

Pennsylvania Convention Center



Pennsylvania
Convention Center
PHILADELPHIA

Pennsylvania Convention Center Authority
One Pennsylvania Convention Center Place
1101 Arch Street
Philadelphia, Pennsylvania 19107

Project Manual
for
Escalator Modernization - #1

November 30, 2017

PENNSYLVANIA CONVENTION CENTER AUTHORITY

INVITATION TO BID

BID PACKAGE: ESCALATOR MODERNIZATION - #1

PENNSYLVANIA CONVENTION CENTER PHILADELPHIA, PA

Bids are invited for the following Contract in connection with the Pennsylvania Convention Center, 11th and Arch Streets, Philadelphia, PA, in accordance the Documents attached hereto.

The Pennsylvania Convention Center Authority (PCCA) will procure this Bid Package as indicated in the specifications and the attached Cover Page for the Project Manual. It is the intent of PCCA to purchase the full quantity of each item; therefore vendor pricing shall be on the total quantity of each sub package. Separate Bid Sheets have been provided for each Sub-Package being offered.

Bids will be received at:

PA Convention Center
1101 Arch Street
Philadelphia, PA. 19107
Attn': Purchasing Department

until 4:00 PM (EST) on Tuesday, January 30, 2018 at which time all Bids received will be opened and read aloud. Bids received after such time will be returned unopened.

Where Bid Security is required on the Bid Form, the bid shall be accompanied by Bid Security in the form of either a certified check or a surety company's Bid Bond in substantially the form contained in these materials and, in either case, in an amount of not less than 5% of the Total Base Contract Bid, which Bid Security shall be payable to the Pennsylvania Convention Center Authority as payee or obligee.

Bidders may access and copy the bid documents at the:

Pennsylvania Convention Center Website
<http://www.paconvention.com/about/purchasing-bids-rfps> under
Doing Business with PCC

Questions during the bid period should be directed to:

Mr. Brad K. Leak., Audit & Compliance Manager
bleak@paconvention.com 215-418-4796

To assure that PCCA has an accurate list of Bidders and the Bidders receive Addenda from PCCA, Bidders are to indicate their intention to bid by the time and date indicated on the Project Schedule. The registration is mandatory. Registration is by email that requests a receipt. The email is to be sent to:

Attention: Mr. Brad K. Leak

E-Mail: bleak@paconvention.com

Failure to follow this procedure may disqualify a Bidder.

Until the time and date indicated on the Project Schedule, Bidders may submit in writing to the PCCA any comments or questions related to the Bid Documents or the Project. PCCA will consider the comments and question and if PCCA determines in its sole discretion that changes to any of the documents are appropriate, then an Addendum to the Bid Documents will be issued to all registered bidders. Exceptions, modifications or qualifications to any of the Bid Documents which are submitted with the Bid will not be accepted and could be considered cause for disqualification.

All questions pertaining to this Invitation to Bid must be submitted by email (with confirmed receipt) to the:

Pennsylvania Convention Center Authority

Attention: Mr. Brad K. Leak, Audit & Compliance Manager

E-Mail: bleak@paconvention.com

If an award is made as a result of this Invitation to Bid, PCCA will award Contracts to the responsible Bidder submitting the lowest responsive Bid, as determined in the sole discretion of the PCCA. Notwithstanding the foregoing, PCCA reserves the right to reject any and all Bids if PCCA determines that doing so would be in the best interests of PCCA. Note: The term contract will be utilized throughout this document. PCCA will issue Purchase Orders that will have language consistent with the Bid Document attached appropriately.

Following is the Project Schedule:

Project Schedule and Bid Checklist for

BID PACKAGE: ESCALATOR MODERNIZATION - #1

Invitation to Bid:	Thursday, December 28, 2017
Documents Available:	Thursday, December 28, 2017
Registration to Bid (Last Day) (Recommended):	Tuesday, January 9, 2018
Site Visit (Mandatory) (10:00 AM EST.):	Tuesday, January 9, 2018
Deadline for Requests for Information (2:00 PM EST.):	Friday, January 19, 2018
Receipt of Bids:	Tuesday, January 30, 2018
Evidence of Best & Good Faith Effort:	Tuesday, January 30, 2018

Bid Checklist:

- Bid Form
- Sub-Packages tabulated and totaled
- Acknowledgment of Addenda
- Signed Bid
- Bid Surety if required

Intent to Award Bid:	Friday, February 23, 2018
Notice to Proceed:	Monday, February 26, 2018
Contract Time (From Notice to Proceed):	365 Days

INSTRUCTIONS TO BIDDERS

1. GENERAL INFORMATION

These Instructions to Bidders refer to the Pennsylvania Convention Center Authority ("PCCA") as the Owner of the Project.

Refer to the Invitation to Bid for information relating to time, date and place for receipt of Bids, and other pertinent bidding information.

All furniture, fixtures and equipment provided under this Bid shall be FOB Destination at locations in the Pennsylvania Convention Center. The convention center is one structure from IIth to Broad St and Arch to Race St. in downtown Philadelphia. The Bidder is to include all items of labor, materials, tools, equipment, insurance and other costs necessary to fully complete the Work pursuant to the Contract Documents.

All insurance as indicated in the Bid Documents or otherwise required shall be provided by the Vendor.

The apparent low bidder is required to submit evidence of its Best and Good Faith Efforts, which includes its solicitation of and commitments with MIW/DSBEs, to the Authority **due with submission of bid.** Bidders are referred to the Authority's Diversity, Inclusion, & Anti-Discrimination Policy.

The work at the Pennsylvania Convention Center is covered by a Customer Service Agreement between the PCCA and the trades working at the center.

Where Bid Security is required by the Bid Documents: Bids submitted without Bid Security will not be considered.

2. SECURING DOCUMENTS

A. Bid Documents will be placed on file and may be examined and retrieved on and after the date of issuance of the Bid Documents from the Pennsylvania Convention Center Web site at:

<http://www.paconvention.com/about/purchasing-bids-rfps> under tab Request for Proposals

B. To assure that PCCA has an accurate list of Bidders and the Bidders receive Addenda from PCCA, Bidders are required to indicate their intention to bid by the time and date indicated on the Project Schedule. The registration is mandatory. Registration is by email that requests a receipt. The email is to be sent to:

Attention: Mr. Brad K. Leak, Audit & Compliance Manager
E-Mail: bleak@paconvention.com

Failure to follow this procedure may disqualify a Bidder.

3. EXAMINATION OF BID DOCUMENTS

- A. Each Bidder shall carefully examine the Bid Documents and all Addenda and thoroughly familiarize itself with the detailed requirements prior to submitting a Bid.
- B. Until the time and date indicated on the Project Schedule, Bidders may submit in writing to the PCCA any comments or questions related to the Bid Documents or the Project. PCCA will consider the comments and question and if PCCA determines in its sole discretion that changes to any of the documents are appropriate, then an Addendum to the Bid Documents will be issued to all registered bidders. Exceptions, modifications or qualifications to any of the Bid Documents which are submitted with the Bid will not be accepted and could be considered cause for disqualification. Failure of Bidder to clarify ambiguities prior to bid opening as aforesaid constitutes a waiver of its right to raise any such ambiguity after bid opening.
- C. All questions pertaining to this Bid must be submitted by email (with confirmed receipt) to the:
 - Pennsylvania Convention Center Authority
 - Attention: Mr. Brad K. Leak, Audit & Compliance Manager
 - E-Mail: bleak@paconvention.com
- D. PCCA shall not be bound by any oral communications.
- E. Bid Documents can be downloaded from the PCCA website. Paper copies will not be available from PCCA. Each Bidder shall examine their downloaded Bid Documents for missing or partially blank pages. It shall be the Bidder's responsibility to identify and notify PCCA of any missing pages. If necessary, any such pages will be uploaded to the PCCA server and all Bidders will be notified.

4. SCOPE OF WORK

The Contract Documents shall include, but not be limited to, the Bid Form, these Instructions to Bidders and the Specifications.

5. PREPARATION AND SUBMISSION OF BID FORM

- A. The Bid Form included in the Bid Documents shall be reproduced by the Bidder and filled in as indicated in these Instructions to Bidders. When a Bidder proposes to bid, all blank spaces in that Bid-Package portion must be filled in. Signature(s) must be in long hand and must be those of a principal duly authorized to make contracts. The Bidder's legal name must be fully stated. The completed form must be without interlineations, alteration, or erasure. Bids shall not contain any added statement that would recapitulate, modify, condition or interpret the terms of the Bid.
- B. At the time of submitting its Bid, a Bidder must be legally licensed to operate under all applicable laws of the Commonwealth of Pennsylvania and the City of Philadelphia.
- C. Envelopes containing Bids shall be opaque, and must be so presented that they may be easily identified as containing a Bid. Outside of the envelope must show:

Name and location of the Project as described in the Bid Documents.

Name and address of Bidder.

Identification of Contract for which bid is submitted; i.e.,

- D. The Bidder must provide a Unit Cost and Total for each Item in the Bid-Package. Bidders must include pricing for all Items in the Bid-Package. Partial Bids are not acceptable.
- E. Each Bidder shall set forth in its Bid Form the proposed "Unit Cost" and "Extended Cost" for each item in the Bid-Package. The Bidder must then provide a "Total Bid-Package Price" at the end of the Bid-Package list.
- F. **To validate their Bid, the Bidder must provide a Total Cost at the bottom of the Sub-Package list in both Arabic numbers and written form.**
- G. Any work items omitted from such Contract Documents which are reasonably inferable from them as being necessary for the completion of the Work (without increasing the scope of the Work) shall be considered a part of such Work although not directly specified or called for in the Contract Documents.
- H. Simultaneously with its Bid Proposal on the Bid Form, each Bidder shall submit to the PCCA, where required, the requisite Bid Security, and other documents as listed in the Bid Submittal Checklist.
- I. Oral, telephone, fax or electronic Bids or modifications to Bids will not be considered.

6. BID SECURITY AND BONDS

- A. Where required on the Bid Form, Bids shall be accompanied by Bid Security in the form of a certified or cashier's check with the Pennsylvania Convention Center as the payee in an amount equal to or exceeding 5% of the total for all bids submitted or a Bid Bond issued by a surety company which is authorized to do business in the Commonwealth of Pennsylvania and acceptable to PCCA in substantially the form contained in these materials. The amount of the bond shall be equal to or exceed the total for all bids submitted. The Bid Bond shall be payable to the Pennsylvania Convention Center Authority as payee or obligee. If awarded the Contract, the Bidder will execute the Agreement in the same form as contained in the Bid Documents (as may have been modified by Addenda), and shall furnish the policies of insurance or insurance certificates as required by the General Conditions and where required and surety as indicated in the Contract Documents. These documents shall be submitted in their final form within five (5) business days after receipt of the Notice of Award. If any Bidder offered the Contract refuses to enter into the Contract, the PCCA may execute upon the Bid Security as liquidated damages and not as a penalty. Where Bid Security is required, Bids without Bid Security will be rejected.

- B. Bid Security for all but the two lowest bidders for each package will be returned within three (3) working days after bids are received. If no award has been made within thirty (30) days after opening of Bids, upon demand of a remaining Bidder at any time thereafter, their Bid Security will be returned to any Bidder that has not been notified of acceptance of its Bid.
- C. The performance security shall be a letter of credit for 10% of the value of the award or a surety bond in the form enclosed with the Bid Documents.
- D. For all surety bonds, Bidder shall also deliver a Power of Attorney authorizing signature of the Bond.

7. WITHDRAWAL OF BID

- A. Each Bid submitted shall remain firm for the periods listed in this document and may not be withdrawn in whole or in part during that time, except by written mutual consent of the PCCA and the Bidder. Bidder shall forfeit its Bid Security to the extent of the damage to PCCA occasioned by such withdrawal.
- B. Bids may be withdrawn personally or on written or telegraphic request received from Bidders prior to the time fixed for receiving Bids. Electronic request for withdrawal will not be permitted. Negligence on the part of the Bidders in preparing Bids confers no right for the withdrawal of Bids after opening except as provided by law.

8. ACCEPTANCE OR REJECTION OF BIDS; BASIS OF AWARD

- A. PCCA reserves the right to reject any and all Bids if PCCA determines that doing so would be in the best interests of PCCA; and/or to reject the Bid of a Bidder who is not, in the opinion of the PCCA, a responsible Bidder or who has not submitted a responsive Bid.
- B. The PCCA reserves the right to waive any informalities and technicalities in bidding. If any discrepancy exists in the Bid between numbers as written in words and as written in Arabic numerals, the total value of the Extended Prices for the Items bid will control.
- C. The apparent low bidder is required to submit evidence of its Best and Good Faith Efforts, which includes its solicitation of and commitments with M/W/DSBEs, to the Authority **due with submission of bid**. Bidders are referred to the Authority's Diversity, Inclusion, & Anti-Discrimination Policy, Exhibit 15.4 of the General Conditions, for further information.

Exhibit 16 Solicitation and Commitment Form; Bidders must comply with all the requirements outlined in the Diversity, Inclusion, & Anti-Discrimination Policy attached (Exhibit 15.4) to this document. Along with the BGEF forms required the bidders must also complete the attached Solicitation and Commitment Form (S&C). The S&C form *must* be completed by filling in all of the appropriate spaces as follows:

- Type of Certification MBE, WBE or DSBE (must select only one)
- Name and Contact information
- Certification Number (must submit a copy of current certification certificate with package)
- Type of work to be performed or service provided
- Confirm Commitment (indicate yes **or** no; if no commitment, provide reason in comment section)
- Date of Commitment
- Dollar Value of Service Commitment
- Percentage of contract value

D. Any Contract to be awarded will be awarded to the Bidder submitting the lowest responsive Bid for each Sub-Package.

E. PCCA shall make a determination of the Bidder's responsibility and responsiveness as determined in the sole discretion of the PCCA.

1. Responsiveness. A responsive bid is one, both as to form and substance, which conforms to all the essential terms and conditions of the Invitation and in which the work offered meets the specifications in all essential respects. PCCA reserves the right to waive minor informalities or irregularities whenever it is to the advantage of PCCA to do so.
2. Responsibility. A responsible bidder is one that possesses the capability to fully perform the contract requirements in all respects and the integrity and reliability to assure good faith performance.

9. BIDDER QUALIFICATION

Bidders shall be prepared to provide information to PCCA that they are qualified that they have the necessary experience and financial resources to execute the contract. Bidders may also be required to provide evidence that the Bidder is the manufacturer or an authorized representative or dealer for the manufacturer of the products they are bidding. Notwithstanding the above, PCCA shall not be responsible the Contractor's performance of the Work.

10. EXECUTION OF AGREEMENT

The Bidder to whom the Contract is awarded by the PCCA shall execute the Agreement in the same form as contained in the Bid Documents (as may have been modified by Addenda), and will furnish the required security and the policies of insurance or insurance certificates as required by the General Conditions.

11. PRE-BID CONFERENCES/BID RECEIPT

A Pre-Bid Conference is scheduled as indicated in the Invitation to Bid. It is suggested that prospective Bidders attend to fully understand the scope of the project.

12. TAXES:

A. GENERAL

- I. Bidder, as a result of any contract entered into pursuant to this Invitation, may be subject to certain business taxes imposed by the City of Philadelphia and/or the School District of Philadelphia. BIDDER IS RESPONSIBLE FOR MAKING ITS OWN INVESTIGATION TO DETERMINE WHETHER OR NOT SUBJECT TO THE ABOVE-MENTIONED CITY AND SCHOOL DISTRICT TAXES, AND FOR PAYING ANY SUCH TAX IF APPLICABLE. Bidders are hereby informed that PCCA is obligated by law to furnish to City of Philadelphia Department of Revenue, upon its request, the name and address of any person or firm with whom it (PCCA) has a contract for goods and/or services.
2. The successful bidder, if not already paying the aforesaid taxes, is required to apply to the Department of Collections, Room #240, Municipal Services Building, 15th Street and J. F. Kennedy Boulevard, Philadelphia, Pennsylvania 19107, for an account number and to file appropriate business tax returns as provided by law.

B. SALES TAX (COMMONWEALTH OF PENNSYLVANIA)

- I. The Pennsylvania Convention Center Authority, an agency and public instrument of the Commonwealth of Pennsylvania and a body politic and corporate created and existing under the Pennsylvania Convention Center Authority Act, 64 Pa. Cons. Stat. Ann. 6001, et seq., as amended. As an agency and instrumentality of the Commonwealth of Pennsylvania, Owner is exempt from the payment of state sales and use tax. Nothing in this paragraph is meant to exempt a construction contractors from the payment of and taxes of fees which are required to be paid with respect to the purchase, use, rental of lease of tangible personal property or taxable services use of transferred in connection with the performance of a construction contract.

13. SCHEDULE; CONTRACT TIME

- A. The Bidder is advised that time is of the essence with regard to Contractor's performance of the Work and the discharge of all of the Contractor's obligations under the Contract. Contractor acknowledges that it is of critical importance to the completion of the project, and subsequent beneficial use of the Convention Center, that all delivery and completion dates as indicated in the Contract Documents be met.
- B. The schedule for the Project is provided in the Invitation to Bid.

14. WAGE RATE AND OTHER FEDERAL/STATE/LOCAL REQUIREMENTS

- A. Prior to submitting a Proposal, each Proposer must familiarize itself with all current working conditions, including but not limited to the labor environment and all applicable laws, codes, ordinances, contracts, agreements, rules and regulations that will affect the delivery of the services to be provided by the Proposer.

15. COMPLIANCE WITH LAWS, RULES ETC.

- A. The Bidder shall comply with all federal, state and local statutes, laws, rules, regulations and ordinances including those of any public authorities having jurisdiction on the Project.
- B. Bidder shall give special attention to the Pennsylvania Steel Products Procurement Act. A copy of the law is attached hereto.

16. OR EQUALS

- A. Where products are specifically identified in the Specifications by a manufacturer's name, model or catalogue number, only such specific items may be used in the Bid.
- B. When three or more products are specified by name for one use, the Bidder shall select any of those specified. Materials specified by manufacturer's trade name shall comply with manufacturer's printed specifications and data.

17. PERFORMANCE AND PAYMENT BONDS; ASSURANCE OF COMPLETION

- A. The accepted bidder shall furnish Corporate Surety Bonds covering faithful performance of the Contract and the payment of all obligations arising thereunder. The bonds shall be substantially in the forms provided herein and shall be procured from a surety or sureties acceptable to the Owner. The bond or bonds shall be in an amount equal to the Contract price (100% performance bond, 100% payment bond). The Owner and such other persons or entities as the Owner designates shall be named as obligees on the bond or bonds.
- B. The Bidder shall identify with his bid, the cost of obtaining such bonds separate from the Base Bid or the cost for any Unit, Alternate or Allowance pricing

BID FORM

BID PACKAGE: ESCALATOR MODERNIZATION- #1

For the

PENNSYLVANIA CONVENTION CENTER
PHILADELPHIA, PA

TO: Pennsylvania Convention Center Authority OWNER
ADDRESS
1101 Arch St.
Philadelphia, PA 19107

FROM: _____ BIDDER
_____ ADDRESS
_____ CITY/STATE

SUB-PACKAGES BIDS:

- A. **Bidders must include pricing for all Items.** Partial Bids are not acceptable.
- B. To validate their Bid, the Bidder must provide a Total Bid-Package Price at the bottom of the Bid-Package list in both Arabic numbers and written form.
- C. Having carefully examined the Bid Documents together with any Addenda as listed hereinafter, the undersigned hereby proposes and agrees to provide all labor, materials, plant, equipment, transportation and other work as necessary and/or required to execute all of the Work described by the Bid Documents, AS FOLLOWS:

Bid Package: Escalator Modernization - #1

The undersigned hereby proposes to furnish all materials and perform all of the Work for the erection, construction and completion of the subject Project as shown on the Drawings, described in the Specifications and specified in the General Conditions, Supplemental or Special Conditions, Addenda, if any, and other Contract Documents, or as referred to in the "Solicitation For Bids" and "Instructions to Bidders" for the following amounts:

BASE BID: Escalator Modernization - #1

_____ (DOLLARS) (\$ _____)

ADD ALTERNATE NO. 1: Escalator Modernization - #2

_____ (DOLLARS) (\$ _____)

TOTAL BID: Escalator Modernization - #1 and #2

_____ (DOLLARS) (\$ _____)

Bid Package: Escalator Modernization - #1

SCOPE OF WORK:

BASE BID:

- 1) Contractor to provide all labor, materials, and equipment required to perform the escalator modernization of Escalator #1 as stated on the specifications (see attached.)
- 2) Contractor to schedule work so not to disrupt the daily operations of the PA Convention Center.
- 3) Specifications: (Attached)
 - a) Vertical Transportation System: (21 Pages) Section 143100

ADD ALTERNATE No. 1:

- 1) Contractor to provide all labor, materials, and equipment required to perform the escalator modernization of Escalator #2 as stated on the specifications (see attached.)
- 2) Contractor to schedule work so not to disrupt the daily operations of the PA Convention Center.
- 3) Specifications: (Attached)
 - a) Vertical Transportation System: (21 Pages) Section 143100

II. INSURANCE

Vendors are required to provide bid surety as described in the Instructions to Bidders and insurance coverage as described in the General Conditions of the Contract.

III. ADDENDA ACKNOWLEDGEMENT:

The undersigned acknowledges receipt of the following Addenda (list by number and date appearing on Addenda)

Addendum No.	Dated	Addendum No.	Dated

IV. TIME OF COMPLETION:

The undersigned agrees to substantially complete all Work as specified in Article XV, SCHEDULE; CONTRACT TIME, contained in the Instructions to Bidders.

V. GENERAL STATEMENTS:

The undersigned declares that the person or persons executing this Bid is/are fully authorized to sign on behalf of the Bidder and to bind the Bidder to all the conditions and provisions of the Bid.

It is agreed that the Bidder has complied or will comply with all requirements of local, state, and national laws, and that no legal requirement has been or will be violated in making or accepting this Bid, in awarding the Contract to the Bidder and/or in prosecution of the Work.

Bid Security in the amount of five percent (5%) of the Total Base Contract Bid is attached as required by the Instructions to Bidders. The conditions for release of the Bid Security are specified in the Instructions to Bidders. If the undersigned fails or neglects to appear within the specified time to execute the Contract, the undersigned will be considered as having abandoned the Contract and the Bid Security accompanying this Bid may be forfeited to the PCCA by reason of such failure on the part of the undersigned.

The undersigned further agrees that its Bid shall remain firm for a period of sixty (60) days from the date of Bid opening as indicated in the Instructions to Bidders.

The undersigned further agrees that their Bid Security shall remain with the PCCA until a Contract has been signed by the successful Bidder and the requisite payment/completion bonds have been made and delivered to the PCCA. The Bid Security will be returned within forty-eight (48) hours after the Contract has been executed. If no award is made within sixty (60) days after opening of Bids, upon demand of the Bidder at any time thereafter, PCCA will return the Bid Security to the Bidder provided that the Bidder has not been notified of acceptance of its Bid.

Attached hereto and made a part hereof is Bid Security in the required amount.

Respectfully submitted this

____ day of _____, 2018

Individual Proprietorship or Partnership

(If Bidder is an individual proprietorship or is a partnership, sign here)

_____(SEAL)

(Trade Name of Firm)

_____(SEAL)

(Signature of Owner or Partner)

Corporation*

(Name of Corporation)

(President or Vice President)

(Corporate Seal)

Attest: _____
(Secretary of Treasurer)

***Signature by anyone other than the President or Vice President and Secretary or Treasurer, must be accompanied by a power of attorney, executed by the proper corporate officers under the corporate seal indicating authority to execute this Bid.**

Bid Bond

KNOW ALL MEN BY THESE PRESENT, that we _____ as Principal, (hereinafter call the "Principal"), and _____, a corporation duly organized under the laws of the State of _____ as Surety, (hereinafter called the "Surety"), are held and firmly bound unto the Pennsylvania Convention Center Authority, as obligee, (hereinafter called the "obligee"), in the sum of (\$ _____) Dollars, 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 _____ (the "Bid")

NOW, THEREFORE, if the Obligee shall accept the Bid of the Principal and the principal shall enter into a Contract with the Obligee in accordance with the terms of such Bid, and give such bond or bonds as may be specified in the Bid Documents 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 bond 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 _____ 2018

ATTEST: _____
(Name of Corporate Surety)

By: _____
TitTitle
Tit

ATTEST:

By: _____
Title

PENNSYLVANIA CONVENTION CENTER AUTHORITY
PENNSYLVANIA CONVENTION CENTER
PHILADELPHIA, PA

NON-COLLUSION AFFIDAVIT

BID PACKAGE: ESCALATOR MODERNIZATION - #1

STATE OF PENNSYLVANIA

SS:

COUNTY OF _____

I, _____ of the City of _____,
in the County of _____ and the State of _____, of full age, being dully sworn
accordingly to law on my oath depose and say that:

I am _____ of the firm of _____, the Bidder making the Bid for the BID
PACKAGE : **ESCALATOR MODERNIZATION - #1** and that I executed the said Bid with full authority so to do;
that the said Bidder has not, directly or indirectly, entered into any agreement, **participated in any collusion, or
otherwise taken any action, in statements contained in the said Bid and in this Affidavit** are true and correct, and
made with full knowledge that The Pennsylvania Convention Center Authority relies upon the truth of the statements
contained in the said Bid, in this Affidavit and in any statements requested by **the Authority showing evidence of
qualifications in awarding the Contract for the said Project.**

**I further warrant that no person or selling agency has been employed or retained to solicit or secure such Contract
upon an agreement or understanding for a commission percentage, brokerage or contingent fee, except bona fide
employees or bona fide established commercial or selling agencies maintained by**

_____(Name of Bidder)

Sworn to and Subscribed

Before me this _____ day of

Of _____, 2018

Authorized Signature

Notary Public

My Commission Expires:

Printed Name

SECTION 143100

Vertical Transportation System

PART 1 – GENERAL

1.1 GENERAL

These specifications are intended to cover the complete modernization of One (1) commercial grade escalator in a first class workman like manner by the Escalator Contractor.

1.02 RELATED WORK BY OTHERS

- A. A lockable mainline fused disconnect switch and wiring brought to the terminals of the motor starter in the truss machine space where the controller is located (3 phase power). Refer to NEC/NFPA 70, Article 620.
- B. Light, light switch and two (20 AMP) GFI outlets in each machine space (top and bottom of each escalator unit). Refer to NEC/NFPA 70, Article 620.
- C. Adequate open air ventilation for machine and controller compartment space.
- D. Adequate illumination of steps through the escalator run. (Not less than 5 foot candles thru out the run and 20 foot candles at the landings.)
- E. Verify all openings in the floors properly framed and finished and all permanent fireproof enclosures for the escalator wells, pits and machine areas. (In accordance with local building codes)
- F. Verify all steel or concrete supports of adequate strength for trusses at upper and lower locations.
- G. Coverings for exteriors of escalators from the edges of the deck covers, including coverings for exposed surfaces of trusses and soffits. (Not to exceed 10 pounds per square foot or as recommended by the manufacturer.)
- H. Floor fill and finish to access floor plates. All floor fill and finish to be provided after installation of landing plates.
- I. Dry pit including sump pit, pump or drains. Drains connected directly to sewers shall not be installed. Provide covers over sump pits or drains.

1.03 QUALITY ASSURANCE

- A. The approved escalator companies are:
 - 1. Nouveau Elevator
 - 2. Thyssen Krupp Elevator
 - 3. Kone
 - 4. Approved Equal
- B. Design Criteria:
 - 1. Contract Speed: Maximum +/- five feet per minute speed variation under varying load conditions in either direction. The minimum no-load speed shall be the rated speed.
 - 2. Stopping Requirements: Escalators shall stop smoothly, quietly and without a hard stop, under all load conditions.
 - a. Stops in the up or down direction, (after activating the stop button or a safety device) shall cause the escalator to coast no more than the distance between the last skirt safety device and the comb plate.
 - b. Stops in the down direction shall be smooth and at a rate as required by the latest applicable safety code.
 - 3. Full Speed Ride: Free from vibration or jerk.
 - 4. Sound Control:
 - a. Airborne Noise Control: Maximum noise of the operating escalator shall be 62 dBA as measured 60 inches above the moving steps with an ambient noise level of 48 dBA.
 - b. Vibration: Sound isolate equipment to prevent objectionable noise and vibration transmission to occupied building spaces.

1.04 STANDARDS

Except as modified by governing codes and by this Division, the work shall comply with provisions of the latest editions of the following, and in the event of conflict between these standards, the Architect's/Consultant's determination shall be final:

- A. ASME A17 - The American Society of Mechanical Engineers - Safety Code for Elevators and Escalators including Supplements. (Applicable Edition)
- B. ANSI A117.1 - American National Standards for Buildings and Facilities Providing Accessibility and Usability for Physically Handicapped People.
- C. NFPA Life Safety Code/Electrical Code.
- D. Uniform Federal Accessibility Standards (UFAS).
- E. Title III of the Americans with Disabilities Act (ADAAG)

1.05 SUBMISSION, SAMPLES, CUTS AND DRAWINGS

- A. Within thirty (30) days of the Letter of Award, the Contractor shall provide seven (7) sets of submissions. Partial submissions are not acceptable. All submissions shall be made at one time, complete, in a single package. Transmittal letter shall be marked with contractor's name, project name and contract number.
- B. Product Data - Submit manufacturer's complete technical product data and installation instructions including performances, operations, safety features, controls, finishes and similar information. Clearly indicate any variations from specified requirements. Show maximum dynamic and static loads imposed on building structure at points of support. Show maximum and average power demands.
- C. The Shop Drawings shall show material type and gauge, general dimensions, methods of attachment, location and size of reinforcements and openings, and a general arrangement of components. Approval thereof shall not relieve the Contractor of compliance with the specification, unless the attention of the Architect/Construction Manager is called to the non-complying features in writing.
- D. Shop Drawings - Submit dimensioned general layout drawings of each escalator unit, with large scale details showing coordination with building structure and interfaces with other work, shear guards and deck barrier details. Show locations and wiring of controls, and show required access, ventilation, lighting and electrical to be provided by others.
- E. Power Confirmation Sheets: Including horsepower, code letter, starting current, full-load running current and demand factor for applicable motors.
- F. Samples - Submit samples of exposed finishes and signal/graphic elements; provide 6" to 8" square samples of sheet materials, 10" to 12" lengths of running trim members, and single units of smaller elements.
- G. Sample submissions (as requested by the Architect) may include:
 - 1. Handrail samples
 - 2. Glass Balustrade
 - 3. Aluminum Floor Plate sample
 - 4. Shear Guard and Deck Barrier material and finish
- H. Maintenance Manuals - Submit bound manuals for each different type of escalator, with operating and maintenance instructions, parts listing, recommended parts inventory listing, purchase source listing, emergency instructions and similar applicable information.

1.06 TERMS/DEFINITIONS

The terms used herein are defined as follows:

- A. "Construction Manager" shall be the Pennsylvania Convention Center Project Manager or their authorized representative.

- B. "Architect" shall mean the Pennsylvania Convention Center Project Manager or their authorized representative.
- C. "Consultant" shall mean the firm of Vertical Systems Analysis.
- D. "Contractor" shall mean the person, firm or corporation named in the Contract Documents who will execute the Work. It shall include all his employees, subcontractors and suppliers.
- E. "Provide" shall mean to supply, install and connect up complete and ready for safe and regular operation the particular work referred to unless specifically indicated otherwise by the Architect.
- F. "Install" shall mean to erect, mount and connect complete with related accessories.
- G. "Furnish" or "Supply" shall mean to purchase, procure, acquire and deliver complete with related accessories.
- H. "Notice to Proceed" shall mean a written document from the Owner allowing the Contractor to commence only that portion of the Work stated in the written document.
- I. "Work" shall mean the services, materials, labor and all other equipment required for complete and proper installation by the Contractor.
- J. "Best", "first-class" or similar terms as applied to materials, products and workmanship shall mean that, in the Architect's opinion, there are no superior qualities of materials or products on the market, and there is no better class of workmanship.
- K. "Concealed" shall mean in masonry or other construction, installed in furred spaces, within double partitions or hung ceilings, in trenches, in crawl spaces or in enclosures.
- L. "Exposed" shall mean not installed underground or "concealed" as defined above.

1.07 PERMITS

- A. The Contractor shall file all necessary plans and application with the local building department or other authorities having jurisdiction and obtain the required permits and approvals.
- B. The Contractor shall submit to the Construction Manager a copy of the permit application, escalator specs, permit and print of escalator drawings as submitted and approved by the authority having jurisdiction.
- C. Upon completion of the work, and prior to final payments, tests may be made by the Owner/Construction Manager of all materials and appliances installed hereunder. The Contractor shall furnish all labor and materials required for such tests.
 - 1. Should the tests show that any of the materials, appliances or workmanship are not first class or not in compliance with the Specifications, the Contractor, on written notice from the Owner/Construction Manager, shall remove same and promptly replace them with other materials and appliances in conformity with the Specifications.

- D. The Contractor shall perform all tests required by the State or other authorities having jurisdiction in the presence of an authorized inspector to obtain Final Certificate of Inspection prior to turnover of the escalators to the Owner/Construction Manager.

1.08 PROTECTION

- A. Protect all items against dirt and damage. The Contractor shall be held fully responsible for all damage until final acceptance. Any equipment or property of the Owner damaged by this Contractor or his employee's, shall be restored to its original condition or replaced without cost to the Owner.

1.09 STORAGE

- A. The Construction Manager will designate a suitable area where the Contractor may store equipment until the work is completed. All equipment shall be stored at the sole risk of the Contractor.
- B. If the Contractor utilizes a construction shanty or similar structure, he shall provide his own lock and key, but a duplicate key shall be furnished to the Project Superintendent. The assigned storage area shall be left clear and unencumbered of material or debris and shall be left in a broom-clean condition at the completion of the workday. An approved type "Fire Extinguisher" shall be provided and installed on a wall for each storage area assigned to the Contractor. The Contractor shall comply with all code requirements for construction of such shanty at his own expense, (i.e., sprinklers, temporary electric, etc.)

1.10 WARRANTY

- A. The escalator contractor shall guarantee the materials and workmanship of the apparatus furnished under these specifications and shall make good any defects which may develop within one (1) year from the date of completion of each escalator not due to ordinary wear and tear or vandalism or improper or insufficient maintenance by others or abuse, misuse, or neglect or any other cause beyond the escalator contractor's control.

1.11 MAINTENANCE

- A. Furnish full protective maintenance on the equipment described herein for a period of one (1) year from the date of final acceptance of the entire installation. The maintenance shall include systematic monthly examinations, adjustments and lubrication of all equipment. Also repair or replace any parts of equipment whenever this is required during the maintenance period and shall use only genuine standard parts produced by the manufacturer of the equipment installed.
- B. All work under the maintenance provisions shall be performed by competent personnel under the supervision and in the direct employ of the Contractor and 24-hour emergency call back service shall be available at all times and be included in the cost of the contract.
- C. Provide interim maintenance on all units completed and put to service prior to the overall project completion.
- D. Full protective maintenance requirements:

1. Regularly and systematically examine, adjust, lubricate, clean and when conditions warrant repair or replace defective or worn items and all other mechanical or electrical equipment.
 2. Examine regularly and systematically all safety devices. All tests shall be performed in accordance with the provisions of the American National Standard, Safety Code for Elevators and Escalators (ANSI/ASME A17.1), current edition.
 3. Furnish lubricants compounded specifically for escalator usage.
- E. The Owner reserves the right to make inspections and tests as and when deemed advisable. If it is found that the escalator and associated equipment are deficient either electrically or mechanically, the Contractor will be notified of these deficiencies in writing, and it shall be his responsibility to make the necessary corrections within 30 days after his receipt of such notice. In the event that the deficiencies have not been corrected within 30 days, the Owner may terminate the Contract and employ a Contractor to make the corrections at the original bidder's expense.
- F. Approximately six months prior to the end of the contract term, the Owner may make a thorough maintenance inspection of all escalators covered under the contract. At the conclusion of this inspection, the Owner may give the Contractor written notice of any deficiencies found. The Contractor shall be responsible for correction of these deficiencies within 30 days after receipt of such notice.
- G. The Owner reserves the right to accept or reject any or all alternates.

1.12 BIDDERS INSTRUCTIONS

A. Invitation to Bidders

1. The bid is to be sealed and shall comply with these specifications. Any bid submitted shall be inclusive of materials, labor, administration and all applicable fees for permits, tests, etc.
2. With exception of only those items specifically identified as being performed by others, the Specifications are intended to include all engineering, material, labor, testing and inspections needed to achieve work specified by the Contract Documents. Inasmuch as it is understood that any incidental or unforeseen work necessary to complete the project is also covered by the Specifications, bidders are cautioned to familiarize themselves with the existing job site conditions. Additional charges for material and labor shall not be permitted subsequent to execution of the contract.
3. Bidders shall report discrepancies or ambiguities occurring in the Specifications to the Consultant for resolution prior to the bidding deadline, otherwise the Specifications shall be deemed acceptable in their existing form

B. Destination of Bid (see cover page)

1. DO NOT SEND A BID OR A COPY OF BID TO VERTICAL SYSTEMS ANALYSIS, INC.

C. Submission of Bids

1. Bids must be submitted to the address outlined on the cover page prior to the deadline.
2. All bids should be in strict accordance with the Escalator Modernization Specifications.
3. All bidders shall utilize the form included in "Project Specifications" to submit their bids.
4. Submission of a bid will be considered proof that the bidder is familiar with the location, facilities and conditions, requirements of the documents and of pertinent state and local codes, state of labor and material markets.
5. The bidder shall make allowances in his/her bid for all contingencies. All governmental regulations shall be adhered to as necessary including, but not limited to the entities indicated in Section 300. Any questions concerning the Project Specifications, Codes, Standards, etc. shall be communicated to Vertical Systems Analysis, Inc. immediately in writing.
6. All discrepancies, omissions or doubts as to the meaning of specifications should be communicated in writing to the Owner and Vertical Systems Analysis, Inc.. Bidders shall act promptly well in advance of the bid due date.
7. Should the bidder desire to furnish different item(s) from that specifically mentioned in the specifications, the bidder shall immediately notify Vertical Systems Analysis, Inc. of the intentions to do so in writing. The bidder shall do so prior to bid submission (within a reasonable time in relation to the bid due date). The bidder shall supply the elevator Consultant with information (data, pictures, cuts, designs, etc.) of the item(s) the bidder desires to furnish, to enable Vertical Systems Analysis, Inc. to decide whether the item intended to be furnished is equal to or better than that specified.
8. Any exception to the specifications should be submitted in a transmittal letter, together with and as part of the bid. The bidder agrees to furnish all labor material and fees required for the complete escalator modernization as outlined in the Project Specifications. All work shall be in accordance with the job specification and in accordance with all regulations and requirements of National and Local Municipalities.
9. The bidder also agrees to include all additions and/or addenda in the contract price subject to any additions and/or deductions decided on by the Owner and/or Consultant.
10. The bidder shall include all taxes, fees and levies with the exception of sales tax only in the price indicated on the Bid Form.

D. Withdrawal or Rejection of Bids

1. Without any prejudice, the owner reserves the right to reject any or all bids, and to waive all informalities, and is not bound to accept the lowest bid. Any bidder may withdraw his/her bid prior to the scheduled time for the receipt of bids. Notwithstanding anything said in the submitted bids, all prices quoted in a bid shall be guaranteed for a period of 90 days after the date of the bid.

E. Bidders Representation

1. Upon submitting a bid, the bidder certifies that the bidder has read and fully understands the Project Specifications. The bidder certifies that the bidder has visited the site and has familiarized himself/herself with the individual conditions under which the work is to be performed. The bidder also agrees to coordinate with the Owner for use of specific areas for storage.

F. Addenda

1. Before the bid deadline, and if necessary as determined by Owner and Elevator Consultant, Addenda will be mailed or delivered to each person(s) or firm(s) recorded by Vertical Systems Analysis Inc. as having received the Escalator Modernization Specification.

G. Mandatory Submission

1. As a mandatory requirement, any person(s) submitting a bid will comply with all of the following:

The bidder shall submit a list of names of all subcontractors or other persons or organizations to be involved with the project and describe the work to be performed. Under no circumstances may the Elevator Contractor receiving the Escalator Modernization Contract transfer or pass it to any other party without the prior written consent of the Owner.

H. AIA Contract

1. The attached edition of the AMERICAN INSTITUTE OF ARCHITECTS (AIA) A 101-1997 shall be used. This document has been slightly modified. We shall use "The Abbreviated Form of The Agreement Between Owner and Elevator Contractor". This agreement is used for agreed upon sums of money to act as a guide for payment. At the signing of this agreement, there will be certain modifications that apply to the unique situation. For your convenience, we have attached a copy of the unmodified agreement to review which can be found in the appendix section of this specification. Please use this copy for a reference guide when necessary. Prior to final payment, the Elevator Contractor shall furnish to the Owner: all assignable warranties and guarantees; all documentation required from Elevator Contractor to secure J-51 tax exemption and tax abatement benefits; all documentation in connection with the work that is required by law, Owner's mortgages and Owner's insurers; releases from Elevator Contractor and subcontractors; maintenance contract from Elevator Contractor as provided in specification; documentation to establish compliance with five year safety test requirements. The Consultant shall determine whether completed work is in conformance with contract and such determination shall be final and binding.

THE BID FORM SHALL BE SUBMITTED WITH THE BID.
THIS SUBMISSION IS MANDATORY.

1.13 INSURANCE

- A. Prior to commencement of design or actual work, the Elevator Contractor shall furnish all Certificates of Insurance which are requested, naming the Owner and/or the Corporation additionally insured. The Elevator Contractor shall provide insurance for the entire period that the work takes place at the premise referenced herein and have a minimum of one million dollars' worth of insurance with three million dollars' worth of aggregate insurance. It shall be the Contractor's full responsibility to maintain his/her insurance. The Contractor's insurance shall cover all of his/her tools and escalator equipment not yet installed on the escalators. It is also the Contractor's responsibility to provide or cause any Subcontractors to have equal insurance coverage. The Elevator Contractor agrees to assist in reporting and investigating any accident and, to cooperate with all interested insurance carriers in the handling of any claim by securing and giving evidence and obtaining the attendance of witness as required for any claims or suit. The Elevator Contractor shall have the following coverage:

Comprehensive General Liability Policies shall include: Standard Broad Property damage endorsed for Elevator Contractor, The Elevator Contractor's Subcontractor and any and all tradesmen engaged on the project. All insurance shall include the "occurrence" basis wording.

Comprehensive General Liability Insurance; Public Liability; including premises, products completed operations and contractual.

The Elevator Contractor shall maintain Fire Insurance for storage of any equipment in and on the Owner's premise. In the event that storage is necessary on the job site, the Elevator Contractor shall inform Owner of such necessity and Owner shall offer available space, (if available), for storage of such materials or equipment. The Elevator Contractor shall use said space only for such purpose. Any and all materials which may be stored in such space or which may be brought onto the job site at any time by Elevator Contractor shall be left at Contractor's sole risk. The Owner will not be responsible to Elevator Contractor for loss of or damage to said materials or equipment for any cause whatsoever, except where such loss or damage is caused by gross negligence of Owner, its' agents, servants and/or employees. It is expressly understood and agreed that the Elevator Contractor assumes all risk of loss or damage and the Owner shall not be required to furnish or supply watchmen or security service at any time.

The following entity (ies) shall be named as insured's as applicable:
Owner
Management Company.

The following entity (ies) shall be named as Additional Insured's:
Vertical Systems Analysis, Inc.

1.14 Department of Buildings Inspections

- A. The Elevator Contractor shall be responsible for all costs of inspections and arrangements of same. All necessary authorities shall be contacted to witness tests. Any necessary certificates of inspection(s) and/or permit(s) for operation of the escalator shall be applied for (in advance) by the Elevator Contractor. All applicable Building Codes shall be conformed to in a timely professional manner.

1.15 PROJECT SUPERVISOR

- A. The Elevator Contractor shall provide a qualified escalator person at the job site to supervise all work and answer any questions which will surface during the duration of the contract. This person shall be informed of all aspects of the project and be directly responsible for workmanship. Routine business concerning the Escalator Modernization shall be conducted through the Consultant's office unless otherwise stated. The project supervisor shall be answerable to the Consultant. All instructions given to the supervisor shall be binding and represent part of the contract. All verbal instructions issued to the project supervisor will be followed-up by written documentation by Vertical Systems Analysis, Inc.. The project supervisor shall be available for all job and progress meetings. Job meetings shall be decided on as necessary and coordinated with the Consultant

1.16 MATERIAL STORAGE

- A. Should the need to store equipment at the job site arise, the Elevator Contractor shall limit the storage of materials to areas approved by the Owner. The Elevator Contractor shall not encumber the premises or overload any portion of it with equipment and materials to a greater extent than it is calculated to bear. The Elevator Contractor stores any and all materials and equipment at his/her own risk.

1.17 RUBBISH REMOVAL

- A. The Elevator Contractor shall remove all rubbish as fast as it accumulates. The bidder shall keep the building and premise clean during all work, and leave the premises at completion in perfect condition as far as the work is concerned. If the Elevator Contractor needs a dumpster service it will be coordinated with the Elevator Consultant. The cost for rubbish removal is the contractor's responsibility. The Elevator Contractor shall not hinder the building's rubbish removal system.

1.18 EQUIPMENT REMOVAL

- A. In cases where there is existing equipment, all equipment in good working order designated to be removed and retained for future reuse by the building shall be decided on at the commencement of all work. Any equipment being replaced or made inoperative by the Elevator Contractor shall be removed from the site at the Contractor's expense. Any questions concerning the retention of escalator equipment shall be made to Vertical Systems Analysis, Inc. The escalator equipment that is replaced does not convert into Contractor's ownership and shall remain the Owner's property. The Owner of the building's service department may require clean up and removal of rubbish accumulation at any time.

1.19 BARRICADES

- A. During the time of the Escalator Modernization, the Elevator Contractor shall provide OSHA acceptable protection devices on shaftway entrances. Means to protect the public's safety shall be paramount. Protection shall be provided for the entire escalator shaftway. If the need arises plywood walls shall be constructed to protect the public from the escalator shaftway. This includes but is not limited to dust control protection.

1.20 PATENTS

- A. Where any disputes over patents arise, the Elevator Contractor shall hold and save the owner and its officers, agents, servants and employees and the Consultant harmless from liability of any nature and/or kind on account of any patented invention, process, article or appliance manufactured or used in the performance of the contract, including its use by the owner, including all cost and expenses for defending any suits unless otherwise specifically stipulated in the contract documents.

1.21 PERMITS

- A. All Department of Buildings permits are the Contractor's responsibility. The Elevator Contractor shall secure any necessary building permits required for performance of work to be done by other trades. The Elevator Contractor shall obtain and pay for all municipal and state permits necessary for execution of the escalator work. VSA will be providing all expediting services to the chosen elevator contractor for a nominal fee. Any questions regarding same shall be directed to VSA Management or Executive staff. The contractor is responsible for signing off all escalators.

1.22 ADVERTISING

- A. No Elevator Contractor advertising will be permitted. The advertising privileges will be retained by the Owner and it shall be the duty of the Elevator Contractor to keep the premises free from unauthorized posters, signs, decorations, etc.

1.23 PROPERTY PROTECTION

- A. The Elevator Contractor shall continuously maintain adequate protection of the Owner(s) property from damage and injury or loss arising out of this contract. The bidder shall make good any such damage, injury or loss, except such as may be directly caused by agents or employees of the Owner. Stairwells, stairways, floors, walls, doors, etc. shall be carefully protected and where necessary, guards provided.

1.24 ASSIGNMENTS

- A. This Escalator Modernization is not assignable. Neither party to the contract shall assign the contract nor sell it in whole or in part without the written consent of the Owner. The Elevator Contractor may not assign any payment due or to become due, without the prior consent of the Owner.

1.25 AS BUILT CLOSE OUT PACKAGE

The following as built drawings (two (2) Sets), spare parts, spare boards and diagnostic tools.

- Full layouts indicating all changes which have occurred in CAD drawings.
- “As Built” wiring diagrams of the controller and drive units. (CAD Drawings on storage media) detailing machine room, hoistway, wiring diagrams and “run sheets” used for point to point wiring.
- “As Built” drawing for all signal fixtures and cab enclosures. (CAD Drawings on storage media)
- One complete set of disks and or tapes for the base program of the system with all required instructions and a list of vendors for all parts. This package, in the presence of a VSA representative, shall be tested then removed from the controller and dispatcher, and then given to that representative.
- Copies of the Department of Buildings’ final approval certificate, Sign-off forms, ELV-12, and electrical sign-offs for all escalators must be submitted to Owner and Consultant.
- All diagnostic tools including proprietary software and computers that are required to troubleshoot and/or electronically interact with installed equipment must be submitted as part of closeout.
- Written confirmation, to both the client and VSA, that all outstanding escalators related violations, which pertain to the escalator(s) covered under these specifications, have been cleared.**

PART 2 - PRODUCTS

2.01 DESCRIPTION OF SYSTEMS

A. ESCALATOR - "Teacup 1" – ID 69978

1. Quantity	One (1)
2. Step Width	Field Verify
3. Vertical Rise	Field Verify
4. Floors Served	First Floor to Second Floor
5. Speed	90 FPM
6. Balustrade	Glass (3/8" Minimum Thickness)
7. Deckboard and Skirt Material	Stainless Steel No. 6 Finish
8. Handrail Color	Black
9. Power Supply	460V (Verify)

2.02 MATERIALS

A. Aluminum:	Alloy and temper best suited for anodizing finish specified.
B. Sheet Steel:	ASTM A366, uncoated, pickled, free from defects.
C. Stainless Steel:	ASTM A1 67; type 302 or 304.
D. Glass:	Minimum 3/8" thick conforming to ANSI Z97.1. Glass shall be low iron type. Provide starfire, opti-white or approved equal.

2.03 FINISHES

A. Aluminum:	Clear anodized finish unless otherwise specified.
B. Sheet Steel:	Clean of foreign substances and apply two coats of rust-inhibitive paint.
C. Stainless Steel:	Satin directional polish, #6 finish unless otherwise specified.

2.04 TYPE

- A. Escalator shall be cleat step, reversible type with full semi-circular extended newels and handrails.
- B. Escalator shall be a self-contained unit consisting of truss, tracks, step drive units, steps, step chains, comb plates, handrails, driving machine, controller, safety devices, balustrades and all other parts required to provide a complete and satisfactory operating installation. The design and method of installation of each escalator shall be such that each shall operate smoothly and quietly.

2.05 TRUSS

- A. The escalator truss, tracks, top/bottom pits and mounting attachments to be inspected for fatigue / wear. Tracks to be replaced as necessary.
- B. An oil-tight drip pan shall be welded to the underside of the truss, along the entire length and width of truss, designed with sufficient rigidity to support the weight of a workman, throughout the length of the truss. Minimize cross bracing or other obstacles on inner surface of truss cover to all for easy cleaning and debris removal.
- C. The truss shall be painted with two coats of rust inhibiting primer and one coat of enamel paint.

2.06 STEP DRIVING UNIT

- A. The machine shall be especially designed for escalator service with long life, smooth running, low maintenance and shall run in an oil tight housing. The machine shall be mounted at the upper end of the escalator inside the truss.

2.07 TRACKS

- A. The step roller tracks shall accurately aligned and fitted with diagonal splices to minimize any effect of roller movement in a vertical direction. The splices shall be ground smooth. Tracks shall be of such design that they can be easily replaced.
- B. The tracks shall be constructed of drawn steel to maintain permanently the proper rigidity and shall be so installed and supported as to assure permanent alignment and smooth operation of the running gear under all loads.
- C. The carriages and curved tracks for guiding the steps at the upper and lower landings shall be provided with machined guiding surfaces, or formed from cold rolled steel bars. Curved chain wheel tracks shall be easily removable and replaceable.
- D. The track system shall be smooth continuous support of the chain wheels from sprocket to sprocket. The transition between incline and the landing level shall be accomplished by a curved track system with a sufficient radius to provide for a smooth interface.

2.08 DRIVE MACHINE

- A. Driving machine shall be specifically designed for escalator service and shall be of adequate size for the duty specified in both directions of travel.
- B. The drive unit shall be designed to distribute the load evenly on the step chains and shall provide for smooth and quiet operation.
- C. The escalator motor shall have a maximum speed of 1800 rpm and rated in accordance with NEMA or IEEE Standards or equivalent for one hour continuous duty escalator service.

2.09 BRAKE

- A. The machine shall be provided with an electro-mechanical brake designed to bring the escalator and its live load to a gradual stop whenever power is interrupted, a stop button is pressed or any of the safety devices are actuated.
- B. A brake mounted on the main drive shaft shall be provided on the units so that it will operate, stop and hold the escalator and its load.

2.10 CONTROLLER

- A. The controller shall be of the microprocessor type designed for escalator use. It shall include, three phase motor protection, and thermal overload relays which shall be designed to protect the motor, and interrupt power to the motor should a safety device be actuated. The switches and relays shall be mounted on a panel supported by a metal frame. It shall be weatherproofed and protected against damage from splashing water.
- B. A separate fused disconnect switch shall be provided in the upper landing of the escalator truss.
- C. The controller shall be mounted in the top of the truss and capable of monitoring power supply, hours of usage, fault indicator, lubrication, motor protection, brake distance, brake wear, phase failure, and over/under speed.

2.11 SAFETY DEVICES

- A. General: Provide at a minimum the following:
 - 1. Starting Switches: Provide spring return type key operated starting switch for manual starting, located at the normal entry landing so all the steps are within sight. Final location of switches to be approved by the Architect.
 - 2. Governor: Provide speed governor to interrupt power to the drive machine in the event the speed of the steps exceeds allowable limits per code; governor to be manually reset type.
 - 3. Broken Step Chain Device: Provide a broken step chain device which causes interruption of power to the drive machine if a step chain breaks; device to be manual reset type.
 - 4. Broken Drive Chain Device: Provide a broken drive chain device, if applicable, which causes application of the brake on the main drive shaft and stops the drive machine if the drive chain parts; device to be manual reset type.

5. Reversal Device: Provide a reversal stop device which causes interruption of power at the drive machine motor and brake in the case of accidental reversal of travel in the up direction; device to be manual reset type.
6. Upthrust Device: Provide a step upthrust device which causes interruption of the power to the drive machine motor and brake should a step be dislodged against the upthrust track at the lower curve.
7. Step Level Device: Provide a step level device located at the top and bottom of the escalator. Device to detect downward movement displacement of 1/8" or greater at the riser end at either side of the step. When activated, device causes escalator to stop prior to the step entering the combplate; device to be manual reset type.
8. Drive Connector Device: Provide a device which applies the brake in the event the drive motor becomes disconnected from the gear box.
9. Handrail Speed Monitoring Device: Provide a Handrail speed monitoring device that causes activation of the alarm whenever the speed of either handrail deviates from the step speed by more than 15%. Device to interrupt power to the drive machine motor and brake in the event over speeding continues for more than 2 seconds; device to be manual reset type.
10. Handrail Switch: Provide a handrail entry device at each newel. Operation to be in the entry direction only. Device to be manual reset type. The device interrupts the power to the drive machine motor and brake if either of the following occurs:
 - a. An object becomes caught between the handrail and the guard.
 - b. An object approaches the area between the handrail and the guard.
11. Missing Step Device: Provide a missing step device that detects a missing step and stops the operation prior to the gap from the missing step exits the combplate; device to be manual reset type.
12. Comb-Step Impact Device: Provide a comb-step impact device; device to be manual reset type. The device interrupts the power to the drive machine motor and brake if either of the following occurs:
 - a. A horizontal force in the direction of travel is applied exceeding the code specified load at the front edge of the combplate.
 - b. A resultant vertical force in the upward direction is applied exceeding the code specified load at the center of the front of the combplate.
13. Step Displacement Device: Provide a lateral step displacement device. Device to be manual reset type. The device interrupts the power to the drive machine motor and brake if a step is excessively displaced horizontally due to failure in the lateral support system.
14. Demarcation Lights: Provide green step demarcation lights located below the step at the lower and upper landing; three fluorescent lamp fixtures as a minimum at each landing. Arrange lamp fixtures parallel to the combplate (leading edge) with the first lamp located directly below the teeth line. Space lamps accordingly between the side edges of the steps and the skirt panel. Lights shall be UL labeled "suitable for outdoor locations."
15. Fault Finders: Provide a suitable electronic fault finding system with memory for each moving stair to indicate source of trouble, should there be a failure of any escalator components. Fault finders are readily accessible and separately identify each safety device in case of failure.

2.12 OPERATING DEVICE

- A. Fixtures shall be provided at the upper and lower landing newels to include a momentary pressure emergency stop button and a key actuated starting switch, which shall start the escalator in either direction. The stop button is covered with a plastic cover that, when moved, actuates an alarm in the balustrade. Switch location shall be in accordance with applicable codes.

2.13 BALUSTRADE

- A. Shall be retained if they are to be replaced with new they shall conform to the following.
- B. The balustrade shall be of the specified type and shall have the following architectural features and finishes:
 - 1. Architectural Features:
 - a. Newel Type - Semi-circular
 - b. Decking Transition - Curved
 - c. Glass balustrades-Minimum 3/8 inch thick clear low iron glass
 - 2. Finishes:
 - a. Moldings for handrails - Anodized Extruded Aluminum, Satin finish
 - b. Interior and Exterior Decking - Stainless steel, #4
 - c. Skirt Panels- Durable wear-resisting exposed surface impregnated with a durable friction reducing material, black in color.
- C. Design glass panels such that the joints align with the joints of the stainless truss cladding.

2.14 HANDRAIL DRIVE

- A. Handrail drive shall be driven by direct gearing drive arrangement.

2.15 MOVING HANDRAILS

- A. Each balustrade shall be provided with a handrail moving at substantially the same speed as the steps and in the same direction. The handrail shall be constructed of rubber or neoprene covered canvas with suitable reinforcement and made endless by suitable vulcanized joints. The handrails shall run on formed guides attached to the balustrade. Hand or finger guards shall be provided where the handrails enter or leave the Escalator newels. Drive shall be positive through friction drive wheel and not allow slip or stalling unless excessive forces are applied.

2.16 NEWELS

- A. The handrail newels shall contain ball bearing rollers at both ends of escalators. Friction slides shall not be provided.

2.17 STEP CHAINS

- A. The escalator step chains shall be of the roller type. Minimum pitch 3". Chain pins shall be case hardened (minimum pin diameter 5/8") for the step chain roller.

2.18 AUTOMATIC PRECISION LUBRICATION

- A. An automatic central lubrication system shall be provided capable of precise lubrication at each chain link pin and axle point. Interval between lubrication shall be adjustable by time relays.

2.19 STEP CHAIN TENSION DEVICE

- A. The escalator shall be provided with a device at the lower landing to maintain tension in the step chains. Safety switches shall be provided which will interrupt power to the motor if the step chains wear should exceed pre-determined limits or should either step chain break.

2.20 STEPS

- A. The treads shall be die-cast aluminum with closely spaced cleats designed to provide a secure foothold and comfortable standing surface, and to provide wearing surfaces for long life. Steps shall include vertical cleats designed to pass between the cleats of the adjacent steps thus providing a combing action with minimum clearances. A demarcation line shall be provided as required ASME code compliance for the step tread. Steps shall be of a one piece die cast material.
- B. The design shall permit the easy removal of a step without disturbing the balustrade.

2.21 SKIRT OBSTRUCTION DEVICE

- A. Skirt switches shall be provided in accordance with ASME code compliance.

2.22 STEP DEMARCATION LIGHTS

- A. Lights shall be in accordance with ASME A1 7.1 code requirements for additional safety.

2.23 COMB PLATES

- A. Combs of the sectional type shall be located at the top and bottom landings designed to properly mesh with the cleats on the step treads. It shall be made in sections so that a section can be readily replaced without the use of special tools.

2.24 FLOOR PLATES

- A. Structural steel frames at upper and lower landings, shall be provided with extruded aluminum floor plates to match the combplates.

2.25 REVERSE PHASE RELAY

- A. The escalator shall be provided with a device which when activated, due to loss or reversal in phase of the main power will cause interruption of escalator operation.

2.26 SIGNS

- A. Provide signs as required by code authorities. Design, material, etc., as selected by Architect.

2.27 SHEAR GUARDS

- A. Provide solid guards in the intersecting angle of the outside balustrade and the ceiling or soffit wherever the intersection of the balustrade and the ceiling or soffit is less than 24 inches per code.

2.28 DECK BARRIER GUARDS

- A. Provide solid guards between the building guardrail and the escalator balustrades and between adjacent parallel escalators per code. Guards shall be the same low iron “extra-white” glass as used in the balustrade.

PART 3 - EXECUTION

3.01 GENERAL

- A. Bidding Documents: Bidder shall examine architectural, structural, electrical and mechanical plans and specifications. Any discrepancies which affect the escalator work or conditions adverse to the bidder's equipment shall be brought to Architect's attention at least seven (7) days prior to bid date.

3.02 PREPARATION

- A. Site Inspection - Examine the areas and conditions where the escalator is to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Architect.
- B. Wellway Inspection - Examine wellways to receive escalators, including supporting structure, electrical rough-ins, machine spaces, and condition under which work is to be installed. Verify dimensions of wellways before beginning the installation work. Notify Contractor in writing of dimensional discrepancies and other conditions detrimental to proper performance of escalator work. Do not proceed with installations until unsatisfactory conditions have been corrected in a manner acceptable to approved escalator fabrication drawings.

3.03 INSTALLATION

- A. General - Comply with manufacturers instructions and recommendations for work during installation.
- B. Set escalator units true to line and level, properly supported and anchored to building structure. Use benchmarks, lines and levels designated by Contractor, to ensure dimensional coordination of the work.
- C. Adjust installed components for smooth, efficient operation, complying with required tolerances and free of hazardous conditions. Lubricate operating parts including bearings, tracks, chains, guides and hardware. Test operate devices, equipment, signals and controls.
- D. Repair damaged finishes and, where damaged beyond acceptable condition as determined by Architect, replace damaged component.

3.04 FIELD QUALITY CONTROL

- A. Acceptance Testing - Upon nominal completion of each escalator installation, and before permitting use of escalator (either temporary or permanent), perform acceptance tests as required and recommended by Code and by governing regulations or agencies.
- B. Obtain and pay for permits, licenses and inspection fees necessary to complete the escalator installation.
- C. Perform tests required by ASMEA17.1, A17.2 safety code for the construction and installation of escalators and escalators, in the presence of the Owner or his Representatives.

D. Supply personnel and equipment for tests and final reviews at no additional cost.

3.05 PROTECTION

A. At time of substantial completion of escalator work, provide suitable protective coverings, barriers, devices, signs or such other methods or procedures to protect escalator work from damage or deterioration. Maintain protective measures throughout remainder of construction period.

3.06 INSTRUCTION AND MAINTENANCE

A. Instruct Owner's personnel in proper use, operation and daily maintenance of escalators. Review emergency provisions, including access and procedures to be followed in checking for sources of operational failures or malfunctions. Confer with Owner on requirements for a complete escalator maintenance program.

B. Check each escalator operation, with Owners personnel present just prior to acceptance of the escalator work by the Owner. Determine that control system and operational/safety devices are functioning properly.

C. Continuing Maintenance - Provide a continuing maintenance proposal to Owner, in the form of a standard yearly (or specified period) maintenance agreement, starting on the date construction contract maintenance requirements are concluded. Local Government services, obligations, conditions and terms for agreement period and for renewal options.

END OF SECTION