LOADING DOCK EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Loading dock equipment of the following types:
   1. Dock lifts.
   2. Control stations.

1.2 RELATED SECTIONS

A. Section 03100 - Concrete Forms and Accessories: Placement of anchors into concrete.

B. Section 03300 - Cast-In-Place Concrete: Docks and pits.

C. Section 05500 - Metal Fabrications: Metal angles for edge of dock.

1.3 REFERENCES

A. American National Standards Institute (ANSI):
   1. ANSI MH30.1- Industrial Loading Dock Boards (Ramps).
   2. ANSI MH29.1- Industrial Scissor Lifts.
   3. ANSI MH30.3- Vehicle Restraining Devices (Safety, Performance, and Testing)

1.4 SUBMITTALS

A. Section 01330 - Submittals Procedures: Procedures for submittals.

B. Product Data: For each product specified.
   1. Bumpers: Indicate unit dimensions, method of anchorage, and details of construction.
   2. Levelers: Indicate materials and finish, installation details, roughing-in measurements, and operation of unit.

C. Shop Drawings:
   1. Indicate required opening dimensions, tolerances of opening dimensions, placement dimensions, and perimeter conditions of construction.
   2. Wiring diagrams including location of control stations and disconnect switches.

D. Assurance/Control Submittals:
   1. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
   2. Qualification Documentation: Submit documentation of experience indicating compliance with specified qualification requirements.

1.5 QUALITY ASSURANCE

A. Dock Levelers: Conform to requirements of ANSI MH30.1.

B. Vehicle Restraining Devices: Conform to requirements of ANSI MH30.3.

C. Manufacturer Qualifications:
   1. Manufacturer specializing in manufacturing Products specified with minimum 30 years experience.
   2. Manufacturer to have quality assurance improvement programs.
   3. Manufacturer shall be associated with Loading Dock Equipment Manufacturers (LODEM) setting ANSI standards.
   4. Manufacturers welding procedure compliant with A.W.S.D1 .1 specifications.

D. Installer Qualifications: Company specializing in performing the Work of this Section with minimum 5 years experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Refer to Section 01600 - Product Requirements: Transporting, handling, storage, installation and protection of products.

1.7 WARRANTY

A. Warranty: Provide manufacturer's standard warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Blue Giant Equipment Corp., which is located at:
   85 Heart Lake Rd. S., Brampton, ON, Canada L6W 3K2
   Toll Free Tel: 800-668-7078 Tel: 905-457-3900
   Email: marketing@bluegiant.com
   Web: www.BlueGiant.com

2.2 HYDRAULIC DOCK LIFTS

A. Scissor Dock Lifts: Semi-portable type, Model 'S' as manufactured by BLUE GIANT.
   1. **Type:** Floor installed, single scissor dock lift. Electro-hydraulic operated. Capacity based on evenly distributed loads. Single axle rolling load capacity 50 percent across ends and 20 percent across sides. Deck dimension between cylinder posts is 18 inches (457 mm) less than overall width. Lowered Height - 5 inches (127 mm) minimum, Vertical Travel - 55 inches (1397 mm), Raised Height - 60 inches (1524 mm) minimum. Lowered and raised heights are nominal.
      a. Model 4000S/72x96: Deck Size - 72 inches (1829 mm) W by 96 inches (2438 mm) L. Lowered height - 5 inches (127 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
      b. Model 4000S/72x120: Deck Size - 72 inches (1829 mm) W by 120 inches (3048 mm) L. Lowered height - 5 inches (127 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
      c. Model 4000S/84x96: Deck Size - 84 inches (2134 mm) W by 96 inches (2438 mm) L. Lowered height - 5.25 inches (133 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
      d. Model 4000S/84x120: Deck Size - 84 inches (2134 mm) W by 120 inches (3048 mm) L. Lowered height - 5.25 inches (133 mm). Vertical

Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).

e. Model 4000S/96x120: Deck Size - 96 inches (2438 mm) W by 120 inches (3048 mm) L. Lowered height - 5.25 inches (133 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
f. Model 5000S/72x96: Deck Size - 72 inches (1829 mm) W by 96 inches (2438 mm) L. Lowered height - 5 inches (127 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
g. Model 5000S/72x120: Deck Size - 72 inches (1829 mm) W by 120 inches (3048 mm) L. Lowered height - 5.25 inches (133 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
h. Model 5000S/84x96: Deck Size - 84 inches (2134 mm) W by 96 inches (2438 mm) L. Lowered height - 5 inches (127 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
i. Model 5000S/84x120: Deck Size - 84 inches (2134 mm) W by 120 inches (3048 mm) L. Lowered height - 5.25 inches (133 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
j. Model 5000S/96x120: Deck Size - 96 inches (2438 mm) W by 120 inches (3048 mm) L. Lowered height - 5.25 inches (133 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).
k. Model 6000S/72x96: Deck Size - 72 inches (1829 mm) W by 96 inches Lowered height - 5 inches (127 mm). Vertical Travel - 55 inches (1397 mm), Lift Speed - maximum 25 fpm (7 mpm).

2. **Travel Speed:** Recommended standard available up to 25 FPM (7 MPM). Lowering speed is factory preset for safe lowering with rated load. Consult factory.

3. Operation:

a. **Power Unit:** Remote 5HP power pack on 12' (3657mm) hydraulic hose. Includes all major components, motor, high-pressure gear pump, manifold, oil filters and oil reservoir. Power unit includes a pressure relief valve, load holding check valve, fixed pressure compensated flow control valve and poppet-type lowering solenoid valve. Oil filter located in the valve manifold (oil reservoir).
b. **Control Station:** Remote on 12 feet (3,657 mm) electrical cord. NEMA4 rated dual button control station, constant pressure type, complete with 'UP' and 'DOWN' buttons, 2-1/4 inches W by 4 inches H by 2-1/2 inches D (57 by 102 by 64 mm) in size. Controller includes a three pole magnetic motor starter with adjustable overload and a fuse protected 120-volt control transformer. Terminals provided for incoming power connection. Controller components are installed in NEMA12 rated enclosure, pre-wired and dielectric tested.

4. Construction:

a. **Platform:** Fabricated of heavy non-skid high tensile steel checker plate and reinforced with steel beams for maximum strength and rigidity. Safety indicator bars provide four sided toe protection.
b. **Hinged Bridge:** Standard lip is piano-hinge type, 18 inches long by 60 inches wide (457 mm by 1,524 mm), and is fabricated of non-skid high tensile steel checker plate. Lip edge is Beveled. Plated lifting chain is provided.
c. **Removable Handrails:** Steel pipe 1.5 inches (38 mm) construction, 42 inches (1,067 mm) high, with mid-rail and 4 inches (102 mm) high kick plate. Handrail sockets are flush with platform surface. Chains are provided at both open ends between the rails.
d. **Scissor Mechanism:** Legs are fabricated of solid steel sections.
e. **Cylinders:** Two piston-type hydraulic cylinders. Each cylinder is encased in a 9 inches (229 mm) W weather resistant steel housing (post) located on the top of the deck at end corners. Rods constructed

of hard-chrome steel and include self-adjusting polyurethane seals, positive internal stops, and fitted with vent lines. Hydraulic velocity fuse "fall safe" to prevent platform free fall is attached to each cylinder.

f. **Bearings:** All pivot points fitted with permanently lubricated Teflon impregnated bushings. Pivot pins made of hard-chrome plated steel.

5. Rated Capacity:

a. Welding procedure compliant with A.W.S.D1.1 specifications. All units are constructed in compliance with ANSI MH29.1. UL approved electrical components. All units are rated for evenly distributed loads. Single axle rolling load capacities are 50 percent across the ends and 20 percent across the sides.

6. Power: __ V, __ Amps, __ Phase.

7. Safety Devices:

a. Safety velocity fuses on each cylinder.
b. Safety Indicator bars (acts as a warning in the event of down travel obstruction).
c. Safety striping and warning labels.
d. Handrails and safety chain.

8. Finish and Color:

a. Safety indicator bars and handrails painted safety yellow.
b. Unit painted blue.

9. **Warranty:** Warranties are subject to standard limitations on liability. Consult manufacturer for full details on warranty information and product registration.

10. **Optional Accessories:**

a. Custom lip size and configuration.
b. Spring-assisted lips for ease of handling on heavier capacity.
c. Aluminum lips.
d. Portable dolly (makes unit portable).
e. Warning bell (to indicate lift in motion).
f. Warning horn with adjustable volume control mounted on power unit (to indicate lift in motion).
g. Flashing amber warning beacon mounted on power pack.
h. 24 VAC control.
i. Up travel limit switch.
j. Return line oil filter.
k. Electric trip bars (to stop unit in case of down travel obstruction).

A. EXECUTION

2.3 EXAMINATION

A. Section 01700 - Execution Requirements: Verification of existing conditions before starting work.

B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.

2.4 INSTALLATION

A. Install dock leveler and/or dock lift unit in prepared opening in accordance with manufacturer's instructions.

B. Set square and level.

C. Anchor unit securely, flush with dock. Weld back of dock leveler to pit frame. Touch-up welds with matching paint.

D. Install dock bumpers in accordance with manufacturer's instructions.

2.5 ADJUSTING

A. Adjust installed unit for smooth and balanced operation.

END OF SECTION