   f. System shall automatically restart when power is restored.
   g. System memory shall be retained in the event of power failure or disturbance.
   h. Equipment shall be provided with Electro Magnetic Interference (EMI) shielding within FCC guidelines.
4. Wiring: CSA labeled copper for factory wiring. Neatly route all wiring interconnections and securely attach wiring connections to studs or terminals.
5. Permanently mark components (relays, fuses, PC boards, etc.) with symbols shown on wiring diagrams.
6. Elevator Contractor to confirm proper earth ground is provided.
7. Monitoring System Interface: Provide controller with serial data link through RJ45 Ethernet connection and install all devices necessary to monitor items outlined in Section 2.13.
8. Provide controller or machine mounted auxiliary, lockable “open,” disconnect if mainline disconnect is not in sight of controller and/or machine.

F. Sleeves and Guards: Provide 2" steel angle guards around cable or duct slots through floor slabs or grating. Provide rope and smoke guards for sheaves, cables, and cable slots in machine room.

G. New - Machine and Equipment Support Beams: Retain existing in place. Provide all required supplemental supports and attachments for new machine.
   1. Isolate machine and overhead sheave beams to prevent noise and vibration transmission to building structure.
   2. Provide a drawing showing the supports, stamped by Professional Engineer verifying the adequacy of the support provided.

H. New - Hollister Whitney Centrifugal-type, car driven machine room mounted with pull-through jaws and bi-directional shutdown switches. Provide required bracketing and supports for attachment to building structure.

I. New – Hollister Whitney Rope Gripper Emergency Brake:
   1. Provide means to prevent ascending car over-speed and unintended car movement per Code.
   2. Mount the auxiliary brake on suitable structural steel supports. If the mounting is field modified and not provided on the support beams by Hollister Whitney. Provide a drawing showing the supports, stamped by Professional Engineer verifying the adequacy of the support provided.
   3. Provide control circuits to enable the device to function as required by Code.

2.06 HOISTWAY EQUIPMENT

A. Supports:
   1. Inspect and correct all deficiencies to all existing, reused, and new for machines, deflectors, governors, buffers and related supports, fastenings and anchors for correct alignment and torque.

B. Guide Rails: Main and counterweight guide rails – where retained:
   1. Inspect, clean, align, and tighten all existing rails to comply with ASME A17.1.
   2. File all rail surfaces for a smooth even ride.
   3. Provide supplemental rail brackets and/or backing as required by Code or to enhance car ride quality.
   4. Plumb all rails to existing building conditions, within 1/16 of an inch in 100 foot of travel.
   5. Wire brush and prep all rails, supports and anchors for a complete coating of black rustproof paint.
   6. Paint all rails with black rustproof paint when all construction is completed

C. Buffers, Car, and Counterweight: Retain existing.
   1. Oil Buffers: Car and Counterweight:
      a. Drain, flush, clean, inspect, rebuild/replace piston.
      b. Refill, paint and seal as required for proper operation.
      c. Verify proper operation and test with State acceptance test.

D. New - Pit Ladders: Pit access stationary ladder for each elevator provided and installed by elevator contractor. Stationary ladders to be provided on all elevators that allow clearance for a stationary ladder. If site condition presents requires a retractable type ladder. The retractable ladder shall include an electrical contact conforming to ASME A17.1, Rule 2.2.2.4.2.7. Pit ladder to contain rungs the full height of the ladder.

E. New – Deflector and Overhead Sheaves: Machined grooves and sealed bearings. Provide mounting means to machine beams, machine bedplate, car and counterweight structural members, or building structure.

F. Counterweight: Retain existing.

G. New - Counterweight Guide Shoes: Spring dampened roller guide shoes. Elsco Model D

H. Counterweight Guard: Metal guard in pit. Retain existing, clean, scrape and paint. Install new where missing.

I. New – Hollister Whitney Governor Rope and Encoder Tape Tensioning Sheaves: Mount sheaves and support frame on pit floor or guide rail. Provide frame with guides or pivot point to enable free vertical movement and proper tension of rope and tape.

J. New – Hoist and Governor Ropes:
   1. 8 x 19 or 8 x 25 Seale construction, traction steel type. Fasten with staggered length, adjustable, spring isolated wedge type shackles.
   2. Governor rope to suit Contractor's specification.

K. Terminal Stopping: Provide normal and final mechanical devices.

L. New - Electrical Wiring and Wiring Connections:
   1. Conform to NFPA 70 for particular type of location.
   2. Run wiring in electrical metallic tubing (EMT) 3/4" minimum, except that used for control wiring which may be 1/2", or metal wire ways and outlet boxes, except for traveling cables. Flexible metal conduit may only be used for short connections not subject to moisture, oil, or embedment in concrete, but such runs shall contain green equipment grounding conductor.
   3. Hoist way raceway may be in rigid steel wiring duct. Thread-less fittings shall not be used with rigid galvanized steel conduit. Electrical connections to machinery shall allow one foot of lateral motion. Utilize only compression type conduit and box connections. No set screw type connectors are permitted.
   4. Traveling Cables: Shall have flame retarding and moisture resistant outer cover. Cables shall be flexible and designed for elevator service in accordance with NFPA 70, and suitably suspended, anchored and ran to relieve strain on all individual cable connectors and terminal blocks. Pad and or shield areas that contact hoistway construction. Color-code and number each conductor and indelibly label each terminal connection.
   5. Provide and install a separate travel cable and appropriate conductors for each elevator's fire system communications and interface. Terminate in a pull box mounted on machine room wall, or ceiling near elevator controller for final connection to the fire system by the electrical contractor, coordinate location with elevator contractor A minimum of 12 pairs of twisted shielded 14 AWG will be required (8 pair + 50% spare). Note: 14 AWG pairs can be derived by combining 2 pairs of twisted shielded pairs of 20 AWG, which is standard in most travel cables.
   6. Provide 4 twisted shielded pair travel cable for elevator phone communication. Terminate in the dual jack phone box by others, mounted on wall or ceiling adjacent to each car controller in machine room. Location to be coordinated with the Elevator Contractor.
   7. Provide 20% spares of all other travel cable wiring.
   8. Hoistway spare wires: If hoistway junction wiring is used there shall be no fewer spares than equal to the required travel cable spares. The additional spares shall be properly marked and tagged in the pull-box / junction box and controller.
   9. Ancillary devices are not to be mounted on the elevator controller and must be coordinated with the Elevator Contractor.

M. New - Entrance Equipment:
   1. Door Hangers: Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.

2. Door Tracks: Bar or formed, cold-drawn removable steel tracks with smooth roller contact surface.
3. Door Interlocks: Operable without retiring cam. Paint interlock box flat black.
4. Door Closers: Spring, spirator, or jamb/strut mounted counterweight type. Design and adjust to insure smooth, quiet mechanical close of doors. Approved manufacturer: SmartTork

N. New - Hoistway Door Unlocking Device: Provide unlocking device with escutcheon in door panel at all floors, with finish to match adjacent surface.

O. New - GAL Hoistway Access Switches: Passenger groups shall be mounted in entrance frame, or mounted in the wall with a flush faceplate at the top and bottom landings.

P. New - Floor Numbers: Stencil paint 4" high floor designations in contrasting color on inside face of hoistway doors or hoistway fascia in location visible from within car.

Q. New - Pit Stop Switch: Provide new elevator stop switch inside the elevator pit entrance area, mounted in safe and convenient location.

2.07 HOISTWAY ENTRANCES

A. Frames: Retain existing. Refinish and paint to match existing finishes.

B. New - Satin Stainless Steel Door Panels, 16 gauge steel, sandwich construction without binder angles. Provide leading edges of center-opening doors with rubber astragals. Provide a minimum of three (3) gibs per panel, one at leading, one in the middle of the door pane, and one at trailing edge with gibs in the sill groove entire length of door travel. The middle gib to be a fire gib. Construct door panels with interlocking, stiffening ribs.

C. ALTERNATE: Door Panels: Retain existing. Retrofit gibs, provide a minimum of three (3) gibs per panel, one at leading, one in the middle of the door panel, and one at trailing edge with gibs in the sill groove entire length of door travel. The middle gib to be a fire gib.

D. New - Sight Guards: 14 gauge, same material and finish as hoistway entrance door panels. Construct without sharp edges.

E. Sills: Retain existing. Clean and polish. Check and tighten all fastenings. Cast iron sills to be cleaned and painted with black enamel.

F. Sill Supports: Retain existing. Check and tighten all fastenings.

G. New - Fascia, Hanger Covers and Toe Guards: 14 gauge furniture steel with black enamel. Provide hoistway width fascia, toe guards, and hanger covers.

H. Struts and Headers: Retain existing. Check and tighten all fastenings.

I. Finish of Frames and Doors: Paint frames, color as selected by Architect. Door panels to be satin stainless steel.

2.08 CAR EQUIPMENT

A. Frame: Retain Existing. Check and tighten all fastenings.

B. Safety Device: Retain existing. Check and tighten all fastenings. Disassemble, clean, and inspect components. Replace all worn or damaged parts. Reassemble and test for proper operation.

C. Platform: Retain existing. Reinforce if required. Check and tighten all fastenings.

D. New - Platform Apron: Provide new extended platform apron to meet Code. Minimum 14 gauge steel, reinforced and braced to car platform front and rear with black baked enamel.

E. New - Elsco Guide Shoes: Roller type with three or more spring dampened, sound-deadening rollers per shoe. Maximum roller rotation speed, 350 f.p.m. up through contract car speed of 900 f.p.m.

F. New - Finish Floor Covering: New - Flooring: Provide new rubber tile 1/8" thick with 1" diameter by 0.025 high, raised circular pattern. Color selected by Architect.

G. Sills: Retain existing. Clean. Check and tighten all fastenings.

H. New - Doors: Satin Stainless Steel Door Panels,16 gauge steel, sandwich construction without binder angles. Provide leading edges of center-opening doors with rubber astragals. Provide a minimum of three (3) gibs per panel, one at leading, one in the middle of the door pane, and one at trailing edge with gibs in the sill groove entire length of door travel. The middle gib to be a fire gib. Construct door panels with interlocking, stiffening ribs

I. New – GAL Door Hangers: Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.

J. New – GAL Door Track: Bar or formed, cold-drawn removable steel track with smooth roller contact surface.

K. New - GAL Door Header: Construct of minimum 12 gauge steel, shape to provide stiffening flanges.

L. New – GAL Door Electrical Contact, prohibit car operation unless car door is closed. Raise door contact to be out of site, disguised, and painted black.

M. New - GAL Door Clutch: Heavy-duty clutch, linkage arms, drive blocks and pickup rollers or cams to provide positive, smooth, quiet door operation. Design clutch so car doors can be closed, while hoistway doors remain open.

N. New - GAL Restricted Opening Device: Restrict opening of car doors outside unlocking zone. Plunger type restrictors not acceptable.

O. New - GAL MOVFR Door Operator: High speed, heavy-duty door operator capable of opening doors at no less than 2-1/2 f.p.s. Accomplish reversal in no more than 2-1/2" of door movement. Provide solid-state door control with closed loop circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Maintain consistent, smooth, and quiet door operation at all floors, regardless of door weight or varying air pressure. Acceptable closed-loop door operators:

P. New - Door Control Device:
   1. Infrared PanaChrome 3D by Janus Infrared Reopening Device: Black fully enclosed device with full screen infrared matrix or multiple beams extending vertically along leading edge of each door panel to minimum height of 7'-0" above finished floor.

Device shall prevent doors from closing and reverse doors at normal opening speed if beams are obstructed while doors are closing, except during nudging operation. In event of device failure, provide for automatic shutdown of car at floor level with doors open

2. Tape all cord connections together after installation and install down into top of device, inside mounting angle pocket space.
3. Nudging Operation: After beams of door control device are obstructed for a predetermined time interval (minimum 20.0 - 25.0 seconds), warning signal shall sound and doors shall attempt to close with a maximum of 2.5 foot pounds kinetic energy. Activation of the door open button shall override nudging operation and reopen doors.
4. Interrupted Beam Time: When beams are interrupted during initial door opening, hold door open a minimum of 3.0 seconds. When beams are interrupted after the initial 3.0 second hold open time, reduce time doors remain open to an adjustable time of approximately 1.0 - 1.5 seconds after beams are reestablished.
5. Differential Door Time: Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls. The door times must meet A.D. A.
   a. Car Call: Hold open time adjustable between 3.0 and 5.0 seconds.
   b. Hall Call: Hold open time adjustable between 5.0 and 8.0 seconds. Use hall call time when car responds to coincidental calls.
6. All door performance times must meet the A.D.A. standards

Q. New – Car Operating Panel:

1. Provide and install all new signal equipment unless otherwise noted and as follows:
   a. All equipment is to be by GAL Manufacturing Corporation unless otherwise noted, utilizing #4 brushed stainless steel (S/S) fixtures with all language and visuals permanently engraved, CHEMICALLY ETCHED, and all LED illuminations flush mounted into fixtures. GAL buttons shall be VPMC.
   b. All fixtures shall have all components flush and be vandal resistant.
   c. All illumination to be by LED bulbs capable of a minimum of 5 years continual service life.
   d. Provide flush mounted vandal resistant 2 pin head fastenings on all fixtures, signal and signage equipment for fastening and securing.
2. One car operating panel with faceplate, consisting of a metal box containing vandal resistant operating fixtures, mounted behind the car stationary front return panels. Car operating panel is preferred to be installed in the right hand return, when standing in the car looking out into the hallway. Car operating panel to be an applied flush mounted with a faceplate
3. Suitably identify floor buttons, alarm button, door open button, door close button and emergency push-to-call button with cast tactile symbols recessed flush rear mounted. Configure plates per local building code accessibility standards including Braille. Locate operating controls no higher than 48" above the car floor; no lower than 35" for emergency push-to-call button and alarm button.
4. Floor pushbuttons to be located on the panel with floor below grade at the bottom row, vertically with increasing to the above grade levels. Refer to Appendix A Fixture Drawings.
5. Provide minimum 3/4" diameter raised floor pushbuttons which illuminate to indicate call registration.
6. Provide minimum 3/4” diameter visual and audible car overload flashing indicator.
7. Provide alarm button to ring bell located on car. Illuminate button when actuated.
8. Provide “door open” button to stop and reopen doors or hold doors in open position.
9. Provide “door close” button to activate door close cycle. Cycle shall not begin until normal door dwell time for a car or hall call has expired, except firefighters’ operation.
10. Provide firefighters’ Phase II key switch with engraved instructions filled red. Include light jewel, buzzer, and call cancel button.

11. Provide and install keyed operating switches per the following:
    a. Stop switch GEM EX520
    b. Independent switch GEM EX514
    c. Fan switch GEM EX513
    d. Light switch GEM EX513
    e. Fire operation switch FEO K1.
    f. Inspection switch GEM EX512
    g. Emergency Lighting Test switch GEM EX513
12. All key switches and cores are to be provided and installed by the contractor. The University will provide the core number to the contractor during construction.
13. All operational keys are only to be provided to the appropriate NKU personnel and NOT to any others.

R. New - Car Top Control Station: Mount to provide safe access and utilization while standing in an upright position on car top.

S. New - Work Light and Duplex Plug Receptacle: GFCI protected outlet at top and bottom of car. Include on/off switch and lamp guard. Provide additional GFCI protected outlet on car top for installation of car CCTV.

T. Communication System:
1. Telephone system: Provide “hands-free” push button activated vandal resistant tamper proof speaker/microphone communication system by Viking, Wurtec or EMS integrated into the car operating panel. An illuminated cut through flush light shall be incorporated with engraving “call received” to verify the call has been received. This light shall stay continuously illuminated until the phone line has been disconnected from the receiving end of the line only. Phone button shall be marked “Help” as required by code. Provide wiring inside a ¾” diameter electrical conduit from each elevator controller to the elevator machine room car phone jack interface box. System shall be designed for ring down phone circuit (no timers, capability for programming, or battery backup.
2. Install fire announcement speakers provided under Item 1.01, F., 1, in car operating panel with drilled speaker pattern, with shielded wiring to machine room junction box.
3. Provide two-way communication between car and machine room. Speaker of the emergency communications device to be utilized for announcement speaker, if the communications device is capable of accepting additional inputs.

2.09 CAR ENCLOSURE

A. Reuse Car Enclosure: Retain existing car shell. Overall car weight to be verified and documented, prior to removal of any equipment from the existing car frame or car enclosure. Check and tighten all fastenings. Provide new interior finishes as specified and/or detailed on architectural drawings. Modify shell for application of new signal and pushbutton fixtures. New cab weight including all new finishes to be verified following completion of modernization. Post modernization weight not to exceed code allowable limits.
1. Shell: Retain existing shell. Patch any holes on side walls to maintain fire rating.
2. Canopy: Retain existing canopy and remove any drop ceilings, or replace lighting, seal existing holes, cover fan with design as provided in the architectural drawings and prepare ceiling to appear as new after receiving final finish coat of paint. If existing escape hatch size does not meet requirement, contractor to perform alterations to meet code requirement. Finished ceiling shall be flush finish and not contain any visible fastening devices.
3. New - Interior Wall Finish: Removable panels with binder angles, faced and edged, with color core plastic laminate. Panel and revel color, finish, and orientation as selected by NKU Interior Design staff from manufactures standard options.

4. New – Handrails on side and rear walls as selected by KNU Interior Design Staff from manufactures standard options.
5. New - Lighting: Provide LED fixtures with wiring and hookup. Coordinate with emergency lighting requirements. Lighting shall shut off after adjustable period (60 – 180 seconds) of no elevator demand. Provide emergency lighting integral with portion of normal car lighting system.
6. New - Suspended Ceiling: Satin stainless steel downlight ceiling.
7. New - Pads and Buttons or Hooks: Three-piece removable pads. Two pads covering side walls and adjacent front returns and one covering rear wall. Provide cutouts to access main car operating panel.
8. New - Car Door Panels: Satin Stainless Steel Door Panels,16 gauge steel, sandwich construction without binder angles. Provide leading edges of center-opening doors with rubber astragals. Provide a minimum of three (3) gibs per panel, one at leading, one in the middle of the door pane, and one at trailing edge with gibs in the sill groove entire length of door travel. The middle gib to be a fire gib. Construct door panels with interlocking, stiffening ribs
9. New - Ventilation: Two-speed OE AA exhaust blower mounted to car canopy on isolated rubber grommets. Exhaust blower shall meet requirements of Item 2.03, H. Ventilation shall shut off after adjustable period of no elevator demand. Initial setting should be set for 10 minutes. after adjustable period (60 – 180 seconds) of no elevator demand. Cab fan blades to be accessible from car top to keep clean, free of dust buildup.
10. Front Returns, Entrance Columns, Transom, Interior Wall Finish, Handrails, Lighting and Ceiling: Retain existing.
11. New - Flooring: Provide new rubber tile 1/8" thick with 1" diameter by 0.025 high, raised circular pattern. Color selected by NKU Interior Design staff.

2.10 HALL CONTROL STATIONS

A. Reference Appendix A for Sample Signal Fixture Drawings.

B. New - Hall Push Button Stations: GAL. Provide and install new flush stainless steel length stations with engraved, CHEMICALLY ETCHED, ASME pictograph “In case of fire” sign above buttons, contained within and on the same panel at all levels, Cars 1, 2, and 3. Hall buttons shall have engraved Braille markings showing "Up" or "Down" and be located adjacent to the buttons within the same fixture. Hall station faceplates to be installed level.
   1. All floor landing stations shall contain flush digital position indicators from C.E. Electronics. Displays will be required for each elevator car. Units are C.E. Electronics model # ME 205-2, segmented LED display, ½” high characters with directional arrows behind a 1 ½” diameter LN0511 lens.
   2. Any floors that contain hall lanterns, or position indicators will be patched. The patch work for hall lanterns has been provided under other sections.

2.11 SIGNALS

A. Reference Appendix A for Sample Signal Fixture Drawings.

B. New - GAL digital car travel lanterns, on both jambs, one lantern with chime per entrance. Fixture based upon style # SA 125 with 2.5” high red arrows for lantern. Provide fixtures with LED bulbs. Provide electronic chime announcement for handicap use. One chime for "Up" and two chimes for "Down" shall clearly announce the next direction of travel at all floors.

C. New - GAL Car Position Indicator: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Locate fixture in main car operating panel. When a car leaves or passes a floor, illuminate indication representing position of car in hoistway. Illuminate proper direction arrow to indicate direction of travel.
   1. C.E. Electronics. Displays will be required for each elevator car. Units are C.E. Electronics model # ME 205-2, segmented LED display, ½" high characters with directional arrows behind a 1 ½" diameter LN0511 lens.

D. New - GAL Hall Position Indicator: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Mount in hall push button station, all floors.
   1. C.E. Electronics. Displays will be required for each elevator car. Units are C.E. Electronics model # ME 205-2, segmented LED display, ½" high characters with directional arrows behind a 1 ½" diameter LN0511 lens.

E. Position Indicator Messages – All position indicators should flash these codes alternating the floor level location, or the nearest floor level location of the car, while in any of these service modes. Indicator and respective code shall flash/function continuously while car is disabled or unavailable to allow respondents to view cars location and its inability to operate.
   1. All displays shall continually show car location in its respective hoist way and direction of car travel as opposed to that floor. A MCCU controller powers floor units. Equip with a MAMMI-X message module for visual indications, including:
      a. OS (out of service; elevator unable to function)
      b. ES (extended service; extended door hold open time)
      c. FS (fire service)
      d. IS (independent service)
      e. ND (door nudging)
      f. EM for emergency power
      g. IN for Inspect
      h. ST for run stop switch
      i. Three (3) extra, future codes which can be programmed when/as needed.
      j. Position Indicators shall remain functional during Fire Service operation.

F. Faceplate Material and Finish: Stainless steel Satin finish all fixtures. All operational key switches to be GEM style key switches to match key schedule.

G. New - Floor Passing Tone: Provide an audible tone of no less than 20 decibels and frequency of no higher than 1500 Hz, to sound as the car passes or stops at a floor served.

H. New – Voice Synthesizer: Provide electronic device with easily reprogrammable message and female voice to announce car direction, floor, emergency exiting instructions, etc.

PART 3 EXECUTION

3.01 SITE CONDITION INSPECTION

A. Prior to beginning installation of equipment, examine hoistway and machine room areas. Verify no irregularities exist which affect execution of work specified.

B. Do not proceed with installation until work in place conforms to project requirements.

3.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver material in Contractor's original, unopened protective packaging.

B. Store material in original protective packaging. Prevent soiling, physical damage, or moisture damage.

C. Protect equipment and exposed finishes from damage and stains during transportation, erection, and construction.

3.03 INSTALLATION

A. Install all equipment in accordance with Contractor's instructions, referenced codes, specification, and approved submittals.

B. Install machine room equipment with clearances in accordance with referenced codes, and specification.

C. Install all equipment so it may be easily removed for maintenance and repair.

D. Install all equipment for ease of maintenance.

E. Install all equipment to afford maximum accessibility, safety, and continuity of operation.

F. Remove oil, grease, scale, and other foreign matter from the following equipment and apply one coat of field-applied machinery gloss enamel.
   1. All exposed equipment and metal work installed as part of this work which does not have architectural finish.
   2. Machine room equipment, and pit equipment.
   3. Neatly touch up damaged factory-painted surfaces with original paint color. Protect machine-finish surfaces against corrosion.

3.04 FIELD QUALITY CONTROL

A. Work at jobsite will be checked during course of installation. Full cooperation with reviewing personnel is mandatory. Accomplish corrective work required prior to performing further installation.

B. Have Code Authority acceptance inspection performed and complete corrective work.

3.05 ADJUSTMENTS

A. Static balance car to equalize pressure of guide shoes on guide rails.

B. Lubricate all equipment in accordance with Contractor's instructions.

C. Adjust motors, power conversion units, brakes, controllers, leveling switches, limit switches, stopping switches, door operators, interlocks, and safety devices to achieve required performance levels.

3.06 CLEANUP

A. Keep work areas orderly and free from debris during progress of project. Remove packaging materials on a daily basis.

B. Remove all loose materials and filings resulting from work.

C. Clean machine room equipment and floor.

D. Clean hoistways, car, car enclosure, entrances, operating and signal fixtures.

E. Perform final cleanup of all machine room, hoistway, car, car enclosure, entrance, operating and signal fixtures after completion of all project work.

3.07 FINAL CLEANING

A. As a minimum:
   1. Elevator hoistways and all equipment therein shall be cleaned and left free of rust, filings, welding slag, rubbish, loose plaster, mortar drippings, extraneous construction materials, dirt, and dust. Include walls, building beams, sill ledges, and hoistway divider beams.
   2. Care shall be taken by workpersons not to mark, soil, or otherwise deface existing or new surfaces. Clean and restore such surfaces to their original condition.
   3. Clean down surfaces and areas which require final painting and finishing work. Cleaning includes removal of rubbish, broom cleaning of floors, removal of any loose plaster or mortar, dust and other extraneous materials from finish surfaces, and surfaces which will remain visible after the work is complete.

3.08 ACCEPTANCE REVIEW AND TESTS

A. Upon nominal completion of each elevator modernization and before permitting use of elevator (either temporary or permanent). Complete and submit the signed Elevator Devices and Scheduling checklist to NKU Project Manager and State Division of Elevator Inspection prior to scheduling acceptance tests. Perform acceptance tests as outlined in Part III of A 17.2. That inspection procedure shall form a part of final inspection. Furnish all test instruments and materials required at time of final inspection, to determine compliance of work with contract requirements and to perform the following tests in the presence of the University Project Representative and the elevator consultant:
   1. Final weight car and confirm proper counter balancing per new controls, drives and machine specifications in counterweight.
   2. Full Load/Run Test: Subject elevator to full-specified rated load running continuously for at least ½ hour. During test, stop car at all floors in both travel directions for standing periods of 10 sec. per floor.
   3. Speed Test: Determine actual elevator speed in both directions with full contract load and no load in car. Proceed and follow full load-run tests with speed tests. Measure speed by applying tachometer to car hoist cables. Measured speed of cars with all loads in any direction shall be with 5% of specified rated speed.
   4. Car Leveling Tests: Test leveling devices at all floors for accuracy with no load and full load, in both directions. Verify compliance within specification limits both before and after full load-run tests.
   5. Emergency Operation Test: Perform functional tests of automatic and manual recall systems. Perform test with car fully loaded running simultaneously on electrical power from the emergency generator. Confirm correct operation including floor and door position signaling equipment and acceptable consistent electrical supply from generator system to operate V3F drive controllers and equipment.
   6. Car Safety and Governor Test: Test as specified in Rule 1000.2 of ANSI/ASME, A17.1.
   7. Oil Buffer Tests: Test oil buffers for car and counterweight as specified in Rule 1000.3 of ANSI/ASME Al 7. 1a. Tests shall bear a certified endorsement to clearly

demonstrate the method of testing and the results achieved. Label each device with metal calibration tags indicating test results and date of test.

8. Performance Standards: Demonstrate that the elevators, as modernized, meet the following performance criteria:
   a. Acceleration: 5.0 Ft/Sec
   b. Deceleration: 5.0 Ft/Sec
   c. Max. Jerk Rate: Less than 9 Ft/Sec
   d. Vertical Vibration: Less than 15 mg
   e. Horizontal Vibration - S/S: Less than 30 mg
   f. Horizontal Vibration - F/B: Less than 30 mg
   g. Stopping Zone: +/- 1/4"
   h. Performance Time: Less than 11.0 sec
   i. Door Opening Time: Less than 2.0 sec
   j. Door Closing Time: Less than 3.0 sec
   k. Door Sound: Less than 70 dba
   l. Sound in Car at Rated Speed: Less than 60 dba
   m. Sound in Stopped Car w/fan on: Less than 65 dba
   n. Sound in Machine Room: Less than 80 dba.
9. Provide signed pre-inspection checklist to the prime contractor's project manager in advance on elevators:
   a. Starting, accelerating, running
   b. Decelerating, stopping accuracy
   c. Door operation and closing force
   d. Equipment noise levels
   e. Signal fixture utility
   f. Overall ride quality
   g. Performance of door control devices
   h. Operations of emergency two-way communication device
   i. Operations of firefighters' service
   j. Operations of remote monitoring devices
   k. Operations of emergency brake device
   l. All key switch operations
10. Advise the University's representative the date and time of the inspection with the Commonwealth of Kentucky.
11. Test Results:
   a. In all test conditions, obtain specified contract speed, performance times, stopping accuracy without re-leveling, and ride quality to satisfaction of Purchaser and Consultant. Tests shall be conducted under both no load and full load condition.
   b. Temperature rise in motor windings limited to 50° Celsius above ambient. A full-capacity one (1) hour running test, stopping at each floor for ten (10) seconds in up and down directions, may be required.

B. Performance Guarantee: Should Consultant's review identify defects, poor workmanship, variance or noncompliance with requirements of specified codes and/or ordinances, or variance or noncompliance with the requirements of Contract Documents, Contractor shall complete corrective work in an expedient manner to satisfaction of Purchaser and Consultant at no cost as follows:
   1. Replace equipment which does not meet code or Contract Document requirements.
   2. Perform work and furnish labor, materials, and equipment necessary to meet specified operation and performance.
   3. Perform retesting required by governing code authority, Purchaser and Consultant

C. A follow-up final contract compliance review shall be performed by Consultant after notification by Contractor that all deficiencies have been corrected. Provide Consultant with copies of the initial deficiency report marked to indicate items which Contractor considers complete.

3.09 THE UNIVERSITY'S INFORMATION

A. Provide three sets of neatly bound written information necessary for proper maintenance and adjustment for equipment of within 30 days following final acceptance. Final retention will be withheld until data is received by the University and reviewed by Consultant. Include the following as minimums:
   1. Straight-line wiring diagrams of "as-installed" elevator circuits, with index of location and function of components. Provide one set reproducible master. Mount one set wiring diagrams on panels, racked, or similarly protected, in elevator machine room. Provide remaining set rolled and in a protective drawing tube. Maintain all drawing sets with addition of all subsequent changes. These diagrams are the University's property. A legend sheet shall be furnished with each set of drawings to provide the following information:
      a. Name and symbol of each relay, switch, or other apparatus.
      b. Location on drawings, drawing sheet number and area, and location of all contacts.
      c. Location of apparatus, whether on controller or on car.
   2. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment.
   3. Printed instructions explaining all operating features.
   4. Complete software documentation for all installed equipment.
   5. Lubrication instructions, including recommended grade of lubricants.
   6. Parts catalogs listing all replaceable parts including Contractor's identifying numbers and ordering instructions.
   7. Four sets of keys for all switches and control features properly tagged and marked.
   8. Diagnostic test devices together with all supporting information necessary for interpretation of test data and troubleshooting of elevator system, and performance of routine safety tests.
   9. The elevator installation shall be a design which can be maintained by any licensed elevator maintenance company employing journeymen mechanics, without the need to purchase or lease additional diagnostic devices, special tools, or instructions from the original equipment Manufacturer.
      a. Provide onsite capability to diagnose faults to the level of individual circuit boards and individual discreet components for the solid-state elevator controller.
      b. Provide attached onboard device for fault diagnosis. The device is to be self-contained within the controller.
      c. Installed equipment not meeting this requirement shall be removed and replaced with conforming equipment at no cost to the University.
   10. Provide upgrades and/or revisions of software during the progress of the work, warranty period and the term of the ongoing maintenance agreement between the University and Contractor.
   11. All software update notifications shall be provided to the installation contractor and the University. Installation contractor shall immediately notify the University of any software upgrade notifications, regardless if the installation contractor is the maintenance contractor at the time of notification.

B. Acceptance of such records by the University/Consultant shall not be a waiver of any Contractor deviation from Contract Documents or shop drawings or in any way relieve Contractor from his responsibility to perform work in accordance with Contract Documents.

END OF SECTION

Exhibit “B“ - NKU ELEVATOR MAINTENANCE CONTRACT

ELEVATOR MAINTENANCE CONTRACT

For

The Vertical Transportation System

Located at:

Northern Kentucky University
Highland Heights, KY 41099

T.B.D., (hereinafter called Contractor) shall furnish services to ***Northern Kentucky University*** (hereinafter called Owner) on all elevator equipment listed in ***Appendix "A".***

100. SCOPE OF WORK

A. The entire elevator system shall be maintained as hereinafter described, in accordance with the following detailed terms: Trained employees of the Contractor will use all reasonable care to keep the elevators in proper adjustment and in safe operating condition, in accordance with all applicable Federal, State, and local laws, ordinances and regulations.

B. This Contract establishes the minimum requirements for a full maintenance program. The Contract shall cover the elevator equipment as set forth in ***Appendix "A".***

C. All elevators under this Contract shall be maintained in first class operating condition and must comply with all maintenance and other requirements of the latest revised edition (as of the date bids are taken) of the American Society of Mechanical Engineers (ASME) Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks (ASME A17.1 2007), ASME Inspection Manual (ASME A17.2 – 2007) and all other applicable laws including but not limited to City of Highland Heights, and Commonwealth of Kentucky regulations, ordinances, codes, etc. Contractor shall provide a Maintenance Control Program (MCP) in accordance with the City of Highland Heights requirements. Should the Authority Having Jurisdiction Elevator Inspector call for a re-inspection as a result of Contractor not performing to this Contract, Contractor shall pay for the re-inspections costs. If the re- inspection is due to a building deficiency, then the Owner shall pay for the re- inspection.

101. CONTRACTOR INSURANCE

A. During the term of this Contract, the CONTRACTOR shall maintain such

insurance as will protect him from claims as set forth below which may arise out of or result from the CONTRACTOR'S operations, products and completed operations under the Contract, whether such operations be by himself or by a Subcontractor or Sub-subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be held liable. The Contractor shall provide the Owner, prior to commencement of work, a certificate of insurance and policy endorsements naming Northern Kentucky University and the directors, officers, trustees and employees of the University as additional insureds as "Additional Insured" and providing insurance coverage with the following minimum coverage:

1. Worker's Compensation in accordance with applicable state laws and regulations and Employer's Liability Insurance with a limit of not less than $1,000,000.00. Contractor will provide a waiver of subrogation in favor of the Owner.

2. Commercial General Liability covering both operations, products and completed operations liability with a single limit of not less than $5,000,000 each occurrence and in the annual aggregate for Bodily Injury and Property Damage including loss of use. Personal Injury, Advertising Injury and Blanket Contractual Liability of not less than $5,000,000 each occurrence and in the annual aggregate. Contractor will add Owner as an "Additional Insured" on a Primary Basis for both operations and completed operations as per the Indemnification Agreement. Contractor will provide Owner with a waiver of subrogation in favor of the Owner.

3. Comprehensive Automobile Liability insurance including owned, non-owned, and hired vehicle coverage and with the same limits of liability of not less than $500,000.

4. Any deductible or retention, if applicable to loss covered by provided insurance or any self insurance program will be the responsibility of the Contractor.

5. Contractor shall maintain valid required insurance during all operations and services performed under this Contract. Contractor shall provide Owner with a Certificate of Insurance evidencing all required insurance conditions. The certificate of insurance shall provide the Owner with a minimum of thirty (30) days notice in case of cancellation, termination or non-renewal of insurance.

B. Waiver of Subrogation. Contractor releases and relieves Owner, and waive the entire right of recovery for loss or damage to property or person located within or constituting a part or all of the Building to the extent that the loss or damage is actually covered (and claim amount recovered) by commercial insurance carried by Contractor and in force at the time of such loss or damage, or such loss would have been covered if Contractor had maintained the insurance required to be carried by this Agreement. This waiver applies whether or not the loss is due to the negligent acts or omissions of Owner or Contractor, or their respective officers, directors, employees, agents, contractors, or invitees. Contractor shall have its insurers endorse the applicable insurance policies to reflect the foregoing waiver of claims, provided, however, that the endorsement shall not be

required if the applicable policy of insurance permits the named insured to waive rights of subrogation on a blanket basis, in which case the blanket waiver shall be acceptable.

102. WORK HOURS

A. All work shall be performed during regular working hours of regular working days unless otherwise specified. Any regular time or overtime work not otherwise included in the contract shall be preapproved in writing by the Owner and billed to the Owner as an extra charge at the Contractor's billing rate as stated in section 121.

B. The Contractor shall provide scheduled routine maintenance during regular hours for all elevators.

C. The Contractor shall perform preventative maintenance, as a minimum, per the table below. If additional hours are required to maintain reliability, performance and overall safe operation of the elevators, then Contractor shall perform this additional work at no extra cost to Owner.

Minimum Preventative Maintenance Hours Per Month/Per Unit		
Type of Equipment	**Frequency and Hours per visit for each unit**	**Total Hours per Month Per Unit**
Geared Traction	1.5 hours every other week	3 hours

103. INSPECTION OF EQUIPMENT AND CONDITIONS AT JOB SITE

A. Prior to bidding, it shall be the responsibility of the Contractor to visit the job site and inspect each elevator to establish to its satisfaction the condition of the elevator equipment to be maintained and any other conditions affecting the work to be performed. The elevators shall be accepted in "as-is condition" and the Contractor shall be required to bring the elevators up to the performance level specified in this Contract within ninety (90) days of the issuance of the Notice to Proceed (NTP).

104. WIRING DIAGRAMS

A. Contractor shall provide to the Owner a set of reproducible wiring diagrams covering all changes, modifications, etc., which take place during the Contract term. These diagrams are to be furnished to the Owner immediately following modifications.

105. PERFORMANCE CONFERENCES AND REPORTS

A. Annually the Contractor shall meet with the Owner's representative to review performance for the previous year and to schedule major repairs contemplated during the next twelve (12) months. The Contractor shall submit written performance reports on forms approved by Owner within 10 days of the end of each year.

106. CHECKING IN AND OUT AND COMMUNICATIONS

A. At the Owners' request the Contractor's personnel shall report to the Owner's Maintenance office prior to commencing work and check out after completing the work. This requirement applies to regular maintenance, repairs and callbacks. At time of check-in, the Owner shall provide Contractor's personnel with a list of any reported problems requiring the Contractor's attention. The Contractor shall sign in and out of logbooks kept at the management office. In the event of an emergency such as an entrapment the Contractor shall go directly to the elevator.

107. BILLING PROCEDURE

A. Contractor shall render a monthly invoice for regular monthly maintenance service which lists all equipment serviced. The Contractor shall render a separate invoice for any Owner approved extra work. Each and every invoice shall clearly state the building name, elevator serial number and/or Commonwealth of Kentucky identification number along with Building's Car number. All purchase order numbers or person(s) authorizing the work will be noted on each invoice. The Owner or Owner's Representative may request a copy of the time sheets and backup paperwork prior to processing any invoice for payment. Any past due fees will be waived if the request causes a delay in payment.

108. TIME SHEETS

A. Each time an elevator is serviced, inspected, repaired, etc., whether emergency or regular, a report on an approved form shall be submitted to Owner's representative at the beginning of each month for the work performed during the previous month. The time sheet or ticket shall include the date and hours (time in and out) the work was performed, a description of the work performed, the elevator number the work was performed on, along with the Owner name and number. Owner may at any time request a copy of the work order prior to the monthly report. Acceptance of work is subject to approval by the assigned Owner Representative. Signing of daily work reports is not considered approval.

109. SCOPE OF MAINTENANCE

A. This specification provides for complete maintenance coverage including examinations, cleaning, painting, lubrication, adjusting, parts replacement, repairs, and testing on all parts of the elevator equipment including, but not limited to, machines, bearings, commutators, brushes, gears, hoist ropes, flat belts, compensation ropes or chains, governor ropes, thrust bearings, drive sheaves, sheave bearings, brake pulleys, brakes, brake coils, linings, motors, tachs, controllers, selectors, relays, contacts, solid state devices, computers, monitors, transformers, resistors, and all related control equipment including card readers. Provide 24-hour phone monitoring and an offsite answering service in conjunction with the phone. If remote elevator monitoring for the control system is provided, the Contractor shall maintain the remote system and ensure all functions are working properly. All flat belt type hoist ropes shall be monitored electronically for wear.

B. It also includes safety governors, governor sheaves, car safeties, hydraulic oil, pump, motor, valves, plunger, above ground oil lines, jack packing, deflector and secondary sheaves, bearings, car and counterweight buffers, car and counterweight guide rails, limit switches, guide shoes (slide and roller), door operators, car and hall signal fixtures, remote security panel and all components, all car and hatch door equipment, contacts, interlocks, auxiliary door closing devices, infrared safety edges, fans, blowers, emergency lights, car frames, platforms, and all other elevator related devices. Contractor will change cab ceiling light bulbs when furnished by the Owner during preventative service visits.

C. Contractors maintenance, repair and callback records will be kept electronically on-line and made available at all times through e*service. Upon Owner request Contractor will provide this information in a timely manner in email or other printed form.

110. SCHEDULED MAINTENANCE

A. All preventive maintenance performed by the Contractor shall be scheduled elevator by elevator prior to commencement of the work and subject to final approval of the Owner.

B. The preventive maintenance schedule, as prepared by the Contractor, shall show Owner name, elevator serial numbers, examination frequency, examination hours and be keyed to a preventive maintenance schedule prepared for the specific equipment covered by this specification.

1. Examine: The Contractor shall examine the equipment on a regular interval as set forth in Section 119 of this specification.

a) When, as a result of an examination, corrective action is found to be the responsibility of the Contractor, the Contractor shall proceed immediately to make (or cause to be made) replacements, repairs and corrections. When such work is determined not to be the Contractor's responsibility, a written report, signed by the Contractor, shall be delivered to the Owner for further action.

b) Items of an emergency nature shall be communicated to the Owner immediately and followed up in written form.

c) Examinations of the equipment shall follow the basic procedures recognized by the elevator service industry.

2. Clean: The Contractor shall clean all of the elevator equipment as well as car and hoistway door sills and grooves, elevator equipment rooms, pits, and hoistway rail equipment. Cleaning of the equipment shall occur at regular intervals sufficient in frequency to maintain a professional appearance and preserve the life of the equipment. Minimum interval shall be as set forth in Section 119 of this specification.

3. Paint: The Contractor shall paint the elevator equipment, including the machine room, at intervals frequent enough to maintain a professional appearance, prevent rusting, and preserve the equipment. All paint shall be suitable for the purpose intended and be of a high quality. Application of the paint shall, in all circumstances, comply with applicable local codes and/or current ASME codes. Contractor shall consult with the Owner as to the best times to perform the work in an effort to minimize disruption to the building's operations due to paint odors.

4. Lubricate: The Contractor shall lubricate all moving parts of the equipment. Lubricants shall be applied at intervals recommended by the equipment manufacturer or as dictated through use of the equipment. All lubricants shall be suitable for the purpose intended and shall meet or exceed the minimum requirements specified by the manufacturer of the equipment to which the lubricant is applied.

5. Adjust: The Contractor shall adjust the equipment. Adjustments shall be made as necessary and when the operation of the equipment varies from its normal or originally designed performance standards, as a result of normal wear and use. See Section 120 for performance standards.

   a) Adjustments shall be made by qualified individuals properly equipped with tools and instruments, employed by the Contractor. Adjustments shall be made at regular intervals frequent enough to maintain the elevator in optimum operating condition.

   b) Parts or assemblies which have worn (or otherwise deteriorated) beyond "normal" adjustment limits shall be replaced as provided for under the "Replace" and/or "Repair" section of this specification.

6. Replace: The Contractor shall, when required, "replace" at its own cost items covered under the Contract as stated in Section 109 during the course of scheduled preventive maintenance when in the reasonable opinion of Owner such replacement will prevent an unscheduled elevator shutdown and/or ensure the continued normal operation of the elevator or which otherwise will extend the useful life of the elevator. All replacements shall be made using original manufacturer's parts or Owner approved equal.

7. Replacement Parts: To assure the maximum use of elevators and a minimum shutdown time for emergency repairs, the Contractor shall be required to have and maintain on or near the job site, in metal cabinets furnished by the Contractor, a supply of spare parts sufficient for normal maintenance and repair of the elevators. These spare parts and lubricants shall be equal to or better than original manufacturer's parts. All lubricants, oils and other flammable liquids shall be stored in a suitable UL listed metal cabinet.

   a) Motors, armatures, field coils, and any other component parts must be delivered within five (5) working days.

b) Refurbished parts or parts that are equal to or better than genuine manufacturer's parts are acceptable and will be permitted, without prior approval.

8. Repairs:

a) Repairs which are the responsibility of the Contractor:

(1) Repairs shall be made by the Contractor to elevator components covered by the Contract as stated in Section 109. The Contractor shall make (or cause to be made) all repairs made necessary due to normal wear and use of the elevator system. The Contractor shall be responsible for all cost for labor, materials, expenses, and supplies that occur as a result of the stated repair.

b) Repairs, which are the responsibility of the Owner:

(1) Repairs shall be made by the Contractor, when authorized in writing by the Owner, where such repairs are not included in the Contract. The Contractor shall make (or cause to be made) all repairs made necessary for any reason during the term of the Contract. The Contractor shall supply all labor, materials, and supplies at the Contractor's billing rates as stated in this Contract. On completion of all repair work, the Contractor shall submit to the Owner for payment an invoice detailing the nature of the work performed and related charges.

(2) Prior to any repairs being made by the Contractor, the Contractor shall submit a written cost estimate to the Owner to obtain formal written approval to proceed.

9. Perform Periodic Tests: The Contractor shall, during regular business hours, perform periodic Safety Tests of the elevator components, including monthly testing of Emergency Fire Service, telephone communications, emergency car light and alarm bell. The periodic tests and cleaning shall be conducted at the frequency stated in the ASME A17.2 code and follow the procedures set forth in said code. Test results shall be recorded on forms supplied by or acceptable to the Owner. Certified copies of the completed test forms shall be submitted to the Owner.

a) Periodic inspections as required by city, county, state, federal government and/or insurance agencies or representatives are included in this specification. One (1) and five (5) year tests shall be included. The five-year full load and emergency standby power tests shall be performed between 6 pm and 6 am weekdays or on the weekends.

10. Callback Service: For the purpose of this specification, a "callback" is a request from the Owner to the Contractor, requesting the Contractor to go to a specific elevator to correct any elevator problem and/or condition, which in the Owner's sole opinion needs attention before the Contractor's next scheduled preventive maintenance visit.

a) Additionally, a "callback" is work which can ordinarily be performed by one person working alone at the job site for a period of time not exceeding two hours.

b) Work required in excess of the basic two hours and/or which requires a second person shall be considered "Repair" work and shall be governed by the "Repair" provisions and specifications set forth elsewhere in this specification.

c) Callback service during regular working hours:

(1) The Contractor shall, without additional charge to the Owner provide callback service during normal working hours for calls placed to the Contractor Monday through Friday 7:00 am to 5:00 pm. The Contractor shall respond to a callback within one (1) hour of the time reported to the Contractor.

d) Callback service during overtime working hours:

(1) The Contractor shall provide 24-hour callback service. Contractor shall bill for the overtime portion only if the call is performed during overtime. The Contractor shall respond to an overtime callback within two (2) hours of the time reported to the Contractor.

e) Entrapments: Callbacks for entrapments shall be responded to by Contractor within 30 minutes of the call during normal working hours and one (1) hour after normal working hours.

111. CONTRACT TERM

A. The term of this Contract shall be for **two (2) years**. The contract shall commence upon issuance of the Notice to Proceed (NTP).

112. TERMINATION OF CONTRACT

A. This Contract terminates at the end of the first term and does not automatically renew. The Owner has the option to renew for two (2) additional one (1) year periods.

It shall be the Contractor's responsibility to inform the Owner in writing, at least ninety (90) days prior to the expiration of the Contract period, of the upcoming date of expiration of the Contract so that Owner may decide whether or not to renew the Contract for successive one-year periods as provided for above in paragraph 111. The Owner may terminate the Contract for failure to perform as outlined in paragraph 113-B. If the Owner sells the building, the Contract will be cancelled with a thirty-day notice. Should the Owner decide to roll this agreement into a facility wide agreement, this Contract shall be cancelled with thirty (30) days' notice.

113. FAILURE TO PERFORM

A. Contractor shall guarantee all work required during the contract period for the duration of the Contract. Should the Owner determine during the Contract period or within ninety (90) days after termination that any required work has been performed improperly or not performed at all; the Contractor shall, after mailing of written notifications by the Owner, correct said difficulty within thirty (30) days. Failure to correct will be construed as default of the Contract and the Owner may secure others to perform the services and deduct the cost of these services from the contractual amount due under the Contract.

B. All maintenance deficiencies brought to the Contractor's attention during the Contract period by the Owner which are the responsibility of the Contractor, shall be completed within thirty (30) days during the Contract period and on or before the abatement date of the report, or expiration of the Contract period, whichever is less.

C. The Owner reserves the right to engage an independent party to perform an inspection to determine responsibility.

114. EQUAL OPPORTUNITY EMPLOYMENT STATEMENT

A. The non-discriminatory clause contained in Section 202 Executive Order 11246, as amended by Executive order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex, or national origin, and the implementing rules and regulations prescribed by the Secretary of Labor, are incorporated herein.

115. INDEMNIFICATION AGREEMENT

A. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, and their agents and employees from and against all claims, damages, losses and expenses, including attorney's fees, provided that any such claim, loss, damage or expense: (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (b) is caused in whole or in part by any willful negligent act or omission of the Contractor, any Trade Contractor or material supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. This basic obligation to indemnify shall not be construed to nullify or reduce other indemnification rights which the Owner would otherwise have.

B. The Contractor shall also indemnify and hold harmless the Owner and its agents and employees from any claims relating to the Work brought against the Owner by any subcontractor unless such claims are due to the gross negligence or willful misconduct of the Owner.

C. In any and all claims against the Owner, or any of their agents or employees, by any employee of the Contractor, any subcontractor, any one directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under Worker's Compensation acts, disability benefit acts or other employee acts.

116. COMMENCEMENT DATE (ANNIVERSARY DATE)

A. This Contract shall commence after the Notice To Proceed is issued. The Commencement Date shall also serve as the Anniversary Date for escalation and cancelation purposes.

117. CONTRACT EXCLUSIONS

A. The Contractor shall not be responsible for the following:

1. Main line power feeders and associated disconnect switches and breakers. Car enclosures including removable panels, door panels, hung ceilings, light diffusers, fluorescent tubes, fluorescent ballasts, handrails, mirrors, carpets, tile flooring, hoistway enclosure, door panels, frames, sills, underground hydraulic jacks, and underground oil lines.

2. Contractor is not responsible for any work required due to abuse, misuse, vandalism, negligence or other causes beyond their control.

118. EQUIPMENT COVERED BY THIS CONTRACT:

A. ***Appendix "A"*** Equipment and Performance Tables.

119. ELEVATOR MAINTENANCE FREQUENCY AND TASKS (PER ELEVATOR)

A. GEARED TRACTION

FREQUENCY 4 WKS:

1. CLEAN AND INSPECT MACHINE, CONTROLLER, SELECTOR, MOTOR, AND GOVERNOR. CHECK LEVELING, STOP SWITCH, COMMUNICATIONS AND DOOR PRESSURE.

2. CLEAN AND INSPECT CAR TOP, OPERATING SWITCHES, DOOR OPERATOR AND CONTROLS, CAR DOOR HANGERS, GIBS AND DOOR RE-OPENING DEVICES. CHECK DOOR RESTRICTORS FOR PROPER OPERATION.

3. CLEAN AND INSPECT HOISTWAY DOOR HANGERS, INTERLOCKS, LINKAGE, PICK UP ASSEMBLY, DOOR GIBS, NON-VISION WING AND HOISTWAY SWITCHES.

4. CLEAN AND INSPECT GOVERNOR TENSION SHEAVE, CAR AND COUNTERWEIGHT BUFFERS, COMPENSATING SHEAVE ASSEMBLY. CLEAN PIT AND CHECK SAFETY PLANK AND TRAVEL CABLE.

FREQUENCY 8 WKS:

5. CLEAN MACHINE ROOM, CHECK COMMUTATORS AND BRUSHES, CLEAN AND ADJUST CONTROLLER AND SELECTOR CONTACTS AND RELAYS.

6. CHECK CAR AND HALL FIXTURE LAMPS, LEVELING AND FLOOR STOPS, ALARM BELL, EMERGENCY STOP AND RETIRING CAM.

FREQUENCY 12 WKS:

7. INSPECT ROPE SHACKLES, CAR AND COUNTERWEIGHT GUIDES, TM AND SLOW DOWN SWITCHES, ADJUST AND LUBRICATE AS REQUIRED, CHECK EMERGENCY LIGHT.

8. CHECK BRAKE OPERATION, SELECTOR DRIVE, BLOW OUT HOIST MOTOR AND CLEAN CONTROLS.

9. CLEAN CAR AND HALL STATION CONTACTS, CHECK DOOR CLOSING FORCE, CHECK AND LUBRICATE SAFETY EDGE LINKAGE PINS AND ADJUST, CHECK CAR AND HOISTWAY HANGER ROLLERS AND ADJUST UP THRUSTS.

10. CHECK MACHINE BEARINGS, LUBRICATE GOVERNOR LINKAGE, CHECK TRANSFORMERS, RECTIFIERS AND TIMERS.

FREQUENCY 26 WKS:

11. CHECK CONTROL AND MAIN LINE FUSES, VOLTAGE READINGS, HOIST MOTOR, OVERLOADS, ARMATURE CLEARANCE AND BRAKE CORES.

12. CHECK CAR, SAFETY MECHANISM, GOVERNOR ROPE HITCH, HOISTWAY SWITCH ROLLERS, DOOR CLOSING DEVICES, INSPECT AND EQUALIZE HOIST ROPES.

FREQUENCY 52 WKS:

13. DROP BRAKE SHOES, CLEAN, LUBRICATE AND ADJUST.

14. CHECK CAR FRAME, GUIDE RAIL AND BRACKET FASTENINGS, CLEAN GUIDE RAILS AND BRACKETS, OVERHEAD SHEAVES DOOR HANGERS, SILLS AND PITS.

15. ANNUAL LUBRICATION OF MACHINE BEARINGS, DEFLECTOR, COMPOUND AND COMPENSATING SHEAVES AND GOVERNOR TENSION SHEAVE BEARINGS.

16. ANNUAL CAR SAFETY TEST. CHECK BUFFER OIL LEVEL.

17. BLOW OUT MOTOR.

18. ADJUST MOTOR CONTROL AND CHECK LOGIC OPERATION.

19. SEISMIC SWITCHES AND DEVICES.

FREQUENCY 260 WKS:

20. FIVE (5) YEAR FULL LOAD TEST SAFETY TESTS

120. PERFORMANCE STANDARDS

A. It is the intention of this Contract that the elevator equipment be maintained so as to preserve the operating characteristics in line with the original design. Should the Owner find through its own investigation or that of its representative that these standards are not being maintained, the Contractor will be given thirty (30) days to restore the performance to the required level. Failure by the Contractor to restore the performance to the required level within the thirty (30) day period shall constitute sufficient cause for termination of the contract by reason of default, at the option of the Owner, in accordance with Section 112.

B. The following are performance levels which are a part of the original design and which shall be maintained at all times.

1. Contract speed of all elevators, dumbwaiters and lifts shall be maintained, and brake to brake (flight times) shall be maintained as originally designed.

2. Leveling accuracy of all elevators shall be maintained at all times. Traction elevators shall be within 1/8" level.

3. Opening and closing times of all hoistway and car doors shall be maintained within limits of ASME A17.1 Code, yet assuring minimum standing times at each floor.

4. Door reversals on all elevators equipped with mechanical safety shoes shall always be initiated within the stroke of the shoe. Light ray devices shall be operable at all times under normal operation.

5. "Variable" car and hall door hold open times shall be maintained in accordance with original design and or local code requirements. Deviations

from this will not be permitted.

6. Elevators operating under group supervisory systems shall operate at all times in accordance with original design specifications. The Contractor shall be required to periodically test these systems no less than annually and submit to the Owner test data indicating performance levels and proof that variable and fixed features are operating properly and all circuits and time settings are properly adjusted.

7. Emergency fire service operation, seismic operation, telephone communications, emergency car light and alarm bell shall be periodically tested to be sure it is functioning properly as required by ASME A17.1 Elevator Code.

8. Vertical and horizontal ride quality shall be maintained to ensure smooth and quite operation without noticeable movement in the car. Contractor will identify and correct any ride quality issues respective to all components, but rail alignment is not part of this Contract scope.

C. As a minimum requirement the performance levels for passenger and service cars shall be per ***Appendix "A"*** – Equipment and Performance Table. For the purpose of this Contract, the following performance criteria shall apply:

1. Floor-to-floor time is the elapsed time in seconds from car doors starting to close until the doors are ½ open at the next floor for side opening doors and ¾ open for center opening doors on a one (1) floor run of approximately 12'-0" For traction elevators if the one floor run is above or below 12'-0", .25 seconds should be added or subtracted for each foot above or below 12'-0". For hydraulic elevators if the one floor run is above or below 12'-0" .50 seconds should be added or subtracted for each foot above or below 12'-0".

2. Door Open Time is the elapsed time in seconds from the time the car doors start to open after arriving at a landing until they are fully open.

3. Door Close Time is the elapsed time in seconds from the time the car doors start to close after a call is initiated until they are fully closed with the interlock engaged. Speed must not exceed requirements as set forth in A17.1

D. Excessive Callbacks: At the beginning of each quarter, the total number of maintenance related callbacks for the previous quarter for each building shall be calculated. If the average number of calls at any building exceeds .6 calls per unit per month the Contractor shall credit 30% of one month's billing for that building.

121. COMPENSATION

A. PAYMENT

The Owner agrees to pay Contractor **($_____)** every month for the term of this Contract. The price per building is as follows:

B. ANNUAL PRICE ADJUSTMENT

The Contractor shall be entitled to a review of their labor and material costs for the purpose of adjusting the maintenance fee thirty (30) days prior to the annual anniversary date of this agreement.

Upon submission of proof, satisfactory to the Owner, that the Contractor's actual labor and/or material costs for performance of service have changed, the monthly price for service coverage's shall be adjusted in an amount equal to the established variance based on the following formula;

1. Eighty percent (80%) of the fee shall be used to represent the labor portion of the contract.

2. Twenty percent (20%) of the fee shall be used to represent the material portion of contract.

The current labor portion of the contract shall be increased or decreased by the percentage of increase or decrease of the current straight-time hourly rate for the Elevator Contractor Maintenance Mechanic, compared with same rate used for the previous year's labor portion of the agreement. The initial base labor amount is **$** ____. This represents the Maintenance Mechanics hourly wage with associated cost fringe benefits.

The current materials portion of the contract shall be adjusted based on the established monthly difference in the "Wholesale Metals and Metal Products Index" as published by the United States Department of Labor, Bureau of Labor Statistics. Using **(Month) 2013** as the base month, the material factor is ___.

In any event, the total annual price adjustment (increase or decrease) shall not be more than 3% of the previous year's base monthly service charge pursuant to paragraph 121 A above.

B. BILLING RATES:

The following billing rates shall be used for extra work performed by the Contractor and pre-approved by the Owner. The rates shall be adjusted annually in accordance with paragraph 121.B.

Overtime (M-F, 5:00pm to 7:00am, Saturday, Sunday and IUEC Holidays)
(Bonus portion only – work is included in contract but Owner requests Contractor to perform work on overtime.):

Overtime Portion Only – Included in contract but requested during overtime			
	1.5 Overtime Portion	1.7 Overtime Portion	2.0 Overtime Portion
Mechanic Billing Rate			
Helper Billing Rate			
Team Billing Rate			

Billing Rates for Extra Work
(Owner requests Contractor to perform work that is not included in the contract):

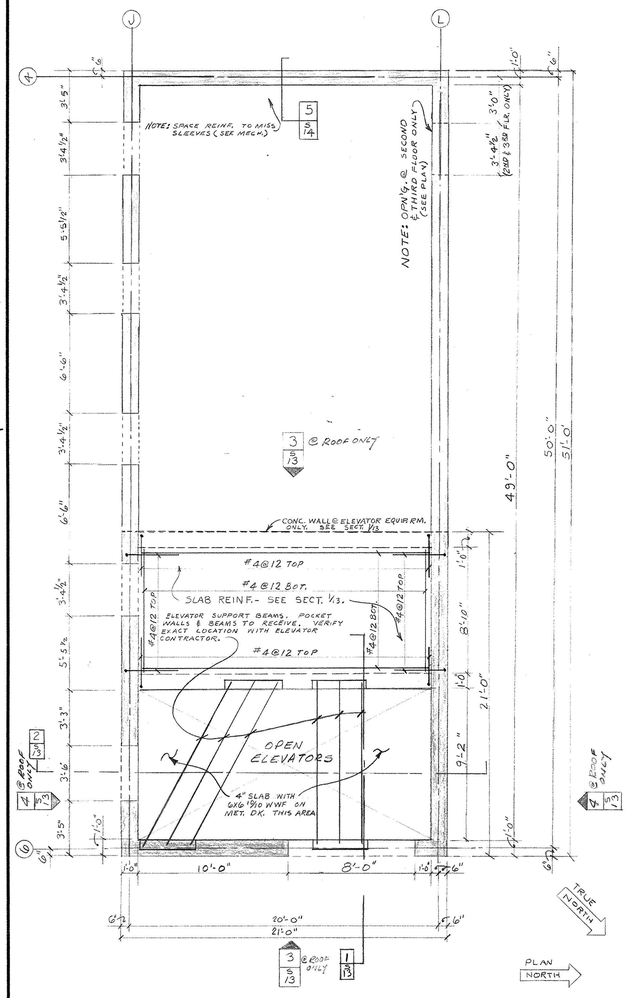
Billing Rate for Extra Work Not In Contract				
	Straight Time (7:00am to 5:00pm)	1.5 Overtime	1.7 Overtime	2.0 Overtime
Mechanic Billing Rate				
Helper Billing Rate				
Team Billing Rate				

The above rates shall be adjusted annually in accordance with the labor portion of the maintenance agreement. The above rates are for small emergency repair type projects with estimated times of 1 to 8 hours. For larger size projects Owner has the right to negotiate better hourly pricing and/or fixed prices for specific work.

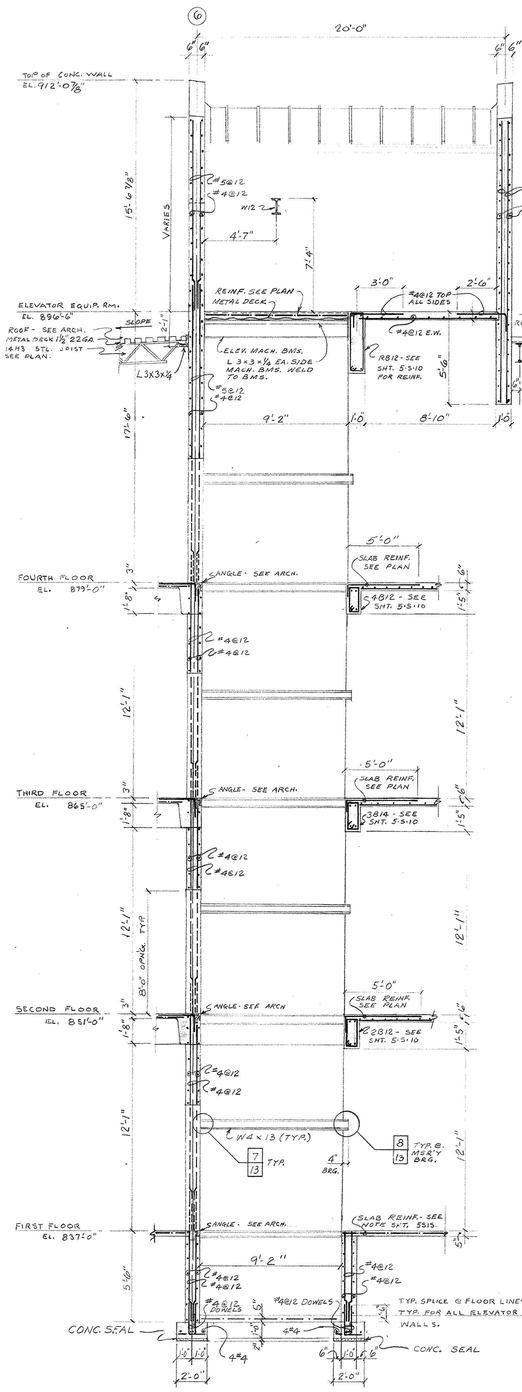
ACCEPTANCE:	
Owner: Northern Kentucky University Nunn Avenue, MA 100 Highland Heights, KY 41099	**Contractor:**
Authorized Signature:	Authorized Signature:
Printed Name:	Printed Name:
Date:	Date:

End of Contract

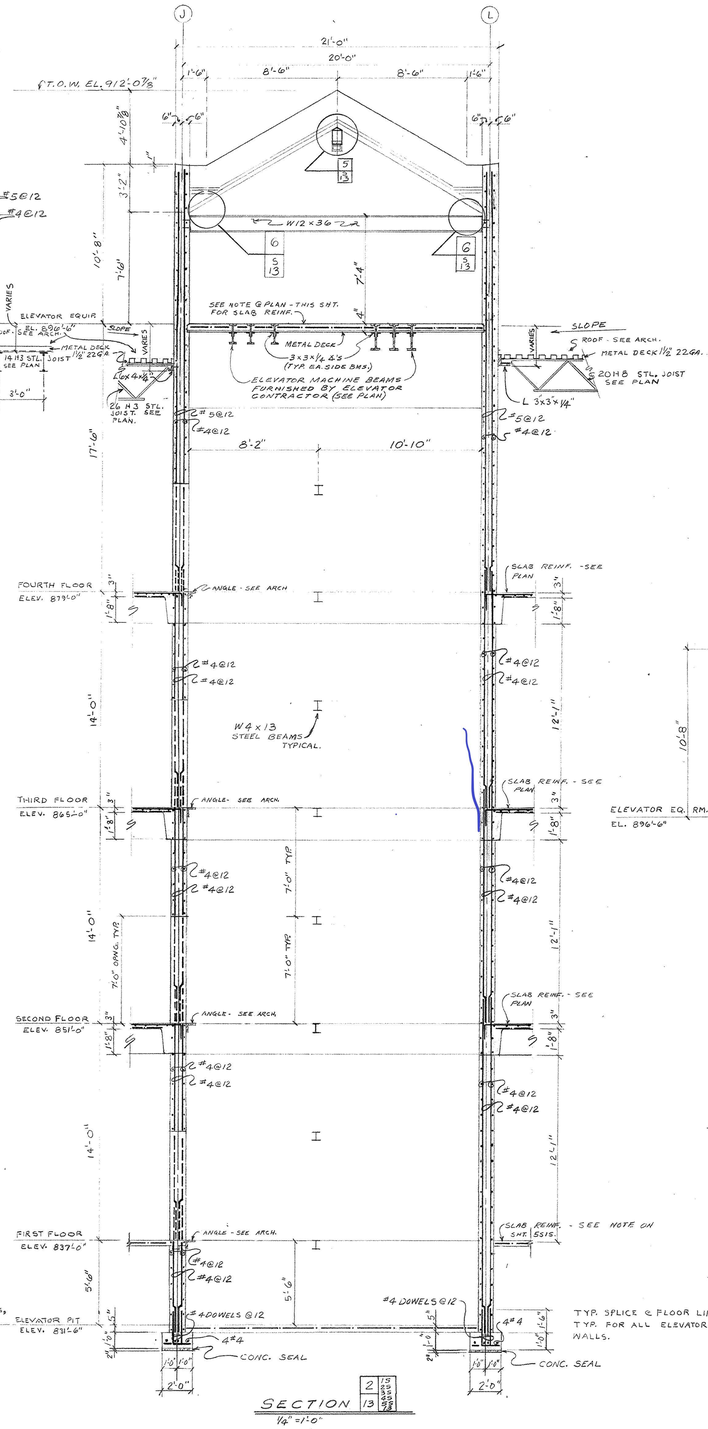
Exhibit “C “ - EXISTING DRAWINGS



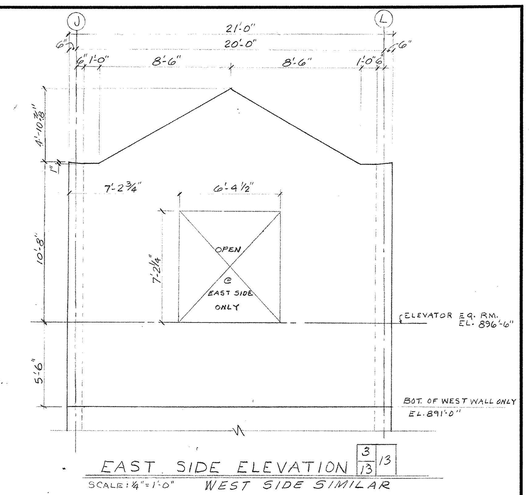
TYP. PLAN @ ELEVATORS
1/4" = 1'-0"



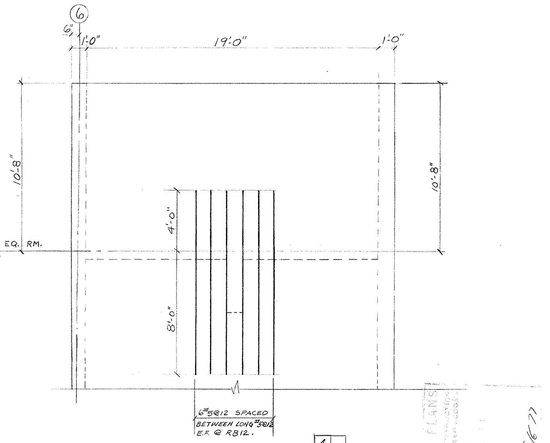
SECTION
SCALE: 1/4" = 1'-0"



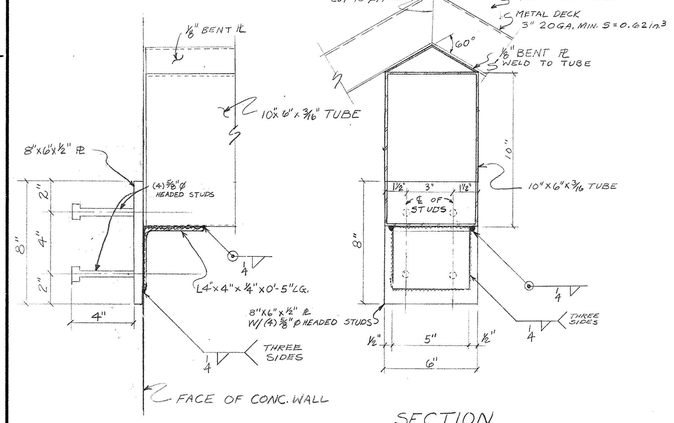
SECTION
1/4" = 1'-0"



EAST SIDE ELEVATION 3/13
SCALE: 1/8" = 1'-0" WEST SIDE SIMILAR



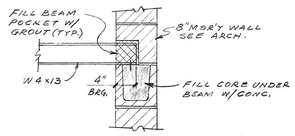
NORTH SIDE ELEVATION 4/13
SCALE: 1/4" = 1'-0" SOUTH SIDE OPP. HAND



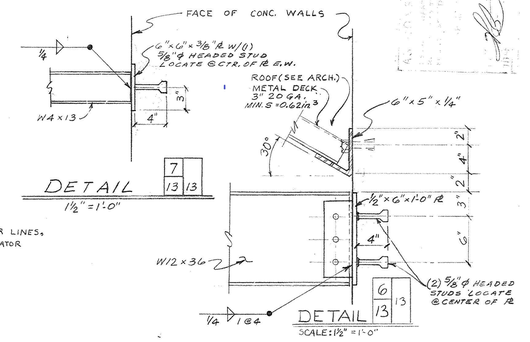
ELEVATION

SECTION

DETAIL 5/13
SCALE: 3" = 1'-0"



DETAIL 8/13
1" = 1'-0"



DETAIL 7/13 13
1/2" = 1'-0"

DETAIL 6/13 13
SCALE: 1/2" = 1'-0"

	REVISIONS	DATE
1	DIM. CHG. PER ARCH.	6-23-75
2	AS BUILT	1-6-77
3		
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NORTHERN KENTUCKY STATE COLLEGE
FINE ARTS BUILDING
CAMPBELL COUNTY, KENTUCKY

ENGINEERING FILE I-12
DRAWN BY TK
CHECKED BY AFC
FILE NO. 3123
REVIEW BY OF ENG. FOR INTENT ONLY

ELEVATOR DETAILS

DATE 9-30-74
SCALE AS NOTED
SPEC. NO. 3663
DRAWING NO. 5-5-13

FISK • RINEHART & HALL • McALLISTER • STOCKWELL
ARCHITECTS ENGINEERS
COVINGTON, KY.

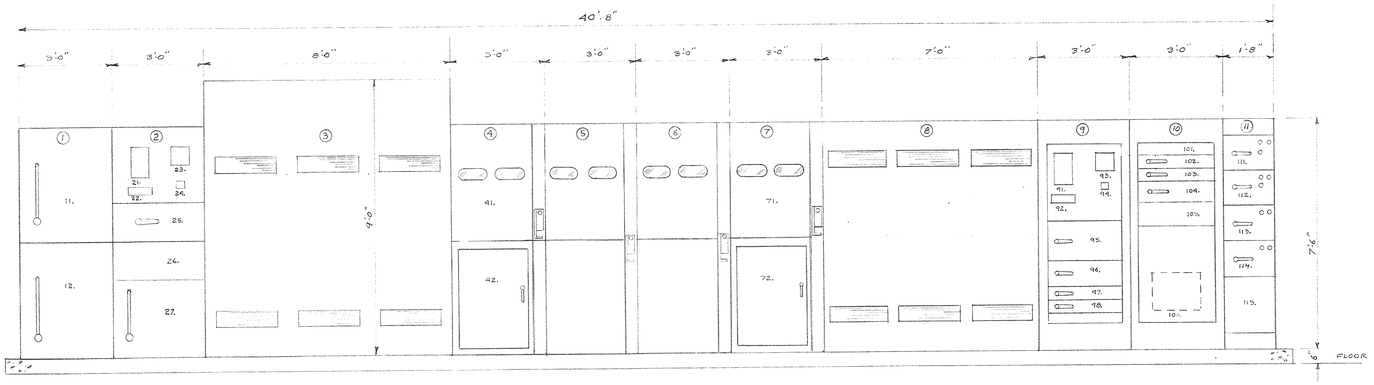
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FINANCE
ENGINEERING STAFF
FRANKFORT KENTUCKY

APPROVED FOR PROGRAM ONLY
AGENCY HEAD — DATE OCT 21 1974
MANAGER DIVISION OF ENGINEERING — DATE 10-22-74

CONSULTING ENGINEERS
SENLER, CAMPBELL & ASSOCIATES
1311 SOUTH THIRD
LOUISVILLE, KENTUCKY 40208
H.E.W. No. KY. —

SENLER CAMPBELL & ASSOCIATES 4848 — 3104 REGISTERED PROFESSIONAL ENGINEERS STATE OF KENTUCKY

I-541

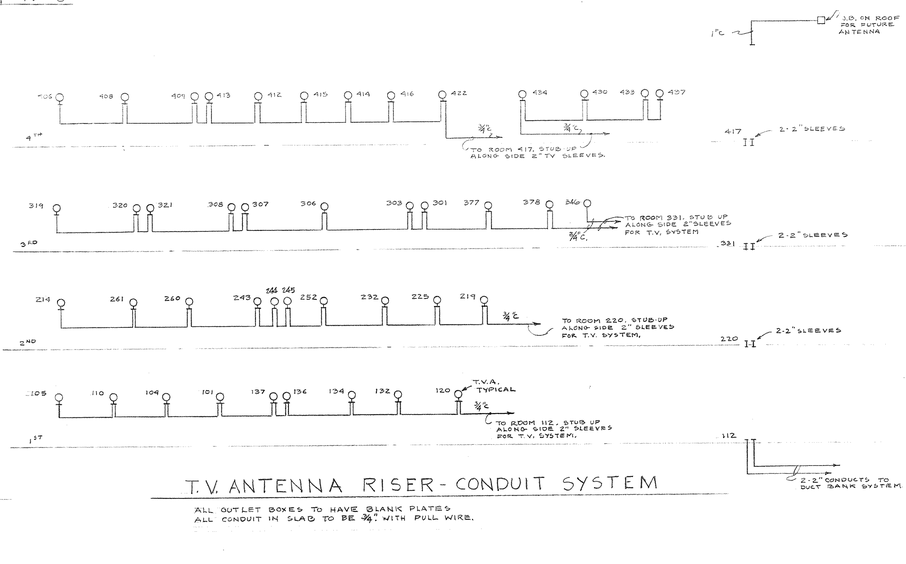


UNIT SUB STATION No. 5
SCALE ½" = 1'-0"

SWITCHGEAR COMPONENT SCHEDULE

BAY NO.	ITEM NO.	DESCRIPTION	
1	11.	1200 AMP 3P BOLTED PRESSURE SW. W/1200A FUSES(KRPC)	THEATER DIMMER
	12.	1200 AMP 3P BOLTED PRESSURE SW. W/1200A FUSES(KRPC)	208Y/120V BUS RISER
2	21.	3ϕ STATION DEMAND TAB METER (208Y/120V 3ϕ 4W)	
	22.	METER TEST DEVICE	
	23.	VOLTMETER 0-250V AC	
	24.	VOLTMETER SELECTOR SW. ϕ TO ϕ & ϕ TO N.	
	25.	600 AMP 3P SW. W/600 AMP. FUSES (KTN)	PANEL 1BB-M
	26.	600 AMP 3P SPACE	
	27.	800 AMP 3P BOLTED PRESSURE SW. W/800A FUSES(KRPC)	BLACK BOX DIMMER
3		1500 KVA, 12.5 KV DELTA: 208Y/120V 3ϕ 4W TRANSFORMER W/LIGHTNING ARRESTER	
4	41.	600 AMP 3P 15 KV FUSED SWITCH	208V MAIN SW.
	42.	H.V. FUSE COMPARTMENT 100E FUSES	KIRK KEY INTERLOCK COMP. 41 & 42.
5		AIR BREAK, 15 KV 3P NON-FUSED 600A SWITCH	LOOP-B
6		AIR BREAK, 15 KV 3P NON-FUSED 600A SWITCH	LOOP-B
7	71.	600 AMP 3P 15 KV FUSE SWITCH	480V MAIN SW.
	72.	H.V. FUSE COMPARTMENT 50E FUSE	KIRK KEY INTERLOCK COMP. 71 & 72
8		750 KVA, 12.5 KV DELTA: 480Y/277V 3ϕ 4W TRANSFORMER W/LIGHTNING ARRESTER	
9	91.	3ϕ STATION DEMAND TAB METER (480Y/277V 3ϕ 4W)	
	92.	METER TEST DEVICE	
	93.	VOLTMETER 0-600 V AC	
	94.	VOLTMETER SELECTOR SW. ϕ TO ϕ & ϕ TO N	
	95.	600 AMP 3P SW. W/600 AMP FUSES (LPS)	480Y/277V BUS RISER
	96.	200 AMP 3P SW. W/125 AMP FUSES (LPS)	MCC.
	97.	100 AMP 3P SW W/100 AMP FUSES (LPS)	PANEL 1AS-2
	98.	100 AMP 3P SW. W/100 AMP FUSES (LPS)	PANEL 1AS-3
10	101.	100 AMP 3P SPACE	
	102.	60 AMP 3P SW W/60 AMP FUSES (LPS)	ELEC. HOT WATER BOILER
	103.	60 AMP 3P SW. W/60 AMP FUSES (LPS)	ELEC. HOT WATER BOILER
	104.	200 AMP 3P SW. W/150 AMP FUSES (LPS)	PANE 5AS-1
	105.	200A 3P SPACE	
	106	1600 AMP 3P AUTOMATIC TRANSFER SW.	
	107.		
11.	111.	SIZE 2 STARTER - 50A 3P ETI-FRAME C/B	CHWP - 20 HP
	112.	SIZE 1 STARTER - 20A 3P ETI-FRAME C/B	AC-2 ½ HP
	113.	SIZE 1 STARTER - 20A 3P ETI-FRAME C/B	AC-1 ½ HP
	114.	SIZE 2 STARTER - 40A 3P ETI-FRAME C/B	HWP-1 5 HP
	115.	SPACE W/ PROVISIONS FOR SIZE 2 STARTER/C.B.	

FUSE TYPES SHOWN ABOVE ARE BASED ON BUSSMANN MFG. CO. AND COORDINATION IS BASED ON 6% IMPEDANCE TRANSFORMER MINIMUM. ON 1500 KVA BOLTED PRESSURE SWITCHES SHALL BE AS MANUFACTURED BY FRENCH CO. SHALL BE MANUALLY OPERATED & SHALL BE TYPE TO CHARGE CLOSING SPRING ON CLOSING.

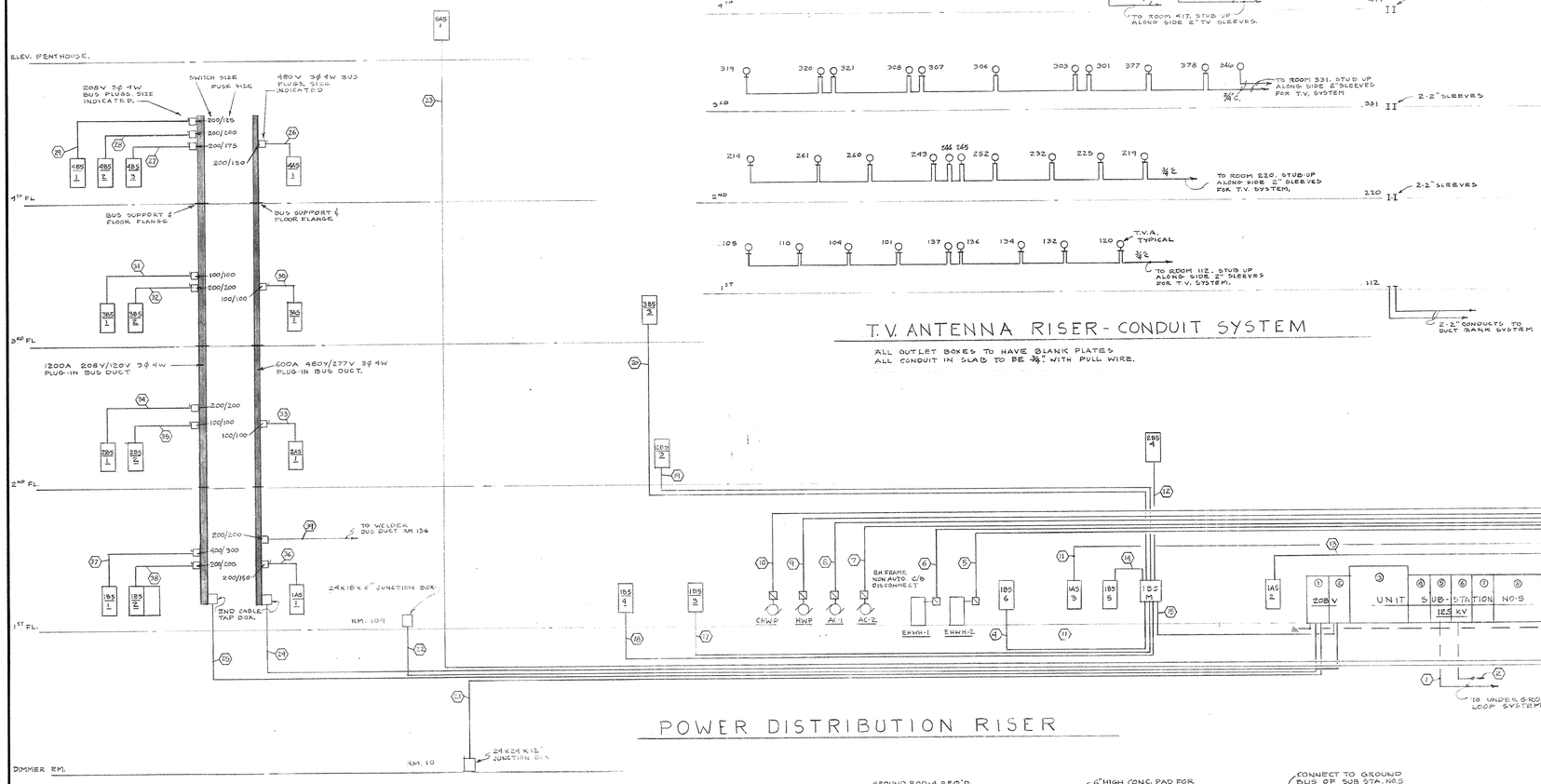


T.V. ANTENNA RISER - CONDUIT SYSTEM

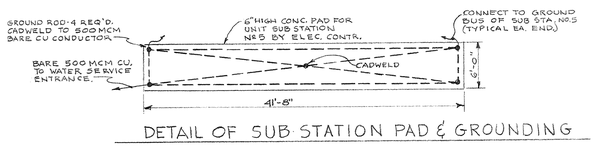
ALL OUTLET BOXES TO HAVE BLANK PLATES
ALL CONDUIT IN SLAB TO BE ¾" WITH PULL WIRE.

FEEDER SCHEDULE

FEEDER NO.	WIRE SIZE	CONDUIT SIZE	FEEDER NO.	WIRE SIZE	CONDUIT SIZE
(1)	3#⅜ 15 KV 1#⅜ 600V	UNDERGROUND DUCT SYSTEM.	(33)	4#2	1¼
(2)	DO	DO	(34)	4#3/0	2
(3)	4#2 & 2#12	1½"	(35)	4#2	1¼
(4)	4#⅜	2	(36)	4#3/0	2
(5)	4#6	1	(37)	4#2	1¼
(6)	4#6	1	(38)	4#⅜	2
(7)	3#12	¾	(39)	3#4/0	2½
(8)	3#12	¾	(40)	4#⅜	2
(9)	3#8	¾	(41)	3#4/0	2
(10)	3#6	¾	◯		
(11)	4#2	1¼	◯		
(12)	4#4	1¼	◯		
(13)	4#2	1¼	◯		
(14)	4#2	1¼	◯		
(15)	8-350 MCM	2-3"			
(16)					
(17)	4#2	1¼"			
(18)	4#2	1¼			
(19)	4#2	1¼			
(20)	4#2	1¼			
(21)	16-350 MCM	4#3			
(22)	8-500 MCM	2-3½"			
(23)	4#⅜	2			
(24)	8-350 MCM	2-3"			
(25)	16-350 MCM	4-3"			
(26)	4#⅜	2			
(27)	4#4/0	2			
(28)	4#⅜	2			
(29)	4#1	1½"			
(30)	4#2	1¼			



POWER DISTRIBUTION RISER



DETAIL OF SUB STATION PAD & GROUNDING

REVISIONS	DATE
1	
2	
3	
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10	

AS BUILT DATE

NORTHERN KENTUCKY STATE COLLEGE
FINE ARTS BUILDING
CAMPBELL COUNTY, KENTUCKY

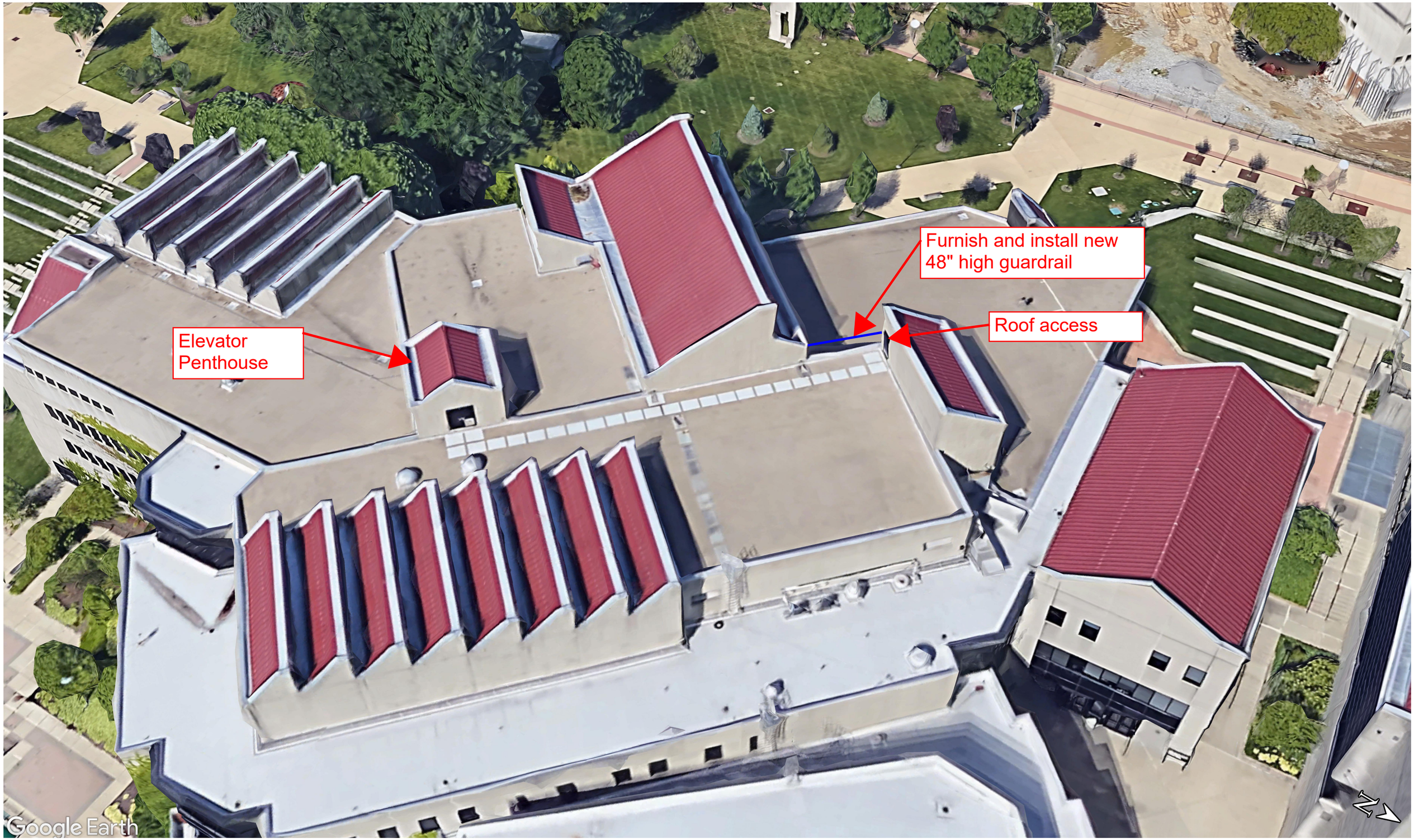
ENGINEERING FILE I-12	POWER DISTRIBUTION	DATE 9-30-74
DRAWN BY	FISK • RINEHART & HALL • McALLISTER • STOCKWELL ARCHITECTS ENGINEERS COVINGTON, KY.	SCALE as shown
CHECKED BY		SPEC. NO. 3663
FILE NO. 3123	COMMONWEALTH OF KENTUCKY DEPARTMENT OF FINANCE ENGINEERING STAFF FRANKFORT KENTUCKY	DRAWING NO. 5E-6

REVIEWED FOR CONFORMITY ONLY
APPROVED FOR PROGRAM ONLY
AGENCY HEAD — DATE OCT 18 1974
MANAGER, DIRECTOR: DIVISION OF ENGINEERING — DATE 10-22-74

I-604

Exhibit “D “ - ROOF ACCESS

EXHIBIT 'D'



NEW FINE ARTS BLDG - ROOF