CHANGES TO DIVISION 14:

<table>
<thead>
<tr>
<th>REVISION DATE</th>
<th>SUMMARY OF CHANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>01AUG11</td>
<td>Schindler added to elevator supplier list (Page 14.1)</td>
</tr>
<tr>
<td>01AUG11</td>
<td>Elevator door finish, hydraulic power unit description (Page 14.2)</td>
</tr>
<tr>
<td>15FEB12</td>
<td>Acceptable Elevator Suppliers (14.1)</td>
</tr>
<tr>
<td>05MAR12</td>
<td>Acceptable Elevator Suppliers (14.1)</td>
</tr>
</tbody>
</table>

DIVISION 14: TABLE OF CONTENTS

Elevators ................................................................................................................... ............ 14.1
Elevators

1. Acceptable Elevator Suppliers:
   - Kone, Monospace platform
   - Otis, Gen2 system
   - Schindler
   - Thyssen Krupp

2. Work Standard According to Current Regulatory Agencies

   Elevators are to be designed and installed in accordance with the latest edition of the Safety Code for Elevators and Escalators (ANSI/ASME A17.1), the National Electrical Code, OSHA, ADA and/or such state and local elevator codes as may be applicable.

   The BYU elevator crew is to be part of the design concept of all elevators on campus.

   Approval is required by the BYU Elevator crew prior to design or remodel of a facility.

3. Use of Elevator for Temporary Service

   The elevator shall not be used for temporary service or for any purpose prior to completion and acceptance by the Owner unless written approval of the elevator contractor and owner has been obtained.

4. Quantity

   All new buildings will require a minimum of two elevators. One elevator may be approved with written permission from Brigham Young University.

5. Type

   a. Machine room-less;
   b. Traction; and
   c. Hydraulic type elevators will not be allowed without written permission.

6. The elevator cab size for one elevator in a building should be sized to allow 4’ x 8’ sheet of plywood. See detail below. Elevators should have 94” high ceilings. This elevator may be a passenger elevator but can also be used for freight, furniture, etc. Some buildings may require larger elevators depending on program requirements.
7. Location

Elevators shall be grouped together to allow passenger use if for any reason one elevator is down. See details below for sample details

**Side by Side Option**

**Across Hallway Option**
8. Maintenance Service

The elevator contractor shall furnish maintenance and call back service for a period of twelve months on each elevator after it is completed and placed into operation. This service will consist of monthly examinations of the equipment, inspections, adjustments, lubrication, cleaning, supplies, and parts to keep the equipment in proper operation, except such adjustments, parts, or repairs made necessary by abuse, misuse, or any other causes beyond the control of the elevator contractor. All work will be done by trained employees of the elevator installer during regular working hours of the trade. Service personnel must contact BYU elevator personnel prior to performing maintenance.

9. Prints, Manuals, and Equipment

a. Supply two physical complete sets of as-built drawings and O&M manuals of the actual elevator installation. No general purpose documentation is acceptable.

b. In addition to the physical copies, one copy of all the information will be provided in electronic format. This copy shall include a list of suggested spare parts with ordering information.

c. Supply all diagnostic service and adjustment tools and other accessories as required for the Owner's maintenance and service program. This is to include the training in the use of the equipment.

d. A comprehensive list of power requirements, wiring size, ground and neutral specifications, motor specification, and other requirements needed before or during construction.

e. O&M manuals and service tools, diagnostic equipment and accessories will be provided at the beginning of the installation unless the equipment is mounted to the controller or other component

10. Telephone Instrument

a. The contractor is to provide a cable pair to the elevator car terminating in the telephone enclosure.

b. The telephone instrument is supplied and installed by the contractor

11. Elevator monitoring system

a. An Ethernet drop/jack will be provided adjacent to the elevator controller

b. The BYU Elevator Crew will be consulted for information concerning monitoring requirements for specific facilities on campus
12. Security
   a. Provide two additional twisted/shielded pairs in the traveling cable for future security systems.
   b. BYU electric/security shop to provide approvals for security

13. Miscellaneous Work Not Performed by Elevator Supplier
   a. Pit lights with switch, duplex outlet are to be by the contractor.
   b. All remodels are to be done in accordance with the most current codes

14. The elevator cab size for one elevator in a building should have minimum dimensions of 68” wide by 97” deep by 96” high. This elevator may be a passenger elevator but can also be used for freight, furniture, etc. Some buildings may require larger elevators depending on program requirements.

15. Elevator Cab to Include:
   a. Walls: Plastic laminate (to be selected by BYU Interior Designer) flame and smoke index must be provided and must meet applicable codes and standards;
   b. Canopy: Baked enamel;
   c. Front Transom and Swing Return: Stainless steel. All Car Operating Panels (COP) must be a swing return type;
   d. Doors: Stainless steel;
   e. Ceiling: Plain type;
   f. Lighting: Fluorescent, T-8 lamps with electronic ballasts. Unless specified in the bid package;
   g. Sill: Aluminum;
   h. Handrails: Located on three sides; and
   i. All traction elevators will have a Hollister Rope Gripper installed.

16. Hydraulic Power Unit: Shall be compactly and neatly designed with all components combined in a self-contained unit; structural steel outer base with tank supports; controller compartment with cover; metal drip pan; hydraulic control valve. The controller for the hydraulic unit shall not be mounted on the oil tank whenever possible. An external oil cooling fan will be installed. Maxton over speed valve shall be installed.

17. Door Leading Edge: Consist of Pana Forty Plus or Microscan D200.

18. Hall Position Indicator: A digital position indicator shall be provided on the main level. Unless specified otherwise in the bid package.

19. Car Flooring: Furnished and installed by owner unless otherwise indicated. The Elevator supplier is to include a sub floor ready for the installation of the final covering.

20. Pit Floor: Shall have a smooth and sealed finish.

21. Traction Elevators: Shall be AC variable voltage, variable frequency solid state controller and motor power supply.
22. Door Hangers and Tracks: The tracks and hangers shall be of the removable type for ease of replacement. Tracks formed on the headers are not acceptable.

23. Earthquake Protection: Compliance with ANSI A17.1 (Zone 3+). Draka earthquake sensors will not be accepted unless mounted to a concrete wall or floor.

24. Elevator machine rooms will be furnished with HVAC from the building or from a stand-alone unit.

25. Pit ladder to be provided by elevator contractor.