

GraniteCrete Specification Guide

CRUSHED AGGREGATE BLENDED WITH GRANITECRETE ADMIXTURE SURFACING

COORDINATE WITH DRAWINGS: Show location and extent of stabilized aggregate surfacing. Show details required at adjoining materials and special conditions. The depth of base course and the thickness of stabilized aggregate surfacing can be either shown on the drawings or described in the specifications; edit this section carefully to avoid conflicting requirements.

FOR MORE INFORMATION: Contact GraniteCrete Incorporated, www.granitecrete.com, email info@granitecrete.com, or call (800) 670-0849.

PART 1: General

1.1 SUMMARY

- A.** Section Includes: Crushed aggregate blended with GraniteCrete admixture surfacing
- B.** Related Work:
 - 1. Section – Earth Moving []: Grading
 - 2. Section – Base Courses []: Base Course

1.2 REFERENCES

- A.** ASTM C136-Sieve Analysis of Fine and Coarse Aggregates
- B.** ASTM D2419- Sand Equivalent Value of Soils and Fine Aggregates
- C.** Caltrans Standard Specifications for Public Works Construction
- D.** RIS-Redwood Inspection Services Grades of California Redwood

1.3 SEQUENCING

- A.** Do not install work specified in this section prior to acceptance of earth moving. Coordinate work specified in this section with work specified in other sections to minimize cutting of - and operation of - heavy equipment over newly-installed surfacing.
- B.** Submit in accordance with Section []--Submittal Procedures

- a. Manufacturer's product data sheet and installation instructions indicating that product complies with specifications for:
 - i. Crushed aggregate blended with GraniteCrete admixture surfacing
 - ii. Edging []
- b. Submit a quartjar size [] sample[s] of crushed aggregate with admixture in color[s] specified [in manufacturer's standard colors for selection].
- c. Redwood Edging: Submit evidence of chain-of-custody in accordance with Forest Stewardship Council

1.4 QUALITY ASSURANCE/FIELD QUALITY CONTROL

- A.** Installer qualifications: Installer to provide evidence to indicate successful installations of 25,000 square feet or more, with an additional 6,000 square feet per year in providing decomposed granite surfacing containing GraniteCrete admixture and/or ability to follow installation instructions.

GraniteCrete Certified Installers can be found on our website here:

[Professional Installation](#).

Use of GraniteCrete Certified Installers is highly recommended.

- a. Materials shall comply with manufacturer's specifications.
- b. For projects being installed by other than a GraniteCrete Certified Installer, GraniteCrete strongly recommends the use of GraniteCrete personnel onsite to oversee the installation process. Warranty is void otherwise.

B. Porous Base Rock Testing:

1. Testing shall occur during installation at [] ton increments of shipping for sieve conformance. Results shall be submitted prior to completion of the stone base installation.
 - a. The stone field area shall have a permeable rate no less than 14" per hour. For $\frac{3}{8}$ " minus stone, the permeable rate should be 2.7" per hour. The testing shall be per Din 8035 Part 7, ASTM 2434 (constant head), or ASTM F2898 testing methods.
 - b. In addition to the lab testing, after installation of any aggregate base cross-section, designed to conduct rainfall to the sub-soils and/or under-drain system, the finished aggregate base shall be tested, *in situ* for infiltration rate, using method ASTM F2898. **The test shall be performed by a registered Geotechnical Engineer or certified agronomist.**

2. The Contractor is responsible to meet this performance specification, before proceeding with installation, and shall bear the cost of the on-site testing and the cost of any additional work necessary to achieve compliance with the specification.
3. All test results shall be logged and documented by the Owner's Technical Representative or Geotechnical Engineer. If at any time the processed stone base does not meet specifications, it shall be the Contractor's responsibility to restore, at his expense, the processed stone base to the required grade, cross-section and density.
4. After the contractor has independently confirmed compliance with all the above tolerances (planarity and elevation verified by a licensed surveyor and compaction, gradation, & permeability verified by Geotechnical Engineer, he shall notify the appropriate party and schedule a final inspection for approval. The contractor shall make available an orbital laser system to the Inspection Team for the inspection process.
5. The compaction rate for porous base rock should be 88%. The compaction rate for non-porous base rock should be 95%.

C. Standard Specifications: Shall mean the California Department of Transportation Standard Specifications, latest active edition.

1.5 MOCK-UP

- A.** Construct mockup of [20] [] square feet minimum of crushed aggregate blended with GraniteCrete admixture surfacing, including [base course and] edging, at location approved by [Architect] [Engineer] [Owner's Representative]. Build mockup [] days prior to installation. Intent of the mockup is to demonstrate surface finish, texture, color and standard of workmanship
- B.** Notify [Architect] [Engineer] [Owner's Representative] [] days in advance of mockup construction.
- C.** Allow [Architect] [Engineer] [Owner's Representative] to view and obtain approval of mock-up before proceeding with rest of crushed aggregate blended with GraniteCrete admixture surfacing.
- D.** Approved mock-up may remain as first in place construction. Remove mock-up after acceptance of work specified in this Section.

1.6 DELIVERY, STORAGE, AND HANDLING

- A.** Deliver all GraniteCrete Admixture [bags] [bulk] materials in original, unopened packaging. Protect materials and aggregate from contamination with foreign matter. Store under waterproof cover and protect from dampness.

1.7 FIELD CONDITIONS

- A. Do not install crushed aggregate blended with GraniteCrete admixture surfacing when sub-base is wet at saturated field capacity.
- B. Do not install GraniteCrete materials during rainy conditions or below 40 degrees Fahrenheit.

PART 2: PRODUCTS**2.1** CRUSHED AGGREGATE BLENDED WITH GRANITECRETE ADMIXTURE SURFACING MATERIALS.**A.** Acceptance Manufacturer:

1. Specification is based on products by GraniteCrete, Inc.
P.O. Box 1574
Carmel Ca. 93921
Phone: (800) 670-0849; Fax: (800) 670-0849
www.granitecrete.com

GraniteCrete admixture is an all-natural product and does not contain oils, polymers, resins, or enzymes.

2. Substitutions: [Not allowed.] [Products by other manufacturers that comply with specifications will be considered in accordance with Section []-
Instructions to Bidders. []
-Substitution Procedures.

B. Decomposed Granite (DG), crushed aggregate.

1. DG shall have a 3/8" maximum gradation, produced from naturally friable rock/granite with enough fines to produce a smooth walking surface. Materials should be free from clay lumps, organic matter, and deleterious material. Blends of coarse sand and rock dust are not acceptable.
2. Use a single supply source for the entire quantity required.
3. Gradation, in accordance with ASTM C136:
4. Color: Should have gold to yellow hues. To be selected by [Architect] [Engineer] from manufacturer's standard colors.
5. Supplier: Vineyard Rock Products, Hollister, CA. - (831) 637-6443[Or

equal].

- C. Aggregate binder: Provide GraniteCrete Admixture. Color: [Natural] [Adobel]
[Sand] [Ash Gray]

2.2 BASE COURSE MATERIAL

- A. Class II Permeable Base Rock.
- B. Soft stone materials (i.e. sandstone, limestone and shale materials) are not suitable. Stone supplier shall certify that all supplied stone will be clean of this type of stone. All types of stone shall meet the following stability requirements.

TEST METHOD	CRITERIA
LA Abrasion (Calif. Test 211)	Not to exceed 40
Durability Index (Calif. Test 229)	Not less than 40

In addition, if stone stability to water and vehicles is in question, Owner has the right to perform additional testing to ensure material shall adhere to requirements of Caltrans Section 68, as well as additional applicable ASTM tests.

- C. All testing fees shall be paid for by the Contractor.
- D. Permeable Stone: Stone base materials shall be washed, 100% fractured, by mechanical means, with elongated characters on each individual particle larger than 1/4". Materials shall be devoid of mineral fines. All particles smaller than 1/4" shall be produced by manufactured means only. Rounded sands or aggregates are prohibited.
- E. Delivery Moisture Content: Processed stone shall contain 90% to 110% of the optimum moisture content to ensure that fines do not migrate in transit or during placement and to facilitate proper compaction. The contractor shall ensure that aggregate leaving the source plant meet this requirement. The contractor is required to apply water to the processed stone on site to attain and maintain this minimum moisture content.
- F. Aggregate or aggregate blends of permeable stone shall conform to the following gradation:

SIEVE	Sieve Sizes Metric (mm)	Percent Passing by Weight* Intended Result	Range
1"	25.0	100	100
3/4"	19.0	100	90-100
3/8"	9.52	78	40-100

No. 4	4.75	36	25-40
No. 8	2.36	26	18-33
No. 30	0.600	11	5-15
No. 50	0.300	6	2-10
No. 200	0.075	2	0-5
Durability Index (CTM# 229)		40 min	
Sand Equivalent (CTM# 217)		70	
LA Rattler (CTM# 211)			500 Revs, less than or = 40%

* AASHTO Test Method T-27

- G.** Specs for $\frac{3}{8}$ " minus and $\frac{3}{4}$ " minus Crushed Aggregate Following ASTM D 422-63/07; D 1140-14:

100% fractured on all sides with no rounded particles
Sieve 200 - Non-expansive Clay Fines - not to exceed 18%

The below test is for $\frac{3}{8}$ " minus stone, at approximately 90% compaction when tested.

GraniteCrete Sieve Analysis Cumulative Percent Passing

Sieve Size	% Passing Sieve Ranges	
1/2"	100	100
3/8"	95	98
#4	85	90
#8	75	85
#16	55	70
#30	38	57
#50	24	33
#100	15	24
#200	9	18
#400	0	9

2.3 ACCESSORIES

- A.** Water: Free from contaminants that would discolor or be deleterious to crushed aggregate blended with GraniteCrete admixture surfacing.

Installation: Do not use a vibratory plate to compact the GraniteCrete. Use a dual-drum peanut roller for 5,000+ square feet installations, and a large dual-drum peanut roller for 12,000+ square feet installations.

- B.** [Steel [Edging]]:

1. Dimensions: [3/16"] [1/4"] [] thick by [4-inch] [] deep, with overlapping joints.
2. Stakes: 3/16" x 1-3/4" wide at top tapering to point at bottom; located 36" o.c. maximum.
3. Finish: [Baked-on [green] [brown] [black] paint.] [Hot dipped galvanized.]

- C.** [Redwood [Edging]]:

1. Material: RIS Merchantable Heart Grade from sustainably managed forests as certified by the Forest Stewardship Council.
2. Dimensions: Nominal [2x6] [] inches
3. Stakes: Steel, 3/16" x 16" long x 1-3/4" wide at top tapering to point at bottom; located 36" o.c. maximum.
4. Finish: Provide in color to be selected by [Architect] [Engineer] from manufacturer's standards.

PART 3: EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A.** Excavation: Excavate to depth required so edges of crushed aggregate blended with GraniteCrete admixture surfacing will match adjacent grades and have a maximum cross slope of 1 percent. [Remove excavated soil from site.]
- B.** Sub-grade Preparation: Comply with Caltrans Standard Specifications Section 301-1 – "Sub-grade Preparation."

- C. Base Course Installation: Class II permeable base rock at 90% compaction.
- D. Edging: Install flush with crushed aggregate blended with GraniteCrete admixture. Provide sufficient stakes to secure in place.

3.3 INSTALLATION: There are two installation methods for GraniteCrete: "Dry" and "Wet."

The **dry method** is for installations up to 10,000 square feet (most home applications). The **wet method** is for installations over 10,000 square feet (most large, commercial installations) and may require the use of a volumetric concrete truck.

The following installation instructions have been developed to help ensure a blemish-free, high-quality installation. While GraniteCrete looks similar to concrete, the installation of GraniteCrete follows a different procedure. For best results, follow the instructions below carefully. For assistance, contact GraniteCrete, Inc. at 800-670-0849.

Installation Depth (also known as "lift")

For **residential/pedestrian applications**, GraniteCrete is installed as a 3-inch thick layer ("lift") over a 4-inch subgrade of compacted Class II base rock. For **commercial/light vehicular applications** such as driveways, bicycle paths and cart paths, GraniteCrete is installed as a 4-inch thick layer (lift) over a 6-inch subgrade of compacted Class II base rock. Compaction rates for all applications are 88%–92%.

Measurements

An online calculator to assist you with estimating the amount of material needed to complete your project can be found on the GraniteCrete website here:

<https://www.granitecrete.com/job-estimator/>

GraniteCrete: Residential/Pedestrian Application - (2 bag mixture) One cubic yard of aggregate/decomposed granite and two (85 lbs) sacks of GraniteCrete admixture combined covers 108 square feet at a 3-inch thickness. **Note:** Aggregate/decomposed granite should be 3/8" minus material.

Commercial /Light Vehicular Application - (3 bag mixture) One cubic yard of aggregate/decomposed granite and three (85 lbs.) sacks of GraniteCrete admixture combined covers 82

square feet at a 4-inch thickness. **Note:** Aggregate/decomposed granite should be 3/8" minus material.

Class II Base Rock: Residential/Pedestrian Application - After final compaction, baserock should have a 4-inch depth.

Commercial/Light Vehicular Application - After final compaction, baserock should have a 6-inch depth.

Mixing Ratios

GraniteCrete: Residential/Pedestrian Application - (2 bag mixture) The aggregate/decomposed granite (DG) is mixed with GraniteCrete admixture at an 11:1 ratio (eleven (11) units of DG to one (1) unit of GraniteCrete, measured in volume). This can be measured using "shovelfuls" or other measuring methods; maintaining the 11:1 ratio is what is important.

Commercial/Light Vehicular Application - (3 bag mixture) The ratio for commercial applications is eleven (11) units of decomposed granite to one-and-one-half (1.5) units of GraniteCrete admixture.

Note: Depending on the mixing equipment available, it may be necessary to prepare GraniteCrete in batches. Batches can be measured using "shovelfuls" or other measuring methods; maintaining the appropriate ratio is important.

Installation Instructions - "Dry" Method

- 1. Class II Base Rock:** Moisten and compact base rock on entire installation area to an even depth of 4-inch or 6-inch, depending on residential or commercial application. A vibratory plate can be used to compact the base rock; it should **not** be used to compact the GraniteCrete for residential installations.
- 2. GraniteCrete:** Wheelbarrow the prepared GraniteCrete/DG mixture to the installation site and place a layer of the mixture to one-half of the desired final lift.
- 3.** Moisten the material with a hose end trigger sprayer attachment, avoiding puddling. Rake area lightly to evenly distribute water throughout the mix or "lift". Walking on the area is perfectly acceptable; initial compaction can be

performed by walking on the edges and corners.

4. Install second lift as above; when doing this, make sure to pay particular attention to the edges to ensure even material height, and moisten to dampen mixture.
5. Moisten until both lifts are damp. Proper moisture content can be checked by clenching your fist around the GraniteCrete, when the mixture just stays together and the color just starts to transfer to your hand, GraniteCrete is ready to compact.
6. **Compaction:** After proper moisture is achieved for compaction, hand tamp (with a 10" hand tamp) around benches, sign posts, corners, boulders, et cetera. Pay particular attention to corners and edges to ensure tight compaction.
7. Make several passes with a 36" lawn roller (filled with water), or for larger installations, a 36" walk-behind or riding-roller in static position. Hand tamp out any imperfections with a 6" wooden masonry float.
8. Make sure to keep your 10" hand tamp, lawn roller, and wooden floats clean at all times. Fill in any divots with fresh, loose material (removing any larger stone) and hand tamp with the wooden floats to match existing finish.
9. When laying GraniteCrete in batches, be sure to use the **cold joint** method below to ensure a blemish-free installation.
10. **Finishing:** If desired, lightly sweep finish surface with a medium bristled broom. Then make several more passes with the lawn roller until the desired surface texture is achieved. With larger installations, a roller in static position can be used, making sure to keep drum clean at all times. Remove spoils off the surface.
11. **DO NOT ALLOW GRANITECRETE TO DRY DURING INSTALLATION. MIST LIGHTLY WITH A HOSE END SPRAY HEAD AS NECESSARY OR COVER WITH A PLASTIC TARP.**
12. The final step for a GraniteCrete installation is a dampening with water of all newly-installed and compacted GraniteCrete materials. Using a shower head/spray hose attachment, moisten the entire newly-installed GraniteCrete area - **avoid puddling**. For best results, moisten all newly-installed GraniteCrete paving a second time the following 1 to 5 days, as practical. **Slow curing of GraniteCrete is important to avoid cracking.**

Installation Instructions - "Wet" Method

After DG and GraniteCrete have been mixed together but BEFORE installation has begun: Mix thoroughly and moisten with water until the GraniteCrete mixture begins to marble or clump together. Squeeze the mixture in your fist and open your hand.

When the color has just started to transfer onto your hand and the mixture just begins to stay together in a clump, it's ready for installation.

- 1. Class II Base Rock:** Moisten and compact base rock on entire installation area to an even depth of 4-inch or 6-inch, depending on residential or commercial application. A vibratory plate can be used to compact the base rock; it should **not** be used to compact the GraniteCrete for residential installations.
- 2. GraniteCrete:** Wheelbarrow the prepared GraniteCrete/DG to the installation site and spread the mixture over the compacted base rock.
- 3. Compaction:** Walking on the area is perfectly acceptable; initial compaction can be performed by walking on the edges and corners. Rake or grade area with the flat side of a landscape or asphalt rake (Do not use tang side), until the GraniteCrete is one inch above finish grade.
- 4.** Once initial compaction has been completed, hand tamp (with a 10" hand tamp) around benches, sign posts, corners, boulders, et cetera. Pay particular attention to corners and edges to ensure tight compaction.
- 5.** Make several passes with a 36" lawn roller (filled with water), or for larger installations, a 36" walk-behind or riding-roller in static position. Hand tamp out any imperfections with a 6" wooden masonry float.
- 6.** Make sure to keep your 10" hand tamp, lawn roller, and wooden floats clean at all times. Fill in any divots with fresh, loose material (removing any larger stone) and hand tamp with the wooden floats to match existing finish.
- 7.** When laying GraniteCrete in batches, be sure to use the **cold joint** method below to ensure a blemish-free installation.
- 8. Finishing:** If desired, lightly sweep finish surface with a medium bristled broom. Then make several more passes with the lawn roller until the desired surface texture is achieved. With larger installations, a roller in static position can be used, making sure to keep drum clean at all times. Remove spoils off the surface.
- 9. DO NOT ALLOW GRANITECRETE TO DRY. MIST LIGHTLY WITH A HOSE END SPRAY HEAD AS NECESSARY OR COVER WITH A PLASTIC TARP.**
- 10.** The final step for a GraniteCrete installation is a dampening with water of all newly-installed and compacted GraniteCrete materials. Using a shower head/spray hose attachment, moisten the entire newly-installed GraniteCrete area - avoid puddling. For best results, moisten all newly-installed GraniteCrete paving a second time the following 1 to 5 days, as practical. Slow curing of GraniteCrete is important to avoid cracking.

The following information is applicable to BOTH installation methods.

You may walk on GraniteCrete immediately after installation. However, like concrete, GraniteCrete gets stronger with time. Ideally, stay off the newly-installed GraniteCrete areas for at least one day; after that, foot traffic is allowed. Vehicular traffic should avoid newly installed areas for 5 – 7 days.

Newly installed GraniteCrete paving surfaces are fully cured in 28 days. At that time, the entire surface should be blown or swept off to eliminate loose surface materials. Minor cracking may take place. However, over time, the aggregate fines will fill in the minor cracks and they should disappear. Occasional blowing off of the surface will help to minimize loose surface materials.

Cold Joint Methods

Cold joints can be used at the end of the work day.

Method One:

1. "Between pours," stop at an area that makes the joint location look intentional. Take a chalk snap line just back from loose GraniteCrete into the compacted area and create a chalk line. Use either a masonry blade - or a square-nose shovel - and cut a straight line across the installation.
2. Continue with installation. Place newly mixed GraniteCrete into area, being careful not to overlap existing compacted material. With a concrete trowel or similar tool, tamp the new material at a tapered, 45 degree angle 1" above the finished grade and compact. If necessary, "feather" in with a medium-bristled broom.

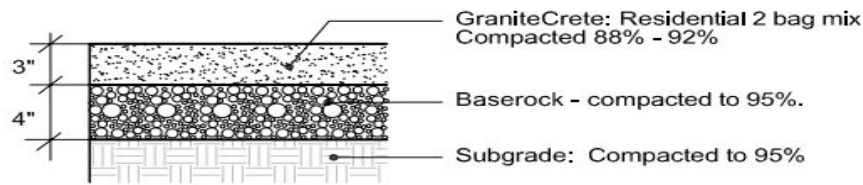
Method Two:

1. Place a 2"X4" or 2"X6" piece of wood across the installation, stake it, and finish compacting the material. Leave the board in place overnight.
2. The next day, carefully lift the wood up and away from the installed GraniteCrete. Continue the installation process as per step 2 under Method One.

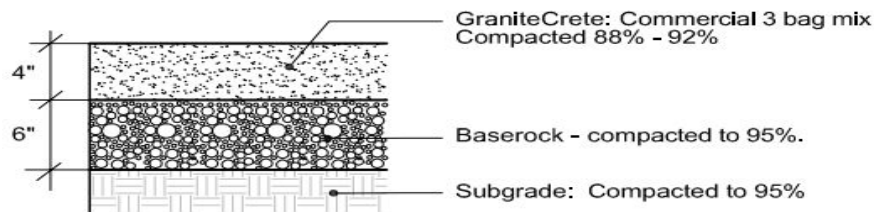
Installing for Vehicular Traffic

Installing for vehicular traffic is nearly identical to the method above, **EXCEPT** you will use a vibratory plate or static riding roller to compact the GraniteCrete, after final compaction by a lawn roller.

Cross-section Details



① GraniteCrete Paving - Residential/Pedestrian



② GraniteCrete Paving - Commercial/Light Vehicle

Recommended Equipment

Tools	Materials
Rounded point and flat edge shovels	GraniteCrete Admixture bags (85 lbs.)
6 cubic foot cement mixer or volumetric concrete mixer	3/8" minus aggregate/ decomposed granite
Wheelbarrow	Class II Base Rock or Class II Permeable Base
8" or 10" hand-tamps	Curbing or Header Board materials (if desired)
Hose w/spray nozzle	Water source

Landscape and asphalt rake w/flat edge	
Heavy lawn roller	
Medium bristled push broom	
(2) 6" Wooden Floats (1) Steel Float to keep hand tamps clean	

A large commercial project may require the use of a volumetric concrete truck.

Please refer to our website for further information:

<https://www.granitecrete.com/installation/>

3.4 Important Notes:

- A. Do not allow GraniteCrete to dry during installation. Mist lightly with a hose end spray head as necessary - **avoid puddling** - or cover with plastic tarp.
- B. Non-compacted - or poorly-compacted - GraniteCrete top layer will result in loose and pebbled materials. Edge and corner compaction may require special attention with a hand tamp during installation.
- C. Non-compacted - or poorly-compacted - base rock may result in failure of top layer of GraniteCrete.
- D. Squeeze the mixture in your fist and open your hand. When the color has just started to transfer onto your hand and the mixture just begins to stay together in a clump, it's ready for installation. Excessive moisture level may result in "sticky" materials complicating the quality of the finish surface or proper compaction. If the material is too wet, it may be placed on the bottom of the installation, with material that has a better moisture content on top.
- E. Aggregate/decomposed granite materials should meet the sieve specifications in this Specification Guide
- F. Surface shall follow overall contours of landscape. Flat areas shall be [sloped] [crowned] for drainage. Slope [2.0%] [] percent minimum to drain away from structures.
- G. Compaction rates for all applications are 88% - 92%.
- H. Please Note: 3/8" minus aggregate comes in different colors. GraniteCrete™ samples reflect the use of a Golden Granite decomposed aggregates.. Mock-ups using your local aggregate source is strongly suggested.
- I. Take care compacting adjacent to planting and irrigation systems.
- J. Saw cut/trowel/install expansion joints every 5' in narrower paths, every 12' in wider paths, and at every engineered stress areas.

- K. Cover finished surface, when practical, to achieve maximum curing period. See Section 3.5.
- L. Minimum Compacted Thickness (See Section Details):
 - 1. [Residential/Pedestrian Paths] []: [3] inches.
 - 2. [Commercial/Light Vehicular Drives] []: [4] inches.
- M. Completed, finished surface shall be of consistent quality and free of deleterious materials such as organic materials, nails, stones, and loose material. Surface shall not have depressions or humps greater than [1/4] [] inch in ten feet. Cold joints, if any, should be inconspicuous.

3.5 CURING PERIOD / PROTECTION

- A. **For Driveway Installations ONLY:** Do not allow traffic on crushed aggregate blended with GraniteCrete admixture surfacing for 5 days after placement or until compacted crushed aggregate blended with GraniteCrete admixture surfacing has fully cured. [Cover for extended curing period].
- B. Protect crushed aggregate blended with GraniteCrete admixture surfacing from damage until project completion. [Repair damaged areas to match specified requirements].

3.6 MAINTENANCE & REPAIRS

- A. Follow manufacturer's recommendations.
- B. Maintenance: Depending on the end users desired finish surface, maintenance may require occasional blowing off or brooming of paved surface. Depending on quality of compaction at time of installation, a thin veneer of loose aggregate material is typical after the full 28 days cure period. If cracking appears in a GraniteCrete surface, broom loose aggregate "fines" into cracks and compact with a rubber mallet.
- C. Repair: When repairing GraniteCrete it is important to use the original aggregate/decomposed granite and the original GraniteCrete Admixture color to match previously installed materials. If the paved surface has large areas of raveled material (loose aggregate/decomposed granite) the initial installation may not have been properly compacted, or blended materials did not have proper compaction, or optimum moisture content during installation. **GraniteCrete must not be allowed to dry prior to final compaction.** The following are suggestions for repair of raveled materials:
 - 1. For the large loose areas, a minimum of a 3-inch of GraniteCrete can be installed. The repair areas need to be

saw-cut at agreed length, removed, and re-installed. A portable concrete mixer or wheelbarrow can be used. Batch proportions are 33 shovelfuls of aggregate/decomposed granite to 3 shovelfuls of GraniteCrete Admixture (11:1 ratio). The mixture must be **thoroughly** dry mixed and moistened to specifications.

2. In areas that collapse/fail due to equipment weight, re-form and re-install with original materials as per specifications.
3. Cracks: Repair by brooming existing surface fines into the cracks of filling with dry, pre-mixed materials, or both. The onsite aggregate/decomposed granite should be sieved to 1/8" minus material for better application and in-fill of cracks. Materials should be mixed as per ratio described above. Broom or fill the crack, moisten, compact (with rubber mallet or hand compaction plate) and "feather" material into the final finish.