SECTION 07 76 00

PEDESTAL PAVERS

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\*\* NOTE TO SPECIFIER \*\* Envirospec, Inc./Pave-El; paver pedestal system.
This section is based on the products of Envirospec, Inc./Pave-El, which is located at:
21 Mellowood Dr.
Toronto, ON, Canada M2L 2E4
Tel: 905-271-3441
Email: [request info (info@envirospecinc.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Envirospec,+Inc./Pave-El&coid=32328&rep=&fax=&message=RE:%20Spec%20Question%20(07760esi):%20%20&mf=)
Web: <http://www.envirospecinc.com>
 [ [Click Here](https://www.arcat.com/arcatcos/cos32/arc32328.html) ] for additional information.
The PAVE-EL pedestal system elevates levels and uniformly spaces paver stones and protects the substrates in such waterproofed installations as roof decks and promenades, terraces, balconies, patios, podiums, plazas, arenas and roof gardens. It is also ideal for roof garden walkways, for use as support pedestals or sleepers for catwalks, mechanical access walkways, balcony-deck structures and roof-mounted duct pipes.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Elevated paver pedestal system for the following applications as indicated:
			1. Balconies.
			2. Plaza decks.
			3. Green roof decks.
			4. Protected membrane roof systems.
			5. Roof garden walkways.
			6. Access walkway to roof top mechanical equipment.
			7. Dry deck type water fountains.
		2. Pavers:
			1. Precast concrete.
			2. Wood.
			3. Porcelain.
			4. Stone.
	1. RELATED SECTIONS

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

* + 1. Section 32 14 23 - Asphalt Unit Paving.
		2. Section 03 48 00 - Precast Concrete Specialties.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
			1. ASTM D746 - Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact.
			2. ASTM D1525 - Standard Test Method for Vicat Softening Temperature of Plastics.
			3. ASTM D1706 - Method of Test for Indentation Hardness of Plastics by Means.
	1. SUBMITTALS

\*\* NOTE TO SPECIFIER \*\* Use of PAVE-EL pedestal systems may contribute to LEED 2009 or LEED V4 credits. Our Products are more water-efficient than similar products, more durable or require less maintenance than similar products, Are recyclable or biodegradable after use. Contact the manufacturer for more detailed information.

* + 1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Compressive force calculation of supporting surface loading for anticipated paver dead load and application live load using scheduled pedestal size.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Installation methods.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Design, production, distribution and service from a single entity whose primary product are paver pedestal systems.
		2. Installer Qualifications: A minimum of two years documented experience installing pedestal paver systems.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish Area: 8 x 8 ft (2300 x 2400 mm).
			2. Finish Area: \_\_\_\_ x \_\_\_\_ ft (\_\_\_\_ x \_\_\_\_ mm).
			3. Finish Area: Designated by Architect.
			4. Do not proceed with remaining work until workmanship is approved by Architect.
				1. Approved Mockup: May remain as part of the Work.
				2. Approved Mockup: May not remain as part of the Work.
			5. Rework mock-up area as required to produce acceptable Work.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
	2. 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.
	3. WARRANTY
		1. Provide paver pedestal manufacturer's 5 year warranty against material defects.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Envirospec, Inc./Pave-El, which is located at: 21 Mellowood Dr.; Toronto, ON, Canada M2L 2E4; Tel: 905-271-3441; Email: [request info (info@envirospecinc.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Envirospec,+Inc./Pave-El&coid=32328&rep=&fax=&message=RE:%20Spec%20Question%20(07760esi):%20%20&mf=); Web: <http://www.envirospecinc.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 will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. PEDESTAL PAVER SYSTEMS
		1. Pedestal Paver System: Grid-like structure with integral spacer ribs on top surface incorporating through-drainage and air-ventilation.

\*\* NOTE TO SPECIFIER \*\* The Pave-El system is not recommended for vehicular traffic applications. The system was designed for use with square or rectangular pavers. Consult with Envirospec Inc. for use with other shapes.

* + 1. Consult membrane manufacturer, insulation manufacturer, and Envirospec Inc. if uncertain about compatibility of membrane and pedestals.
			1. Product: Pave-El Paver Pedestal as manufactured by Envirospec Inc.
		2. Sizes: As scheduled or required for building configuration.

\*\* NOTE TO SPECIFIER \*\* Delete size not required. Size determines resultant compressive unit force on pedestal substrate.

* + - 1. Pedestal: 4-1/2 inches by 4-1/2 inches by 5/8 inch high by 3/16 inch spacer rib (114 mm by 114 mm by 16 mm high by 4.75 mm spacer rib).
			2. Pedestal: 5-1/2 inches by 5-1/2 inches by 5/8 inch high by 1/4 inch spacer rib (140 mm by 140 mm by 16 mm high by 6 mm spacer rib).
			3. Pedestal: 5-3/4 inches by 5-3/4 inches by 5/8 inch high by 1/8 inch spacer rib (146 mm by 146 mm by 16 mm high by 3 mm spacer rib).
			4. Pedestal: 7-3/4 inches by 7-3/4 inches by 7/8 inch high by 1/4 inch spacer rib (197 mm by 197 mm by 22 mm high by 6 mm spacer rib).
			5. Levelling Plates: Pedestal base size x 1/8 inch (3 mm) thick.
			6. Color: Black.
			7. Material Characteristics:
				1. Composition: High-density polyethylene.
				2. Low Temperature Brittleness per ASTM D746: Minus 94 degrees F (minus 70 degrees C).
				3. Resistance to Ultra-Violet: UV stabilized.
				4. Shore Hardness per ASTM D1706: D65.
				5. Softening Point (Vicat) per ASTM 1525: 264 degrees F (129 degrees C).
				6. Weatherability: Unaffected by freeze-thaw cycling, ozone, humidity and is not water absorbent.
				7. Sound Transmission Loss: Resilient, high density polyethylene reduces sound transmission to occupied areas below.
		1. Pavers:

\*\* NOTE TO SPECIFIER \*\* 18 x 18 inches (457 x 457 mm) is the smallest paver size recommended by Manufacturer,

* + - 1. Size: 18 x 18 inches (450 x 450 mm).
			2. Size: 24 x 24 inches (600 x 600 mm).
			3. Size: 36 x 36 inches (900 x 900 mm).
			4. Size: \_\_ x \_\_ inches (\_\_ x \_\_ mm).
			5. Size: As detailed on the Drawings.
			6. Thickness: 2 inches (50 mm).
			7. Thickness: 2-1/2 (63 mm).
			8. Thickness: 3 inches (75 mm).
			9. Thickness: \_\_\_\_\_\_\_\_.
			10. Thickness: As detailed on the Drawings.
			11. Precast Concrete: Product No: \_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_\_.
				1. Color: \_\_\_\_\_\_\_\_.
				2. Color: As detailed on the Drawings.
				3. Color: To be selected from manufacturer's standard range.
				4. Surface Texture: \_\_\_\_\_\_\_.
				5. Surface Texture: As detailed on the Drawings.
				6. Surface Texture: To be selected from manufacturer's standard range.
				7. Unit Weight: 150 lbs per cf (2403 kg per cu m).
				8. Unit Weight: \_\_\_\_ lbs per cf (\_\_\_\_ kg per cu m).
			12. Wood: Product No: \_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_\_.
				1. Species: Ipe.
				2. Species: Cumaru.
				3. Species: Teak.
				4. Species: Mahogany.
				5. Species: \_\_\_\_\_\_\_\_.
				6. Species: As detailed on the Drawings.
				7. Species: To be selected from manufacturer's standard range.
				8. Color: Natural.
				9. Color: \_\_\_\_\_\_\_\_
				10. Color: As detailed on the Drawings.
				11. Color: To be selected from manufacturer's standard range.
				12. Surface Texture: Smooth.
				13. Surface Texture: Ribbed.
				14. Surface Texture: \_\_\_\_\_\_\_\_.
				15. Surface Texture: As detailed on the Drawings.
				16. Surface Texture: To be selected from manufacturer's standard range.
				17. Finish: Factory sealed.
				18. Finish: Factory stained and sealed.
				19. Finish: Unfinished.
				20. Finish: \_\_\_\_\_\_\_\_.
				21. Finish: As detailed on the Drawings.
				22. Finish: To be selected from manufacturer's standard range.
				23. Fire Hazard Classification: Class A, tested to ASTM E108.
				24. FSC Certified.
				25. Unit Weight: \_\_\_\_ lbs per cf (\_\_\_\_ kg per cu m).
			13. Porcelain: Product No: \_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_\_.
				1. Color: \_\_\_\_\_\_\_\_.
				2. Color: As detailed on the Drawings.
				3. Color: To be selected from manufacturer's standard range.
				4. Surface Texture: Smooth.
				5. Surface Texture: \_\_\_\_\_\_\_.
				6. Surface Texture: As detailed on the Drawings.
				7. Surface Texture: To be selected from manufacturer's standard range.
				8. Unit Weight: \_\_\_\_ lbs per cf (\_\_\_\_ kg per cu m).
			14. Stone: Product No: \_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_\_.
				1. Type: Granite.
				2. Type: Limestone.
				3. Type: \_\_\_\_\_\_\_\_.
				4. Type: As detailed on the Drawings.
				5. Surface Texture: Honed.
				6. Surface Texture: Thermal.
				7. Surface Texture: \_\_\_\_\_\_\_\_.
				8. Surface Texture: As detailed on the Drawings.
				9. Unit Weight: \_\_\_\_ lbs per cf (\_\_\_\_ kg per cu m).
			15. Type: As detailed on the Drawings.
	1. APPLICATION

\*\* NOTE TO SPECIFIER \*\* The PAVE-EL system is not recommended for vehicular traffic applications. The PAVE-EL system was designed specifically for use with square or rectangular pavers. Consult with Envirospec Inc. for use with other shapes.

* + 1. Pedestrian Traffic Applications: Selected pedestal size to support the scheduled paver as intended must comply with the following.

\*\* NOTE TO SPECIFIER \*\* Typical unit weight for concrete paver. Confirm paver unit weight.

* + - 1. Paver unit weight.

\*\* NOTE TO SPECIFIER \*\* Delete live load options not required.

* + - 1. Live Load: 50 psf (2.40 kPa).
			2. Live Load: 100 psf (4.79 kPa).
			3. Live Load: 200 psf (9.58 kPa).

\*\* NOTE TO SPECIFIER \*\* Consult with membrane manufacturer, insulation manufacturer and Envirospec Inc. if uncertain about compatibility of loading between membrane and pedestal.

* + - 1. Minimum Compressive Force of Pedestal Substrate: 30 psf.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect 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.

\*\* NOTE TO SPECIFIER \*\* Bituminous waterproofing membranes are subject to softening at high ambient temperatures. It is recommended that protection board or topping be used under the pedestal to decrease point load pressure on the membrane.

* + - 1. Confirm pedestal size selected does not exceed compressive strength of pedestal supporting substrate.
	1. INSTALLATION

\*\* NOTE TO SPECIFIER \*\* Use basically the same number of pedestals as pavers on square or rectangular decks. Columns and protrusions, where pavers are cut and fit, increases number of pedestals required.

* 1. Leveling Plate Requirements: Shimming adjustment requires, approx. 10 leveling plates per 100 pedestals. Irregular deck surfaces or pavers of varying thickness increase number required.
		1. Install in accordance with manufacturer's instructions.

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

* + 1. Horizontal Leveling: On deck areas where a dead level paver surface is required, full shimming with leveling plates and multiple stacking of pedestals shall be utilized.
		2. Method:

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

* + - 1. On deck perimeter and around protrusions where it is not practical to cut pavers to fit (i.e. canted roof-wall junctures), coarse gravel with binder (if required) shall be used in voids.
			2. Following predetermined layout, locate first row of paver stones at an exterior edge of deck, using 1/2 pedestals at edges and 1/4 pedestals at corners and at partial angled paver locations.
			3. Place pedestals with projecting ribs facing upwards to ensure uniform paver stone joint spacing. Place pavers tight to spacer ribs to ensure even spacing.
			4. Place paver stones by lowering horizontally rather than nosing into position to eliminate possible indentation of substrate.
			5. Align and shim as required as work progresses. Vertical difference between pavers for walking surfaces shall not exceed 1/8 inch (3 mm).
			6. Run subsequent rows of pavers parallel to first row.
			7. Where multiple stacking of pedestals is employed, locate leveling plates on top of upper pedestal, never in-between or below pedestals.
	1. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION