

## SECTION 111319 STATIONARY LOADING DOCK EQUIPMENT

**NOTE:** Enable Microsoft Word option to display hidden text to view notes to specifier.

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Edge of dock (EOD) levelers.
- B. Fixed dock seals.
- C. Adjustable curtain dock seals.
- D. Fixed dock shelters.
- E. Foam dock shelters.
- F. Maintenance.

#### 1.02 RELATED REQUIREMENTS

- A. Section 031000 - Concrete Forming and Accessories: Placement of leveler frame[ **and safety lock frame**] into concrete [**loading dock**] [\_\_\_\_\_].
- B. Section 031000 - Concrete Forming and Accessories: Placement of seal and shelter frame into concrete.
- C. Section 033000 - Cast-in-Place Concrete.
- D. Section 111313 - Loading Dock Bumpers.
- E. Section 111316 - Loading Dock Seals and Shelters.

#### 1.03 REFERENCE STANDARDS

- A. ANSI MH30.1 - Design, Testing, and Utilization of Dock Leveling Devices 2022.
- B. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification 2021.
- C. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020, with Errata (2022).

#### 1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide materials and finish, installation details, roughing-in measurements, and operation of unit.
- C. Shop Drawings: Indicate required opening dimensions and tolerances, perimeter conditions of construction.
- D. Shop Drawings: Indicated framed wall opening, dimensions and tolerances, adjacent construction and fittings required for anchorages, and anchor points.
- E. Samples: Submit [**two**] [\_\_\_\_\_] cuts of [**seal**] [**shelter**] [\_\_\_\_\_] covering material, \_\_\_\_ by \_\_\_\_ inch (\_\_\_\_ by \_\_\_\_ mm) in size, illustrating color and finish.
- F. Manufacturer's Instructions: Indicate special requirements.
- G. Manufacturer's Qualification Statement.
- H. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated within the previous [**12 months**] [\_\_\_\_\_].
- I. Installer's Qualification Statement.

- J. Operation Data: Provide operating instructions, and identify unit limitations.
- K. Maintenance Data: Provide unit maintenance information, lubrication cycles, and spare parts manual.

### 1.05 QUALITY ASSURANCE

- A. Welder Qualifications: Welding processes and welding operators qualified within previous **[12 months]** [\_\_\_\_\_] in accordance with AWS D1.1/D1.1M.
- B. Installer Qualifications: Company specializing in performing work of type specified and with at least **[three]** [\_\_\_\_\_] years of **[documented]** experience **[and approved by manufacturer]**.

### 1.06 FIELD CONDITIONS

- A. 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]** [\_\_\_\_\_].

### 1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer agrees to correct defective work within one year period from Date of Substantial Completion.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Acceptable Manufacturer:
  1. Wayne Dalton; www.wayne-dalton.com; 1 (800) 827-3667.

### 2.02 EDGE OF DOCKS (EOD) LEVELERS

- A. **<drawing designation>**: Model **[E66WD]** **[E72WD]** [\_\_\_\_\_] by Wayne Dalton.
  1. Edge of Dock (EOD) Levelers: Hinged-edge type, in compliance with ANSI MH30.1, and located at exterior edge and securely mounted to face of loading dock. Levelers complying with ANSI MH14.1 lack load testing compliance and will not be approved.
  2. 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.
  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 unexpectedly. EOD also auto stores to a safe position when truck departs unexpectedly.
  4. Mechanical Operating System: Manually controlled, with counterbalance and spring operation; spring-operated raising and lowering the ramp.
  5. Construction: Fabricate loading dock leveler frame, edge, and platform supports from structural and formed steel shapes, with platform and hinged edge welded to supports, chamfer edge to minimize obstructing material-handling vehicles, and ensure entire assembly is fabricated to withstand deformation during operation and storage phases of service.
  6. Ramp Maintenance Support: Provide safety brace mechanism in framework to support ramp in up position during dock leveler maintenance.
  7. Rated Capacity: Capable of supporting **[20,000 pounds (9072 kg)]** **[30,000 pounds (13,608 kg)]** without permanent deflection or distortion.
  8. Width: **[66 inches (1676 mm)]** **[72 inches (1829 mm)]**.
  9. Smooth Path: Beveled lip edge of ramp transition, edge to deck transition, and floor to deck transition to avoid jolts to equipment and workers.
  10. Platform Deck: Steel checker plate deck, reinforced on underside, welded to fabricated steel frame. Also have on bumper box.

11. Hinged Ramp Edge: **[15 inch (381 mm) edge with standard crown] [15 inch (381 mm) edge with high crown] [17 inch (432 mm) edge with standard crown] [17 inch (432 mm) edge with high crown]**.
  - a. Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge cavity, and replaceable hinge pin for maintenance without welding equipment.
12. Finish: Textured powder coat to increase durability of finish and slip resistance, as well as reduce corrosion and VOCs.
13. Handle Storage: Self storing within the deck where it's convenient to reach. Tethered to prevent loss or misplacement.
14. Safety Brace: Conveniently located under the leveler and tethered to prevent loss or misplacement.
15. Molded Bumper and Bumper Box: Manufacturer's standard.

### 2.03 FIXED DOCK SEAL

- A. **<drawing designation>**: Model LX10WD by Wayne Dalton.
  1. Height: \_\_\_\_\_.
  2. Width: \_\_\_\_\_.
  3. Projection: \_\_\_\_\_.
    - a. Taper up (8 inches to 20 inches (203 mm to 508 mm)) or down (8 inches to 20 inches (203 mm to 508 mm)).
    - b. Project Box Option: **[4 inches (102 mm)] [6 inches (152 mm)] [8 inches (203 mm)] [10 inches (254 mm)] [12 inches (305 mm)]**.
  4. Cushion: Fire retardant foam for full depth of seal; tapered at jambs. Full compression and recovery required to temperatures below -40 degrees F (-40 degrees C).
    - a. Continuously bonded to backing with flexible, non-flammable adhesive.
  5. Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: **[22 oz/sq ft (6.7 kg/sq m)] [28 oz/sq ft (8.5 kg/sq m)] [40 oz/sq ft (12.2 kg/sq m)] [\_\_\_\_ oz/sq ft (\_\_\_\_ kg/sq m)]**.
    - b. Covering Color: **[Black] [Blue] [Gray] [Green] [\_\_\_\_] [Brown]**.
  6. Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: **[40 oz/sq ft (12.2 kg/sq m)] [22 oz/sq ft (6.7 kg/sq m)] [28 oz/sq ft (8.5 kg/sq m)] [\_\_\_\_ oz/sq ft (\_\_\_\_ kg/sq m)]**.
    - b. Covering Color: **[Black] [Blue] [Gray] [Green] [\_\_\_\_] [Red] [Brown]**.
  7. Premium Abrasion-Resistant Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: **[40 oz/sq ft (12.2 kg/sq m)] [22 oz/sq ft (6.7 kg/sq m)] [28 oz/sq ft (8.5 kg/sq m)] [\_\_\_\_ oz/sq ft (\_\_\_\_ kg/sq m)]**.
    - b. Abrasion Resistance: 6 times more abrasion resistant than standard covering material.
    - c. Covering Color: Black.
  8. Header: Fixed air vented construction.
    - a. Header Height: **[12 inches (305 mm)] [15 inches (381 mm)] [18 inches (457 mm)]**.
  9. Vertical Columns: **[10/10: 10 inch (254 mm) back column, 10 inch (254 mm) front column] [12/12: 12 inch (305 mm) back column, 12 inch (305 mm) front column] [8/11: 8 inch (203 mm) back column, 11 inch (279 mm) front column] [8/14: 8 inch (203 mm) back column, 14 inch (356 mm) front column] [12/15: 12 inch (305 mm) back column, 15 inch (381 mm) front column] [12/18: 12 inch (305 mm) back column, 18 inch (457 mm) front column]**.
  10. Seams: Mechanically double stitched; double ply at exposed face.
  11. UV Protection: Treat all fabrics and thread with UV protection for fade resistance.
  12. Bottom Dock Seal: **[Same construction as above] [\_\_\_\_]**.
    - a. Length: **[4 feet (1219 mm)] [8 feet (2438 mm)]**.
  13. Curtain: To accommodate additional variation in trailer heights.
    - a. Installation: Velcro holding capability.

- b. Fabric: **[Match seal fabric]** ["Low temperature" PVC material for cold applications].
- c. Drop Length: **[12 inches (305 mm)] [18 inches (457 mm)] [24 inches (610 mm)]**.
- 14. Column Double Fabric Layer: **[None required]** [Matching fabric dual layer required].
- 15. Draft Control: 2 bottom draft flaps.
- 16. Frame Construction (Top and Sides): **[Treated wood]** [Galvanized steel].
- 17. Guide Stripe: **[24 inches (610 mm) high]** [Full height].
- 18. Column Fabric Scuff Guard: **[None required]** [40 oz. premium fabric scuff guards required].
- 19. Security Seal: **[Required]** [Not required].
- 20. Wear Pleats: **[Not required]** [Matching fabric pleats required].
- 21. Corner Wear Pleats: **[Not required]** [66 oz premium fabric pleats required].

#### 2.04 ADJUSTABLE CURTAIN DOCK SEAL

- A. **<drawing designation>**: Model LC20WD by Wayne Dalton.
  - 1. Height: \_\_\_\_\_.
  - 2. Width: \_\_\_\_\_.
  - 3. Projection: \_\_\_\_\_.
    - a. Taper up ( 8 inches to 20 inches (203 mm to 508 mm)) or down ( 8 inches to 20 inches (203 mm to 508 mm)).
    - b. Project Box Option: **[4 inches (102 mm)] [6 inches (152 mm)] [8 inches (203 mm)] [10 inches (254 mm)] [12 inches (305 mm)]**.
  - 4. Cushion: Fire retardant foam for full depth of seal; tapered at jambs. Full compression and recovery required to temperatures below -40 degrees F (-40 degrees C).
    - a. Continuously bonded to backing with flexible, non-flammable adhesive.
  - 5. Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: 22 oz/sq ft (6.7 kg/sq m).
    - b. Covering Color: **[Black] [Blue] [Gray] [Green] [Brown]**.
  - 6. Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: 40 oz/sq ft (12.2 kg/sq m).
    - b. Covering Color: **[Black] [Blue] [Gray] [Green] [Red] [Brown]**.
  - 7. Premium Abrasion-Resistant Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: 40 oz/sq ft (12.2 kg/sq m).
    - b. Abrasion Resistance: 6 times more abrasion resistant than standard covering material.
    - c. Covering Color: Black.
  - 8. Vertical Columns: **[10/10: 10 inch (254 mm) back column, 10 inch (254 mm) front column] [12/12: 12 inch (305 mm) back column, 12 inch (305 mm) front column] [8/11: 8 inch (203 mm) back column, 11 inch (279 mm) front column] [8/14: 8 inch (203 mm) back column, 14 inch (356 mm) front column] [12/15: 12 inch (305 mm) back column, 15 inch (381 mm) front column] [12/18: 12 inch (305 mm) back column, 18 inch (457 mm) front column] [8/20: 8 inch (203 mm) back column, 20 inch (508 mm) front column]**.
  - 9. Seams: Mechanically double stitched; double ply at exposed face.
  - 10. UV Protection: Treat all fabrics and thread with UV protection for fade resistance.
  - 11. Bottom Dock Seal: **[Same construction as above]** [\_\_\_\_\_].
    - a. Length: **[4 feet (1219 mm)] [8 feet (2438 mm)]**.
  - 12. Optional **[Adjustable]** **[Fixed]** Curtain: **[Required]** **[Not required]**.
    - a. Height: \_\_\_\_\_.
    - b. Curtain Split: **[With Velcro]** **[Without Velcro]**; **[adjustable, 24 to 48 inches (610 to 1219 mm)] [fixed, 12 to 48 inches (305 to 1219 mm)]**.
    - c. Curtain Fabric: **[To match balance of fabric]** **[Low temperature PVC]**.
  - 13. Draft Control: 2 bottom draft flaps.

14. Frame Construction (Top and Sides): **[Treated wood] [Galvanized steel]**.
15. Guide Stripes: **[Partial height] [Full height]**.
16. Wear Pleats: **[None required] [Matching fabric pleats required] [66 oz. premium fabric pleats required]**.
17. Corner Wear Pleats: **[None required] [Matching fabric pleats required] [66 oz. premium fabric pleats required]**.
18. Column Double Fabric Layer: **[None required] [Matching fabric dual layer required]**.
19. Column Fabric Scuff Guard: **[None required] [40 oz. premium fabric scuff guards required]**.
20. Security Seal: **[Required] [Not required]**.

## 2.05 FIXED DOCK SHELTER

- A. **<drawing designation>**: Model TX40WD by Wayne Dalton.
  1. Width: 11 feet (3353 mm) minimum to 12 feet 8 inches (3861 mm) maximum.
  2. Height: 11 feet (3353 mm) minimum to 12 feet 6 inches (3810 mm) maximum.
  3. Projection: **[24 inches (610 mm)] [36 inches (914 mm)] [48 inches (1219 mm)] [60 inches (1524 mm)]**.
  4. Frame Construction (Top and Sides): **[Treated wood] [Galvanized steel]**.
  5. Side and Top Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: 22 oz/sq ft (6.7 kg/sq m).
    - b. Covering Color: **[Black] [Blue] [Gray] [Green] [Brown]**.
  6. Side and Top Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: 40 oz/sq ft (12.2 kg/sq m).
    - b. Covering Color: **[Black] [Blue] [Gray] [Green] [Red] [Brown]**.
  7. Premium Abrasion-Resistant Side and Top Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
    - a. Covering Weight: 40 oz/sq ft (12.2 kg/sq m).
    - b. Abrasion Resistance: 6 times more abrasion resistant than standard covering material.
    - c. Covering Color: Black.
  8. Vertical Panel Upgraded Seal Accessories: **[Required] [Not required]**.
  9. Seams: Mechanically double stitched; double ply at exposed face.
  10. UV Protection: Treat all fabrics and thread with UV protection for fade resistance.
  11. Curtain Drop: \_\_\_\_\_.
  12. Draft Control: 2 draft control pads. Projection: **[24 inches (610 mm)] [36 inches (914 mm)] [48 inches (1219 mm)] [60 inches (1524 mm)]**.
  13. Mounting: Galvanized mounting hardware and stabilizing bracket.
  14. Steel Guards (Shelter Bumpers): Manufacturer's standard double guards.
  15. Guide Stripes: **[Partial height] [Full height]**.

## 2.06 FOAM DOCK SHELTER

- A. **<drawing designation>**: Model TM70WD by Wayne Dalton.
  1. Width: 11 feet 4 inches (3454 mm) maximum.
  2. Height: \_\_\_\_\_.
  3. Projection: **[16 inches (406 mm)] [18 inches (457 mm)] [20 inches (508 mm)] [24 inches (610 mm)]**.
    - a. Taper up ( 8 inches to 20 inches (203 mm to 508 mm)) or down ( 8 inches to 20 inches (203 mm to 508 mm)).
    - b. Project Box Option: **[4 inches (102 mm)] [6 inches (152 mm)] [8 inches (203 mm)] [10 inches (254 mm)] [12 inches (305 mm)]**.
  4. Frame Construction (Top and Sides): **[Treated wood] [Galvanized steel]**.

5. Side and Top Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
  - a. Covering Weight: 22 oz/sq ft (6.7 kg/sq m).
  - b. Covering Color: **[Black] [Blue] [Gray] [Green] [Brown]**.
6. Side and Top Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
  - a. Covering Weight: 40 oz/sq ft (12.2 kg/sq m).
  - b. Covering Color: **[Black] [Blue] [Gray] [Green] [Red] [Brown]**.
7. Premium Abrasion-Resistant Side and Top Covering Material: Fabric which remains flexible to -40 degrees F (-40 degrees C).
  - a. Covering Weight: 40 oz/sq ft (12.2 kg/sq m).
  - b. Abrasion Resistance: 6 times more abrasion resistant than standard covering material.
  - c. Covering Color: Black.
8. Seams: Mechanically double stitched; double ply at exposed face.
9. UV Protection: Treat all fabrics and thread with UV protection for fade resistance.
10. Optional **[Adjustable] [Fixed]** Curtain: **[Required] [Not required]**.
  - a. Height: \_\_\_\_\_.
  - b. Curtain Split: **[With Velcro] [Without Velcro]**; **[adjustable, 30 to 48 inches (762 to 1219 mm)] [fixed, 18 to 48 inches (457 to 1219 mm)]**.
  - c. Curtain Fabric: **[To match balance of fabric] [Low temperature PVC]**.
11. Draft Control: 2 bottom draft flaps.
12. Guide Stripes: **[Partial height] [Full height]**.
13. Wear Pleats: **[None required] [Matching fabric pleats required] [66 oz. premium fabric pleats required]**.
14. Corner Wear Pleats: **[None required] [Matching fabric pleats required] [66 oz. premium fabric pleats required]**.
15. Column Double Fabric Layer: **[None required] [Matching fabric dual layer required]**.
16. Column Fabric Scuff Guard: **[None required] [40 oz. premium fabric scuff guards required]**.

## 2.07 ACCESSORIES

- A. Loading Dock Bumpers: See Section 111313 - Loading Dock Bumpers.
- B. Loading Dock Seals and Shelters: See Section 111316 - Loading Dock Seals and Shelters.
- C. Curb Angles: See Section 055000 - Metal Fabrications.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify **[existing conditions] [and] [\_\_\_\_\_]** meet the manufacturer's requirements before starting work.
- B. Examine loading dock equipment area for compliance with requirements for installation tolerances and other conditions related to this work.
- C. Examine walls and floors of loading dock equipment concrete pits for suitable conditions, verify that pits are plumb and square, and properly sloped back to front of loading dock for drainage.
- D. Verify that rough-in wall opening and anchors are acceptable, correctly sized, and aligned to proper tolerances.
- E. Verify that frames installed in concrete and masonry are correctly located.
- F. Proceed with installation after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Prepare loading dock equipment for size and locations as indicated, and provide anchoring devices with templates, diagrams, and installation instructions.

### 3.03 INSTALLATION

- A. Install edge-of-dock levelers to ensure arrangement is adequate to accommodate lift in proper relation to the loading platform.
  - 1. Anchor and/or weld edge-of-dock leveler securely in place, in accordance with manufacturer's written instructions.
  - 2. Weld anchor holes in contact with continuously embedded loading dock edge channel.
  - 3. Weld or bolt bumper blocks to face of loading dock.
- B. Install **[seal] [and] [shelter]** components in accordance with manufacturer's instructions.
  - 1. Set plumb and level.
  - 2. Attach anchors and fittings to prepared wall construction and opening frame.

### 3.04 ADJUSTING

- A. Adjust installed loading dock equipment **[ and safety devices]** for smooth and balanced operation **[, and lubricate as recommended by manufacturer]**.
- B. Test dock levelers for vertical travel within operating range as indicated and adjust as necessary for proper operation.
- C. After installation, inspect exposed factory finished loading dock equipment, and repair damaged finishes.

### 3.05 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.
- B. Clean recessed pits of debris.

### 3.06 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

### 3.07 CLOSEOUT ACTIVITIES

- A. See Section 017800 - Closeout Submittals, for closeout submittals.
- B. See Section 017900 - Demonstration and Training, for additional requirements.
- C. Demonstrate proper operation of **[loading dock equipment] [\_\_\_\_\_]** to Owner's designated representative.
- D. 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.
- E. 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.

### 3.08 MAINTENANCE

- A. See Section 017000 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.
- B. Provide a separate maintenance contract for specified maintenance service.
- C. 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. Includes **[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.

### 3.09 SCHEDULES

- A. Main Loading Dock Leveler: \_\_\_\_\_ lb (\_\_\_\_\_ kg) capacity, \_\_\_\_\_ feet (\_\_\_\_\_ mm) wide by \_\_\_\_\_ feet (\_\_\_\_\_ mm) long.

**END OF SECTION**