

D10 Conveying - UniFormat to MasterFormat Conversion Chart

D10 Conveying	MasterFormat No.	Title
D1010	14 20 00	Vertical Conveying Systems
D6020	14 28 00	Elevator Telephones

D.1010 Vertical Conveying Systems

14 20 00 VERTICAL CONVEYING SYSTEMS (ELEVATORS)

A. Purpose:

1. The Elevators Facilities Standard establishes a series of guidelines for specifying this particular item on any construction project at the University. This Facilities Standard is not to be regarded as a specification.

B. Requirements:

1. Types of Elevators:
Architect shall review the type of elevator (either hydraulic or traction / machine room-less or conventional) with the owner to determine the suitability of the elevator type with the building type and occupancy.
2. Description of Work:
The elevator vendor shall furnish all labor, materials and equipment required to install, repair or alter the elevators as indicated on the contract documents and/or as specified.
3. Elevator Vendor Qualifications:
The elevator vendor shall maintain adequate factory-trained personnel to perform the installation and provide continuing maintenance during the warranty period. The elevator vendor shall provide written factory certification of all personnel performing installation, service and/or maintenance

C. Products:

In general, all elevator systems and replacement parts must be nonproprietary. Open technical support, training and parts must be available to UAB. It is the intent of the University to have the option of maintaining the elevator equipment in-house or having multiple vendors capable of performing quality maintenance.

Elevator Components:

1. Elevator Control System:

All control systems shall be selective-collective microprocessor based. Control system components include, but are not limited to: logic control, solid state drives, door operators, selector and leveling systems, diagnostic systems and displays.

Elevator control systems that deviate from this standard must be pre-approved by UAB and incorporated in these standards at least 30 days prior to bid submittal. Controls may be approved and added to these standards after completing the following steps:

- a) Submit a statement of intent to supply Factory Training and Technical Documentation to UAB Elevator Maintenance personnel. This training and documentation is to be the same as supplied to the manufacturers technicians. UAB will pay the employee's expenses and reasonable industry standard cost for the training.
- b) Submit a complete replacement parts list, with current price and availability.
- c) Submit a statement of intent to supply continuing Factory Technical Support for the installed equipment to UAB elevator technicians.

Current approved systems are listed below:

GAL Manufacturing Corp - Hydro and Traction Model Galaxy

KONE Elevator - Traction Model KCM 831 - MonoSpace

Motion Controls Engineering - Traction Model 4000 AC

Motion Controls Engineering - Traction Model iControl AC or DC

Motion Controls Engineering - Hydraulic Model 2000

SmartRise Engineering - Traction Models SRA AC, SRD DC, and SRH Hydro

ThyssenKrupp - TAC 32 Hydro and TAC 32 T Traction AC

Virginia Controls Inc. - Traction Model MVFCL - AC or MDCCD – DC

Virginia Controls Inc. - Hydraulic Model MH – series

Control and drive systems shall have on board diagnostics and adjustment access, or if a special tool is required, one shall be supplied with each controller at no additional cost to the University. No controls or service tools shall be programmed to expire for any reason. The manufacturer shall provide a written statement signed by an officer of the company attesting to this submittal.

2. Control Fixtures:

- a) Hall buttons and car control buttons shall be "California Code Compliant" stainless steel vandal resistant series. Acceptable manufacturers are EPCO, PTL Equipment, GAL, Innovation Industries, DMG/MAD, or approved equal.

- b) Hall lanterns / car lanterns shall be vandal resistant series.
- c) Position Indicators on elevators over 3 floors shall be digital display.
- d) Each elevator shall be provided with “Independent Operation” controlled by a Group 2 key switch. Key shall be removable in the ‘Off’ position only.
- e) Control key switches, when required, shall be keyed as follows, unless otherwise specified:

Group 1 - EX512 = in car stop switch, EX514 = Inspect.

Group 2 - EX513 = Cab lights/Fan and Independent, EX516-519 = Security.

Group 3 – FEOK1 = Fire Service.

- f) Each elevator shall be supplied with logic inputs to interface with a UAB supplied card reader floor security system for each opening.
- g) Each elevator shall have a Voice Annunciator inside the cab to announce the floor number at which the elevator is about to stop.

3. Hoistway Door:

Unlocking devices shall be installed on every hoistway door of every elevator.

4. Door Detection Devices:

All door safety edge detection devices shall utilize full screen infrared sensors.

5. Door Operators:

Door operators shall be standard solid-state belt drive, GAL, MAC, or approved equal. No screw-drive type will be accepted.

6. Elevator Telephones – Refer to Facilities Standard No. 16753 for guidelines concerning elevator telephones.

7. Finishes: The following standard finishes shall be provided unless otherwise specified:

- a) Walls – Satin patterned stainless steel paneled walls.
- b) Ceiling – Standard translucent suspended ceiling with LED tube lighting or (6) panel down light LED
- c) Car platform sub-floor– plywood over full sheet metal plate.
- d) Floor finish (passenger elevator) – vinyl composition tile or sheet vinyl, color as approved in Facilities Standard.
- e) Floors finish (freight elevators) – ¼ inch aluminum checker-plate.
- f) Handrails – Flat solid metal, satin stainless steel.

8. Elevator Control Rooms:

- a) All elevators shall have a dedicated room for the elevator controller and machine space/access., If the machine is in the hoistway, the control room shall be adjacent to the hoistway and means shall be provided to the view the machine drive sheave from the controller room.
- b) Each elevator room shall be a conditioned space with a means to maintain a temperature between 60 degrees F & 90 degrees F as required by the local and state AHJ's. Additionally, fire alarm/detection systems shall be provided.

9. Spare Hoistway Wiring:

- a) All hoistway wiring and traveling cables shall be supplied with sufficient spares, per code, for future changes or repairs. Traveling cables shall be supplied with three (3) 20 gauge shielded pair for future card reader and 1 coax RG6/U for future camera.

10. Hydraulic Elevators:

When a hydraulic elevator is installed, the Contractor shall furnish and install the following:

- a) An auxiliary casing made from Poly Vinyl Chloride (PVC) will be installed to provide corrosion protection for the underground cylinder and act as an oil containment casing in the event of cylinder leakage. The casing will be a minimum schedule 40 wall thickness with a minimum diameter of six inches larger than the elevator cylinder. It shall extend from the bottom of the elevator cylinder through the top of the pit floor, and will include a bottom end cap. The auxiliary casing shall be installed plumb and exact as shown on the contractor's layout drawing. The outside of the casing shall be back-filled with washed sand and the top outside shall be sealed at the pit floor.
- b) All pump, motors, and wiring shall be externally mounted. Submersible rotating equipment is not acceptable.
- c) Elevator car sling and platform shall be heavy duty – Class A loading unless specified otherwise.

11. Traction Elevator:

- a) Car speed for traction elevators shall be a minimum of 200 foot Per Minute
- b) Elevator cab sling and platform shall be heavy duty – Class A loading unless specified otherwise.
- c) Elevator Drive System:

All new installations and modernizations shall use an AC Drive and AC motors when possible.

When an AC motor is not practical, a SCR type DC Drive and DC motor shall be used. The drive shall be a field-programmable microprocessor control. No motor-generator drive systems shall be allowed.

12. Elevator Hoist Ropes:

Traction elevators shall utilize standard traction-steel hoisting cables that are available from multiple sources.

Belt drive and fabric rope systems shall not be allowed.

13. Governor and Governor Ropes:

If the governors are in the hoistway, a means of remote reset or access separate from the elevator car-top, shall be provided. Only a standard traction-steel or iron governor rope shall be used.

D. Execution

1. Installation of guide rails:

The elevator car and counter weight guide rail shall be installed true and plumb with a maximum deviation of + or - 1/8" from the top to the bottom of the rail and + or - 1/16" from face to face between the rails for the entire length of the rail installation.

2. Related Documents And Requirements:

All work shall be performed in accordance with the latest edition (as of the date bids are taken) of the ansi/asme safety code for elevators and escalators (ansi/asme a17.1), the national electrical code (nfpa 70), americans with disabilities act, and other applicable codes adopted by the state of alabama – elevator safety board.

3. Maintenance service included in contract:

The elevator vendor shall service the elevator for one (1) calendar year from the date of substantial completion per uab elevator maintenance specification (see attachment).

4. Warranty service:

The elevator vendor shall warrant the elevator equipment they installed against defects in materials and workmanship for a period of one (1) year from the date of substantial completion.

5. Elevator maintenance prices:

- a) The elevator vendor shall provide a unit price for a three (3) year maintenance contract per standard UAB Elevator Maintenance Contract including a provision for a thirty (30) day cancellation notice from the owner

6. Maintenance manuals and training:

The elevator vendor shall provide the following items prior to issuance of the certificate of substantial completion:

- a) One week of classroom training at the controller manufacturer's training facility shall be available at no cost to UAB for four (4) of the owner's personnel. UAB will pay the employee's expenses for travel and lodging required for this training.
- b) Two (2) complete hard copies and one electronic copy of maintenance manuals. The maintenance manuals shall include:
 - Diagnostic / repair guides and error codes for all controller, motor drive and door operator systems.
 - Setup / repair guide for all major mechanical systems – machines, brakes, doors, etc.
 - Parts list for all electrical and mechanical parts.
 - The complete 'as-built' wiring diagrams in printed hard-copy and electronic format.
 - A complete price list of all replacement parts, with part numbers, prices and the delivery lead time for each item.
- c) One (1) set of circuit boards for all different controllers, drives, operators, car & hall fixtures shall be supplied to uab elevator maintenance at turn-over.

D.6020 Elevator Equipment and Controls

14 28 00 ELEVATOR TELEPHONES

A. General

1. The elevator contractor shall provide an emergency telephone in each elevator. This is in addition to the fire alarm voice/alarm two-way communication telephone jack that may be required in every elevator car. The elevator contractor shall also provide the necessary travel cables.
2. Emergency telephones shall be hands-free one button call, speaker-phone type suitable for automatic ring-down, and auto answer feature that allows security to call back or to monitor. Telephones shall be recess mounted in the elevator car before shipment from the factory, with stainless steel plate construction.
3. Installation must comply with ADAAG requirements for elevator emergency phone.
4. A Fire alarm telephone jack shall be provided by Telephone Contractor and flush mounted for use with the fire fighter portable phone. "Fire Emergency Phone" shall be engraved on the front, and a call LED shall be provided.

B. Products

1. Acceptable manufacturers are:
 - a) Hospital and non-hospital building emergency telephone - Gai-Tronics Corporation smart emergency telephone, Model 297-SL, flush mounted.
 - b) Fire alarm telephone jack – shall match the building fire alarm system.
 - c) Approved Equivalent
2. CAT 6A Approved Cables:
 - a) Siemon – Approved UAB Standard
 - Plenum Part # 9U6P4-A5-07-R1A
 - Non-Plenum Part # 9U6R4-A5-07-R1A

CAT 6A Approved Equivalent Cables:

- b) Hitachi
 - Plenum Part # 30303-8-GR3
 - Non-Plenum Part # 30304-8-GR3
- c) Berk-Tek
 - Plenum Part # 11083158
 - Non-Plenum Part # 11085549
- d) General Cable
 - Plenum Part # 7141853
 - Non-Plenum Part # 7133853
- e) Cables installed in slab or under slab considered a “Wet” Condition cable, use OSP-Indoor/Outdoor-I/O type cable.
 - Berk-Tek PT.#11094458-OSP/IO
 - Hitachi PT.#30323-8-BK-3- Plenum/IO

C. Execution

1. The Elevator Contractor shall supply and install emergency telephone in cab and provide two (2) pairs of communication cables from phone to an interface junction box (by the Elevator Contractor) located in Elevator Equipment Room or other designated location. The Elevator Contractor shall connect one (1) pair to the elevator telephone and identify in the interface junction box, and mark the other pair as "spare". The same applies to the Fire alarm telephone jack, except that the travel cables shall be compatible with the building fire alarm system.
2. The General Contractor shall provide one (1) 4 CAT 6A Data Cable from the emergency telephone interface junction box to the nearest communication backboard, and extend the wiring from the fire alarm interface junction box to the fire alarm wiring.
3. UAB Communications will provide the final communication terminations.

Revision Request Form - Electrical Construction Standards

Date: _____

Requestor: _____ Department/Consultant: _____

Project Number & Name: _____

EXISTING CONVEYING STANDARD

Section Number & Name: _____

Section Revision Number: _____ Section Paragraph: _____

(ENTER CURENT SECTION LANGUAGE BELOW)

REQUESTED REVISION REQUEST

(ENTER REVISION SECTION LANGUAGE BELOW)- Identify if request will be permanent to standards or for the referenced project.

JUSTIFICATION FOR REVISION

FOR UNIVERSITY OF ALABAMA AT BIRMINGHAM USE ONLY

UAB Staff Requestor: _____

Authorized UAB Approval Personnel: _____ Date: _____

Status: _____ Rejected _____ Accepted

_____ Revise and Resubmit (see attachment)