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	Guide Specification For HYDRAULIC/CANTILEVER

**GUIDE SPECIFICATIONS FOR
VERTICAL RECIPROCATING CONVEYORS (VRC)
(HYDRAULIC, CANTILEVER)**

PART 1 - GENERAL

1.1 RELATED WORK

- A. The following sections contain preparatory requirements (by others), to receive the VRC specified in this section.
 - 1. Division 3: "Concrete Reinforcement", provide smooth and level slab/pit to support loads indicated by VRC manufacturer.
 - 2. Division 16: "Electrical", provide permanent power to operate the VRC through a lockable fused disconnect box located within ten feet of the VRC unit.

1.2 SYSTEM DESCRIPTION (Hydraulic Cantilever V.R.C.)

- A. Furnish and install a Vertical Reciprocating Conveyor.
 - 1. Type of Vertical Conveyor, Hydraulic Cantilever V.R.C. Vertical travel up to 18'6" (actual must be specified). Capacity up to 4,000 lbs. (actual must be specified). Two level operation only. Carriage size up to 6' x 6' (actual must be specified). Larger carriages may be available (consult engineering).

1.3 REFERENCES

- A. ANSI/ASME B20.1 - (Current Addition) safety standard for conveyor and related equipment.
- B. NEC - (Current Addition) National Electric Code.
- C. ASTM A36 - Structural Steel.
- D. ASTM A325 - High strength bolts for structural steel joints.
- E. AWS D1.1 - Structural Welding Code.

1.4 QUALITY ASSURANCE

- A. **Equipment** should be designed, installed and guarded in accordance with References 1.3.
- B. **Code Compliance:** Manufacturer guarantees that should this equipment not be able to be used due to applicable Federal, State or Local Codes, the equipment will be removed and all money paid refunded, including freight and installation.
- C. **Installer:** Company specializing in performing the work of this section and approved by the VRC equipment manufacturer.

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D. Warranty.

1. The supplier shall warrant the VRC materials to be free from manufacturing defects beginning after completion of installation.
 - a. Structural Components - Five years parts and labor.
 - b. Non-Structural Components - One year parts and 90 days labor.
2. Warranty does not cover damage caused by conditions beyond the control of the supplier or installer; such as abuse, negligence or failure to operate or maintain properly.

1.5 SUBMITTALS

- A. Submit (3) brochures of manufacturer's product data.
- B. Approval Drawings: Provide approval drawings detailing specific application including plan and elevation views with dimensional information, equipment specification and guarding requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to the following:
 1. **Wildeck, Inc.** (P.O. Box 89, Waukesha, WI 53187).

2.2 APPLICATION DATA

- A. **LIFTING CAPACITY** _____ pounds.
- B. **CARRIAGE SIZE** _____ " wide x _____ " long. The carriage will have a steel deck plate with railings on non-operating sides and safety chains on operating ends. The carriage shall be guided between at least two structural steel members, each a minimum of 6" in width and suitably designed.
- C. **LIFTING SPEED** 20 FPM (nominal).
- D. **VERTICAL RISE** _____ ft., _____ in.
RAISING AND LOWERING of the carriage shall be provided by two cylinders suitably mounted on the unit. Transmission of the lifting force shall be through wire rope attached to the cylinders and the carriage in a manner that produces a 4:1 ratio of carriage movement to cylinder stroke.

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SHEAVE DIAMETER shall be at least 20 times the wire rope diameter.
UPWARD TRAVEL of the carriage shall be limited by positive mechanical stops assuring positive leveling with the upper level.

REDUNDANT OVERLOAD protection shall be provided which shall positively prevent raising of the carriage if loaded to more than 105% of rated capacity.

ELECTRICAL CONTROL will be provided for each level. All control circuits are 24V via step-down transformer (unless otherwise specified).

- E. **UNCONTROLLED DESCENT** shall be protected against by dual safety cams attached to lifting cables.
- F. **GUARDING** on all sides of the VRC shall be by safety enclosures a minimum of 8' high, consisting of material which will reject a ball 3/4" in diameter. Access for loading and unloading shall be by gates which are electrically and mechanically interlocked with carriage movement. The interlock shall positively prevent a gate from being opened unless the carriage is at that level and shall also prevent carriage movement if any gate is not fully closed and locked.
- G. **RIDING** the conveyor is forbidden, and signs shall be furnished with the unit so stating. These signs shall be posted at each point of access and each point of operation.
- H. **FINISH** on the lift, gates and enclosures shall be coated with one coat of manufacturer's standard paint, **Two – Part Polyurethane**.
Color: Wildeck Gray with Red carriage.

2.3 FABRICATION

- A. Fabrication of materials will comply with dimensions, profiles and gauges (thickness) shown on the approval drawings and, if not shown, will consist of the VRC manufacturer's standard products.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine the construction and service requirements of related work by others for compliance with specifications in this and other sections. Do not proceed with installation until unsatisfactory conditions have been

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corrected.

3.2 PREPARATION

- A. Coordination: (General Contractor/Owner) to verify approval drawings prior to fabrication. Any obstructions not indicated on the construction drawings that may affect the design of the VRC shall be reported to the manufacturer.

3.3 INSTALLATION

- A. Erection of the VRC and accessories shall be in accordance with the specifications, instructions contained in the erection manual and approved drawings.
- B. Installer to provide manufacturer's "Installation Operation and Maintenance Manual" to the end user upon completion of his scope of work.

3.4 CLEANING

- A. Clean up all unused materials and debris caused by the work of this section, keeping the premises clean and neat at all times.

Vertical Lift Products
Manufactured by

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