

Origination Form

Specifications

Name:	David Cerlanek	Specification Number:	526-1, 526-2, 526-3, 526-4, 526-5
Email:	david.cerlanek@dot.state.fl.us	Associated Specs:	None
Date:	2024-06-28T00:20:12Z	Verified:	VERIFIED

Summary:

Adding language to differentiate between dimensions of brick pavers and concrete pavers. Requiring final base layer to be asphalt for local side streets and commercial driveways. Adding language to allow reuse of pavers in good condition for repair projects. Also providing more language routinely added through the modified special provision process.

Justification:

The minimum thickness listed in the current specification is not currently used in production for brick pavers. This gives an unfair advantage to concrete pavers. Requiring asphalt base will reduce the need for future maintenance. Also, designers are requesting Modified Special Provisions (MSP) to add certain common language elements, like reinstallation of existing pavers. These additions will mitigate the need for these MSP requests.

Do the changes affect other types of specifications?

Neither

List Specifications Affected:

Other Affected Documents/Offices	Contacted	Yes/No
Other Standard Plans		No
Florida Design Manual		No
Structures Manual		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No

Materials Manual		No
Traffic Engineering Manual		No

Are changes in line with promoting and making progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?

The proposed changes focus on improving durability and reducing maintenance costs.

What financial impact does the change have; project costs, pay item structure, or consultant fees?

The proposed modifications may have a beneficial financial impact by increasing competition between concrete paver and brick paver producers. Adding pay items to better track and encourage more competitive quotes by allowing reinstallation of existing pavers when possible.

What impact does the change have on production or construction schedules?

No foreseeable impacts to production or construction schedules.

How does this change improve efficiency or quality?

These changes improve efficiency by reducing the need for MSPs. They improve quality by extending the service life of the improvement and reducing the maintenance costs.

Which FDOT offices does the change impact?

Design, Estimates, Construction, Maintenance, Local Programs, Materials.

What is the impact to districts with this change?

Improved project management and slightly reduced asset maintenance costs.

Does the change shift risk and to who?

There is no foreseeable shift of risk.

Provide summary and resolution of any outstanding comments from the districts or industry.

Comments and Responses are available on the Track the Status of Revisions hyperlink located on the Specifications landing page: <https://www.fdot.gov/programmanagement/Specs.shtm>

What is the communication plan?

Through the established specification revision process (e.g., Internal and Industry Review)

What is the schedule for implementation?

The Standard Specifications eBook and Workbook are effective July 1st every year.

ARCHITECTURAL PAVERS
(REV 7-24-24)

SECTION 526 is deleted and the following substituted:

526-1 Description.

Furnish and install architectural pavers, base materials, concrete curbs, and bedding and joint materials in accordance with this Section and as indicated in the Contract Documents.

526-2 Materials.

526-2.1 General: Architectural pavers shall meet the following requirements:

Table 526-1 Architectural Paver Requirements			
Proposed Use	ASTM C902 (Brick Paver)	ASTM C1272 (Brick Paver)	ASTM C936 (Concrete Paver)
Local Side Streets (\leq 35 mph Design Speed)	Do Not Use	X	X
Commercial Driveways	Do Not Use	X	X
Sidewalks and Medians	X	Do Not Use X	X
Residential Driveways	X	Do Not Use X	X

Ensure that the pavers are consistent in color, size, and appearance. Architectural paver type, pattern, shape and ~~or~~ color will be in accordance with plan details, when specified. Existing pavers to be reinstalled must be unbroken except along edges and to fill gaps, use due care when removing and storing existing pavers identified for reinstallation. Pavers with hairline cracks or spalls greater than 1/4 inch shall be discarded and replaced with a type matching the existing paver.

526-2.2 Architectural Pavers - Roadway: For installations on roadways and commercial driveways, provide concrete architectural pavers having a minimum thickness of 3-1/8 inches or brick architectural pavers having a minimum thickness of 2-5/8 inches. Reinstalling existing pavers as roadway pavers requires Engineer written approval.

526-2.3 Architectural Pavers - Sidewalk: For installations on sidewalks, medians and residential driveways, provide concrete architectural pavers having a minimum thickness of 2-3/8 inches or brick architectural pavers having a minimum thickness of 2-1/4 inches. Reinstalling existing pavers as roadway pavers requires Engineer written approval.

526-2.4 Base Materials: For Architectural Pavers – Roadway, the minimum base as established per the Contract Documents shall include, in part, 1-1/2 inches of Superpave Asphalt Base meeting the requirements in Section 234 or Cement Concrete Pavement meeting the requirements of Section 350, placed as the final lift of base material.

526-2.5 Bedding and Joint Sands: Provide clean, non-plastic bedding and joint sand, free from deleterious or foreign matter, natural or manufactured from crushed rock.

Ensure the bedding sand meets the grading requirements of ASTM C33 Standard Specification for Concrete Aggregate.

Ensure the joint sand meets the grading requirements of ASTM C144 Standard Specification for Aggregate for Masonry Mortar.

Bedding sand may be used for joint sand. Do not use joint sand for bedding sand.

526-2. 56 Bedding and Joint Grouts: A suitable grout, in thickness specified by the manufacturer and approved for use by the architectural paver manufacturer, may be substituted for either bedding sand, joint sand or both when specified in the Plans and approved by the Engineer. Bedding and joint grouts shall only be used for non-vehicular applications.

526-2.7 Concrete Curbs: Concrete curbs to restrain the pavers, bedding and base layers shall conform to Section 520.

526-3 Construction Methods.

526-3.1 General:

526-3.1.1 Submittals: For Architectural Pavers – Roadway, furnish full size samples to the Engineer for approval prior to beginning placement. For Architectural Pavers – Sidewalk, submit to the Engineer a certification that the architectural pavers meet the requirements of this Section. In addition, for all architectural pavers except existing pavers approved for reinstallation, submit a certified sieve analysis for gradation comparing results of the bedding sand and joint sand with the requirements of ASTM C33 or ASTM C144 as applicable.

526-3.1.2 Mock-ups: Prior to beginning placement, install a 6 foot by 6 foot paver area following these specifications. This area will be used to determine surcharge of the bedding material layer, joint sizes, lines, laying patterns and colors of the job. This area will be adjacent to an edge treatment, incorporated into the work, and will be the standard from which the work will be judged.

526-3.1.3 Environmental Conditions: Cover stockpiled materials with waterproof covering to prevent exposure to rainfall. Do not install bedding materials or architectural pavers during heavy rains or over wet substrata.

526-3.2 Installation: Install the architectural pavers in the following manner:

1. When reinstallation of existing pavers is shown in the Contract Documents, remove existing sidewalk pavers with caution to avoid damage to the pavers. Replace any paver damaged during removal or storage with a new paver at no cost to the Department. Remove and dispose of existing leveling sand below freshly removed pavers. Place new bedding material evenly, and lightly compacted, in all areas that leveling sand was removed, not to exceed 6 inches in depth. Follow existing layout pattern when reinstalling existing pavers.

2. Spread the bedding material evenly over the base course and screed to plan thickness, not to exceed a thickness of 1-1/2 inches. Do not disturb the screeded bedding material. Ensure placement of sufficient bedding material to stay ahead of the laid architectural pavers. Do not use the bedding material to fill depressions in the base course.

3. Lay architectural pavers in the pattern(s) shown in the Contract Documents and maintain straight pattern lines.

4. Joints between the architectural pavers, on average, will be between 1/16 to 3/16 inch wide.

5. Fill gaps at the edges of the paved area with cut or edge architectural pavers. For vehicular applications, no cut paver subject to tires shall be less than one-third of a whole paver.

6. When utilizing bedding and joint sand:

a. Use a low amplitude vibrator ~~capable of~~ with a minimum of 5,000 foot-pounds ~~with centrifugal force operating at 70- to 100 Hz frequencies~~ to vibrate and compact architectural pavers into bedding sand. Make a minimum of two passes over the entire area with the second pass perpendicular to the first pass.

b. Vibrate the architectural pavers, sweeping dry joint sand into the joints and vibrating, until the joints are full. Do not vibrate within 3 feet of the unrestrained edges of the architectural pavers. Make a minimum of two passes over the entire area with the second pass perpendicular to the first pass.

c. At the end of each day, all work within 3 feet of laying face must be left fully compacted, with sand-filled joints. If rain is forecasted overnight, secure a waterproof cover over exposed, screeded bedding sand that has not received pavers such that it does not become saturated.

d. Sweep off the excess sand.

67. Leave a final surface elevation of architectural pavers of 1/8 to 1/4 inch above adjacent drainage inlets, concrete collars or channels.

78. Do not permit the final surface elevations of the pavers to deviate more than 3/8 inch under a ~~10-foot-long~~ 10-foot-long straightedge, or more than 1/8 inch between adjacent pavers.

526-4 Method of Measurement.

526-4.1 General: The quantity to be paid for will be the plan quantity, in square yards, for architectural pavers and edge restraint completed and accepted. No deduction will be made for the areas occupied by ornamental trees left within and any other areas occupied by manholes, inlets, drainage structures or by public utility appurtenances within the normal areas of the architectural pavers. Base materials will be paid in accordance with Section 234 or Section 350, as required.

526-4.2 Removal and Reinstallation of Existing Pavers: Payment for removal and reinstallation of existing architectural pavers will be the plan quantity area, in square yards, for existing pavers removed and reinstalled, completed and accepted.

Payment for replacing existing damaged pavers as identified in the Contract Documents will be made as new pavers.

No payment will be made for material used to replace pavers damaged during removal or storage.

526-5 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including all materials, equipment, edge restraint curbing, and labor; including any preparation of the base or subgrade not included in the work to be paid for under another Contract item; and all incidentals necessary to complete the work. labor, and incidentals necessary to complete the work.

Payment shall be made under:

Item No. 526- 1- - ~~Pavers,~~ Architectural Pavers ~~per square yard.~~

Roadway – per square yard.

Sidewalk – per square yard.

Remove Existing and Reinstall - per square yard.