

1. Section 111319
HYDRAULIC Recessed Loading Dock leveler specification
2. NOTE: Enable Microsoft Word option to display hidden text to view notes to specifier.
	1. PART 1 GENERAL
		1. Section Includes
			1. Recessed loading dock levelers.
		2. Related Requirements
			1. Section 031000 - Concrete Forming and Accessories: Placement of leveler frame **[and safety lock frame]** into concrete **[loading dock] [\_\_\_\_\_\_\_]**.
			2. Section 033000 - Cast-in-Place Concrete.
			3. Section 111313 - Loading Dock Bumpers.
		3. Reference Standards
			1. ANSI MH30.1 - Design, Testing, and Utilization of Dock Leveling Devices 2022.
			2. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020, with Errata (2022).
			3. UL 508A – Standard for Industrial Control Panels.

~~~~~ PROJECT NOTE ~~~~~~
Do not request submittals if drawings sufficiently describe the products of this section or if proprietary specifying techniques are used. The review of submittals increases the possibility of unintended variations from contract documents, thereby increasing the design professional's liability. See Section 01 3000 - Administrative Requirements for definitions of the types of submittals for review, information, and project record.
~~~ END OF PROJECT NOTE ~~~~

* + 1. Submittals
			1. See Section 013000 - Administrative Requirements for submittal procedures.
			2. Product Data: Provide materials and finish, installation details, roughing-in measurements, and operation of unit.
			3. Shop Drawings: Indicate required opening dimensions and tolerances, perimeter conditions of construction.
			4. Shop Drawings: Indicated framed wall opening, dimensions and tolerances, adjacent construction and fittings required for anchorages, and anchor points.
			5. Manufacturer's Instructions: Indicate special requirements.
1. ~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
2. Request qualification statements if qualifications are defined in PART 1 under QUALITY ASSURANCE article.
3. ~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	* + 1. Manufacturer's Qualification Statement.
4. ~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
5. Request qualification statements if qualifications are defined in PART 1 under QUALITY ASSURANCE article.
6. ~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~
	* + 1. Welders' Qualification Statement.
7. ~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
8. Request qualification statements if qualifications are defined in PART 1 under QUALITY ASSURANCE article.
9. ~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~
	* + 1. Installer's Qualification Statement.
			2. Operation Data: Provide operating instructions, and identify unit limitations.
			3. Maintenance Data: Provide unit maintenance information, lubrication cycles, and spare parts manual.
10. ~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
11. Coordinate this paragraph with WARRANTY article.
12. ~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~
	* + 1. Executed warranty.
		1. Quality Assurance
			1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with at least **[one] [\_\_\_\_\_\_\_]** years of**[ documented]** experience.
			2. Welder Qualifications: Welding processes and welding operators qualified within previous **[12 months] [\_\_\_\_\_\_\_]** in accordance with AWS D1.1/D1.1M.
			3. Installer Qualifications: Company specializing in performing work of type specified and with at least **[one] [\_\_\_\_\_\_\_]** years of**[ documented]** experience**[ and approved by manufacturer]**.
13. ~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
14. Describe field conditions when particularly important or when no manufacturer's instructions apply. Field conditions include ambient air and surface temperatures, humidity, light level, air pressure, and other characteristics of the environment. Include description of existing work conditions that might not be apparent by review of construction/contract documents.
15. Specify required conditions of substrates and related work necessary for completion in EXAMINATION article in PART 3.
16. Specify work the Contractor must perform to make corrections prior to installation and completion of this work in PREPARATION article in PART 3.
17. ~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~
	* 1. Field Conditions
			1. Existing Conditions: Field verify dimensions of construction related to stationary loading dock equipment prior to fabrication, including **[recessed pit dimensions] [slope of inclined dock approach] [dock height] [and] [\_\_\_\_\_\_\_]**.
18. ~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
19. Improper specifying of warranty and correction period extensions may limit the Owner's statutory rights and the ability to enforce claims under the Contractor's contractual warranty. Be careful about establishing warranty requirements that few, if any, manufacturers will honor.
20. ~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~
	* 1. Warranty
			1. See Section 017800 - Closeout Submittals for additional warranty requirements.

***~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~***

*This paragraph requests a manufacturer warranty; the request may not be effective as the manufacturer is outside the jurisdiction of the Owner/Contractor contract. Coordinate this paragraph with the SUBMITTALS article.*

*Second year is available when dock unit is ordered with a door from manufacturer; see manufacturer’s extended limited warranty for more details.*

***~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~***

* + - 1. Manufacturer Warranty: Provide 1-year manufacturer warranty for defective work from Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer.
			2. Special Limited Warranty: Provide 4-year warranty for main spring on mechanical levelers following manufacturer warranty. Complete forms in Owner's name and register with warrantor.

***~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~***

*This paragraph extends the correction period beyond one year. An extended correction period adds to the construction cost and may not be enforceable.*

***~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~***

* + - 1. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion if dock and door are purchased and installed by manufacturer.
	1. PART 2 PRODUCTS
		1. Manufacturers

***~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~***

*Founded in 1954, Wayne Dalton was built on a dedication to ingenuity and customer service. As our business grew, so did our commitment to expanding our product lines, leading the company to become one of the largest door manufacturers in the United States. Since the beginning, we have remained committed to being the garage door partner whose innovation drives dealer productivity and provides industry-leading garage door solutions. In continuing this innovation, Wayne Dalton offers products, not only through our dealer connections, but also through our retail partner, Lowe's.*

*Wayne Dalton offers a broad selection of residential garage doors, as well as a complete line of doors for commercial and industrial applications. Our Commercial Sectional Doors are ideal for jobs that call for excellent thermal efficiency, have stringent wind load requirements, or simply need a high performing door designed for long life and superior strength.*

*Our Commercial Rolling Doors include service doors, counter doors, fire doors, security grilles, security shutters and roll up sheet doors. In 2016, we expanded our commercial door category to include High Speed Doors. Wayne Dalton designed and built a new series of High-Speed Doors from the ground up. These doors feature patent-pending, high-cycle designs, and industry-leading safety features for both interior and exterior applications.*

*With everything from residential garage doors to rolling doors to commercial sectional to high performance doors, Wayne Dalton’s breadth of product can provide a garage door solution for any application.*

***~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~***

* + - 1. Acceptable Manufacturer:
				1. Wayne Dalton; www.wayne-dalton.com; 1 (800) 827-3667.
		1. RECESSED LOADING DOCK LEVELERS (PIT LEVELER)
			1. Wayne Dalton, Model **[H68WD] [H78WD]**.
				1. Provide manufacturer’s standard loading dock levelers, complying with ANSI MH30.1 2022, and of capacity, size, and construction as indicated. Provide nonslip steel platform with complete controls, safety devices, and required accessories. Levelers complying with ANSI MH14.1 lack load testing compliance and are not permitted.

Recessed Concrete Pit: Provide **[preformed] [\_\_\_\_\_\_\_]** concrete pit sized to fit dimensions of specified loading dock levelers.

Reinforce concrete slab as required to support dock leveler.

See Section 033000 for additional cast concrete requirements.

* + - * 1. Automatic Vertical Compensation: Floating travel of dock leveler ramp edge extended to automatically compensate for upward and downward movement of truck bed during loading and unloading operations.
				2. Automatic Lateral Compensation: Tilting of dock leveler ramp edge extended and resting on truck bed to automatically compensate for canted truck bed up to 4 inches (102 mm) over width of ramp.
				3. Lip Operation: Manufacturer's standard mechanism that automatically extends and supports hinged ramp edge and rests on truck bed over dock leveler's working range, allows ramp edge to yield under incoming truck impact and automatically retracts ramp edge when truck departs.

Adjustable Lip Extension: **[16 inches (406 mm)] [18 inches (457 mm)] [20 inches (508 mm)]** long.

Lip Taper: 7 by 8 feet (2.13 by 2.44 m) only.

Hinged Ramp Lip: Nonskid steel plate.

Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge and replaceable hinge pin for maintenance without breaking welds or grinding of metal.

Lip keepers: Adjust for off spec pits to more easily accommodate 18”/20” lips. Provides cross traffic support and off-hour security.

* + - * 1. Hydraulic Operating System: Electronically controlled, with 1 horsepower frame-mounted **[single; or three phase]** motor; NEMA 4X push button control operated raising and gravity lowering of unloaded ramp. Power voltage: **[120/240 VAC single phase; or 240/480 VAC three phase]**.

Ramp raised to top operating range limit by push button control; ramp lowered below building floor level by gravity.

Hydraulic Failsafe: velocity fuse automatically engages in event of sudden truck departure; maximum fall of 3 inches when loaded up to full rated capacity.

Hydraulic fluid shall be MIL-L-5606, petroleum based hydraulic fluid, aircraft grade.

Motor overload protection shall meet UL508A requirements.

* + - * 1. Construction: Fabricate loading dock leveler frame, edge, and platform supports from structural and formed C-channel shapes, with platform and continuously supported hinged edge welded to supports, chamfer edge to minimize obstructing material-handling vehicles, and ensure entire assembly fabricated to withstand deformation during operation and storage phases of service.

Platform thickness: ¼ inch.

Lip thickness: **[5/8 inch on 30k and 35k] [3/4 inch on 40k and 45k]**.

Forklift Protection: Three wheel.

Toe Guards: Full range in safety yellow.

* + - * 1. Ramp Traffic Support: Provide support for ramp at platform level in stored position to support cross-dock traffic with ramp edge retracted. Provide ability to descend below platform level.
				2. Ramp Maintenance Support: Provide safety brace mechanism in framework of lift, not within lip, to support ramp in up position during dock leveler maintenance.

Rated Capacity: Capable of supporting **[30,000 lb (13,608 kg)] [35,000 lb (13,063 kg)] [40,000 lb (18,144 kg)] [45,000 lb (20,412 kg]** without permanent deflection or distortion.

***~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~***

*Specifier to select products according to available sizes as follows:*

*H68WD platform size: 6 by 8 feet (1.83 by 2.44 m).*

*H78WD platform size: 7 by 8 feet (2.13 by 2.44 m).*

***~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~***

* + - * 1. Platform Size: **[6 by 8 feet (1.83 by 2.44 m)] [7 by 8 feet (2.13 by 2.44m)]** nominal.
				2. Platform Length: 8 feet (2.44 m) nominal.
				3. Range of Operating: Dock levelers to compensate for height differences between truck bed and loading platform, as follows: 12 inches (305 mm) above dock level, and 12 inches (305 mm) below dock level.
				4. Lip Extension Length: **[16 inches (406 mm)] [18 inches (457 mm)] [20 inches (508 mm)]** long.
				5. Smooth Path: Beveled edge of lip ramp transition, edge to deck transition, and floor-to-deck transition to minimize jolts to equipment and workers.
				6. Platform Deck: Steel checker plate deck for traction, reinforced on underside, welded to fabricated steel frame.
				7. Frame: Clean-pit type, with no dirt traps from cross-pit beams in rear of pit; dock leveler supports at sides of pit, including full front-to-rear openness for ease of cleaning.
				8. Hinged Ramp Lip: Nonskid steel plate.

Lip Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge and replaceable hinge pin for maintenance without breaking welds or grinding of metal.

* + - * 1. Finish: Textured powder coat to increase durability of finish and slip resistance, as well as reduce corrosion and VOCs.
				2. Leveler Adjustment: Height adjusters operate above leveler deck to adjust plus or minus 1.25 inches (32 mm) without shims or welding equipment.
				3. Transport Loops: Four lifting loops for top transport of leveler by forklift.
				4. Bumpers: Standard 410-14.
				5. Weather Seals: Brush; Neoprene.

***~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~***

*Include requirements for determining suitability of conditions for required work.*

*Include field testing requirements for materials, substrates, systems, etc.*

*Specify ambient condition requirements in PART 1 in the FIELD CONDITIONS article.*

***~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~***

* 1. PART 3 EXECUTION
		1. Examination
			1. Verify **[existing conditions] [and] [\_\_\_\_\_\_\_]** meet the manufacturer's requirements before starting work.
			2. Examine loading dock equipment area for compliance with requirements for installation tolerances and other conditions related to this work.
			3. Examine walls and floors of loading dock equipment concrete pits for suitable conditions, and verify pits are plumb and square and properly sloped back to front of loading dock for drainage.
			4. Verify rough-in wall opening and anchors are acceptable, correctly sized, and aligned to proper tolerances.
			5. Verify that frames installed in concrete and masonry are correctly located.
			6. Proceed with installation after unsatisfactory conditions corrected.
		2. PREPARATION
			1. Prepare loading dock equipment for size and locations as indicated and provide anchoring devices with templates, diagrams, and installation instructions.
			2. Prepare metal curb angles along concrete edges of recessed pits with top flush with loading platform and fit exposed ends together to form smooth hairline joints.
		3. Installation
			1. Install loading dock leveler unit in prepared opening in accordance with manufacturer's written instructions.
				1. Set square and level.
				2. Anchor unit securely, flush with building floor, and fillet-weld back of leveling dock to pit frame; touch-up welds with paint.
				3. Position mechanical pit levelers above or below dock height, inclusive of end loading with lip pendant.
			2. Grease fittings to lubricate deck hinge for smooth operation.
		4. Adjusting
			1. Adjust installed loading dock equipment **[and safety devices]** for smooth and balanced operation **[and lubricate as recommended by manufacturer]**.
			2. Test dock levelers for vertical travel within operating range as indicated and adjust as necessary for proper operation.
			3. After installation, inspect exposed factory-finished loading dock equipment and repair damaged finishes.
		5. Cleaning
			1. See Section 017000 - Execution and Closeout Requirements for additional requirements.
			2. Clean recessed pits of debris.
		6. CLOSEOUT ACTIVITIES
			1. See Section 017800 - Closeout Submittals for additional submittals.
			2. See Section 017900 - Demonstration and Training for additional requirements.
			3. Demonstrate proper operation of **[loading dock equipment] [\_\_\_\_\_\_\_]** to Owner's designated representative.
			4. Demonstration: Demonstrate operation of system to Owner's personnel.
				1. Use operation and maintenance data as reference during demonstration.
				2. Conduct walking tour of project.
				3. Briefly describe function, operation, and maintenance of each component.
			5. Training: Train Owner's personnel on operation and maintenance of system.
				1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
				2. Provide minimum of **[two hours] [one day] [\_\_\_\_\_\_\_]** of training.
				3. Instructor: Manufacturer's training personnel.
				4. Location: At project site.
				5. Location: Owner's offsite classroom facilities may be used.
				6. Location: Provide local classroom facilities.
				7. Location: At manufacturer's training facility; include travel expenses for **[one member] [two members] [\_\_\_\_\_\_\_ members]** of Owner's staff.

***~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~***

*Describe protection of completed work.*

***~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~***

* + 1. PROTECTION
			1. Protect finishes until completion of project.
			2. Touch up damaged finishes after Substantial Completion.

***~~~ PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~***

*Describe maintenance services that are to be performed after completion. Be clear as to whether the original Contractor is to perform such service under the original construction contract or a separate service agreement is required. The latter is usually preferred as it does not unnecessarily delay final payment and contract closeout.*

***~~~ END OF PROJECT NOTE ~~~~~~~~~~~~~~~~~~~~~~~~~***

* + 1. MAINTENANCE
			1. See Section 017000 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.
			2. Provide a separate maintenance contract for specified maintenance service.
			3. Provide service and maintenance of operating equipment for a period of **[one year] [two years] [\_\_\_\_\_\_\_]** from Date of Substantial Completion.
				1. Provide maintenance service by skilled employees of loading dock equipment installer.
				2. Include **[monthly] [quarterly] [\_\_\_\_\_\_\_]** preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper operation of loading dock equipment at rated speed and capacity.
				3. Provide manufacturer's authorized replacement parts and supplies.
1. END OF SECTION