



Organic Lock Aggregate Paving

SECTION [32 15 40] [02730] STABILIZED CRUSHED AGGREGATE PAVING

Note: These specifications were current at the time of publication but are subject to change without notice. Please confirm the accuracy of these specifications with the manufacturer and / or distributor prior to installation.

SPECIFIER NOTE: This product guide specification is written according to the Construction Specifications Institute (CSI) Format, including MasterFormat, SectionFormat, and PageFormat, as contained in the CSI Manual of Practice. Section numbers are based on MasterFormat 2004 except that numbers shown in blue are based on MasterFormat 1995.

The section must be carefully reviewed and edited by the Architect to comply with project requirements. Coordinate this section with other specification sections and the drawings. Drawings must show location and extent of stabilized granite surfacing. Show details required at adjoining materials and special conditions. The depth of base coursed and the thickness of stabilized granite surfacing can be either shown on the drawings or described in the specifications; edit this section carefully to avoid conflicting requirements.

Delete all italicized "Specifier Notes" when editing this section. FOR MORE INFORMATION: Contact Gail Materials at www.GailMaterials.net or call 951-667-6106.

PART 1: GENERAL

1.1 Section Includes

- A. Section Includes: Supply and installation of stabilized crushed aggregate paving as indicated in the Contract documents, including:
 - 1. Base Course
 - 2. Crushed Aggregate Paving
 - 3. Organic Binder for Crushed Aggregate

1.2 Related Sections

SPECIFIER NOTE: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 31 20 00 [02310] – Earth Moving [Grading]
- B. Section 31 23 13 [02335] – Subgrade Preparation
- C. Section 32 11 23 [02720] – Aggregate Base Courses

1.3 References

- A. ASTM C136 – Sieve Analysis of Fine and Coarse Aggregates.
- B. ASTM D2419 – Sand Equivalent Value of Soils and Fine Aggregates.

1.4 Submittals

- A. Submit in accordance with Section 01 33 00 [01330] - Submittal Procedures:
 - 1. Manufacturer’s product data sheet.
 - 2. [1 quart] [] sample of base course.
 - 3. Base Course gradation indicating that the product meets specifications.
 - 4. [1 quart] [] sample of stabilized crushed aggregate paving.
 - 5. Stabilized crushed aggregate gradation indicating that the product meets specifications.

1.5 Mock-Up

SPECIFIER NOTE: *Do not include mock-up unless project is large or has special requirements.*

- A. Install [20] [] square feet minimum of stabilized crushed aggregate paving including base course, at location approved by [Architect] [Engineer].
- B. Allow [Architect] [Engineer] to view mock-up before proceeding with rest of stabilized crushed aggregate paving.
- C. [Approved mock-up may remain as part of completed Work.] [Remove mock-up after acceptance of work specified in this Section.]

1.6 Delivery, Storage and Handling

- A. Protect stabilized crushed aggregate mix from contamination. Store under cover.

1.7 Sequencing

- A. Do not install work specified in this Section prior to acceptance of earth moving.
- B. Coordinate work specified in this Section with work specified in other Sections to minimize cutting of and operation of heavy equipment over installed stabilized crushed aggregate paving.
- C. Do not install stabilized crushed aggregate surfacing when subbase is wet at saturated field capacity.

PART 2: PRODUCTS

2.1 Materials

SPECIFIER NOTE: Base Course Materials:

- 1. Comply with MTO OPSS 1010 – “Material Specification for Aggregates – Granular A, B, M and Select Subgrade Material” specification for Granular A material.
- B. Crushed Aggregate Materials:
 - 1. Crushed Aggregate Material shall consist of sound, angular, durable particles.
 - 2. Gradation, in accordance with ASTM C136:

Sieve	Sieve Size (mm)	Percent Passing
½”	12.7	100%
3/8”	9.51	90-100%

4	4.76	50-100%
30	0.595	25-55%
100	0.149	10-25%
200	0.074	5-18%

3. Aggregate color shall be selected from a pre-approved material pallet from Gail Materials 951-667-6106, www.gailmaterials.net.

C. Organic Binder:

1. Organic-Lock™ self-healing organic binder by Gail Materials, Corona, CA; phone 951-667-6106; fax 951-667-6102; www.gailmaterials.net.

SPECIFIER NOTE: *Delete one of the two following paragraphs; coordinate with Division 01 requirements.*

2. Requests for substitutions will be considered in accordance with provisions of section 01 25 00 [01630] Substitution Procedures.
3. Substitutions: Not permitted.

SPECIFIER NOTE: *Pre-blended Organic Lock™ Aggregate Paving Mix Crushed Aggregate Material with Organic-Lock™ binder using a pug mill that includes a weigh-belt feeder.*

2. Mix rate of Organic-Lock depends on the selected material as well as the application and shall be determined by Gail Materials.

E. Accessories:

1. Water: Free from contaminants that would discolour or be deleterious to stabilized aggregate paving.

PART 3: EXECUTION

3.1 Examination

- A. Examine grading and subsoil conditions. Do not proceed until conditions are acceptable.

SPECIFIER NOTE: *A qualified engineer should determine subgrade preparation and base course installation requirements.*

3.2 Preparation of Subgrade

- A. Excavate to depth required so that finish grade can be established as noted on plans.
- B. [Remove excavated soil from site. [Spread excavated surface as specified in Section [31 10 00] [02310] [_____]].
- C. Compact subgrade to 95% Modified Proctor Density. Excavate soft and unstable areas of subgrade that cannot be compacted to standard noted, fill and compact with approved granular material.

3.3 Base Course

- A. Place base course material over subgrade to depths and dimensions shown on drawings in maximum (6") lifts compacted to 95% Modified Proctor Density.

3.4 Pre-blended Organic Lock™ Aggregate Surfacing

- A. For typical pathways or trails install Organic Lock™ Aggregate Paving to a compacted depth of 4 inches. For areas of vehicular use or equal install Organic Lock™ Aggregate Paving to a compacted depth of 6 inches.
- B. Prewetted Organic Lock Aggregate Paving can be installed in one lift for pathway, trails or equal application. For areas of vehicular use of compacted depths of 6 inches or greater shall be installed at 3 inch compacted lifts. Estimated compacted max density is +/- 129 lbs/cu. ft. The moisture percentage in the prewetted Organic Lock Aggregate Paving will be determined by Gail Materials and will depend on selected aggregate.
- C. For applications that are not prewetted by Gail Materials the Organic Lock Aggregate Paving will be delivered dry. Gail Materials will calculate the required gallons of water to be added per ton of selected material in order to reach the ideal moisture percentage for installation. In order to ensure that water is being applied correctly the Organic Lock Aggregate Paving shall be bucket blended or equal prior to spreading. Gail Materials does not recommend installing Organic Lock Aggregate Paving in place and then watering in either lifts or from the surface down.
- D. Depending on weather conditions, the time required to allow the material to set-up before it can be compacted varies. Generally, this time period is between 6 and 48 hours. The top layer should be firm and not sticky. Compaction can begin when you can walk on the material without significantly sinking in and material does not feel muddy. If material sticks to the roller during compaction, allow the material to further dry. Do not allow the material to completely dry out.
- E. Make 4-6 passes using a 1-10 ton double or single static drum roller, or equivalent. Do not use a vibratory compactor or vibratory setting on the compactor. The contractor shall select the proper size roller for the appropriate application.
- F. After final compaction, the surface shall be true to elevation and shall not vary by more than (1/4") tested with a straight edge at any location on the surfaces. Surfaces can either be crowned at a minimum of 2% and/or installed with a cross slope of minimum 1%.
- G. Compaction testing shall not be conducted until the Organic Lock Aggregate Paving has been allowed to thoroughly dry and cure.

3.05 Adjust and Clean

- A. All paved areas or adjacent surface shall be brushed clean and excess materials shall be removed from the work site and disposed of in an approved dump location.

3.06 Protection

- A. Do not allow traffic on stabilized crushed aggregate paving after placement or until compacted stabilized crushed aggregate paving has fully cured. This time may vary depending on weather conditions.
- B. Protect stabilized crushed aggregate paving surface from damage until Project completion. Repair damaged areas to match specified requirements.

3.07 Maintenance & Repairs

- A. Loose aggregate will appear on the surface over time and is a natural occurrence. If excess material becomes loose, redistribute the material over the surface, water thoroughly and re-compact with a minimum 1-ton drum roller.
- B. To repair, excavate damaged area and scarify exposed stabilized crushed aggregate paving. Pre-blend replacement crushed aggregate material with Organic-Lock™ Aggregate Paving at the specified rate. Apply material to the excavated area and compact. Thoroughly water the material and allow the material to cure, but not completely dry out. Re-compact the material, ensuring that the final grade and crown are maintained. Do not use a vibratory compactor.

END OF SECTION