PART 1 - GENERAL

1.01 Elevator manufacturer to provide equipment and installation warranty and maintenance services for at least one year after acceptance. This requires routine monthly inspection, emergency calls and all parts and labor required to maintain elevator in first class condition. UAF maintenance specifications are available from Project Manager. Owner caused call-outs will be invoiced to the University at agreed to rate.

1.02 Use of existing and new elevators during construction:

   A. Designer and Project Manager will ensure that contract language defines liability for UAF or Contractor caused operational deficiencies during the construction phase. Include provisions for protection and repair of existing cab, frame and door surfaces. Include consequences for repair of damages.

   B. Specify load carrying limits and consequences for exceeding those limits. All UAF freight elevators are classified as Class A-General Freight Loading. This classification limits any single piece of freight to a maximum of 25 percent of the rated load of the elevator. Pallet jacks, both manual and powered, are not permitted to be used to load/unload any elevator. If there is a need to move loads exceeding this limit, contact UAF Facilities Services Labor Shop to coordinate. Tests may be performed before and after construction to establish undue wear and tear during construction.

1.03 Standard university elevator features include:

   A. Closed loop door operators.

   B. All parts and equipment shall be non-proprietary or be readily serviceable and available by third-party vendors. Special equipment or tools necessary for the repair, adjusting, or troubleshooting of the operation of any related equipment shall be included in the project. Provide diagnostic tools that are not self-destructing or self-resetting and will become the property of the owner.

   C. Electronic scanning type door protection.

   D. Independent service.

   E. Emergency battery lowering unit on hydraulic elevators.

   F. Tamper-proof door interlock.

   G. Minimum 15% spare conductors in traveling cable. Traveling cables will include communications wiring (coax, twisted pair, Ethernet).

   H. UAF elevator number engraved on car operating panel.
I. Run/Stop key.

J. Floor lockout switch keyed to UAF master for access to university restricted areas.

K. Provide work tool and software for proprietary controllers. Provide (1) set of spare controller boards for any boards that are not readily available from third-party vendors. Submittals will include an itemized list of spare components to be provided.

L. New or replacement sills will be nickel-silver alloy for all elevators with a capacity of 2500 pounds or more.

M. Provide large machine numbers on drives, controllers and disconnects.

N. Provide cab pads and vandal resistant hangars for all elevators.

O. Provide flush mounted, vandal resistant buttons and bezels.

P. Maximum Machine Roomless (MRL) elevator roping will be 2:1.

Q. Beam will be installed in the overhead of all elevator hoistways that is capable of supporting the weight of the fully loaded car.

1.04 Multi-stage telescoping twin-post equipment will not be installed at UAF.

1.05 Designers will include in their design documents the following items:

A. All work depicted in elevator space drawings will include sheet notes requiring that:

   a. Subcontractors coordinate all electrical, mechanical and plumbing installations with elevator contractor.

   b. All hoistway penetrations are fireproof sealed.

   c. Remove unused devices/connectors on hoistway surfaces.

   d. Bevel all hoistway horizontal surfaces not on the loading/unloading side exceed 4 inches to an angle not less than 75 degrees from horizontal. Elevator support framework is not included in this requirement.

   e. No equipment can be installed in elevator car, hoistway or machine room that is not directly related to the elevator operation.

   f. Coordination of pit ladder size and installation location will be coordinated with the elevator contractor.

B. See ASME A17.1-2010, Sec. 2.8 for restrictions on installation of equipment in
hoistways and machine rooms. Examples: wiring/raceways/cables, steam and water piping, risers, return piping, traps, valves, ducts, sprinklers and alarms.

C. Provide two phone lines and one Ethernet cable to controller in elevator machine room to accommodate cab phone and future remote monitoring by elevator maintenance contractor. One of the phone lines will be a two-way “800” line for remote monitoring by the elevator contractor.

D. Inspector will not issue certificate of operation if cab phone is not connected to emergency responder. Contract managers need to identify the destination for the phone and coordinate the connection and programming prior to inspection.

E. Review provisions of NEC Art. 620 for compliance with elevator work.
   a. GFCI receptacles in elevator pit and machine room. If pit sump pump is installed, provide separate simplex (bulls-eye), non-GFCI receptacle for sump pump.
   b. Elevator pit light switch location is subject to hoistway door operation and pit ladder location. Electrical to coordinate with elevator contractor.
   c. ASME A17.1-2010 requires minimum pit illumination of 10 foot-candles at pit floor. Use F32 T-8 fixtures mounted horizontally on pit wall.
   d. ASME A17.1-2010 requires NEMA 4 fixtures and wet location wiring on all electrical equipment mounted less than 48 inches AFF in hoistways with sprinklers.
   e. All machine room disconnects (power, lighting, pit equipment) require labeling that provides location of panel, panel number and breaker number.
   f. Car light disconnecting switch/breaker will be capable of being locked in the open position. Consequently the upstream overcurrent protection should not be located in the machine room. See NEC 620.53 for car light disconnecting means.

F. Comply with applicable Fire Protection codes and standards:
   a. Sprinklers are required in all machine rooms and within 24 inches of pit floor on hydraulic (roped-hydro) installations using combustible hydraulic fluid.
   b. Sprinklers are not required in hoistway overhead of new elevators.
   c. Smoke detectors are required in all elevator lobbies, elevator machine rooms and elevator hoistway overheads.
   d. Heat detectors required in elevator machine rooms (adjacent to the sprinkler head) with lower release temperature than sprinkler head. Similarly, heat detector is required in hoistway overhead only if sprinkler head is installed.
e. Upon activation of machinery space heat detector, elevator shunt trip activation will have a programmed delay based on the AHJ policy at the time of acceptance.

G. Pit sump and automatic pump required if Firefighter Service is installed, pit is subject to groundwater intrusion or if sprinkler is installed. Sump pumps will be indirectly connected to the plumbing system per IBC. UAF prefers that a dedicated discharge receptacle be provided. The receptacle will be furnished with a grated cover to prevent deposition of foreign materials that can clog the drain.

a. Elevator code and plumbing code do not direct the discharge but local water utility will not be receptive to the possibility of oily discharge. Hydraulic elevators require a hydrocarbon switch on sump pump that opens pump motor circuit when it detects oily products.

b. All pits with a sump will have a high water level alarm installed to notify maintenance personnel of pump activation.

c. Install drain tee and ball valve in pit to allow drainage of pump discharge line after testing or any operation. Location of drain tee and accessories will be coordinated with elevator contractor to guarantee clearances.

d. Install sump grate that is flush with pit floor and supports a minimum of 300 pounds.

e. Specify cast bronze pumps unless otherwise approved.

f. Sumps, sump pumps and discharge receptacles will be capable of accommodating diversified discharge loads of at least 50 gpm per elevator. NOTE: Dual elevators in a shared hoistway will require accommodation of at least 100 gpm discharge rate.

H. UAF discourages the installation of hoistway venting. If required by IBC or the AHJ, the vents will use low-temperature, low-leakage dampers and be controlled.

I. Pit ladder will be provided by General Contractor. See ASME A17.1 for specific requirements. Ladder must comply with OSHA standards.

J. Hoistway and machine room shall have all holes and penetrations fire caulked to meet fire rating of hoistway to include the top of the hoistway, where the ceiling meets the walls.

K. If structure must be rated, cementitious mono-coating or intumescent paint must be used. Sprayed-on fiber insulation shall not be applied to any surface of the hoistway to achieve the required fire rating of the hoistway. The intent is to ensure the hoistway is not contaminated.
L. Entrance to machine room shall be located off a public corridor or through a mechanical
equipment room. Entrance shall not be through an office, classroom, or restroom.

M. 10 lb ABC type fire extinguisher will be located and mounted in machine room by the
door.

N. Install switched lighting and GFCI outlet in hoistway overhead for any hoistway that has
a machine-room-less (MRL) elevator installed.

PART 2 - PRODUCTS

2.01 Controllers:
   A. Major manufacturers: Otis, ThyssenKrupp
   B. Independents: Virginia Controls, ERM, Minnesota Elevator, GAL GALaxy.
   C. All subject to approval by UAF.

2.02 Door operators:
   A. ThyssenKrupp Elevator
   B. Otis.
   C. G. A. L.
   D. No alternate brand requests, No substitutions allowed

2.03 Elevator Cars and Operating Systems:
   A. Hydraulic
   B. Traction

2.04 Acceptable manufacturers of major Machine-Room-Less equipment:
   A. Otis
   B. ThyssenKrupp
   C. Global Tardiff
   D. Hollister Whitney

PART 3 – EXECUTION (NOT USED)