



SECTION 32 11 00
STABILIZER® FOR STABILIZED AGGREGATE PAVEMENT:
FIRELANES, DRIVEWAYS AND PARKING LOTS

PART 1 - GENERAL

1.1 SUMMARY

- A. The work of this Section consists of all paving work and related items as indicated on the drawings and or as specified herein and includes, but is not limited to, the following items:
 - 1. Stabilized Aggregate firelane, driveway, and parking lot surfacing.
- B. Related Sections:
 - 1. Section 31 00 00 – Earthwork
 - 2. Section 32 15 43 – Stabilizer® for Stabilized Aggregate Pathway Pedestrian Access
- C. General Provisions
 - 1. All of the contract documents, including General and Supplementary Conditions and Division I General Requirements, apply to the work of this Section.
 - 2. Examine all drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.
 - 3. Coordinate work with that of all those affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 PERFORMANCE REQUIREMENTS

- A. The following standards and definitions are applicable to the work of this Section to the extent referenced herein:
 - 1. Standard Specifications: Highway Department, Standard Specifications for Highways and Bridges, latest edition.
 - 2. ASTM: American Society for Testing and Materials.
 - 3. AASHTO: American Association of State Highway and Transportation Officials.

1.3 SAMPLES AND SUBMITTALS

- A. Sieve analysis of aggregate for firelanes, driveways, and parking lots.
- B. Samples and or shop drawings for the following: Aggregate for strength and color– firelanes, driveways, and parking lots.
- C. Construction Samples:
 - 1. Stabilized Aggregate firelane, driveway, and parking lot surfacing: Construct a 12' x 24' sample of finished Stabilized Aggregate surface as directed by the Owner's Representative on site.
 - 2. General:
 - a. Schedule mock-up construction so that mock-up can be accepted a minimum of 30 days prior to the application of paving surfaces represented by the mock-up.
 - b. Locate mock-up panel(s) in areas as directed by the Owner's Representative.
 - c. Continue to construct mock-ups until acceptable mock-up is produced (at no cost to the Owner). Acceptable mock-up shall be standard for texture, color and workmanship.
 - d. Use same setting bed and joint mixes used in accepted mock-up in final work unless otherwise directed by Owner's Representative.

- e. Protect accepted mock-ups from damage until completion and acceptance of the work represented by the mock-up.
- f. Remove mock-up panel(s) from the site at completion of the project, unless otherwise instructed by Owner's Representative.

D. LEED Submittals:

- 1. Credit MR 4 – Recycled Content: Attach product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
 - 2. Credit MR 5 – Regional Materials: Attach product data for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
 - 3. Credit MR 6 – Rapidly Renewable Materials: Attach product data and certification letter indicating percentages by weight of rapidly renewable materials for each product. Include statement indicating costs for each product having rapidly renewable material.
- E. Maintenance Instructions: Submit copy(ies) of manufacturer's written maintenance instructions in accordance with 01 73 23 – Operation and Maintenance Data.

1.4 PROJECT/SITE CONDITIONS

- A. Field Measurements: Each bidder is required to visit the site of the work to verify the existing conditions. No adjustments will be made to the Contract Sum for variations in the existing conditions.
 - 1. Where surfacing is indicated to fit with other construction, verify dimensions of other construction by field measurements before proceeding with the work.
- B. Environmental Limitations: Do not install Stabilized Aggregate during rainy conditions or below 40 degrees Fahrenheit and falling.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Installer to provide evidence to indicate successful experience in providing Stabilized Aggregate surface or ability to follow installation instructions.
- B. Mock-ups: Install 4 ft. wide x 10 ft. long mock-up of decomposed granite or 3/8" or 1/4" minus crushed aggregate surfacing with Stabilizer® additive at location specified by owner's representative.
- C. Compaction testing to be provided by contractor, one test per 2,000 square feet of base course.
- D. Manufacturer's technical representative shall visit the site at the start of an installation to ensure the installer understands the correct installation methods to use.

1.6 WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Special Warranty: Submit a written warranty executed by the installer agreeing to repair or replace components of Stabilized Aggregate that fail in materials or workmanship within the specified warranty period. Stabilizer Solutions, Inc. does not warranty "Stabilizer®" purchased from a non-approved Stabilizer Solutions, Inc. licensee. Failures include, but are not limited to, the following:
 - 1. Premature wear and tear, provided the material is maintained in accordance with manufacturer's written maintenance instructions.

- 2. Failure of system to meet performance requirements.
- C. Warranty Period: Contractor shall provide warranty for performance of product. Contractor shall warranty installation of product for the time of one year from completion.
- D. Contractor shall provide, for a period of sixty days, unconditional maintenance and repairs as required.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Stabilizer® for Stabilized Aggregate surfaces provided by the following manufacturer:
 - 1. Stabilizer Solutions, Inc. 33 South 28th St., Phoenix, AZ 85034; phone (602) 225-5900, (800) 336-2468; fax (602) 225-5902; website stabilizersolutions.com; email info@stabilizersolutions.com

2.2 MATERIALS

- A. Sand and crushed stone shall consist of inert materials that are hard and durable, with stone free from surface coatings and deleterious materials.
 - 1. The sand equivalent shall be in the range of 35-55. The R-value shall be a minimum of 71. ASTM testing shall be used for the sand equivalent and R-value determination.
 - 2. Dense graded crushed stone base shall be furnished and installed as required and specified to a 6” compacted depth.
 - 3. Gradation requirements shall be as follows:

U.S. Sieve No.	Percent Passing by Weight
# 1/2"	95 – 100
# 3/8"	90 – 100
# 4	65 – 80
# 8	48 – 63
# 16	40 – 49
# 30	30 – 40
# 50	20 – 27
# 100	10 – 18
# 200	10 - 12

- 4. Acceptable local supplier list to be provided by Architect
- B. Stabilizer® Binder
 - 1. Patented, non-toxic, organic binder that is a colorless and odorless concentrated powder that binds decomposed granite or crushed 3/8” or 1/4" minus aggregate.
 - 2. Product to have 64% pre-consumer recycled content.
 - 3. Product shall have 25 years experience at same formulation.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Base shall be 6” compacted layer of the state’s DOT recommended crushed granular road base. Make any corrections necessary to base furnished and installed to bring gravel to the elevations shown on the drawing.

- B. Pre-soak base material with water and compact to 95% determined by Test Method ASTM D 1557 prior to installing Stabilized Aggregate. Compaction testing to be provided by project owner, one test per 2,000 square feet of base.
- C. Although porous, it is recommended to have proper drainage available to ensure no standing water on surface or adjacent to Stabilized Aggregate, including downspouts when placed under roof overhang and surface drains.
- D. Before proceeding with installation, notify Owner's Representative in writing of unsuitable site/base conditions.

3.2 BLENDING

- A. Stabilizer® shall be thoroughly pre-mixed with aggregate at the rate of 15-lbs of Stabilizer® per 1-ton of aggregate. Verify with Stabilizer Solutions, Inc. for correct Stabilizer® rate for project and climate conditions. Drop spreading of Stabilizer® over pre-placed aggregate or mixing by rototilling is not acceptable for vehicular access. Stabilizer shall be mechanically pre-mixed per manufacturer's recommendations using an approved mechanical blending unit that will adequately mix and blend Stabilizer® with aggregate (Bucket blending is not an approved blending apparatus). Always blend Stabilizer® and aggregate DRY.

3.3 PLACEMENT

- A. Place the Stabilized Aggregate directly on a prepared base, and rake smooth to desired grade and cross section. Place material to sufficient depth to allow 4" for residential or 5" for commercial after compaction. Installation of Stabilized Aggregate to be installed in lifts. If 3" thick compacted for paths (2) 1.5" lifts. If 4" thick compacted for vehicular (2) 2" lifts. If Stabilized Aggregate is pre-moistened before installation entire 3" or 4" lift may be installed. DO NOT place on filter fabric. Contact Stabilizer Solutions, Inc. for installation on slopes greater than 8%.

3.4 WATERING

- A. Water heavily for full-depth moisture penetration of profile. Water activates Stabilizer®, saturate to total depth. Apply 25 to 45-gallons of water per 1-ton. Application test moisture using a probing device reaching full depth.
- B. Contractor shall wait a minimum of 6 – 72 hours or until such time that the Stabilized Aggregate is able to accept compaction from a 2 to 5 ton roller without separation, plowing or any other physical compromise of the aggregate.
- C. If surface aggregate dries significantly quicker than subsurface material, lightly mist surface before compaction.

3.5 COMPACTION

- A. Compact Stabilized Aggregate to 85% relative compaction by equipment such as; a 2 to 5-ton double drum roller making 3 to 4 passes. Do not begin compaction for 6 hours after placement and up to 72 hours. DO NOT use a vibratory plate compactor or vibration feature on roller, as vibration separates large aggregate particles. If pumping or pancaking of surface occurs, surface is still too wet to roll.
- B. Take care in compacting Stabilized Aggregate when adjacent to planting and irrigation systems. Hand tamping with 8" or 10" hand tamp recommended.
- C. Lightly spray surface area following compaction. Do not disturb aggregate surface with spray action.

3.6 INSPECTION

- A. Finished surface shall be smooth, uniform and solid. There shall be no evidence of chipping or cracking. Cured and compacted surface shall be firm throughout profile with no spongy areas. Loose material shall not be present on the surface after installation, but may appear after use and according to environmental conditions. Surface shall remain stable underneath the loose granite on top with a 'natural' look. Any significant irregularities in Stabilized Aggregate surface shall be repaired to the uniformity of entire installation.

3.7 PROTECTION

- A. Contractor shall furnish and install construction fence around new surface to prevent public access. Maintain in place for a minimum of 12 - 72 hours after installation, or as directed by the Owner' Representative.
- B. Contractor shall notify Owner's Representative to restrict landscape irrigation near surface until drying period is complete. Standing water on surface and adjacent to path shall be restricted at all times.

3.8 MAINTENANCE

- A. Remove debris, such as paper, grass clippings, leaves or other organic material by mechanically blowing or hand raking the surface as needed. Any plowing program required shall involve the use of a rubber baffle on the plow blade or wheels to lift blade 1/4" off of paving surface.
- B. During the first year, a minor amount of loose aggregate may appear on the surface (1/16 to 1/4"). If material exceeds a 1/4", redistribute material over entire surface. Water thoroughly to 1" depth and compact with power roller of no less than 1000-lbs. This process shall be repeated as needed.
- C. If cracking occurs, simply sweep fines into cracks, water thoroughly and hand tamp with an 8" to 10" hand tamp .

3.9 REPAIRS

- A. Excavate damaged area to the depth of the Stabilized Aggregate and square off sidewalls.
- B. If area is dry, moisten damaged portion lightly.
- C. Pre-blend the dry required amount of Stabilizer® powder with the proper amount of aggregate in a concrete mixer.
- D. Add water to the pre-blended Stabilized Aggregate. Thoroughly moisten mix with 25 to 45 gallons per ton of pre-blended material or to approximately 10% moisture content.
- E. Apply moistened pre-blended Stabilized Aggregate to excavated area to finish grade.
- F. Compact with an 8" to 10" hand tamp or use a larger 1000 lb. roller. Keep traffic off areas for 12 to 48 hours after repair has been completed.

END OF SECTION