



# Design and Planning Guide

**Tiger Lift® Elevators**



**ELEVATOR CONCEPTS LTD**

18720 Krause  
Riverview, MI 48192  
734-246-4700  
734-246-2547 (fax)  
[www.elevatorconcepts.com](http://www.elevatorconcepts.com)

# TABLE OF CONTENTS

	<b>PAGE</b>
Introduction .....	1
Application Guidelines.....	2
Tiger Lift® Product Line	
Residential Series	
Type X3R – Direct Hydraulic .....	4
Type X5R – Roped Hydraulic Elevator.....	4
Commercial Series	
Type X3C – Commercial Direct Hydraulic .....	4
Type X5C – Commercial Roped Hydraulic Elevator.....	4
Type I - Basement Traction Elevator.....	4
Type IV – Overhead Traction Elevator.....	5
Design and Performance Data.....	5
Tiger Lift® Cab Styles .....	6
Tiger Lift® Optional Equipment .....	7
Tiger Lift® General Specifications .....	8
LULA and Codes .....	9
Sample Plan Views .....	10

Elevator Concepts LTD continually improves its products. This specification is subject to change at the sole discretion of Elevator Concepts LTD. Installation must be done in accordance with manufacturer's published installation and operation instructions as furnished with equipment, and in compliance with all applicable codes. Elevator Concepts LTD assumes no liability for equipment improperly installed. Local Code May Restrict Some Design Parameters.

# DESIGN AND PLANNING GUIDE

**Tigerlift® Elevators**

**Revised 05/26/02**

---

Elevator Concepts' TIGER LIFT® series of elevators is designed to meet the need for small, high quality, and economical elevators in a variety of applications. This extensive and versatile product line can fit just about any site plan and budget. Several platforms are designed to accommodate modifications and allow for extensive customizing. This Design and Planning Guide has been prepared to help you choose the right TIGER LIFT® for your application.

Why choose a TIGER LIFT®? We know there are other elevator manufacturers that want your business. Here are several reasons why choosing the TIGER LIFT® line of small elevators is the best choice you can make:

## **WE'RE SPECIALISTS**

Elevator Concepts has been designing and manufacturing small elevators exclusively since 1986. We have the experience to manufacture cost competitive standard units as well as highly customized special units.

## **WE INSIST ON QUALITY**

We design our own equipment in house - you will not see copycat engineering in a TIGER LIFT®. Component parts utilized in our elevators come only from the finest suppliers in the industry. We are not the least expensive elevator manufacturer; we are the highest quality manufacturer. While price is important, you won't be thinking about the bargain you got when you're having trouble with the equipment.

## **WE GIVE YOU MORE CHOICES**

There are more options available for TIGER LIFT® elevators than any other small elevator product line. If you need an option or configuration that you don't see in this guide, we'll be happy to investigate the possibilities of supplying it. Customer suggestions play an important role in our ongoing process of improvement. Custom designs are our specialty.

## **WE DELIVER GREAT VALUE**

We know that there are alternatives when looking for access solutions. You'll find that dollar for dollar, a TIGER LIFT® will provide more use than other types of access devices. Most people prefer the security and comfort of a fully enclosed elevator car over an open platform lift. The investment made in a fully enclosed elevator will result in more usage than a similar investment in a platform lift.

## **WE DELIVER GREAT SERVICE**

We build the best elevator possible at the best possible price. If you have any problem with a TIGER LIFT®, it is our problem too. We support our products - our commitment is just beginning when the elevator leaves our plant. Our goal is to deliver a complete elevator that installs easily and functions properly. We meet that goal the vast majority of the time, but if we fail in any respect, we will do whatever it takes to satisfy you. No questions asked.



**ELEVATOR CONCEPTS LTD**

18720 Krause  
Riverview, MI 48192  
734-246-4700 / 734-246-2547 (fax)  
[www.elevatorconcepts.com](http://www.elevatorconcepts.com)

*Manufacturers of the finest small  
elevators since 1986*

## Application Guidelines

With so many models to choose from, it may seem difficult at first to make the best choice for a particular application. As with any guideline, this brief explanation is not intended to cover every single design application question, but rather be a guide. In some cases a standard model will not fit the application and our team of engineers will need to design a custom elevator to fit your architectural specifications. Whenever you have any application questions, give us a call at (734) 246-4700.

The first question to answer when selecting an elevator is "What exactly do we expect the elevator to accomplish for us?" This can be broken down into several more specific questions, which are appropriate for all types of elevators:

- How much weight must it lift?
- How fast should it lift it?
- How many landings will be served?
- How large does the cab need to be? (How big are the things going on the elevator?)
- Are automatic doors or gates required?

Next, we have to answer questions about the building structure that will support the elevator:

- What size is the hoistway?
- What is the wall construction?
- How deep is the pit?
- How high is the overhead?
- What kind of power is available?
- Is a machine room available?
- Is an overhead machine space available?
- How many car openings are required to suit the floor plan?
- Is underground drilling a problem?

These answers will usually narrow the available choices down. To help determine the suitability each type of elevator, we offer the following guidelines.

### **Hydraulic Machines**

Hydraulic machines have gained wide acceptance in all applications, from residential to heavy-duty freight. In the TIGER LIFT line, we offer both direct and roped hydraulic. Direct hydraulics are less expensive, but most require a well hole for the hydraulic cylinder. For applications with travel 12' or less, the well hole is generally not a problem, and the direct hydraulic is the most cost effective. For applications exceeding 12', or where site conditions preclude a well hole, the roped hydraulic is usually the most cost effective, as the added expense of the roped mechanism is usually less expensive than providing the well hole. Hydraulic elevators are fail-safe with regard to electrical system failure. Ride quality is excellent thanks to modern control valves. Submersible pumps make for very quiet operation, equivalent to a pool filter pump. Hydraulic machines require 220 power, a separate machine space, and at least one load bearing hoistway wall. While a hydraulic requires a lot of electrical power to go up, it requires none at all to go down. This inherent characteristic makes it very easy to lower a hydraulic elevator during a power failure.

### **Traction Machines**

Traction machines are the most expensive, all other things being equal. Traction machines are much more efficient, requiring only half the electrical power of a drum or hydraulic. TIGER LIFT traction elevators run on 115 volt current. Other advantages include no separate machine room and no need for heavy structural walls. In some applications, the cost to provide 220 power, or a machine room, or structural walls outweighs the additional cost of the traction unit. Traction elevators are also fail-safe with regard to electrical system failure.

**Drum Machines**

Drum machines should be limited to residential applications, where budget is a primary concern. Operational noise tends to be higher than other units, and the ride quality, especially starting and stopping is generally inferior to other drive systems. Drum machines require a structural machine room floor or overhead beams to sit on, whereas other models have all the load transmitted to the pit floor. There is an inherent safety concern with drum drives. If the motor contactor welds shut and all electrical safety devices fail, the machine is capable of pulling the car into the overhead, possibly causing damage to the elevator. Drum machines are also the most inefficient, and require the most electric power to operate for a given capacity - 220 volt power is required.

The majority of installations are best served by a hydraulic machine in terms of both performance and price. As a general rule, a direct hydraulic is most cost effective for elevators with less than 12' of travel, and a roped hydraulic is most cost effective for elevators over 12 feet. Traction machines should be used where site conditions make the installation of a hydraulic difficult or expensive. Drum machines should be used only where price is the primary consideration.

While each type of drive requires different types of maintenance and safety tests, overall cost of maintenance of all types tends to be fairly equal over the long run. Elevator Concepts LTD recommends maintenance inspections on a quarterly basis as a minimum, regardless of the type of elevator. Local code may require a different frequency. For cars with a safety, we recommend a no load test every year, and a full load test every 5 years. For cars with buried hydraulic equipment, we recommend that the cylinder be tested every year. Hydraulic pressure relief valves should also be tested every year.

It is not possible to depict every possible configuration in a planning guide of this type. Hoistway sizes, car sizes and landing configurations are available in a wide range for each type of elevator. Custom sizes and configurations to overcome existing site limitations are also possible.

Codes and designs are subject to change without notice. Before committing to design or construction, consult with your elevator contractor, or contact our engineering department.

## Tiger Lift® Product Line

Since 1986 Elevator Concepts LTD has designed and manufactured high quality TIGER LIFT® elevators specifically for the residential and access market. While we have an extensive line of standard products, we specialize in custom designed elevators to suit unique structural or aesthetic requirement. TIGER LIFT® elevators are engineered and manufactured to the highest standards, and incorporate safety features and heavy-duty construction not found in other residential elevators.

### RESIDENTIAL SERIES

The pre-engineered residential series offers the same dependability and innovative designs of our commercial elevators, but are designed for the less rigorous demands of residential duty to offer cost savings. Primary differences include lighter gauge frame components, lower capacity and speeds, and restrictions on some options. Our residence elevators should not be confused with light duty units, which typically have an uni-channel guide rail with trolley, and require a 3rd stabilizer rail.

#### **TYPE X3R**

This is a direct hydraulic model incorporating our lightweight frame. It features a 750# capacity, submersible screw pump unit, 28 FPM single speed valve, leveling/anticreep operation, and several cab sizes. A partial well hole is required for the hydraulic cylinder. Recommended for 10' travel or less, but can be used up to 15'. Many options are available.

#### **TYPE X5R**

This is a roped hydraulic model, incorporating our lightweight frame, instantaneous broken rope safety, and a hydraulic cylinder fitted with a rope sheave and follower guides. It has performance characteristics similar to the Type X3R, but does not require a well hole for the hydraulic cylinder. Travel up to 50'.

### COMMERCIAL SERIES

Our commercial elevators are designed to withstand the rigors of the public environment. The X3C and X5C pre-engineered models are specifically designed to meet the requirement of the ASME A17.1 Section 25 "LULA" code when equipped with the proper options. Our commercial series offers rugged durable unit design to carry maximum loads of 1400 lbs. The X3C and X5C are standard production units and should be specified when possible.

#### **TYPE X3C – DIRECT HYDRAULIC ELEVATOR**

This is a direct hydraulic model incorporating our roll formed frame. It features a 1400# capacity, submersible screw pump unit, 28 FPM single speed valve, leveling/anticreep operation, and several cab sizes. A partial well hole is required for the hydraulic cylinder. Recommended for 10' travel or less, but can be used up to 15'.

#### **TYPE X5C – ROPED HYDRAULIC ELEVATOR**

This is a roped hydraulic version of our X3R roll formed frame, and includes instantaneous broken rope safety, and a hydraulic cylinder fitted with rope sheave and follower guides. It has performance characteristics similar to the Type X3R, but does not require a well hole for the hydraulic cylinder. Travel up to 50', but typically limited to 25' by LULA code.

#### **TYPE I – BASEMENT TRACTION ELEVATOR**

This is the original basement traction TIGER LIFT®. It incorporates many innovative design features that make it well suited for many situations, especially retrofit applications. Among its unique features:

- Unique structural tower arrangement for guide rails and machine, allowing for very little loading on hoistway walls - load is transmitted to pit slab.
- Governor operated overspeed safety.
- 3.3.8 - 8x19 hoist cables.
- Machine and governor located at bottom of hoistway, eliminating the need for penthouses, ladders or other elaborate means of equipment access.
- All equipment is can be located within the hoistway; controller can be remotely located if desired.
- Requires only 20 amps of 115 VAC single phase current

## Design and Planning Guide

The TYPE I is the most expensive TIGER LIFT®, but the savings in building construction in many instances will more than make up the difference compared to a less expensive model. The TYPE I allow for many different cab configurations and equipment options.

**TYPE IV – OVERHEAD TRACTION ELEVATOR**

This is an overhead traction model, incorporating our tube frame design. It features:

- 850# capacity
- 30 FPM single speed AC machine supported by the rails.
- Instantaneous broken rope safety
- Two 3/8" hoist cables.

Due to the machine-supporting configuration of the rails for a TYPE IV, cab layout for this model is limited to front or front and rear gates only.

**Standard Design and Performance Data Summary**

	TIGER LIFT® ELEVATORS					
	X3R	X5R	X3C	X5C	TYPE I	TYPE IV
	Residential	Residential	Commercial	Commercial	Residential	Residential
Machine Type	Direct Hydro	Roped Hydro	Direct Hydro	Roped Hydro	Traction	Traction
Maximum Capacity	750#	750#	1400#	1400#	850#	850#
Static Capacity	3800#	3800#	7000#	7000#	7000#	7000#
Maximum Platform	36" x 54"	36" x 54"	42" x 60"	42" x 60"	36" x 60"	36" x 60"
Maximum Stops	3	6	3	6	8	8
Maximum Travel	18'	50'	15'	50'	50'	50'
Speed	28 FPM	28 FPM	28 FPM	28 FPM	32 FPM	35 FPM
Power Requirement	220 VAC	208 VAC	208 VAC	220 VAC	115 VAC	115 VAC
Minimum Pit	12"	12"	12"	12"	12"	12"
Minimum Overhead	8'	8'	9'	9'	9'	10'
Gross Pit Load	2000#	2000#	2800#	2800#	3500#	3500#
Gross Bracket Load	300#	300#	300#	300#	25#	25#
Rail Size	6#	6#	8#	8#	8#	8#
Maximum Car Gates	3	3	3	3	3	2
Scr Dc Drive	N/A	N/A	N/A	N/A	Optional	Optional
2 Speed Valve	Optional	Optional	Optional	Optional	N/A	N/A
Optional High Speed	50 FPM	50 FPM	50 FPM	50 FPM	N/A	N/A
Auto Doors/Gates	Optional	Optional	Optional	Optional	Optional	Optional
Sideslide Entrances	N/A	N/A	Optional	Optional	N/A	N/A

Elevator Concepts LTD continually improves its products. This specification is subject to change at the sole discretion of Elevator Concepts LTD. Installation must be done in accordance with manufacturer's published installation and operation instructions as furnished with equipment, and in compliance with all applicable codes. Elevator Concepts LTD assumes no liability for equipment improperly installed. Local Code May Restrict Some Design Parameters.

## TIGER LIFT® Cab Styles

Selecting the finished look of your elevator is one of the most important decisions you will make when choosing a TIGER LIFT® elevator. To assist in your decision, our designers have created standard cab packages featuring stylish, finished looks that easily fit any decorating need. We offer everything from durable and decorative laminate walls, to handcrafted recessed or raised hardwood panels. Each cab package includes such standard amenities as: finished laminate ceiling, recessed incandescent light fixtures, brushed aluminum handrails, stainless car panel and hall buttons, unfinished floor and manual accordion gates.

### The Liberty

Our popular LIBERTY package offers superior craftsmanship and durable building materials making this an economical and attractive elevator interior.

Type A: Cabs are constructed of ¾ melamine panels, offered in six decorative matte-finish surfaces.

Type B: Fabricated of high-pressure laminate applied to ¾ plywood core, available in a matte-finish solids, light and dark wood grains and a variety of decorative patterns.

Type C: Cabs feature decorative Formica® laminate applied to a unique, lightweight warp and crack resistant stress skin vacuum-formed panels. Wall panels are available in a variety of matte-finish solids, light and dark wood grains or decorative textured patterns.

### The Patriot

Our PATRIOT package offers the beauty of light or dark hardwood grain veneers applied to a ¾ plywood core for added stability. This high quality cab is available in select cherry, maple, mahogany, oak and walnut finishes.

### The Americana

The rich and warmth of hardwood is represented in our AMERICANA series. Distinctly handcrafted of recessed hardwood wall panels and fine-quality matching hardwood trim, the AMERICANA is available in natural, medium, dark or unfinished surfaces.

### The Heritage

Add elegance and sophistication to your décor with our HERITAGE package. Constructed of select raised hardwood panels with matching premium hardwood molding, the HERITAGE is available in choice five distinguishably beautiful finishes.

## TIGER LIFT® Gate Options

Each residential elevator comes equipped with a standard vinyl accordion gate. Our accordion gates are an attractive, affordable and safe way to protect elevator car openings. Choose your gate surface from one of the four standard vinyl laminate finishes or customize with hardwood veneer or clear acrylic panels, available at an additional cost.

Our accordion style gates feature solid panels joined with steel hinges and sealed with premium vinyl for a gate that completely closes the car opening and eliminates pinch hazards. Hanger assemblies of dual nylon rollers with ball bearings hubs provide easy manual operation. The extruded aluminum top track and lower guide pins keep the gate securely in position throughout its travel. Our optional power operator featuring a smooth, quiet linear screw drive and magnetic link provides safe and dependable automatic gate operation.

**Scissor Gate** - In keeping with the high quality of other components in our elevators, we use only heavy-duty "Bostwick" style scissor gates. Upright stiles every 3" provide rigidity not found in scissor gates having only a leading stile. Every stile has a 3-wheel truck, with roller bearings and urethane tires for smooth and easy action. Scissor gates are available in a variety of finishes, including painted steel, stainless steel or brass. Scissor gates are available for manual operation only.

**Side Slide Gates** - Our Side Slide gate is a multi-paneled cab door that turns and slides behind the side cab wall and out of the way, thus providing the widest possible door opening. The door panel system consists of roll-formed steel, solid wood or lightweight aluminum panels with vision windows. These panels are hinged with solid steel rods encapsulated in steel tubes. This system of tubes and panels covers the entire door opening. In fact, it covers the opening so completely that even a pencil won't fit between the panels. The Side Slide gate is available for manual operation as well as motorized.

## TIGER LIFT® Optional Equipment

Once the basic design has been determined, options can be added for upgrade in function and appearance. Some of our most popular options are described below.

**PLC Controller:** The controller is the “brain” of the elevator. There are two primary types of systems currently used to process the logic of the controller – relay and microprocessor. A relay is a very dependable device consisting of an electromagnet that opens and closes contacts, routing the logic to various circuits. A simple elevator with a few stops and manual door operation can be served well by a relay controller. Relays can also be used for more complex elevators, and in fact were until the 1980's. However, the number of relays required can make it difficult to troubleshoot should there ever be a problem. The advent of personal computers has made microprocessor technology affordable for many other fields. Elevator Concepts utilizes a special type of industrial computer called a Programmable Logic Controller – or PLC – to control the logic of more complex jobs. They are very dependable, compact, and simple to troubleshoot. PLC controllers are available for any elevator we make.

**2 Speed Valve:** Our standard 1 speed hydraulic control valve is designed for a comfortable ride and leveling accuracy for speeds up to 30 feet per minute. Starting in both directions is a gradual and smooth acceleration, while stopping is a little quicker in order to achieve leveling accuracy within ¼". With speeds over 30 feet per minute, the stop would be quite noticeable. In order to achieve a more gradual stop and assure leveling accuracy, a 2 speed valve is required over 30 feet per minute. The 2 speed valve is available on all hydraulic elevators regardless of speed.

**Tank Heater:** Hydraulic control valves work best when the oil is maintained between 60 and 90 degrees. In some parts of the country, oil in the pump unit in an unheated machine room can get cold enough to blow the motor fuses. Instead of heating the entire room, we can provide small unit that magnetically attaches to the side of the tank that will automatically maintain oil temperature between 60 - 70 F.'

**Battery Backup Lowering:** Hydraulic elevators require only enough power to energize the control valve in order to move in the down direction. This power can be provided by a battery backup unit, allowing someone to run the elevator in the normal manner from an upper floor to a lower floor in the event of a power failure. This type of system will not run the elevator in the up direction. If running up is required, a backup generator should be installed.

**Electric Interlocks:** Interlocks are the devices that prevent the hoistway doors from being opened unless the elevator is at the floor, and prevents the elevator from running unless the doors are closed. We provide mechanical door locks as standard. On some jobs the arrangement of the doors may make it difficult to arrange the mechanism to unlock the doors. In these cases, electrically actuated interlocks may be used. Electric interlocks are dependent on electrical power for the door to open.

**Retiring Cam:** An actuator on the car (called a “cam”) contacts the doorlock releasing mechanism, allow the door to be opened. The standard cam is call a fixed cam, and it engages the releasing mechanism whenever the car is at a floor, including when it running past a floor. On elevators with more that 2 stops, the door without a properly functioning closer can pop open when the cam engages the door lock as it goes past a floor, causing the elevator to stop. On elevators over 40 feet per minute, the sound of the cam engaging the doorlock can get loud. A retiring cam has a mechanism that retracts the cam until the elevator stops moving, eliminating these problems.

**Scissor Gate:** Our standard gate is an accordion style, which completely closes the car opening and is inherently safer than a scissor gate. Scissor gates have upright stiles and a relating mechanism (the “scissors” that close the car opening, but allow objects up to 3” in diameter to pass through. There is also a pinch hazard if someone opens a scissor gate by pulling on a stile instead of the handle. Scissor gates are used today purely as a design element.

**Power Gate Operator:** Our accordion gate can be fully automated with a power operator.

**Individual Door Operator:** Swing hoistway doors can be automated by individual units that mount on the exterior of the hoistway. The mechanism is the same as you will find on many swing doors, except the operator is triggered automatically by the elevator controller instead of the user having to push a special button. The operator also acts as the door closer.

**Master Operator:** Swing hoistway doors can be automated by an operator that rides with the car. When the car gate is opened, an arm rotates out from the elevator, pushing the hoistway door open. The arm retracts to release the door; however, a separate closing mechanism (such as a hydraulic closer or spring hinges) must be provided.

## TIGER LIFT® General Specifications

The TIGER LIFT® line of small elevators comes with a number of features in their standard configuration; this standard configuration is designed to be a complete package with all equipment required for an installation, and designed to meet most code requirements.

### Standard Equipment:

**Car Frame:** Frame shall be constructed of steel, rigidly reinforced and gusseted, bolted and welded to insure durability. Supply isolation coupling between piston and platen. Provide platform of 1-1/4"plywood. All frame components shall be capable of sustaining a static load 5 times the rated load.

**Cab:** Cab walls to be 3/4" panels. Car shall be fitted with a collapsing gate at each opening, conforming to applicable code. Canopy shall be 3/4" plywood, laminate finish with 2 recessed incandescent light fixtures. Canopy shall be capable of sustaining 100 lbs/sq.ft. - 500 lbs total. Handrail of 3/8 x 2" brushed aluminum shall be provided.

**Gate:** Standard gate to be wood folding accordion type, with vinyl hinges. Panels to have stabilized wood core faced with semi-rigid vinyl film, 6 mil minimum, pressure laminated. Panels to be enclosed in steel frames, joined with full length articulated pins. Hanger assembly of dual nylon rollers shall be installed on alternate panels. Gate shall be suspended in track of no less than 20-gauge metal. Gate shall be fitted with lower guide pins and track.

Optional heavy-duty side slide gate to consist of articulated 5" extruded aluminum panels, each with a total thickness of 5/8". Each panel to have articulation joint with upper and lower bearings, retaining rod and outer tube. Provide 3 wheel trolley with ball bearing urethane tired wheels on alternate panels. Provide nylon bearings for bottom guide. Provide upper and lower aluminum extruded track, with molded corner sections. Gate to turn and recess behind cab wall.

**Guide Rails:** Steel T rails shall be machined to exact tolerances for smooth travel. Guides shall be stabilized by adequate brackets, as required, and secured to hoistway. Guides shall have a nominal weight of 8 lbs/ft.

**Guide Shoes:** Car guides shall be adjustable. Insert shall be nylon with molybdenum disulfide machined for close tolerance. Insert shall be removable without removing entire shoe.

**Controller:** Controller shall be enclosed in a NEMA 12 cabinet. Shall be of the electro-magnetic type, designed to prevent damage to the motor from overload or excessive current. The controller shall automatically stop the motor and close all valves if any safety device becomes operative. A non-interference relay shall be provided. Constant pressure on a car or hall button shall send car to the desired floor if all safety circuits are made up. A low oil timer shall stop the motor and cause the car to descend to the lowest landing if the required travel time is exceeded. Controller and all associated switches and wiring to comply with ANSI 17.1.

**Buffers:** Compression springs of sufficient stroke and capacity shall cushion the car in the event of overtravel.

**Fixtures:** Provide a car-operating panel with buttons for each landing. Provide a car top operation device. Provide a light switch, alarm button, and emergency stop button. Provide a call button at each landing. All fixtures shall have stainless steel face, #4 finish. Operating buttons shall be internally illuminated when depressed and extinguished when call is answered. Buttons shall be 1-1/8" diameter with black bezel. Floor designations shall be 5/8" high, black, on translucent white background.

## LULA and Codes

TIGER LIFT® elevators, as manufactured by Elevator Concepts LTD, are limited use - limited access elevators, and do not comply with ADA and ASME A17.1 Section 2 & 3 requirements for full passenger elevators. TIGER LIFT® elevators, properly specified, will meet the ASME A17.1 Section 25 - Limited Use/Limited Access Elevator code. There is speculation that the ADA will recognize LULA's for certain applications, but this would certainly be several years away. The TIGER LIFT currently meets many State and local requirements for LULA type devices.

The Section 25 LULA code allows for these basic parameters:

MAXIMUM LOAD:	1400#
MAXIMUM SPEED:	30 FPM
MAXIMUM PLATFORM :	18 SQ FT
MAXIMUM TRAVEL:	25 FT
TOP AND BOTTOM CLEARANCES AS PER Section 1 (typically 3' pit and 11' overhead minimum)	

The addition of car top inspection, retiring cams, and flush type hoistway doors are generally all that is required to make a standard TIGER LIFT® comply with Section 25, unless there are restrictions on top and bottom clearance. In those cases, electro/mechanical travel restrictors are required. Several jurisdictions currently use this; others are either more or less restrictive.

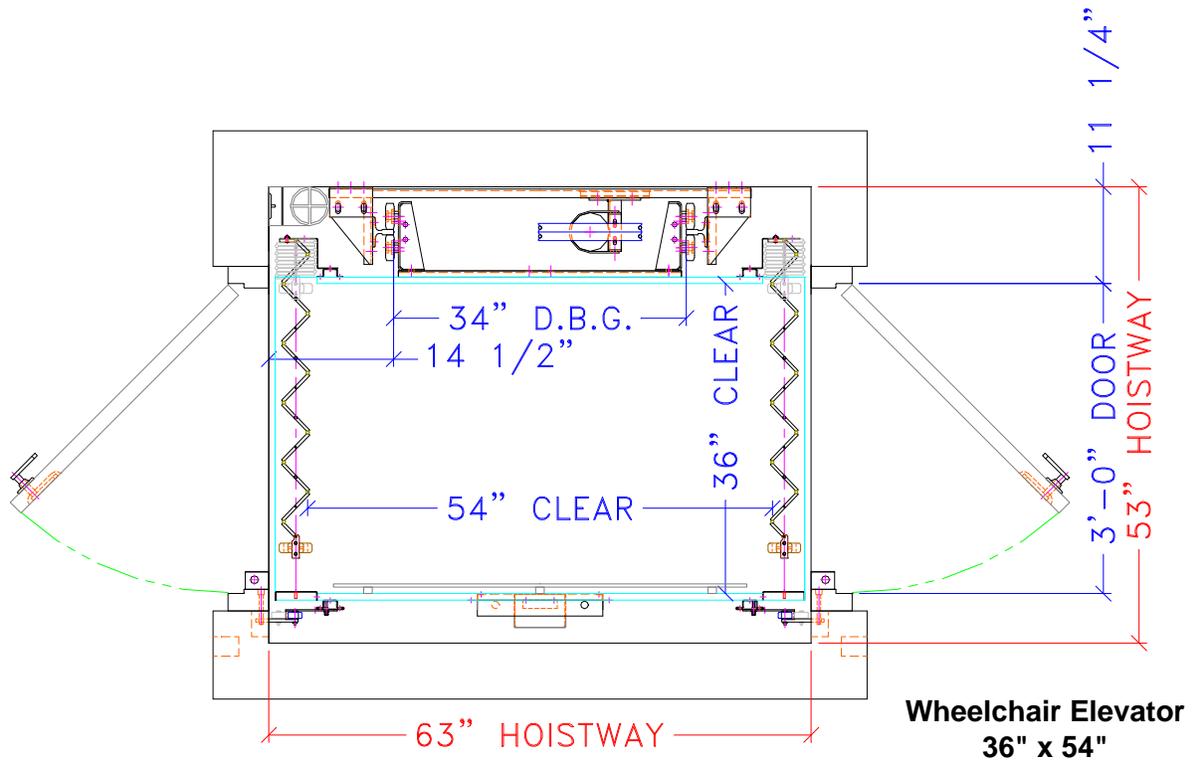
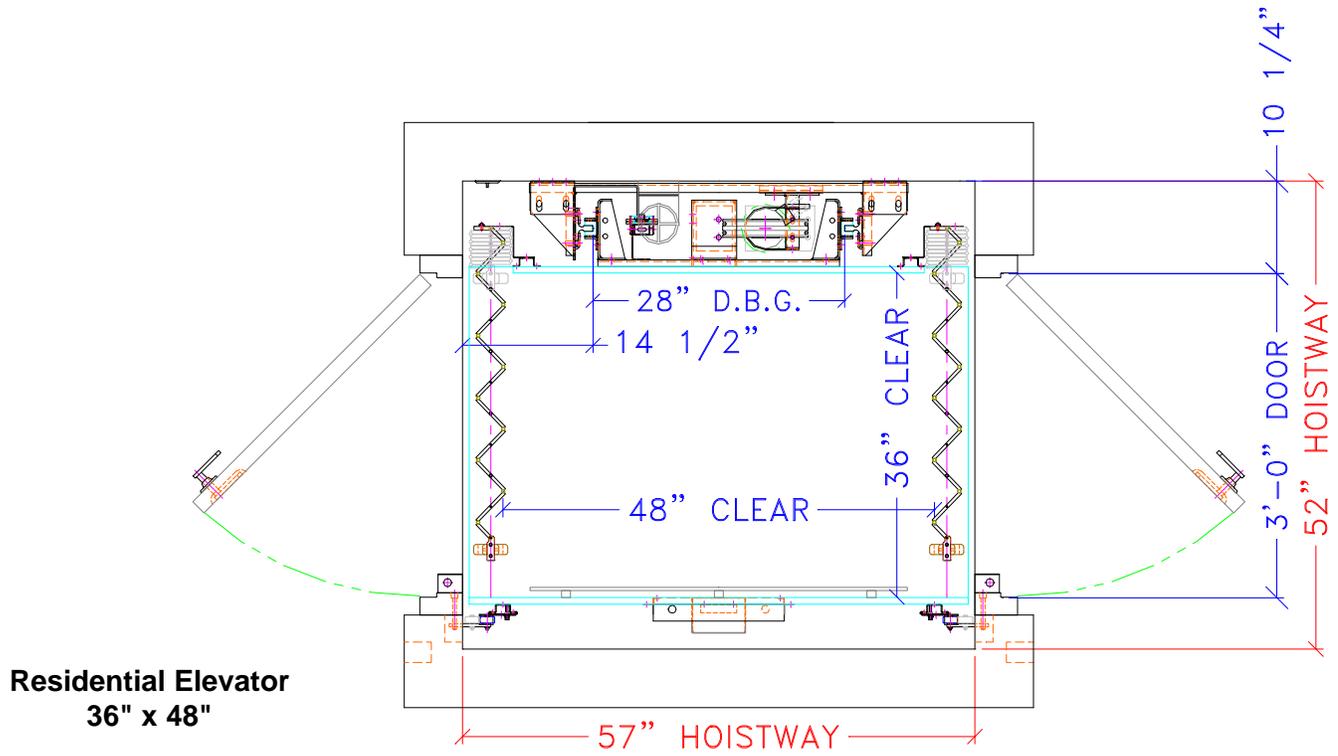
The Americans with Disabilities Act is civil rights legislation designed to promote the removal of barriers. It is not a building code; technically, it does not require anything be done to any building. If buildings are not in compliance with the ADA, the Department of Justice can bring suit against the building owner, with penalties including making the building comply with ADA along with substantial fines. However, most of the model building codes such as BOCA now have design requirements patterned after the ADA, so new construction and renovation work will typically comply with ADA if it complies with the building code.

For new construction, or improvements to existing structures, the ADA does not required a full passenger elevator if a building has less than 3 stories, or if each story in the building is less than 3000 square feet, unless the building is a shopping mall, a medical office, or other type of building the government determines should have an elevator. If a full passenger elevator is planned for a building, whether required or not, it must meet the ADA requirements for elevators and serve every level, unless it is infeasible to do so. However, the ADA does not prohibit the installation of devices other than full passenger elevators in buildings where there is no requirement for vertical access. Since the TIGER LIFT® is not a full passenger elevator, it is not subject to the requirements for a full passenger elevator when installed in buildings such as described above.

The ADA specifically allows platform or wheelchair lifts meeting local codes to be used to provide access to a performance area, to a specified wheelchair viewing area, incidental spaces for less than 5 people not open to the general public, and **areas where it is infeasible to provide a ramp or an elevator.**

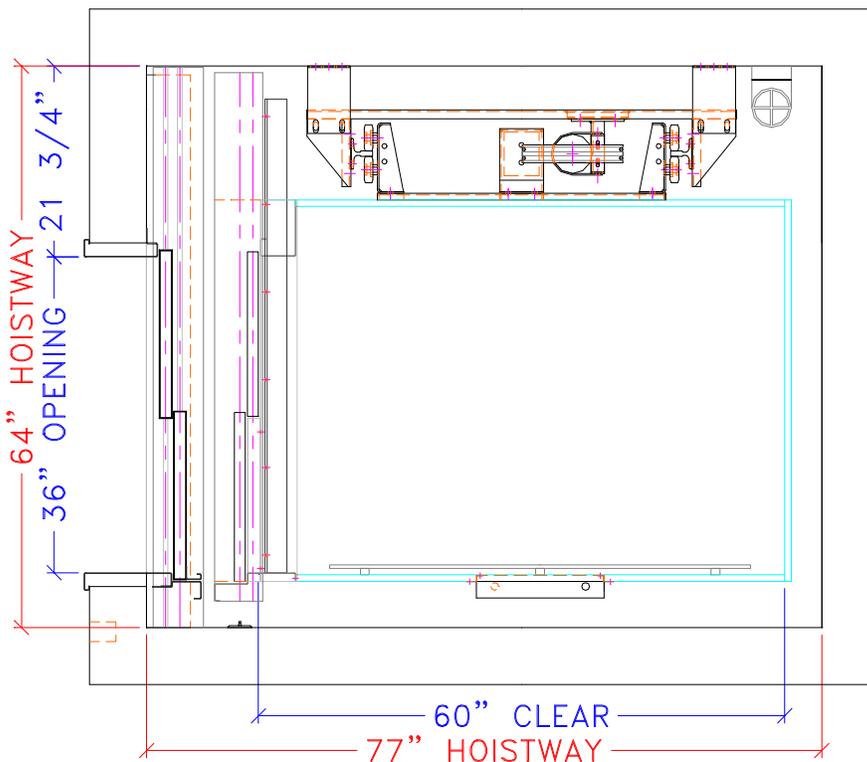
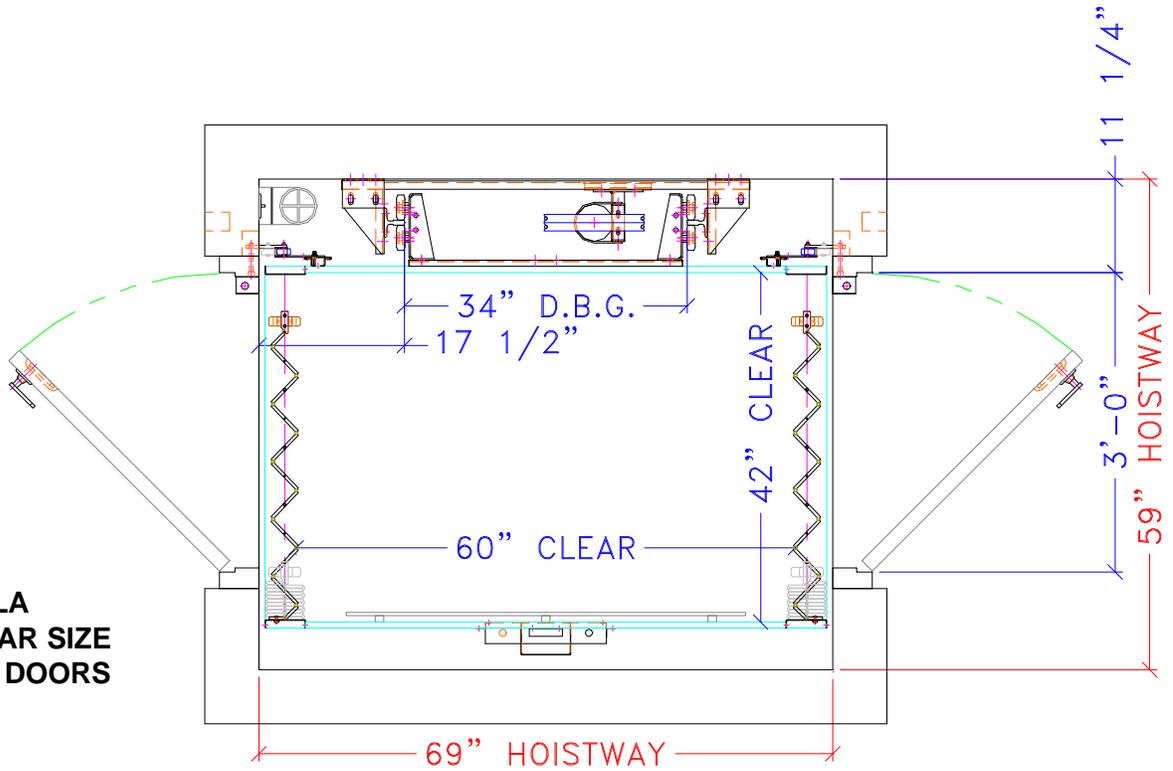
All codes are subject to interpretation and revision. It is always advisable to check with the code enforcement authority with jurisdiction about the latest requirements. The information contained herein, while believed to be accurate, is provided for general reference purposes only. **Changes occur in Codes regularly.** Elevator Concepts is not responsible for any condition arising out of the use of the information provided herein.

**Sample Plan Views**  
**Do Not Use For Construction**



### Sample Plan Views Do Not Use For Construction

**LULA  
42 x 60 CAR SIZE  
MANUAL DOORS**



**LULA  
42 x 60 CAR SIZE  
POWER DOORS**