SECTION 11 13 00

LOADING DOCK EQUIPMENT

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Kelley; Dock Equipment.  
This section is based on the products of Kelley, which is located at:1612 Hutton Dr., Suite 140Carrollton, TX 75006Toll Free Tel: 800-558-6960Fax: 972-389-4752Email: [request info (Kelley@4frontes.com)](https://arcat.com/rfi?action=email&company=Kelley&message=RE%253A%2520Spec%2520Question%2520(11160kly)%253A%2520&coid=33553&spec=11160kly&rep=&fax=972-389-4752)  
Web: <https://kelleydocksolutions.com>   
 [ [Click Here](https://arcat.com/company/kelley-33553) ] for additional information.  
The Kelley brand was established in 1953 with the invention of the world's first counterbalanced dock leveler. Today the Kelley product line includes dock levelers, vehicle restraints, integrated control systems, dock seals and shelters, HVLS warehouse fans, ergonomic scissor lift tables and a full array of products and services specifically designed to support customers' sustainability initiatives.  
Kelley's comprehensive offerings include commercial sectional doors, loading dock equipment, HVLS warehouse fans, and high-performance dock seals & shelters. Kelley loading dock products are sold through an extensive network of trained dealers who provide superior installation and service. In North America, the distributor network extends throughout the U.S., Canada and Mexico.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Loading Dock Equipment:
       1. Air powered dock levelers.
       2. Hydraulic dock levelers.
       3. Edge of dock levelers.
       4. Vertical dock levelers.
       5. Perimeter seal loading dock leveler.
       6. Dock lifts.
       7. Dock seals.
       8. Dock Accessory Items
       9. Vehicle restraints
       10. Truck levelers.
       11. HVLS Fans.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 05 50 00 - Metal Fabrications.
    3. Division 16 - Electrical; electrical connections to dock equipment.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
    2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
  2. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  3. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
  4. PROJECT CONDITIONS
     1. 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.
  5. WARRANTY
     1. Manufacturer's Warranties for Air, Hydraulic, Power Assist, and Vertical Dock Levelers.
        1. Limited Parts and Labor Base Warranty: All components under normal use for 1 year beginning on installation completion or 60th day after shipment, whichever is earlier.

\*\* NOTE TO SPECIFIER \*\* Remaining paragraphs are optional leveler warranties Delete options not required.

* + - * 1. Limited 4-Year Parts and Labor Warranty on Lifting System: Air bag, motor, hoses, gaskets, fittings, and seals.
        2. Prorated Structural 10 Year Warranty: With engineering approval.
      1. Manufacturer's Limited Edge of Dock Warranty: Warranted against defects in materials and workmanship for one year.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Kelley, which is located at:1612 Hutton Dr., Suite 140Carrollton, TX 75006Toll Free Tel: 800-558-6960Fax: 972-389-4752Email: [request info (Kelley@4frontes.com)](https://arcat.com/rfi?action=email&company=Kelley&message=RE%253A%2520Spec%2520Question%2520(11160kly)%253A%2520&coid=33553&spec=11160kly&rep=&fax=972-389-4752);Web: <https://kelleydocksolutions.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for Substitutions: Considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete basis of design paragraphs not required.

* 1. AIR POWERED DOCK LEVELERS
     1. Basis of Design: aFX Series Dock Leveler as manufactured by Kelly. Air Force Technology dock leveler with "airDefense" system to be complete package, including motor housing assembly, full operating range toe guards, integral support struts for deck and lip lock.
        1. Standards Compliance: ANSI MH14.1-1987.
        2. Platform: Welded assembly. High tensile steel tread-plate supported by Lamda deck beams welded to front header.
           1. Deck: CIR 30,000 to 35,000 lbs (13,608 to kg): 1/4 inch (6 mm) thick.
           2. Deck: CIR 40,000 to 50,000 lbs (22,680 kg): 5/16 inch (10 mm) thick.
        3. Lip: 16 inch (406 mm) high tensile steel tread-plate. Beveled leading edge.
           1. Thickness: CIR 30,000 to 35,000 lbs (13,608 to 15876 kg): 5/8 inch (16 mm).
           2. Thickness: CIR 40,000 to 50,000 lbs (18,144 to 22,680 kg): 11/16 inch (19 mm).
           3. Self-cleaning lug-style lip hinge with heavy lugs welded directly to each beam and lip assembly.
           4. Lip Rod: 1 inch (25 mm) solid steel.
        4. Lip Extension: GRAVITY LIP Automatic Lip Extension ensures proper lip extension with descent of dock leveler into trailer.
        5. Rear Subframe and Hinge: 4 vertical angles welded to 2 horizontal members. Upper Rear Angle: Longitudinal support for gussets and deck supports. Hinge: Four, 1/2 inch (13 mm) thick lugs. Allows 4 inch (100 mm) side to side deck twist.
        6. SafeTFrame: Four, independently operated vertical leveling feet. Adjustment: 1-1/2 inches (38 mm). Prevents gap or bump at rear transition angle and curb angle.
        7. Power Unit: 120 V one phase motor/blower on galvanized pan. Elevated off pit floor.

\*\* NOTE TO SPECIFIER \*\* Interlock capable control panel available.

* + - 1. Control Panel: Non-metallic, non-interlock capable, single push-button control panel.
      2. Clean Frame: Open frame design provides access to pit floor for routine cleaning and scheduled maintenance. EZ-Clean Pit Kit eliminates need for additional tools for complete access to concrete floor or access to fan motor.
      3. Full Range Toe Guard Protection: Full operating range toe guards with two galvanized sliding guards (yellow OSHA required markings per ANSI/Z535.1) provided on the sides of the dock leveler.
      4. Integral Support Strut: Integral support strut keeps ramp raised during routine maintenance and pit cleaning.
      5. Integral Lip Lock: Lip lock keeps lip raised for routine maintenance and cleaning.
      6. Safety Legs: "airDefense" sensor rollers ride along reinforced cams, providing fluid free float motion to eliminate stump-out while also providing a measure of freefall protection in event of premature trailer separation. High-efficiency 60,000 lbs. (27,225 kg) structural dock level support legs. Drop-tested to full rated capacity of dock leveler.
      7. Integral Maintenance Strut and Lip Support Latch: Permanently mounted, hinged, and lockout capable. Supports lip and leveler during maintenance and pit cleaning.
      8. Below Dock Control, Endloading: Allows for lowering of leveler without extending lip.
      9. Float Compensation: Lets vertical carrier deflect when lip is in contact with truck bed.
      10. Operation: NEMA 4x non-metallic push-button control panel, non-interlock capable.
          1. Rises when push-button is pushed and held. Gravity lip automatically extends as deck section descends into trailer bed.
          2. After Loading or Unloading: Push button to activate air system and raise dock leveler. Gravity lip moves pendant and dock leveler is stored. In stored position,
          3. Dock leveler is fully supported by dock level support legs.
          4. Ramp may be lowered to fully supported below dock level position without extending lip, to service low trucks in end load situations.
      11. Concrete Pit Construction: Per certified Serco pit detail drawings.
          1. Pit Depth: 20 inches (508 mm) for 6 to 8 ft (1.83 to 2.44 m) long units.
          2. Pit Depth: 24 inches (610 mm) for 10 ft (3.05 m) long units.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Color: Manufacturer's standard enamel green.
      2. Color: As determined by Architect from Manufacturer's range.
      3. Capacity: CIR 30K lbs (13,607 kg).
      4. Capacity: CIR 35K lbs (15,875 kg).
      5. Capacity: CIR 40K lbs (18,143 kg).
      6. Capacity: CIR 45K lbs (20,411 kg).
      7. Capacity: CIR 50K lbs (22,680 kg).
      8. Width: 6 ft (1,829 mm).
      9. Width: 6.5 ft (1,981 mm).
      10. Width: 7 ft (2,134 mm).
      11. Length: 6 ft (1,829 mm).
      12. Length: 8 ft (2,438 mm).
      13. Length: 10 ft (3,048 mm).
      14. Extended Lip: 18 inches (457 mm).
      15. Extended Lip: 20 inches (508 mm).
      16. Lip Taper: \_\_\_\_\_\_\_\_.
      17. Weather Seal: Factory installed brush.
      18. Weather Seal: ENERGY GUARD perimeter system
      19. Dock Bumpers: B410-14.
      20. Dock Bumpers: B410-14F. Standard.
      21. Dock Bumpers: B610-14.
      22. Dock Bumpers: B610-14F.
      23. Dock Bumpers: VB420-11F.
      24. Dock Bumpers: VB420-11 steel faced.
      25. Dock Bumpers: \_\_\_\_\_\_\_\_.
      26. Spray foam insulated deck.
      27. Galvanized Finish: Deck, lip and subframe.
      28. Abrasive surface.
      29. Interlock capable non-metallic control panel.
      30. High lip crown.
      31. Box: Dock leveler enclosed in pre-formed steel box for pour-in-place construction. Six, welded curb angles and concrete anchors. Concrete in place.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Accessories:
         1. STAR vehicle restraint \_\_\_\_\_\_.
         2. HIDDEN HOOK recessed restraint.
         3. MANUAL SURFACE CHOCK wheel restraint.
         4. SURFACE-CHOCK wheel restraint.
         5. AUTO CHOCK wheel restraint.
         6. VERSACHOCK wheel restraint.
         7. Digital master or combination control panel with HMI.
    1. Basis of Design: aFX-C Series Dock Leveler as manufactured by Kelly. Air Force Technology dock leveler to be complete package, including motor housing assembly, full operating range toe guards, integral support struts for deck and lip lock.
       1. Standards Compliance: ANSI MH14.1-1987.
       2. Platform: Welded assembly. High tensile steel tread-plate supported by Lamda deck beams welded to front header.
          1. Deck: CIR 30,000 to 35,000 lbs (13,608 to kg): 1/4 inch (6 mm) thick.
          2. Deck: CIR 40,000 to 50,000 lbs (22,680 kg): 5/16 inch (10 mm) thick.
       3. Lip: 16 inch (406 mm) high tensile steel tread-plate. Beveled leading edge.
          1. Thickness: CIR 30,000 to 35,000 lbs (13,608 to 15876 kg): 5/8 inch (16 mm).
          2. Thickness: CIR 40,000 to 50,000 lbs (18,144 to 22,680 kg): 11/16 inch (19 mm).
          3. Self-cleaning lug-style lip hinge with heavy lugs welded directly to each beam and lip assembly.
          4. Lip Rod: 1 inch (25 mm) solid steel.
       4. Lip Extension: GRAVITY LIP Automatic Lip Extension ensures proper lip extension with descent of dock leveler into trailer.
       5. Rear Subframe and Hinge: 4 vertical angles welded to 2 horizontal members. Upper Rear Angle: Longitudinal support for gussets and deck supports. Hinge: Four, 1/2 inch (13 mm) thick lugs. Allows 4 inch (100 mm) side to side deck twist.
       6. SafeTFrame: Four, independently operated vertical leveling feet. Adjustment: 1-1/2 inches (37.5 mm). Prevents gap or bump at rear transition angle and curb angle.
       7. Power Unit: 120 V one phase motor/blower on galvanized pan. Elevated off pit floor.

\*\* NOTE TO SPECIFIER \*\* Interlock capable control panel available.

* + - 1. Control Panel: Non-metallic, non-interlock capable, single push-button control panel.
      2. Clean Frame: Open frame design provides access to pit floor for routine cleaning and scheduled maintenance. Eliminates need for additional tools for complete access to concrete floor or access to fan motor.
      3. Full Range Toe Guard Protection: Full operating range toe guards with two galvanized sliding guards (yellow OSHA required markings per ANSI/Z535.1) provided on the sides of the dock leveler.
      4. Integral Support Strut: Integral support strut keeps ramp raised during routine maintenance and pit cleaning.
      5. Integral Lip Lock: Lip lock keeps lip raised for routine maintenance and cleaning.
      6. Safety Legs: High-efficiency 60,000 lbs. (27,225 kg) structural dock level support legs. Drop-tested to full rated capacity of dock leveler.
      7. Integral Maintenance Strut and Lip Support Latch: Permanently mounted, hinged, and lockout capable. Supports lip and leveler during maintenance and pit cleaning.
      8. Below Dock Control, Endloading: Below-dock control chain supplied to retract dock level support legs for complete servicing of trailers below-dock and allows for lowering of leveler without extending the lip.
      9. Float Compensation: Lets vertical carrier deflect when lip is in contact with truck bed.
      10. Operation: NEMA 4x non-metallic push-button control panel, non-interlock capable.
          1. Rises when push-button is pushed and held. Gravity lip automatically extends as deck section descends into trailer bed.
          2. After Loading or Unloading: Push button to activate air system and raise dock leveler. Gravity lip moves pendant and dock leveler is stored. In stored position,
          3. Dock leveler is fully supported by dock level support legs.
          4. Ramp may be lowered to fully supported below dock level position without extending lip, to service low trucks in end load situations.
      11. Concrete Pit Construction: Per certified Serco pit detail drawings.
          1. Pit Depth: 20 inches (508 mm) for 6 to 8 ft (1.83 to 2.44 m) long units.
          2. Pit Depth: 24 inches (610 mm) for 10 ft (3.05 m) long units.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. EZ-Clean Pit Kit: Eliminates need for additional tools top access the concrete floor or fan motor.
      2. Color: Manufacturer's standard enamel green.
      3. Color: As determined by Architect from Manufacturer's range.
      4. Capacity: CIR 30K lbs (13,607 kg).
      5. Capacity: CIR 35K lbs (15,875 kg).
      6. Capacity: CIR 40K lbs (18,143 kg).
      7. Capacity: CIR 45K lbs (20,411 kg).
      8. Capacity: CIR 50K lbs (22,680 kg).
      9. Width: 6 ft (1,829 mm).
      10. Width: 6.5 ft (1,981 mm).
      11. Width: 7 ft (2,134 mm).
      12. Length: 6 ft (1,829 mm).
      13. Length: 8 ft (2,438 mm).
      14. Length: 10 ft (3,048 mm).
      15. Extended Lip: 18 inches (457 mm).
      16. Extended Lip: 20 inches (508 mm).
      17. Lip Taper: \_\_\_\_\_\_\_\_.
      18. Weather Seal: Factory installed brush.
      19. Weather Seal: ENERGY GUARD perimeter system
      20. Dock Bumpers: B410-14.
      21. Dock Bumpers: B410-14F. Standard.
      22. Dock Bumpers: B610-14.
      23. Dock Bumpers: B610-14F.
      24. Dock Bumpers: VB420-11F.
      25. Dock Bumpers: VB420-11 steel faced.
      26. Dock Bumpers: \_\_\_\_\_\_\_\_
      27. Spray foam insulated deck.
      28. Galvanized Finish: Deck, lip and subframe.
      29. Abrasive surface.
      30. Interlock capable non-metallic control panel.
      31. High lip crown.
      32. Box: Dock leveler enclosed in pre-formed steel box for pour-in-place construction. Six, welded curb angles and concrete anchors. Concrete in place.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Accessories:
         1. STAR vehicle restraint \_\_\_\_\_\_.
         2. HIDDEN HOOK recessed restraint.
         3. MANUAL SURFACE CHOCK wheel restraint.
         4. SURFACE-CHOCK wheel restraint.
         5. AUTO CHOCK wheel restraint.
         6. VERSACHOCK wheel restraint.
         7. Digital master or combination control panel with HMI.
    1. Basis of Design: aFX-S Series Dock Leveler as manufactured by Kelly. Air Force Technology dock leveler with "airDefense" system to be complete package, including motor housing assembly, full operating range toe guards, integral support struts for deck and lip lock.
       1. Standards Compliance: ANSI MH14.1-1987.
       2. Platform: Welded assembly. High tensile steel tread-plate supported by Lamda deck beams welded to front header.
          1. Deck: CIR 40,000 to 50,000 lbs (22,680 kg): 5/16 inch (10 mm) thick.
       3. Lip: 16 inch (406 mm) high tensile steel tread-plate. Beveled leading edge.
          1. Thickness: CIR 40,000 to 50,000 lbs (18,144 to 22,680 kg): 11/16 inch (19 mm).
          2. Self-cleaning lug style lip hinge with full-time solid steel 5 inch (127 mm) vertical barrier prevents accidental forklift roll-off.
          3. Lip Rod: 1 inch (25 mm) solid steel.
       4. Lip Extension: GRAVITY LIP Automatic Lip Extension ensures proper lip extension with descent of dock leveler into trailer.
       5. Rear Subframe and Hinge: 4 vertical angles welded to 2 horizontal members. Upper Rear Angle: Longitudinal support for gussets and deck supports. Hinge: Four, 3/4 inch (19 mm) thick lugs. Allows 4 inch (100 mm) side to side deck twist.
       6. SafeTFrame: Four, independently operated vertical leveling feet. Adjustment: 1-1/2 inches (37.5 mm). Prevents gap or bump at rear transition angle and curb angle.
       7. Power Unit: 120 V or 240 V one phase motor/blower on galvanized pan. Elevated off pit floor.

\*\* NOTE TO SPECIFIER \*\* Interlock capable control panel available.

* + - 1. Control Panel: Non-metallic, non-interlock capable, single push-button control panel.
      2. Clean Frame: Open frame design provides access to pit floor for routine cleaning and scheduled maintenance. EZ-Clean Pit Kit eliminates need for additional tools for complete access to concrete floor or access to fan motor.
      3. Full Range Toe Guard Protection: Full operating range toe guards with two galvanized sliding guards (yellow OSHA required markings per ANSI/Z535.1) provided on the sides of the dock leveler.
      4. Integral Support Strut: Integral support strut keeps ramp raised during routine maintenance and pit cleaning.
      5. Integral Lip Lock: Lip lock keeps lip raised for routine maintenance and cleaning.
      6. Safety Legs: "airDefense" sensor rollers ride along reinforced cams, providing fluid free float motion to eliminate stump-out while also providing a measure of freefall protection in event of premature trailer separation. High-efficiency 60,000 lbs. (27,225 kg) structural dock level support legs. Drop-tested to full rated capacity of dock leveler.
      7. Integral Maintenance Strut and Lip Support Latch: Permanently mounted, hinged, and lockout capable. Supports lip and leveler during maintenance and pit cleaning.
      8. Below Dock Control, Endloading: Allows for lowering of leveler without extending lip.
      9. Float Compensation: Lets vertical carrier deflect when lip is in contact with truck bed.
      10. Operation: NEMA 4x non-metallic push-button control panel, non-interlock capable.
          1. Rises when push-button is pushed and held. Gravity lip automatically extends as deck section descends into trailer bed.
          2. After Loading or Unloading: Push button to activate air system and raise dock leveler. Gravity lip moves pendant and dock leveler is stored. In stored position,
          3. Dock leveler is fully supported by dock level support legs.
          4. Ramp may be lowered to fully supported below dock level position without extending lip, to service low trucks in end load situations.
      11. Concrete Pit Construction: Per certified Serco pit detail drawings.
          1. Pit Depth: 20 inches (508 mm) for 6 to 8 ft (1.83 to 2.44 m) long units.
          2. Pit Depth: 24 inches (610 mm) for 10 ft (3.05 m) long units.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Color: Manufacturer's standard enamel green.
      2. Color: As determined by Architect from Manufacturer's range.
      3. Capacity: CIR 40K lbs (18,143 kg).
      4. Capacity: CIR 45K lbs (20,411 kg).
      5. Capacity: CIR 50K lbs (22,680 kg).
      6. Width: 6 ft (1,829 mm).
      7. Width: 6.5 ft (1,981 mm).
      8. Width: 7 ft (2,134 mm).
      9. Length: 6 ft (1,829 mm).
      10. Length: 8 ft (2,438 mm).
      11. Length: 10 ft (3,048 mm).
      12. Extended Lip: 18 inches (457 mm).
      13. Extended Lip: 20 inches (508 mm).
      14. Lip Taper: \_\_\_\_\_\_\_\_.
      15. Weather Seal: Factory installed brush.
      16. Weather Seal: ENERGY GUARD perimeter system
      17. Dock Bumpers: B410-14.
      18. Dock Bumpers: B410-14F. Standard.
      19. Dock Bumpers: B610-14.
      20. Dock Bumpers: B610-14F.
      21. Dock Bumpers: VB420-11F.
      22. Dock Bumpers: VB420-11 steel faced.
      23. Dock Bumpers: \_\_\_\_\_\_\_\_
      24. Spray foam insulated deck.
      25. Galvanized Finish: Deck, lip and subframe.
      26. Abrasive surface.
      27. Interlock capable non-metallic control panel.
      28. High lip crown.
      29. Box: Dock leveler enclosed in pre-formed steel box for pour-in-place construction. Six, welded curb angles and concrete anchors. Concrete in place.
      30. Spacer kit for existing and sloped pits

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Accessories:
         1. STAR vehicle restraint \_\_\_\_\_\_.
         2. HIDDEN HOOK recessed restraint.
         3. MANUAL SURFACE CHOCK wheel restraint.
         4. SURFACE-CHOCK wheel restraint.
         5. AUTO CHOCK wheel restraint.
         6. VERSACHOCK wheel restraint.
         7. Digital master or combination control panel with HMI.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete levelers and options not required.

* 1. HYDRAULIC DOCK LEVELERS
     1. Basis of Design: HK Series Dock Leveler as manufactured by Kelly. Open subframe, hinged lip, hydraulic platform, lip extension and retraction. Hydraulic velocity fuse safety stop. Reduced lip crown/extended lip chamfer. Supplied assembled with platform, lip, power unit, motor, pump, valves, and grease fittings. Ready to install in pre-formed concrete pit.
        1. Standards Compliance: Conforms to ANSI MH14.1-1987.
        2. Platform: High tensile steel tread-plate over steel beams welded to front header.
           1. Construction: Lambda deck beams welded to tread plate.
           2. Deck: CIR 30,000 to 35, 000 lbs (13,608 to 15,876 kg): 1/4 inch (6 mm) thick
           3. Deck: CIR 40,000 to 50,000 lbs (18144 to 22,680 kg): 5/16 inch (8 mm) thick
        3. Lip: 16 inch (406 mm) high tensile steel tread-plate with chamfered leading edge. Self-cleaning lug style lip hinge.
           1. Thickness: CIR 30,000 to 35, 000 lbs (13,608 to 15,876 kg): 5/8 inch (16 mm).
           2. Thickness: CIR 40,000 to 50,000 lbs (18,144 to 22,680 kg): 11/16 inch (17 mm).
           3. Lip Rod: 1 inch (25 mm) solid steel.
        4. Lip Extension: Automatic lip extension activated by independent hydraulic lip cylinder.
        5. Rear Welded Structural Subframe and Hinge: 4 vertical angle members connecting 2 horizontal members. Upper Rear Angle: Longitudinal support for gussets and deck supports. Hinge: Four 1/2 inch (13 mm) thick lugs. Allows 4 inch (100 mm) side to side deck twist.
        6. SafeTFrame: Four, independently operated vertical leveling feet. Adjustment: 1-1/2 inches (37.5 mm). Prevents gap or bump at rear transition angle and curb angle.
        7. Power Unit: Totally enclosed, non-ventilated electric hydraulic pump, valve, and motor assembly. Mounted to unit subframe elevated off pit floor.
           1. Motor Voltage: 120/208/240V single phase. Standard.
           2. Motor Voltage: 208/240V/480V and 575V three phase.
        8. Hydraulic Fluid. Viscosity of15 cSt at 100 degrees F (40 degrees C).
        9. Cylinder Bores: Main: 4 inch (101 mm). Lip: 2 inch (51 mm).
        10. Control Panel: Steel NEMA 4X, single push button activation, non-interlock capable. Automatic Return-to-Dock (ARTD) and interlocking with other dock equipment available for added capability.
        11. Support Legs: Automatic 60,000 lbs. (27.2K kg) structural dock level support legs. Drop tested to full rated capacity of dock leveler.
        12. Structural Center Beam Deck Support: CIR 40,000 to 50,000 lbs (18,144 to 22,680 kg): 5 inch (127 mm) structural channel. Reinforces leveler for 3-wheel lift truck traffic.
        13. Full operating range Toe Guard Protection: On sides of leveler. Yellow OSHA required markings per IAW ANSI Z535.1 on sides of dock leveler.
        14. Integral Maintenance Strut and Lip Support Latch: Permanently mounted, support strut and lip lock are provided to support the lip and leveler during routine maintenance and pit cleaning.
        15. Automatic Return-to-Dock: Solid state proximity switch senses when lip loses contact with trailer. Automatically retracts lip and restores leveler to dock level.
        16. Below-dock Control, Endloading: Push-button control and front mounted
        17. Out of level Compensation: Levelers compensate for canted truck beds up to 4 inches. Rear of deck remains flush with pit.
        18. Float Compensation: Lets vertical carrier deflect when lip is in contact with truck bed.
        19. Operation: Hydraulic controlled dock leveler. Platform and lip operated by independent hydraulic cylinders controlled by a remote push-button station.
            1. Pressing Raise Button: Platform raises. Hinged lip extends.
            2. Releasing Raise button: Platform descends until lip is supported by truck bed and floats with truck movement.
            3. Restore Dock Leveler: Press Raise button. Lip retracts as platform raises. If truck departs when lip is extended, leveler descends under hydraulic control.
        20. Below-dock level operation allows for below-dock end loading with pushbutton control.
            1. Working Range for 6, to 8 ft (1.83 to XX m) long units.

Above and Below-Dock: 12 inch (305 mm).

* + - * 1. Working Range for 10 ft (XX m) long units.

Above Dock: 18 inch (457 mm). Below Dock: 12 inch (305 mm).

* + - 1. Concrete Pit Depth: 6 and 8 ft (1.83 and 2.44 m) Long Units: 20 inches (508 mm).
      2. Concrete Pit Depth: 10 ft (3.05 m) long Units: 24 inches (610 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Color: Manufacturer's standard enamel green.
      2. Color: As determined by Architect from Manufacturer's range.
      3. Capacity: CIR 30,000 lbs (13,607 kg).
      4. Capacity: CIR 35,000 lbs (15,875 kg).
      5. Capacity: CIR 40,000 lbs (18,143 kg).
      6. Capacity: CIR 45,000 lbs (20,411 kg).
      7. Capacity: CIR 50,000 lbs (22,680 kg).
      8. Width: 6 ft (1,829 mm).
      9. Width: 6.5 ft (1,981 mm).
      10. Width: 7 ft (2,134 mm).
      11. Length: 6 ft (1,829 mm).
      12. Length: 8 ft (2,438 mm).
      13. Length: 10 ft (3,048 mm).
      14. Lip Length: 16 inch (406 mm). Standard.
      15. Lip Length: 18 inch (457 mm).
      16. Lip Length: 20 inches (508 mm).
      17. Lip taper: \_\_\_\_\_\_ (specify).
      18. Weather Seal: Factory installed brush.
      19. Weather Seal: ENERGY GUARD perimeter system.
      20. Dock Bumpers: B410-14.
      21. Dock Bumpers: B410-14F. Standard.
      22. Dock Bumpers: B610-14.
      23. Dock Bumpers: B610-14F.
      24. Dock Bumpers: VB420-11F.
      25. Dock Bumpers: VB420-11 steel faced.
      26. Spray foam insulated deck.
      27. High lip crown.
      28. Box: Dock leveler enclosed in pre-formed steel box for pour-in-place construction. Six, welded curb angles and concrete anchors. Concrete in place.
      29. Non-metallic control panel. Interlock capable.
      30. Option 1 Package:
          1. Automatic return-to-dock
          2. Non-metallic interlock capable control panel
      31. Option 2 Package:
          1. Mushroom-style stop button.
          2. Independent hydraulic lip control.
          3. Non-metallic interlock capable control panel.
      32. Option 3 package:
          1. Mushroom-style stop button.
          2. Independent hydraulic lip control.
          3. Non-metallic interlock capable control panel.
          4. Automatic return-to-dock
          5. Weatherseal. Brush only.
      33. Independent hydraulic lip control
      34. Pit Conversion: 24 inches (607 mm).
      35. Abrasive Surface
      36. Spray Metalize: Deck, lip and subframe.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Accessories:
         1. STAR vehicle restraint \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
         2. HIDDEN HOOK recessed restraint.
         3. MANUAL SURFACE CHOCK wheel restraint.
         4. SURFACE CHOCK wheel restraint.
         5. AUTO CHOCK wheel restraint.
         6. VERSACHOCK wheel restraint.
         7. Digital master or combination control panel with HMI.
    1. Basis of Design: HK-S Series Dock Leveler as manufactured by Kelly. Open subframe, hinged lip, hydraulic platform, lip extension and retraction. Hydraulic velocity fuse safety stop. Reduced lip crown/extended lip chamfer. Supplied assembled with platform, lip, power unit, motor, pump, valves, and grease fittings. Ready to install in pre-formed concrete pit.
       1. Standards Compliance: Conforms to ANSI MH14.1-1987.
       2. Platform: High tensile steel tread-plate over steel beams welded to front header.
          1. Construction: Lambda deck beams welded to tread plate.
          2. Deck: CIR 40,000 to 50,000 lbs (18144 to 22,680 kg): 5/16 inch (8 mm) thick
       3. Lip: 16 inch (406 mm) high tensile steel tread-plate with chamfered leading edge. 5 inch (127 mm) steel safety barrier lip design rated to 10,000 lbs (4.5k kg) at 4 mph (6.43 kph). Self-cleaning lug style lip hinge with full-time solid steel 5 inch (127 mm) vertical barrier prevents accidental forklift roll-off.
          1. Thickness: CIR 40,000 to 50,000 lbs (18,144 to 22,680 kg): 11/16 inch (17 mm).
          2. Lip Rod: 1 inch (25 mm) solid steel.
       4. Lip Extension: Automatic lip extension activated by independent hydraulic lip cylinder.
       5. Rear Welded Structural Subframe and Hinge: 4 vertical angle members connecting 2 horizontal members. Upper Rear Angle: Longitudinal support for gussets and deck supports. Hinge: Four 1/2 inch (13 mm) thick lugs. Allows 4 inch (100 mm) side to side deck twist.
       6. SafeTFrame: Four, independently operated vertical leveling feet. Adjustment: 1-1/2 inches (37.5 mm). Prevents gap or bump at rear transition angle and curb angle.
       7. Power Unit: Totally enclosed, non-ventilated electric hydraulic pump, valve, and motor assembly. Mounted to unit subframe elevated off pit floor. Motor overload protection as standard.
          1. Motor Voltage: 120/208/240V single phase. Standard.
          2. Motor Voltage: 208/240V/480V and 575V three phase.
       8. Hydraulic Fluid. Viscosity of15 cSt at 100 degrees F (40 degrees C).
       9. Cylinder Bores: Main: 4 inch (101 mm). Lip: 2 inch (51 mm).
       10. Control Panel: Steel NEMA 4X, single push button activation, non-interlock capable. Automatic Return-to-Dock (ARTD) and interlocking with other dock equipment available for added capability.
       11. Support Legs: Automatic 60,000 lbs. (27.2K kg) structural dock level support legs. Drop tested to full rated capacity of dock leveler.
       12. Structural Center Beam Deck Support: CIR 40,000 to 50,000 lbs (18,144 to 22,680 kg): 5 inch (127 mm) structural channel. Reinforces leveler for 3-wheel lift truck traffic.
       13. Full operating range Toe Guard Protection: On sides of leveler. Yellow OSHA required markings per IAW ANSI Z535.1 on sides of dock leveler.
       14. Integral Maintenance Strut and Lip Support Latch: Permanently mounted, support strut and lip lock are provided to support the lip and leveler during routine maintenance and pit cleaning.
       15. Automatic Return-to-Dock: Solid state proximity switch senses when lip loses contact with trailer. Automatically retracts lip and restores leveler to dock level.
       16. Below-dock Control, Endloading: Push-button control and front mounted
       17. Out of level Compensation: Levelers compensate for canted truck beds up to 4 inches. Rear of deck remains flush with pit.
       18. Float Compensation: Lets vertical carrier deflect when lip is in contact with truck bed.
       19. Operation: Hydraulic controlled dock leveler. Platform and lip operated by independent hydraulic cylinders controlled by a remote push-button station.
           1. Pressing Raise Button: Platform raises. Hinged lip extends.
           2. Releasing Raise button: Platform descends until lip is supported by truck bed and floats with truck movement.
           3. Restore Dock Leveler: Press Raise button. Lip retracts as platform raises. If truck departs when lip is extended, leveler descends under hydraulic control.
       20. Below-dock level operation allows for below-dock end loading with pushbutton control.
           1. Working Range for 6, to 8 ft (1.83 to XX m) long units.

Above and Below-Dock: 12 inch (305 mm).

* + - * 1. Working Range for 10 ft (XX m) long units.

Above Dock: 18 inch (457 mm). Below Dock: 12 inch (305 mm).

* + - 1. Concrete Pit Depth: 6 and 8 ft (1.83 and 2.44 m) Long Units: 20 inches (508 mm).
      2. Concrete Pit Depth: 10 ft (3.05 m) long Units: 24 inches (610 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Color: Manufacturer's standard enamel green.
      2. Color: As determined by Architect from Manufacturer's range.
      3. Capacity: CIR 40,000 lbs (18,143 kg).
      4. Capacity: CIR 45,000 lbs (20,411 kg).
      5. Capacity: CIR 50,000 lbs (22,680 kg).
      6. Width: 6 ft (1,829 mm).
      7. Width: 6.5 ft (1,981 mm).
      8. Width: 7 ft (2,134 mm).
      9. Length: 6 ft (1,829 mm).
      10. Length: 8 ft (2,438 mm).
      11. Length: 10 ft (3,048 mm).
      12. Lip Length: 16 inch (406 mm). Standard.
      13. Lip Length: 18 inch (457 mm).
      14. Lip Length: 20 inches (508 mm).
      15. Lip taper: \_\_\_\_\_\_ (specify).
      16. Weather Seal: Factory installed brush.
      17. Weather Seal: ENERGY GUARD perimeter system.
      18. Dock Bumpers: B410-14.
      19. Dock Bumpers: B410-14F. Standard.
      20. Dock Bumpers: B610-14.
      21. Dock Bumpers: B610-14F.
      22. Dock Bumpers: VB420-11F.
      23. Dock Bumpers: VB420-11 steel faced.
      24. High lip crown.
      25. Box: Dock leveler enclosed in pre-formed steel box for pour-in-place construction. Six, welded curb angles and concrete anchors. Concrete in place.
      26. Non-metallic control panel. Interlock capable.
      27. Option 1 Package:
          1. Automatic return-to-dock
          2. Non-metallic interlock capable control panel
      28. Option 2 Package:
          1. Mushroom-style stop button.
          2. Independent hydraulic lip control.
          3. Non-metallic interlock capable control panel.
      29. Option 3 package:
          1. Mushroom-style stop button.
          2. Independent hydraulic lip control.
          3. Non-metallic interlock capable control panel.
          4. Automatic return-to-dock
      30. Independent hydraulic lip control.
      31. Spray Metalize: Deck, lip and subframe.
      32. Automatic return-to-dock.
      33. High lip crown.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Accessories:
         1. STAR vehicle restraint \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
         2. HIDDEN HOOK recessed restraint.
         3. MANUAL SURFACE CHOCK wheel restraint.
         4. SURFACE CHOCK wheel restraint.
         5. AUTO CHOCK wheel restraint.
         6. VERSACHOCK wheel restraint.
         7. Digital master or combination control panel with HMI.
    1. Basis of Design: HP series Hydraulic Dock Leveler as manufactured by Kelly. Hinged lip, hydraulic platform, lip extension and retraction. Supplied assembled with platform, lip, power unit, motor, pump, valves, and grease fittings. Ready to install in pre-formed concrete pit.
       1. Standards Compliance: Conforms to ANSI MH14.1-1987.
       2. Platform: High tensile steel tread-plate over steel beams welded to front header. Lambda deck beams optimize twist resistance and stress distribution.
          1. Deck: CIR 30,000 to 45, 000 lbs (13,608 to 20,412 kg): 1/4 inch (6 mm) thick.
          2. Deck: CIR 50,000 lbs (22,680 kg): 5/16 inch (8 mm) thick.
       3. Lip: 16 inch (406 mm) high tensile steel tread-plate with beveled leading edge.
          1. Thickness: CIR 30,000 to 45, 000 lbs (13,608 to 20,412 kg): 5/8 inch (16 mm).
          2. Thickness: CIR 50,000 lbs (22,680 kg): 11/16 inch (19 mm).
          3. Lip Taper: 7 ft (2.13 m) to 6 ft 6 inches (2.01 m) at leading edge.
          4. Lip Taper: 7 ft (2.13 m) to 6 ft (1.83 m) at leading edge.
       4. Lip Assembly: Self-cleaning lug-style lip hinge.
       5. Fixed rear hinge. No pinch points.
       6. Hinge Shaft: Sold steel 1 inch (25 mm),
       7. Lip Extension: GRAVITY LIP mechanical lip extension. Automatic lip extension ensures proper lip extension with descent of dock leveler into trailer. Auxiliary leg release to allow lowering of dock leveler below-dock level without extending lip.
       8. Rear Welded Subframe and Hinge: Rear structural frame consists of a welded structure constructed from 4 structural angle vertical members connecting two horizontal members. The upper rear angle has longitudinal support gussets and additional deck supports to promote structural stiffness. The hinge system consists of four lugs allowing 4 inches (102 mm) of side to side deck twist.
       9. SafeTFrame: Four, independently operated vertical leveling feet. Adjustment: 1-1/2 inches (37.5 mm). Prevents gap or bump at rear transition angle and curb angle.
       10. Power Unit: Electric hydraulic pump and valve assembly. Mounted to unit subframe elevated off pit floor. Pre-wired to integral junction box. Remote mount required with shallow pits. Hydraulic velocity fuse safety stop. Totally enclosed non-ventilated hydraulic pump and motor assembly with single hose to cylinder for longer life and lower maintenance costs.
           1. Motor : 1 hp, NEMA Standard TENV/56C frame. RPM 3450
           2. Motor Voltage: 120/208/240V single phase. Standard.
           3. Motor Voltage: 208/240V/480V and 575V three phase.
       11. Hydraulic Fluid. Viscosity of15 cSt at 100 degrees F (40 degrees C).
       12. Cylinder Bores: Main: 4 inch (101 mm). Lip: 2-1/2 inch (63 mm).
       13. Control Panel: Heavy-duty, single push-button activation. Optional A.R.T.D. and interlocking with other dock equipment available for added capability.
           1. Steel NEMA 12. Interlock capable, single push-button.
           2. Support Legs: Automatic 60,000 lbs. (27.2 K kg) structural dock level support legs. Drop tested to the full rated capacity of the dock leveler. Full operating range Toe Guard Protection: On sides of leveler. Yellow OSHA required markings per IAW ANSI Z535.1 on sides of dock leveler.
       14. Integral Maintenance Strut and Lip Support Latch: Permanently mounted, hinged, and lockout capable. Supports lip and leveler during maintenance and pit cleaning.
       15. Below-dock Control, Endloading: Push-button control extends lip beyond lip supports.
       16. Out of level Compensation: Levelers compensate for canted truck beds up to 4 inches. Rear of deck remains flush with pit.
       17. Operation: Dock Leveler to be hydraulic controlled. Platform and lip operated by independent hydraulic cylinders controlled by a remote push-button station.
           1. Pressing Raise Button: Platform raises. Hinged lip extends.
           2. Releasing Raise button: Platform descends until lip is supported by truck bed and floats with truck movement.
           3. Restore Dock Leveler: Press "RAISE" button. Lip retracts as platform raises. If truck departs when lip is extended, leveler descends under hydraulic control and automatically restores to dock level support position.
       18. Below-dock level operation allows for below-dock end loading with pushbutton control.
           1. Working Range:

Platform Length: 6 and 8 ft. Above and Below-Dock: 12 inch (305 mm).

Platform Length: 10 ft. Above Dock 18 inches (457 mm). Below-Dock: 12 inch (305 mm).

* + - 1. Concrete Pit Depth for 6 and 8 ft (1.83 and 2.44 m) Long Units: 20 inches (508 mm)
      2. Concrete Pit Depth for 10 ft (3.05 and 3.66 m) long Units: 24 inches (610 mm)

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Non-metallic control panel (interlock capable).
      2. Option 1 Package:
         1. Automatic return-to-dock
         2. Non-Metallic control panel (interlock capable)
      3. Color: Manufacturer's standard enamel gray.
      4. Color: As determined by Architect from Manufacturer's range.
      5. Capacity: CIR 30,000 lbs (13,607 kg).
      6. Capacity: CIR 35,000 lbs (15,875 kg).
      7. Capacity: CIR 40,000 lbs (18,143 kg).
      8. Capacity: CIR 45,000 lbs (20,411 kg).
      9. Capacity: CIR 50,000 lbs (22,680 kg).
      10. Width: 6 ft (1,829 mm).
      11. Width: 6.5 ft (1,981 mm).
      12. Width: 7 ft (2,134 mm).
      13. Length: 6 ft (1,829 mm).
      14. Length: 8 ft (2,438 mm).
      15. Length: 10 ft (3,048 mm).
      16. Lip Length: 16 inch (406 mm). Standard.
      17. Lip Length: 18 inch (457 mm).
      18. Lip Length: 20 inches (508 mm).
      19. Lip Taper: \_\_\_\_\_\_ .
      20. Weather Seal: Factory installed brush.
      21. Weather Seal: ENERGY GUARD perimeter system.
      22. Dock Bumpers: B410-14.
      23. Dock Bumpers: B410-14F. Standard.
      24. Dock Bumpers: B610-14.
      25. Dock Bumpers: B610-14F.
      26. Dock Bumpers: VB420-11F.
      27. Dock Bumpers: VB420-11 steel faced.
      28. High lip crown.
      29. Box: Dock leveler enclosed in pre-formed steel box for pour-in-place construction. Six, welded curb angles and concrete anchors. Concrete in place.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Accessories:
         1. STAR vehicle restraint \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
         2. HIDDEN HOOK recessed restraint.
         3. MANUAL SURFACE CHOCK wheel restraint.
         4. SURFACE CHOCK wheel restraint.
         5. AUTO CHOCK wheel restraint.
         6. VERSACHOCK wheel restraint.
         7. Digital master or combination control panel with HMI.
    1. Basis of Design: HRL Rail Leveler as manufactured by Kelly. Hinged lip, hydraulic platform, lip extension and retraction. Units ship partially assembled. Track assembly is embedded at site by mounting carriage assembly to track assembly and then mounting the deck/lip assembly and power unit to carriage. Hydraulic components on deck/lip are pre-installed, enabling easy power pack hook up. Control panel for remote mounting is furnished with unit to be electrically interconnected by others.
       1. Standards Compliance: Conforms to ANSI MH14.1-1987.
       2. Platform: High tensile steel tread-plate over steel beams welded to front header.
          1. Construction: CIR 45,000 to 50,000 lbs (20,412 to 22,680 kg): Channel beam.
          2. Construction: CIR 60,000 lbs (27,216 kg): Structural I-beams.
          3. Deck: CIR 45, 000 lbs (13,608 to 20,412 kg): 1/4 inch (6 mm) thick
          4. Deck: CIR 50,000 to 60,000 lbs (22,680 to 27,216 kg): 3/8 inch (10 mm) thick.
       3. Lip: 20 inch (508 mm) high tensile steel tread-plate with beveled leading edge.
          1. Thickness: CIR 45, 000 lbs (13,608 to 20,412 kg): 5/8 inch (16 mm).
          2. Thickness: CIR 50,000 to 60,000 lbs (22,680 to 27,216 kg): 3/4 inch (19 mm).
       4. Lip Hinge Tubes: Full width structural front header and heavy wall tubing.
          1. Wall: CIR 45,000 to 50,000 lbs (20,412 to 22,680 kg): 1/2 inch (12 mm)
          2. Wall: CIR 60,000 lbs (27,216 kg): 3/4 inch (19 mm).
          3. Hinge Shaft: Sold steel.

Wall: CIR 45,000 to 50,000 lbs (20,412 to 22,680 kg): 1 inch (25 mm)

Wall: CIR 60,000 lbs (27,216 kg): 1-1/4 inch (31 mm)

* + - 1. Deck Extensions: Units equipped with two steel deck extension arms to be used during end load operations. Arms are 1 inch (25 mm) wide by 5 inch (127 mm) tall structural steel and extend providing deck support during end load operations. Arms are provided with locking feature to lock them at any extension length.
      2. Carriage Assembly: Utilizes sealed roller bearing wheels to enable side to side movement of vertically stored dock leveler along a track assembly. Structure to support rear hinge assembly, lower main cylinder mount and power pack. Structure to be 60,000 lbs. (27.2K kg) capacity.
         1. Rear Hinge Assembly: CIR 45,000 to 50,000 lbs (20,412 to 22,680 kg): 4 rear hinge pins
         2. Rear Hinge Assembly: CIR 60,000 lbs (27,216 kg): 6 rear hinge pins
         3. All pins to be a minimum of 1 inch (25 mm) diameter.
      3. Track Assembly: Two heavy steel tracks mounted on an embedded structural channel. Minimum 60,000 lbs. (27.2K kg) capacity.
      4. Power Unit: Electric hydraulic pump and valve assembly. Mounted to unit subframe elevated off pit floor. Pre-wired to integral junction box. Remote mount is possible.
         1. Motor : 1 hp, NEMA Standard TENV/56C frame. RPM 3450
         2. Motor Voltage: 240V single phase. Standard.
      5. Hydraulic Fluid. Viscosity of15 cSt at 100 degrees F (40 degrees C).
      6. Cylinder Bores: Main: 3-1/2 inch (89 mm). Lip: 2-1/2 inch (63 mm).
      7. Control Panel: Steel NEMA 12. Built-in motor overload protection. Optional remote solenoid valves and power pack supplied with standard wall mount bracket. Interlock capable control panel with motor starter, thermal overload, control circuit breaker with reset capability control panel. UL listed. Mushroom-style STOP button. Independent controls for raise, lip extend, and lip retract. Optional side shift control. Amber and green pilot lights indicate power and safe operation respectively.
      8. Side Shift: Mechanical side shift standard. Hydraulic side shift upon request.
      9. Mushroom-Style Stop Button: Stops leveler instantly when depressed. Activates a solenoid on leveler hydraulic system. Button does not need to be continuously held to maintain leveler in a stop position.
      10. Quick Cycle Lip: Properly sized cylinders and the LIP EXTEND/LIP RETRACT button ensure quickest leveler cycle time by not having to fully raise the unit to extend or retract the lip.
      11. Projection: Unit to project a maximum of 14 inch (355 mm) from dock face when in the vertical stored position (lip vertical).
      12. Float Compensation: Allows for vertical deflection when lip is in contact with rail car bed.
      13. Operation:
          1. Supplied with a carriage assembly, track assembly, platform and lip assembly, electrical power-pack assembly including motor and pump, hydraulic assembly including cylinders, hosing, and valving.
          2. Platform and Lip to be operated by independent hydraulic cylinders controlled by a remote push button station.
          3. To Operate Dock Leveler:

Pull "STOP" button (amber light indicates power on) on control panel.

Push and hold "LOWER" button to lower leveler onto railcar floor.

Audible alarm will sound anytime leveler is stopped between stored position and operating range.

Above operating range, while motor is running, releasing "LOWER" button will stop leveler motion.

Pressing the "STOP" button at any time immediately stops all movement.

When leveler lowers to near operating range, motor will stop, and platform will float down to rest on rail car floor.

The green light will illuminate to indicate the leveler has reached the operating range.

Pressing "LIP EXTEND" or "LIP RETRACT" button will extend or retract lip at any point in leveler cycle.

Rail leveler is restored by pressing the "RAISE" button and holding until the leveler raises to a vertical position. Lip must be in vertical position.

To perform an end load pull the "STOP" button and press the "LOWER BUTTON" to lower the leveler. Once unit has descended partially, press the "LIP RETRACT" button, retracting the lip to a pendant position.

Lower unit to several inches above rail car bed, push "STOP" button and while standing on unit, supported hydraulically, manually extend support arms to desired length. With arms correctly positioned, pull the "STOP" button and then allows unit to float down to rail car floor.

Standard Working Range: 6 inches (152 mm) above and below dock.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Color: Manufacturer's standard enamel green.
      2. Color: As determined by Architect from Manufacturer's range.
      3. Capacity: CIR 45,000 lbs (20,411 kg).
      4. Capacity: CIR 50,000 lbs (22,680 kg).
      5. Capacity: CIR 60,000 lbs (27,216 kg).
      6. Width: 8 ft (2,438 mm).
      7. Width: 8.5 ft (2,591 mm).
      8. Width: 9 ft (2,743 mm).
      9. Length: 8.5 ft (2,591 mm).
      10. Length: 9 ft (2,743 mm).
      11. Length: 9.5 ft (2,896 mm).
      12. Length: 10 ft (3,048 mm).
      13. Lip Length: 20 inches (508 mm).
      14. Lip taper: \_\_\_\_\_\_ (specify)
      15. Remote handheld push button station.
      16. Remote power pack.
      17. Additional embedded rail length, 10 ft (3.05 m). Qty: \_\_\_\_.
      18. Abrasive deck surface.
      19. Flush mount track assembly.
      20. Digital master or combination control panel with HMI.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete basis of design options not required.

* 1. EDGE-OF-DOCK LEVELERS
     1. Basis of Design: KA series air powered edge of dock leveler as manufactured by Kelly. Air-powered platform and automatic lip extension supplied assembled with platform, lip, and power unit. Ready to install in pre-formed concrete pit.
        1. Standards Compliance: ANSI MH14.1-1987.
        2. Deck and Lip: 3/8 to 1/2 inch (10 mm) thick high tensile steel tread plate.
        3. Lip Leading Edge: Beveled 11 degrees.
        4. Front Lip Hinge: Self-cleaning heavy-duty lugs to ramp.
        5. Ramp Assembly: Projects 13 inches (330 mm) from dock in stored position.
        6. Lifting System: High volume, low pressure air bag. Heavy-duty PVC coated vinyl material RF welded. Capable of operating if punctured.
        7. Operating Temperature: Minus 65 to 180 degrees F (Minus 53 to 82 degrees C).
        8. Electrical Fan, Filter, and Motor: 12 amp fan with two-stage single speed, self-cleaning filter, UL approved motor. Power: 120 volt single-phase.
        9. Control Panel: NEMA 4 single button.
        10. Operation: Constant contact push button
        11. Bumpers: Two 4 x10 x12 inch (101 x 254 x 305 mm) tire laminated bumpers on steel block assemblies. Bumper Projections: 16, 17, or 18 inches (406, 432, or 457 mm).

\*\* NOTE TO SPECIFIER \*\* Due to the limited length of EOD levelers, its structure is subjected to greater dynamic load than with longer levelers. Capacity selection is based on ideal operating conditions (i.e., maximum gross load traveling at 3 mph on 10 percent grade or less); if the application exceeds this condition a higher capacity leveler must be selected.

* + - 1. Working Range: Operating range: 5 inches (127 mm) above and below dock level.
      2. Effective Working Range: 3 inch (76.2 mm) above and below dock level.
      3. Weld unit to 8 inch (203 mm) channel secured in concrete as recommended.
      4. Platform Length: 27 inches (686 mm)

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Color: Manufacturer's standard enamel gray.
      2. Color: As determined by Architect from Manufacturer's range.
      3. Ramp Width: 66 inches (1676 mm).
      4. Ramp Width: 72 inches (1829 mm).
      5. Ramp Width: 78 inches (1981 mm).
      6. Ramp Width: 84 inches (2134 mm).
      7. Lip Length: 15 inches (381 mm). Standard.
         1. Bumper Projection: 16 inches (406 mm). Crown: 5 degrees.
         2. Bumper Projection: 16 inches (406 mm). Crown: 8 degrees.
         3. Steel faced.
      8. Lip Length: 17 inches (432 mm). For refrigerated trailers.
         1. Bumper Projection: 16 inches (406 mm). Crown: 8 degrees.
         2. Bumper Projection: 17 inches (406 mm). Crown: 5 degrees.
         3. Bumper Projection: 18 inches (406 mm). Crown: 2.5 degrees.
         4. Steel faced.
      9. Capacity: CIR 20,000 lbs (9091 kg)
         1. Width: 66 inches (1676 mm)
         2. Width: 72 inches (1829 mm)
      10. Capacity: CIR 30,000 lbs (13,636 mm)
          1. Width: 66 inches (1676 mm)
          2. Width: 72 inches (1829 mm)
          3. Width: 78 inches (1981 mm)
          4. Width: 84 inches (2134 mm)
      11. Post office model with 2 inch (51 mm) cart guard
      12. Tapered Lip (tapered on each side).
      13. Recessed pit model.
    1. Basis of Design: KH series hydraulic edge of dock leveler as manufactured by Serco. Platform with automatic lip extension supplied assembled with platform, lip, and power unit. Ships assembled ready to install in pre-formed concrete pit.
       1. Standards Compliance: ANSI MH14.1-1987.
       2. Deck and Lip: 3/8 to 1/2 inch (9.5 to 13 mm) high tensile steel tread plate.
       3. Lip Leading Edge: Beveled 11 degrees.
       4. Front Lip Hinge: Self-cleaning heavy-duty lugs welded to ramp.
       5. Ramp Assembly: Projects 13 inch (330 mm) from dock in stored position.
       6. Hydraulics: 2 inch (51 mm) bore single acting cylinder.
       7. Electric Motor: 1 hp, NEMA standard TENV/56C frame.
          1. Motor Voltages: 120/208/240 volt single phase.
          2. Motor Voltages: 208/240/480 and 575 volt three phase.
          3. Built in motor overload protection.
       8. Bumpers: Two 4 x10 x12 inch (101 x 254 x 305 mm) tire laminated bumpers on steel block assemblies. Bumper Projections: 16, 17, or 18 inches (406, 432, or 457 mm).
       9. Operating Range: 5 inch (127 mm) above and below dock level.
       10. Effective Working Range: 3 inch (76 mm) above and below dock level.
       11. Operation: Constant contact push button.
       12. Weld unit to 8 inch (203 mm) channel secured in concrete as recommended.
       13. Unit to be welded to an 8 inch (203 mm) channel embedded in concrete and secured with anchoring hooks as recommended.
       14. Platform Length: 27 inches (686 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Ramp Width: 66 inches (1676 mm).
      2. Ramp Width: 72 inches (1829 mm).
      3. Ramp Width: 78 inches (1981 mm).
      4. Ramp Width: 84 inches (2134 mm).
      5. Lip Length: 15 inches (381 mm). Standard.
         1. Bumper Projection: 16 inches (406 mm). Crown: 5 degrees.
         2. Bumper Projection: 16 inches (406 mm). Crown: 8 degrees.
         3. Steel faced.
      6. Lip Length: 17 inches (432 mm). For refrigerated trailers.
         1. Bumper Projection: 16 inches (406 mm). Crown: 8 degrees.
         2. Bumper Projection: 17 inches (406 mm). Crown: 5 degrees.
         3. Bumper Projection: 18 inches (406 mm). Crown: 2.5 degrees.
         4. Steel faced.
      7. Capacity: CIR 20,000 lbs (9091 kg).
         1. Width: 66 inches (1676 mm).
         2. Width: 72 inches (1829 mm).
      8. Capacity: CIR 30,000 lbs (13,636 mm).
         1. Width: 66 inches (1676 mm)
         2. Width: 72 inches (1829 mm).
         3. Width: 78 inches (1981 mm).
         4. Width: 84 inches (2134 mm).
      9. Post office model with 2 inch (51 mm) cart guard.
      10. Tapered Lip (tapered on each side).
      11. Recessed pit model.
    1. Basis of Design: KM series mechanical edge-of-dock leveler as manufactured by Kelly. Unit ships assembled ready to install in pre-formed concrete pit.
       1. Standards Compliance: ANSI MH14.1-1987.
       2. Deck and Lip: 3/8 to 1/2 inch (9.5 to 13 mm) high tensile steel tread plate.
       3. Front Lip Hinge: Self-cleaning heavy-duty lugs welded to ramp assembly.
       4. Ramp Assembly: Projects 13 inch (330 mm) from dock in stored position .
       5. Dual extension spring lift. Handle: 1-5/16 inches (33 mm) diameter steel pipe.
       6. Bumpers: Two, 4 x 10 x 12 inch (101 x 254 x 305 mm) tire laminated bumpers on steel block assemblies. Bumper Projections: 16, 17 and 18 (406, 432 and 457 mm).
       7. Operating Range: 5 inch (127 mm) above and below dock level.
       8. Effective Working Range: 3 inch (76 mm) above and below dock level.
       9. Operation: Pulling handle raises ramp into position. Pushing handle forward extends lip into trailer. Store unit by again pulling handle to remove lip from trailer.
       10. Weld unit to 8 inch (203 mm) channel secured in concrete as recommended.
       11. Platform Length: 27 inches (686 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Ramp Width: 66 inches (1676 mm).
      2. Ramp Width: 72 inches (1829 mm).
      3. Ramp Width: 78 inches (1981 mm).
      4. Ramp Width: 84 inches (2134 mm).
      5. Lip Length: 15 inches (381 mm). Standard.
         1. Steel Faced Bumper Projection: 16 inches (406 mm). Crown: 5 degrees.
         2. Bumper Projection: 16 inches (406 mm). Crown: 8 degrees.
         3. Steel faced.
      6. Lip Length: 17 inches (432 mm). For refrigerated trailers.
         1. Bumper Projection: 16 inches (406 mm). Crown: 8 degrees.
         2. Bumper Projection: 17 inches (406 mm). Crown: 5 degrees.
         3. Bumper Projection: 18 inches (406 mm). Crown: 2.5 degrees.
         4. Steel faced.
      7. Capacity: CIR 20,000 lbs (9091 kg).
         1. Width: 66 inches (1676 mm).
         2. Width: 72 inches (1829 mm).
      8. Capacity: CIR 30,000 lbs (13,636 mm).
         1. Width: 66 inches (1676 mm).
         2. Width: 72 inches (1829 mm).
         3. Width: 78 inches (1981 mm).
         4. Width: 84 inches (2134 mm).
      9. Post office model with 2 inch (51 mm) cart guard.
      10. Tapered Lip (tapered on each side).
      11. Recessed pit model.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. VERTICAL DOCK LEVELER
     1. Basis of Design: VSL Series vertical storing dock leveler as manufactured by Kelley. Hydraulic operated platform and hinged lip extension and retraction. Rear subframe assembly, platform and lip assembly, electrical power-pack assembly including motor, pump, hydraulic cylinders, hoses, and valves. Ships partially assembled. Rear subframe assembly to be concrete embedded by others. Assemble at site by mounting platform to hinge channel assembly and installing hydraulic power unit. Control panel furnished with unit to be electrically interconnected by others.
        1. Standards Compliance Conforms to ANSI MH14.1-1987.
        2. Platform Assembly: High tensile steel tread plate over channel beams. Structural members fully welded to front header.
           1. CIR 40,000 and 45000 (18144 and 20412 kg).

Deck Thickness: 1/4 inch (6 mm) capacity.

* + - * 1. CIR 50,000 lbs (22680 kg). Deck Thickness: 3/4 (9.5 mm).
      1. Lip Assembly: 20 inch (508 mm) high tensile steel tread plate with beveled leading edge.
         1. CIR 40,000 and 45000 (508 kg). Lip Thickness: 5/8 inch (16 mm) capacity.
         2. CIR 50,000 lbs (22680 kg). Lip Thickness: 3/4 (19 mm).
         3. Lip Hinge: Full width structural front header and wall tubing with minimum of 1/2 inch (13 mm) wall thickness.

CIR 45,000 and 50,000 (18144 and 20412 kg):

Gussets on hinge tubes. Lip Hinge Shaft: 1-1/4 inch solid steel.

* + - 1. Rear Channel and Hinge: Include five 1 inch (25 mm) diameter rear hinge pins and wear resistant bushings. Rear channel assembly eliminates horizontal structural members enabling full access to pit floor for clean out and maintenance.

\*\* NOTE TO SPECIFIER \*\* Delete channel height options not required. Contact Manufacturer for other height/length combinations.

* + - * 1. Channel Height for 5 ft (1.52 m) leveler Length: 10 inches (254 mm)
        2. Channel Height for 6 ft (1.83 m) leveler Length: 12 inches (381 mm)
        3. Channel Height for 8 ft (2.44) leveler Length: 15 inches (254 mm)
      1. Power Unit: An electric/hydraulic motor pump and valve assembly.
         1. Motor: 1 HP NEMA Standard TENV/56C frame. RPM: 3450.
         2. Motor Voltages: 120/208/240V single phase. Standard.
         3. Motor Voltages: 208/240V/480V and 575V three phase.
      2. Hydraulic Fluid. Viscosity of15 cSt at 100 degrees F (40 degrees C).
      3. Cylinder Bores: Main: 3-3/4 inch (89 mm). Lip: 2-1/2 inch (63 mm).
      4. Control Panel: Solid state. Built-in motor overload protection. Solenoid valves and power pack. Programmable logic controller, real time diagnostics, industrial push-buttons, integral LED warning system and printed operating instructions. Supplied with standard wall mount bracket. Size (WxHxD): 9 x 20 x 8 inches (229 x 508 x 203 mm).
      5. Hydraulic Velocity Fuse Safety Stop System: Stops platform free fall if truck pulls out while load is on platform. Reusable and non-adjustable.
      6. Mushroom-style Stop Button: Stops leveler when depressed at any time. The button, a maintained contact type, activates a solenoid on leveler hydraulic system. Button does not have to be continuously held to maintain leveler in a stop position.
      7. Quick Cycle Lip Extend and Retract Buttons: Reduces cycle time by not having to fully raise leveler to extend or retract lip during endloading.
      8. Below-dock Control, Endloading: Push-button control retracts lip from any deck position including stored, to handle end loads.
      9. Out of Level Compensation: For canted truck beds up to 4 inches (102 mm). Rear of deck remains flush with pit.
      10. Float Compensation: Lets vertical carrier deflect when lip is in contact with truck bed.
      11. Hinged Bottom Pad: Attaches to leveler deck for added environmental control.
      12. Operation: Platform and lip operated by independent hydraulic cylinders controlled by a remote push-button station. Pull "Stop" button on control panel. Amber light means power is on. Press and hold "Lower" button to lower leveler onto truck bed. Above operating range, while motor is running, releasing the "Lower" button will stop leveler motion. Audible alarm sounds if leveler is stopped in the operating range. Pressing Stop button at any time stops movement. When leveler lowers to near working range, approximately 18 inches (457 mm) above dock level, motor stops and platform floats down to rest on truck bed and float with truck movement. Green light illuminates to indicate leveler has reached operating range. If truck departs when lip is extended, leveler descends under hydraulic control and lip falls to pendant position. Pressing the Lip Extend/Lip Retract button will extend or retract lip at any point in leveler cycle. Below-dock level operation allows below-dock endloading with push-button control. Restore leveler by pressing Raise button and holding until platform and lip are in their vertical storing positions. Press Stop button on control panel to remove electrical power from leveler (amber light off).
      13. Working Range: 6 inches (152 mm) above and below dock for 5 and 6 ft (1.52 to 1.83 m) units. 9 inches (229 mm) above and below-dock for 8 ft (2.44 m) units.
      14. Lip extends 15 inches (381 mm) beyond face of a 4 inch (102 mm) bumper.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Capacity: CIR 40,000 lbs (18,143 kg).
      2. Capacity: CIR 45,000 lbs (20,411 kg).
      3. Capacity: CIR 50,000 lbs (22,680 kg).
      4. Width: 6 ft (1,829 mm).
      5. Width: 7 ft (2,134 mm).
      6. Length: 5 ft (1,524 mm).
      7. Length: 6 ft (1,829 mm).
      8. Length: 8 ft (2,438 mm).
      9. Lip Taper: 7 ft (2.13 m) wide to 6 ft 6 inch (2.01 m) at leading edge. Standard.
      10. Lip Taper: 7 ft (2.13 m) wide to 6 ft (1.83 m) at leading edge.
      11. Lip Taper: \_\_\_\_\_\_\_\_.
      12. Bumpers: With riser brackets and load distributing back plate.
          1. VB420-11FF steel faced with riser brackets. Standard.
          2. VB620-11FF steel faced with riser brackets.
      13. Additional hose length over 20 ft (6.1 m) standard length for remote mount power unit (includes 3 hose assemblies). Survey and dock pictures for bumper design required.
      14. Maintenance pin locking handle.
      15. Lip keepers.
      16. Hot dip galvanized rear embed.
      17. Hot dip galvanized deck, lip and embed.
      18. Door opened/closed switches.
      19. Deck mount power unit.
      20. Control panel stanchion.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. LOADING DOCK LEVELER PERIMETER SEAL
     1. Basis of Design: Energy Guard as manufactured by Kelly. Forms perimeter seal on sides and rear of dock levelers. Blocks debris, insects, and energy loss. Seals gaps between leveler and pit walls. Minimizes energy transfer in and out of facility. Perimeter Seal: Up to 9 inches (229 mm) above dock level during operation. Factory installed on dock leveler.
        1. Side Seal Construction: Chemical resistant, 22 oz. PVC coated, polyester reinforced composite fabric rated to minus 30 degrees F (-1 degrees C) with UV inhibitors and anti-mildew formulation and matte finish.
           1. Foam in Assemblies: Triangular cut, 1 lbs per cu ft (16 kg per cu m), open cell polyurethane foam.
           2. Reinforcing Aluminum Bars: 1/8 x 1 inch (3 x 25 mm) cut to length of side seals for maximum support. Seal Ends: Sewn closed to reduce moisture absorption.
        2. Rear Hinge Seal Construction: Durable, resilient, and chemical resistant PVC-coated 3 ply polyester fabric. Monofilament added to weft providing inherent memory.
        3. Nylon Brush Weather Seal: 1-3/4 inch (44 mm). 1,000 bristles per inch.
        4. Nylon Brush Weather Cup Seals: Fill chain openings. Plugs provided to fill miscellaneous holes in deck assembly.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required. or basis of design options not required.

* 1. DOCK LIFTS

\*\* NOTE TO SPECIFIER \*\* Maximum platform size is 45 x 60 inches (1143 x mm).

* + 1. Basis of Design: KALT Airbag Tilt and Lift Tables as manufactured by Kelly.
       1. Standards Compliance: ANSI MH29.1 and ANSI MH29.2 standards for scissors lifts.
       2. Over pressure relief valve.
       3. Single wire braided hydraulic hose x 10 ft (3048 mm) for air bags.
       4. Unit standard with hand lever control with 10 ft (3048 mm) of hose.
       5. Male/female quick disconnect for air supply.
       6. Maintenance strut.
       7. Two safety chains with shackles at each end for tilt.
       8. Motion stabilizer for tilt to control down only using an air cylinder.

\*\* NOTE TO SPECIFIER \*\* Delete air bag table type options not required.

* + - 1. Air Bag Lift Table.
         1. Vertical Travel: 24 inches (610 mm).

\*\* NOTE TO SPECIFIER \*\* Delete capacity options not required.

* + - * 1. Capacity: 2,000 lbs (907 kg). Airbag Quantity: 1.

Base Frame and Platform Size: 36 x 48 inches (914 x 1219 mm).

Base Frame: 36 x 48 inches (314 x 1219 mm). Platform Size: 48 x 48 inches (1219 x 1219 mm).

Height: Lowered: 8 inches (203 mm). Raised: 32 inches (813 mm).

Operating Pressure: 85 psi (586 kPa).

* + - * 1. Capacity: 4,000 lbs (1814 kg). Airbag Quantity: 1.

Base Frame and Platform Size: 42 x 48 inches (1067 x 1219 mm).

Base Frame: 42 x 48 inches (1067 x 1219 mm). Platform Size: 48 x 48 inches (1219 x 1219 mm).

Height: Lowered: 8 inches (203 mm). Raised: 32 inches (813 mm).

Operating Pressure: 85 psi (586 kPa).

* + - * 1. Capacity: 6,000 lbs (2722 kg). Airbag Quantity: 2.

Base Frame and Platform Size: 48 x 48 inches (1219 x 1219 mm).

Height: Lowered: 10 inches (254 mm). Raised: 34 inches (864 mm).

Operating Pressure: 95 psi (655 kPa).

* + 1. Basis of Design: KDL Series Hydraulic Surface Mounted Dock Lift as manufactured by Kelly.
       1. Standards Compliance: ANSI MH29.1 safety requirements. UL approved panel.
       2. Construction: High tensile strength, structural tubing.
       3. Velocity Fuses: On lift cylinders. Stops free falling due to hydraulic failure
       4. Pre-wired NEMA-4X push button control panel.
       5. Split entry plates with lifting chains and entry ramp.
       6. Removable, mandrel formed tubing handrails.
       7. Maintenance strut.
       8. Removable lifting lugs.
       9. Upper travel limit switch.
       10. Oil sight gauge in hydraulic reservoir.
       11. Self-lubricating bushings.
       12. Standard 25 ft (7620 mm) hydraulic hose.
       13. Low temperature oil.
       14. Warranty: Two-year parts, one-year labor limited warranty.
       15. Vertical Travel: 52 inches (1321 mm)
       16. Lowered Height: 7 inches (178 mm) unless specified otherwise.
       17. Horsepower: 3 unless specified otherwise.
       18. Raising and Lowering Speed Range: 8 to 12 ft per min (2438 to 3658 mm) per min.
       19. Split Bridge Plate with Lifting Chains: One 24 x 60 inch (610 x 1524 mm) and one 36 x 60 inch (914 x 1452 mm).
       20. Manual lowering valve use in power loss to lower lift.

\*\* NOTE TO SPECIFIER \*\* Delete capacity, end load and platform options not required.

* + - 1. Capacity: 4,000 lbs (1814 kg).
         1. End Load: 2400 lbs (1089 kg). Side Load: 2,000 lbs (907 kg).

Platform: 48 x 84 inches (1219 x 2134 mm).

Platform: 60 x 84 inches (1524 x 2134 mm).

Platform: 72 x 84 inches (1829 x 2134 mm).

* + - 1. Capacity: 5,000 lbs (2268 kg) Horsepower: 3.
         1. End Load: 3000 lbs (1361 kg). Side Load: 2,500 lbs (1134 kg).

Platform: 48 x 84 inches (1219 x 2134 mm).

Platform: 60 x 84 inches (1524 x 2134 mm).

Platform: 72 x 84 inches (1829 x 2134 mm).

* + - 1. Capacity: 5,000 lbs (2268 kg) Horsepower: 3.
         1. End Load: 2500 lbs (1134kg). Side Load: 2,500 lbs (1134 kg).

Platform: 72 x 96 inches (1829 x 2438 mm).

Platform: 72 x 120 inches (1829 x 3048 mm).

* + - 1. Capacity: 6,000 lbs (2722 kg).
         1. End Load: 3600 lbs (1633 kg). Side Load: 3000 lbs (1361kg).

Platform: 48 x 84 inches (1219 x 2134 mm).

Platform: 60 x 84 inches (1524 x 2134 mm).

* + - * 1. End Load: 6000 lbs (1814 kg). Side Load: 6000 lbs (1814kg).

Platform: 72 x 144 inches (1829 x 3658 mm).

Lowered Height: 8 inches (203 mm).

Horsepower: 10 unless specified otherwise.

* + - 1. Capacity: 8,000 lbs (3629 kg).
         1. End Load: 4000 lbs (4 kg). Side Load: 4000 lbs (2722 kg)

Platform: 72 x 96 inches (1829 x 2438 mm)

Lowered Height: 8 inches (203 mm)

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - * 1. Portability.
        2. Electric toe guard.
        3. Aluminum bridge plates.
        4. Post office option package.
        5. Hot dipped galvanized.
        6. Spring-assisted bridge.
        7. In-motion warning beeper and flashing light.
        8. Roller curtain.
        9. Accordion bellow skirting.
        10. Mechanical pop-up stop.
        11. Biodegradable oil.
        12. Special sizes.
    1. Basis of Design: KDL Series Hydraulic Pit Mounted Dock Lift as manufactured by Kelly.
       1. Standards Compliance: ANSI MH29.1. UL/CSA approved panel.
       2. Construction: High tensile strength, structural tubing construction
       3. Velocity Fuses: On dual lift cylinders. Stops free fall due to hydraulic failure
       4. Pre-wired NEMA-4X push button control panel.
       5. Split entry plates with lifting chains and entry ramp.
       6. Removable handrails.
       7. Maintenance strut.
       8. Removable lifting lugs.
       9. Upper travel limit switch.
       10. Oil sight gauge in hydraulic reservoir.
       11. Self-lubricating bushings.
       12. Standard 25 ft (7620 mm) hydraulic hose
       13. Low temperature oil.
       14. Two-year parts, one-year labor limited warranty.
       15. Vertical Travel: 60 inches (1524 mm)
       16. Lowered Height: 12 inches (305 mm) unless specified otherwise.
       17. Horsepower: 5 unless specified otherwise.
       18. Raising and Lowering Speed Range: 12 to 16 ft per min (3658 to 4877 mm) per min.

\*\* NOTE TO SPECIFIER \*\* Delete capacity and platform options not required.

* + - 1. Capacity: 4,000 lbs (1814 kg).
         1. End Load: 3000 lbs (1361 kg). Side Load: 2,000 lbs (907 kg).
         2. Platform: 48 x 96 inches (1219 x 2438 mm).
         3. Platform: 60 x 96 inches (1524 x 2438 mm).
         4. Platform: 72 x 108 inches (1829 x 2743 mm).
         5. Platform: 84 x 96 inches (2134 x 2438 mm).
      2. Capacity: 5,000 lbs (2268 kg) Horsepower: 3.
         1. End Load: 3750 lbs (1701 kg). Side Load: 2,500 lbs (1134 kg).
         2. Platform: 48 x 96 inches (1219 x 2438 mm).
         3. Platform: 60 x 96 inches (1524 x 2438 mm).
         4. Platform: 72 x 96 inches (1829 x 2438 mm). Horsepower: 3.
         5. Platform: 72 x 108 inches (1829 x 2743 mm). Horsepower: 3.
         6. Platform: 72 x 120 inches (1829 x 3048 mm). Horsepower: 3.
         7. Platform: 84 x 96 inches (2134 x 2438 mm).
         8. Platform: 84 x 108 inches (2134 x 2743 mm).
         9. Platform: 84 x 120 inches (2134 x 3048 mm).
         10. Platform: 96 x 96 inches (2438 x 2438 mm). Horsepower: 3.
         11. Platform: 96 x 108 inches (2438 x 2743 mm).
         12. Platform: 96 x 120 inches (2438 x 3048 mm). Horsepower: 3.
      3. Capacity: 6,000 lbs (2722 kg).
         1. End Load: 2500 lbs (1134 kg). Side Load: 3000 lbs (1361 kg).
         2. Platform: 48 x 96 inches (1219 x 2438 mm).
         3. Platform: 60 x 96 inches (1524 x 2438 mm).
         4. Platform: 72 x 96 inches (1829 x 2438 mm).
         5. Platform: 72 x 108 inches (1829 x 2743 mm).
         6. Platform: 72 x 120 inches (1829 x 3048 mm).
         7. Platform: 84 x 96 inches (2134 x 2438 mm).
         8. Platform: 84 x 108 inches (2134 x 2743 mm).
         9. Platform: 84 x 120 inches (2134 x 3048 mm).
         10. Platform: 96 x 96 inches (2438 x 2438 mm).
         11. Platform: 96 x 108 inches (2438 x 2743 mm).
         12. Platform: 96 x 120 inches (2438 x 3048 mm).
      4. Capacity: 8,000 lbs.
         1. End Load: 6000 lbs (2122 kg). Side Load: 4000 lbs (1814 kg).
         2. Lowered Height: 14 inches (356 mm).
         3. Platform: 48 x 96 inches (1219 x 2438 mm).
         4. Platform: 60 x 96 inches (1524 x 2438 mm).
         5. Platform: 72 x 96 inches (1829 x 2438 mm).
         6. Platform: 72 x 108 inches (1829 x 2743 mm).
         7. Platform: 72 x 120 inches (1829 x 3048 mm).
         8. Platform: 84 x 96 inches (2134 x 2438 mm).
         9. Platform: 84 x 108 inches (2134 x 2743 mm).
         10. Platform: 84 x 120 inches (2134 x 3048 mm).
         11. Platform: 96 x 96 inches (2438 x 2438 mm).
         12. Platform: 96 x 108 inches (2438 x 2743 mm).
         13. Platform: 96 x 120 inches (2438 x 3048 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - * 1. Electric toe guard.
        2. Aluminum bridge plates.
        3. Post office option package.
        4. Hot dipped galvanized.
        5. Spring-assisted bridge.
        6. In-motion warning beeper and flashing light.
        7. Roller curtain.
        8. Accordion bellow skirting.
        9. Hydraulic pop-up stop.
        10. Mechanical pop-up stop.
        11. Hydraulic lip.
        12. Biodegradable oil.
        13. Special sizes.
        14. Master control panel.
    1. Basis of Design: KHDL Series Hydraulic Pit Mounted Dock Lift as manufactured by Kelly.
       1. Standards Compliance: ANSI MH29.1. UL/CSA approved panel.
       2. Construction: High-tensile strength, structural tubing.
       3. Beveled toe guards.
       4. 18 inch (457 mm) full or split bridge plate.
       5. Dual lifting cylinders for optimum performance.
       6. Velocity fuses on lift cylinders prevent free falling in event of hydraulic failure.
       7. Pre-wired Nema 4x push button control with 15 ft (4.6 m) cord.
       8. Removable handrails.
       9. Maintenance safety strut.
       10. Removable lifting lugs.
       11. Upper travel limit switch.
       12. Oil sight gauge in hydraulic reservoir.
       13. Self-lubricating bushings.
       14. Standard 25 ft (7620 mm) hydraulic hose.
       15. Low temperature oil.
       16. Two-year parts, one-year labor warranty.
       17. Vertical Travel: 60 inches (1524 mm).
       18. Raising and Lowering Speed Range: 9 to 12 ft per min (2742 to 3658 mm) per min.

\*\* NOTE TO SPECIFIER \*\* Delete capacity and platform options not required.

* + - 1. Capacity: 10,000 lbs (4536 kg). Horsepower: 7.5.
         1. End Load: 7500 lbs (3402 kg). Side Load: 5000 lbs (2268 kg).
         2. Lowered Height: 14 inches (356 mm).
      2. Capacity: 12,000 lbs (5443 kg). Horsepower: 7.5.
         1. End Load: 9000 lbs (4082 kg). Side Load: 6000 lbs (2722 kg).
         2. Lowered Height: 14 inches (356 mm).
      3. Capacity: 15,000 lbs (6804 kg). Horsepower: 7.5.
         1. End Load: 11200 lbs (5080 kg). Side Load: 7500 lbs (3402 kg).
         2. Lowered Height: 14 inches (356 mm).
      4. Capacity: 20,000 lbs (kg). Horsepower: 10.
         1. End Load: 15000 lbs (6804 kg). Side Load: 10000 lbs (4536 kg).
         2. Lowered Height: 18 inches (457 mm).
      5. Platform: 72 x 96 inches (1829 x 2438 mm).
      6. Platform: 72 x 108 inches (1829 x 2743 mm).
      7. Platform: 72 x 120 inches (1829 x 3048mm).
      8. Platform: 72 x 144 inches (1829 x 3658 mm).
      9. Platform: 84 x 96 inches (2134 x 2438 mm).
      10. Platform: 84 x 108 inches (2134 x 2743 mm).
      11. Platform: 84 x 120 inches (2134 x 3048 mm).
      12. Platform: 84 x 144 inches (2134 x 3658 mm).
      13. Platform: 96 x 96 inches (2438 x 2438 mm).
      14. Platform: 96 x 108 inches (2438 x 2743 mm).
      15. Platform: 96 x 120 inches (2438 x 3048 mm).
      16. Platform: 96 x 144 inches (2438 x 3658 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Electric toe guards.
      2. Aluminum bridge plates.
      3. Post office option package.
      4. Hot dipped galvanized.
      5. Spring-assisted bridge.
      6. In-motion warning beeper and flashing light.
      7. Roller curtains.
      8. Accordion bellow skirting.
      9. Hydraulic pop-up stop.
      10. Mechanical pop-up stop.
      11. Hydraulic lip.
      12. Biodegradable oil.
      13. Special sizes and lowered heights.
      14. Master control panel.
    1. Basis of Design: KRL Series Hydraulic Rail Lift as manufactured by Kelly.
       1. Low profile for surface-mounted applications.
       2. No pit construction required.
       3. Three-sided platform.
       4. Heavy-duty I-beam deck understructure.
       5. Excellent end-load stability in fully raised position.
       6. Displacement style cylinder with internal stops.
       7. Self-contained power unit/control panel.
       8. Standard pre-wired control panel.
       9. NEMA 4X push-button controller with 15 ft (4572 mm) cord.
       10. Superior speed-to-horsepower ratio compared to scissor-style dock lifts.
       11. Direct thrust cylinder provide constant speed through full range of travel.
       12. Checker plate or smooth deck surface.
       13. Sealed guide bearing rollers.
       14. Fused 24 volt control circuit.
       15. Bridge: 18 inches (457 mm).
       16. Stationary Ramp: 30 inch (762 mm) with lagging angles.
       17. Bolt on handrail.
       18. Hydraulic system pressure gauge.
       19. Horsepower: 5.

\*\* NOTE TO SPECIFIER \*\* Delete capacity and platform options not required.

* + - 1. Capacity: 4000 lbs. Speed: 13 fpm (0.066 m per sec).
      2. Capacity: 6000 lbs. Speed: 12 fpm (0.061 m per sec).
      3. Platforms: 48 x 60 inches (1219 x 1524 mm).
      4. Platforms: 48 x 72 inches (1219 x 1929 mm).
      5. Platforms: 60 x 60 inches (1524 x 1524 mm).
      6. Platforms: 60 x 72 inches (1524 x 1929 mm).
      7. Platforms: 60 x 84 inches (1524 x 2134 mm).
      8. Platforms: 60 x 96 inches (1524 x 2438 mm).
      9. Platforms: 72 x 72 inches (1829 x 1829 mm).
      10. Platforms: 72 x 84 inches (1829 x 2134 mm).
      11. Platforms: 72 x 96 inches (1829 x 2438 mm).
      12. Platforms: 72 x 120 inches (1829 x 3048 mm).
      13. Platforms: 72 x 144 inches (1829 x 3658 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Upper travel limit switch.
      2. In motor warning beeper and flashing light on a post X 60" high or wall mounted on bracket.
      3. Interlocking gate.
      4. Aluminum bridges.
      5. Larger steel bridges.
      6. Power pack cover.
    1. Basis of Design: KZL Series Hydraulic Zero Lift as manufactured by Kelly.
       1. Power Unit: 1 HP power unit. 115v/1ph/60hz with UL/CSA approved electrical panel.
       2. NEMA 4X hand control with 10 ft (3048 mm) of cable.
       3. Self-lubricating bushings with hardened chrome pins for pivot points.
       4. Velocity fuses on cylinders to prevent uncontrolled descent.
       5. Up travel limit switch.
       6. Maintenance blocks.
       7. Travel: 30 inches (762 mm).
       8. Travel: 40 inches (1016 mm).
       9. Deck Lowered Height: 0.5 inches (13 mm).
       10. Deck Raised Height: 30.5 inches (775 mm).

\*\* NOTE TO SPECIFIER \*\* Delete capacity options not required.

* + - 1. Capacity: 2000 lbs (907 kg).
         1. Platform (WxL): 50 x 48 inches (1270 x 1219 mm).
         2. Overall Dimensions (WxL): 72 x 54 inches (1829 x 1372 mm).
      2. Capacity: 4000 lbs (1814 kg).
         1. Platform (WxL): 50 x 60 inches (1270 x 1524).
         2. Overall Dimensions (WxL): 72 x 66 inches (1829 x 1676 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Foot switch with cover - NEMA 1.
      2. In motor warning beeper and flashing light on a post x 36 inch (914 mm) high or wall mounted bracket.
      3. Increased horsepower available.
      4. Stainless steel.
      5. Hand rails.
      6. Transition bridge.
      7. Three phase power.
      8. Accordion skirting.
    1. Basis of Design: KDS Hydraulic Double Scissor Table Dock Lift as manufactured by Kelly.
       1. Standards Compliance: ANSI MH29.1 . UL approved panel.
       2. Pre-wired power unit with UL approved control panel.
       3. Self-lubricating bushings.
       4. Solid steel legs with hard chromed pins.
       5. Velocity fuses on all cylinders to prevent uncontrolled descent.
       6. Wire braided hydraulic hoses.
       7. Maintenance strut.
       8. Power Unit: 1 HP single phase with 115 VAC control valve.

\*\* NOTE TO SPECIFIER \*\* Delete travel and capacity options not required.

* + - 1. Travel: 48 inches (1219 mm). Platform: 30 x 36 inches (762 x 914 mm).
         1. Capacity: 2000 lbs (907 kg).
         2. Raise Height: 60 inches (1524 mm). Lowered Height: 12 inches (305 mm).
         3. Max. Platform Size: 40 x 48 inches (1016 x 1219 mm).
      2. Travel: 60 inches (1524 mm). Platform: 30 x 48 inches (762x 1219 mm).
         1. Capacity: 2000 lbs (907 kg).
         2. Capacity: 4000 lbs (1814 kg).
         3. Capacity: 6000 lbs (2721 kg).
         4. Raised Height: 74 inches (1880 mm). Lowered Height: 14 inches (356 mm).
         5. Max. Platform Size: 48 x 60 inches (1219 x 1524 mm).
      3. Travel: 80 inches (2032). Platform: 30 x 60 inches (762 x 1524 mm).
         1. Capacity: 2000 lbs (907 kg).
         2. Capacity: 4000 lbs (1814 kg).
         3. Raised Height: 94 inches (2388 mm). Lowered Height: 14 inches (356 mm).
         4. Max Platform Size: 48 x 72 inches (1219 x 1829 mm).
      4. Travel: 80 inches (2032). Platform: 42 x 60 inches (1067 x 1524 mm).
         1. Capacity: 6000 lbs (2721 kg).
         2. Raised Height: 98 inches (2489 mm). Lowered Height: 18 inches (457 mm).
         3. Max Platform Size: 48 x 72 inches (1219 x 1829 mm).
      5. Travel: 96 inches (2438 mm). Platform: 30 x 72 inches (762 x 1829 mm).
         1. Capacity: 2000 lbs (907 kg).
         2. Capacity: 4000 lbs (1814 kg).
         3. Raised Height: 110 inches (2794 mm). Lowered Height: 14 inches (356 mm).
         4. Max Platform Size: 48 x 96 inches (1219 x 2438 mm).
      6. Travel: 96 inches (2438). Platform: 42 x 72 inches (1067 x 1829 mm).
         1. Capacity: 6000 lbs (2721 kg).
         2. Raised Height: 114 inches (2896 mm). Lowered Height: 18 inches (457 mm).
         3. Max Platform Size: 48 x 96 inches (1219 x 2438 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Tapered toe guards.
      2. Foot switch with cover - NEMA 1.
      3. In motor warning beeper and flashing light on a post X 60 inch (1524 mm) high or wall mounted bracket.
      4. Increased horsepower available.
      5. Manual lowering valve located at power pack.
      6. Power Unit: 1 HP air/hydraulic power unit with air lever valve or air foot valve and 10 ft (3048 mm) hose.
      7. Portability with casters.
      8. Accordion bellows - yellow/black 4 sides of base.
      9. Hot dip galvanizing.
      10. Special color.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. DOCK SEALS
     1. Trucks and Trailer Serviced:
        1. Max Width: \_\_\_ inch (\_\_\_ mm). Min Width: \_\_\_ inch (\_\_\_ mm).
        2. Max Height: \_\_\_ inch (\_\_\_ mm). Min Height: \_\_\_ inch (\_\_\_ mm).
        3. Max Length: \_\_\_ inch (\_\_\_ mm). Min Length: \_\_\_ inch (\_\_\_ mm).
        4. Tailgate/Step Section Size: \_\_\_ inch (\_\_\_ mm).
        5. Hydraulic Tailgate (Yes/No): \_\_\_\_.
        6. Rear Step Section (Yes/No): \_\_\_\_.
        7. Yard Jockeys (Yes/No): \_\_\_\_.
     2. Application Data:
        1. Quantity: \_\_\_\_.
        2. Door Width: \_\_\_ ft \_\_\_in ( mm).
        3. Door Height: \_\_\_ft \_\_\_in ( mm).
        4. Dock Height: \_\_\_ft \_\_\_in ( mm).

\*\* NOTE TO SPECIFIER \*\* bumper projection includes any building wall/foundation offset or cantilever.

* + - 1. Bumper Projection: \_\_\_ in ( mm).

\*\* NOTE TO SPECIFIER \*\* Delete dock seals and shelters not required.

* + 1. Basis of Design: WEARMASTER Dock Seal as manufactured by Kelly. Two-piece head pad with sliding front pad increases wearability. Roll-formed galvanized steel frame reduces pressure on building. Full-width head pad wear face on mobile head pad portion. Head pad mounted firmly to steel framing with TEK screws inserted through heavy-duty washers. 4 inch (402 mm) exposure wear pleating moves with trailer, extending fabric life in key wear areas. Reinforced TEK screws provide firm attachment of sliding wear pleat system to side pads. Replace sliding wear pleat system and front head pad without dock seal removal. Urethane-coated base material provides sliding surface for mobility of wear surfaces.
       1. Design Attributes:
          1. Flame Retardant: Fabric and foam.
          2. Flame Retardant: Fabric only.
          3. Framing: Roll formed galvanized steel.
          4. WearMaster Head Pad Width: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Head Pad Back/Face options are 12/12, 18/18, 12/15, and 12/18

* + - * 1. WearMaster Head Pad Bevel: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Drop curtain is optional. Delete option not required.

* + - * 1. Drop Curtain: 12 inches (305 mm).
        2. Drop Curtain: 12 inches (305 mm). Hook-Loop.
        3. Side Pad Height: \_\_\_\_ inches (\_\_\_\_ mm) Total.
        4. Side Pad Bevel: 6/10.
        5. Side Pad Bevel: 12/12.
        6. Side Pad Bevel: 8/12.
        7. Side Pad Bevel: 10/12.
        8. Side Pad Bevel: 10/15.
        9. Side Pad Bevel: 8/15.
        10. Side Pad Bevel: 12/15.
        11. Side Pad Bevel: 10/18.
        12. Side Pad Bevel: 6/14.
        13. Base Material: 22 oz. black vinyl.
        14. Taper: Tapered.
        15. Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 10, 12, 14, 16, 18, 20, and 22 inches.

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 10, 12, 14, 16, 18, 20, and inches.

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Bottom Flaps: 3 inch (76 mm) inside.
        3. Bottom Flaps: 6 inch (152 mm) inside.
        4. Bottom Flaps: 3 inch (76 mm) inside and front.
        5. Bottom Flaps: 6 inch (152 mm) inside and front.
        6. Bottom Flaps: 3 inch (76 mm) all three sides.
        7. Bottom Flaps: 6 inch (152 mm) all three sides.
        8. Wear Surface: Full width black TS-55 on head pad front chamber.

Reinforced inside face.

Side pad 4 inches (102 mm).

Side pad full height.

* + - * 1. Material: 40 oz. vinyl
        2. Material: TS-55
        3. Color: Black, Tan, Brown, Blue, and Green.
        4. Wear Pleats: Black TS-55 4 inch (102 mm) exposure on side pads and head pad corners.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Side Pad Mounting Brackets: None.
      3. Side Pad Mounting Brackets: Flats and angles.
      4. Side Pad Mounting Brackets: Angles.
      5. Side Pad Mounting Brackets: 1-1/2 inch (38 mm) Offsets and angles.
    1. Basis of Design: FOAMSIDE Truck Shelter as manufactured by Kelly. Impactable foam-filled side members. Roll-formed galvanized steel framing. Fiberglass stays inside/head curtains. Translucent head member transmits light. Raked header for moisture run-off. Foam filled draft pads. Full range of colors and fabrics. Side curtains feature removable stays
       1. Design Attributes:

\*\* NOTE TO SPECIFIER \*\* Delete design attributes not required.

* + - * 1. Drive Approach: Level.
        2. Drive Approach: Incline. \_\_\_\_ percent grade.
        3. Drive Approach: Decline. \_\_\_\_ percent grade.
        4. Building Wall Structure: Metal.
        5. Building Wall Structure: Other.
        6. Unit Width: 11 ft 6 inches (3.5 m).
        7. Unit Width: 12 ft (3.65 m).
        8. Unit Width: 12 ft 6 inches (3.81 m).
        9. Unit Height: 11 ft (3.35 mm).
        10. Unit Height: 11 ft 6 inches (3.5 m).
        11. Unit Height: 12 ft (3.65 mm).
        12. Unit Height: 12 ft 6 inches (3.81 m).
        13. Head Member Style: Raked.
        14. Head Member Style: Flat.
        15. Curtain Material: 22 oz. vinyl.
        16. Curtain Material: 40 oz. vinyl.
        17. Curtain Material: 40 oz. CSM.
        18. Curtain Material: TS-55.
        19. Color: Black, Tan, Brown, Blue, or Green.
        20. Head Curtain Drop: 30 inch (762 mm).
        21. Head Curtain Drop: 36 inch (914 mm).
        22. Head Curtain Drop: 42 inch (1067 mm).
        23. Head Curtain Drop: 48 inch (1219 mm).
        24. Head Curtain Drop: 54 inch (1372 mm).
        25. Head Curtain Drop: \_\_\_ inch (\_\_\_ mm).
        26. Taper: Tapered.
        27. Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches.

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Full length guide stripes.
      3. Pull rope assembly.
    1. Basis of Design: FOAMSIDE Truck Shelter with Hinge Guard as manufactured by Kelly. Impactable foam-filled side members. Roll-formed galvanized steel framing. Fiberglass stays inside/head curtains. Translucent head member transmits light. Raked header for moisture run-off. Foam filled draft pads. Full range of colors and fabrics.
       1. Design Attributes:
          1. Hinge Guard: Effectively seals hinge gap at opened trailer doors. Made of High Molecular Weight Polyethylene (HMWPE). Attached securely with industrial hook and loop for easy replacement.

\*\* NOTE TO SPECIFIER \*\* Delete design attributes not required.

* + - * 1. Drive Approach: Level.
        2. Drive Approach: Incline. \_\_\_\_ percent grade.
        3. Drive Approach: Decline. \_\_\_\_ percent grade.
        4. Building Wall Structure: Metal.
        5. Building Wall Structure: Other.
        6. Unit Width: 11 ft 6 inches (3.5 m).
        7. Unit Width: 11 ft 9 inches ( m).
        8. Unit Width: 11 ft 10 inches ( m).
        9. Unit Width: 12 ft 1 inches ( m).
        10. Unit Height: 11 ft (3.35 mm).
        11. Unit Height: 11 ft 6 inches (3.5 m).
        12. Unit Height: 12 ft (3.65 mm).
        13. Unit Height: 12 ft 6 inches (3.81 m).
        14. Head Member Style: Raked.
        15. Head Member Style: Flat.
        16. Curtain Material: 22 oz. vinyl.
        17. Curtain Material: 40 oz. vinyl.
        18. Curtain Material: 40 oz. CSM.
        19. Curtain Material: TS-55.
        20. Color: Black, Tan, Brown, Blue, or Green.
        21. Head Curtain Drop: 30 inch (762 mm).
        22. Head Curtain Drop: 36 inch (914 mm).
        23. Head Curtain Drop: 42 inch (1067 mm).
        24. Head Curtain Drop: 48 inch (1219 mm).
        25. Head Curtain Drop: 54 inch (1372 mm).
        26. Head Curtain Drop: \_\_\_ inch (\_\_\_ mm).
        27. Taper: Tapered.
        28. Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches.

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Full length guide stripes.
      3. Pull rope assembly.
    1. Basis of Design: TS Series Rigid Frame Dock Shelter as manufactured by Kelly. Heavy-duty frame of roll formed galvanized steel or 1-1/4 inch square steel tube covered with translucent white fiberglass to transmit natural light into loading area. Raked header for drainage. Flat header if protected by a hood or canopy. Foam weather strips seal on top front edge of shelter frame, under aluminum trim angle. Fiberglass stays add stiffness to shelter face curtains. Wind straps on head curtain keep it from being blown out of position when shelter is not in use. Four overlapping wear pleats per side absorb impact from trailer corners. Closed cell neoprene forms a wiper seal on sides and top of trailers. Wear panels with guide stripes provide drivers with visual reference to the dock. Tapered draft pads, 8 to 2 inch (203 to 51 mm) behind side curtains prevent air flow from lower corners of shelter. "NO STEP" labels included for safety. Heavy-duty steel supports protect each side frame.
       1. Design Attributes:

\*\* NOTE TO SPECIFIER \*\* Delete design attributes not required.

* + - * 1. Drive Approach: Level.
        2. Drive Approach: Incline. \_\_\_\_ percent grade.
        3. Drive Approach: Decline. \_\_\_\_ percent grade.
        4. Framing: Galvanized steel.
        5. Framing: 1-1/4 inch (32 mm) square steel tube.
        6. Building Wall Structure: Metal.
        7. Building Wall Structure: Other.
        8. Unit Width: 11 ft 6 inches (3.5 m).
        9. Unit Width: 12 ft (3.65 m).
        10. Unit Width: 12 ft 6 inches (3.81 m).
        11. Unit Width: 13 ft (3.96 m).
        12. Unit Height: 11 ft (3.35 m).
        13. Unit Height: 11 ft 6 inches (3.5 m).
        14. Unit Height: 12 ft 6 inches (3.81 m).
        15. Unit Height: 13 ft 6 inches (4.11 m).
        16. Unit Height: 14 ft 6 inches (4.42 m).
        17. Unit Height: 15 ft 6 inches (4.72 m).
        18. Head Member Style: Raked.
        19. Head Member Style: Flat.
        20. Head Member Style: Single steel tube.
        21. Curtain Material: 22 oz. vinyl.
        22. Curtain Material: 40 oz. vinyl.
        23. Curtain Material: 40 oz. CSM.
        24. Curtain Material: TS-55
        25. Color: Black, Tan, Brown, Blue, or Green.
        26. Head Curtain Drop: 30 inch (762 mm).
        27. Head Curtain Drop: 36 inch (914 mm).
        28. Head Curtain Drop: 42 inch (1067 mm).
        29. Head Curtain Drop: 48 inch (1219 mm).
        30. Head Curtain Drop: 54 inch (1372 mm).
        31. Taper: Tapered.
        32. Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 24, 30, 36, 42, 44, 48, 51, and 54 inches

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 24, 30, 36, 42, and 48 inches

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 24, 30, 36, 42, 48, and 54 inches

* + - * 1. Draft Pad: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 24, 30, 36, 42, 48, and 54 inches

* + - * 1. Steel Supports: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Steel Support Extensions: None.
        3. Steel Support Front Channel Extensions: 6 inch (152 mm).
        4. Steel Support Front Channel Extensions: 12 inch (305 mm).
        5. Steel Support Back Channel Extensions: 6 inch (152 mm).
        6. Steel Support Back Channel Extensions: 12 inch (305 mm).

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Full length guide stripes.
      3. Pull rope assembly.
    1. Basis of Design: DSS Foam Dock Seal with Head Pad as manufactured by Kelly. Roll-formed, galvanized steel frame. 5 year warranty against rotting, splitting, or cracking. Endurance tested foam core bonded to frame surface with, non-flammable adhesive. Wide selection of durable coated fabrics provide maximum durability. Open-celled polyurethane foam. Keeps original shape and compresses easily. Side pad bottoms are tapered to avoid pinching and wear. Vented pads for air and moisture release. Full length yellow stripes guide drivers to the dock.
       1. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete design requirements not required.

* + - * 1. Head Pad Width: \_\_\_\_ inches (\_\_\_\_ mm) total.
        2. Head Pad Back/Face: 12/12.
        3. Head Pad Back/Face: 18/18.
        4. Head Pad Back/Face: 24/24.
        5. Head Pad Back/Face: 12/15.
        6. Head Pad Back/Face: 12/18.

\*\* NOTE TO SPECIFIER \*\* Delete drop curtain if not required. Size options are 12, 18, and 24 inches.

* + - * 1. Drop Curtain: \_\_\_\_ inches (\_\_\_\_ mm) total.

Hook-loop.

No hook-loop.

Full width.

* + - * 1. Side Pad Height: \_\_\_\_ inches (\_\_\_\_ mm) total.
        2. Side Pad Back/Face: 6/10.
        3. Side Pad Back/Face: 8/12.
        4. Side Pad Back/Face: 10/12.
        5. Side Pad Back/Face: 12/12.
        6. Side Pad Back/Face: 12/15.
        7. Side Pad Back/Face: 8/15.
        8. Side Pad Back/Face: 6/14.
        9. Side Pad Back/Face: 10/18.
        10. Side Pad Back/Face: 8/23.
        11. Base Material: 22 oz. vinyl.
        12. Base Material: 40 oz. vinyl.
        13. Base Material: 16 oz. CSM.
        14. Base Material: 40 oz. CSM.
        15. Base Material: TS-55.
        16. Color: Black, Tan, Brown, Blue, or Green.
        17. Taper: Tapered.
        18. Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Blockout is optional. Delete if not required. Sizes: 2, 4, 6, 8, 10, and 12 inch.

* + - * 1. Blockout: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Wear pleats are optional. Delete if not required or delete materials not required. Sizes: 4, 8, and6 inch. Wear Pleats: \_\_\_\_ inches (\_\_\_\_ mm).

Head and side pads.

Head pad corners only.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Base Material: 16 oz. CSM.

Base Material: 40 oz. CSM.

Base Material: TS-55.

Color: Black, Tan, Brown, Blue, or Green.

\*\* NOTE TO SPECIFIER \*\* Wear face is optional. Delete if not required or delete material not required.

* + - * 1. Wear Face:

Head pad.

Side pad.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Base Material: 40 oz. CSM.

Base Material: TS-55.

Color: Black, Tan, Brown, Blue, or Green.

* + - * 1. Reinforced Inside Face: None.

\*\* NOTE TO SPECIFIER \*\* Inside face is optional. Delete if not required or delete materials not required.

* + - * 1. Reinforced Inside Face:

Side pad 4 inch (102 mm).

Side full height.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Base Material: 40 oz. CSM.

Base Material: TS-55.

Color: Black, Tan, Brown, Blue, or Green.

* + - * 1. Bottom Flaps: None.
        2. Bottom Flaps: 3 inch (76 mm).
        3. Bottom Flaps: 6 inch (152 mm).
        4. Bottom Flaps Location: Inside.
        5. Bottom Flaps Location: Inside front.
        6. Bottom Flaps Location: All 3 sides.
        7. Side Pad Mounting Brackets: None.
        8. Side Pad Mounting Brackets: Flats and angles.
        9. Side Pad Mounting Brackets: Angles.
        10. Side Pad Mounting Brackets: 1-1/2 inch (38 mm) offsets and angles.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. 24 inch (610 mm) guide stripes.
      3. Flame retardant fabric.
      4. Flame retardant foam.
      5. Heavy-duty, galvanized steel mounting brackets.
    1. Basis of Design: DSH Foam Dock Seal with Head Curtain as manufactured by Kelly. Top of hood is tapered forward and securely fastens to building wall. Fiberglass stays add stiffness to hood top to prevent sagging. Hood curtain splits offer load relief and higher clearance. Roll-formed galvanized steel framing reduces pressure on building wall. Warranted for 5 years against rotting, splitting, or cracking. Endurance tested foam core bonded to frame surface with, non-flammable adhesive. A wide selection of durable coated fabrics provide maximum durability. Resilient, open-celled polyurethane foam. Keeps original shape; compresses easily. Side pad bottoms are tapered to avoid pinching and wear. Pads are vented for air and moisture release. Full length yellow stripes guide drivers to the dock. Hood curtain splits offer load relief and higher clearance.
       1. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete design requirements options not required.

* + - * 1. Unit Width: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Head curtain height options are 18, 24, 30, 36, 42, and 48 inches.

* + - * 1. Head Curtain Height: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Head curtain splits options are 12, 18, 24, 30, and 36 inches.

* + - * 1. Head Curtain Splits: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Head Curtain Options:

Pull-rope assembly.

O-rings.

Foam front: 2 inches (51 mm).

Sectional foam front.

* + - * 1. Side Pad Height: : \_\_\_\_ inches (\_\_\_\_ mm) total.
        2. Side Pad Back/Face: 6/10.
        3. Side Pad Back/Face: 8/12.
        4. Side Pad Back/Face: 10/12.
        5. Side Pad Back/Face: 12/12.
        6. Side Pad Back/Face: 12/15.
        7. Side Pad Back/Face: 8/15.
        8. Side Pad Back/Face: 6/14.
        9. Side Pad Back/Face: 10/18.
        10. Side Pad Back/Face: 8/23.
        11. Base Material: 22 oz. vinyl.
        12. Base Material: 40 oz. vinyl.
        13. Base Material: 16 oz. CSM.
        14. Base Material: 40 oz. CSM.
        15. Base Material: TS-55.
        16. Color: Black, Tan, Brown, Blue, or Green.
        17. Taper: Tapered.
        18. Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 8, 10, 12, 14, 16, 18, 20, 22, and 24 inches

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Blockout is optional. Delete if not required. Sizes: 2, 4, 6, 8, 10, and 12 inch.

* + - * 1. Blockout: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Wear pleats are optional. Delete if not required. Sizes: 4, 8, and 16 inches.

* + - * 1. Wear Pleats: \_\_\_\_ inches (\_\_\_\_ mm).

Head and side pads.

Head pad corners only.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Base Material: 40 oz. CSM.

Base Material: TS-55.

Color: Black, Tan, Brown, Blue, or Green.

\*\* NOTE TO SPECIFIER \*\* Delete wear face if not required or delete materials not required.

* + - * 1. Wear Face:

Head pad.

Side pad.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Base Material: 40 oz. CSM.

Base Material: TS-55.

Color: Black, Tan, Brown, Blue, or Green

\*\* NOTE TO SPECIFIER \*\* Delete reinforced inside face if not required or delete materials not required.

* + - * 1. Reinforced Inside Face:

Side pad 4 inch (102 mm).

Side full height.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Base Material: 40 oz. CSM.

Base Material: TS-55.

Color: Black, Tan, Brown, Blue, or Green.

* + - * 1. Bottom Flaps: None.
        2. Bottom Flaps: 3 inch (76 mm).
        3. Bottom Flaps: 6 inch (152 mm).
        4. Bottom Flaps Location: Inside.
        5. Bottom Flaps Location: Inside front.
        6. Bottom Flaps Location: All 3 sides
        7. Side Pad Mounting Brackets: None
        8. Side Pad Mounting Brackets: Flats and angles
        9. Side Pad Mounting Brackets: Angles
        10. Side Pad Mounting Brackets: 1-1/2 inch (38 mm) Offsets and Angles

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Guide Stripes: 24 inch (610 mm).
      3. Flame retardant fabric.
      4. Flame retardant foam.
    1. Basis of Design: DSA Foam Dock Seal with Adjustable Head Pad as manufactured by Kelly. Adjustable head pad system operates with an easy-release lever and has 48 inch (1219 mm) working range. 18 inch (457 mm) high foam head pad is mounted on steel pan which travels in slide tracks. Spring-tension system provides adjustment of counterbalance and horizontal tilt for smooth, jam-free operation. Open-celled polyurethane foam keeps original shape and compresses to extend seal life. Roll-formed galvanized steel framing. 5 years warranty against rotting, splitting, or cracking. Pads are vented for air and moisture release. Full length yellow stripes guide drivers to dock.
       1. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete design requirements not required.

* + - * 1. Unit Width: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Head Pad Bevel: 18/18.
        3. Follower Curtains: None.
        4. Follower Curtains: 36 inch (914 mm).
        5. Follower Curtains: \_\_\_\_ inches (\_\_\_\_ mm).
        6. Side Pad Height: \_\_\_\_ inches (\_\_\_\_ mm) total.
        7. Side Pad Back Face: 6/10.
        8. Side Pad Back Face: 8/12.
        9. Side Pad Back Face: 10/12.
        10. Side Pad Back Face: 12/12.
        11. Side Pad Back Face: 8/15.
        12. Side Pad Back Face: 10/15.
        13. Side Pad Back Face: 12/15.
        14. Side Pad Back Face: 10/18.
        15. Side Pad Back Face: 6/14.
        16. Material: 22 oz. vinyl.
        17. Material: 40 oz. vinyl.
        18. Material: 16 oz. CSM
        19. Material: 40 oz. CSM.
        20. Material: TS-55
        21. Color: Black, Tan, Brown, Blue, or Green.
        22. Taper: Tapered.
        23. Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 8, 10, 12, 14, 16, 18, 20, and 22 inches

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 8, 10, 12, 14, 16, 18, 20, and 22 inches

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Delete wear pleats if not required. Size options are 4, 8, and 16 inches.

* + - * 1. Wear Pleats: \_\_\_\_ inches (\_\_\_\_ mm)

Side pads.

Head pad corners only.

Material: 22 oz. vinyl

Material: 40 oz. vinyl

Material: 40 oz. CSM.

Material: TS-55

Color: Black, Tan, Brown, Blue, or Green

\*\* NOTE TO SPECIFIER \*\* Delete wear face if not required.

* + - * 1. Wear Face:

Head pad.

Side pad.

Material: 22 oz. vinyl

Material: 40 oz. vinyl

Material: 40 oz. CSM.

Material: TS-55

Color: Black, Tan, Brown, Blue, or Green

\*\* NOTE TO SPECIFIER \*\* Delete reinforced inside face if not required.

* + - * 1. Reinforced Inside Face:

Side pad 4 inch (102 mm).

Side full height.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Material: 40 oz. CSM.

Material: TS-55

Color: Black, Tan, Brown, Blue, or Green.

* + - * 1. Bottom Flaps: 3 inch (76 mm).
        2. Bottom Flaps: 6 inch (152 mm).
        3. Bottom Flaps: \_\_\_\_ inches (\_\_\_\_ mm).
        4. Bottom Flaps Location: Inside.
        5. Bottom Flaps Location: Inside front.
        6. Bottom Flaps Location: All 3 sides
        7. Mounting Brackets: Flats and angles
        8. Mounting Brackets: Angles
        9. Mounting Brackets: 1-1/2 inch (38 mm) Offsets and Angles

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Guide Stripes: 24 inch (610 mm).
      3. Flame retardant fabric.
      4. Flame retardant foam.
    1. Basis of Design: V- Seal Head Pad Dock Seal as manufactured by Kelley. V-shaped side pads provide improved trailer access and seal hinge gaps on trailer. swing-out doors. Fixed-foam head pad seals gap between top of trailer and building wall. 22 oz. vinyl-base fabric with protective pleated layer of TS-55 super fabric in critical wear areas. Full-length yellow stripes guide drivers to dock. Roll-formed galvanized steel framing reduces pressure on building. 3-inch inside bottom flaps provide protection against outside elements.
       1. Model: VS-801 for 8 ft wide doors. Unit Width: 114 inches
       2. Model: VS-861 for 8.5 ft wide doors. Unit Width: 120 inches
       3. Model: VS-902 for 9' ft wide doors. Unit Width: 123 inches
       4. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete design requirements not required.

* + - * 1. WearMaster Head Pad.
        2. Head Pad Back Face: 12/12.
        3. Head Pad Back Face: 18/18.
        4. Head Pad Back Face: 12/18.

\*\* NOTE TO SPECIFIER \*\* Drop curtain is optional. Delete if not required. Options for Drop curtain are 12, 18, and 24 inches. Delete drop curtain options not required.

* + - * 1. Drop Curtain: \_\_\_\_ inches (\_\_\_\_ mm) total.

Hook-loop.

No hook-loop.

* + - * 1. Side Pad Height: \_\_\_\_ inches (\_\_\_\_ mm) total.
        2. Side Pad Back Face: 6/14.
        3. Side Pad Back Face: 8/15.
        4. Side Pad Back Face: 10/18.
        5. Side Pad Back Face: 8/21.
        6. Material: 22 oz. vinyl eiotyh TS-55 wear pleats in critical areas.
        7. Color: Black, Tan, Brown, Blue, or Green.
        8. Wood Blockout: None.
        9. Wood Blockout Taper: Tapered.
        10. Wood Blockout Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 0, 2, 4, 6, 8, and 12, inches.

* + - * 1. Wood Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 0, 2, 4, 6, 8, 10 and 12, inches.

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Foam Blockout: None.
        3. Foam Blockout Taper: Tapered.
        4. Foam Blockout Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Blockout is optional. Size options are 0, 2, and inches.

* + - * 1. Foam Top Blockout Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Blockout is optional. Size options are 0, 2, and 4 inches.

* + - * 1. Foam Bottom Blockout Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Wear face is optional. Delete wear face options not required.

* + - * 1. Wear Face: Head pad.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Material: 40 oz. CSM

Material: TS-55.

Color: Black, Tan, Brown, Blue, or Green.

* + - * 1. Bottom Flaps: 3 inch (76 mm).
        2. Bottom Flaps: 6 inch (152 mm).
        3. Bottom Flaps: \_\_\_\_ inches (\_\_\_\_ mm).
        4. Side Pad Mounting Brackets: Flats and angles.
        5. Side Pad Mounting Brackets: Angles.
        6. Side Pad Mounting Brackets: 1-1/2 inch (38 mm) offsets and angles.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Guide Stripes: 24 inch (610 mm).
      3. Flame retardant fabric.
      4. Flame retardant foam,
    1. Basis of Design: V-Seal Head Curtain Dock Seal as manufactured by Kelly. V-shaped side pads provide better trailer access and seal hinge gaps on trailer swing-out doors. Fabric hood with fixed or adjustable head curtain seals gap between taller doors and building walls. 22 oz. vinyl base fabric with protective pleated layer of TS-55 super fabric in critical wear areas provides wear resistance. Full-length yellow stripes guide drivers to dock. Roll-formed galvanized steel framing reduces pressure on building. 3-inch inside bottom flaps provide protection against outside elements.
       1. Model: VSH-801 for 8 ft wide doors. Unit Width: 114 inches
       2. Model: VSH-861 for 8.5 ft wide doors. Unit Width: 120 inches
       3. Model: VSH-902 for 9' ft wide doors. Unit Width: 123 inches
       4. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Head curtain height options are 18, 24, 30, 36, 42, and 48 inches.

* + - * 1. Head Curtain Drop: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Head curtain splits options are 12, 18, 24, 30, and 36 inches or none.

* + - * 1. Head Curtain Splits: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Head Curtain Options:

None.

Pull-rope assembly.

D-rings.

Foam front: 2 inches (51 mm).

Sectional foam front.

* + - * 1. Side Pad Height: : \_\_\_\_ inches (\_\_\_\_ mm) total.
        2. Base Material: 22 oz. vinyl with TS-55 wear pleats in critical wear area.
        3. Color: Black, Tan, Brown, Blue, or Green.
        4. Wood Blockout: None.
        5. Wood Blockout Taper: Tapered.
        6. Wood Blockout Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 0, 2, 4, 6, 8, 10 and 12, inches.

* + - * 1. Wood Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 0, 2, 4, 6, 8, 10 and 12, inches.

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Foam Blockout: None.
        3. Foam Blockout Taper: Tapered.
        4. Foam Blockout Taper: Non-Tapered.

\*\* NOTE TO SPECIFIER \*\* Blockout is optional. Size options are 0, 2, and 4 inches.

* + - * 1. Foam Top Blockout Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Blockout is optional. Size options are 0, 2, and 4 inches.

* + - * 1. Foam Bottom Blockout Projection: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Bottom Flaps: 3 inch (76 mm).
        3. Bottom Flaps: 6 inch (152 mm).
        4. Bottom Flaps: \_\_\_\_ inches (\_\_\_\_ mm).
        5. Side Pad Mounting Brackets: Flats and angles.
        6. Side Pad Mounting Brackets: Angles.
        7. Side Pad Mounting Brackets: 1-1/2 inch (38 mm) offsets and angles.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Flame retardant fabric.
      3. Flame retardant foam,
    1. Basis of Design: DSSL L-Pad Standard Dock Seal as manufactured by Kelly. L-shaped sides compress around side of trailer to create a seal providing full width trailer access. Provides positive seal between internal and external environments. Endurance-tested foam core is continuously bonded to frame surface with flexible, non-flammable adhesive. Wide selection of coated fabrics provide maximum durability. Highly resilient, open-celled polyurethane foam compresses easily to extend seal life. Roll-formed galvanized steel framing reduces pressure on building wall. All pads are vented for air and moisture release. Full length yellow stripes guide. Heavy-duty, galvanized steel mounting brackets included.
       1. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete design requirements options not required.

* + - * 1. Framing: Roll-formed galvanized steel.
        2. Head Pad: Guardian.
        3. Head Pad Width: 129 inch (3277 mm) for 9 ft 3 inch (2819 mm) door widths or smaller.
        4. Head Pad Width: 135 inch (3429 mm) for 9 ft 4 inch to 10 ft (2845 to 3048 mm) door widths.
        5. Head Pad Bevel: 12/12.
        6. Head Pad Bevel: 18/18.
        7. Head Pad Bevel: 24/24.
        8. Head Pad Bevel: 12/15.
        9. Head Pad Bevel: 12/18.
        10. Drop Curtain: None.
        11. Drop Curtain: 12 inch (305 mm).

Hook-Loop.

* + - * 1. Side Pad Height: \_\_\_ inch (\_\_\_ mm) total.
        2. Side Pad Face: 18 inches for 9 ft 3 inch (2819 mm) door widths or smaller.
        3. Side Pad Face: 21 inches for 9 ft 4 inch to 10 ft (2845 to 3048 mm) door widths.
        4. Base Material: 22 oz. vinyl.
        5. Base Material: 40 oz. vinyl.
        6. Base Material: XL-100.
        7. Color: Black, Tan, Brown, Blue, or Green.
        8. Taper: Tapered.
        9. Taper: Non-tapered.

\*\* NOTE TO SPECIFIER \*\* Top projection options are 16, 18, 2, 22, and 24 inches

* + - * 1. Top Projection: \_\_\_\_ inches (\_\_\_\_ mm) total.

\*\* NOTE TO SPECIFIER \*\* Bottom projection options are 16, 18, 2, 22, and 24 inches

* + - * 1. Bottom Projection: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Delete Blockout if not required. Options are 2, 4, 6, 8, 10, and 12 inches.

* + - * 1. Blockout: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Delete wear pleats if not required. Size options are 4, 8, and 16 inch.

* + - * 1. Wear Pleats: \_\_\_\_ inches (\_\_\_\_ mm).

Side pads.

Head pad corners.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Material: XL-100.

Color: Black, Tan, Brown, Blue, or Green.

\*\* NOTE TO SPECIFIER \*\* Delete wear face if not required.

* + - * 1. Wear Face:

Head pad.

Side pad.

Material: 22 oz. vinyl.

Material: 40 oz. vinyl.

Material: XL-100.

Color: Black, Tan, Brown, Blue, or Green.

* + - * 1. Mounting Brackets: Flats and angles.
        2. Mounting Brackets: Angles.
        3. Mounting Brackets: 1-1/2 inch (38 mm) Offsets and angles.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Door numbers.
      2. Flame retardant fabric.
      3. Flame retardant foam.
    1. Basis of Design: Inflatable Rail Shelter as manufactured by Kelly. Top, side, and optional bottom air chambers constructed from durable 10 oz per sq yd vinyl-coated fabric. Provides sealing for wide variety of rail cars and rail applications. Conforms to irregularities present on side of some rail cars. Inflated by a high volume, low pressure motor. Unit retraction assisted by upward biased track-trolley support system. Can be sized to accommodate a variety of rail ramp configurations.

\*\* NOTE TO SPECIFIER \*\* Delete model option not required.

* + - 1. Model: 3-Sided Cover and Frame.
      2. Model: 4-Sided Cover and Frame. Size so that bottom can be mounted 24 inches (610 mm) below dock floor while maintaining top coverage range.
      3. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete design requirements options not required.

* + - * 1. Motor/Blower. None.
        2. Motor/Blower. Single. Standard.
        3. Motor/Blower. Two. Total shelter volume exceeds 275 cu ft.
        4. Standard Frame: 2 x 12 inch (51 x 305 mm) Pressure treated wood framing.
        5. Motor/Blower: 1/2 hp, 115 V, 50/60 Hz, 5.5 Amps. Switch with pilot light.
        6. Motor/Blower: 1/2 hp, 220V, 1Ph, 50/60 Hz, 2.8 Amps.
        7. Air Inlet Tube Location: Top Left. Standard.
        8. Air Inlet Tube Location: Center.
        9. Air Inlet Tube Location: Top Right.

\*\* NOTE TO SPECIFIER \*\* Unit width options are 12, 13, 14, 15, 16, 17, and 18 inches.

* + - * 1. Unit Width: \_\_\_\_ inches (\_\_\_\_ mm)

\*\* NOTE TO SPECIFIER \*\* Standard minimum unit height for 4-sided unit is 13 ft. Unit height options are 12, 13, 14, 15, and 16 inches.

* + - * 1. Unit Height: \_\_\_\_ inches (\_\_\_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Projection options are 48, 54, 60, 66, 72, 78, and 84 inches.

* + - * 1. Projection: \_\_\_\_ inches (\_\_\_\_ mm).
        2. Maximum Percent of Slope Without Tapering Shelter Frame: 3 percent.
        3. Aig Bag Fabric: 16 oz Hypalon.
        4. Aig Bag Fabric: 10 oz Vinyl.
        5. Colors: Black or Blue.

\*\* NOTE TO SPECIFIER \*\* Delete head curtain drop id not required. Head curtain drop options are 48, 54, 60, 66, 72, 78, and 84 inches.

* + - * 1. Head Curtain Drop: \_\_\_\_ inches (\_\_\_\_ mm).
    1. Basis of Design: Rigid Frame KI-450 Inflatable Shelter as manufactured by Kelley. Provides full height and width access to interior of trailer. Inflated by a high volume, low pressure 1/2 hp, 115 V blower motor after trailer is positioned at loading dock. Side and head air chambers constructed from 10 oz/sq yd vinyl coated fabric. Roll-formed galvanized steel channel frame. Before trailer departs, air chambers retract from contact with trailer and store behind side and head curtains. Can be interlocked with other dock equipment for improved performance and efficiency.
       1. Motor: Motor/blower: Std. 1/2 HP, 115V, 50/60 Hz, 5.5 Amps. Switch with pilot light included. Motor can be wired for 220V, 1Ph, 50/60 Hz, 2.8 Amps.

\*\* NOTE TO SPECIFIER \*\* Unit width options are 11ft 6 inches, 12ft, 12 ft 7 inches, and 13 ft.

* + - 1. Unit Width: \_\_\_ ft \_\_\_ inches (\_\_\_\_ mm)

\*\* NOTE TO SPECIFIER \*\* Unit height options areft, 12 ft 6 inches, 13 ft, 13 ft 6 inches, and 14 ft.

* + - 1. Unit Height: \_\_\_\_ inches (\_\_\_\_ mm).
      2. Head Frame Style: Raked.
      3. Air Bag Color: Black.
      4. Air Bag Fabric: 10 oz. vinyl
      5. Air Bag Fabric: 16 oz CSM.
      6. Storage Curtain Fabric: 22 oz.
      7. Storage Curtain Fabric: Vinyl 40 oz. vinyl.
      8. Storage Curtain Fabric: 40 oz. CSM.

\*\* NOTE TO SPECIFIER \*\* Colors only available with 22 oz. vinyl material.

* + - 1. Curtain Colors: Black, Tan, Brown, Blue, and Green.
      2. Head Bag Drop: 36 inches ( mm).
      3. Head Bag Drop: 42 inches ( mm).
      4. Head Bag Drop: 48 inches ( mm).
      5. Head Bag Drop: 54 inches ( mm).
      6. Head Bag Drop: 60 inches ( mm).
      7. Head Frame/Side Frame Projection: 36 inches ( mm).
      8. Head Frame/Side Frame Projection: 42 inches ( mm).
      9. Head Frame/Side Frame Projection: 48 inches ( mm).
      10. Head Frame/Side Frame Projection: 54 inches ( mm).
      11. Head Frame/Side Frame Projection: 60 inches ( mm).
      12. Steel Supports: None.
      13. Steel Supports: 42 inches ( mm).
      14. Steel Supports: 48 inches ( mm).
      15. Steel Supports: 54 inches ( mm).
      16. Steel Supports: 60 inches ( mm).
      17. Steel Supports: 66 inches ( mm).

\*\* NOTE TO SPECIFIER \*\* Delete the following options not required.

* + - 1. Door numbers.
      2. Electrical interconnect.
    1. Basis of Design: AQUASHIELD Rain Sealing System as manufactured by Kelly. Protects dock from moisture infiltration, keeping products safe from costly water damage. Covers trucks 12 ft 9 inches to 13 ft 6 inches (3.89 to 4.11 mm) high. Automatic position, no manual activation. Heavy-duty galvanized steel channel head frame. Translucent fiberglass raked head frame. High-resilient foam core protected by three layers of durable coated fabric. Seal to be easily replaceable. Support brackets for mounting over existing equipment. Weighted side covers for extra protection of dock area.
       1. Design Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete drive requirements options not required.

* + - * 1. Drive/Approach: Level.
        2. Drive/Approach: Incline.
        3. Drive/Approach: Decline.
        4. Drive/Approach: \_\_\_ percent grade.
        5. Weighted Side Covers: 22 oz. vinyl.

Color: Black, Tan, Brown, Blue, or Green.

Flame Retardant Fabric and Foam.

Flame retardant fabric only.

* + - * 1. Removable Cover Material: XL-100.

Color: Black, Tan, Brown, Blue, or Green.

* + - * 1. Wear Pleat Material: XL-100.

Color: Black, Tan, Brown, Blue, or Green.

Flame Retardant Fabric and Foam.

Flame retardant fabric only.

* + - * 1. Head Frame Material: Galvanized steel.
        2. Top Projection of Dock Seal: \_\_\_\_ inches (\_\_\_\_ mm).
        3. DryDock Head Frame Projection: \_\_\_\_ inches (\_\_\_\_ mm). 18 inch (457 mm) greater than dock seal top projection.
        4. Dock Seal Overall Unit Height off Grade at Wall: \_\_\_\_ inches (\_\_\_\_ mm).
        5. Dock Seal Unit Width: \_\_\_\_ inches (\_\_\_\_ mm) total.
        6. Dock Seal Unit Width Including Mounting Brackets: \_\_\_\_ inches (\_\_\_\_ mm).
        7. DryDock Head Frame Width: \_\_\_\_ inches (\_\_\_\_ mm) total.
        8. Building Wall Construction: Metal.
        9. Building Wall Construction: Other.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. DOCK EQUIPMENT ACCESSORY ITEMS
     1. Basis of Design: ALS and MLS LED Light Communication as manufactured by Kelly. Ships with inside control panel, exterior light, and sign. High visibility low profile electrical safety signaling device. Alerts drivers and dock personnel of dock condition. Red and green LED lights provide clear visual communication. Caution sign with standard and reverse lettering.
        1. Standards Compliance: UL / cUL listed.
        2. Communication Lights: LED red and green.
        3. Interlocking capable with other dock equipment.
        4. Controller: Programmable solid state.
        5. ALS: Automatic interior/exterior LED red/green communication lights and exterior caution sign. Limit switch and bracket by others.
           1. Operation: Control panel is interlocked with dock equipment so interior and exterior lights automatically switch based on leveler or door position. With "automatic" switch select and interlocked with a door open sensor, interior light will automatically switch to green "O" and exterior light to red" X" when door is open. A red "X" is present on exterior light when "override" switch is selected.
        6. MLS: Manual interior/exterior LED red/green communication lights with exterior caution sign.
           1. Operation: As trailer backs against dock bumpers, exterior light is green "O" and interior light is red "X". With trailer in proper position, manually switch control panel to "Enter Vehicle". Exterior light changes to red "X" and interior light changes to green "O". Once loading/unloading is completed switch panel to "Do Not Enter Vehicle"and interior light turns to red "X" with exterior light changing to green "O".
           2. Control Panel: Non-metallic, prewired NEMA 4X (HxWxD): 10 x 8 x 6 inch (254 x 203 x 152 mm) with clearly marked operating instructions. Field Wiring Terminations: Made to removable modular terminal connectors.

Control Panel Circuitry: 120 volt operation at 1 amp.

Control Panel Lights: 24 volt light-emitting diodes (LED).

* + - * 1. Composite Exterior Light (HxWxD): 6 x 6 x 4-1/4 inch (152 x 152 x 107 mm). Housing: Black polypropylene, prevents rust and corrosion.

Composite light LED's: 24 volt DC with a load of 150 mA.

* + - * 1. Panel mounts on interior wall near dock door opening. Exterior light mounts on building exterior wall 90 inches (2286 mm) from ground on driver's side of door opening and at safe distance from door jamb to prevent interference with dock seals or dock shelters.
        2. Limited Warranty: Free of defects in material and workmanship, under normal use, for 1 year base period beginning on completion of installation or 60th day after shipment whichever is earlier.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or basis of design options not required.

* 1. VEHICLE RESTRAINTS
     1. Basis of Design: STAR 1 Vehicle Restraint as manufactured by Kelley. Engages rear impact guard of trailer or vehicle securing it in place at loading dock during loading and unloading. Low profile, non-impact operation. Manual activation. Conforms to OSHA standards. Compatible with NHTSA regulation rear impact guards. Signage: Interior mounted operating instructions and exterior-mounted caution sign.
        1. Restraining Force: 32,000 lbs.
        2. Operating Range: From 11-1/2 to 28 inches above grade.
        3. Horizontal Hooking Range: 0 to 10 inches (0 to 254 mm) from face of 4 inch (102 mm) bumper.
        4. Push Bar: Zinc-plated tubular steel; 1-1/2 x 1/2 x 66 inches ( mm).
        5. Mounting bracket.
        6. Mounting frame: 3/8 inch (9.5 mm) thick heavy structural plate.
        7. Horizontal Mounting Plate: Separate 1/4 inch (6 mm) thick steel provides shear strength against pullout loads.
        8. Restraining Arm: Cast ductile iron with 45,000 psi yield strength. Arm moves over T-rail, which is welded to mounting plate with over 60 inches ( mm) of continuous 3/16 inch ( mm) bevel weld.
        9. Heavy-Duty Gas Spring: Provides "float" assuring constant contact with rear impact guard.
        10. Finish: Zinc-plated.
        11. Operation:
            1. Vehicle backs into position and brakes are set,
            2. Operator uses push bar to trigger latching lever and activate restraining arm, which moves vertically along T-rail until it contacts vehicle's rear impact guard.
            3. When Loading/Unloading is Complete: Operator uses push bar to return restraining arm to stored position.
        12. Hooking Range: Restraint engages rear impact guards positioned up to 10 inches ( mm) horizontally from face of 4 inch (102 mm) bumper. Vertical Hooking Range: 11-1/2 to 28 inches".

\*\* NOTE TO SPECIFIER \*\* Delete options and accessories not required.

* + - 1. Available Options:
         1. New construction mounting plate.
         2. Back Plate Cut-Down: \_\_\_\_\_\_\_\_.
         3. Stand-Off: \_\_\_\_\_\_\_\_.
         4. Other: \_\_\_\_\_\_\_\_.
      2. Available Accessories:
         1. Light stanchion.
         2. Dock seal/shelter.
         3. Loading dock light.
         4. Guard rail/rack protection.
         5. HV air exchange fan.
         6. Other: \_\_\_\_\_\_\_\_.
    1. Basis of Design: STAR 1 Vehicle Restraint with Truk Alert as manufactured by Kelley. Engages rear impact guard of trailer or vehicle securing it in place at loading dock during loading and unloading. Low profile, non-impact operation. Manual activation. Conforms to OSHA standards. Compatible with NHTSA regulation rear impact guards. Signage: Interior mounted operating instructions and exterior-mounted caution sign.
       1. Restraining Force: 32,000 lbs.
       2. Operating Range: From 11-1/2 to 28 inches above grade.
       3. Horizontal Hooking Range: 0 to 10 inches (0 to 254 mm) from face of 4 inch (102 mm) bumper.
       4. Push Bar: Zinc-plated tubular steel; 1-1/2 x 1/2 x 66 inches ( mm).
       5. Mounting bracket.
       6. Mounting frame: 3/8 inch (9.5 mm) thick heavy structural plate.
       7. Horizontal Mounting Plate: Separate 1/4 inch (6 mm) thick steel provides shear strength against pullout loads.
       8. Restraining Arm: Cast ductile iron with 45,000 psi yield strength. Arm moves over T-rail, which is welded to mounting plate with over 60 inches ( mm) of continuous 3/16 inch ( mm) bevel weld.
       9. Heavy-Duty Gas Spring: Provides "float" assuring constant contact with rear impact guard.
       10. Finish: Zinc-plated.
       11. Operation:
           1. Vehicle backs into position and brakes are set,
           2. Operator uses push bar to trigger latching lever and activate restraining arm, which moves vertically along T-rail until it contacts vehicle's rear impact guard.
           3. When Loading/Unloading is Complete: Operator uses push bar to return restraining arm to stored position.
       12. Hooking Range: Restraint engages rear impact guards positioned up to 10 inches ( mm) horizontally from face of 4 inch (102 mm) bumper. Vertical Hooking Range: 11-1/2 to 28 inches. Complies with NHTSA regulations for rear impact guards. Unit stores at 9-1/2 inch above grade to accommodate low trailers.
       13. Exterior Lights (WxHxD): 6-3/8 x 11-3/8 x 4 inch ( mm). Low profile flashing green and red LED signals indicate safe or unsafe conditions for vehicle movement.
           1. Caution Sign (WxH): 9 x 24 inch ( mm) with standard and reversed lettering.

\*\* NOTE TO SPECIFIER \*\* Delete options and accessories not required.

* + - 1. Available Options:
         1. New construction mounting plate.
         2. Back Plate Cut-Down: \_\_\_\_\_\_\_\_.
         3. Stand-Off: \_\_\_\_\_\_\_\_.
         4. Other: \_\_\_\_\_\_\_\_.
      2. Available Accessories:
         1. Dock seal/shelter.
         2. Loading dock light.
         3. Guard rail/rack protection.
         4. HV air exchange fan.
    1. Basis of Design: STAR 2 Vehicle Restraint as manufactured by Kelley. Engages rear impact guard of trailer or vehicle securing it in place at loading dock during loading and unloading. Low profile, non-impact operation. Manual activation. Conforms to OSHA standards. Compatible with NHTSA regulation rear impact guards. Automatic interior/exterior LED light communication system. Sensor bar indicates positive engagement with rear impact guard. Signage: Interior mounted operating instructions and exterior-mounted caution sign.
       1. Restraining Force: 32,000 lbs.
       2. Operating Range: From 11-1/2 to 28 inches above grade.
       3. Horizontal Hooking Range: 0 to 10 inches (0 to 254 mm) from face of 4 inch (102 mm) bumper.
       4. Locking unit. Push Bar: Zinc-plated tubular steel; 1-1/2 x 1/2 x 66 inches ( mm).
       5. Push bar mounting bracket.
       6. Mounting Frame: 3/8 inch (9.5 mm) thick heavy structural plate.
       7. Horizontal Mounting Plate: Separate 1/4 inch (6 mm) thick steel provides shear strength against pullout loads.
       8. Restraining Arm: Cast ductile iron with 45,000 psi yield strength. Arm moves over T-rail, which is welded to mounting plate with over 60 inches ( mm) of continuous 3/16 inch ( mm) bevel weld.
       9. Heavy-Duty Gas Spring: Provides "float" assuring constant contact with rear impact guard.
       10. Sensor Bar: 3/8 inch steel rod heat treated and plated.
       11. Finish: Zinc-plated.
       12. Operation:
           1. Vehicle backs into position and brakes are set,
           2. Operator uses push bar to trigger latching lever and activate restraining arm, which moves vertically along T-rail until it contacts vehicle's rear impact guard.
           3. Exterior light changes from green "O" to red "X" when restraint is activated.
           4. Interior light changes from red to green only after hook-mounted sensor bar indicates contact with rear impact guard.
           5. If the hook does not contact the rear impact guard, the interior light changes to flashing red.
           6. When Loading/Unloading is Complete: Operator uses push bar to return restraining arm to stored position.
           7. Interior light changes to red when sensor bar breaks contact with rear impact guard.
           8. Exterior light changes to green "O" when restraining arm has been lowered to its stored position.
       13. Hooking Range: Restraint engages rear impact guards positioned up to 10 inches ( mm) horizontally from face of 4 inch (102 mm) bumper. Vertical Hooking Range: 11-1/2 to 28 inches. Complies with NHTSA regulations for rear impact guards.
       14. Control Panel: Nema 4X with red/green communications light and over-ride switch for manual operation. Interlock capable.
       15. Exterior Lights (WxHxD): 6-3/8 x 11-3/8 x 4 inch ( mm). Low profile flashing green and red LED signals indicate safe or unsafe conditions for vehicle movement.
           1. Caution Sign (WxH): 9 x 24 inch ( mm) with standard and reversed lettering.
       16. Electrical: 110 VAC, 1-3/4 Amp. Lights are 24 VDC. Components are UL listed.
       17. Power to unit and electrical connections provided by others.

\*\* NOTE TO SPECIFIER \*\* Delete options and accessories not required.

* + - 1. Available Options:
         1. New construction mounting plate.
         2. Audible alarm.
         3. Back Plate Cut-Down: \_\_\_\_\_\_\_\_.
         4. Stand-Off: \_\_\_\_\_\_\_\_.
         5. Other: \_\_\_\_\_\_\_\_.
      2. Available Accessories:
         1. Dock seal/shelter.
         2. Loading dock light.
         3. Guard rail/rack protection.
         4. HV air exchange fan.
         5. Digital master or combination control panel with HMI: \_\_\_\_\_\_\_\_.
         6. Other \_\_\_\_\_\_\_\_.
    1. Basis of Design: STAR 4 Vehicle Restraint as manufactured by Kelley. Engages rear impact guard of trailer or vehicle securing it in place at loading dock during loading and unloading. Low profile linear actuator drive system. Integral sensor bar on locking unit indicates contact with rear impact guard. Audible alarm if no contact is made with rear impact guard. Control panel with printed operation instructions, exterior-mounted caution sign with forward facing and reversed lettering. Interior and exterior LED light communication system. Compatible with NHTSA regulation rear impact guards.
       1. Restraining Force: 32,000 lbs (14515 kg).
       2. Control Panel (WxHxD): 9 x 20 x 8 inches (229 x 508 x 203 mm). Solid state with programmable logic controller (PLC) and real time diagnostic capability. Industrial quality pushbuttons. Integral 24 V LED red and green lights and printed operational instructions. UL listed.
          1. Printed operating instructions on control panel.
       3. Interior and Exterior Composite Lights, and exterior-mounted caution sign for the vehicle driver.
          1. Exterior Lights (WxHxD): 6 x 6 x 4-1/4 inches (152 x 152 x 108 mm). Low profile flashing green and red 24 VDC LED lights indicate safe or unsafe conditions for vehicle movement.
          2. Caution Sign (WxH): 9 x 24 inches (229 x 610 mm) with standard and reversed lettering.
       4. Electrical: Locking unit and exterior lights operate on 24 volt circuit. Control panel requires 120 volt, single phase, 60 HZ supply. Components are UL listed.
       5. Horizontal Hooking Range: Restraint will engage a rear impact guard positioned up to 10 inches (254 mm) horizontally from face of a 4 inch bumper. Vertical hooking range: 11-1/2 x 28 inches (292 x 711 mm). Unit stores at 10 inches (254 mm) above grade to accommodate low trailers.
       6. Sensor bar indicated positive engagement with rear impact guard.
       7. Linear actuator drive system.
       8. Programmable logic controller (PLC).
       9. Audible alarm (if no contact with RIG).
       10. Mounting Frame: 3/8 inch (9.5 mm) thick heavy structural plate.
       11. Horizontal Mounting Plate: 1/4 inch (6 mm) thick steel. Provides shear strength against pullout loads.
       12. Restraining Arm: Cast ductile iron with 45,000 psi yield strength. Arm moves over T-rail, which is welded to mounting plate with 60 inches (1524 mm) continuous 3/16 (5 mm) bevel weld.
       13. Sensor Bar: 3/8 inch (9.5 mm) steel rod.
       14. Heavy-duty Gas Spring: Provides "float" to assure constant contact with rear impact guard.
       15. Finish: Zinc-plated.
       16. Operation:
           1. Vehicle is backed into position and brakes are set.
           2. Operator pushes the "HITCH" button activating restraining arm, which will move vertically along reinforced T-rail until it contacts the vehicle's rear impact guard.

Exterior Light: Changes from green "O" to red "X".

Interior Light: Changes from red "X" to green "O" after sensor bar on restraining arm makes contact with rear impact guard.

* + - * 1. If restraining arm does not contact rear impact guard:

Interior Light: Changes to flashing red "X" and an audible alarm sounds.

Operator must push "OVERRIDE" button, which restores restraint, and secure trailer using an alternative method.

Exterior Light: Switches to red "X". Interior lights will flash red "X" and green "O" indicating vehicle is secured by alternate means.

* + - * 1. When Loading/Unloading is Complete: Operator pushes "RELEASE" button on control panel.

Interior light: Changes to red "X" when "RELEASE" button is pressed.

Exterior light: Changes to green "O" when restraining arm has been lowered to its stored position.

NOTE TO SPECIFIER \*\* Delete options and accessories not required.

* + - 1. Available Options:
         1. New construction mounting plate.
         2. Leveler stored switch for dock leveler interconnect.
         3. Keyed switch override.
         4. Heater element kit.
         5. Key lock switch on control panel.
         6. Flood resistant package.
         7. Back Plate Cut-Down: \_\_\_\_\_\_\_\_.
         8. Other: \_\_\_\_\_\_\_\_.
      2. Available Accessories:
         1. Dock seal/shelter.
         2. Loading dock light.
         3. Guard rail/rack protection.
         4. HV air exchange fan.
         5. Digital master or combination control panel with HMI: \_\_\_\_\_\_\_\_.
         6. Other \_\_\_\_\_\_\_\_.
    1. Basis of Design: Flood Package STAR 4 Vehicle Restraint as manufactured by Kelley. Engages rear impact guard of trailer or vehicle securing it in place at loading dock during loading and unloading. Low profile hydraulic activation system. Integral sensor bar on locking unit indicates contact with rear impact guard. Audible alarm if no contact is made with rear impact guard. Control panel with printed operation instructions, exterior-mounted caution sign with forward facing and reversed lettering. Interior and exterior LED light communication system. Compatible with NHTSA regulation rear impact guards.
       1. Restraining Force: 32,000 lbs.
       2. Hydraulic operation with exterior hydraulic cylinder and control panel mounted pump/motor allows operation in flooded dock bays. 12V DC, 0.2 gpm pump and motor. Double-acting cylinder with 8 inches (203 mm) stroke and 1 inch (25 mm) bore. Hydraulic reservoir with 46 cubic inch capacity. Hydraulic hoses and fittings provided.
       3. Control Panel (WxHxD): 9 x 20 x 8 inches (229 x 508 xc 203 mm). Solid state controller and real time diagnostic capability. Industrial quality pushbuttons. Integral 24 V LED red and green lights and printed operational instructions. UL listed,
          1. Printed operating instructions on control panel.
       4. Interior and Exterior Composite Lights, and exterior-mounted caution sign for the vehicle driver.
          1. Exterior Lights (WxHxD): 6 x 6 x 4-1/4 inches(152 x 152 x 108 mm). Low profile flashing green and red 24 VDC LED lights indicate safe or unsafe conditions for vehicle movement.
          2. Caution Sign (WxH): 9 x 24 inches (229 x 610 mm) with standard and reversed lettering.
       5. Electrical: Locking unit and exterior lights operate on 24 volt circuit. Control panel requires 120 volt, single phase, 60 HZ supply. Components are UL listed.
       6. Horizontal Hooking Range: Restraint will engage a rear impact guard positioned up to 10 inches (254 mm) horizontally from face of a 4 inch (102 mm) bumper. Vertical hooking range: 11-1/2 x 28 inches (292 x 711 mm). Unit stores at 9-1/2 inches (241 mm) above grade to accommodate low trailers.
       7. Sensor bar indicated positive engagement with rear impact guard.
       8. Linear actuator drive system.
       9. Programmable logic controller. (PLC).
       10. Audible alarm (if no contact with RIG).
       11. Mounting Frame: 3/8 inch (9.5 mm) thick heavy structural plate.
       12. Horizontal Mounting Plate: 1/4 inch (6 mm) thick steel. Provides shear strength against pullout loads.
       13. Restraining Arm: Cast ductile iron with 45,000 psi yield strength. Arm moves over T-rail, which is welded to mounting plate with 60 inches (1524 mm) continuous 3/16 inch (5 mm) bevel weld.
       14. Sensor Bar: 3/8 inch (9.5 mm) steel rod. Indicates positive engagement with rear impact guard
       15. Heavy-duty Gas Spring: Provides "float" to assure constant contact with rear impact guard.
       16. Finish: Zinc-plated.
       17. Operation:
           1. Vehicle is backed into position and brakes are set.
           2. Operator pushes the "HITCH" button activating restraining arm, which will move vertically along reinforced T-rail until it contacts the vehicle's rear impact guard.

Exterior Light: Changes from green "O" to red "X".

Interior Light: Changes from red "X" to green "O" after sensor bar on restraining arm makes contact with rear impact guard.

* + - * 1. If restraining arm does not contact rear impact guard:

Interior Light: Changes to flashing red "X" and an audible alarm sounds.

Operator must push "OVERRIDE" button, which restores restraint, and secure trailer using an alternative method.

Exterior Light: Switches to red "X". Interior lights will flash red "X" and green "O" indicating vehicle is secured by alternate means.

* + - * 1. When Loading/Unloading is Complete: Operator pushes "RELEASE" button on control panel.

Interior light: Changes to red "X" when "RELEASE" button is pressed.

Exterior light: Changes to green "O" when restraining arm has been lowered to its stored position.

NOTE TO SPECIFIER \*\* Delete options and accessories not required.

* + - 1. Available Options:
         1. New construction mounting plate.
         2. Lip limit switch or dock leveler interconnect.
         3. Keyed switch override.
         4. Heater kit.
         5. Back Plate Cut-Down: \_\_\_\_\_\_\_\_.
         6. Other: \_\_\_\_\_\_\_\_.
      2. Available Accessories:
         1. Dock seal/shelter.
         2. Loading dock light.
         3. Guard rail/rack protection.
         4. HV air exchange fan.
         5. Digital master or combination control panel with HMI: \_\_\_\_\_\_\_\_.
         6. Other \_\_\_\_\_\_\_\_.
    1. Hidden Hook Vehicle Restraint as manufactured by Serco. Pit-mounted, hydraulic recessed vehicle restraint featuring push-button control and rear impact guard safe engagement signaling system. Includes locking unit, LED interior and exterior communication light system, and push-button control panel. Unit conforms to OSHA standards.
       1. Steel Main Frame: Pit mounted. Pull-out Resistance: 32,000 lbs (14,515 kg).
       2. Operation:
          1. As Vehicle Backs in Position: Exterior Light: Green "O". Interior light: Red "X".
          2. When Vehicle is in Position, Operator presses "Engage" button.

Exterior Light: Changes to red "X". Interior Light: Red "X".

Hydraulic Hook: Lowers and extends from pit. Hook then raises to make contact with rear impact guard. Hook retracts until sensing positive engagement with rear impact guard.

* + - * 1. Hydraulic Hook is Positively Engaged: Inside light: Switches to green "O " and maintains engagement during loading/unloading, preventing horizontal movement away from dock.
        2. To Release Vehicle: Press "Restraint Release" button on control panel. Restraint returns to storage position in pit.

Interior Light: Changes to red "X " signaling it is unsafe to load/unload.

* + - * 1. When restraint is fully restored.

Exterior light: Changes to green "O ", signaling vehicle it is safe to leave.

* + - * 1. If Restraint is Unable to Engage Rear Impact Guard: Restraint returns to stored position, sounds an optional audible alarm, and flashes Interior red "X" and amber light. Exterior Light: Remains red "X ".

If Vehicle is Not Engaged: You must manually chock wheels and rotate control panel selector switch to "Restraint Override".Exterior Light: Is red "X ". Interior Light: Switches to green "O ". Amber light indicates vehicle is secured by alternate means.

To release vehicle: Press "Restraint Release" button on control panel, switching exterior light to green "O " and interior light to red "X " showing it is safe for vehicle to leave.

* + - 1. Solid State Control Panel (WxHxD): 9 x 20 x 8 inches (229 x 508 x 203 mm). Programmable logic controller, "real time" diagnostic capability, industrial quality push-buttons, integral LED visual safety warning system, and printed operating instructions.
      2. Hooking Range: Vehicle restraint engages rear impact guards 9 to 28 inch (229 to 711 mm) vertically from driveway. Hydraulic system limits vehicle movement and engages rear impact guards positioned up to 14 inches (356 mm) from dock face and is compatible with NHTSA regulation rear impact guards.
      3. Exterior Lights (WxHxD): 6 x 6 x 4-1/4 inch (152 x 152 x 108 mm). Indicate safe or unsafe conditions for vehicle movement. Low profile flashing green and red 24 VDC LED lights. Caution Sign (WxH): 9 x 24 inches (229 x 610 mm), standard and reversed lettering.
      4. Control panel for locking unit. Available in single and three phase voltages. Interior and exterior LED lights operate on 24 volt circuit. All Components: UL approved.
      5. Limited Warranty: Components to be free of defects in material and workmanship, under normal use, for 1 year from date of shipment. Base Warranty Period: Will begin on completion of installation or 60th day after shipment, whichever is earlier.
      6. Accessories:
         1. Control panel stanchion.
         2. Digital master or combination control panel with HMI.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Single phase power.
      2. Audible alarm.
      3. Key lock switch on control panel.
      4. Pit Cover: VSL.
      5. Pit Cover: Pit leveler.
      6. 120 V high visibility traffic light.
    1. Manual Safety-Chock Wheel Restraint as manufactured by Serco. Surface mounted devise to chock wheel of truck or trailer and restrain it at loading dock. Manually activated. Mounted within 4 inches (102 mm) ground clearance. Operates in extreme weather conditions including snow and flooding. Interior/exterior visual communication system and exterior audible alarm.
       1. Welded and hot dip galvanized steel. Tubular steel guide rail mounted to driveway. Pull-Out Resistance: 32,000 Ibs (142 kN). High strength, sealed bushings.
       2. Operation:
          1. Truck backs into position against dock bumpers and sets brakes.

Exterior Light: Green. Interior Light: Red. Selector Switch: "Automatic" position.

* + - * 1. Move restraint carriage along guide rail using activation handle to position chock in front of trailer wheel. Extend restraining arms out by pushing handle toward trailer until it locks into position on guide rail.
        2. As restraining arm begins to extend toward trailer: Exterior Light: Becomes red.
        3. Operator moves restraining arm backward to make contact with trailer wheel. When restraint has fully engaged the wheel: Interior Light: Becomes green.
        4. When Loading/Unloading is Complete: Press "Restraint Release" button on control panel. Interior Light: Changes to red. Exterior Light: Changes to flashing red and green.
        5. Push foot pedal, allowing restraining arm to retract to stored position. Interior Light: Remains red. Exterior Light: Changes to green. It is now safe for vehicle to leave.
      1. Solid State Interlock Capable Control Panel (WxHxD): 8 x 10 x 5-1/2 inch (203 x 254 x 140 mm). Real-time diagnostics, integral LED red/green/amber light communication system and printed operating instructions.
         1. Field Wiring Terminations: Removable modular terminal connectors.
      2. Capture Range: 10 ft (3 m) guide rail. Engagement range of 6 ft (1.8 m). Captures rear wheel of transport vehicle for any axle position from 59-7/8 to 133-7/8 inches (1.5 to 3.4 m) from dock face. Extended engagement range available.
      3. Communication System: Printed operating instructions on control panel, an outside mounted instruction sign for truck driver, and internal and external visual communication lights and external audible alarm.
      4. Exterior Lights (WxHxD): 6-3/8 x 11-3/8 x 4 inch (162 x 289 x 102 mm). Low profile flashing green and red LEDs indicate safe or unsafe conditions for vehicle movement. Caution Sign (WxH): 9 x 24 inch (229 x 610 mm). Standard and reversed lettering.
         1. Exterior lights operate on 24 volt circuit.
      5. Exterior Audible Alarm (WxHxD): 4 x 2-1/2 x 1-1/2 inch (102 x 64 x 38 mm) 102 dB(A) solid state alarm. 180 degree sound dispersion; 10 pulses per second. Encapsulated dust resistant.
      6. Electrical: Exterior Lights: 24 volt circuit. Control Panel: NEMA 12, 120 volts, single phase, 60 Hz supply. UL listed components. Conduct Guard: 28 inch (711 mm) long. Included Angle Iron: 2 x 2 x 1/4 inch (50 x 50 x 6 mm).
      7. Limited Warranty: Components to be defect free in material and workmanship, under normal use, for 1 year from date of shipment. Base Warranty Period: Begins on installation completion or 60th day after shipment, whichever is earlier.
      8. Accessories:
         1. Master or combo control panel.
         2. Control panel stanchion.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Electric de-icing system (heater kit).
      2. Passenger side mount.
      3. Extended guide rail.
      4. Length: 13 ft (4 m). Engagement Range: 9 ft (2.7 m).
      5. Length: 16 ft (4.9 m). Engagement Range: 12 ft (3.7n m).
      6. Interlock switched (specify door open/closed or leveler stored)
    1. SURFACE-CHOCK Wheel Restraint as manufactured by Serco. Surface mounted hydraulic device to chock wheel of truck or trailer holding it at loading dock. NEMA 12 control panel. Single and three phase voltages. Drive mounted. 4 inch (101 mm) ground clearance. Extreme weather operation. Remote-mounted power pack located inside building. Interior and exterior visual communication system.
       1. Welded tubular steel guide rail mounted to driveway. Finish: Hot dip galvanized, entire unit.
       2. Operation:
          1. Truck backs into position against dock bumpers and sets brakes.

Push "Chock Engage" button on control panel to activate.

* + - * 1. When Activated: Exterior Lights: Change from green "O" to red "X".
        2. When Sensing Roller Contacts Rear Truck Wheel: Chock arm extends out of housing until placed in front of rear wheel. Chock housing then reverses and moves the chock arm back to firmly engage wheel.

Interior Lights: Change from red "X" to green "O".

* + - * 1. If configuration of vehicle wheels prevents proper engagement of wheel chock:

Carriage returns to home position and reports a Vehicle Not Found condition. Interior Lights: Flash red "X" and amber.

* + - * 1. Manually chock vehicle wheels and rotate "Override" selector switch to initiate lights override condition.

Exterior Lights: Red "X". Interior Lights: Green "O" and amber.

* + - * 1. When Loading and Unloading is Complete: Push "Release" button on control panel to disengage "Safety-Chock".

Interior Light: Changes from green "O" to red "X".

Chock arm retracts. Housing begins to reverse back toward dock wall.

* + - * 1. When "Safety Chock" reaches stored position:

Exterior Lights: Change from red "X" to green "O".

* + - * 1. Press "release"button: Stops restraint in any position.
      1. Solid State Control Panel (WxHxD): 9 x 20 x 8 inch (229 x 508 x 203 mm). Programmable logic controls, "real time" diagnostics, industrial push buttons, integral LED safety light warning system, and printed operating instructions.
      2. Capture Range: Captures rear wheel of transport vehicle for any axle position from 32 inches (813 mm) to 14 ft (4.27 m) from dock face.
      3. Communication System: Printed operating instructions on control panel. Outside instruction sign for truck driver, and internal and external communication lights.
      4. Exterior Lights (WxHxD): 6 x 6 x 4-1/4 inch (152 x 152 x 106 mm). Low profile flashing green and red LEDs. Indicate safe or unsafe conditions for vehicle movement. Caution Sign (WxH): 9 x 24 inch (229 x 610 mm). Standard and reverse lettering.
      5. Control Panel for Safety-Chock: Available in single and three phase voltages. Interior and exterior LED communication lights operate on a 24V circuit.
      6. Hydraulics: 3/2 GPM pump (two speed) and 1 HP motor, single and three phase voltages, double-acting PLC controlled cylinder with 144 inch (3658 mm) stroke and hydraulic reservoir with 3 gallon capacity. Hydraulic hoses and fittings.
      7. Limited Warranty: Components to be free of defects in material and workmanship, under normal use, for 1 year from date of shipment. Base Warranty Period: Will begin on completion of installation or 60th day after shipment, whichever is earlier.
      8. Accessories:
         1. Digital master or combination control panel with HMI.
         2. Control panel stanchion.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Electric de-icing system (heater kit).
      2. Exterior wall mounted emergency stop.
      3. Additional guide rail system.
      4. Additional hydraulic hose lengths.
    1. Auto Chock Wheel Restraint as manufactured by Kelly. Automatic hydraulic device to chock wheel of truck or trailer holding it at loading dock, NEMA 12 control panel. Selectable Voltages: 208V, 230V, 460V or 575V; all 3 phase. In-ground mounted housing. Selectable chock height of 12 or 16 inches (305 or 406 mm). Stores In-ground and raises to operating position when activated. Operating controls and hydraulic power system mounted inside building along with interior and exterior visual communication system.
       1. Weldment of 1/4 inch (6 mm) steel plate, 12 inches (305 mm) wide with 21 inch (533 mm) engagement radius. Housing: 3/16 inch (5 mm) with 3/8 inch (9.5 mm) steel chock track and guide rails. Heat Tracing Cables: 120V temperature activated to prevent ice in housing. Finish: Yellow, acting as a guide strip to align trucks with the dock.
       2. Operation:
          1. Truck backs into position against dock bumpers and sets brakes. Push "Restraint Engage" button on control panel. Exterior Lights: Change from green "O" to red "X". Interior Lights: Change from red "X" to flashing red "X".
          2. Truck chock rises from stored position and moves toward dock until snug against truck tire. When Chock is moving in either direction, a motion alarm sounds. Interior Lights: Changes from flashing red "X" to green "O".
          3. When Loading/Unloading is Complete: Operator, pushes "Restraint Release"button on control panel to disengage truck chock. Interior Light: Changes to flashing red "X".
          4. When Truck Chock Reaches Stored Position: Exterior Lights: Change to green "O". Interior Lights: Change to solid red "X".
       3. Communication System: Printed operating instructions on control panel. Outside instruction sign for truck drivers. Interior LED Lights: Red/amber/green. Exterior LED Lights: Red/green. Operating and installation instructions in Owner's manual.
       4. Composite Exterior Light (HxWxD): 6 x 6 x 4-1/4 inch (152 x 152 x 108 mm). Black polypropylene housing.
       5. Solid State Control Panel (WxHxD): 9 x 20 x 8 inch (229 x 508 x 203 mm). Programmable logic controller, real time diagnostic capability, industrial push-buttons, integral LED visual safety warning system lights, and printed operating instructions.
       6. Hydraulic Specifications: 5 GPM pump and 3 HP motor. 208, 230, 460 or 575 V, 3 phase; double-acting PLC controlled cylinder with 144 in (3658 mm) stroke, and hydraulic reservoir with 10.5 gallon capacity. Hydraulic hoses and fittings.
       7. Mounting of Truck Chock Housing: In a 30 x 384 x 16 inch (762 x 9754 x 406 mm) pit. Provisions for drainage are required. Concrete is poured securing housing in place. Install lights, caution signs, control panel and hydraulic system per instructions.
       8. Warranty: Components to be defect free in material and workmanship, under normal use. Base Warranty Period: Begins on completion of installation or 60th day after shipment, whichever is earlier.
       9. Accessories:
          1. Digital master or combination control panel with HMI.
          2. Control panel stanchion.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Chock Height: 12 inches (305 mm).
      2. Chock Height: 16 inches (406 mm).
      3. Dual pump and motor.
      4. Extension hose kit.
      5. Wall mount bracket for power unit.
      6. Interior audible alarm.
      7. Electric de-icing system (heater kit).
    1. VERSACHOCK Wheel Chock Restraint as manufactured by Kelly. Vehicle restraint system with wireless engagement detection. Accommodates trailers and vehicles regardless of condition or presence of ICC bar.
       1. Extruded aluminum with clear hard anodized finish. Chock Cradle: 1/4 inch (6 mm) zinc coated steel.
       2. Electrical: Exterior Power: 24 VDC. Control Panel: 120 VDC.
       3. Control Panel: Nema 4X interlock capable. Communication Lights: Red/green. Over-ride switch for manual operation.
       4. Operation: Control Panel Switch: "Automatic" position.
          1. Remove wheel chock from cradle. Place directly in front of wheel. Exterior Lights: Changes from green "O" to red "X").
          2. Slide wheel chock towards wheel until firmly seated, aligned, and engaged. Maintain a vertical attitude on the handle. Interior Lights: Change from red "X" to green "O".
          3. Release Vehicle: Remove wheel chock from vehicle wheel. Store in chock cradle. Exterior Light: Changes from red "X" to green "O". Vehicle is safe to leave.
       5. When Override Switch is Selected: Exterior Light communicates a red "X".
       6. Chock and cradle must be assembled before installation.
       7. Limited Warranty: Components to be free of defects in material and workmanship, under normal use, for 1 year from date of shipment. Base Warranty Period: Begins on installation completion or 60th day after shipment, whichever is earlier.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. -TRUCK LEVELERS
     1. Basis of Design: ATL Hydraulic Truck Leveler with Universal TruckChock as manufactured by Kelly. Push-button control for raising, lowering, and chocking trailers at loading dock. Powered wheel chocking device chocks wheel and holds truck at loading dock. Surface mounted housing includes hydraulic Universal Truck Chock, 14 inches (356 mm) high. Stores below truck leveler deck and raises operating position when activated. Operating Controls and Hydraulics: Mount inside building with red/green light communication system.
        1. Capacity: 60,000 lbs ( kg).
        2. Deck Width: 120 inches (3048 mm). Deck Length: 14, 16, 18 or 20 ft (5.49 or 6.1 m).
        3. Approach Ramp (WxL): 120 x 48 inches (3048 x 1219 mm)
        4. Lowered Height: 8-1/2 inches (216 mm).
        5. Spherical bearings in cylinders allow for trailer misalignment
        6. Operation:
           1. Truck backs into position against dock bumpers and sets brakes.
           2. Turn switch on control panel to activate Universal Truck Chock.

Exterior Light: Changes from green to red.

* + - * 1. Truck chock rises and moves toward dock until snug against truck tire.

Interior Light: Changes from red to green.

* + - * 1. Press Raise button to raise trailer to appropriate position.
        2. Once loading/unloading is complete: Pressing Lower button returns leveler to stored position.
        3. When leveler is lowered, turn switch to release chocks.

Interior Lights: Change from green to red.

* + - * 1. After chocks are released:

Exterior Light: Changes from red to green indicating truck may depart.

* + - 1. Deck: Welded construction. 3/8 inch (9.5 mm) thick tread plate over I beam structure.
         1. Removable plate to access pit for maintenance.
      2. Heavy Duty Hydraulic Cylinders: Two, single speed, displacement type, seamless tube, micro-honed cylinder walls, piston seals, and chrome plated rods. Synchronized to eliminate deflection during operation. Velocity Fuses: At cylinders base preventing collapse if supply line fails.
      3. Universal Truck Chocks: Heavy-duty weldment of 1/4 inch (6 mm) steel plate. Height: 12 inches (305 mm). Engagement Radius: 21 inches (533 mm). Two double-acting heavy duty cylinders with chrome plated cylinder rods.
      4. Electrical: Steel NEMA 12, push-button. Supplied in 208V, 230V, 460V, 600V; all 3 phase, 60 Hz. 5 HP motor/pump.
      5. Surface Mounted: On driveway centered in front of dock.
      6. Shallow Pit Mounting: Centered in front of dock accommodates higher trailers.
      7. Limited Warranty: Components to be defect free in material and workmanship, under normal use, for 1 year from date of shipment. Base Warranty Period: Begins on installation completion or 60th day after shipment, whichever is earlier.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Length: 14 ft ( m).
      2. Length: 15 ft ( m).
      3. Length: 18 ft (5.49 m).
      4. Length: 20 ft (6.1 m).
      5. Vertical Travel: 24 inches (610 mm)
      6. Vertical Travel: 36 inches (914 mm)
      7. Surface mounted.
      8. Shallow pit.
      9. Deep pit style (lift cylinders under deck).
      10. Truck positioner guides. Internal 5 inches (27 mm) high.
      11. Truck positioner guides. External 12 inches high (305 mm).
      12. Fused disconnect on control panel.
      13. Special paint color: \_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete Paragraphs not required, and size options not required.

* 1. HVLS FANS
     1. Commercial HVLS Fans manufactured by Kelly. 5 blade low speed rotary airfoil application and near ground effect and reverse capable.
        1. Standards Compliance: ETL and UL 507 Certified. ANSI / AMCA 230-15 HVLs.
        2. Size: 6 ft (1.8 m). Motor: 1/3 hp. Hang Weight: 50 lbs (22.7 kg). RPM: 200.
        3. Size: 8 ft (2.4 m). Motor: 1/3 hp. Hang Weight: 54.5 lbs (24.7 kg). RPM: 165.
        4. Size: 10 ft (30.m). Motor: 1/3 hp. Hang Weight: 59 lbs (26.8 kg). RPM: 110.
        5. Size: 12 ft (3.78 m). Motor: 1/3 hp. Hang Weight: 63 lbs (28.6 kg). RPM: 80.
        6. Size: 14 ft (4.3 m). Motor: 1/3 hp. Hang Weight: 65 lbs (29.5 kg). RPM: 60.
        7. Capability to shut down with fire system.
        8. Minimum Ceiling Height: 12 ft (3.7 m).
        9. Sound Pressure: 35 dBA.
        10. Components:
            1. Hub Assembly: High tensile steel. 50,000 lbs yield strength.
            2. Motor (AC): Gearless, direct drive. Housing: 0.050 3003 Aluminum.
            3. Blades: 6063-T6 Aluminum. Powder coated. NACA optimized blade profile.

Blade End Winglets 6061-T6 Aluminum, Powder coated.

Blade Attachment Retainers 50,000 lbs Yield High Tensile Steel.

* + - 1. Mounting Hardware: Standard Mount Versatile 45 degree mounting bracket.

\*\* NOTE TO SPECIFIER \*\* Delete drop extensions if not required.

* + - * 1. Drop Extensions: Up to 15 ft (4572 mm) at 1 ft (305 mm) increments
      1. Standard Power 120 to 230 V single phase, or 230 V three phase.
      2. Controls Module: Remote.
      3. Enclosure: IP 66 / 0 to 122 degrees F (Minus 18 to 50 degrees C)
      4. Fan Controller: Wired touch screen

\*\* NOTE TO SPECIFIER \*\* Delete finish options not required.

* + - 1. Finish: Powder coated. Color: Stardust Silver: RAL 9006
      2. Finish: Powder coated. Color: Gloss Black: RAL 9017
      3. Finish: Powder coated. Color: Reflective White: RAL 9003
      4. Finish: Powder coated. Color: Red Baron: RAL 3002
      5. Finish: Powder coated. Color: Cobalt Blue: RAL 5013
      6. Finish: Powder coated. Color: Safety Green: RAL 6016
      7. Finish: Powder coated. Color: Safety Orange: RAL 2004
      8. Warranty: 10-Year Parts, 1 Year Labor. Warranty: 10-Year Mechanical. Warranty: 5-Year Electrical. Warranty: 1-Year Control.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Networked Multi-Fan Controller (2-6 Fans).
      2. iFan 4.3.
      3. iFan 7.0.
      4. iFan 10.0.
      5. BMS Integration.
    1. Direct Drive HVLS Fans as manufactured by Kelly. High volume low speed fans. 5-blade low speed rotary airfoil application and near ground effect. No gearbox.
       1. Standards Compliance: ETL and UL/ULc 507 Certified. ANSI / AMCA 230-15 HVLS.
       2. Acoustic Level: 45 dBA. Air Current Depth: Horizontal floor jet of 3 to 9 ft (1 to 3 m).
       3. Frame: Black powder coat / welded steel fabrication.
       4. Hub Assembly: 6061-T6 Aluminum. Steel hub plate.
       5. Blade Struts (Invertible): Clear zinc / high tensile steel.
       6. Blades: Black or clear anodized / 6063-T6 aluminum. NACA optimized blade profile.
       7. Blade End Aerodynamic Winglets: Aluminum 3003-H14.
       8. Safety Cable Galvanized: 1/4 inch x 7 x 19 steel aircraft grade cable.
       9. Guy Wires Galvanized: 1/8 inch x 7 x 19 steel aircraft grade cable.
       10. Rotor Retaining Ring: Zinc plated 3/16 inch A569 steel.
       11. Size: 8 ft (2.4 m). Motor: 1 hp. Hang Weight: 166 lbs. (75 kg). RPM 198.
           1. Normal Industrial Spacing: 55 ft (16.76 m).
       12. Size: 10 ft (30. m). Motor: 1 hp. Hang Weight: 174 lbs. (79 kg). RPM: 154.
           1. Normal Industrial Spacing: 60 ft (18.29 m).
       13. Size: 12 ft (3.8 m). Motor: 1 hp. Hang Weight: 183 lbs. (83 kg). RPM: 125.
           1. Normal Industrial Spacing: 65 ft (19.381 m).
       14. Size: 14 ft (4.3 m). Motor: 1 hp. Hang Weight: 191 lbs. (86 kg). RPM: 106.
           1. Normal Industrial Spacing: 70 ft ( m).
       15. Size: 16 ft (4.9 m). Motor: 2 hp. Hang Weight: 216 lbs. (97 kg). RPM: 92.
           1. Normal Industrial Spacing: 90 ft (21.34 m).
       16. Size: 18 ft (5.5 m). Motor: 2 hp. Hang Weight: 224 lbs. (101 kg). RPM: 81.
           1. Normal Industrial Spacing: 95 ft (27.43 m).
       17. Size: 20 ft (6.1 m). Motor: 2 hp. Hang Weight: 232 lbs. (105 kg). RPM: 72.
           1. Normal Industrial Spacing: 100 ft (30.48 m).
       18. Size: 24 ft (7.3 m). Motor: 2 hp. Hang Weight: 249 lbs. (112 kg). RPM: 60.
           1. Normal Industrial Spacing: 110 ft (33.53 m).
       19. Mounting Hardware:
           1. Universal I-beam clamp with swivel joint and 7 inch (178 mm) drop. Standard.

\*\* NOTE TO SPECIFIER \*\* Remaining hardware items are optional. Delete if not required.

* + - * 1. Extra wide and thick I-beam mount. Consult factory.
        2. Laminated Wood Beam Clamp: Brackets.
        3. Additional Drop Extensions: Up to 10 ft in 1 ft Increments.
        4. Power: 120 V 1 phase, 208-230 V single phase, 208-230 V 3 phase, 460-480 V 3 Phase, or 575 V 3 phase.
      1. Motor: DC brushless. Enclosure / Insulation Class / Efficiency Class: IP65.
         1. Temperature Range: 0 to 122 degrees F (Minus 17.78 to 50 degrees C).
         2. Motor Size: 1 hp (85 Nm). 8 to 14 ft (2.4 to 4.9 m).
         3. Motor Size: 2 hp (188 Nm). 16 to 24 ft (5.5 to 7.3 m).
      2. VFD Assembly: Enclosure: NEMA 1. Remote CAT 5E Cable: 1 to 100 Ft (30.48 Meters). Communication Protocol: Modbus RTU. Disconnect: Panel Mount, UL/CE. UL Certified: 50 hz Operation.
      3. Fan Control Station: Touchscreen LCD. Forward/off/reverse, self-diagnostics, and 4 digit pass code protection. Connection: CAT 5E. Mounting: Standard wall J-Box
      4. Warranty: Lifetime on blades, hub, and frame. Mechanical: 15 years. Non Pro Rated: 15 years. Electrical: 7 years. Labor: 1 year. Controls: 1 year.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Mounting Extension: \_\_\_ ft (\_\_\_ m).
      2. Extra Wide Beam Plate: \_\_\_ ft (\_\_\_ m).
      3. Powder Coated Blades: \_\_\_\_\_\_\_\_\_\_\_.
      4. Powder Coated Frame and Mount: \_\_\_\_\_\_\_\_.
      5. Fire Control Panel: Standard and networked fans.
      6. Multiple Fan Remote: 2 to 6.
      7. BAS Integration.
      8. iFan 4.3. 12 fans maximum.
      9. iFan 7.0. 24 fans maximum.
      10. iFan 10.0. 30 fans maximum.
    1. Industrial HVLS Fans as manufactured by Serco. High volume low speed. 5-blade low speed rotary airfoil application and near ground effect.
       1. Standards Compliance: ETL and UL/ULc 507 Certified. ANSI / AMCA 230-15 HVLS.
       2. Acoustic Level: 55 dBA. Air Current Depth: Horizontal floor jet of 3 to 9 ft (1 to 3 m).
       3. Frame: Black Powder Coat / Welded Steel Fabrication.
       4. Hub Assembly: 6061-T6 Aluminum. Steel hub plate.
       5. Blade Struts (Invertible): Clear zinc / high tensile steel.
       6. Blades: Clear corrosion-resistant anodized / 6063-T6 aluminum.
       7. Blade End Aerodynamic Winglets: Aluminum 3003-H14. NACA airfoil profile.
       8. Safety Cable Galvanized: 1/4 inch x 7 x 19 steel aircraft grade cable.
       9. Guy Wires Galvanized: 1/8 inch x 7 x 19 steel aircraft grade cable.
       10. Rotor Retaining Ring: Zinc plated 3/16 inch A569 steel.
       11. Size: 8 ft (2.4 m). Motor: 1.5 hp. Hang Weight: 164 lbs. (73 kg). RPM 198.
           1. Normal Industrial Spacing: 55 ft (16.76 m).
       12. Size: 10 ft (30. m). Motor: 1.5 hp. Hang Weight: 173 lbs. (82 kg). RPM: 154.
           1. Normal Industrial Spacing: 60 ft (18.29 m).
       13. Size: 12 ft (3.8 m). Motor: 1.5 hp. Hang Weight: 181 lbs. (86 kg). RPM: 125.
           1. Normal Industrial Spacing: 65 ft (19.81 m).
       14. Size: 14 ft (4.3 m). Motor: 1.5 hp. Hang Weight: 189 lbs. (86 kg). RPM: 106.
           1. Normal Industrial Spacing: 70 ft (21.34 m).
       15. Size: 16 ft (4.9 m). Motor: 1.5 hp. Hang Weight: 198 lbs. (94 kg). RPM: 92.
           1. Normal Industrial Spacing: 90 ft ( m).
       16. Size: 18 ft (5.5 m). Motor: 1.5 hp. Hang Weight: 206 lbs. (101 kg). RPM: 81.
           1. Normal Industrial Spacing: 95 ft (27.43 m).
       17. Size: 20 ft (6.1 m). Motor: 1.5 hp. Hang Weight: 214 lbs. (105 kg). RPM: 72.
           1. Normal Industrial Spacing: 100 ft (30.48 m).
       18. Size: 24 ft (7.3 m). Motor: 2 hp. Hang Weight: 231 lbs. (107 kg). RPM: 60.
           1. Normal Industrial Spacing: 110 ft (33.53 m).
       19. Mounting Hardware:
           1. Universal I-beam clamp, swivel joint and 7 inch (178 mm) drop. Standard.

\*\* NOTE TO SPECIFIER \*\* Remaining hardware items are optional. Delete if not required.

* + - * 1. Extra wide and thick I-beam mount. Consult factory.
        2. Laminated Wood Beam Clamp: Brackets.
        3. Additional Drop Extensions: Up to 10 ft in 1 ft Increments.
      1. Power Cable: 25 ft (7.62 m) wired to motor. Source connection by others.
      2. Power: 208-230 V single phase, 208-230 V three phase, 460-480 V three phase, or 575 V three phase.
      3. Gearbox and Motor: DC brushless motor. 2-stage helical gearbox. Lubed for life.
         1. Enclosure / Insulation Class / Efficiency Class: IP55 / F /IE3.
      4. VFD Assembly: Enclosure: NEMA 1. Remote CAT 5E Cable: 1 to 100 Ft (30.48 Meters). Disconnect: Panel Mount, UL/CE. UL certified.

\*\* NOTE TO SPECIFIER \*\* 50 hz is optional. Not included with iFAN options Delete if not required.

* + - * 1. 50 hz Operation.
      1. Fan Control Station: Touchscreen LCD. Forward/off/reverse, self-diagnostics, and 4 digit pass code protection. Connection: CAT 5E. Mounting: Standard wall J-Box. Fused disconnect.
      2. Warranty: Lifetime on blades, hub, and frame. Mechanical: 15 years. Non Pro Rated: 15 years. Electrical: 7 years. Labor: 1 year. Controls: 1 year.

\*\* NOTE TO SPECIFIER \*\* The remaining items are options. Delete options not required.

* + - 1. Mounting Extension: \_\_\_ ft (\_\_\_ m).
      2. Extra Wide Beam Plate: \_\_\_ ft (\_\_\_ m).
      3. Powder Coated Blades: \_\_\_\_\_\_\_\_\_\_\_.
      4. Powder Coated Frame and Mount: \_\_\_\_\_\_\_\_.
      5. Fire Control Panel: Standard and networked fans.
      6. Multiple Fan Remote: 2 to 6.
      7. BAS Integration.
      8. Slave remote.
      9. iFan 4.3. 12 fans maximum.
      10. iFan 7.0. 24 fans maximum.
      11. iFan 10.0. 30 fans maximum.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly constructed and prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
   4. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturer's recommendations.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION