

## AGREEMENT

**THIS AGREEMENT** for elevator modernization and installation services is made and entered into by and between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado (the "City") and **KONE INC.**, whose address is 8585 Concord Center Dr. Suite 900, Englewood, CO 80112 (the "Contractor").

The parties agree as follows:

**1. FORM OF AGREEMENT:** This Agreement shall consist of the terms and conditions stated in the following numbered paragraphs. No other documentation related to this Agreement or generated as a result of this Agreement shall form a part of this Agreement unless it is expressly referenced and incorporated herein.

**2. CITY REPRESENTATIVE:** The Manager of General Services ("Manager") is the official City representative and directs all services performed under this Agreement. Communication between the Manager and the Contractor shall be directed through the Manager or such other representative as the Manager shall designate. The Contractor agrees that during the term of this Agreement he/she shall fully coordinate all services hereunder with the City.

**3. WORK TO BE PERFORMED:**

**A. Modernization and Installation of Elevators:** The Contractor shall diligently undertake, perform and complete all modernization and installation of elevators in the Minoru Yasui Building, including all material, labor, supervision, tools, supplies and all other expenses necessary to modernize and install the elevators as set forth in **Exhibit A**, Scope of Work, in compliance with KONE Modernization Proposal dated 3/9/18 for the Minoru Yasui building to the City's satisfaction ("**Modernization and Installation**").

**B.** The Contractor shall faithfully perform the services in accordance with the standards of care, skill, training, diligence and judgment provided by highly competent individuals performing services of a similar nature to those described in the Agreement and in accordance with the terms of the Agreement.

**C.** All records, findings, research, opinions and documentation prepared by the Contractor under this Agreement, if delivered to and accepted by the Manager shall become the property of the City. The Contractor also agrees to allow the City to review any of the procedures

used by him/her in performing the services hereunder and to make available for inspection notes and other documents used in the preparation of any of the services required hereunder.

**4. TERM OF AGREEMENT:** The Agreement will commence on July 1, 2019 and will expire on October 31, 2021 (the “Term”). Subject to the Manager’s prior written authorization, the Contractor shall complete any Assigned Work in progress as of the expiration date and the Term of the Agreement will extend until the work is completed or earlier terminated by the Manager. The parties agree that in the performance of the terms, conditions, and requirements of this Agreement by the Contractor, time is of the essence.

**5. FORCE MAJEURE:** The Contractor shall not be liable for any loss, damage or delay, caused directly or indirectly by embargoes, strikes, lockouts, work interruptions, or other labor disputes, fire, theft, flood, or by any cause beyond Contractor’s control. Neither party shall be liable for incidental, special or consequential damages. Notwithstanding any other provision of the agreement, it is the intent of the parties that each party shall only be liable for damages caused by its own negligent acts.

**6. COMPENSATION AND PAYMENT:**

**A. Reimbursable Expenses:** There are no reimbursable expenses permitted under this agreement.

**B. Invoicing:** Contractor shall provide the City with a monthly invoice in a format and level of detail acceptable to the City including all supporting documentation required by the City. The City’s Prompt Payment Ordinance, §§ 20-107 to 20-118, D.R.M.C., applies to invoicing and payment under this Agreement.

**C. Maximum Contract Amount:**

(1) Notwithstanding any other provision of the Agreement, the City’s maximum payment obligation will not exceed **ONE MILLION SIXTY-FIVE THOUSAND FIVE HUNDRED SIXTY-ONE DOLLARS AND NO CENTS (\$1,065,561.00)** (the “Maximum Contract Amount”). The City is not obligated to execute an Agreement or any amendments for any further services, including any services performed by Contractor beyond that specifically described in **Exhibit A**. Any services performed beyond those in **Exhibit A** are performed at Contractor’s risk and without authorization under the Agreement.

The City’s payment obligation, whether direct or contingent, extends only to funds appropriated annually by the Denver City Council, paid into the Treasury of the City, and encumbered for the

purpose of the Agreement. The City does not by this Agreement irrevocably pledge present cash reserves for payment or performance in future fiscal years. The Agreement does not and is not intended to create a multiple-fiscal year direct or indirect debt or financial obligation of the City.

**7. STATUS OF CONTRACTOR:** The Contractor is an independent contractor retained to perform professional or technical services for limited periods of time. Neither the Contractor nor any of its employees are employees or officers of the City under Chapter 18 of the Denver Revised Municipal Code, or for any purpose whatsoever.

**8. TERMINATION OF AGREEMENT:**

**A.** The City has the right to terminate this Agreement, with cause, on Twenty (20) days written notice to the Contractor. However, nothing herein shall be construed as giving the Contractor the right to perform services under this Agreement beyond the time when such services become unsatisfactory to the Manager.

**B.** If this Agreement is terminated by the City with cause, the Contractor shall be compensated for, and such compensation shall be limited to, (1) the sum of the amounts contained in invoices which it has submitted and which have been approved by the City, (2) the reasonable value to the City of the work which the Contractor performed prior to the date of the termination notice, but which had not yet been approved for payment, and (3) the cost of any work which the Manager approves in writing which he determines is needed to accomplish an orderly termination of the work.

**C.** The City has the right to terminate this Agreement, without cause, on thirty (30) days written notice to the Contractor. However, nothing herein shall be construed as giving the Contractor the right to perform services under this Agreement beyond the time when such services become unsatisfactory to the Manager.

**D.** If this Agreement is terminated by the City without cause, the Contractor shall also be compensated for any reasonable costs it has actually incurred in performing services hereunder prior to the date of the termination.

**E.** If this Agreement is terminated, the City shall take possession of all materials, equipment, tools and facilities owned by the City which the Contractor is using by whatever method it deems expedient, and the Contractor shall deliver to the City all drafts or other documents it has completed or partially completed under this Agreement, together with all other items, materials and documents which have been paid for by the city, and these documents and

materials shall be the property of the City. Copies of work product incomplete at the time of termination shall be marked "DRAFT-INCOMPLETE." The City shall use any and all such incomplete documents or incomplete data at its own risk.

F. Upon termination of this Agreement by the City, the Contractor shall have no claim of any kind whatsoever against the City by reason of such termination or by reason of any act incidental thereto, except for compensation for work satisfactorily performed as described herein.

9. **WHEN RIGHTS AND REMEDIES NOT WAIVED:** In no event shall any payment by the City hereunder constitute or be construed to be a waiver by the City of any breach of term, covenant, or condition or any default which may then exist on the part of the Contractor, and the making of any such payment when any such breach or default shall exist shall not impair or prejudice any right or remedy available to the City with respect to such breach or default; and no assent, expressed or implied, to any breach of any one or more terms, covenants, or conditions of the Agreement shall be construed as a waiver of any succeeding or other breach.

10. **INDEMNIFICATION:**

A. Contractor agrees to defend, indemnify, reimburse and hold harmless City, its appointed and elected officials, agents and employees for, from and against all liabilities, claims, judgments, suits or demands for damages to persons or property arising out of, resulting from, or relating to the work performed under this Agreement ("Claims"), unless such Claims have been specifically determined by the trier of fact to be the sole negligence or willful misconduct of the City. This indemnity shall be interpreted in the broadest possible manner to indemnify City for any acts or omissions of Contractor or its subcontractors either passive or active, irrespective of fault, including City's concurrent negligence whether active or passive, except for the sole negligence or willful misconduct of City.

B. Contractor's duty to defend and indemnify City shall arise at the time written notice of the Claim is first provided to City regardless of whether Claimant has filed suit on the Claim. Contractor's duty to defend and indemnify City shall arise even if City is the only party sued by claimant and/or claimant alleges that City's negligence or willful misconduct was the sole cause of claimant's damages.

C. Contractor will defend any and all Claims which may be brought or threatened against City and will pay on behalf of City any expenses incurred by reason of such

Claims including, but not limited to, court costs and attorney fees incurred in defending and investigating such Claims or seeking to enforce this indemnity obligation. Such payments on behalf of City shall be in addition to any other legal remedies available to City and shall not be considered City's exclusive remedy.

**D.** Insurance coverage requirements specified in this Agreement shall in no way lessen or limit the liability of the Contractor under the terms of this indemnification obligation. The Contractor shall obtain, at its own expense, any additional insurance that it deems necessary for the City's protection.

**E.** This defense and indemnification obligation shall survive the expiration or termination of this Agreement.

**11. EXAMINATION OF RECORDS:** The Contractor agrees that any duly authorized representative of the City, including the City Auditor or his representative, shall, until the expiration of three (3) years after the final payment under this Agreement, have access to and the right to examine any directly pertinent books, documents, papers and records of the Contractor, involving transactions related to this Agreement.

**12. NO AUTHORITY TO BIND CITY TO CONTRACTS:** The Contractor has no authority to bind the City on any contractual matters. Final approval of all contractual matters which obligate the City must be by the City, as required by Charter and ordinance.

**13. VENUE, GOVERNING LAW:** Each and every term, condition, or covenant herein is subject to and shall be construed in accordance with the provisions of Colorado law, the Charter of the City and County of Denver and the ordinances, rules, regulations and Executive Orders enacted and/or promulgated pursuant thereto. The Charter and Revised Municipal Code of the City and County of Denver, as the same may be amended from time to time, are hereby expressly incorporated into this Agreement as if fully set out herein by this reference. Venue for any action arising hereunder shall be in the District Court for City and County of Denver, Colorado.

**14. USE, POSSESSION OR SALE OF ALCOHOL OR DRUGS:** The Contractor, his or her officers, agents, and employees shall cooperate and comply with the provisions of Executive Order 94 and Attachment A thereto concerning the use, possession or sale of alcohol or drugs. Violation of these provisions or refusal to cooperate with implementation of the policy can result in the City barring the Contractor from City facilities or participating in City operations.

**15. ASSIGNMENT AND SUBCONTRACTING:** The City is not obligated or liable under this Agreement to any party other than the Contractor named herein. The Contractor understands and agrees that he or she shall not assign or subcontract with respect to any of his or her rights, benefits, obligations or duties under this Agreement except upon prior written consent and approval of the City, which consent or approval may be withheld in the absolute discretion of the City; and in the event any such assignment or subcontracting shall occur, such action shall not be construed to create any contractual relationship between the City and such assignee or subcontractor, and the Contractor herein named shall remain fully responsible to the City according to the terms of this Agreement.

**16. NO WAIVER OF RIGHTS:** No assent, expressed or implied, to any breach of any one or more covenants, provisions or conditions of the Agreement shall be construed as a waiver of any succeeding or other breach.

**17. NO DISCRIMINATION IN EMPLOYMENT:** In connection with the performance of work under this Agreement, the Contractor may not refuse to hire, discharge, promote or demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, gender identity or gender expression, marital status, or physical or mental disability. The Contractor shall insert the foregoing provision in all subcontracts.

**18. CONFLICT OF INTEREST:** The parties agree that no employee of the City shall have any personal or beneficial interest whatsoever in the services or property described herein and the Contractor further agrees not to hire or contract for services any employee or officer of the City which would be in violation of the Denver Revised Municipal Code, Chapter 2, Article IV, Code of Ethics, or Denver City Charter §§ 1.2.8, 1.2.9, and 1.2.12.

The Contractor agrees that it will not engage in any transaction, activity or conduct which would result in a conflict of interest under this Agreement. The Contractor represents that it has disclosed any and all current or potential conflicts of interest. A conflict of interest shall include transactions, activities or conduct that would affect the judgment, actions or work of the Contractor by placing the Contractor's own interests, or the interests of any party with whom the Contractor has a contractual arrangement, in conflict with those of the City. The City, in its sole discretion, shall determine the existence of a conflict of interest and may terminate this Agreement in the event such a conflict exists after it has given the Contractor written notice which describes the

conflict. The Contractor shall have thirty (30) days after the notice is received to eliminate or cure the conflict of interest in a manner which is acceptable to the City.

**19. INSURANCE:**

**A. General Conditions:** Contractor agrees to secure, at or before the time of execution of this Agreement, the following insurance covering all operations, goods or services provided pursuant to this Agreement. Contractor shall keep the required insurance coverage in force at all times during the term of the Agreement, or any extension thereof, during any warranty period and maintain coverage including products and completed operations for three (3) years after termination of the Agreement. The required insurance shall be underwritten by an insurer licensed or authorized to do business in Colorado and rated by A.M. Best Company as “A-”VIII or better. Each policy shall contain a valid provision or endorsement requiring notification to the City in the event any of the required policies be canceled or non-renewed before the expiration date thereof. Such written notice shall be sent to the parties identified in the Notices section of this Agreement. Such notice shall reference the City contract number listed on the signature page of this Agreement. Said notice shall be sent thirty (30) days prior to such cancellation or non-renewal unless due to non-payment of premiums for which notice shall be sent ten (10) days prior. If such written notice is unavailable from the insurer, Contractor shall provide written notice of cancellation, non-renewal and any reduction in coverage to the parties identified in the Notices section by certified mail, return receipt requested within three (3) business days of such notice by its insurer(s) and referencing the City’s contract number. If any policy is in excess of a deductible or self-insured retention, the City must be notified by the Contractor. Contractor shall be responsible for the payment of any deductible or self-insured retention. The insurance coverages specified in this Agreement are the minimum requirements, and these requirements do not lessen or limit the liability of the Contractor. The Contractor shall maintain, at its own expense, any additional kinds or amounts of insurance that it may deem necessary to cover its obligations and liabilities under this Agreement.

**B. Proof of Insurance:** Contractor shall provide a copy of this Agreement to its insurance agent or broker. Contractor may not commence services or work relating to the Agreement prior to placement of coverages required under this Agreement. Contractor certifies that the certificate of insurance attached as **Exhibit B**, preferably an ACORD certificate, complies with all insurance requirements of this Agreement. The City requests that the City’s contract

number be referenced on the Certificate. The City's acceptance of a certificate of insurance or other proof of insurance that does not comply with all insurance requirements set forth in this Agreement shall not act as a waiver of Contractor's breach of this Agreement or of any of the City's rights or remedies under this Agreement. The City's Risk Management Office may require additional proof of insurance, including but not limited to policies and endorsements.

**C. Named Insureds:** For Owners and Contractors Protective, Contractor shall name the City and County of Denver, its elected and appointed officials, employees and volunteers as the named insured.

**D. Additional Insureds:** For Auto Liability, Contractor and subcontractor's insurer(s) shall name the City and County of Denver, its elected and appointed officials, employees and volunteers as additional insured.

**E. Owners and Contractors Protective:** Contractor shall provide limits of \$1,000,000 for each occurrence and \$2,000,000 policy aggregate.

**F. Waiver of Subrogation:** For all coverages required under this Agreement, Contractor's insurer shall waive subrogation rights against the City.

**G. Subcontractors and Subconsultants:** All subcontractors and subconsultants (including independent contractors, suppliers or other entities providing goods or services required by this Agreement) shall be subject to all of the requirements herein and shall procure and maintain the same coverages required of the Contractor. Contractor shall ensure that all such subcontractors and subconsultants maintain the required coverages. Contractor agrees to provide proof of insurance for all such subcontractors and subconsultants upon request by the City.

**H. Workers' Compensation/Employer's Liability Insurance:** Contractor shall maintain the coverage as required by statute for each work location and shall maintain Employer's Liability insurance with limits of \$100,000 per occurrence for each bodily injury claim, \$100,000 per occurrence for each bodily injury caused by disease claim, and \$500,000 aggregate for all bodily injuries caused by disease claims. Contractor expressly represents to the City, as a material representation upon which the City is relying in entering into this Agreement, that none of the Contractor's officers or employees who may be eligible under any statute or law to reject Workers' Compensation Insurance shall effect such rejection during any part of the term of this Agreement, and that any such rejections previously effected, have been revoked as of the date Contractor executes this Agreement.



**I. Commercial General Liability:** Contractor shall maintain a Commercial General Liability insurance policy with limits of \$1,000,000 for each occurrence, \$1,000,000 for each personal and advertising injury claim, \$2,000,000 products and completed operations aggregate, and \$2,000,000 policy aggregate.

**J. Business Automobile Liability:** Contractor shall maintain Business Automobile Liability with limits of \$1,000,000 combined single limit applicable to all owned, hired and non-owned vehicles used in performing services under this Agreement.

**K. Professional Liability (Errors & Omissions):** Contractor shall maintain limits of \$1,000,000 per claim and \$1,000,000 policy aggregate limit. Policy shall include a severability of interest or separation of insured provision (no insured vs. insured exclusion) and a provision that coverage is primary and non-contributory with any other coverage or self-insurance maintained by the City.

**L. Builder's Risk or Installation Floater:** Contractor shall maintain limits equal to the completed value of the project. Coverage shall be written on an all risk, replacement cost basis including coverage for soft costs, flood and earth movement, if in a flood or quake zone, and, if applicable, equipment breakdown including testing. The City and County of Denver, Contractor, and subcontractors shall be Additional Named Insureds under the policy. Policy shall remain in force until acceptance of the project by the City.

**M. Excess/Umbrella Liability:** Contractor shall maintain excess liability limits of \$5,000,000. Coverage must be written on a "follow form" or broader basis. Any combination of primary and excess coverage may be used to achieve required limits.

**N. Owners and Contractors Protective:** Contractor shall provide limits of \$1,000,000 for each occurrence and \$2,000,000 policy aggregate.

**O. Additional Provisions:**

- (1) For Commercial General Liability the policy must provide the following:
  - (a) That this Agreement is an Insured Contract under the policy;
  - (b) Defense costs are outside the limits of liability;
  - (c) A severability of interests or separation of insureds provision (no insured vs. insured exclusion); and
  - (d) A provision that coverage is primary and non-contributory with other coverage or self-insurance maintained by the City.

(2) For claims-made coverage:

(a) The retroactive date must be on or before the contract date or the first date when any goods or services were provided to the City, whichever is earlier

(3) Contractor shall advise the City in the event any general aggregate or other aggregate limits are reduced below the required per occurrence limits. At their own expense, and where such general aggregate or other aggregate limits have been reduced below the required per occurrence limit, the Contractor will procure such per occurrence limits and furnish a new certificate of insurance showing such coverage is in force.

**20. COLORADO GOVERNMENTAL IMMUNITY ACT:** The parties hereto understand and agree that the City is relying upon, and has not waived, the monetary limitations and all other rights, immunities and protection provided by the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, *et seq.*

**21. NO THIRD PARTY BENEFICIARY:** It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the City and the Contractor, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person on such Agreement, including but not limited to subcontractors and suppliers. It is the express intention of the City and the Contractor that any person other than the City or the Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**22. DISPUTES:** All disputes of whatsoever nature between the City and Contractor regarding this Agreement shall be resolved by administrative hearing, pursuant to the procedure established by Denver Revised Municipal Code, Section 56-106. For the purpose of that procedure, the City official rendering a final determination shall be the City representative identified in Paragraph 2 hereof.

**23. TAXES, CHARGES AND PENALTIES:** The City shall not be liable for the payment of taxes, late charges or penalties of any nature, except as required by Denver's Revised Municipal Code.

**24. TOBACCO PRODUCTS:** There shall be no sale or advertising of tobacco products on the premises or in facilities owned or operated or controlled by the City and County of Denver. "Sale" includes promotional distribution, whether for consideration or not, as well as

commercial transactions for consideration. "Advertising" includes the display of commercial and noncommercial promotion of the purchase or use of tobacco products through any medium whatsoever, but does not include any advertising and sponsoring which is a part of a performance or show or event displayed or held in city facilities.

**25. NOTICES:** Notices concerning the termination of this Agreement, notices of alleged or actual violations of the terms or conditions of this Agreement, and other notices of similar importance shall be made:

By Contractor to:     Manager of General Services  
                                  201 West Colfax Avenue, Dept. 904  
                                  Denver, Colorado 80202

And by the City to:    KONE INC.  
                                  8585 Concord Center Dr Ste 900  
                                  Englewood, CO 80113

**26. SURVIVAL OF CERTAIN PROVISIONS:** The parties understand and agree that all terms, conditions and covenants of this Agreement, together with any exhibits and attachments hereto, any or all of which by reasonable implication, contemplate continued performance or compliance beyond the expiration or termination of this Agreement (by expiration of the term or otherwise), shall survive such expiration or termination and shall continue to be enforceable as provided herein. Without limiting the generality of the foregoing, the Contractor's obligations for the provision of insurance and for indemnity to the City shall survive for a period equal to any and all relevant statutes of limitation, plus the time necessary to fully resolve any claims, matters or actions begun within that period.

**27. PARAGRAPH HEADINGS:** The captions and headings set forth herein are for convenience of reference only, and shall not be construed so as to define or limit the terms and provisions hereof.

**28. SEVERABILITY:** It is understood and agreed by the parties hereto that if any part, term, or provision of this Agreement, except for the provisions of this Agreement requiring prior appropriation of funds and limiting the total amount payable by the City, is by the courts held to be illegal or in conflict with any law of the State of Colorado, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be

construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

**29. AGREEMENT AS COMPLETE INTEGRATION-AMENDMENTS:** This Agreement is intended as the complete integration of all understandings between the parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein in writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a written amendatory or other Agreement properly executed by the parties. This Agreement and any amendments shall be binding upon the parties, their successors and assigns.

**30. LEGAL AUTHORITY:**

**A.** The Contractor assures and guarantees that he or she possesses the legal authority, pursuant to any proper, appropriate and official motion, resolution or action passed or taken, to enter into this Agreement.

**B.** The person or persons signing and executing this Agreement on behalf of the Contractor do hereby warrant and guarantee that he/she or they have been fully authorized by the Contractor to execute this Agreement on behalf of the Contractor and to validly and legally bind the Contractor to all the terms, performances and provisions herein set forth.

**C.** The City shall have the right, at its option, to either temporarily suspend or permanently terminate this Agreement, if there is a dispute as to the legal authority of either the Contractor or the person signing the Agreement to enter into this Agreement. The City shall not be obligated to pay Contractor for any performance of the provisions of this Agreement after the City has suspended or terminated this Agreement as provided in this Paragraph.

**31. NO CONSTRUCTION AGAINST DRAFTING PARTY:** Each of the Parties acknowledge that each of them and their respective counsel have had the opportunity to review this Agreement and that this Agreement shall not be construed against any Party merely because this Agreement or any of its provisions, have been prepared by a particular Party.

**32. CONTRACT DOCUMENTS; ORDER OF PRECEDENCE:** This Agreement consists of Paragraphs 1 through 40, which precede the signature page, and the following attachments which are incorporated herein and made a part hereof by reference:

- |                  |                                 |
|------------------|---------------------------------|
| <b>Exhibit A</b> | <b>Scope of Services</b>        |
| <b>Exhibit B</b> | <b>Certificate of Insurance</b> |

**Exhibit C                      Prevailing Wage Rates**  
**Exhibit D                      Performance and Payment Bond**

In the event of (i) an irreconcilable conflict between a provision of Paragraphs 1 through 40, and any of the listed attachments or between provisions of any attachments, such that it is impossible to give effect to both, the order of precedence to determine which document shall control to resolve such conflict, is as follows, in descending order:

- Paragraphs 1 through 40
- Exhibit A**
- Exhibit B**
- Exhibit C**
- Exhibit D**

**33.      OWNERSHIP OF WORK PRODUCT:** All plans, drawings, reports, submittals and other documents submitted to the City or its authorized agents by the Contractor shall become and are the property of the City, and the City may, without restriction, make use of such documents and underlying concepts as it sees fit. The Contractor shall not be liable for any damage, which may result from any use of such documents for purposes other than those described in this Agreement.

**34.      PAYMENT OF PREVAILING WAGE RATES:**

**A.** Contractor shall comply with, and agrees to be bound by, all requirements, conditions and City determinations regarding the Payment of Prevailing Wages Ordinance, Sections 20-76 through 20-79, D.R.M.C. including, but not limited to, the requirement that every covered worker working on a City owned or leased building or on City-owned land shall be paid no less than the prevailing wages and fringe benefits in effect on the date the bid or request for proposal was advertised. In the event a request for bids, or a request for proposal, was not advertised, Contractor shall pay every covered worker no less than the prevailing wages and fringe benefits in effect on the date funds for the contract were encumbered. A copy of the applicable prevailing wage rate schedule is attached as **Exhibit C** and incorporated herein by reference.

Date bid or request for qualifications/proposals was advertised NA.

If contract opportunity was not advertised, date of written encumbrance, March 1, 2019.

**B.** Prevailing wage and fringe rates will adjust on the yearly anniversary of the actual date of bid or proposal issuance, if applicable, or the date of the written encumbrance if no bid/proposal issuance date is applicable. Unless expressly provided for in this Agreement, Contractor will receive no additional compensation for increases in prevailing wages or fringe benefits.

**C.** Contractor shall provide the Auditor with a list of all subcontractors providing any services under the contract.

**D.** Contractor shall provide the Auditor with electronically-certified payroll records for all covered workers employed under the contract.

**E.** Contractor shall prominently post at the work site the current prevailing wage and fringe benefit rates. The posting must inform workers that any complaints regarding the payment of prevailing wages or fringe benefits may be submitted to the Denver Auditor by calling 720-913-5000 or emailing [auditor@denvergov.org](mailto:auditor@denvergov.org).

**F.** If Contractor fails to pay workers as required by the Prevailing Wage Ordinance, Contractor will not be paid until documentation of payment satisfactory to the Auditor has been provided. The City may, by written notice, suspend or terminate work if Contractor fails to pay required wages and fringe benefits.

**35. PAYMENT OF CITY MINIMUM WAGE:** Contractor shall comply with, and agrees to be bound by, all requirements, conditions, and City determinations regarding the City's Minimum Wage Ordinance, Sections 20-82 through 20-84 D.R.M.C., including, but not limited to, the requirement that every covered worker shall be paid no less than the City Minimum Wage in accordance with the foregoing D.R.M.C. Sections. By executing this Agreement, the Contractor expressly acknowledges that the Contractor is aware of the requirements of the City's Minimum Wage Ordinance and that any failure by the Contractor, or any other individual or entity acting subject to this Agreement, to strictly comply with the foregoing D.R.M.C. Sections shall result in the penalties and other remedies authorized therein.

**36. FINANCIAL ASSURANCES:** Without limiting or waiving any other responsibilities or obligations of the Contractor under this Agreement, the Contractor shall provide a payment bond or other performance guarantees in the amount of **FOUR HUNDRED THOUSAND DOLLARS AND NO CENTS (\$400,000.00)** (the "Surety"). Bonds must be substantially in the form specified in **Exhibit D**, which is attached hereto and incorporated herein by reference. The form of other performance guarantees must be acceptable to the City Attorney. The Contractor shall deliver to the Director, prior to the execution of the Agreement, a fully

executed Surety which shall provide effective and sufficient financial assurance for the payment of bills for labor and materials for the Work, along with appropriate powers of attorney. The Surety must be issued from a surety corporation or bank authorized to do business in the State of Colorado and which is acceptable to the City. Such Surety shall be payable to the City upon demand for the Contractor's failure to pay all amounts owed to laborers, mechanics, subcontractors, and materialmen for work performed or materials, supplies, rental items, tools, and equipment provided for the Work under this Agreement. The Surety shall also assure the repair or replacement of any Work found to be defective or otherwise not in compliance with this Agreement. The Surety shall remain in effect or be promptly renewed or replaced by another Surety acceptable to the City during the Term of the Agreement and during the Term of any Extension Amendment and for a ninety (90) day period after the expiration or termination of this Agreement or any Extension Amendment and any warranty period or other period prescribed by law. Satisfactory proof of renewal or acceptable replacement must be provided to the Director at least sixty (60) days prior to the date of expiration or termination of the Surety. The Contractor's obligations set out in this section shall survive the expiration or termination of this Agreement and failure to obtain or maintain said Surety shall be grounds for immediate suspension or termination of this Agreement.

**37. NO EMPLOYMENT OF ILLEGAL ALIENS TO PERFORM WORK UNDER THE AGREEMENT:**

**A.** This Agreement is subject to Division 5 of Article IV of Chapter 20 of the Denver Revised Municipal Code, and any amendments (the "Certification Ordinance").

**B.** The Contractor certifies that:

- (1) At the time of its execution of this Agreement, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement.
- (2) It will participate in the E-Verify Program, as defined in § 8 17.5-101(3.7), C.R.S., to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.

**C.** The Contractor also agrees and represents that:

- (1) It shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.

(2) It shall not enter into a contract with a subconsultant or subcontractor that fails to certify to the Contractor that it shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.

(3) It has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement, through participation in the E-Verify Program.

(4) It is prohibited from using the E-Verify Program procedures to undertake pre-employment screening of job applicants while performing its obligations under the Agreement, and that otherwise requires the Contractor to comply with any and all federal requirements related to use of the E-Verify Program including, by way of example, all program requirements related to employee notification and preservation of employee rights.

(5) If it obtains actual knowledge that a subconsultant or subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, it will notify such subconsultant or subcontractor and the City within three (3) days. The Contractor will also then terminate such subconsultant or subcontractor if within three (3) days after such notice the subconsultant or subcontractor does not stop employing or contracting with the illegal alien, unless during such three-day period the subconsultant or subcontractor provides information to establish that the subconsultant or subcontractor has not knowingly employed or contracted with an illegal alien.

(6) It will comply with any reasonable request made in the course of an investigation by the Colorado Department of Labor and Employment under authority of § 8-17.5-102(5), C.R.S, or the City Auditor, under authority of D.R.M.C. 20-90.3.

**D.** The Contractor is liable for any violations as provided in the Certification Ordinance. If Contractor violates any provision of this section or the Certification Ordinance, the City may terminate this Agreement for a breach of the Agreement. If the Agreement is so terminated, the Contractor shall be liable for actual and consequential damages to the City. Any such termination of a contract due to a violation of this section or the Certification Ordinance may



also, at the discretion of the City, constitute grounds for disqualifying Contractor from submitting bids or proposals for future contracts with the City.

**38. CITY EXECUTION OF AGREEMENT:** This Agreement is expressly subject to and shall not be or become effective or binding on the City until it has been fully executed by all signatories of the City and County of Denver.

**39. COOPERATION ON CLAIMS:** City agrees to cooperate with Contractor in the investigation and resolution of any claims brought against either of them arising out of this agreement.

**40. LIQUIDATED DAMAGES:** Work shall be commenced on the date indicated in the Scope of Work for each elevator, and shall be completed by the date specified in the Scope of Work to the City's satisfaction. If the work is not completed in accordance with the foregoing, it is understood that the City will suffer damages. It being impractical and infeasible to determine the amount of actual damages, it is agreed that Contractor shall pay to the City as fixed and liquidated damages, and not as a penalty, the sum of \$1,000.00 U.S. dollars per day for each calendar day of delay until the work is completed and accepted. Contractor and its surety shall be liable for the amount thereof.

**41. ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS:** Contractor consents to the use of electronic signatures by the City. The Agreement, and any other documents requiring a signature hereunder, may be signed electronically by the City in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

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**Contract Control Number:** GENRL-201951354- 00  
**Contractor Name:** KONE INC

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of:

**SEAL**

**CITY AND COUNTY OF DENVER:**

**ATTEST:**

By:

\_\_\_\_\_

\_\_\_\_\_

**APPROVED AS TO FORM:**

**REGISTERED AND COUNTERSIGNED:**

Attorney for the City and County of Denver

By:

By:

\_\_\_\_\_

\_\_\_\_\_

By:

\_\_\_\_\_

**Contract Control Number:**  
**Contractor Name:**

GENRL-201951354-00  
KONE INC

By:  387ADF4E2FDA491...

Name: Jeff Blum  
(please print)

Title: Senior Vice President west Region  
(please print)

ATTEST: [if required]

By: \_\_\_\_\_

Name: \_\_\_\_\_  
(please print)

Title: \_\_\_\_\_  
(please print)

## EXHIBIT A

### SCOPE OF WORK ELEVATOR MODERNIZATION FOR MINORU YASUI BUILDING

#### OVERVIEW

The City and County of Denver Department of General Services intends to procure a Contractor for the modernization of four passenger elevators located at the Minoru Yasui Building at 303 West Colfax Avenue, Denver, CO. The Scope of Work for the elevator modernization will require the Contractor to provide all labor, engineering, tools, transportation services, supervision, materials and equipment necessary for and incidental to satisfactory completion of required work as indicated in the Contract.

#### SCOPE OF WORK

##### SECTION 01010 SUMMARY OF WORK

###### PART 1 GENERAL

###### 1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Modernize four passenger elevators.
- B. Provide all labor, engineering, tools, transportation, services, supervision, materials, and equipment necessary for and incidental to satisfactory completion of required work as indicated in Contract Documents.
- C. Provide all required staging, hoisting and movement of new equipment, reused equipment, or removal of existing equipment.
- D. Prime contracts are defined below and each is recognized to be a major part of required work to be performed concurrently in close coordination with work of other Contractors.
  - 1. This Contract: Elevator Modernization. Including associated work specified in Section 01900.
  - 2. General construction contract includes those work items identified in Section 01900, related work to be provided by other trades.
- E. Scope of Contract includes, but is not limited to, the following:
  - 1. Coordination, scheduling, and management of work of component suppliers and subcontractors.
  - 2. Modernize or furnish and install equipment as specified utilizing existing and/or modified hoist ways and machine rooms.
  - 3. Specific item of required work which cannot be determined to be included in another contract is thereby determined to be included in prime contract.

###### 1.02 PRIME CONTRACTOR'S DUTIES

- A. Prime Contractor's duties include the following:
  - 1. Provide and pay for labor, materials and equipment, tools, construction equipment and machinery, and other facilities and services necessary for proper execution and completion of required work.
  - 2. Pay for legally required sales, consumer, and state remodel taxes.
  - 3. Secure and pay for required permits, fees and licenses necessary for proper execution and completion of required work, as applicable at time of quotation due

- date.
- 4. Give required notices.
- 5. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of required work.
- 6. Promptly submit written notice to General Services Project Manager of observed variance of Contract Documents from legal requirements.
- 7. Enforce strict discipline and good order among employees. Do not employ persons unskilled in assigned task.

### 1.03 WORK SEQUENCE

- A. Construct work in stages. Description and proposed timeline sequence dates are as listed under the General Services Project Manager 's Construction Schedule in Section 02000.

### 1.04 CONTRACTOR USE OF PREMISES

- A. Confine operations at site to areas permitted by law, ordinances, permits, Contract Documents, and General Services Project Manager s specific instructions.
- B. Do not unreasonably encumber site with materials or equipment. Staging area will be located as directed by City and County of Denver General Services Project Manager.
- C. Do not load structure with weight that will endanger structure. Coordinate with General Services Project Manager.
- D. Assume full responsibility for protection and safekeeping of tools and products stored on or off premises.
- E. Move stored products which interfere with operations of building or the operations of other trades.
- F. Obtain and pay for use of additional storage or work areas needed for operations.

### 1.05 CONCURRENT MODERNIZATION WORK AND BUILDING OPERATION

- A. This project is a major elevator modernization in an existing building which is open for public business and will continue to operate throughout all phases of required work. It is essential that Contractor give special attention and priority to all matters concerning project safety, protection from dust and loose materials, reduction of noise level, protection from water and air infiltration into building, and maintenance of neat, sightly conditions in and around work areas inside and outside of building. Packaging, scrap materials, and demolition debris shall be promptly removed from building and site on a daily basis.
- B. At all times Contractor shall provide clearly visible warning and directions signs, barricades, temporary lighting, overhead protection, and hazard-free walking surfaces throughout public area. At all times special attention must be given to building entrances, exits, and proper safe exiting through work areas as required by law.
- C. Contractor shall consult General Services Project Manager and other Contractors to establish and maintain safe temporary routes including, but not limited to, proper barricades, walking surfaces, lighting, fire protection, exiting, warning, and directional signs, and general protection of persons from all hazards in accordance with OSHA Standards due wholly or partially to its operations.

**SECTION 01300  
SUBMITTALS**

**PART 1 - GENERAL**

**1.1 SUBMITTALS**

- A. Within 30 calendar days after contract execution and before beginning equipment fabrication submit shop drawings and required material samples for review. Allow 14 days for response to initial submittal.
  - 1. Scaled or Fully Dimensioned Layout: Plan of machine room indicating equipment arrangement, details of car enclosures, hoistway entrances, 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: Shop drawings. Provide full size samples of all Destination Dispatch signal devices. Provide full cab mock-up to evaluate cab details. Provide full details of ascending car protection means and installation.
  - 5. Finish Material: 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.
  - 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. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.
- B. 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.
- C. Acknowledge and/or respond to review comments within 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.

**1.2 FINAL CONTRACT DOCUMENTS**

- A. See Section 01700, Project Closeout.

**SECTION 14220  
ELECTRIC TRACTION ELEVATOR MODERNIZATION**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. Four traction elevators as follows:
  - 1. Four Gearless Passenger Elevators Cars 1 - 4
- B. All engineering, equipment, labor, and permits required to satisfactorily complete elevator modernization required by Contract Documents.
- C. Existing Maintenance agreement to supercede.
- D. Additional equipment or finishes furnished under other sections, installed under this section:
  - 1. Building announcement speakers
  - 2. In car Firefighters' telephone jacks
  - 3. CCTV system
  - 4. Card reader security system
- 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. Unless specifically identified as "Reuse," "Retain," or "Refurbish," provide new equipment.
- G. Protective barriers between cars in normal operation and adjacent cars in the modernization process. Full depth and height of hoistway.
- H. Hoistway, pit, and machine room barricades as required.

1.02 RELATED WORK PROVIDED UNDER OTHER SECTIONS

- A. See Section 01900, Related Work Provided Under Other Sections.

1.03 DEFINITIONS

- A. Terms used are defined in the latest edition of the Safety Code for Elevators and Escalators, ASME A17.1.
- 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. Qualified Contractors: Alternate Contractors must receive approval of Architect, General Services Project Manager at least 14 days prior to bid date.
- B. Approved Contractors: Alternate Contractors must receive approval of General Services Project Manager at least 14 calendar days prior to bid date.
  - 1. Gearless Elevators: KONE, Otis, Schindler, and ThyssenKrupp.
  - 2. Car Enclosure: Eklund's Inc., Gunderlin, Ltd., Hauenstein & Burmeister, KONE, Otis, Schindler, ThyssenKrupp, Tyler, Fujitec, Mitsubishi.
  - 3. Hoistway Entrance: Hauenstein & Burmeister, KONE, Otis, Schindler, ThyssenKrupp, Tyler, Fujitec, Mitsubishi.

- C. Compliance with Regulatory Agencies: See Section 01040, Project Procedures.
- D. Warranty:
  - 1. Material and workmanship of installation shall comply in every respect with Contract Documents. Correct defective material or workmanship which develops within one year from date of final acceptance of all work to satisfaction of Architect and General Services Project Manager at no additional cost, unless due to ordinary wear and tear or improper use or care by General Services Project Manager.
  - 2. Defective is defined to include, but not be limited to: Operation or control system failures, car performance below required minimum, excessive wear, unusual deterioration, or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise, or vibration, and similar unsatisfactory conditions.
  - 3. Retained Equipment: All retained components, parts, and materials shall be cleaned, checked, modified, or repaired so each component and its parts are in like new operating condition. Retained equipment must be compatible for integration with new systems. All retained equipment shall be covered under the warranty provisions, of Article 1.04, D., 1. & 2. above. No prorations of equipment or parts shall be allowed on preventive maintenance contract, between the Contractor and General Services Project Manager.
  - 4. Make modifications, requirements, adjustments, and improvements to meet performance requirements of Sections 01700 and 14220.

#### 1.05 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. General Services Project Manager will not pay for change to structural, mechanical, electrical, or other systems required to accommodate Contractor's equipment.

#### 1.06 SUBMITTALS

- A. See Section 01300, Submittals, and Section 01700, Final Contract Compliance Review, Article 1.03.

#### 1.07 PERMIT, TEST AND INSPECTION

- A. Obtain and pay for permit, license, and inspection fee necessary to complete installation.
- B. 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.
- C. Supply personnel and equipment for test and final review by General Services Project Manager as required in Section 01700.

#### 1.08 MAINTENANCE

- A. Existing Maintenance Agreement to stay in effect during and after modernization.

### PART 2 PRODUCTS

#### 2.01 SUMMARY



A. Unless specifically identified as “retain existing,” provide new equipment.

	Existing Equipment	Disposition
Number:	Cars 1 - 4	Retain Existing
Capacity:	2500 #	2500 #
Class Loading:	Passenger Class A	Retain Existing
Contract Speed:	350 F.P.M.	350 F.P.M.
Roping:	1:1 2:1	Retain Existing
Machine:	Geared	Gearless
Machine Location:	Overhead	Retain Existing
Supervisory Control:	Group Automatic Microprocessor-Based System	Group Automatic Microprocessor- Based System
Operational Control:	Selective Collective Microprocessor-Based System	Selective Collective Microprocessor-Based System
Motor Control:	AC Variable Voltage Variable Frequency Microprocessor Based with Digital Closed-Loop Feedback	AC Variable Voltage Variable Frequency Microprocessor Based with Digital Closed-Loop Feedback
Power Characteristics:	Field Verify	Retain Existing
Stops:	#1: 13 Front, 3 rear #2-#4: 13 Front;	Retain Existing
Openings:	#1: 13 Front; 3 Rear #2-#4: 13 Front	Retain Existing

	<u>Existing Equipment</u>	<u>Disposition</u>
Floors Served:	#1: 13 Front, 1 Front and Rear 2 Rear Only #2-#4 13 Front only	Retain Existing Retain Existing
Travel:	~140/111 ± Field Verify	Retain Existing
Platform Size:	Field Verify	Retain Existing
Minimum Clear Inside Car:	Field Verify	Retain Existing
Entrance Size:	Front: 42" Wide X 84" High #1 Rear: 48" Wide X 84" High	Retain Existing
Entrance Type:	Single Speed, Center Opening #1R: Two-Speed Side Opening	Retain Existing
Door Operation:	Medium Speed, Heavy-Duty, Door Operator, Minimum Opening Speed 2-1/2 F.P.S.	High Speed, Heavy-Duty, Door Operator, Minimum Opening Speed 2-1/2 F.P.S.
Door Protection:	Infrared, Full Screen Device	Infrared, Full Screen Device with Differential Timing, Nudging and Interrupted Beam Time
Safety:	Flexible Guide Clamp – Type B, Car	Retain Existing
Guide Rails:	Planed Steel Tees	Retain Existing
Buffers:	Oil	Retain Existing
Compensation:	Chain with Sound-Dampening rope	Contractor's Standard Application with Pit Guide
Car Enclosure:		Retain Existing  Battery Powered Emergency Car Lighting. Provide Separate Constant Pressure Test Button In Car Service Compartment.

<u>Existing Equipment</u>	<u>Disposition</u>
Signal Fixtures:	LED Illumination Contractor's Vandal Resistant Assembly
Hall and Car Pushbutton Stations:	Dual Hall Pushbutton Risers at floors L to 15. 3 Risers at 16. One Riser at Elevator 1 rear entrances at B, 1, and 17.
Car Position Indicators:	Vandal Resistant Car and Hall Pushbuttons
Hall Lanterns:	Single Digital with Car Direction Arrows
Hall Car Position Indicator:	Firefighters' Control Panel
Communication System:	At All Floors with Volume Adjustable Electronic Chime or Tone. Sound Twice for Down Direction, With Vandal Resistant Assembly
Fixture Submittal:	Digital with Car Direction Arrows at First Floor Vandal Resistant Assembly
	Intercom with Distress Signal
	Self-Dialing, Vandal Resistant, Push to Call, Two-Way Communication System with Recall, Tracking and Voiceless Communication
	Submit Brochure Depicting Contractor's Proposed Designs

Existing Equipment	Disposition
Additional Features, Car 1-4:	Car Top Inspection Station
	Firefighters' Service, Phase I and II, including Alternate Floor Return
	Standby Power Transfer (Automatic to Main Floor) with Manual Override in Firefighters' Control Panel
	Accessibility Signage
	Stationary Car Return Panel Arranged for Surface Applied Car Operating Panel
	Hoistway Access Switches, Top And Bottom Floors
	Hoistway Door Unlocking Device, All Floors
	Platform Isolation
	Load-Weighing Device
	Anti-Nuisance Feature
	Independent Service Feature
	Individual Floor Lockoff Feature for Floors 5-17.
	Card Reader Provisions, All Cars
	CCTV Provisions, All Cars
	Firefighters' Control Panel and Remote Wiring
	Machine, Power Conversion Unit, and Controller Sound Isolation
	Tamper Resistant Fasteners for All Fastenings Exposed to the Public

Existing Equipment

Disposition

Firefighters' Telephone Jack

Emergency Paging Speaker Installation

No Visible Company Name or Logo

Wiring Diagrams, Operating Instructions, and Parts Ordering Information

2.02 MATERIALS

A. See Section 01600, Materials.

2.03 CAR AND GROUP PERFORMANCE

- A. Car Speed:  $\pm 3\%$  of contract speed under any loading condition.
- B. Car Capacity: Safely lower, stop and hold 125% of rated load.
- C. Car Stopping Zone:  $\pm 1/4"$  under any loading condition.
- D. Door Opening Time: Seconds from start of opening to fully open:
  - 1. Cars 1 – 4 (Front): 1.6 seconds.
  - 2. Car 1: 2.4 seconds.
- E. Door Closing Time: Seconds from start of closing to fully closed:
  - 1. Cars 1 – 4: 2.4 seconds.
  - 2. Car 1, Rear: 4.6 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 (10' typical floor height):
  - 1. Cars 1 - 4: 9.3 seconds.
- G. Car Ride Quality:
  - 1. Horizontal and vertical acceleration within car during all riding and door operating conditions. Not more than 20 mg peak to peak (adjacent peaks) in the 1 - 10 Hz range.
  - 2. Acceleration and Deceleration: Smooth constant and not less than 3 feet/second<sup>2</sup> with an initial ramp between 0.5 and 0.75 second.
  - 3. Sustained Jerk: Not more than 6 feet/second<sup>3</sup>.
  - 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. Group Automatic, Cars 1-4:
  1. Approved microprocessor-based, group dispatch, car and motion control systems as follows:
    - a. KONE: Resolve
    - b. Otis: RSRPlus
    - c. Schindler: Miconic TXR5
    - d. ThyssenKrupp: TAC 32T
  2. Include as a minimum, the following features:
    - a. Operate cars as a group capable of balancing service and providing continuity of group operation with one or more cars removed from the system.
    - b. Register service calls from pushbuttons located at each floor and in each car. Slow cars and stop automatically at floors corresponding to registered calls. Make stops at successive floors for each direction of travel irrespective of order in which calls are registered except when bypassing hall calls to balance and improve overall service; stop only one car in response to a particular hall call. Assign hall calls to specific cars and continually review and modify those assignments to improve service. Simultaneous to initiation of slow down of a car for a hall call, cancel that call. Render hall pushbutton ineffective until cardoors begin to close after passenger transfer. Cancel car calls in the same manner. Give priority to coincidental car and hall calls in car assignment.
    - c. Operate system to meet changing traffic conditions on a service demand basis. Include provisions for handling traffic which may be heavier in either direction, intermittent or very light. As traffic demands change, automatically and continually modify group and individual car assignment to provide the most-effective means to handle current traffic conditions. Provide means to sense long-wait hall calls and preferentially serve them. Give priority to coincidental car and hall calls in hall call assignment. Accomplish car direction reversal without closing and reopening doors.
    - d. Use easily reprogrammable system software. Design basic algorithm to optimize service based on equalizing system response to registered hall calls and equalizing passenger trip time to shortest possible time.
    - e. Serve floors below main floor in a manner which logically minimizes delay in passing or stopping at main floor in both directions of travel. Provide manual means to force a stop at the main floor when passing to or from lower levels.

- f. Required Features:
  - 1) Dispatch Protection: Backup dispatching shall function in the same manner as the primary dispatching.
  - 2) Delayed Car Removal: Automatically remove delayed car from group operation.
  - 3) Position Sensing: Update car position when passing or stopping at each landing.
  - 4) Hall Pushbutton Failure: Provide multiple power sources and separate fusing for pushbutton risers.
  - 5) Communication link: Provide serial or duplicate communication link for all group and individual car computers.
  
- B. Other Items:
  - 1. Load Weighing: Provide means for weighing car passenger load. Control system to provide dispatching at main floor in advance of normal intervals when car fills to capacity. Provide hall call by-pass when the car is filled to preset percentage of rated capacity and traveling in down direction. Field adjustment range: 10% to 100%.
  - 2. Anti-Nuisance Feature: If car loading relative to weight in car is not commensurate with number of registered car calls, cancel car calls. Systems employing either load weighing or door protective device for activation of this feature are acceptable.
  - 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. Car-to-Lobby Feature: Provide the means for automatic return to the 1st floor. Return car nonstop after answering pre-registered car calls, and park with doors open for an adjustable time period of 60-90 seconds. Upon expiration of time period, car shall automatically revert to normal operation and close its doors until assigned as next car or until the car is placed on manual control via in-car attendant or out-of- service switch.
  - 5. 24/7 Connected Services through IBM Watson. This system will be included in the monthly service pricing for each elevator in the post modernization pricing.
  
- 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. 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  $\pm 3\%$  of the contract speed.
  
- F. Door Operation: Automatically open doors when car arrives at main floor. At expiration of normal dwell time, close doors. Reopen doors when car is designated for loading. Provide front or rear selective door operation Car 1. Provide "heavy door/variable air pressure" feature for consistent specified door operation within appropriate speed and inertia limits.
  
- G. 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 constant pressure test button in service compartment of car operating panel.

- H. Standby Power Operation: Upon loss of normal power, adequate standby power will be supplied via building electrical feeders to simultaneously start and run all cars 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 cars 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 separate group selection switches in firefighters' control panel.
    - 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 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.
    - c. Provide "ELEVATOR EMERGENCY POWER" indicator lights, one per car, in firefighters' control panel. Indicator light illuminates when corresponding car is selected, automatically or manually, to operate on standby power.
  - 4. 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.
- I. Security System: Provide means to limit access to each building floor for all Cars as follows:
  - 1. Individual floor lockout means in main car operating panel to prevent registration of car calls to any selected secure floor.
  - 2. Arrange system so that independent service overrides security system.
  - 3. Arrange system so that firefighters' service overrides security system.
  - 4. Actuate hall lantern each time car arrives at main lobby during secure mode operation.
  - 5. Provide warning light and signal in lobby indicator panel to indicate an attempt to register unauthorized destinations or to open car doors when car is moving or parked at a secured floor. Provide reset switch or button to cancel warning light and signal.
- J. Card/Proximity Reader Security System: Provide provisions inside Cars 1 - 5 for reader unit. Mount reader unit as directed by General Services Project Manager and cross connect from car pushbuttons to control module in machine room. Reader control unit, mounting brackets, wiring materials, logic circuits, etc., by Security Subcontractor. Elevator control systems shall facilitate system tracking of



persons accessing secure floors via printout by passenger I.D. number, floor accessed, and time of entry.

- K. Pushbutton Crossover Network: Provide an interim crossover network to interface new and old group supervisory systems for purposes of cross cancellation of registered car and hall calls until modernization of individual group is complete.

## 2.05 MACHINE ROOM EQUIPMENT

- A. Arrange equipment in existing machine room spaces.
- B. Gearless Traction Hoist Machine:
  - 1. AC induction or P.M.S.M. ACV3F gearless traction type motor with brake, drive sheave, and deflector sheave mounted in proper alignment on a common, isolated bedplate. Provide bedplate blocking to elevate secondary or deflector sheave above machine room floor.
  - 2. Provide hoist machine mounted direct drive, digital, closed-loop velocity encoder.
  - 3. Hoist machine installations which require blockouts through machine room floor for other than hoist ropes shall be provided with a 14-gauge galvanized sheet metal enclosure over entire blockout on underside of floor slab.
- C. Solid State Power Conversion and Regulation Unit:
  - 1. Provide solid state, alternating current, variable voltage, variable frequency (ACV3F), 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. Isolate unit to minimize noise and vibration transmission. Provide isolation transformers, filter networks, and choke inductors.
  - 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. Encoder: Direct drive, solid-state, digital type. Update car position at each floor and automatically restore after power loss.
- E. 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.
  - 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. 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. Machine and Equipment Support Beams: Retain existing in place. Provide all required supplemental supports and attachments.
- H. Governor: 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. Emergency Brake:
  1. Provide means to prevent ascending car over-speed and unintended car movement per Code.
  2. Provide control circuits to enable the device to function as required by Code.

## 2.06 HOISTWAY EQUIPMENT

- A. Guide Rails: Retain main and counterweight guide rails in place.
  1. Clean rails and brackets. Remove rust.
  2. Check all rail and bracket fastenings and tighten.
  3. Realign rails as required to provide smooth car ride.
  4. Provide supplemental rail brackets and/or backing as required by Code or to enhance car ride quality.
- B. Buffers, Car, and Counterweight: Retain existing.
  1. Drain, flush, refill, and test.
  2. Rebuild as required and paint.
- C. Sheaves: Machined grooves and sealed bearings. Provide mounting means to machine beams, machine bedplate, car and counterweight structural members, or building structure.

- D. Counterweight: Retain existing. Retrofit spring dampening roller guide shoes.
- E. Counterweight Guide Shoes: Spring dampened roller guide shoes.
- F. Counterweight Guard: Metal guard in pit. Where counterweight is provided between adjacent elevators, provide runway guard next to the adjacent elevator.
- G. 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.
- H. 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.
- I. Compensation: Contractor's standard application. Pit mounted guide assembly shall provide quiet, effective restraint without excessive wear of components. Inhibit rubbing or chafing against hoistway or equipment within hoistway or pit. Application must meet performance/noise level requirement of specification.
- J. Terminal Stopping: Provide normal and final devices.
- K. Electrical Wiring and Wiring Connections:
  - 1. Conductors and Connections: Copper throughout with individual wires coded and connections on identified studs or terminal blocks. Use no splices or similar connections in wiring except at terminal blocks, control compartments, or junction boxes. Provide 10% spare conductors throughout. Run spare wires from car connection points to individual elevator controllers in the machine room. Provide four pair of spare shielded communication wires in addition to those required to connect specified items. Tag spares in machine room.
  - 2. Conduit: Painted or galvanized steel conduit, EMT, or duct. Conduit size, 1/2" minimum. Flexible heavy-duty service cord may be used between fixed car wiring and car door switches for door protective devices.
  - 3. Traveling Cables: Flame and moisture-resistant outer cover. Prevent traveling cable from rubbing or chafing against hoistway or equipment within hoistway. Provide five (5) pair of shielded wires and two (2) RG-6/U type coaxial cables for card reader. Provide two (2) RG-6/U coaxial CCTV cables within traveling cable from car controller to car top, plus 3'-0" excess loop at both ends. Provide two (2) pair 14-gauge wire for CCTV power.
  - 4. Auxiliary Wiring: Connect fire alarm initiating devices, emergency two-way communication system, firefighters' phone jack, paging speaker, CCTV, card reader, intercom, and announcement speaker and/or background music in each car controller in machine room.
- L. Entrance Equipment: Retain existing. Refurbish/replace and adjust assemblies to ensure smooth and quiet mechanical open and close of doors.
  - 1. Door Hangers and Rollers: Replace hangers as needed. Provide roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.
  - 2. Door Track: Refurbish and/or replace as required.
  - 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.

- M. Hoistway Door Unlocking Device: Retain existing.
- N. Hoistway Access Switches: Mount in wall at top and bottom floors. Provide switch with faceplate.
- O. 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.

## 2.07 HOISTWAY ENTRANCES

- A. Frames: Retain existing.
- B. Transom Panels: Retain existing.
- C. Door Panels: Retain existing. Provide new door gibs and fire tabs at all floors. Minimum two gibs per panel, one at leading edge, and one at trailing edge of each panel.
- D. Sight Guards: Retain existing. Replace damaged sight guards and paint to match doors.
- E. Sills: Retain existing. Clean and polish. Check and tighten all fastenings.
- F. Sill Supports: Retain existing. Check and tighten all fastenings.
- G. Struts and Headers: Retain existing. Check and tighten all fastenings.

## 2.08 CAR EQUIPMENT

- A. Frame: Retain Existing. Check and tighten all fastenings.
- B. Safety Device: Retain existing. Check and tighten all fastenings.
- C. Platform: Retain existing. Reinforce if required. Check and tighten all fastenings.
- D. Platform Apron: Provide new extended platform apron to meet Code. Minimum 14-gauge steel reinforced and braced to car platform front and rear (Elevator 1) with Contractor's standard finish.
- E. Guide Shoes: Retain existing. Check and tighten all fastenings. Kone will provide a report to the City documenting the existing condition of all rollers per elevator with color pictures of each roller with captions identifying locations. The report will also include which rollers are to be replaced and which rollers will remain in place. Replace identified rollers and adjust alignment of guides after car has been balanced.
- F. Sills: Retain existing. Clean and polish. Check and tighten all fastenings.
- G. Door Panels: 16-gauge steel, sandwich construction without binder angles. Provide leading edges of center-opening doors with rubber astragals. Provide a minimum of two (2) gibs per panel, one at leading and one at trailing edge with gibs in the sill groove entire length of door travel. Construct door panels with interlocking, stiffening ribs.
- H. Door Hangers: Retain existing. Replace roller or complete hanger assembly as

required. Check and tighten all fastenings.

- I. Door Track: Retain existing. Clean and sand for smooth, quiet operation. Check and tighten all fastenings.
- J. Door Header: Retain existing. Check and tighten all fastenings.
- K. Door Electrical Contact: Prohibit car operation unless car door is closed.
- L. 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.
- M. Restricted Opening Device: Restrict opening of car doors outside unlocking zone.
- N. Door Operator: High speed, heavy-duty linear 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.
- O. Door Control Device:
  - 1. 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. 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.
  - 3. 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.
  - 4. Differential Door Time: Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls.
    - 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.
- P. Car Operating Panel:
  - 1. One car operating panels with faceplates, consisting of a metal box containing vandal resistant operating fixtures, mounted behind the car stationary front return panels. For elevator #1 provide one faceplate at front return and one faceplate at rear return. Faceplates shall be hinged and constructed of stainless steel, satin finish. Provide extended-height panel to cover cutout of existing position indicator.
  - 2. Suitably identify floor buttons, alarm button, door open button, door close button and emergency push-to-call button with SCS, Visionmark, or Entrada

- cast tactile symbols surface or recessed flush 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.
3. Provide minimum 3/4" diameter raised or flush floor pushbuttons which illuminate to indicate call registration.
  4. Provide alarm button to ring bell located on car. Illuminate button when actuated.
  5. Provide keyed stop switch at bottom of car operating panel in locked car service compartment. Mark device to indicate "run" and "stop" positions.
  6. Provide "door open" button to stop and reopen doors or hold doors in open position.
  7. 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.
  8. Provide firefighters' locked box as required by code.
  9. Provide firefighters' Phase II key switch with engraved instructions filled red. Include light jewel, buzzer, and call cancel button.
  10. Install firefighters' telephone jack with approved mounting bezel matching adjacent controls.
  11. Provide lockable service compartment with recessed flush door. Door material and finish shall match car return panel or car operating panel faceplate.
  12. Include the following controls in lockable service cabinet with function and operating positions identified by permanent signage or engraved legend:
    - a. Inspection switch.
    - b. Light switch.
    - c. Three-position exhaust blower switch.
    - d. Independent service switch.
    - e. Constant pressure test button for battery pack emergency lighting.
    - f. 120-volt, AC, GFCI protected electrical convenience outlet.
    - g. Card reader override switch.
    - h. Stop switch.
    - i. Switch to select either floor voice annunciation, floor passing tone, or chime.
  13. Provide black paint filled (except as noted), engraved, or approved etched signage as follows with approved size and font:
    - a. Phase II firefighters' operating instructions on main operating panel above corresponding keyswitch filled red.
    - b. Car number on main and auxiliary car operating panel.
    - c. "Certificate of Inspection on File in Building Office" on main car operating panel.
    - d. "No Smoking" on main car operating panel.
    - e. Car capacity in pounds on service compartment door.
- Q. Car Top Control Station: Mount to provide safe access and utilization while standing in an upright position on car top.
- R. Work Light and Duplex Plug Receptacle: GFCI protected outlet at top and bottom of car. Include on/off switch and lamp guard.
- S. Ventilation: Three-speed type OE 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 (60 – 180 seconds) of no elevator demand.
- T. Communication System:

1. "Push to Call," two-way communication instrument in car with automatic dialing, tracking, and recall features with shielded wiring to car controller in machine room. Provide dialer with automatic rollover capability with minimum two numbers.
  - a. "Push to Call" button or adjacent light jewel shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase "PUSH TO CALL" "HELP ON THE WAY" engraved signage adjacent to button.
  - b. Provide "Push to Call" button tactile symbol, engraved signage, and Braille adjacent to button mounted integral with car front return panel.
2. Firefighters' telephone jack in car and firefighters' panel, with four shielded wires to machine room junction box. Jack bezel shall match adjacent controls.
3. Install remote speakers provided under Item 1.01, in car behind front return panel with drilled speaker pattern, with shielded wiring to machine room junction box.
4. Provide two-way communication between car and machine room if required.

## 2.09 CAR ENCLOSURE

- A. Car Enclosure Passenger/Service Elevator: Retain existing. Modify as required for application of new signal and pushbutton fixtures. Check and tighten all fasteners.

## 2.10 HALL CONTROL STATIONS

- A. Pushbuttons: Provide 2 risers at floors 1-15. Provide 3 risers at floor 16. Provide 1 riser at rear entrances at floors B, 1<sup>st</sup> and 17<sup>th</sup> floors. Provide risers with surface mounted faceplates. Include pushbuttons for each direction of travel which illuminate to indicate call registration. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency situation as part of faceplate. Pushbutton design shall match car operating panel pushbuttons. Provide vandal resistant pushbutton and light assemblies. Provide enlarged faceplate to cover existing wall blockout and facilitate handicapped access requirements. Provide any cutting and patching required.

## 2.11 SIGNALS

- A. Hall Lantern, Cars 1 -4: Provide at Lobby entrance integral to position indicator to indicate travel direction of arriving car. Illuminate up or down LED lights and sound tone once for up and twice for down direction prior to car arrival at floor. Sound level shall be adjustable from 20-80 dBA measured at 5'-0" in front of hall control station and 3'-0" off floor. Illuminate light until the car doors start to close. Provide advanced hall lantern notification to comply with ADA hall call notification time. Car direction lenses shall be arrow shaped with faceplates. Lenses shall be minimum 2-1/2" in their smallest dimension. Provide vandal resistant lantern and light assemblies consisting of series of dots or lines for maximum visibility.
- B. 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 car main front return 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.

- C. Faceplate Material and Finish: Stainless steel finish all fixtures.
- D. 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.
- E. Voice Synthesizer: Provide electronic device with easily reprogrammable message and female voice to announce car direction, floor, emergency exiting instructions, etc.
- F. Firefighters' Control Panel: Locate in building fire control room. Fixture faceplate, stainless steel satin finish, including the following features:
  1. Car position and direction indicator. Identify each position indicator with car number and group identification.
  2. Indicator showing operating status of car.
  3. Manual car standby power selection switch(es) and power status indicators.
  4. Two-position firefighters' emergency return switch(es) and indicators with engraved instructions filled red.
  5. Firefighters' telephone jack.
  6. Garage elevator to be on a separate panel.

Fixtures and monitor shall be located as directed by Architect. Where applicable, identify all indicators and manual switches with appropriate engraving. Provide conduit and wiring to control panel.

- G. Firefighters' Key Box: Flush-mounted box with lockable hinged cover. Engrave instructions for use on cover per Local Fire Authority requirements.

2.12 INTERCOM AND DISTRESS SIGNAL SYSTEM

- A. General: Provide intercommunication system for Cars 1 - 4. Include all wiring between elevator hoistways and control panels. Include the following stations:

Station Location	Type Station	Selection Buttons to Call
Elevator Machine Room	Master	Control Panels, Cars 1-4
Firefighters' Control Panel	Master	Machine Rooms, Cars 1-4
All Cars	Remote	Lobby Control Panel

- B. Basic Equipment:
  1. Amplifier providing static-free voice transmission with adequate volume and minimum distortion at all stations, with pre-amplifier capable of receiving voice and music inputs from building and emergency building communication system.
  2. Activation of emergency building communication system overrides all other conversations and permits one-way conversation to all master stations in system.
  3. Master Stations:
    - a. Speaker-microphone combination, and/or handset for two-way communication.
    - b. Selection buttons to enable communication with all master stations. Maintain continual reception of hands-free reply from station when a selected button is depressed.
    - c. Two-Position "Talk/Listen" Button: Press to talk; release to listen.



- d. Illuminate "in use" light when any master station is being used.
  - e. Reset button to make system available for use by any master station.
  - f. Volume control knob for adjustment of incoming volume.
  - g. Button to establish communications with all stations.
  - h. Distress light in lobby panel which illuminates when "push to call" button or alarm button in car is actuated. Energize distress light and buzzer or chime until intercom selection button for that car has been depressed. Sound buzzer or chime in lobby panel simultaneously with illumination of distress light.
4. Remote Stations:
- a. Station in car shall be activated by "push to call" two-way communication button. "Push to call" button shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase "PUSH TO CALL," "HELP ON THE WAY" engraved signage adjacent to button. Provide "push to call" button tactile symbol, engraved signage, and Braille adjacent to button.
  - b. Locate car microphone and speaker, or transceiver/speaker combination in car canopy behind front return panel with drilled speaker pattern, with shielded wiring to machine room junction box.
- B. Station Housings:
- 1. House master station in machine room in a metal compartment with baked enamel finish. Attach to the group elevator supervisory control panel or wall mount. Provide communication handset with 25'-0" long cord.
  - 2. Provide control center master intercoms with stainless steel satin finish faceplates and engraved operating instructions. Coordinate faceplate size and installation of units with building Console Supplier.

## 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 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. Install rails plumb and align vertically with tolerance of 1/16" in 100'-0". Secure joints without gaps and file any irregularities to a smooth surface.
- B. Static balance car to equalize pressure of guide shoes on guide rails.
- C. Lubricate all equipment in accordance with Contractor's instructions.
- D. 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.

### 3.07 ACCEPTANCE REVIEW AND TESTS

- A. See Section 01700, Article 1.02, General Services Project Manager Final Observation and Review Requirements.

### 3.08 GENERAL SERVICES PROJECT MANAGER 'S INFORMATION

- A. See Section 01700, Article 1.03, Final Contract Compliance Review.

**SECTION 01600  
MATERIAL AND HANDLING**

**PART 1 - GENERAL**

**1.1 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.

**1.2 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.
- D. Allocate available site storage areas and coordinate their use with General Services Project Manager and other Contractors.
- E. Provide suitable temporary weather-tight storage facilities as may be required for materials that will be stored in the open.

**1.3 INSTALLATION REQUIREMENTS**

- 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 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.

**1.4 MANUFACTURER'S NAMEPLATES**

- A. 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.

- B. 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.

#### 1.5 OLORS OF FACTORY-FINISHED EQUIPMENT

- A. All colors will be selected from the Manufacturer's standard range unless custom colors are specified herein.
- B. Submit samples of all standard colors available and/or specified custom colors for review and approval. See Section 01300, Submittals.
- C. Submit samples of all specified architectural metals specified for review and approval. See Section 01300, Submittals.

#### 1.6 MATERIALS AND FINISHES

- A. Steel:
  - 1. Sheet Steel (Furniture Steel for Exposed Work): Stretcher-leveled, cold-rolled, commercial quality carbon steel, complying with ASTM A366, matte finish.
  - 2. Sheet Steel (for Unexposed Work): Hot-rolled, commercial quality carbon steel, pickled and oiled, complying with ASTM A568/A568M-03.
  - 3. Structural Steel Shapes and Plates: ASTM A36.
- B. 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.
  - 1. No. 4 Satin: Directional polish finish. Graining directions as shown or, if not shown, in vertical longest dimension.
  - 2. No. 8 Mirror: Reflective polish finish with no visible graining.
  - 3. Textured: 2WL, 5WL, 4LB as manufactured by Rigidized Metals or Windsor pattern 5-SM as manufactured by Rimex Metals or approved equal with .050 inches mean pattern depth with bright directional polish (satin finish).
  - 4. Burnished: Non-directional, random abrasion pattern.
- C. Bronze: Stretcher-leveled, re-squared sheets composed of 60% copper and 40% zinc similar to Muntz Metal, Alloy Group 2, with standard temper and hardness required for fabrication, strength, and durability. Clean and treat bronze surfaces before mechanical finish. After completion of the final mechanical finish on the fabricated work, use a chemical cleaner to produce finish, Federal Standard, and NAAMM nomenclature, matching Architect's sample:
  - 1. No. 4 Satin: Directional polish finish, fine-satin, clear-coated with clear-organic coating recommended by Fabricator. Provide graining direction as shown or, if not shown, in vertical dimension.
  - 2. No. 8 Mirror: Reflective polish finish with no visible graining, bright-polished, clear-coated finish with clear-organic lacquer coating recommended by Fabricator.
  - 3. Acid-Etched Pattern: Provide a No. 8 mirror reflective-polished background with selectively acid-etched, matte-textured, custom pattern as shown. Acid selection and dilution, if required, as recommended by Fabricator. After final finishing, coat bronze with clear-organic lacquer coating recommended by Fabricator.
- D. Aluminum: Extrusions per ASTM B221; sheet and plate per ASTM B209.

- E. 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:
  - 1. Exposed Surfaces: Color and texture selected by Architect.
  - 2. Concealed Surfaces: Contractor's standard color and finish.
- F. Fire-Retardant Treated Particle Board Panels: Minimum 3/4" thick backup for natural finished wood and plastic laminate veneered panels, edged and faced as shown, provided with suitable anti-warp backing; meet ASTM E84 Class "I" rating with a flame-spread rating of 25 or less, registered with Local Authorities for elevator finish materials.
- G. Natural Finish Wood Veneer: Standard thickness, 1/40" thoroughly dried conforming to ASME/HPMA HP-1983, Premium Grade. Place veneer, tapeless spliced with grain running in direction shown, belt and polish sanded, book-matched. Species and finish designated and approved by Architect.
- H. 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 enamel paint. Galvanized metal need not be painted.
- I. Prime Finish: Clean all metal surfaces receiving a baked enamel paint finish of oil, grease, and scale. Apply one coat of rust-resistant primer followed by a filler coat over uneven surfaces. Sand smooth and apply final coat of primer.
- J. 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.
- K. Entrance Field Paint: Clean all surfaces to remove dirt and grease. Sand and finish surfaces as necessary to remove pits and scratches and prepare surface for painting. Apply filler to insure smooth surface; sand and apply one coat of electrostatic enamel in the selected solid color.
- L. Refinishing of natural metals: Remove existing protective finish. Buff as necessary to remove scratches. Regrain or finish as specified and protect as indicated for particular metal type.
- M. Entrance Support Equipment within Hoistway: Include strut angles, headers, sill support angles, fascia, hanger covers, etc. Clean, remove, and check for corrosive activity. Replace components which exhibit severe deterioration. Tighten all fastenings. Repaint exposed surfaces with two coats of rust preventive primer.
- N. Glass: Laminated safety glass, minimum 9/16" thick, conforming to ANSI Z97.1 and CPSC 16 CFR Part 1201.

**SECTION 01700**  
**FINAL CONTRACT COMPLIANCE REVIEW**

**PART 1 - GENERAL**

**1.1 FINAL CLEANING**

- A. See Section 00800, Supplemental Conditions, for contractual requirements governing site cleaning. 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 work persons 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.
- 4. Machine room walls and floors shall be painted.

1.2 GENERAL SERVICES PROJECT MANAGER'S FINAL OBSERVATION AND REVIEW REQUIREMENTS

- A. Review procedure shall apply for individual elevators, portions of groups of elevators and completed groups of elevators accepted on an interim basis, or elevators and groups of elevators completed, accepted, and placed in operation.
- B. General Services Project Manager shall perform review and evaluation of all aspects of its work prior to requesting General Service Project Manager's final review. Work shall be considered ready for General Services Project Manager's final contract compliance review when all Contractor's tests are complete and all elements of work or a designated portion thereof are in place and elevator or group of elevators are deemed ready for service as intended.
- C. Furnish labor, materials, and equipment necessary for General Services Project Manager's review. Notify Project Manager five (5) working days in advance when ready for final review of elevator or group of elevators.
- D. Project Manager's written list of observed deficiencies of materials, equipment and operating systems will be submitted to Contractor for corrective action. Project Manager's review shall include as a minimum:
  - 1. Workmanship and equipment compliance with Contract Documents.
  - 2. Contract speed, capacity, floor-to-floor, and door performance comply with Contract Documents.
  - 3. Performance of following is satisfactory:
    - 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 special security features and floor lock-off provisions
    - k. Operations of emergency brake device
  - 4. Test Results:
    - a. In all test conditions, obtain specified contract speed, performance times, stopping accuracy without re-leveling, and ride quality to satisfaction of General Services Project Manager. 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.

- E. Performance Guarantee: Should Project Manager'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 General Services Project Manager 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, General Services Project Manager.
  
- F. A follow-up final contract compliance review shall be performed by Project Manager after notification by Contractor that all deficiencies have been corrected. Provide Project Manager with copies of the initial deficiency report marked to indicate items which Contractor considers complete.

1.3 GENERAL SERVICES PROJECT MANAGER 'S INFORMATION

- A. Provide three (3) sets of neatly bound written information necessary for proper maintenance and adjustment of equipment within 30 days following final acceptance. Final retention will be withheld until data is received by General Services Project Manager. 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 General Services Project Manager 's property.
  - 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. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.
  - 3. Provide any necessary interface cards required for equipment maintenance, code mandated testing, and troubleshooting.
  - 4. Lubrication instructions including recommended grade of lubricants.
  - 5. Parts catalogs for all replaceable parts including ordering forms and instructions.
  - 6. Four sets of keys for all switches and control features properly tagged and marked.
  - 7. Neatly bound instructions explaining all operating features including all apparatus in the car and lobby control panels.
  - 8. Neatly bound maintenance and adjustment instructions explaining areas to be addressed, methods and procedures to be used, and specified tolerances to be maintained for all equipment.
  
- B. Preventive Maintenance Contract: Existing agreement to remain in effect.
  
- C. Acceptance of such records by General Services Project Manager 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.

**SECTION 01800  
MAINTENANCE**

PART 1 - GENERAL

1.1 INTERIM MAINTENANCE

- A. Furnish preventive maintenance service on elevators described herein for a period from mobilization, verbal or written, until each unit is removed from building service for modernization. Cost of interim maintenance shall not be included as part of modernization quotation. Indicate costs on a per-unit basis for interim maintenance as requested on quotation form, Section 02000. Costs for interim maintenance shall be paid by General Services Project Manager separately and monthly based upon the number of units in service.
  - B. Existing Agreement to stay in effect, T & C to remain.
- 1.2 WARRANTY MAINTENANCE
- A. Use competent personnel, acceptable to the General Services Project Manager, supervised and employed by Contractor.

**SECTION 01900  
RELATED WORK**

**PART 1 - GENERAL**

- 1.1 RELATED WORK BY CONTRACTOR, PROVIDED BY OTHER TRADES
- A. Architectural and Structural, Hoistway and Hallway
    1. Clear, plumb, substantially flush hoistway with variations not to exceed 1" at any point.
    2. Wall blockouts and fire rated closure for control and signal fixture boxes which penetrate walls.
    3. Cutting and patching walls and floors.
    4. Decorating of walls and floors. Match existing finishes.
    5. Structural slab, concrete wall pockets, and/or structural steel beams for support of hoist machine, rope sheaves, and dead-end hitch beams. Support deflection shall not exceed 1/1666 of span under static load.
    6. Lockable, self-closing, fire-rated pit door.
    7. Protect open hoistways and entrances during construction per OSHA Regulations.
    8. Protect car enclosure, hoistway entrance assemblies, and special metal finishes from damage.
    9. Hoistway venting.
    10. Seal fireproofing to prevent flaking.
    11. Access ladders and platform to upper machine space.
  - B. Architectural and Structural, Machine Room
    1. Enclosure with access.
    2. Self-closing and locking rated access door. Include signage: "ELEVATOR MACHINE ROOM" and "AUTHORIZED PERSONNEL ONLY".
    3. Pass Through Machine Room: Where existing Pass Through condition exists provide signage on door to adjacent space "NOT AN EXIT"
    4. Paint walls and ceiling for improved light reflectivity.
    5. Class "ABC" fire extinguisher in each elevator machine room.
    6. Seal fireproofing to prevent flaking.
    7. Self-closing and locking governor access door and access means.
    8. Overhead floor grating for access to overhead machinery space.
  - C. Mechanical:
    1. Machine Room or Control Space: Ventilation and heating. Maintain minimum temperature of 55° F, maximum 90° F. Maintain maximum 80% relative humidity, non- condensing.



- D. Electrical Service, Conductors, and Devices:
1. Machine Room or Control Space Lighting: Guarded LED fixtures to provide minimum 19 footcandles average illumination. Provide toggle switch adjacent to strike side of machine room door. Occupancy sensor is not allowed.
  2. Machine Space Lighting: Guarded LED or fluorescent fixtures to provide minimum 19 footcandles average illumination.
  3. Pit Lighting: Guarded LED fixtures to provide minimum 10 footcandles average illumination.
  4. Hallway Lighting: LED fixture(s) to provide 10 footcandles average illumination measured at the threshold with doors closed. Lighting shall be always on, un-switched and no occupancy sensor.
  5. GFCI convenience outlets in pit.
  6. Non-GFCI convenience outlet in pit for sump pump.
  7. GFCI convenience outlets in machine room or control space.
  8. GFCI convenience outlets in machine space.
  9. Heavy Duty three-phase mainline copper power feeder to terminals of each elevator controller in the machine room with protected lockable "open" disconnecting means.
  10. Single-phase copper power feeder to each elevator with individual protected lockable "open" disconnecting means located in machine room for utilization equipment:
    - a. Car lighting and Blower
    - b. Pit Sump Pump
    - c. CCTV Camera
    - d. In-Car Video Display
    - e. Card Reader System
    - f. Firefighters' control status panel.
    - g. Elevator intercom amplifier in the elevator machine room.
  11. Emergency telephone line to each individual designated elevator control panel in elevator machine room.
  12. Automatic Fire Recall System
    - a. Fire alarm initiating devices in each elevator lobby, for each group of elevators or single elevator.
    - b. Fire alarm initiating devices in each elevator machine room.
    - c. Fire alarm initiating devices at top of hoistway if sprinklered.
    - d. Three Relay Activation Modules for each group of elevators or single elevator. Locate modules within three feet of controller designated by the Elevator Contractor to minimize un-supervised wiring. Program Modules as follows:
      - 1) PRIMARY: Activate when any hallway device, except primary floor, activates.
      - 2) ALTERNATE: Activate when hallway device at primary floor activates.
      - 3) FIRE HAT: Activate when machine room device activates.
    - e. Device in machine room and at top of hoistway (if provided) to provide signal for general alarm.
    - f. Provide technician from fire alarm contractor for pre-test of system during normal working hours.
    - g. Provide technician from fire alarm contractor for acceptance test of system with AHJ during normal or overtime working hours.
    - h. Remove fire alarm devices from pit where not required.
    - i. Remove fire alarm devices from hoistway overhead where not required.
  13. Temporary power and illumination to install, test, and adjust elevator equipment.
  14. Internet access to each machine room for off-site web access to monitoring system.
  15. Firefighters' telephone jack in car with connection to individual elevator control

- panels in elevator machine room and elevator control panel in firefighters' control room.
  - 16. Firefighters' announcement speaker in car with connection to individual elevator control panels in elevator machine room and elevator control panel in firefighters' control room.
  - 17. Conduit from the closest hoistway of each elevator group or single elevator to the firefighters' control room and/or main control console. Coordinate size, number, and location of conduits with Elevator Contractor.
  - 18. Wiring from building CCTV system to elevator controllers and all CCTV equipment.
  - 19. CCTV Cameras, elevator contractor to coordinate and assist with installation of cameras in elevators.
  - 20. Wiring from building security system to elevator controllers and all security system equipment.
  - 21. Card or Proximity Readers, elevator contractor to coordinate and assist with installation of readers in car operating panels or hall stations.
  - 22. Power for Mechanical Equipment: Provide power for HVAC and/or ventilation equipment where applicable.
  - 23. Remove abandoned mechanical equipment from machine room and hoistway as follows: old elevator machine and motor generator parts and all elevator related equipment that will not be used once the modernization is complete.
  - 24. Conduit from fire alarm panel to each fire alarm device location at each floor, hoistway, pit and machine room including three relay activation modules in machine room. Provide junction box at each location.
  - 25. Review power confirmation data, provided by the Elevator Contractor, on behalf of the Owner. Verify electrical supply to the controllers meets the stated requirements. Where applicable, review standby power generator capability to meet stated requirements and absorb regenerated power.
- E. Standby Power Provision:
- 1. Standby power of normal voltage characteristics via normal electrical feeders to run all elevator at simultaneously at full-rated car speed and capacity.
  - 2. Conductors from auxiliary form "C" dry contacts, located in the standby power transfer switch to a designated elevator control panel in each elevator group and/or single elevator unit to indicate utility or standby power active.
  - 3. Conductors from auxiliary form "C" dry contacts, located in the standby power transfer switch to a designated elevator control panel in each elevator group and/or single elevator unit. Provide a time delay of 30 - 45 seconds for pre-transfer signal in either direction.
  - 4. Standby single-phase power to group controller, and each elevator controller for car lighting, exhaust blower, emergency signaling device, and intercom amplifier.
  - 5. Means for absorbing regenerated power during an overhauling load condition per NEC 620.91. Elevators will employ IGBT drive, presenting a non-linear active load.
  - 6. Standby power to machine room ventilation or air conditioning.
  - 7. Standby power to emergency communications device(s).
- F. Elevator Contractor Related Work
- 1. Pit access stationary ladder for each elevator. Retractable ladder if provided shall include an electrical contact conforming to ASME A17.1, Rule 2.2.2.4.2.7.
- 1.2 RELATED WORK PROVIDED BY CONTRACTS AND SUB-CONTRACTORS
- A. All related work performed by the Contractor and all Sub-Contractors will be subject to the City and County of Denver's Prevailing Wage Ordinance as defined in this Agreement.

**SECTION 02000  
PRICING AND SCHEDULE**

**CONTRACTOR'S PRICING**

**A. LUMP SUM PRICING FOR MODERNIZATION AN INSTALLATION OF ELEVATORS:**

- 1. Final pricing for the modernization and installation of four traction xxx elevators located at the Police Administration Building is cited in this agreement under Section 6, Compensation and Payment.

**GENERAL SERVICES PROJECT MANAGER 'S CONSTRUCTION SCHEDULE**

Contractor submits the following completion schedule for the project. The construction schedule is to be attached to this scope of work.

Note: Start work date is date existing unit is removed from service for modernization.

**1.02 CONTRACTOR'S LIST OF SUPPLIERS/SUBCONTRACTORS**

- A. The undersigned Contractor will utilize the following suppliers/subcontractors for major components of work and submits these firms for approval. Upon acceptance of these Suppliers/Sub-Contractors by General Services Project Manager, no substitutions shall be made without written approval of Project Manager.

Suppliers/Subcontractor Name	Component/Type of Work

**SECTION 02100  
SUPPLEMENTAL CONDITIONS**

**PART 1 - GENERAL**

**1.1 DEFINITION OF TERMS**

- A. The term CONTRACT or CONTRACT DOCUMENTS as used herein consists of the Agreement, Conditions of Contract, Specifications, Addenda, Drawings if included, and Alternates if accepted.
- B. CONTRACTOR or ELEVATOR CONTRACTOR as used herein refers to any persons, partners, firm, or corporation having a contract with General Services Project Manager to furnish labor and materials for the execution of work required.
- C. CONTRACT AWARD as used herein refers to General Services Project Manager 's

verbal or written award for work required.

- D. SUBCONTRACTOR as used herein refers to any persons, partners, firm, or corporation having a contract with Contractor to furnish labor and materials for the execution of work required.
- E. As used in these Contract Documents "provide" shall be understood to mean "furnish and install."
- F. As used in these Contract Documents "retain or reuse existing" shall be understood to mean restore existing components or parts to like-new condition.
- G. Words in the singular shall include the plural whenever applicable or context so indicates.
- H. All technical terms in these Contract Documents have their definition given in latest edition of American National Standard Safety Code for Elevators, Dumbwaiters, Escalators, and Moving Walks ASME A17.1. and A17.2.

## 1.2 CONTRACT

- A. Contract includes all engineering, labor, tools and material required to complete the work in every respect. Contractor is cautioned to familiarize itself with existing site conditions and to include all incidental work that might occur or be required during the work. After Contract has been awarded, verbally or in writing, no extra charges will be allowed for any labor or material necessary to complete required work whether exactly described in these specifications herein or not, as long as such work, labor, and material are required to accomplish desired effect and results.
- B. Any discrepancies or ambiguities found in Contract Document or drawings shall be reported to the General Services Project Manager.

## 1.3 CODES AND ORDINANCES

- A. All work covered by these Contract Documents is to be done in full accord with national code, state and local codes, ordinances, and elevator safety orders as are in effect at time of Contract award. All requirements of local Building Department and fire jurisdiction are to be fulfilled by Contractor and its Subcontractors. Also see Section 01040, Article 1.01.

## 1.4 PROTECTION OF WORK AND PROPERTY

- A. Contractor shall continuously maintain adequate protection of all its work from damage and shall protect City and County of Denver Department of General Services property from injury or loss arising out of this Contract. Contractor shall make good any such damages, injury, or loss, except such as may be directly caused by agents, subcontractors, or employees of the City and County of Denver Department of General Services. Contractor shall provide all barricades required to protect open hoistways or shafts per OSHA regulations. Design of barricades in public areas shall be approved by City and County of Denver Department of General Services prior to fabrication and installation.
- B. If Contract includes work which would be disruptive during normal business operations, or would be dangerous to building occupants, said work shall be performed during hours as building management dictates. Examples of such work include, without limitation, saw cutting of concrete, jack hammering, welding, metal cutting, pouring concrete, erecting steel or hoisting equipment over occupied portions of the building, or performing tests requiring all elevators in a group. Contractor shall perform such work during off-hours and shall include

all costs in its quotation. The following times and scheduling requirements are part of the project: Off hours are considered 6:00 p.m. to 6:00 a.m. Monday through Friday and all-day Saturday and Sunday. These services as well as the items listed in this paragraph shall be performed off hours: All final testing and life safety testing.

- C. Contractor shall install a suitable protective covering on all finished floors whether marble, wood, carpet or other, in areas where work is being performed. No material handling equipment shall be permitted on or over finished floors unless said floors have been protected in a manner approved by building management.
- D. Portable fire extinguishers shall be provided throughout Contractor's area of work and shall be placed so as to be accessible at all times. Extinguishers shall be multi-purpose dry chemical type, provided on a basis of one 2A-20BC rated unit for each 3,000 square feet of floor area. Extinguishers will remain property of Contractor.
- E. Contractor shall at all times maintain work areas so all portions are accessible to fire department personnel and apparatus. Fire hydrants and fire department connections to building sprinkler systems must be kept free from obstruction at all times.
- F. Contractor shall strictly supervise any welding, metal cutting or other operations employing open flame work. All welding and cutting equipment shall be safely arranged and all combustibles in vicinity of any work being performed shall either be removed or protected by a noncombustible cover. Welding or cutting shall be attended by an assistant or fire watchman who is equipped with at least one 2A-20BC rated multi-purpose dry chemical fire extinguisher. Fire watchman will maintain strict surveillance during entire welding or cutting operation and extinguish flying sparks or burning slag. After welding or cutting operation fire watchman shall thoroughly search entire area for remnants of smoldering materials before he is released from his duty. Any welding or other operation employing open flame in any portion of building shall be scheduled with and receive approval of City and County of Denver Department of General Services. Hot work permits shall be scheduled and approved with Owner.
- G. Contractor shall keep noise level below 80 dBA level during normal building hours. When it is necessary to produce noise above this level, Contractor shall advise building management of such needs and times will be scheduled as directed. The Contractor shall anticipate, and schedule excessive noise generating procedures and include allowance for same in its schedule. Anything above 80 dBA shall be conducted in previously listed off hours.

1.5 ACCIDENT REPORTS

In the event of accidents of any kind, Contractor shall furnish City and County of Denver Department of General Services with copies of all accident reports. Reports shall be sent without delay and at same time that they are forwarded to any other parties.

1.1 STORAGE OF MATERIALS

- A. Contractor shall confine storage of materials on job site to limits approved by City and County of Denver Department of General Services and shall not unnecessarily encumber premises or overload any portion of building with materials to a greater extent than structure design load.

1.2 REMOVAL OF EQUIPMENT AND RUBBISH

- A. Contractor shall remove and properly dispose of all rubbish as fast as it accumulates including all existing parts and components not retained, keeping building and premises

clean during progress of work and leave premises at completion in a condition acceptable to the City and County of Denver Department of General Services. Store parts and components identified by Project Manager as useful for maintenance of units not being modernized as directed by City and County of Denver Department of General Services. All other parts and components not retained shall become property of Contractor. Dumpster shall be located in the loading dock area.

1.3 MATERIALS AND WORKMANSHIP

- A. All materials and equipment furnished shall be new and best quality. Installation shall be accurate, workmanlike, and subject to approval of Project Manager. All materials and equipment provided shall conform to regulations of enforcement bodies having jurisdiction. Contractor shall furnish material samples for approval.

1.4 SUPERVISION

- A. Contractor shall assign a competent Project Manager, superintendent, and on-site foreman for project satisfactory to Purchase. Such persons shall represent Contractor and all instructions given to them shall be binding as if given to Contractor.

1.5 CHANGES AND EXTRA WORK

- A. City and County of Denver Department of General Services may at any time make changes to Contract Documents, plans and drawings, omit work, or require additional work by Contractor. For such additional work performed hereunder, City and County of Denver Department of General Services shall pay Contractor on the basis of a mutually agreed lump sum. See Article 1.25 for method of computing lump sum cost of additional work. Contractor shall make no additions, changes, alterations, or omissions, or perform extra work, without receipt of written authorization of City and County of Denver Department of General Services.

1.6 PAYMENTS

- A. Contractor shall submit monthly applications for payment together with necessary data, information, waivers, and affidavits to General Services Project Manager. Information shall be submitted with payment request and work progress forms.
- B. Applications for payments are to cover 90% of the value of labor performed and material installed and delivered during the preceding month or materials delivered to Contractor's storage facility.
- C. Balance (retention) shall be paid by City & County of Denver upon final acceptance of entire work by General Services Project Manager and after performance guarantees have been satisfactorily demonstrated. See Section 01700, Article 1.02, D-G.

1.7 PAYMENT WITHHELD

- A. City and County of Denver Department of General Services may withhold approval of payment on any Contractor request to such extent as may be necessary to protect City and County of Denver Department of General Services from loss on account of:
  - 1. Believed negligence on part of Contractor to execute the work properly or fail to perform any provision of Contract. City and County of Denver Department of General Services, after 15 days' written notice to Contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct its cost from the overall Contract sum.

2. Claims filed or reasonable evidence indicating probable filing of claims by other Contractors or Subcontractors.
3. Failure of Contractor to make proper payments to its material suppliers or Subcontractors for material and labor.
4. A reasonable doubt that required work can be completed by Contractor for balance then unpaid or in Contract time frame.
5. Contractor's damage to building or another Contractor.

B. When the above grounds are removed, payment shall be made in full, less retention.

#### 1.8 LIENS AND AFFIDAVITS

- A. Neither final payment nor any part of billing retention shall become due until Contractor shall deliver to City and County of Denver Department of General Services a complete release of all liens arising out of this Contract or receipts marked paid in full in lieu thereof. In addition, Contractor shall furnish an affidavit to City and County of Denver Department of General Services that, so far as he has knowledge or information, releases, or receipts include all labor and materials for which a lien could be filed. If any lien remains unsatisfied after all payments are made by City and County of Denver Department of General Services, Contractor shall refund to City and County of Denver Department of General Services all monies the latter may be compelled to pay in discharging such a lien, including all costs and reasonable attorney's fees.

#### 1.9 CLAIMS FOR EXTRA COST

- A. Contractor claims for extra cost due to additions or changes to required work shall be submitted to Project Manager in writing within a reasonable time after such additions or changes identified or are requested and in any event before proceeding with required work. No such claim shall be valid unless so made. Maximum charge for additions/changes to work shall be Contractor cost +10% for overhead and profit. Contractors cost shall be verifiable from actual supplier invoices, purchase orders, time tickets, etc.

#### 1.10 DELAYS AND EXTENSION OF TIME

- A. If Contractor progress is delayed due to acts of City and County of Denver Department of General Services, acts of other Contractors, fire, floods, strikes or other casualties beyond the control or without fault or negligence of Contractor, time for completion of the work shall be extended for a period determined by Project Manager to be equivalent to time of such delay. Contractor must notify Project Manager, in writing, of such delay within 48 hours after delay commences, or no extension of time will be granted. Extension of time without written request within said period on one or more occasions shall not be deemed a waiver of provisions of this article.

#### 1.11 PERMITS

- A. Contractor shall obtain and pay for or cause its Subcontractor to obtain and pay for all permits required to complete required work. In addition, Contractor shall arrange, schedule, and pay for or cause its Subcontractors to arrange, schedule and pay for all required final inspections by state, local or independent certified inspecting authorities necessary for issuance of all required City and County of Denver Department of General Services utilization permits in regard to completed work.

### PART 2 - SPECIAL CONDITIONS

#### 2.1 PROGRESS OF WORK

- A. Upon award, verbally or in writing, Contractor shall reconfirm in writing, starting and completion schedule including equipment delivery dates based upon the information submitted on its quotation form, Section 00310.
- B. Contractor shall submit in writing monthly reports with payment request, including current equipment delivery dates and anticipated completion dates for individual units and groups of units.
- C. Project Manual: Contractor shall prepare two project manuals neatly bound in a three-ring binder. One manual shall be retained by Contractor and one provided to City and County of Denver Department of General Services. The manuals shall contain the following information and sections identified in an index with numbered divisions.
  - 1. Project Specification revised if required to indicate basis of award. (While maintaining original text and clearly identifying revision.)
  - 2. Alternate quotations indicating City and County of Denver Department of General Services acceptance or rejection.
  - 3. City and County of Denver Department of General Services 's executed Contract.
  - 4. Initial project schedule with estimated versus actual milestone dates. Include schedule revisions.
  - 5. Project payment requests including verification of payment and lien releases.
  - 6. Code acceptance.
  - 7. City and County of Denver Department of General Services 's temporary acceptance documents
  - 8. City and County of Denver Department of General Services 's final acceptance documents.
  - 9. As built drawings, including control wiring diagrams.
- D. A final manual shall include the identical section numbers and shall be identified and utilized for general correspondence on these subjects. Additional sections shall include correspondence not specifically identified by one of these sections. An index in front of this section shall number and identify source of correspondence and subject.



ID	Task Mod	Task Name	Duration	Start	Finish	3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
						Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
1		<b>MY Building Elevator Modernization</b>	<b>423.2 days</b>	<b>Thu 3/21/19</b>	<b>Mon 10/18/21</b>																														
2	✓	Contract Receipt & Order Entry	1 wk	Thu 3/21/19	Wed 3/27/19																														
3		Contract Processing	15.6 wks	Thu 3/28/19	Tue 8/6/19																														
4		Local Engineering & Site Survey	2 wks	Mon 4/22/19	Tue 5/7/19																														
5		KONE Engineering & Submittal Generation	4 wks	Wed 5/8/19	Tue 6/11/19																														
6		Submittal Submission	1 wk	Wed 6/12/19	Wed 6/19/19																														
7		Submittal Approval (Estimated)	1 wk	Thu 6/20/19	Thu 6/27/19																														
8		Fabrication of Elevator Equipment	16 wks	Wed 8/7/19	Mon 12/30/19																														
9		Delivery of Equipment/Crew Mobilization	1 wk	Thu 1/2/20	Thu 1/9/20																														
10		Modernize #1 Unit & QEI inspection	16 wks	Mon 1/13/20	Mon 6/1/20																														
11		DFD Inspection	2 wks	Tue 6/2/20	Wed 6/17/20																														
12		Install Interim Dispatch	1 wk	Tue 6/2/20	Tue 6/9/20																														
13		Modernize #2 & QEI Inspection	16 wks	Wed 6/10/20	Tue 10/27/20																														
14		DFD Inspection	2 wks	Wed 10/28/20	Thu 11/12/20																														
15		Modernize #3 & QEI Inspection	16 wks	Mon 11/16/20	Tue 4/6/21																														
16		DFD Inspection	2 wks	Wed 4/7/21	Thu 4/22/21																														
17		Modernize #4 & QEI Inspection	16 wks	Mon 4/26/21	Mon 9/13/21																														
18		DFD Inspection	2 wks	Tue 9/14/21	Wed 9/29/21																														
19		Final Clean up & Demobilization	2 wks	Thu 9/30/21	Mon 10/18/21																														

Project: MY Schedule 8.5.19  
Date: Mon 8/5/19

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	



**CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY)  
7/18/2019

**THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.**

**IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).**

<b>PRODUCER</b> Aon Risk Services Central, Inc. Chicago IL Office 200 East Randolph Chicago, IL 60601	<b>CONTACT NAME:</b> Aon Client Services <b>PHONE (A/C, No. Ext):</b> <b>FAX (A/C, No):</b> <b>E-MAIL ADDRESS:</b>
	<b>INSURER(S) AFFORDING COVERAGE</b> INSURER A : Old Republic Insurance Company INSURER B : IF P&C Insurance Company LTD. INSURER C : INSURER D : INSURER E : INSURER F :
<b>INSURED</b> KONE Inc. Attn: insurancerequests@kone.com One KONE Court Moline IL 61265	<b>NAIC #</b> 24147 N/A

**COVERAGES CERTIFICATE NUMBER: 50061363 REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:		<input checked="" type="checkbox"/>	MWZY 57732	1/1/2019	1/1/2020	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$2,000,000 MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000
A	<input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY		<input checked="" type="checkbox"/>	MWTB 20018	1/1/2019	1/1/2020	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$		<input checked="" type="checkbox"/>	LP 000002172 Producer Aon Finland Oy	1/1/2019	12/31/2019	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000
A A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Other Policies		<input checked="" type="checkbox"/>	MWC 115397 11 (AOS) MWXS 822 11 (OH)	1/1/2019 1/1/2019	1/1/2020 1/1/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$500,000 E.L. DISEASE - EA EMPLOYEE \$500,000 E.L. DISEASE - POLICY LIMIT \$500,000
	See Schedule of Other Policies						

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Contract No. 6530064 - Project/Location: Minoru Yasui Bldg. MOD, 303 West Colfax Ave. Denver CO  
 "As required by written contract, the City and County of Denver, its Elected and Appointed Officials, Employees and Volunteers are included as Additional Insured" with regards to the appropriate policies ONLY.

**CERTIFICATE HOLDER**

City and County of Denver  
 201 W. Colfax Ave., Dept. 304  
 Denver CO 80202

**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Aon Risk Services Central, Inc.*

Aon Risk Services Central, Inc.

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ACORD 25 (2016/03)

The ACORD name and logo are registered marks of ACORD

**SCHEDULE OF OTHER POLICIES**

DATE ISSUED

7/18/2019

**NAMED INSURED:**

KONE Inc.  
 Attn: insurancerequests@kone.com  
 One KONE Court  
 Moline IL 61265

**CERTIFICATE HOLDER:**

City and County of Denver  
 201 W. Colfax Ave., Dept. 304  
 Denver CO 80202

<b>INSURER NAIC#</b>	<b>COVERAGE</b>	<b>POLICY NO.</b>	<b>EFF - EXP DATE</b>	<b>LIMITS</b>
Zurich American Insurance Company 16535	Installation/Erection/All-Risk/Builder Risk	MBR1009372-04	12/31/2018 - 12/31/2019	
IF P & C Insurance Company Ltd.	Professional Liability	LP 0000002172	01/01/2019 - 12/31/2019	\$10,000,000 Each Loss - \$10,000,000 Aggregate



**TO:** All Users of the City and County of Denver Prevailing Wage Schedules  
**FROM:** Ryland Feno, Classification and Compensation Technician II  
**DATE:** May 13, 2019  
**SUBJECT:** Latest Change to Prevailing Wage Schedules

The effective date for this publication will be **Friday, May 10, 2019** and applies to the City and County of Denver for **BUILDING CONSTRUCTION PROJECTS** (does not include residential construction consisting of single family homes and apartments up to and including 4 stories) in accordance with the Denver Revised Municipal Code, Section 20-76(c).

General Wage Decision No. CO190020  
Superseded General Decision No. CO20180030  
Modification No. 3  
Publication Date: 05/10/2019  
(6 pages)

Unless otherwise specified in this document, apprentices shall be permitted only if they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor (DOL). The employer and the individual apprentice must be registered in a program which has received prior approval by the DOL. Any employer who employs an apprentice and is found to be in violation of this provision shall be required to pay said apprentice the full journeyman scale.

Attachments as listed above.

**Office of Human Resources**  
201 W. Colfax Ave. Dept. 412 | Denver, CO 80202  
p: 720.913.5751 | f: 720.913.5720  
[www.denvergov.org/humanresources](http://www.denvergov.org/humanresources)

General Decision Number: CO190020 05/10/2019 CO20

Superseded General Decision Number: CO20180030

State: Colorado

Construction Type: Building

County: Denver County in Colorado.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/04/2019
1	02/01/2019
2	02/22/2019
3	05/10/2019

ASBE0028-002 07/01/2018

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation).....	\$ 31.73	14.23
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CARP0055-002 11/01/2018

Rates	Fringes
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CARPENTER (Drywall Hanging Only).....\$ 29.45 9.64

-----  
 CARP1607-001 06/01/2018

	Rates	Fringes
MILLWRIGHT.....	\$ 32.99	14.02

-----  
 ELEC0068-012 06/01/2018

	Rates	Fringes
ELECTRICIAN (Includes Low Voltage Wiring).....	\$ 35.80	15.45

-----  
 ELEV0025-001 01/01/2019

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 45.05	34.125

FOOTNOTE:

- a. Vacation: 6%/under 5 years based on regular hourly rate for all hours worked. 8%/over 5 years based on regular hourly rate for all hours worked.
- b. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

-----  
 \* ENGI0009-017 05/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Crane)		
141 tons and over.....	\$ 31.07	10.70
50 tons and under.....	\$ 28.40	10.70
51 to 90 tons.....	\$ 28.57	10.70
91 to 140 tons.....	\$ 29.55	10.70

-----  
 IRON0024-009 01/01/2019

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 29.85	11.42

-----  
 IRON0024-010 01/01/2019

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 29.85	11.42

-----  
 PAIN0079-006 08/01/2017

	Rates	Fringes
PAINTER (Brush, Roller and Spray; Excludes Drywall Finishing/Taping).....	\$ 20.50	8.41

-----  
PAIN0079-007 08/01/2017

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 21.20	8.41

-----  
PAIN0419-001 07/01/2016

	Rates	Fringes
SOFT FLOOR LAYER (Vinyl and Carpet).....	\$ 20.00	10.83

-----  
PAIN0930-002 07/01/2018

	Rates	Fringes
GLAZIER.....	\$ 31.52	10.13

-----  
PLUM0003-009 06/01/2018

	Rates	Fringes
PLUMBER (Excludes HVAC Duct, Pipe and Unit Installation).....	\$ 35.48	15.94

-----  
PLUM0208-008 06/01/2018

	Rates	Fringes
PIPEFITTER (Includes HVAC Pipe and Unit Installation; Excludes HVAC Duct Installation).....	\$ 37.55	14.95

-----  
SFCO0669-002 04/01/2017

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 36.73	20.47

-----  
SHEE0009-004 07/01/2018

	Rates	Fringes
SHEET METAL WORKER (Includes HVAC Duct Installation; Excludes HVAC Pipe and Unit Installation).....	\$ 34.02	17.49

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SUCO2013-006 07/31/2015

	Rates	Fringes
BRICKLAYER.....	\$ 21.96	0.00
CARPENTER (Acoustical Ceiling Installation Only).....	\$ 22.40	4.85
CARPENTER (Metal Stud Installation Only).....	\$ 17.68	0.00
CARPENTER, Excludes Acoustical Ceiling Installation, Drywall Hanging, and Metal Stud Installation.....	\$ 21.09	6.31
CEMENT MASON/CONCRETE FINISHER....	\$ 20.09	7.03
LABORER: Common or General.....	\$ 14.49	5.22
LABORER: Mason Tender - Brick....	\$ 15.99	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 16.00	0.00
LABORER: Pipelayer.....	\$ 16.96	3.68
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 20.78	5.78
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 19.10	3.89
OPERATOR: Grader/Blade.....	\$ 21.50	0.00
ROOFER.....	\$ 16.56	0.00
TRUCK DRIVER: Dump Truck.....	\$ 17.34	0.00
WATERPROOFER.....	\$ 12.71	0.00

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.



**Office of Human Resources  
Supplemental Rates  
(Specific to the Denver projects)  
Revision Date: 11-28-2016**

<b>Classification</b>		<b>Base</b>	<b>Fringe</b>
Boilermaker		\$30.97	\$21.45
Iron Worker, Reinforcing		\$18.49	\$3.87
Laborer: Concrete Saw		\$13.89	-
Paper Hanger		\$20.15	\$6.91
Plasterer		\$24.60	\$12.11
Plaster Tender		\$10.79	-
Power Equipment Operator	Concrete Mixer - Less than 1 yd	\$23.67	\$10.67
	Concrete Mixer - 1 yd and over	\$23.82	\$10.68
	Drillers	\$23.97	\$10.70
	Loader - up to and incl 6 cu yd	\$23.67	\$10.67
	Loaders - over 6 cu yd	\$23.82	\$10.68
	Mechanic	\$18.48	-
	Motor Grader	\$23.97	\$10.70
	Oilers	\$22.97	\$10.70
	Roller	\$23.67	\$10.67
Tile Finisher		\$20.87	\$8.42
Tile Setter		\$26.83	\$8.48
Truck Driver	Flatbed	\$19.14	\$10.07
	Semi	\$19.48	\$10.11

Go to [www.denvergov.org/Auditor](http://www.denvergov.org/Auditor) to view the Prevailing Wage Clarification Document for a list of complete classifications used.

**EXHIBIT D**

Bond No. 9316094

**CITY AND COUNTY OF DENVER  
DEPARTMENT OF GENERAL SERVICES**

**PERFORMANCE AND PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned KONE INC.

\_\_\_\_\_ ,  
 a corporation organized and existing under and by virtue of the laws of the State of DE \_\_\_\_\_,  
 hereafter referred to as the "Contractor", and FIDELITY AND DEPOSIT COMPANY OF MARYLAND \_\_\_\_\_,  
 a corporation organized and existing under and by virtue of the laws of the State of IL \_\_\_\_\_,  
 and authorized to transact business in the State of Colorado, as Surety, are held and firmly bound unto the  
 CITY AND COUNTY OF DENVER, a municipal corporation of the State of Colorado, hereinafter referred  
 to as the "City", in the penal sum of **FOUR HUNDRED THOUSAND AND NO CENTS DOLLARS (\$400,000.00)**, lawful money of the United States of America, for the payment of which sum, well and truly  
 to be made, we bind ourselves and our heirs, executors, administrators, successors and assigns, jointly and  
 severally, firmly by these presents;

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT:

WHEREAS, the above bounden Contractor has on the 1st day of May, 2019 \_\_\_\_\_,  
 entered into a written contract with the aforesaid City for furnishing all labor and tools, supplies, equipment,  
 superintendence, materials and everything necessary for and required to do, perform and complete the  
 construction of **CONTRACT NO. GENRL-201951354, MINORU YASUI ELEVATOR  
 MODERNIZATION PROJECT**, Denver, Colorado, and has bound itself to complete the project within  
 the time or times specified or pay liquidated damages, all as designated, defined and described in the said  
 Contract and Conditions thereof, and in accordance with the Plans and Technical Specifications therefore, a  
 copy of said Contract being made a part hereof;

NOW, THEREFORE, if the said Contractor shall and will, in all particulars well and truly and faithfully  
 observe, perform and abide by each and every Covenant, Condition and part of said Contract, and the  
 Conditions, Technical Specifications, Plans, and other Contract Documents thereto attached, or by  
 reference made a part thereof and any alterations in and additions thereto, according to the true intent and  
 meaning in such case, then this obligation shall be and become null and void; otherwise, it shall remain in  
 full force and effect;

PROVIDED FURTHER, that if the said Contractor shall satisfy all claims and demands incurred by the  
 Contractor in the performance of said Contract, and shall fully indemnify and save harmless the City from  
 all damages, claims, demands, expense and charge of every kind (including claims of patent  
 infringement) arising from any act, omission, or neglect of said Contractor, its agents, or employees with  
 relation to said work; and shall fully reimburse and repay to the City all costs, damages, and expenses  
 which it may incur in making good any default based upon the failure of the Contractor to fulfill its  
 obligation to furnish maintenance, repairs or replacements for the full guarantee period provided in the  
 Contract Documents, then this obligation shall be null and void; otherwise it shall remain in full force and  
 effect;

PROVIDED FURTHER, that if said Contractor shall at all times promptly make payments of all amounts  
 lawfully due to all persons supplying or furnishing it or its subcontractors with labor and materials, rental  
 machinery, tools or equipment used or performed in the prosecution of work provided for in the above  
 Contract and that if the Contractor will indemnify and save harmless the City for the extent of any and all  
 payments in connection with the carrying out of such Contract, then this obligation shall be null and void;  
 otherwise it shall remain in full force and effect;

PROVIDED FURTHER, that if the said Contractor fails to duly pay for any labor, materials, team hire,  
 sustenance, provisions, provender, gasoline, lubricating oils, fuel oils, grease, coal, or any other supplies

or materials used or consumed by said Contractor or its subcontractors in performance of the work contracted to be done, or fails to pay any person who supplies rental machinery, tools or equipment, all amounts due as the result of the use of such machinery, tools or equipment in the prosecution of the work, the Surety will pay the same in any amount not exceeding the amount of this obligation, together with interest as provided by law;

PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to contracts with others in connection with this project, or the work to be performed thereunder, or the Technical Specifications and Plans accompanying the same, shall in any way affect its obligation on this bond and it does hereby waive notice of any change, extension of time, alteration or addition to the terms of the Contract, or contracts, or to the work, or to the Technical Specifications and Plans.

IN WITNESS WHEREOF, said Contractor and said Surety have executed these presents as of this  
19th day of July, 2019.

Attest:

  
Assistant Secretary

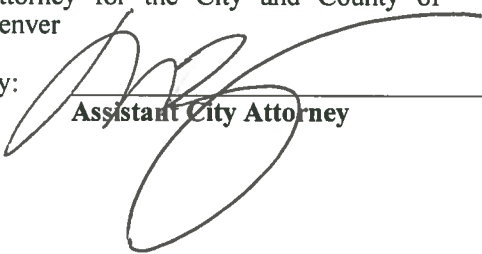
KONE INC.  
Contractor



By:   
SVP

FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
Surety

By:   
Attorney-In-Fact Christina L. Sandoval

(Accompany this bond with Attorney-in-Fact's authority from the Surety to execute bond, certified to include the date of the bond).

APPROVED AS TO FORM:  
Attorney for the City and County of  
Denver  
By:   
Assistant City Attorney

APPROVED FOR THE CITY AND COUNTY OF  
DENVER  
By:   
Michael B. Hancock  
MAYOR  
By:   
Murphy F. Robinson III  
EXEC. DIR. OF GENERAL SERVICES

ACKNOWLEDGEMENT BY SURETY

STATE OF ILLINOIS  
COUNTY OF COOK

On this 19<sup>th</sup> day of July, 2019, before me, Jean Torres, a Notary Public, within and for said County and State, personally appeared Christina L. Sandoval to me personally known to be the Attorney-in-Fact of and for Fidelity and Deposit Company of Maryland and acknowledged that they executed the said instrument as the free act and deed of said Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County, the day and year in this certificate first above written.



\_\_\_\_\_  
Notary Public in the State of Illinois  
County of Cook



**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by **Robert D. Murray, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Sandra M. WINSTED, Diane M. O'LEARY, Susan A. WELSH, Judith A. LUCKY-EFTIMOV, James B. McTAGGART, Debra J. DOYLE, Sandra M. NOWAK, Jessica B. DEMPSEY and Christina L. SANDOVAL, all of Chicago, Illinois, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 28<sup>th</sup> day of January, A.D. 2019.



**ATTEST:  
ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**

By: *Robert D. Murray*  
Vice President

By: *Dawn E. Brown*  
Secretary

**State of Maryland  
County of Baltimore**

On this 28th day of January, A.D. 2019, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.



Constance A. Dunn, Notary Public  
My Commission Expires: July 9, 2019

**EXTRACT FROM BY-LAWS OF THE COMPANIES**

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

**CERTIFICATE**

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 19 day of July, 2019.



*Michael C. Fay*

Michael C. Fay, Vice President

**TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:**

Zurich Surety Claims  
1299 Zurich Way  
Schaumburg, IL 60196-1056  
[www.reportsfclaims@zurichna.com](mailto:www.reportsfclaims@zurichna.com)  
800-626-4577