Planning Guide for Residential Elevators

ASME A17.1-2000 Section 5.3

January 5, 2010

HOYT ELEVATOR
by Plum Island Design

Elevating your quality of life

Introduction

This is a guide only to assist architects, contractors, home owners and elevator professionals in planning for a home elevator that meets the requirements of ASME A17.1-2000 Section 5.3.

Please contact the codes authority having jurisdiction in the area where the elevator will be installed and become familiar with all the requirements governing the installation and use of elevators in private residences.

About Hoyt Elevator:

After four years of extensive research and development, the Hoyt Elevator was finally introduced to the market in 2009 in response to a growing need for affordable accessibility in the home.

The only all-inclusive home elevator sold in North America, Hoyt Elevator users benefit from:

- Receiving all hoistway doors with each order
- A standard automatic interior door for each unit
- More affordable installation, as neither a pit nor mechanical room is needed
- Simple installation for interior and exterior application, thanks to a unique free-standing design

Hoyt Elevator is manufactured by Plum Island Design, a company committed to delivering a high-quality product every installer, inspector and home owner may comfortably rely on... on time, every time.

Important Notice:

Before beginning actual construction, be sure to receive application drawings customized with specifications and dimensions for your specific project. To contact Hoyt Elevator, please call toll-free at (877) 372-8685, or visit www.hoytelevator.com for more information.

Elevator configurations and dimensions are in accordance with Hoyt Elevator's interpretation of the standards set forth by ASME A17.1-2000 Section 5.3. Please consult Hoyt Elevator for more specific information pertaining to your project, including any deviation between referenced standards and those of any local codes or laws.

The dimensions and specifications in this guide are subject to constant change (without notice) due to product enhancements and continually evolving codes and product applications.

Elevator electrical requirements are as follows:

- (1) 220VAC, 20 amp, 1ph servicing (1) three-pole lockable fused disconnect (with cover panel) recessed in wall adjacent to main floor elevator entrance with (4) 12-guage wires (plus ground) leading to shaft ceiling center.
- (1) 115VAC, 15 amp GFI outlet, shaft ceiling center
- Pullchain work light, shaft ceiling center
- (1) telephone line, shaft ceiling center

Features & Specifications

This elevator meets the requirements of ASME A17.1-2000 Section 5.3 for residential elevator.

Features:

In every Hoyt Elevator package you receive exterior hoistway doors, frames and hardware. The steel door frames are specially manufactured to fasten directly to the hoistway to prevent the problem most often experienced in Home Elevators of interlock (door sensor) misalignment as the building frame contracts and/or expands. The door frames are configured for ¾" clearance minimums between door and platform to ensure acceptance in many municipalities, which are now mandating stricter safety codes. The doors are 36"x80" 6 panel steel 90 minute fire doors with self-closing hinges, electro-mechanical interlocks and exterior lever knobs.

General:

- Travel rate – 35 fpm feet/minute
- Maximum rise – 30' (four stops)
- Payload capacity – 550-750 lbs.
- Total unit weight – 2000 lbs.

Mechanical:

- 600 lb. counterweight (steel plates)
- Aluminum base, guide rails, and cap
- Motor – 1hp, 3ph, TEFC
- Gear reducer
- Drive & counterweight shafts fully keyed
- Chain sprockets
- Chain
- Motor brake
- Emergency motor

Car:

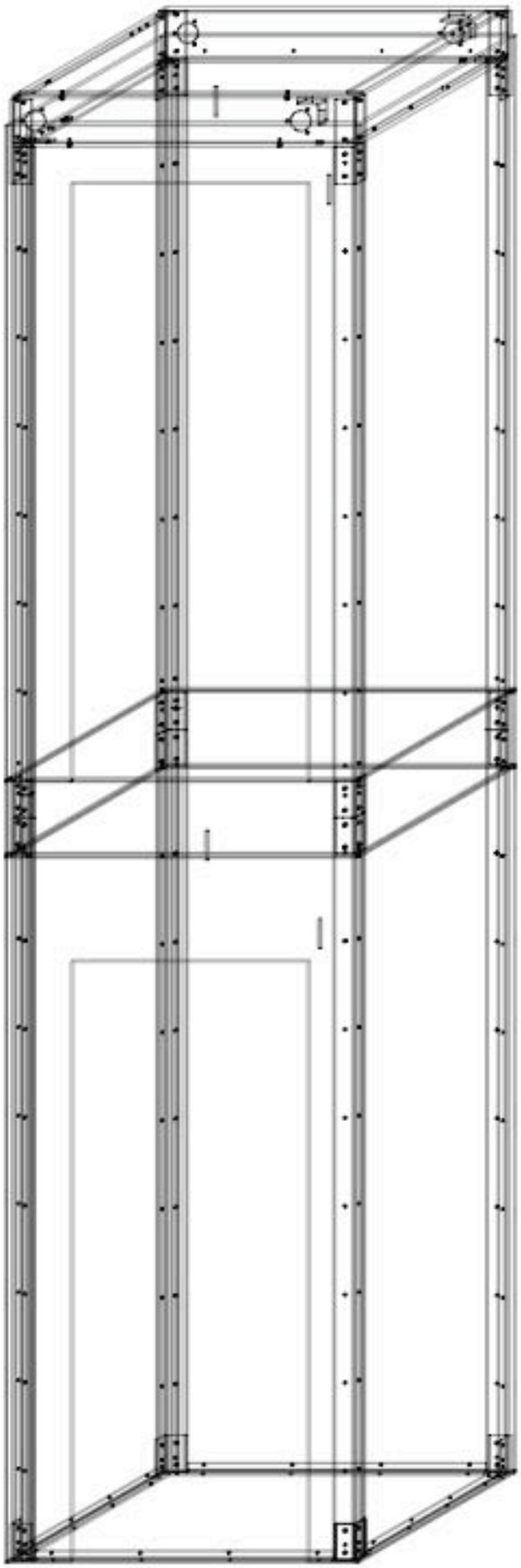
- 40" x 46" clear floor space
- Interior natural maple panel finish
- White melamine ceiling
- Ash handrails
- Aluminum floor and cap
- Car telephone
- Automatic car lighting
- Illuminated control buttons on plate brass
- Automatic interior door operator

Controls:

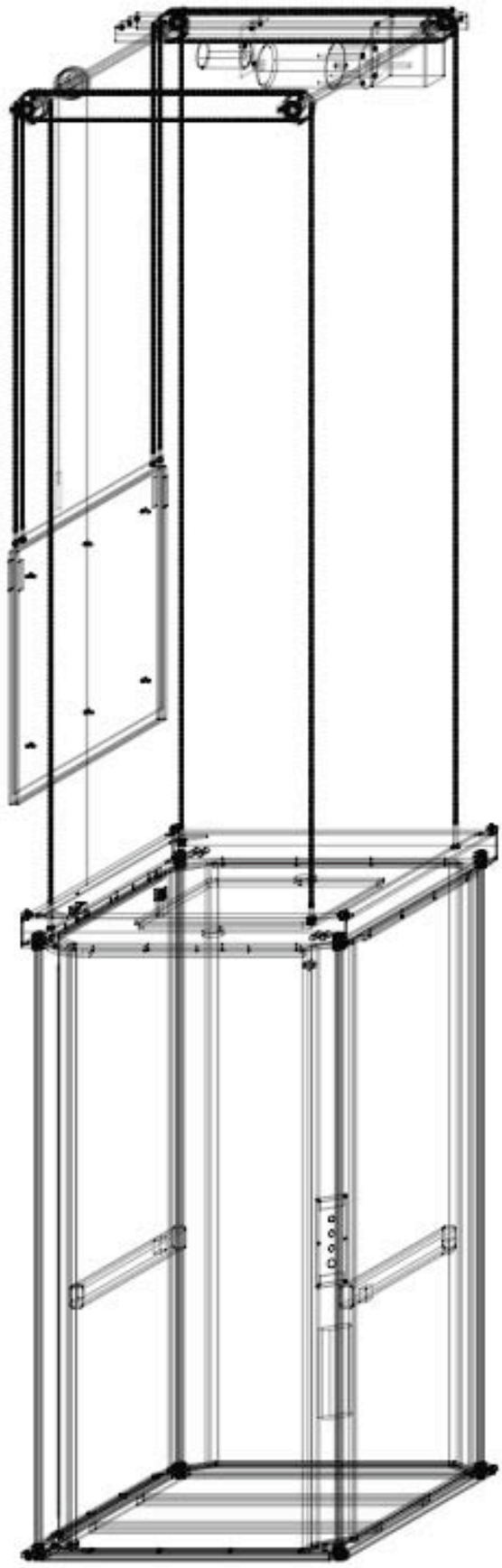
- Low voltage power supply
- House power supply: (1) secondary 220VAC, 20 amp lockable fused disconnect
- Programmable logic controller (PLC)
- Emergency power batteries
- Emergency motor battery
- Car and shaft door sensors
- Shaft door electromechanical locks
- Electric motor drive
- (1) Telephone line

Options:

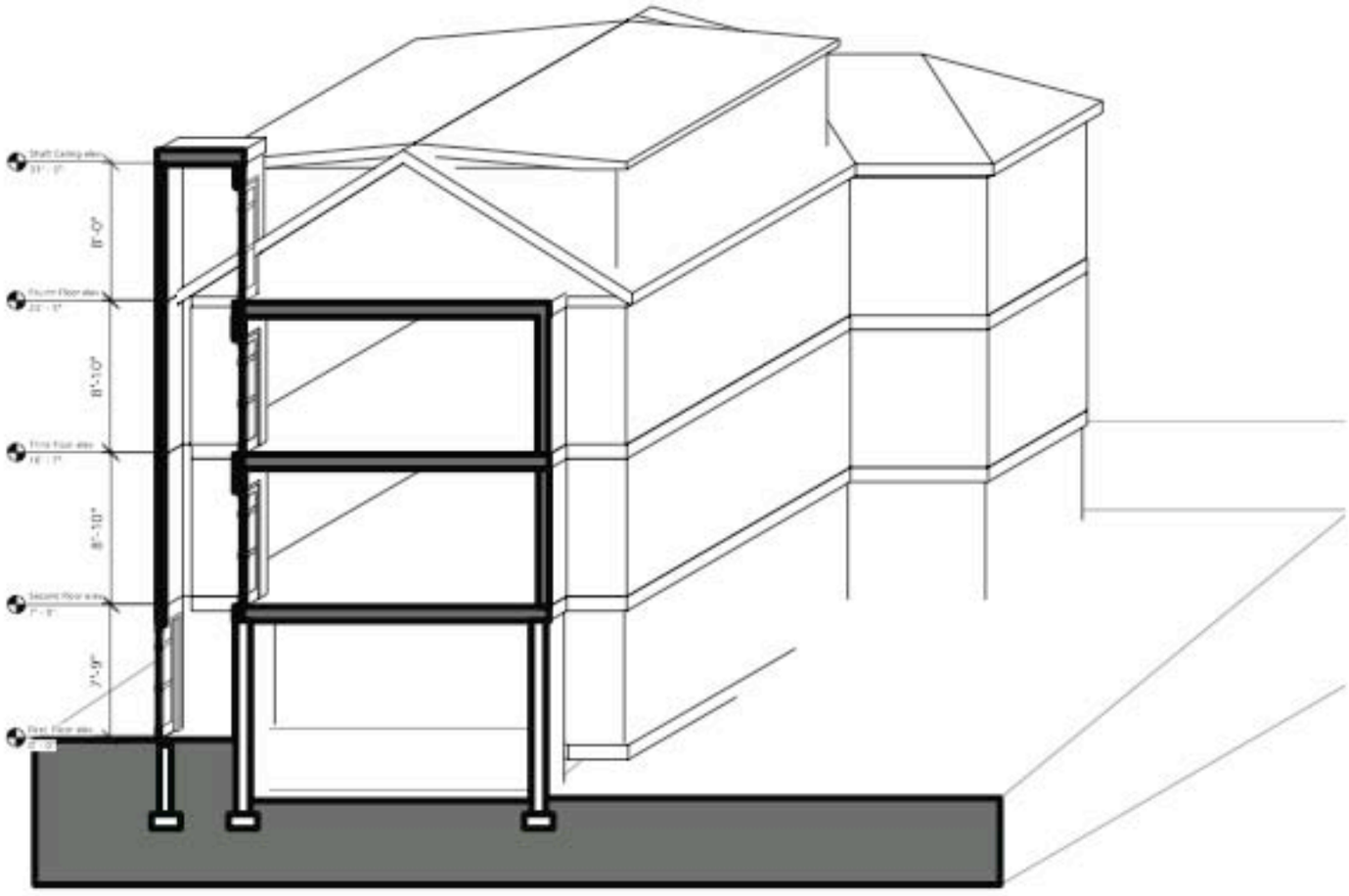
- Second automatic interior car door (opposite or adjacent)
- Three or four level access (30' max lift height)
- Upgrade to 750 lb. payload capacity
- Automatic hoistway door operators
- Prefabricated insulated hoistway panels (exterior installation)
- Car heater (exterior installation)
- Interior natural cherry finish



Hoistway Frame

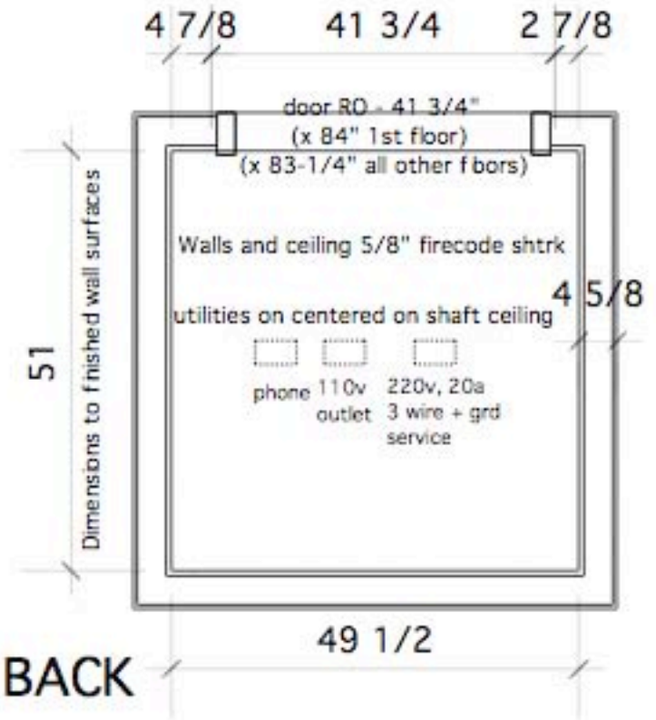


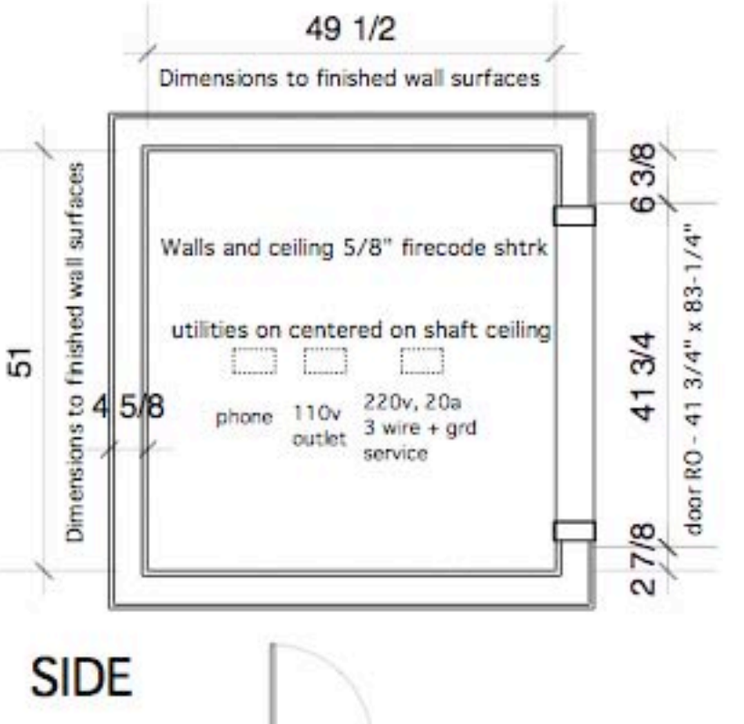
Car & Drive System



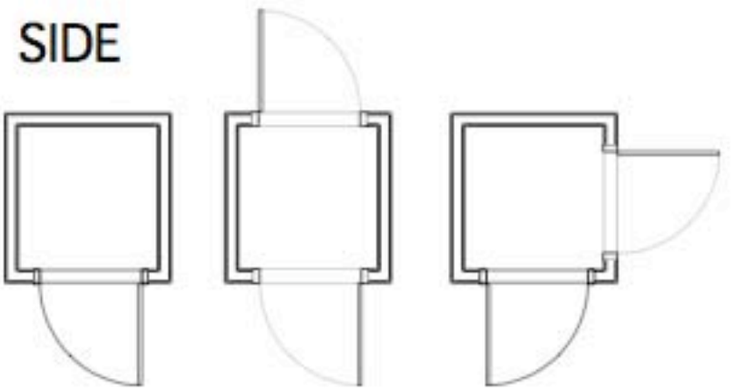
Section of Exterior Installation

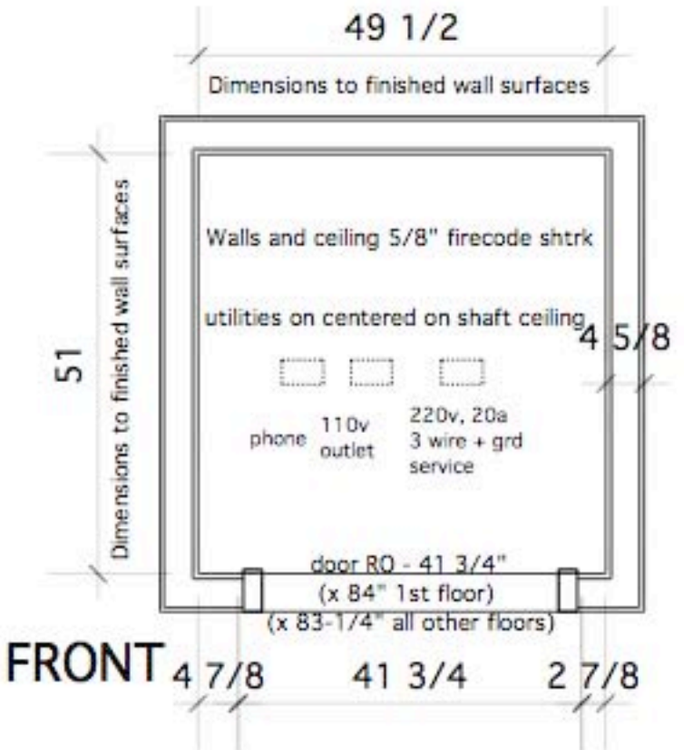
Section of Interior Installation





Car Door Configurations





Notes: Shaft clearances shown are minimums

Door swing can be in either direction full open is 100 degrees from closed

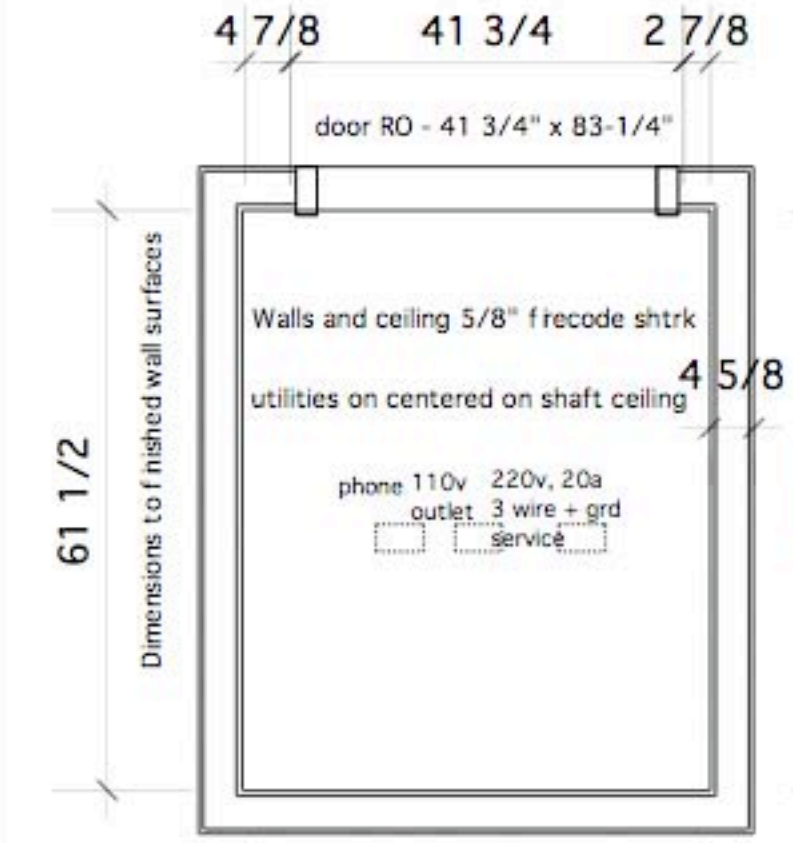
"FRONT" is normally the lower level opening

Hall stations s/b centered 40" above floor, knob side of door

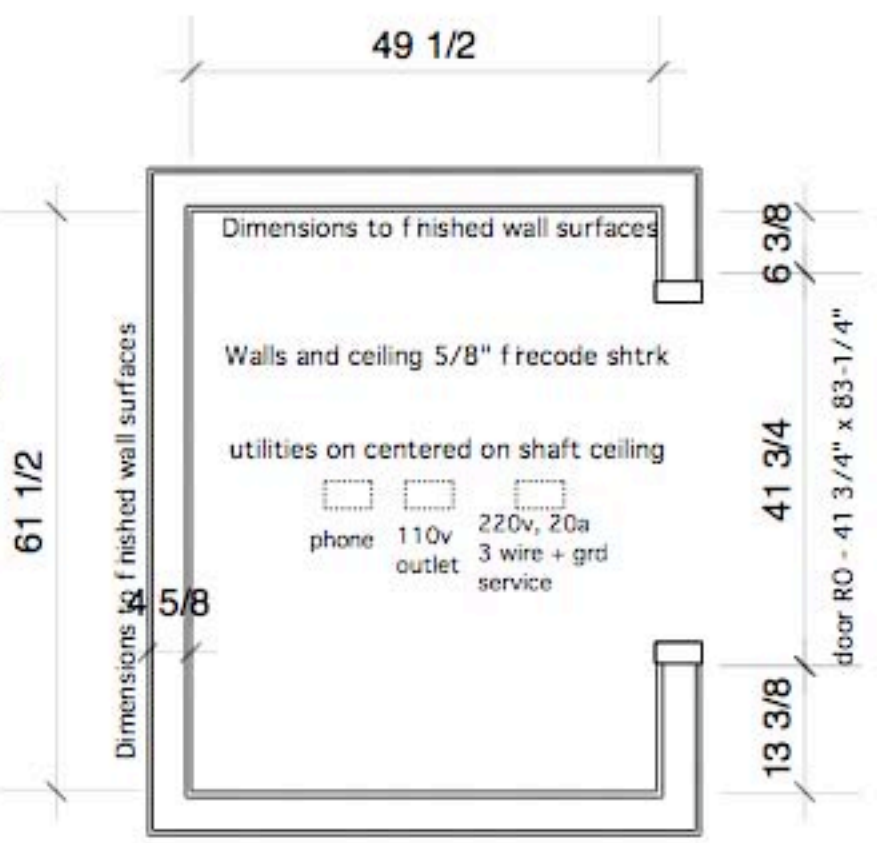
Shaft finishedceiling height must be MINIMUM 98" above upper level subfloor

Phone, 220V-20A electric, and 115V-15A service boxes centered on shaft ceiling

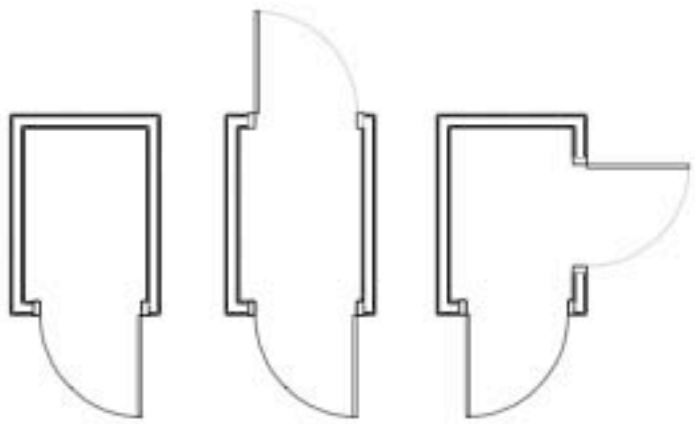
Hoistway Plans - Model #48

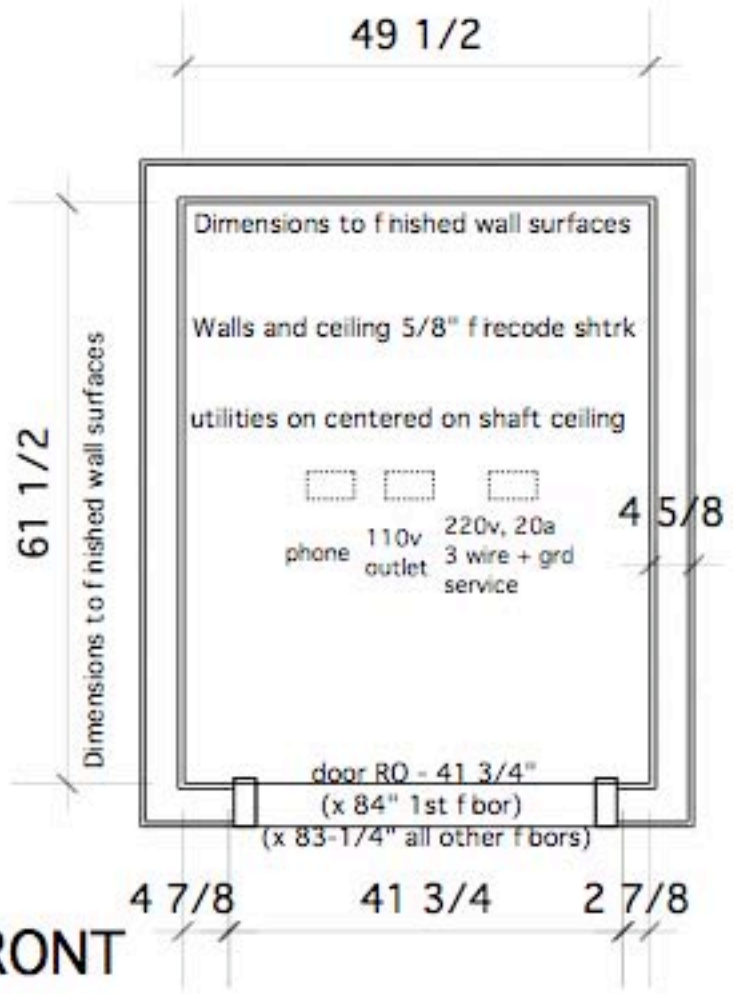


BACK



SIDE





FRONT

Notes: Shaft clearances shown are minimums -

Door swing can be in either direction - full open is 100 degrees from closed

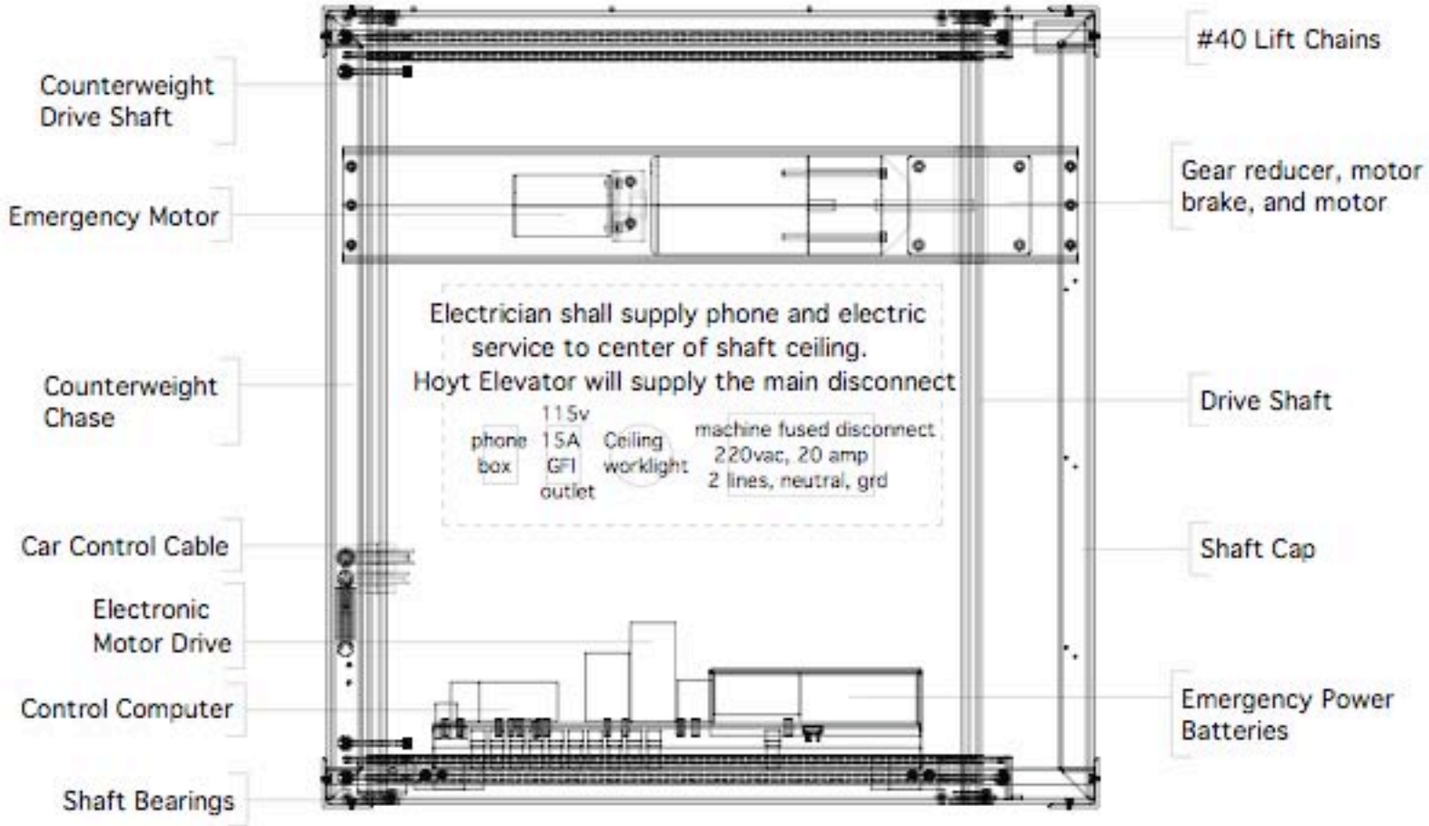
"FRONT" is normally the lower level opening -

Hall stations s/b centered 40" above f bor, knob side of door

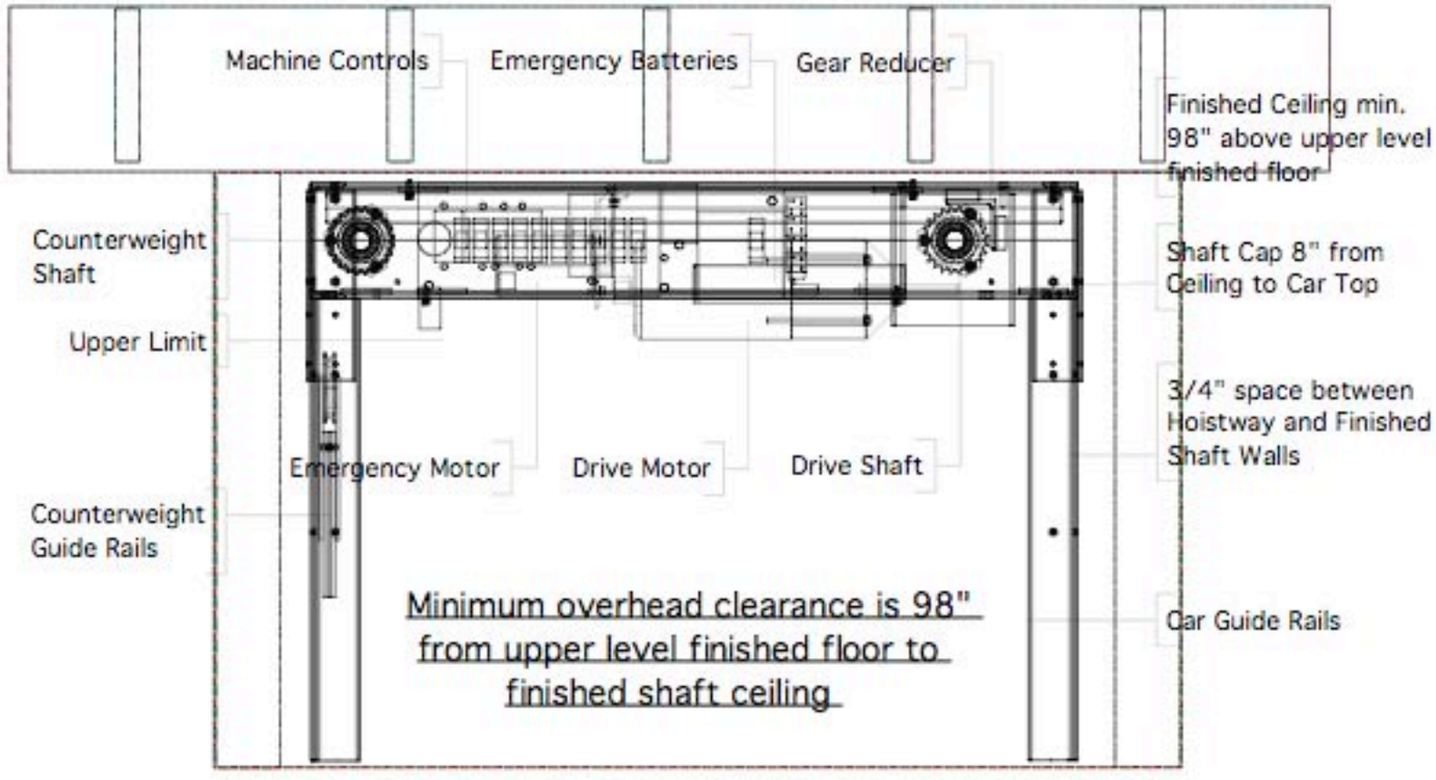
Shaft f inishedceiling height must be MINIMUM 98" above upper level subf bor

Phone, 220V-20A electric, and 115V-15A service boxes centered on shaft ceiling

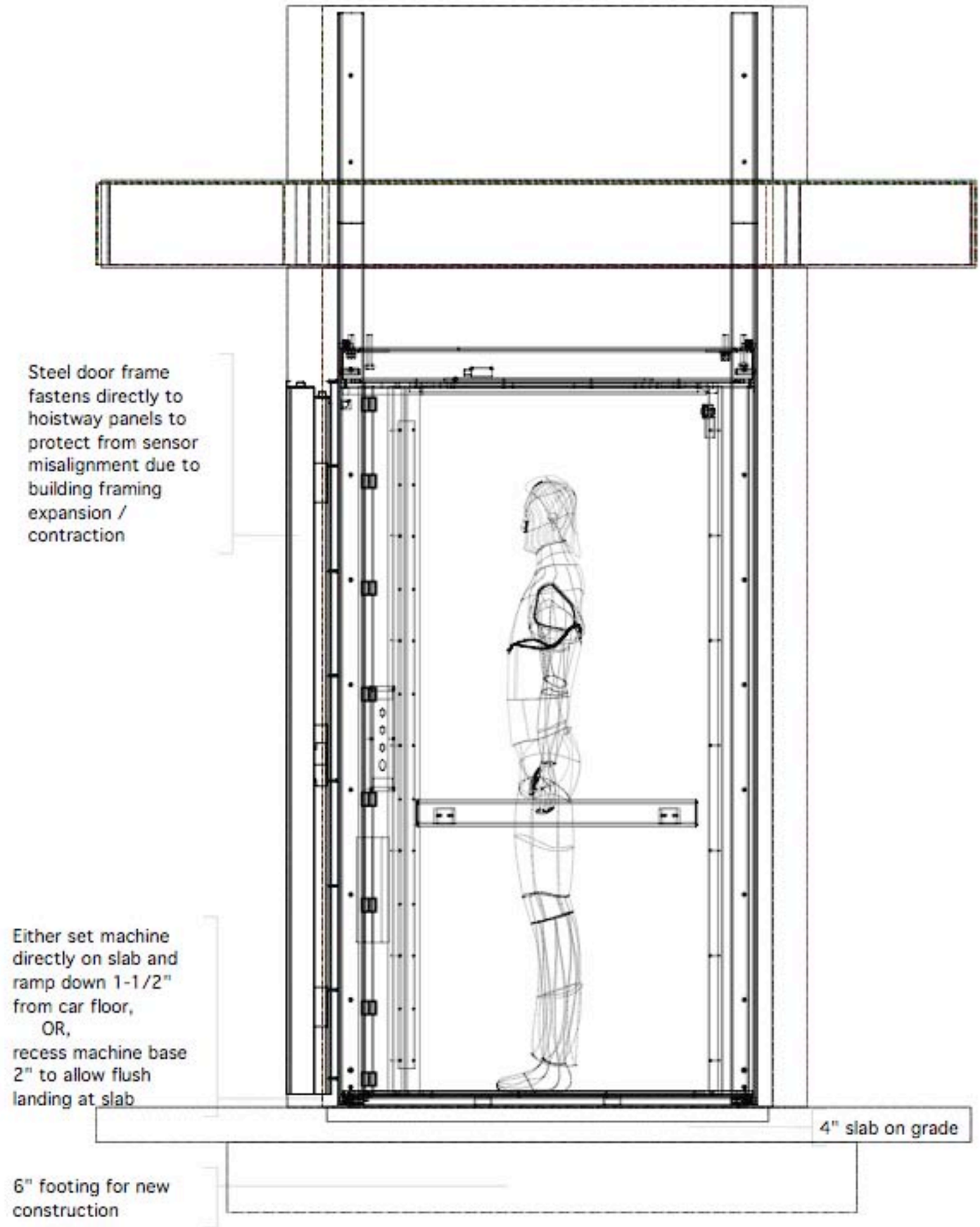
Hoistway Plans - Model #60



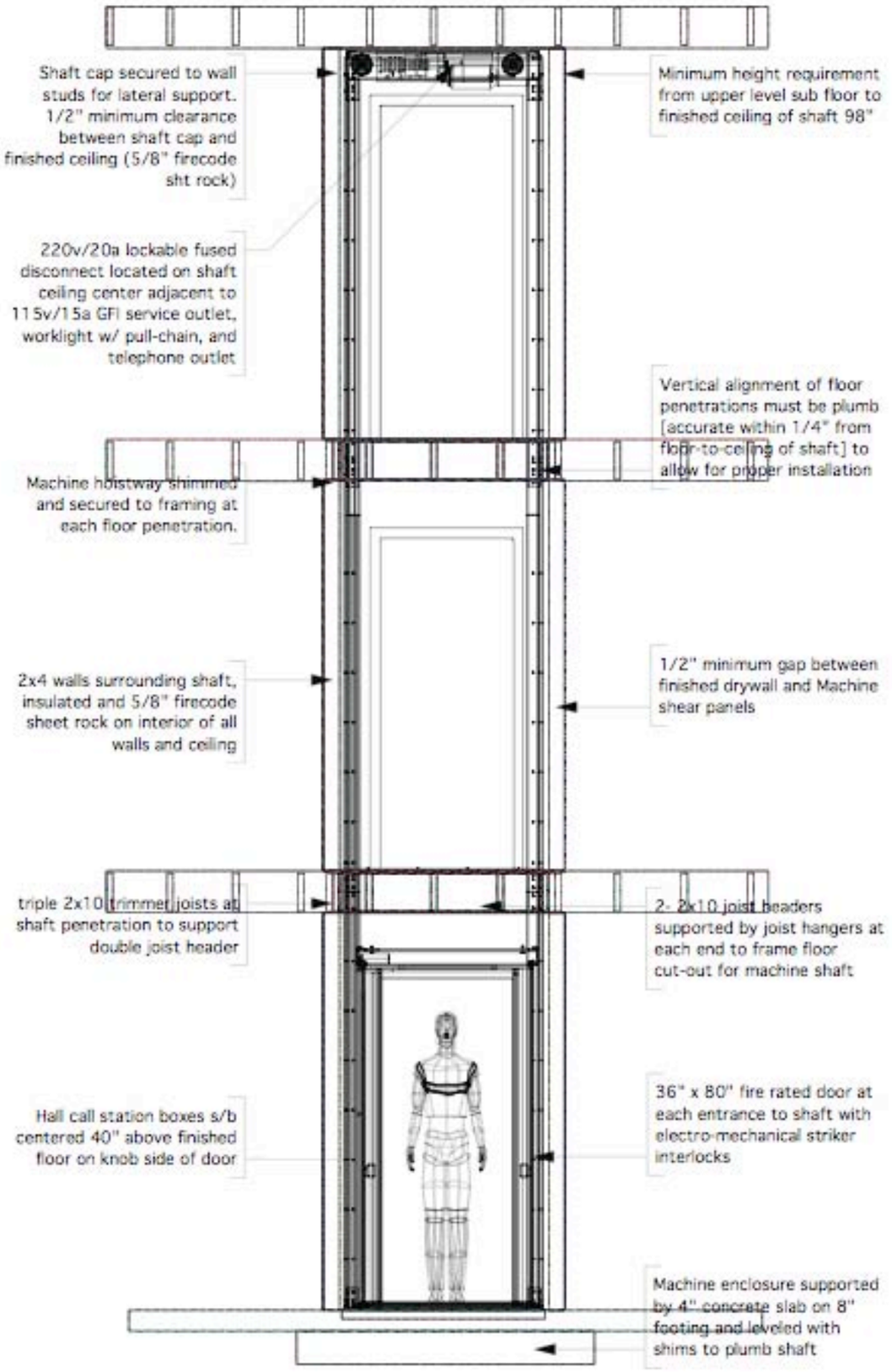
Plan View of Hoistway Cap



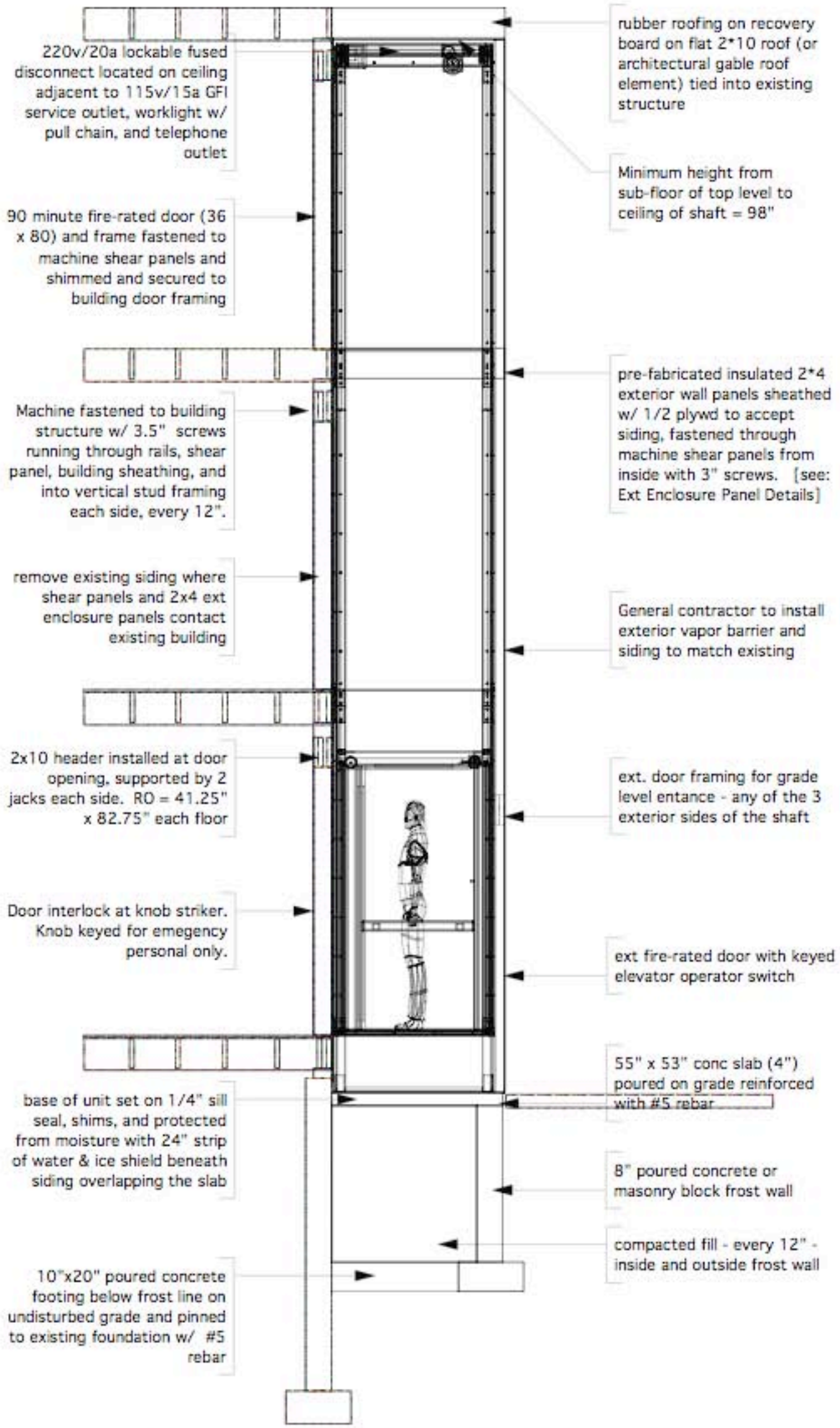
Section Through Top of Hoistway



Section thru Floor w/ No Pit Needed



Interior Installation Configuration



Exterior Installation Configuration

To download a free brochure please visit **www.hoytelevator.com**

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