



Section 3

TECHNISOIL® NATURAL AGGREGATE PAVING

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes: Stabilized Aggregate Paving

B. Related Sections:

1. Section 2100 - Site Preparation
2. Section 2200 - Earth Moving
3. Section 2300 – Aggregate Base Course

1.2 REFERENCES

A. ASTM – ASTM International

B. Greenbook Standard Specifications for Public Works Construction.

C. ASTM C136 – Sieve Analysis of Fine and Coarse Aggregates

D. ASTM D2419 – Sand Equivalent Value of Soils and Fine Aggregates

1.3 SUBMITTALS

A. Product Data:

1. TechniSoil® Handouts and or Promotional Materials
2. TechniSoil® Polymer

B. Samples:

1. Compacted Stabilized Aggregate Paving: 1 Quart Sample per Color
2. 1 Pint TechniSoil® Topcoat

1.4 QUALITY ASSURANCE

A. Current TechniSoil® commercial blender as licensed by EkoResearch.

B. Installer shall have installed TechniSoil® Aggregate Paving in areas in excess of 3000 sq. ft. or approved by manufacturer.

C. Regulatory Requirements: Meet requirements of application laws, codes, and regulations required by authorities having jurisdiction over such work.

D. Mock-Ups

1. Employ TechniSoil® manufacturer's representative to be present during mock up construction to supervise placement and compaction of TechniSoil® Aggregate Mix. TechniSoil® Topcoat shall be applied after a minimum of 1 working day after initial mock up installation. All rates of application as per manufacturers specifications.
2. Construct a 10 foot by 10 foot area of stabilized TechniSoil® Aggregate Mix, including required headers.
3. Install over compacted base and subgrade.
4. Mock-ups that are not completely or finished incorrectly will be rejected.
5. The mock-up, when accepted, shall become the project standard for compaction, aggregate consolidation, texture and appearance.

1.5 SITE CONDITIONS

A. Environmental Requirements:

1. Do not apply TechniSoil® Aggregate Paving Mix a minimum of 48 hours preceding or following a rainfall.
2. Do not install TechniSoil® Aggregate Paving Mix when ambient temperature is below 50 degrees Fahrenheit.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURER AND SUPPLIER

- A. Gail Materials Inc, Corona, CA; (951) 667-6106. Licensed commercial blender for EkoResearch.
- B. TechniSoil® Topcoat – Gail Materials Inc, Corona, CA: (951) 667-6106

2.2 MATERIALS

A. Pathways/Trails or equal.

1. Gradation as determined by ASTM C 136 C methodology.

<u>Sieve Size</u>	<u>Percent Passing</u>
1/2"	100
3/8"	85 – 100
No. 4	50 – 80
No. 30	25 – 55
No. 200	5 – 18

2. Sand Equivalent as determined by ASTM D 2419 methodology shall have a minimum of 35.
3. R-Value as determined by ASTM D 2488 methodology shall have a minimum of 70.

B. Roadways/Fire Lanes or any equal area of vehicular use.

1. Gradation as determined by ASTM C 136 methodology.

<u>Sieve Size</u>	<u>Percent Passing</u>
1"	100
3/4"	85 – 100
3/8"	50 – 80
No. 4	35 – 55
No. 30	10 – 30
No. 200	2 – 15

2. Sand Equivalent as determined by ASTM D 2419 methodology shall be a minimum of 35.

3. R – Value as determined by ASTM D 2488 methodology shall be a minimum of 75.

C. Materials considered for use must be approved by Gail Materials. For a list of tested and approved materials contact Gail Materials (951) 667-6106.

2.3 MIXES

A. Premixed TechniSoil® Aggregate Mix.

1. Employ blender to blend and deliver TechniSoil® Aggregate Mix to the site.
2. Blender shall thoroughly blend TechniSoil® binder with the aggregate at Gail Materials recommended rate.
3. Equipment for mechanical blending shall be approved by Gail Materials.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verification of General Conditions: Examine site and verify that conditions are suitable to receive work.
- B. Aggregate Base: Review aggregate base course to verify that it has been graded and compacted per engineer's criteria.

3.2 PREPARATION

- A. Protection of Existing Conditions:
 - 1. Use every possible precaution to prevent damage to existing conditions to remain such as structures, utilities, irrigation systems, plant materials and paving on or adjacent to the site of work.
 - 2. Provide barricades, fences or other barriers as necessary to protect existing conditions to remain from damage during construction.

3.3 INSTALLATION OF TECHNISOIL® AGGREGATE PAVING

- A. Placement
 - 1. For pathways/trails install to a minimum compacted thickness of three inches. For areas of vehicular use install to a minimum compacted thickness of four inches or per engineers recommendations.
 - 2. Place the material in one lift and spread per the specified grade and cross section profile. Allow for settling and compaction.
 - 3. Pockets of large aggregate may develop, inspect the surface and evenly distribute the loose aggregate.

4. Installation on large areas can include equipment such as a paver box or equal. In small areas of installation hand distribution is allowed.

B. Compaction

1. Allow for the material to reach a uniform moisture content of 7 – 8% before initiating compaction.
2. Compact material to 95% with a vibratory double drum roller. The last two – three passes turn off the vibratory function and roll smooth.
3. A vibratory plate compactor can be used in areas that are not accessible by the drum roller.

3.4 TOP COAT APPLICATION

A. Application:

1. Allow for the material to cure for approximately 24 hours prior to the first top coat sealer application.
2. Apply TechniSoil® sealer coat at the rate of one gallon per 20 sq. ft.
3. Apply with a Hudson sprayer or equivalent.
4. Wait for approximately six hours and apply a second coat at the rate of one gallon per 35 sq. ft.
5. Allow the surface to fully dry before allowing traffic.

3.5 FIELD QUALITY CONTROL

A. Inspection of Installed TechniSoil® Aggregate Paving:

1. Finished surface of paving shall be uniform and solid with no soft areas.
2. Initially loose material shall be minimal.
3. After the first year a minor amount of material is expected and the amount depends on use and frequency.

3.6 REPAIR

A. Surface repair of loose or soft areas.

1. If dry lightly moisten the area of concern to 2-3 percent moisture content.
2. Apply TechniSoil® at the rate of one gallon per 35 sq. ft.
3. Allow the material to soak into the area of concern for approximately 2 hours.
4. Compact with a drum roller or vibratory plate.
5. Apply a second coat if required.
6. Allow for the material to dry before allowing use.

END OF SECTION