

## SECTION 07 76 16

### ROOF PEDESTAL WOOD TILE SYSTEM



This section is based on the products of SkyDeck USA, which is located at:

4450 Bradford Farms Ct.

Grand Rapids, MI 49525

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[ [Click Here](#) ] for additional information.

Our company was born out of an installation company who got tired of using difficult and time consuming pedestals so we did something about it. We created Skydeck USA and the SkyJack Pedestal Product Line which is the Trusted Single Source for All Rooftop Hardscape Solutions.

We have installed and worked with the installers on some of the largest and most prominent rooftop decks and patios in the USA. Lean on our experience through the following services:

Real Time Project Consultation.

Onsite Team Training For Your Crew.

Takeoff and Product Estimation Assistance.

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#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES:

- A. Adjustable pedestal supports.
- B. Rooftop wood deck tiles.

##### 1.2 RELATED SECTIONS:

- A. Section 04 22 00 - Concrete Unit Masonry.
- B. Section 04 40 00 - Stone Assemblies.
- C. Section 61 50 00 - Wood Decking.
- D. Section 07 33 63 - Vegetated Roof System.
- E. Section 07 55 00 - Membrane Roofing.
- F. Section 09 69 00 - Access Flooring.

##### 1.3 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. 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.
- C. Verification Samples:
1. Architectural Pavers: Submit samples for type, color and texture required.
  2. Pedestals: Submit samples of each pedestal component.
- D. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
1. Scaled drawings to include plan of installation area, layout of all paver and pedestal areas, starting point and elevations, and construction details at critical terminations of pedestal paver system with adjacent construction.
- E. Delivery, storage and handling requirements and recommendations.
- F. Certifications: Written submittal by manufacturer indicating that installer is certified as qualified to perform work of this Section.
- G. Warranty: Submit manufacturer warranty and ensure Owner's name is registered with manufacturer.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.
- B. Single Source Responsibility: Manufacturer shall provide the following:
1. Rooftop Wood Deck Tiles.
  2. Pedestal Support System.
- C. Installer Qualifications: Certified as pre-approved and qualified by manufacturer to install work of this section.
1. Installer assumes liability for any deviations from specifications and/or the Drawings.
- D. Preconstruction Testing: Conduct to verify following.
1. Membrane Roofing Manufacturer: Conduct inspection by certified manufacturer's technical representative to verify that the in-place membrane roofing system meets the manufacturer's specifications, is waterproof, and is approved for installation of the pedestal paver system. Verify membrane protection layer (if required) and other requirements to maintain roofing manufacturer's warranty provisions. A copy of the inspection report shall be submitted to the pedestal paver manufacturer prior to installation of the pedestal paver system.
  2. Membrane Integrity Test: The roof area or portions thereof shall be leak tested by means of electronic testing or flood testing for a period of 48 hours to check the integrity of the membrane installation. The Membrane integrity test shall be conducted by roof membrane contractor and attested in writing to pedestal paver manufacturer by the roofing contractor prior to the pedestal paver system being installed.
- E. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
1. The intent of mock-up is to demonstrate quality of workmanship and visual appearance.

2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
3. Retain mock-up during construction as a standard for comparison with completed work.
4. Do not alter or remove mock-up until work is completed or removal is authorized.

#### 1.5 PRE-INSTALLATION CONFERENCE

- A. 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.

#### 1.6 DELIVERY, HANDLING, STORAGE, PROTECTION

- A. Deliver materials to project site in the original packaging with the manufacturer's labels intact and legible.
- B. Inspect all materials to ensure they are undamaged and in good condition.
- C. Store materials in a clean, dry, and protected location.
  1. Lpe Tiles:
    - a. Place tiles in a shaded location and unwrap immediately upon arrival at the job site.
    - b. Place spacers between the tiles to allow airflow while they acclimatize to the climate and humidity level in the location where they'll be installed.
    - c. Tiles and planks should be left to acclimate for 7-10 days prior to installation. Natural shrinking should be expected as the wood ages.
- D. Ensure waterproofing membrane is not damaged while delivering, storing, or handling material.
- E. Take measures to locate and spread loads in manner to not exceed load capacity of roof deck.
- F. Store paver and pedestal components and materials over plywood panels or protective sheeting. Do not allow products, grit, debris, and pedestrian traffic on unprotected roofing.
- G. During installation, protect the roof deck and membranes with appropriate material such as plywood sheeting. Never scrape or puncture membrane protection layer or membranes. Keep roof surfaces free of soil, grit, or debris at all times.

#### 1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, precipitation) within limits recommended by manufacturer for optimum results. Do not install products in any unsafe condition, inclement weather or under environmental conditions outside the manufacturer's recommended limits.
- B. Deck supports specified are to be used with pedestrian traffic only. All four sides of the deck system must restrain and contain the decking panels with perimeter blocking or walls. Decking panels must not be allowed to move laterally.
- C. All membrane waterproofing and protection board surfaces to receive pedestals must be frost/ice free, and free of dirt, oil, debris, or any rough foreign matter, which may impair the waterproofing / roofing manufacturers guarantee or protection

requirements.

- D. Installation or anticipated installation of additional heavy roof top feature such as, planters, benches, water features, hot tubs, industrial equipment etc. must be supported directly by additional pedestals that are in addition to the main deck paver pedestal system. Failure to adequately support the additional weight of any such features or items may cause significant damage to the deck, underlying structure, or waterproofing.
- E. All decks shall be designed to not exceed the design capacity of the pedestal.
- F. The substrate immediately below the pedestal supports shall provide positive and adequate drainage in accordance with good building practice and applicable building codes.
- G. Do not install Sky Deck Pedestal Paver System over any insulation less than 60psi or with low-density polystyrene (bead board insulation).

## 1.8 WARRANTY

- A. Manufacturer's Warranty: Paver and pedestal system manufacturer shall warrant the materials to remain free from defects for a period of three (3) years.
  - 1. Ipe Wood Pavers: Limited 3 year warranty
  - 2. SkyJack Pedestal System: Limited 3 year warranty.
- B. Contractor's Warranty: The contractor shall warrant the work to remain free from defects of labor and materials used in conjunction with their work in accordance with the general conditions for this project for a maximum period of two (2) years.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: SkyDeck USA, which is located at: 4450 Bradford Farms Ct.; Grand Rapids, MI 49525; Tel: 616-308-6309; Email: [request info \(ceagan@skydeckusa.com\)](mailto:ceagan@skydeckusa.com); Web: <https://skydeckusa.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.

### 2.2 MATERIALS

- A. SkyJack Adjustable Height and Slope Compensating Pedestals
  - 1. Material: Fully Recyclable High Density Copolymer Poly Propylene (HDCPP)
    - a. Resistant to UV Radiance, Aging and Decay.
  - 2. Temperature Range: -20 to 200 degrees F (29 to 93 degrees C).
  - 3. Typical Height Range: 0 to 21 inches (0 to 533 mm).
  - 4. Pedestal Bracing System: For pedestal applications over 21-3/4 inches (552 mm) in height.
  - 5. Weight Bearing Design Capacity: 2150 lbs (975 kg) per pedestal.
  - 6. Spacer Tabs: 3/16 inch (5 mm).
  - 7. Slope Stabilization Head: Compensates for slope up to 7 percent.
  - 8. Pedestal Components:
    - a. Adjustable Pedestals:
      - 1) Model SD-XXS: A top screw and bottom screw sit on top of one another.

- a) Height Adjustment: Twist 8 ergonomic handles to adjust height in 0.04 inch (1 mm) increments.
    - b) Adjustment Range: 1/3 to 5/8 inches (8.5 to 16 mm).
  - 2) Model SD-XS: A top screw and bottom screw that sit on top of one another.
    - a) Height Adjustment: Twist 8 ergonomic handles to adjust height in 0.04 inch (1 mm) increments.
    - b) Adjustment Range: 5/8 to 1-1/4 inches (16 to 32 mm).
  - 3) Model SD-S: A base, screw ring, screw, and spacer tabs.
    - a) Height Adjustment: Twist 4 ergonomic handles to adjust height.
    - b) Adjustment Range: 1-1/4 to 1-3/4 inches (32 to 44 mm).
  - 4) Model SD-M: A base, screw ring, screw, and spacer tabs.
    - a) Comes in one assembled piece with spacer tabs in a separate bag.
    - b) Height Adjustment: Made by twisting the ergonomic handles, using the hand tool or the drill bit tool.
    - c) Adjustment Range: 1.75 to 2.95 inches (44 to 75 mm).
  - 5) Model SD-L: A base, screw ring, screw, and spacer tabs.
    - a) Comes in one assembled piece with spacer tabs in a separate bag.
    - b) Height Adjustment: Made by twisting the ergonomic handles, using the hand tool or the drill bit tool.
    - c) Adjustment Range: 2.95 to 5.9 inches (75 to 150 mm).
  - 6) Model SD-XL: A base, screw ring, screw, and spacer tabs.
    - a) Comes in one assembled piece with spacer tabs in a separate bag.
    - b) Height Adjustment: Made by twisting the ergonomic handles, using the hand tool or the drill bit tool.
    - c) Adjustment Range: 5.9 to 13.75 inches (150 to 349 mm).
- b. Extender Sleeve:
  - 1) Model SD-XL-EXT. Used to increase the height range of SD-XL pedestals.
    - a) Screws into the SD-XL pedestal base.
    - b) The screw head is applied to the extender top.
  - 2) Pedestal Heights Greater than 21-3/4 inches (552 mm): Use Skydeck USA steel strapping system to stabilize pedestals.
- c. Base Slope Corrector:
  - 1) Model SD-SC. Placed underneath the SD-M, SD-L and SD-XL pedestals to compensate for slopes up to 8 percent.
    - a) Twist to adjust the slope correction from 0 to 8 percent.
- d. Head, Self -Leveling: Used for installations where slope is present. Upper and lower pieces.
  - 1) Model SD-XL-SLH:
  - 2) The lower piece locks onto the Screw. The upper piece is put into the lower part of the head. The Head automatically adjusts to be level under applied loads.
- e. Regulation Shim: Used to eliminate uneven pavers and to compensate small differences in height of terrace pavers. Can be cut into halves and quarters, as necessary.
  - 1) Model SD-SH2. Used with SD-00 and stackable pedestals.
  - 2) Model SD-XL-SH2. Used with all adjustable pedestals.
  - 3) Thickness: 1/16 inches (1.6 mm).
- f. Deck Joist Adapter: for mounting and supporting deck joists.
  - 1) SC-AD

- B. SkyWalk IPE Wood Deck Tiles:
1. Type: IPE Wood Deck Tiles.
  2. Wood Type: Brazilian hardwood slats. Thickness: 13/16 inches (21 mm).
  3. Construction: Slats are screwed to three solid wood battens using stainless steel screws.
  4. Color: Natural product comes in one color found in nature.
  5. Covered Area: 24 x 24 inches (610 x 610 mm).
  6. Tile Size: 23-5/8 x 23-5/8 inches (600 x 600 mm).
  7. Tile Height: 1-1/2 inches (38 mm).
  8. Wood Thickness: 13/16 inches (21 mm).
  9. Slats per Tile: 8.
  10. Width of Slats: 2-7/8 inches (73 mm).
  11. Ends and Sides Finish: S4S E4E. Radius: 1/8 inches (3 mm).
  12. Tile Weight: 23.5 lbs (10.66 kg).
  13. Surface Finish:
    - a. Ends: Waxed with paraffin.
    - b. Slats: With machined finish and wood not coated with oil.
  14. Common name: Ipe.
  15. Botanical Name: Tabebuia sp.
  16. Color: Typically reddish brown color, but can vary from olive brown to blackish, often with lighter or darker striping.
  17. Grain: Fine to medium texture, grain always interlocked, sometimes very highly oily looking.
  18. Density at 12 percent moisture: 65.55 to 73.66 lbs per cu ft (1050 to 1180 kg per cu m).
  19. Durability: Class A.
  20. Fire rating: Class A.
  21. Hardness (Janka): 3680 (very hard)
  22. Resistance to decay and insect attack.
  23. Resistant to attack by decay fungi and termites.
  24. Not resistant to marine borers.
  25. Modulus of rupture: 24656 psi (170 MPa).
  26. Modulus of elasticity: 3.046e+6 psi (21 GPa).
  27. Maximum crushing strength: 13633 psi (94 MPa).
  28. Shrinkage:
    - a. Tangential: 7 percent.
    - b. Radial: 6 percent.
    - c. Tangential / Radial Shrinkage Ratio: 1.2.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared and related work penetrating the plane of the roof is completed.
1. Carefully inspect installed work of other trades and verify that such work is complete to the point where work of this section may properly commence.
  2. Notify the Architect in writing of the conditions detrimental to the proper and timely completion of work.
- B. Verify the Following:
1. Substrates, membranes, and protection boards are ready for installation of pedestal and paver system.
  2. The roof deck will sustain the weight of the pedestal paver system.
  3. Deck dimensions and elevations and pedestal heights before commencing work.

### 3.2 PREPARATION

- A. Clean and prepare deck free of all debris in accordance with manufacturer's instructions.
- B. Install membrane protection layer under all pedestals if specified by roofing membrane manufacture.
- C. Establish accurate lines, levels, and pattern.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
  - 1. Determine starting point and layout the paver and pedestal grid layout determining where full and cut pavers will be installed.
  - 2. Mark perpendicular guidelines on substrate surface to ensure square layout.
  - 3. Install initial pavers along guidelines forming a "T" pattern.
  - 4. Install Pavers tightly butted into pedestals. Form even joint width determined by pedestal spacer tabs.
  - 5. Checks shall be made constantly for correct elevation and spacing of the installed pavers using laser level, automatic leveler, or mason's line.
  - 6. Slight irregularities in paver thickness and/or deck heights can be compensated for by using one or more regulation shims.
  - 7. Any section of paver, pedestal or protection course which is not restrained by an abutting wall or parapet must be "boxed in" by some field installed restraint.

#### B. CLEANING AND PROTECTION

- C. Clean products in accordance with the manufacturers recommendations.
- D. Touch-up, repair or replace damaged products before Substantial Completion.

### 3.4 ROUTINE MAINTENANCE AND CARE

- A. Remove and replace pavers, which are loose, chipped, broken, stained or otherwise damaged. Make sure edge restraints stay intact and are structurally sound.
- B. Remove stains and soiling from exposed paver surfaces. Wash and scrub clean.
  - 1. Pressure Washers: May be used to lightly clean the surface.
  - 2. Always test on an inconspicuous location before using any cleaning products or pressure washer to ensure no damage or discoloration will occur.
- C. Ipe wood is a naturally occurring wood product and behaves as a natural product.
  - 1. Checking, cupping, splitting, shrinking, warping and discoloration can occur.
  - 2. Seal cut ends with a wax sealant immediately after cutting to minimize these natural tendencies.
  - 3. Apply a hard wood oil as needed to seal visible surfaces in order to minimize discoloration and protect the pavers.

END OF SECTION