PART 1 GENERAL

1.01 SECTION INCLUDES
A. Vertical platform lift with 1:2 roped hydraulic lift system and full height platform enclosure.

1.02 WORK INCLUDED
A. Furnish all labor and materials, equipment and incidentals necessary to assemble and erect the lift, complete with a remote power unit and all hoses, rails, brackets, connections and controls essential for proper operation.

1.03 WORK BY OTHERS
A. Construct a runway of the size required by the manufacturer, complete with all demolition, additional framing, headers and framing components necessary to prepare the existing building to receive the lift.
1. Runway size: 53" W x 61 1/2" D (dependent upon car size)
2. The runway shall be vertical to within 1/8" throughout the entire height.
3. Runway shall have a smooth surface throughout region traversed by the lift.
4. Provide structural members, installed, full length vertically of runway between floor plates per manufacturer's recommendation.
5. Pit requirements: Provide 8" deep pit (minimum 6" deep). Install reinforcement and concrete as necessary. Floor must sustain load specified in job drawings.

B. Construct a machine room:
1. Provide lift electrical circuit appropriate for particular motor, such as: 208/230 volt AC/ 1 phase/ 60hz (30 amp)
2. Provide lift lighting electrical circuit: 115 volt (15amp)

C. Provide system to maintain runway and machine room temperature between 50-90 degrees Fahrenheit.

1.04 REFERENCES:
A. General: The applicable provisions of the following standards shall apply as if written here in their entirety.
B. American Society of Mechanical Engineers / American National Standards Institute (ASME/ANSI) publications:
1. ASME/ANSI A18.1"Safety Standard for Platform Lifts and Stairway Chairlifts".
2. ICC/ANSI A117.1.

C. Canadian Standards Association (CSA) B355-00.
D. National Fire Protection Association (NFPA) publications: NFPA 70 National Electrical Code

1.05 SYSTEM DESCRIPTION**:**
A. Travel: _____ (30' max for CSA B355-00; 14' max for ASME/ANSI A18.1)
B. Stops: _____ (up to 4)
C. Load Capacity: 750 lb.
D. Speed: 30 fpm

1.06 SUBMITTALS:
A. Submittals shall be in accordance with Section 01300, SUBMITTALS.
B. Product Data: Submit product data, including manufacturer's specifications.
C. Shop Drawings:
1. Shop drawings showing all field construction, including dimensions.
2. Runway dimensions
3. Wiring diagrams
4. Maintenance instructions
5. Car and Gate selection charts

1.07 QUALITY ASSURANCE
A. Qualifications:
1. Installer Qualifications: A company experienced in the assembly and erection of lifts of the type specified.
2. Manufacturer Qualifications: A company specializing in the manufacture of lifts for the disabled.

B. Regulatory Requirements: The complete manufacture, fabrication and erecting of the lift shall be in compliance with all Federal, State and local codes and ordinances. The installer shall verify requirements of the local authority having jurisdiction and shall comply with all local codes and ordinances.

1.08 DELIVERY, HANDLING & STORAGE
A. All components shall be shipped to the site in substantial crates to protect from damage during shipping and handling. Upon arrival, inspect components and keep under cover until installed.

1.09 WARRANTY
A. Unit shall have a three (3) year limited parts warranty.

1.10 MAINTENANCE:
A. Maintenance of the platform lift unit shall consist of regular cleaning and inspection at intervals not longer than every 6 months.
B. Inspection: ASME A18.1 requires all platform lifts be inspected every 6 months.

PART 2 PRODUCTS

2.01 MANUFACTURER
A. National Wheel-O-Vator a division of ThyssenKrupp Access, Model WOV355, as distributed
By_____
B. Substitutions: No substitution shall be considered unless written request for approval has been submitted and received by the architect at least ten (10) days prior to the bid date.

2.02 COMPONENTS
A. Car:
1. Size: 36" W x 60" D Clear (others available)
2. Enclosure: Securely fastened to the car frame and platform. The car shall be constructed of steel walls or minimum ¾" thick wood walls. Floorboard shall be constructed of 1" AC plywood with no slip, sheet rubber flooring.
3. Handrail: One located on the car wall and mounted in accordance with ICC/ANSI A117.1 requirements.
4. Control panel: Provide one constant pressure illuminated button for each landing, emergency stop and alarm button, and a digital position indicator; all mounted in a control panel having a removable stainless steel cover.

5. Interior lighting: Provide overhead light fixtures that automatically turn on when the car is in operation and turn off by means of a timer circuit.

B. Runway door:
1. Size: 3'0" W x 6'8"H swing type
2. The general contractor or owner is to furnish (lift contractor may opt to furnish) and install runway doors, frames, hinges and passage sets at each landing. The type and installation of the doors and frames must comply with ASME A18.1, all local codes and as per manufacturer's layout drawings.
3. Locking Device: A combination mechanical lock with a positive opening electric contact shall be provided. The type and height shall depend on model and code requirements.

C. Hydraulic power unit:
1. The pump, submerged motor and valve shall be pre-wired, ready for connection to the controller in the field.
2. Up direction acceleration adjustment.
3. Two speed operation.
4. Adjustable pressure relief valves.
5. Manually operated down valve for emergency operation.
6. Pressure gauges and pressure gauge isolation valves.
7. Manual valve isolation between pump unit and jack.
8. Negative pressure switch provided.
9. Testing: Shall be factory tested prior to shipment.
10. Muffler provided for quiet operation.

D. Cylinder:
1. Construction: Steel pipe with cylinder head having an internal guide ring and self-adjusting packing.
2. Safety valve: Cylinder shall be equipped with a pipe rupture safety valve to prevent uncontrolled car descent.

E. Plunger:
1. Construction: Shall be a machined steel shaft equipped with a stop, electrically welded to bottom end, to prevent plunger from leaving shaft cylinder.
2. Diameter: 80 mm.

F. Suspension system: 1:2 system using (2) 3/8" – 7x19 aircraft cables integrated with rams header sheave mounted to the plunger.

G. Guide rail: Shall consist of two 6 ¼ lb. tee rails assembled and fastened. Provide brackets to hold rail assembly to walls. Rail shall be furnished with steel splice plates and hardware.

H. Car frame: Shall be equipped with non-metallic faced roller guide wheels.

I. Leveling device: Provide Hall Effect Position Sensor to maintain car within ¼" of the landing.

J. Control systems: Low voltage, constant pressure control system.

K. Motor (submerged): 3.0 HP, 1750-RPM 208/230 VAC, single phase.

L. Wiring:
1. Provide flexible traveling cable for electrical lights and controls in car.
2. All other electrical wiring shall be insulated, flame retardant and moisture proof copper wiring, installed in flexible metal conduit.

M. Safety Devices:
1. Slack cable protection: Provide a stainless steel linkage device that stops and sustains the car in the event of breakage or slacking of cables.
2. Terminal stopping device: Shall be provided at the top and bottom of the car travel.
3. Provide a platform toe guard at the car entrance.

N. Battery emergency operation system:
1. Powers a light in the car.
2. Powers an emergency alarm system.
3. Powers a system to allow car to descend to floor selected by passenger.
4. The batteries shall be a re-chargeable type complete with an automatic re-charging system.

2.03 ACCESSORIES

Specifier Note: - Due to the individual nature of lifts installations, accessories such as, but not limited to, those in the following list are available:

A. Runway doors and door locks.
B. Flush mounted telephone box.
C. Car trim and wood specie or color.
D. Custom platform and car size.
E. Hydraulic tank heater.
F. Electrical disconnects.

PART 3 EXECUTION

3.01 INSTALLATION

A. Inspect the runway and determine if the runway meets the manufacturer's requirements for clearances and plumb.
B. All components shall be assembled and erected in strict compliance with manufacturer's printed instructions.
C. All wiring shall be in accordance with the wiring diagram furnished by the manufacturer.

3.02 FIELD QUALITY CONTROL

A. Static/Running Load Test: All load rating and safety factors shall meet or exceed those specified in ASME A18.1.
B. Load the lift to rated capacity and test for several cycles to ensure proper operation. No mechanical failures should occur and no wear that would affect the reliability of the unit shall be detected.

3.03 ADJUSTING

A. Test the lift to assure proper operation under all conditions of use. Make proper adjustments and review operating components for proper operation.

For more details, call National Wheel-O-Vator's Design Line 800-968-5438.