

CONCRETE PAVER STRIP

****From Statewide STP SDWK(11)**

xx. DESCRIPTION. This work shall consist of installing concrete paver strips at the locations indicated on the Plans and as directed by the Engineer.

xx. MATERIALS.

(a) Concrete Pavers. Solid interlocking paving units complying with ASTM C 936, made from normal-weight aggregates.

The concrete pavers shall match the size, color, style, and pattern previously installed by the Town of Bradford on Barton Street and shall be approved by the Engineer.

Sample pavers shall be submitted to the Engineer for approval.

(b) Aggregate Setting-Bed Materials.

(1) Graded Aggregate for Subbase. Sound, crushed stone or gravel complying with ASTM D 448 for Size No. 57.

(2) Graded Aggregate for Base. Sound, crushed stone or gravel complying with ASTM D 448 for Size No. 8.

(3) Stone Screenings for Leveling Course. Sound stone screenings complying with ASTM D 448 for Size No. 10.

Provide sand of color needed to produce required joint color.

(4) Separation Geotextile. Woven geotextile fabric, manufactured for separation applications; made from polyolefins or polyesters, with elongation less than 50 percent; complying with AASHTO M 228 and the following, measured per test methods referenced:

a. Survivability. Class 2; AASHTO M 228.

b. Apparent Opening Size. No. 60 sieve, maximum; ASTM D 4751.

c. Permittivity. 0.02 per second, minimum; ASTM D 4491.

d. UV Stability. 50 percent after 500 hours exposure; ASTM D 4355.

(5) Herbicide. Commercial chemical for weed control, registered with the EPA. Provide in granular, liquid, or wettable powder form.

xx. SUBMITTALS.

- (a) Product data for pavers.
- (b) Sieve analysis for aggregate setting-bed materials, according to ASTM C 136.
- (c) Samples for Initial Selection.
 - (1) Each type of unit paver indicated.
 - (2) Joint materials involving color section.
- (d) Samples for Verification.
 - (1) Full-size units of each type of unit paver indicated. Assemble not less than five (5) samples of each type of unit on suitable backing and grout joints.
 - (2) All sample pavers shall be submitted to the Engineer for approval.

xx. QUALITY ASSURANCE.

- (a) Source Limitations. Obtain each type of unit paver and joint material from one source with resources to provide materials and products of consistent quality in appearance and physical properties.
- (b) Mockups. Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - (1) Approved mockups may become part of the completed work if undisturbed at time of Substantial Completion.

xx. DELIVERY, STORAGE, AND HANDLING.

- (a) General. Store pavers on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied.

Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- (b) Cold-Weather Protection. Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.

xx. CONSTRUCTION REQUIREMENTS.

- (a) Examination. Examine areas indicated to receive paving, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

- (b) Preparation. Proof-roll prepared subgrade to identify soft pockets and areas of excess yielding. Proceed with unit paver installation only after deficient subgrades have been corrected and are ready to receive subbase and base course for unit pavers.
- (c) Installation.
- (1) Do not use unit pavers with chips, cracks, voids, discolorations, and other defects that might be visible in finished work.
 - (2) Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.
 - (3) Cut unit pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible. Hammer cutting is not acceptable. For concrete pavers, a block splitter may be used.
 - (4) Joint Pattern. Running bond.
 - (5) Tolerances. Do not exceed 1/32 inch unit-to-unit offset from flush (lippage) nor 1/8 inch in 24 inches and ¼ inch in 10 feet from level, or indicated slope, for finished surface of paving.
 - (6) Expansion and Control Joints. Provide joint filler at locations and of widths indicated. Install joint filler before setting pavers. Make top of joint filler flush with top of pavers.
- (d) Aggregate Setting-Bed Applications.
- (1) Compact soil subgrade uniformly to at least 95 percent of ASTM D 698 laboratory density.
 - (2) Proof-roll prepared subgrade to identify soft pockets and areas of excess yielding. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, and replace with compacted backfill or fill as directed.
 - (3) Place separation geotextile over prepared subgrade, overlapping ends and edges at least 12 inches.
 - (4) Place aggregate subbase and base, compact by tamping with plate vibrator, and screed to depth indicated.
 - (5) Place leveling course and screed to a thickness of 1 to 1-1/2 inches, taking care that moisture content remains constant and density is loose and constant until pavers are set and compacted.
 - (6) Treat leveling course with herbicide to inhibit growth of grass and weeds.

- (7) Set pavers with a minimum joint width of 1/16 inch and a minimum of 1/8 inch, being careful not to disturb leveling base. If pavers have spacer bars, place pavers hand tight against spacer bars. Use string lines to keep straight lines. Fill gaps between units that exceed 3/8 inch with pieces cut to fit from full-size unit pavers.

When installation is performed with mechanical equipment, use only unit pavers with spacer bars on sides of each unit.

- (8) Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500 to 5000-lbf compaction force at 80 to 90 Hz. Perform at least three passes across paving with vibrator. Vibrate under the following conditions:

- (1) After edge pavers are installed and there is a completed surface or before surface is exposed to rain.
 - (2) Before ending each day's work, fully compact installed concrete pavers to within 36 inches of the laying face. Cover pavers that have not been compacted and leveling course on which pavers have not been replaced, with nonstaining plastic sheets to protect them from rain.
- (9) Spread dry sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of sand on the surface for joint filling.
 - (10) Do not allow traffic on installed pavers until sand has been vibrated into joints.
 - (11) Repeat joint-filling process 30 days later.

(e) Repairing, Pointing, and Cleaning. Remove and replace unit pavers that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Provide new units to match adjoining units and install in same manner as original units, with the same joint treatment and with no evidence of replacement.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Concrete Paver Strip) to be measured for payment will be the number of square meters (square feet) installed in the complete and accepted work.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Concrete Paver Strip) will be paid for at the Contract unit price per square meter (square foot). Payment will be full compensation for performing the work specified and for furnishing all materials, including sand bedding, labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.670 Special Provision (Concrete Paver Strip)	Square Foot
900.675 Special Provision (Concrete Paver Strip)	Square Meter