SECTION 11160

LOADING DOCK EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Loading dock equipment of the following types:
   1. Dock levelers.
   2. Vehicle restraints.
   3. Dock seals.
   4. Dock shelters.
   5. Dock lifts.

1.2 RELATED SECTIONS

A. Section 03300 - Cast-In-Place Concrete: Coordination with dock construction.

B. Section 16050 - Basic Electrical Methods and Materials: Coordination with power requirements and controls/safety circuits.

1.3 REFERENCES

A. American National Standards Institute (ANSI): ANSI MH29.1 Safety Requirements for Industrial Scissor Lifts.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Showing overall dimensions (width, height) and location of electrical service panels and motor locations. Supporting construction requirements and equipment structural attachment. Operating range and required clearances.

D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Providing sole source for design, engineering, manufacturing and warranty claims handling. Company specializing in manufacturing products specified with a minimum 20 years experience.

B. Installer Qualifications: Trained, certified and approved by manufacturer, with documented experience on similar projects.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 WARRANTY

A. Warranty: Provide manufacturer's standard warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Pentalift Equipment Corp., which is located at: 21 Nicholas Beaver Rd. ; Guelph, ON, Canada N1H 6H9 ; Tel: 519-763-3625; Fax: 519-763-2894; Email: request info (dock@pentalift.com); Web: www.pentalift.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

Low Profile Dock Lifts:

1. Product: LPE Series Low Profile Dock Lifts as manufactured by Pentalift Equipment Corporation.
2. Low profile dock lift shall be built of 4-way safety tread plate with straight toe guards. The unit shall have a vertical travel of 54 inches (1372 mm) and a lowered height of 6 inches (152 mm).
3. An 18 inches long by 60 inches wide (457 mm by 1524 mm) safety tread bridge plate shall be provided on the rolling end. A 36 inches long by 60 inches wide (1524 mm by 1524 mm) hinged approach plate shall be provided on the fixed end.
4. Plated access chain between guard rails on fixed end shall be provided.
5. Hydraulic lift cylinders shall be PentaFLOW style equipped with an automatic bypass system at the top of cylinder stroke. Hydraulic cylinders shall be located completely beneath the unit to permit both full use of deck area and product transfer in all four directions. A velocity fuse shall be incorporated to prevent deck free-fall in the event a hydraulic hose is accidentally severed.
6. Scissor legs shall be of solid steel construction for maximum strength and rigidity.
7. Unit shall have two removable guardrails 1-5/8 inches (41 mm) in diameter, 42 inches (1067 mm) high with mid rail and 4 inches (102 mm) high kick plate.
8. Controls shall be NEMA 4X pendant type push-button.
9. The power unit shall be remote mounted and consist of a TEFC, continuous duty motor with integral hydraulic fluid reservoir. The motor shall be equipped with a NEMA 12 control enclosure.
10. Power supply shall be _____/_____/_____.
11. The dock lift shall be shipped complete with hydraulic fluid.
12. Unit shall have Pentalift gray finish.
13. Model LPE 58: 60 inches by 96 inches (1524 mm by 2438 mm).
14. Model LPE 510: 60 inches by 120 inches (1524 mm by 3048 mm).
15. Model LPE 68: 72 inches by 96 inches (1829 mm by 2438 mm).
16. Model LPE 610: 72 inches by 120 inches (1829 mm by 3048 mm).
17. Model LPE 78: 84 inches by 96 inches (2134 mm by 2438 mm).
18. Model LPE 710: 84 inches by 120 inches (2134 mm by 3048 mm).
19. Model LPE 88: 96 inches by 96 inches (2438 mm by 2438 mm).
20. Model LPE 810: 96 inches by 120 inches (2438 mm by 3048 mm).

21. Capacity: Side and end edge load capacities are 50% of lift capacity. Retaining cradles and wear plates, recommended for all installations, increase the end edge load capacity to 75% of lift capacity.
22. Capacity: 4,000 lb (1814 kg).
23. Capacity: 5,000 lb (2268 kg).
24. Capacity: 6,000 lb (2722 kg).
25. Capacity: 8,000 lb (3629 kg).
26. Provide retaining cradles and wear plates. Add 1/4 inch (6 mm) to low height.
27. Provide toe sensor.
28. Provide larger bridge sizes 48" - 96".wide x 18" - 42" long.
29. Provide aluminum bridge(s).
30. Provide split bridge(s).
31. Provide spring assisted bridge(s).
32. Provide automatic mechanical roll off Stop.
33. Provide power units with increased hp for faster lift times.
34. Provide up travel limit switch.
35. Provide platform mounted push button control.
36. Provide push button on coil cord.
37. Provide wall mounted push button.
38. Provide two second warning bell (sounds prior to lift movement).
39. Provide up / down key operated selector switch.
40. Provide additional guard rails (platform or floor mount).
41. Provide manual lowering valve.
42. Provide portable dolly handle.
43. Provide platform mounted power unit.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION