

SECTION 306

MECHANICALLY STABILIZED SUBGRADE - GEOGRID REINFORCEMENT

306.1 DESCRIPTION:

Mechanically stabilized subgrade shall consist of furnishing and placing a geogrid material within or below the untreated base to provide a stabilized paving platform on which paving materials can be placed. Geogrid type, fill thickness, pavement cross-section and associated details, shall be as shown on the contract drawings.

306.2 MATERIALS:

The geogrid material shall be supplied in accordance with and conform to the material requirements of Section 796 and Table 796-4.

306.3 PREPARATION:

Prior to placement of geogrid material unsuitable soil or material shall be removed and replaced with acceptable material. The surface upon which the geogrid is to be placed shall be brought to a compacted condition, true to line and grade. The placement of the geogrid shall be approved by the Engineer before placement of overlaying materials.

Geogrid shall not be placed during unsuitable weather or surface conditions. The Engineer shall determine when wet and snowy conditions, heavy rainfall, extreme cold, frost, or extreme heat constitute unsuitable conditions.

306.4 EQUIPMENT:

Mechanical or manual laydown equipment shall be capable of laying the geogrid properly and smoothly, in compliance with the manufacturer's recommendations.

306.5 GEOGRID PLACEMENT:

The geogrid shall be installed in accordance with the installation guidelines provided by the manufacturer or as directed by the engineer.

The geogrid may be temporarily secured in place with ties, staples, pins, sand bags or acceptable fill material as required by fill placement procedures, weather conditions or as directed by the Engineer. A 12-inch minimum secured overlap is required at all joints (both transverse and longitudinal). At transverse joints, the preceding roll shall overlap the following roll in the direction that the aggregate base will be placed. The geogrid shall be rolled out along the alignment in the direction of advancing construction. All wrinkles and folds shall be removed.

The geogrid shall be tensioned by hand and anchored to the ground at the edges, including overlaps, and in the center of the roll at 30-foot intervals along the roll length, at the corners if applicable, or as directed by the Engineer. Securing locations may be reduced or eliminated when it can be shown to the satisfaction of the Engineer that an alternative installation process will provides satisfactory results.

Geogrid shall be placed to obtain full coverage of the indicated area. Placement of geogrid on irregular shaped areas and radii may require cutting of the geogrid material and the use of diagonal overlapping joints. Buckling of geogrid material will not be allowed.

306.6 PLACING AND COMPACTING AGGREGATE FILL:

The aggregate shall be back dumped and spread in a uniform lift maintaining the design aggregate thickness at all times. The aggregate material shall be bladed on the geogrid in such a manner that the aggregate rolls forward onto the grid ahead.

When underlying substrate is trafficable with minimal rutting, rubber-tired equipment may pass over integrally-formed geogrid reinforcement at slow speeds (less than 10 mph). Sudden stops and turning by trucks shall be

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- Deleted: aggregate
- Deleted: as shown on the project plans to mechanically stabilize the subgrade. Work shall
- Deleted: section
- Deleted: ¶ This specification shall be used for a construction platform and not as a means of mitigating swell (retaining moisture in subgrades) unless retaining moisture in the section can be assured by other means.¶
- Deleted: ¶ Other than the specified geogrid, no structural contribution shall be attributed to other geosynthetic fabrics that may be specified as part of the pavement or subgrade cross-section to provide separation, filtration or drainage.¶ ¶ (Possible change per Peoria comment this week): The geogrid shall not result in a reduction in the pavement section if the geogrid is being used primarily to allow pavement construction on soft subgrades.¶
- Deleted: as directed by the Engineer or as shown on the plans. During this process any unsuitable soil or material shall be removed and replaced with acceptable material. The compacted surface shall be at the proper elevation as specified, shown on the plans, or a ... [1]
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avoided on the geogrid. Traffic shall not be allowed onto coated geogrid material. A minimum loose fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles shall be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.

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Any ruts which develop during spreading or compacting aggregate fill shall have additional aggregate added rather than bladed from surrounding areas. Placing additional aggregate into the rutted areas limits disturbance to the underlying geogrid keeping it intact.

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Untreated base shall be compacted as specified in Section 310. Untreated base material shall not be mixed or processed on the geogrid. Base materials will be uniformly blended and sampled for acceptance prior to placement on the geogrid material. Contamination and segregation of base materials during placement shall be minimized.

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**306.7 REPAIR:**

Any geogrid material damaged before, during or after installation shall be replaced by the contractor at no additional cost to the owner.

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Replacement of geogrid reinforcement shall consist of removal and replacement of the geogrid and aggregate fill from the defective area. The aggregate fill shall be removed at least 3 feet beyond of the limits of the defective area. The replacement geogrid shall be installed with proper overlaps. Aggregate fill replacement shall not commence until placement of the geogrid material has been inspection and approved.

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**306.8 PAYMENT:**

The surface area of accepted in-place geogrid reinforcement will be measured to the nearest square yard. No allowance will be made for material overlaps.

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Payment for geogrid reinforcement at the contract unit price shall be full compensation for furnishing all labor, material, equipment, and installing complete in place the geogrid as shown on the project plans.

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Paving platform found deficient shall be removed and replaced. ¶

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as directed by the Engineer or as shown on the plans. During this process any unsuitable soil or material shall be removed and replaced with acceptable material. The compacted surface shall be at the proper elevation as specified, shown on the plans, or as directed by the Engineer, for		
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. At completion of this phase, the material and surface		
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, are not suitable for placement. This will normally be at times of		
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by careful installation the geogrid is adequately tensioned by hand and anchored by the placed aggregate in a progressive installation process as recommended by the manufacturer's representative		
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Care shall be taken to ensure that geogrid sections do not separate at overlaps during construction		
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around corners will require cutting of the geogrid product and		
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of the same to make sure that excessive		
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, by gradually raising the dozer blade while moving ahead		
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when integrally-formed geogrids are used		