

CONCRETE UNIT PAVING / TILE PAVERS

SECTION 02515

NOTE: THIS IS A GUIDE SPECIFICATION FOR THE INSTALLATION OF CONCRETE TILE PAVING UNITS, GENERALLY 7/8 IN. – 1 ½ IN. (20-40MM) THICK AND BEDDING SAND ON AN EXISTING CONCRETE BASE. THE FINISHED PAVER SURFACE IS INTENDED FOR PEDESTRIAN USE ONLY. THIS METHOD OF CONSTRUCTION HAD BEEN USED FOR REHABILITATION OF CONCRETE POOL DECKS, OTHER KINDS OF CONCRETE DECKS, WALKS AND ROOFS. THIS SPECIFICATION SHOULD BE EDITED TO SUIT PROJECT CONDITIONS FOR ROOFING BALLAST BY AN ARCHITECT, ENGINEER, OR LANDSCAPE ARCHITECT. THE SPECIFIER SHOULD VERIFY COMPATIBILITY OF PAVERS AND / OR BEDDING SAND WITH THE ROOFING MATERIALS MANUFACTURER.

Note: Construction involves securing edge pavers with acrylic fortified mortar (often called “thin-set”) or adhesives specifically for concrete pavers, placing a thin layer of bedding sand, or installing the units directly on concrete, spreading sand, and rinsing the joints with water to ensure settlement of the sand into them. Installations may be proof rolled with a water-filled roller to further imbed the units into the sand. The surface of the pavers are often sealed. Adjustments in elevation of the concrete base prior to paving may be necessary to facilitate drainage.

PART 1 - GENERAL

1.01 Section Includes

- A. Concrete tile paver units. (Concrete paver units.)**
- B. Bedding and joint sand.**
- C. Acrylic fortified mortar or paver adhesive.**
- D. Sealer.**

1.02 Related Sections

- A. Tech Data - Details / Design Considerations.**
- B. ICPI Tech Spec #14 – Concrete Paving Units in Roof Applications.**

1.03 References

- A. American Society of Testing and Materials (ASTM):**
 - 1. C 136, Method for Sieve Analysis for Fine and Coarse Aggregate.**
 - 2. C 936, Specification for Solid Interlocking Concrete Paving Units.**
 - 3. C 979, Specification for Pigments for Integrally Colored Concrete.**

1.04 Qualify Assurance

- A. Installation shall be by a contractor and crew with at least one year of experience in placing interlocking concrete pavers on projects of similar nature or dollar cost.**
- B. Contractor shall hold a current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.**
- C. Contractor shall conform to all local, state/provincial licensing and bonding requirements.**

1.05 Submittals

- A. Manufacturer’s product data for pavers, acrylic fortified mortar / paver adhesive, and sealer.**
- B. Full-size samples of concrete paving units to indicate color and shape selections. Color will be selected by Architect / Engineer / Landscape Architect / Owner from manufacturer’s available colors.**
- C. Sieve analysis for grading of sand.**
- D. Test results from an independent testing laboratory for compliance of 2 3/8 in. (60 mm) thick units to ASTM C 936. The concrete tile pavers shall be made from the same or similar concrete mix design as the 2 3/8 in. (60 mm) thick units.**

1.06 Mock-Ups

- A. Install a 7 ft. x 7 ft. (2 m x 2 m) paver area as described in Article 3.02.
- B. This area will be used to determine surcharge of the bedding sand layer, joint sizes, lines, laying pattern(s), color(s), and texture of the job.
- C. This area shall be the standard from which the work will be judged and it shall be incorporated into the work.

1.07 Delivery, Storage, and Handling

- A. Deliver concrete tile pavers to the site in steel banded, plastic banded, or plastic wrapped cubes capable of transfer by fork lift or clamp lift. Unload pavers at job site in such a manner that no damage occurs to the product.
- B. Sand shall be covered with waterproof covering to prevent exposure to rainfall or removal by wind. The covering shall be secured in place.
- C. Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.

1.08 Section Includes

- A. Do not install sand or pavers during heavy rain or below freezing.

PART 2 • PRODUCTS









2.01 Concrete Pavers

A. Manufacturer:

2885 St. Clair Street
 Jacksonville, FL 32254
 866.358.5900 or
 904.359.5900
 Fax 904.359.5901

11321 NW 112th Court
 Medley, FL 33178
 800.567.1480 or
 305.825.9000
 Fax 305.823.6614

B. Product name(s) / shape(s), color(s), overall dimensions, and thickness of the paver(s) shall be:

STONE SHAPE	NAME	WEIGHT/ PALLET	SQ. FT./ PALLET	EXACT DIMENSIONS
	BRICK 4X8 1"	2325 LBS.	245	3-7/8" X 7-7/8" X 1"
	DECOR 1"	2425 LBS.	255	5-3/8" X 9 X 1"
	COBBLESTONE	2150 LBS.	225	4-5/8" X 9-3/8" X 1"
	12X12 1"	2850 LBS.	300	11-7/8" X 11-7/8" X 1"
	ESTATE PAVER 1"	1818 LBS.	265	11-3/8" X 15-7/8" X 1"
	OLD TOWNE 1"	2375 LBS.	265	6-1/4" X 6-1/4" X 1" 6-1/4" X 4-3/4" X 1" 6-1/4" X 9-3/8" X 1"
	MEGA OLDE TOWNE 3 PC MEGA OLDE TOWNE 3-1/8 3 PC	2964 2964 3128 3128	114 114 92 92	6X9 = 6-1/4" X 9-1/2" 9X9 = 9-1/2" X 9-1/2" 9X12 = 9-1/2" X 12-1/4"
	STONEHURST 3 PC STONEHURST 3-1/8 3 PC	2964 2964 3128 3128	114 114 92 92	6X9 = 6-1/4" X 9-1/2" 9X9 = 9-1/2" X 9-1/2" 9X12 = 9-1/2" X 12-1/4"

C. When manufactured as a 2 3/8 in. (60 mm) thick unit, the concrete mix for the thin units shall meet comprehensive strength and absorption requirements set forth in ASTM C 936.

D. Pigment in concrete pavers shall conform to ASTM C 979.

E. Colors:

Colors

SOLIDS:	GREY CEMENT BASE	NATURAL CHARCOAL TAUPE TAN DARK BROWN
	WHITE CEMENT BASE	WHITE SANDSTONE CORAL SALMON GOLDENROD
BLENDS:	GREY CEMENT BASE	HERITAGE SANTA FE ORTEGA RUSTIC DRIFTWOOD GRANITE COFFEE REDWOOD BURNT OAK
	WHITE CEMENT BASE	OAK RUN SOUTH BEACH CAPPUCCINO RIVERWOOD OLD CHICAGO SIERRA SAND DUNE MAHOGANY ASH TIMBERWOOD

*Grey based on greens are billed at a white cement price

2.02 Bedding and Joint Sand

A. Bedding and joint sand shall be clean, non-plastic, free from deleterious or foreign matter. The sand shall be natural silica sand and conform to the grading requirements shown in Table 1 on the right. Grading of sand samples shall be done according to ASTM C 136 or by procedure approved by architect/engineer/landscape architect.

SIEVE SIZE	PERCENT PASSING
NO. 4 (4.75 MM)	100
NO. 8 (2.36 MM)	95 TO 100
NO. 16 (1.18 MM)	70 TO 100
NO. 30 (0.600 MM)	40 TO 75
NO. 50 (0.300 MM)	10 TO 35
NO. 100 (0.150 MM)	2 TO 15
NO. 200 (0.075 MM)	0

2.03 Acrylic Fortified Mortar/Paver

A. Acrylic fortified mortar shall be: [_____.]

B. Paver adhesive shall be: [_____.]

2.04 Sealer

A. Sealer for pavers shall be: [_____.]

PART 3 - EXECUTION

3.01 Examination

- A. Verify that the concrete base drains water away from the buildings, pools, or other structures and conforms to elevations on the drawings.
- B. Verify that concrete base is dry and ready to support sand, pavers, and imposed loads. Verify that concrete base is sound, clean and free from cracks, scaling, spalling or other defects that would be detrimental to the adhesion of the mortar or other polymer adhesive materials, or contribute to the loss of bedding sand, cracking or other kinds of degradation of the installed assembly.
- C. Verify location, type, installation and elevations of edge pavers to be installed around the perimeter area to be paved.
- D. Beginning of edge pavers, bedding sand and paver installation means acceptance of base.

3.02 Installation

- A. Follow all manufacturer's instructions on mixing and applying acrylic fortified mortar or polymer adhesive to edge pavers. Locate and secure edge tile pavers on the concrete base according to the drawings. Allow them to cure per manufacturer's instructions. Do not exceed ½ in. (13 mm) thickness for the thin set mortar. The top of the edge units shall be even.

Note: Cracks in the concrete base may need to be filled / repaired prior to placing the pavers.

Note: Subsurface drainage may be necessary. This can be accomplished through weep holes at the lowest elevations. Holes may be placed under or between edge units, through the concrete base or roof deck. Consideration should be given to where water will drain without damage to adjacent structures.

- B. Spread the sand evenly over the base and screed smooth to a nominal ¼ in (7 mm) thickness, or to the thickness that results in a finished paver surface that is level with the edge units. The screeded sand should not be disturbed. Place sufficient sand to stay ahead of the laid pavers. Do not use the bedding sand to fill depressions in the base surface.

Note: Pavers may be placed without bedding sand provided that the concrete base is smooth and even.

- C. Ensure that pavers are free of foreign materials before installation.
- D. Lay the pavers in the pattern(s) as shown on the drawings. Maintain straight joint lines.
- E. Joints between the pavers on average shall not exceed 1/16 in. (1.5). Joint widths shall be negligible on roof decks and the entire surface shall be tightly fitted.
- F. Cut pavers to be placed along the edge with masonry saw.
- G. Fill gaps at the edges of the paved area with cut pavers or edge units.
- H. Spread sand over the surface of the pavers. Wash the area with water, settling the sand into joints. Repeat as necessary until the joints are full.
- I. Remove excess sand.

- J. Proof roll all the pavers with a water-filled roller not exceeding 300lbs. (135 kg). Do not use a plate compactor on the pavers.**
- K. The surface elevation of pavers shall not exceed 1/8 in. (3mm) above edge pavers, drainage inlets, concrete collars or channels.**
- L. Check final elevations for conformance to the drawings.**
- M. Apply sealer according to manufacturer's instructions.**

Note: Periodic maintenance may include refilling the joints with sand and reapplying sealer.

Tremron

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